June 26, 2025 Via Email: *Peter.Ruttan@dtsc.ca.gov*

Pete Ruttan, P.G. 6830
Senior Engineering Geologist
Site Mitigation and Restoration Program – LLO/NCSU
Department of Toxic Substances Control
8800 Cal Center Drive
Sacramento, CA 95826

Subject: Comments on the Draft Removal Action Workplan (RAW): Extension of Covered Area: Chiquita Canyon Landfill prepared by CEC and dated May 2025

Dear Mr. Ruttan:

The California Department of Resources Recycling and Recovery (CalRecycle) Staff are providing this letter in response to your request for technical assistance reviewing the following document:

> *Draft Removal Action Workplan: Extension of Covered Area Chiquita Canyon Landfill;* dated May 2025; prepared by Civil & Environmental Consultants, Inc.

The Draft Removal Action Workplan (RAW) was prepared in response to the Imminent and Substantial Endangerment Determination and Order (ISE Order) issued by the California Department of Toxic Substances Control (DTSC) on April 2, 2025, regarding the Subsurface Elevated Temperature Event (SET) occurring at the Chiquita Canyon Landfill (the Landfill or Site).

The RAW specifically addresses relocation of the leachate Tank Farm 9 from the top of the CCL and Section 5.1.2(a) of the ISE Order, *Extension of Covered Area*. Approximately 45.9 acres of the northwest portion of the Landfill have been covered with a 30-mil thick high-density polyethylene (HDPE) textured geomembrane to improve landfill gas (LFG) collection, impede the inflow of oxygen and water into the waste mass, and improve control of odors and emissions. The geomembrane extension is needed because the SET Event has been detected outside of the covered 45.9 acres.

CalRecycle staff and Dr. Timothy Stark, as requested by CalRecycle, are providing the following comments for your consideration.

The following comments relate to Cell 8B, which is the interim location for Tank Farm 9 from the top of the Landfill:

1. The soil pad to support the tanks is approximately 40 feet thick and comprises approximately 400,000 cubic yards of soil from the Cell 7 borrow area. The 400,000 cubic yards may be an error but even compacting about 250,000 cubic yards of soil will be difficult to compact this large fill uniformly. As a result, Dr. Timothy Stark expects that differential fill settlement will occur below the relocated tanks, so the associated plumbing must be able to accommodate differential movements, e.g., flex hoses and coupling, which are also beneficial for seismic events.

2. Given the cost and difficulty of uniformly compacting 250,000 to 400,000 cubic yards, it appears the Cell 8B tank pad is actually a slope buttress because this slope is starting to be impacted by the SET Event and Geo-Logic Associates computed marginal factors of safety for this slope. As a result, CCL should add some contingencies to account for the potential movement of the slope and its impact on the relocated tanks under both static and seismic conditions.

3. CCL should provide new slope stability analyses for this south facing slope using failure surfaces that daylight above the interim Cell 8B Tank Farm to ensure adequate static and seismic factors of safety.

4. The opinion that the Cell 8B tank pad is a slope buttress is reinforced because CCL would have to excavate 250,000 to 400,000 cubic yards to recapture the disposal capacity that was filled with soil. Does CCL plan to excavate 250,000 to 400,000 cubic yards after the tank farm is moved to Cell 7? If so, how will the existing bottom liner system be protected during the excavation?

5. Hazardous tanks will be placed on the top tier of the tank pad, so if there is leakage, the hazardous liquid may reach the lower two tiers. As a result, the perimeter berm must be high enough to retain all hazardous liquids so that none can spill over to the lower two tiers. Did CEC limit the number of hazardous tanks so that liquid cannot overtop the perimeter berm?

6. It is beneficial that CCL is utilizing a double geomembrane system for the hazardous tanks, incorporating a leak detection zone. However, Dr. Timothy Stark is concerned about placing a 2 ft thick layer of rock on top of the bottom geomembrane with only an 8-ounce cushion geotextile. CCL should consider replacing the rock with at least one double-sided drainage composite (two geotextiles with a geonet in the middle) because this is a temporary installation, so the drainage composite(s) should not clog in a short period of time.

7. Dr. Timothy Stark disagrees that the settlement around Tank Farm 9 is due to the load imposed by the tanks. In his opinion, the rapid settlement around Tank Farm 9 is due to the SET Event moving towards this area.

8. The RAW should be signed by a registered professional engineer in the State of California.

The following comments relate to the expansion of the geomembrane cover:

9. CalRecycle staff suggest that the RAW be revised to include the details of the geomembrane's type (60 mill double textured) and color (tan) in Section 3.0 for consistency. Further, CalRecycle staff recommends that Table 1 (40 mil thick) and Table 2 (60 mil thick but smooth geomembrane) be removed as they will not be utilized for the cover expansion.

10. Section 3.1 of the RAW states, "The area shaded in blue on the figure is the area covered by the existing geomembrane. The area shaded in darker green (approximately 15 acres) is Chiquita's proposed initial deployment (Figure 3, provided below). The area shaded in lighter green is the potential expansion area divided into five-acre segments. Other segments will receive geomembrane if Chiquita's Reaction Committee of experts determines pursuant to its monthly determinations that those segments are within the reaction area boundary (based on data review).

    CalRecycle staff disagree with allowing CCL's Reaction Committee to determine if the remaining cover is required. CalRecycle Staff recommends that the entire facility be covered since there is no reaction barrier or break.

    Further, CalRecycle staff recommends that CCL should be directed to purchase geomembrane for the 15 acres in the dark green area and the 85 acres in the light green area. The ISE Order states that "Respondents shall install a DTSC-approved landfill cover on all areas of the Site which are not presently covered by a geomembrane and to which the reaction area has expanded or has the potential to expand." CCL should adhere to this directive, since there is a potential for the reaction to expand in this area.

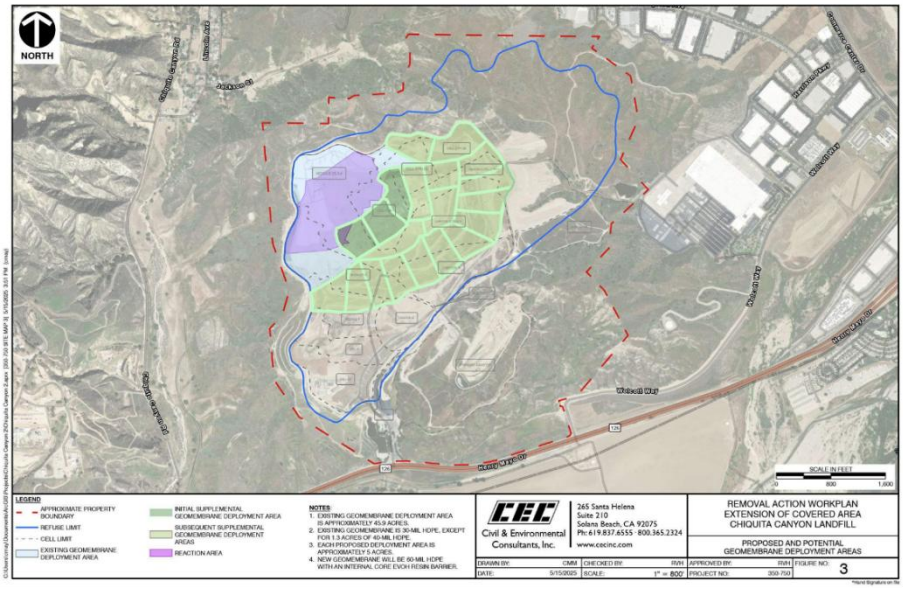


Figure 3. Proposed and Potential Geomembrane Deployment Areas

If you have any comments or questions, please contact Todd Thalhamer at (916) 341-6356 or email Todd.Thalhamer@Calrecycle.ca.gov.

Sincerely,

Todd Thalhamer, P.E.
Senior Waste Management Engineer
Engineering Support Branch

Cc Via Email:

Shikari Nakagawa-Ota, Los Angeles County Department of Public Health, (sota@ph.lacounty.gov)
Todd Sax, CalEPA (todd.sax@calepa.ca.gov)
Jeff Lindberg, California Air Resources Board (jeff.lindberg@arb.ca.gov)
Terrence Mann, South Coast Air Quality Management District (tmann@aqmd.gov)
Larry Israel, South Coast Air Quality Management District (lisrael@aqmd.gov)
Jenny Newman, Los Angeles Regional Water Quality Control Board (Jenny.Newman@waterboards.ca.gov)
Enrique Casas, Los Angeles Regional Water Quality Control Board (enrique.casas@waterboards.ca.gov)
Thanne Berg, Department of Toxic Substances Control (thanne.berg@dtsc.ca.gov)
Laura Friedli, United States Environmental Protection Agency (friedli.laura@epa.gov)