

July 8, 2024

Mr. Steve Cassulo
Chiquita Canyon Landfill
29201 Henry Mayo Drive
Castaic, CA 91384

Subject: Response to the LEA's June 21, 2024 Email Regarding Milestone 2A-1 (Formerly Mitigation Measure #2A)
Chiquita Canyon Landfill, Castaic, California

Dear Mr. Cassulo,

On behalf of Chiquita Canyon, LLC (Chiquita), SCS Engineers and Tetra Tech hereby submit this letter to provide an updated response to the LEA's June 21, 2024 email. The LEA's June 21 email requested the following:

LEA reviewed the attached report [submitted June 14] and would like for CCL to define the term REACTIVE used for vertical/horizontal wells (green) in the legend. Also, the proposed 30-mil geosynthetic coverage should extend to the boundary of the settlement reaction area. Per the June 6, 2024 Compliance Order, Milestone 2A-1, CCL is to install the approved 30-mil HDPE geosynthetic cover over the 30-acre reaction settlement area as defined in the Weekly Cover Reports dated up through May 28, 2024, and around any wells showing signs of reaction. The due date for compliance is August 2, 2024. Please update future weekly status reports on geosynthetic cover installation.

Definition of A REACTIVE Well

Chiquita updated Note 3 in the map enclosed with the weekly status reports on the geosynthetic cover installation to include the following definition for a REACTIVE well, starting with the update submitted on June 28, 2024:

A REACTIVE well is a well that exhibits all of the following characteristics:

- 3.1 Landfill gas (LFG) wellhead temperatures in excess of approximately 160 degrees Fahrenheit.
- 3.2 Poor gas quality (defined as methane levels of less than 30 percent) in conjunction with methane-to-carbon dioxide (CH₄:CO₂) ratios less than 1.0.
- 3.3 The concentration of hydrogen (H₂) in the LFG measured greater than 2 percent by volume.

Chiquita further notes that a REACTIVE well is limited to vertical wells. Vertical wells collect LFG from a vertical column of waste, and thus indicate the temperature, gas quality, and hydrogen concentration in the area directly adjacent to the vertical well. Horizontal wells collect LFG from the horizontal run of perforated pipe that extends into a surrounding area, such that LFG present at a horizontal well located

outside of the reaction area could originate hundreds of feet from an area inside the reaction area. Horizontal wells should thus not be used as an indicator of reaction.

Chiquita will revise Note 3 in future maps to further clarify that the definition for a REACTIVE well is limited to vertical wells.

A REACTIVE well is a **vertical** well that exhibits all of the following characteristics:

- 3.1 Landfill gas (LFG) wellhead temperatures in excess of approximately 160 degrees Fahrenheit.
- 3.2 Poor gas quality (defined as methane levels of less than 30 percent) in conjunction with methane-to-carbon dioxide (CH₄:CO₂) ratios less than 1.0.
- 3.3 The concentration of hydrogen (H₂) in the LFG measured greater than 2 percent by volume.

Upon further review of the REACTIVE wells, Chiquita notes that there is one existing vertical well outside of the proposed limits of the geosynthetic cover—CV-2306—that shows signs of reaction as of July 5, 2024, in that the well exhibits all the characteristics set forth in Note 3. However, CV-2306 is located within Chiquita Canyon Landfill's (Landfill) only turnaround area in that portion of the Landfill. Chiquita must keep that area uncovered for the foreseeable future to continue to effectively operate the Landfill and allow vehicle traffic. Instead of covering that well with the geosynthetic cover, Chiquita proposes to install a well boot around CV-2306. The well boot is a liner that extends 20' in all directions around the well casing, assisting in providing coverage similar to a permanent cap that is then buried to allow for traffic and truck turn around.

Area of Geosynthetic Cover Coverage

Chiquita also responds to the LEA's direction in its June 21 email to Chiquita to install the geosynthetic cover over the 30-acre reaction settlement area as defined in Chiquita's weekly cover reports. Chiquita's approved schedule for installation of the geosynthetic cover, last updated on May 14, 2024, planned that Chiquita will complete installation of the 30-mil HDPE geosynthetic cover over the "reaction settlement area" by July 12, 2024.¹ Chiquita included a map demonstrating the below proposed limit of the geosynthetic cover, which is the same limit that has been included in Chiquita's subsequent weekly status updates. As of July 3, 2024, there were 0.9 acres of cover on the top deck, 1.8 acres of scrim on the west slope, and an additional 1.6 acres surrounding the scrim of remaining cover to be installed.

The LEA's June 21 email first maintains that the proposed 30-mil geosynthetic cover should extend to "the boundary of the settlement reaction area" but then later refers to "the 30-acre reaction settlement area as defined in the Weekly Cover Reports". Upon further review of the LEA's June 6, 2024 Compliance Order, Chiquita realized that the LEA made the same reference to the weekly cover reports in Milestone 2A-1 of the Compliance Schedule. However, the settlement area defined in Chiquita's weekly cover reports is not the same as the "reaction settlement area".

¹ This proposed schedule did not apply to the area of the landfill that is currently covered by the scrim and will be replaced by the geosynthetic cover once liquid levels in the area have dropped.

The “reaction settlement area” was initially defined in Chiquita’s August 18, 2023 response to the Los Angeles County Public Works’ August 3, 2023 comments on the July 27, 2023 Conditional Use Permit Condition 69 report. While Chiquita used settlement data to help map out the area of the Landfill that had been affected by the reaction at that time, that is not the only data that Chiquita was considering when it defined that area. Chiquita also considered the locations of vertical wells with elevated temperatures, elevated oxygen levels, elevated hydrogen sulfide, elevated hydrogen, or an inverse methane to carbon dioxide ratio. Thus, it was a combination of multiple factors that contributed to Chiquita’s initial delineation of the reaction settlement area.

Chiquita was later asked by the LEA to track settlement data, and so Chiquita provides in the weekly cover issue reports the approximate area of settlement based on drone aerial surveys. However, settlement data alone is insufficient to justify changes to the reaction settlement area. Changes to the reaction settlement area must take into consideration the same variety of factors that Chiquita originally considered in its August 18 response and has since refined in its monthly submittals to the South Coast Air Quality Management District (SCAQMD). Accelerated settlement of the landfill surface—defined as approximately 6 inches or greater within a 60-day period—is one of several factors Chiquita’s Reaction Committee of experts considers in determining the boundary of the reaction area under the Stipulated Order for Abatement with SCAQMD. Chiquita also recently clarified this distinction in its June 25, 2024 weekly cover issues report submitted to the LEA.

Chiquita added a red line to the map enclosed with the weekly status reports on the geosynthetic cover installation in response to the requirement in the LEA’s June 6, 2024 Compliance Order to revise this map to “delineate any areas showing settlement”. This red line delineates the limit of settlement documented in Chiquita’s weekly cover reports because that limit includes “any areas showing settlement”. However, as described above, the limit of settlement documented in Chiquita’s weekly cover reports is not the same as the reaction settlement area. Moreover, Chiquita’s monthly submittals to SCAQMD more accurately represent the current boundaries of the area of the Landfill affected by the reaction.

The limit of settlement documented in Chiquita’s weekly cover reports encompasses a larger area than that of the reaction settlement area and the reaction area as defined in Chiquita’s monthly submittals to SCAQMD. Settlement can occur outside of the reaction settlement area due to the deep depth of waste, removal of liquids, and the settlement influence zone on surrounding areas. The deeper waste in a particular area increases the possible settlement amount as there is a larger waste column to decompose and cause settlement. With waste depths at Chiquita exceeding 300 feet, settlement of 5 feet or more in a year would not be considered abnormal. Additionally, the expeditious pumping of liquids from the Landfill to comply with the best management practices for addressing elevated temperature landfill increases the settlement rate throughout the Landfill as the removal of liquids creates pore spaces within the waste to allow additional settlement. Finally, additional settlement may be caused by the settlement influence zone. In short, the settlement area may be larger than the actual area affected by the reaction simply due to the fact that settlement in one area may cause settlement to occur in adjacent areas.

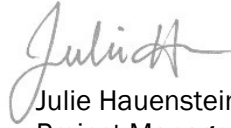
If you have any questions regarding the information contained in this submittal, please contact the undersigned.

Mr. Steve Cassulo
July 8, 2024
Page 4

Sincerely,



Bill Haley, P.E.
Project Director
(858) 524-9525
SCS ENGINEERS



Julie Hauenstein, P.E.
Project Manager
(909) 835-8167
Tetra Tech

cc:

Nicole Ward, Chiquita
Steve Cassulo, Chiquita
Amanda Froman, Chiquita
Robert Ragland, Los Angeles County Department of Public Health
Liza Frias, Los Angeles County Department of Public Health
Nichole Quick, M.D., Los Angeles County Department of Public Health
Shikari Nakagawa-Ota, Los Angeles County Department of Public Health
Ken Habaradas, Los Angeles County Department of Public Health
Karen Gork, LEA
Eric Morofuji, LEA
Renee Jensen, LEA Counsel
Blaine McPhillips, County Counsel
Emiko Thompson, Los Angeles County Public Works
Alex Garcia, Los Angeles County Department of Regional Planning
Ai-Viet Huynh, Los Angeles County Department of Regional Planning
Wes Mindermann, CalRecycle
Janelle Heinzler, CalRecycle
Jeff Lindberg, California Air Resources Board
Vanessa Aguila, California Air Resources Board
Jack Cheng, South Coast Air Quality Management District
Larry Israel, South Coast Air Quality Management District
Douglas Cross, Los Angeles Regional Water Quality Control Board
Thanne Berg, United States Environmental Protection Agency