

San Francisco Bay Conservation and Development Commission

375 Beale Street, Suite 510, San Francisco, California 94105 tel 415 352 3600 fax 888 348 5190

State of California | Gavin Newsom – Governor | info@bcdc.ca.gov | www.bcdc.ca.gov

Transmitted via electronic mail only.

December 20, 2022

Tim Oolman
Cargill, Inc.
7220 Central Ave
Newark, CA 94560
Email: tim_oolman@cargill.com

SUBJECT: Next steps and clarification of application filing requirements based on discussion at BCDC Engineering Criteria Review Board (ECRB) Meeting on November 16, 2022 (BCDC Permit Application No. 2021.003.00)

Dear Mr. Oolman,

Thank you for attending BCDC's Engineering Criteria Review Board (ECRB) meeting on November 16, 2022, regarding Cargill's BCDC Permit Application No. 2021.003.00. Upon further review and consideration of the ECRB's discussion and recommendations during the meeting, BCDC staff has clarified a list of action items (below) for Cargill to complete as application filing requirements for BCDC Permit Application No. 2021.003.00.

We expect Cargill to complete these items in 2023, concurrently with other outstanding permit application items identified in previous communications from BCDC, to allow BCDC staff to present the proposed project to the Commission for a hearing and vote by late 2023.

We look forward to discussing these items, including an estimated timeline for completion, at our next meeting on January 9, 2022:

1. **Conduct site specific borings / cone penetration tests (CPTs) and associated analysis of the P2-12 / P2-13 berms ("berms"), including on the berms and off the toes of the berms.**
2. **Provide site-specific surveys and cross-sections of the berms.**
 - a. Provide relevant elevations, including: of the berms (top, toe); adjacent marshes/sloughs; various water levels of the Bay (ordinary tides and 100-year storm levels); and levels of Mixed Sea Salt (MSS) materials inside the ponds.
 - b. Include cross sections of both settled and non-settled areas at various berm locations.
 - c. Specify freeboard on the inboard and outboard sides of the berms.

- d. Include information on the location, depth, status, and history of any borrow trenches adjacent to the berms. Are there borrow trenches that have been recently filled in by sedimentation, and therefore contain ultra-young (highly unconsolidated) Bay muds?
 - e. Include a time history of settlement on the berms.
- 3. History of P2-12 and P2-13 berms.**
- a. As part of its ECRB package submission, Cargill provided a report titled “Report of Levee Integrity Bittern Storage Facilities/San Francisco Bay Area, California for Leslie Salt Co.” dated April 1, 1986, by Purcell, Rhoades & Associates. The report provides valuable information on the extent of past coring, berm raising, and other repairs that had occurred on the P2-12 and P2-13 berms prior to the report. For example, it states that approximately 7,100 feet or 49% of the P2-12 berm had previously been cored. Please provide a description of any significant maintenance work that has occurred on the P2-12 and P2-13 berms, such as core compaction or raising of the berms, since that 1986 report was published. Wherever possible, please provide approximate work quantities and locations, including estimates of the overall percentages of the P2-12 and P2-13 berms that have been subject to compaction, raising, or other significant maintenance work since that 1986 report.
- 4. Static condition assessment.**
- a. Conduct a static condition assessment of the berms to analyze the influence of daily operations, routine tides, and seepage on berm stability.
- 5. Seismic and ecological risk assessments.**
- a. Conduct a seismic risk assessment to analyze and describe performance of the berms under a range of earthquake scenarios, including smaller earthquakes up to a maximum credible earthquake. Analyze any expected damage that may occur, and any expected associated release of MSS material into the environment. For each earthquake scenario, please also analyze that earthquake occurring simultaneously with a Base Flood Event (BFE). We understand this would be unlikely, but it is important to understand a full range of scenarios, including the worst-case scenarios, particularly given the potential ecological risks associated with a substantial breach and release of MSS material into the Bay.
 - b. Conduct ecological risk assessment to analyze expected ecological impacts that may occur due to release of MSS material into the environment, based on expected performance of berms during various earthquake scenarios.

- c. Also describe any expected impacts from any berm failures on adjacent communities / human developments.

6. **2nd Presentation to the ECRB.**

- a. The data and information gathered through Items 1 to 5 should be presented to the ECRB at a second meeting in 2023. Based on ECRB recommendations, further analysis or work to stabilize the berms may be required as a condition of the future permit.

Other issues

The following item will not be a filing requirement for your permit application but will likely be a special condition of your permit.

7. **Updated Sea Level Rise Risk Assessment.**

- a. During the ECRB meeting, some Board members expressed a need for further analysis of sea level rise risk on the berms, beyond what was conducted in the Sea Level Rise Assessment by AECOM in 2020. Specifically, the risk assessment should be updated to include analysis of storm wave run-up beyond stillwater levels, wave-induced berm erosion, and the risk of groundwater rise on berm stability, as discussed in the ECRB meeting. Any permit recommended for approval by the Commission may also include a special condition requiring sea level rise monitoring, and future adaptation measures based on the results of the risk assessment. We will work with you further to refine this requirement as we draft the staff report recommending approval of the permit application.
- b. While Items 1 through 6 above will focus specifically on the P2-12 and P2-13 berms, we expect that the condition for the updated sea level rise risk assessment would apply to the entire Cargill site.

Thank you for your attention to these matters. Please provide all responses to this communication over e-mail, as our staff primarily works remotely. Please do not hesitate to contact me with any questions at 415-352-3668 or schuyler.olsson@bcdc.ca.gov.

Sincerely,

DocuSigned by:



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SCHUYLER OLSSON

Senior Environmental Scientist (Specialist)
San Francisco Bay Conservation and Development Commission
375 Beale Street, Suite 510, San Francisco, California 94105
Tel: 415-352-3600 | Fax: 888 348 5190



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Email: info@bcdc.ca.gov | Website: www.bcdc.ca.gov

cc: Christine Boudreau, Boudreau LLC. (cboudreau@boudreaullc.com)
Susanne von Rosenberg, GAIA Consulting (susanne@gaiainc.com)
Connie Lee, Cargill, Inc (connie_lee@cargill.com)
Anniken Lydon, BCDC (anniken.lydon@bcdc.ca.gov)
Michael Ng, BCDC (michael.ng@bcdc.ca.gov)
Rafael Montes, BCDC (rafael.montes@bcdc.ca.gov)

SO/mm

