CHIQUITA CANYON
A Waste Connections Company

January 12, 2026

Via E-Mail
Thanne Berg, Deputy Director
Site Mitigation and Restoration Program
Department of Toxic Substances Control
8800 Cal Center Drive
Sacramento, CA 95826
Thanne.Berg@dtsc.ca.gov

Re: Chiquita Canyon, LLC Response to DTSC's December 26, 2025 Notice of Proposed Determination of Noncompliance with Imminent and Substantial Endangerment Determination and Order, In the Matter of Chiquita Canyon Landfill, Docket No. HSA-FY24/25-082

Dear Ms. Berg:

Chiquita Canyon, LLC (Chiquita) submits this response to the Department of Toxic Substances Control's (DTSC) December 26, 2025 Notice of Proposed Determination of Noncompliance with the Imminent and Substantial Endangerment Determination and Order (the Notice).[1] DTSC issued the Imminent and Substantial Endangerment Determination and Order to Chiquita on April 2, 2025 (the ISE Order).

Chiquita disagrees with each and every allegation of DTSC's Notice, including DTSC's characterization of Chiquita's draft Removal Action Workplans (RAWs) and its notice of intent to comply. DTSC claims that Chiquita has not complied with the ISE Order because it allegedly failed to submit three draft RAWs that DTSC deems adequate, pursuant to section 5.3 of the ISE Order.[2] Chiquita has fully cooperated with the ISE Order, including timely responding to each of DTSC's comments on the three draft RAWs and submitting revised draft RAWs. While the parties continue to review and revise the RAWs, implementation of all three draft RAWs is well underway, as described herein. DTSC also claims that Chiquita failed to provide notice of unequivocal intent to comply, pursuant to section 7 of the ISE Order.[3] DTSC's claim that Chiquita failed to provide an adequate notice of intent to comply is inconsistent with facts on the ground and the law, as further described herein. For the reasons described herein, Chiquita respectfully requests that DTSC

[1] This response also addresses unfounded allegations contained in DTSC's November 18, 2025 letter to Chiquita on Task 7, Extension of Covered Area. Because DTSC subsequently rescinded its November 18, 2025 letter via a November 21, 2025 letter on the same subject, Chiquita did not respond at that time. However, despite rescinding the November 18, 2025 letter, DTSC improperly relies on allegations and statements made in that rescinded letter as a basis for its Notice. Thus, Chiquita must now respond.

[2] DTSC Notice of Proposed Determination of Noncompliance, Dec. 26, 2025, at 1.

[3] *Id*. at 2.

withdraw its Notice, and, after reviewing Chiquita's extensive communications and data productions which are described in this letter, identify with specificity any remaining perceived deficiencies with the draft RAWs. Chiquita will then endeavor to provide further revisions to the draft RAWs promptly based on a reasonable response timeframe that is commensurate with the scope of the request.

Chiquita has made consistent, good-faith efforts to communicate proactively with DTSC and to address the department's requests for revisions to the draft RAWs. However, Chiquita cannot simply agree to DTSC's requirements without first determining that they are safe, reasonable, and feasible. Chiquita will not agree to undertake action that will significantly disrupt the substantial progress it has made on mitigating the underground reaction, also known as an Elevated Temperature Landfill (ETLF) event, particularly where DTSC provides no data or evidence supporting its requirements. For example, Chiquita has been diligently expanding the new 60-mil EVOH/HDPE geomembrane cover at the direction of DTSC and other agencies. To date, Chiquita has deployed 781,783 square feet of additional geomembrane cover. Chiquita only contests the recent requirement to cover the entire main canyon of the Landfill by August 31, 2026. Despite Chiquita providing data showing how the expansion of the cover on DTSC's timeline would significantly disrupt progress on reaction mitigation and evidence showing the construction timeline is simply not possible, DTSC has failed to provide any data or evidence to the contrary.

Similarly, with respect to the vertical barrier requirement, while Chiquita remains fully committed to protecting Cell 8A, Chiquita cannot agree to measures that lack scientific support, are technically impossible, and are more likely than not to set back the substantial progress Chiquita has already made mitigating the reaction. In short, Chiquita's approach to managing the reaction is backed by science and industry expertise with a focus on data analysis rather than speculation, whereas DTSC's approach to order first and (presumably) study later is ill-advised. DTSC's proposed barrier lacks even the most basic scientific and engineering underpinnings to support its construction. Further, DTSC has not performed any cost benefit analysis that adequately grapples with the substantial negative effects of even attempting, much less completing, a project unprecedented in scope. While the regulators, including DTSC, now acknowledge that alternatives to the barrier are warranted, Chiquita has not missed any deadlines previously established by DTSC for providing such alternatives. Chiquita cannot be penalized for failing to take an action of which it had no notice. DTSC's finding of noncompliance is, therefore, unreasonable.

DTSC's Notice is not designed to protect human health and the environment. Numerous aspects of the Notice make clear that it is punitive in nature and does not advance mitigation measures or a constructive dialogue between the parties. For example, the Notice contains significant inaccuracies and mischaracterizations of Chiquita's actions, the timelines, and the communications between Chiquita and the agencies. Chiquita details these inaccuracies in its response below.

DTSC's positions are also internally contradictory. DTSC issued a separate Notice of Proposed Determination of Noncompliance on December 12, 2025, alleging that Chiquita had failed to provide the raw data DTSC needed to evaluate the reaction and its impacts.[4] As detailed in the December 22, 2025 response, Chiquita strongly disagrees with these assertions.[5] Chiquita has provided unprecedented access to data, and DTSC's December 12, 2025 Notice is replete with factual inaccuracies and mischaracterizations. Chiquita provided more than 40,000 files on December 22 and 23, 2025. Before even downloading that data, DTSC issued this Notice, alleging that Chiquita has failed to take actions to contain the reaction when the department had just stated that it had inadequate information to evaluate the reaction.

With respect to the actions specified in the Notice, this is the first time DTSC has clarified several of its requirements. The ISE Order provides only high-level directions on mitigation measures, leaving the specific details to be developed in the RAWs. As described below, on several occasions, when Chiquita raised concerns or asked for clarification about DTSC's requirements, DTSC declined to engage in a constructive discussion with Chiquita about the best path forward. In fact, Chiquita has responded to the best of its ability and has provided all requested information and revisions to the draft RAWs. DTSC and Chiquita meet weekly, and Chiquita has been transparent throughout regarding its implementation plans. DTSC on the other hand, has not. Some of the positions DTSC has taken in its Notice in fact contradict other regulators' directions on the same mitigation measures. For example, while DTSC has alleged that the new tank farm's location in Cell 8B is not stable, the LEA's most recent correspondence expressed no concern with the location of the new tank farm. In addition, DTSC asserts that Chiquita failed to provide a schedule for the cover installation even though it previously directed Chiquita to follow the LEA's schedule.[6] Moreover, while the LEA and DTSC directed Chiquita to provide alternatives regarding the barrier, DTSC's Notice suggests that Chiquita has missed deadlines of which it was not previously informed.[7]

Chiquita has repeatedly requested a clear lead from the regulators to address these exact problems. The inability of the State and local agencies to coordinate and provide clear, consistent direction to Chiquita has impeded Chiquita's progress in managing the reaction. DTSC's refusal to engage with Chiquita in good faith only exacerbates these issues and runs contrary to DTSC's mission to protect California's people, communities, and environment. Chiquita respectfully requests that DTSC withdraw its Notice, for the reasons described herein.

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[4] *See* DTSC Notice of Proposed Determination of Noncompliance with Imminent and Substantial Endangerment Determination and Order, Dec. 12, 2025, at 5.
[5] *See generally* Chiquita Response to DTSC Notice of Proposed Determination of Noncompliance with Imminent and Substantial Endangerment Determination and Order, Dec. 22, 2025.
[6] *Compare* DTSC Notice of Proposed Determination of Noncompliance, Dec. 26, 2025, at 4-5 with DTSC Imminent and Substantial Endangerment and Order (Docket No. HAS-FY24/25-082), Task 7, Extension of Covered Area, Schedule (Site Code 302132), Nov. 21, 2025 ("In light of the Local Enforcement Agency (LEA) letter that was sent to Respondents yesterday, November 20, 2025, establishing a deadline for installation of the geomembrane cover at CCL, DTSC rescinds the November 18, 2025, letter and the requirements listened therein.")
[7] *Compare* LEA Comments on the Draft Removal Action Workplan (RAW) Chiquita Canyon Landfill (CCL), SWIS No, 19-AA-0052, Nov. 20, 2025 *with* DTSC Imminent and Substantial Endangerment and Order (Docket No. HAS-FY24/25-082), Task 7, Extension of Covered Area, Schedule (Site Code 302132), Nov. 21, 2025 *and with* DTSC Notice of Proposed Determination of Noncompliance, Dec. 26, 2025, at 9-12.

For ease of review, this response is organized as follows:

I. DTSC's ISE Order improperly conflicts with requirements of other agencies.

II. Chiquita has acted diligently and in good faith to comply with the ISE Order.

III. Chiquita timely provided an appropriate Notice of Intent to Comply.

IV. Chiquita's draft RAWs met the requirements set forth in the ISE Order.

- a. Chiquita submitted a satisfactory draft cover RAW.
  - i. Chiquita provided an implementation schedule that was as detailed as possible in satisfaction of section 5.3(n) of the ISE Order.
  - ii. Chiquita included all relevant criteria, plans, and specifications in satisfaction of section 5.3(c) of the ISE Order.
  - iii. Chiquita adequately identified the goals to be achieved in satisfaction of section 5.3(b) of the ISE Order.
  - iv. Chiquita provided a site description that includes current site conditions in satisfaction of section 5.3(a) of the ISE Order.
  - v. Chiquita included an adequate description of cover installation methods in satisfaction of section 5.3(e) of the ISE Order.
- b. Chiquita submitted a satisfactory relocation RAW.
  - i. The relocation of Tank Farm 9 to Cell 8B satisfies section 5.1.2(b) of the ISE Order because Cell 8B was the only available option for the prompt relocation of Tank Farm 9, it was the most environmentally protective location, and it is currently stable.
    - A. The history of Tank Farm 9.
    - B. Planning, designing, siting, and constructing the new tank farm.
    - C. Cell 8B is the most environmentally protective location at the Landfill that allowed for the prompt relocation of Tank Farm 9.
    - D. Cell 8B is currently stable and is expected to remain stable for the foreseeable future.
    - E. Relocating Tank Farm 9 to Cell 8B satisfies section 5.1.2(b) of the ISE Order.

ii. Chiquita has provided all relevant criteria, plans, and specifications in satisfaction of section 5.3(c) of the ISE Order.

iii. Chiquita addressed DTSC's comments regarding the relocation RAW.

c. Chiquita is dedicated to protecting Cell 8A and complying with all section 5.1.2(c) obligations that do not harm mitigation efforts.

i. Cell 8A is not in imminent and substantial danger.

ii. DTSC's requested vertical barrier is not supported by scientific analysis, is technically infeasible, and would negatively impact Chiquita's successful mitigation measures.

A. DTSC's requested barrier is not supported by scientific evidence and contradicts LEA's most recent directive.

B. DTSC's requested barrier is neither technically nor practically feasible.

C. DTSC's requested barrier would negatively impact Chiquita's existing, successful mitigation measures.

iii. The draft barrier RAW and other correspondence provide sufficient support for Chiquita's approach to manage the reaction.

iv. The draft barrier RAW satisfied all other requirements under the ISE Order.

I. DTSC's ISE Order improperly conflicts with requirements of other agencies.

The DTSC's ISE Order and Notice conflict with the Unilateral Administrative Order issued by the United States Environmental Protection Agency (EPA) on February 21, 2024 (UAO) and the Compliance Order issued by Los Angeles County Department of Public Health, acting as the Local Enforcement Agency (LEA), on May 1, 2025 (2025 LEA Compliance Order).[8] Several DTSC communications to Chiquita have also conflicted with EPA and LEA demands, requiring Chiquita to reconcile those differences without sufficient guidance from DTSC. Chiquita explains the duplicative and contradictory nature of these state and federal orders in more detail in its Request for a Formal Appeal Hearing and Petition for Stay of the 2025 LEA Compliance Order.[9] Chiquita

[8] U.S. EPA, Unilateral Administrative Order, EPA Docket No. RCRA 7003-09-2024-0001 and CERCLA 106-09-2024-05 (Feb. 21, 2024), available at https://s3.us-west-1.amazonaws.com/chiquitacanyon.com.bucket/2024/04/rcra-7003-09-2024-0001-cercla-106-09-2024-05-chiquita-canyon-llc-uao-2024-02-21-1.pdf; Los Angeles County Department of Public Health, acting as the Local Enforcement Agency, Compliance Order (May 1, 2025), available at https://s3.us-west-1.amazonaws.com/chiquitacanyon.com.bucket/2025%2F05%2F2025-05-01-LEA-Compliance-Order-Chiquita-Canyon-Landfill-5.1.2025-Final.pdf.

[9] *See* Chiquita's Request for a Formal Appeal Hearing and Petition for Stay of LEA's May 1, 2025 Compliance Order (May 16, 2025), provided in Attachment A.

is not in violation of the ISE Order because it had good cause for not following DTSC's demands that are in conflict with or duplicative of the requirements in the EPA UAO and are thus preempted by the EPA UAO.

Under the Supremacy Clause, state and local laws and orders that "interfere with, or are contrary to the laws of Congress" are preempted and are therefore invalid.[10] Thus, conflict preemption exists wherever the ISE Order or DTSC's demands under the ISE Order are in opposition to the pre-existing federal UAO.[11] Chiquita does not dispute that DTSC may exercise authority at the Landfill. Chiquita does object, however, that Chiquita must or even could follow the orders of DTSC that conflict with those of the federal EPA.

Section 5.1.2 of the ISE Order and its three subsections conflict with the "Master Work Plan" requirement of Paragraph 22 in the EPA-issued UAO.[12] UAO Paragraph 22 required Chiquita to develop (1) a "Leachate Management Plan" which controls the operating procedures to accumulate and manage leachate at the Landfill; (2) a "Soil Reaction Break/Barrier Plan" which includes the installation of waste temperature monitoring devices and specifications of a containment trench; and (3) a "Cover Installation Plan" which requires the installation of a High-Density Polyethylene geomembrane. The Master Work Plan, including these individual workplans, are all subject to EPA oversight and approval: "Following EPA's approval or modification of the Master Work Plan, [Chiquita] shall implement the Master Work Plan in accordance with the schedule and provisions approved by EPA."[13] The requirements of section 5.1.2 of the ISE Order overlap and conflict with the requirements of Paragraph 22 of the UAO. DTSC and EPA having approval authority over the same actions is in conflict and interferes with EPA's federal authority.[14] This conflict also creates a confusing regulatory environment prone to inefficiencies, miscommunications, and frustrations for all parties involved. Chiquita cannot be in violation of an ISE Order that is preempted by the EPA UAO; penalizing Chiquita for noncompliance with conflicting and preempted requirements would violate due process.

Section 5.1.2 of the ISE Order also directly overlaps and conflicts with sections 4.1, 4.2, and 4.3 of the LEA's 2025 Compliance Order, which also requires Chiquita to extend the geomembrane cover, relocate Tank Farm 9, and install a barrier to prevent expansion of the reaction to Cell 8A.[15]

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[10] *Fireman's Fund Ins. Co. v. City of Lodi, California,* 302 F.3d 928, 943 (9th Cir. 2002).
[11] *See e.g.*, *U.S. v. City and County of Denver, Colo*., 916 F. Supp. 1058 (D. Colo. 1996) (holding that the City's cease and desist order violated the supremacy clause by being in direct conflict with an EPA order).
[12] *See* U.S. Environmental Protection Agency, Unilateral Administrative Order, EPA Docket No. RCRA 7003-09-2024-0001 and CERCLA 106-09-2024-05 (Feb. 21, 2024).
[13] *Id*. at 26. EPA itself has noted that its UAO preempts the actions of state agencies. Although EPA has indicated it is abating "until further notice" the UAO requirements related to the Soil Reaction Break/Barrier Plan, EPA has reiterated it "reserves all rights under Section XXIV of the UAO, CERCLA, or other authorities to require CCL to take measures to address the potential expansion of the reaction, including a soil break/barrier, in the future, thus confirming its preemptive role over the state agencies." Letter from EPA to Chiquita re Second Revised Soil Reaction Break/Barrier Plan, dated Apr. 16, 2025, provided in Attachment B. Chiquita therefore objects to section 5.1.2 of the ISE Order as it is preempted by the UAO. *See Fireman's Fund Ins. Co*, 302 F.3d at 943.
[14] *See* Chiquita's Request for a Formal Appeal Hearing and Petition for Stay of LEA's May 1, 2025 Compliance Order (May 16, 2025), at 3.
[15] *See* Los Angeles County Department of Public Health, acting as the Local Enforcement Agency, Compliance Order (May 1, 2025).

The 2025 LEA Compliance Order also requires that the LEA approve Chiquita's relevant workplans. Having multiple regulators with independent review and approval authority over the same substantive work has created an impossible compliance situation. Specific examples of conflict are described below in more detail, including direct conflicts between the LEA and DTSC's directions with respect to the cover expansion, the tank farm relocation, and the barrier plan. The dueling and overlapping orders are particularly egregious when the workplans demand strict, often competing, timelines for compliance despite the high potential for delay due to forces outside of Chiquita's control, such as engineering challenges in an evolving landfill environment, supply chain irregularities, and exceptionally heavy precipitation. Chiquita has raised these concerns with DTSC on several occasions, only to have its concerns ignored or met with accusations of noncompliance. Compliance with both the 2025 LEA Compliance Order and the DTSC ISE Order is not feasible; penalizing Chiquita for noncompliance with overlapping and conflicting orders and inconsistent regulator positions would be unfair and violate due process.

II. Chiquita has acted diligently and in good faith to comply with the ISE Order.

Chiquita continues to devote substantial time and resources to respond to the reaction with unprecedented scope and rigor, including developing and implementing robust RAWs.[16] Despite operating in one of the most challenging regulatory environments in the United States, involving multiple agencies and significant regulator turnover, Chiquita has remained diligent in its compliance and response efforts.[17]

As DTSC is aware through the department's and Chiquita's interactions during the standing weekly technical meetings, Chiquita is engaged in implementing wide-spread mitigation measures that are individually difficult and further complicated by their interconnectedness to other ongoing measures. Chiquita is responding to an unprecedented event with unique and tailored solutions and applications that must be considered and implemented holistically. Customized solutions rarely come out of a box ready to go without challenges or the need for refinement. In fact, it is a testament to Chiquita's ongoing commitment to manage the reaction that it continues to evolve and improve its management strategies to best respond to issues and challenges as they arise.

Considering this unique event and Chiquita's extensive compliance efforts and response to the reaction, Chiquita is struggling to reconcile DTSC's shift in its tone over the past several weeks, including in this Notice, with the on-the-ground reality. Contrary to DTSC's assertions, Chiquita has responded to the reaction with the gravity it deserves.[18] Chiquita has spent tens of millions of

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[16] *Contra* DTSC Notice of Proposed Determination of Noncompliance, Dec. 26, 2025, at 1.
[17] *See, e.g.*, 34th Annual Environmental Law Conference at Yosemite, Session 6.3 – Chiquita Canyon Landfill – When the Environmental Externalities of Municipal Waste Heat Up; *see also, e.g.*, email from D. Barclay to K. Logan, CCL: Request to Delay Deployment of Final Portion of Segment 3 of Geomembrane Cover (Docket No. HSA-FY24/25-082), Oct. 31, 2025 ("I will be the main point of contact for CCL moving forward and Dan Ziarkowski is retiring effective Monday. Please address your communications to me with ccs to Christopher Kane, Tim Crick, Pete Ruttan, and Bridget Floyd.")
[18] *Contra* DTSC Imminent and Substantial Endangerment Determination and Order (Docket No. HAS-FY24/25-082, Task 7, Extension of Covered Area, Schedule, Nov. 18, 2025 ("[B]y rejecting the urgency that is due this emergency situation, [Chiquita is] making several people in the California government very nervous, leading some to look into enforcement options. I am requesting that [Chiquita] treat this situation with the gravity that it deserves.").

dollars to mitigate the reaction, and its experts have repeatedly confirmed that its actions are working to slow and stabilize the reaction. Since DTSC issued the ISE Order to Chiquita on April 2, 2025, Chiquita has installed approximately 17.9 acres of 60-mil EVOH/HDPE geomembrane cover in and around the reaction area; installed 80 vertical landfill gas extraction wells, for a total of 365 operational wells, to collect landfill gas and leachate; installed and replaced additional dewatering pumps in vertical landfill gas extraction wells, for a total of 149 pumps, to extract leachate; and installed eight in-situ waste temperature monitoring probes, for a total of 40 probes, in and around the reaction area at varying depths.[19] As directed in various other compliance orders, Chiquita has installed a new permanent landfill gas combustion flare, for a total of three flares, with plans to install a fourth flare; three portable thermal oxidizers to combust and remove landfill gas from the reaction area; three new groundwater monitoring wells, two onsite and one offsite; a perimeter odor control misting system and 1,000 feet of semi-permanent vapor odor control in the reaction area to reduce potential odors; and ten micro gas chromatograph (microGC) air monitoring units to monitor air constituents 24 hours a day, seven days a week, among several other mitigation measures. Beginning January 2024 through the end of December 2025, Chiquita extracted an estimated 163,960,668 gallons of leachate.[20] Chiquita has also increased landfill gas collection to 16,700 cubic feet per minute; during December 2025, the overall gas extraction from the Landfill was approximately 701,249,760 cubic feet. In summation, Chiquita remains wholly dedicated to containing the reaction and restoring the Landfill to typical conditions.

Chiquita's actions and responses to DTSC have also been timely. To the extent the regulators allege delay, they should consider in fact their own role in that timeline. Figure 1 below shows that DTSC has taken demonstrably longer to respond to Chiquita's submittals than Chiquita takes to provide such submissions. Because of the time in which it takes the regulators to consider Chiquita's workplans and proposals, Chiquita must implement measures before approval. If Chiquita did not act quickly to implement necessary measures, its regulators would surely accuse it of delay and bad faith (as DTSC is doing now). But by acting to implement orders before approval, Chiquita

[19] Chiquita is currently operating 37 temperature monitoring probes at the Landfill. Chiquita has completed its drilling of three additional probes which are not yet operational. Chiquita expects to begin operating these three remaining probes by February 6, 2026, after it has received and installed the temperature sensors and telemetry heads necessary for the probes, as explained in its weekly reports submitted to DTSC, EPA, and the LEA.
[20] Chiquita is providing this information to the best of its knowledge; this information is subject to change based on further review and verification.

risks added time and expense of redoing work.

Figure 1: Timeline of Chiquita's and DTSC's Response Times for ISE Order Tasks

Event	**Task 1 – Extension of Cover RAW**	**Task 2 – Relocation of Tank Farm 9 RAW**	**Task 3 – Protection of Cell 8A RAW**
ISE Order issued to Chiquita	April 2, 2025	April 2, 2025	April 2, 2025
Days between issuance of the ISE Order and Chiquita's submittal	44 days	37 days	90 days
Days between Chiquita's submittal and DTSC's first set of comments	80 days	81 days	106 days
Days between DTSC's response and Chiquita's submittal	60 days	52 days	23 days
Days since submittal without receiving a response	101 days	115 days	52 days
Total time RAW with Chiquita	**104 days**	**89 days**	**113 days**
Total time RAW with DTSC	**181 days**	**196 days**	**158 days**

Chiquita has moved as swiftly as possible to comply with the ISE Order, communicate issues and concerns, and keep DTSC apprised of its progress. DTSC has not reciprocated with the same swift or cooperative spirit. Although Chiquita and DTSC disagree on the appropriate response actions to manage the reaction, DTSC's accusations that Chiquita does not understand the gravity of the situation, and that Chiquita personnel regard complying with the ISE Order as a wasteful drafting exercise, are inaccurate, unhelpful and unwarranted.[21] Moreover, such accusations are not technical or otherwise constructive to the overall goal of the ISE Order. These accusations, together with the explicit threat of enforcement, are difficult to view as anything other than political and are plainly inappropriate given that, over the past 24 months, Chiquita has spent tens of millions of dollars on mitigation measures and direct community payments. Customized solutions specific to the Landfill cannot reasonably or reliably be forecasted years in advance, particularly in a hostile regulatory environment. Chiquita therefore respectfully requests that DTSC withdraw its Notice, and, after reviewing the referenced communications and data productions, identify with specificity any remaining perceived deficiencies with the draft RAWs and confer with Chiquita to align on

[21] *See* DTSC Imminent and Substantial Endangerment Determination and Order (Docket No. HAS-FY24/25-082, Task 7, Extension of Covered Area, Schedule, Nov. 18, 2025 ("”B]y rejecting the urgency that is due this emergency situation, [Chiquita is] making several people in the California government very nervous, leading some to look into enforcement options. I am requesting that [Chiquita] treat this situation with the gravity that it deserves. . . . I realize that some working on the CCL project see scheduling updates as simply a wasteful drafting exercise . . . .").

these issues.

III. Chiquita timely provided an appropriate Notice of Intent to Comply.

Section 7 of the ISE Order required Chiquita to provide written notice stating whether it would comply with the terms of the ISE Order or provide any "sufficient cause" defenses under Health and Safety Code sections 78870 and 79055(a)(1)(B) or Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) section 107(c)(3). More than nine months later, DTSC now claims that Chiquita's response was equivocal and did not meet the strictures of section 7 in regard to protecting Cell 8A.[22] Not so. Chiquita's response was clear.

In its April 9, 2025 response, Chiquita stated its belief that it was already in compliance with providing necessary measures to protect Cell 8A.[23] In a meeting between DTSC's and Chiquita's technical personnel on the previous day (April 8, 2025), DTSC told Chiquita that its previously designed and implemented soil barrier may be adequate. At DTSC's request, on May 13, 2025, Chiquita submitted to DTSC a Construction Quality Assurance report regarding the previously constructed soil barrier for DTSC's evaluation.[24]

Chiquita also unequivocally stated in its April 9, 2025 response that it would not construct a barrier consistent with DTSC's design and presented sufficient cause defenses as to why.[25] The Health and Safety Code provides that only parties who fail to abide by an order "without sufficient cause" are subject to penalties.[26] DTSC's requested design, shown below in Figure 1, would require "excavating a vertical shaft using a three or four-foot auger drill rig," backfilling the shaft "with a soil-bentonite or soil-cement mix," and installing "tangent" shafts and rows of vertical shafts.[27] As previously explained to DTSC and reiterated below, the barrier requested by DTSC is not only without scientific underpinnings but would be physically impossible to construct. In short, DTSC's

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[22] DTSC Notice of Proposed Determination of Noncompliance, Dec. 26, 2025, at 2.
[23] Chiquita's Sufficient Cause Defenses and Notice of Intent to Comply, April 9, 2025, at 6-7.
[24] Email from K. Logan to P. Ruttan (DTSC), et al., CCL: Construction Quality Assurance Report for the Soil Barrier Construction Project (Docket No. HSA-FY24/25-082), May 13, 2025 (attaching report).
[25] Parties have "sufficient cause" if they have a reasonable belief that they are not liable under the statues or can show that the applicable provisions or guidance give rise to an objectively reasonable, good faith belief in the invalidity or inapplicability of the Order. *See Solid State Circuits, Inc. v. EPA*, 812 F.2d 383, 390 (8th Cir. 1987); *see also Pakootas v. Teck Cominco Metals, Ltd.*, 452 F.3d 1066, n.13 (9th Cir. 2006).
[26] Cal. Health & Safety Code §§ 79550, 79570. *See also Foster-Gardner, Inc. v. Nat'l Union Fire Ins. Co.*, 18 Cal. 4th 857, 867, 959 P.2d 265, 272 (1998), *as modified* (Sept. 23, 1998) ("[A] PRP that fails to comply with an Order *without sufficient cause* is subject to a civil penalty" (emphasis added)); *Cnty. of Santa Clara v. U.S. Fid. & Guar. Co.*, 868 F. Supp. 274, 278 (N.D. Cal. 1994) ("A potentially responsible party may decline to follow an RAO if there is sufficient cause to believe that it is not liable for the remediation."); *Wagner Elec. Corp. v. Thomas*, 612 F. Supp. 736, 745 (D. Kan. 1985) (construing CERCLA § 107(c)(3) as prohibiting "assessing punitive damages against a party who fails to comply with an EPA order in the reasonable belief that it has a valid defense to that order"); *Aminoil, Inc. v. United States*, 646 F. Supp. 294, 299 (C.D. Cal. 1986) (punitive damages permissible under CERCLA only when party refused to comply with order in bad faith).
[27] ISE Order, Ex. 6 (Memo from T. Stark to ERRG, Inc., Comments on November 26, 2024 Revised Soil Reaction Break/Barrier Plan and February 20, 2025 Waste Temperature Data for Chiquita Canyon Landfill Subsurface Elevated Temperature (SET) Event, Feb. 26, 2025) (Stark Memo)), at 13-14.

requested barrier was and is arbitrary, capricious, not supported by substantial evidence, and otherwise not in accordance with law, and would be harmful to the community.

Figure 1– DTSC Requested Barrier Design[28]

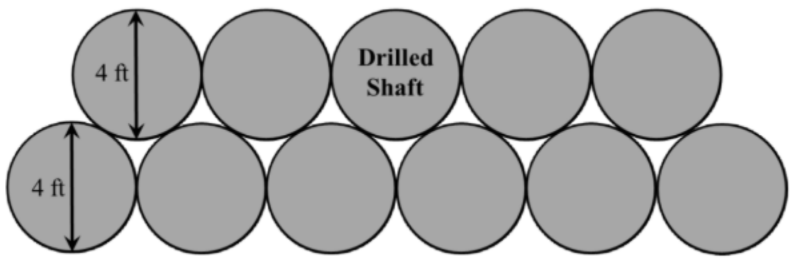

Figure 8. Possible configurations of 3 to 4 ft diameter vertical elements to comprise a heat barrier system south of TP06 to isolate southernmost 13 acres.

DTSC's new claim in its December 26, 2025 correspondence that Chiquita "made no attempt to unequivocally commit to the broader goal of protecting Cell 8A" is blatantly false.[29] To reiterate, Chiquita remains fully committed to protecting Cell 8A. Chiquita continues to implement all scientifically recognized measures to prevent the expansion of the reaction into Cell 8A, as described above.

Further, the evidence shows that Chiquita's mitigation actions to protect Cell 8A have been successful. Nine months after DTSC issued its ISE Order, Cell 8A remains fully protected. There is no indication that the reaction has expanded into Cell 8A or will do so imminently.[30] There is no indication that any slope stability problems exist or will develop imminently, as evidenced by the multiple slope stability analyses submitted to DTSC.[31] Instead, reaction conditions remain stable, in a general equilibrium, and in some places are cooling.[32] DTSC claimed nine months ago that an

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[28] Stark Memo, at 14.

[29] DTSC Notice of Proposed Determination of Noncompliance, Dec. 26, 2025, at 2.

[30] See the most recent Monthly Reaction Committee Determination on Reaction Area Boundary, submitted on January 9, 2026, for the month of December 2025, in accordance with Condition Nos. 9a and 9b of the Stipulated Order for Abatement (SOFA) issued by the South Coast Air Quality Management District (Case No. 6177-4). This report will be available on Chiquita's website on January 16, 2026.

[31] *See* Comprehensive Global Stability Study Work Plan, Chiquita Canyon Landfill, Castaic, California, Dec. 17. 2025; Chiquita Canyon Landfill - Proposed Hazardous Waste Tank System Global Static and Seismic Stability Analysis, prepared by SCS Engineers, Nov. 27, 2025; Professional Engineer Hazardous Waste Tank System Assessment & Certification, prepared by SCS Engineers, Nov. 19, 2025; Master Development Plan Stability Analyses, Project No. RM22.1077.00, prepared by Geo-Logic Associates, Aug. 23, 2024; West and North Slope Stability Analyses, Project No. RM23.1077.00, prepared by Geo-Logic Associates, Feb. 2024; Slope Stability Analysis Work Plan, prepared by Geo-Logic Associates, Dec. 14, 2023.

[32] The most recent Monthly Reaction Committee determination concluded that "ETLF conditions are fully contained within the Reaction Area boundary, and have not expanded into a new cell." *See* Monthly Reaction Committee Determination on Reaction Area Boundary, Chiquita Canyon Landfill, dated Jan 9, 2026. In some instances, temperatures have decreased since April 2025. For example, TP-04's and TP-20's average temperatures at every depth were lower in November 2025 than in April 2025. Chiquita's April 2025 Monthly Report, available at https://s3.us-west-1.amazonaws.com/chiquitacanyon.com.bucket/2025/05/2025-05-09-Reaction-Committee-Determination-on-Reaction-Area_Final.pdf; Chiquita's November 2025 Monthly Report, available at https://s3.us-

"imminent" and "substantial" danger exists at the Landfill. The facts and the significant progress that continues to be made at the Landfill prove otherwise.

With respect to the DTSC requirements relating to the geomembrane cover and the relocation of the tank farm, Chiquita expressed in its intent to comply with the broad goals set forth in the DTSC ISE Order. As described further below, DTSC's current allegations of noncompliance arise from implementation details that were not set forth in the DTSC ISE Order, but have been ordered by subsequent correspondence, including, in some instances, for the first time in the Notice. For clarity, and to the extent necessary to preserve any appellate rights, Chiquita's response should be construed as providing sufficient cause defenses with respect to DTSC's implementation and interpretation of these provisions of the ISE Order.

DTSC's claim that Chiquita failed to provide an adequate notice of intent to comply is inconsistent with facts on the ground and the law.[33] Chiquita therefore respectfully requests that DTSC withdraw its Notice, including its claims that Chiquita failed to satisfy the requirements of section 7 of the ISE Order.

IV. Chiquita's draft RAWs met the requirements set forth in the ISE Order.

Chiquita disputes DTSC's assertion that it failed to submit draft RAWs that met the requirements of section 5.3 of the ISE Order.[34] Chiquita addressed all of section 5.3's requirements in its draft RAWs, including the requirements provided in subsections (a), (b), (c), (e), (f), (n), and (o).[35] To the extent that DTSC believes that Chiquita did not satisfactorily address these requirements in some or all of the draft RAWs, DTSC should have provided further direction and comment in order for Chiquita to collaboratively revise the draft RAWs to meet DTSC's expectations rather than raise these issues at first blush in a notice of proposed determination of noncompliance.

The ISE Order is devoid of guidance or expectation on section 5.3's requirements. Taking subsection (b) as an example, DTSC directed the draft RAWs to include "[t]he goals to be achieved by the removal actions identified in 5.1.2 of this Order[.]"[36] Chiquita provided in each draft RAW a description of the "goals and objectives" to be achieved.[37] DTSC nevertheless alleges that

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west-1.amazonaws.com/chiquitacanyon.com.bucket/2025/12/2025-12-10-Reaction-Committee-Determination-on-Reaction-Area_Final.pdf.

[33] *See, e.g.*, *Meghrig v. KFC W., Inc.*, 516 U.S. 479, 485-86 (1996) (citation omitted) ("An endangerment can only be 'imminent' if it 'threaten[s] to occur immediately.'"); *Santa Clarita Valley Water Agency v. Whittaker Corp.*, 99 F.4th 458, 476 (9th Cir. 2024) (no imminent or substantial danger where "there is no 'necessity for . . . action' in excess of the actions already taken and those that are currently ongoing," including "remedial actions" and the installation of "over two hundred monitoring wells") (quoting *Price v. U.S. Navy*, 39 F.3d 1011, 1019 (9th Cir. 1994)).

[34] DTSC Notice of Proposed Determination of Noncompliance, Dec. 26, 2025, at 2.

[35] *Contra* DTSC Notice of Proposed Determination of Noncompliance, Dec. 26, 2025, at 2-3.

[36] ISE Order § 5.3(b).

[37] *See, e.g.*, Revised Draft Removal Action Workplan, Extension of Covered Area, Oct. 3, 2025, section 2.3 ("This section addresses Section 5.3(a) of the ISE Order. The goal/objective of this removal action is to extend the area of the Landfill provided with a geomembrane cover. The primary purpose of the extension is to improve LFG collection and thereby minimize emissions and reduce odors. In addition, the geomembrane reduces infiltration into the landfill waste."); Revised Draft Removal Action Workplan, Interim Relocation and Stabilization of Containerized Waste, Sep. 19, 2025, section 2.3 ("The primary goal/objective of this removal action is to relocate Tank Farm 9 on an interim

Chiquita's draft cover RAW, for example, did not meet this requirement because it "does not reference the SET event/landfill reaction in the Goals and Objectives section."[38] The draft cover RAW references the reaction in multiple sections.[39] The ISE Order does not state that Chiquita's draft RAWs must reference the "SET event/landfill reaction" to satisfy section 5.3(b). Neither did DTSC's comments on the draft cover RAW dated August 4, 2025.[40]

Chiquita respectfully requests that DTSC withdraw its Notice, including its claims that Chiquita failed to submit draft RAWs that met the requirements of section 5.3 of the ISE Order. Chiquita should not learn about DTSC's expectations for the draft RAWs for the first time in a Notice of Proposed Determination of Noncompliance. Absent clearer requirements in the ISE Order, these expectations could and should have been communicated earlier to Chiquita during any of Chiquita's and DTSC's weekly meetings, in email correspondence, or during other methods of communication. Chiquita has consistently demonstrated a willingness to communicate and cooperate, but DTSC must first explicitly state its expectations to give Chiquita the opportunity to address them. Chiquita cannot reasonably infer such expectations when they are omitted from DTSC's communications and correspondence, especially when those expectations seem to evolve as further development of the draft RAWs occurs. Chiquita requests that after reviewing Chiquita's extensive communications and data productions described in this letter, DTSC identify with specificity any remaining perceived deficiencies with the draft RAWs. Chiquita will then endeavor to provide further revisions to the draft RAWs promptly based on a reasonable response timeframe that is commensurate with the scope of the request.

a. Chiquita submitted a satisfactory draft cover RAW.

Chiquita's draft cover RAW satisfied the requirements of the ISE Order and adequately responded to DTSC's comments.[41] Many of DTSC's allegations regarding this RAW ignore the site visits, weekly conversations, and consistent correspondence between the department and Chiquita regarding the deployment of the geomembrane cover, including the extent of the work that has been completed thus far, detailed installation methods designed to optimize installation, and issues with the deployment schedule. DTSC's treatment of these conversations and correspondence as if they do not exist purely because they were not included within the four corners of the draft cover

basis to a new location. The new, interim location will facilitate effective performance of the leachate collection system and not be impacted by the ETLF conditions or unrelated landfill settlement."); Draft Removal Action Workplan, Protect Cell 8A from Intrusion of Elevated Temperature Landfill Event, Jul. 1, 2025, section 2.5 ("The primary goal/objective of this removal action is to prevent the spread of the ETLF to Cell 8A.").

[38] DTSC Notice of Proposed Determination of Noncompliance, Dec. 26, 2025, at 6.

[39] *See, e.g.*, Revised Draft Removal Action Workplan, Extension of Covered Area, Oct. 3, 2025, sections 2.2, 3.1, 4.3, and 4.4.

[40] *See* Review of Draft Removal Action Workplan, Imminent and Substantial Endangerment Determination and Order (Docket No. HAS-FY24/25-082), Task 7 – Extension of Covered Area (Site Code 302132), Aug. 4, 2025, Specific Comment #3 ("This section of the Draft RAW must clarify that the goals/objectives of the remedial efforts are (a) to cover all areas of the landfill which are not presently covered by a geomembrane and to which the reaction area has expanded or has the potential to expand in order to adequately control infiltration of oxygen and water into the landfill waste, and (b) to control production of gas emissions, odors, and leachate.")

[41] *See* Draft Removal Action Workplan, Extension of Covered Area, May 16, 2025; *see also* Revised Draft Removal Action Workplan, Extension of Covered Area, Oct. 3, 2025. *Contra* DTSC Notice of Proposed Determination of Noncompliance, Dec. 26, 2025, at 3-4.

RAW severely discounts the immense effort Chiquita has made to deploy the geomembrane cover as quickly as feasible using the best installation methods that are protective of existing mitigation measures. Nowhere does the ISE Order state that these conversations and correspondence must be incorporated into the draft RAW to satisfy the ISE Order's requirements.

Chiquita's draft cover RAW addresses all requirements set forth in section 5.3 of the ISE Order. Contrary to DTSC's assertions, Chiquita's draft cover RAW included a detailed implementation schedule consistent with section 5.3(n); a design and implementation plan consistent with section 5.3(c); goals to be achieved by the additional geomembrane cover, consistent with section 5.3(b); a site description consistent with section 5.3(a); and a description of the methods to be employed, consistent with section 5.3(e).[42] The following subsections address each deficiency alleged in the Notice.

i. Chiquita provided an implementation schedule that was as detailed as possible in satisfaction of section 5.3(n) of the ISE Order.

Chiquita disputes DTSC's claim that it "ignored DTSC's many instructions to provide a detailed schedule for installation of the geomembrane cover in the Cover RAW, as required under Section 5.3(n) of the Order."[43] Chiquita did not ignore DTSC's instructions to provide a detailed schedule. Chiquita addressed DTSC's scheduling demands directly and overtly in writing and verbally.[44] Chiquita provided a detailed implementation schedule covering the deployment of geomembrane cover in Segments 1 through 3 in section 3.2 of its initial draft cover RAW submitted on May 16, 2025.[45] In response to DTSC's comments dated August 4, 2025, requesting Chiquita to include a "comprehensive schedule that will accomplish installation of the geomembrane expeditiously," Chiquita submitted a revised draft cover RAW with a further detailed implementation schedule.[46] This implementation schedule covered the deployment of geomembrane cover in the remaining segments in Table 1 of its revised draft cover RAW submitted on October 3, 2025.[47] The revised draft cover RAW provided a completion date of November 2026 for Segments 4 through 15, and a completion date of "TBD" for Segments 16 through 20, further explaining that "Timing is subject to field conditions and can be affected by weather conditions that pose a risk to safety (e.g., high wind, rain), other agency directed work in the same area, or availability of materials or work

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[42] *See* Revised Draft Removal Action Workplan, Extension of Covered Area, Oct. 3, 2025, sections 2.1, 2.3, 3.0, 3.2, 4.3, Table 1, and Appendices N and O. *Contra* DTSC Notice of Proposed Determination of Noncompliance, Dec. 26, 2025, at 3-7.

[43] DTSC Notice of Proposed Determination of Noncompliance, Dec. 26, 2025, at 4.

[44] *See* Chiquita Canyon, LLC's Response to U.S. EPA's, DTSC's, and the LEA's Requirement to Expand the Geomembrane Cover, Aug. 15, 2025; Chiquita Canyon, LLC Response to DTSC Request for Updated Geomembrane Cover Deployment Schedule, Nov. 7, 2025; Chiquita Canyon, LLC Response to DTSC Comments on Draft Removal Action Workplan: Protect Cell 8A from Intrusion of Elevated Temperature Landfill Event, Nov. 21, 2025; and Chiquita Canyon, LLC Response to LEA's Comments on the Revised Draft Removal Action Workplan: Extension of Covered Area, Dec. 15, 2025, provided in Attachment C.

[45] *See* Draft Removal Action Workplan, Extension of Covered Area, May 16, 2025, section 3.2.

[46] *See* Review of Draft Removal Action Workplan, Imminent and Substantial Endangerment Determination and Order (Docket No. HAS-FY24/25-082), Task 7 – Extension of Covered Area (Site Code 302132), Aug. 4, 2025, Specific Comment #5; *see also* Revised Draft Removal Action Workplan, Extension of Covered Area, Oct. 3, 2025, Table 1 and Appendix A.

[47] *See* Revised Draft Removal Action Workplan, Extension of Covered Area, Oct. 3, 2025, Table 1.

crews."[48] DTSC then directed Chiquita in an email request on October 31, 2025 to "expedite" deployment of the geomembrane cover and submit an "updated comprehensive cover installation schedule" that includes "the full main canyon including deployment areas D16-D20, including all of cells 5, 6 and 8."[49] In further response to DTSC and other regulators' inquiries, Chiquita provided correspondence on November 7, 2025 explaining that expediting the deployment of geomembrane cover over the requested area was not feasible and would set back Chiquita's progress on mitigating the reaction.[50] In response to DTSC's request for a Master Schedule in its comments on the draft barrier RAW, Chiquita nevertheless accelerated its deployment schedule by implementing a new deployment strategy that would enable the cover to be fully deployed by July 31, 2027, subject to weather conditions.[51] DTSC's disagreement with Chiquita's responses does not equate to Chiquita ignoring DTSC.[52]

As Chiquita has explained repeatedly, it is not feasible to deploy the geomembrane cover any faster than the current rate.[53] To date, DTSC has failed to provide data or other evidence in response to Chiquita's explanations and concerns that attempts to deploy the geomembrane cover at a faster rate than proposed may significantly impair existing mitigation measures. DTSC's request is neither reasonable nor feasible, for the reasons explained above and in Chiquita's previous correspondence with DTSC, and thus Chiquita has good cause not to comply with DTSC's request.

Chiquita further disputes DTSC's characterization of the scope of its comments on Chiquita's schedule. DTSC's Notice states, "Despite the Order's text and the additional direction in the August 4, 2025 comment letter, [Chiquita] continued to propose a piecemeal plan to install the cover in five (5) acre segments without covering the entirety of the landfill where the SET event could impact the waste."[54] But neither the ISE Order nor DTSC's August 4, 2025 comment letter include the directives that DTSC claims. Section 5.3(n) of the ISE Order requires "[a] detailed schedule for implementation of the removal action consistent with the schedule contained in the approved Workplan including procurement, mobilization, construction phasing, sampling, facility startup, and testing[.]" The ISE Order does not provide further instruction on what DTSC would consider an adequate schedule. DTSC's August 4, 2025 comment letter states the following, in relevant part:

> Section 3.2 – Schedule: Several parts of this section must be updated. This section includes a schedule for the installation of the first 15 acres of geomembrane (identified in Figure 3 as "Initial

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[48] *Id.* at n. 2. *Contra* DTSC Notice of Proposed Determination of Noncompliance, Dec. 26, 2025, at 4.
[49] Email from D. Barclay (DTSC) to K. Logan (Chiquita), RE: CCL: Request to Delay Deployment of Final Portion of Segment 3 of Geomembrane Cover (Docket No. HSA-FY24/25-082), Oct. 31, 2025.
[50] *See* Chiquita Canyon, LLC Response to DTSC Request for Updated Geomembrane Cover Deployment Schedule, Nov. 7, 2025.
[51] Chiquita Canyon, LLC Response to DTSC Comments on Draft Removal Action Workplan: Protect Cell 8A from Intrusion of Elevated Temperature Landfill Event, Nov. 21, 2025, Attachment A. *Contra* DTSC Notice of Proposed Determination of Noncompliance, Dec. 26, 2025, at 5 (claiming Chiquita's proposed schedule in its November 21, 2025 letter was not accelerated).
[52] *Contra* DTSC Notice of Proposed Determination of Noncompliance, Dec. 26, 2025, at 4.
[53] Supra n. 47.
[54] DTSC Notice of Proposed Determination of Noncompliance, Dec. 26, 2025, at 4.

> Supplemental Geomembrane Deployment Area") to be installed in three (3) segments (five acres each identified as Segments 1, 2 and 3). 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*." Update the schedule to include installation dates as specified above; DTSC directs Respondents to provide a comprehensive schedule that will accomplish installation of the geomembrane expeditiously.

DTSC August 4, 2025 comment letter does not explain what it considers to be an "expeditious" schedule. It also fails to acknowledge the conflicting understanding that Chiquita currently has in place with EPA to deploy the geomembrane cover over 100 acres of the Landfill, and the many discussions Chiquita had with EPA, DTSC, and the LEA to determine how deployment should be prioritized and over which areas, which directly determined the areas identified in Chiquita's draft RAW and deployment schedule.[55]

Chiquita also disputes DTSC's claim that the draft cover RAW "did not attempt to describe how [Chiquita] would optimize and accelerate cover installation such as by installing cover contemporaneously across distinct areas of the site."[56] Chiquita described how it would optimize and accelerate cover installation to the extent feasible in its November 7 and November 21, 2025 letters to DTSC and its December 15, 2025 letter to the Local Enforcement Agency, on which DTSC was copied.[57] Chiquita explained that it was not feasible to install cover contemporaneously across areas of the Landfill because deploying the geomembrane cover expeditiously is not a matter of maximizing the number of drill rigs and liner crews that can fit onsite to complete the work all at the same time; rather, it is a matter of working deliberately and meticulously to not disrupt the gas infrastructure and other existing mitigation measures, as having to perform repairs on the gas infrastructure and other existing mitigation measures themselves would require Chiquita to pause deployment. To maintain the integrity of the gas infrastructure and existing mitigation measures, Chiquita must deploy the geomembrane cover at a careful and diligent rate while still working as expeditiously as possible to avoid delays in the first place. Chiquita has therefore satisfied this requirement and provided this detail to the agencies. If DTSC's concern is that this description is not included in the draft RAW, Chiquita will revise the draft RAW to incorporate. DTSC has never previously requested such information be included in the draft RAW until this Notice.

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[55] *See, e.g.*, Chiquita Canyon, LLC's Response to U.S. EPA's, DTSC's, and the LEA's Requirement to Expand the Geomembrane Cover, Aug. 15, 2025.

[56] DTSC Notice of Proposed Determination of Noncompliance, Dec. 26, 2025, at 4.

[57] *See* Chiquita Canyon, LLC Response to DTSC Request for Updated Geomembrane Cover Deployment Schedule, Nov. 7, 2025; Chiquita Canyon, LLC Response to DTSC Comments on Draft Removal Action Workplan: Protect Cell 8A from Intrusion of Elevated Temperature Landfill Event, Nov. 21, 2025; and Chiquita Canyon, LLC Response to LEA's Comments on the Revised Draft Removal Action Workplan: Extension of Covered Area, Dec. 15, 2025.

Chiquita disagrees with DTSC's suggestion that the reaction area has expanded or has the potential to expand to Module 5, Cell 6, or Cell 8 of the Landfill.[58] As described above, the reaction conditions remain stable, in a general equilibrium, and in some places are cooling, and Chiquita expects the reaction conditions to remain stable for the foreseeable future based on current reaction data. There is no data or other evidence supporting a potential for expansion of the reaction area to include Module 5, Cell 6, or Cell 8, and therefore no basis for requiring geomembrane coverage of those areas.

Finally, DTSC's Notice contradicts its November 21, 2025 letter on this same subject. On November 21, DTSC stated that it rescinds its November 18, 2025 letter and the requirements listed therein.[59] The November 18, 2025 letter had requested a more detailed and specific schedule for the 100 acres that Chiquita had already agreed to cover and set interim deadlines for setting this schedule.[60] It stated that if it did take such steps, "the next step in this process may be DTSC finding the Respondents out of compliance with the ISE Order and starting the enforcement of the penalty phase of the order."[61] Then, three days later, DTSC reversed course, rescinded its November 18, 2025 letter, and directed Chiquita to comply with a November 20, 2025 LEA letter establishing a deadline for installation of a geomembrane cover at Chiquita.[62]

Since DTSC rescinded its November 18, 2025 letter, Chiquita understood that it did not need to provide any further specification or detailed schedule at this time to DTSC. Instead, Chiquita is working on a separate track with the LEA on its directive. This again demonstrates the confusing and unfair burden placed on Chiquita to navigate its multiple regulators and their changing positions. DTSC's Notice is inconsistent with its November 21 letter and should be withdrawn.

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[58] DTSC Notice of Proposed Determination of Noncompliance, Dec. 26, 2025, at 4-5 (directing Chiquita to deploy the geomembrane cover over Module 5 and Cells 6 and 8).
[59] *See* DTSC Imminent and Substantial Endangerment and Order (Docket No. HAS-FY24/25-082), Task 7, Extension of Covered Area, Schedule (Site Code 302132), Nov. 21, 2025 ("In light of the Local Enforcement Agency (LEA) letter that was sent to Respondents yesterday, November 20, 2025, establishing a deadline for installation of the geomembrane cover at CCL, DTSC rescinds the November 18, 2025, letter and the requirements listened therein.").
[60] *See* DTSC Imminent and Substantial Endangerment and Order (Docket No. HAS-FY24/25-082), Task 7, Extension of Covered Area, Schedule (Site Code 302132), Nov. 18, 2025 ("Without a specific and detailed schedule for the 100-acre cover area that the Respondents have already delineated in their segment map, the next step in this process may be DTSC finding the Respondents out of compliance with the ISE Order and starting the enforcement of the penalty phase of the order.").
[61] *Id.*
[62] Supra n. 63; *see also* LEA Comments on the Response Letters and the Draft Removal Action Workplan to Address the Extension of Covered Area Submitted by Chiquita Canyon Landfill (CCL), SWIS No. 19-AA-0052, Nov. 20, 2025, provided as Attachment D.

ii. Chiquita included all relevant criteria, plans, and specifications in satisfaction of section 5.3(c) of the ISE Order.

Chiquita's draft cover RAW included sufficient details regarding design and implementation plans for the geomembrane cover, consistent with the requirements of section 5.3(c) of the ISE Order.[63] Section 5.3(c) directed inclusion of the following:

> A Design and Implementation Plan. The design portion of the plan shall include, at a minimum, relevant criteria and final plans and specifications. The implementation portion of the plan shall detail, at a minimum, the techniques and methods to implement the removal activities, including any excavating, storing, handling, transporting, treating, and disposing of material on or off the Site.

The draft cover RAW included substantial details regarding the design and implementation of the cover. It explained that Chiquita's installation of the additional geomembrane cover will proceed in a phased approach, which is critical for ongoing management of the ETLF event. To install a section of cover, all LFG extraction wells and pumps in that section must be taken offline, and the offline wells will not extract gas and the offline pumps will not extract liquid during the offline period. Previous installation efforts have shown that even temporary cessation of gas and liquid extraction has an immediate and measurable impact. To minimize the number of offline wells and pumps at any given time, the draft cover RAW proposes to install the additional geomembrane cover in approximately five-acre segments. The area shaded in darker green (approximately 15 acres) in Figure 3 of the draft cover RAW is Chiquita's proposed initial deployment of the geomembrane cover (segments D01-D03). The draft cover RAW also noted that the area to be covered requires preparation including grading. If a rainstorm occurs during this process, much of the prep work will need to be redone. Proceeding with this work would have a high risk of lengthening the time during which wells are offline. Instead, to continue making progress during the rainy season, the draft RAW proposes to conduct repairs on approximately 16.4 acres of the existing 30-mil HDPE geomembrane using the new 60-mil EVOH/HDPE geomembrane. Following the rainy season and completion of the repairs outlined above, the draft RAW explained that Chiquita would then proceed with installing the EVOH/HDPE geomembrane cover. The area shaded in lighter green in Figure 3 of the draft cover RAW is the remainder of the expansion area divided into five-acre segments. Other segments will receive geomembrane in accordance with the approximate schedule presented in Table 1.[64]

The draft cover RAW provides an extensive discussion of the work to be done to prepare the deployment area and install the geomembrane cover. This discussion is specific to actual site

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[63] *See* Revised Draft Removal Action Workplan, Extension of Covered Area, Oct. 3, 2025, section 3.0. *Contra* DTSC Notice of Proposed Determination of Noncompliance, Dec. 26, 2025, at 5-6.

[64] For more discussion, see Revised Draft Removal Action Workplan, Extension of Covered Area, Oct. 3, 2025, section 3.1.

conditions at the Landfill and tailored to meet the ongoing needs of the existing mitigation measures.[65] For example, preparation of the deployment area will include:

- Clearing, grubbing, and further preparing the work area, including removing the green waste and vegetation;
- Preparing the subgrade to receive the 60-mil EVOH/HDPE geomembrane;
- Regrading existing benches and slopes (as needed) to ensure proper drainage;
- Installing vertical LFG collectors per the Updated Design and Installation Schedule of the Gas Collection and Control System Well Field Expansion Plan (Appendix H of the draft cover RAW). This plan was revised on October 3, 2025, to reflect changes resulting from this draft RAW;
- Installing surface LFG collectors to ensure proper distribution of vacuum to the underside of the geomembrane. This project will use the same surface collector design as that used for the existing geomembrane. The design is illustrated in Appendix I of the draft cover RAW. Collector positions will be located in the field and spaced no greater than 100 feet apart. Note that the gravel shown on the bench roads is part of the collector and is not part of the access road. All access road gravel is installed over the geomembrane with an underlying geotextile to protect against punctures and abrasion;
- Installing toe drains for segments where geomembrane is installed on slopes. The toe drain will be located at the toe of the slope under the geomembrane and inside of the anchor trench. Temporary sumps will be located at the low end of each toe drain and connected to the LFG condensate system (the initial deployment area will not require any toe drains); and
- Disconnecting and temporarily removing LFG headers and laterals in the deployment area.[66]

Geomembrane installation will include:

- Geomembrane pipe boots around vertical collectors;
- Continuous seaming between the existing geomembrane and the new geomembrane;
- Placement of geotextile and gravel access roads where needed (locations will be determined in the field by operations personnel);
- Placement of sandbag ballast in other areas to prevent geomembrane uplift by wind; and
- Re-installation of LFG headers and laterals over the geomembrane.[67]

The draft cover RAW additionally includes several Appendices providing additional design and implementation specifics, including Appendix J (specifications and CQA requirements used for

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[65] *See* Revised Draft Removal Action Workplan, Extension of Covered Area, Oct. 3, 2025, at 8-10.
[66] *See* Revised Draft Removal Action Workplan, Extension of Covered Area, Oct. 3, 2025, at 8.
[67] *Id.*

installation of the 60-mil EVOH/HDPE geomembrane cover) and Appendix K (typical road cross-sections and details that are used by the contractors as guides).[68]

Chiquita disputes DTSC's characterization of these plans as being "too generalized to be fit for the specific work," and disputes DTSC's characterization of its General Comment #1 in its August 4, 2025 comment letter as reflecting such. Once again, DTSC's Notice alleges a requirement that was never previously communicated to Chiquita. Nowhere in DTSC's General Comment #1 does the department state or even imply that the plans Chiquita provided were "too generalized." General Comment #1 merely directs Chiquita to include specifications of products that are to be constructed or installed as a call-out in standalone sections or appendices of the draft RAW. DTSC's General Comment #1 states the following, in relevant part:

> Specifications and Cross-Sections: Specifications of products that are to be constructed or installed with this removal action must be called out in standalone sections of the Draft RAW or in appendices that are specific to this RAW, not sheets from other submittals. Cross-sections that are to be developed for this removal action must be included in the Draft RAW and not simply by reference to other plans.
>
> If the specifications and/or cross-sections are not included in the Draft RAW as standalone items, there is no way to confirm if those items are being included in the removal action. For example, Appendix G calls out "Section 02771" and "Cell 7 Liner Construction"; these have nothing to do with the geomembrane cover associated with this Draft RAW.
>
> The types of cross-sections that are expected to be included, at a minimum, are:
> a) Road Cross-Sections […]
> b) Pipe Road-crossings […]
> c) Joint Trench and Electricity Crossings […]
> d) Tie Downs and Anchoring […]
> e) Permanent and Semi-Permanent Structures […]
> f) Footings […]

General Comment #1 also directs Chiquita to include six types of cross-sections in the revised draft RAW. Chiquita responded to DTSC's comments and included all six in Appendices A and K and section 3.1 of the draft RAW.[69]

Further, as stated above, Chiquita's revised draft RAW reflects EPA's July 24, 2025 letter, issued pursuant to EPA's authority under Paragraph 90 of the UAO, requiring Chiquita to expand the

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[68] *Id.* at 9.
[69] *See* Revised Draft Removal Action Workplan, Extension of Covered Area, Oct. 3, 2025, section 3.1 and Appendices A and K.

geomembrane cover consistent with the 2025 LEA Compliance Order, and Chiquita's response to that letter.[70] The revised draft RAW contains all of the plans and specifications relating to these 100 acres of the Landfill. The ISE Order directly conflicts with Chiquita's agreement with EPA, which DTSC was aware of.[71] If DTSC takes issue with the extent of Chiquita's proposed coverage, DTSC must work with both EPA and Chiquita to come to an agreement on the portion of the landfill that should be covered.

As DTSC pointed out, Chiquita's revised draft RAW also reflects the commitment to provide a hydrology analysis in the next update to the RAW. Before this Notice, DTSC had not directed Chiquita to further update the revised draft RAW. As such, Chiquita had not yet provided the hydrology analysis but intends to do so during the month of January 2026.

iii. Chiquita adequately identified the goals to be achieved in satisfaction of section 5.3(b) of the ISE Order.

As described above, the first time DTSC stated that Chiquita must "reference the SET event/landfill reaction in the Goals and Objectives section" was in this Notice. DTSC's prior comments did not specify that Chiquita's draft RAW must make this reference to satisfy section 5.3(b), nor does the ISE Order make such a specification. Chiquita's stated goals "to extend the area of the Landfill provided with a geomembrane cover" and "to improve LFG collection and thereby minimize emissions and reduce odors" therefore satisfy the requirements of section 5.3(b) and directly address DTSC's August 4, 2025 comments. Chiquita's stated goals clearly relate to the landfill reaction. Chiquita cannot be expected to comply with a requirement to include specific language that had not previously been communicated to Chiquita. Chiquita will revise the draft RAW to more explicitly reference the landfill reaction in the Goals and Objectives section.

iv. Chiquita provided a site description that includes current site conditions in satisfaction of section 5.3(a) of the ISE Order.

Chiquita's draft cover RAW included an accurate description of current site conditions, consistent with the requirements of section 5.3(a) of the ISE Order.[72] Chiquita provided a robust site description based on the copious data streams monitored and measured at the Landfill that is reflective of current site conditions. DTSC appears to disagree with Chiquita's assessment of such site conditions. DTSC alleges that the draft cover RAW does not provide an accurate description

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[70] *See* Additional Work Required Under UAO for Geomembrane Cover Expansion, Jul. 24, 2025, provided in Attachment E; Chiquita Canyon, LLC's Response to U.S. EPA's, DTSC's, and the LEA's Requirement to Expand the Geomembrane Cover, Aug. 15, 2025.
[71] *See* Chiquita Canyon, LLC's Response to U.S. EPA's, DTSC's, and the LEA's Requirement to Expand the Geomembrane Cover, Aug. 15, 2025.
[72] *See* Revised Draft Removal Action Workplan, Extension of Covered Area, Oct. 3, 2025, sections 2.1, 2.2, and 2. *Contra* DTSC Notice of Proposed Determination of Noncompliance, Dec. 26, 2025, at 6.

of current site conditions because it "does not accurately depict the extent of the SET event and the expanding reaction."[73]

Each draft RAW must include design criteria, plans, and specifications that are prepared by a California licensed civil engineer.[74] Chiquita and its experts and consultants, including its California licensed civil engineer, carefully reviewed and prepared the description of current site conditions. Chiquita cannot require those independent experts to reflect DTSC's perceived extent of the reaction and current site conditions if those independent experts do not agree with DTSC's assessment. As DTSC itself acknowledged in its December 12, 2025 Notice of Proposed Determination of Noncompliance, it did not apparently have the full data set it believed it needed to fully assess the reaction.[75] While Chiquita disagrees with that assertion, Chiquita provided the additional requested data on December 22 and 23, 2025.

Chiquita's independent experts provided a characterization of current site conditions supported by all available data, expert reports, and actual landfill operations. DTSC takes particular issue with Chiquita premising its characterization of current site conditions on the "findings of the Reaction Committee."[76] The crux of DTSC's issue with relying on the Reaction Committee Determinations was that DTSC did not have access to the "raw data" referenced in those reports and thus the findings were "unverifiable."[77] This is not the same as saying that Chiquita did not describe current site conditions. Chiquita provided a detailed description of current site conditions in its draft cover RAW, consistent with the requirements of section 5.3(a) of the ISE Order, and Chiquita has given DTSC access to all raw data for it to review and independently confirm such assessment.

v. Chiquita included an adequate description of cover installation methods in satisfaction of section 5.3(e) of the ISE Order.

Section 5.3(e) of the ISE Order requires Chiquita to include "[a] description of methods that will be employed during the removal action to ensure the health and safety of workers and the public during the removal action." DTSC alleges that the draft cover RAW does not comply with this requirement because the RAW does not describe the new deployment process being implemented by Chiquita to minimize the potential for on-site odors.[78] At the time Chiquita submitted the first draft cover RAW and the revised draft cover RAW (May 16 and October 3, 2025, respectively), the cover installation methods described in the draft RAWs were entirely accurate. Chiquita began implementing this new deployment process after observing an increase in on-site odors as a result of taking all LFG extraction wells and dewatering pumps offline in the active cover deployment areas. Chiquita informed DTSC in subsequent correspondence that in order to avoid these potential negative impacts, it had begun employing a new deployment process that enables the wells and

[73] DTSC Notice of Proposed Determination of Noncompliance, Dec. 26, 2025, at 6.
[74] ISE Order § 5.3(g).
[75] DTSC Notice of Proposed Determination of Noncompliance, Dec. 12, 2025, at 5.
[76] DTSC Notice of Proposed Determination of Noncompliance, Dec. 26, 2025, at 6.
[77] *See* Review of Draft Removal Action Workplan, Protect Cell 8A from Intrusion of Elevated Temperature Landfill Event, Imminent and Substantial Endangerment Determination and Order (Docket No. HAS-FY24/25-082), Task 10, Protect Cell 8A from Intrusion of Subsurface Elevated Temperature Event (Site Code 302132), Oct. 15, 2025, at 4.
[78] DTSC Notice of Proposed Determination of Noncompliance, Dec. 26, 2025, at 6-7.

pumps in active cover deployment areas to be offline for the least amount of time possible and that Chiquita needed additional time to fully evaluate and further develop this process.[79]

Chiquita did not begin employing the new method of cover installation described in its November 7, 2025, November 21, 2025, and December 15, 2025 letters and in discussions with DTSC on November 12, 2025, until after Chiquita's submittal of the revised draft RAW on October 3, 2025. As such, the description of cover installation methods described in both the May 16 and October 3, 2025 draft RAWs satisfied section 5.3(e) of the ISE Order because they accurately reflected the cover installation methods employed at the time of submission. Chiquita cannot be expected to comply with a requirement to include specific language that had not previously been communicated to it. Chiquita will revise the draft RAW to provide more description of this new deployment process.

b. Chiquita submitted a satisfactory relocation RAW.

Chiquita's relocation RAW satisfied the ISE Order's requirements; included all relevant criteria, plans, and specifications; and addressed DTSC's comments.[80] DTSC's assertion that Chiquita did not submit a satisfactory relocation RAW relies on false allegations, ignores Chiquita's extensive good-faith engagement with DTSC and other federal, state, and local regulators regarding the new tank farm's (Tank Farm 13) location, and ignores the totality of the circumstances surrounding the reaction and Chiquita's efforts to effectively manage it.

DTSC's specific allegations are addressed in turn below. First and most importantly, Cell 8B allowed Tank Farm 9's prompt relocation to a location at the Landfill that is currently stable and that Chiquita and its experts expect to remain stable for the foreseeable future based on current reaction data.[81] Cell 8B was the most environmentally protective location at the Landfill, and it was the only location that was acceptable to certain regulators, including DTSC (at least initially) and CalRecycle. Second, contrary to DTSC's allegations in the Notice, Chiquita provided compaction data demonstrating that Tank Farm 13's construction met compaction standards and provided a slope stability analysis further demonstrating that the new location is stable. Third, DTSC's allegation that Chiquita did not address DTSC comments because the version of Chiquita's Leachate Management Plan (LMP) submitted to DTSC in September 2025 did not reflect Tank Farm 13's final, as-built conditions fails because, among other things, the LMP is a requirement of EPA's UAO and DTSC has no jurisdiction over its contents and Tank Farm 13's construction was not complete at the time of the submission so it could not have been included in the September 2025 submission. Since Chiquita's relocation RAW satisfies the ISE Order's

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[79] *See* Chiquita Response to DTSC Request for Updated Cover Deployment Schedule, Nov. 7, 2025, at 2-3.
[80] *See* Revised Draft Removal Action Workplan, Interim Relocation and Stabilization of Containerized Waste, Sep. 19, 2025; June 3, 2025 email from K. Logan to P. Ruttan transmitting Compaction memo; Nov. 25, 2025 email from K. Logan to T. Crick, P. Ruttan, and B. Floyd transmitting stability analysis; June 3, 2025 Summary of Compaction Test Results. *Contra* DTSC Notice of Proposed Determination of Noncompliance, Dec. 26, 2025, at 7-9.
[81] See the most recent Monthly Reaction Committee Determination on Reaction Area Boundary, submitted on January 9, 2026, for the month of December 2025, in accordance with SOFA Condition Nos. 9a and 9b.

requirements, DTSC should withdraw its Notice.

i. The relocation of Tank Farm 9 to Cell 8B satisfies section 5.1.2(b) of the ISE Order because Cell 8B was the only available option for the prompt relocation of Tank Farm 9, it was the most environmentally protective location, and it is currently stable.

DTSC's allegation that the relocation of Tank Farm 9 to Cell 8B fails to satisfy the ISE Order ignores over two years of Chiquita's constant engagement with DTSC and other federal, state, and local regulators regarding its good faith efforts to effectively manage the reaction, in part, by constructing a tank farm that will satisfy the requirements for Conditional Authorization to treat the leachate under California's tiered hazardous waste permitting program. Once DTSC required that Tank Farm 9 be relocated under the ISE Order, it became further apparent that Cell 8B was the only feasible location that would meet regulators' demands and constraints and simultaneously comply with the ISE Order as the most environmentally protective location at the Landfill.

Additionally, Cell 8B was the only location at the Landfill (other than Cell 7, which became unacceptable due to public opposition during location discussions with the regulators) that would provide sufficient space for the new tank farm. Cell 8B was also the only location at the Landfill that would allow the new tank farm to be constructed in the near term due to permitting constraints on other locations, such as the Wolcott Way location (which also faced substantial public opposition), and to achieve Tank Farm 9's prompt relocation to a stable location at the Landfill as contemplated by the ISE Order.

A. The history of Tank Farm 9.

As an initial matter, it is important to understand the evolution of Chiquita's leachate management practices as influenced and directed by its regulators, such as DTSC, and the history of Tank Farm 9. Due to DTSC's early stated concerns with comingling leachate from extraction wells from different areas of the Landfill during Chiquita's initial response to the reaction and increased leachate production in early 2024, Chiquita developed a group system for the extraction wells—Groups A, B, North, and East. Due in part to DTSC's initial instructions that a tank could only manage leachate from one extraction well group (e.g., once a tank managed leachate from Group A, that tank could only be used to manage leachate from Group A wells going forward), Tank Farm 9 was ultimately located on the Landfill's top deck to accommodate leachate collection and treatment needs while managing the leachate from the different well groups in dedicated tanks as instructed by DTSC. As leachate production and extraction increased, the logistics of managing the leachate from the different well groups in dedicated tanks required the acquisition and placement of additional tanks in Tank Farm 9. Accordingly, Tank Farm 9 might not have ultimately come to be located on the Landfill's top deck or it might have looked quite different had DTSC's initial instructions not focused on managing leachate from different extraction well groups in dedicated tanks.[82]

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[82] During formal recharacterization, compatibility was also established, allowing commingling of compatible wastes and reducing administrative and logistical burdens.

B. Planning, designing, siting, and constructing the new tank farm.

In late 2024, as Chiquita continued its efforts to design, site, and construct the new tank farm, it began more extensive discussions with the Los Angeles County Fire Department (the Certified Unified Program Agency or CUPA) and other state and local regulators, including DTSC, regarding the new tank farm's location.[83] These discussions ultimately resulted in the January 28, 2025 meeting and site visit to the Landfill where Chiquita and many state and local regulators discussed, among other things, the new tank farm's location. In addition to Cell 8B, Canyon B and Wolcott Way were identified as potential locations for the new tank farm in 2024. However, both Canyon B and Wolcott Way were less environmentally protective than Cell 8B and both presented logistical challenges rendering them impractical and/or unacceptable.[84]

Chiquita notes that it had originally planned to construct the new tank farm in Canyon B and had even begun site prep for construction. However, after nearly six months of discussions with the CUPA, the CUPA informed Chiquita in December 2024 that other regulators expressed concern about Canyon B as the new tank farm's location.[85] While Canyon B is not physically connected to the Main Canyon, concerns were raised regarding whether Canyon B was formally closed. Wolcott Way would have required extensive permitting and regulatory approvals (e.g., Conditional Use Permit modification, and LEA and Regional Water Board permits and approvals, among others), some of which may have required CEQA analysis, that would not have allowed for Tank Farm 9's prompt relocation as contemplated by the ISE Order. Other alternate locations, including Wolcott Way, initially identified by regulators and provided to Chiquita by the CUPA were unacceptable alternate locations because those locations were less environmentally protective than Cell 8B and the logistics of constructing and operating the new tank farm in those locations were entirely unworkable.

Chiquita repeatedly sought guidance from the regulators about potential locations at the Landfill for the new tank farm, but it did not receive any significant guidance until March 6, 2025, months after it first asked. The March email transmitting the regulators' collective feedback from the

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[83] *See*, *e.g.*, Jul. 2, 2024 Outlook calendar meeting invite, Chiquita -- On-Site Leachate Treatment; Jul. 19, 2024 email from S. Cassulo to the CUPA with copy to DTSC, CCL Conditional Authorization Update; Sep. 6, 2024 email from D. Smith to the CUPA, CCL - Proposed CUPA Transmittal Email and Documents; Oct. 9. 2024 email from D. Smith to the CUPA, CCL - Conditional Authorization Progress Update; Oct. 23, 2024 email from S. Phillips to EPA with copy to DTSC, CCL Conditional Authorization Update to CUPA; Nov. 6, 2024 email from D. Smith to the CUPA, CCL - Conditional Authorization Progress Update; Nov. 20, 1014 email from D. Smith to the CUPA, Chiquita Canyon Landfill (CCL) – Conditional Authorization Progress Update; Nov. 27, 2024 email from S. Phillips to EPA and DTSC, Chiquita Canyon Landfill (CCL) – Conditional Authorization Progress Update; Dec. 12, 2024 email from D. Smith to the CUPA, CCL - Conditional Authorization Update; Dec. 17, 2024 email from D. Smith to the CUPA, CCL - Post Site Visit Update.

[84] *See* Jan. 31, 2025 email from J. Perkey to EPA and the CUPA with copy to Los Angeles County Counsel, CalRecycle, DTSC, the Los Angeles Regional Water Quality Control Board, the LEA, Los Angeles County Department of Regional Planning, Los Angeles County Public Works, and South Coast Air Quality Management District, transmitting Chiquita's memorandum, Summary of Tank Farm Options and Approval Requirements.

[85] *See* Email from T. Quiaoit (CUPA) to D. Smith, Dec. 19, 2024; Email from E. Morofuji (Public Health) to S. Cassulo, Dec. 18, 2024.

January 28, 2025 site visit and discussion of potential locations for the new tank farm contained the following statement: "we are not able to suggest or recommend a site [for the new tank farm], but have instead provided criteria for a site that will likely facilitate the necessary permits and approvals."[86] As the regulators knew, there was no available option at the Landfill that met all criteria. To date, Chiquita and the regulators have been unable to identify such an option.

Prior to and after the ISE Order, Chiquita clearly conveyed to the regulators that Cell 8B was the best location for the new tank farm because the other locations did not work for various reasons, including environmental protection and space issues.[87] Chiquita proceeded with Cell 8B construction and held weekly technical calls with DTSC and often CalRecycle. CalRecycle's Todd Thalhammer agreed that Cell 8B was a good interim location for the new tank farm. It was under Mr. Thalhammer's direction and DTSC's verbal agreement that Chiquita proceeded with Cell 8B as the interim location for the new tank farm with the understanding, at that time, that the final location would be Cell 7. Chiquita finalized its design and construction plans in accordance with this understanding. However, community opposition to Cell 7 as the final location for the new tank farm prior to issuance of the ISE Order ultimately resulted in the regulators' inability to support Cell 7 as the new tank farm's final location.

The new tank farm requires an extensive amount of space that must be relatively flat, and the Landfill does not have that type of space anywhere else besides Cell 8B. As noted above, Chiquita initially planned to site the new tank farm in Canyon B but was told no. Since Canyon B was not an acceptable location for the new tank farm, Primary Canyon was also an unacceptable location for the new tank farm because it had the same concerns about formal closure of the old landfill. Accordingly, other than Cell 7 (which became an unacceptable option due to community opposition) and Wolcott Way (which also became an unacceptable option for the reasons described above), there is no other space at the Landfill that could accommodate the new tank farm's space requirements.

C. Cell 8B is the most environmentally protective location at the Landfill that allowed for the prompt relocation of Tank Farm 9.

Cell 8B is the most environmentally protective location at the Landfill because a tank farm in Cell 8B is mostly gravity fed, meaning that minimal pumping of hazardous leachate under pressure is required to move the leachate to the tank farm. The Cell 8B location is also the most protective from wildfires. In addition, Cell 8B is located within the Landfill's lined footprint so it provides "tertiary" containment (considering the new tank farm's primary and secondary containment liners).

The other alternate locations identified by the regulators were outside of the Landfill's footprint and would have required extensive pumping of hazardous leachate over significant distances and elevation of unlined and native land to reach the tank farm. In addition, the other alternate locations

[86] *See* Email from L. Lye to Chiquita, Los Angeles County Counsel, CalRecycle, DTSC, the Los Angeles Regional Water Quality Control Board, the LEA, Los Angeles County Department of Regional Planning, Los Angeles County Public Works, and South Coast Air Quality Management District, Mar. 6, 2025.
[87] *See, e.g.*, supra n. 87.

were outside of the Landfill's ridgeline which rendered them more susceptible to wildfires. For example, Wolcott Way, one of the few alternative options with sufficient space, was the least environmentally protective location because of its proximity to the community and the Santa Clara River. The location would have necessitated pumping hazardous leachate under pressure up and over a ridge (over native, unlined land) to a tank farm right next to the highway.

D. Cell 8B is currently stable and is expected to remain stable for the foreseeable future.

Relocating Tank Farm 9 to Cell 8B was the only way to satisfy the ISE Order's requirement to relocate Tank Farm 9 to a stable location considering the totality of the circumstances surrounding the reaction and the need to promptly relocate Tank Farm 9's leachate tanks. Constructing the new tank farm in Cell 8B allowed for Tank Farm 9's relocation within the landfill to occur promptly, eliminate any imminent threats, and minimize any potential long-term threat to the leachate tanks from the reaction.

As discussed above, Chiquita disagrees that the reaction is expanding. According to the interpretation of current data by Chiquita's consultants, it is highly unlikely that the reaction could even begin to threaten Cell 8B for the foreseeable future considering the current location of the reaction impacts, the very small amount of waste located under a small portion of Tank Farm 13, and Chiquita's current reaction management measures that independent experts have confirmed are continuing to effectively manage and contain the reaction.[88] As discussed further below, Cell 8B is currently stable and will be so for the foreseeable future. Thus, relocating Tank Farm 9 to Cell 8B satisfied section 5.1.2(b) of the ISE Order because it promptly eliminated any imminent threat to the Tank Farm 9 leachate tanks and it minimized potential future threats to the leachate tanks. DTSC's allegation that Cell 8B may theoretically be subject to the reaction in the future ignores the totality of the circumstances surrounding Chiquita's management of the reaction and the limited options that Chiquita had for promptly relocating Tank Farm 9 leachate tanks to another portion of the Landfill as explained above.

E. Until the DTSC Notice, DTSC had indicated that Chiquita was in compliance with section 5.1.2(b) of the ISE Order.

Chiquita has been transparent with its plans and acted in good faith in its efforts to construct a tank farm that satisfies the requirements for Conditional Authorization and that resulted in Tank Farm 9's prompt relocation within the Landfill. Chiquita staff have met regularly with its regulators and have consistently updated them on these plans. This includes the 33 weekly technical meetings between DTSC and Chiquita following issuance of the ISE Order during which the tank farm was discussed routinely, including when there were no new developments. During this period, no regulators, including DTSC, ever instructed Chiquita to stop constructing the new tank farm in Cell 8B, nor has any regulator suggested additional alternate locations that Chiquita should

[88] *See* Declaration of C. Benson, The People of the State of California and The County of Los Angeles v. Chiquita Canyon, LLC; Chiquita Canyon, Inc.; and Waste Connections US, Inc., Case No. 2:24-cv-10819-MEMF-MAR, ECF No. 82-5, provided as Attachment F. *Contra* DTSC Notice of Proposed Determination of Noncompliance, Dec. 26, 2025, at 8.

consider.[89] Chiquita should not be threatened with noncompliance now, after substantial coordination and communication in which DTSC was silent on this exact point.

As described above, relocating Tank Farm 9 to Cell 8B was the only option that would satisfy section 5.1.2(b) of the ISE Oder. Relocation to Cell 8B achieved the key goal of the ISE Order by providing the only practical, environmentally protective, and stable location at the Landfill for achieving the prompt relocation of Tank Farm 9. Since the relocation of Tank Farm 9 to Cell 8B satisfies section 5.1.2(b) of the ISE Order, DTSC should withdraw its Notice.

ii. Chiquita has provided all relevant criteria, plans, and specifications in satisfaction of section 5.3(c) of the ISE Order.

Chiquita disagrees with DTSC's allegation that it has not complied with section 5.3(c) of the ISE Order.[90] The Notice summarily states that Chiquita "failed to provide adequate documentation to prove that [it has] met compaction and other geotechnical standards for construction of the pad at Tank Farm 13 in the Relocation RAW," and it cites section 5.3(c) of the ISE Order as support.[91] This allegation is false. Chiquita provided this documentation to DTSC on multiple occasions:

- On May 7, 2025, Chiquita emailed pre-construction soil compaction sample results for the soil placed in Cell 8B to DTSC's Peter Ruttan, Peter Gathungu, Perry Myers, and Tim Crick, copying DTSC's Dan Ziarkowski.[92]
- On May 20, 2025, after meeting with DTSC on May 14, 2025, Chiquita emailed the most recent soil sample results, including lab test results and moisture/density test results for the soil placed in Cell 8B, to DTSC's Dan Ziarkowski, Peter Ruttan, and Tim Crick, copying five additional DTSC personnel.[93]
- On June 3, 2025, in response to questions received from DTSC, Chiquita emailed a memorandum summarizing the pre-construction soil compaction sample results provided on May 7, 2025 to DTSC's Peter Ruttan, copying five additional DTSC and CalRecycle personnel.[94] The compaction memorandum—"Summary of Compaction Test Results – 2025 Cell 8 Tank Farm Project, Chiquita Canyon Landfill, Castaic, California"—begins by

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[89] Chiquita notes that LA County Public Works issued stop work orders regarding grading permit issues in June 2025, which Chiquita is contesting, and the County has not moved to enforce the orders. Upon learning about the stop work orders, Wes Mindermann of CalRecycle expressed concern and directed Chiquita to continue work.
[90] *See* Revised Draft Removal Action Workplan, Interim Relocation and Stabilization of Containerized Waste, Sep. 19, 2025, section 3.1. *Contra* DTSC Notice of Proposed Determination of Noncompliance, Dec. 26, 2025, at 8.
[91] DTSC Notice of Proposed Determination of Noncompliance, Dec. 26, 2025, at 8.
[92] *See* Email from K. Logan (Chiquita) to P. Ruttan (DTSC), et al., May 7, 2025.
[93] *See* Email from K. Logan (Chiquita) to P. Ruttan (DTSC), et al., May 20, 2025.
[94] *See* Email from K. Logan (Chiquita) to P. Ruttan (DTSC), et al., Jun. 3, 2025.

stating that it "summarizes the results of the compaction testing during the placement of engineered fill associated with the 2025 Cell 8 tank farm project."

- On June 6, 2025, after Chiquita had shared the compaction memorandum, DTSC's Peter Ruttan emailed Chiquita with a question regarding the amount of soil placed for the new tank farm, and Chiquita promptly answered the question.[95]

In summary, DTSC received the soil compaction documentation over seven months ago and discussed questions regarding soil placed for the new tank farm with Chiquita around the time the compaction information was submitted. DTSC had numerous opportunities to raise any additional questions or concerns about the documentation, including during the routine weekly calls. DTSC never indicated that the compaction memorandum or the other relevant compaction information provided by Chiquita failed to adequately document how it met the compaction and other geotechnical standards for constructing the pad for Tank Farm 13.

In addition to the documentation described above, Chiquita submitted Tank Farm 13's engineering assessment titled "Professional Engineer Hazardous Waste Tank System Assessment and Certification" in CalEPA's California Environmental Reporting System (CERS) on November 20, 2025, as part of its Conditional Authorization notification. That same day, Chiquita emailed managers and staff from CalEPA, DTSC, EPA, and the CUPA to alert them that Chiquita had submitted its Conditional Authorization notification and that Chiquita was working to provide the CUPA with the tank system certification.[96] DTSC at the very least had knowledge of this engineering assessment and could have requested a copy. The assessment included, among other things, a construction quality assurance monitoring report for Tank Farm 13 that included the same soil compaction information. Again, DTSC did not raise any questions or otherwise object to the compaction information that Chiquita provided. Accordingly, Chiquita has always understood that it has provided adequate documentation demonstrating that it met the compaction and other geotechnical standards for constructing Tank Farm 13's pad. To the extent that DTSC has specific comments or questions about the compaction documentation that Chiquita provided, Chiquita is willing to discuss further.

The Notice also claims that Chiquita failed to provide a slope stability analysis, as required by section 5.3(c) of the ISE Order. This allegation is also false. Chiquita provided the Tank Farm 13 stability analysis to DTSC on November 25, 2025, via an email to DTSC's Tim Crick, Peter Ruttan, and Bridget Floyd.[97] To date, DTSC has not raised any questions or concerns regarding the slope stability analysis. As with the compaction documentation, to the extent that DTSC has specific comments or questions about the slope stability analysis, Chiquita is willing to discuss further.

Given the above, DTSC's allegation that Chiquita did not provide all relevant plans, criteria, and specifications for the relocation RAW fails because it relies on false assertions that Chiquita failed to provide soil compaction and slope stability documentation, both of which were previously

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[95] *See* Email from K. Logan (Chiquita) to P. Ruttan (DTSC), et al., Jun. 6, 2025.

[96] *See* Email from D. Smith (Chiquita) to D. Barclay and T. Berg (DTSC), et al., Nov. 20, 2025, Chiquita Canyon - Conditional Authorization Notification.

[97] *See* Email from K. Logan (Chiquita) to T. Crick (DTSC), et al., Nov. 25, 2025, Slope Stability Analysis - TF13.

provided to DTSC. DTSC has the information it needs to assess stability of the Cell 8B location.[98] DTSC's apparent belief that it does not have this information suggests that it is asserting Cell 8B is not a stable location in violation of the ISE Order without reviewing Chiquita's submittals or relying on the facts. To the extent DTSC's concerns are about the content of those documents, it should state this specifically and explain in detail what additional information is required so the parties can have a constructive dialogue about how to address DTSC's concerns. Thus, DTSC's allegation that Chiquita failed to provide all relevant criteria, plans, and specifications in satisfaction of section 5.3(c) of the ISE Order is unfounded and DTSC should withdraw its Notice.

iii. Chiquita addressed DTSC's comments regarding the relocation RAW.

Chiquita provided extensive, substantive responses to DTSC's comments on all three RAWs. The Notice alleges that Chiquita did not address DTSC's comments regarding the relocation RAW.[99] More specifically, the Notice alleges that Chiquita did not address or provide the information specified in DTSC's comments on the May 2025 draft relocation RAW, including compaction testing and material classification based on geotechnical testing prior to fill placement. As noted above, Chiquita provided this documentation to DTSC on multiple occasions. As noted in the summary soil compaction memorandum, soil compaction testing occurred prior to fill placement.[100] Chiquita's alleged failure to include this information as part of the revised RAW does not warrant this Notice because Chiquita had previously provided the information directly to DTSC at DTSC's request. If DTSC's concern is that the revised draft relocation RAW did not expressly state that soil compaction testing occurred prior to fill placement, Chiquita will revise the draft RAW to incorporate this information.

The Notice further alleges that Chiquita failed to provide an updated LMP as requested in DTSC's July 29, 2025 comment letter on the May 2025 draft relocation RAW.[101] More specifically, DTSC alleges that the January 2025 LMP that Chiquita provided to DTSC was inadequate because it failed to include and reflect Tank Farm 13's as-built conditions. As an initial matter, Tank Farm 13 was still under construction in September 2025, so it was not possible to provide an LMP that reflected as-built conditions at that time. In addition, the LMP was prepared in response to EPA's February 21, 2024 UAO and Chiquita is still awaiting feedback from EPA regarding the January 2025 version that Chiquita shared with DTSC. DTSC does not have jurisdiction over the content or timing of revisions to the LMP. Since Chiquita is still awaiting EPA's feedback on the January 2025 version, it is not appropriate for Chiquita to make further updates at this time. For these reasons, it was neither possible nor required that the LMP reflect Tank Farm 13's as-built conditions. Thus, as with the soil compaction documentation, the LMP provided to DTSC cannot serve as the basis for the Notice's allegation that Chiquita failed to comply with the ISE Order.

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[98] *Contra* DTSC Notice of Proposed Determination of Noncompliance, Dec. 26, 2025, at 8 ("Without this information [which Chiquita has already provided], DTSC cannot assess stability of the Cell 8B location.").
[99] DTSC Notice of Proposed Determination of Noncompliance, Dec. 26, 2025, at 8.
[100] *See* Summary of Compaction Test Results at 1 ("Before the work started [on Tank Farm 13] and throughout fill placement, Geo-Logic Associates (GLA) collected soils samples from the borrow area in Cell 7 for compaction testing. The results of these tests are summarized in Table 1 and the test results are included in Attachment 1.").
[101] DTSC Notice of Proposed Determination of Noncompliance, Dec. 26, 2025, at 8-9.

Accordingly, DTSC's allegations that Chiquita failed to address DTSC's comments regarding the relocation RAW are inaccurate and without merit, and DTSC should withdraw its Notice.

c. Chiquita is dedicated to protecting Cell 8A and complying with all section 5.1.2(c) obligations that do not harm mitigation efforts.

Due to Chiquita's successful mitigation efforts, the ETLF is in a state of localized equilibrium and does not pose an imminent and substantial danger to Cell 8A. Based on its consultants' data driven analysis, Chiquita unequivocally disagrees with DTSC's assessment that the ETLF poses an existential threat to Cell 8A warranting the construction of the requested vertical barrier unprecedented in scope and complexity. Importantly, DTSC has ordered this construction without any scientific analysis demonstrating that the requested vertical barrier would preclude heat intrusion into Cell 8A and without any engineering study demonstrating that the barrier could be constructed. Not only has DTSC failed to present any evidence that the barrier would have a positive effect on protecting Cell 8A, but DTSC fails to consider the myriad of substantial negative impacts that the barrier would create. The construction of the requested vertical barrier would reverse the substantial progress that Chiquita's ongoing mitigation efforts to control the ETLF have accomplished. For these reasons, among others, Chiquita has good cause to not install the vertical barrier requested in section 5.1.2(c) of the ISE Order or include discussion of its installation in the draft barrier RAW.

Despite its opposition to the requested vertical barrier, Chiquita has remained cooperative and submitted a draft barrier RAW which, when combined with other active mitigation measures, will fully protect Cell 8A. Chiquita has satisfied all other barrier requirements under section 5.3 of the ISE Order. As such, since Chiquita's barrier RAW satisfies all requirements of the ISE Order save for those Chiquita has good cause with which not to comply, DTSC should withdraw its Notice. Chiquita remains wholly dedicated to protecting Cell 8A.

i. Cell 8A is not in imminent and substantial danger.

DTSC's claim that the ETLF poses an imminent and substantial danger to Cell 8A—originally made over nine months ago now—is not supported by actual evidence. Chiquita's ongoing mitigation measures have been successful at controlling the impacts of the ETLF and protecting Cell 8A. The reaction has not expanded into Cell 8A nor does the data suggest it will do so. There is no indication that any slope stability problems exist or will develop. Instead, the reaction remains stable, has reached a general equilibrium, and is cooling in some areas.[102] Further, the law is clear:

[102] The most recent Monthly Reaction Committee report concluded that "ETLF conditions are fully contained within the Reaction Area boundary, and have not expanded into a new cell." Monthly Reaction Committee Determination on Reaction Area Boundary Chiquita Canyon Landfill, Dec. 10, 2025, available at https://s3.us-west-1.amazonaws.com/chiquitacanyon.com.bucket/2025/12/2025-12-10-Reaction-Committee-Determination-on-Reaction-Area_Final.pdf. In some instances, temperatures have decreased since April 2024. For example, TP-04 and TP-20's average temperatures at every depth were lower in November 2025 than in April 2025. *Compare* Chiquita's April 2025 Monthly Report, *with* Chiquita's November 2025 Monthly Report. *See also* Declaration of Robert Dick, P.E., B.C.E.E., In the Matter of South Coast Air Quality Management District v. Chiquita Canyon, LLC, Case No. 6177-4, Oct. 22, 2025, ¶¶ 17-20 ("we have noted numerous areas where we are seeing improvements in

there can be no imminent or substantial danger when there is no necessity for action in excess of the actions already taken and those that are currently ongoing.[103] The requested vertical barrier is therefore not necessary to install.

ii. DTSC's requested vertical barrier is not supported by scientific analysis, is technically infeasible, and would negatively impact Chiquita's successful mitigation measures.

DTSC continues to order Chiquita to install a vertical barrier without any scientific evidence indicating the barrier would prevent the expansion of ETLF conditions into Cell 8A, any engineering analysis demonstrating it could be constructed, and any cost benefit analysis that acknowledges the impact its construction would have on the Landfill and surrounding communities. Chiquita has consistently opposed installation of a vertical barrier and has presented scientific evidence that DTSC has not addressed. Chiquita remains committed to protecting Cell 8A, but will not blindly obey an order that lacks scientific and engineering analysis and would undo the substantial progress Chiquita's successful mitigations measures have accomplished.

A. DTSC's requested barrier is not supported by scientific evidence and contradicts LEA's most recent directive.

DTSC has proffered no scientific evidence in support of its requested vertical barrier, and Chiquita has been unable to identify any evidence or research supporting the proposition that the barrier could effectively prevent or preclude heat transfer under ETLF conditions. EPA's own guidance does not recommend a soil barrier to mitigate ETLF events.[104] Instead, EPA guidance and industry best management practices include heat removal through aggressive extraction of leachate and gas.[105] This is precisely what Chiquita has been doing. DTSC's requested vertical barrier would both fail to accomplish these critical tasks and interfere with them.

Chiquita has maintained this position—that a vertical barrier would be infeasible to install—for the last 17 months, starting with the Soil Reaction Break/Barrier Plan submitted to EPA on March 27, 2024 and to the LEA on April 12, 2024 pursuant to EPA's UAO and in response to LEA letters dated November 21, 2023 and April 5, 2024. After discussions with both EPA and the LEA, Chiquita resubmitted the Soil Reaction Break/Barrier Plan on July 8, 2024 to the LEA and November 26, 2024 to EPA. Although the nature of the requested vertical barrier and Chiquita's proposed mitigation measures have evolved over the course of these submittals and discussions,

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ETLF conditions….the landfill gas wellhead temperatures recorded each month demonstrate several subareas within the data-driven boundary that consistently exhibit substantially lower temperatures than other wellheads within this boundary").

[103] *Santa Clarita Valley Water Agency v. Whittaker Corp*., 99 F.4th 458, 476 (9th Cir. 2024) (no imminent and substantial threat where "there has been extensive government oversight," and the defendant "has engaged in remedial actions" and "installed over two hundred monitoring wells").

[104] Elevated Temperature Landfill, U.S. Environmental Protection Agency, *available at* https://www.epa.gov/land-research/elevated-temperature-landfill (last updated August 14, 2025).

[105] *Id*.

Chiquita's position has never changed—Chiquita would not, and will not, install the vertical barrier as specified by the LEA and DTSC, for the reasons described herein.

More recently, on November 20, 2025, in response to Chiquita's position, the LEA directed Chiquita to "propose alternatives . . . to protect Cell 8A," aside from the vertical barrier.[106] DTSC's continued insistence that Chiquita install the vertical barrier runs contrary to the LEA's own directives and indication that satisfactory alternatives to the barrier may exist.[107]

B. DTSC's requested barrier is neither technically nor practically feasible.

Not only is DTSC's requested barrier contrary to the existing science and best practices to mitigate ETLFs, but the requested barrier is also neither technically feasible nor practically possible to construct. According to Chiquita's technical experts, it is not technically possible to construct DTSC's requested barrier. Simply put, there are no existing construction methods that would result in a barrier as described and depicted in the DTSC ISE Order, which requires "excavating a vertical shaft using a three or four-foot auger drill rig," backfilling the shaft "with a soil-bentonite or soil-cement mix," and installing "tangent" shafts and rows of vertical shafts.[108]

As explained in Chiquita's November 21, 2025 letter to DTSC, DTSC and CalRecycle have not demonstrated how the requested vertical barrier could be installed in such a manner that it would effectively mitigate the reaction. DTSC and CalRecycle claim that the requested vertical barrier would not need to be installed to the depths that Chiquita outlines in the draft RAW to contain the reaction and indicate that shallow borings would be sufficient.[109] However, because the peak temperatures of the reaction are beneath the liquids level in the waste mass, relatively shallow borings would not prevent the spread of the heat and reaction beneath the borings; deep boreholes and wells would be necessary. Recognizing that the reaction area is within saturated waste and below the liquid level within the waste mass, and therefore deeper boreholes and wells would be required, sonic drilling rigs would be necessary as conventional drill rigs are unable to drill deep into the reaction area without collapsing the borehole. Sonic drill rigs set the casing while drilling to hold the borehole open in order to allow these borings to drill through the liquid. This drilling method would greatly increase the amount of time required to create the requested vertical barrier, as the sonic rigs have a maximum diameter of one foot instead of three feet, requiring a greater number of borings that would need to be up to 250 feet deep. Based on Chiquita's engineers' experiences at other ETLF landfills, each boring could require approximately three days to complete. This dramatically increases the timeline for the installation of the requested vertical barrier by a magnitude of years even if multiple drill rigs were used to complete the project. DTSC

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[106] LEA Comments on the Draft Removal Action Workplan (RAW) Chiquita Canyon Landfill (CCL), SWIS No, 19-AA-0052, Nov. 20, 2025.
[107] *See* LEA Comments on the Draft [Barrier] Removal Action Workplan (RAW) Chiquita Canyon Landfill (CCL), SWIS No. 19-AA-0052, Nov. 20, 2025, provided in Attachment G.
[108] See Stark Memo at 13-14.
[109] *See* CalRecycle Comments on the Draft Removal Action Plan to Protect Cell 8A from Intrusion of Elevated Temperature Landfill Event, Sep. 12, 2025, Technical Comment #3 ("The CCL's consultant indicates that the cutoff barrier soil borings would need to be more than 200 ft deep, and this is not feasible. This again is confusing, given that the waste at the interface between Cells 6 and 8 is approximately 80 ft deep and is very achievable.")

also provides no explanation of how the boreholes could be drilled tangent to one another. As Chiquita has explained repeatedly, that is simply not possible when drilling into waste.

Even if it were technically possible to build the requested vertical barrier, numerous construction and worker safety issues would result. For example, the requested vertical barrier would require extremely heavy machinery for drilling on slopes, often 2:1 and up to 150 feet in height. Using existing roads or building new benches into the Landfill's slopes would not facilitate drilling platforms because there are no feasible flat areas from which to drill that could support the weight of the heavy machinery required, which could cause landfill instability or equipment collapse. Additionally, the design of the drilled shafts could cause the shafts themselves to act as conduits for landfill gas to reach the surface. Further, substantial additional construction would likely be required to ready the Landfill site for the barrier, which could take years to accomplish and face issues of its own.

C. DTSC's requested barrier would negatively impact Chiquita's existing, successful mitigation measures.

Even if DTSC's requested vertical barrier could be built, its installation would negatively impact the ongoing mitigation measures at the Landfill, setting back substantial progress that has been made. Constructing the barrier could require Chiquita to reduce or cease its extraction of landfill gas—a critical measure to mitigate the reaction—when areas of active construction overlap with the locations of buried pipelines and other infrastructure. Extracting landfill gas removes heat and pressure from the reaction. Reducing the extraction of such gas would have numerous detrimental impacts, including likely leading to an increase in temperature and pressure, and increasing fugitive surface emissions.[110] Relatedly, drilling shafts without vacuum applied could cause the shafts to act as conduits for landfill gas to reach the surface, further exacerbating emissions and complicating gas collection. Finally, constructing the barrier could increase oxygen entering the Landfill's waste mass, which could result in dangerous conditions, including subsurface fires, shifts in gas composition and byproducts, and worsening of the ETLF conditions.

Chiquita's concerns are not unfounded. For example, during the push to deploy the initial 15 additional acres of the geomembrane cover in Segments 1, 2, and 3 of the Landfill, Chiquita saw an increase in temperatures measured at certain wells and temperature monitoring probes, as explained to DTSC. These temperatures went back down soon after the LFG extraction wells and dewatering pumps in the active cover deployment areas came back online. Any alternative(s) to the requested vertical barrier explored or implemented must not impede the effectiveness of Chiquita's existing mitigation measures.

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[110] As Chiquita explained in numerous communications including its November 7 and November 21, 2025 letters to DTSC, Chiquita immediately observed increased temperatures in the Landfill when it had to take crucial landfill gas and heat extraction equipment offline to deploy the geomembrane cover. Any impacts to existing mitigation measures must be avoided.

iii. The draft barrier RAW and other correspondence provide sufficient support for Chiquita's approach to manage the reaction.

Chiquita rejects DTSC's assertion that Chiquita's draft barrier RAW did not meet the requirements of the ISE Order because it "did not propose any new alternative measures to protect the SET event from entering Cell 8A."[111] Nowhere was Chiquita's draft barrier RAW required to include such alternative measures.

Chiquita's draft barrier RAW submitted on July 2, 2025 did not propose alternatives to DTSC's requested vertical barrier because the direction to provide proposed alternatives was in DTSC's October 15, 2025 comments. The scope of Chiquita's draft barrier RAW was limited to the requirements of section 5.1.2(c) of the ISE Order, which requested a vertical barrier.

As described throughout this response, DTSC engages in a consistent pattern of attempting to expand the ISE Order in ways that are not supported by the language of the order itself. For example, DTSC claims that Chiquita's draft RAW failed because the existing soil barrier "does not extend fully across landfilled areas" but the ISE Order includes no such requirement.[112] Further, Chiquita never represented to DTSC that it intended to offer the existing soil barrier as a "substitute for the requirements of Section 5.1.2(c)." The ISE Order does not state that the barrier is the only method to protect Cell 8A nor that Chiquita must necessarily install a new barrier.[113] It is therefore not necessary for the existing soil barrier to meet all of the requirements of the ISE Order alone; rather, when combined with Chiquita's extensive reaction management strategy, the existing soil barrier improves Chiquita's ability to prevent the spread of the reaction.

Further, DTSC's assertion that Chiquita's draft barrier RAW "did not contain a satisfactory CQA report" is inaccurate. As discussed in Chiquita's November 21, 2025 letter to DTSC, the CQA report originally submitted on May 13, 2025 accurately represented Chiquita's existing soil barrier. As Chiquita explained, the CQA report is meant only to summarize the construction activities to install the existing soil barrier, which it accurately did—not whether the existing soil barrier insulates entirely against heat transfer.[114] Nevertheless, Chiquita submitted a revised CQA report for the existing soil barrier on January 9, 2026, in response to DTSC's October 15, 2025 comments.

Finally, and most significantly, DTSC's description of its October 15, 2025 comments in the Notice mischaracterizes the requests made therein. Nowhere in DTSC's October 15, 2025 comments did the department state Chiquita's response must include "a revised RAW" or that the response must

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[111] DTSC Notice of Proposed Determination of Noncompliance, Dec. 26, 2025, at 11.
[112] DTSC Notice of Proposed Determination of Noncompliance, Dec. 26, 2025, at 9; *see also* Regarding Imminent and Substantial Endangerment Determinization [*sic*] and Order ("Order" – Docket No. HAS-FY24/25-082), Task 10 – Submit Draft Removal Action Workplan for Protection of Cell 8A from Intrusion of SET Event (Site Code 302132), May 19, 2025 at 2 and Review of Draft Removal Action Workplan, Protect Cell 8A from Intrusion of Elevated Temperature Landfill Event, Imminent and Substantial Endangerment Determination and Order (Docket No. HAS-FY24/25-082), Task 10, Protect Cell 8A from Intrusion of Subsurface Elevated Temperature Event (Site Code 302132, Oct. 15, 2025, at 3.
[113] Section 5.1.2(c) of the ISE Order states, "The measures *shall include, but are not limited to*, the installation of a vertical barrier of inert material . . . ."
[114] Chiquita's Response to DTSC Comments on Draft Removal Action Workplan, Nov. 21, 2025.

"propose three alternatives." While DTSC's comments provide for several deliverables, some with specific deadlines, those deliverables did not include the submission of a revised draft RAW or three proposed alternatives. Rather, DTSC's comments directed Chiquita "to address each of the comments and recommendations provided above, as well as the comments and recommendations in the attached CalRecycle letter, *in a response letter* to the DTSC Project Manager within 15 days of receipt of this comment letter."[115]

DTSC's October 15 comments stated, in relevant part:[116]

> If the Respondents are steadfast against planning for and ultimately building a vertical barrier to protect Cell 8A from the expanding SET event, then *DTSC is willing to discuss alternatives to protecting Cell 8A*. *DTSC's consideration of proposed alternatives* does not modify the Respondents' obligations to comply fully and completely with the ISE Order.
>
> *To pursue the "alternatives" option, the Respondents must document the pursuit of an alternatives meeting with DTSC and agree upon a schedule for submitting both a Cell 8A Protection Alternative Workplan and a Slope Stability Workplan*, and the Respondents *must submit an abbreviated version of a revised RAW that briefly describes the pursuit of an alternatives Workplan*.

Chiquita complied with all requests in DTSC's October 15 Comments. In a November 21 response, Chiquita unequivocally stated its intent to pursue the "alternatives" option:

> As such, Chiquita continues to respectfully decline to install the requested vertical barrier and instead *explicitly elects to pursue the "alternatives" option*. Chiquita is in the process of evaluating viable alternatives that will ensure the continued success of the mitigation measures already in place to manage the reaction *while addressing DTSC's request to propose alternatives that protect Cell 8A*. The proposed alternatives will additionally include the combination of parameters and data points that trigger implementation as well as the approximate implementation timeline. The alternatives selected will depend on actual Landfill conditions and are subject to change. *Chiquita will submit both a Cell 8A Protection Alternative Workplan*

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[115] Review of Draft Removal Action Workplan, Protect Cell 8A from Intrusion of Elevated Temperature Landfill Event, Imminent and Substantial Endangerment Determination and Order (Docket No. HAS-FY24/25-082), Task 10, Protect Cell 8A from Intrusion of Subsurface Elevated Temperature Event (Site Code 302132, Oct. 15, 2025, at 12. DTSC's Notice appears to express surprise at the format of Chiquita's response to the department's comments, despite directing Chiquita to submit a response letter rather than a revised draft RAW: "Despite receiving a deadline extension, Respondents did not submit a revised RAW, but instead, submitted a letter on November 21, 2025."

[116] Review of Draft Removal Action Workplan, Protect Cell 8A from Intrusion of Elevated Temperature Landfill Event, Imminent and Substantial Endangerment Determination and Order (Docket No. HAS-FY24/25-082), Task 10, Protect Cell 8A from Intrusion of Subsurface Elevated Temperature Event (Site Code 302132, Oct. 15, 2025, at 6.

> *and a Slope Stability Workplan and an abbreviated version of a revised draft RAW*. All submissions will meet the standard of practice for draft engineering plans and reports to be submitted to the State of California, as is Chiquita's practice.[117]

Thus, DTSC's assertion in the Notice that "Respondents' alternatives proposals remain overdue" is inaccurate. Chiquita has complied with every deliverable included in DTSC's October 15, 2025 comments. DTSC's request for an Alternative Workplan, a Slope Stability Workplan, and an abbreviated version of a revised draft RAW cannot be "overdue" if DTSC has not established a deadline. Chiquita provided deadlines for a number of DTSC's requests in its October 15, 2025 comments, including dates Chiquita would provide the requested Slope Stability Workplan and revised CQA report, both of which Chiquita timely provided. DTSC's other requests require meetings to ensure that both Chiquita and DTSC are aligned on DTSC's expectations and Chiquita's capabilities. Chiquita informed DTSC in a series of emails that it was "actively working on" the Alternative Workplan and would provide the department "with a proposed date to provide the Alternative Workplan" but first needed a call "to further clarify and confirm DTSC's expectations," noting that the questions raised in Chiquita's November 21, 2025 letter to DTSC remain outstanding.[118] Chiquita has requested a meeting for the end of January 2026, but such a meeting has yet to be scheduled, as DTSC has yet to commit to a date. As such, Chiquita's draft barrier RAW submitted on July 2, 2025, and Chiquita's response to DTSC's October 15, 2025 comments submitted on November 21, 2025, adequately met the requirements of section 5.1.2(c) of the ISE Order.

iv. The draft barrier RAW satisfied all other requirements under the ISE Order.

DTSC additionally asserts that the draft barrier RAW fails to include information on Chiquita's ownership history, a construction air monitoring plan, or a detailed schedule to install a vertical barrier, pursuant to sections subsections (a), (f), and (n) of section 5.3 of the ISE Order, respectively. Chiquita included in the draft barrier RAW its Odor Mitigation Plan (Revision 1.01) in Appendix J, which includes best management practices for mitigating odors that would be used as construction air monitoring requirements and protocol. As explained in the draft barrier RAW, the actions taken to implement the mitigation measures described therein are consistent with this Odor Mitigation Plan, in satisfaction of section 5.3(f). Further, because Chiquita does not intend to construct DTSC's requested vertical barrier, a schedule for such a barrier was not required to be included in the draft barrier RAW. Chiquita is willing to include ownership history information in the next iteration of the draft RAW but notes that DTSC's Notice is the first instance in which the department made such a request.

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[117] Chiquita's Response to DTSC Comments on Draft Removal Action Workplan, Nov. 21, 2025 (emphasis added).

[118] *See* Emails between K. Logan (DTSC) and P. Ruttan (DTSC), RE: CCL-Task 10 RAW - 11/21 RTC letter, Dec. 19, 2025, Dec. 23, 2025, and Dec. 31, 2025 ("Upon further review of our November 21, 2025 letter and following our discussion with our technical consultants, Chiquita has outstanding questions regarding scope and the currently requested vertical barrier that we would like to discuss. This discussion will directly inform our proposed alternatives.").

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Chiquita has been cooperative and transparent with its regulators and the public. It has spent tens of millions of dollars to implement state-of-the-art mitigation measures to address the reaction and maintain compliance with the ISE Order and orders from its other regulators. To move forward constructively, Chiquita respectfully requests that DTSC withdraw its Notice, which as described in detail in this letter is based on factual inaccuracies and misunderstandings. Chiquita also requests that after reviewing Chiquita's extensive communications and data productions described in this letter, DTSC identify with specificity any remaining perceived deficiencies with the draft RAWs. Chiquita remains willing, as it has been all along, to engage in a productive dialogue with DTSC to ensure the proper management of the reaction and protection of human health and the environment. Chiquita will endeavor to provide further revisions to the draft RAWs promptly based on a reasonable response timeframe that is commensurate with the scope of the request. Chiquita remains available to confer promptly to align on these issues.

If you have any questions, please do not hesitate to reach out to me at (346) 807-5547 or Kate.Logan@WasteConnections.com.

Sincerely,

Kate Logan

Kate Logan
Senior Remediation Project Manager
Chiquita Canyon Landfill

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ATTACHMENT A

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Re: Chiquita's Request for a Formal Appeal Hearing and Petition for Stay of LEA's May 1, 2025 Compliance Order

Dear Ms. Gork and Ms. Heller:

Chiquita Canyon, LLC ("Chiquita") received a Compliance Order pertaining to California Code of Regulations, title 27, section 20750 on May 1, 2025 ("LEA Compliance Order"), from the Los Angeles County Department of Public Health, Solid Waste Management Program, acting as the Local Enforcement Agency ("LEA"). The LEA Compliance Order requires Chiquita to undertake four mitigation measures at the Chiquita Canyon Landfill ("Landfill"): (1) installation of an additional approved geomembrane cover; (2) relocation of Tank Farm 9; (3) implementation of a soil barrier; and (4) installation of five additional temperature monitoring probes ("TMPs").

Consistent with the procedures of the Public Resources Code ("PRC") section 44310, Chiquita hereby requests a formal hearing,[1] and provides a statement of issues it seeks to appeal. Specifically, Chiquita appeals the mitigation measures described in Sections 4.1 to 4.4 of the LEA Compliance Order as well as the underlying violations noted in Section 3.0. Chiquita also disputes many of the factual allegations set forth in the Statement of Facts in Section 2.0 of the LEA Compliance Order. Chiquita looks forward to a full presentation of evidence, including expert testimony, at the formal hearing.[2]

Chiquita also requests a stay of Section 4.3 of the LEA Compliance Order due to the potentially extreme adverse environmental impacts that would result from implementing the LEA Compliance Order during the pendency of the appeal. (See PRC, § 45017(B).) Given the complicated scientific, engineering, and environmental issues (including the exponential increase in odors that would result from implementing the order) outlined in the approximately 1000 pages of attachments, a careful and fully developed record and decision before implementing the LEA Compliance Order is warranted. Because of the complex nature of the issues involved in this case, Chiquita also agrees to waive its right to a hearing within 30 days as provided under PRC section 44310(b). Chiquita will work with the LEA to establish a reasonable briefing schedule and hearing date.

[1] Chiquita objects to the use of informal hearing procedures. Under Government Code section 11445.20(a), informal hearing procedures are appropriate only if there are no disputed issues of material fact. This request establishes that there are many disputed issues of material fact that will require cross examination. While Government Code section 1145.20(b) permits informal proceedings where there is a dispute of material fact, informal proceedings have been confined to cases that involve: (1) monetary amounts of not more than $1,000 (Gov't. Code, §11445.20(b)(1)); (2) academic sanctions involving no more than 10 days' suspension or exclusion (Gov't. Code, §11445.20(b)(2)); (3) employee disciplinary sanctions that do not involve discharge, demotion, or suspension for more than 5 days (Gov't. Code, §11445.20(b)(3)); (4) proceedings authorized by agency regulation (Gov't. Code, §11445.20(c)); or (5) proceedings in which an evidentiary hearing for determination of facts is not required by statute but the agency determines that the federal or state constitution requires a hearing (Gov't. Code, §11445.20(d)). None of these circumstances exist here. The code provisions governing informal hearings omit proceedings such as the challenge to this Compliance Order that involves many complex, disputed issues of material facts, and millions of dollars in costs. Therefore, the informal hearing procedures are inappropriate to address the issues raised by the Order.

[2] Nothing in this letter shall be construed to limit the rights, claims, and defenses Chiquita may have against the LEA or any other agency in complying with or challenging this LEA Compliance Order or in any future actions. Chiquita reserves the right to pursue all available state and federal constitutional defenses, including those related to procedural and substantive due process, takings, and equal protection. Chiquita also preserves the right to pursue any defenses available to it under any applicable state or federal statute. Moreover, nothing in this letter shall be construed as an admission of any factual allegation or legal conclusion in the Order or an admission of any liability for any matter described in the Order. Chiquita reserves the right to raise any defense, or any information in support thereof, whether mentioned in this letter or otherwise existing or known to Chiquita on the date of this letter.

I. STATEMENT OF ISSUES

A. Previous, Duplicative, and Contradictory State and Federal Orders Demand Striking Sections 4.1, 4.2, and 4.3.

The LEA Compliance Order conflicts with previously issued state and federal orders, including the U.S. Environmental Protection Agency's ("EPA") Unilateral Administrative Order ("UAO")[3] issued on February 21, 2024, and the Department of Toxic Substances Control's ("DTSC") Imminent and Substantial Endangerment Determination and Order ("ISE Order")[4] issued on April 2, 2025.

Under the Supremacy Clause, state and local laws and orders that "interfere with, or are contrary to the laws of Congress" are preempted and are therefore invalid. (*Fireman's Fund Ins. Co. v. City of Lodi*, *California* (9th Cir. 2002) 302 F.3d 928, 943.) Thus, conflict preemption exists wherever the LEA Compliance Order is in opposition to the pre-existing federal UAO. (See e.g., *U.S. v. City and County of Denve*r, *Colo*. (D. Colo. 1996), 916 F. Supp. 1058 [holding that the City's cease and desist order violated the supremacy clause by being in direct conflict with an EPA order].) Chiquita does not dispute that the Los Angeles County Department of Public Health may exercise authority at the Landfill. Chiquita does object, however, that Chiquita must or even *could* follow the orders of the Los Angeles County Department of Public Health, which is a local agency with delegated state authority, when those orders conflict with those of the federal EPA.

Sections 4.1, 4.2, and 4.3 of the LEA Compliance Order conflict with the "Master Work Plan" requirement of Paragraph 22 in the EPA issued UAO. Under the UAO's Master Work Plan Requirement, Chiquita must include (1) a "Leachate Management Plan" which controls the operating procedures to store leachate at the Landfill; (2) a "Soil Reaction Break/Barrier Plan" which includes the installation of temperature monitoring devices and specifications of a containment trench; and (3) a "Cover Installation Plan," requiring the installation of a High-Density Polyethylene geomembrane. The Master Work Plan, and these individual workplans, are all subject to EPA oversight and approval: "[f]ollowing EPA's approval or modification of the Master Work Plan, Respondent shall implement the Master Work Plan in accordance with the schedule and provisions approved by EPA."[5] The Master Work Plan requirements overlap with the requirements of Section 4.1, 4.2, and 4.3 of the LEA Compliance Order. LEA and EPA having approval authority over the same actions is in conflict and interferes with EPA's federal authority.

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[3] U.S. Environmental Protection Agency, Unilateral Administrative Order, EPA Docket No. RCRA 7003-09-2024-0001 and CERCLA 106-09-2024-05 (February 21, 2024), provided in Attachment A. Chiquita reserves its right to supplement the record. See Cal. Rules of Court, rule 3.2225.
[4] Department of Toxic Substances Control, Imminent and Substantial Endangerment Determination and Order, Docket No. HAS-FY24/25-082 (April 2, 2025), provided in Attachment B.
[5] EPA UAO, at 26.

Although EPA has indicated it is abating "until further notice" the UAO requirements related to the Soil Reaction Break/Barrier Plan, EPA has reiterated it "reserves all rights under Section XXIV of the UAO, CERCLA, or other authorities to require CCL to take measures to address the potential expansion of the reaction, including a soil break/barrier, in the future, thus confirming its preemptive role over the state agencies."[6] Chiquita therefore objects to Section 4.1, 4.2, and 4.3 of the LEA Compliance Order as they are preempted by the UAO. (*Fireman's Fund Ins. Co*, 302 F.3d at 943.)

Similarly, Sections 4.1, 4.2, and 4.3 directly overlap and conflict with an earlier-issued order from a separate state regulator: the DTSC. On April 2, 2025, DTSC issued an ISE Order to Chiquita. The DTSC Order, issued one month before the LEA Compliance Order, also requires Chiquita to extend the geomembrane cover, relocate Tank Farm 9, and install a barrier to prevent expansion of the reaction to Cell 8A. DTSC also requires that their agency approve the relevant workplans. Chiquita cannot have multiple regulators with independent review and approval authority over the same substantive work. Chiquita therefore objects to the later-issued LEA Compliance Order.

The LEA Compliance Order is directly duplicative and violates state and federal due process by creating a potentially impossible compliance situation and the possibility for double penalties. If the regulators do not agree (and history suggests they won't) the regulators have created a "Catch-22"—Chiquita will be penalized by the LEA if it complies with a conflicting DTSC workplan, and penalized by DTSC if it complies with a conflicting LEA workplan. This is untenable. (See *Adam v. Jacobs* (2d Cir. 1991) 950 F.2d 89, 93 [holding parties should be "free from the vexation of concurrent litigation over the same subject matter"]; see also *Coleman v. Newsom* (9th Cir. 2025) 131 F.4th 948, 959 ["Inability to comply with an order is ... a complete defense to a charge of contempt."].)

Even if the agencies do agree, Chiquita will be subject to double penalties for potential violations. This is illegal. (See generally Cal. Penal Code § 654 ["An act or omission that is punishable in different ways by different provisions of law may be punished under either of such provisions, but in no case shall the act or omission be punished under more than one provision"].) The dueling and overlapping orders are particularly egregious when the workplans demand strict timelines for compliance and there is high potential for delay due to forces outside of Chiquita's control (including engineering challenges in an evolving landfill environment and

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[6] Letter from US EPA to Chiquita re Second Revised Soil Reaction Break/Barrier Plan, dated Apr. 16, 2025, provided in Attachment C. EPA also indicated that it is deferring specifically to DTSC's ISE Order, although LEA had previously issued a letter requesting the same actions that the DTSC Order required. See, 2025-04-01, Letter from LEA to Chiquita, re "Review of the November 26, 2024, Revised Soil Reaction Break/Barrier Plan for the Chiquita Canyon Landfill Subsurface Elevated Temperature (SET) Event", provided in Attachment D. This further indicates that between the DTSC and LEA Order, the DTSC Order should control.

new supply chain challenges for supplies and equipment).

In addition to due process, basic equities favor striking 4.1, 4.2, and 4.3 of the LEA Compliance Order. DTSC was the first mover. (See generally *Adams v. California Dep't of Health Servs.* (9th Cir. 2007) 487 F.3d 684, 688 [“District Court may exercise its discretion to dismiss a duplicative later-filed action, to stay that action pending resolution of the previously filed action, to enjoin the parties from proceeding with it, or to consolidate both actions”]; see also generally *Hollingsworth v. Superior Ct.* (2019) 37 Cal.App.5th 927 [when tribunals have overlapping jurisdiction, the tribunal first “assuming jurisdiction” retains the matter].) The ISE Order predated the LEA Compliance Order by approximately a month. In that time, Chiquita has been diligently cooperating with DTSC to resolve their concerns. Chiquita has (i) engaged in multiple meetings with DTSC, (ii) submitted a tank farm removal plan, (iii) submitted a construction quality assurance report for the construction of a soil barrier; and (iv) will submit a plan for a cover expansion on May 16. In working with DTSC and complying with its ISE Order, Chiquita is already taking all reasonable steps to comply with the first-issued state order on the exact subject of the LEA Compliance Order. (See generally *Kelly v. Wengler* (9th Cir. 2016) 822 F.3d 1085, 1096 [“A contemnor in violation of a court order may avoid a finding of civil contempt only by showing it took all reasonable steps to comply with the order”].)

Therefore, Chiquita seeks to strike 4.1, 4.2, and 4.3 on preemption, due process, impossibility, substantial compliance, and basic equities grounds.

B. Section 4.3 is Unlawful if the LEA Insists on Additional Barriers.

In addition to the grounds described above, Section 4.3 of the LEA Compliance Order should be stricken because it is arbitrary, capricious, and dangerous.[7] The barrier will fail to

[7] As a preliminary matter, Chiquita may already be in compliance with Section 4.3 because of the soil barrier it installed in the summer of 2024. The barrier consists of a five-foot layer of soil across the length of Cell 8A’s interface with Cell 6. Importantly, this barrier was installed without disturbing tons of dormant and decaying waste. For this reason, even if the barrier has limited utility in materially slowing the spread of the reaction, there was no danger of the potential extremely negative consequences associated with the construction of the massive barrier contemplated in the Order. Excavating thousands of tons of waste in constructing a new barrier will post grave risks of nuisance impacts to the surrounding community and the stability of the Landfill, as further outlined in Section B of this letter. See generally 2024-03-27 Soil Reaction Break/Barrier Plan, provided in Attachment E.

In compliance with DTSC’s ISE Order, Chiquita has already submitted to DTSC a Construction Quality Assurance report regarding the construction of the installed soil barrier. 2025-05-13 Email from Chiquita to DTSC re “CC: Construction Quality Assurance Report for the Soil Barrier Construction Project (Docket No. HSA-FY24/25-082)”, provided in Attachment F. To the extent the LEA takes issue with the existing soil barrier and seeks to order additional barriers, Chiquita appeals this issue. Chiquita has maintained this position for nine months. See 2024-07-08 Revised Soil Reaction Break/Barrier Plan, provided in Attachment G. For additional background on the barrier requirement, see 2023-11-21, Letter re CalRecycle’s Review of Conditions at the Landfill, provided in Attachment H; see also 2023-12-7, Chiquita’s Response to November 21, 2023 Letter and Additional Mitigation Measures, provided in Attachment I.

counteract the reaction, increase odors, and threaten the stability of the Landfill.[8] It will increase the risk to the surrounding community of exposure to hazardous substances. Expert evidence and objective data plainly demonstrate these flaws in the barrier and Chiquita will prove this at hearing and in any subsequent judicial review.

The effectiveness of the barrier contemplated by Section 4.3 is unsupported by *any* evidence, much less substantial evidence. Chiquita has been unable to identify any evidence or research supporting the proposition that such a barrier could effectively prevent heat transfer under ETLF conditions. Further, the LEA has not identified such evidence. Importantly, US EPA guidance does not recommend a soil barrier to mitigate ETLFs.[9] Rather US EPA guidance and industry best management practices include heat removal through aggressive extraction of gas and leachate. The proposed barrier fails to accomplish these essential tasks.[10]

Any barrier of the type ordered in the LEA Compliance Order (beyond what Chiquita has already installed) would also pose significant health and safety concerns to personnel at the Landfill and members of the surrounding community. Installation of a vertical barrier would significantly increase foul odors by *exposing thousands of tons of decomposing waste* to the environment. The barrier's construction would seriously diminish the stability of the landfill. Moreover, installing the barrier would necessarily require shutting off the gas collection system and, in some instances, disconnecting gas wells altogether. If Chiquita takes such action, the effectiveness of the gas collection system would severely diminish, resulting in increased emissions. Quite clearly, such a barrier would undermine the progress Chiquita has made—by all objective scientific measurements of the site this year, off-site air quality has shown marked

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[8] See 2024-11-26, Chiquita Canyon Landfill's Revised Soil Reaction Break/Barrier Plan, at 19, provided in Attachment J.

[9] Elevated Temperature Landfill, U.S. Environmental Protection Agency (last updated September 4, 2024).

[10] See 2024-09-24, LEA Response to Chiquita's Revised Soil Reaction Break Barrier Plan, provided in Attachment K; 2024-11-26, Chiquita's Response to LEA's September 24, 2024 Letter re Revised Soil Reaction Break/Barrier Plan, provided in Attachment L; See LEA Response to Chiquita's Revised SRBBP; see also Email Correspondence between Chiquita and the LEA re Request for Information, provided in Attachment M (the original attachments to the email correspondence include voluminous data and are incorporated by reference, and will be provided upon request).

Prior to this Order, the agencies had directed Chiquita to evaluate a shallow barrier consisting of a soil trench. To the extent the agencies consider a shallow barrier appropriate here, the published literature pertaining to ETLFs and landfill reactions shows that in ETLFs, heat accumulates in deeper zones of the waste mass. CCL is not aware of any documented instances of an ETLF in the United States experiencing a subsurface exothermic chemical reaction exclusively at a shallow depth of less than 50 feet. And here, the waste zone exhibiting the highest recorded temperatures at the landfill is much deeper. Accordingly, a shallow barrier would prove ineffective in addressing potential expansion of a reaction, rendering the requirement arbitrary, capricious, and otherwise not in accordance with law.

improvement coupled with a decrease in odor complaints from the surrounding community—while providing no benefit to mitigating the reaction.[11]

The barrier lacks any evidentiary support and is arbitrary and capricious. Further, installing such a barrier will significantly harm the surrounding community. Accordingly, Chiquita seeks to strike Section 4.3 of the LEA Compliance Order and stay the effectiveness of this Section during the appeal (see section II infra).[12]

C. The Deadlines Imposed By Sections 4.1, 4.2, and 4.4 Are Arbitrary and Capricious.

1) **Installation of the Cover (4.1)**

The LEA Compliance Order requires Chiquita to provide by June 2, 2025 a workplan for a significant expansion of a previously installed geosynthetic cover.[13] Chiquita previously installed a 30-mil High Density Polyethylene geosynthetic cover over approximately 44.6 acres of the reaction area pursuant to the LEA's June 6, 2024 Compliance Order and South Coast AQMD's Stipulated Order for Abatement. Chiquita finished installation of the geosynthetic cover in accordance with the LEA's June 6, 2024 Compliance Order on December 27, 2024. Chiquita also completed installation of an additional approximately 1.3 acres of geosynthetic cover over the west toe drain excavation project's disposal area on January 3, 2025.[14]

As noted in correspondence with DTSC on this issue, Chiquita had already committed to expand the geosynthetic cover. Consistent with DTSC's requirements, Chiquita has now submitted a work plan to DTSC for a phased expansion of the cover.[15] The LEA Compliance Order sets an impossible and arbitrary and capricious deadline of June 2, just two weeks from today, to submit a second highly complicated work plan to a second state agency, this time for as much as 100 acres of expansion. The LEA also demands approval authority and a clear schedule of deadlines, both of which are impossible to provide. Installing a new cover will be a time intensive process, with significant room for uncertainty.[16] For each section of geosynthetic cover,

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[11] See Chiquita's February 2025 Technical Addendum to the December 2024 State of the Landfill Report.

[12] In the meantime, Chiquita will provide the LEA courtesy copies of correspondence it shares with DTSC on this issue.

[13] LEA Compliance Order, Section 4.1.

[14] See Final Completion Report of Milestone 2A-1 (Formerly Mitigation Measure #2A), Chiquita Canyon Landfill, Castaic, California, provided as Attachment N. The LEA, in collaboration with CalRecycle, conditionally approved the Final Compliance Report on April 9, 2025, contingent on Chiquita submitting an Operations and Maintenance Plan, which Chiquita submitted to the LEA on May 9, 2025, provided in Attachment O.

[15] Chiquita submitted the draft geosynthetic cover expansion workplan to DTSC on May 16, 2025. See 2025-05-02 Email from Chiquita to DTSC re "Chiquita Canyon Landfill – Order, Docket No. HAS-FY24/25 – 092, Monthly Summary Report", Provided in Attachment P.

[16] Chiquita also notes that the LEA Compliance Order is not consistent on the scope of the ordered cover. Paragraph 2.9 says the cover needs to be installed over approximately 100 acres of the Landfill, whereas paragraph 4.1 broadly

Chiquita must undertake myriad measures, including: removal of green waste and vegetation in the area; regrading to maintain positive drainage; installation of surface landfill gas collectors; disconnecting and temporarily relocating portions of the landfill gas collection system, then reconnecting and installing the same after installation; installation of geomembrane pipe boots; and installation of a sandbag ballast system.[17] Previously, Chiquita had to devote more than a year to the completion of these projects and the schedule changed numerous times because of the substantial steps involved in the installation process as well as site conditions and unforeseen circumstances.

Given growing supply chain and uncertainties with respect to procuring the materials for the cover and related equipment, and the complicated nature of cover expansion as outlined above, the accelerated LEA Compliance Order timeline for submission is arbitrary and capricious. As such, the Section should be stricken.

2) Relocation of the Tank Farm (4.2)

The LEA Compliance Order requires relocation of Tank Farm 9 with a workplan submitted to the LEA for review and approval by June 2, 2025. Chiquita agrees that Tank Farm 9 should be relocated from its present location and has undertaken diligent efforts to plan an effective and safe relocation since July 2024, as Chiquita's regulators have been made aware, including the LEA.[18] In December 2024, Chiquita began construction for such relocation efforts. However, as established by the attached correspondence,[19] multiple agencies ordered Chiquita to cease preparation activities in Canyon B for the relocation of the tank farm. Since that time, these agencies have not provided clear directives on permitting or approvals regarding technical requirements of the new installation, preventing Chiquita from taking the same action demanded by this Order.

Chiquita has already submitted a new plan for tank farm relocation consistent with the ISE Order.[20] Again, the LEA Compliance Order sets an arbitrary and capricious deadline of June 2, just two weeks from today, to submit a second highly complicated work plan to a second state agency which is also demanding approval authority. The Section is unlawful and should be stricken.

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says, "over all areas of the Site that are not currently covered by a geomembrane and to which the reaction area has expanded or has the potential to expand".

[17] See Completion Report, at Attachment 5.

[18] See 2024-07-19 Email Correspondence to LA County Fire, provided in Attachment Q.

[19] See Compilation of Email Correspondence between Chiquita and LA County Fire and EPA re Tank Farm Relocation, provided in Attachment R.

[20] See 2025-05-09 Email from Chiquita to DTSC re "CCL: Draft RAW for Interim Relocation and Stabilization of Containerized Waste (Docket No. HSA-FY24/25-082)", provided in Attachment S.

3) Installation of Temperature Monitoring Probes (TMPs) (4.4)

Chiquita is making all reasonable efforts to comply with the requirement to install five new TMPs, but the current deadline of August 4 is unreasonable. Chiquita is already working diligently to acquire the necessary parts, but the delivery of these custom order parts is complicated by current trade disputes that have caused manufacturing and shipping delays across the world. The LEA's schedule for installing the five TMPs and providing the final completion report by August 4, 2025 is tight and does not account for delays caused by, for example, weather, site conditions, and unanticipated events like supply chain disruption. There is also the potential during the drilling process for bore holes to collapse inward due to the presence of liquids saturating the waste, preventing drilling to the full planned depth, as occurred multiple times during Chiquita's installation of the second set of TMPs.[21] Chiquita will remain in close contact with its regulators regarding this issue but objects to the timeline in the LEA Compliance Order. The deadline for installation is unreasonable, arbitrary and capricious, and should be stricken.

II. A Stay Is Appropriate Due to the Likelihood of Serious Adverse Environmental Affects That Would Result with Section 4.3 Compliance.

A stay is warranted when "the immediate effect of the order … will preclude or interfere with the provision of an essential public service so that the public health and safety or the environment will be adversely affected." PRC § 45017(B). A stay requires "extraordinary circumstances." *Id*. Such circumstances are met here.

Although the Landfill no longer accepts waste, the Landfill's maintenance and upkeep and efforts to manage the reaction are an essential public service. Chiquita Canyon Landfill served Los Angeles County for 54 years and was accepting an average of approximately 200,000 tons of waste per month in the years prior to closure. The Landfill was a critical component of Southern California's solid waste infrastructure, taking in nearly a quarter of Los Angeles County's waste from millions of residents and businesses annually. At the time of closure, it was the second-largest landfill in the County. The LEA Compliance Order threatens vital response and maintenance activities at the Landfill. Now that it is experiencing a rare ETLF event, it is essential to public health and safety that the Landfill's mitigation efforts are not hamstrung.

The installation of a barrier, for the reasons outlined above,[22] would be adverse to the health and safety of the surrounding community, and threatens significant environmental issues. To start, Chiquita's ongoing mitigation efforts at the Landfill have been largely effective.[23] No

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[21] See 2024-12-24 Letter from Chiquita to LEA, "Notification Regarding Change in Proposed Locations of TMPs Identified in Revised Soil Reaction Break/Barrier Plan", provided in Attachment T.
[22] See Section I(B), supra and Attachments.
[23] See Chiquita's February 2025 Technical Addendum to the December 2024 State of the Landfill Report.

hazardous materials have entered the watershed and fugitive emissions and any resulting odors have vastly decreased. The ordered barrier will unravel this progress and pose grave risks.

The barrier would force the excavation and movement of tens of thousands of tons of decaying waste. Uncovering this amount of buried waste would cause significant odors, disrupt the landfill's stability, and create the potential for the release of characteristically hazardous leachate to waterways. To Chiquita's knowledge, no barrier like the one ordered by Section 4.3 has ever been installed in any landfill anywhere. With good reason: digging up tens of thousands of tons of decaying waste and exposing it to the atmosphere would cause severe nuisance conditions and other significant environmental issues, with no evidence that it would achieve the intended goal. The proposed installation of the barrier is technically unfeasible, lacking any engineering basis, and it will seriously harm the surrounding community. In short, nearly all progress at the Landfill will be undone by the construction of a barrier such as that required by the LEA Compliance Order.

These are exactly the type of "extraordinary circumstances" that warrant a stay. The creation of a barrier would devastate the surrounding communities. In addition to the arguments above, we look forward to presenting detailed technical and scientific arguments during a formal hearing.

II. CONCLUSION

Chiquita has been working diligently to mitigate the ETLF event and address its associated impacts. The LEA should consider Chiquita's efforts and Chiquita's continued cooperation with the LEA, and all its regulators, as we work to resolve this unprecedented reaction event.

If the LEA intends to proceed, Chiquita appeals the LEA Compliance Order, which is unlawful on all grounds set forth above, as well as the underlying factual determinations leading to the Order. Chiquita further requests a stay of Section 4.3 due to the severe adverse environmental impact that would result from opening up the landfill, dislodging, and exposing tens of thousands of tons of waste.

Sincerely,

/s/ Megan Morgan

Megan Morgan
Kaitlyn Shannon
Jacob P. Duginski
Counsel for Chiquita Canyon, LLC

Enclosures: Exhibits A through T

cc:

Ken Habaradas, Los Angeles County LEA
Eric Morofuji, Los Angeles County LEA
Liza Frias, Los Angeles County LEA
Shikari Nakagawa-Ota, Los Angeles County LEA
Renee Jensen, LEA Counsel
Wes Mindermann, CalRecycle
Todd Thalhamer, CalRecycle
Emel Wadhwani, CalRecycle
Mark DeBie, CalRecycle
Joel Jones, United States Environmental Protection Agency
Joshua Wirtschafter, United States Environmental Protection Agency
Laura Friedli, United States Environmental Protection Agency
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Rick Sakow, United States Environmental Protection Agency
Tara Frost, United States Environmental Protection Agency
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Linda Lye, California Environmental Protection Agency
Todd Sax, California Environmental Protection Agency
Dan Ziarkowski, Department of Toxic Substances Control
Peter Ruttan, Department of Toxic Substances Control
Tim Crick, Department of Toxic Substances Control
Thanne Berg, Department of Toxic Substances Control
Diane Barclay, Department of Toxic Substances Control
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Johnathon Crook, Department of Toxic Substances Control
Lisa Winebarger, Department of Toxic Substances Control
Jeff Linberg, California Air Recourses Board
Jack Cheng, South Coast Air Quality Management District
Larry Israel, South Coast Air Quality Management District
Wayne Nastri, South Coast Air Quality Management District
Terrence Mann, South Coast Air Quality Management District
Enrique Casas, Los Angeles Regional Water Quality Control Board
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Ai-Viet Huynh, Los Angeles County Department of Regional Planning
Teresa Quiaoit, Los Angeles County Fire
Daniel Yniguez, Los Angeles County Fire

ATTACHMENT B

REGION 9
SAN FRANCISCO, CA 94105

April 16, 2025

Mr. Steve Cassulo
District Manager
Chiquita Canyon, LLC
29201 Henry Mayo Drive
Castaic, CA 91384-2705

RE: Second Revised Soil Reaction Break/Barrier Plan

Dear Manager Cassulo:

On March 27, 2024, the U.S. Environmental Protection Agency ("EPA") received the Soil Reaction Break/Barrier Plan (the "Plan"), submitted as Attachment C to the Master Work Plan submitted by Chiquita Canyon, LLC ("CCL") pursuant to the Unilateral Administrative Order, EPA Docket No. RCRA 7003-09-2024-0001 and CERCLA 106-09-2024-05, *In the Matter of Chiquita Canyon, LLC*, issued February 21, 2024 (the "UAO"). On May 10, 2024, EPA provided a Notice of Deficiency to the Plan. On July 8, 2024, EPA received a revised copy of the Plan. On October 1, 2024, EPA provided a Second Notice of Deficiency to the Plan. On November 26, 2024, EPA received a letter from CCL to EPA regarding the resubmission of the Plan and a revised copy of the Plan (the "Second Revised Plan").

EPA has received a copy of the letter, dated April 1, 2025 (the "Third Rejection Letter"), from the Los Angeles County Department of Public Health, Solid Waste Management Program, acting as the Los Angeles County Local Enforcement Agency ("LEA") to CCL, pursuant to which the LEA provided an initial response to the Second Revised Plan. The Third Rejection Letter indicates that the LEA is preparing an official Notice and Order, which will formally establish compliance deadlines for directives to be determined by the LEA, which may include: (a) expansion of the containment and cover system; (b) relocation of leachate Tank Farm 9; (c) prevention of expansion of the reaction into Cell 8A; and (d) installation of additional temperature monitoring probes.

EPA has also received a copy of the Imminent and Substantial Endangerment Determination and Order, Docket No. HAS-FY24/25-082, *In the Matter of: Chiquita Canyon Landfill*, issued on April 1, 2025, by the California Department of Toxic Substances Control (the "ISE Order"). The ISE Order directs CCL, Chiquita Canyon, Inc., and Waste Connections US, Inc., to prepare and implement workplans for activities consistent with those outlined in the LEA's Third Rejection Letter.

Through these actions, the State of California has demonstrated it is leading efforts to address the potential expansion of the landfill reaction. EPA believes that these actions may overlap or supersede the requirements of the UAO for CCL to prepare and implement a Soil Reaction Break/Barrier Plan.

EPA, therefore, is exercising its discretion to abate until further notice the requirements under Paragraph 22(c)(2) of the UAO. EPA anticipates that successful completion of the requirements in the ISE Order may ultimately resolve or render moot further obligations under Paragraph 22(c)(2) of the UAO. Absent further notice, any obligations of CCL under the UAO conditioned upon approval of the Master Work Plan (as defined in the UAO), including but not limited to, the obligations under Paragraphs 23, 26 (Progress Reports), and 27 (Final Reports) of the UAO, shall not be conditioned upon approval of the Soil Reaction Break/Barrier Plan (as defined in the UAO).

EPA reserves all rights under Section XXIV of the UAO, CERCLA, or other authorities to require CCL to take measures to address the potential expansion of the reaction, including a soil break/barrier, in the future.

If you have any questions or comments regarding this letter, please contact Laura Friedli, EPA Attorney Advisor, at (415) 972-3325 or Friedli.Laura@epa.gov.

Sincerely,

Tyler Holybee
EPA Project Coordinator

Enclosures

cc: John Perkey, Waste Connections
Jim Little, Waste Connections
Kurt Shaner, Waste Connections
Sarah Phillips, Waste Connections
Megan Morgan, Beverage & Diamond
Nicole Weinstein, Beverage & Diamond
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Joel Jones, United States Environmental Protection Agency
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Rick Sakow, United States Environmental Protection Agency
Mark Anthony Relon, United States Environmental Protection Agency
Joshua Wirtschafter, United States Environmental Protection Agency
Laura Friedli, United States Environmental Protection Agency

ATTACHMENT C

December 15, 2025

Via E-Mail
Eric Morofuji, EHS III
Los Angeles County Department of Public Health
Solid Waste Management Program
Local Enforcement Agency
Environmental Programs Division
5050 Commerce Drive,
Baldwin Park, California 91706
emorofuji@ph.lacounty.gov

Re: Chiquita Canyon, LLC Response to LEA's Comments on the Revised Draft Removal Action Workplan: Extension of Covered Area – LEA Compliance Order, May 1, 2025

Dear Mr. Morofuji:

Chiquita Canyon LLC (Chiquita) submits this response to the Local Enforcement Agency's (LEA) November 20, 2025 letter providing comments on Chiquita's revised draft Removal Action Workplan (RAW) for Extension of Covered Area, resubmitted on October 3, 2025, pursuant to section 4.1 of the LEA's Compliance Order issued on May 1, 2025, and Chiquita's response letters dated August 15, 2025 and August 18, 2025.

The revised draft RAW detailed Chiquita's plan to expand the area of the Chiquita Canyon Landfill (the Landfill) covered by 30-mil high density polyethylene (HDPE) geomembrane in accordance with the requirements of the United States Environmental Protection Agency's (EPA) Unilateral Administrative Order (UAO) issued on February 21, 2024, the South Coast Air Quality Management District's (SCAQMD) Stipulated Order for Abatement (SOFA) issued on November 13, 2024, and most recently modified on December 10, 2025, and the LEA's Compliance Order issued on June 6, 2024. This cover expansion will also supplement the area of the Landfill covered by 40-mil HDPE geomembrane in accordance with the west toe drain workplan. The revised draft RAW detailed Chiquita's process of installing additional geomembrane cover that is at least 60-mil thick, made from HDPE with an inner core of ethylene vinyl alcohol (EVOH) barrier resin, tan in color, and textured on both sides.

The LEA's November 20, 2025 letter directs Chiquita to install the approved geomembrane cover "over the entire facility where waste is disposed (Main Canyon waste management area)" by

August 31, 2026, to continue to install the approved cover during the winter months, and to provide an estimated cover installation schedule by December 15, 2025.

Chiquita disputes the LEA's rationale for requiring cover over the Main Canyon by August 31, 2026. Such an aggressive installation schedule is infeasible to safely and effectively deploy the remainder of the geomembrane cover, and covering the entire Main Canyon is an unnecessary and surprising change from the portion of the Landfill that Chiquita originally discussed covering. Pursuant to DTSC's Imminent and Substantial Endangerment Determination and Order (Order) and subsequent communications with EPA and the LEA, Chiquita had discussed covering 100 acres of the Landfill with geomembrane cover. These 100 acres do not include covering the tank farms or other areas, which Chiquita does not intend to cover now. Not only has the LEA moved the goal posts by unilaterally requiring the deployment of more geomembrane cover than previously agreed, but it has also imposed a deployment schedule that does not consider the multitude of complexities and pitfalls about which Chiquita has informed its regulators on several occasions. For the reasons described herein, in Chiquita's letters to EPA dated August 15, 2025 and to the Department of Toxic Substances Control (DTSC) dated November 7, 2025 and November 21, 2025,[1] and during our discussion with the LEA on December 10, 2025, Chiquita intends to act in a way that is most protective of the existing mitigation measures and continue to move forward with the installation of the geomembrane cover in accordance with the draft Master Schedule submitted to DTSC on November 21, 2025 and attached to this letter as **Attachment A**.[2]

Due to the unique and complex nature of the work needed to deploy the geomembrane cover while minimizing impacts to Chiquita's other ongoing reaction mitigation efforts and the impending rainy season, Chiquita cannot at this time commit to a further expedited and detailed schedule or to covering the entire Main Canyon. Chiquita's draft Master Schedule reflects an expeditious deployment timeline that accounts for the challenging realities, complicated logistics, and unknown variables, such as weather, that are beyond Chiquita's control and can impact the pace of such an extensive installation project.[3]

As the LEA is aware, under DTSC's Order and per directives from DTSC, EPA, and the LEA, Chiquita worked as expeditiously as possible to deploy the initial 15 additional acres of the geomembrane cover in Segments 1, 2, and 3 of the Landfill before the rainy season.[4] As described in prior correspondence, during this initial deployment process, Chiquita had to take landfill gas extraction wells and dewatering pumps in the active cover deployment areas offline to complete the cover installation. To help ensure the longevity of the installed geomembrane cover, the cover must be placed on a smooth surface. This surface must also be graded for appropriate routing of stormwater. Because of ongoing settlement in the data-driven reaction area, installation of cover across this initial 15 acres included substantial subgrade preparation, requiring use of heavy equipment to complete this subgrade preparation quickly enough before the rainy season. To protect existing infrastructure from damage during this subgrade preparation phase, existing piping

[1] Chiquita expressly incorporates these letters herein.
[2] The draft Master Schedule is approximate and subject to change based on actual conditions at the Landfill, as further described in Chiquita's November 21, 2025 response to DTSC's comments on the draft RAW.
[3] Chiquita Canyon, LLC Response to DTSC Request for Updated Cover Deployment Schedule, Nov. 7, 2025, page 2.
[4] *Id*.

and infrastructure was removed, to the extent feasible, requiring removal of portions of the piping to enable cover installation access.[5]

As a result of taking landfill gas extraction wells and dewatering pumps offline in the active cover deployment areas, Chiquita saw an increase in on-site odors and temperatures.[6] This complicated Chiquita's deployment strategy. Continuing to deploy the remainder of the geomembrane cover using this same approach could negatively impact the success of the mitigation measures in place to manage the reaction and mitigate odors. These impacts to the existing mitigation measures also raise questions about the practicality of installing geomembrane cover over the entire "Main Canyon waste management area," as installing just a portion of the additional coverage has disrupted the existing mitigation measures and the progress Chiquita has made to manage the reaction.

Chiquita will not compromise on ensuring that the reaction continues to be effectively managed for the sake of accelerating the geomembrane cover deployment rate. An unreasonably aggressive and strict cover deployment schedule that also requires covering unnecessary portions of the Landfill would limit Chiquita's ability to continue to evaluate the effectiveness and feasibility of its deployment strategy and to make optimizing adjustments as needed.[7] Such an aggressive and strict schedule could hamper effective reaction management by increasing landfill gas extraction well and dewatering pump downtime, as described in Chiquita's November 7, 2025 response to DTSC, not to mention that the LEA has not explained why covering the entire Main Canyon is necessary.[8]

To continue to deploy additional geomembrane cover as quickly, safely, and effectively as possible while maintaining Chiquita's existing mitigation measures, Chiquita has begun employing a new deployment process that enables landfill gas extraction wells and dewatering pumps in active cover deployment areas to be offline for the least amount of time possible, typically one to two days at a time.[9] As further described in prior correspondence, this new deployment process has been successful thus far, but Chiquita requires more time to fully evaluate the feasibility of this process, to optimize this process to ensure maximum operational efficiency for the remainder of the installation project, and to determine the estimated amount of time needed to complete deployment using this new process.[10] Each well, lateral, header, forcemain, electrical line, and panel located in the active cover deployment area, which is constantly changing as the active cover deployment area moves, must be managed uniquely. For example, while some pieces of the system may be relatively straightforward to take offline, others may pose particular challenges due to their apparent location and the area(s) of the Landfill they service, among other factors.[11] In these more

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[5] *Id.*
[6] *Id.*
[7] *Id.* at 3.
[8] *Id.*
[9] *Id.* at 2.
[10] *Id.* at 2-3.
[11] *See id.*

complicated situations, the equipment cannot be disconnected from the system, requiring piping to be lifted so that cover may be placed underneath while maintaining connection to the system.[12]

This is extremely tedious and delicate work to ensure that the equipment and infrastructure are not damaged. Even in relatively straightforward situations that allow for equipment to be taken offline, Chiquita must coordinate efforts and schedules with at least five different groups of people to disconnect the equipment in order to move the cover deployment process forward.[13] As a point of reference, some of Chiquita's infrastructure in these areas are gas headers that are 24 inches in diameter. These headers require heavy machinery to lift, which cannot be driven directly on top of already-deployed liner, causing access issues.

Nevertheless, and despite this unavoidable reality, Chiquita's draft Master Schedule submitted to DTSC and the LEA on November 20, 2025, attempts to estimate completion dates of each phase of deployment, subject to actual conditions at the Landfill and a multitude of moving parts and competing projects, any of which could impact the installation of the geomembrane cover.[14] As an example, Chiquita requested and received an extension of the original acreage deployment schedule to allow the main access road on the north side of the Landfill to remain open while other roads to the south were completed, as well as to maintain access for a drill rig to complete installation of certain temperature monitoring probes; this demonstrates the nature of the competing projects Chiquita must balance.

Deploying the geomembrane cover expeditiously is not a matter of maximizing the number of drill rigs and liner crews that can fit onsite to complete the work all at the same time; rather, it is a matter of working deliberately and meticulously to not disrupt the gas infrastructure and other existing mitigation measures, as having to perform repairs on the gas infrastructure and other existing mitigation measures themselves would require Chiquita to pause deployment. To maintain the integrity of the gas infrastructure and existing mitigation measures, Chiquita must deploy the geomembrane cover at a careful and diligent rate while still working as expeditiously as possible to avoid delays in the first place. Chiquita cannot commit to completing the installation of the geomembrane cover "over the entire facility where waste is disposed (Main Canyon waste management area)" by August 31, 2026 for the reasons described herein and in Chiquita's August 15, November 7, and November 21, 2025 responses. Chiquita instead estimates completion of additional cover by July 31, 2027, in accordance with the draft Master Schedule submitted to DTSC and the LEA on November 21, 2025.[15]

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[12] *Id.*
[13] *Id.*
[14] For example, Chiquita recently drilled new temperature monitoring probes (TMPs) and installed thermocouples in each. These TMPs are in the same area in which the additional geomembrane cover has been or will be deployed. This necessitated pausing the cover deployment process until installation of the thermocouples in each TMP was complete. This is but one of several constantly competing projects that Chiquita must balance with the deployment of the geomembrane cover on a daily basis. Having an additional crew would not have helped because the installation of the thermocouples in the TMPs could not have been completed while the additional geomembrane cover was being deployed in the same area. *See also* Chiquita Canyon, LLC Response to DTSC Comments on Draft RAW, November 21, 2025, PDF page 33.
[15] *Id.*

The LEA's letter additionally requests that Chiquita "[e]mploy the necessary resources to complete geomembrane coverage" and "[c]ontinue to install the required geomembrane cover during the winter months to ensure completion within the required timeframe, as CCL has done previously."

Since the start of the deployment of geomembrane cover, Chiquita has employed all necessary resources to work as expeditiously and safely as possible to install the geomembrane cover despite several regulatory roadblocks. As soon as DTSC ordered Chiquita on April 2, 2025 to install the geomembrane cover pursuant to DTSC's Order, Chiquita immediately began to diligently identify and source materials for the geomembrane cover and prepare a feasible construction schedule. Chiquita provided DTSC on April 22, 2025 copies of a fact sheet of the geomembrane cover material it was evaluating at that time and a case study of the geomembrane cover material's success at another landfill. Chiquita then shared its plans with DTSC to order the geomembrane cover materials once DTSC provided its written approval. Yet, such written approval did not come until June 2, 2025 due to in large part discussions between DTSC and CalRecycle relating to the color of the geomembrane cover. Given this regulatory delay, Chiquita conferred with DTSC to come up with a prioritization plan for the deployment of the geomembrane cover. Chiquita and DTSC together agreed to prioritize a 300-foot radius or approximately 15 acres of the Landfill extending from the existing 30-mil geomembrane covered area before deploying geomembrane cover over other areas of the Landfill. This plan required Chiquita to move quickly to complete the installation before the rainy season.[16]

From the start, and as detailed in Chiquita's previous correspondence and its monthly summary reports to DTSC, Chiquita has employed all necessary resources to deploy the geomembrane cover despite regulatory setbacks. These regulatory setbacks prevented Chiquita from moving forward with the deployment of the geomembrane cover in earnest until shortly before the start of the rainy season. Chiquita has nevertheless continued to employ all necessary resources to deploy the geomembrane cover, but this process cannot again jeopardize the Landfill's existing mitigation measures.

As described in prior correspondence, Chiquita has committed to deploying EVOH in the existing 30-mil HDPE cover area to enhance odor mitigation. Employing additional crews to deploy the geomembrane cover would not lead to a more expeditious geomembrane cover deployment rate; in fact, employing additional crews could result in occupational hazards and health and safety issues and would complicate the efficacy of the geomembrane cover deployment process and further jeopardize the other mitigation measures in place. CalRecycle's letter to the LEA, dated October 3, 2025, states, "Currently, the CCL is using only one drill rig and one liner crew; the CCL should employ the necessary resources to complete the entire waste area within the recommended timeframe." To the extent that CalRecycle or the LEA intend to insinuate that Chiquita is not making as much progress as it can due to its use of one drill rig and one liner crew, Chiquita strongly disputes this allegation. More drill rigs and liner crews do not equate to more progress.

[16] Chiquita is still dealing with the repercussions of rushing to deploy the initial 15 acres of geomembrane cover before the start of the rainy season, including delays associated with deploying the final portion of geomembrane cover over Segment 3 and bringing impacted equipment back online due to the weather. See, e.g., weekly update to the LEA, Chiquita Canyon Landfill – Geosynthetic Cover – Mitigation Measure 4.1, Nov. 14, 2025; Nov. 21, 2025; Nov. 26, 2025; Dec. 5, 2025; and Dec. 12, 2025.

As described above, the work required to deploy the geomembrane cover is tedious and delicate. This is not an issue of sequencing the work like an assembly line; the pieces must fit together precisely, like a puzzle. Having more drill rigs or liner crews onsite would not expedite the deployment process, even if the liner crews were working on different jobs. To safely deploy the geomembrane cover without disrupting, or worse, breaking the existing gas infrastructure requires deliberate and meticulous work that additional hands would prevent.

Additionally, the work that must be done to deploy the geomembrane cover is highly specialized. Any crew hired to complete the work must be properly trained, as the gas infrastructure that must be moved or rerouted to accommodate deployment of the cover poses potential hazards and must be handled by crews who know how to do so safely. Finding and training knowledgeable crews is not simple, yet Chiquita has managed to add three crews to assist with the deployment of the cover in the past few months, and the contractor has brought on an additional supervisor to further assist with the deployment and train these crews.

Moreover, some portions of the Landfill have a significant amount of infrastructure that must be relocated before deployment of the geomembrane cover can occur in those areas. This infrastructure includes but is not limited to a thermal oxidizer, pump cleaning and repair equipment, and contractor trailers and offices. As the LEA is aware, Chiquita is actively working to relocate this infrastructure, but this relocation is not a simple or fast process, especially because the Landfill has limited space. Chiquita has nevertheless been diligently working to relocate this infrastructure to allow for the deployment of geomembrane cover in these areas of the Landfill.

During the winter months, also known as the rainy season, the Landfill experiences rain and other wet weather conditions that make it unsafe for personnel to access the site or operate the requisite equipment to install the geomembrane cover. Requiring Chiquita to continue deployment of the geomembrane cover regardless of weather conditions would unnecessarily endanger human health and safety and could constitute a violation of labor and occupational safety laws. Rain creates accessibility issues for heavy machinery, and to the extent that gas or liquids extraction equipment were offline, they would have to remain offline until the ground surface dried up enough to again allow machinery safe access to the area. This would further hamper Chiquita's ongoing mitigation efforts.

CalRecycle's letter to the LEA, dated October 3, 2025, states, "The CCL has previously demonstrated its ability to install a geomembrane liner during the winter months, and it should continue this approach."[17] Chiquita's ability to make progress on that 30-mil geomembrane cover during the previous rainy season has no bearing on Chiquita's ability to make progress on the deployment of the new geomembrane cover this rainy season. The Landfill today is engaged in even more mitigation measures to manage the reaction than during the previous rainy season when the 30-mil geomembrane cover was installed. For instance, and as shown in Chiquita's State of the

[17] The rate of previous cover deployment does not dictate present cover deployment possibilities. Chiquita previously installed approximately 45.9 acres of 30-mil cover over the course of about seven months, with completion in January 2025. It appears the LEA assumed Chiquita could continue working at the same rate and provided an August 31, 2026 deadline. However, every cover project is different and must take into account present day conditions and changes to the Landfill.

Landfill Report, the 30-mil deployment was initially begun in the furthest northwest corner of the Landfill, on side slopes where minimal existing infrastructure was present. The pictures in the State of the Landfill Report document progress during early 2024, which is the rainy season presumed to be referenced by CalRecycle.

As the LEA should be aware, Landfill infrastructure has changed substantially since that time. In conjunction with and upon completion of the 30-mil cover, Chiquita deployed many large gas headers to greatly expand its ability to collect and control landfill gas. As documented in the State of the Landfill Report, Chiquita added 50 miles of piping in 2024 alone, a majority of which is now in the areas being scheduled for further geomembrane deployment. Chiquita must now work around this additional infrastructure, which will slow down its ability to install further geomembrane.

Nevertheless, when the Landfill experiences a dry period long enough to allow personnel to safely access the site and operate the requisite equipment to install the geomembrane cover during the rainy season, Chiquita has been working to complete the enhancements of the existing 30-mil cover during these discrete periods. The gas infrastructure is less likely to be negatively impacted in these areas if extended pauses are needed due to the weather. Chiquita will continue to provide weekly updates on the cover installation progress to the LEA pursuant to Milestone 4.1 of the LEA's Compliance Order, including noting delays caused by the rainy season and other weather conditions.

Chiquita has detailed its geomembrane installation progress in a variety of reports, including the aforementioned weekly updates to the LEA. Chiquita also provides monthly updates to DTSC that describe in detail Chiquita's efforts since May 2025 to commence this undertaking. Consistent with our discussion with the LEA on December 10, 2025, Chiquita intends to continue to employ all necessary resources to complete the installation of the geomembrane cover by July 31, 2027, per the draft Master Schedule and subject to actual Landfill conditions.

Further deployment of the geomembrane cover to the areas that would enhance odor mitigation is of the utmost importance to Chiquita. However, the geomembrane installation process must support the continued effective management of the reaction by allowing for the unimpeded and continued extraction of heat, gas, and liquids as maximally as possible. The LEA's requested completion date of August 31, 2026 and unilateral decision that the geomembrane cover be installed over the entire Main Canyon would severely curb the progress that Chiquita has made to manage and stabilize the reaction and possibly endanger human health and safety. As such, Chiquita cannot in good conscious agree to such an infeasible request.

*****

If you have any questions, please do not hesitate to reach out to me at (346) 807-5547 or Kate.Logan@WasteConnections.com.

Sincerely,

Kate Logan

Kate Logan
Senior Remediation Project Manager
Chiquita Canyon Landfill

cc: Robert Ragland, Los Angeles County Department of Public Health
Liza Frias, Los Angeles County Department of Public Health
Azar Kattan, J.D., M.P.H., Los Angeles County Department of Public Health
Ken Habaradas, Los Angeles County LEA
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Jack Cheng, South Coast Air Quality Management District
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Enrique Casas, Los Angeles Regional Water Quality Control Board
Amy Miller, United States Environmental Protection Agency
Joel Jones, United States Environmental Protection Agency
Thanne Berg, Department of Toxic Substances Control
Peter Ruttan, Department of Toxic Substances Control
Tim Crick, Department of Toxic Substances Control
Christopher Kane, Department of Toxic Substances Control
Johnathon Crook, Department of Toxic Substances Control
Lisa Winebarger, Department of Toxic Substances Control
Bridget Floyd, Department of Toxic Substances Control
John Perkey, Chiquita Canyon
Dylan Smith, Chiquita Canyon

ATTACHMENT A

Draft Master Schedule

The Department of Toxic Substances Control's (DTSC) October 15, 2025 letter directed Chiquita Canyon, LLC (Chiquita) to submit a draft Master Schedule.[1] Chiquita provides the requested draft Master Schedule below, which is subject to change based on actual conditions at the Chiquita Canyon Landfill (the Landfill). This draft Master Schedule focuses on the scope of DTSC's Order, including the tasks scheduled for completion pursuant to the three Removal Action Workplans (RAWs) required by the Order as well as DTSC's data requests issued pursuant to section 6.11 of the Order.

Geomembrane Cover Deployment (60-mil EVOH/HDPE)

The following primary tasks are currently being executed as part of the cover deployment process; however, as deployment continues, it is possible that efficiencies will be established that may result in changes to the timing of tasks needed to complete deployment of the geomembrane.

1. Disconnect wellheads and piping
2. Relocate gas header piping
3. Prepare subgrade
4. Deploy liner
5. Construct Access Road
6. Reconnect gas header and wells
7. Install LFG boots

As previously stated in Chiquita's November 7, 2025 response to DTSC's request for an updated cover deployment schedule, which Chiquita incorporates herein, several factors will continue to impact deployment progress, including but not limited to weather conditions through the rainy season, technical challenges, and the need to coordinate with multiple contractors, personnel, and competing and concurrent projects. Until the rainy season concludes, it is difficult to accurately project how cover deployment will progress. All dates below are approximate and subject to weather conditions.

- Deployment Schedule
    - Segments 1 and 2 – Completed September 2025
    - Segment 3 (partial) – Completed November 2025
    - Segment 3 (remaining 1.7 acres) – December 12, 2025

[1] DTSC General Comment #1 ("The future submittal of the Draft RAW must include a Master Schedule of all activities planned for the landfill and a draft of the Master Schedule must be submitted to DTSC within seven (7) days for review. This Schedule shall also include timing of all responses to data requests."). Chiquita requested an extension to submit this draft Master Schedule as part of this response to DTSC's October 15, 2025 letter.

    - Install 16 acres of 60-mil EVOH geomembrane over the top of the existing 30-mil geomembrane cover, which involves disconnecting and reconnecting gas headers and wells, as needed, over the geomembrane cover – March 31, 2026
    - Segments 4 through 15 – November 30, 2026
    - Segments 16 through 20 – July 31, 2027 (subject to weather conditions)
- Communication and Notification Schedule for Deployment Progress
    - Provide regular updates to DTSC through:
        - Weekly technical calls (Tuesdays)
        - Written weekly updates (Fridays)
        - Bi-weekly updates regarding estimated upcoming project timelines (every other Friday)

Interim Relocation and Stabilization of Containerized Waste (Tank Farm 9)

As of November 21, 2025, Tank Farm 9 has been relocated to Cell 8B. The last primary task associated with this RAW is to obtain a grading permit from Los Angeles County Public Works (Public Works).

- Permitting Schedule
    - Submitted grading permit application – August 4, 2025
        - Received comments on grading permit application from Public Works – September 25, 2025
    - Submitted notification for Conditional Authorization of hazardous waste treatment in Tank Farm 13 to the CUPA – November 20, 2025
    - Respond to Public Works' comments on grading permit application
    - Obtain grading permit – To be determined by Public Works

Protection of Cell 8A From Intrusion of ETLF (Existing Mitigation Measures and Proposed Alternatives)

As of November 21, 2025, Chiquita has elected to consider alternatives to the requested vertical barrier in the Order. Because these alternatives have not yet been selected or finalized, Chiquita reserves the right to supplement the below schedule with additional tasks associated with the selected and finalized alternatives. The schedule below includes primary tasks associated with Chiquita's existing mitigation measures.

- Existing Mitigation Measures Schedule
    - <u>Gas Well Drilling</u>
        - Landfill gas vertical extraction well drilling will continue.
            - There are 15 additional wells to be drilled in the Tank Farm 7 area that were previously inaccessible. The drilling has already started, and there are 3 wells that have yet to be drilled.

    - Borehole logs are submitted to the South Coast Air Quality Management District (South Coast AQMD) in a monthly report pursuant to Condition 8 of the [Stipulated Order for Abatement in Case No. 6177-4 ("SOFA")](#) (see Chiquita's Odor Mitigation website (https://chiquitacanyon.com/odor-mitigation/) under Odor Maintenance Logs ("Stipulated Order Condition 8 (monthly reports)").
    - Weekly well drilling updates for the drilling of landfill gas vertical extraction wells and temperature monitoring probes are submitted to South Coast AQMD pursuant to SOFA Condition 15(c) (see Chiquita's Odor Mitigation website under Odor Maintenance Logs ("Stipulated Order Condition 15(c) (weekly well drilling updates)").
    - Rig parts that allow for deeper drilling have been installed and the rig is now capable of drilling wells up to 195 feet in depth, subject to on-site conditions.
  - <u>Sonic Drill Rig – TMPs and SVEs</u>
    - The sonic drill rig finished drilling TMP-36 to TMP-40 on September 24, 2025. Chiquita ordered temperature sensors and remote telemetry heads for the drilled TMPs (TMP-36 to TMP-40). The vendor was delayed in shipment. Chiquita expects to receive the equipment by November 24, 2025, and once they arrive, Chiquita expects to install them by December 5, 2025, subject to weather conditions. The thermocouples had to be ordered after drilling was completed because the Local Enforcement Agency (LEA) directed Chiquita to use an equation that depends on the final installed TMP depth to ensure equal spacing among the thermocouples.
    - The mobilization of the drill rig and widening of the existing perimeter road to allow drill rig access required more time than initially anticipated to begin the installation of soil vapor extraction (SVE) wells. The installation of SVE well SW-3S/M was completed on October 23, 2025, and SW-3D on October 27, 2025.
    - Drilling of the remaining temperature probes (TMP-22, TMP-23, and TMP-33) is being conducted concurrently to expedite the projects to the extent feasible.
      - The sonic drill rig was redirected to complete the installation of TMP-23, while the road work continued for the SVE wells.
      - As TMP-23 was being completed, Chiquita prepared the west side road for the drilling of the SVE wells.
      - Over the upcoming weeks, the sonic drill rig will move between the SVE wells and TMPs to complete both projects.
      - TMP-23 was completed on October 22, 2025, and TMP-22 was completed on October 31, 2025.

        - Due to the current and expected rain conditions on-site, the west side road is currently inaccessible. We anticipate drilling will resume on December 1, 2025, after the Thanksgiving holiday.
    - Chiquita and the LEA held a meeting on October 17, 2025, and determined where TMP-33 should be located. This location has been staked out and the additional work required to allow the drill rig to access this location has been completed.
    - Please also see the weekly well drilling updates for the drilling of landfill gas vertical extraction wells and temperature probes submitted to South Coast AQMD pursuant to SOFA Condition 15(c) (see Chiquita's Odor Mitigation website under Odor Maintenance Logs ("Stipulated Order Condition 15(c) (weekly well drilling updates)").
    - See the weekly TMP reports submitted to the LEA pursuant to the LEA's June 6, 2024 Compliance Order and to the US EPA (see Chiquita's Odor Mitigation website under Reports, Permits, and Other Documents, LEA ("Weekly submittals of all temperature monitoring probe data in accordance with Milestone 1B")).
- Flares/TOxs
    - The HERO thermal oxidizer (TOx) is now online, and the work to relocate the Parnel TOx has been completed. All three TOx are currently running.
    - The ongoing discussion with South Coast AQMD has resulted in Chiquita modifying the permit applications for the 3 gas destruction units to be classified as flares, with verbal agreement from South Coast AQMD staff on September 24, 2025, supporting the ongoing operation of the 3 units until Flares 4 and 5 are online. Chiquita submitted an application for a permit to construct/operate and a Title V permit modification for Flare 4 to South Coast AQMD on October 30, 2023. This flare will provide additional critical destruction capacity once installed. Under the current SOFA, Chiquita would need to take down Flare 1 once Flare 4 is permitted and operational.
    - Chiquita is working through problems with the Los Angeles County Electronic Permitting & Inspections (EPIC LA) system regarding the review and approval of grading permits for Flare 4.

Data Requests (Order Section 6.11)

As of November 21, 2025, Chiquita has provided DTSC with access to data pursuant to Order section 6.11 on the following dates. Several of these documents were previously submitted to DTSC and other regulators.

- Soil compaction results for the soil placed in Cell 8B – May 7, 2025
- Follow up summary of soil compaction results – June 3, 2025

- AutoCAD files for the January 2023 topographic map and subgrade map – June 12, 2025
- Surface and base elevations for TMP-21 through TMP-35 – July 2025
- Proposed data delivery schedule pursuant to Order section 6.11 – July 21, 2025
- Raw gas data collected for the Landfill from August 20, 2024 to August 20, 2025 – August 25, 2025
- Topography of the surface of the Landfill in AutoCAD format for August 2025, ground survey points to fix the 2025 topography and properly orient the AutoCAD data, and boring logs for TMP-01 through TMP-21 and TMP-24 through TMP-35 – September 8, 2025
- EVOH Construction Quality Assurance documents – September 25, 2025
- Spreadsheet with latitudes and longitudes for a specific list of wells – October 14, 2025
- Data Management Plan – October 21, 2025 (originally submitted to US EPA and the RMAC in July 2024)
- Raw data via SCS eTools – October 30, 2025
- Raw data via RMC – November 3, 2025

ATTACHMENT D

COUNTY OF LOS ANGELES
Public Health

BARBARA FERRER, Ph.D., M.P.H., M.Ed.
Director

MUNTU DAVIS, M.D., M.P.H.
County Health Officer

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November 20, 2025

Via Electronic Correspondence

Mr. Steve Cassulo, District Manager
Steven.cassulo@wasteconnections.com
Chiquita Canyon Landfill
29201 Henry Mayo Drive
Castaic, CA 91384

SUBJECT: LEA COMMENTS ON THE RESPONSE LETTERS AND THE DRAFT REMOVAL ACTION WORKPLAN TO ADDRESS THE EXTENSION OF COVERED AREA SUBMITTED BY CHIQUITA CANYON LANDFILL (CCL), SWIS NO. 19-AA-0052

Dear Mr. Cassulo,

The Los Angeles County Department of Public Health, Solid Waste Management Program, acting as the Local Enforcement Agency (LEA), is responding the following three (3) submittals received from Chiquita Canyon Landfill's (CCL) addressing the LEA's May 1, 2025, Compliance Order (Order), Section 4.1:

- ***"CCL's Response to U.S. EPA's, DTSC's, and the LEA's Requirement to Expand the Geomembrane Cover,"*** dated August 15, 2025. This letter served as CCL's response to the U.S. Environmental Protection Agency's (EPA) July 24, 2025 letter titled *"Additional Work required under UAO for Geomembrane Cover Expansion."* The submittal also addressed the Department of Toxic Substances Control (DTSC) April 1, 2025 Imminent and Substantial Endangerment Order, and the LEA's May 1, 2025 Compliance Order requiring expansion of the geomembrane cover.

- ***"Response to LEA Comments on the DRAFT RAW: Extension of Covered Area, for May 1, 2025 Compliance Order Mitigation Measure 4.1,"*** dated August 18, 2025. This letter served as CCL's response to the LEA's August 1, 2025 comment letter on the *"Draft Removal Acton Workplan (Draft RAW): Extension of Covered Area,"* dated May 2025, prepared by Civil and Environmental Consultants, Inc. (CEC).

- ***"Revised Draft Removal Action Workplan (Revised RAW): Extension of Covered Area,"*** dated October 2025. This document, prepared by CEC, was submitted to address Section 4.1 of the LEA's Order.

CCL's response letters and the Draft RAW propose to install additional geomembrane cover in five-acre segments, which CCL asserts would effectively control emissions while minimizing disturbance to the landfill gas control system. CCL further proposed to discontinue the installation during the rainy season and instead, conduct repairs to the existing geomembrane cover. CCL's estimated installation schedule did not have a completion date and is described as "To Be Determined," allowing for adjustments based on field conditions and unforeseen delays.

The LEA, in consultation with the California Department of Resources Recycling and Recovery (CalRecycle), has determined these submittals are unacceptable. Furthermore, since CCL has failed to install a vertical soil barrier and the reaction continues to expand, the LEA's current directive is for CCL to install the approved geomembrane cover over all areas to which the reaction has expanded or has the potential to expand as stated in Section 4.1 of LEA's Order. The entire facility where waste is disposed (Main Canyon waste management area) shall be covered by August 31, 2026. As part of compliance with Section 4.1, CCL must also:

1. By December 15, 2025, provide an estimated schedule for the 60 ml geomembrane cover installation, with final completion of no later than August 31, 2026.
2. Employ the necessary resources to complete geomembrane coverage over the entire facility where waste is disposed (Main Canyon waste management area) by August 31, 2026.
3. Continue to install the required geomembrane cover during the winter months to ensure completion within the required timeframe, as CCL has done previously.

The LEA reserves the right to issue a new directive or order if site conditions or available data indicate that additional corrective actions are necessary to protect public health and the environment.

Ensure to obtain all permits and approvals from Federal, State and Local agencies as required by the law and regulations.

If you have any questions, please email me at emorofuji@ph.lacounty.gov or call me at (213) 668-2206.

Sincerely,

Eric Morofuji, EHS III
Solid Waste Management Program
Local Enforcement Agency (LEA)

Enclosed: CalRecycle comment letter for Directive 4.1 – Expansion of the Geomembrane Cover Schedule dated October 3, 2025.

Cc: (Via Electronic Correspondence Only)

- Robert Ragland, Los Angeles County Department of Public Health
- Liza Frias, Los Angeles County Department of Public Health
- Azar Kattan, J.D., M.P.H, Los Angeles County Department of Public Health
- Ken Habaradas, Los Angeles County LEA
- Karen Gork, Los Angeles County LEA
- Renee Jensen, LEA Counsel (rjensen@bgsplaw.com)
- Blaine McPhillips, Senior Deputy County Counsel
- Emiko Thompson, Los Angeles County Department of Public Works
- Alex Garcia, Los Angeles County Department of Regional Planning
- Ai-Viet Huynh, Los Angeles County Department of Regional Planning
- Wes Mindermann, CalRecycle (wes.mindermann@calrecycle.ca.gov)
- Todd Thalhamer, CalRecycle (todd.thalhamer@calrecycle.ca.gov)
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- Amy Miller, United States Environmental Protection Agency (Miller.Amy@epa.gov)
- Joel Jones, United States Environmental Protection Agency (Jones.Joel@epa.gov)
- Peter Ruttan, Department of Toxic Substances Control (Peter.Ruttan@dtsc.ca.gov)

California Environmental Protection Agency

Gavin Newsom
California Governor

CalRecycle
Department of
Resources Recycling and Recovery

Yana Garcia
Secretary for Environmental Protection
Zoe Heller
CalRecycle Director

October 3, 2025 Via Email: kgork@ph.lacounty.gov

Karen Gork
Chief Environmental Health Specialist
Los Angeles County Department of Public Health
5050 Commerce Drive
Baldwin Park, California 91706

Subject: Chiquita Canyon Landfill (19-AA-0052) Technical Review – Directive 4.1, Expansion of the Geomembrane Cover Schedule and Directive 4.2 Relocation of Tank Farm 9 at Chiquita Canyon Landfill

Dear Ms. Gork:

CalRecycle staff is providing this letter in response to your request for technical assistance in the proposed schedule for the additional geomembrane cover and relocation of Tank Farm 9.

The following comments are provided to the Los Angeles County Department of Public Health [Local Enforcement Agency (LEA)] as assistance to support the program in carrying out its responsibilities at permitted disposal sites. The final determination as to the comments to be provided to the responsible party is within the sole purview of the LEA, acting within the parameters of its discretion, in accordance with its vested authority under its certification as defined in Title 14, California Code of Regulations (14 CCR), Division 7, 27 CCR, Division 2, Subdivision 1 (Section 20005 et seq.), and Division 30 of the Public Resources Code.

Directive 4.1 Comments

CalRecycle staff have reviewed the proposed Chiquita Canyon Landfill (CCL) Proposed Cover Installation and Repair Plan for Directive 4.1 and find it inadequate. Since CCL has chosen not to install any barriers in the main fill, the Subsurface Elevated Temperature (SET) Event has the potential to expand to the entire waste area. CCL's current strategy of using an unproven heat exchange and pressure control methodology is not preventing the SET from expanding or controlling the emissions and/or odors at the facility. According to the South Coast Air Quality Management District, the facility has received over 4,600 complaints and 80 Notices of Violation since January 1, 2025. The SET Event continues to expand and impact the community.

CalRecycle staff recommends that the LEA consider requiring the entire Main Canyon Fill waste management unit to be covered by July 1, 2026. The CCL has previously demonstrated its ability to install a geomembrane liner during the winter months, and it should continue this approach. Currently, the CCL is using only one drill rig and one liner crew; the CCL should employ the necessary resources to complete the entire waste area within the recommended timeframe.

Directive 4.2 Comments

The CCL relocated the hazardous waste treatment and leachate storage facility, known as Tank Farm 9, from the top deck to the bottom of the facility at Cell 8B. CalRecycle staff have provided comments for consideration to the Department of Toxic Substances Control (DTSC) regarding this temporary location. CalRecycle staff consider the current location temporary and susceptible to being affected by the current and future SET Events, which may require relocating the facility again. CalRecycle staff recommends that the LEA consider requiring the CCL to take the necessary actions as soon as practicable to establish a permanent location for the leachate treatment facility (Tank Farm 13) that will not be impacted by the current and future SET Events.

If you have comments or questions, please call (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:

Peter Ruttan, Department of Toxic Substances Control (Peter.Ruttan@dtsc.ca.gov)
Todd Sax, CalEPA (Todd.Sax@calepa.ca.gov)

ATTACHMENT E

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 9

SAN FRANCISCO, CA 94105

July 24, 2025

Mr. Steve Cassulo
District Manager
Chiquita Canyon, LLC
29201 Henry Mayo Drive
Castaic, CA 91384-2705

RE: Additional Work required under UAO for Geomembrane Cover Expansion

Dear Steve Cassulo:

This letter directs Chiquita Canyon LLC ("CCL") to implement additional work under Paragraph 90 of the Unilateral Administrative Order, EPA Docket No. RCRA 7003-09-2024-0001 and CERCLA 106-09-2024-05, In the Matter of Chiquita Canyon, LLC, issued February 21, 2024 (the "UAO"), the U.S. Environmental Protection Agency ("EPA"). Paragraph 90 allows EPA to direct additional work consistent with the objectives of the UAO.

The overall objectives of the UAO are set forth in Paragraph 1 of the UAO as the performance of response actions to address off-site impacts and ongoing subsurface reactions causing off-site impacts, in connection with the Chiquita Canyon Landfill ("Landfill") in Castaic, California, including identifying, investigating, remedying, and/or preventing the potential endangerment to human health or the environment from activities involving solid and hazardous waste. The objectives of the UAO specifically include the objectives of the Master Work Plan (as defined in the UAO) set forth in Paragraph 22 of the UAO as:

> (1) remedy[ing] and prevent[ing] off-Site impacts caused by odors, emissions, leachate or other waste streams; and
>
> (2) deploy[ing] measures to delineate, fully characterize, prevent the expansion of, contain, and reduce the smoldering or the subsurface reaction occurring at the Landfill.

A. Additional Work

EPA has determined that the following additional work ("Additional Work") is necessary to meet the foregoing objectives:

1. CCL shall install an EPA-approved landfill cover on all areas of the Landfill which are not presently covered by a geomembrane and to which the reaction area has expanded or has the

potential to expand. The Additional Work shall be consistent with the California's Department of Toxic Substances Control ("DTSC's") Imminent and Substantial Endangerment Determination and Order, Docket No. HAS-FY24/25-082, dated April 1, 2025 ("DTSC ISE Order") and the Los Angeles County Department of Public Health, Solid Waste Management Program, acting as the Local Enforcement Agency ("LEA") Compliance Order, dated May 1, 2025 ("LEA Compliance Order").[1] Consistent with the LEA Compliance Order, the additional geomembrane cover must be installed over at least 100 acres outside the existing geomembrane cover. In no event shall installation of the cover be conditioned upon findings of the Reaction Committee.[2]

B. Basis for Determination

EPA has determined, based on temperature monitoring data showing the migration of the reaction at the Landfill, findings regarding the potential for the reaction to expand to the entire main canyon of the Landfill, and the continued issuance of notices of violation based on odor complaints from community members, as described below, that the Additional Work is necessary to meet the objectives of the UAO.

State and local agencies have found, based on extensive analysis of temperature monitoring data, that the reaction has migrated beyond the portion of the Landfill currently covered with geomembrane cover. DTSC determined that "[u]nderground temperatures recorded at [the Landfill] between January 9, 2025 and February 19, 2025 demonstrate the SET event has expanded beyond the original 30 acres in the northwestern portion of the landfill in Cell 1/2A, Module 2B/3, Module 4, and Module 2B/3/4 P2," and, as of April 1, 2025, encompassed "approximately 90 acres of [the Landfill]." *See* **Enclosure A** at pp. 5-6. Similarly, the LEA concluded that the reaction was continuing to expand as of May 1, 2025: "Contrary to CCL's stated belief that the reaction has not expanded, new temperature data from the recently installed TMPs . . . indicates that the reaction is expanding." *See* **Enclosure B** at p. 5. These statements were consistent with the findings of Dr. Timothy Stark, a leading landfill expert, based on a review of Waste Borehole Maximum Temperature Profiles Over 6 Weeks from January 9, 2025 to

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[1] The DTSC ISE Order and the LEA Compliance Order contain specific requirements for the work to expand the geomembrane cover and for the geomembrane cover, which are hereby incorporated by reference. These requirements include, without limitation: "The geomembrane cover shall accommodate landfill settlement/subsidence, sufficiently limit the transmission of gases (e.g. methane permeance less than 2.5x10-13 m/s using ASTM D1434), and provide durability from foot traffic, exposure to ultraviolet radiation, and inclement weather, or motorized equipment, if any. In addition, the cover shall have material properties to address site-specific conditions, including but not limited to, elevated landfill temperatures, settlement, and harmful landfill gas/odor emissions. This work shall be conducted with appropriate air monitoring, use Construction Quality Assurance techniques, and be consistent with South Coast AQMD's order and other applicable requirements. The geomembrane thickness shall be adequate to withstand the activities and conditions at the facility, but no less thick than 40 mil, with material consistent to prevent heat degradation and control odors and emissions as documented in the Stark Memo, Exhibit 6," and "Install a 40- to 60-mil thick tan or green HDPE-EVOH textured geomembrane underlain by a minimum 6 oz/sy nonwoven geotextile over approximately 100 acres outside the existing geomembrane cover. This new barrier must be welded to the existing 30-mil-thick white HDPE geomembrane or placed in a suitable anchor trench. A construction and quality assurance/quality control (QA/QC) plan must be submitted for approval." *See* **Enclosure A** at pp. 11-12; **Enclosure B** at p. 2.)

[2] The Reaction Committee was formed in response to the South Coast Air Quality Management District ("SCAQMD") Stipulated Order of Abatement (Case No. 6177-4) to review applicable data, estimate the extent of the reaction, and determine the reaction area. The findings of the Reaction Committee have been disputed by regulatory agencies, such as CalRecycle, which has asserted that the "Reaction Committee has taken a conservative approach in determining the reaction area," disregarding critical data such as carbon monoxide results. *See* **Enclosure C** at pp. 6-7.

February 19, 2025, that CCL's contractor "believes the SET Event covers about 28 acres as of February 20, 2025 whereas [Dr. Stark's] extent of the SET Event covers about 90 acres." *See* **Enclosure** A, Exhibit 6 at p. 6. Analysis of temperature monitoring probe data demonstrates that the reaction has migrated beyond the area of the Landfill covered with geomembrane cover.

Further, various statements of state and local agencies, based on analyses of temperature monitoring and other data, confirm that the reaction at the Landfill has the potential to expand to the entire main canyon of the Landfill. On March 28, 2025, CalRecycle issued a letter ("CalRecycle Letter") to the LEA stating, "The reaction area is expanding, and the current containment strategy has failed." *See* **Enclosure C**, CalRecycle Letter at pp. 18-19. CalRecycle based its conclusion on an analysis of various reaction metrics, including temperature, landfill gas levels, settlement, cover fissures, leachate outbreaks, damage to the Landfill's gas collection and control system, and emissions and odors, among other metrics. *See* **Enclosure C,** CalRecycle Letter at p. 5. Similarly, DTSC found that, "Without additional action, the SET event may consume the entire waste fill in the Main Canyon, which could threaten the stability of the southern toe of the waste fill in Cell 8A." *See* **Enclosure A** at p. 6.

The potential for the reaction to affect the entire main canyon of the Landfill warrants expansion of the geomembrane cover over the remaining uncovered portion of the Landfill. Indeed, Dr. Stark has confirmed that given the lack of containment strategy for the reaction, that "the only option for controlling odors and emissions is to cover the area with a geomembrane . . . over which the temperature monitoring probes (TPs) have been installed." *See* **Enclosure A** at Exhibit 6, p. 4. Dr. Stark specifically recommended extending the cover to "cover about 183 acres and leave only about 13 acres at the southern end of the [Landfill] uncovered for current disposal operations." *See* **Enclosure A** at Exhibit 6, p. 5. CalRecycle also recommended installing geomembrane cover "over the approximately 100 acres outside of the current geomembrane cover." *See* **Enclosure C**, CalRecyle Letter at p. 19.

CCL reported to the LEA that it completed the installation of 30-mil HDPE geosynthetic cover over approximately 44.6 acres of the reaction area and over approximately 1.3 acres over the disposal area in accordance with the west toe drain workplan, as of January 17, 2025. *See* **Enclosure D**. CCL has reported that "[t]he cover has contributed to the substantial decrease of odors at the Landfill." *See* **Enclosure E** at p. 4.

Notwithstanding completion of the initial geomembrane cover, members of the community surrounding the Landfill continue to report odors from the Landfill. According to CCL's Notice of Violation Log, available at https://chiquitacanyon.com/reports/notice-of-violation-log/, SCAQMD has issued approximately 50 Notices of Violation to CCL for discharging air contaminants from the Landfill, based on odor complaints from the community, between February 2025 and July 8, 2025.

State and local regulatory agencies agree that expanding the geomembrane cover will address the ongoing odor issues. DTSC stated: "Extending the area covered by a geomembrane is necessary to adequately control infiltration of oxygen and water into the landfill waste, and to control production of gas emissions, odors, and leachate." *See* **Enclosure A** at p. 11. CCL has even acknowledged that the geomembrane cover can effectively mitigate odors: "Chiquita agrees that installation of additional cover may be an appropriate method for mitigating potential odor impacts." *See* **Enclosure E** at p. 4.

EPA concurs with the state and local regulatory agencies that covering the remaining uncovered portion of the Landfill with geomembrane cover is a necessary and appropriate measure to control the Landfill reaction and related odors. Expanding and improving the geomembrane cover will, among other things, control the migration of odors from the Landfill and, therefore, mitigate off-site impacts from odors or emissions.

Further, extending the geomembrane cover will control infiltration of oxygen and water into the landfill mass, which can help prevent the expansion of the smoldering or subsurface reaction occurring at the Landfill.

The Additional Work, therefore, serves the dual objectives of the Master Work Plan and the UAO, as set forth above.

Moreover, the Additional Work is necessary to meet the broader objective of the UAO to address the imminent and substantial endangerment to the public health or welfare from the Landfill resulting from the release or threatened release of a hazardous substance.

C. Submittal of Work Plan and Opportunity to Meet and Confer

EPA directs CCL to submit a Work Plan for the Additional Work within fifteen (15) days of this letter to EPA for approval, in accordance with Paragraph 90 of the UAO. Within five (5) days after the receipt of this letter, CCL shall have the opportunity to meet or confer with EPA to discuss the Additional Work. On approval of the Work Plan for the Additional Work, Respondent shall implement the Work Plan in accordance with the schedule and provisions contained therein, and the Work Plan for the Additional Work shall be incorporated by reference into the UAO.

If you have any questions or comments regarding this letter, or if you wish to exercise the opportunity to meet and confer, please contact Laura Friedli, EPA Attorney Advisor, at (415) 972-3325 or Friedli.Laura@epa.gov.

Sincerely,

AMY MILLER-BOWEN

Digitally signed by AMY MILLER-BOWEN
Date: 2025.07.23 17:01:34 -07'00'

Amy C. Miller-Bowen
Enforcement and Compliance Assurance Division Director
U.S. Environmental Protection Agency, Region 9

MICHAEL MONTGOMERY

Digitally signed by MICHAEL MONTGOMERY
Date: 2025.07.24 16:59:11 -07'00'

Michael Montgomery
Superfund and Emergency Management Division Director
U.S. Environmental Protection Agency, Region 9

Enclosures
Enclosure A – DTSC ISE Order
Enclosure B – LEA Compliance Order
Enclosure C – LEA March 2025 Letter attaching CalRecycle March 2025 Letter
Enclosure D – Cover Completion Report
Enclosure E – CCL Notice of Intent to Comply with DTSC ISE Order

cc: John Perkey, Waste Connections
Jim Little, Waste Connections
Kurt Shaner, Waste Connections
Sarah Phillips, Waste Connections
Megan Morgan, Beverage & Diamond
Nicole Weinstein, Beverage & Diamond
Allyn Stern, Beverage & Diamond
Todd Sax, California Environmental Protection Agency
Joel Jones, United States Environmental Protection Agency
Roshni Brahmbhatt, United States Environmental Protection Agency
Kaoru Morimoto, United States Environmental Protection Agency
Rick Sakow, United States Environmental Protection Agency
Tyler Holybee, United States Environmental Protection Agency
Mark Anthony Relon, United States Environmental Protection Agency
Tara Frost, United States Environmental Protection Agency
Laura Friedli, United States Environmental Protection Agency

ATTACHMENT F

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Attorneys for Defendants Chiquita Canyon, LLC, Chiquita Canyon, Inc. and Waste Connections US, Inc.

UNITED STATES DISTRICT COURT

CENTRAL DISTRICT OF CALIFORNIA, WESTERN DIVISION

THE PEOPLE OF THE STATE OF CALIFORNIA, by and through Dawyn R. Harrison, County Counsel for the County of Los Angeles, and THE COUNTY OF LOS ANGELES,

Plaintiffs,

vs.

CHIQUITA CANYON, LLC, a Delaware limited liability company; CHIQUITA CANYON, INC., a Delaware corporation; and WASTE CONNECTIONS US, INC., a Delaware corporation,

Defendants.

CASE NO. 2:24-cv-10819-MEMF-MAR

DECLARATION OF CRAIG H. BENSON, PHD, PE, BCGE, BCEE, NAE

Filed Concurrently with Opposition to Motion for Preliminary Injunction

Date: July 17, 2025
Time: 10:00 a.m.

Assigned to Hon. Maame Ewusi-Mensah Frimpong, Courtroom 8B

DECLARATION OF CRAIG H. BENSON, PhD, PE, BCGE, BCEE, NAE

I, Craig H. Benson, PhD, PE, BCGE, BCEE, NAE, declare:

1. I have been engaged by Defendants' Chiquita Canyon, LLC, Chiquita Canyon, Inc., and Waste Connections US, Inc. (collectively, "Chiquita Defendants") to provide expertise regarding the Chiquita Canyon Landfill (the "Landfill"), in support of Defendants' opposition to Plaintiffs' Motion for Preliminary Injunction in the above-captioned action. This Declaration sets forth my professional opinions regarding the Chiquita Canyon Landfill's ongoing Elevated Temperature Landfill ("ETLF") event. My opinions in this Declaration are based on industry standards and are stated to a reasonable degree of scientific and engineering certainty. If called as a witness, I could and would testify competently to the material facts and opinions herein.

2. This Declaration is based on my assessments to date, which were conducted over a limited time frame. With additional time, I could have and would have done additional analysis. My opinions could change with additional information and analysis. I reserve the right to update my opinions should additional information become available.

3. I hold the titles of Wisconsin Distinguished Professor Emeritus at the University of Wisconsin-Madison and Dean of Engineering Emeritus at the University of Virginia. I have a PhD in engineering with a focus on landfills and waste containment, and nearly 40 years of experience in engineering research and practice related to municipal solid waste ("MSW") landfills and solid waste containment systems as a Wisconsin Distinguished Professor Emeritus at the University of Wisconsin-Madison and as Dean of Engineering Emeritus at the University of Virginia. I am a board-certified environmental engineer by the American Academy of Environmental Engineering and Scientists ("AAEES") and board-certified geotechnical engineer by the Geo-Institute of the American Society

of Civil Engineers. I am an elected member of the US National Academy of Engineering ("NAE") and am past-Chair of NAE Section 4 on Civil and Environmental Engineering.

4. I have extensive experience working on landfills and waste containment systems for a diversity of waste streams at locations throughout the United States, Canada, South America, Europe, Africa, Japan, Australia, and New Zealand. This experience has provided me with a broad and detailed knowledge of operational and design issues for landfills and other waste containment systems.

5. I served as a co-Principal Investigator on an expert team of engineers charged by the Environmental Research and Education Foundation ("EREF") to develop an understanding of MSW landfills with elevated temperatures that persist over large areas, which are referred to as ETLFs. This expert team, referred to as the EREF ETLF team, was charged with understanding causative mechanisms for the persistent high temperatures at ETLFs, identifying strategies to prevent ETLFs, and recommending best management practices for ETLFs.

6. I have been engaged in evaluating many of the major ETLFs over the past two decades, including those at Countywide Landfill, Congress Landfill, Waimanalo Gulch Landfill, Bridgeton Landfill, Middle Point Landfill, and Bristol Landfill. I am currently engaged as the expert engineer for the Bristol Landfill in Bristol, Virginia, providing oversight, review, and recommendations associated with managing the Bristol ETLF. I am also engaged as an engineering expert evaluating conditions and practices at the Middle Point Landfill ETLF in Murfreesboro, Tennessee. I have published referred research papers regarding mechanisms contributing to heat accumulation in ETLFs, thermal properties of MSW affecting heat transfer in ETLFs, pyrolytic reactions in ETLFs, and temperature-dependent compression and settlement of MSW. Causative mechanisms and best management practices to address ETLFs was one of the

lecture themes for my 2024 Kappe Lecture series tour for the American Association of Environmental Engineers and Scientists.

7. My education, training, professional background, and expertise are summarized in my curriculum vitae, attached as **Exhibit A**.

8. I have been engaged as an expert by a broad range of private sector and public sector entities. My public sector engagements include the US Environmental Protection Agency, US Department of Energy, US Nuclear Regulatory Commission, US Department of Defense, Wisconsin Department of Natural Resources, Iowa Department of Natural Resources, Missouri Department of Natural Resources, Tennessee Department of Environmental Conversation, Michigan Department of Environmental Quality, Idaho Department of Environmental Quality, Utah Department of Environmental Quality, Texas Commission on Environmental Quality, Montana Department of Environmental Quality, Wyoming Department of Environmental Quality, and the Virginia Department of Environmental Quality. My private sector engagements include Republic Services Inc., Waste Management Inc., GFL Inc., Cleveland-Cliffs Inc., Bayer Corporation, Simplot Corporation, Morrow Energy, Evergy Inc., Energy Fuels Resources Inc., Alcoa, and the Electric Power Research Institute.

<u>Background on Elevated Temperature Landfills</u>

9. Landfills are highly engineered containment facilities for solid wastes that include engineered barriers and control systems for managing liquids and gases associated with the waste with the objective of protecting groundwater and air. Modern MSW landfills include engineered liners beneath the waste that retain leachate (contaminated water released from the waste) and engineered covers above the waste to control the ingress of precipitation and egress of gases.

Leachate collection and treatment systems are used to collect the leachate contained on the liner surface, followed by treatment to remove contaminants prior to discharge. Typically, leachate treatment occurs offsite. Gas collection and control systems ("GCCS") are used to collect gas emitted from the waste and to treat the gas so that it can be discharged to the atmosphere.

10. A portion of the organic fraction of MSW placed in a landfill undergoes microbial decomposition. This process produces landfill gas ("LFG"), which is comprised primarily of methane and carbon dioxide under typical conditions along with much smaller fractions of other constituents. Under normal conditions, LFG is collected and treated by the GCCS prior to discharge. In some cases, the treatment system may include combustion or conversion of the methane to produce renewable energy. The microbial decomposition process also produces heat, which results in the waste mass temperature being above ambient atmospheric temperatures. Under normal conditions, heat does not accumulate to a level at which the biological process is inhibited.

11. Water is present in waste due to the ingress of precipitation after disposal in the landfill and wetting that may have occurred prior to disposal. Water in contact with waste solids and gases is referred to as leachate. Leachate contains a variety of inorganic and organic constituents that have the potential to impact groundwater and other water resources, and therefore is collected for treatment. Leachate drains by gravity to the bottom of the landfill, where the liner redirects flow laterally to a sump. Leachate in the sump is removed by a pump. In some cases, when drainage within the waste is constrained, vertical extraction wells with pumps are installed in the waste to remove leachate. The wells generally are also used to collect LFG, and are referred to as dual-phase extraction wells, with the two phases being leachate and LFG.

12. The EREF ELTF research team defined ETLFs as MSW landfills with gas wellhead temperatures substantially in excess of 65 °C (150 °F) that persist over a large area for a sustained period of time. This definition has been broadly adopted by practitioners and environmental regulators throughout the United States. The elevated temperatures have a variety of impacts, including alterations in gas composition, higher rates of settlement, alterations in leachate chemistry, and generation of odors. ELTFs differ from MSW landfills with a limited number of wells operating under a higher operating value (HOV) exemption, which are landfill gas wells permitted to operate at a temperature in excess of 55 °C (131 °F). An informal survey I conducted indicated that approximately one-third of the MSW landfills in the United States have at least one gas well operating under an HOV exemption.

13. ETLFs are uncommon. The first ETLF occurred circa 2006. Since then, approximately ten to 15 ETLFs have been recognized. Some of these are described in a fact sheet issued by the US Environmental Protection Agency ("USEPA")[1].

14. ETLFs occur when exothermic, or heat-releasing, processes within the waste mass generate heat at a rate that is faster than the rate at which the heat can dissipate into the surrounding environment. Consequently, the heat accumulates in the waste, resulting in increasing temperatures. The heat spreads and waste temperatures increase until an equilibrium is reached between the rate of heat generation and the rate heat dissipation.

15. Exothermic reactions are the source of heat in ETLFs. These reactions are known at some ETLFs, such as the exothermic reactions associated with

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[1] USEPA, When Does a Municipal Solid Waste Landfill Become an Elevated Temperature Landfill (ETLF)? (Jan. 2022), https://cfpub.epa.gov/si/si_public_record_report.cfm?Lab=CESER&dirEntryId=354569.

aluminum metal in aluminum processing wastes at the Countywide Landfill in Sparta, Ohio and the Middle Point Landfill in Murfreesboro, Tennessee. At other landfills, such as the Congress Landfill in Chicago, Illinois or and the Bristol Landfill in Bristol, Virgina, the exothermic reactions have not been identified conclusively. The exothermic reactions responsible for ETLFs are generally believed to be abiotic (non-biological in origin) with origins in hydration and carbonation of reactive surfaces in the waste (e.g., some coal combustion and incinerator ashes can have reactive surfaces) and potentially exothermic pyrolysis.

16. Very wet or saturated waste and high leachate levels are common in ETLFs, precluding combustion reactions (smoldering combustion, fire) as significant sources of heat. Consequently, the mechanisms causing ETLFs generally are different from landfill fires or smoldering combustion, which are more common near the landfill surface where oxygen is available. Combustion generates charred waste, combustion odors, and gas laden with particulate (smoke), each of which is not common at ETLFs. Strategies to address heat in ETLFs necessarily are very different from those used to manage combustion in MSW.

17. ETLFs typically have several common characteristics in addition to the elevated waste and landfill gas temperatures. These include (1) landfill gas composition that differs from that of gas released from conventional microbial decomposition processes in MSW; (2) elevated leachate generation rates; (3) elevated concentrations of inorganic and organic constituents and suspended solids in the leachate; and (4) higher rates of compression of the MSW.

18. The elevated temperatures in ETLFs suppress the methanogenic microbial community in MSW associated with decomposing the organic matter in MSW under typical MSW landfill conditions. Consequently, the LFG in ETLFs generally has lower methane content and higher carbon dioxide content compared

to LFG in a landfill operating under conventional conditions with methanogenic microbial decomposition.

19. LFG in ETLFs often contains reduced sulfide compounds that are highly odiferous, even at low concentrations. Consequently, LFG from ETLFs has a distinct pungent odor that is different from conventional LFG. Dimethyl sulfide (DMS) is one of the most common of these odiferous reduced sulfide compounds in LFG at ELTFs.

20. The elevated temperatures in an ETLF soften the solid components in MSW, reducing the stiffness of the solid matrix in MSW, resulting in increased magnitude and rate of settlement. The softening of the solid matrix also results in the release of moisture that is typically bound within the pores of the waste. This release of moisture is responsible for much of the higher leachate generation rates associated with ETLFs.

21. The elevated temperatures and the absence of oxygen in MSW in an ETLF may result in pyrolysis, which is defined as the thermal decomposition of organic matter in the absence of oxygen. The pyrolytic decomposition process results in the release of constituents from the solids to the leachate, a factor responsible for the elevated concentrations of organic constituents in leachate at ETLFs. These organic constituents often include acetone, benzene, toluene, and ketones. Pyrolysis in ETLFs generally is endothermic, meaning that the decomposition process consumes energy. However, pyrolysis can be exothermic (energy and heat releasing) under certain pressure and energy conditions. The role of exothermic pyrolysis in ETLFs is a topic of current research.

22. A crock pot is a useful analog to an ETLF. A crock pot is filled with organic solid matter (meats, vegetables, etc.), with the pore spaces between the solids filled with liquid (broth). When the crock pot is first filled, the solids are relatively firm and rigid, and the pore water between the solids is dilute. A lid is

placed on the upper surface, constraining the release of heat and moisture. Heat is applied to the contents in the pot. This heat for cooking softens the solid matter, which releases substances to the broth. The process also releases an aroma. After a period of sustained heat application, the solid matrix is soft and compressible, and the liquid phase is highly concentrated. These analogous processes occur in the MSW within an ETLF.

Chiquita has Followed Best Management and Control Practices for Elevated Temperature Landfills

23. Even with aggressive actions, dissipation of heat within an ETLF occurs slowly. Noticeable reductions in waste temperature often do not occur for several years after heat removal has been initiated. For example, experience at the Congress Landfill in Illinois has shown that a decade or more is required to dissipate the heat accumulated in an ETLF. Best management practices developed based on findings and recommendations from the EREF ETLF team along with industry experience recognize these limitations, and focus on practical outcomes that minimize impacts while removing heat.

24. Heat is released from an ETLF by thermal diffusion into the surroundings and by convection through the removal of LFG and leachate. Thermal diffusion into the surroundings is a slow heat transfer process controlled by thermal conductivity of the MSW and the surroundings. Convection is a more rapid heat removal process, where the heat contained within the MSW is physically extracted when leachate and gas are removed. The heat capacity of liquid is much greater than that of gas. Therefore, aggressive leachate removal is a best management practice and is regarded as the most effective and practical heat removal strategy in ETLFs.

25. ETLFs tend to be very wet or saturated, with high leachate levels. Vertical dual-phase extraction wells are often installed in ETLFs to concurrently remove leachate and gas from the waste mass. These wells remove heat that has accumulated in the waste, and also drain liquid-filled pore spaces. Drainage of the pores enhances the gas permeability of the MSW, resulting in more effective removal of gas and management of odors. Thus, best management practices for ETLFs include deployment of a dense network of dual-phase gas collection wells that remove both leachate and gas. The aggressive gas removal via these wells also reduces impacts by reducing odiferous emissions provided that there is an effective gas treatment system.

26. Other best management practices that address emissions include application of interim cover to control surface emissions and installation of seals around gas well penetrations. Interim cover using a geomembrane has been found to be very effective, including but not limited to EVOH geomembranes that have very low gaseous diffusion coefficient. Perimeter misting systems can also be applied to treat odiferous gases that could not be captured for treatment, and odor and gas surveillance systems can be installed to detect odors and monitor the concentrations of constituents released into the atmosphere.

27. State regulators have mandated that Chiquita Canyon Landfill implement numerous mitigation measures including installing cover to contain surface emissions and additional dual-phase extraction wells. These actions have been undertaken, as described subsequently.

28. As detailed in the Declaration of Steve Cassulo, Chiquita Canyon Landfill has implemented these best management practices. Since 2023, 292 additional vertical gas wells have been placed that have the capacity for dual-phase extraction, and 170 leachate pumps have been installed in the vertical extraction wells. Cassulo Decl. ¶¶ 16, 34. More pumps are planned for deployment. *Id.* ¶ 34.

Geomembrane has been installed over approximately 46 acres, with an additional geomembrane installation scheduled. *Id*. ¶ 21. A perimeter misting system has been deployed to address odoriferous emissions, odor monitoring is being conducted routinely, drone surveillance has been deployed to monitor for surface emissions, and air monitoring stations have been installed on-site and within the community. *Id*. ¶¶ 48, 51. The monitoring stations include on-location gas chromatography to provide real-time assessment of volatile organic compounds in the atmosphere. *Id*. ¶ 50. Chiquita Canyon Landfill has also installed two thermal oxidizers and one additional flare to treat the gas being extracted. *Id*. ¶¶ 19, 20.

<u>By Following Established Guidance, Chiquita is Succeeding in Mitigating the ETLF's Effects</u>

29. The Declarations of Steve Cassulo and Patrick Sullivan, who is an air quality and LFG systems specialist and Senior Vice President with SCS Engineers, Inc., demonstrate that these practices have had significant impact. Gas extraction at Chiquita Canyon Landfill has nearly doubled since 2023, leachate extraction has increased considerably, with more than 7 million gallons extracted in April 2025 alone, surface exceedances measured by drone have been reduced, sulfide concentrations in the atmosphere have declined steadily, and odor surveillance has shown that the frequency of objectionable odor (defined as an odor index >3+) present in the Landfill surroundings has dropped substantially. *See* Cassulo Decl. ¶ 39; Sullivan Decl. ¶¶ 20, 32, 40 and exhibits.

30. Frequency of odor complaints, while subjective, can be an indicator of the effectiveness of best management practices at ETLFs. The monthly complaint record for 2023, 2024, and 2025 is included in the Sullivan Declaration (Ex. 20)

and shows that odor complaints declined by more than a factor of three since the best management practices were implemented.

31. Data collected from the temperature monitoring probes ("TMPs") also indicate that the best management practices are maintaining stable conditions within the landfill. I have reviewed the temperature profiles from the TMPs, and they indicate that temperatures have changed little on a year-on-year basis. Three TMPs have shown larger increases in temperature year-on-year (TMP-8, TMP-11, and TMP-13), but even in these TMPs, the temperatures remain modest and considerably lower than observed at many other ETLFs.

Todd Thalhamer's Report and the County Declarants' Conclusions are Scientifically Unsound and Deviate from Best Practices

32. Mr. Thalhamer has provided an assessment of the Chiquita Canyon Landfill ETLF in a letter to Ms. Karen Gork of the Los Angeles County Department of Public Health dated 28 March 2025. He refers to the condition at Chiquita Canyon Landfill as a subsurface elevated temperature ("SET") event. The SET nomenclature is used by Mr. Thalhamer and one of his collaborators to describe ETLFs, but is not a broadly accepted term in industry, regulatory, or academic environments.

33. Mr. Thalhamer correctly recognizes that a portion of Chiquita Canyon Landfill is an ETLF, with persistent elevated temperatures monitored within the waste and at gas well heads, gas composition consistent with ETLF conditions, and accelerated waste settlements due to elevated temperatures. This recognition is consistent with my review of the data and site conditions.

34. My review of Mr. Thalhammer's report indicates that he has not identified the mechanisms responsible for the elevated temperatures using the

accepted scientific method, which includes hypothesis formulation and evaluation using data and other factors. In the short period in which I have been engaged in this assessment, I have not had the opportunity to evaluate and identify the mechanisms responsible for elevated temperatures. ETLFs are very complex, and understanding the causative mechanisms requires detailed study over a considerable period. Even with a high level of effort, the causative mechanisms frequently are not identified. To my knowledge, no one has drawn firm and defensible conclusions regarding causation of the ETLF at Chiquita Canyon Landfill.

35. Mr. Thalhammer has inferred that separate areas of heat generation are evolving within the ETLF in response to gas collection system operations. I found no scientific basis for these inferences based on the information contained in his report.

36. Mr. Thalhamer has concluded that the "reaction area is expanding" and that the "containment strategy has failed." I found no convincing scientific evidence in his report to support this conclusion. My own review of the thermal data that has been collected to date, albeit over the relatively short period in which I have been engaged in this assessment, suggests that the subsurface temperatures that are elevated are stable.

37. I found no evidence that the area comprising the ETLF is expanding or that a process is underway that would accelerate expansion. A local equilibrium appears to exist that precludes expansion of the area comprising the ETLF.

38. Mr. Thalhamer has concluded that a "soil barrier" must be installed to provide a "thermal block" to prevent expansion of the ETLF. No rational basis for this recommendation is provided and no engineering analysis or design is used to illustrate how this barrier will provide a "thermal block." My own assessment, albeit in the limited period for which I have had to study the issue, suggest that

using a soil barrier as a "thermal block" is illogical, inconsistent with thermodynamic principles, and potentially could exacerbate subsurface conditions, emissions, and impacts on the surrounding community. Installation of the soil barrier based on the current logic would be contrary to best management practices from my assessment.

39. The facts show that subsurface temperatures have remained relatively stable, airborne emissions have diminished, and complaints have dropped considerably in response to implementation of best management practices at Chiquita Canyon Landfill. These facts suggest that the best management practices have been effective, the ETLF is stable, and impacts on the surrounding community have been reduced. The logical inference from these facts is that the best management practices should continue to be implemented unless new information to the contrary becomes available.

<u>Conclusion</u>

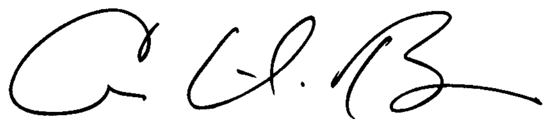
40. Chiquita Canyon Landfill is applying the best management and control practices to address the ETLF consistent with site-specific conditions. These practices have been highly successful at other ETLFs and are expected to be successful at Chiquita Canyon Landfill.

41. The data suggest that the thermal conditions are stable, and that emissions at Chiquita Canyon Landfill are being managed effectively. The best management practices that are being applied are effective.

42. Experience from other ETLFs suggests that application of these best management practices at Chiquita Canyon Landfill will continue to be successful in controlling the impacts, and that the ETLF conditions will diminish over time provided these best management practices are continued.

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct.

Executed on this 12th day of June 2025 in the Town of Middleton, Wisconsin.



Craig H. Benson, PhD, PE, BCGE, BCEE, NAE

Exhibit 1

CRAIG H. BENSON, PHD, PE, BCGE, BCEE, NAE

Wisconsin Distinguished Professor Emeritus, University of Wisconsin-Madison
Dean of Engineering Emeritus, University of Virginia

3299 Saracen Way, Verona, Wisconsin, 53593 USA
Phone: +1 (608) 444-0007
Email: chbenson@chbenson.org

EDUCATION

BSCE, Lehigh University - 1985
MSE, University of Texas at Austin – 1987 (Civil Engineering, Geotechnical/Geoenvironmental)
PhD, University of Texas at Austin – 1989 (Civil Engineering, Geotechnical/Geoenvironmental)

REGISTRATION AND APPOINTMENTS

US National Academy of Engineering, Inducted 2012
US National Academy of Inventors, Inducted 2018
American Association for Advancement of Science, Fellow, Inducted 2019
Professional Engineer, State of Wisconsin, License No. 34108-006
Board Certified Environmental Engineer, American Society of Environ. Engrs. & Scientists
Board Certified Geotechnical Engineer, Geo-Institute of the American Society of Civil Engineers

ACADEMIC LEADERSHIP APPOINTMENTS

Dean, School of Engineering, University of Virginia, Charlottesville, Virginia, July 2015 – June 2021 (Reappointed June 2020, Retired July 2021, Emeritus December 2022).

Director of Sustainability Research and Education and Co-Director of the Office of Sustainability, University of Wisconsin, Madison, Wisconsin, 2011-2015.

Chair, Civil & Environmental Engineering, University of Wisconsin, Madison, Wisconsin, 2011-2015.

Chair, Geological Engineering, University of Wisconsin, Madison, Wisconsin, 2007-2015.

Chair, Civil & Environmental Engineering, University of Washington, Seattle, WA, 2008-August 2009.

Director, Recycled Materials Resource Center, University of Wisconsin, Madison, Wisconsin, 2007-2011. ⓘ

Director, Wisconsin Geotechnics Laboratory, University of Wisconsin, Madison, Wisconsin, 2000-2015.

Management Board, Consortium for Risk Evaluation and Stakeholder Participation, US Department of Energy, 2009-present. ⓘ

Associate Chair for Environmental Science and Engineering, Dept. of Civil & Environmental Engineering, University of Wisconsin, Madison, Wisconsin, 2004-2007.

Co-Director, Consortium for Fly Ash Use in Geotechnical Engineering, University of Wisconsin-Madison, Co-Director, 1999-2007.

PROFESSIONAL AND COMMUNITY LEADERSHIP APPOINTMENTS

Roundtable Linking Defense Basic Research to Leading Academia Research and Engineering Communities, National Academy of Engineering and US Department of Defense, 2019-2021.
Board of Trustees, Lehigh University, Bethlehem, Pennsylvania, 2018-2021.
Engineering Advisory Board, Lehigh University, Bethlehem, Pennsylvania, 2018-2020.
Sustainability Advisory Panel, ExxonMobil Corporation, Irving, Texas, 2017-2023 (disbanded).
National Academy of Engineering, Washington, DC.
Committee on Awards (2019-2022, Vice Chair 2020–2021, Chair 2021-2022)
Section 4, Chair (2021 – 2023), Vice Chair (2019 – 2021), Secretary (2016 – 2018), Nomination Committee (Chair, 2016 – 2018)
Committee on Grand Challenges and Opportunities in Environmental Engineering and Science for the 21st Century (2017-1018).
Board of Directors, Commonwealth Center for Advanced Manufacturing, Disputanta, Virginia, 2015-2021, Chair (2018-2021), Vice Chair (2016–2018), Executive Committee (2015–2021), Compensation Committee (2018-2021), Governance Committee (Chair, 2016–2018; Vice Chair, 2018-2021).
Advisory Board, Global Waste Research Institute, California Polytechnic Institute at San Louis Obispo, 2010-present.
Board of Directors, Sustain Dane, Madison, Wisconsin, 2014-2015.
Geo Institute of ASCE, Board of Governors, Board Member 2007-2014, Treasurer 2010-11, Vice President 2011-12, President, 2012-13.
Editor-in-Chief, *Journal of Geotechnical and Geoenvironmental Engineering*, 2004-06.
Executive Committee, Committee D18 on Soil & Rock, ASTM International, 2006-2013, Liaison to Geo Institute Board of Governors, 2007-2011, Vice Chair, 2011-2013.
Glacier's End Homeowners Association, Town of Middleton, WI, President, 2012-2015, Vice President, 2010 – 2012, 2020-present.
Independent Technical Review Committee for On-Site Disposal Facilities, US Department of Energy, Appointed by Asst. Secretary J. Rispoli, Chair 2007-2010 (disbanded).
Park Commission, Town of Middleton, Wisconsin, Commissioner, 2010-12.
Research Council, Environmental Research and Education Foundation, 2011-present, Vice Chair 2016-2017, Chair 2017-2018.

INDUSTRY EXPERIENCE

Dr. Benson has been extensively engaged by the environmental, energy, mining, and manufacturing industries over the last 30+ years. His recent roles include specialty engineering consultant, strategy advisor, leadership advisor, expert witness in litigation support, and corporate board director/chair. Dr. Benson's industry experience spans six continents and more than 100 companies. More information on Dr. Benson's industry experience can be provided on request.

FACULTY APPOINTMENTS

Hamilton Endowed Chair in Engineering, University of Virginia, 2015-2022 (Emeritus Dec. 2022).
Honorary Professor, Southwest Jiaotong University, Chengdu, China, 2017.
Adjunct Professor, School of Civil, Environmental, and Mining Engineering, University of Western Australia, Crawley, WA, Australia, July 2015.

Wisconsin Distinguished Professor, University of Wisconsin, Madison, Wisconsin, 2007, Geological Engineering, Civil & Environ Engineering (Emeritus May 2021).
Affiliate Professor, Nelson Institute for Environmental Studies, University of Wisconsin, Madison, Wisconsin, 2010-2015.
A.H. Fuller Professor, University of Washington, Seattle, WA, 2008- 2009.
Professor, University of Wisconsin, Madison, Wisconsin, 2000-2007 (joint appointment in Geological Engineering, Civil & Environmental Engineering).
Associate Professor, University of Wisconsin, Madison, Wisconsin, 1995-2000 (joint appointment in Geological Engineering, Civil & Environmental Engineering).
Assistant Professor, University of Wisconsin, Madison, Wisconsin, 1990-1995 (joint appointment in Geological Engineering, Civil & Environmental Engineering).

HONORS AND AWARDS

Professional

L. David Suits Award, Committee D35 on Geosynthetics, ASTM International, 2024
Kappe Lecturer, American Academy of Environmental Engineers and Scientists, 2024 ⓘ
Karl Terzaghi Award, Geo-Institute of the American Society of Civil Engineers, 2021
A. Ivan Johnson Outstanding Achievement Award, ASTM International, 2015
Fellow, ASTM International, 2011
Fellow, American Society of Civil Engineers, 2009
Fellow, Sigma Xi, Scientific Research Honor Society, 2017
Academy of Distinguished Alumni, University of Texas at Austin, 2009 ⓘ
Diplomate, Geotechnical Engineering, Academy of Geo-Professionals, 2009 ⓘ

Research

Lymon C. Reese Distinguished Lecturer, University of Texas at Austin, 2023
Best Paper Award, *Geotextiles and Geomembranes J.*, 2019
Best Paper Award, *Geosynthetics International J.*, 2019
Superior Paper Award, Waste Management Symposium, 2019, 2021, 2024
Spencer J. Buchanan Lecturer, Texas A&M University, 2014
Best Paper Award, Waste Management Symposium, 2014
G. Leonards Lecturer, Purdue University, 2013
Best Paper Honorable Mention (2nd Place), *Geosynthetics International*, 2013.
Ralph B. Peck Award, American Society of Civil Engineers, 2012
Outstanding Article on the Practice of Geotechnical Testing, ASTM International, 2011, 2013
Croes Medal, American Society of Civil Engineers, 1998 and 2008
Alfred P. Noble Prize, American Society of Civil Engineers, 2008
IJOG Excellent Paper Award, Intl. Assoc. Computer Methods & Advances in Geomechanics, 2008
Second Paper Award, Global Waste Management Symposium, 2008
Kellet Mid-Career Research Award, University of Wisconsin, 2005
Walter L. Huber Civil Engineering Research Award, ASCE, 2000
Casagrande Award, American Society of Civil Engineers, 1995
Middlebrooks Award, American Society of Civil Engineers, 1995, 2013
Collingwood Prize, American Society of Civil Engineers, 1994
Distinguished Young Faculty Award, U.S. Department of Energy, 1991
Presidential Young Investigator, National Science Foundation, 1991

Teaching
Polygon Outstanding Instructor Award, College of Engr., Univ. of Wisconsin, 1991, 93, 97
Outstanding Professor Award, ASCE Wisconsin Student Chapter, 1992
Top 100 Educators Award, Wisconsin Students Association, Univ. of Wisconsin, 1991

Professional Service
Honor Medal, Eurasian National University and Kazakhstan Geotechnical Society, 2013
Order of the Engineer, Geo Institute, 2011
Award of Merit, ASTM International, 2011
Richard S. Ladd Standards Development Award, Committee D18, ASTM International, 2002, 03, 04, 06, 08, 11
Special Service Award, Committee D18, ASTM International, 2007

Academics
Ford Foundation Fellowship, Univ. of Texas at Austin, 1989
John A. Focht Endowed Presidential Scholarship in Civil Engr., Univ. of Texas at Austin, 1988
Dawson Endowed Presidential Scholarship in Civil Engr., Univ. of Texas at Austin, 1986
Engineering Foundation Fellowship, University of Texas at Austin, 1985
John B. Carson Prize in Civil Engineering, Lehigh University, 1985
Phi Beta Kappa, Chi Epsilon, and Tau Beta Pi

CONGRESSIONAL TESTIMONY & DISCUSSION

Invited Testimony on Proposed USEPA Regulations Related to Coal Combustion Products; House Small Business Committee, Congressman H. Shuler, Chair (D-NC), 22 July 2010.

Invited Discussion on Environmental Regulation and Sustainable Materials Management; Senators for Environmental Policy and Sustainability, 29-30 May 2012.

LEADERSHIP DEVELOPMENT

Academic Leadership Program, Committee on Institutional Cooperation, Big10 Academic Alliance, 2010 – 2011.

Manager's Boot Camp, Center for Executive Education, Haas School of Business, University of California-Berkeley

Negotiations and Influence, Center for Executive Education, Haas School of Business, University of California-Berkeley

Philanthropy Fundamentals: Developing and Stewarding Donors, UW Foundation

UNIVERSITY SERVICE

Academic Council, UW Dept. of Civil and Environmental Engineering (1994-99, Chair 1997-99)
Academic Planning Council, UW Nelson Institute for Environmental Studies (2012-2016)
Ad Hoc Committee on Fossil Fuel Use and Climate Change, UW (2013-2014)
Admissions Chair, UW Geotechnical Engineering Program (1990-2006)
Becker Award Committee, UW Civil and Environmental Engineering (Chair 2002-04)
Bicentennial Commission, Future of Public Education Committee, UVA (2017-2022)
Bollinger Academic Staff Award Committee, UW (2010-11, Chair)
Byron Bird Award Committee, UW College of Engineering (1995)
Chancellor's Campus Budget Model Committee, UW (2013-2014)

Civil and Environmental Engineering Strategic Hiring Committee, UW (2010-12, Chair 2010)
Civil and Environmental Engineering Merit Committee, UW (1998, 2002, 2004-2006, Chair 2002)
Classroom Space Utilization Committee, Co-Chair, UW (2014)
Climate Change Solutions Committee, UW (2013-2015, Chair)
College of Engineering Search Committee for Executive Associate Dean, UW (Chair, 2014)
College of Engineering Leadership Council, UW (2013-2015)
College of Engineering Promotion and Tenure Committee, UW (2014-2015)
College of Engineering Search Committee for Associate Dean for Advancement, UW (2013)
College of Engineering Search Committee for Assistant Dean for Facilities, UW (2013)
College of Engineering Academic Planning and Curriculum Committee, UW (1996-99)
College of Engineering Curriculum Committee, UW (1997-99, 2002-04)
College of Engineering Diversity Committee, UW (2002-04)
Conflict of Interest Oversight Committee, University of Wisconsin (2000-02)
Governance Committee, UW Nelson Institute for Environmental Studies (2012-present).
Graduate Committee, UW Geological Engineering (1999-2006, Chair 1999-2001, 2003-2006)
Master Planning Committee, Deans' Council Representative, University of Virginia (2018-19)
Scholarship Committee, UW Dept. of Civil and Environmental Engineering (1998-2002)
Search Committee for Vice President for Research, UVA (2015-2017)
Search Committee for Assoc. Vice Chancellor for Facilities Planning & Mgmt., UW (Chair, 2012)
Search Committees for UW Geological Engineering (Chair, 1997-98, 2003-04)
Tau Beta Pi, Virginia Alpha Chapter, Advisor, 2019 – 2022.
Undergraduate Committee, UW Geological Engineering (Chair, 2002-2008)
University of Wisconsin Information Technology Committee (2010-12)
University of Wisconsin Honors Committee (2010-2011)

PROFESSIONAL SERVICE & AFFILIATIONS

National Academy of Engineering, 2012- present.
Science Advisory Board, Environmental Engineering Committee, US Environmental Protection Agency, 2015-2018 (committee disbanded).
Steering Committee, Performance and Risk Assessment Community of Practice, US Department of Energy, 2013-2022, co-Chair 2024-present.
Research Council, Environmental Research and Education Foundation, 2013-present, Vice Chair 2015-2016, Chair, 2017-2018.
External Advisory Board, School of Engineering, University of Connecticut (2019)
American Association for the Advancement of Science
Colorado School of Mines
External Advisory Board, College of Earth Resource Sciences and Engineering (2016)
External Advisory Board, Dept. of Geology and Geological Engineering (2015, 2018)
External Advisory Board, College of Engineering (2012)
External Advisory Board, Department of Civil and Environmental Engineering, Vanderbilt University (2015-2022)
External Advisory Board, Engineering School of Sustainable Infrastructure & Environment, University of Florida (2011)
ASTM International
D18 Executive Committee (2006-13, Vice Chair 2011-13)
D18.04 - Hydrologic Properties of Soil & Rock (1991-present, Chair 1996-2006)
D18.14 – Sustainable Geotechnical Construction (founding member, 2008-present)

D18.19 - Frozen Soil & Rock (1992-present)
Geo-Institute of the American Society of Civil Engineers (Fellow ASCE)
Board of Governors (Treasurer 2010-11, V. President, 2011-12, President 2012-13)
Org. Committee, Geo-Chicago 2016: Sustainability, Energy, & Geoenviron. Conf. (2014-16)
Awards Committee (Chair, 1999-01, Member 2023-current)
Editor-in-Chief, *JGGE*, 2004-06, Editor *JGGE*, 1996-99, Ombudsman *JGGE*, 2023-present.
Geoenvironmental Engineering Committee (1990-present, chair 1996-99)
Geo-Strata Magazine Task Force (1997-99)
Technical Publications Committee (1993-99, 2004-2006, BoG Liaison 2010-2013)
TPC Subcommittee on Policies for Specialty Conferences (1997-99)
American Geophysical Union
British Geotechnical Association
Canadian Geotechnical Society
International Geosynthetics Society
National Ground Water Association
North American Geosynthetics Society
Soil Science Society of America

PATENTS

Apparatus and Method for Testing the Hydraulic Conductivity of Geologic Materials, United States Patent No. 6,178,808.
Pressure Plate Extractor, United States Patent No. 6,718,835.
Bentonite Collars for Wellbore Casings, United States Patent No. 9,080,419.

LIVE INTERVIEWS, KEYNOTE AND SPECIAL LECTURES

Performance of Final Covers for Waste Containment Systems: Lessons Learned From the Field, Kappe Lecture, American Academy of Environmental Engineers and Scientists, Drexel University, 2 April 2025.
Elevated Temperature Landfills (ETLFs): Causation, Impacts, and Best Management Practices Learned from the Field, Kappe Lecture, University of Miami, 28 March 2025.
Does Harvesting Coal Ash for Use as Cementitious Material Promote Sustainability? Kappe Lecture, University of Nebraska-Lincoln, 20 February 2025.
Does Harvesting Coal Ash for Use as Cementitious Material Promote Sustainability? Kappe Lecture, Missouri University of Science and Technology, 12 February 2025.
Elevated Temperature Landfills (ETLFs): Causation, Impacts, and Best Management Practices Learned from the Field, Kappe Lecture, St. Louis University, 11 February 2025.
Elevated Temperature Landfills (ETLFs): Causation, Impacts, and Best Management Practices Learned from the Field, College of Engineering and Computer Science (CECE) Distinguished Lecturer Series, University of Central Florida, 5 December 2024.
Performance of Final Covers for Waste Containment Systems: Lessons Learned From the Field, Kappe Lecture, American Academy of Environmental Engineers and Scientists, University of New Mexico, 13 November 2024.
Does Harvesting Coal Ash for Use as Cementitious Material Promote Sustainability? George Mason Univ., Dept. of Civil Engineering Distinguished Speaker Lecture Series, 24 October 2024.

Elevated Temperature Landfills (ETLFs): Causation, Impacts, and Best Management Practices Learned from the Field, Kappe Lecture, American Academy of Environmental Engineers and Scientists. LA County Sanitation District, 25 June 2024, ; Clemson University, 10 October 2024, .

Performance of Waste Containment Systems for Long-Lived Waste Forms: Lessons Learned From the Field, Lymon C. Reese Distinguished Lecture, University of Texas at Austin, Austin, Texas, 14 April 2023.

Lessons Learned for the Practicing Engineer: How and When Geosynthetic Clay Liners are Effective for Containment, Keynote Lecture, GeoANZ 1 Advances in Geosynthetics, Brisbane, Queensland, Australia, 9 June 2022.

In-Service Condition of Radon Barriers over Uranium Mill Tailings Disposal Facilities in the United States, Craig H. Benson, National Council on Radiation Protection and Measurements 2022, Bethesda, Maryland, USA, 29 March 2022

Stress-Induced Porewater Pressures in the Vadose Zone Beneath a Composite-Lined Landfill, 3rd International Symposium on Coupled Phenomena in Environmental, Kyoto, Japan, October 2021.

Tackling Geoenvironmental Problems in the Unsaturated Zone: Principles and Practice, Keynote Lecture, 12th Asian Regional Conference of the International Association of Engineering Geologists, Jeju Island, Korea, September 2019.

Factors Affecting the Long-term Hydraulic Conductivity of Geosynthetic Clay Liners used in Liners, Workshop on Advances In Characterization of Hydraulic Barrier Performance of GCLs, ASTM International, Denver, Colorado, June 2019.

Using Life Cycle Analysis to Evaluate Options to Promote Infrastructure Sustainability, Sustainability in Urban Planning and Infrastructure, Celfi Sustentabilidida Y Desarrollo, Universidad Nacional de Córdoba, Córdoba, Argentina, May 2019.

Sustainability in Geoengineering: A New Paradigm for Engineering with Earthen Materials, 8th International Congress on Environmental Geotechnics, Hangzhou China, November 2018.

Water Balance Covers for Waste Containment: Engineering with Unsaturated Soils from Theory to Practice, Dr. Arthur T. Corey Distinguished Lecture Series, Colorado State University, Fort Collins, Colorado, October 2018.

Sustainability: Compelling Value Proposition for Engineers, Southwest Jiaotong University, Chengdu, China, November 2017.

Principles of Unsaturated Soil Behavior to Design Water Balance Covers for Waste Containment, Pan-Am UNSAT 2017, Dallas, Texas, November 2017.

Infusing Sustainability into Geotechnics: Opportunity for a New Value Proposition, Geo-Chicago 2016 - Sustainability, Energy, & the Geoenvironment, ASCE Geo-Institute, Chicago, August 2016.

Earthen & Geosynthetic Covers for Mine Waste Containment – Lessons Learned from Case Histories, Symposium on Caps and Covers for Mine Waste, Society for Mining Engineers, Pocatello, Idaho, April 2016.

Civil & Environmental Engineering: Creating a Compelling Value Proposition for the Future, Lehigh University, 150th Anniversary Reunion, April 2016.

Engineering Bentonite-Polymer Composite Materials for Extreme Environmental Applications, T.H. Wu Distinguished Lecture, Ohio State University, March 2016.

Are We Designing for Sustainability? Using Life Cycle Analysis to Assess Sustainability Accomplishment, Higley Endowed Lecture, Case Western Reserve University, April 2015.

Next Generation GCLs with Polymer-Bentonites for Extreme Environmental Applications, Keynote Lecture, Global Waste Research Institute, San Luis Obispo, CA, February 2015.

Landfill Covers: Water Balance, Unsaturated Soils, and the Pathway from Theory to Practice, Spencer J. Buchanan Lecture, Texas A&M University, November 2014.

Polymer-Modified Bentonites for Extreme Environmental Applications, Keynote Lecture, 7th Intl. Conference on Environmental Geotechnics, Melbourne, Australia, November 2014.

Strategies for Long-Term Monitoring and Stewardship, Best Practices for Risk-Informed Remedy Selection, Closure, and Post-Closure Control of Contaminated Sites, National Academy of Sciences, Washington, DC, January 2014.

Sustainable Closure of Waste Containment Systems Using Water Balance Covers: Lessons Learned from a Nationwide Field Experiment, Distinguished Lecture Series, University of Texas at Austin, November 2013.

Organoclays: Barrier Media for Managing Groundwater Flow and Transport At NAPL-Sites, University of Michigan, November 2013.

Solid Waste in the USA: Moving from Disposal to Sustainable Materials and Energy Management, University of California, Los Angeles, November 2013.

Organoclays: Novel Barrier Media for Managing Groundwater Flow and Transport at NAPL-Contaminated Sites, 11th G. A. Leonards Lecture, Purdue Geotechnical Society, April 2013.

Sustainability -- Opportunity for Innovation in the Solid Waste Industry, Engineering Society of Detroit, Keynote, April 2013.

Earthen and Geosynthetic Final Covers for Mine Waste Containment, Geosynthetics in Mining, Pocatello, ID, February 2013.

The Solid Waste Industry as a Sustainability Industry: Moving from Disposal to Materials and Energy Management, Keynote Lecture, Global Waste Management Symposium, Phoenix, AZ, October 2012.

Geosynthetic Clay Liners (GCLs): Lessons Learned from Full-Scale Applications, 2012 Ralph M. Peck Lecture, ASCE Geo Institute, Oakland, CA, March 2012.

Designing Water Balance Covers for Sustainable Waste Containment: Transitioning State-of-the-Art to State-of-the-Practice, *GeoCongress 2012*, ASCE Geo Institute, Oakland, CA, March 2012.

Unsaturated Geotechnics: Transitioning from State-of-the-Art to State-of-the Practice, 5th Asia-Pacific Conference on Unsaturated Soils, Bangkok, Thailand, February 2012.

Recycled Materials, Infrastructure, and Sustainability, Waste Management Association of Australia National Conference 2011, Adelaide, S. Australia, August 2011.

Novel Developments in Geosynthetic Clay Liner Technology, Innovations in Geosynthetic Materials Used in Environment and Infrastructure Symposium, Ministry of Environment and Ministry of Interior, Almaty, Republic of Kazakhstan, February 2011.

Role of Recycled Materials in Sustainable Infrastructure, Weston Roundtable Lecture, Nelson Institute for Environmental Studies, University of Wisconsin-Madison, January 2011.

Sustainable Bioreactor Landfills: North American State-of-the-Practice and State-of-the-Art in North America, Keynote Lecture, Sixth Asian Pacific International Landfill Symposium, Seoul, Korea, October 2010.

Physical and Chemical Processes Altering Geosynthetic Clay Liners In Situ, Distinguished Lecture Series, Department of Geology, Korea University, Seoul, Korea, October 2010.

Hydraulic & Chemical Properties of Geosynthetic Clay Liners Exhumed from Landfill Final Covers: Lessons Learned from a Decade of Research, Keynote Lecture, 3rd International Symposium on Geosynthetic Clay Liners, International Geosynthetics Society and SKZ – ConSem GmbH, Wurzburg, Germany, September 2010.

Evaluating our Predictive Capabilities in Geoenvironmental Engineering, Distinguished Lecture Series, Dept. of Civil and Materials Engineering, University of Illinois-Chicago, April 2010.

Prediction in Geoenvironmental Engineering: How Good are our Models?, Keynote Lecture, GeoFlorida 2010, Advances in Analysis, Design, and Modeling, ASCE Geo Institute, West Palm Beach, FL, February 2010.

Final Covers for Waste Containment: Lessons Learned from a Nationwide Field Experiment, Sowers State-of-the-Art Lecture, 12th Annual George F. Sowers Symposium, Georgia Institute of Technology, Atlanta, Georgia, May 2009.

Chemical Alterations and Their Impact on the Hydrologic Properties of Bentonite, Monash University, Melbourne, Victoria, Australia, December 2008.

Hydrology and Settlement in Bioreactor Landfills, Cutting Edge Technological Advances in Design and Operation, Reducing Leachate Quantity, Spatial Needs, and Costs, and Accelerating Landfill Gas Recovery Rates, World Bank, Washington, DC, November 2007.

Modeling Unsaturated Flow and Atmospheric Interactions, Keynote Speaker, Second International Conference on Mechanics of Unsaturated Soils, Weimar, Germany, March 2007.

Geosynthetic Clay Liners for Waste Containment: Panacea or Future Problem?, Geosynthetic Research Institute, Drexel University, Philadelphia, November 2005.

Effects of Heterogeneity on Mineral Fouling of Permeable Reactive Barriers, 2nd International Conference on Reactive Barriers, Belfast, Northern Ireland, March 2004.

Lessons Learned from North American Failures, Keynote Lecture, Fifth International Conference on Environmental Geotechnics, ISSMGE, Rio de Janeiro, Brazil, August 2002.

Waste Containment Systems: Strategies and Performance, Keynote Lecture, GeoEnvironment 2002, Australian-New Zealand Geomechanics Society, Newcastle, NSW, Australia, Nov. 2001

Engineered Barriers, Keynote Lecture, National Academy of Sciences, Washington, DC, July 2001.

Solid Waste Containment Systems, Keynote Lecture (with M. Manassero), GeoEng2000, Melbourne, Australia, November 2000.

Liners and Covers for Waste Containment, Keynote Speaker, Fourth Kansai International Geotechnical Forum, Creation of a New Geo-Environment, Japanese Geotechnical Society, Kyoto, Japan, June 2000

Environmental Geotechnics in the New Millennium, Keynote Speaker, Geotechnics for Developing Africa, African Geotechnical Society, Durban, South Africa, March 1999.

Final Covers for Waste Containment Systems: A North American Perspective, Keynote Speaker, XVII Conference of Geotechnics of Torino, Control and Management of Subsoil Pollutants, Italian Geotechnical Society, Torino, Italy, January 1999.

WEBINARS, SHORTCOURSES, AND VIDEO CLIPS

Black Goo: What is This Stuff and What Can We Do About It?, Engineering Science and Wastewater Technology Program, Waste Management Inc., 15 May 2025.

Black Goo: What is This Stuff and What Can We Do About It?, Kappe Lecture Webinar, American Academy of Environmental Engineers and Scientists, 20 March 2025.

Principles of Soil Physics and Vadose Zone Hydrology Applied to Practice, Electric Power Research Institute, 2024. *1 – What is the Vadose Zone?*; *2 – Quantifying Water Movement in the Vadose Zone*; *3 – Simulating Variably Saturated Flow for Practical Problems*; *4 – Measuring Hydraulic Properties in the Laboratory*; *5 – Measuring Hydraulic Properties in the Field*

Landfill Design for Coal Combustion Products, Electric Power Research Institute, 2024. *0–Introduction and course content*; *1–Basics of CCP Landfills: Foundational Principles and Concepts*; *2–Geosynthetics in CCP Landfill Design*; *3A–Principles of Compacted Soil Liners*; *3B–Construction Considerations for Compacted Clay Liners*; *4–Geosynthetic Clay Liners*; *5–*

Leachate Collection Systems; *6–Final Covers for Waste Containment Facilities*; *7–Performance Based Design: Making the Case for Alternative Liners*; *8–Slope Stability for Landfills*.

Water Balance Covers: Principles, Performance Prediction, and Performance, Iowa Dept. of Natural Resources, 16 July 2024. Entire course; Purpose and Scope; Introduction to Water Balance Covers; Water Balance Cover Modeling; Monitoring and Case Histories.

Black Goo II - Understanding and Treating Black Goo in Landfills, SCS Learning Center, 23 April 2023.

Science Session - Black Goo: The Unseen Challenge in Modern Waste Management, Environmental Research and Education Foundation, 16 August 2023.

Identifying and Managing Elevated Temperature Landfills, SCS Learning Center, 27 July 2023.

Bentonite-Polymer Composite Geosynthetic Clay Liners for Heap Leach Liners, 5th International Conference on Heap Leach Mining Solutions 2022, Sparks, Nevada, 17 October 2022. [starts at 36:34].

Lessons-Learned in the Design and Construction of Capping Systems Used in the Closure of Near Surface Disposal Facilities, International Atomic Energy Agency's International Low Level Waste Disposal Network (DISPONET) Meeting on Lessons Learned from the Disposal of Low-Level Waste, Bulgaria, 4 October 2022.

Enhancing Armored Final Covers for Radioactive Waste Disposal Facilities Through Naturalization, Performance and Risk Assessment Community of Practice, US Dept. of Energy, Washington, DC, 17 August 2022.

Plastic Recycling and Upcycling as an Element of Sustainable Waste Management, USAID, Washington, DC, 12 August 2022.

In-Service Condition of Radon Barriers over Uranium Mill Tailings Disposal Facilities in the United States, National Council on Radiation Protection and Measurements 2022, Bethesda, Maryland, 29 March 2022.

PFAS Containment by Modern Liner Systems: the Good News – and the Bad!, Craig H. Benson and R. Kerry Rowe, International Geosynthetics Society-North America, 13 January 2022.

In-Service Condition of Final Covers Over Historic Uranium Mill Tailings Disposal Facilities, International Webinar Series - Geoenvironmental Engineering: Polluted Land, Waste Management & Sustainability/Resiliency, University of Illinois-Chicago, 15 October 2021.

A Career in Environmental Engineering with Geosynthetics, Simak's Geosynthetics Podcast, 16 March 2021.

Bentonite-Polymer Composite Geosynthetic Clay Liners for Containment of Highly Aggressive Leachates, International Webinar Series - Geoenvironmental Engineering: Polluted Land, Waste Management & Sustainability/Resiliency, University of Illinois-Chicago, 29 April 2021.

Performance-Based Landfill Liner Design, 21st National Course on Solid Waste Landfill Design, University of Wisconsin Madison, 23 March 2021.

Geosynthetic Clay Liners, 21st National Course on Solid Waste Landfill Design, University of Wisconsin Madison, 23 March 2021.

Final Covers for Waste Containment Facilities, 21st National Course on Solid Waste Landfill Design, University of Wisconsin Madison, 23 March 2021.

Elevated Temperature Landfills, 21st National Course on Solid Waste Landfill Design, University of Wisconsin Madison, 24 March 2021.

Stability of Final Covers, 21st National Course on Solid Waste Landfill Design, University of Wisconsin Madison, 23 March 2021.

In-Service Condition of Final Covers Over Historic Uranium Mill Tailings Disposal Facilities, Australasian Chapter of the International Geosynthetics Society, 24 February 2021.

Geosynthetics in Landfills: Accomplishments and Future Directions, GeoAmericas 2020, 4th Pan American Conference on Geosynthetics, 31 October 2020.

Fundamentals of GCLs as Exceptional Hydraulic Barriers, Webinar 1 of 4, GCL Webinar Series, 12 August 2020.

Bentonite-Polymer Composite GCLs for Aggressive Conditions, Webinar 2 of 4, GCL Webinar Series, 10 November 2020.

Evaluating Chemical Compatibility of Geosynthetic Clay Liners (GCLs), Webinar 3 of 4, GCL Webinar Series, 16 February 2021.

Practical Lessons Learned from Geosynthetic Clay Liner (GCL) Case Histories, Webinar 4 of 4, GCL Webinar Series, 4 August 2021.

GCL Tech Talk: The Science Behind the Magic of Bentonite, 7 April 2020.

GCL Tech Talk: Hydraulic Conductivity of Engineered Bentonite-Polymer Composite (BPC) Materials, 7 April 2020.

Engineering in Real Time: Accelerating the Innovation Cycle, with Jennifer Pulley and Innovation Now, National Public Radio, 13 July 2018.

The Internet of All Things: LinkLab Collaborative Environment, with Jennifer Pulley and Innovation Now, National Public Radio, 3 July 2018.

Coal Combustion Residual Containment, Craig H. Benson and John T. Allen, Geosynthetica, 15 July 2016.

Frac-Sand Mining Roundtable, with Joy Cardin on the Joy Cardin Show, Wisconsin Public Radio, 11 May 2015.

Coal Ash = Environmental Win (when you recycle it), with Dan Weissmann and Marketplace, National Public Radio, 28 April 2014.

PUBLICATIONS

Refereed Journal Articles: Environmental Containment Systems

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Albrecht, B. and Benson, C. (2002), Predicting Airflow Rates in the Coarse Layer of Passive Dry Barriers, *J. Geotech. Geoenvironmental Eng.*, 128(4), 338-346.

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Albright, W., Benson, C., Gee, G., Abichou, T., Tyler, S., Rock, S. (2006), Field Performance of Three Compacted Clay Landfill Covers, *Vadose Zone J.*, 5(6), 1157-1171.

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Williams, M., Fuhrmann, M., Stefani, N., Michaud, A., Likos, W., Benson, C., and Waugh, W. (2022), Evaluation of In-Service Radon Barriers over Uranium Mill Tailings Disposal Facilities, NUREG/CR-7288, Office of Research, US Nuclear Reg. Comm., Washington, DC. Appx.

Yesiller, N., Edil, T., and Benson, C. (1994), Ultrasonic Evaluation of Cased Borehole Seals, Environmental Geotechnics Report 94-8, Dept. of Civil and Environmental Engineering, University of Wisconsin-Madison.

Yesiller, N., Edil, T., and Benson, C. (1994), Verification Technique to Evaluate the Integrity of Well Seals, Environmental Geotechnics Report 94-2, Department of Civil and Environmental Engineering, University of Wisconsin-Madison.

Standards

Benson, C. (2011), Standard D 6391, Standard Test Method for Field Measurement of Hydraulic Conductivity Using Borehole Infiltration, *Annual Book of Standards*, ASTM Intl., 04.09.

Benson, C. (2007), Standard D 7243, Standard Guide for Measuring the Saturated Hydraulic Conductivity of Paper Industry Sludges, *Annual Book of Standards*, ASTM Intl., 04.09.

Benson, C., Wang, X. and Kim, H. (2007), Standard D 6836, Test Methods for Determination of the Soil Water Characteristic Curve for Desorption Using a Hanging Column, Pressure Extractor, Chilled Mirror Hygrometer, and/or Centrifuge, *Annual Book of Standards*, ASTM Intl., 04.09.

Bradshaw, S., Scalia, J., Benson, C., and Rauen, T. (2010), Standard D 7503, Standard Test Method for Measuring the Exchange Complex and Cation Exchange Capacity of Inorganic Fine-Grained Soils, *Annual Book of Standards*, ASTM Intl., 04.09.

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Ladd, R. and Benson, C. (2000), Standard D 5084, Test Method for Measurement of Hydraulic Conductivity of Saturated Porous Materials Using a Flexible Wall Permeameter, *Annual Book of Standards*, ASTM Intl., 04.09. Extensive revision in 2000 by R. Ladd and C. Benson. Originally developed by J. Dunn and D. Daniel.

Yesiller, N., Shackelford, C., and Benson, C. (2005), Standard D 7100, Standard Test Method for Hydraulic Conductivity Compatibility Testing of Soils with Aqueous Solutions that may Alter Hydraulic Conductivity, *Annual Book of Standards*, ASTM Intl., 04.09.

SPONSORED RESEARCH

Environmental Containment Systems

Field and Laboratory Assessment of the Radon Barrier at the Mexican Hat, Utah Disposal Site, US Department of Energy, Office of Legacy Management, with W. Likos.

Understanding, Managing, and Preventing Clogging of Landfill Systems with Black Sticky Material, Environmental Research and Education Foundation.

Effectiveness of Landfill Liners to Control Transport of PFAS in Leachate, Environmental Research and Education Foundation.

Spatial and Temporal Correlation Between Physical and Chemical Odor Measurements and Odor Complaints, Advanced Disposal Services, with A. Benson.

Evaluation and Management of High-Moisture Waste Disposal in Municipal Solid Waste Landfills, Environmental Research and Education Foundation, with J. Scalia and C. Bareither (Colorado State University).

Geochemical Assessment of Long Term Leachate Quality and Impacts of Wastewater Management Practices at Coal Combustion Product (CCP) Disposal Facilities, Electric Power Research Institute, with D. Kosson (Vanderbilt University).

Water Balance Analysis and Data Quality Assurance Assessment for Monticello and Grand Junction Disposal Cell Lysimetry, Navarro Corporation and US Department of Energy.

Service Life of Bentonite-Polymer Geosynthetic Clay Liners, CETCO, Inc.

Behavior of Bentonite-Polymer Geosynthetic Clay Liners Permeated with Aggressive Leachates, CETCO, Inc., with W. Likos.

Evaluating the Long-Term Performance of the SDF Closure Cap, Savannah River Remediation, Inc. and US Department of Energy.

Understanding and Predicting Temperatures in Municipal Solid Waste Landfills, Environmental Research and Education Foundation, with M. Barlaz, NC State University.

Evaluating Effectiveness of Surface Covers for Controlling Water and Radon Fluxes at Uranium Mill Tailings Disposal Facilities, US Nuclear Regulatory Commission, with W. Likos.

Behavior of Polymer-Modified Bentonites Contacted with Aggressive Leachates, Colloid Environmental Technologies Corporation, with W. Likos.

Compatibility of Compacted Clay Liners and Leachate from CCP Containment Facilities, Electric Power Research Institute.

Compatibility of Geosynthetic Clay Liners and Leachate from CCP Containment Facilities, Electric Power Research Institute.

Bench-Scale Comparison of EVOH and HDPE Geomembranes as Barriers to VOC and Methane Emissions, Kuraray America Inc.

Consortium for Risk Evaluation and Stakeholder Participation, US Department of Energy, with Vanderbilt University, Rutgers University, New York University, Oregon State University, University of Pittsburgh, Howard University, University of Arizona, Robert Wood Johnson Medical School.

Coupling Effects of Erosion and Hydrology on the Long-Term Performance of Engineered Surface Barriers, US Nuclear Regulatory Commission

Predicting the Long-Term Performance of Surface Barriers for LLRW Containment, US Department of Energy, Consortium for Risk Evaluation with Stakeholder Participation

Effectiveness of Engineered Covers: From Modeling to Performance Monitoring, US Nuclear Regulatory Commission

Bentonite-Polymer Nanocomposites for Geoenvironmental Applications, National Science Foundation, with T. Edil and C. Shackelford

Prion Transport in Porous Media: Influence of Electrostatic and Non-DLVO Interactions, National Science Foundation, with J. Pedersen and J. Aiken

Effect of Stress, Hydration, and Ion Exchange on the Hydraulic Conductivity of Geosynthetic Clay Liners, Colloid Environmental Technologies Corporation

Innovative Methods for Natural Restoration of Final Covers for Mill Tailings, US Dept. of Energy, with W. Albright and J. Waugh

Evaluating Long-Term Impacts on Final Covers - Exhumation of the ACAP Test Sections, National Science Foundation, US Environmental Protection Agency, Environmental Research and Education Foundation, with D. Fratta and W. Albright

Toxin/Pathogen Inactivation and Disposal of Intentionally Contaminated Foods, National Center for Food Protection and Defense, US Dept. of Homeland Security, with D. Noguera

Predictive Tools for Sustainable Solid Waste Management Using Bioreactor Landfills, National Science Foundation, with M. Barlaz (*Bioreactor Partnership*)

The State of Municipal Solid Waste Bioreactor Landfills-II, US Environmental Protection Agency, with M. Barlaz

VOC Transport Through Composite Landfill Liners, Groundwater Research Advisory Council, State of Wisconsin, with T. Edil.

VOC Transport in Lined Containment Facilities, Groundwater Research Advisory Council, State of Wisconsin, with T. Edil.

Hydrology of the Monticello Water Balance Cover, Stoller Corporation and US Dept. of Energy.

Effect of Freeze Thaw on Compacted Soil Liners and Covers, University of Wisconsin Graduate School.

Fate and Transport of Chronic Waste Disease Prions in Municipal Solid Waste Landfills, US Environmental Protection Agency, with J. Pedersen and J. Aiken.

Evaluation of VOC Contamination of Groundwater from Lined Landfills in Wisconsin, Groundwater Research Advisory Council, State of Wisconsin.

Hydrologic Modeling of Covers Used for Mine Waste Containment, US Environmental Protection Agency, with C. Shackelford.

Bioreactor Landfills: State of the Practice, US Environmental Protection Agency, with D. Lane and M. Barlaz.

Field Performance of Alternative Covers, US Environmental Protection Agency.

Integrated Long-Term Stewardship for Low-Level Radioactive Waste, US Department of Energy and Flour Fernald, Fernald, Ohio.

Chemical Interactions Between Mine Waste Liquids and Geosynthetics, Groundwater Research Advisory Council, State of Wisconsin, with T. Edil.

Long-term Chemical Compatibility of Geosynthetic Clay Liners, National Science Foundation, with C. Shackelford.

Hydraulic Conductivity Testing Protocols for Paper Sludges, National Council of the Pulp and Paper Industry for Air and Stream Improvement.

Dry Barriers for Waste Containment, National Science Foundation, with S. Kung

Alternative Cover Assessment Program, United States Environmental Protection Agency, with W. Albright (Desert Research Institute) and Glendon Gee (Battelle PNNL).

Large-Scale Verification of a VOC Transport Model for Composite Liners, Groundwater Research Advisory Council, State of Wisconsin, with T. Edil.

Field Assessment of Geosynthetic Clay Liners in Final Covers, United States Environmental Protection Agency.

Unsaturated Hydraulic Properties of Alternative Cover Soils, Waste Management, Waste Connections, Bluestem Solid Waste Authority, and Marina Solid Waste Management District

Alternative Covers for Waste Containment in Southern California, San Bernardino County, CA.

Equivalency of Subtitle D and Alternative Earthen Covers, City of Glendale, Arizona.

Development of *Win*UNSAT-H, a Windows Implementation of UNSAT-H, WMX Technologies.

Hydraulic Characterization of Mine Rock Backfill for the Flambeau Mine, Flambeau Mining Company, Ladysmith, WI

Hydraulic Characterization of Mine Rock Backfill for the Flambeau Mine: II-In Situ Verification, Flambeau Mining Company, Ladysmith, WI

Field Hydraulic Conductivity Assessment of the NCASI Test Plots, National Council of the Paper Industry for Air and Stream Improvement

Effect of Freeze-Thaw on the Hydraulic Conductivity of Compacted Papermill Sludge, the National Council of the Paper Industry for Air and Stream Improvement.

Engineering Properties of Paper Sludges Used for Hydraulic Barriers in Landfill Covers, Solid Waste Research Program, State of Wisconsin.

Shear Strength of Municipal Solid Waste, WMX Technologies, Inc., with T. Edil.

Evaluating the Effectiveness of Landfill Liners, Groundwater Research Advisory Council, State of Wisconsin, with T. Edil.

Laboratory and Field Evaluation of the Effects of Freeze-Thaw on Barrier Materials, United States Environmental Protection Agency.

Field-Evaluation of Geoinsulation-A Geosynthetic Insulation Material, Envotech Limited Partnership, with P. Bosscher

Hydraulic Conductivity Assessment of Compacted Soil Liners, Waste Management of North America, Inc.

Rational Construction Quality Control Criteria for Compacted Soil Liners, University of Wisconsin Graduate School.

Final Cover Hydrologic Evaluation, Waste Management of North America, Inc.

Evaluation of Freezing and Thawing on the Hydraulic Conductivity of a Test Pad, Waste Management of Wisconsin, Inc.

Improved Design Methods for Landfill Final Covers, National Science Foundation.

Quality Assurance and Hydraulic Conductivity Assessment of Compacted Soil Liners, Waste Management of North America and Chemical Waste Management, Inc.

Hydrologic Analysis of a Co-Composting Landfill, Solid Waste Research Council, State of Wisconsin.

Sustainability and Sustainable Infrastructure

Center for Mineral and Metal Oxide Removal from Biomass (CMORE), Schmidt Sciences and the Foundation for Food & Agriculture Research, with Idaho National Laboratory, Iowa State University, University of Kansas, and Idaho State University.

Using Harvested Ash in Concrete and Cement Production, Electric Power Research Institute, Palo Alto, California.

Multi-University Center on Chemical Upcycling of Waste Plastics (CUWP), Office of Energy Efficiency and Renewable Energy US Department of Energy, with U. Wisconsin-Madison, U. Massachusetts, and Iowa State U.

Greenhouse Gas Emissions, Climate Change, and the Impacts of Climate Policy on the Global Coal Industry, Vigoris Coal Coalition LLP, Vancouver, BC.

Sustainability Assessment and Greenhouse Gas Implications of Envirocoal, Adaro Energy PT, Jakarta Indonesia.

Exchange Network for Expanded Polystyrene Bio-Shipping Containers, People, Prosperity, & Planet (P3) Program-Phase II, US Environmental Protection Agency

Exchange Network for Expanded Polystyrene Bio-Shipping Containers, People, Prosperity, & Planet (P3) Program-Phase I, US Environmental Protection Agency

Leaching from Roadways Constructed with Unencapsulated CCPs: Data Assessment & Synthesis, Electric Power Research Institute, with T. Edil.

Climate Change Mitigation and Adaptation in Dairy Production Systems of the Great Lakes Region, United States Department of Agriculture, National Institute of Food and Agriculture, with Matthew Ruark (PI) and others.

Recycled Materials Resource Center – Third Generation, Federal Highway Administration Pooled Fund, with T. Edil.

Recycled Materials Resource Center, Federal Highway Administration and United States Environmental Protection Agency, with K. Gardner

Environmental Benefits of Using Coal Combustion Products in Construction, Electric Power Research Institute, with T. Edil

Engineering Behavior of Recycled Unbound Materials, US Dept. of Transportation Pooled Fund, with T. Edil.

Assessing Environmental Impacts Associated with Bases and Subgrades Stabilized with Coal Combustion Products, Center for Freight and Infrastructure Research and Education, US Department of Transportation, with T. Edil.

User Guidelines for Waste and By-Product Materials in Highway Pavements, US Environmental Protection Agency, with A. Graettinger and J. Jambeck

Gravel Equivalency of Fly Ash Stabilized Reclaimed Roads, Minnesota Local Roads Research Board, with T. Edil

In Situ Stabilization of Gravel Roads with CCPs, Combustion Byproducts Recycling Consortium, US Dept. of Energy, with T. Edil

Leaching of Heavy Metals from Gray-Iron Foundry Slags Used in Geo Engineering Applications, Solid Waste Research Council, State of Wisconsin, with T. Edil.

Monitoring and Analysis of Leaching from Subbases Constructed with Industrial Byproducts, FHWA Recycled Materials Research Center, with T. Edil.

Ash Utilization in Low Volume Roads, Minnesota Department of Transportation, with T. Edil

Integrated Approach for Assessing Groundwater Impacts from Fly Ash Stabilized Soils, Alliant Energy, with T. Edil.

Geoenvironmental Assessment of Soft Soils Stabilized with High Carbon Fly Ashes, Solid Waste Research Program, State of Wisconsin, with T. Edil.

Are High Carbon Fly Ashes Effective Stabilizers for Soft Organic Soils?, National Science Foundation, with T. Edil.

Consortium for Beneficial Reuse of Fly Ashes, Alliant Energy, Northern States Power, and Mineral Solutions, Inc., with T. Edil.

Reuse of Fly Ash for Soil Stabilization, US Dept. of Energy, with T. Edil.

Field Demonstration of Earth Structures Constructed with Soil-Tire Chip Mixtures, Solid Waste Research Council, State of Wisconsin, with T. Edil.

Use of Foundry Sands in Hot Mix Asphalt, University Industrial Relations, with H. Bahia

Fly Ash Stabilization of Soft Subgrades, US Dept. of Energy, Mineral Solutions, Inc., and Alliant Power, with T. Edil.

Field Demonstration of Beneficial Reuse of Foundry Byproducts in Highway Subgrade, Wisconsin Department of Transportation, with T. Edil.

Properties of Foundry Sand Relevant to Design of Embankments and Retaining Wall Backfill, State of Wisconsin, Recycling Market Development Board, with T. Edil.

National Practice Survey: Beneficial Re-use of Waste Foundry Sands, State of Wisconsin Recycling Market Development Board, with T. Edil.

Using Waste Foundry Sands as Hydraulic Barriers, Solid Waste Research Council, State of Wisconsin, with T. Edil.

Field Assessment of Barrier Layers Constructed with Foundry Sands, Solid Waste Research Council, State of Wisconsin, with T. Edil.

Use of Shredded Waste Tires in Highway Construction, United States Environmental Protection Agency, with T. Edil.

Sub-base Replacement with Waste Foundry Sands, State of Wisconsin, Recycling Market Development Board, with T. Edil.

Using High Carbon Class F Fly Ash as a Lining Material: I-Laboratory Study, Solid Waste Research Council, State of Wisconsin, with T. Edil.

Using High Carbon Class F Fly Ash as a Lining Material: II-Field Verification, Solid Waste Research Council, State of Wisconsin, with T. Edil.

Reinforcement of Soils with Shredded Waste Tires, Solid Waste Research Council, State of Wisconsin, with P. Bosscher.

Use of Reclaimed Waste HDPE as Soil Reinforcement, Solid Waste Research Council, State of Wisconsin.

Groundwater

Leaching and Mobility of Per and Polyfluoroalkyl Substances (PFAS) from Concrete and Asphalt, Strategic Environmental Research and Development Program, US Dept. of Defense, with J. Guelfo and D. Kosson.

Sorption and Transport of Polycyclic Aromatic Hydrocarbons in Organoclays used for Permeable Adsorptive Barriers, CH2M Hill Inc. and Union Pacific Inc.

Environmental Impacts of Engineered Nanomaterials, Nanoscale Science and Engineering Center, National Science Foundation, with J. Pedersen and R. Hammers

Gray-Iron Foundry Slags as a Reactive Medium for Removing Arsenic from Ground Water and Drinking Water, Groundwater Research Advisory Council, State of Wisconsin, with D. Blowes.

Innovative Treatment of COPR Wastes in Coastal Areas, US Dept. of Transportation, with T. Edil.

Development of Large-Scale Application for Remediation of Chromium Ore Processing Residue, University Industrial Relations, University of Wisconsin, with T. Edil.

An Integrated Approach to Evaluating Environmental Impacts from Soils Stabilized with Fly Ashes, State of Wisconsin Recycling Program and Alliant Energy, Inc.

Uncertainty Based Design of Permeable Reactive Barriers, Wisconsin Ground Water Research Advisory Council, with G. Eykholt

Innovative Groundwater Treatment: Reactive Walls Constructed with Excess Foundry Sand, Wisconsin Groundwater Research Advisory Council, with G. Eykholt.

Development of Integrated Decision Support System for Wellhead Protection, Wisconsin Water Resources Council, State of Wisconsin.

Reducing Uncertainty in Subsurface Characterization, U.S. Department of Energy.

Ultrasonic Probe to Evaluate the Integrity of Borehole Seals, Federal Highway Administration, with T. Edil.

Field Assessment of Monitoring Well Seal Integrity, Groundwater Research Advisory Council, State of Wisconsin, with T. Edil.

A Tool for Evaluating the Integrity of Monitoring Well Seals, Groundwater Research Advisory Council, State of Wisconsin, with T. Edil.

Characterization of Air Plumes and Modeling Mass Removal During In Situ Air Sparging, Groundwater Research Advisory Council, State of Wisconsin, with G. Eykholt.

Education

Wisconsin-Puerto Rico Partnership for Research and Education in Materials [Wi(PR)EM], US National Science Foundation, with J. de Pablo, J. Pedersen, et al.

A Modular Geoenvironmental Curriculum, National Science Foundation, with other faculty from Wisconsin, Northwestern, Michigan, and Argonne National Laboratory.

Research Experience for Undergraduates Site, Geothermal and Energy Geotechnics, National Science Foundation, with J. Tinjum (PI), D. Fratta (co-PI), and S. Bradshaw.

Transforming CEE/GLE 330, Soil Mechanics, to Blended Learning, Division of Continuing Studies, University of Wisconsin-Madison.

Other Topics

Wisconsin Highway Research Program, Wisconsin Department of Transportation, with T. Edil.

Fate and Transport of Chronic Waste Disease Prions in Waste Water Treatment Plants, US Environmental Protection Agency

Stiffness and Stress State in Unsaturated Soils, Minnesota Department of Transportation, with T. Edil.

Thermal Conditions Below Highway Pavements During Winter, Wisconsin Department of Transportation, with P. Bosscher.

Design Protocols for Cellular Confinement with Geoweb, University Industrial Relations and Presto Products, Appleton, WI, with T. Edil.

Equivalency of Subgrade Improvement Methods, Wisconsin Department of Transportation, with T. Edil.

Reinforcement of Soft Subgrades with Geosynthetics, Wisconsin Department of Transportation, with T. Edil.

Evaluation of the DCP and SSG for Subgrade Evaluation, Wisconsin Department of Transportation, with T. Edil.

Shear Strength of Granular Backfill Materials, Wisconsin Department of Transportation, with T. Edil.

Correlating Index Properties and Engineering Behavior of Wisconsin Soils, Wisconsin Department of Transportation, with T. Edil.

Incorporating Alternative Subgrade Improvement Methods in Pavement Design, Wisconsin Department of Transportation, with T. Edil.

STEM TEACHER ENGAGEMENT

The following STEM teachers have been engaged in our research and educational programs through NSF's *Research Experience for Teachers* (RET) program:

Hayden, Matthew, Earth Science Teacher, Glacier Creek Middle School, Middleton-Cross Plains School District, Middleton, Wisconsin.

Kisting, Richard, Science Teacher, Badger Ridge Middle School, Verona Area School District, Verona, Wisconsin.

GRADUATE STUDENTS SUPERVISED

PhD Students

Abichou, T., Hydraulic Properties of Foundry Sands, co-advised with T. Edil, 1999.

Albrecht, B., Passive Dry Barriers: Air Circulation and Mass Transfer, 2001.

Albright, W., Field Performance of Landfill Covers, 2005.

Apiwantragoon, P., Alternative Covers: Field Performance and Modeling Methods, 2007.

Bareither, C., Settlement of Bioreactor Landfills: Compression Mechanisms, co-advised with T. Edil, 2010.

Breitmeyer, R., Unsaturated Hydraulic Properties of Solid Waste and Hydrology of Bioreactor Landfills, co-advised with T. Edil, 2010.

Bin-Shafique, S., Leaching of Heavy Metals from Fly Ash Stabilized Soils, co-advised with T. Edil, 2002.

Chalermyanont, T., Reliability Analysis of Mechanically Stabilized Earth (MSE) Walls, 2002.

Chang, P., Geophysical Characterization of Water and Solute Movement in an Arid Climate, 2003, co-advised with D. Alumbaugh.

Chen, J., Chemical Interactions between Coal Combustion Products and Geosynthetic Clay Liners, 2015.

Elder, C., Effect of Heterogeneity on Performance of Permeable Reactive Barriers, 2000.

Eun, J., Diffusive Transport of Organic Compounds in Liquid and Gas Phases through Co-Extruded EVOH Geomembranes, with J. Tinjum, 2014.

Foose, G., Leakage Rates and Chemical Transport Through Composite Landfill Liners, co-advised with T. Edil, 1997.

Gulec, S., Compatibility of Geosynthetics and Mine Waste Liquids, co-advised with T. Edil, 2003.

Gustitus, S. Accelerated Degradation and Service Life Prediction of Bentonite-Polymer Composite GCLs, 2021.

Hunter, E., Sorption of Radionuclides in Engineered Barrier Materials, with J. Tinjum, 2014.

Jo, H., Fundamental Factors Affecting Interactions Between Bentonite and Inorganic Liquids, 2003.

Khire, M., Field Hydrology and Water Balance Modeling of Earthen Final Covers for Waste Containment, 1995.

Kim, H., Oxygen Transport Through Multi-Layer Caps Over Mine Waste, 2000.

Kim, W., Alternative Subgrades Stabilization with Geosynthetics, co-advised with T. Edil, 2003.

Komonweeraket, K., Mechanisms Controlling Release of Trace Elements from Soils Stabilized with Fly Ash, co-advised with T. Edil, 2010.

Lee, T., Using Waste Foundry Sands as Reactive Media in Permeable Reactive Barriers, 2002.

Li, L., Impacts of Mineralogical Fouling of Permeable Reactive Barriers in Heterogeneous Environments, 2004.

Nokkaew, K., Unsaturated Hydraulic Behavior of Recycled Base Course Materials, co-advised with J. Tinjum, 2014

Othman, M., Effect of Freeze/Thaw on the Structure and Hydraulic Conductivity of Compacted Clays, 1992.

Park, M., Transport of VOCs in Composite Landfill Liners, co-advised with T. Edil, 2011.

Scalia, J., Bentonite-Polymer Nanocomposites for Environmental Containment, 2012.

Tachavises, C., Flow Rates Past Vertical Groundwater Cut-Off Walls: Influential Factors and Their Impact on Wall Selection, 1998.

Tanyu, B., Equivalency of Alternative Subgrade Stabilization Methods, co-advised with T. Edil, 2003.

Tian, K., Life Expectancy of Geomembranes Used in Low-Level Radioactive Waste Containment, 2015.

Tinjum, J., Innovative Remedial Treatment of Chromium Ore Processing Residues, co-advised with T. Edil, 2006.

Yesiller, N., Ultrasonic Evaluation of Cased Borehole Seals, 1994, co-advised with T. Edil.

Yu, T., Effect of PFAS on Effectiveness of Landfill Liner Systems, 2023, in progress.

MS Students

Abichou, T., Field Evaluation of Geosynthetic Insulation for Protection of Clay Liners, 1993.

Abu Hassanein, Z., Using Electrical Resistivity Measurement as a Quality Control Tool for Compacted Clay Liners, 1994.

Acosta, H., Stabilization of Soft Subgrade Soils Using Fly Ash, with T. Edil, 2002.

Albrecht, B., Effect of Desiccation on Hydraulic Conductivity of Compacted Clays, 1995.

Akpinar, M., Interface Shear Strength of Geomembranes and Geotextiles at Different Temperatures, 1997.

Bahner, E., Soil Nailing Case Histories in Wisconsin, 1993.

Baker, D., Physical Modeling of In Situ Air Sparging, 1996.

Bareither, C., Geological Controls on the Shear Strength of Wisconsin Sands, with T. Edil, 2006.

Basantis, A., Hydraulic Properties of Sluiced Coal Ashes, 2021.

Bashel, M., Flow Rates in Composite Landfill Liners, 1993.

Baugh, J., Fly Ash Stabilization of Gravelly Soils, with T. Edil, 2008.

Benavides, J. Marie, Hydrologic Predictions for Coal Combustion Products Disposal Facilities, did not finish thesis.

Beuermann, S., Dielectric Sensor for Measuring Suction in Dry Soils, 1999.

Bohnhoff, G., Predicting the Water Balance of Alternative Covers Using UNSAT-H, 2005.

Bozyurt, O., Effect of Deleterious Materials on the Mechanical Properties of RAP and RCA, with T. Edil, 2011.

Bradshaw, S., Effects of Stress, Hydration, and Ion Exchange on Geosynthetic Clay Liners, 2008.

Bridstrup, J., Transport of Polyfluorinated Compounds Through Engineered Barrier Materials, 2020.

Brown, B., Leaching of Trace Elements from Roadways Constructed with CCPs, 2015.

Camacho, L., Analysis of Landfill Failure Using Three-Dimensional Limit Equilibrium Methods, with T. Edil, 2002.

Camargo, F., Equivalency of Fly-Ash Stabilized RPM and Gravel Base Course, with T. Edil, 2008.

Chen, C., Meteorological Conditions for Design of Monolithic Alternative Earthen Final Covers (AEFCs), 1999.

Chiang, I., Effect of Fines and Gradation on Soil Water Characteristic Curves of Sands, 1998.

Christman, M., Annular Well Seals: A Geophysical Study of Influential Factors and Seal Quality, with T. Edil, 1999.

Cope, D., Treating TCE-Contaminated Groundwater with Gray-Iron Slag, 2007.

Cooper, S., An Evaluation of How Subsurface Characterization Using Soil Classifications Affects Predictions of Containment Transport, 1993.

Dingrando, J., Beneficial Reuse of Foundry Sands in Controlled Low Strength Material, with T. Edil, 1999.

Eberhardt, M., Leaching of Heavy Metals from Gray-Iron Slags with and without Carbonation, 2008.

Elder, C., Modeling Mass Transfer During In Situ Air Sparging, 1996.
Foose, G., Shear Strength of Sand Reinforced with Shredded Waste Tires, 1993.
Gavin, M., Physical and Chemical Effects of Electroosmosis on Kaolinite, with T. Edil, 1997.
Genthe, D., Shear Strength of Two Pulp and Paper Mill Sludges with Low Solids Content, 1993.
Gibson, S., Geoelectric Methods to Evaluate Borehole Seals, with T. Edil, 1999.
Goodhue, M., Reuse of Foundry Sands in Reinforced Earthen Structures, with T. Edil, 1998.
Gurdal, T., Unsaturated Hydraulic Properties of Alternative Cover Soils, 2003.
Hardianto, F., Representative Sample Size for Hydraulic Conductivity of Compacted Clay, 1993.
Harrick, M., Permeable Reactive Walls in Wisconsin, 1994.
Hill, T., Field and Laboratory Hydraulic Conductivity of Compacted Mine Waste Rock, 1997.
Jo, H., Chemical Compatibility of Non-Prehydrated GCLs and Inorganic Liquids, 1999.
Jong, D., Load Limit Timings for Roadways Exposed to Frost, 1997.
Kim, K., Water Content Reflectometer Calibrations for Final Cover Soils, 2002.
Kircher, J., Modeling Chemical and Physical Effects of Electro-osmosis on Kaolinite, with T. Edil, 1997.
Klett, N., Evaluation of VOC Discharges to Groundwater from Engineered Landfills in Wisconsin, with T. Edil, 2005.
Kolstad, D., Hydraulic Conductivity and Ion Exchange in GCLs Permeated with Multispecies Inorganic Solution, 2000.
Kleven, J., Mechanical Properties of Excess Foundry System Sand and an Evaluation of its use in Roadway Structural Fill, with T. Edil, 1997.
Klima, J., Field Assessment of Monitoring and Water Supply Well Seals, with T. Edil, 1996.
Kraus, J., Hydraulic Conductivity of Papermill Sludges, 1994.
Kucukkirca, I., In-Service Properties of Geosynthetic Materials Exhumed from Landfill Final Covers, with J. Tinjum, 2009.
Lanier, A., VOC Transport in Geosynthetic Clay Liners, 2002.
Lane, D., Hydrologic Observations and Modeling Assessments of Landfill Covers, 1992.
Lau, W., Use of Geocells in Flexible Pavements Over Poor Subgrades, with T. Edil, 2001.
Lee, T., Physical Modeling of Vertical Groundwater Cut-Off Walls, 1999.
Lin, L.C., Effect of Wet-Dry Cycling on Swelling and Hydraulic Conductivity of Geosynthetic Clay Liners, 1998.
Marchesi, I., Simulating the Hydrology of Alternative Covers with *SoilCover*, 2002.
Maxwell, S., Geosynthetic Reinforcement of Soft Subgrades, with T. Edil, 1999.
Meer, S., Effects of Ion Exchange and Desiccation on GCLs used in Final Covers, 2003.
Meerdink, J., Unsaturated Hydraulic Conductivity of Barrier Soils Used for Final Covers, 1994.
Mengelt, M., Effect of Cellular Confinement on Soil Stiffness Under Dynamic Loads, with T. Edil, 2000.
Mergener, E., Assessing Clogging of Permeable Reactive Barriers in Heterogeneous Aquifers Using a Geochemical Model, 2002.
Metz, S., Gray-Iron Slags as a Reactive Medium for Arsenic Treatment, 2007.
Nelson, M., Laboratory Hydraulic Conductivity Testing Protocols for Paper Sludges in Barrier Layers, 2001.
Olson, R., Source and Prevention Strategies for Black Goo in Landfills, Summer 2023.
Palmer, B., High Carbon Class F Fly Ash for Reactive Barrier Landfill Liners, with T. Edil, 1995.
Payne, L., Use of Pulsating Electro-Osmosis in Barrier Applications, with T. Edil, 1995.
Rauen, T., Effect of Bioreactor Leachate on Geosynthetic Clay Liners, 2007.
Pekarun, O., Evaluation of Hydraulic Significance of Defects in Annular Well Seals, with T. Edil, 1994.

Rochford, W., Effectiveness of Geomembrane and Soil-Bentonite Cut-Off Walls, 2002.

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ATTACHMENT G

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November 20, 2025

Via Electronic Correspondence

Mr. Steve Cassulo, District Manager
Steven.cassulo@wasteconnections.com
Chiquita Canyon Landfill
29201 Henry Mayo Drive
Castaic, CA 91384

SUBJECT: LEA COMMENTS ON THE DRAFT REMOVAL ACTION WORKPLAN (RAW) CHIQUITA CANYON LANDFILL (CCL), SWIS NO. 19-AA-0052

Dear Mr. Cassulo,

On June 2, 2025, the Los Angeles County Department of Public Health, Solid Waste Management Program, acting as the Local Enforcement Agency (LEA), received Chiquita Canyon Landfill's (CCL) *Draft Removal Action Workplan: Interim Relocation and Stabilization of Containerized Waste, Chiquita Canyon Landfill* (Workplan) dated May 9, 2025, and prepared by Civil and Environmental Consultants, Inc. The Workplan 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 (SET) Event occurring at the CCL. CCL has submitted the Workplan to the LEA to address Section 4.3 of the LEA's May 1, 2025 Compliance Order (LEA Order).

CCL's Workplan again does not propose construction of a vertical soil barrier and instead provides justification for not installing one. Further, CCL has informed the U.S. EPA, DTSC, CalRecycle and the LEA that it does not intend to construct the required barrier. Rather, CCL asserts that continued gas and leachate removal will contain the Subsurface Elevated

Temperature (SET) event. However, available data indicate that the SET event continues to expand, and the current gas and leachate extraction approach has not proven effective in containing or stopping the growth of the reaction. The LEA has significant concerns with both the current and future conditions at the landfill.

CCL has failed to install a vertical soil barrier pursuant to the LEA's May 1, 2025 Compliance Order, which was required to protect Cell 8A from the intrusion of the SET event. Section 4.3 of the LEA Order directed CCL to verify or extend the "previously constructed soil barrier" that CCL represented was present, to connect the western and eastern edges of Cell 8A. Based upon current available data, there is no "previously constructed soil barrier" that would have been capable of extension to connect the western and eastern edges of Cell 8A. Since CCL has elected not to install any vertical barrier to protect Cell 8A from the expanding SET event, CCL is directed to propose alternatives, identical to the proposed alternative requirements provided on pages 5-6 of DTSC's October 15, 2025 letter to CCL and in compliance with DTSC's conditions, to protect Cell 8A. Please confirm to the LEA by November 26, 2025, CCL's agreement to provide a Cell 8A Protection Alternative Workplan to the LEA.

Based on deteriorating site conditions and available data, CalRecycle and the DTSC have expressed serious concerns regarding global slope stability impacts and potential need for alternative mitigation measures as the SET event continues to expand. After technical consultation with CalRecycle, the LEA now requires CCL to conduct a global slope stability study for areas where critical infrastructure is located (e.g., Temporary Tank Farm 13, located in Cell 8B). The LEA understands that CCL is currently preparing a Slope Stability Workplan, as required in DTSC's October 15, 2025 letter to CCL, which is due to be submitted to DTSC by November 21, 2025. Provide a copy of the Slope Stability Workplan to the LEA at the time it is submitted to DTSC to satisfy this requirement. This will allow the LEA to participate in the technical review of CCL's new Plan and provide comments.

The LEA reserves the right to issue a new directive or order if site conditions or available data indicate that additional corrective actions are necessary to protect public health and the environment.

Ensure to obtain all permits and approvals from Federal, State and Local agencies as required by the law and regulations.

If you have any questions, please email me at emorofuji@ph.lacounty.gov or call me at (213) 668-2206.

Sincerely,

Eric Morofuji, EHS III
Solid Waste Management Program
Local Enforcement Agency (LEA)

Cc: (Via Electronic Correspondence Only)

- Robert Ragland, Los Angeles County Department of Public Health
- Liza Frias, Los Angeles County Department of Public Health
- Azar Kattan, J.D., M.P.H, Los Angeles County Department of Public Health
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