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SOP Owner	M. Paul	**Approval**	R. Kalinowsky

Standard Operating Procedure – Observation of Coke Oven Charging Operation

1. Purpose

The purpose of this SOP is to define how to properly read emissions from coal charging on the battery top for EES Coke Battery LLC and document the inspections.

2. Scope

This document is intended to give a description on how to properly read, document, calculate, and report emissions from coal charging on the battery top at EES Coke Battery.

3. Responsibilities

Sidock field personnel are responsible for implementing this procedure. Only field personnel certified to USEPA Method 303 shall observe, document, calculate, and report charging operations.

4. PPE Requirements

The following PPE is required for personnel responsible for implementing this procedure:

1. Standard Battery PPE (leather gloves; FR clothing; safety hood; hard hat; spoggles or safety goggles; radio; metatarsal safety boots; hearing protection; CO detector; and half-face respirator).

5. Required Equipment

The following equipment is required to implement this procedure:

1. Accumulative-type stopwatch or timer with unit divisions of at least 0.5 seconds.
2. Calculator
3. Clipboard

6. Communication

1. Field Personnel shall sign into the log book at the Battery Foreman's Office before going to the battery top.
2. Field Personnel shall to speak to the Battery Foreman or Team Leader regarding any safety issues or other events that may affect the completion of this task before going to the battery top.
3. Field Personnel shall obtain a radio tuned to Channel #2 and have it on their person.

4. If a reading cannot be obtained for any reason, Field Personnel shall immediately inform EES Coke Environmental personnel via text.
5. If emissions from any one charge exceed 10 seconds, Field Personnel shall immediately inform the Battery Foreman / Team Leader verbally and the EES Coke Environmental staff by text. Record the names of EES personnel notified.
6. If emissions from the first three (3) charges observed for the day total 30 seconds or more, Field Personnel shall immediately notify the Battery Foreman / Team Leader verbally and the EES Coke Environmental staff via text. Record the names of EES personnel notified.
7. If the sum of the five (5) consecutive charges exceeds 55 seconds, Field Personnel shall immediately inform the Battery Foreman / Team Leader verbally and the EES Coke Environmental personnel by text. Record the names of EES personnel notified.

7. Safety Requirements

1. Field Personnel must be accompanied by the Battery Foreman or Team Leader when working on top of the battery.
2. All PPE must be properly donned.
3. Be aware of lids and flue caps. They are extremely hot and are a tripping hazard.
4. Be aware of the Larry Car. An alarm sounds when the Larry Car is in motion to alert personnel on top of the battery. Proceed to or stay within the yellow walkway to avoid being hit by the Larry Car when it moves.
5. Do not walk backwards.

8. Procedure

1. Charging observations must comply with USEPA Method 303 and be in accordance with the Crowder Environmental Associates Method 303 Determination of Visible Emissions from By-Product Coke Batteries Classroom Course Manual.
2. Field Personnel shall document charging observations by completing the Method 303 Charging Certification Form (Form A-1).
3. Field Personnel must measure the time visible emissions are released from five (5) consecutive complete charges once each day, 7 days per week.
4. If the observer's view becomes obstructed during the observation of a charge, Field Personnel shall stop the timer, record the accumulated time for the charge and document the charge as an "incomplete charge" on the Method 303 Charging Certification Form (Form A-1) and proceed to read additional charges until five complete charges are observed. An incomplete charge may be used as one of the five (5) consecutive charges if it is not possible to obtain five complete charges and one of the observed complete charges has a lower visible emission time than the incomplete charge.

5. If Field Personnel are unable to read five (5) consecutive charges, they must restart the observations until five consecutive charges are read. Note: Three (3) or four (4) complete charges may be used as a daily set of charges if it is not possible to obtain five (5) charges, provided the number of charges observed for the 30-day averaging period is not less than 145. (US EPA Method 303 Section 11.1.8)
6. Field Personnel shall position themselves such that they can see the entire charging system (i.e., Larry car hoppers, drop sleeves, slide gates, and the charging ports and standpipe caps on the oven being charged and any assist oven) when observing a charge (typically 8-12 ovens away from Larry car).
7. The charging operation begins when coal begins to flow into the oven and ends when the last lid on the oven being charged is recapped. The charging operation may last several minutes.
8. Field Personnel will begin reading once the telescopes are attached to the ports, and stop reading once the u-tube is off the offtakes and the charging lids are recapped. Field Personnel will start and stop the accumulative-type stopwatch or timer as necessary to time only when visible emissions appear at the source during the charging operation.
9. Visible emissions due to charging are possible at any time during the charging operation; however, Field Personnel shall only time the puffs of visible emissions as they are released at the source. **Field Personnel shall not time the visible emissions as they dissipate.** Potential points of visible emission releases during the charging operation include: Larry car hoppers, Larry car drop sleeves (telescopes), Larry car slide gates, charging ports on the oven being charged, open standpipe caps on the oven being charged, charging ports on assist oven, and open standpipe caps on assist oven. Visible emissions from closed standpipe caps, burning or smoldering coal, fugitive emissions from doors or the leveler bar, or emissions from hopper (if already timed at drop sleeve) are not considered charging emissions. Simultaneous visible emissions from multiple points in the charging system are timed as one visible emission and overlapping visible emissions are timed as continuous visible emissions. If the observer cannot safely and with reasonable confidence determine that visible emissions are from charging, the emissions shall not be counted as charging emissions. (Coal that falls around the charging port during charging may smolder and emit a white or gray plume.) The total elapsed time (in seconds) that emissions are visible during each charge shall be rounded to the nearest 0.5 seconds and recorded on the Method 303 Charging Certification Form (Form A-1).
10. Field Personnel shall document the sources of any observed releases (e.g., which Larry car hopper, which drop sleeve, which slide gate, which charging port, etc.). Attached Figure 1 illustrates the naming nomenclature to be used in identifying the emission sources.
11. If emissions from any one charge exceed 10 seconds, Field Personnel shall immediately inform the Battery Foreman/ Team Leader verbally and the EES Coke Environmental staff by text. Record the names of EES personnel notified.

12. If emissions from the first three (3) charges observed for the day total 30 seconds or more, Field Personnel shall immediately notify the Battery Foreman / Team Leader verbally and the EES Coke Environmental staff via text. Record the names of EES personnel notified.
13. Once five (5) consecutive charges are observed, sum the time of visible emissions from the five (5) charges and record on the Method 303 Charging Certification Form (Form A-1).
14. If the sum of the five (5) consecutive charges exceeds 55 seconds, Field Personnel shall immediately inform the Battery Foreman / Team Leader verbally and the EES Coke Environmental personnel by text. Record the names of EES personnel notified.
15. The following information shall be documented on the Method 303 Charging Certification Form (A-1):
    - The name of the inspector.
    - The date of the inspection.
    - The crew.
    - The name of the battery foreman.
    - The start time for the 5 consecutive charges.
    - The stop time for the 5 consecutive charges.
    - The number of each oven observed.
    - The start time of each charge.
    - The stop time of each charge.
    - The number of seconds that visible emissions are observed during each charge.
    - The aggregate number of seconds that visible emissions are observed during the five consecutive charges.
    - The location of where leaks are observed (e.g., which Larry car hopper, which drop sleeve, which slide gate, which charging port, etc.)
    - The Larry car used for each charge.
    - Any issues observed during charging.
    - The name and signature of the EES Coke personnel notified of observed issues, if applicable.
    - The date and time that EES Coke personnel were notified of observed issues during charging, if applicable.
    - Description of corrective actions implemented to address issues identified during the charging observations (e.g., changing Larry cars, kao wool applied, respotting Larry car, etc.).
16. Field personnel shall review the completed Method 303 Charging Certification Form (Form A-1) and confirm that all of the items specified in Step 15 above are documented on the form.
17. Field personnel shall document their review of the daily Method 303 Charging Certification Form (A-1) by initialing each element specified for the Charging Form on the Field Technician QA/QC Form for Daily Method 303 and Push-Travel Inspection Reports (Form A - Tech QC).

18. The Field Technician QA/QC Form for Daily Method 303 and Push-Travel Inspection Reports (Form A - Tech QC) shall be updated by Field Personnel daily prior to the distribution of the daily reports.
19. The completed Method 303 Charging Certification Form (A-1) shall be included in the daily inspection report and distributed in accordance with the requirements for the daily inspection reports specified in ENV-EES-YY.
20. **Once Field Personnel have distributed the completed Method 303 Charging Certification Form (A-1) to the Sidock Project Manager or their designee for QA/QC review, Field Personnel shall not modify any data on the hard copy form without consultation and coordination with the Sidock Project Manager or their designee. Failure to follow this requirement may result in conflicting data between the hard copy records and the electronic recordkeeping system maintained by the Project Manager or their designee. Conflicting data may result in incorrect compliance calculations.**

9. References

1. USEPA Method 303
2. Crowder Environmental Associates, Inc., Method 303, Determination of Visible Emissions from By-Product Coke Oven Batteries, Classroom Course Manual

10. Attachments

- Method 303 Charging Certification Form (Form A-1) (example)
- Diagram of Charging System

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Method 303 Charging Certification Form
Form A-1

EES Coke Battery LLC Contact Information

Security/Emergency/Medical: 313-216-2499

Environmental Engineer (mobile): 734-320-5255

Facility Name: EES Coke Battery LLC

Inspector's Name:_____ **Date:**_____

Battery No. 5 **Crew:**_____ **Battery Foreman:**_____

Start Time _____ **End Time** _____

Charge Number	Oven Number	Start Time	Stop Time	Visible Emissions (sec)	Comments
1					
2					
3					
4					
5					
		Total (Seconds)			

Larry Car #

Notes:

Any Issues? Describe _____

EES Person Notified of Issue _____

Signature_____ **Date / Time** _____

Corrective Action Taken_____

_____

_____

_____

EES Coke Battery, LLC
No. 5 Battery
Components of Charging System
Looking East