INTERA Incorporated
9600 Great Hills Trail, Suite 300W
Austin, Texas 78759 USA
512.425.2000

June 5, 2021

Mr. Gary Westbrook , General Manager
Post Oak Savannah Groundwater Conservation District
310 E. Avenue C
Milano, TX 76556

RE: Review of Alcoa 2021 Operating Permit Amendment Application for Drilling and Operating Permit No 0148 and Transport Permit for 25,000 AF/YR from the Simsboro Formation

Dear Gary:

INTERA has reviewed the two referenced permits. INTERA considers the Operations Permit Amendment Application to be administratively incomplete. Because the Transport Permit relies on information in the operation permit such as well screen intervals and model simulations, which are deemed to be incomplete, INTERA also considers the Transport Permit incomplete.

Table A-1 in Attachment A lists the deficiencies for considering the Operation Permit to be administratively incomplete.

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Sincerely,

Steven C Young

Steven Young, PG PE
Principal Geoscientist

Attachment A

INTERA considers the Operations Permit Amendment Application to be administratively incomplete for the three deficiencies listed below.

Deficiency 1. Lack of Proper Documentation of Well Screen Information. INTERA included the assumptions and deliverables required to be included in Alcoa's application for permits in Table 1 of their February 18, 2020 memo to POSGCD.. . On page 42 of the of the PDF copy of Alcoa's permit application includes INTERA's Table 1 which lists required deliverables. Reproduced below is the part of INTERA's Table 1 that lists Deliverable D-1 and D-2.

List of Deliverables for Groundwater Model Runs	
D-1	A table that contains the following information for the 32 historical wells: (1) latitude; (2) longitude; (3) current ground elevation; (4) depth of top of well screen below current ground elevation; and (5) depth of bottom of screen below current ground elevation. Similar information for the 24 approved wells to be drilled.
D-2	Documentation, as available, that the well screen information in Item D-1 is valid for the historical wells (e.g. driller report, geophysical log, and/or well setting report).

In Alcoa's application, Table 1-2 'Construction Summary for Operating Permit Wells (on PDF pages 28 & 29) provides the ground level, top of screen, and bottom of screen data. However, INTERA cannot locate the documentation that validates the tabulated values. Of most importance is the documentation for the screen information. Our review of the Appendix A "Existing Operating Permit Wells Construction Documentation" (page 80 to 294) does not contain the documentation to validate the tabulated screen intervals for following 11 wells: AT-1/AX(10)5, DP-S-A-3, DP-S-A-4, DP-S-A-5, DP-S-A-6, DP-S-A-7, F15 Sims, F2 Sims, F4 Sims, F9 Sims, and P-5.

Pending a submission of an administratively complete permit application, INTERA will use the screen data in conjunction of other relevant information to determine which aquifers the wells intersect based on the aquifer boundaries used by POSGCD to assign wells to aquifers.

Deficiency 2. Improper Assumption Regarding the Historical Permit for 15,000 AFY. The modeling scenarios provided in the permit have incorrectly assumed that Alcoa will be able to produce 40,000 after 2038. As stated in the aforementioned INTERA memo, the historical permit for 15,000 AFY ends in 2038. Consequently, the correct production amount after 2038 is 25,000 AFY unless Alcoa obtains an additional 15,000 AFY production permit in the Simsboro after the historical permits for 15,000 terminates in 2038.

Deficiency 3. Incomplete Information Regarding Description of Flow Measurements. The description of how metering would be performed to account for flow from the 32-dual use wells is incomplete. The additional information that is needed to complete the description are figures showing the location of all flow meters that will be used to measure production in each well and to measure flow for each permit. With regard to the metering, INTERA recommends that production is metered for each well, for the historical permit, and for the operating permit. Alcoa is proposing to not meter all production but rather meter only some production and then use algebra to calculate the production that is not metered.