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CC:
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February 25, 2020

Re: Response to Continental Aluminum LOV – 2/6/2020 (SRN: 6013 Oakland County)

This letter is meant to serve as a response to the LOV dated 2/6/20. Continental Aluminum continuously strives to meet and exceed all environmental requirements. Continental Aluminum looks forward to working with EGLE-AQD to close the issues that were identified in this LOV.

BACKGROUND

Continental Aluminum originally had a permit to run 2 Reverbs and 1 rotary furnace as a minor source of air emissions. In 2013, plant tested the flue stack and baghouse of RV-1 and the rotary furnace to obtain Permit 504-96F in 9/27/2013. This permit included a section referencing RV2 as “IDLE – requires testing to run”. In 2019 Continental Aluminum advised its plans to prepare RV2 for melting operations and set up the July and October 2019 stack testing to prove compliance for continued operations of both reverbs with a total production limit of 54,000 tons total between both reverb furnaces.

A NOCS report for RV2 was submitted in December 30, 2019 demonstrating compliance with Permit 504-96F. Each furnace has its each baghouse system and each separate stack for heating flue gases. All stacks met all limits listed on the permit. On 2/6/2020, Continental received a LOV outlining the following 2 issues:

1. RV2 flue + baghouse exhaust exceeds 1.4 lbs/hr PM2.5 emissions
2. RV2 fails to meet the COMS requirements on its baghouse.

The purpose of this letter is to outline the status on each item in order to set up a method to maintain full compliance operating RV2.

ISSUE REVIEW & ASSESSMENT

Issue 1 – High PM2.5 lb/hr emissions from the combination of both stacks (heater stack and baghouse)
Root Cause - Experience with PM2.5 limits and testing is relatively new especially when dealing with the “clean” flue (or heater stacks). This is the 1st time RV2 has been tested for PM2.5. All previous tests completed for the furnace for PM/PM10 and HAP’s have been passed. The baghouse test portion shows similar very low results on PM2.5 using the same baghouse technology. RV2 flue does not exceed the

PM2.5 limit, but it is high enough when combined the normal acceptable PM2.5 emissions from the baghouse (it is 1.7 lb/hr, slightly above the 1.4 lb/hr limit). Although the total PM2.5 emissions exceeded the lb/hr limit, the emissions analysis report shows it does not exceed the annual tons emissions limit of 4.8 tons for PM2.5 in 2019 due to limited RV2 production and would not expect to exceed the ton/yr limit at this time.

Per the permit, the PM2.5 limit that is in the permit is based on the Federal NAAQS Standard. It is our understanding that the PM2.5 lb/hr limits have generally been developed as a percent of the PM10 limit and that development may not work for aluminum smelters. Continental would like to understand the basis for the lb/hr limit and work with EGLE-AQD to potentially modify that limit to a limit that will still allow the state to comply with the NAAQS but provide a limit that is more representative of the facility operations. Continental is willing to assist with air dispersion modeling or providing additional information as necessary to assist in the review of the limit.

Proposed Corrective Action –

- 1) Continental proposes to meet with EGLE-AQD to discuss the PM2.5 lbs/hr permit limit and develop a plan to assess the limit and determine if the limit can be modified while still allowing the NAAQS limits to be satisfied. This will be formalized via a permit modification by mid-2020.
- 2) In the interim, Continental Aluminum proposes continuing operations of RV2 with an interim operating limit of 14,555 lbs/hr (or 43,665/3hr block).

This temporary limit is derived by factoring the present permit limit by the test results:

$$1.4 \text{ lbs/hr (PM2.5 permit)} / 1.7 \text{ lbs/hr (actual test results)} = 0.824$$

and multiplying by the throughput from the October 2019 testing.

$$17,674 \text{ lbs/hr} * 0.824 = 14,555 \text{ lb/hr}$$

This interim limit should allow the facility to comply with the lb/hr limit and still maintain a reasonable safety margin below the 4.8 tons /year of PM2.5 while the plant works with EGLE-AQD for the final permit changes. (Note this change will codified via Furnace label revisions dated 2020-March)

- 3) Additionally the plant will submit the revised emissions report format to include the worst case emissions from RV2 along with the Semi- Annual Report for review and audit.

Issue 2 – Failing to meet COMS requirements on RV2

Continental aluminum has no experience with the COMS requirements for continuous emissions measurements on the baghouse. It has been using Bag Break Detector (BBD) systems with no issues over 15 years on the RV1 and Rotary baghouses. The system was last calibrated and evaluated for full compliance in October 2019 by the OEM after the initial set-up in June 2019. Additionally we submitted a Monitoring and QA/QC plan for COMS / Bag Break Detector that included semi-annual calibrations this in the updated OMM for RV2 in NOCS report in December 2020. An initial audit shows no alarms or potential issues during the 4th quarter 2019 or 1st quarter 2020. **Upon further review, additional special QA/QC analysis and summary reports are required to be submitted to the MDEQ during the 1st year of COMS systems operation.**

Corrective Action-2

We regret the failure of the initial COMS report. It was thought the initial reporting requirement was covered thru the NOCS report that was submitted in December of 2019. It is the intention of Continental Aluminum that all future reports will meet the requirements outlined in the COMS supplement outlined in Appendix A of Air Permit 504-96F(Page 31). To that end, here is our action plan.

1. The plant will submit the December 2019 OMM, the initial COMS analysis report (both from the December 2020 NOCS report) and the proposed COMS Quarterly report format to the EGLE contact as provided by Mr. Iranna Konanahalli for to see if this meets the initial review requirements. This will be completed by the end of March.
2. Continental Aluminum has also engaged a 3rd party consultant to analyze and perform a QA/QC evaluation of the data collection, screens and alarm settings for the existing system for every quarter it operates in 2020. This report along with the Proposed Quarterly COMS report outlined in item 1 will be submitted to the MDEQ along with the Proposed Quarterly COMS report (outlined in items 1) by the end of April for the 1st quarter of 2020. This report and all future reports will continue to meet the extra reporting requirements outlined in the COMS supplement outlined in the Air Permit (Appendix A).
3. The plant will submit any catch up summary reports for the 2019 RV-2 / COMS operations as needed.

Please note the extra calibration and assessment and reporting requirements for the COMS system is much more expensive than what is required for the BBD systems. The plant may consider retrofitting the baghouse with the standard BBDS (Bag Break Detection System (technology similar to the other baghouses). The plant will submit a letter with an OMM revision to this change if it occurs after the final permit revisions are completed.

The state has asked that Continental aluminum review impact of raising the baghouse stack heights to reduce possible odor complaints in the area, especially since there is more projected home building in the area over the next 3-5 years. Continental Aluminum will evaluate this project in conjunction with the permit modification discussed in Item 1. Project Integration will be leading this effort with EGLE using the modeling plans agreed to modify the PM2.5 limits.

Continental Aluminum wants to continue meeting the Air Emissions standards even as they change over time. We hope these changes will meet the Air Emissions expectations of the State and our Air Permit requirements.

Regards,

Mark Buchner
President
Continental Aluminum