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

P040834623

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 ,		ACTIVITY DATE: 08/18/2016
STAFF: Katherine Koster	COMPLIANCE STATUS: Non Compliance	SOURCE CLASS: MEGASITE
SUBJECT: Targeted FY2016 Inspection		
RESOLVED COMPLAINTS:		

REASON FOR INSPECTION: Targeted Inspection
INSPECTED BY: Katie Koster
PERSONNEL PRESENT: Brenna Harden, 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, the operations, including the No. 5 battery and the No. 3 byproducts recovery plant, was owned and operated by National Steel Company. The facility is located on the southern half of Zug Island in the city of River Rouge. The property is owned by USS.

While the No. 5 battery and No. 3 byproducts operations and coal piles are managed by DTE, the 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 preheating the gas was not feasible. USSGLW still accepts and purchases excess coke oven gas for use at the Hot Strip Mill and Boilerhouses1&2 on Zug Island.

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. This permit application 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.

Consent Orders
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 Byproduct 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. At this time, due to low demand for coke, the battery is on an extended coking time of 40 hours. Ever 9th oven is pushed to ensure gas is evenly distributed 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. Coking time cannot be extended longer than 36 hours because the process will not generate enough gas to run the battery. Important factors for coke are stability (strength), size (permeability), sulfur (<0.85%), and ash (<10%), and volatility. Samples are tested daily. 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 thousands 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 cross over 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 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 NH3 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 NOx, SO2, and CO lb/hr emissions. COG is mainly comprised of hydrogen and CH4 and has an average heating value of 500 BTU/ft3. It also contains H2S, benzene, and PAH's.

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 26, 2016, I arrived at Zug Island. I was met by Brenna Harden, EES, Steve Zervas, DTE, Mike Krchmar, EES Plant Manager, and Rhianna, NTH. We discussed battery operations and recordkeeping.

Currently USS is using coal from its facility in Clairton Works and it is delivered by train which blocks the entrance and exit to the island. As such, EES coke orders are down dramatically. The battery is currently on a Koppers 9 push schedule and is only contracted to produce 500,000 tons of coke this year. The battery is permitted to produce 1.365MM tons per year.

I returned on August 18, 2016. I met with Brenna Harden and Steve Zervas. We discussed records and I reviewed the files. I did not observe any visible emissions from the PECS stack or the battery combustion stack. The road was being watered alongside the battery.

BYPRODUCTS PLANT (BPP)

We did not complete a walk though of this process during this inspection. This is an enclosed process. It is subject to LDAR monitoring through the various NESHAPs. Reports are submitted on a quarterly and semi annual basis. Siddock performs this monitoring.

TAR LOADING FACILITY

AQD did not inspect this process during this visit. This emission unit was not included in the existing ROP. It is operating under PTI 124-09. It will be included in the renewal. The TLF is located across the pushing side of the coke battery. The TLF allows EES Coke to ship out the tar produced in the by-product plant (BPP) to their customers by rail or by tank truck.

APPLICABLE RULES/PERMIT CONDITIONS EVALUATED

EUCOKE-BATTERY – 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 NOx tons per year limit. This is an increase from prior limit of 959.5 tons per year. Based on 12 month time period ending in December 2015 for the MAERS report, emissions were 857.65 tons of NOx from the combustion stack.

3. IN COMPLIANCE. 563.5 NOx hourly limit as recorded by the CERMS. No excess emissions have been reported in the quarterly reports.

4. IN COMPLIANCE. 0.75 NOx lb/ MMBTU heat input. 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 NOx lb/MMBTU heat input 24 hr rolling. 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.

6. IN COMPLIANCE. 2.61 NOx pph from the PECS stack. Testing was conducted in December 2014. See TPU memo in file dated March 11, 2015 for a summary of the test report review. Worst case NOx emissions on an hourly basis, based on a three run average, was 1.84 pph. Next test is scheduled for September 2016.

7. IN COMPLIANCE. PM limit of 0.095 lbs/1000 lbs exhaust gas on combustion stack. Testing conducted in August 2014 and results were received on 9/17/2014. Results were 0.013 lb PM/1000 lb gas @50% excess air.

8. IN COMPLIANCE. PM limit of 0.012 gr/dscf on the combustion stack (excluding sulfates). Testing conducted in October 2013. Results were 0.002 gr/dscf.

9. IN COMPLIANCE. PM Limit of 25.7 pph on the combustion stack. Testing conducted in August 2014 and results were received on 9/17/2014. Results were 6.29 pph.

10. IN COMPLIANCE. PM limit of 9.7 tons per year from the PECS stack. For calendar year 2015, emissions from the PECS stack were 9.965.

11. IN COMPLIANCE. PM limit of 0.02 lb/ton of coke pushed on the PECS stack. Testing conducted in November 2014 and April 2015. Results were 0.006 lb PM/ton coke and 0.003 lb PM/ton coke pushed.

12. IN COMPLIANCE. PM10 limit of 73.3 pph on the combustion stack. This is a new limit. Stack test was performed in September 2015 and results were received on November 12, 2015. Based on reported results, PM10 emissions were 50.8 pph. Note, this report has not undergone TPU review .

13. IN COMPLIANCE. PM10 limit of 0.69 pph on the PECS stack. Testing in 2014 was inconclusive. See facility file for report. . Retest occurred in April 2015. 0.62 pph was the result.

14. IN COMPLIANCE. PM2.5 limit of 73.3 pph on the combustion stack. This is a new limit. Stack test was performed in September 2015. Based on reported results, PM2.5 emissions were 50.5 pph. Note, this report has not undergone TPU review.

15. IN COMPLIANCE. PM2.5 limit of 0.69 pph on the PECS stack. Testing in 2014 was inconclusive. See facility file for report. Retest occurred in April 2015. 0.62 pph was the result.

16. UNABLE TO DETERMINE. SO2 limit of 2,071 tpy based on a 12 month rolling time period. Unable to determine was chosen due to the amount of downtime with the CERMS over the last year. However, based on CERMS and methodology used to account for emissions during downtime, 12 month rolling time period ending in December 2015 was 1,826 tons from the combustion stack.

17. IN COMPLIANCE. SO2 3 hour average of 544.6. Some exceedances have been reported in the quarterly EER's and a violation notice(s) were issued. At this time, there does not appear to be ongoing non compliance.

18. IN COMPLIANCE. SO2 limit of 0.702 lb/1000 scf of COG on a 1 hr average. One exceedance was reported in the 1st quarter of 2015 and a violation notice was issued. At this time, there does not appear to be ongoing non compliance.

19. IN COMPLIANCE. VOC limit on 43.1 pph for the combustion stack. Testing occurred in October 2013. Results were 7.99 pph VOC. Testing also occurred in September 2015 and results were 19.5 pph.

20. IN COMPLIANCE. VOC 0.0956 lb/MMBTU limit. This is a new limit for the combustion stack. Stack test was performed in September 2015. Based on reported results, VOC emissions were .0391 lb/MMBTU

heat input. Note, this report has not undergone TPU review.

21. IN COMPLIANCE – VE limit of 20% 6 minute average on the combustion stack. No visible emissions were observed during the inspection. For 2016, no exceedances of the 20% 6 minute average have been reported in the quarterly reports.

22. IN COMPLIANCE. VE limit of 15% on a 6 reading average of the PECS stack. No visible emissions were observed during the inspection.

23-28. IN COMPLIANCE. These are limits, in terms of % leaking on a daily basis, found in the state Part 3 rules. Facility has not reported an exceedance of these limits.

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 June 2015 – May 2016 was 1,344,268 in November 2015 and 117,192 tons per month in May 2015.

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 June 2015 - May 2016 was 700,944 in January 2016.

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 June 2015 – May 2016 was 605,564 in December 2015.

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 with a maximum sulfur content of 15ppm.

6. IN COMPLIANCE. TDS of quench water shall not exceed 800 mg/liter. 3 samples minimum collected per week. State rule 336.2033 actually 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 January 22, 2015 and approved by AQD.

2. IN COMPLIANCE. Volatile matter in coke shall not exceed 0.94% by weight based on a 12 month rolling average. Based on records provided, while some daily averages are above this value, the 12 month rolling volatility is below this level. Facility tests for volatility for quality purposes as well.

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). In 2015, EES sent 721,494 MMBTU off site according to attached response.

IV. DESIGN/EQUIPMENT
1-4. IN COMPLIANCE. A Violation Notice was issued in October 2015 due to going issues with the bypass/bleeder flare system. Electronic igniters do not appear to be working properly on a consistent basis. Detailed response was provided and much work was reportedly performed on the flares. From January through April 2016, all flare activations have been ignited. At this time, it appears the problem is not ongoing so compliance has been chosen. PECS baghouse (not including capture system) and quench tower appear to be maintained properly based on records provided.

5. IN COMPLIANCE. Permittee shall only use acceptable make up water. Make up water is mill water. I believe it meets that definition in terms of "water from any of these sources (i.e. river), that has been used only for non-contact cooling or in water seals".

6. IN COMPLIANCE. Pressure drop monitoring occurs on a continuous basis via a pressure drop gauge. See attached example. I did not request calibration records at this time.

V. TESTING
1. IN COMPLIANCE. Permittee shall test combustion stack every two years. Prior test was conducted in 2013 and 2015. Next test is due in 2017.

2. IN COMPLIANCE. Permittee shall test PECS stack every two years. Prior tests were conducted in December 2014 and June 2012. Next test is scheduled for September 2016.

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

4. DID NOT EVALUATE – I did not request records of volatility of coke at this time.

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. NOT IN COMPLIANCE. CERMS shall be maintained and operated in a satisfactory manner. This system was the subject of a recent enforcement action and Consent Order AQD No 57-2014. Through this order, various improvements were made to the CERMS. However, downtime continues to be an issue; mostly related to issues with the flow monitor. A violation notice was recently issued by TPU staff for the 2016 2nd quarter excess emissions report which has not yet been resolved.

4. NOT IN COMPLIANCE. Flow monitoring system shall be maintained and operating in a satisfactory manner. This system was the subject of a recent enforcement action and Consent Order AQD No. 57-2014. . Through this order, various improvements were made to the CERMS. However, downtime continues to be an issue; mostly related to issues with the flow monitor. A violation notice was recently issued for the 2016 2nd quarter excess emissions report by TPU staff which has not yet been resolved.

5. IN COMPLIANCE. Permittee shall keep continuous opacity monitor records. Records are available.

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

7. PENDING. Required NOx emission records are being maintained. However, AQD and EES are still working to agree on the calculation methodology.

8. PENDING. Required SO2 emission records are being maintained. However, AQD and EES are still working to agree on the calculation methodology.

9. PENDING. Required SO2 emission records are being maintained. However, AQD and EES are still working to agree on the calculation methodology.

10. IN COMPLIANCE. Records were presented during the inspection. Did not request records of non-certified VE's of the PECS baghouse during a minimum of one push are required weekly.

11. DID NOT EVALUATE. Did not request records of certified VE's of the PECS baghouse.

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

13. IN COMPLIANCE. Pressure drop is continuously recorded. Sample of records are attached. No pressure readings outside of the normal range during processing have been observed. The normal range is 0.3 – 7 in. w.c. according to the July 1, 2015 O&M plan.

14. IN COMPLIANCE. Inspection of the PECS baghouse is required once per month. From May 2015 – August 2016, inspections were performed on time.

15. IN COMPLIANCE. Inspection of the baffles is required once per month. From May 2015 – August

2016, inspections were performed on time.

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 (May 2015 – May 2016) were provided. See attached response.

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. See Response: #3 (for fuel usage and heat input and coke production rate). BTU content is an assumed constant of 500 BTU/scf.

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 were provided and are attached. Did not request records of COG generated per ton of dry coal at this time.

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 available upon request.

20. DID NOT EVALUATE. I did not request flare inspection records at this time. Records of inspections of the flare and automatic ignition system once every 6 months. Log of corrective actions taken shall be maintained.

21. IN COMPLIANCE. Daily records of overpressure of the bleeder flare system. Records are maintained and bleeder openings are emailed to AQD. Records contain time, duration, and reason for opening. See attached.

22. IN COMPLIANCE. Shall maintain record of the analysis of each shipment of No 2 fuel oil. Purchase records with sulfur content from vendor are maintained.

VII. REPORTING
1. IN COMPLIANCE. Reports of bleeder openings have been received in a timely manner.
2. PENDING. 1 hr SO2 emissions quarterly reports are being received in the timely manner. AQD and EES are working to agree upon the appropriate calculation methodology.

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.

IX. OTHER. NESHAP L and 5C are contained in later sections of the PTI.

EUCOKEBYPRODUCT – DID NOT EVALUATE AT THIS TIME.

EUMATERIALS
I.1&2 IN COMPLIANCE. Visible emissions limits of 10% opacity on a 6 minute average for the coal bin vents and the mixing building baghouse. I observed both of these emission points during the inspection and I did not see any visible emissions. These are also being read periodically by the VE reader.

III.1 PENDING. A fugitive dust plan was submitted within the required time period. However, it did not contain sufficient information to accept the report. Changes to the fugitive dust SIP consent order require the submission of specific information as outlined in the CO. Awaiting this additional information from the facility to demonstrate the changes requested will result in equivalent or better fugitive dust control.

III.2 IN COMPLIANCE. An updated MAP was submitted on January 22,2015 for the mixing building baghouse and approved. See facility file.

IV. IN COMPLIANCE. A pressure drop gauge is installed at the mixing building baghouse

VI.2 and 3 IN COMPLIANCE. Monitor and record amount of chemical dust suppressant used in coal crushing and screening and coke screening buildings on a monthly basis. Monthly records of the time and duration of chemical dust suppressant system malfunction. Amount of suppressant used is being

recorded. Example is attached.

VI.4. IN COMPLIANCE. Daily non certified VE's on the mixing building baghouse and coal bin vents. If VE's are observed, a certified reading shall be performed. According to the VE reading, Robert Johnson, he has not observed any VE's from either emission point.

VI.5 DID NOT EVALUATE. Did not request records of daily pressure drop across the mixing building baghouse at this time.

IX.1 IN COMPLIANCE. Shall comply with fugitive dust plan in SIP CO 27-1993. Facility has certified compliance with dust plan quarterly. Spot check of records while on site indicates compliance. Sample records are attached.

FGMACT L
I.2 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. A violation notice was issued in the past year. Based on response provided, 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. At this time, compliance is chosen. However, this will be reevaluate once battery resumes normal operations and is not on extended coking time which will result in more frequent maintenance events.

IV.1 IN COMPLIANCE. See IV 1 above.

FGMACTCCCCC/MACT 5C
I.1 IN COMPLIANCE. PM limit of .02 lb/ton of coke pushed. December 2014 test results were 0.006 and April 2015 were 0.003.

I.2 IN COMPLIANCE. Based on the COMS data, and as reported quarterly in the Excess Emissions Reports (EER), no exceedances of the daily average 15% opacity for a battery on normal coking have been reported or 20% on extended coking.

II. MATERIAL LIMITS
1 IN COMPLIANCE. TDS testing results for the quench water are all below 1,100 mg/liter. This is based on a composite sample of 5 daily samples. Records to indicate daily samples are being taken were presented.

III PROCESS/OPERATIONAL
1& 2. IN COMPLIANCE. Permittee shall comply with work practice standards for fugitive pushing emissions and soaking. Compliance is demonstrated through training. Training materials and attendance logs were provided. At this time, c, d and e of this condition were not evaluated as I am unsure how compliance should be demonstrated.

3. Shall comply with the following for quench towers:
   a.IN COMPLIANCE. Demonstration provided showing uncovered cross sectional area less than 5%.
   b.IN COMLPLIANCE. Baffles washed every 6th quench cycle and are washed every day regardless of temperature. The PLC activates the washing.
   c.IN COMPLIANCE. Baffles inspected monthly and monthly checks for blockage as well
   d.IN COMPLIANCE. No baffles needing repair were identified.

4. IN COMPLIANCE. Permittee shall comply with the general O&M requirements for the battery. Must prepare and operate at all times according to a written operation and maintenance plan for the general operation and maintenance of new or existing by-product coke oven batteries. Each plan must address, at a minimum, the elements listed in paragraphs (b)(1) through (6) of this section. (1) Frequency and method of recording underfiring gas parameters. (2) Frequency and method of recording battery operating temperature, including measurement of individual flue and cross-wall temperatures. (3) Procedures to prevent pushing an oven before it is fully coked. (4) Procedures to prevent overcharging and undercharging of ovens, including measurement of coal moisture, coal

bulk density, and procedures for determining volume of coal charged. (5) Frequency and procedures for inspecting flues, burners, and nozzles. (6) Schedule and procedures for the daily washing of baffles. Procedures exist. See attached example of parameters that are tracked and recorded to indicate compliance with this condition.

5. UNABLE TO DETERMINE. Permittee shall maintain and operate at all times according to the O&M plan for the capture system and control device. Part of the O&M plan is to inspect the capture system monthly and repair defects within 30 days. Based on the records provided, repairs were not completed within 30 days. The records have been updated since the prior inspection with notes written on the record that the determination was made that the "hole" was not affecting the capture system. More discussion is needed with EES Maintenance to understand how this determination is being made. I will request this information.

6. DID NOT EVALUATE. Permittee shall implement and maintain an SSM plan. Did not evaluate whether this plan has been implemented.

IV DESIGN/EQUIPMENT

1. IN COMPLIANCE. Documentation has been previously provided to demonstrate that the bag leak detector meets the requirements in the MACT and the sensitivity and range have not been adjusted since the initial establishment. According to Ms. Harden, an alarm is generated from an instantaneous reading above the set point.

V. TESTING

1. IN COMPLIANCE. PECS baghouse stack shall be tested twice every 5 years. Testing was conducted in 2012 and 2014. Sampling was only conducted during pushing. Next test is scheduled for September 2016.

2. IN COMPLIANCE. Permittee uses a COMS to determine compliance with opacity limits

3. DID NOT EVALUATE. Sampling of TDS of the quench water based on methods for coke oven quench towers in 63.7325. Did not evaluate at this time whether all parts of the methodology are being followed.

VI. MONITORING/RECORDKEEPING

1a. IN COMPLIANCE. Documentation was previously provided to demonstrate that the bag leak detector meets the requirements in the MACT and the sensitivity and range have not been adjusted since the initial establishment. See Appendix.

1b. IN COMPLIANCE. PECS baghouse monitoring – pressure drop, dust removal, compressed air supply, bag cleaning mechanism, quarterly visual inspection of interior, quarterly fan inspection are being conducted.

2. IN COMPLIANCE. Permittee shall monitor and collect data for combustion stack opacity, PECS stack bag leak detection readings, and PECS baghouse fan amps to demonstrate continuous compliance. All parameters listed are continuously monitored and recorded. See attached example of records.

3. IN COMPLIANCE. Daily average opacity has not exceeded 15% as determined by the COMS. This is reported quarterly in the EER.

4. IN COMPLIANCE. TDS content is below 1100 mg/l as determined by the sampling results provided. Also, the TDS content is determined weekly per the records.

5. a.1 IN COMPLIANCE. 4 pushes a day are being read and every oven has been read once every 90 days.
b. Records of work practice standards for soaking. IN COMPLIANCE related to training of workers and procedures for dampering off ovens. Did not evaluate whether facility has documentation related to soaking emissions events.
c. IN COMPLIANCE. See other identical condition regarding the quench tower.

6. IN COMPLIANCE and PENDING. For 6.a and b.ii, part of the O&M plan is to inspect the capture system monthly and repair defects within 30 days. Based on the records provided, repairs were not completed

within 30 days. See explanation above for III.5 For the remainder of this condition, records of corrective actions for a BLD alarm were provided and appear sufficient (see attached), baghouse conditions related to 63.7331(a)(1)-(8) were provided during the inspection and in Appendix L and M. Current O&M plans are maintained and available per condition d. I did not request copies of prior plans at this time.

7. IN COMPLIANCE. Based on a spot check of records during the inspection, it appears that the permittee is maintaining the required records. Permittee must maintain compliance records. Cannot certify that all records are maintained by the facility at this time.

VII.REPORTING

1. **IN COMPLIANCE. 5C reports appear to be complete now.**

2. **DID NOT EVALAUTE. Did not review all notifications that have been submitted for MACT 5C at this time.**

COMPLIANCE DETERMINATION

At this time of the inspection, EES Coke is not in compliance with all of the conditions evaluated above as there are ongoing issues with CERMS downtime. A recent violation notice was already issued by TPU staff.

NAME Katie Kobb DATE 9/22/16 SUPERVISOR W. M.