	Department - Environmental	**SOP #**	ENV-EES-06
		Revision #0	
		Implementation Date	XX/XX/202X
Page #	1 of 5	**Last Reviewed/Update Date**	12/11/2020
SOP Owner	M. Paul	**Approval**	R. Kalinowsky

Standard Operating Procedure – Door Inspection

1. Purpose

The purpose of this SOP is to define how to properly inspect the doors on the battery for EES Coke Battery LLC.

2. Scope

This document is intended to give a description on how to properly read, calculate, and report emissions from doors 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 door leaks.

4. PPE Requirements

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

1. Standard Battery PPE (leather gloves; FR clothing; hard hat; safety glasses; radio; metatarsal safety boots; hearing protection; CO detector; ½- face respirator on person).

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.

6. Communication

1. Field Personnel must confirm if any ovens are inoperable with the Battery Foreman/ Team Leader.
2. Field Personnel shall have a radio tuned to Channel #2 on their person.
3. If a reading cannot be obtained for any reason, Field Personnel shall immediately inform EES Coke Environmental personnel via text.
4. If the percent of doors leaking for the daily traverse is calculated to be over 5.0%, Field Personnel shall immediately inform EES Coke Environmental personnel by text, and Battery Foreman/ Team Leader verbally.

7. Safety Requirements

1. When traversing the side of the battery, watch for the moving pushing machine. Stay on the walkway.
2. When traversing the coke side of the battery, be aware of your surroundings on the catwalk. Processing operations may result in the rapid and unexpected release of steam and hot gases that can engulf areas of the catwalk.

8. Procedure

1. Door observations must comply with USEPA Method 303 following the standards according to the Crowder Environmental Associates Method 303 Determination of Visible Emissions from By-Product Coke Batteries Classroom Course Manual.
2. Field Personnel must observe doors each day, 7 days per week.
3. Door observations are a timed task. Traverses are valid if the elapsed times do not exceed 4 seconds per door plus 10 seconds per leak, shown by the following:

   For doors (in secs): (4 secs/door x 85 ovens x 2 doors/oven)
   + (10 secs/leaking door x number of leaking doors)

4. Field Personnel shall document door observations by completing the Method 303 Door Certification Form (Form A-2).
5. When starting the traverse, record the start time and start the accumulative-type stopwatch or timer.
6. Traverse down one side of the battery, recording any emission leaks and the locations of the leaks.
7. If there are any doors blocked during the traverse, record those on the form.
8. If Field Personnel encounter an impediment along the traverse path, the accumulative-type stopwatch or timer shall be stopped as the personnel navigates around the impediment and restarted once the impediment is cleared.
9. Stop the accumulative-type stopwatch or timer when the far end of the battery is reached and record the end time and the elapsed time for the traverse.
10. Proceed to the other side of the battery and repeat steps 4-9 for the doors on that side of the battery.
11. Add the elapsed times for the traverses of the coke side doors and the push side doors. If the combined time is less than the time defined in Step 3, the observation/run is valid.
12. If the actual traverse time exceeds the allowed traverse time, the traverse is not valid and Steps 5-11 must be repeated until the actual traverse time is less than or equal to the allowed traverse time as defined in Step 3.
13. Calculate the percent leaking doors as defined by the following formula:

$$\% \text{ Leaking Doors} = \frac{\text{Leaking Doors Observed} \times 100}{[170 - (\text{Number of Inoperable Ovens} \times 2) - \text{Number of Doors Not Observed}]}$$

Note: If doors to an inoperable oven are also temporarily blocked, account for them as inoperable oven doors in the calculation and do not double count them by also including them as blocked doors.

14. If the percent leaking doors for the daily traverse is calculated to be greater than 5.0%, Field Personnel must immediately notify the DTE Environmental Engineer by text, and Battery Forman and /or Team Leader verbally. Note: 5% leaking doors is typically equivalent to 8 or more doors leaking when there are five (5) or fewer inoperable ovens.
15. The following information shall be documented on the Method 303 Door Certification Form (Form A-2):
    - The name of the inspector.
    - The date of the inspection.
    - The number of inoperable ovens and the oven numbers.
    - The crew.
    - The name of the battery foreman.
    - The start time for the traverse of the push side doors.
    - The stop time for the traverse of the push side doors.
    - The start time for the traverse of the coke side doors.
    - The stop time for the traverse of the coke side doors.
    - The oven numbers of any leaking doors.
    - The location and zone of any door leak.
    - The oven numbers of temporarily blocked push side doors.
    - The oven numbers of temporarily blocked coke side doors.
    - The number of temporarily blocked push side doors (after accounting for inoperable ovens that may also be blocked).
    - The number of temporarily blocked coke side doors (after accounting for inoperable ovens that may also be blocked).
    - The traverse time for push side doors in minutes and seconds.
    - The traverse time for coke side doors in minutes and seconds.
    - The total number of seconds for the traverse of the push side doors.
    - The total number of seconds for the traverse of the coke side doors.
    - The total traverse time for doors in seconds (i.e., the sum of the total number of seconds for the traverse of the push side doors and the total number of seconds for the traverse of the coke side doors).
    - The allowed traverse time is defined by the following formula:

      $$\text{Allowed Traverse Time (secs)} = 680 + (10 \text{ secs} \times \text{number of leaks})$$

    - Whether the traverse was valid (i.e., within the amount of time defined by the allowed traverse time calculation).
    - The percent leaking doors is defined by the following formula:

      $$\%\ \text{Leaking Doors} = \frac{\text{Leaking Doors Observed} \times 100}{[170 - (\text{Number of Inoperable Ovens} \times 2) - \text{Number of Doors Not Observed}]}$$

Note 1: If doors to an inoperable oven are also temporarily blocked, include account for them as inoperable oven doors in the calculation and do not double count them by also including them as blocked doors.

- Any issues observed during the door inspection.
- 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 the door inspection, if applicable.
- Description of corrective actions implemented to address issues identified during the door inspection.

16. Field personnel shall review the completed Method 303 Door Certification Form (Form A-2) 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 Door Certification Form (Form A-2) by initialing each element specified for the Door 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 Door Certification Form (Form A-2) 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 Door Certification Form (A-2) 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 Method 303 Determination of Visible Emissions from By-Product Coke Batteries Classroom Course Manual

10. Attachments

- Method 303 Door Certification Form (Form A-2) (example)

Sidock Group, Inc.
ENGINEERS • ARCHITECTS • CONSULTANTS • PROJECT MANAGERS

Method 303 Door Certification Form
Form A-2

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 **Total No. Ovens: 85** **Total No. of Inoperable Ovens:** _____

Crew:_____ **Battery Foreman:**_____

Push Side Start Time _____ / _____ Coke Side Start Time _____ / _____

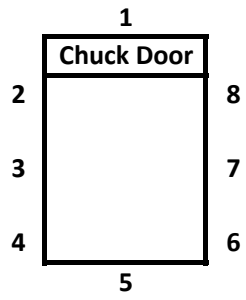
Push Side Stop Time _____ / _____ Coke Side Stop Time _____ / _____

PUSH SIDE				
Oven	Location			Zone
	D	C	M	

Temp. Blocked
_____ to _____

COKE SIDE				
Oven	Location			Zone
	D	C	M	

Temp. Blocked
_____ to _____



Push Side Traverse Time _____ **min** _____ **sec** **Coke Side Traverse Time** _____ **min** _____ **sec**

D = Door
C = chuck door
M = masonry

Total Traverse Time _____ **sec**

Allowed Traverse Time:

T = 680 + (10 sec x #leaks) = _____

Valid Run?	
Yes	No

$$\% \text{ Leaking Doors} = \frac{L_y \times 100}{D_t - D_i - D_{no}} = \frac{\_\_\_\_\_ \times 100}{170 - \_\_\_\_\_ - \_\_\_\_\_} = \_\_\_\_\_\%$$

Where: L_y = Leaking Doors Observed, D_i = Inoperable Ovens x 2, and D_{no} = Doors not observed

Notes

Any Issues? Describe _____

EES Person Notified of Issue _____

Signature_____ **Date / Time** _____

Corrective Action Taken_____