



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
RESEARCH TRIANGLE PARK, NC 27711

OFFICE OF
AIR QUALITY PLANNING
AND STANDARDS

08/17/2020

Mr. Jim Serne, PE
Principal Engineer
Air Measurements Group
TRC
1429 Rock Quarry Road
Raleigh, NC 27610

Dear Mr. Serne:

We are writing in response to your letter of July 20, 2020, on behalf of Century Aluminum of SC, Inc., requesting approval for use of Method 30B (40 CFR 60, Appendix A) as an alternative to Method 29 (40 CFR 60, Appendix A) to determine the mercury emission rate from the Anode Bake Oven (ABO) at their primary aluminum facility located in Mt. Holly, SC. The Office of Air Quality Planning and Standards is the delegated authority for approval/disapproval of major alternatives to test methods and procedures as set forth in 40 CFR 63.7(f), under which your request must be addressed.

As we understand it, Century Aluminum in Mt. Holly is subject to 40 CFR 63, Subpart LL, National Emission Standards for Hazardous Air Pollutants for Primary Aluminum Reduction Plants (Subpart LL). The emission limit for mercury from ABO at affected primary aluminum facilities is 1.7 $\mu\text{g}/\text{dscm}$ and is found in section 63.843(c)(4) of Subpart LL; the requirement to measure the mercury emissions using Method 29 is found in section 63.849 of the subpart. You explain that your company has tested the two ABO stacks at Century Aluminum for mercury emissions in the past using both Method 29 and Method 30B. You provide the following data showing that, even with extended sampling times (240 minutes), Method 29 yielded values below the detection limit of the method, while 120-minute runs yielded values above the detection limit of Method 30B.

Date	Test Method	Sampling Time (min)	Emission Rate ($\mu\text{g}/\text{dscm}$)
April 2013 North Stack South Stack	Method 29	240 240	<0.81 <0.81
Sept 2018 North Stack South Stack	Method 30B	120 120	0.32 0.30
Sept/Oct 2019 North Stack South Stack	Method 30B	120 120	0.52 0.35

You cite, as well, the following points in support of the use of Method 30B in this application:

- Method 30B, section 1.2, specifically states that it is intended for “relatively low particulate conditions (i.e., sampling after all pollution control devices)” and the ABO emissions are controlled by dry scrubbers and have low particulate matter emissions at the stack locations (less than 2 mg/dscm).
- Method 30B includes specific quality assurance/quality control criteria (QA/QC) to assure accuracy and validate the test results for each test program.
- The labor and other costs associated with conducting Method 30B are lower than those for Method 29 especially if extended test run durations are necessary to improve the Method 29 in-stack detection limit.

We have reviewed Subpart LL, the results of the previous mercury testing you conducted on the ABO stacks at Century Aluminum, as well as the anode bake oven mercury results that we received under the Information Collection Request for revision of Subpart LL. In consideration of the improved detection limits and test program-specific QA/QC criteria offered by Method 30B, and the fact that the ABO stack locations at Century Aluminum have the relatively low particulate matter emission levels required by Method 30B, we are approving the use of Method 30B in lieu of Method 29 for measuring mercury emissions from the two ABO stacks at Century Aluminum in Mt. Holly, SC with the caveats specified below:

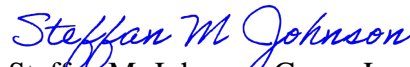
- A copy of this approval letter must be included with test plans and test reports required in conjunction with ABO testing under 40 CFR 63, Subpart LL.
- As per 40 CFR 63.7(f)(5), any future desire to deviate from these alternative method procedures will require another alternative method request.

We believe that Method 30B is acceptable for use to measure mercury emissions from other anode bake ovens subject to 40 CFR 63, Subpart LL, therefore, we will post this letter as ALT-139 on EPA's website (at www.epa.gov/emc/broadly-applicable-approved-alternative-test-methods) to announce that our approval of this alternative test method is broadly applicable to anode bake ovens for the purposes of meeting 40 CFR 63, Subpart LL subject to the following caveat in addition to those above:

- Consistent with its applicability statement, Method 30B may only be used at anode bake oven sampling locations with relatively low particulate conditions (i.e., sampling after all pollution control devices).

If you should have any questions or require further information regarding this approval, please contact Robin Segall of my staff at 919-541-0893 or segall.robin@epa.gov.

Sincerely,


Steffan M. Johnson, Group Leader
Measurement Technology Group

cc: Scott Courtney, Century Aluminum
John Cox, EPA/OECA/OC/MAMPD
Gerri Garwood, EAP/OAR/OAQPS/SPPD
Katy Lusky, EPA Region 4
David Monroe, SC DHEC
David Putney, EPA/OAR/OAQPS/SPPD
Michael Verzwylvelt, SCDHEC