

**DEPARTMENT OF ENVIRONMENTAL QUALITY  
AIR QUALITY DIVISION  
ACTIVITY REPORT: Scheduled Inspection**

P040848437

FACILITY: EES COKE BATTERY LLC		SRN / ID: P0408
LOCATION: 1400 Zug Island Road, RIVER ROUGE		DISTRICT: Detroit
CITY: RIVER ROUGE		COUNTY: WAYNE
CONTACT: Brenna Harden , Senior Environmental Engineer		ACTIVITY DATE: 04/08/2019
STAFF: Katherine Koster	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: MEGASITE
SUBJECT: FY2019 Targeted Inspection		
RESOLVED COMPLAINTS:		

**REASON FOR INSPECTION: Targeted Inspection**

**INSPECTED BY: Katie Koster**

**PERSONNEL PRESENT: Brenna Harden, EES Environmental Engineer**

**FACILITY PHONE NUMBER: 313-297-4183 (phone); 734-320-5255 (cell)**

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**FACILITY BACKGROUND**

EES Coke Battery, LLC was organized and formed by DTE to assume the coke making operations from United States Steel Great Lakes Works (USSGLW) in 2004. Prior to USSGLW ownership, the coke making operations were owned and operated by National Steel Company. The equipment is located on the southern half of Zug Island in the city of River Rouge. The property is owned by USSGLW.

While the No. 5 battery and No. 3 byproducts operations and coal piles are managed by DTE, the coke making operations rely on USSGLW for steam, power, and water. The battery used to receive blast furnace gas from USSGLW for underfire combustion, but that practice was halted by EES in July 2012 as DTE claimed that moisture in the gas was degrading the regenerators below the ovens. EES also claimed that preheating the gas to drive off the moisture was not feasible. USSGLW still accepts and purchases excess coke oven gas for use at Boilerhouses 1&2 on Zug Island. COG used to also be combusted at the Hot Strip Mill but that was halted by USSGLW in mid-2016.

**REGULATORY ANALYSIS**

On June 13, 2014, the facility submitted PTI application, 51-08C, to increase the yearly coal throughput limit, permanently remove the heat input restrictions, modify/remove emission limits, and modify a variety of recordkeeping and reporting conditions. The permit evaluation form states that it is a major modification under PSD for NOx and greenhouse gases. This permit replaced 71-13 and 51-08. The permit was issued in November 2014. 71-13 was a temporary permit to suspend the daily and annual heat input limits on the battery.

The whole coke making facility is incorporated as Section 7 of the United States Steel Great Lakes Works (USSGLW) Renewable Operating Permit (ROP) Number 199600132d. However, USSGLW and EES submitted a request in December 2012 to administratively split the ROP into two documents. This process has started as the USSGLW ROP renewal has gone through public comment and does not contain conditions related to EES. EES was assigned a separate SRN, P0408, and reports annual emissions in MAERS under this SRN.

Benzene and HCl are the main HAP's emitted; primarily from the underfire stack and the COG flare.

**St of Michigan Consent Orders**

The facility is operating under some old Wayne County consent orders including SIP Consent Order No. 27-1993 for fugitive dust. In December 2013, the facility was referred for escalated enforcement action due to issues with the CERMS systems for monitoring NOx, CO, SO2, and flow; including incorrect reporting of downtime and manual revisions of the CERMS data unbeknownst to AQD at the time. The referral also included other recently cited violations related to inadequate maintenance, inspections, and recordkeeping, and failed stack test, and improper calibration gas used for leak checks under Part 61 Subpart L and V. This is consent order AQD CO No. 57-2014.

**Federal Regulations**

The No. 5 coke oven battery is subject to MACT Standards promulgated in 40 CFR Part 63, Subpart CCCCC (NESHAP for Coke Ovens: Pushing, Quenching, and Battery Stacks) and Subpart L (National Emission Standards for Coke Oven Batteries). The No. 3 Coke Byproducts plant is subject to NESHAPs promulgated in 40 CFR, Part 61, Subpart FF (NESHAP for Benzene Waste Operations), Subpart L (NESHAP for Benzene Emissions from Coke By-Product Recovery Plants), and Subpart V (NESHAP for Equipment Leaks (Fugitive Emission Sources)).

## PROCESS OVERVIEW

The vast majority of the coal is received by vessel and off loaded on the southern end of the island. Four to six types of coal are used in the coke making process and a mix of low, mid, and hi vol coal is used and properties such as ash and sulfur content and strength are important. Coal is loaded into a truck and driven to the coal hopper. From the hopper, it enters the mixing building. Blended coal is pulverized and conveyed to the coal bunker on top of the battery. Along the way, coal tar sludge is sprayed onto the conveyor for bulk density control. No 2 fuel oil is also used for this purpose.

Coal is stored in a bunker until dispensed into one of two larry cars on the top of the battery. Coal is then charged into an oven with the larry car and leveled with the leveling bar. It is important to create an even headspace so that gas is drawn off evenly across the oven during coking. Each oven has four ports with lids on the top for charging and two sides with removable doors. Approximately 35 tons of wet coal/32 tons dry coal is charged per oven and 23 - 25 tons of coke are produced. The normal coking time is about 17 hours at a temperature of approximately 2200F. If there is reduced demand for coke, then the battery has to shift to an extended coking time; however, at this time, it is on the normal coking cycle.

The staggered oven pushing is to ensure even distribution of the coke oven gas across the collector main. The coking process takes place in the absence of oxygen to drive off residual VOCs and other impurities in the coal and to form a hard mass known as metallurgical coke. This coke can withstand the very high temperatures in iron making blast furnaces. There is a limit to how long coking time can be extended because the process will not generate enough gas to run the battery and the battery will not be able to produce metallurgical coke of the required size. Important factors for coke are stability (strength), size (permeability), sulfur (<0.85%), and ash (<10%), and volatility. Samples are tested daily. Approximately 6% of coke made is breeze and nut coke. 117 ovens per day is maximum that can be pushed. Ovens are 18 inches wide.

Ovens are charged and pushed in a specific sequence whereby odd numbers are pushed and then even or vice versa unless there is extended coking schedule. Ovens are kept under slightly positive pressure while coking and slightly negative pressure while charging. Negative pressure is achieved with the use of an assist oven and jumper pipe. High pressure flushing liquor is in use to aid in off gas collection during charging. The flushing liquor shock cools the raw coke oven gas causes it to contract quickly which pulls a vacuum.

When pressure in the crossover main(s) reaches 0.80 inches w.c., the bleeder stack(s) open. There are two bleeders per crossover. The bleeders are equipped with automatic igniters so that raw COG is combusted when they are opened. The main function of the bleeders is to flare gas until the pressure returns to normal. The company sends reports to AQD on when the bleeders open, length of time of opening, and certification that the emissions were ignited. Overall plant pressure is 37 in. w.c.

Once the coking cycle is complete, the oven doors are removed, and coke is pushed from the oven into a receiving car. The car moves along the oven to the quench tower where is it deluged with water. The coke is then poured out onto the coke wharf for further cooling. Emissions from pushing and traveling to the quench tower are captured by a movable hood positioned over the receiving car. The hood ducts emissions to the Pushing Emissions Control System (PECS) baghouse. Baffles in the quench tower must be maintained to suppress the release of particulate emissions. Twelve thousand gallons of water are used per quench. After cooling, coke is conveyed to the screening station and then loaded into rail cars.

Off gas from the ovens (raw coke oven gas or raw "COG"), is collected through the suction main to the four crossover mains and into the collecting main. The collecting main feeds the byproducts recovery plant. Flushing liquor is sprayed in the collecting main for cooling and tar begins to precipitate out. Tar, light oil, and ammonia are recovered from the coke oven gas through a series of decanters, condensers,

heat exchangers, and stills. These products are then sold offsite. The byproducts recovery process is completely enclosed; nitrogen blanketing is in use for emissions suppression. Emissions from this process are only attributable to leaks or storage tank emissions and load out activities. The wash oil has a high boiling point; it absorbs benzene, toluene, and xylene, and is sent through the distillation column. Coal tar is loaded by rail or truck off site.

Excess gas that is not needed in the underfire system by the battery or by US Steel is sent to the main flare. About 40% of the gas generated is used to underfire the battery. Natural gas could be used for a short time period in an emergency situation; however, the flame temperature is too high, and it would damage the refractory if used on a long-term basis.

Process water from moisture in the coal is contaminated with ammonia, phenols, heavy metals and mercury. The onsite wastewater treatment plant removes phenols and NH<sub>3</sub> biologically.

The battery operates 24 hours a day, 7 days a week. Approximately every 20 minutes there is a reversal whereby the fuel gas combustion is turned off for approximately 2 minutes. The heating flues become exhaust flues and vice versa to even out the heat distribution throughout the battery. The products of combustion of 100% COG are exhausted out of the natural draft stack. There is a CEMS in the combustion stack for measuring NO<sub>x</sub>, SO<sub>2</sub>, and CO lb/hr emissions. COG is mainly comprised of hydrogen and CH<sub>4</sub> and has an average heating value of 500 BTU/ft<sup>3</sup>. It also contains H<sub>2</sub>S, benzene, and PAH's.

USSGLW provides steam, cooling water, and electricity to the battery operations.

A contractor, AKJ, used to oversee the tar sludge handling, storage and loading process. This has been reclaimed by EES to be done in house.

#### INSPECTION NARRATIVE

On April 4, 2019, I arrived on Zug Island. I was met by Brenna Harden, EES Environmental Engineer.

Currently USSGLW is using coke from its facility in Clairton Works, and it is delivered by train which blocks the entrance and exit to the island. USSGLW is not using any coke that is being produced by EES.

On the date of the inspection, coke was "going to ground". It is stockpiled and scooped by front end loader and loaded into a truck.

I did not observe any visible emissions from the underfire combustion stack or the PECS stack while on site.

#### Notes:

HHV for the COG has ranged between 450-525

RATAs and flow study occurring

Panther Eagle is the lighter, loamier coal – more likely to cause dust issue

Stack diameter is 229 vs. 220 that was used

Failed PECS test then passed. Company does not have a reason for the failure. They inspected the bags but only replaced one. EES decided to use Method 201A instead of M5 for the filterable particulate for the second test.

#### APPLICABLE RULES/PERMIT CONDITIONS EVALUATED

EUCOKE-BATTERY – Only conditions that were evaluated are in this report. Conditions are from PTI 51-08C which was issued in November 2014

#### I. EMISSION LIMITS

1. IN COMPLIANCE. 437.3 pph CO 8 hr block average from the combustion stack as recorded by the CERMS. No excess emissions have been reported in the quarterly reports.

2. **IN COMPLIANCE.** 1,411 NO<sub>x</sub> tons per year limit from the combustion stack. This is an increase from prior permitted limit of 959.5 tons per year. Based on 12 month rolling time period from January 2018 – February 2019, highest emissions were 924 tons of NO<sub>x</sub> from the combustion stack in March 2018 (See attached).
3. **IN COMPLIANCE.** 563.5 NO<sub>x</sub> hourly limit from the combustion stack as recorded by the CERMS. No excess emissions have been reported in the quarterly reports.
4. **IN COMPLIANCE.** 0.75 NO<sub>x</sub> lb/ MMBTU heat input for the combustion stack. EES has not reported any exceedances in the quarterly reports. At this time, compliance is based on EES calculation methodology of assuming COG BTU content of 500.
5. **IN COMPLIANCE.** 1.25 NO<sub>x</sub> lb/MMBTU heat input on a 24 hr rolling basis for the combustion stack. EES has not reported any exceedances in the quarterly reports.
6. **IN COMPLIANCE.** 2.61 NO<sub>x</sub> pph from the PECS stack. The most recent test was conducted in September 2018 and prior to that in September 2016. See TPU memo in the file for a summary of the test report review. The NO<sub>x</sub> emissions on an hourly basis, based on a three run average, were 1.37 pph. As this process does not run continuously, i.e. pushing only occurs once every 11 minutes, and the hourly emissions are calculated based on the actual non-continuous operation.
7. **IN COMPLIANCE.** PM limit of 0.095 lbs/1000 lbs exhaust gas on combustion stack. The most recent test was conducted in September 2017. Results were received in November 2017. Results were 0.022 lbs PM/1000 lb gas @50% excess air. The prior test was conducted in September 2015 and the results were 0.078 lb PM/1000 lb gas @50% excess air.
8. **IN COMPLIANCE.** PM limit of 0.012 gr/dscf from the combustion stack (excluding sulfates). The most recent test was conducted in September 2017. Results were received in November 2017. Results were 0.004 gr/dscf. The prior test was conducted in September 2015 and the results were 0.000095 gr/dscf.
9. **IN COMPLIANCE.** PM limit of 25.7 pph from the combustion stack. The most recent test was conducted in September 2017. Results were received in November 2017. Results were 5.48 lb/hr. Prior test was conducted in September 2015 and the results were 0.111 pph.
10. **IN COMPLIANCE.** PM limit of 9.7 tons per year from the PECS stack. 7.53 tons was reported for 2018 in MAERS for PM-10. The MAERS value includes fugitive emissions.
11. **IN COMPLIANCE.** PM limit of 0.02 lb/ton of coke pushed from the PECS stack. The most recent tests were conducted in September 2018 and December 2018. See TPU memo in the file for a summary of the test report review Results for December 2018 were 0.005 lb. PM/ton coke pushed and September 2018 was 0.01 lb. PM/ton coke.
12. **IN COMPLIANCE.** PM<sub>10</sub> limit of 73.3 pph from the combustion stack. The September 2017 test result was 30.14 pph. The prior stack test was performed in September 2015 and the result was 50.8 pph.
13. **IN COMPLIANCE.** PM<sub>10</sub> limit of 0.69 pph from the PECS stack. The most recent tests were conducted in September 2018 and December 2018. See TPU memo in the file for a summary of the test report review. Company failed the test in September 2018 for PM<sub>10</sub> and 2.5. The result was 1.15 lb./hr. A violation notice was issued. Facility retested in December 2018 and passed. Results were 0.28 pph for PM<sub>10</sub>. Facility used 201A instead of M5 which size sorts the filterable particulate. As such, the PM<sub>10</sub> and PM<sub>2.5</sub> results are different.
14. **IN COMPLIANCE.** PM<sub>2.5</sub> limit of 73.3 pph from the combustion stack. The September 2017 test result was 30.14 pph. The prior stack test was performed in September 2015 and the result was 50.8 pph.
15. **IN COMPLIANCE.** PM<sub>2.5</sub> limit of 0.69 pph from the PECS stack. The most recent tests were conducted in September 2018 and December 2018. See TPU memo in the file for a summary of the test report review. Company failed the test in September 2018 for PM<sub>10</sub> and 2.5. The result was 1.15 lb./hr. A violation notice was issued. Facility retested in December 2018 and passed. Results for December 2018

were 0.23 pph PM2.5. Facility used 201A instead of M5 which size sorts the filterable particulate. As such, the PM10 and PM2.5 results are different.

16. IN COMPLIANCE. SO2 limit of 2,071 tpy from the combustion stack based on a 12 month rolling time period. Based on the CERMS and the approved methodology in PTI 51-08C used to estimate emissions during downtime, for the 12-month time period from January 2018 – February 2019 the highest emissions were 1,989 tons of SO2 from the combustion stack in March 2018. Some quarter(s) had downtime where emissions are estimated.

17. NOT IN COMPLIANCE. SO2 3-hour average of 544.6 lbs. from the combustion stack. From January 2018 – February 2019, 0 exceedances in 1<sup>st</sup> and 2<sup>nd</sup> quarter, 2 exceedances in 3<sup>rd</sup> QTR 2018, and 5 exceedances in 4<sup>th</sup> QTR 2018. Violation notice to be issued for 4<sup>th</sup> quarter exceedances.

18. IN COMPLIANCE. SO2 limit of 0.702 lb/1000 scf of COG on a 1 hr average from the combustion stack. No exceedances were reported for CY2018 or the first quarter of 2019.

19. IN COMPLIANCE. VOC limit on 43.1 pph from the combustion stack. The September 2017 test result was 12.7 pph. Testing also occurred in September 2015 and result was 19.5 pph. In October 2013, the test result was 7.99 pph VOC.

20. IN COMPLIANCE. VOC limit of 0.0956 lb/MMBTU limit from the combustion stack. The September 2017 test result was 0.0248 lb/MMBTU heat input. Stack test was performed in September 2015 and the result was 0.0391 lb/MMBTU heat input.

21. IN COMPLIANCE – VE limit of 20% 6 minute average on the combustion stack. No visible emissions were observed while on site. For 2018, there were 8 total exceedances on six different dates for a total of 48 minutes. As the COMS operates continuously, facility is substantively in compliance with this condition.

22. IN COMPLIANCE. VE limit of 15% on a 6 reading average of the PECS stack. No visible emissions exceedances have been reported in the semi annual Title V deviation reports.

23-28. IN COMPLIANCE. These are limits, in terms of % leaking as observed on a daily basis, found in the state Part 3 rules. Facility has not reported an exceedance of these limits. Also, see attached spreadsheet which includes the leak percentages as input from the daily readings.

## II. MATERIAL LIMITS

1&2. IN COMPLIANCE. Dry coal charge limited to 1,420,000 tpy on a 12 month rolling time period and 125,000 tons/month. Highest 12 month rolling from January 2018 – February 2019 was 1,302,803 tons in February 2019 and 113,582 tons per month in July 2018. (attached)

3. IN COMPLIANCE. Heavy tar sludge charged limited to 836,000 gallons per year on a 12 month rolling time period. Highest 12 month rolling from January 2018 – February 2019 was 707,365 gallons in March 2018. ( attached)

4. IN COMPLIANCE. No. 2 fuel oil charged limited to 1,365,000 gallons per year on a 12 month rolling time period. Highest 12 month rolling from January 2018 – February 2019 was 815,347 gallons in February 2019. (attached)

5. IN COMPLIANCE. No. 2 fuel oil sulfur content should be no more than 0.5% by weight. Fuel records indicate facility is purchasing ULSD. ULSD is defined as having a maximum sulfur content of 15 ppm.

6. IN COMPLIANCE. TDS of quench water shall not exceed 800 mg/liter. 3 samples minimum collected per week. State rule 336.2033 requires 5 samples be collected. I discussed this with Brenna who stated that the facility was doing that anyway. TDS results have been below the 800.

## III. PROCESS/OPERATIONAL

1. IN COMPLIANCE. An updated MAP was submitted on February 21, 2018. MAP was approved after 90 days by default as allowed by the condition. However, AQD did review the MAP in relation to the

compliance inspection and it appears to contain the required information. The prior MAP was submitted on January 22, 2015 and approved by AQD.

**3. IN COMPLIANCE.** Shall not cause a standpipe lid to be open on an oven which is more than 3 ovens ahead of the one being pushed. Facility is demonstrating compliance through training of the operators. At this time, I do not have information that indicates this is not sufficient. Based on visible observations during prior inspections, I did not notice any open standpipe lids on in service ovens that did not meet this condition.

**4. IN COMPLIANCE.** Excess COG shall be sent off site when dry coal charged exceeds 1.3MM tons per 12 month rolling time period (based on equation in the permit). Dry coal charged has not exceeded 1.3MM from January 2018 – February 2019 except for in February 2019. The required amount to go off site was 21,098 MMBTU in February. However, gas is sent off site every month. (attached)

#### **V. TESTING**

**1. IN COMPLIANCE.** Permittee shall test combustion stack every two years. Testing was conducted in 2017, 2015, and 2013. Next test is due by September 2019.

**2. IN COMPLIANCE.** Permittee shall test PECS stack every two years. Testing was conducted in September 2018, September 2016, December 2014 and June 2012.

**3. IN COMPLIANCE.** Permittee shall sample TDS on a weekly basis with a minimum of three samples collected per week. Five samples are being collected per week.

#### **VI. MONITORING/RECORDKEEPING**

**2. IN COMPLIANCE.** COMS shall be installed and maintained. COMS is installed; annual audit is performed and provided to AQD. Also, quarterly excess emission reports are required and have been submitted by EES in a timely manner.

**3. IN COMPLIANCE.** CERMS shall be maintained and operated in a satisfactory manner. This system was the subject of an enforcement action which resulted in Consent Order AQD No 57-2014 in 2014. Through this order, various improvements were made to the CERMS. In 2016, the pitot based flow monitor was replaced by an optical scintillation monitor (OSI). However, downtime has been an issue; mostly related to issues with the flow monitor. For July 2017 – July 2018, excess monitor downtime occurred in the 3<sup>rd</sup> and 4<sup>th</sup> quarters of 2017 due to a failed RATA. However, the 1<sup>st</sup> and 2<sup>nd</sup> quarter of 2018 had minimal downtime. AQD TPU reviewed 3<sup>rd</sup> and 4<sup>th</sup> quarter downtime reports and chose compliance. As such, compliance was chosen at this time.

**4. IN COMPLIANCE.** Flow monitoring system shall be maintained and operating in a satisfactory manner. This system was the subject of a recent enforcement action which resulted in Consent Order AQD No. 57-2014. Through this order, various improvements were made to the CERMS. In 2016, the pitot based flow monitor was replaced by an optical scintillation monitor (OSI). However, downtime continues to be an issue; mostly related to issues with the flow monitor. For July 2017 – July 2018, excess monitor downtime occurred in the 3<sup>rd</sup> and 4<sup>th</sup> quarters of 2017 due to a failed RATA. However, the 1<sup>st</sup> and 2<sup>nd</sup> quarter of 2018 had minimal downtime. AQD TPU reviewed 3<sup>rd</sup> and 4<sup>th</sup> quarter downtime reports and chose compliance. As such, compliance was chosen at this time.

**5. IN COMPLIANCE.** Permittee shall keep continuous opacity monitor records. Records are available. An example is attached.

**6. IN COMPLIANCE.** Hourly and 8-hour averages of CO are being maintained in a satisfactory manner through the CERMS system.

**7. IN COMPLIANCE.** Required NOx emission records are being maintained.

**8. IN COMPLIANCE.** Required SO2 emission records are being maintained.

**9. IN COMPLIANCE.** Required SO2 emission records are being maintained.

10. **IN COMPLIANCE.** Non-certified VE's of the PECS baghouse shall occur on a weekly basis. Records were presented during the inspection.

11. **IN COMPLIANCE.** Certified VE's of the PECS baghouse shall occur on a monthly basis. Records were presented during the inspection.

12. **IN COMPLIANCE.** Daily Method 9B observations shall be conducted. It appears that sufficient information to determine compliance with Method 9B is being recorded.

16. **IN COMPLIANCE.** Records of monthly and 12 month rolling dry coal, heavy tar sludge, and No.2 fuel oil charged to the battery for the time period requested (January 2018 – February 2019) were provided. See attached.

17. **IN COMPLIANCE.** Records of monthly, twelve month rolling, heat input, fuel gas usage, BTU content of fuel gas, volatile matter of coke produced, and coke production rate as attached. BTU content is an assumed constant of 500 BTU/scf. See attached.

18. **IN COMPLIANCE.** Records of monthly and twelve month rolling of the amount of COG generated per ton of dry coal and amount sent to a separate stationary source and COG generated per ton of dry coal are attached. No COG was required by the permit to be sent to a separate stationary source based on the coal charged. However, highest 12 month rolling average amount of COG sent off site for January 2018 – February 2019 was 1,681,775 MMBTU. See attached.

19. **IN COMPLIANCE.** Permittee shall monitor and record the amount of coke oven gas vented to the flare on a daily basis. This information is tracked and maintained by DTE. See attached example.

20. **IN COMPLIANCE.** Condition requires regular inspections of the flare and automatic ignition system. According to facility, no formal inspections are necessary because it is obvious whether the flare is working. No issues with the ignition system at the flare have been experienced. At this time, this appears to be sufficient.

21. **IN COMPLIANCE.** Shall maintain daily records of the operation of the overpressure bleeder flare system. Records are maintained, and a log of opening is submitted to AQD semi annually as part of the ROP deviation report. Records contain time, duration, and reason for opening. See semiannual ROP deviation reports.

22. **IN COMPLIANCE.** Shall maintain record of the analysis of each shipment of No 2 fuel oil. Purchase records with notations that the material is ultra-low sulfur diesel (ULSD) from vendor, Spencer Oil, are maintained and were presented during the inspection.

## **VII. REPORTING**

1. **IN COMPLIANCE.** Reports of bleeder openings have been received in a timely manner.

2. **IN COMPLIANCE.** 1-hr SO<sub>2</sub> emissions quarterly reports are being received in a timely manner.

## **VIII. STACK HEIGHTS/RESTRICTIONS**

1,2&3. **IN COMPLIANCE.** Stack dimensions were reviewed during the recent PTI review and should be correct. Error in height from 51-08 was corrected.

## **EUMATERIALS**

IX.1 **IN COMPLIANCE.** Shall comply with fugitive dust plan in SIP CO 27-1993. Facility has certified compliance with dust plan quarterly. Quarterly reports are submitted which detail the fugitive dust activities that have been performed. See attached sample of fugitive dust inspections.

## **FGMACT L**

I.1 **IN COMPLIANCE.** Percentage of leaks allowed at certain points on the battery. Based on daily Method 303 readings and the tabulated 30-day averages and log averages as allowed by the MACT, the battery is in compliance with these conditions. (attached spreadsheet)

**I.2 NOT IN COMPLIANCE.** No visible emissions from each flare except for periods not to exceed 5 minutes in 2 hours. Facility has started reporting all individual bleeder openings (regardless of whether the gas was ignited) that last more than 5 minutes as deviations. AQD agrees with this approach. However, as there are 8 bleeders, usually a single bleeder is not open for more than 5 minutes. Based on information provided by the facility (in the file), much work has been done to minimize the duration of scheduled maintenance which causes most of the flaring events. As such, instances of flares open more than 5 minutes in two hours have been reduced. For 2017, there were no reported deviations from this requirement. For 2018, there were 10 reported; most of the visible emissions were reportedly due to power or steam loss which is supplied by US Steel. As these events appear to be beyond the control of EES based on the information available at this time, discretion is being used in terms of issuing a violation notice. Future events will continue to be monitored and reviewed.

### **III. PROCESS/OPERATIONAL RESTRICTIONS**

**2. IN COMPLIANCE.** Shall seal leaks in the collecting main within 4 hours. No leaks have been detected in the collecting main.

**4. IN COMPLIANCE.** An SSM plan is in place. See attached.

### **V. TESTING/SAMPLING**

**1. IN COMPLIANCE.** A daily performance test shall be conducted each day, 7 days per week by certified Method 303 observer to determine compliance with each applicable visible emission limitation for coke oven doors, topside port lids, offtake systems, bypass/bleeder flares, and charging operations in this permit. Each performance test shall be conducted according to the procedures and requirements of reference Method 303 or 303A or Methods 9 and 22 where applicable. Each performance test is to be conducted by a certified observer. The certified observer shall conduct each performance test according to the requirements of 40 CFR 63, Subpart L. The procedures in § 63.309(d) shall be used to determine compliance with each applicable visible emission limitation for coke oven doors, topside port lids, offtake systems, bypass/bleeder flares, and charging operations in this permit.

Daily readings described in this condition are conducted and recorded. Records are maintained by the facility and have been presented during past inspections. An example of the readings is attached.

### **VI. MONITORING/RECORDKEEPING**

**1. IN COMPLIANCE.** The permittee shall inspect the collecting main for leaks at least once daily according to the procedures in Method 303 as specified in § 63.308(a). The permittee shall record the time and date a leak is first observed, the time and date the leak is temporarily sealed, and the time and date of repair. Collecting main is inspected daily. No leaks have been observed

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#### **APPENDIX B - Continuous Opacity Monitoring System (COMS) Requirements**

**IN COMPLIANCE.** Annual audits of the COMS have been completed in a timely manner and reports have been submitted for review. Quarterly EER's are being submitted with the required information and on time. Monitoring plan was submitted to TPU for review.

#### **APPENDIX C - NO<sub>x</sub>, SO<sub>2</sub>, CO, CO<sub>2</sub>/O<sub>2</sub> - Continuous Emission Monitoring System and Continuous Emission Rate Monitoring System (CEMS/CERMS) Requirements**

**IN COMPLIANCE** with Conditions 2-7. The CERMS monitoring plans have been submitted and reviewed by TPU. The initial plan was submitted on July 27, 2009. An updated plan was submitted on April 13, 2015 as required by the Consent Order 57-2014. Quarterly reports have been submitted and contain the required information. TPU staff has determine the CERMS to be compliant with the required performance specifications.

#### **COMPLIANCE DETERMINATION**



**At the time of the inspection, a violation notice is pending for excess SO2 emissions as described above. As such, non compliance was chosen.**

NAME Katie Kote

DATE 12/23/19

SUPERVISOR W.M.