BEFORE THE HEARING BOARD OF THE

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

In The Matter Of SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT, Petitioner, vs. CHIQUITA CANYON, LLC, a Delaware Corporation, [Facility ID No. 119219] Respondent.	**Case No. 6177-4** **DECLARATION OF NEAL BOLTON, P.E.** Health and Safety Code § 41700, and District Rules 402, 431.1, 3002, 203, 1150 Hearing Date: August 17 and 20, 2024 Time: 10:00 A.M. Place: Santa Clarita Performing Arts Center College of the Canyons 26455 Rockwell Canyon Road Santa Clarita, CA 91355

I, Neal Bolton, declare as follows:

1. I am of sufficient age and am competent to testify in this proceeding. I make this declaration based upon personal knowledge and am competent to testify to the facts set forth herein.

Background and Experience

2. As discussed in my prior declarations in this Case No. 6177-4, I serve on the Reaction Committee as the expert on landfill design and operational best management practices. I have owned and managed the landfill consulting company Blue Ridge Services Montana, Inc., since 1988 (then called Blue Ridge Services) ("Blue Ridge"). I am a registered civil engineer in California with more than 46 years of experience in heavy construction, landfill operations, and solid waste management. I began working with Chiquita Canyon, LLC ("Chiquita") in 2020, related to a series of notices of violation issued to Chiquita by the South Coast Air Quality Management District ("South Coast AQMD"). Since then, Blue Ridge has continued to work with Chiquita on various components of landfill operations, including odor mitigation and leachate management.

3. This declaration is made for the August 17 and 20, 2024 status and modification hearing on the Stipulated Order for Abatement with the South Coast AQMD issued on April 24, 2024.

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Actions to Address Leachate Seeps and Leachate-Related Odors

4. In accordance with the Unilateral Administrative Order issued to Chiquita by the U.S. Environmental Protection Agency ("EPA") on February 21, 2024. Blue Ridge assisted in the preparation of the portion of the Leachate Management Plan ("LMP") related to Best Management Practices ("BMPs"). The LMP was submitted to EPA on March 27, 2024, and pursuant to **Condition 64**, Chiquita provided a copy of the LMP to South Coast AQMD on March 28, 2024. Chiquita received a deficiency notice from the EPA on June 17, 2024 and submitted a revised LMP on August 2, 2024, which is attached hereto as **Exhibit A**. Chiquita submitted the revised LMP to South Coast AQMD, within 24 hours of submission to EPA. Generally, the revised LMP focuses on providing the EPA with additional information related to Chiquita's compliance with the Resource Conservation and Recovery Act and Chiquita's hazardous waste operations, but also provides some additional information related to leachate related BMPs implemented by Chiquita at the Landfill.

5. The remainder of the LMP concerns the following topics: improvements to landfill systems (such as the leachate collection and dewatering systems), standard operating procedures for on-site leachate storage, waste characterization and profiling, leachate testing, off-site transportation and disposal for both hazardous and non-hazardous leachate, a summary of current treatment and disposal facilities, the preparation and shipment of waste, and permitting (including permit modifications).

Leachate Seep Identification and Management

6. Chiquita continues to implement many measures to prevent and minimize potential environmental or health impacts associated with the increased leachate generation caused by the elevated temperature landfill event ("ETLF" or "reaction"). These measures include implementing BMPs to manage and mitigate odor and leachate as required by the Modified Stipulated Order.

7. On June 25, 2024, Blue Ridge, on behalf of Chiquita, submitted a model to estimate the rate of liquid generation in the Landfill and the total quantity of liquid existing within the Landfill waste mass at any given time. As required by **Condition 12(g)(vii)**, the report also contained supporting assumptions, references, and calculations. A true and correct copy of the report is attached hereto as **Exhibit B**. Blue Ridge modeled the quantity of liquid within the waste mass by estimating the overall moisture content within the waste mass and then extrapolating the volume of liquid that would be released

from the entrained moisture as free liquid in the Landfill. Settlement data, inbound waste tonnage, precipitation, and liquid volumes were also considered in the preparation of this report. The modeling results will likely change upon the receipt of additional data from additional well logs, liquid levels, and spatial data from near the reaction area, when such data becomes available. Based on these calculations, Blue Ridge roughly estimated that the reaction area within the Landfill liberated approximately 67,014,813 gallons of leachate.

8. As required by **Condition 24**, Chiquita continues to operate and maintain the Landfill to prevent standing leachate and the pooling and/or ponding of leachate exposed to the atmosphere. Compliance with this condition has been ongoing since January 18, 2024. When Chiquita witnesses pooling or ponding leachate, Chiquita immediately: (i) vacuums such leachate into a sealed tanker truck or leachate tank (safety permitting), or (ii) makes repairs to stop leachate from pooling or ponding. Some of these repairs include, without limitation, creating berms, digging French drains, installing additional drain rock and piping, or covering smaller seeps with a minimum of six inches of clean soil.

9. Chiquita conducts inspections twice per calendar day as required under **Conditions 27(b) and 27(c)** to aid in early seep detection. Since January 18, 2024, dedicated staff has performed inspections of the western slope, northern slope, and the stormwater channels twice daily, once before 10 a.m., and again after 1 p.m. During the inspections, the dedicated staff documents and records any leachate seepage or pooling. The records maintained by Chiquia include: (1) the location of the seepage or pooling identified on a map, including the specific grid location of the seep, (2) the time discovered, (3) the estimated duration of presence of leachate at such locations, (4) the estimated quantity of leachate, (5) the characteristics of the leachate, (6) the leachate saturation level of surrounding soils, and (7) any containment systems or measures deployed. As of April 24, 2024, Chiquita also documents the GPS coordinates of any seeps in its logs as required by Condition 27(b). These logs are compiled and submitted to South Coast AQMD every Tuesday and included in Section Q and Attachment M of the **Condition 8** reports that are submitted to South Coast AQMD monthly. If applicable, Chiquita also reports any ongoing leachate seepage or pooling that occurred at the same location more than once within a calendar week.

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West Slope Construction

10. The west slope construction project aims to improve leachate management on the site. To better mitigate leachate seepage in the long-term on the western slope of the Landfill, Chiquita is installing a new toe drain and removing and replacing the temporary scrim liner that current covers the area with the 30-mil geomembrane liner required by **Condition 31**. This construction will help to minimize leachate seeps occurring along the northern and western slopes, improve gas collection, and allow for stormwater collected on top of the liner to flow directly into the concrete channel. The project will involve replacing the existing toe drain with piping, sumps, and cleanouts. This specific placement of this equipment allows for maintenance and redundancy.

11. Chiquita has planned this construction project over the past several months in close coordination with the Response Multi-Agency Coordination Group, which is composed of Chiquita's federal, state, and local onsite coordinators. In this time, Chiquita has met with its regulators, including South Coast AQMD, to discuss the project, circulated multiple drafts of its work plan and health and safety plan, and provided written responses to comments received from its regulators, including South Coast AQMD. As a result of this coordination, Chiquita is implementing a project that addresses concerns regarding potential impacts from odors and other emissions to the community and to those working on the project by implementing mitigation measures far beyond the requirements of **Condition 42**. Chiquita operates pursuant to this condition pending South Coast AQMD's approval of Chiquita's Rule 1150 excavation plan, submitted pursuant to **Condition 41** on January 30, 2024.

12. **Condition 42**'s relevant requirements, including the following measures to provide adequate notice, limit potential impacts, and minimize the potential for odors resulting from the western slope excavation and any other excavations, are:

- **Condition 42(a):** Notifying South Coast AQMD two days prior to each excavation and within five days after its completion. To date, Chiquita has submitted notifications under this condition on July 26, 2024 and August 2, 2024, and is planning to submit another notification on August 9, 2024.

- **Condition 42(b):** Not conducting excavations between 6:00 p.m. and 6:00 a.m. or on weekends, and legal holidays (unless excavation is occurring to comply with Condition 24, or otherwise approved in writing by South Coast AQMD).
- **Condition 42(c):** Not conducting excavations when South Coast AQMD forecasts first, second, or third stage episodes for area number 13, or when South Coast AQMD requires companies in area number 13 to implement their first, second, or third stage episode plans.
- **Condition 42(f):** Watering down all working excavation areas, excavated material, and unpaved roadways until the surfaces are moist. The moist surfaces will be maintained for the duration of the excavation to minimize dust and emissions.
- **Condition 42(g):** Not spreading VOC contaminated soil (as defined by Rule 1166) on site or offsite, or stockpiling the VOC contaminated soil, in the event it results in uncontrolled evaporation of VOC into the atmosphere. VOC contaminated soil shall not be used for landfill cover.
- **Condition 42(k)**: Immediately relocating excavated material for burial onsite or immediately depositing it into trucks/trailers for off-site transport. The trucks/trailers will be completely covered with automated vinyl tarps, with such covers tied down, except for during active loading/unloading of refuse.
- **Condition 42(l)**: Ensuring that during the transport of excavated material, no material extends above the sides or rear of the tracker or trailer hauling the excavated material.
- **Condition 42(m)**: Utilizing rumble strips to minimize track-out from the excavation area.
- **Condition 42(n):** Immediately, not to exceed two hours, covering landfill materials and refuse which have been exposed to the atmosphere but have not been excavated and relocated whenever excavation is not actively in progress. Such materials shall also be covered at the end of each working day so that no portion of landfill material and refuse is exposed to the atmosphere. Foam by itself shall not be used as a night cover if it rains or if it is predicted to rain.
- **Condition 42(o)**: Conducting daily inspections of any covered excavation area to ensure the integrity of the cover(s) is maintained and secured so that no portion of the soil is

exposed to atmosphere. If there are cover issues, Chiquita will take corrective action to add and secure a new excavation cover. Chiquita will maintain an inspection log which records the time of the inspections and any corrective action performed.

- **Condition 42(p)(i)**: Transporting all hazardous material in a manner that prevents any emissions of hazardous material. The definition of "hazardous materials" includes all materials listed as hazardous by a federal or state agency.
- **Condition 42(p)(ii)**: Transporting all hazardous materials in containers clearly marked as to the type of material contained therein and what procedures should be followed in case of spills.
- **Condition 42(p)(iii)**: Encapsulating or enclosing any excavated liquid hazardous materials in containers sealed with lids before loading the materials into transport vehicles.
- **Condition 42(q)**: Complying with Rule 403 with respect to excavation, handing, and stockpiling activities.
- **Condition 42(r)**: Keeping and maintaining records required to demonstrate compliance with Condition 42 for at least 5 years.

13. These additional measures, which have required Chiquita to revise its work plan and health and safety plan multiple times, have also significantly delayed the start date for the work. Chiquita initially anticipated beginning the project in early to mid-July. Pursuant to **Condition 48**, which requires Chiquita to notify South Coast AQMD of any substantial operational change that is designed to or anticipated to reduce orders, on July 1, 2024, Chiquita submitted an Executive Summary to South Coast AQMD, detailing the construction Chiquita is planning to perform on the western slope. Although this construction does not technically require notification under **Condition 48**, in the interest of transparency and cooperation, Chiquita elected to notify South Coast AQMD. The Executive Summary is included here at **Exhibit C**. Due to the delays described above, Chiquita currently plans to begin the project on August 8, 2024, after incorporating the final round of comments and feedback from its regulators, including South Coast AQMD.

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Pressurized Leachate Releases

14. Since the April 2024 hearing, there have been no pressurized leachate releases ("PLRs") at the Landfill. As required by **Condition 25**, Chiquita is prepared to promptly act to mitigate any pressurized leachate releases ("PLRs") as a result of drilling/maintenance/other operations.

Sampling and Monitoring

15. As required by **Condition 51**, Chiquita allows South Coast AQMD to conduct all inspections at the Landfill that it deems necessary. Compliance with this condition has been ongoing since March 22, 2024 however, to date, South Coast AQMD has neither conducted any inspections, nor taken any samples.

16. Since March 22, 2024, Chiquita has maintained at least two 5-gas monitors, which are calibrated, with sufficient battery and ready for use, as required by **Condition 51(a)**. These monitors are available for regulatory personnel to use during their inspections. To use these monitors, regulatory personnel must sign the waiver and release of liability agreed upon by Chiquita and South Coast AQMD on April 19, 2024. Chiquita developed and provided a Health and Safety Plan to South Coast AQMD and requires all visitors to comply with this plan when at the Landfill. The Health and Safety Plan has recently been revised in connection with the western slope construction project discussed in Paragraphs 10-14. Chiquita submitted the revised Health and Safety Plan to South Coast AQMD on August 8, 2024.

Geosynthetic Cover Installation and Repairs

17. Pursuant to **Condition 31**, Chiquita is required to install the geosynthetic cover over the western portions of Module 2B/3/4 Phase 2, Module 2B/3, and Module 4. Chiquita submitted the completed design for the cover on September 12, 2023 as required. As of August 2, 2024, Chiquita has installed a total of 41 acres of geosynthetic cover. There are approximately 3.4 additional acres of cover to install in order to complete the geosynthetic cover installation. Chiquita is diligently working to complete the installation of the cover. It must complete the west slope excavation project before installing the remaining acreage. If the west slope project stays on schedule, Chiquita anticipates that the work will be completed in October. Chiquita reports updates regarding the installation of the geosynthetic cover every month in Section O of the **Condition 8** monthly reports. The first notification regarding the process of acquiring and installing the cover was submitted on October 31, 2023.

18. Chiquita works diligently to maintain both the landfill cover and the geosynthetic cover. Pursuant to **Condition 30**, Chiquita has visually inspected the landfill cover around the Reaction Area each operating day since September 7, 2023 and since installation of geosynthetic cover began, has also been inspecting the geosynthetic cover. Chiquita promptly repairs issues or damage to both covers. Repairs may include adding and spreading of clean soil, wetting the soil, retracking the damaged area, and repairing or resealing the geosynthetic cover as needed. Chiquita records and maintains records of all repairs made to the landfill cover and geosynthetic cover. The records demonstrate how any damage to covers was addressed, including the date damage was identified, actions taken to repair the damage, and time at which repair was completed. These inspection logs are submitted to South Coast AQMD every Tuesday pursuant to **Condition 30** and are also reported monthly in Section L of **Condition 8** reports.

19. As of April 25, 2024, pursuant to **Condition 30**, Chiquita performs all repair and corrective actions to the landfill cover, and interim repair of geosynthetic cover promptly, no later than two hours after identification during inspection, safety permitting. If necessary, Chiquita schedules all repairs of the geosynthetic cover immediately and ensures that such repairs take place as soon as possible following the identification of the damage.

Additional Air Dispersion Modeling

20. As stated in my prior declaration, submitted April 19, 2024 and reported in that certain *Ambient Air & Emissions Monitoring Study,* which was submitted to the South Coast AQMD on December 1, 2023, Blue Ridge recommended conducting additional air modeling that would incorporate complaint data received from South Coast AQMD and the results of a subsequent flux chamber study. Blue Ridge, on behalf of Chiquita, submitted a proposal for additional air modeling on January 15, 2024, as required by **Condition 32(b)**. The proposal identified the primary proposed personnel/firms for conducting the study, qualifications of such personnel, and a timeline for completion of the study and submittal of final reports. Blue Ridge received comments from South Coast AQMD on March 28, 2024, and pursuant to **Condition 32(c)**, submitted a revised proposal incorporating South Coast AQMD's comments on May 8, 2024. Blue Ridge further revised and resubmitted this proposal on May 16, 2024 in response to additional comments received from South Coast AQMD on May 10, 2024.

21. As required by **Condition 32(b)(ii) and (c)**, Blue Ridge is in the process of conducting the additional air modeling as proposed and is working on a written report.

Odor Mitigation Strategies

22. Beginning September 7, 2023, as required by **Condition 1**, Chiquita started conducting odor surveillance in the communities surrounding the Landfill. Chiquita, as required by **Conditions 1(a) and (b)**, on October 6, 2023 contracted with a trained third party to conduct odor surveillance at the thirty-two locations listed by South Coast AQMD. The third-party contractor does not visit the Reaction Area within four hours prior to the surveillance, as required by **Condition 1(c).**

23. Pursuant to **Condition 1(d**), the third-party contractor stands in ambient air to conduct the surveillance. Before the end of the work day, pursuant to **Condition 1(e)**, the surveyor prepares the "Odor Surveillance Log" which contains the following information: (1) the date and time; (2) stop number; (3) the name of the person performing the surveillance and written acknowledgement that they did not visit the working face or other on-site areas where exposed trash or landfill odors such as, but not limited to, landfill gas odors, refuse or refuse contaminated material odors, or landfill liquids/landfill leachate odors exist within four hours prior to conducting odor surveillance; (4) the wind speed and direction; (5) a narrative description of any odor detected (including the type of odor, such as trash, landfill gas, chemical, or odor neutralizer, as applicable); (6) current weather conditions; and (7) an assessment of the strength of any odor, using a scale from "0 – No odor detected" to "5 – very strong odor detected." These logs are maintained by Chiquita as required by **Condition 2**, and are available for review upon South Coast AQMD's request.

24. As stated in my April 19, 2023 declaration, the Modified Stipulated Order requires Chiquita to conduct daily odor surveillance in the communities surrounding the Landfill. If a "Moderate Odor", an odor of a strength of 3 out of 5 or greater, is detected at three or more stops during Chiquita's surveillance, **Condition 1(f)** requires Chiquita to document such event and immediately report to the Landfill's operations staff. Since April 24, 2024, if observed odors are described as trash-related, staff immediately notifies Landfill operating staff responsible for the working face area. The revised provides considerations for detecting different types of trash odors, namely: chemical, leachate, landfill gas, or similar non-trash

landfill odors. Chiquita also maintains a written record of any notification received and action taken, as required by **Condition 2**.

25. Since September 7, 2023, to combat fresh trash odors, Chiquita has implemented the following measures during Unfavorable Wind Conditions as required by **Condition 43**:

- The use of orchard fans, and tow-and-blow fans as needed, placed and spaced around the working face;
- The use of equipment including fans and misters equipped with odor neutralizer misting systems in various portions of the Landfill to neutralize any fresh trash odors;
- The identification and appropriate handling of odorous loads at the scale and working face as new waste loads enter the Landfill;
- Hauling odorous loads with proper sequencing and cover; and
- Regularly training staff on all aspects of Landfill operations, employee safety, and odor control.

26. Chiquita also trained employees or contractors to re-perform odor surveillance following deployment of additional mitigation to assess if trash odors have dissipated and, if needed, take additional remedial steps pursuant to **Condition 43(f)**.

27. Beginning on April 25, 2024, if trash-based odors are detected at any stops during the surveillance conducted pursuant to **Condition No. 1(f)** during operating hours, Chiquita deploys additional permitted orchard-style fans to the working face and surrounding area. If Chiquita cannot confirm the reduction of trash-based odors within one hour of deployment of these additional fans, Chiquita will reduce the working face by 25% of that day's total size for the remainder of the operating day.

28. Chiquita has designated employees in each area who are able to receive order event notifications. Within thirty minutes of receiving an odor notification, Chiquita reviews and initiates modifications as appropriate to fan placement, and conducts a visual inspection of the Reaction Area in order to assess, and, if necessary, address any surface cracks. Upon receiving such notification for the working face area, Chiquita employs any necessary appropriate trash odor mitigation strategies, which are detailed above in Paragraphs 25 and 27.

29. Since September 7, 2023, Chiquita has been operating and maintaining a landfill perimeter odor control misting system on the western and northwest portions of the Landfill as required by **Conditions 46 and 47**. The system is operated immediately and continuously upon receiving data from the MET station that the 1-hour averaged wind direction is blowing in western, northwestern, northern, or northeastern directions. Chiquita operates the system until the wind direction data demonstrates the wind is no longer blowing in the specified directions. Chiquita also operates the system to neutralize and mitigate odors to the extent possible, as determined by the Reaction Committee. Notwithstanding the foregoing, Chiquita operates this odor control misting system at all hours.

30. Pursuant to **Condition 45** and its September 20, 2023 notification to South Coast AQMD, Chiquita continues to maintain and operate over 1,000 feet of Semi-Permanent Vapor Odor Control in the Reaction Area.

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

Executed on this 9th day of August, 2024, in Victor, Montana.

Neal Bolton

President

Blue Ridge Services, Inc.

BEFORE THE HEARING BOARD OF THE

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

In The Matter Of SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT, Petitioner, vs. CHIQUITA CANYON, LLC a Delaware Corporation, [Facility ID No. 119219] Respondent.	**Case No. 6177-4** **EXHIBIT A TO DECLARATION OF NEAL BOLTON, P.E.: REVISED LEACHATE MANAGEMENT PLAN** Health and Safety Code § 41700, and District Rules 402, 431.1, 3002, 203, 1150 Hearing Date: August 17 and 20, 2024 Time: 10:00 am Place: Santa Clarita Performing Arts Center College for the Canyons 26455 Rockwell Canyon Rd. Santa Clarita, CA 91355

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LEACHATE MANAGEMENT PLAN
CHIQUITA CANYON LANDFILL
CASTAIC, CALIFORNIA

Prepared for:

CHIQUITA CANYON
A Waste Connections Company

Chiquita Canyon, LLC
29201 Henry Mayo Dr, Castaic, CA 91384

Prepared by:

MONTROSE
ENVIRONMENTAL

August 2024
Revision 2

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List of Acronyms and Abbreviations

BMP	Best Management Practices
CCL	Chiquita Canyon Landfill
CCR	California Code of Regulations
CFR	Code of Federal Regulations
CONEX	Container Express
DTSC	Department of Toxic Substances Control
EC	Emergency Coordinator
ER	Emergency Response
EPA	Environmental Protection Agency
ERU	Emergency Response Unit
ETLF	Elevated Temperature Landfill
FOSC	Federal On-Scene Coordinator
GAC	Granulated Activated Carbon
GCCS	Gas Collection and Control System
HAZMAT	Hazardous Materials Management
HDPE	High-Density Polyethylene
HWCP	Hazardous Waste Contingency Plan
HWPM	Hazardous Waste Program Manager
IC	Incident Commander
LEA	Local Enforcement Agency
LCRS	Leachate Collection and Removal System
NRC	National Response Center
OES	Office of Emergency Services
PLR	Pressurized Leachate Releases
PPE	Personal Protective Equipment
RQ	Reportable Quantity
RWQCB	Regional Water Quality Control Board
SCAQMD	South Coast Air Quality Management District (SCAQMD
TDS	Total Dissolved Solids
UAO	Unilateral Administrative Order
WSD	Waste Stream Determination

1.0 Introduction

1.1 Overview

The Chiquita Canyon Landfill (Landfill) operated by Chiquita Canyon, LLC (CCL) has been experiencing a subsurface reaction in an inactive portion of the Landfill, also known as an Elevated Temperature Landfill (ETLF) event.

The reaction has escalated landfill gas condensate and leachate production and modified the chemical composition of these liquid waste streams. Weekly leachate production has increased from 100,000 gallons in January 2022 to over 1,000,000 gallons in December 2023. Based on recent analytical testing, some of the condensate and leachate may exhibit characteristics of ignitability and toxicity under the Code of Federal Regulations (CFR) (40 CFR 261.21 and 40 CFR 261.24, respectively) and California Code of Regulations (CCR) (22 CCR 66261.21 and 22 CCR 66261.24, respectively).

This Leachate Management Plan (Plan) fulfills the requirements of Paragraph 22(c)(1) of the February 21, 2024 Unilateral Administrative Order (UAO) issued by the United States Environmental Protection Agency (EPA).

1.2 Purpose and Scope of the Leachate Management Plan

The Plan outlines comprehensive procedures and protocols for the effective management of leachate and hazardous waste streams at the Landfill. To this end, the Plan:

- describes the procedures for identifying, responding to, and mitigating leachate seeps, and identifying any necessary repairs or improvements to the leachate collection system;
- describes the process to characterize leachate, condensate, and all waste streams that are potentially hazardous;
- describes the process for collecting, storing, and removing leachate from the Landfill;
- provides the procedures for transporting waste streams to the appropriate waste receiving and disposal facilities; and
- describes the process for obtaining any required permit(s) from the appropriate local, state, or federal agency for onsite leachate management activities.

2.0 Leachate Collection System and Seep Identification

CCL has developed a proactive approach to identifying and controlling leachate seeps or leachate releases associated with Pressurized Leachate Releases (PLRs).

2.1 Overview of the Leachate Collection System

CCL's leachate collection and removal system (LCRS) consists of a series of pipes constructed over a composite liner, which incorporates a high-density polyethylene (HDPE) geomembrane and a low hydraulic conductivity layer. The liner system is designed to contain leachate accumulated in the landfill and direct it to the LCRS. The liner system also minimizes the potential for migration of landfill gas and increases the effectiveness of the landfill gas collection and control system (discussed further below). The leachate collection system as of March 2024 is set forth in **Appendix A.1**.

The landfill gas collection and control system (GCCS) is designed to prevent methane surface exceedances and minimizes fugitive emissions of landfill gas. Horizontal landfill gas collection trenches and/or vertical landfill gas extraction wells are connected to a central header system that conveys landfill gas to the flare facility, which actively controls and destroys landfill gas.

2.2 Seep Identification and Management

The following section discusses procedures for identifying, responding to, and mitigating leachate seeps, and planned improvements to the leachate system.

2.2.1 Procedures for Identification of Leachate Seeps

CCL performs inspections for exposed leachate seepage or pooling in accordance with the Stipulated Order for Abatement (SOFA) between CCL and the South Coast Air Quality Management District (SCAQMD) (Case No. 6177-4), most recently revised on April 24, 2024. SOFA Condition 27(b)(i) requires CCL to conduct leachate inspections twice per calendar day. After a two-week period with no observed exposed leachate seepage or pooling, CCL may reduce the inspection frequency to once every other day during the operating week. If inspections show exposed leachate seepage or pooling, then the inspection frequency must return to twice daily inspections. These inspections are recorded and submitted to South Coast Air Quality Management District (SCAQMD) on a weekly basis. CCL also submits the inspection records to SCAQMD in a monthly report required under Condition 8 of the SOFA. These inspections also allow CCL to identify any necessary repairs to the leachate collection system. CCL also measures and records the leachate temperature in accordance with Condition 27(a) of the SOFA. Condition 27(a) requires CCL to measure and record the leachate temperature within all 6-inch leachate pipes that feed into onsite frac tanks, and at the piping leading into the tanks at all tank farms.

CCL acts proactively to discover leachate seeps as early detection of leachate seeps is an important part of the mitigation process. Early indicators of leachate seeps include visible wet spots on the slopes that may appear as single wet spots, or a horizontal line of wet soil. Identification of these early indicators allows for the detection of leachate seeps before visible liquid leachate appears on the surface.

Detection of PLRs is generally less difficult. Workers who are drilling or servicing wells in or near the reaction area have been trained to recognize pre-indicators that a PLR may occur. These pre-indicators may include temperatures that exceed a pre-established threshold at the wellhead or in drilling spoils, wells located within the limits of the reaction area, or wells that have previously exhibited a PLR.

Additional thresholds may be established based on future data or experience with the reaction area and/or PLRs.

In the event CCL detects a leachate seep or PLR, actions will be taken to prevent pooling, ponding, or other leachate exposure to the atmosphere, as discussed below.

2.2.2 Responding to Leachate Seeps or Other Releases

In the event of a leachate seep or other release, CCL is implementing the best management practices (BMPs) detailed in **Appendix A.2**. Immediately upon detection of a leachate seep or release, CCL conducts initial safety and environmental assessments and characterizes the incident (e.g., whether the incident involves a seep or PLR), to determine the scope of mitigative action required. If pooling or ponding of leachate is occurring, the leachate must be immediately collected and contained in a sealed tanker truck or leachate tank that minimize emissions, or repairs must be promptly performed to redirect leachate into the leachate collection system. Notification, if required based on the specific circumstances, is also provided to emergency response services and the appropriate regulatory agencies. Additionally, SOFA Condition 25 provides CCL requirements for responding to pressurized leachate releases, including mitigation of odors and the dispersion and exposure of leachate into the atmosphere, equalization of pressure or diminished flow, and the removal of soil saturated with leachate, or addition of dry coil cover, to mitigate the potential for odors from the saturated soil.

CCL management staff notifies the appropriate regulatory agencies, which may include the SCAQMD, Regional Water Quality Control Board (RWQCB), CalRecycle, California Department of Toxic Substances Control, EPA, and/or the Local Enforcement Agency (LEA). All notifications are made through appropriate levels of management.

2.3 Improvements to Landfill Systems

CCL is evaluating improvements or modifications to the leachate collection and/or de-watering system continually and as needed in view of the subsurface reaction.

Upgrades are planned for the existing leachate de-watering system (**Appendix A.3**) in accordance with Condition 18 of the SOFA. The design plan includes installation of leachate collection force main piping (comprised of 8-inch, 6-inch, and 4-inch HDPE piping with associated tees and valves). The HDPE piping is rated to withstand temperatures based on current temperatures as measured during the regular leachate temperature monitoring described above. The proposed upgrades will also add piping to all existing and proposed vertical extraction wells. Further, approximately 74 new cleanouts are installed or planned for installation, which will allow for improved maintenance of the system. The upgraded de-watering system will allow for removal of excess liquid/leachate, thereby increasing the volume of leachate collected and helping to prevent seeps and discharges from occurring.

The above improvements are being made in conjunction with the installation of a geosynthetic cover that will cover more than 40-acres of the reaction area. The cover will mitigate any methane surface exceedances and fugitive LFG emissions in the shorter-term. If there are leachate seeps, the cover will also prevent commingling of stormwater and leachate.

As part of longer-term mitigation measures, CCL is continuing to expand its landfill gas system, including the planned installation over 200 new vertical gas extraction wells and associated piping to achieve a minimum density of three vertical extraction wells per acre on average within the initial Reaction Area

and even dispersion, achieving a well density of at least two vertical extraction wells per acre. CCL submits weekly reports to SCAQMD and the LEA detailing the week's well drilling installation activities. This information is also submitted in the monthly report to SCAQMD required under Condition 8 of the SOFA. Since these upgrades are expected to result in increased gas collection, CCL has also requested that the SCAQMD modify CCL's Title V air permit to include a new landfill gas blower, additional flare capacity, and the additional vertical extraction wells.

CCL conducts daily inspections of the leachate tanks and documents such inspections in the operating record of the facility in accordance with 22 CCR 66264.195. CCL is working toward compliance with all normally applicable federal and state hazardous waste regulations, including acquiring compliant tanks, identifying a qualified engineer for certification, and operation of leachate tanks in compliance with subpart J.

A detailed workplan, dated March 13, 2024, outlining the above improvements to address the subsurface reaction is provided in **Appendix A.3**.[1]

2.4 Standard Operating Procedures for On-Site Leachate Storage

At present, leachate and condensate is accumulated at eight distinct areas across the Landfill, as shown in Figure 1, below. Those areas include #1 Top Deck Manifold;[2] #2 East Perimeter (~4 frac tanks); #3 Ameresco Condensate Tanks; #4 Leachate Collection Manifold (~1 frac tank); #6 North Perimeter (~6 frac tanks); #8 Primary Canyon;[3] #7 Tank Farm (~107+ frac tanks); and #9 Tank Farm (129 frac tanks). In response to the subsurface reaction and significant increase in leachate production, CCL has significantly increased the number of tanks onsite to allow for greater storage capacity at the Landfill, including the recent addition of tank groups at #7 Tank Farm and the addition of #9 Tank Farm.

CCL is maintaining documentation to identify tanks in each tank group and their locations. That document is not a static document and is updated and revised as needed. A copy of that document (version March 19, 2024) is appended hereto as **Appendix A.4** for illustrative purposes only.

In accordance with the SOFA, leachate storage tanks and the landfill gas (LFG) collection and control system (GCCS) are subject to numerous conditions. For example, Condition 63 of the SOFA required CCL to submit a schematic of the current leachate treatment and storage system, including connections, flow lines, tank groups, vent lines to flares, lines to and between leachate tanks, and tanks that are connected and not connected to vacuum vent lines. This document was submitted to the SCAQMD on April 22, 2024, and is included as **Appendix B**.

[1] Some attachments to this workplan may have been superseded since drafted.

[2] #1 Top Deck Manifold has been disconnected from the landfill gas collection system since approximately January 2024.

[3] #8 Primary Canyon accumulates landfill gas condensate that is unaffected by the reaction area. However, a waste determination has been completed for #8 Primary Canyon in accordance with Section 4.0 of this Plan and the Sampling and Analysis Plan and associated Quality Assurance Project Plan, discussed below, #8 Primary Canyon is also discussed herein.

Condition 69 of the SOFA currently requires CCL to conduct quarterly inspections and monitoring of above ground piping and piping connections starting July 19, 2024, which would include piping/connections associated with the leachate vapors. This will include a physical condition assessment as well as monitoring for leaks of total organic compounds (TOCs) in accordance with the leak testing requirements of SCAQMD Rule 1150.1, including corrective action and re-monitoring as required by the rule. Quarterly inspection and monitoring events provide an additional mechanism to ensure that leachate vapors are being properly managed to avoid leaks to the atmosphere.

Any additional leachate storage tanks that are brought into service shall be equipped with vapor controls (i.e., connections to the GCCS) no later than 10 working days following commissioning of the tanks.

The response to the subsurface reaction involves utilization of all available offsite disposal options, including (1) onsite treatment of leachate followed by disposal at non-hazardous disposal facilities; and (2) disposal at hazardous waste treatment and disposal facilities. The onsite leachate treatment is designed to achieve a non-hazardous waste classification. As the leachate exits the waste mass through the collection piping, it is first routed to tanks that briefly hold the liquids (under vacuum) to properly manage the flows. The leachate is then pumped through the manifolds, piping, and hoses into the treatment units. There are currently two enclosed Granular Activated Carbon ("GAC") systems in place. The treatment units use sand filtration and bag filtration to remove solids from the leachate before the leachate is passed through a series of GAC vessels.

In addition, CCL is currently seeking approval to test a dissolved air flotation (DAF) system after the GAC system in Tank Farm #9 and a gravity clarifier after the GAC system in Tank Farm #7 to remove total dissolved solids (TDS) from the treated leachate stream. In the DAF system, contaminants will be removed using a dissolved air-in-water solution produced by injecting air under pressure into a recycled stream of clarified DAF effluent. Currently, the solution is a mixture of proprietary coagulants, polymers, and pH adjustment. The gravity clarifier also uses a mixture of proprietary coagulants, polymers, and pH adjustments and contaminants are removed by significantly slowing fluid velocity, allowing for gravity separation. If approved for testing and the tests are successful, employing these treatment methods may allow CCL to utilize additional disposal outlets which can accept waste without TDS.

Leachate that is characteristically hazardous is treated at #7 Tank Farm, extracted through three groupings of collection wells: Group A, North Perimeter, and East Perimeter. The leachate in Groups B and C is not characteristically hazardous. Group B is piped to #7 Tank Farm, and Group C is piped to both #7 Tank Farm and #9 Tank Farm. The groupings of collection wells are piped into a network of individual and interconnected (manifolded) frac tanks. Frac tanks containing treated landfill liquids are staged at #7 and #9 Tank Farms for off-site transport and disposal.

As described below, the #3 Ameresco Condensate Tanks are currently only accumulating small volumes of knock-out condensate from landfill flaring operations.

All frac tank lids and hatches are kept closed and inspected on a daily frequency. Inspection records are managed electronically and corrective actions are tracked. Tanks located in #7 and #9 Tank Farms are connected under vacuum, meaning any potential emissions from the tanks are pulled into the landfill gas collection flare system to capture emissions. As shown in the attached schematic, vacuum is applied to the vent lines from the leachate storage tanks via gas wellheads in the GCCS to maintain vacuum in the tanks and to transport leachate vapors into the GCCS to be destroyed by the LFG flares or thermal oxidizer. As of the date of this updated submittal, there are roughly 245 frac tanks storing leachate, all of

which are under vacuum.[4] The number of tanks can and will vary as needed due to operational demand, cleanings, or repairs. Any new or replacement tanks CCL acquires will be put under vacuum as soon as possible.

To ensure that vacuum is maintained in the leachate tanks, in accordance with Condition 68 of the SOFA, CCL installed pressure gauges on each leachate storage tank by July 10, 2024, and is currently taking/recording daily differential pressure readings to confirm that the tanks are under vacuum. Condition 72 of the SOFA required daily pressure readings to be obtained with hand-held meters, beginning April 29, until the pressure gauges were installed. This information is reported to SCAQMD in the monthly report required pursuant to Condition 8 of the SOFA.

In accordance with Condition 72 of the SOFA, CCL installed flow meters within the main gas piping headers for associated leachate tank farms to accurately measure and record the flow rate (in scfm) and total daily volume of vented leachate tank vapors being sent to the flare station for combustion by July 19, 2024. The vapor flow data will provide further data to allow CCL to monitor the volume of leachate vapors being extracted and managed by the GCCS and provide an additional confirmation that adequate vacuum is being applied.

If there are any tanks or groups of tanks that are not under vacuum, CCL will make adjustments to the GCCS components to increase the vacuum levels to the tanks. If after a week vacuum is still not being demonstrated in certain tanks/tank groups, CCL will make additional improvements to the piping network and/or connections to the GCCS within 30 days. Ongoing vacuum monitoring consistent with SOFA procedures will allow CCL to continually confirm vacuum levels, for any existing or new tanks, and conduct corrective action when needed to ensure that leachate vapors will be properly controlled by the GCCS.

CCL is actively working with a contractor to determine applicability of RCRA Subpart BB for the air emission standards for equipment leaks. To do so, CCL will use the test methods in 40 CFR 264/265.1063(d) to determine if a waste meets the 10% by weight organic concentration threshold. If applicable, CCL will document, consistent with 40 CFR 264/265.1064(k), which equipment (if any) is exempt from these requirements. CCL is also working with a contractor to determine applicability of RCRA Subpart CC air emission standards for tanks, surface impoundments, and containers. CCL is undertaking testing to determine the average volatile organic concentration per 40 CFR 264.1083 and 265.1084.

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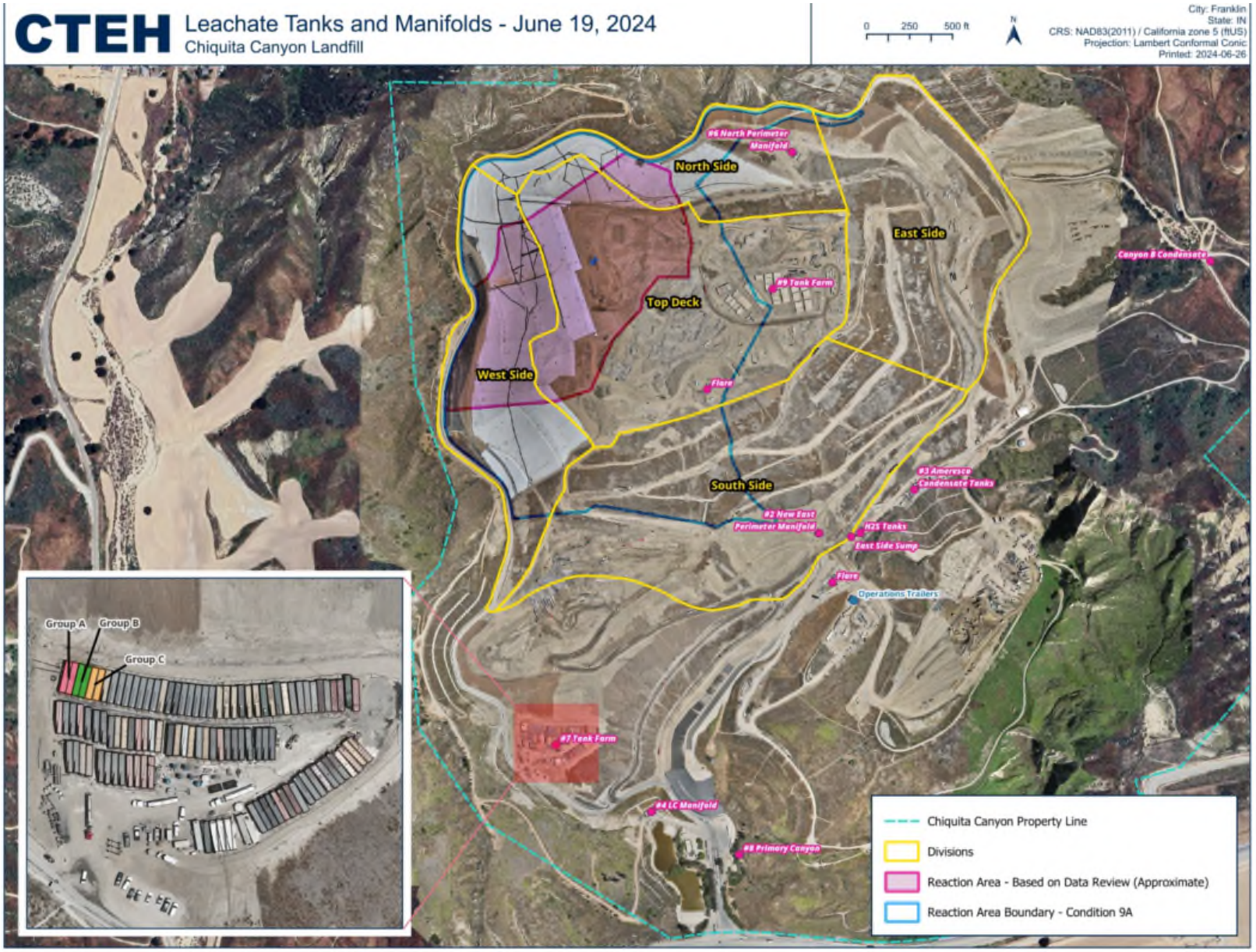
[4] There are 251 frac tanks onsite total, however, 2 frac tanks are not setup for operation and 4 are undergoing repair.

Figure 1. Leachate and Condensate Accumulation Areas



3.0 Waste Characterization

3.1 Waste Streams

Waste streams related to the ETLF event requiring characterization and potential offsite disposal include leachate, condensate, tank bottoms, spent filter and carbon media, personal protective equipment (PPE), and spill debris, as described below.

- Leachate: As previously noted, leachate is the liquid generated from water percolating through a solid waste disposal site. Because landfill gas condensate and leachate currently both flow into the landfill gas system due to the subsurface reaction and increased liquid levels, there is no way to separate the two types of liquids. Thus, for purposes of this response, landfill leachate and landfill gas condensate will generally be addressed and referred to collectively as leachate unless otherwise specifically noted.
- Condensate: For purposes of this Leachate Management Plan, condensate generally refers to knock-out condensate produced in connection with landfill flaring operations and not, for the reasons discussed above, landfill gas condensate.[5]
- Tank Bottoms: The residual materials deposited (settled) at the bottom of storage tanks.
- Spent Filter and Carbon Media: Sand and bag filter solids and activated carbon that has reached its sorption capacity.
- Personal Protective Equipment (PPE): Equipment or materials used in waste characterization and management, including, nitrile gloves, respirator cartridges, bailers, and miscellaneous sampling equipment.
- Spill Debris: Materials used in spill response, mainly absorbents (e.g., Oil Dri® and absorbent pillows).

3.2 Waste Characterization and Profiling

3.2.1 Objectives

A Sampling and Analysis Plan (SAP) has been developed to provide a mechanism for collecting waste characterization data in support of the decision-making process regarding the management and disposal

[5] A separate condensate waste stream was also previously produced by the Ameresco facility, a waste-to-energy facility at the Landfill and operated by Ameresco Chiquita Energy LLC. That condensate was accumulated in the #3 Ameresco Condensate Tanks (in addition to a small volume of knock-out condensate from landfill flaring operations). Ameresco ceased operations at its facility on January 31, 2024, and the #3 area tanks no longer received any additional Ameresco condensate. Condensate accumulated in the #3 tanks was shipped offsite to the Aragonite Incineration Facility in Tooele County, Utah, as hazardous or potentially hazardous waste in March 2024. Since then, the tanks in the # 3 tank area have been cleaned out and are only accumulating knock-out flare condensate.

of waste materials. The SAP provides a mechanism for collecting data to support waste classification and inform decision-making regarding the appropriate management and disposal of the waste. The SAP: (1) provides the technical approach (i.e., sampling design) and rationale for waste characterization, including sampling locations, frequency of sampling, and the analytical testing regimen; (2) describes the field procedures and methods for implementing the sampling design (i.e., the field sampling plan); and (3) discusses the relevant regulatory frameworks and thresholds defining hazardous waste.

CCL is using knowledge of the waste itself from historical acceptance at the Landfill and/or the process to select the analytical parameters. The waste stream determinations are made at the point of generation, before any mixing or other alteration of the waste occurs. The analytical and waste characterization will determine the appropriate management and final disposition of the waste.

The objectives of the waste sampling prescribed by the SAP are as follows.

1. Characterize the various liquid and solid waste streams for the purpose of waste profiling and disposal. Each waste stream determination (WSD) will follow the RCRA regulations at 40 CFR 262.11 and California Hazardous Waste Determination rules found in 22 CCR Section 66262.11 for waste determinations. CCL will recharacterize a particular waste stream when the process or operation that produces the waste changes or the waste is sent to a different hazardous waste treatment and disposal facility for the first time or requires annual recertification at the disposal facility. CCL will conduct sampling using TCLP when recharacterizing a particular waste stream when the process or operation that produces the waste changes. Waste characterization shall involve testing to determine whether any wastes are California-only hazardous wastes pursuant to California's testing procedures, including the Soluble Threshold Limit Concentration (STLC) and Total Threshold Limit Concentration (TTLC).
2. Verify the efficacy of liquid waste (i.e., leachate and condensate) treatment (discussed in **Section 4.2** of the Sampling and Analysis Plan). Treatment is deemed effective when the results from waste sampling fall below the regulatory thresholds for hazardous waste. and meet the disposal criteria of the various receiving facilities. If necessary, treatment will continue until it results in the waste meeting offsite disposal facility acceptance criteria, including applicable RCRA Universal Treatment Standards under the Land Disposal Restrictions (LDR) requirements (if any). Liquids following treatment that are deemed hazardous due to their chemical properties (i.e., exhibit toxicity characteristic) are subject to further treatment. Wastes that do not exhibit the toxicity characteristic but classify as ignitable based on flash point are profiled as hazardous waste and disposed of accordingly.

A Chiquita Canyon ETLF Response Action Quality Assurance Project Plan (QAPP), dated March 27, 2024, has also been developed to serve as a framework ensuring the quality and integrity of data collected through implementation of the SAP. The QAPP defines data quality objectives and outlines criteria for data quality, including precision, accuracy, representativeness, comparability, and completeness. Collectively, the SAP and the QAPP set forth the process and parameters to characterize the various waste streams described above and are being submitted to EPA concurrently with this Plan.

3.2.2 Analytical Testing Regimen

As set forth in the SAP and QAPP, a comprehensive waste characterization approach (i.e., the analytical testing regimen) was developed based on: (1) the nature of the Landfill waste matrix and corresponding

characteristic chemical composition of the leachate and gas stream; (2) the effects of ETLF; (3) the criteria for identifying and listing hazardous waste promulgated under 40 CFR 261.20 – 261.24 and 22 CCR 66261.20 – 66261.24; and (4) the disposal criteria (requirements) of the receiving facilities.

A subset of volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), and metals customary to municipal solid waste leachate and indicators of ETLFs are included in 40 CFR 261.24 and 22 CCR 66261.24 as part of the toxicity characteristic determination. The receiving facilities require testing for these parameters to ensure compliance with regulatory requirements for toxicity. Additionally, the receiving facilities require testing for flashpoint and pH to evaluate waste for characteristics of ignitibility (40 CFR 261.21 and 22 CCR 66261.21) and corrosivity (40 CFR 261.22 and 22 CCR 66261.22), respectively. Based on this information, waste characterization will involve testing of VOCs by Method 8260, SVOCs by Method 8270, mercury by Method 7470, the remaining California Title 22 metals by Method 6010, flashpoint by Method 1010; and pH by Method 9040B, as specified in the SAP and QAPP. Initial waste determinations and new hazardous waste determinations due to a change in the character of the waste shall be conducted via the TCLP method. Waste characterization shall involve testing to determine whether any wastes are California-only hazardous wastes pursuant to California's testing procedures, including the STLC and TTLC.

3.2.3 Frequency of Testing

Liquid waste streams are initially sampled at a daily frequency and solid waste streams are sampled periodically as needed, such as during a tank cleaning or GAC filter replacement. The scope of the analytical testing program and frequency of sampling may be reduced over time with consent from the receiving facilities, or increased/reduced in response to changing conditions related to the ETLF. Waste determinations will be performed for various waste streams in accordance with the SAP and QAPP, and may be reevaluated for each waste stream or point of generation as appropriate and on a case-by-case basis. On a weekly basis at least, sampling occurs at the point of origination for the characteristically non-hazardous waste groups.

3.2.4 Incorporation of Additional Plans

The Leachate Disposal Unit within the Multi-Agency Coordination Group has prepared a separate leachate management plan, the Leachate Unit Management Plan ("LUMP"). The requirements of the RMAC LUMP are incorporated by reference into this Plan. The LUMP is provided as **Appendix C** to this Plan.

Additionally, CCL has also developed a Leachate Contingency Plan which is incorporated by reference into this Plan. The Leachate Contingency Plan is provided as **Appendix D**.

CCL has also developed a Data Management Plan, submitted to EPA on July 17, 2024. In the event of a conflict between the Plan and the Data Management Plan, with respect to data management, the Data Management Plan will govern.

4.0 Off-Site Transport and Disposal of Waste

This section describes the operating procedures to transport waste streams to appropriate locations for offsite disposal. A summary of current offsite treatment and disposal facilities is provided below in Section 5.1.3.

CCL is meticulously tracking the management of liquid waste from the point of generation through off-site transport and disposal, ensuring the various waste streams are not commingled.

4.1.1 Off-Site Transport and Disposal - Non-Hazardous Waste Facilities

Pending any waste determinations for leachate in accordance with the SAP and QAPP, leachate is not sent offsite to non-hazardous treatment and disposal facilities listed below until sampling results confirm that the leachate is below the applicable regulatory thresholds for relevant constituents, including constituents for waste characterization (i.e., benzene) and constituents requested to be sampled by offsite disposal facilities. Under the Multi-Agency Coordination Group, CCL personnel, contractors and regulators have been assigned duties within the Leachate Disposal Unit to identify and track leachate. This unit tracks the daily generated leachate inventory, daily disposal, and amount of pumps and wells installed. The Leachate Disposal Unit also maintains a Disposal Facility tracking spreadsheet with approximately 400 potential facilities and storage locations which have been contacted. Samples and analytical data have been provided to disposal outlets for acceptance criteria. CCL is currently treating leachate onsite in order to open up more disposal outlets and is working diligently to identify additional options.

After onsite treatment is complete following the process described above, CCL conducts posttreatment confirmatory sampling of each tank (or multiple tanks if manifolded and treated together). Once laboratory reports and results are received, CCL evaluates results against the applicable regulatory thresholds. If the sampling results indicate constituents in leachate are below regulatory levels, CCL provides those sampling results to the non-hazardous offsite facility for confirmation that the waste can be accepted at the facility. Once the facility receives the analytical reports and provides its approval to accept the leachate, CCL directs available trucks for loading to the particular tanks that have been approved for offsite transport and instructs the drivers as to where to transport the leachate from those tanks. CCL has dedicated personnel (including overnight staff) to coordinate the loading and shipment process.[6]

For tanks other than those discussed above or in instances where post-treatment sampling shows that target constituents (e.g., benzene) are not treated to levels below their respective regulatory thresholds, the leachate in the tank is retreated and post-treatment confirmatory sampling is then again performed for that tank. CCL then follows the same procedures discussed above following receipt of the laboratory report, including evaluation of the results against the applicable regulatory thresholds, provision of the analytical reports to the offsite facilities, awaiting confirmation by the offsite facilities that the leachate can be accepted, and directing available trucks to the specific tanks that have been approved for offsite transport.

[6] Currently, the majority of leachate is being treated onsite with two enclosed GAC systems apart from #4 LC Manifold, which at this time is producing the lowest volumes of leachate daily and has shown the lowest constituent levels overall. As a general matter, for tanks in which treatment is not taking place, CCL samples the tanks and then follows the procedures outlined herein following receipt of the initial laboratory report.

4.1.2 Off-Site Transport and Disposal – Hazardous Waste Facilities

For tanks that are shipped offsite as hazardous waste (e.g., leachate is not treated prior to offsite shipment), CCL has contracted with Clean Harbors, Inc. to transport landfill liquid that has been identified as hazardous or potentially hazardous to several of Clean Harbors' facilities to ensure proper disposal of those waste streams. Landfill liquid that has been identified for transport to a Clean Harbors facility is manifested on a hazardous waste manifest in accordance with 22 CCR 66262.20. A one-time Land Disposal Restriction (LDR) notification is also provided to each hazardous waste facility in accordance with 22 CCR 66268.7.

CCL is actively assessing the use of additional facilities to manage hazardous or potentially hazardous leachate or condensate. CCL will also follow the same procedures as set forth in the UAO to obtain EPA's determination of acceptability and provide notice to the relevant state environmental officials for any newly identified facilities.

Other waste streams described in Section 4.0, above, will be disposed of appropriately. Any spent carbon media or tank bottoms characterized as hazardous waste, or managed as hazardous waste in an over-abundance of caution pending any waste determination, shall only be disposed of at permitted hazardous waste facilities pre-approved by EPA in accordance with the UAO.

4.1.3 Off-Site Rule

Pursuant to Paragraph 28.a of the UAO issued by EPA, hazardous substances, pollutants, and contaminants may only be shipped to an offsite facility in compliance with the "Off-Site Rule" (OSR) under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) at 42 U.S.C. § 9621(d)(3) and 40 CFR 300.440. CCL is deemed in compliance with the Off-Site Rule if it obtains a prior determination from EPA that a proposed receiving facility is acceptable under the criteria at 40 CFR 300.440.

In the event CCL needs emergency off-site disposal capacity and is unable to find additional offsite disposal at a facility on the EPA OSR approved facilities list, CCL may seek an emergency exemption from the OSR. 40 CFR 300,440(b) following EPA's "Site-Specific Procedures for Seeking an Emergency Exemption from Off-Site Rule Requirements," as agreed by EPA and CCL.

In accordance with Paragraph 28.a of the UAO and the Off-Site Rule, on February 24, 2024, CCL obtained EPA's determination that the Clean Harbors Aragonite Incineration Facility in Tooele County, Utah is acceptable to receive offsite shipments of hazardous or potentially hazardous landfill liquid. CCL can ship approximately two truckloads of leachate (approximately 10,000 gallons total) offsite to the Aragonite facility each day, on an as-needed basis.

On February 27, 2024, EPA provided a determination of acceptability for the Clean Harbors Kimball Incineration Facility located in Kimball, Nebraska. CCL can ship approximately two truckloads of hazardous or potentially hazardous landfill liquid (approximately 10,000 gallons total) offsite to the Kimball facility each day, on an as-needed basis.

CCL also obtained EPA's determination of acceptability for the Clean Harbors Deer Park Incineration Facility in La Porte, Texas on February 29, 2024. CCL can ship landfill liquid via rail to the Deer Park facility. CCL has arranged for a local rail car to be available for bulk transportation to the Deer Park facility on an as-needed basis for up to three shipments of hazardous or potentially hazardous landfill liquid per week, consisting of one rail car tanker per shipment. Each rail car tanker has a capacity of approximately 20,000 gallons.

Pursuant to Paragraph 28.b of the UAO, CCL provided written notice to the appropriate Utah, Nebraska, and Texas environmental officials and to EPA of shipments of hazardous or potentially hazardous landfill liquid to the above facilities. Copies of the notice to Utah dated February 26, 2024, Nebraska dated February 27, 2024, and Texas dated February 29, 2024, are attached hereto, respectively, as **Appendices A.5, A.6, and A.7.**

On July 3, 2024, EPA approved the acceptance of waste from CCL under the site-specific emergency exemption procedure to the OSR at the Durham Regional Landfill located in Florence, Arizona, the Clean Harbors Industrial Service Oil Company, Inc. located in Los Angeles, California, and the East Valley Remediation Facility[7] located in Mecca, California.

4.1.4 Summary of Treatment and Disposal Facilities as of August 1, 2024

Non-Hazardous Facilities

(1) Avalon Industrial Wastewater Treatment Facility– 14700 S. Avalon Blvd., Gardena, California 90248
(2) Durham Regional Landfill – 22326 S Harmon Road, Florence, Arizona 85132
(3) Clean Harbors Industrial Service Oil Company, Inc. – 1700 South Soto Street, Los Angeles California 90023
(4) East Valley Remediation Facility – 62150 Gene Welmas Way, Mecca, California 92254
(5) US Ecology Nevada – 11455 S US-95, Beatty, Nevada 89003

Hazardous Facilities

(1) Clean Harbors Aragonite Incineration Facility - 11600 North Aptus Road, Grantsville, UT 84029
(2) Clean Harbors Kimball Incineration Facility - 2247 South Highway 71, Kimball, Nebraska 69145
(3) Clean Harbors Deer Park - 2027 Independence Parkway South, La Porte, TX 77571

CCL provides SCAQMD an updated list of off-site disposal facilities in the monthly report CCL submits pursuant to SOFA Condition 8.

[7] The East Valley Remediation Facility is approved for disposal of characteristically non-hazardous leachate only. EPA is actively considering whether the facility can accept disposal of treated non-hazardous leachate.

4.1.5 Waste Shipment Preparation

To initiate shipments of hazardous and non-hazardous waste, CCL personnel (or its contractors) must prepare and provide the following documentation:

- Provide a complete and accurate waste inventory for the waste to be transported offsite.
- Provide waste profile and corresponding analytical report for each type of waste transported offsite.
- If the waste profile has been previously provided, ensure it has been updated annually.

When a shipment is needed and the above-listed information has been provided to CCL Compliance Manager, a shipment will be initiated as follows:

- When authorized by the designated representative, CCL Compliance Manager will contact the disposal contractor and arrange for transportation of the waste offsite.
- The HW disposal contractor may choose to be onsite the day before the shipment to review paperwork and inspect containers.
- Compliance with pre-transportation requirements at 22 CCR 66262.30 - 66262.33 will be assessed.

All shipments of hazardous or potentially hazardous waste to permitted hazardous waste treatment and disposal facilities will be properly manifested on hazardous waste manifests in accordance with 22 CCR 66262.20 and the hazardous waste manifest requirements at 40 CFR 262.20.

4.2 U.S. Department of Transportation

Prior to transporting or offering hazardous waste for transportation offsite, each shipment is labeled in accordance with applicable DOT regulations (49 CFR 172 Subpart E) as follows:

- “HAZARDOUS WASTE-State and Federal Law Prohibit Improper Disposal. If found, contact the nearest police or public safety authority, the U.S. Environmental Protection Agency or the California Department of Toxic Substances Control.”
- DOT proper shipping name
- United Nations (UN) or North America (NA) number (49 CFR 172.101)
- Generator’s name and address
- Generator’s EPA ID number
- EPA/State waste code(s)
- Accumulation Start Date
- Manifest tracking number

Additionally, each hazardous waste shipment will be labeled in accordance with 49 CFR 172 Subpart D, as follows:

- Weight
- Sequence (e.g., 1 of 3)
- DOT shipping label

Each package of hazardous waste for shipment will be labeled according to the DOT hazard classification for that waste, as follows:

- Hazardous waste that meets the definition of more than one DOT hazard classification must be labeled in accordance with all DOT hazard classifications (e.g., Flammable, Toxic).

4.3 Land Disposal Restriction

The Land Disposal Restrictions (LDRs) are a set of regulations at 40 CFR Part 268 and Title 22 of the California Code, Division 4.5, Chapter 18, that place certain restrictions on hazardous waste sent to land disposal. These regulations generally require treatment of hazardous wastes prior to land disposal.

The LDR requirements apply to all persons who generate hazardous wastes, as well as owners and operators of hazardous waste treatment, storage, and disposal (TSD) facilities. Depending on constituent concentrations in the waste, some wastes will require treatment to meet LDR treatment standards and some may meet them without further treatment. In some instances, the Universal Treatment Standards must be met for Underlying Hazardous Constituents ("UHC") that are identified.

When applicable, LDR Notification Forms will accompany the manifest as part of the shipping papers. A one-time LDR notification is provided to each hazardous waste facility CCL is shipping waste to in accordance with 22 CCR 66268.7 and signed by personnel designated by the CCL Compliance Manager.

All LDR paperwork and associated documentation will be retained by CCL as required under applicable regulations.

4.3.1 *Process for Making Wastewater vs. Nonwastewater Determinations*

Only leachate generated at Group A, East Perimeter, and North Perimeter has been identified as potentially hazardous. CCL has made the determination that leachate – from Group A, East Perimeter, and North Perimeter generation points, both before and after treatment – is "nonwastewater" using numerous representative grab samples, consistent with EPA's "*Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*" (EPA Publication SW-846), rather than by testing each and every tank of leachate.

For the leachate prior to treatment, CCL obtained one grab sample from each of the relevant tank groups on 7 days, for a total of 21 samples, and had these samples tested for total organic carbon (TOC). The TOC results from these samples ranged from 19,000 mg/L to 44,000 mg/L (not counting 2 samples for which the laboratory apparently made an error in reporting), which translates to a range of 1.9% to 4.4%. Because all these results are above 1% TOC, they clearly demonstrate that the pre-treatment leachate from these tank groups are nonwastewaters. *See* 40 CFR 268.2(f) (defining wastewaters as "wastes that contain less than 1% by weight TOC *and* less than 1% by weight total suspended solids (TSS)"; 40 CFR 268.2(d) (defining nonwastewater as "wastes that do not meet the criteria for wastewaters"); *see also* 22 CCR 66260.10.

For leachate after treatment, CCL obtained a total of 46 grab samples of the effluent of the GAC treatment units over 6 sampling days, and again had them tested for TOC. All of the 46 TOC results except one were above 10,000 mg/L (1%) TOC, with values up to 31,000 mg/L (3.1%) TOC. These results clearly demonstrate that the post-treatment leachate is generally nonwastewater.

4.3.2 *Implications of Any Post-Treatment Leachate Testing as Wastewaters*

To the extent that any post-treatment leachate might contain both <1% TOC and <1% TSS, it would qualify as a "wastewater" for LDR purposes, consistent with the LDR definition of wastewater set forth at

40 CFR 268.2(f) of the federal regulations and 22 CCR 66260.10 of the California regulations. In addition, if such "wastewater" post-treatment leachate was still characteristically hazardous, it would be subject to the LDR treatment standards for wastewater.

However, the post-treatment leachate has consistently tested non-hazardous. Under the RCRA regulations, if the (non-hazardous) post-treatment leachate was a wastewater, it would not be subject to any LDR treatment standards (either for wastewaters or for non-wastewaters). The reason is that the change from "non-wastewater" (prior to treatment) to "wastewater" (after treatment) is considered a "change in treatability group" and thus a new point of generation for LDR purposes. See, e.g., 55 Fed. Reg. 22,520, 22,661 (June 1, 1990) (explaining that the LDR rules generally divide the universe of hazardous wastes into wastewater and non-wastewater "treatability groups"); id. at 22,544 ("each new treatability group is a new point of generation for a characteristic waste"). EPA has made clear that if the new treatability group is not hazardous at its point of generation, the LDR treatment standards no longer apply:

> A change in treatability group for a characteristic treatment residual is a new point of generation for LDR purposes. If the [residual] has undergone a change in treatability group and is no longer characteristic, then it is not a RCRA hazardous waste, and the generator would not need to comply with the LDR requirements in Part 268.[8]

In light of the above, if any (non-hazardous) post-treatment leachate did meet the LDR definition of wastewater, it could be placed into a land-based unit without meeting any LDR treatment standards. If CCL nevertheless continued to manage it as if were a nonwastewater (e.g., if CCL failed to recognize that treatment had changed it into a wastewater), CCL would actually be managing the leachate in a more protective manner than required under the regulations. Specifically, in such a case, CCL would continue to require that the post-treatment leachate meet the LDR treatment standards for nonwastewaters before being placed into a land-based unit, even though no LDR standards would actually apply under the regulations (because of the change in treatability group from nonwastewater to wastewater, together with the fact that the wastewater would not be hazardous at its point of generation, as discussed above). CCL stresses that this would rarely, if ever, happen, because the current post-treatment leachate has almost always tested above 1% TOC and thus qualifies as a nonwastewater for LDR purposes.

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[8] See EPA, RCRA Hotline Report (June 2004) (RCRA Online #14718); see also 58 Fed. Reg. 29,860, 29,871 (May 24, 1993) ("for characteristic wastes, each change of treatability group in a treatment train mark[s] a new point of generation for determining if a characteristic waste [i]s prohibited from land disposal"); Letter from James R. Berlow, Director, Hazardous Waste Minimization and Management Division, EPA, to Barton Day, Bryan Cave, LLP (March 21, 1996) (RCRA Online #14207) ("because the sludge generated in your situation would be a different treatability group from the wastewater from which it is generated, it would be considered to be a newly-generated waste that should be evaluated at its point of generation to determine if it is prohibited from land disposal"; thus, "[t]he sludge would be prohibited from land disposal (and hence subject to meeting treatment standards before land disposal) only if it is a hazardous waste at the point it is generated").

4.3.3 *Wastewater or Nonwastewater Calculations*

The laboratory reported TOC and TSS results in units of mg/L. For TOC, the results were essentially always well above 10,000 mg/L, or 10 g/L (since 1 g equals 1000 mg), with the one exception noted above for 1 of 46 post-treatment samples. For purposes of converting these results to % by weight, CCL assumed that the leachate (which is greater than 90% water) had the same density as water, namely 1 kg/L. Thus, 10 g/L TOC (well below all but one actual measurement) could be converted to 10 g/kg, or 10 g/1000 g (since 1 kg equals 1000 g). A concentration of 10 g/1000 g equates to 1% by weight (since 100% by weight would be 1000 g/1000 g, 10% would be 100 g/1000 g, and 1% would be 10 g/1000 g).

While the actual density of the leachate could be slightly higher or lower than the density of water, any difference would not change the conclusion that the leachate exceeds 1% TOC by weight and thus qualifies as nonwastewater. The difference would be small, given that the leachate is more than 90% water. CCL recently tested a single sample of leachate and measured a specific gravity (density) of 1.032 kg/L. Moreover, even if the density of leachate was 1.5 kg/L, the lowest measured TOC level in untreated leachate – 19,000 mg/L or 19 g/L – would translate to 19 g/1500 g or 1.27% -- still above the threshold for nonwastewaters. The same would be true for virtually all of the post-treatment leachate.

4.3.4 *Post-GAC TSS*

As an initial matter, CCL notes that the TSS level in the leachate was not relevant to our determination that the leachate pre-treatment and post-treatment qualifies as nonwastewater, given the TOC test results for these materials. As noted above, under the LDR regulations, wastewaters are defined as "wastes that contain less than 1% by weight total organic carbon (TOC) and less than 1% by weight total suspended solids (TSS)." See 40 CFR 268.2(f); see also 22 CCR 66260.10. Since the TOC levels measured were above 1%, the leachates could not qualify as wastewaters, regardless of the TSS content. Instead, they were nonwastewaters. See 40 CFR 268.2(d) (defining nonwastewater as "wastes that do not meet the criteria for wastewaters"); see also 22 CCR 66260.10.

Notwithstanding the above, Chiquita has performed limited TSS testing on leachate before and after treatment. For example, the 21 samples of pre-treatment leachate from Group A, East Perimeter, and North Perimeter were also tested to determine their TSS concentration. All of the results were well below 1% TSS, with concentrations ranging from 330 mg/L to 4600 mg/L TSS (0.033% to 0.46%). Based on process knowledge, the TSS concentration after GAC treatment would be expected to remain <1%. Indeed, even though the samples of post-treatment leachate discussed above were not tested for TSS levels (because it was unnecessary to do so), some previous samples of the GAC effluent were tested for TSS levels, and the results were well below the 1% by weight threshold (generally below 1000 mg/L or 0.1%).

4.3.5 *Sampling Points*

Chiquita aggregates characteristically hazardous wastes in holding tanks prior to centralized treatment. This is done to simplify and improve control over handling of the waste—by reducing complexity, CCL has better control. EPA has long recognized that such aggregation prior to centralized treatment is not impermissible dilution. 55 Fed. Reg. 22520, 22666 (June 1, 1990). CCL conducts sampling prior to treatment directly from the holding tanks. Additionally, CCL takes monthly samples directly from the point of generation.

The treatment process entails pumping from those holding tanks into various filters and then the GAC vessels. Treated liquids (GAC effluent) are then discharged into designated non-hazardous “Treated Water” tanks that do not receive hazardous liquids. These treated water tanks are then sampled to determine treatment efficacy and disposal options. Composite samples are performed on Treated Water tanks that are filled simultaneously (i.e., 2 or 3 tanks are filled at the same moments from the same GAC effluent via a manifold).9

[9] Composites are used due to lab capacities.

5.0 Permitting

As explained in a letter submitted to DTSC on CCL's behalf dated February 14, 2024, onsite storage and treatment is being conducted pursuant to the immediate response exemption. See 22 CCR 66264.1(g)(8)(A), 66265.1(e)(11)(A), and 662670.1(c)(3)(A).

On February 16, 2024, CCL also submitted an emergency permit application to DTSC addressing onsite treatment. That emergency permit application is currently pending with DTSC. CCL is engaged in ongoing discussions with EPA, DTSC, and LA Fire (CUPA) regarding appropriate next steps. Based on these discussions, CCL recently submitted information to the CUPA regarding the possibility of conducting onsite treatment pursuant to the Condition Authorization tier of California's tiered hazardous waste permitting program.

CCL is also working to modify its Title V permit to incorporate upgrades and modifications to landfill systems as described herein. Permit No. G43917, A/N 578102 sets forth requirements and conditions to operate CCL's Landfill Gas Collection System, which consists of vertical gas collection wells, a header connecting to the flare station, horizontal gas collection trenches, and soil vapor extraction wells. Permit No. G66132, A/N 613131 sets forth requirements and conditions to modify, construct, and operate CCL's Landfill Gas Condensate and Leachate Collection/Storage System. The permit includes authorization for five condensate tanks and four leachate tanks varying in capacity.

In October 2023, CCL previously applied to the SCAQMD to modify its Landfill Gas Condensate and Leachate Collection/Storage System permit to include additional clarifier and frac tanks to increase the landfill's liquid storage capacity. However, given the evolving situation at the Landfill and the need for additional tanks and other equipment to accommodate the increase in leachate production, CCL sought further modification of its Title V permit. CCL also submitted an application to include treating hazardous liquid waste in its Landfill Gas Condensate and Leachate Treatment System. The SOFA requires CCL receive various permit modifications to remain in compliance with applicable permit requirements and Conditions of the SOFA. CCL will continue to update the Title V permit as necessary to reflect the ultimate configuration of the treatment process.

In October 2023, an application was also submitted to SCAQMD on behalf of CCL for a new landfill gas blower and flare system. Based on discussions with SCAQMD, CCL submitted a permit application to modify its flare system to incorporate the combustion of vapor from the tie in of the LFG condensate and leachate treatment system as described in Section 2.4. CCL also submitted an application to permit its portable thermal oxidizer.

A permit modification application has also been submitted to the SCAQMD for the Landfill Gas Collection System permit to increase the number of permitted wells in the well field. CCL submitted an application to modify this permit to include the tie in of the landfill gas condensate and leachate treatment system vapor vent lines.

CCL and its consultant, SCS Engineers, continue to have bi-weekly virtual conferences with SCAQMD technical staff to discuss improvements to the leachate and/or landfill gas systems and identify any associated permit modifications that may be required. Additionally, members of the Reaction Committee meet monthly and those discussions include permit modifications that may be required.

CCL is also working with the CUPA on a long-term approach for hazardous waste treatment, storage, and disposal activities under the California tiered permitting system's conditional authorization.

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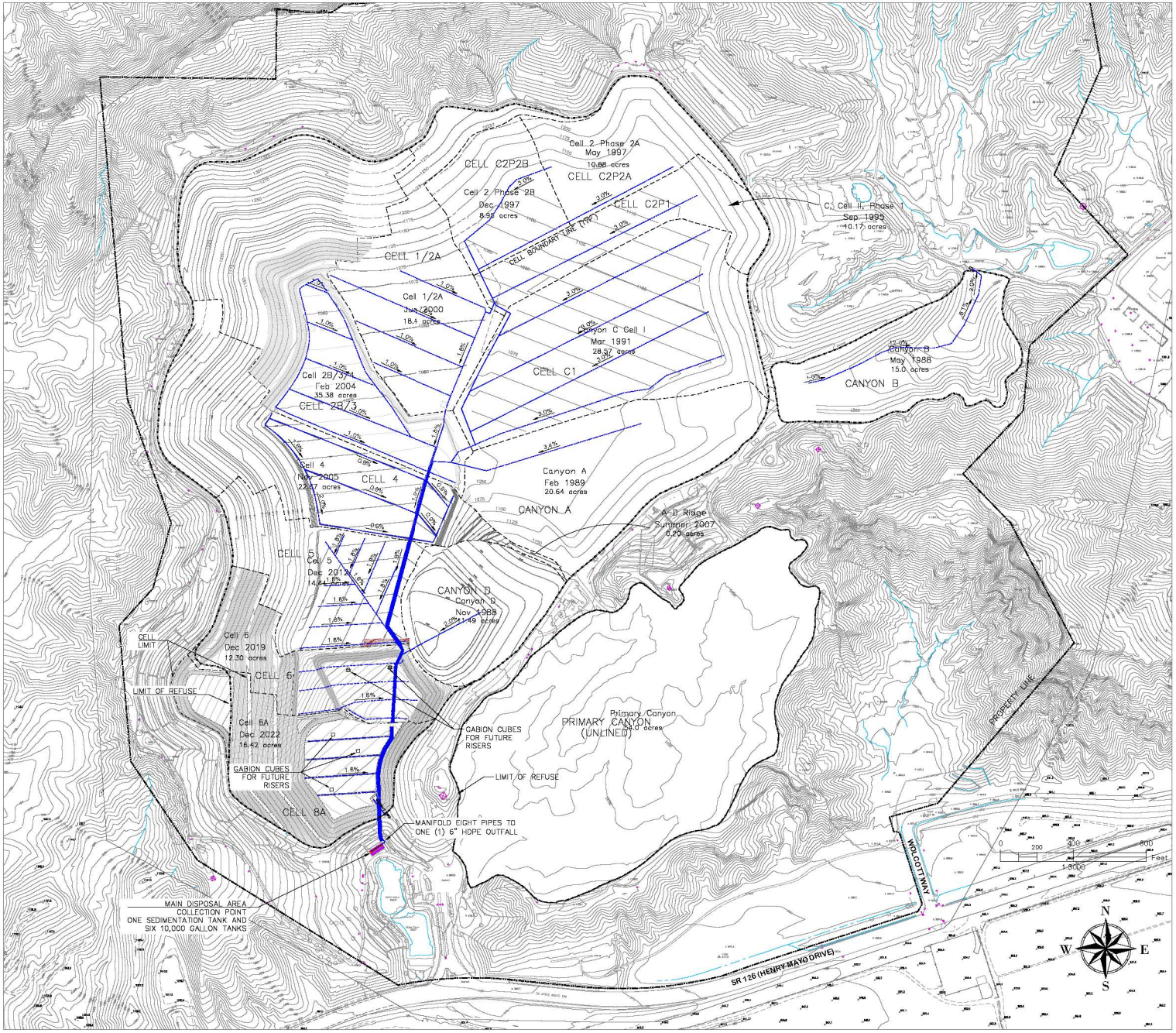
Appendix A.1



LEGEND

- LEACHATE COLLECTION PIPE – PERFORATED
- LEACHATE COLLECTION PIPE – SOLID
- LANDFILL CELL OR WMU SUB-AREA BOUNDARY
- LIMIT OF REFUSE (FILL BOUNDARY)
- PROPERTY LINE

NOTES

1. THIS DRAWING PREPARED BASED ON REVIEW OF AS-BUILT DOCUMENTS ON FILE AT THE LANDFILL OFFICES
2. ALL PIPES SHOWN ARE 6" HDPE UNLESS OTHERWISE INDICATED
3. ALL LEACHATE IS COLLECTED IN STORAGE TANKS AND DISPOSED OFFSITE AT APPROVED TREATMENT PLANT FACILITIES
4. LINER LIMIT IS COINCIDENT WITH LIMIT OF REFUSE EXCEPT AS SHOWN IN CELL 8A
5. CONTOURS SHOWN WITHIN LIMIT OF REFUSE ARE AS-BUILT LINER ELEVATIONS EXCEPT PRIMARY CANYON WHERE PRE-LANDFILL SURFACE TOPOGRAPHY IS SHOWN
6. BACKGROUND TOPO BY TETRATECH GEOMATIC TECHNOLOGIES DATED JANUARY 16, 2024 AND SURROUNDING AREA BY CARTWRIGHT AERIAL SURVEY DATED APRIL 9, 2011

REV. NO.	DATE	DESCRIPTION	APPROVED BY
REV1	XXXXXX	XXX	XXX

CHIQUITA CANYON LANDFILL
CASTAIC, CALIFORNIA

EXISTING LEACHATE COLLECTION SYSTEM
AS OF MARCH 2024

CHIQUITA CANYON LANDFILL
29201 HENRY MAYO DRIVE
CASTAIC, CA 91384

Geo-Logic ASSOCIATES
2777 E. GUASTI RD
ONTARIO, CA 91761
(909) 626-2282
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Appendix A.2

Best Management Practices to Address Leachate Seeps

As described in more detail in the November 6, 2023, Report on Landfill Best Management Practices: Mitigating Landfill Reaction Odors, Blue Ridge Services Montana, Inc. has prepared the following list of best management practices (BMPs) for addressing leachate seeps.

1. Response Preparation

To maintain a proactive position, Chiquita shall maintain soil stockpiles near areas where leachate seeps have previously occurred to facilitate a quick response if/when constructing containment soil berms or other short-term containment structures is necessary.

Similarly, heavy equipment capable of constructing berms or other immediate short-term containment structures shall be available onsite daily. At least one vacuum truck, one wheel loader, and one excavator shall also be available onsite daily and capable of providing immediate response if/when a leachate seep occurs.

2. Detection

Early detection of leachate seeps is an important part of the mitigation process. Indicators may include visible wet spots on the slopes that may appear as single wet spots or a horizontal line of wet soil. Leachate seeps often show these early indicators before visible liquid leachate appears on the surface. We understand that Chiquita is currently conducting inspections for leachate seeps twice each calendar day or as otherwise required pursuant to the Stipulated Order for Abatement with the South Coast Air Quality Management District.

3. Immediate Response

Initial Safety, Environmental, and Characterization Assessments

Immediately following detection, Chiquita staff shall conduct initial safety and environmental assessments and characterize the seepage. The initial safety assessment determines what forms of personal protective equipment (if any) shall be used to protect workers collecting and containing the seepage. The initial environmental assessment and characterization determines the scope of the mitigation effort necessary to collect and contain the seep, and determines what level of notification (if any) is appropriate. For example, the initial assessment shall be used to assess whether any leachate has entered the concrete-lined stormwater channel.

Notification

Landfill staff shall notify Site Management and report the location and type of the leachate seep. As appropriate, Site Management shall notify appropriate regulatory agencies, for example, if the seep extends off the landfill liner.

SHORT-TERM MITIGATION

Chiquita's actions to mitigate the seepage shall be based on need, as explained in this section, and consider the above-listed assessments and characterizations. For most leachate seeps, Chiquita shall implement the following actions:

1. For very minor seeps, where no liquid or leachate is visible (only wet soil), landfill staff shall place additional soil on that portion of the slope within 48 hours of detection, safety permitting.
2. For seeps where a very small quantity of liquid or leachate is present (less than 5 gallons), staff shall place soil and/or processed organic material as an absorbent material within 48 hours of detection, safety permitting. Successful control by these methods would be evident if leachate does not re-emerge.
3. For seeps where a small quantity of liquid or leachate is visible (less than approximately 50 gallons), landfill staff shall contain leachate using, for example, soil berms or dams within 48 hours of a seep exceeding approximately 5 gallons of visible quantity, safety permitting. This action shall be considered an interim mitigation until resources can be assembled to begin expanded mitigation, as appropriate (See below).
4. If the quantity of leachate exceeds what can be controlled through these measures, landfill staff shall undertake expanded mitigation efforts as soon as possible, but not later than 48 hours of initial detection of a leachate seep exceeding approximately 5 gallons of visible quantity, safety permitting.
5. If saturated soil is removed, it shall be placed into an articulated haul truck and transported to the active face. Loads shall be tarped to minimize spillage and odors. Care shall be taken to avoid spilling soil during the loading process. Any spilled soil shall be removed and also transported to the active face.

Expanded mitigation efforts may include one or more of the following efforts, as appropriate:

1. Dig a small hole into the underlying waste to allow leachate to return into the waste mass. If possible, breach any visible layer of low permeability material. Within 24 hours of drilling (i.e., digging) the hole to allow leachate to return into the waste mass, CCL shall apply cover material to the area to maintain cover integrity.
2. Use onsite vacuum truck(s) to extract pooling or ponding leachate within 4 hours of detection of approximately 50 gallons or more, safety permitting. If adequate extraction of leachate is not possible, CCL shall implement additional mitigation efforts as set forth below in paragraph 3.
3. If leachate does not dissipate into the underlying waste, or if it continues to flow from the seep location, coordinate with Site Management as appropriate to apply additional mitigation efforts, which shall include:
    a. Digging deeper into the underlying waste and installing a French Drain and perforated pipe to create a sump.
    b. Temporarily utilizing a vacuum truck(s) to pump from this sump until more permanent piping can be installed to direct leachate to an onsite storage tank.

Once a seep has been repaired, landfill staff shall cover the area with sufficient clean soil to cover the seep, track-walk the freshly laid soil as appropriate, and monitor the seep location to confirm that the repair was successful.

4. Intermediate Response

As soon as possible, and no later than two hours following CCL learning of the indication that leachate is flowing towards and within 50ft of, or has actually reached (whichever is earlier), one of the Landfill's concrete-lined stormwater channels, landfill staff shall begin to implement the following measures, as soon as possible, safety permitting:

1. Place soil check dam(s) in the concrete-lined channel immediately downstream of the entry point to prevent leachate from flowing downstream and reaching the stormwater basin(s). Install multiple soil check dams as needed to contain the leachate. All leachate in the concrete-lined channel shall be extracted with a vacuum truck and transported to the onsite storage tanks as soon as possible, but no later than 8 hours following containment via Step 1, safety permitting.
2. During wet weather when clean stormwater is flowing in the channel, place soil check dam(s) in the concrete-lined channel immediately downstream of the entry point to prevent leachate mixed with stormwater from flowing downstream and reaching the stormwater basin(s). Install multiple soil check dams as needed to contain the mixed leachate and stormwater. All stormwater mixed with leachate shall, as soon as possible, safety permitting, be extracted with a vacuum truck and transported to the onsite storage tanks.

5. Continued Monitoring

After a seep has been addressed, landfill staff shall continue monitoring all slopes for indication of continuing or additional leachate seeps. Staff shall pay particular attention to those areas where leachate seeps have occurred in the past, and where leachate seeps have recently been mitigated.

Appendix A.3

March 13, 2024
File No. 01204123.21-13

Baitong Chen, Air Quality Engineer, bchen@aqmd.gov
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South Coast Air Quality Management District
21865 Copley Drive
Diamond Bar, California 91765

Subject: 2024 Workplan: Restoring Compliance and Addressing Subsurface Reactions at Chiquita Canyon Landfill
Chiquita Canyon Landfill – Castaic, California

Dear Mr. Chen:

In accordance with Condition No. 50 of the Modified Stipulated Order for Abatement (SOFA) pertaining to the Chiquita Canyon Landfill (CCL or Landfill) (Case No. 6177-4), Chiquita Canyon, LLC (Chiquita) submits the below workplan to address the subsurface reaction and return all aspects of CCL to good and compliant working order (Workplan). Condition No. 50 requires the following:

> *[Chiquita] shall provide a workplan which lists the actions that [Chiquita] plans to take in order to address the subsurface reaction and return all aspects of the CCL to good and compliant working order, including liquid/leachate seepage and discharges of pressurized leachate, methane surface exceedances, fugitive emissions of landfill gas, well temperature exceedances, and non-compliant composition of landfill gas. This workplan shall include a timeline of the proposed work, and shall include both short-term and long-term solutions for managing the subsurface planned to mitigate impacts to the surrounding communities and return the facility into compliance.*

1 INTRODUCTION

Chiquita operates a municipal solid waste (MSW) landfill/solid waste disposal facility located in Castaic, California under South Coast Air Quality Management District (SCAQMD) Facility ID No. 119219.

CCL is located at 29201 Henry Mayo Drive, Castaic, California, in northern Los Angeles County. It is a Class III non-hazardous MSW landfill and operates under Solid Waste Facilities Permit (SWFP) No. 19-AA-0052, issued by CalRecycle (formerly the California Integrated Waste Management Board [CIWMB]). CCL accepts nonhazardous solid waste, including MSW from various areas within Los Angeles County in accordance with Title 27 of the California Code of Regulations (27 CCR), Section 20005, et seq.

A discrete portion of the waste mass at the Landfill is experiencing elevated temperature landfill (ETLF) conditions. ETLF conditions can generally be characterized as when the typical waste decomposition processes and corresponding methanogenesis associated with anaerobic digestion of organic solid waste materials disposed in a landfill are impeded because of heat accumulation. As

a result, certain abiotic (non-biological) processes and chemical reactions within the buried wastes occur instead.

This Workplan presents the actions, responses, and corrective measures that Chiquita plans to implement (or continue implementing) to contain and manage the ETLF conditions at the Landfill and return all aspects of the Landfill to good and compliant working order. For purposes of this Workplan, the terms "ETLF conditions," "subsurface reaction," "landfill reaction," and "heating event" are synonymous. This Workplan focuses on the northwestern area of the Landfill, comprised of Cells 1/2A, 2B/3, 4, and Module 2B/3/4 P2 (of the Main Canyon), which are exhibiting ETLF conditions.

2 SOLUTIONS TO ADDRESS ELEVATION TEMPERATURE LANDFILL REACTION

As described in more detail in the December 8, 2023 Elevated Temperature Landfill Causation Investigation Report, previous experience at other ETLF landfills demonstrates that landfill reactions and any resulting odors have been mitigated by best management practices, including increased gas extraction and liquid removal (e.g., through expanding systems and providing adequate LFG control capacity and leachate disposal capacity). Another best management practice is to improve cover integrity, which reduces infiltration of precipitation and limits the amount of excess liquids available to sustain various chemical reactions.

Implementing these measures will help slow the reaction and mitigate impacts. However, no known method has been identified to quickly stop the reaction leading to elevated temperatures in a landfill. The landfill industry has embraced several approaches to "contain and manage" the reaction area as outlined below:

- Enhanced gas collection and control infrastructure to remove reaction gases, reduce landfill pressures, reduce malodorous emissions, and remove heat.

- Enhanced liquids removal to improve gas collection efficiency and remove heat through the installation of in-well dewatering pumps. Removing landfill liquids removes heat, as well as allows gas to be collected from greater depths in the landfill, the increase in temperature is often a necessary side-effect of pumping operations that remove heat from these portions of the waste mass.

- Enhanced interim or final cover installation to further enhance gas recovery and reduce surface emissions and resulting odors.

The mitigation measures Chiquita is implementing, as described in this Workplan, implement each of these best management practices for slowing and stopping the landfill reaction.

3 SUBSURFACE REACTION WORKPLAN

3.1 LIQUID/LEACHATE SEEPAGE AND DISCHARGES OF PRESSURIZED LEACHATE

Chiquita is taking several short- and long-term actions to address liquid/leachate seepage and discharges of pressurized leachate.

In the event a leachate seep occurs, Chiquita has implemented and will continue implementing the best management practices (BMPs) described by Blue Ridge Services in **Attachment B**. To address discharges of pressurized leachate, Chiquita will evaluate the report prepared by Blue Ridge Services and submitted to SCAQMD on March 12, 2024. This report is provided in **Attachment C**. By the next quarterly update to this Workplan, Chiquita will evaluate this report and develop and provide a plan for implementing Blue Ridge's recommendations.

To address the underlying causes of liquid/leachate seepage and discharges of pressurized leachate in the long-term, Chiquita designed upgrades to its existing liquid/leachate de-watering system (DWS) and submitted these dewatering guidelines and dewatering master plan to the SCAQMD on December 15, 2023. **Attachment A** presents the "Proposed Overall DWS Site Plan" Drawing, prepared by SCS and dated March 5, 2024. This DWS Site Plan includes upgrades to pipe sizing from the previous DWS submittal as Chiquita continues to evaluate the system and future needs. This drawing illustrates the installation plan design of DWS components such as liquid/leachate collection force main piping, dual wye cleanouts, air release valves (ARV) with receiving totes/drums and single cleanouts, and scaling strainers.

The proposed liquid/leachate collection force main piping will comprise 8-inch, 6-inch, and 4-inch high density polyethylene (HDPE) standard dimension ratio (SDR-11) piping with associated tees and valves. The HDPE piping is rated to withstand the temperatures currently being recorded from the regular leachate temperature monitoring. The proposed upgrades to the existing DWS will add piping to all existing and proposed vertical extraction wells. Additionally, dual wye cleanouts with receiving totes/drums, along with single cleanouts, will be strategically installed throughout the Landfill as needed. Approximately thirty-five (35) ARVs, six (6) 8-inch dual wye cleanouts, and thirty-nine (39) 6-inch cleanouts are planned for installation. These are constructed from HDPE and stainless steel suitable for the temperatures being recorded from the regular leachate temperature monitoring.

The objective of the proposed DWS upgrades is to improve the current system by replacing existing lines with larger sizes, additional cleanouts for improved maintenance, and to include redundancy. In order to collect more of the liquids present in the waste mass and help minimize liquid/leachate discharges from the Landfill, particularly diverting them away from the reactive area. By removing excess liquid/leachate, the upgraded DWS will increase the volume of leachate collected while reducing the future volume generated. This reduction in volume generated will improve liquid/leachate management, helping control the flow within the Landfill and preventing discharges from occurring. Removing liquids from the reaction area is the most efficient way to remove heat from the reaction, which will slow down the reaction and reduce long-term leachate generation.

The proposed upgrades to the existing DWS have begun being installed in conjunction with the installation of the geosynthetic cover and are being installed above the geomembrane cap as it is

installed. The installation will be ongoing and prioritized in the reaction area with anticipation that the DWS installations are complete in the reaction area by June 30, 2024, subject to weather conditions. The entire system upgrades are anticipated to be completed by the end of August 2024, subject to weather conditions. Monthly progress updates on these upgrades are incorporated into the monthly report submitted to the SCAQMD pursuant to Condition No.8(m).

3.2 METHANE SURFACE EXCEEDANCES AND FUGITIVE EMISSIONS OF LANDFILL GAS

To address methane surface exceedances and fugitive emissions of landfill gas (LFG), Chiquita has developed a plan to expand the existing gas collection and control system (GCCS) and install a geosynthetic cover over portions of the reaction area.

PROPOSED GCCS EXPANSION

To help prevent methane surface exceedances and minimize fugitive emissions of LFG in the long-term, Chiquita is continuing to expand its existing LFG system. **Attachment D** presents the "Proposed Overall GCCS Site Plan" Drawing, prepared by SCS and dated January 30, 2024. This drawing illustrates the plan for the design and installation of seventy (70) new vertical LFG extraction wells and associated LFG collection piping. This plan was previously submitted to SCAQMD on January 31, 2024. Chiquita will continue providing updates on this plan in the monthly Condition 8 reports.

The wells will be single completions, with design depths ranging between 137 and 300 feet, as depicted in **Attachment E**'s drawing titled "Proposed Well Schedule," also prepared by SCS and dated January 30, 2024. The well casings will be constructed using perforated and blank (solid) 8-inch diameter Chlorinated Poly Vinyl Chloride (CPVC) Schedule 80 and Carbon-Steel pipe. The actual material for each well will be chosen at the time of installation based on the temperatures encountered during drilling. CPVC is rated for temperatures up to 170 degrees and will be used in wells outside of reaction area limits. Carbon steel is rated for 1200 degrees and will be used for any wells within the reaction area or when temperatures encounter during drilling exceed 170 degrees. The final number, depth, and design of the vertical LFG extraction wells may be subject to change based on field and/or other conditions.

Improvements to the existing GCCS include the installation of new LFG header and lateral piping, associated tees, valves, and road crossings. The proposed LFG piping will include 36-inch, 24-inch, 20-inch, 18-inch, 8-inch, and 6-inch HDPE header and lateral piping, to connect all seventy (70) new vertical extraction wells to the proposed and existing GCCS. The HDPE header and lateral piping is rated for the temperatures recorded in the LFG conveyance lines.

As the proposed upgrades to the GCCS are implemented, increased gas collection from the associated LFG header and lateral piping is anticipated. Consequently, on October 30, 2023, SCS submitted a Permit to Construct and Title V Modification application to SCAQMD on behalf of the Landfill for a new LFG blower and flare system (BFS). The objective of the BFS is to achieve methane mitigation by actively controlling and destroying LFG, particularly produced from the reaction area, thereby reducing methane surface exceedances and fugitive emissions. The additional LFG flow from the proposed LFG headers and lateral updates is estimated to be 1,050 standard cubic feet per minute (scfm).

The proposed upgrades of the additional wells is ongoing and expected to be completed by May 30, 2024, subject to weather conditions, Chiquita continues to evaluate the need for additional wells beyond these initial 70. The materials for the proposed piping system upgrades have been ordered and begun arriving to the site. The installation of these upgrades will begin when the capping on the western slope of the reaction area is complete as the piping upgrades and proposed headers and laterals will be located above the geomembrane cap. These proposed upgrades to the piping system are expected to be completed by August 30,2024, subject to weather conditions. Monthly progress updates on these upgrades will continue to be incorporated into the monthly report submitted to SCAQMD pursuant to Condition No.8(m).

GEOSYNTHETIC COVER

To counter methane surface exceedances and fugitive LFG emissions in the shorter-term, a geosynthetic cover is being installed on the western slope and a portion of the northwest top deck. This is the cover required by Condition No. 31 of the Modified Stipulated Order, as expanded by the LEA. The design and implementation schedule for this geosynthetic cover is provided by TetraTech and SCS in **Attachment F**.

The geosynthetic cover is expected to be completed by the end of May 2024, subject to weather conditions. Monthly progress updates on the installation of this geosynthetic cover will continue to be incorporated into the monthly report submitted to SCAQMD pursuant to Condition No.8(o).

3.4 WELL TEMPERATURE EXCEEDANCES AND NON-COMPLIANT COMPOSITION OF LANDFILL GAS

To address well temperature exceedances and the non-compliant composition of Chiquita's landfill gas, Chiquita will continue to implement the measures outlined in more detail in the March 8, 2024 submittal of additional information for HOV's request. Measures typically introduced to reduce LFG temperatures at the wellhead include adjustment of the wellhead control valve to reduce the applied vacuum, sealing of the soil/pipe interface at the well riser pipe penetration at the landfill surface, and checking for liquids accumulation in the well. All of these measures were attempted by LFG system operations personnel and proved insufficient to remediate the elevated temperatures prior to the recognition of ETLF conditions within the reaction area.

As a practical matter, obtaining higher operating values (HOVs) for wells exhibiting elevated temperatures due to abiotic chemical reactions versus subsurface oxidation is an absolute imperative to enable the Facility to achieve its goal of removing heat via gas extraction. There are no measures available to Chiquita to instantly cool the hot LFG originating from the reaction area. Throttling the wellhead to a closed position as a response to the New Source Performance Standards/Emissions Guidelines (NSPS/EG) temperature threshold is absolutely the wrong strategy as an ETLF remedial action because it prevents the beneficial removal of heat from the buried wastes.
As demonstrated at other landfills that have experienced widespread ETLF heating events during the past approximately 15 years, and as discussed in more detail in SCS's report titled "Elevated Temperature Landfill Causation Investigation Report," submitted to SCAQMD on December 8, 2023,

Chiquita and SCS are confident that implementation of the best management practices developed by the landfill industry to contain and manage the reaction, which is accomplished in part via extraction of LFG with temperature exceedances and non-compliance LFG composition. Extraction of elevated temperature LFG and LFG with non-compliant LFG composition will succeed in slowing the propagation of the reaction area, result in cooling of the buried wastes, enable methanogenesis to ultimately be re-initiated within a large section of the affected waste mass, and mitigate and abate the detrimental impacts, such as odors, being experienced by surrounding off-site communities.

5 CONCLUSION

This workplan presents a strategic approach to addressing the subsurface reaction and returning CCL to good and compliant working order. By implementing the short- and long-term measures described above and in the attachments, Chiquita aims to mitigate impacts on the surrounding communities and ensure the compliant operation of the Landfill. Through CCL's implementation of BMPs, upgrades and expansion to its existing DWS through new piping, expansion of its GCCS with additional vertical wells and LFG headers and laterals, and continued installation of the geosynthetic cover, Chiquita and SCS expect significant progress in managing persistent elevated temperatures, reducing methane surface exceedances and fugitive emissions, and preventing liquid/leachate discharges and non-compliant composition of landfill gas.

Please contact either of the undersigned if you have questions or require additional information.

Sincerely,

Bill Haley, PE
Project Director
SCS Engineers

Pat Sullivan, BCES, CCP
Senior Vice President
SCS Engineers

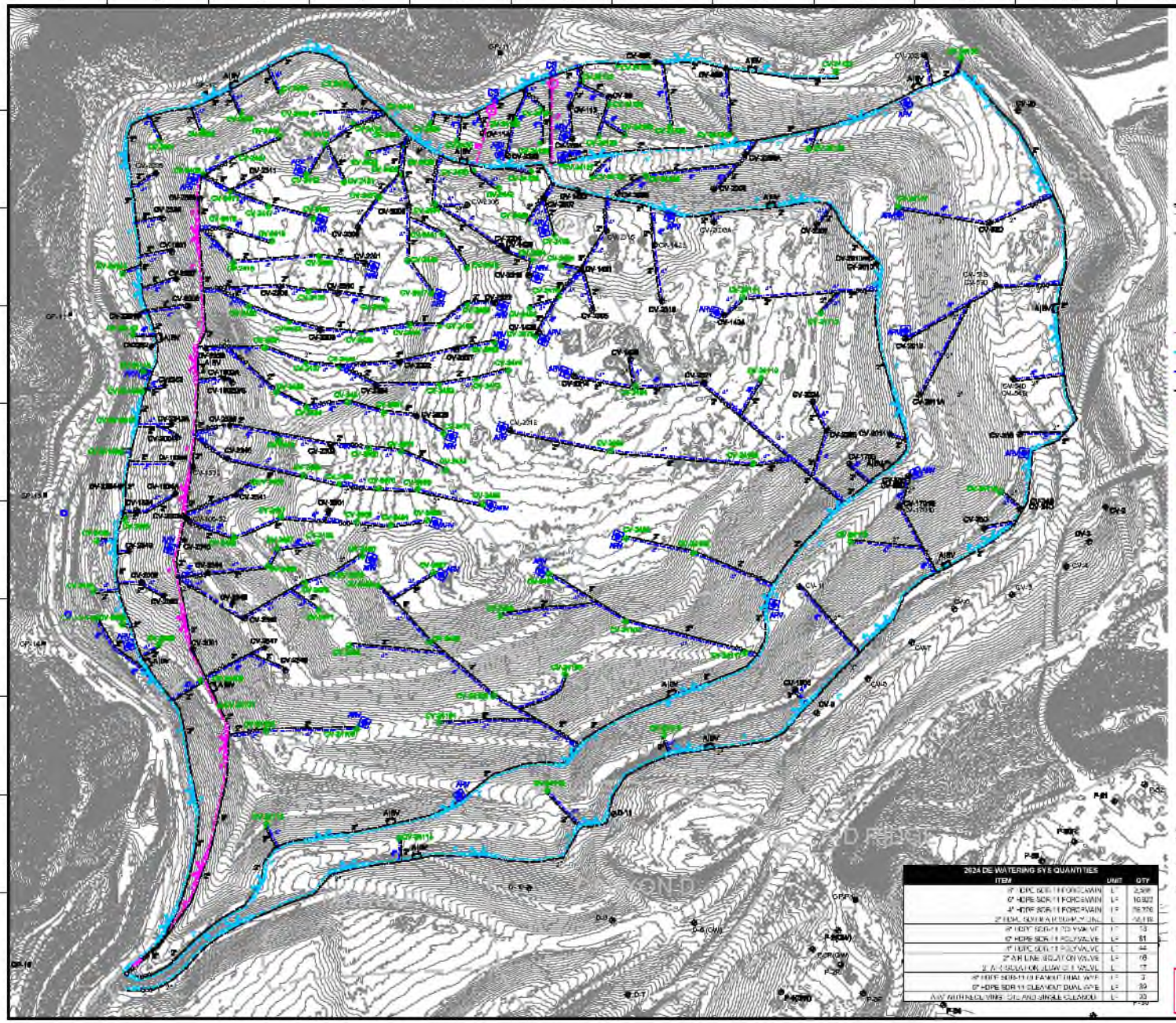
cc: Nathaniel Dickel, SCAQMD
Christina Ojeda, SCAQMD
Pablo Sanchez Soria, PhD, CIH, CTEH
Neal Bolton, PE, Blue Ridge Services, Inc.
Angie Perez, PhD, CIH, CTEH
Srividhya Viswanathan, PE, SCS Engineers
Patrick S. Sullivan, BCES, CCP, SCS Engineers

Enclosure:

Attachment A – Proposed Overall DWS Site Plan
Attachment B – Best Management Practices to Address Leachate Seeps
Attachment C – Pressurized Leachate Mitigation Study
Attachment D – Proposed Overall GCCS Site Plan
Attachment E – Proposed Well Schedule
Attachment F – Geosynthetic Cover Design and Implementation Schedule

Attachment A

Proposed Overall Dewatering System Site Plan



N

GRAPHIC SCALE

150 75 0 150 300 450

SCALE: 1"=150'

LEGEND

- EXISTING TOPOGRAPHIC CONTOUR
- EXISTING CELL LIMITS (APPROXIMATE)
- EXISTING VERTICAL WELLS
- EXISTING PERIMETER MIGRATION PROBE
- EXISTING CONDENSATE SUMP
- PROPOSED LFG EXTRACTION WELL - MASTER GCCS PLAN
- PROPOSED 6" MIN. HDPE SDR 11 FORCE MAIN
- PROPOSED 8" MIN. HDPE SDR 11 FORCE MAIN
- PROPOSED 4" MIN. HDPE SDR 11 FORCE MAIN
- PROPOSED 2" MIN. HDPE SDR 9 AIR LINE
- PROPOSED 6" CLEANOUT DUAL WYE
- PROPOSED 8" CLEANOUT DUAL WYE
- PROPOSED AIR RELEASE VALVE (ARV) WITH RECEIVING TOTE/DRUM AND SINGLE CLEANOUT
- PROPOSED 12"x6" SCALING STRAINER
- PROPOSED 8" FORCE MAIN ISOLATION PLUG VALVE
- PROPOSED 6" FORCE MAIN ISOLATION PLUG VALVE
- PROPOSED 4" FORCE MAIN ISOLATION PLUG VALVE
- PROPOSED 2" AIR LINE ISOLATION VALVE
- PROPOSED AIR ISOLATION BLOW-OFF VALVE

2024 DE-WATERING SYS QUANTITIES

ITEM	UNIT	QTY
8" HDPE SDR 11 FORCEMAIN	LF	2,399
6" HDPE SDR 11 FORCEMAIN	LF	10,922
4" HDPE SDR 11 FORCEMAIN	LF	76,776
2" HDPE SDR 9 AIR LINE	LF	78,119
8" HDPE SDR 11 PLUG VALVE	EA	13
6" HDPE SDR 11 PLUG VALVE	EA	61
4" HDPE SDR 11 PLUG VALVE	EA	44
2" AIR LINE ISOLATION VALVE	EA	78
2" AIR ISOLATION BLOW-OFF VALVE	EA	11
8" HDPE SDR 11 CLEANOUT DUAL WYE	EA	3
6" HDPE SDR 11 CLEANOUT DUAL WYE	EA	39
ARV WITH RECEIVING TOTE AND SINGLE CLEANOUT	EA	33

GENERAL DRAWING NOTES

1. EXISTING TOPOGRAPHIC SURVEY INFORMATION SHOWN WAS PROVIDED BY PROPELLER AERIAL PHOTOGRAPHY DATED JANUARY 02, 2024.
2. NORTH ARROW SHOWN HERE IS REFERENCE TO THE CALIFORNIA STATE PLANE ZONE V COORDINATE SYSTEM, NAD 83.
3. THE LOCATION OF ANY EXISTING PIPING, VALVES, TIE-IN LOCATIONS AND OTHER FEATURES ARE APPROXIMATE AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY. ACTUAL FIELD CONDITIONS MAY VARY AND SUBJECT TO CHANGE BASED ON FUTURE FILL OPERATIONS, WASTE PLACEMENT, TOPOGRAPHIC FEATURES, AND OTHER SITE-SPECIFIC FACTORS.
4. 2024 DE-WATERING SYSTEM MASTER PLAN DESIGN MAY NEED TO CHANGE TO ACCOMMODATE ACTUAL FIELD CONDITIONS AT THE TIME OF CONSTRUCTION. CONTRACTOR TO USE FITTINGS AND FIELD FIT AS NECESSARY.

DRAFT
NOT ISSUED FOR CONSTRUCTION

SCS ENGINEERS
ENVIRONMENTAL CONSULTANTS
CLIENT:
CHIQUITA CANYON LANDFILL
CASTAIC, CALIFORNIA
PROJECT TITLE:
2024 LFG DE-WATERING SYSTEM EXPANSION ON MASTER PLAN DESIGN
CHIQUITA LANDFILL
CASTAIC, CALIFORNIA
SHEET TITLE:
PROPOSED OVERALL DRAINAGE PLAN
DATE:
09/06/2024
SCALE:
AS SHOWN
SHEET:
A

Attachment B

Best Management Practices

Best Management Practices to Address Leachate Seeps

As described in more detail in the November 6, 2023 Report on Landfill Best Management Practices: Mitigating Landfill Reaction Odors, Blue Ridge Services Montana, Inc. has prepared the following list of best management practices (BMPs) for addressing leachate seeps.

1. Response Preparation

To maintain a proactive position, Chiquita should maintain soil stockpiles near areas where leachate seeps have previously occurred to facilitate a quick response if/when constructing containment soil berms or other short-term containment structures is necessary.

Similarly, heavy equipment capable of constructing berms or other immediate short-term containment structures should be available onsite daily. At least one vacuum truck, one wheel loader, and one excavator should also be available onsite daily and capable of providing immediate response if/when a leachate seep occurs.

2. Detection

Early detection of leachate seeps is an important part of the mitigation process. Indicators may include visible wet spots on the slopes that may appear as single wet spots or a horizontal line of wet soil. Leachate seeps often show these early indicators before visible liquid leachate appears on the surface. We understand that Chiquita is currently conducting inspections for leachate seeps twice each calendar day.

3. Immediate Response

Initial Safety, Environmental, and Characterization Assessments

Immediately following detection, Chiquita staff should conduct initial safety and environmental assessments and characterize the seepage. The initial safety assessment should determine what forms of personal protective equipment (if any) should be used to protect workers collecting and containing the seepage. The initial environmental assessment and characterization should be used to determine the scope of the mitigation effort necessary to collect and contain the seep, and to determine what level of notification (if any) is appropriate. For example, the initial assessment should be used to assess whether any leachate has entered the concrete-lined stormwater channel.

Notification

Landfill staff should notify Site Management and report the location and type of the leachate seep. As appropriate, Site Management should notify appropriate regulatory agencies, for example, if the seep extends off the landfill liner.

SHORT-TERM MITIGATION

Chiquita's actions to mitigate the seepage should be based on need, as explained in this section, and consider the above-listed assessments and characterizations. For most leachate seeps, Chiquita should implement the following actions:

1. For very minor seeps, where no liquid or leachate is visible (only wet soil), landfill staff should place additional soil on that portion of the slope.
2. For seeps where a very small quantity of liquid or leachate is present (less than 5 gallons), staff should use soil and/or processed organic material as an absorbent material. Successful control by these methods would be evident if leachate does not re-emerge.
3. For seeps where a small quantity of liquid or leachate is visible (less than approximately 50 gallons), landfill staff should contain leachate using, for example, soil berms or dams. This action should be considered an interim mitigation until resources can be assembled to begin expanded mitigation, as appropriate (See below).
4. If the quantity of leachate exceeds what can be controlled through these measures, landfill staff should undertake expanded mitigation efforts.
5. If saturated soil is removed, it should be placed into an articulated haul truck and transported to the active face. Loads should be tarped to minimize spillage and odors. Care should be taken to avoid spilling soil during the loading process. Any spilled soil should be removed and also transported to the active face.

Expanded mitigation efforts may include one or more of the following efforts, as appropriate:

1. Dig a small hole into the underlying waste to allow leachate to return into the waste mass. If possible, breach any visible layer of low permeability material.
2. Use onsite vacuum truck(s) to extract pooling or ponding leachate.
3. If leachate does not dissipate into the underlying waste, or if it continues to flow from the seep location, coordinate with Site Management as appropriate to apply additional mitigation efforts, which may include:
    a. Digging deeper into the underlying waste and installing a French Drain and perforated pipe to create a sump.
    b. Temporarily utilizing a vacuum truck(s) to pump from this sump until more permanent piping can be installed to direct leachate to an onsite storage tank.

Once a seep has been repaired, landfill staff should cover the area with sufficient clean soil to cover the seep, track-walk the freshly laid soil, and monitor the seep location to confirm that the repair was successful. Alternatively, the area may be covered with scrim or other geomembrane and continue to be monitored.

4. Intermediate Response

If leachate reaches one of the Landfill's concrete-lined stormwater channels, landfill staff should implement the following measures:

1. Place soil check dam(s) in the concrete-lined channel immediately downstream of the entry point to prevent leachate from flowing downstream and reaching the stormwater basin(s). Install multiple soil check dams as needed to contain the leachate. All leachate should be extracted with a vacuum truck and transported to the onsite storage tanks.
2. During wet weather when clean stormwater is flowing in the channel, place soil check dam(s) in the concrete-lined channel immediately downstream of the entry point to prevent leachate

mixed with stormwater from flowing downstream and reaching the stormwater basin(s). Install multiple soil check dams as needed to contain the mixed leachate and stormwater. All stormwater mixed with leachate should be extracted with a vacuum truck and transported to the onsite storage tanks.

5. Continued Monitoring

After a seep has been addressed, landfill staff should continue monitoring all slopes for indication of continuing or additional leachate seeps. Staff should pay particular attention to those areas where leachate seeps have occurred in the past, and where leachate seeps have recently been mitigated.

Attachment C

Pressurized Leachate Mitigation Study

March 12, 2024

The Discharge of Pressurized Leachate Containment Feasibility Study

Prepared For:

March 12, 2024

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March 12, 2024

Steve Cassulo,

RE: Stipulated Order for Abatement, Case No. 6177-4, Condition No. 26 Report

In accordance with the Stipulated Order for Abatement issued on January 17, 2024 (Stipulated Order) by the South Coast Air Quality Management District in Case No. 6177-4, Blue Ridge Services Montana, Inc. has prepared this **THE DISCHARGE OF PRESSURIZED LEACHATE CONTAINMENT FEASIBILITY STUDY.**

The Stipulated Order requires the following under Condition No. 26:

> *Respondent shall investigate and report on the feasibility of temporary containment measures for the purposes of controlling leachate and possible discharges of pressurized leachate when drilling additional holes for wells, liquid pumps, temperature devices, or other purposes. This Discharge of Pressurized Leachate Containment Feasibility Study shall include an analysis on the feasibility of a temporary tenting, containment vessel(s)/ dome(s), other enclosure(s), or partial enclosure system designed to collect and contain the leachate flow while limiting the escape of odors produced from drilling/ discharges of pressurized leachate, to allow for additional well drilling in the Reaction Area. By no later than March 12, 2024, Respondent shall submit to South Coast AQMD [Baitong Chen, Air Quality Engineer, (bchen@aqmd.gov); Nathaniel Dickel, Senior Air Quality Engineer, (ndickel@aqmd.gov), and Christina Ojeda, Air Quality Inspector, (cojeda@aqmd.gov)], a report on the findings of this feasibility study.*

This report evaluates potential containment and mitigation measures for the prevention or control of pressurized leachate releases during well construction and/or maintenance.

Respectfully,

Neal Bolton

Neal Bolton, P.E.
President
Blue Ridge Services Montana, Inc.
neal@blueridgeservices.com

CONTENTS

ACRONYMS

Acronym	Meaning
BGS	Below Ground Surface
BOW	Bottom of Well
BRS	Blue Ridge Services Montana, Inc.
CCL	Chiquita Canyon Landfill
E&P	Exploration and Production
ETLF	Elevated Temperature Landfill
IC	Isolation Chamber
LEA	CalRecycle Local Enforcement Agency
LFG	Landfill Gas
PLR	Pressurized Leachate Release
PSI	Pounds Per Square Inch
SCAQMD	South Coast Air Quality Management District
SCBA	Self-contained Breathing Apparatus
SCS	SCS Engineers

BACKGROUND

A portion of the Chiquita Canyon Landfill (CCL or Landfill) is experiencing a reaction, also referred to as an Elevated Temperature Landfill (ETLF) event. The reaction is occurring in an area of CCL referred to as the South Coast Air Quality Management District (SCAQMD) Reaction Area (Reaction Area), defined initially in the Stipulated Order by the boundary of Cells 1/2A, 2B/3, 4, and Module 2B/3/4/P2. While most landfills generate some odors associated with uncollected (fugitive) landfill gas (LFG) and leachate seeps, the LFG and leachate seeps affiliated with an ETLF event can produce odors that possess unique characteristics, causing them to be more detectable. The ETLF event is also generating leachate and LFG at a higher rate. The increase in odor complaints in the vicinity of CCL are attributable to the LFG and leachate seeps caused by the landfill reaction.

In accordance with Condition No. 12 of the Stipulated Order, Chiquita Canyon, LLC (Chiquita) has formed a committee of subject matter experts, the Reaction Committee (formerly the Dimethyl Sulfide, or DMS Committee), to aid in the investigation, impact assessment, and remediation of the ongoing landfill reaction and resultant odors. The Reaction Committee is conducting investigations and studies into the cause of the landfill reaction, the impacts of air emissions, interim measures to limit odor transport, and corrective measures to reduce or abate the landfill reaction. The Reaction Committee also reviews data each month and determines whether to revise the current boundaries of the Reaction Area.

Neal Bolton, P.E., President of Blue Ridge Services Montana, Inc. (BRS), is a national expert in landfill operations and is serving as a member of the Reaction Committee to satisfy Condition No. 12(a)(i) of the Stipulated Order, which requires that the Reaction Committee include a subject matter expert in landfill design and operational best management practices. He has provided various consulting support to Chiquita since 2020, including as a member of the consulting team that solved the working face odor issue in 2022. Additionally, he has broad operational experience within the heavy construction and solid waste industry that spans more than 46 years. During that time, Mr. Bolton has provided operational support for more than 500 landfills throughout North America and abroad.

This report summarizes BRS's findings and recommendations pursuant to Stipulated Order Condition No. 26 issued on January 17, 2024. Condition No. 26 requires the evaluation of potential containment options for pressurized leachate release (PLR) events. We evaluated containment options and found nothing feasible.

Since we did not identify any feasible containment options, we looked further to focus on potential solutions to control or prevent these PLR events. We looked within the solid waste industry as well as the exploration and production (E&P) segments within the petroleum industry to evaluate options to control PLR events that occur during both the drilling of new wells and the servicing of existing wells. None of the techniques used in the oil and gas industry were readily applicable to drilling new LFG wells. However, when drilling new wells, slowing the speed at which the bucket auger is raised

or lowered in the well, as well as rotating the bucket auger while raising and lowering may reduce the hydraulic forces produced by surging and swabbing. When servicing existing wells, redirecting the flow of liquids through the use of cactus arm wellheads would minimize any release from the top of the well, and installing an isolation chamber on the wellhead may reduce PLR events. However, these options have not been field tested and may not completely eliminate the impacts of a PLR event. There are also potentially significant operational challenges that must be further evaluated to determine the feasibility of such a chamber at CCL.

There are also drilling methods that can help prevent PLRs, including drilling from the outer edges of the Reaction Area, inward, and in the areas with the highest temperatures, drilling at the upper limits of the reaction as opposed to drilling through the entire reaction. However, stopping the reaction is the ultimate solution. Drilling and servicing cannot be avoided altogether as expanding the LFG control and collection system is critical to mitigating the ongoing reaction.

PLR Containment Options

We began our investigation on the feasibility of various containment measures for PLRs with the list suggested in the Stipulated Order while considering practicality and safety concerns. These include temporary tenting, containment vessel(s)/dome(s), other enclosure(s), or partial enclosure system designed to collect and contain the leachate flow while limiting the escape of odors produced from drilling/discharges of pressurized leachate, to allow for additional well drilling in the Reaction Area. These measures are discussed here.

We evaluated the temporary tenting option by reviewing the types of systems that are currently available. While large clear-span tent-like structures (see Figure 1) are available, they have two initial structural problems. First, these structures are generally placed on level areas. If placed on a sloped area, a buttress or retaining wall must be constructed on the downhill side to provide a level perimeter base to ensure equal load distribution for forces of weight and wind.

Figure 1: Clear-Span Structure

Because these structures also require significant anchoring to keep them stable during windy conditions, several days of setup time are required. These structures are therefore not portable in the context of relocating them every day or two as the current drilling schedule would require.

There is also a limitation associated with height. To achieve the height required for the tower on a drill rig, the tent structure would have to be very tall. Consequently, it would also need to be very wide to resist lateral wind forces. This would be impractical for the same reasons. Finally, to contain the steam

and LFG that is emitted during a PLR, the tent would have to be fully enclosed. This full enclosure could create three potential problems with significant impacts on the health and safety of the workers involved.

1. First, during all drilling operations, some LFG is released. This could create a dangerous, potentially toxic atmosphere within the tent – thus requiring special ventilation and filtering, and/or self-contained breathing apparatuses (SCBAs) for all workers. Under some interpretations, this could be considered a permit-required confined space under Cal/OSHA regulation.
2. Second, if a PLR event were to occur, it could significantly increase pressure within the tent. Depending on that pressure, the tent could burst, tear, or be dislodged from its base resulting in a collapse. These units are not intended to be any type of pressure vessel.
3. Third, by containing the LFG within an enclosed area, explosive gas (i.e., methane) would be concentrated inside the tent. This would create an extremely dangerous situation. Consider the level of explosion prevention controls that must be used inside a methane plant. Internal combustion engines (i.e., from the drill rig, wheel loader, etc.) would introduce a very serious risk of explosion.

For all these reasons, it is our opinion that the temporary tent concepts are impractical and unsafe, and would create many more problems than they could possibly solve – even if there was a way to address the engineering and structural challenges identified. The concept of erecting any type of structure above/around the drilling operation, including vessel(s)/dome(s), other enclosure(s), or partial enclosure system(s), is not feasible for these same reasons.

PLR CONTROL OPTIONS

Since we did not identify any feasible containment options, we expanded our evaluation to potential control options. We looked first for options available within the solid waste industry. We quickly determined the body of knowledge of PLRs within this industry is quite limited. PLRs are known to occur only in association with ETLFs and there are only a handful of ETLFs in North America.

We expanded our search to outside of the waste industry. We looked to the E&P segments within the petroleum industry. In this industry there is wide knowledge and experience dealing with what they refer to as "surface blowouts." In the E&P sector, surface blowouts are much more common and often involve pressures that are measured in the thousands of psi, as opposed to what CCL is dealing with at an estimated 50-70 psi.

As shown below in Figure 2, CCL has experienced PLR events both during well maintenance and when drilling new wells. Thus, we evaluated options used in the petroleum industry that could assist in controlling PLR events that occur in both scenarios. The additional options evaluated were based on modifying or enclosing only the well head and/or borehole, and/or changing drilling practices.

Figure 2: PLR Events

Control Options for Drilling New Wells

LFG wells are drilled with a 3-foot diameter bucket auger attached to a long drill stem. The drill rig is attached to the chassis of a large excavator. It is operated by a single operator. Additional ground support workers help monitor drilling activities, log drilling progress, monitor the condition and temperature of drill spoils, and clean and inspect the bucket as needed.

LFG wells may be drilled to a depth of up to 300 feet, a process that takes 1-3 days depending on depth, drilling conditions, and other factors.

The method of drilling required at landfills contributes to the difficulty of controlling a PLR – particularly a major PLR. This is because the waste industry's method for digging a gas well requires a large hammer grab at the end of a stem. This is lowered into the hole and grabs material from the bottom and brings it to the surface for deposit. This method is used due to the necessity of having a large hole (36" in diameter typically) that is then backfilled with gravel around a perforated casing and plugged with various materials near the top. The casing is only perforated below the plug depth. The plug consists of 2 feet of bentonite clay directly over the gravel, then a layer of soil within 5 feet of the ground surface, then an additional 2 feet of bentonite clay. The plug helps prevent oxygen (in air) from being drawn into the waste mass when the well is connected to the LFG collection. The LFG system induces a negative pressure (i.e., vacuum) on the perforated pipe to draw LFG from within the landfill. The overall well construction process is shown in Figure 3.

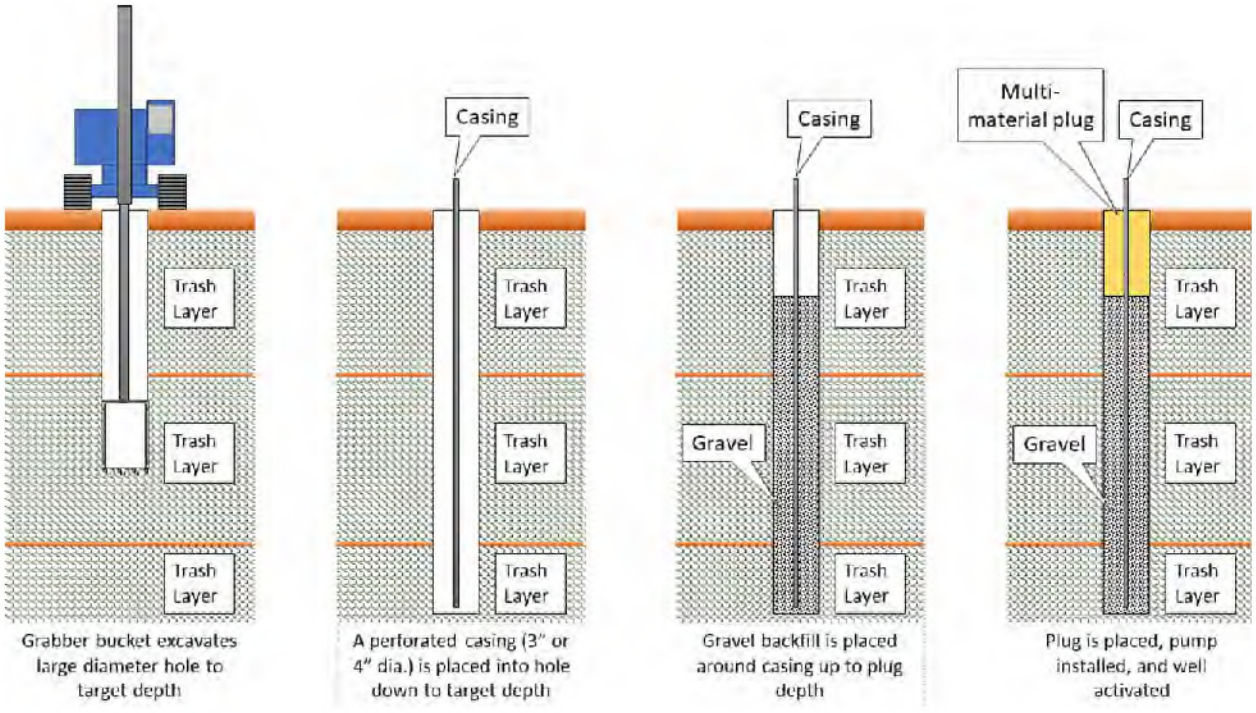


Figure 3: Well Construction

Five of the twelve PLR events at the Landfill occurred during the process of drilling new wells or while backfilling with gravel during the well construction process.

It should be noted that while drilling in or near the ETLF area, the static leachate level is often above the target well depth. Consequently, the bucket auger may penetrate the standing leachate (within the borehole). This may cause surging and/or swabbing.

Surging and swabbing occurs when an object that is approximately the same diameter as the well – in this case the bucket auger – is moved up or down within the well (see Figure 4). As the bucket auger is pushed downward through leachate, the underlying fluid may not be able to pass between the bucket auger and the sidewall of the well. Because this work is being performed in waste, within a landfill, the limited annular space between the bucket auger and the well sidewall tends to be "sealed" by the slurry of paper, plastic, soil, and other debris that is present in the leachate column during the up/down drilling process. Like a syringe, this can increase (surge) pressure downhole and may force leachate into the surrounding waste mass. Conversely, when the bucket auger is pulled upward through leachate (remember, the boreholes are often flooded), this "swabbing" reduces pressure downhole and may draw leachate and/or LFG from the surrounding waste mass. These two forces – surging and swabbing – can change the equilibrium that exists between the vapor pressure of hot leachate and the hydrostatic pressure of the overlying leachate column, thereby triggering a PLR.

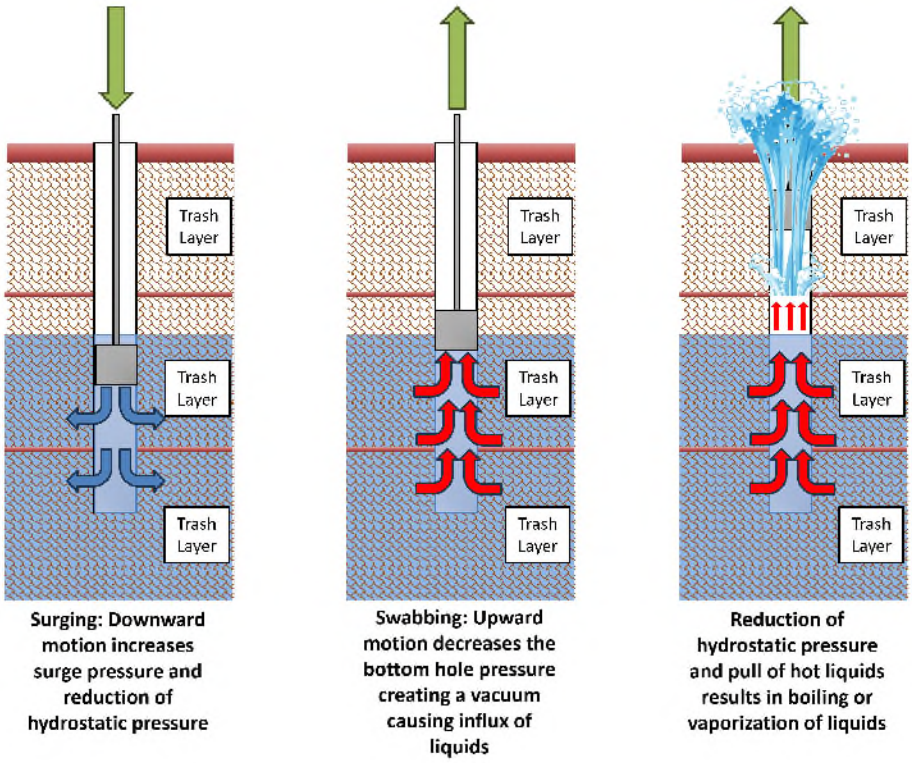


Figure 4: Surging and Swabbing

The hydraulic forces produced by surging and swabbing may be reduced by slowing the speed at which the bucket auger is raised or lowered in the well. Rotating the bucket auger while raising and lowering it may also reduce those forces by allowing more opportunity for pressure above and below the auger to equalize.

We also considered whether techniques used in the oil and gas industry could be applied to drilling LFG wells. We considered options including drilling small pilot holes, drilling adjacent small diameter wells, drilling small diameter test wells or relief wells, adding containment bells, or modifying the existing bucket augers. None of the oil and gas industry options were adaptable to the conditions at CCL as the conditions at a landfill are quite different than the conditions found in the oil and gas industry. With respect to drilling small diameter pilot holes or smaller diameter wells, such smaller diameter wells are not available when drilling in landfills. Drilling through trash poses many difficulties that are not experienced in the oil and gas industry. For example, attempts to use smaller diameter wells or drills can lead to plugged or unusable wells or poor well operation. Adding containment bells would multiply the duration of well installations by a factor of 5-10 times and would also be difficult to engineer due to concerns related to counteracting the estimated uplift force. Modifying existing bucket augers could disrupt the fragile equilibrium that exists in some wells.

Control Options for Servicing Wells

In all cases where a PLR occurred during well servicing, technicians completed removal of the pump to service it and shortly after that a minor PLR occurred. The well, originally at a state of equilibrium, was disrupted when the cap was removed, and the pump pulled out. This disturbance is the likely causation of the PLR.

CCL has already started using one technique to control PLRs that may occur during servicing. New wellheads at CCL have multiple pipes attached to the wellhead. These are referred to as "cactus" wellheads. When servicing wells with cactus wellheads, Chiquita hooks up one of the pipes to a liquid conveyance line or a vacuum truck. That way, if a PLR occurs when removing or replacing a pump or temperature probe, landfill liquids would be directed to the separate arm, minimizing any release from the top of the well. This is achieved with the use of a knife gate at the top of the well. After pump removal, the knife gate is shut, creating a barrier that would divert any liquids to the removal and conveyance line.

We also considered two additional control techniques that we identified as widely used in the oil and gas industry: installing an external pump or installing an isolation chamber.

We do not think that installation of an external pump is a viable option. The external pump, rather than the downhole pump, would eliminate the need to pull/replace pumps for servicing, but such pumps have limited depth of pull far below what is required at CCL.

Installation of an isolation chamber on new wells may reduce PLR events during servicing, but there are significant operational challenges that must be further evaluated to determine whether this is feasible at CCL. The isolation chamber would mount on top of a LFG well with all hoses, cables, and data transmission lines, passing through seals at the top of the chamber. When servicing is required, the equipment would be pulled up into the chamber. Once everything is within the isolation chamber a master valve at the bottom of the chamber would be closed, a bleed off valve to the chamber opened to remove any liquids, and then the chamber itself would be opened with a hammer lock flange and the item requiring servicing removed. Once servicing is complete, the entire system would then be re-attached, and the master valve remains opened, allowing the lowering of the tools back down the well. Parts to construct the isolation chamber appear to be readily available in Central California. The isolation chamber could potentially allow for the total isolation and control of wells during maintenance and would keep crews from physically contacting liquids or gas released. Yet, because this technique has not been used at landfills, more evaluation is needed. There are various constraints, and a PLR could be triggered during installation as pumps need to be pulled. One of the main operational constraints is the additional height on top of existing wells. The isolation chamber needs to be the length of the longest tool in the well, such as a pump. This could potentially add 4 to 5 feet to the top of a well that is already above the ground 3 to 6 feet due to settlement in the reaction area. Such a height addition could pose a safety risk for safely servicing a well.

We also considered one final option, which would include a catchment cone. The last option considered would only be effective for minor PLR events where liquids rise slowly and overtop the casing of the accessed well. This solution would involve a catchment cone that would allow for all of the liquids to be collected and routed to a containment vessel such as vac truck. This would need to

be fabricated and manually installed prior to each servicing event. It would not contain a major PLR event and thus is not an ideal solution for servicing.

PLR PREVENTION

While PLRs cannot be contained, there are some options that may assist with control, although none of the options provide certainty. Because expanding the LFG control and collection system is crucial to mitigating the ongoing reaction, drilling and servicing cannot be altogether avoided. However, there may be methods for preventing PLRs through various drilling strategies. These options must be carefully balanced, however, with the need to relieve pressure and expand the LFG system. Stopping the reaction is the ultimate solution for stopping PLR events.

In reviewing the most recent well temperature data collected when wells are serviced or drilled, it was evident that there was a correlation between the temperature and the PLR events (see Figure 5). Thus, we believe that temperature will be a good indicator of the most high-risk wells.

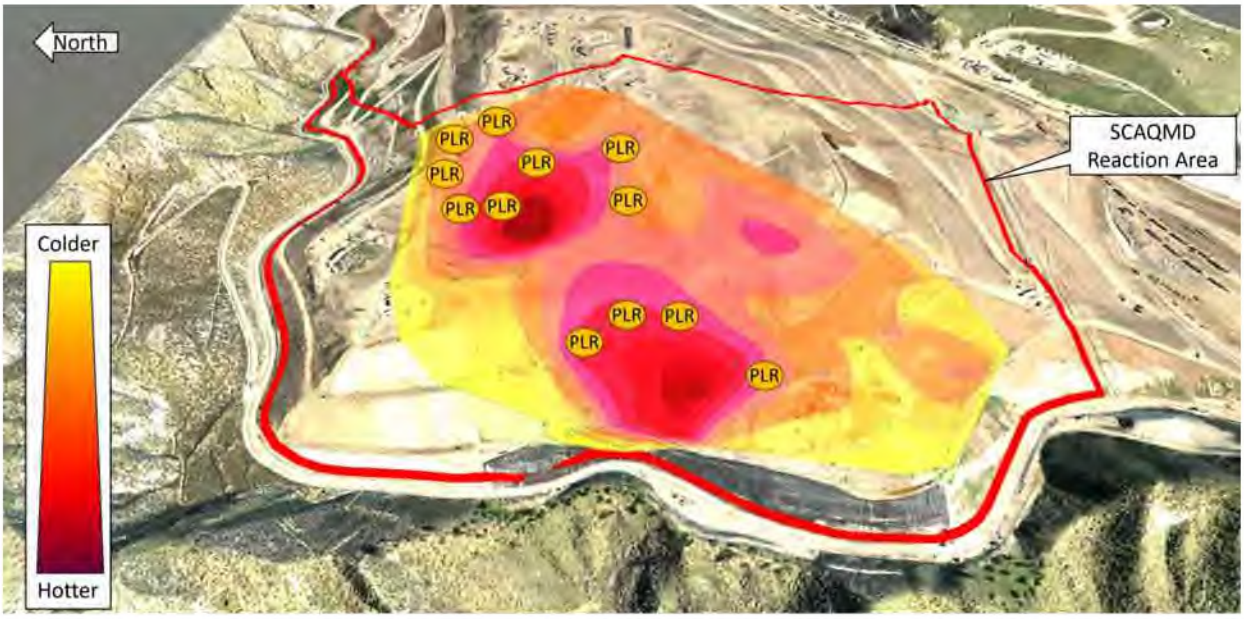


Figure 5: Bottom of Well Temperatures

Currently, CCL is installing over 20 temperature monitoring wells per CalRecycle Local Enforcement Agency (LEA) requirements. These new wells will provide real time data 24 hours a day at depth intervals of 15 feet. We agree with this requirement and approach to expanding the temperature monitoring data. This level of data will allow for better definition of the horizontal extents of zones approaching or exceeding the boiling point of the liquids, as well as better definition of the vertical extents of the hot zones.

With this data, we suggest that CCL continue to pursue two strategies that it has already begun to employ. First, CCL could drill from the outer edges of the Reaction Area, inward. This will relieve pressure and liquids throughout the Reaction Area without drilling directly into the worst areas that

are more susceptible to a PLR event. We also suggest that in the areas with the highest temperatures, CCL drill to the target depth or to the point where the driller observes signs of a potential PLR, or where sidewall conditions deteriorate to the point of potential collapse of the well. Currently drill operators are able to predict these events based on the feel of the drill as it works in the hole and whether they see signs of vapor from the hole. We understand that this technique has been used successfully at other landfills exhibiting ETLF symptoms. Temperature ranges in the Landfill could be a factor to consider, as well as real-time considerations like ending drilling when encountering a pressure change or sidewall conditions dictate. Though the wells will not be at target depth, they can be utilized to extract gas and liquids until such time that the temperature and pressure in that area are reduced. The well casing can then be removed and the well extended down to the intended depth.

This method of partial and perimeter well construction will allow continued well activation to facilitate the needed extraction of liquids and LFG while minimizing the risk of a PLR event from occurring. However, it is crucial to balance these strategies with the need to dewater and remove additional LFG in order to mitigate the reaction.

RECOMMENDATIONS

In summary, there are no feasible containment measures, including no feasible temporary tenting, containment vessel(s)/dome(s), other enclosure(s), or partial enclosure system, designed to collect and contain PLR events. Such measures are impractical for a variety of reasons, including that they would likely require a buttress or retaining wall and significant anchoring, and would need to be very tall and wide, and would introduce serious worker safety issues. Such measures would also require full enclosure, which creates various safety concerns of its own, like the release of LFG and leachate into the fully enclosed space.

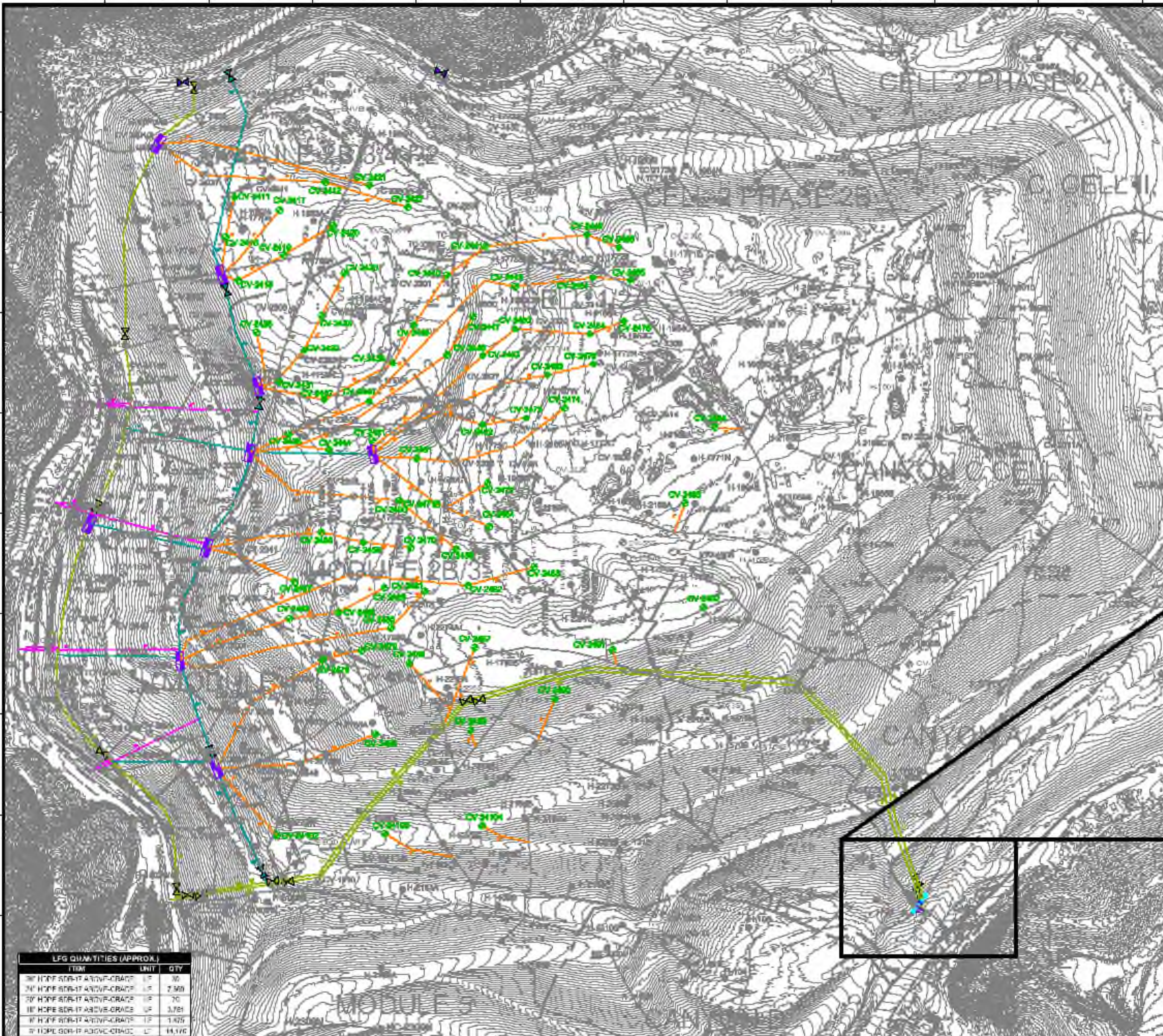
Instead, we looked at potential control measures. When drilling new wells, no specific control measures were identified. We suggest reducing the speed at which the bucket auger is raised and lowered into the well and rotating the bucket auger while raising and lowering when the bucket auger is submerged.

When servicing wells, we suggest the use of cactus wellheads, which would direct any landfill liquids to a separate arm during a PLR occurring when removing or replacing a pump or temperature probe. We also suggest that CCL evaluate further the installation of isolation chambers on new wells, which could potentially be used to minimize the risk of a PLR during well servicing.

Finally, we suggest that CCL utilize the data from the over 20 temperature monitoring wells currently being installed to better understand the high temperature areas, which we believe are more susceptible to PLR events. Using this knowledge, Chiquita can employ drilling strategies, including drilling from the outer edges of the Reaction Area, inward, to relieve pressure and liquids throughout the Reaction Area, and to drill at the upper bounds of the reaction, instead of through the reaction to attempt to prevent PLRs while drilling.

Attachment D

Proposed Overall GCCS Site Plan



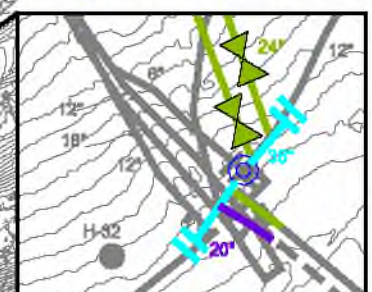
LFG QUANTITIES (APPROX.)		
ITEM	UNIT	QTY
36" HDPE SDR-17 ABOVE-GRADE	LF	30
24" HDPE SDR-17 ABOVE-GRADE	LF	7,360
20" HDPE SDR-17 ABOVE-GRADE	LF	70
18" HDPE SDR-17 ABOVE-GRADE	LF	3,781
8" HDPE SDR-17 ABOVE-GRADE	LF	1,875
6" HDPE SDR-17 ABOVE-GRADE	LF	14,176

N

GRAPHIC SCALE
130 65 0 130 260 390
SCALE: 1"=130'

LEGEND

- EXISTING TOPOGRAPHIC CONTOUR
- EXISTING CELL LIMITS (APPROXIMATE)
- EXISTING LFG EXTRACTION WELL
- EXISTING HORIZONTAL WELLS
- EXISTING ABOVE-GRADE LFG COLLECTION HEADER/LATERAL
- EXISTING BELOW-GRADE LFG COLLECTION HEADER/LATERAL
- PROPOSED LFG EXTRACTION WELL
- PROPOSED MANIFOLD
- PROPOSED ABOVE GRADE 36" LFG HDPE PIPING
- PROPOSED ABOVE GRADE 24" LFG HDPE PIPING
- PROPOSED ABOVE GRADE 20" LFG HDPE PIPING
- PROPOSED ABOVE GRADE 18" LFG HDPE PIPING
- PROPOSED ABOVE GRADE 8" LFG HDPE PIPING
- PROPOSED ABOVE GRADE 6" LFG HDPE PIPING
- PROPOSED ISOLATION VALVE (DIA. VARIES BASED ON PIPE DIA. COLOR)
- PROPOSED BLIND FLANGE (DIA. VARIES BASED ON PIPE DIA. COLOR)
- PROPOSED CONDENSATE SUMP



GENERAL DRAWING NOTES:

1. EXISTING TOPOGRAPHIC SURVEY INFORMATION SHOWN WAS PROVIDED BY PROPELLER AERIAL PHOTOGRAPHY DATED JANUARY 15, 2024.
2. NORTH ARROW SHOWN HERE IS REFERENCE TO THE CALIFORNIA STATE PLANE ZONE V COORDINATE SYSTEM, NAD 83.
3. THE LOCATION OF ANY EXISTING PIPING, VALVES, TIE-IN LOCATIONS AND OTHER FEATURES ARE APPROXIMATE AND SHOULD BE USED FOR INFORMATION PURPOSES ONLY. ACTUAL FIELD CONDITIONS MAY VARY AND SUBJECT TO CHANGE BASED ON FUTURE FILL OPERATIONS, WASTE PLACEMENT, TOPOGRAPHIC FEATURES, AND OTHER SITE-SPECIFIC FACTORS.

PRELIMINARY DESIGN
NOT ISSUED FOR CONSTRUCTION

NO. | REVISION | DATE

SHEET TITLE: PROPOSED OVERALL GCCS SITE PLAN

PROJECT TITLE: CHIQUITA LANDFILL CASTAIC, CALIFORNIA

CLIENT: CHIQUITA CANYON LANDFILL CASTAIC, CALIFORNIA

SCS ENGINEERS
ENVIRONMENTAL CONSULTANTS

DATE:
SCALE: AS SHOWN
SHEET: B

F:\Engineers\Waste Connections\Chiquita Canyon LF\2024 GCLF SOUND SIO\Workplan Submittal\Attachments\DWG\CCLF 2024 Attachments 9 and C_2024-03-05.dwg Mar 06, 2024 - 2:47pm By: 5160enn

Attachment E

Proposed Well Schedule

2024 LFG WELL DRILLING SCHEDULE
CHIQUITA CANYON LANDFILL, CASTAIC, CA

#	Well ID	Coordinates[4] Northing	Coordinates[4] Easting	Elevations Surface[1]	Elevations Base[2]	Depth to Base (ft)	Clearance Above Base >=15 ft.	Bore Depth[5] (ft)	Bore Diam. (in)	Casing size and Material Type[5]	Perforated pipe (ft)	Solid Pipe[3] (ft)	Gravel Pack (ft)	Depth to Top of Gravel Pack (ft)	Depth to Bottom of shallow Gravel Pack (ft)	Shallow Soil Backfill(ft)	Centralizers
1	CV-2411	1981758.730	6365629.668	1385	1225	160	23	137	36	8" CARBON STEEL	105	33	109	28	137	23	2
2	CV-2412	1981796.927	6365864.419	1391	1212	179	22	157	36	8" CARBON STEEL	125	33	129	28	157	23	3
3	CV-2416	1981655.349	6365607.103	1382	1195	187	20	167	36	8" CARBON STEEL	135	33	139	28	167	23	4
4	CV-2417	1981724.493	6365746.684	1387	1203	184	22	162	36	8" CARBON STEEL	130	33	134	28	162	23	4
5	CV-2418	1981542.434	6365639.759	1383	1147	236	24	212	36	8" CARBON STEEL	180	33	184	28	212	23	6
6	CV-2419	1981608.358	6365757.877	1387	1161	226	24	202	36	8" CARBON STEEL	170	33	174	28	202	23	6
7	CV-2420	1981684.455	6365884.354	1383	1168	215	28	187	36	8" CARBON STEEL	155	33	159	28	187	23	5
8	CV-2421	1981789.283	6365979.287	1388	1206	182	25	157	36	8" CARBON STEEL	125	33	129	28	157	23	3
9	CV-2425	1981407.656	6365686.569	1380	1110	270	26	244	36	8" CARBON STEEL	212	33	216	28	244	23	8
10	CV-2426	1981561.583	6365914.109	1385	1126	259	27	232	36	8" CARBON STEEL	200	33	204	28	232	23	7
11	CV-2427	1981731.550	6366078.935	1384	1193	191	29	162	36	8" CARBON STEEL	130	33	134	28	162	23	4
12	CV-2431	1981280.700	6365745.912	1372	1100	272	30	242	36	8" CARBON STEEL	210	33	214	28	242	23	8
13	CV-2432	1981360.401	6365809.530	1382	1078	304	32	272	36	8" CARBON STEEL	240	33	244	28	272	23	9
14	CV-2433	1981450.908	6365855.369	1387	1092	295	33	262	36	8" CARBON STEEL	230	33	234	28	262	23	9
15	CV-2436	1981144.242	6365770.669	1361	1100	261	24	237	36	8" CARBON STEEL	205	33	209	28	237	23	7
16	CV-2437	1981233.265	6365861.476	1371	1068	303	26	277	36	8" CARBON STEEL	245	33	249	28	277	23	9
17	CV-2438	1981328.093	6366040.691	1374	1067	307	30	277	36	8" CARBON STEEL	245	33	249	28	277	23	9
18	CV-2439	1981426.235	6366094.001	1374	1074	300	23	277	36	8" CARBON STEEL	245	33	249	28	277	23	9
19	CV-2440	1981556.729	6366180.008	1376	1125	251	24	227	36	8" CARBON STEEL	195	33	199	28	227	23	7
20	CV-2441	1981630.234	6366280.123	1381	1152	229	22	207	36	8" CARBON STEEL	175	33	179	28	207	23	6
21	CV-2444	1981103.358	6365874.702	1364	1072	292	25	267	36	8" CARBON STEEL	235	33	239	28	267	23	9
22	CV-2445	1981229.645	6365978.426	1371	1061	310	28	282	36	8" CARBON STEEL	250	33	254	28	282	23	10
23	CV-2446	1981350.110	6366180.731	1374	1070	304	27	277	36	8" CARBON STEEL	245	33	249	28	277	23	9
24	CV-2447	1981449.332	6366247.407	1382	1082	300	28	272	36	8" CARBON STEEL	240	33	244	28	272	23	9
25	CV-2448	1981526.446	6366356.092	1392	1106	286	24	262	36	8" CARBON STEEL	230	33	234	28	262	23	9
26	CV-2449	1981661.28	6366543.082	1399	1145	254	25	229	36	8" CARBON STEEL	197	33	201	28	229	23	7
27	CV-2451	1981128.434	6365985.988	1366	1058	308	21	287	36	8" CARBON STEEL	255	33	259	28	287	23	10
28	CV-2452	1981348.223	6366272.976	1394	1070	324	27	297	36	8" CARBON STEEL	265	33	269	28	297	23	10
29	CV-2453	1981417.004	6366357.183	1393	1074	319	27	292	36	8" CARBON STEEL	260	33	264	28	292	23	10
30	CV-2454	1981543.840	6366544.536	1403	1099	304	28	276	36	8" CARBON STEEL	244	33	248	28	276	23	9
31	CV-2455	1981635.923	6366614.239	1405	1123	282	28	254	36	8" CARBON STEEL	222	33	226	28	254	23	8
32	CV-2457	1980761.537	6365797.688	1369	1052	317	30	287	36	8" CARBON STEEL	255	33	259	28	287	23	10
33	CV-2458	1980890.310	6365843.865	1373	1056	317	30	287	36	8" CARBON STEEL	255	33	259	28	287	23	10
34	CV-2459	1980877.690	6365956.554	1378	1054	324	30	294	36	8" CARBON STEEL	262	33	266	28	294	23	10
35	CV-2460	1980972.487	6366055.991	1382	1056	326	30	296	36	8" CARBON STEEL	264	33	268	28	296	23	10

Notes:
1 Surface elevations are from Vertex field survey, dated Janaury 09 and 10, 2024.
2 Base grades titled "CCLF liner limit with floor elevations 20230110" and obtained from Tetra Tech on October 2023.
3 Includes 3 of solid pipe stickup above grade.
4 The Horizontal Coordinates are based on California State Plane Zone 5.
5 If drill cutting temperatures are consistently greater than 150, contractor shall inform Site and Design Engineer for change in well casing materials.

PRELIMINARY DESIGN
NOT ISSUED FOR CONSTRUCTION

SCS ENGINEERS
ENVIRONMENTAL CONSULTANTS

CLIENT: CHIQUITA CANYON LANDFILL CASTAIC, CALIFORNIA

SHEET TITLE: PROPOSED WELL SCHEDULE

PROJECT TITLE: CHIQUITA LANDFILL CASTAIC, CALIFORNIA

SCALE: AS SHOWN

SHEET: C

F:\Engineers\Waste Connections\Chiquita Canyon LF\2024 CCLF SCAQMD SAO\Workplan Submittal\Attachments\DWG\CCLF 2024 Attachments B and C_2024-03-06.dwg Mar 06, 2024 - 2:46pm By: 5160emm

2024 LFG WELL DRILLING SCHEDULE
CHIQUITA CANYON LANDFILL, CASTAIC, CA

#	Well ID	Coordinates[4]		Elevations		Depth to Base (ft)	Clearance Above Base >=15 ft.	Bore Depth[5] (ft)	Bore Diam. (in)	Casing size and Material Type[5]	Perforated pipe (ft)	Solid Pipe[3] (ft)	Gravel Pack (ft)	Depth to Top of Gravel Pack (ft)	Depth to Bottom of shallow Gravel Pack (ft)	Shallow Soil Backfill(ft)	Centralizers
		Northing	Easting	Surface[1]	Base[2]												
36	CV-2461	1981081.732	6366105.102	1386	1057	329	29	300	36	8" CARBON STEEL	268	33	272	28	300	23	11
37	CV-2462	1981168.747	6366271.586	1397	1067	330	30	300	36	8" CARBON STEEL	268	33	272	28	300	23	10
38	CV-2463	1981297.620	6366440.106	1405	1069	336	36	300	36	8" CARBON STEEL	268	33	272	28	300	23	10
39	CV-2464	1981402.993	6366549.762	1411	1072	339	39	300	36	8" CARBON STEEL	268	33	272	28	300	23	11
40	CV-2465	1981543.525	6366654.885	1406	1088	318	21	297	36	8" CARBON STEEL	265	33	269	28	297	23	10
41	CV-2467	1980366.219	6365772.506	1364	1050	314	30	284	36	8" CARBON STEEL	252	33	256	28	284	23	10
42	CV-2468	1980583.016	6365891.962	1381	1050	331	31	300	36	8" CARBON STEEL	268	33	272	28	300	23	11
43	CV-2469	1980746.648	6366017.913	1383	1051	332	32	300	36	8" CARBON STEEL	268	33	272	28	300	23	11
44	CV-2470	1980850.207	6366086.850	1387	1053	334	34	300	36	8" CARBON STEEL	268	33	272	28	300	23	10
45	CV-2471	1980963.070	6366153.709	1390	1055	335	35	300	36	8" CARBON STEEL	268	33	272	28	300	23	10
46	CV-2472	1981017.371	6366285.625	1400	1064	336	36	300	36	8" CARBON STEEL	268	33	272	28	300	23	10
47	CV-2473	1981186.022	6366385.567	1404	1067	337	40	297	36	8" CARBON STEEL	265	33	269	28	297	23	10
48	CV-2474	1981212.037	6366485.113	1409	1067	342	42	300	36	8" CARBON STEEL	268	33	272	28	300	23	11
49	CV-2475	1981325.530	6366559.186	1411	1068	343	46	297	36	8" CARBON STEEL	265	33	269	28	297	23	10
50	CV-2476	1981437.371	6366639.248	1415	1073	342	47	295	36	8" CARBON STEEL	263	33	267	28	295	23	10
51	CV-2478	1980558.653	6365863.259	1364	1046	318	30	288	36	8" CARBON STEEL	256	33	260	28	288	23	10
52	CV-2479	1980584.519	6365958.936	1375	1048	327	30	297	36	8" CARBON STEEL	265	33	269	28	297	23	10
53	CV-2480	1980642.744	6366034.803	1395	1049	346	46	300	36	8" CARBON STEEL	268	33	272	28	300	23	10
54	CV-2481	1980737.324	6366122.356	1390	1050	340	43	297	36	8" CARBON STEEL	265	33	269	28	297	23	10
55	CV-2482	1980743.654	6366198.146	1392	1051	341	41	300	36	8" CARBON STEEL	268	33	272	28	300	23	10
56	CV-2483	1980845.798	6366190.932	1392	1053	339	39	300	36	8" CARBON STEEL	268	33	272	28	300	23	11
57	CV-2484	1980904.731	6366289.726	1397	1062	335	38	297	36	8" CARBON STEEL	265	33	269	28	297	23	10
58	CV-2485	1980362.094	6365982.434	1362	1044	318	30	288	36	8" CPVC	256	33	260	28	288	23	10
59	CV-2486	1980551.439	6366082.254	1396	1047	349	49	300	36	8" CARBON STEEL	268	33	272	28	300	23	11
60	CV-2487	1980592.117	6366252.775	1404	1047	357	57	300	36	8" CPVC	268	33	272	28	300	23	10
61	CV-2488	1980801.069	6366392.515	1398	1053	345	45	300	36	8" CPVC	268	33	272	28	300	23	10
62	CV-2489	1980384.612	6366256.979	1370	1043	327	30	297	36	8" CPVC	265	33	269	28	297	23	10
63	CV-2490	1980472.567	6366425.832	1387	1045	342	42	300	36	8" CPVC	268	33	272	28	300	23	11
64	CV-2491	1980585.765	6366616.580	1406	1047	359	59	300	36	8" CPVC	268	33	272	28	300	23	10
65	CV-2492	1980595.944	6366844.827	1408	1063	345	45	300	36	8" CPVC	268	33	272	28	300	23	10
66	CV-2493	1980965.601	6366784.537	1404	1056	348	48	300	36	8" CPVC	268	33	272	28	300	23	11
67	CV-2494	1981162.449	6366874.044	1408	1066	342	42	300	36	8" CPVC	268	33	272	28	300	23	10
68	CV-24102	1980105.202	6365739.572	1288	1100	188	26	162	36	8" CARBON STEEL	130	33	134	28	162	23	4
69	CV-24103	1980113.960	6366018.102	1296	1039	257	30	227	36	8" CPVC	195	33	199	28	227	23	7
70	CV-24104	1980130.409	6366268.164	1308	1038	270	30	240	36	8" CPVC	208	33	212	28	240	23	7
							Totals	**18619**					**16659**				**612**

Carbon Steel		CPVC	
Total Solid	1947	Total Solid	363
Total Perf	13580	Total Perf	2799
Total Pipe	15527	Total Pipe	3162

Notes:

1 Surface elevations are from Vertex field survey, dated Janaury 09 and 10, 2024.

2 Base grades titled "CC_LF liner limit with floor elevations 20230110" and obtained from Tetra Tech on October 2023.

[3] Includes 3 of solid pipe stickup above grade.

[4] The Horizontal Coordinates are based on California State Plane Zone 5.

[5] If drill cutting temperatures are consistently greater than 150, contractor shall inform Site and Design Engineer for change in well casing materials.

PRELIMINARY DESIGN
NOT ISSUED FOR CONSTRUCTION

SHEET TITLE: PROPOSED WELL SCHEDULE
PROJECT TITLE: CHIQUITA LANDFILL CASTAIC, CALIFORNIA
CLIENT: CHIQUITA CANYON LANDFILL CASTAIC, CALIFORNIA
SCS ENGINEERS ENVIRONMENTAL CONSULTANTS
DATE:
SCALE: AS SHOWN
SHEET: C

Attachment F

Geosynthetic Cover Design and Implementation Schedule

TETRA TECH

MEMORANDUM

To:	Steve Cassulo
From:	Julie Hauenstein P.E. – Tetra Tech
Date:	March 13, 2024
Subject:	Geosynthetic Cover Workplan to Address Condition 50 of the SCAQMD Modified Stipulated Order

1.0 INTRODUCTION

This memorandum summarizes the updated installation workplan for the geosynthetic cover portion of the workplan required by Condition 50 of the Modified Stipulated Order for Abatement with the South Coast Air Quality Management District in Case No. 6177-4. As required by the Modified Stipulated Order and in coordination with the Local Enforcement Agency (LEA), Chiquita Canyon, LLC (Chiquita) is in the process of installing a 30 mil High Density Polyethylene (HDPE) geomembrane cover in phases over portions of the reaction area to counter methane surface exceedances and fugitive LFG emissions in the shorter-term. Attachment 1 to this memorandum shows the approximate area over which the geosynthetic cover is and will continue to be installed.

2.0 GEOMEMBRANE COVER

2.1 UPDATED INSTALLATION WORK PLAN

An exposed geosynthetic cover comprised of 30 mil HDPE geomembrane is continuing to be installed in phases over portions of the reaction area. See Attachment 1 for approximate geosynthetic cover limits. Attachment 2 to this memorandum provides the technical data sheet for this geomembrane cover material. This cover material has a nominal thickness of 30 mils, is textured on both sides, and is white on one side and black on the other. The geomembrane is being installed with the white side up to reduce thermal expansion and contraction.

Chiquita is continuing to install the geomembrane in accordance with its initial plans to install the geomembrane over the west slope of the reaction area as outlined in the plans submitted to SCAQMD in September of 2023. Since the September submittal the planned cover area has been expanded, and the geomembrane cover will be installed over following portions of the Landfill in the following order: (1) the west slope of the reaction area; (2) the top deck of the reaction area; and (3) the north slope of the reaction area. Phase 1 corresponds with the September 2023 submittal; Phases 2 and 3 are an expansion of the original plan. Phases are necessary because of the various preparatory tasks required for cover installation. Chiquita has been sequencing the work so that the preparatory tasks are completed ahead of the cover installation crew and so that cover installation is continuous.

For each section of geosynthetic cover installed, Chiquita is completing the following tasks:

- Chiquita removes the green waste and vegetation that is growing on the area that will be covered and prepares the subgrade for geomembrane installation.
- The existing benches are regarded as necessary to maintain positive drainage.
- Surface landfill gas collectors are then installed in the area to prevent landfill gas from building up pressure under the geomembrane once it is installed.
- Portions of the existing gas collection and control system (GCCS) are taken off-line, and the laterals, headers, and vacuum lines are disconnected and temporarily relocated. The geomembrane is then installed, and the

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21700 Copley Drive, Suite 200 Diamond Bar, CA 91765
Tel 909.860.7777 tetratech.com

laterals, headers, and vacuum pipes are replaced above the geomembrane, reconnected, and brought back on-line. The GCCS laterals, headers, and vacuum pipes are installed over the geomembrane so that adjustments can be made to maintain positive drainage within the pipe network.

- Geomembrane pipe boots are installed around vertical landfill gas wells to provide a continuous seal of the geomembrane cover to control surface emissions.
- A sandbag ballast system is continuing to be placed on top of the geomembrane to prevent uplift of the cover.

2.2 MAINTENANCE

Any significant depressions in the landfill surface under the geomembrane will be repaired by cutting back the geomembrane, filling in the depression with clean soil, and then placing a patch of geomembrane material that extends beyond the cut location. A channel and/or pump capable of draining the lowest point of the depression will be constructed or installed if ponding is anticipated for a prolonged period or a change to surface drainage is required. The site engineer will be responsible for directing fill placement in the depression to facilitate drainage. Records of the depths and limits of fill placement will be maintained. Any repairs required to the geomembrane cover shall be done in accordance with original construction methods. The rope and sandbag ballast shall be repaired or replace as necessary to provide adequate ballast from wind uplift.

Elective penetration of the geomembrane cover system associated with installation or maintenance of GCCS components will be initiated in coordination with, and with the approval of, the site engineer. All earthwork and geosynthetic repairs will be completed in accordance with the procedures contained in the specifications and construction quality assurance (CQA) plan that will be prepared for the project. For well boring excavations, the annular space between the well casing and the boring wall will be backfilled with bentonite from a depth of approximately 5-feet below grade to 3-feet below grade, to achieve an adequate seal around the pipe. A geomembrane pipe boot will then be installed around the completed well and welded to the surrounding geomembrane.

Placing a geomembrane cover over an area of the Landfill with rapid settlement could result in delays in adjustments/expansion of the GCCS and repair of low spots due to restrictions in access, the need to mobilize a liner crew to make repairs, and an inability to work in wet conditions.

2.3 ANTICIPATED UPDATED INSTALLATION SCHEDULE

This section provides the anticipated, updated schedule for the installation of this geosynthetic cover. This timeline is subject to change based on weather conditions, material availability, site conditions, and other unanticipated events. Work should not be performed during rain events or when the ground is too saturated as it will disturb the intermediate cover and could result in exposure of waste. The size of the cover area may also be subject to change based on further monitoring of existing or proposed gas extraction wells. To date, approximately 4.7 acres of geosynthetic cover has been installed on the northly end of the west slope of the reaction area.

Week	Approximate Dates	Phasing
Week 1 – 3	March 11 – March 29	Phase 1 Geosynthetic Cover – West Slope*
Weeks 4 – 7	April 1 – April 26	Phase 2 Geosynthetic Cover – Top Deck
Weeks 8 – 11	April 29 – May 24	Phase 3 Geosynthetic Cover – North Slope
Week 12	May 27 – May 31	Finalize reporting

*The area of the Landfill currently covered by the scrim will be replaced by the 30 mil HDPE geomembrane once liquid levels in the area have dropped.

Appendix A.4

Location	Location Name	Group	From Tank	Tank #	Tank Set Up
# 7	Tank Farm	A	2 & 3 (Clarifying Tanks)	8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 28, 29, 30, 31, 32, 33	Manifold
# 7	Tank Farm	A	Group A Individual Holding Tanks	44, 58, 59, 75, 76, 78, 79, 80, 81, 82, 85, 86, 90, 91, 92, 99, 101, 103, 104, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 122, 123, 124,	Isolated
# 7	Tank Farm	B	4 & 5 (Clarifying Tanks)	18	Individual
# 7	Tank Farm	B	Group B Isolated Manifold Treated	19, 20, 21, 22, 23, 24, 25, 26, 27,	Manifold
# 7	Tank Farm	B	Group B Isolated Treated	93, 94	Isolated
# 6	North Perimeter	D		64, 65, 66, 67	Manifold
# 1	Tank Farm 7	D	North Perimeter Holding Tanks	45, 46, 47, 51, 57, 60, 70, 95, 102, 121, 126	Individual
# 4	LC Manifold			1	Manifold
# 7	LC Manifold		LC Manifold Holding Tank Batched	36	Individual
# 7	LC Manifold		LC Manifold Holding Tank	55, 98, 128, 136, 147, 154, 181	Individual
# 8	Primary Canyon				Individual
# 7	Primary Canyon		Primary Canyon (#8) Holding Tank	88	Individual
# 7	Tank Farm 7		Leachate from Westside Scrim	36, 83, 84, 100, 107	Individual

Appendix A.5

CHIQUITA CANYON
A Waste Connections Company

Via E-Mail

Douglas J. Hansen
Division Director
Utah Division of Waste Management and Radiation Control
PO Box 144880
Salt Lake City, Utah 84114-4880
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Linda Jacobson
Environmental Protection Agency, Region 8
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jacobson.linda@epa.gov

Tyler Holybee
Project Coordinator
Enforcement and Compliance Assurance Division
Environmental Protection Agency, Region 9
75 Hawthorne Street
San Francisco, CA 94105
Holybee.Tyler@epa.gov

Re: **Chiquita Canyon Landfill**
Off-Site Shipments of Waste Material

Dear Mr. Hansen, Ms. Jacobson, and Mr. Holybee:

Chiquita Canyon, LLC ("Chiquita") is the operator of Chiquita Cayon Landfill ("Landfill"), a Class III non-hazardous municipal solid waste landfill ("Landfill") located in the northern portion of the County of Los Angeles. The Landfill is the subject of a Unilateral Administrative Order ("UAO") issued by the United States Environmental Protection Agency ("EPA") on February 21, 2024, in connection with leachate production and management following an unexpected and unusual underground reaction in an inactive portion of the Landfill (also known as an "Elevated Temperature Landfill" or "ETLF" event). A copy of the UAO is enclosed.

Recent sampling of leachate accumulated in certain tank farm areas at the Landfill has in some instances shown levels of volatile organic compounds ("VOCs"), including benzene, above

the applicable regulatory thresholds under the Resource Conservation and Recovery Act ("RCRA") regulations and California and Utah hazardous waste regulations.[1]

A tank farm is also located at the Landfill that accumulates condensate waste streams separate from landfill leachate, including condensate produced by a waste-to-energy facility located at the Landfill operated by Ameresco Chiquita Energy LLC ("Ameresco") and a very small amount of knock-out condensate from landfill flaring operations. Sampling of condensate from those tanks has also shown levels of VOCs (benzene and methyl ethyl ketone, also known as 2-Butanone), semi-volatile organic compounds (pyridine), metals (arsenic) above the regulatory thresholds. Certain samples of condensate have also shown low flashpoint potentially indicative of ignitability. As of January 31, 2024, Ameresco ceased operations at its facility, and the tanks are no longer accumulating any additional Ameresco condensate.

Chiquita is in the process of making waste determinations for the liquid waste streams but in the interim is managing leachate and condensate from tanks showing elevated constituent levels as potentially hazardous waste, and disposing of those liquids offsite at permitted hazardous waste treatment and disposal facilities. Chiquita has recently reached an agreement with Clean Harbors to transport condensate and some of the landfill leachate that has been identified as potentially hazardous to the Aragonite Incineration Facility located in Tooele County, Utah.[2]

Pursuant to Paragraph 28.a of the UAO and the "Off-Site Rule" under the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA"), EPA has determined that the Aragonite Incineration Facility is an acceptable facility to receive these offsite shipments. It is our understanding that a Verification of Continued Acceptability was completed for the Aragonite facility on February 23, 2024, and is valid until April 24, 2024.

Accordingly, pursuant to Paragraph 28.b of the UAO, we are providing advance written notice to Utah and EPA of our intention to ship leachate and a limited amount of condensate to the Aragonite Incineration Facility. The information required for the notice is provided in the table below, including the anticipated schedule for shipments.

[1] Sampling of landfill leachate has sporadically shown flashpoint potentially indicative of the ignitability characteristic. Metals have also been detected in leachate above the applicable regulatory thresholds in only two sampling events to date (mercury in one instance and lead in the other).

[2] Chiquita has also reached an agreement with Clean Harbors to transport some of the leachate that has been identified as potentially hazardous to the Kimball Incineration Facility in Kimball, Nebraska and the Deer Park Incineration Facility in La Porte, Texas. Separate notice letters are being sent to the Nebraska Department of Environment and Energy and the Texas Commission on Environmental Quality in accordance with the UAO.

Table 1
Information for Notification of Off-Site Shipment

Name and location of the receiving facility	Clean Harbors Aragonite Incineration Facility 11600 North Aptus Road Grantsville, UT 84029 Utah/EPA ID Number: UTD981552177
Type of Waste Material to be shipped	Condensate (potentially hazardous waste that may exhibit the characteristics of toxicity, such as arsenic, benzene, methyl ethyl ketone, and pyridine [D004, D018, D035, and D038], and of ignitability [D001]). Landfill leachate (potentially hazardous waste that may exhibit the characteristic of toxicity, such as benzene [D018], and of ignitability [D001]).[3]
Quantity of Waste Material to be shipped	Chiquita is currently anticipating that up to 2 truckloads of liquid (approximately 10,000 gallons total) would be transported offsite to Aragonite each day. The limited amount of condensate wastes described herein will be transported offsite to Aragonite first, in two truckloads on February 26 and one truckload on February 27 (the second truckload on February 27 would consist of landfill leachate). Thereafter, the offsite shipments of 2 truckloads per day to Aragonite will consist of landfill leachate.
Schedule for the shipment	The first shipment of 2 truckloads to the Aragonite facility is anticipated to leave the Landfill on Monday, February 26, 2024, with 2 more truckloads per day through Friday March 1. The schedule for truck shipments beyond that time will vary depending on the amount of material that has been sampled and is ready to be moved offsite. The anticipated travel time from the Landfill to the Aragonite facility is one day.

[3] All of these waste codes may not be potentially applicable to all leachate waste streams, and only a subset of these codes may apply to leachate from a particular tank farm area.

Method of transportation	As discussed above, leachate will be transported by on-road trucks.

Please contact me if you have any questions concerning this notice.

Regards,

Steve J Cassulo

Steve Cassulo
District Manager
Chiquita Canyon, LLC

cc: Ken Habaradas, Los Angeles County Department of Public Health
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
Karen Gork, Los Angeles County LEA
Eric Morofuji, Los Angeles County LEA
Renee Jensen, LEA Counsel
Blaine McPhillips, Senior Deputy 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
Todd Thalhamer, CalRecycle
Janelle Heinzler, CalRecycle
Jeff Lindberg, California Air Recourses 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
Dylan Clark, Department of Toxic Substances Control
Los Angeles County Certified Unified Program Agency

Appendix A.6

Via E-Mail

Kara Valentine
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Tyler Holybee
Project Coordinator
Enforcement and Compliance Assurance Division
Environmental Protection Agency, Region 9
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Holybee.Tyler@epa.gov

Re: **Chiquita Canyon Landfill**
Off-Site Shipments of Waste Material

Dear Ms. Valentine, Mr. Martin, and Mr. Holybee:

Chiquita Canyon, LLC ("Chiquita") is the operator of Chiquita Cayon Landfill ("Landfill"), a Class III non-hazardous municipal solid waste landfill ("Landfill") located in the northern portion of the County of Los Angeles, California. The Landfill is the subject of a Unilateral Administrative Order ("UAO") issued by the United States Environmental Protection Agency ("EPA") on February 21, 2024, in connection with leachate production and management following an unexpected and unusual underground reaction in an inactive portion of the Landfill (also known as an "Elevated Temperature Landfill" or "ETLF" event). A copy of the UAO is enclosed.

Recent sampling of leachate accumulated in certain tank farm areas at the Landfill has in some instances shown levels of volatile organic compounds, including benzene, above the applicable regulatory thresholds under the Resource Conservation and Recovery Act ("RCRA") regulations and California and Nebraska hazardous waste regulations.[1]

Chiquita is in the process of making waste determinations for its leachate waste streams but in the interim is managing leachate from tanks showing elevated constituent levels as potentially hazardous waste, and disposing of a portion of that leachate offsite at permitted hazardous waste treatment and disposal facilities. Chiquita has recently reached an agreement with Clean Harbors to transport some of the landfill leachate that has been identified as potentially hazardous to the Kimball Incineration Facility located in Kimball, Nebraska.[2]

Pursuant to Paragraph 28.a of the UAO and the "Off-Site Rule" under the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA"), EPA has determined that the Kimball Incineration Facility is an acceptable facility to receive these offsite shipments. A Verification of Acceptability was completed for the Kimball facility on February 27, 2024, and is valid until April 27, 2024.

Accordingly, pursuant to Paragraph 28.b of the UAO, we are providing written notice to Nebraska and EPA of offsite waste material shipments to the Kimball Incineration Facility. The information required for the notice is provided in the following table, including the anticipated schedule for the shipment.

[1] Sampling of landfill leachate has sporadically shown flashpoint potentially indicative of the ignitability characteristic. Metals have also been detected in leachate above the applicable regulatory thresholds in only two sampling events to date (mercury in one instance and lead in the other).

[2] Chiquita has also reached an agreement with Clean Harbors to transport some of the leachate that has been identified as potentially hazardous to the Aragonite Incineration Facility in Tooele County, Utah and the Deer Park Incineration Facility in La Porte, Texas. Separate notice letters are being sent to the Utah Division of Waste Management and Radiation Control and the Texas Commission on Environmental Quality in accordance with the UAO.

Table 1
Information for Notification of Off-Site Shipment

Name and location of the receiving facility	Clean Harbors Kimball Incineration Facility 2247 South Highway 71 Kimball, NE 69145 NE/EPA ID number: NED981723513
Type of Waste Material to be shipped	Landfill leachate (potentially hazardous waste that may exhibit the characteristic of toxicity, such as benzene [D018], and of ignitability [D001]).[3]
Quantity of Waste Material to be shipped	Chiquita is currently anticipating that up to 2 truckloads of leachate (approximately 10,000 gallons total) would be transported offsite to the Kimball facility each day.
Schedule for the shipment	The first shipments of 2 truckloads to the Kimball facility were filled on February 26, 2024, with 2 more truckloads per day through Friday March 1. The schedule for truck shipments beyond that time will vary depending on the amount of material that has been sampled and is ready to be moved offsite. The anticipated travel time from the Landfill to the Kimball facility is approximately two days.
Method of transportation	As discussed above, leachate will be transported by on-road trucks.

Please contact me if you have any questions concerning this notice.

Regards,

Steve J Cassulo

Steve Cassulo
District Manager
Chiquita Canyon, LLC

[3] All of these waste codes may not be potentially applicable to all leachate waste streams, and only a subset of these codes may apply to leachate from a particular tank farm area.

cc: Ken Habaradas, Los Angeles County Department of Public Health
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
Karen Gork, Los Angeles County LEA
Eric Morofuji, Los Angeles County LEA
Renee Jensen, LEA Counsel
Blaine McPhillips, Senior Deputy 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
Todd Thalhamer, CalRecycle
Janelle Heinzler, CalRecycle
Jeff Lindberg, California Air Recourses 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
Dylan Clark, Department of Toxic Substances Control
Los Angeles County Certified Unified Program Agency

Appendix A.7

CHIQUITA CANYON
A Waste Connections Company

Via E-Mail

Beth Seaton
Director, Office of Waste
Texas Commission on Environmental Quality
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Tyler Holybee
Project Coordinator
Enforcement and Compliance Assurance Division
Environmental Protection Agency, Region 9
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Holybee.Tyler@epa.gov

Re: **Chiquita Canyon Landfill**
Off-Site Shipments of Waste Material

Dear Ms. Seaton, Mr. Shannon, and Mr. Holybee:

Chiquita Canyon, LLC ("Chiquita") is the operator of Chiquita Cayon Landfill ("Landfill"), a Class III non-hazardous municipal solid waste landfill ("Landfill") located in the northern portion of the County of Los Angeles, California. The Landfill is the subject of a Unilateral Administrative Order ("UAO") issued by the United States Environmental Protection Agency ("EPA") on February 21, 2024, in connection with leachate production and management following an unexpected and unusual underground reaction in an inactive portion of the Landfill (also known as an "Elevated Temperature Landfill" or "ETLF" event). A copy of the UAO is enclosed.

Recent sampling of leachate accumulated in certain tank farm areas at the Landfill has in some instances shown levels of volatile organic compounds, including benzene, above the applicable regulatory thresholds under the Resource Conservation and Recovery Act ("RCRA") regulations and California and Texas hazardous waste regulations.[1]

Chiquita is in the process of making waste determinations for its leachate waste streams but in the interim is managing leachate from tanks showing elevated constituent levels as potentially hazardous waste, and disposing of a portion of that leachate offsite at permitted hazardous waste treatment and disposal facilities. Chiquita has recently reached an agreement with Clean Harbors to transport some of the landfill leachate that has been identified as potentially hazardous to the Deer Park Incineration Facility located in La Porte, Texas.[2]

Pursuant to Paragraph 28.a of the UAO and the "Off-Site Rule" under the Comprehensive Environmental Response, Compensation, and Liability Act ("CERCLA"), EPA has determined that the Kimball Incineration Facility is an acceptable facility to receive these offsite shipments. A Determination of Acceptability was completed for the Deer Park facility on February 29, 2024.

Accordingly, pursuant to Paragraph 28.b of the UAO, we are providing written notice to Texas and EPA of our intention to ship leachate to the Deer Park Incineration Facility. The information required for the notice is provided in the following table.

[1] Sampling of landfill leachate has sporadically shown flashpoint potentially indicative of the ignitability characteristic. Metals have also been detected in leachate above the applicable regulatory thresholds in only two sampling events to date (mercury in one instance and lead in the other).

[2] Chiquita has also reached an agreement with Clean Harbors to transport some of the leachate that has been identified as potentially hazardous to the Aragonite Incineration Facility in Tooele County, Utah, and the Kimball Incineration Facility in Kimball, Nebraska. Separate notice letters have been sent to the Utah Division of Waste Management and Radiation Control and the Nebraska Department of Environment and Energy in accordance with the UAO.

Table 1
Information for Notification of Off-Site Shipment

Name and location of the receiving facility	Clean Harbors Deer Park Incineration Facility 2027 Independence Parkway South La Porte, Texas 77571 TX/EPA ID number: TXD055141378
Type of Waste Material to be shipped	Landfill leachate (potentially hazardous waste that may exhibit the characteristic of toxicity, such as benzene [D018], and of ignitability [D001]).[3]
Quantity of Waste Material to be shipped	At present, Chiquita anticipates that initial shipments via rail will involve one tanker per shipment (each tanker will have a capacity of approximately 20,000 gallons), with up to three anticipated shipments per week (approximately 60,000 total gallons per week). The quantities of leachate to be shipped may increase in the future depending on need and to the extent the Deer Park facility has available capacity. The quantities of leachate shipped to the Deer Park facility per week may also vary depending on the amount of leachate that is sampled and ready to be moved offsite. The quantities will also depend on various logistical factors such as the availability of rail tankers, the availability of trucks to haul leachate to the rail tankers at the railyard, the amount of time it will take to fill each tanker, and the available capacity at the receiving facility.
Schedule for the shipment	Loading of the first rail tanker for shipment began on February 27, 2024. It is currently anticipated that there will be up to 3 shipments per week. The typical estimated travel time from the railyard in California to the transload facility in Texas is 11 calendar days. As discussed above, the schedule for rail shipments may vary depending on the amount of leachate that is sampled and ready to be moved offsite. It

[3] All of these waste codes may not be potentially applicable to all leachate waste streams, and only a subset of these codes may apply to leachate from a particular tank farm area.

	will also depend on various logistical factors, including those noted above.
Method of transportation	Leachate will be transported to the transload facility in Texas via rail.[4]

Please contact me if you have any questions concerning this notice.

Regards,

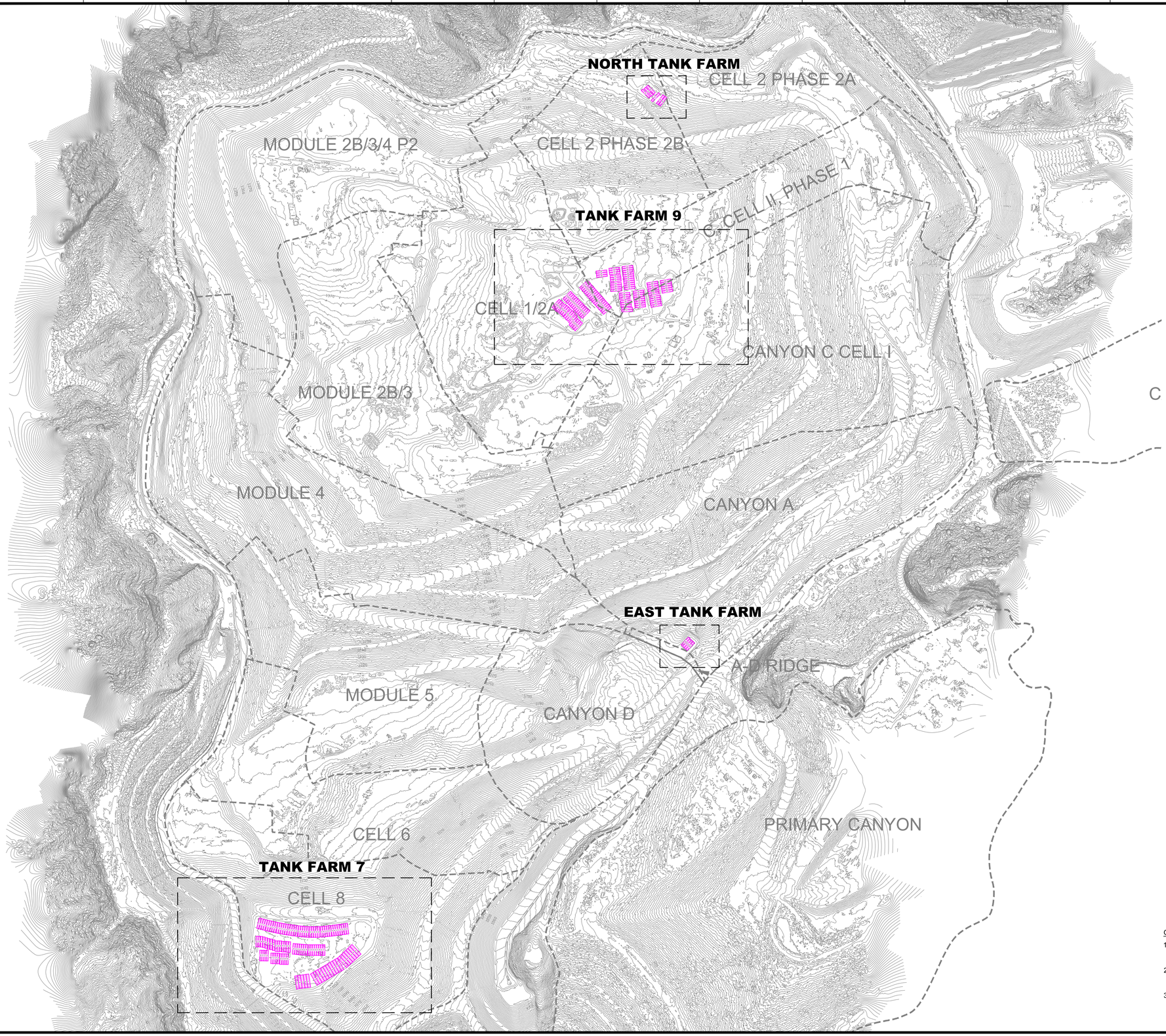
Steve Cassulo
District Manager
Chiquita Canyon, LLC

cc: Ken Habaradas, Los Angeles County Department of Public Health
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
Karen Gork, Los Angeles County LEA
Eric Morofuji, Los Angeles County LEA
Renee Jensen, LEA Counsel
Blaine McPhillips, Senior Deputy 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
Todd Thalhamer, CalRecycle
Janelle Heinzler, CalRecycle
Jeff Lindberg, California Air Recourses 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

[4] The leachate will either be piped directly from the tankers to the Deer Park Incineration Facility or trucked a short (approximately 2-mile) distance to the facility.

Thanne Berg, United States Environmental Protection Agency
Laura Friedli, United States Environmental Protection Agency
Rick Sakow, United States Environmental Protection Agency
Jennifer MacArthur, United States Environmental Protection Agency
Dylan Clark, Department of Toxic Substances Control
Los Angeles County Certified Unified Program Agency

Appendix B



N

GRAPHIC SCALE

200 100 0 200 400 600

SCALE: 1"=200'

LEGEND

1150 TOPOGRAPHIC CONTOUR

EXISTING CELL LIMITS (APPROXIMATE)

EXISTING FRAK TANK

GENERAL DRAWING NOTES:

1. EXISTING TOPOGRAPHIC SURVEY INFORMATION SHOWN WAS PROVIDED BY PROPELLOR. AERIAL PHOTOGRAPHY DATED APRIL 10, 2024.
2. NORTH ARROW SHOWN HERE IS REFERENCE TO THE CALIFORNIA STATE PLANE ZONE V COORDINATE SYSTEM, NAD 83.
3. ACTUAL FIELD CONDITIONS MAY VARY AND SUBJECT TO CHANGE BASED ON FUTURE FILL OPERATIONS, WASTE PLACEMENT, TOPOGRAPHIC FEATURES, AND OTHER SITE-SPECIFIC FACTORS.

NO.	REVISION	DATE

SHEET TITLE: OVERALL TANK FARM SITE PLAN

PROJECT TITLE: CHIQUITA CANYON LANDFILL CASTAIC, CALIFORNIA

CLIENT: CHIQUITA CANYON LANDFILL CASTAIC, CALIFORNIA

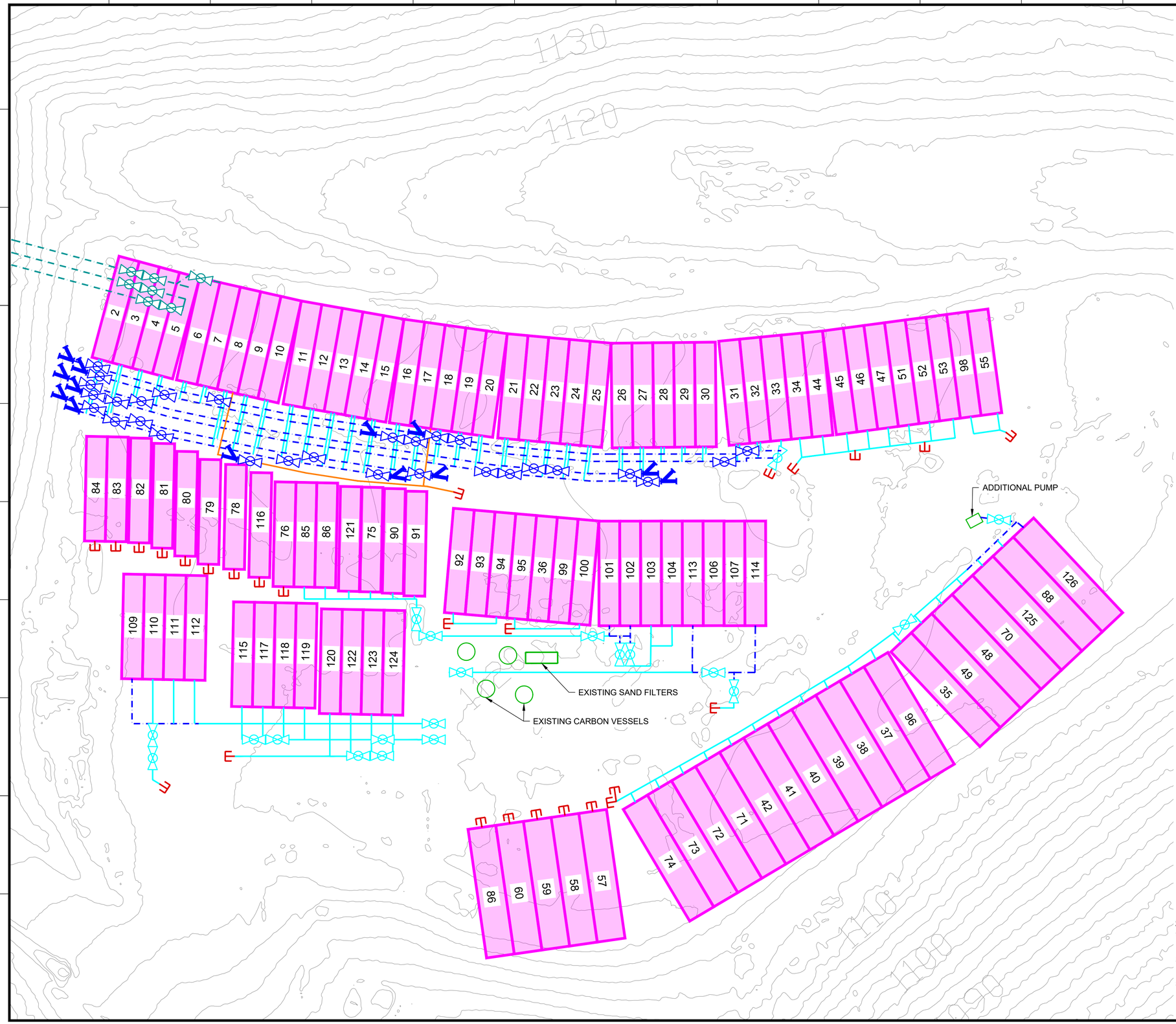
SCS ENGINEERS
ENVIRONMENTAL CONSULTANTS
8799 BALBOA AVENUE SUITE 290
SAN DIEGO, CA 92123
(858) 571-5500 FAX. (562) 427-0805

PROJ. NO. 01204123.35 | DSN. BY: - | DWN. BY: SRM | CHK. BY: WCH | ACAD FILE: | APP. BY: WCH

DATE: 04/18/2024

SCALE: AS SHOWN

SHEET: 1



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GRAPHIC SCALE

20 10 0 20 40 60

SCALE: 1"=20'

LEGEND

- 1150 — TOPOGRAPHIC CONTOUR
- EXISTING 6" HDPE SDR 11 FORCE MAIN
- EXISTING 4" HDPE SDR 11 FORCE MAIN
- EXISTING 4" POWERTRACK HOSE
- EXISTING 4" HDPE SDR 11 ATMOS RETURN LINE
- EXISTING SINGLE-WYE CLEANOUT
- EXISTING 6" ISOLATION POLYVALVE
- EXISTING 4" ISOLATION POLYVALVE
- EXISTING 4" ISOLATION BALLVALVE
- EXISTING CAMLOCK CONNECTION
- EXISTING FRAK TANK

GENERAL DRAWING NOTES:

1. EXISTING TOPOGRAPHIC SURVEY INFORMATION SHOWN WAS PROVIDED BY PROPELLOR. AERIAL PHOTOGRAPHY DATED APRIL 10, 2024.
2. NORTH ARROW SHOWN HERE IS REFERENCE TO THE CALIFORNIA STATE PLANE ZONE V COORDINATE SYSTEM, NAD 83.
3. ACTUAL FIELD CONDITIONS MAY VARY AND SUBJECT TO CHANGE BASED ON FUTURE FILL OPERATIONS, WASTE PLACEMENT, TOPOGRAPHIC FEATURES, AND OTHER SITE-SPECIFIC FACTORS.

NO.	REVISION	DATE

SHEET TITLE: TANK FARM 7 - DE-WATERING SYSTEM LAYOUT

PROJECT TITLE: CHIQUITA CANYON LANDFILL CASTAIC, CALIFORNIA

CLIENT: CHIQUITA CANYON LANDFILL CASTAIC, CALIFORNIA

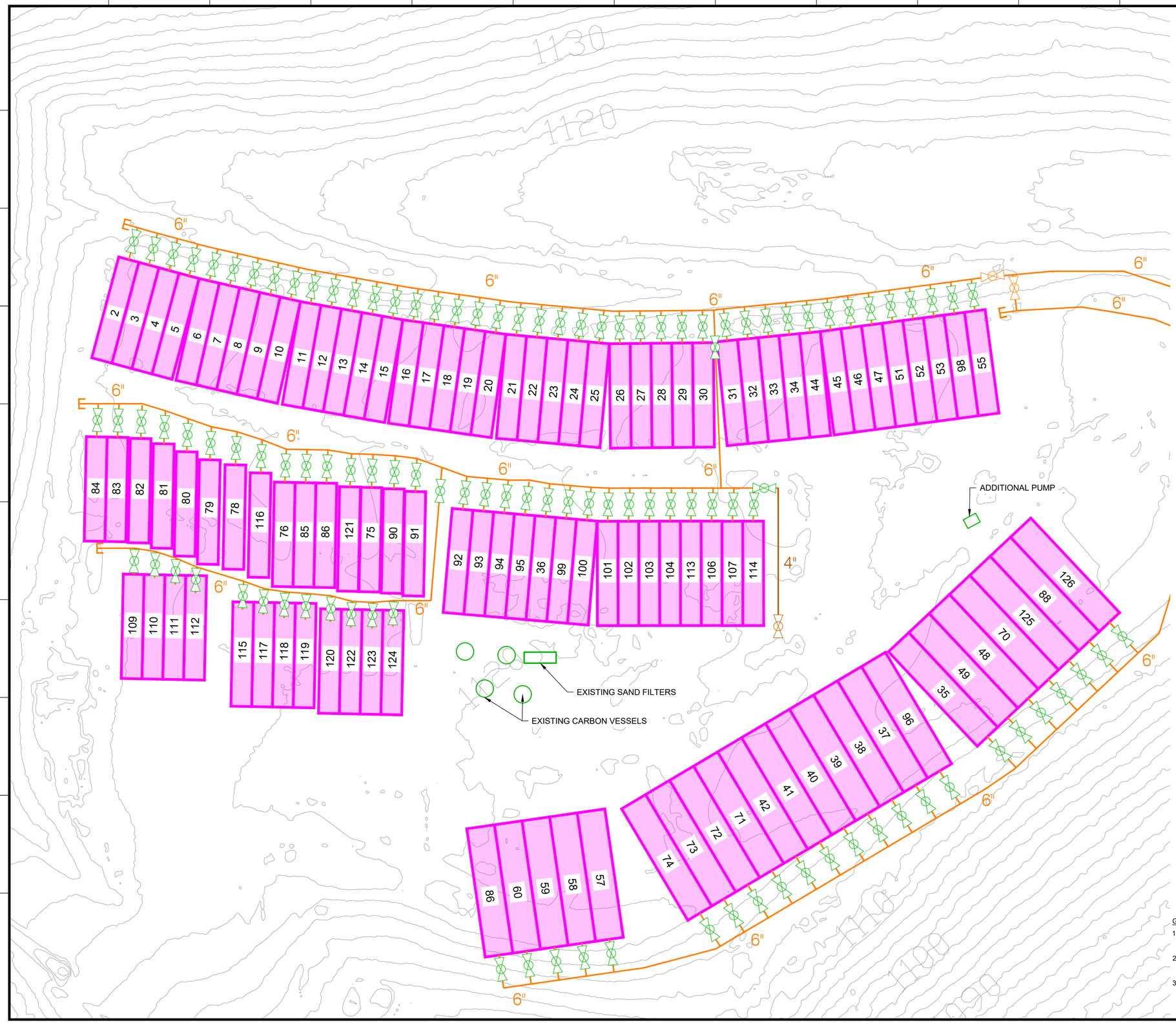
SCS ENGINEERS
ENVIRONMENTAL CONSULTANTS
8799 BALBOA AVENUE SUITE 290
SAN DIEGO, CA 92123
(858) 571-5500 FAX: (562) 427-0805

PROJ. NO: 01204123.35 | DSN. BY: - | DWN. BY: SRM | CHK. BY: WCH | ACAD FILE: - | APP. BY: WCH

DATE: 04/18/2024

SCALE: AS SHOWN

SHEET: 2



N

GRAPHIC SCALE

20 10 0 20 40 60

SCALE: 1"=20'

LEGEND

- 1150 — TOPOGRAPHIC CONTOUR
- EXISTING 6" HDPE SDR 17 VACUUM LATERAL
- EXISTING 4" HDPE SDR 17 VACUUM LATERAL
- EXISTING 6" ISOLATION POLYVALVE
- EXISTING 3" ISOLATION POLYVALVE
- EXISTING 4" ISOLATION BALLVALVE
- EXISTING HDPE FUSED CAP
- EXISTING FRAK TANK

GENERAL DRAWING NOTES:

1. EXISTING TOPOGRAPHIC SURVEY INFORMATION SHOWN WAS PROVIDED BY PROPELLOR. AERIAL PHOTOGRAPHY DATED APRIL 10, 2024.
2. NORTH ARROW SHOWN HERE IS REFERENCE TO THE CALIFORNIA STATE PLANE ZONE V COORDINATE SYSTEM, NAD 83.
3. ACTUAL FIELD CONDITIONS MAY VARY AND SUBJECT TO CHANGE BASED ON FUTURE FILL OPERATIONS, WASTE PLACEMENT, TOPOGRAPHIC FEATURES, AND OTHER SITE-SPECIFIC FACTORS.

DATE | REVISION | NO.

SHEET TITLE: TANK FARM 7 - VENTILATION (VACUUM) SYSTEM LAYOUT

PROJECT TITLE: CHIQUITA CANYON LANDFILL CASTAIC, CALIFORNIA

CLIENT: CHIQUITA CANYON LANDFILL CASTAIC, CALIFORNIA

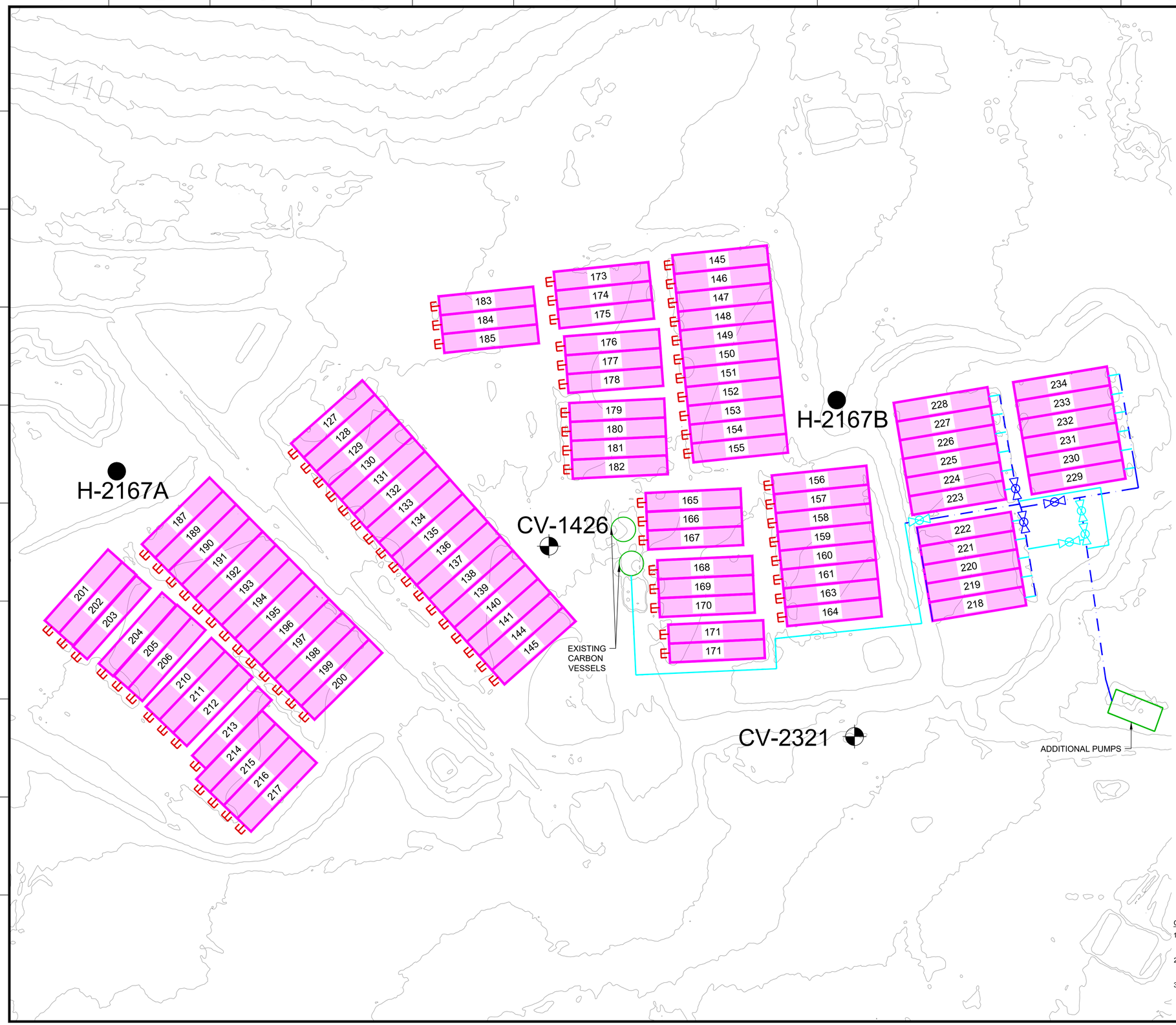
SCS ENGINEERS
ENVIRONMENTAL CONSULTANTS
8799 BALBOA AVENUE SUITE 290
SAN DIEGO, CA 92123
(858) 571-5500 FAX (562) 427-0805

PROJ. NO: 01204123.35 | DWN. BY: SRM | CHK. BY: WCH | ACAD FILE: | APP. BY: WCH | DSN. BY: - | ENGINEERS

DATE: 04/18/2024

SCALE: AS SHOWN

SHEET: 3



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LEGEND

1150	TOPOGRAPHIC CONTOUR
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H-XX	EXISTING HORIZONTAL COLLECTOR WELL
	EXISTING 4" HDPE SDR 11 FORCE MAIN
	EXISTING 4" POWERTRACK HOSE
	EXISTING 4" ISOLATION POLYVALVE
	EXISTING 4" ISOLATION BALLVALVE
	EXISTING CAMLOCK CONNECTION
	EXISTING FRAK TANK

GENERAL DRAWING NOTES:

1. EXISTING TOPOGRAPHIC SURVEY INFORMATION SHOWN WAS PROVIDED BY PROPELLOR. AERIAL PHOTOGRAPHY DATED APRIL 10, 2024.
2. NORTH ARROW SHOWN HERE IS REFERENCE TO THE CALIFORNIA STATE PLANE ZONE V COORDINATE SYSTEM, NAD 83.
3. ACTUAL FIELD CONDITIONS MAY VARY AND SUBJECT TO CHANGE BASED ON FUTURE FILL OPERATIONS, WASTE PLACEMENT, TOPOGRAPHIC FEATURES, AND OTHER SITE-SPECIFIC FACTORS.

DATE | REVISION | NO.

SHEET TITLE: TANK FARM 9- DE-WATERING SYSTEM LAYOUT

PROJECT TITLE: CHIQUITA CANYON LANDFILL CASTAIC, CALIFORNIA

CLIENT: CHIQUITA CANYON LANDFILL CASTAIC, CALIFORNIA

SCS ENGINEERS
ENVIRONMENTAL CONSULTANTS
8799 BALBOA AVENUE SUITE 290
SAN DIEGO, CA 92123
(858) 571-5500 FAX: (562) 427-0805

PROJ. NO. 01204123.35 | DWN. BY: SRM | CHK. BY: WCH | ACAD FILE: - | APP. BY: WCH | PE/ENGINEERS

DSN. BY: -

DATE: 04/18/2024

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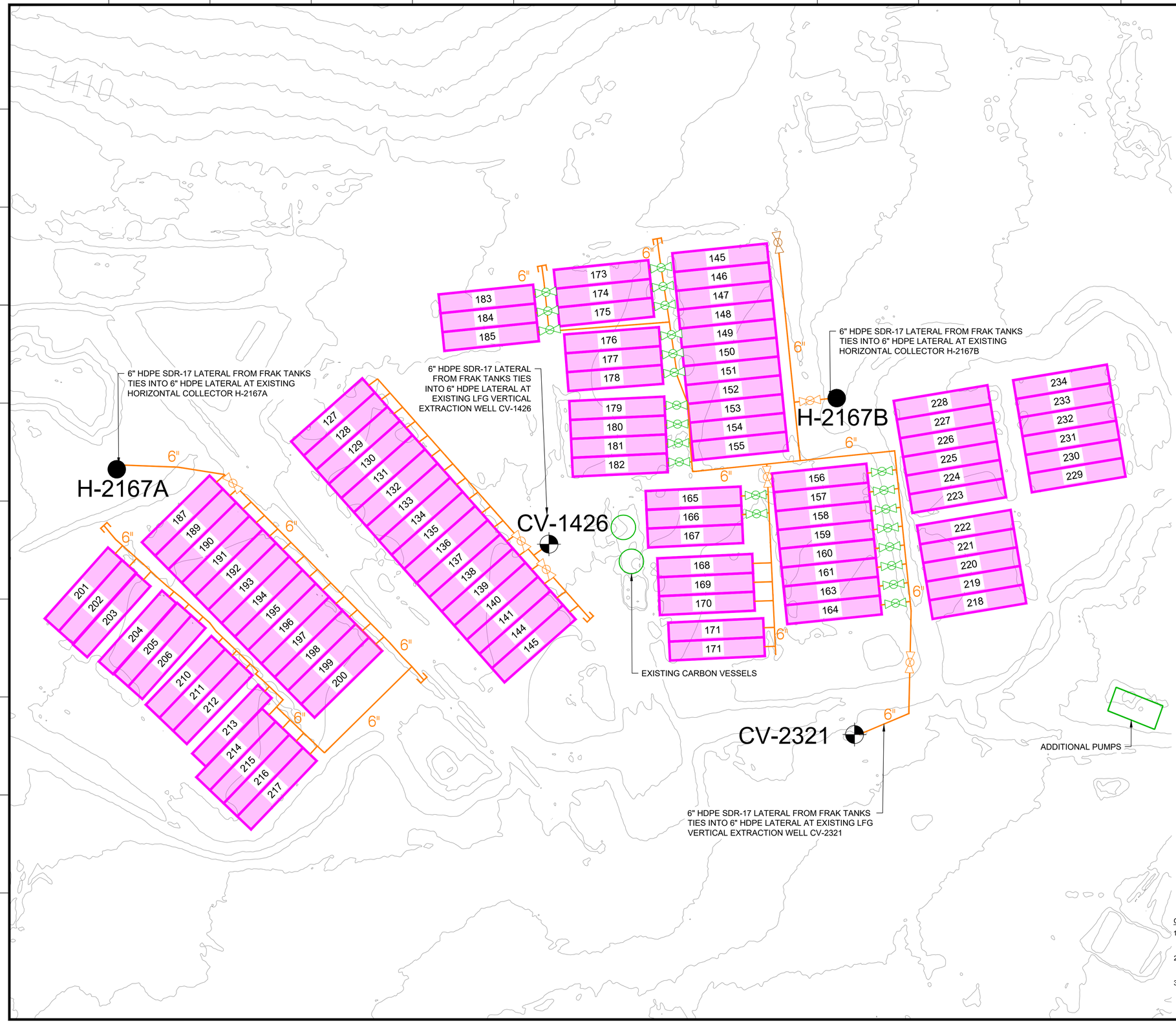

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LEGEND

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H-XX	EXISTING HORIZONTAL WELL
	EXISTING 6" HDPE SDR 17 VACUUM LATERAL
	EXISTING 4" HDPE SDR 17 VACUUM LATERAL
	EXISTING 6" ISOLATION POLYVALVE
	EXISTING 3" ISOLATION POLYVALVE
	EXISTING 3" ISOLATION BALLVALVE
	EXISTING HDPE FUSED CAP
	EXISTING FRAK TANK

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DATE | REVISION | NO.

SHEET TITLE: TANK FARM 9 - VENTILATION (VACUUM) SYSTEM LAYOUT

PROJECT TITLE: CHIQUITA CANYON LANDFILL CASTAIC, CALIFORNIA

CLIENT: CHIQUITA CANYON LANDFILL CASTAIC, CALIFORNIA

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DATE: 04/18/2024

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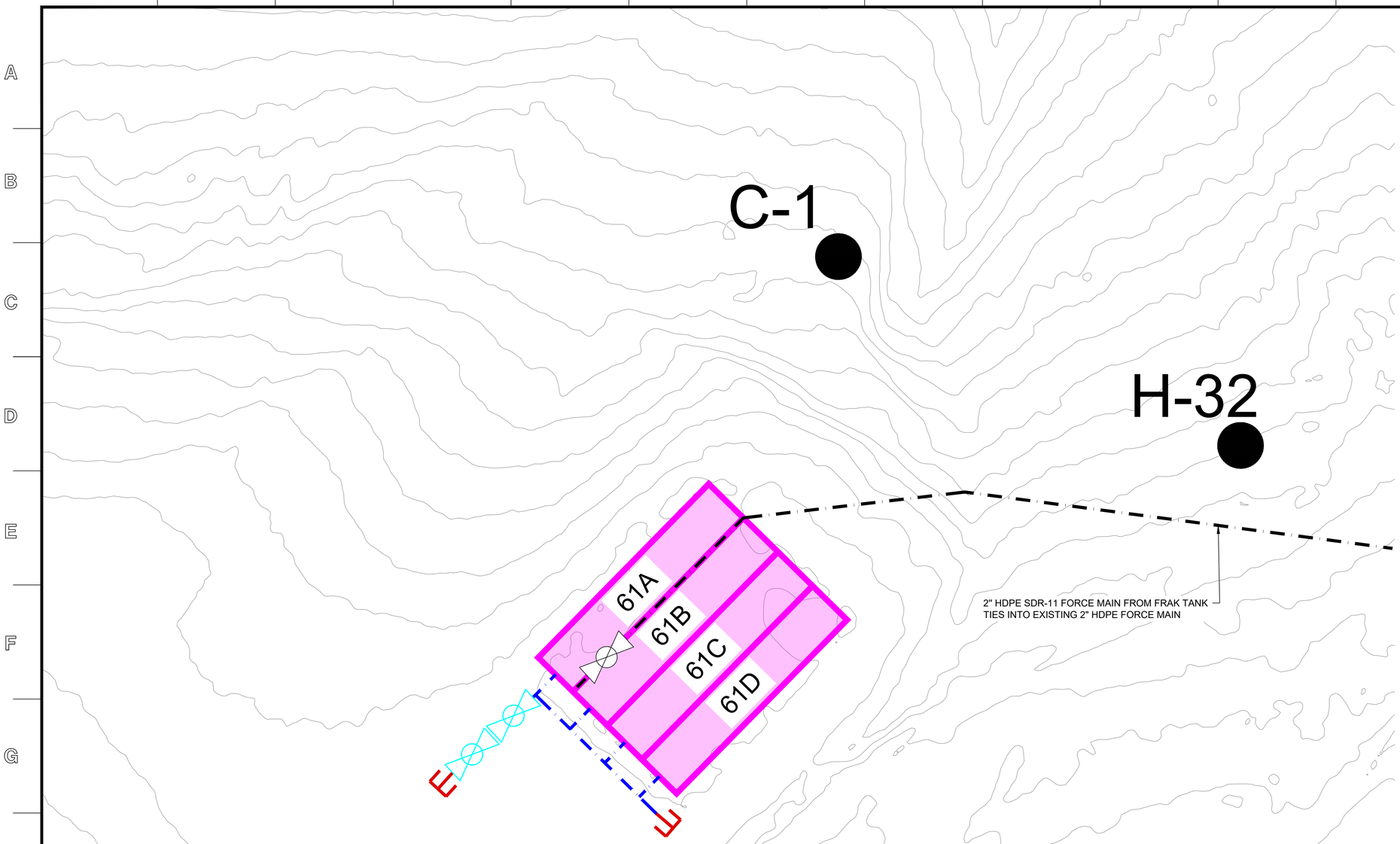

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SCALE: 1"=10'

LEGEND

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- EXISTING 4" HDPE SDR 11 FORCE MAIN
- EXISTING 2" HDPE SDR 11 FORCE MAIN
- EXISTING 4" ISOLATION BALLVALVE
- EXISTING 2" ISOLATION POLYVALVE
- EXISTING CAMLOCK CONNECTION
- EXISTING FRAK TANK

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NO.	REVISION	DATE

SHEET TITLE: EAST TANK FARM - DE-WATERING SYSTEM LAYOUT

PROJECT TITLE: CHIQUITA CANYON LANDFILL CASTAIC, CALIFORNIA

CLIENT: CHIQUITA CANYON LANDFILL CASTAIC, CALIFORNIA

SCS ENGINEERS
ENVIRONMENTAL CONSULTANTS
8799 BALBOA AVENUE SUITE 290
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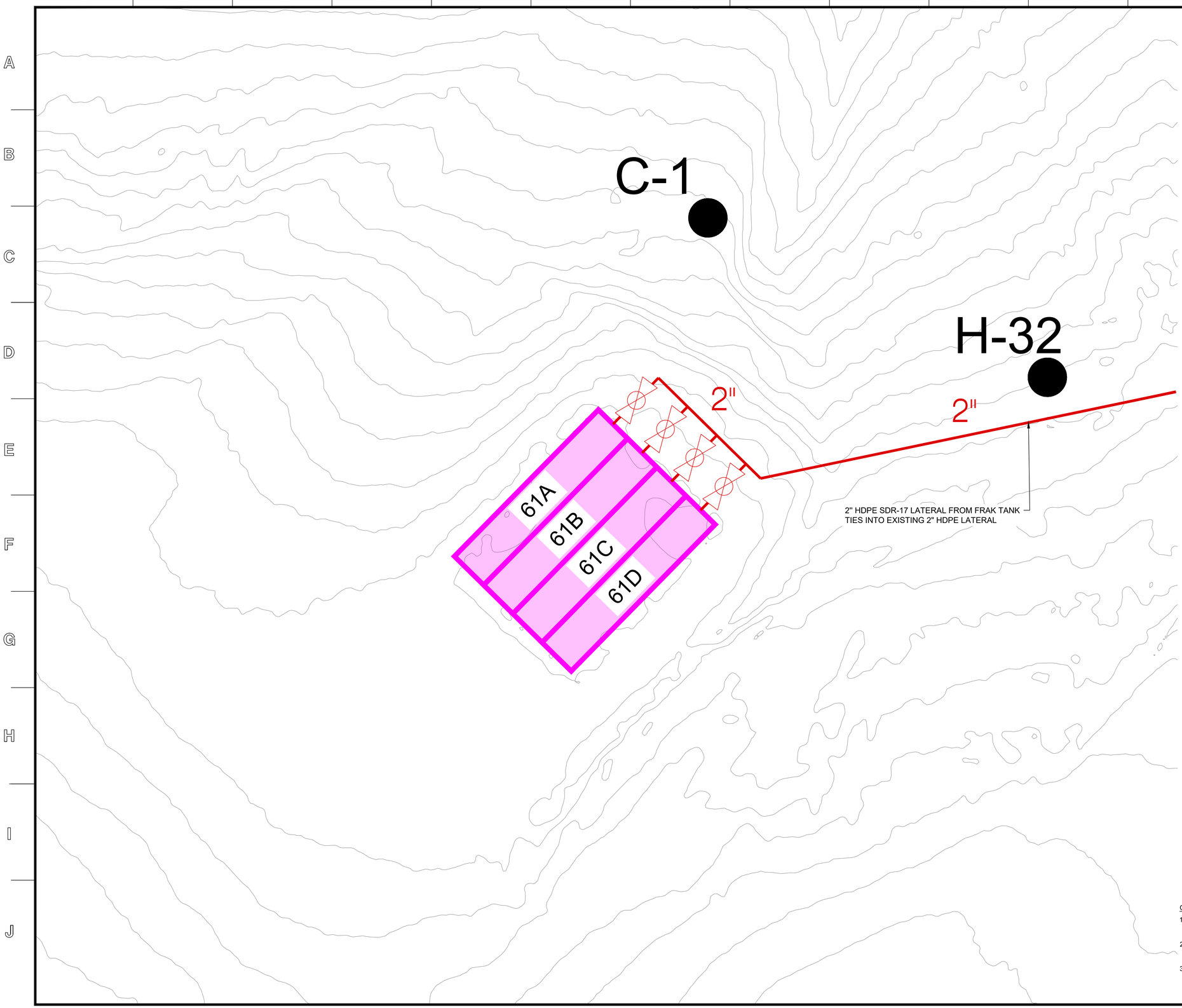

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SCALE: 1"=10'

LEGEND

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- EXISTING 2" HDPE SDR 17 VACUUM LATERAL
- EXISTING 2" ISOLATION POLYVALVE
- EXISTING FRAK TANK

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DATE

REVISION

NO.

SHEET TITLE: EAST TANK FARM - VENTILATION (VACUUM) SYSTEM LAYOUT

PROJECT TITLE: CHIQUITA CANYON LANDFILL CASTAIC, CALIFORNIA

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PE/ENGINEERS
APP. BY: WCH

DATE: 04/18/2024

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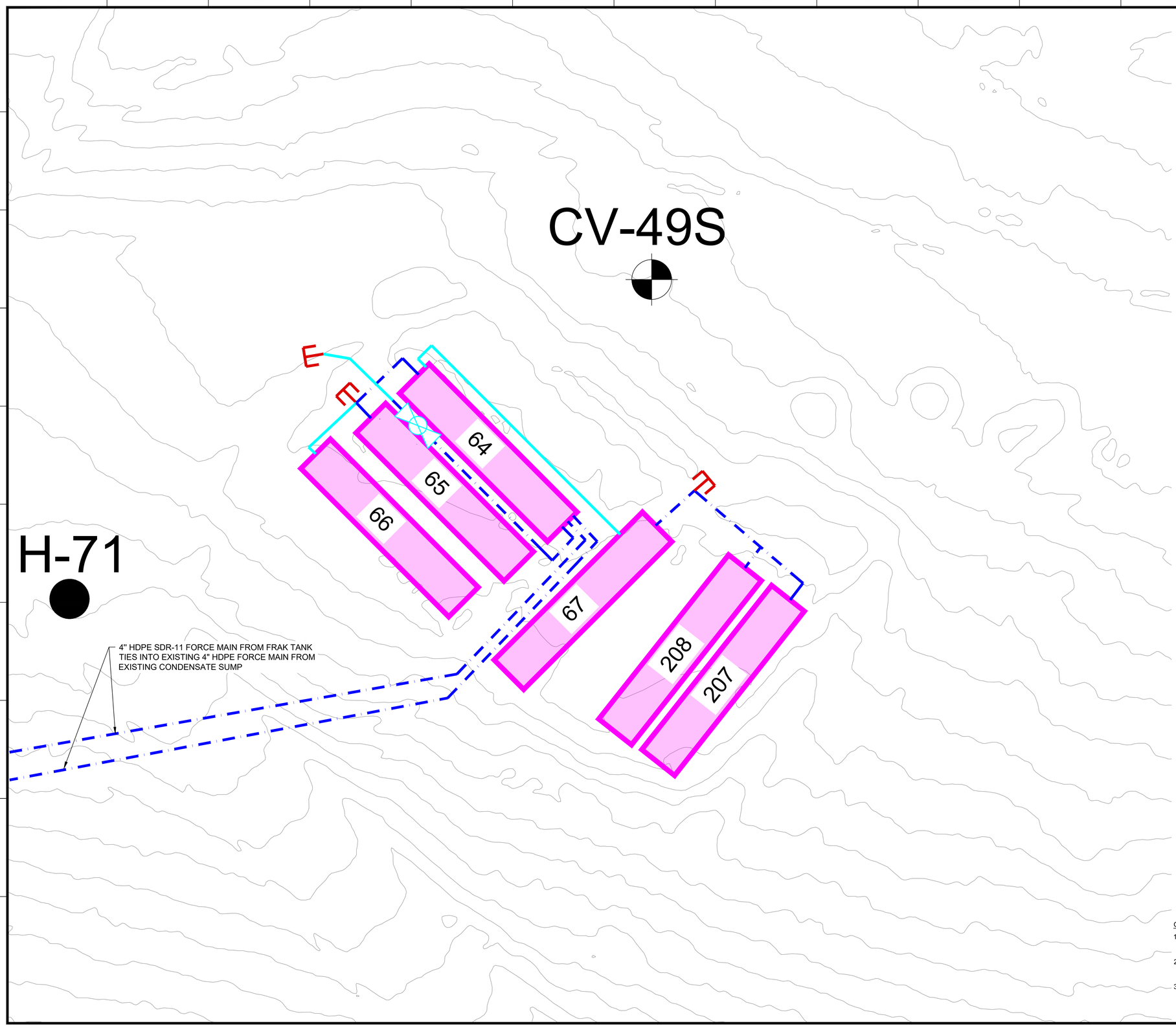

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SCALE: 1"=20'

LEGEND

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- H-XX — EXISTING HORIZONTAL COLLECTOR WELL
- EXISTING 4" HDPE SDR 11 FORCE MAIN
- EXISTING 4" POWERTRACK HOSE
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NO.	REVISION	DATE

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PROJECT TITLE: CHIQUITA CANYON LANDFILL CASTAIC, CALIFORNIA

CLIENT: CHIQUITA CANYON LANDFILL CASTAIC, CALIFORNIA

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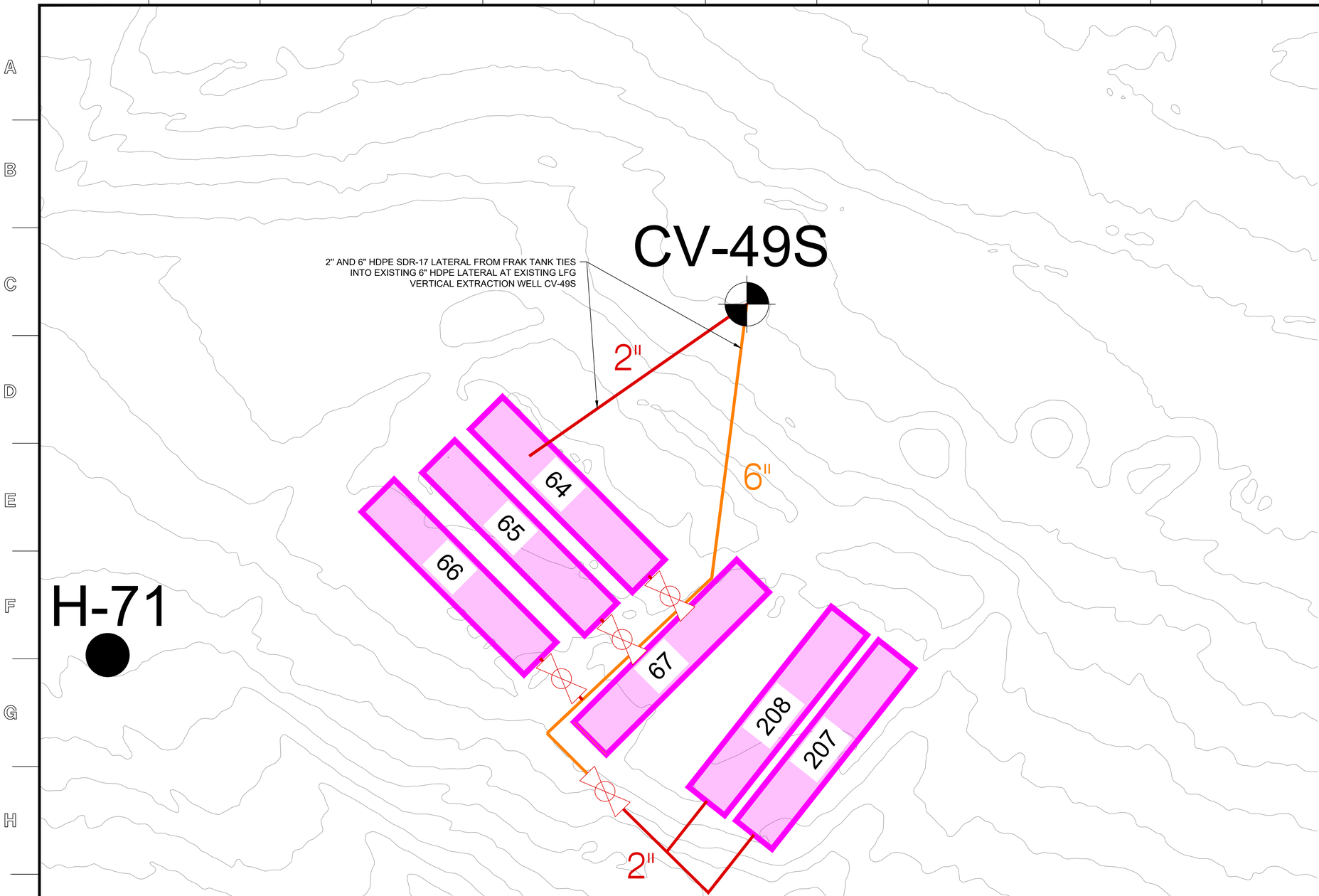

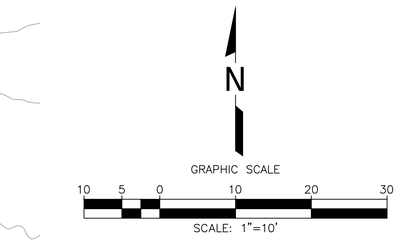

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	TOPOGRAPHIC CONTOUR
CV-XX	EXISTING LFG VERTICAL EXTRACTION WELL
H-XX	EXISTING HORIZONTAL COLLECTOR WELL
	EXISTING 6" HDPE SDR 17 VACUUM LATERAL
	EXISTING 2" HDPE SDR 17 VACUUM LATERAL
	EXISTING 6" ISOLATION POLYVALVE
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DATE: 04/18/2024

SCALE: AS SHOWN

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Appendix C

LEACHATE UNIT MANAGEMENT PLAN

CHIQUITA CANYON LANDFILL
29201 HENRY MAYO DR.
CASTAIC, CALIFORNIA 91384

CHIQUITA CANYON
A Waste Connections Company

Revision 2
August 2024

TABLE OF CONTENTS

APPENDICES

DEFINITIONS

Total Produced: Leachate that has been physically pumped out of the well heads within the waste mass.

Total Treated: Leachate that has been through a process, designed to change the physical or chemical composition to render such waste non-hazardous, or less hazardous, or to render it safer to transport, store, or dispose of.

Total Disposed: Leachate that has been physically transferred into a truck and shipped offsite from Chiquita Canyon Landfill to an approved disposal facility.

Onsite Inventory: Leachate that has been pumped out of the waste mass and is awaiting treatment and or disposal.

LIST OF ACRONYMS AND ABBREVIATIONS

BOD	Biochemical Oxygen Demand
CCL	Chiquita Canyon Landfill
CCR	California Code of Regulations
CFR	Code of Federal Regulations
DAF	Dissolved Air Flotation
DOT	Department of Transportation
DTSC	Department of Toxic Substances Control
EPA	U.S. Environmental Protection Agency
ETLF	Elevated Temperature Landfill
FOSC	Federal On-Scene Coordinator
GAC	Granular Activated Carbon
GCCS	Gas Collection and Control System
HAZMAT	Hazardous Materials Management
HDPE	High-Density Polyethylene
IC	Incident Commander
LCRS	Leachate Collection and Removal System
LDR	Land Disposal Restriction
LFG	Landfill Gas
NA	North America
NRC	National Response Center
OES	Office of Emergency Services
PPE	Personal Protective Equipment
QA	Quality Assurance
QAPP	Quality Assurance Project Plan
QC	Quality Control
RCRA	Resource Conservation Recovery Act
RMAC	Response Multiagency Coordination
RQ	Reportable Quantity
RWQCB	Regional Water Quality Control Board
SCAQMD	South Coast Air Quality Management District
SAP	Sampling and Analysis Plan
SCAQMD	South Coast Air Quality Management District
SVOC	Semi-Volatile Organic Compound
TRG	The Response Group
TSD	Waste Treatment, Storage, and Disposal

UHC	Underlying Hazardous Constituent
UN	United Nations
UAO	Unilateral Administrative Order
VOC	Volatile Organic Compound
WSD	Waste Stream Determination

1 INTRODUCTION

1.1 Overview

The Chiquita Canyon Landfill (Landfill) operated by Chiquita Canyon, LLC (CCL) has been experiencing a subsurface reaction in an inactive portion of the Landfill, also known as an Elevated Temperature Landfill (ETLF) event.

The reaction has escalated landfill gas condensate and leachate production and modified the chemical composition of these liquid waste streams. Weekly leachate production has increased from 100,000 gallons in January 2022 to over 1,000,000 gallons in December 2023. Based on analytical testing, some of the condensate and leachate exhibit characteristics of ignitability and toxicity under the Code of Federal Regulations (CFR) (40 CFR 261.21 and 40 CFR 261.24, respectively) and California Code of Regulations (CCR) (22 CCR 66261.21 and 22 CCR 66261.24, respectively).

CCL is actively working to install additional well pumps to remove the leachate in the waste mass which will aid in controlling the reaction event. The increased leachate production and hazardous characteristics have required the setup of a temporary onsite accumulation area and treatment units until suitable disposal outlets have been established.

Under the Response Multiagency Coordination (RMAC) Group, CCL personnel, contractors and regulators have been assigned duties within the Leachate Disposal Unit to track leachate production, onsite management, and disposal efforts.

CCL is actively working to ensure it has proper capacity to accumulate onsite leachate and/or to dispose of collected liquids/leachate at appropriate facilities. CCL currently reports this information to South Coast Air Quality Management District (SCAQMD) in accordance with Stipulated Order for Abatement (SOFA) Condition 29.[1]

1.2 Purpose and Scope of the Plan

This Plan was prepared at the request of the RMAC Group and outlines comprehensive procedures and protocols for the effective management of leachate at the Landfill. To this end, the Plan:

- Describes the process for collecting, storing, and treating leachate from the Landfill.
- Describes the process to characterize leachate and all waste streams that are potentially hazardous.
- Provides the procedures for transporting waste streams to the appropriate waste receiving and disposal facilities.

[1] CCL's reference to SOFA Conditions in this Plan are subject to change based on SCAQMD modifications.

2 LEACHATE COLLECTION SYSTEM AND ONSITE STORAGE

CCL has developed a proactive approach to the onsite storage and tracking of the leachate. This section provides an overview of current circumstances, but is subject to change due to evolving conditions, needs, and directives.

2.1 Overview of the Leachate Collection System

CCL operates and maintains the landfill to prevent standing leachate and the pooling or ponding of leachate exposed to the atmosphere throughout the facility. *See* SOFA Condition 24. CCL's leachate collection and removal system (LCRS) consists of a series of pipes constructed over a composite liner, which incorporates a high-density polyethylene (HDPE) geomembrane and a low hydraulic conductivity layer. The liner system is designed to contain leachate accumulated in the landfill and direct it to the LCRS. The liner system also minimizes the potential for migration of landfill gas and increases the effectiveness of the landfill gas collection and control system (GCCS).

The landfill GCCS prevents methane surface exceedances and minimizes fugitive emissions of landfill gas. Horizontal landfill gas collection trenches and/or vertical landfill gas extraction wells are connected to a central header system that conveys landfill gas to the flare facility, which actively controls and destroys landfill gas. CCL operates and maintains the LFG collection and control system, and condensate/leachate collection system with materials capable of handling gases and/or liquids at the temperatures recorded at landfill gas wells and/or the leachate temperatures measured. *See* SOFA Condition No. 27(a).

CCL is also working to modify its Title V permit to increase the landfill's liquid storage capacity with regard to its Landfill Gas Condensate and Leachate Collection/Storage System (Permit No. G66132, A/N 613131). *See* SOFA Condition 57. The permit currently includes authorization for five condensate tanks and four leachate tanks varying in capacity. In addition, CCL is working to obtain authorization for the Landfill Gas Condensate and Leachate Treatment System, which includes treating hazardous liquid waste. *See* SOFA Condition 59.

2.2 Standard Operating Procedures for Onsite Leachate Storage

At present, leachate and condensate is accumulated at eight distinct areas across the Landfill, as shown in **Appendix A.1.** Those areas include #1 Top Deck Manifold;[2] #2 East Perimeter (~4 frac tanks); #3 Ameresco Condensate Tanks; #4 Leachate Collection Manifold (~1 frac tank); #6 North Perimeter (~6 frac tanks); #8 Primary Canyon;[3] #7 Tank Farm (~107 frac tanks); and #9 Tank Farm (~129 frac tanks). The number of tanks is subject to change in connection with onsite operations and in coordination with regulators.

Leachate that is characteristically hazardous is treated at #7 Tank Farm, extracted through three groupings of collection wells: Group A, North Perimeter, and East Perimeter. The leachate in Groups B and C is not characteristically hazardous. Group B is piped to #7 Tank Farm, and Group C is piped to both #7 Tank Farm and #9 Tank Farm. The groupings of collection wells are piped into a network of individual and interconnected (manifolded) frac tanks. Frac tanks containing treated landfill liquids are staged at #7 and #9 Tank Farms for off-site transport and disposal.

[2]#1 Top Deck Manifold has been disconnected from the landfill gas collection system since approximately January 2024 and removed from production.

[3]#8 Primary Canyon accumulates landfill gas condensate that is unaffected by the reaction area. However, a waste determination was previously made for #8 Primary Canyon in accordance with **Section 4.0** of this Plan and the Sampling and Analysis Plan and associated Quality Assurance Project Plan.

At present, leachate or liquid condensate produced at #2 East Perimeter, #3 the Ameresco Condensate Tanks, #4 Leachate Collection Manifold, and #6 North Perimeter is transported via vacuum truck to designated tanks at either Tank Farm #7 or Tank Farm #9 for storage. The #3 Ameresco Condensate Tanks are currently only accumulating small volumes of knock-out condensate from landfill flaring operations. Transfer forms as shown in **Appendix A.2** are completed by the vacuum truck drivers which are submitted at the end of the day to track the onsite inventory.

CCL is meticulously tracking the management of liquid waste from the point of generation through offsite transport and disposal, ensuring the various waste streams are not commingled. CCL currently measures, records, and reports the leachate temperatures within the 6-inch leachate pipes feeding into the onsite frac tanks, and at the piping leading into the tanks at all tank farms in monthly reports in accordance with SOFA Condition 27(a).

CCL is also continuing to evaluate and implement measures to comply with tank standards such as secondary containment and air emission controls (as applicable), to the maximum extent possible. Tank Farm #7 and #9 both include a berm that surrounds the tank farm area and is gradually sloped to allow for any rainfall or potential discharge to accumulate in a lined containment area. The containment area is pumped out during any rain event.

To date, approximately 100 transmitters to measure the hydrostatic level of liquids in tanks have also been installed on all tanks in #2 East Perimeter and #6 North Perimeter and on some tanks in #7 and #9 Tank Farms. Eventually transmitters will be installed on all tanks. All frac tank lids and hatches are kept closed and inspected on a daily frequency.

CCL installed appropriately ranged differential pressure gauges on each leachate storage tank. CCL monitors and records daily the differential pressure of each leachate tank, tank identification number, date and time of the reading, and the personnel that conducted the reading.[4] CCL completed this installation, monitoring, and recording in accordance with SOFA Condition 68 and reports to South Coast AQMD on a monthly basis.

Tanks located in #7 and #9 Tank Farms are connected under vacuum, meaning any potential emissions from the tanks are captured and routed to the landfill gas collection system flares. As of the date of this submittal, all of the roughly 245 frac tanks storing leachate are under vacuum.[5] The number of tanks can and will vary as needed due to operational demand, cleanings, or repairs.

Vacuum is applied to the vent lines from the leachate accumulation tanks via gas wellheads in the GCCS to maintain vacuum in the tanks and to transport leachate vapors into the GCCS to be destroyed by the Landfill Gas (LFG) flares or thermal oxidizer. Based on progress to date, all of the leachate tanks are currently under vacuum and connected to the GCCS.

2.3 Leachate Production Tracking

CCL currently maintains an online tracking tool known as the Leachate Dashboard. The Dashboard is currently saved in The Response Group (TRG) - Microsoft Teams Channel for the Landfill Response Support, 7.0 Leachate Disposal Unit. The current reporting period is Wednesday – Tuesday on a weekly basis. The data ultimately originates from the field team dispersed around the landfill. The CCL onsite Controller compiles the data and uploads it into the dashboard. Leachate production values are assessed for quality assurance (QA)/quality control (QC) by having ongoing conversations with the field team to ensure the data reported in the dashboard correlates with their operations. Leachate disposal is assessed for QA/QC via manifest reconciliation.

[4] All data referenced in this plan is recorded and managed in accordance with the Data Management Plan (July 2024).
[5] There are 251 frac tanks onsite total, however, 2 frac tanks are not setup for operation and 4 are undergoing repair.

CCL reports to South Coast Air Quality Management District (1) number of tanks in each leachate tank group; (2) total number of leachate tanks treated; (3) weekly and year-to-date total quantity of liquid collected; (4) weekly and year-to-date total quantity of liquid treated; and (5) estimated weekly and year-to-date total quantity of seeping, pooling, or ponding leachate collected on a weekly basis in accordance with SOFA Condition 53.

CCL is currently working with a third-party contractor for the creation and development of the leachate production tracking which is tentatively planned for release in the later part of September 2024.

2.3.1 Liquids Dashboard Summary

The Liquids Dashboard contains the Year-to-Date (January 2024 – present) total inventory in gallons of leachate that CCL has produced, treated, disposed, and inventoried onsite for the monthly basis. The Dashboard also contains the number of frac tanks and their status as well as the number of active pumps.

2.3.2 Liquids Dashboard – Monthly

The Monthly Liquids Dashboard data is updated daily. The Dashboard displays the gallons tracker per production location and total per day disposed of at each offsite location. This information is reported as two days behind the current date to allow for CCL to gather the applicable information.

3 ONSITE LEACHATE TREATMENT SYSTEM

CCL is currently treating leachate onsite in order to open up more offsite disposal outlets and is working diligently to identify additional options.[6] Leachate that is characteristically hazardous is treated onsite using a granular activated carbon (GAC) system at #7 Tank Farm and #9 Tank Farm for specific leachate waste streams. Both systems use sand and sock filters. Currently, there are two vendors—Clean Harbors Environmental Services and ECT2—operating the GAC treatment units on behalf of CCL. CCL currently records the quantities of leachate collected and leachate treated onsite on a weekly basis, which is reported to the South Coast AQMD on a monthly basis.

3.1 Overview of the Granular Activated Carbon Treatment

Leachate produced from Group A, East Perimeter, and North Perimeter is treated using a GAC system at #7 Tank Farm and #9 Tank Farm. The GAC system can remove certain chemicals, particularly organic contaminants, from water, as well as chemicals that produce odors. The GAC adsorbs the contaminants due to its porous qualities. The adsorption occurs on the internal surface of activated carbon. During adsorption, liquids pass through the porous structure of the activated carbon, diffusing the compounds to be removed to the surface of the adsorbent media, and are retained on or within the media due to attractive forces.

The systems have been designed on the basis that each individual primary treatment train can operate at its respective maximum capacity of 75 gallons per minute per train. The systems have a maximum design flow rate of 150 gallons per minute and are designed to enhance the removal of volatile organic compounds (VOC) and semi-volatile organic compounds (SVOC). The ECT2 GAC Operations and Maintenance Manual is provided as **Appendix A.3**. The Process Flow Diagrams associated with each Treatment System are included as **Appendix A.4** for ECT2 and **Appendix A.5** Clean Harbors Environmental Services.

CCL is seeking approval to test a dissolved air flotation (DAF) system at Tank Farm #9 and a gravity clarifier in Tank Farm #7. The DAF and clarifier systems have been installed after their respective GAC systems and are designed to remove total dissolved solids (TDS) from the treated leachate stream. In the DAF system, contaminants will be removed using a dissolved air-in-water solution produced by injecting air under pressure into a recycled stream of clarified DAF effluent. Currently the solution is a mixture of proprietary coagulants, polymers, and pH adjustment. The removal of TDS from the leachate waste stream may allow CCL to utilize additional disposal outlets which can accept waste without TDS. The gravity clarifier also uses a mixture of proprietary coagulants, polymers, and pH adjustment; contaminants are removed by significantly slowing fluid velocity, allowing for gravity separation.

3.2 Spent Carbon

Carbon is changed out of the GAC system when it is no longer deemed effective via analytical results. Presently, carbon is exchanged roughly every 5 days or every 500,000 gallons of leachate treated. GAC (and DAF/clarifier) solids are (will be) physically removed from the treatment units and placed in a dewatering box. Each change out produces two to three dewatering bins of media. It takes approximately 7 days of dewatering in order for

[6] CCL is currently treating leachate under the immediate response exemption of RCRA and applicable state hazardous waste regulations, and is working with local regulatory authorities to obtain conditional authorization for its onsite treatment under the California tiered permitting system.

the material to be ready for disposal. The solids are then sampled and results are analyzed to determine waste characterization and proper disposal.

3.3 Treated Leachate

Treated leachate is currently stored in designated frac tanks within Tank Farm #7 or #9. Once the leachate has been treated, it is sampled to confirm it is below the regulatory thresholds for hazardous waste and meet the disposal criteria of the various receiving facilities. The treated leachate is then pumped into designated tanks for offsite disposal. Analytical reports are provided daily to the receiving facilities to confirm the treated leachate meets acceptance criteria. Leachate that initially fails to meet offsite acceptance criteria is either retreated in the GAC system or shipped offsite for proper disposal according to the waste characterization.

The Liquids Dashboard contains the Year-to-Date (January 2024 – Current) total inventory in gallons of leachate that CCL has treated on a monthly basis.

4 WASTE CHARACTERIZATION

4.1 Waste Streams

Waste streams related to the ETLF event requiring characterization and potential offsite disposal include leachate, condensate, tank bottoms, spent carbon media, personal protective equipment (PPE), and spill debris, as described below.

- **Leachate:** As previously noted, leachate is the liquid generated from water percolating through a solid waste disposal site. Because landfill gas condensate and leachate currently both flow into the landfill gas system due to the subsurface reaction and increased liquid levels, there is no way to separate the two types of liquids. Thus, for purposes of this response, landfill leachate and landfill gas condensate will generally be addressed and referred to collectively as leachate unless otherwise specifically noted.
- **Condensate:** For purposes of this Plan, condensate generally refers to knock-out condensate produced in connection with landfill flaring operations and not, for the reasons discussed above, landfill gas condensate.[7]
- **Tank Bottoms:** The residual materials deposited (settled) at the bottom of accumulation tanks.
- **Dissolved Air Flotation (DAF) / Clarifier Solids**: Treatment designed to remove total dissolved solids (TDS) from the treated leachate stream. The solids would be physically removed from the treatment tanks and placed in a dewatering box.[8]
- **Spent Granular Activated Carbon:** Activated carbon that has reached its sorption capacity.
- **PPE:** Equipment or materials used in waste characterization and management, including nitrile gloves, respirator cartridges, bailers, and miscellaneous sampling equipment.
- **Spill Debris:** Materials used in spill response, mainly absorbents (e.g., Oil Dri® and absorbent pillows).

4.2 Waste Characterization and Profiling

A Sampling and Analysis Plan (SAP) was developed to provide a mechanism for collecting waste characterization data in support of the decision-making process regarding the management and disposal of waste materials. The SAP: (1) provides the technical approach (i.e., sampling design) and rationale for waste characterization, including sampling locations, frequency of sampling, and the analytical testing regimen; (2) describes the field procedures and methods for implementing the sampling design (i.e., the field sampling plan); and (3) discusses the relevant regulatory frameworks and thresholds defining hazardous waste.

CCL is using knowledge of the waste itself from historical acceptance at the Landfill and/or the process to select the analytical parameters. The Waste Stream Determinations (WSD) are made at the point of generation, before any alteration of the waste occurs. The analytical and waste characterization will determine the appropriate management and final disposition of the waste. CCL currently takes at least one representative monthly sample of leachate from the Reaction Area and at least one representative monthly sample of leachate from the bottom tanks where leachate from the entire Landfill collect. CCL analyzes these samples per U.S. EPA Method 624.1 for

[7]Condensate accumulated in tanks in the #3 tank area was shipped offsite to the Aragonite Incineration Facility in Tooele County, Utah, as hazardous or potentially hazardous waste in March 2024. Since then, the tanks in the # 3 tank area have been cleaned out and are only accumulating knock-out flare condensate.
[8]Solids will only be generated from the DAF and clarifier systems if the systems are approved for testing, testing is successful, and the treatments are ultimately employed.

the presence of VOCs and TACs and posts the analytical results on its website and submits the results to SCAQMD in accordance with SOFA Condition 38. In the event CCL demonstrates that generated leachate is sufficiently collected with no remaining seepage or potential discharges, then sampling and analysis will reduce to a quarterly schedule.

The objectives of the waste sampling prescribed by the SAP are as follows.

1. Characterize the various liquid and solid waste streams for the purpose of waste profiling and disposal. Each WSD will follow the Resource Conservation Recovery Act (RCRA) regulations at 40 CFR 262.11 and California Hazardous Waste Determination rules found in 22 CCR Section 66262.11 for waste determinations. CCL will recharacterize a particular waste stream when the process or operation that produces the waste changes or the waste is sent to a different hazardous waste treatment and disposal facility for the first time or requires annual recertification at the disposal facility.
2. Verify the efficacy of liquid waste (i.e., leachate and condensate) treatment. Treatment is deemed effective when the results from waste sampling fall below the regulatory thresholds for hazardous waste. The liquid waste is further assessed to ensure that it meets the acceptance and disposal criteria of the various receiving facilities, including Land Disposal Restrictions as applicable. Liquids following treatment that are deemed hazardous due to their chemical properties (i.e., exhibit toxicity characteristic) are subject to further treatment. Wastes that do not exhibit toxicity characteristics but classify as ignitable based on flash point are stored, treated, or disposed of according to the waste determination.

A Quality Assurance Project Plan (QAPP), dated March 27, 2024, has also been developed to serve as a framework ensuring the quality and integrity of data collected through implementation of the SAP. The QAPP defines data quality objectives and outlines criteria for data quality, including precision, accuracy, representativeness, comparability, and completeness. Collectively, the SAP and the QAPP set forth the process and parameters to characterize the various waste streams described above and have submitted to the U.S. Environmental Protection Agency (EPA) for review.

4.3 Analytical Testing Regimen

As set forth in the SAP and QAPP, a comprehensive waste characterization approach (i.e., the analytical testing regimen) was developed based on: (1) the nature of the Landfill waste matrix and corresponding characteristic chemical composition of the leachate and gas stream; (2) the effects of ETLF; (3) the criteria for identifying and listing hazardous waste promulgated under 40 CFR 261.20 – 261.24 and 22 CCR 66261.20 – 66261.24; and (4) the disposal criteria (requirements) of the receiving facilities.

A subset of VOCs, SVOCs, and metals customary to municipal solid waste leachate and indicators of ETLFs are included in 40 CFR 261.24 and 22 CCR 66261.24 as part of the toxicity characteristic determination. The receiving facilities require testing for these parameters to ensure compliance with regulatory requirements for toxicity. Additionally, the receiving facilities require testing for flashpoint and pH to evaluate waste for characteristics of ignitibility (40 CFR 261.21 and 22 CCR 66261.21) and corrosivity (40 CFR 261.22 and 22 CCR 66261.22), respectively. Based on this information, waste characterization will involve testing of VOCs by Method 8260, SVOCs by Method 8270, mercury by Method 7470, the remaining California Title 22 metals by Method 6010, flashpoint by Method 1010; and pH by Method 9040B, as specified in the SAP and QAPP. Disposal facilities may also require additional testing as needed to comply with their permit conditions and waste acceptance plan.

4.4 Frequency of Testing

Liquid waste streams are initially sampled at a daily frequency and solid waste streams are sampled periodically as needed, such as during a tank cleaning or GAC replacement. The scope of the analytical testing program and frequency of sampling may be reduced over time with consent from the receiving facilities, or increased/reduced in response to changing conditions related to the ETLF. Waste determinations have been performed for various waste streams in accordance with the SAP and QAPP, and may be reevaluated for each waste stream or point of generation as appropriate and on a case-by-case basis. The current WSDs are included as **Appendix A.6**.

5 OFFSITE DISPOSAL AND TRANSPORTATION

The response to the reaction involves utilization of all available offsite transportation options to remove leachate from the site, including (1) onsite treatment of leachate followed by offsite shipment to non-hazardous facilities; and (2) offsite transport to hazardous waste treatment and disposal facilities.

Due to the difficulty in locating any potential offsite storage options, CCL has asked the agencies to assist by providing a list of locations for CCL to contact and coordinate. CCL has submitted a FOIA request as directed and is prepared to contact any additional facilities that are identified once EPA provides a response.

5.1 Receiving Facilities Database

CCL maintains a disposal facility tracking spreadsheet with over 400 potential facilities and storage locations which have been contacted. The spreadsheet also lists if samples and analytical data have been provided to disposal outlets for acceptance criteria. The spreadsheet is currently saved in TRG - Microsoft Teams Channel for the Landfill Response Support, 7.0 Leachate Disposal Unit. A summary of offsite treatment and disposal facilities, as of August 1, 2024, is provided in **Appendix A.7.** Note that facilities and the total daily maximum acceptance capacity is constantly changing.

5.2 Offsite Transport and Disposal Procedure

Pending any waste determinations for leachate in accordance with the SAP and QAPP, leachate is not sent offsite to non-hazardous treatment and disposal facilities listed below until sampling results confirm that the leachate is below the applicable regulatory thresholds for relevant constituents, including constituents for waste characterization (i.e., benzene) and constituents requested to be sampled by offsite disposal facilities.

After treatment is complete and pending waste determinations for leachate, CCL conducts post-treatment confirmatory sampling of each tank (or multiple tanks if manifolded and treated together). Once laboratory reports and results are received, CCL evaluates results against the applicable regulatory thresholds. If the sampling results indicate constituents in leachate are below regulatory levels, CCL provides those sampling results to the non-hazardous offsite facility for confirmation that the waste can be accepted at the facility. Once the facility receives the analytical reports and provides its approval to accept the leachate, CCL directs available trucks for loading to the particular tanks that have been approved for offsite transport and instructs the drivers as to where to transport the leachate from those tanks. CCL has dedicated personnel (including overnight staff) to coordinate the loading and shipment process.

For tanks other than those discussed above or in instances where post-treatment sampling shows that target constituents (e.g., benzene) are not treated to levels below their respective regulatory thresholds, the tank is generally retreated with the GAC treatment solution and post-treatment confirmatory sampling is again performed for that tank. CCL then follows the same procedures discussed above following receipt of the laboratory report, including evaluation of the results against the applicable regulatory thresholds, provision of the analytical reports to the offsite facilities, awaiting confirmation by the offsite facilities that the leachate can be accepted, and directing available trucks to the specific tanks that have been approved for offsite transport.

5.3 Offsite Transport and Disposal – Hazardous Waste Facilities

For tanks that are shipped offsite as hazardous waste (e.g., leachate is not treated prior to offsite shipment), CCL has contracted with Clean Harbors, Inc. to transport landfill liquid that has been identified as hazardous or

potentially hazardous to several of Clean Harbors' facilities to ensure proper disposal of those waste streams. Landfill liquid that has been identified for transport to a Clean Harbors facility is manifested on a hazardous waste manifest in accordance with 22 CCR 66262.20. A one-time LDR notification is also provided to each hazardous waste facility in accordance with 22 CCR 66268.7.

CCL is actively assessing the use of additional facilities to manage hazardous or potentially hazardous leachate or condensate. CCL will also follow the same procedures as set forth in the Unilateral Administrative Order to obtain EPA's determination of acceptability and provide notice to the relevant state environmental officials for any newly identified facilities.

Other waste streams, described in **Section 4.1**, will be disposed of appropriately. Any spent carbon media, DAF/Clarifier solids, or PPE characterized as hazardous waste will be managed as hazardous.

5.3.1 Waste Shipment Preparation

To initiate shipments of hazardous and non-hazardous waste, CCL personnel (or its contractors) must prepare and provide the following documentation:

- Provide a complete and accurate waste inventory for the waste to be transported offsite.
- Provide waste profile and corresponding analytical report for each type of waste transported offsite.
- If the waste profile has been previously provided, ensure it has been updated annually.

When a shipment is needed and the above-listed information has been provided to CCL Compliance Manager, a shipment will be initiated as follows:

- When authorized by the designated representative, CCL Compliance Manager will contact the disposal contractor and arrange for transportation of the waste offsite.
- The hazardous waste disposal contractor may choose to be onsite the day before the shipment to review paperwork and inspect containers.
- Compliance with pre-transportation requirements at 22 CCR 66262.30 - 66262.33 will be assessed.

All shipments of hazardous or potentially hazardous waste to permitted hazardous waste treatment and disposal facilities will be properly manifested on hazardous waste manifests in accordance with 22 CCR 66262.20 and the hazardous waste manifest requirements at 40 CFR 262.20. CCL Measures and records the quantity of leachate sent off-site for disposal and treatment. These records are maintained by CCL and submitted to SCAQMD under SOFA Condition 27(d). These records generally include the associated company name, physical address of the off-site facilities that receive the leachate generated by the landfill.

5.3.2 U.S. Department of Transportation

Prior to transporting or offering hazardous waste for transportation offsite, each shipment is labeled in accordance with applicable Department of Transportation (DOT) regulations (49 CFR 172 Subpart E) as follows:

- "HAZARDOUS WASTE-State and Federal Law Prohibit Improper Disposal. If found, contact the nearest police or public safety authority, the U.S. Environmental Protection Agency or the California Department of Toxic Substances Control."
- DOT proper shipping name
- United Nations (UN) or North America (NA) number (49 CFR 172.101)

- Generator's name and address
- Generator's EPA ID number
- EPA/State waste code(s)
- Accumulation Start Date
- Manifest tracking number

Additionally, each hazardous waste shipment will be labeled in accordance with 49 CFR 172 Subpart D, as follows:

- Weight
- Sequence (e.g., 1 of 3)
- DOT shipping label

Each package of hazardous waste for shipment will be labeled according to the DOT hazard classification for that waste, as follows:

- Hazardous waste that meets the definition of more than one DOT hazard classification must be labeled in accordance with all DOT hazard classifications (e.g., Flammable, Toxic).

5.3.3 Land Disposal Restrictions

The LDRs are a set of regulations at 40 CFR Part 268 and Title 22 of the CCR, Division 4.5, Article 18, that place certain restrictions on hazardous waste sent to land disposal. These regulations generally require treatment of hazardous wastes prior to land disposal.

The LDR requirements apply to all persons who generate hazardous wastes, as well as owners and operators of hazardous waste treatment, storage, and disposal (TSD) facilities. Depending on constituent concentrations in the waste, some wastes will require treatment to meet LDR treatment standards and some may meet them without further treatment. In addition, the Universal Treatment Standards must be met for Underlying Hazardous Constituents (UHC) that are identified. A UHC evaluation will also be performed for each waste stream identified herein.

When applicable, LDR Notification Forms must accompany the manifest as part of the shipping papers. As discussed above, a one-time LDR notification is provided to each hazardous waste facility CCL is shipping waste to in accordance with 22 CCR 66268.7, and signed by personnel designated by the CCL Compliance Manager.

All LDR paperwork and associated documentation will be retained by CCL as required under applicable regulations.

Appendix A.1 – Leachate and Condensate Accumulation Areas

CTEH

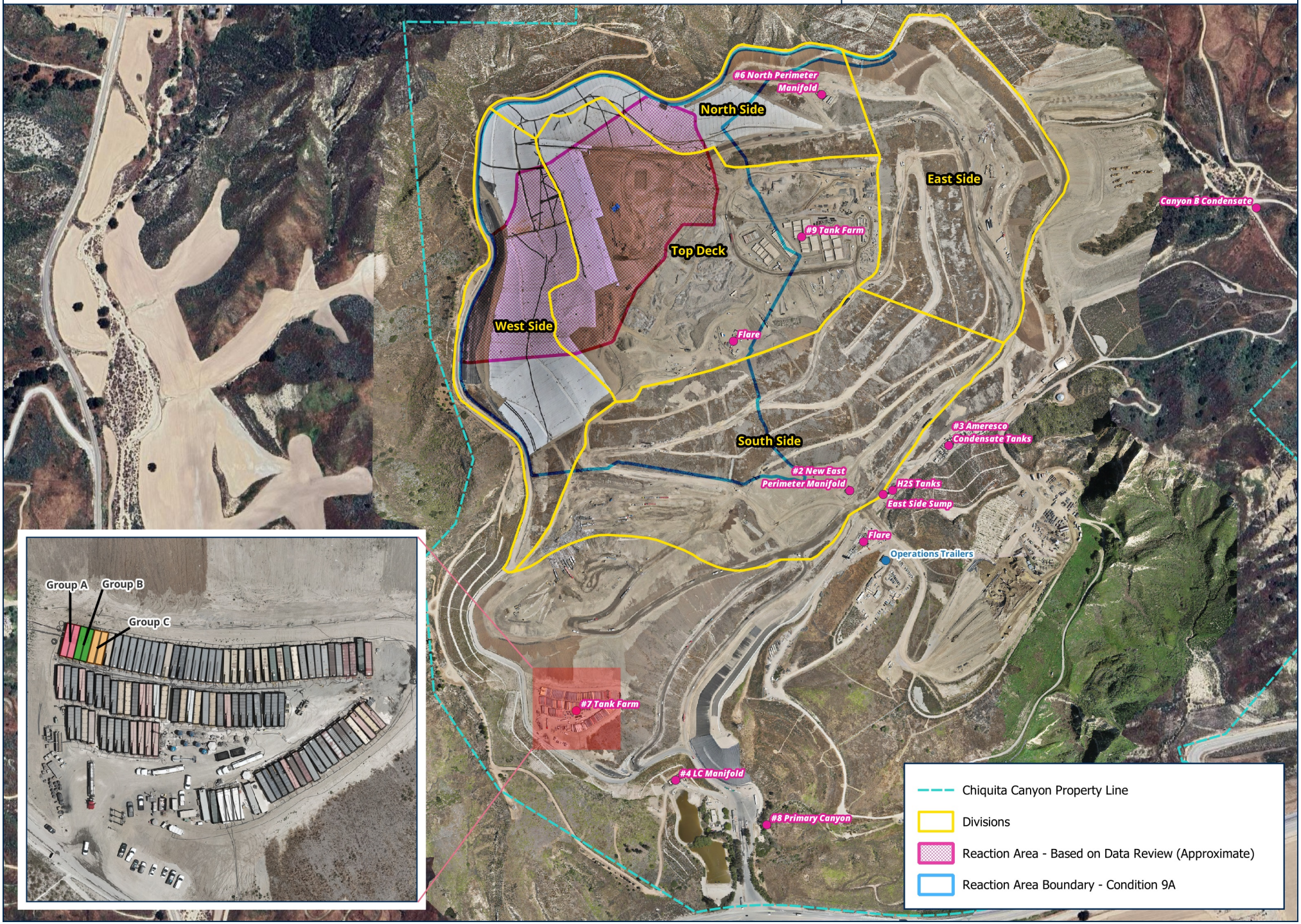
Leachate Tanks and Manifolds - June 19, 2024

Chiquita Canyon Landfill

0 250 500 ft

N

City: Franklin
State: IN
CRS: NAD83(2011) / California zone 5 (ftUS)
Projection: Lambert Conformal Conic
Printed: 2024-06-26



Appendix A.2 – CCL Onsite Liquid Transfer Form

WASTE CONNECTIONS
Connect with the Future®

Date: _____

Name: _____

Truck Number: _____

Company Name: _____

Transfer From Tank #:	Transfer To Tank #:	Amount:	Time:

Appendix A.3 – GAC Operations and Maintenance Manual

Montrose Environmental Group

Emerging Compounds Treatment Technologies, Inc.

125 Industrial Way

Portland, ME 04103-1043

www.ect2.com

OPERATIONS AND MAINTENANCE MANUAL

FOR

CHIQUITA CANYON LANDFILL

TREATMENT SYSTEM

Document Revision Control Table					
Issue	**Date**	**Description**	**BY**	**CHK**	**APR**
Rev 0	17 May 2024	Issued for Use	MMS	TJS	ASB
Rev 1	22 May 2024	Issued for Use – Addendum 1	MMS	CDT	ASB
Rev 2	18 July 2024	Polish Vessel Update	ASB	ASB	ASB

Table of Contents

1.0 SYSTEM DESCRIPTION

The ECT2 Treatment System (Treatment System) has a maximum design flow rate of 150 gallons per minute (GPM) and is designed to enhance the removal of VOCs and SVOCs from site impacted water at the Waste Connections Chiquita Canyon Landfill Project Site (Site). The treatment system is configured in the following treatment stages:

- Equalization
- Multimedia Filtration Pretreatment
- Bag Filter Pretreatment
- Two trains of Lead/Lag Primary Treatment vessels containing Liquid Granular Activated Carbon (LGAC) media

2.0 SYSTEM REQIREMENTS

Table 1: System Requirements

Item	Responsible	Requirement	Comment
Electrical Supply	Owner	Deisel Generator – 480V/60Hz/3Ph supply	100 Amp Service
Influent Water Supply	Owner	Flooded Pump Suction	On-site storage in Frac Tanks feed to System.
Effluent Discharge Location	Owner	Discharge point	Water is held in frac tank for testing prior to release for discharge
Waste Disposal	Owner	Provide and coordinate disposal of spent media, bag filters, settled backwash solids, and PPE	Dispose in accordance with applicable Regulations and Site policies and procedures

3.0 SAFETY

Safety is the responsibility of every person who operates the Treatment System. Site works shall be performed in the Site-Specific Safety Plan. Latest issue as of this O&M Manual Release is **"Site-Specific Safety Plan - Waste Connections Rapid Response – Leachate Treatment." Dated 8-Mar-2024.**

3.1 Safe Work Practices

Operators are responsible for maintaining a working knowledge and understanding of the current occupational, hazard, safety, and environmental laws and regulations (Regulations) applicable to the operation of the Treatment System. The following safe work practices are provided for informational purposes only, and shall not be deemed a substitute for an Operator's compliance with **Site-Specific Safety Plan** and applicable Regulations:

- Only authorized Operators can operate or perform routine maintenance on the Treatment System.
- Appropriate personal protective equipment (PPE) shall be worn by Operators when operating the system, performing routine maintenance, or sampling. Refer to Site-Specific Safety Plan for PPE guidelines.
- All electrical equipment must be locked out, tagged out, and verified to ensure there is no stored energy prior to conducting repairs or maintenance on electrical equipment. Locks/tags may only be removed by the Operator who placed it. Operators shall refer to their own site-specific Health and Safety Plan (HASP) for specific lockout/tag out procedures.
- All piping sections must be verified as relieved of pressure and temperature dangers prior to performing maintenance on piping or connected equipment.
- The treatment system shall only be operated by Operators with proper training.

4.0 SYSTEM OPERATION AND CONTROL

This section provides the Operator with direction on how to interact with and control the Treatment System. Each of the operating modes and the events where Operator involvement is required are explained. This Operations Manual (along with the Appendices) provides the Operator with direction to successfully run the system after receiving training from qualified ECT2 personnel. Adherence to this manual shall not be deemed a substitute for an Operator's compliance with applicable Regulations.

At the time of release, ECT2 Operators are the only qualified personnel to operate the Treatment System.

4.1 Overview

The Treatment System is designed to run in **manual mode**. Routine operation of the system when treating water (referred to as "forward flow" operation) includes initiating the system feed pump, inspection of instrument readings, filter changes, and other activities as described below. Given the manual nature of this treatment system, **a qualified Operator must be present during operations.**

4.2 Forward Flow Operation

As noted above, the Treatment System has a maximum design capacity to treat 150 gpm. The system has been designed on the basis that each individual primary treatment train can operate at its respective maximum capacity of 75 gpm per train. The Treatment System is designed to run in **manual mode**. Forward flow operation includes the following stages, refer to **APPENDIX A** for Process Flow Diagram associated with the Treatment System:

Additional information on ECT2-provided Treatment System Equipment is provided in **Appendix B** Equipment Manuals and Cutsheets.

Equalization
Water is conveyed by **OWNER** into Owner-provided Influent Source Water Frac Tanks for equalization prior to treatment. Determination of which frac tank to treat is made in collaboration between ECT2 and OWNER prior to initiating treatment.

System Feed Pump (P-100)
Water is conveyed from Influent Source Water Frac Tanks to downstream treatment stages via the diesel/electric supply pump System Feed Pump. A key is required to energize the System Feed Pump prior to manually activating the pump in accordance with Section 4.6 System Startup.

Multimedia Filtration Pretreatment (SKD-110)
The first stage of pretreatment is multimedia filtration. This stage reduces suspended solids ahead of downstream filtration stages. A duplex vessel skid is provided with an automatic backwash capability that uses filtered forward flow through one vessel to backwash the other vessel (See Section 4.3 Backwash Operations).

Bag Filter Pretreatment (SKD-150A/B)
Bag filters are located downstream of multimedia filtration equipment to reduce suspended solids prior to the primary treatment stage. Two triplex bag filter skids (one triplex skid per treatment train) are provided. When differential pressure exceeds the trigger setpoint (suggested **10 psi**), bags will be changed out. Housings accept standard No. 2 Bag filters. Bag filter micron size may be adjusted based on site-specific conditions. Spent bag filters are disposed of by OWNER in accordance with Section 4.8 Waste Disposal.

LGAC Primary Treatment (V-200A/B, V-300A/B, V-400A/B)
Two trains of lead/lag/polish LGAC Vessels are provided for primary treatment for the removal of VOCs and SVOCs from site impacted water. Each vessel contains approximately 120-140 cubic feet (CF) of LGAC media over the lower laterals within the treatment vessels. Once the Polish vessel in each primary treatment train reach designated treatment capacity based on analytical results, the system will be shut down and all 6 vessels will undergo a media changeout. Refer to OP-1110 for media changeout procedure, located in **APPENDIX F** Standard Operating Procedures.

Treated Water Conveyance
Treated effluent from the two LGAC Primary treatment trains comingles in a common Treated Water Combined Effluent Line, where the water is held and tested to confirm compliance prior to discharge **by OWNER**.

4.3 Backwash Operation

The multimedia pretreatment vessels are equipped with a backwash system that uses forward flow through one vessel to backwash the other vessel. Backwash can be initiated based on differential pressure (adjustable setpoint, suggested 10 psi), timer, or initiated manually.

Backwash from multimedia vessels is piped to Solids/Backwash Storage Frac Tank 103 and then transferred to Backwash Storage Frac Tanks 101 and 102 to undergo settling. After settling, water is decanted from Frac Tanks 101/102 to the influent water stream to be reprocessed through the system. Settled solids from Frac Tank 103 are sent for Waste Disposal (See Section 4.8 Waste Disposal).

The primary treatment vessels are designed to be backwashed as a way of intermittently cleaning filtered solids from the media for optimal treatment performance and eliminating any excess build-up of particulate matter, if required. Each treatment train's valving allows water to be pumped in a counter-flow direction through any individual media vessel, one at a time, for backwashing purposes. To achieve this, water is pumped from Treated Water Frac Tank by BW Supply Pump P-5000 to the designated vessel to be backwashed via hoses. Discharged backwash water is connected to Solids/Backwash Storage Frac Tank 103 to be processed with Multimedia backwash water as described above. To initiate a backwash operation on the primary treatment vessels, the train with the vessel requiring backwashing must be taken offline.

4.4 Process Monitoring

Sampling ports and pressure indicators are provided at each stage of treatment, and flow indicators are provided on effluent piping of each primary treatment train. Refer to **APPENDIX A** for Process Flow Diagram for sample point and instrument locations. Refer to OP-5000 for instrument Reading operational procedure.

4.5 Sampling

Sampling shall occur according to the **APPENDIX E** Sampling Plan. Samples are to be taken using dedicated sample ports located along the treatment system as depicted in the Treatment System Process Flow Diagram (**APPENDIX A**). During Operator training an Operator will be shown the location of each sample port, as well as receive a demonstration of proper sampling technique, labelling practices, chain-of-custody form completion, and sample handling and dispatch.

Proper PPE must be worn when sampling in line with the **Site-Specific Safety Plan**. For quality control, the sampling sequence should move from areas anticipated to be least contaminated (i.e., treated water) to areas anticipated to be the most contaminated (i.e., system influent).

4.6 System Startup

The following procedure is provided for System Startup operations:

1. Confirm Influent Feed Tank selection with OWNER.
2. Confirm feed valve from Influent Feed Tank to ECT2 Supply Pump is open.
3. Open inlet valve to the Influent Feed Tank per OWNER Direction.
4. Visually inspect Treated Water Frac Tank to ensure it is empty.
5. Open manifold valves to feed to Treated Water Frac Tank area - walk the line from discharge to suction.
6. Note: All ECT2 process valves remain open during shutdown so air purging isn't necessary during every start-up.
7. Ensure the Backwash Tank 103 inlet valve is open.
8. Ensure all valves are open from Influent Feed Tank into the suction side of the diesel/electric supply pump.
9. Prior to starting up the diesel pump open the inlet valve of the Multimedia Filter (The discharge valve should be open and the backwash gate valve that feeds into SOLIDS/BACKWASH STORAGE Frac Tank 103)
10. Start diesel pump at 1380 rpm and throttle the Train North and Train South polish discharge valves to maintain a flow 70 - 75gpm through each train.
11. Visually inspect the Treated Water Frac Tank every 20 mins to ensure overfill does not occur. Note: MUST WEAR A RESPIRATOR WHEN CHECKING FRAC TANKS
12. It takes approximately two hours to fill a Frac Tank at the system design flow rate. Communicate with CTEH on when to take ECT2 process samples.
13. Open the inlet valve to the next Treated Water Frac Tank designated to received treated water.
14. Close the inlet valve of the initial Treated Water Frac Tank
15. Repeat the steps above until planned treatment is complete or there are no more Frac Tanks available to fill.

4.7 System Shutdown

The following procedure is provided for System Startup operations:

1. Close valves from the beginning of the process to the end
2. Turn off diesel pump first - allow the leachate to gravity drain as you move through the system to close valves.
3. Close the "Inlet" valve feeding into the Sand Filters
4. Close the "ECT2 Process Isolation" Valve
5. Close Frac Tank Manifold Valve
6. Close Influent Feed Tank

4.8 Waste Disposal

OWNER is responsible for the disposal of any waste generated during operation of the Treatment System. This includes spent media, backwash solids, spent bag filters, PPE etc. All waste material generated will be evaluated for compliance with RCRA and local disposal procedures and regulations.

5.0 MAINTENANCE

Before performing maintenance on the Treatment System, first turn off and isolate the upstream pump or source, in accordance with **Section 4.7**. To isolate the system for maintenance, close the manual isolation valves at the inlet and outlet of the equipment to be serviced and drain the section of piping where maintenance will occur.

ECT2 strongly recommends adhering to the frequency and type of preventative maintenance and inspection tasks documented in **APPENDIX C MAINTENANCE SCHEDULE.**

If the system is experiencing any of the scenarios below, system maintenance or servicing may be required:

- Minimal water flow through system
- Abnormal noises in pumps, valves, or other mechanical devices
- Leaks
- Electrical or instrumentation failure
- Differential Pressure above **15 psi** across any single treatment stage or vessel (setpoint may be adjusted based on steady state operations).

System servicing may also be required if the quality of inlet or treated water is unacceptable. If the following are present in influent or treated water, discuss treatment strategy with ECT2 personnel prior to resuming treatment:

- Significant change (either visual or analytical) in water quality from normal operations
- Excessive turbidity or sheen
- Strong odor (indicative of co-contaminants present in water)
- Oxidants (e.g., chlorine, chloramine, hypochlorite, ozone, etc.)
- Foulants such as oil, grease, suspended solids, iron, manganese, scale, or microbiological matter

Disclaimer:

Operation of the Treatment System shall be for the specific purpose intended and shall be Waste Connections and/or any third party's sole risk and without liability or legal exposure to ECT2. Any reuse or modification of this manual without written verification or adaption by ECT2 for the specific purpose intended shall be at Waste Connections and/or any third party's sole risk and without liability or legal exposure to ECT2. Waste Connections shall indemnify, defend, and hold harmless ECT from all claims, damages, losses, and expenses, including attorney's fees, arising out of or resulting therefrom.

OPERATIONS AND MAINTENANCE MANUAL

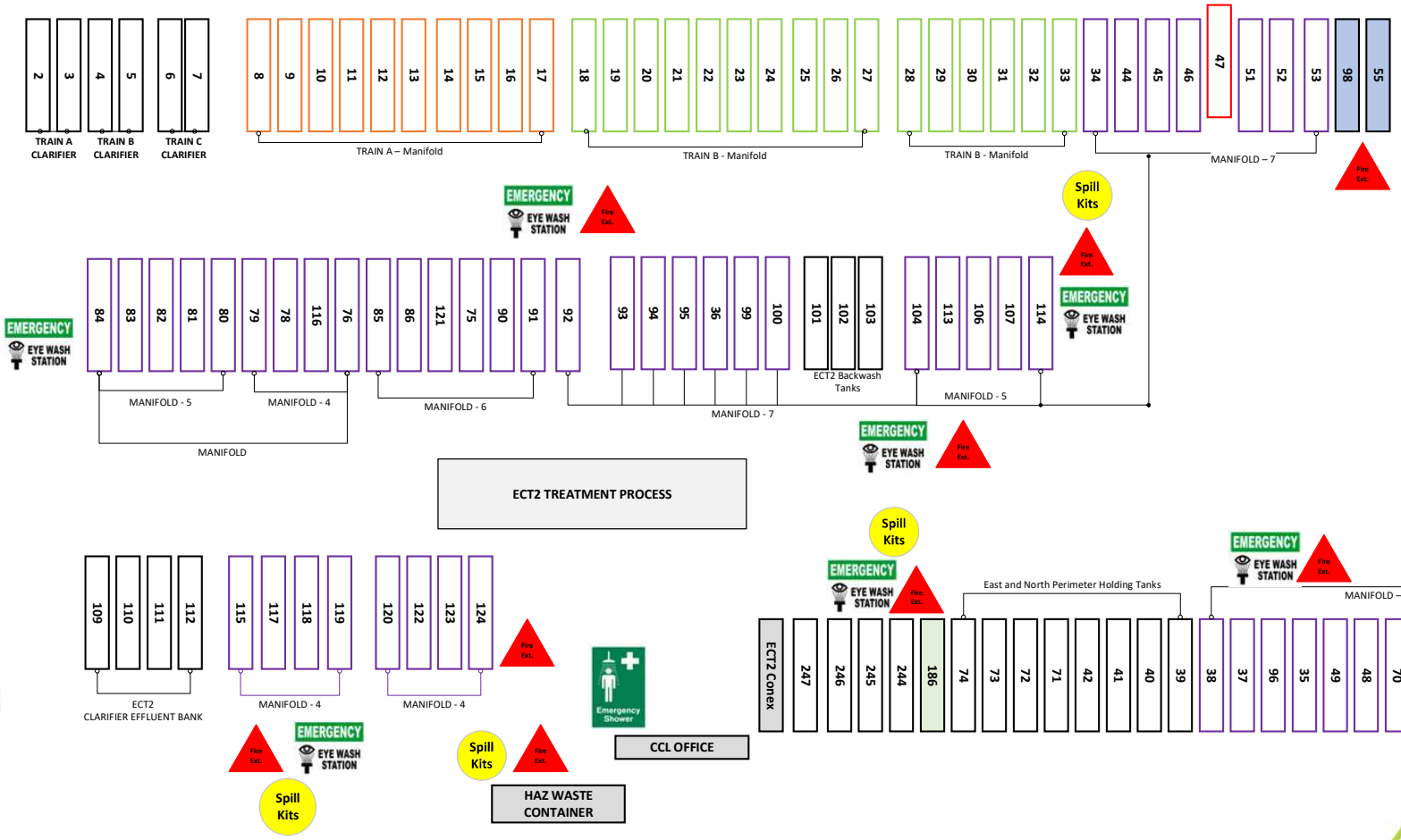
APPENDIX A – DRAWINGS

Tank Farm 7 Layout

Numbers:
2 – 42
44 – 49
51 – 53
55
70 – 76
78 – 86
88
90 – 96
98 – 104
109 - 126
186
244 - 274

TRAIN A: HOLDING TANKS
TRAIN B: HOLDING TANKS
TRAIN C: HOLDING TANKS
Storm Water
Primary Canyon Condensate
TREATED TANKS Total = 52

Spill Kit: Spill Kits
Eye Wash: EMERGENCY EYE WASH STATION
Fire Extinguisher: Fire Ext.
Safety Shower: Emergency Shower



Updated: 5/15/24

ect2
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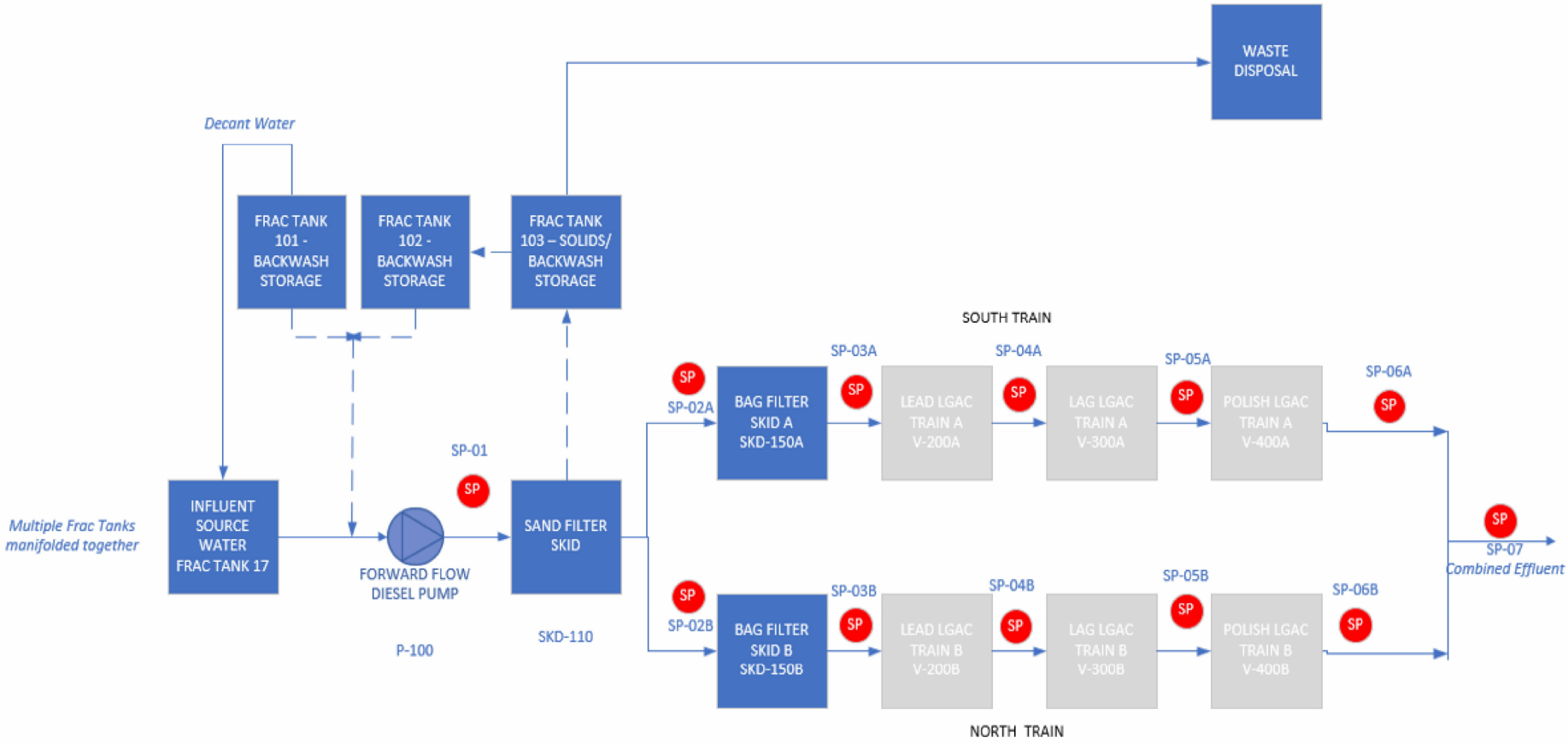

Updated: 7/10/2024

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OPERATIONS AND MAINTENANCE MANUAL

APPENDIX B – EQUIPMENT MANUALS AND CUTSHEETS

SEE SEPARATE .ZIP FILE
FOR ATTACHMENT B

OPERATIONS AND MAINTENANCE MANUAL

APPENDIX C – MAINTENANCE SCHEDULE

Chiquita Canyon Landfill
Equipment Maintenance Schedule

07/18/2024

Tag No.	Classification	Description	Manufacturer	Model	Type of Inspection/Maintenance	Weekly	Monthly	Quarterly	Annually	During/After Each Regen	As Needed	Comments/Work Performed	Date	Done By (Initial)	Reference Documents
N/A	TANK	BACKWASH STORAGE TANK 101	N/A	N/A	Inspect all connections for leaks	X									
N/A	TANK	BACKWASH STORAGE TANK 102	N/A	N/A	Inspect all connections for leaks	X									
N/A	TANK	SOLIDS/BACKWASH STORAGE TANK 103	N/A	N/A	Inspect all connections for leaks	X									
N/A	TANK	INFLUENT TANK	N/A	N/A	Inspect all connections for leaks	X									
P-100	PUMP	FORWARD FLOW PUMP	SUMMIT PUMP, INC	CC815AM-SS	Check tubing/pipe connection and condition of suction and discharge tubing/piping			X							
SKD-110	FILTER	SAND FILTER SKID	PURE EFFECT	PE-300SF	Inspect all connections for leaks	X									
					Inspect all nozzles and flanges		X								
SKD-150A	FILTER	SOUTH TRAIN BAG FILTER SKID	FILTRAFINNE	1x3FSB2S-S-2FA-3FA-NC150	Inspect all connections for leaks	X									
					Inspect all nozzles and flanges						X				
SKD-150B	FILTER	NORTH TRAIN BAG FILTER SKID	FILTRAFINNE	1x3FSB2S-S-2FA-3FA-NC150	Inspect all connections for leaks	X									
					Inspect all nozzles and flanges						X				
V-200A	VESSEL	SOUTH TRAIN LEAD LGAC VESSEL	QUICK TANKS, INC	ECT7272-B REV.1	Inspect all connections for leaks	X									
					Inspect all nozzles and flanges		X								
V-200B	VESSEL	NORTH TRAIN LEAD LGAC VESSEL	QUICK TANKS, INC	ECT7272-B REV.1	Inspect all connections for leaks	X									
					Inspect all nozzles and flanges		X								
V-300A	VESSEL	SOUTH TRAIN LAG LGAC VESSEL	QUICK TANKS, INC	ECT7272-B REV.1	Inspect all connections for leaks	X									
					Inspect all nozzles and flanges		X								
V-300B	VESSEL	NORTH TRAIN LAG LGAC VESSEL	QUICK TANKS, INC	ECT7272-B REV.1	Inspect all connections for leaks	X									
					Inspect all nozzles and flanges		X								
V-400A	VESSEL	SOUTH TRAIN POLISH LGAC VESSEL	QUICK TANKS, INC	ECT7272-B REV.1	Inspect all connections for leaks	X									
					Inspect all nozzles and flanges		X								
V-400B	VESSEL	NORTH TRAIN POLISH LGAC VESSEL	QUICK TANKS, INC	ECT7272-B REV.1	Inspect all connections for leaks	X									
					Inspect all nozzles and flanges		X								
P-500	PUMP	BACKWASH SUPPLY PUMP	SUMMIT PUMP, INC	CC1025AM-SS	Check tubing/pipe connection and condition of suction and discharge tubing/piping			X							

Chiquita Canyon Landfill
Instrument Maintenance Schedule

07/18/2024

Tag No.	Classification 1	Classification 2	Description	Manufacturer	Model	Type of Inspection/Maintenance	Weekly	Monthly	Quarterly	Annually	During/After Each Regen	As Needed	Comments/Work Performed	Date	Done By (Initial)	Reference Documents
SP-01	VALVE	VALVE - SAMPLE PORT	FORWARD FLOW PUMP DISCHARGE SAMPLE PORT	BONOMI	132B41	Visual inspection for leaks and clogs			X							
PI-01	INSTRUMENT	PRESSURE GAUGE	SAND FILTER SKID INLET HEADER PRESSURE GAUGE	ASHCROFT	101008SL02L100#	Clean meter using mild soap solution						X				
PI-11	INSTRUMENT	PRESSURE GAUGE	SAND FILTER SKID OUTLET HEADER PRESSURE GAUGE	ASHCROFT	101008SL02L100#	Clean meter using mild soap solution						X				
SP-02A	VALVE	VALVE - SAMPLE PORT	SOUTH TRAIN BAG FILTER SKD-150A INFLUENT SAMPLE PORT	BONOMI	132B41	Visual inspection for leaks and clogs			X							
PI-02A	INSTRUMENT	PRESSURE GAUGE	SOUTH TRAIN BAG FILTER SKD-150A INFLUENT PRESSURE GAUGE	ASHCROFT	101008SL02L100#	Clean meter using mild soap solution						X				
PI-12A	INSTRUMENT	PRESSURE GAUGE	SOUTH TRAIN BAG FILTER SKD-150A EFFLUENT PRESSURE GAUGE	ASHCROFT	101008SL02L100#	Clean meter using mild soap solution						X				
SP-02B	VALVE	VALVE - SAMPLE PORT	NORTH TRAIN BAG FILTER SKD-150B INFLUENT SAMPLE PORT	BONOMI	132B41	Visual inspection for leaks and clogs			X							
PI-02B	INSTRUMENT	PRESSURE GAUGE	NORTH TRAIN BAG FILTER SKD-150B INFLUENT PRESSURE GAUGE	ASHCROFT	101008SL02L100#	Clean meter using mild soap solution						X				
PI-12B	INSTRUMENT	PRESSURE GAUGE	NORTH TRAIN BAG FILTER SKD-150B EFFLUENT PRESSURE GAUGE	ASHCROFT	101008SL02L100#	Clean meter using mild soap solution						X				
SP-03A	VALVE	VALVE - SAMPLE PORT	SOUTH TRAIN LEAD LGAC VESSEL V-200A INFLUENT SAMPLE PORT	BONOMI	132B41	Visual inspection for leaks and clogs			X							
PI-03A	INSTRUMENT	PRESSURE GAUGE	SOUTH TRAIN LEAD LGAC VESSEL V-200A INFLUENT PRESSURE GAUGE	ASHCROFT	101008SL02L100#	Clean meter using mild soap solution						X				
SP-03B	VALVE	VALVE - SAMPLE PORT	NORTH TRAIN LEAD LGAC VESSEL V-200B INFLUENT SAMPLE PORT	BONOMI	132B41	Visual inspection for leaks and clogs			X							
PI-03B	INSTRUMENT	PRESSURE GAUGE	NORTH TRAIN LEAD LGAC VESSEL V-200B INFLUENT PRESSURE GAUGE	ASHCROFT	101008SL02L100#	Clean meter using mild soap solution						X				
SP-04A	VALVE	VALVE - SAMPLE PORT	SOUTH TRAIN LAG LGAC VESSEL V-300A INFLUENT SAMPLE PORT	SPEARS	1529-002A	Visual inspection for leaks and clogs			X							
PI-04A	INSTRUMENT	PRESSURE GAUGE	SOUTH TRAIN LAG LGAC VESSEL V-300A INFLUENT PRESSURE GAUGE	ASHCROFT	101008SL02L100#	Clean meter using mild soap solution						X				
SP-04B	VALVE	VALVE - SAMPLE PORT	NORTH TRAIN LAG LGAC VESSEL V-300B INFLUENT SAMPLE PORT	SPEARS	1529-002A	Visual inspection for leaks and clogs			X							
PI-04B	INSTRUMENT	PRESSURE GAUGE	NORTH TRAIN LAG LGAC VESSEL V-300B INFLUENT PRESSURE GAUGE	ASHCROFT	101008SL02L100#	Clean meter using mild soap solution						X				
SP-05A	VALVE	VALVE - SAMPLE PORT	SOUTH TRAIN POLISH LGAC VESSEL V-400A INFLUENT SAMPLE PORT	SPEARS	1529-002A	Visual inspection for leaks and clogs			X							
PI-05A	INSTRUMENT	PRESSURE GAUGE	SOUTH TRAIN POLISH LGAC VESSEL V-400A INFLUENT PRESSURE GAUGE	ASHCROFT	101008SL02L100#	Clean meter using mild soap solution						X				
SP-05B	VALVE	VALVE - SAMPLE PORT	NORTH TRAIN POLISH LGAC VESSEL V-400B INFLUENT SAMPLE PORT	SPEARS	1529-002A	Visual inspection for leaks and clogs			X							
PI-05B	INSTRUMENT	PRESSURE GAUGE	NORTH TRAIN POLISH LGAC VESSEL V-400B INFLUENT PRESSURE GAUGE	ASHCROFT	101008SL02L100#	Clean meter using mild soap solution						X				
SP-06A	VALVE	VALVE - SAMPLE PORT	SOUTH TRAIN POLISH LGAC VESSEL V-400A EFFLUENT SAMPLE PORT	SPEARS	1529-002A	Visual inspection for leaks and clogs			X							
PI-06A	INSTRUMENT	PRESSURE GAUGE	SOUTH TRAIN POLISH LGAC VESSEL V-400A EFFLUENT PRESSURE GAUGE	ASHCROFT	101008SL02L100#	Clean meter using mild soap solution						X				
SP-06B	VALVE	VALVE - SAMPLE PORT	NORTH TRAIN POLISH LGAC VESSEL V-400B EFFLUENT SAMPLE PORT	SPEARS	1529-002A	Visual inspection for leaks and clogs			X							
PI-06B	INSTRUMENT	PRESSURE GAUGE	NORTH TRAIN POLISH LGAC VESSEL V-400B EFFLUENT PRESSURE GAUGE	ASHCROFT	101008SL02L100#	Clean meter using mild soap solution						X				
SP-07	VALVE	VALVE - SAMPLE PORT	COMBINED EFFLUENT SAMPLE PORT	BONOMI	132B41	Visual inspection for leaks and clogs			X							
FI-05A	INSTRUMENT	FLOWMETER	SOUTH TRAIN EFFLUENT FLOW METER	FLOMEC	TM20SQ9LMB	Inspect for damage and replace batteries.				X		X				
FI-05B	INSTRUMENT	FLOWMETER	NORTH TRAIN EFFLUENT FLOW METER	FLOMEC	TM20SQ9LMB	Inspect for damage and replace batteries.				X		X				

OPERATIONS AND MAINTENANCE MANUAL

APPENDIX D – EQUIPMENT LISTS

Tag No.	Classification	Description	DIMENSIONS / CAPACITY / DUTY	Size (Device or Connection)	MOC	Process Conditions - Line Type	Max Temp	Max Pressure	Device Connection Type	Electrical Requirements	Manufacturer	Model
N/A	TANK	BACKWASH STORAGE TANK 101	45' L x 8.5' W x 11' H 21,000 GAL	4" INLET/OUTLET	SS	BWR	N/A	N/A	FLG	N/A	N/A	N/A
N/A	TANK	BACKWASH STORAGE TANK 102	45' L x 8.5' W x 11' H 21,000 GAL	4" INLET/OUTLET	SS	BWR	N/A	N/A	FLG	N/A	N/A	N/A
N/A	TANK	SOLIDS/BACKWASH STORAGE TANK 103	45' L x 8.5' W x 11' H 21,000 GAL	4" INLET/OUTLET	SS	BWR	N/A	N/A	FLG	N/A	N/A	N/A
N/A	TANK	EQUALIZATION FRAC TANKS	45' L x 8.5' W x 11' H 21,000 GAL	4" INLET/OUTLET	SS	PW	N/A	N/A	FLG	N/A	N/A	N/A
P-100	PUMP	FORWARD FLOW PUMP	22.25" L x 14" W x 12.5" H 150 GPM @ 212 FT	2" x 1.5"	SS	PW	N/A	98.1 PSI	FNPT	460V 3PH 60HZ 15HP	SUMMIT PUMP, INC	CC815AM-SS
SKD-110	FILTER	SAND FILTER SKID	7.9' L x 4.6' W x 6'H	3" INLET 2" OUTLET	SS	PW	N/A	100 PSI	CAMLOCK	N/A	PURE EFFECT	PE-300SF
SKD-150A	FILTER	SOUTH TRAIN BAG FILTER SKID	46.5" L x 33.3" W x 57.7" H	3" INLET/OUTLET	SS	PW	200 F	150 PSI	FLG	N/A	FILTRAFINNE	1x3FSB2S-S-2FA-4FA-NC150
SKD-150B	FILTER	NORTH TRAIN BAG FILTER SKID	46.5" L x 33.3" W x 57.7" H	3" INLET/OUTLET	SS	PW	200 F	150 PSI	FLG	N/A	FILTRAFINNE	1x3FSB2S-S-2FA-4FA-NC150
V-200A	VESSEL	SOUTH TRAIN LEAD LGAC VESSEL	72" DIA x 72" SWH 82"L x 81" W x 143" H	6" INLET/OUTLET	ASTM A516	PW	120 F	125 PSI MAWP	FLG	N/A	QUICK TANKS, INC	ECT7272-B REV.1
V-200B	VESSEL	NORTH TRAIN LEAD LGAC VESSEL	72" DIA x 72" SWH 82"L x 81" W x 143" H	6" INLET/OUTLET	ASTM A516	PW	120 F	125 PSI MAWP	FLG	N/A	QUICK TANKS, INC	ECT7272-B REV.1
V-300A	VESSEL	SOUTH TRAIN LAG LGAC VESSEL	72" DIA x 72" SWH 82"L x 81" W x 143" H	6" INLET/OUTLET	ASTM A516	PW	120 F	125 PSI MAWP	FLG	N/A	QUICK TANKS, INC	ECT7272-B REV.1
V-300B	VESSEL	NORTH TRAIN LAG LGAC VESSEL	72" DIA x 72" SWH 82"L x 81" W x 143" H	6" INLET/OUTLET	ASTM A516	PW	120 F	125 PSI MAWP	FLG	N/A	QUICK TANKS, INC	ECT7272-B REV.1
V-400A	VESSEL	SOUTH TRAIN POLISH LGAC VESSEL	72" DIA x 72" SWH 82"L x 81" W x 143" H	6" INLET/OUTLET	ASTM A516	PW	120 F	125 PSI MAWP	FLG	N/A	QUICK TANKS, INC	ECT7272-B REV.1
V-400B	VESSEL	NORTH TRAIN POLISH LGAC VESSEL	72" DIA x 72" SWH 82"L x 81" W x 143" H	6" INLET/OUTLET	ASTM A516	PW	120 F	125 PSI MAWP	FLG	N/A	QUICK TANKS, INC	ECT7272-B REV.1
P-500	PUMP	BACKWASH SUPPLY PUMP	23.25" L x 14.5" W x 17.5" H 284 GPM @ 75.4 FT	3" x 2.5"	SS	BWS	N/A	38.1 PSI	FLG	460V 3PH 60HZ 10HP	SUMMIT PUMP, INC	CC1025AM-SS

Chiquita Canyon Landfill
Instrument/Sample Port List

07/18/2024

Tag No.	Classification 1	Type (Classification 2)	Description	Size (Device or Connection)	Connection Type	MOC	Process Conditions - Fluid Type	Max Temp	Max Pressure	Requested Range/Span	Manufacturer	Model
SP-01	VALVE	VALVE - SAMPLE PORT	FORWARD FLOW PUMP DISCHARGE SAMPLE PORT	1/4"	NPT	SS	TW	450 F	1000 PSI	N/A	BONOMI	132B41
PI-01	INSTRUMENT	PRESSURE GAUGE	SAND FILTER SKID INLET HEADER PRESSURE GAUGE	1/4"	NPT	SS	PW	200 F	100 PSI	0-100 PSI	ASHCROFT	101008SL02L100#
PI-11	INSTRUMENT	PRESSURE GAUGE	SAND FILTER SKID OUTLET HEADER PRESSURE GAUGE	1/4"	NPT	SS	PW	200 F	100 PSI	0-100 PSI	ASHCROFT	101008SL02L100#
SP-02A	VALVE	VALVE - SAMPLE PORT	SOUTH TRAIN BAG FILTER SKD-150A INFLUENT SAMPLE PORT	1/4"	NPT	SS	TW	450 F	1000 PSI	N/A	BONOMI	132B41
PI-02A	INSTRUMENT	PRESSURE GAUGE	SOUTH TRAIN BAG FILTER SKD-150A INFLUENT PRESSURE GAUGE	1/4"	NPT	SS	PW	200 F	100 PSI	0-100 PSI	ASHCROFT	101008SL02L100#
PI-12A	INSTRUMENT	PRESSURE GAUGE	SOUTH TRAIN BAG FILTER SKD-150A EFFLUENT PRESSURE GAUGE	1/4"	NPT	SS	PW	200 F	100 PSI	0-100 PSI	ASHCROFT	101008SL02L100#
SP-02B	VALVE	VALVE - SAMPLE PORT	NORTH TRAIN BAG FILTER SKD-150B INFLUENT SAMPLE PORT	1/4"	NPT	SS	TW	450 F	1000 PSI	N/A	BONOMI	132B41
PI-02B	INSTRUMENT	PRESSURE GAUGE	NORTH TRAIN BAG FILTER SKD-150B INFLUENT PRESSURE GAUGE	1/4"	NPT	SS	PW	200 F	100 PSI	0-100 PSI	ASHCROFT	101008SL02L100#
PI-12B	INSTRUMENT	PRESSURE GAUGE	NORTH TRAIN BAG FILTER SKD-150B EFFLUENT PRESSURE GAUGE	1/4"	NPT	SS	PW	200 F	100 PSI	0-100 PSI	ASHCROFT	101008SL02L100#
SP-03A	VALVE	VALVE - SAMPLE PORT	SOUTH TRAIN LEAD LGAC VESSEL V-200A INFLUENT SAMPLE PORT	1/4"	NPT	SS	TW	450 F	1000 PSI	N/A	BONOMI	132B41
PI-03A	INSTRUMENT	PRESSURE GAUGE	SOUTH TRAIN LEAD LGAC VESSEL V-200A INFLUENT PRESSURE GAUGE	1/4"	NPT	SS	PW	200 F	100 PSI	0-100 PSI	ASHCROFT	101008SL02L100#
SP-03B	VALVE	VALVE - SAMPLE PORT	NORTH TRAIN LEAD LGAC VESSEL V-200B INFLUENT SAMPLE PORT	1/4"	NPT	SS	TW	450 F	1000 PSI	N/A	BONOMI	132B41
PI-03B	INSTRUMENT	PRESSURE GAUGE	NORTH TRAIN LEAD LGAC VESSEL V-200B INFLUENT PRESSURE GAUGE	1/4"	NPT	SS	PW	200 F	100 PSI	0-100 PSI	ASHCROFT	101008SL02L100#
SP-04A	VALVE	VALVE - SAMPLE PORT	SOUTH TRAIN LAG LGAC VESSEL V-300A INFLUENT SAMPLE PORT	1/4"	NPT	PVC	PW	140 F	150 PSI @ 73 F	N/A	SPEARS	1529-002A
PI-04A	INSTRUMENT	PRESSURE GAUGE	SOUTH TRAIN LAG LGAC VESSEL V-300A INFLUENT PRESSURE GAUGE	1/4"	NPT	SS	PW	200 F	100 PSI	0-100 PSI	ASHCROFT	101008SL02L100#
SP-04B	VALVE	VALVE - SAMPLE PORT	NORTH TRAIN LAG LGAC VESSEL V-300B INFLUENT SAMPLE PORT	1/4"	NPT	PVC	PW	140 F	150 PSI @ 73 F	N/A	SPEARS	1529-002A
PI-04B	INSTRUMENT	PRESSURE GAUGE	NORTH TRAIN LAG LGAC VESSEL V-300B INFLUENT PRESSURE GAUGE	1/4"	NPT	SS	PW	200 F	100 PSI	0-100 PSI	ASHCROFT	101008SL02L100#
SP-05A	VALVE	VALVE - SAMPLE PORT	SOUTH TRAIN POLISH LGAC VESSEL V-400A INFLUENT SAMPLE PORT	1/4"	NPT	PVC	PW	140 F	150 PSI @ 73 F	N/A	SPEARS	1529-002A
PI-05A	INSTRUMENT	PRESSURE GAUGE	SOUTH TRAIN POLISH LGAC VESSEL V-400A INFLUENT PRESSURE GAUGE	1/4"	NPT	SS	PW	200 F	100 PSI	0-100 PSI	ASHCROFT	101008SL02L100#
SP-05B	VALVE	VALVE - SAMPLE PORT	NORTH TRAIN POLISH LGAC VESSEL V-400B INFLUENT SAMPLE PORT	1/4"	NPT	PVC	PW	140 F	150 PSI @ 73 F	N/A	SPEARS	1529-002A
PI-05B	INSTRUMENT	PRESSURE GAUGE	NORTH TRAIN POLISH LGAC VESSEL V-400B INFLUENT PRESSURE GAUGE	1/4"	NPT	SS	PW	200 F	100 PSI	0-100 PSI	ASHCROFT	101008SL02L100#
SP-06A	VALVE	VALVE - SAMPLE PORT	SOUTH TRAIN POLISH LGAC VESSEL V-400A EFFLUENT SAMPLE PORT	1/4"	NPT	PVC	PW	140 F	150 PSI @ 73 F	N/A	SPEARS	1529-002A
PI-06A	INSTRUMENT	PRESSURE GAUGE	SOUTH TRAIN POLISH LGAC VESSEL V-400A EFFLUENT PRESSURE GAUGE	1/4"	NPT	SS	PW	200 F	100 PSI	0-100 PSI	ASHCROFT	101008SL02L100#
SP-06B	VALVE	VALVE - SAMPLE PORT	NORTH TRAIN POLISH LGAC VESSEL V-400B EFFLUENT SAMPLE PORT	1/4"	NPT	PVC	PW	140 F	150 PSI @ 73 F	N/A	SPEARS	1529-002A
PI-06B	INSTRUMENT	PRESSURE GAUGE	NORTH TRAIN POLISH LGAC VESSEL V-400B EFFLUENT PRESSURE GAUGE	1/4"	NPT	SS	PW	200 F	100 PSI	0-100 PSI	ASHCROFT	101008SL02L100#
SP-07	VALVE	VALVE - SAMPLE PORT	COMBINED EFFLUENT SAMPLE PORT	1/4"	NPT	SS	TW	450 F	1000 PSI	N/A	BONOMI	132B41
FI-05A	INSTRUMENT	FLOWMETER	SOUTH TRAIN EFFLUENT FLOW METER	2"	SPGT	PVC	PW	140 F	225 PSI @ 73 F	20-200 GPM	FLOMEC	TM20SQ9LMB
FI-05B	INSTRUMENT	FLOWMETER	NORTH TRAIN EFFLUENT FLOW METER	2"	SPGT	PVC	PW	140 F	225 PSI @ 73 F	20-200 GPM	FLOMEC	TM20SQ9LMB

OPERATIONS AND MAINTENANCE MANUAL

APPENDIX E – SAMPLING PLAN

ECT2 SAP - System Start-up, Daily Overview

Media Volume	CF	113
	gal	845
Flowrate	gpm	150
	gph	9000
EBCT	min	5.6
	BV/hr	10.6

Revision Date	6/11/2024
Revision #	4
Revision Made By	AB
Approved By	AB

Sampling Key	Requested TAT (days)	Who Collects	Analytical Method
VOC/SVOCs	1	CTEH	8260B & 8270C
VOC/SVOCs	3	CTEH	8260B & 8270C
VOC/SVOCs (H)	N/A	CTEH	N/A
BC	3	CTEH	See analytical list

		Samples																	
		System Influent		Train A						Train B						Combined Effluent		Sample Notes	
		Influent - Pre Sand Filter		Lead Effluent		Lag Effluent		Polish Effluent		Lead Effluent		Lag Effluent		Polish Effluent		Combined Effluent Header (Grab)			
		SP-01		SP-04A		SP-05A		SP-06A		SP-04B		SP-05B		SP-06B		SP-07			
Date	Day	VOC/SVOCs	BC	VOC/SVOCs	BC	VOC/SVOCs	BC	VOC/SVOCs	BC	VOC/SVOCs	BC	VOC/SVOCs	BC	VOC/SVOCs	BC	VOC/SVOCs	BC		
4/15/2024	MON	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC			VOC/SVOCs	TOC	VOC/SVOCs	TOC			VOC/SVOCs	TOC		
4/16/2024	TUE	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC			VOC/SVOCs	TOC	VOC/SVOCs	TOC			VOC/SVOCs	TOC		
4/17/2024	WED	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC			VOC/SVOCs	TOC	VOC/SVOCs	TOC			VOC/SVOCs	TOC		
4/18/2024	THU	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC			VOC/SVOCs	TOC	VOC/SVOCs	TOC			VOC/SVOCs	TOC		
4/19/2024	FRI	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC			VOC/SVOCs	TOC	VOC/SVOCs	TOC			VOC/SVOCs	TOC		
4/20/2024	SAT	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC			VOC/SVOCs	TOC	VOC/SVOCs	TOC			VOC/SVOCs	TOC		
4/21/2024	SUN	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC			VOC/SVOCs	TOC	VOC/SVOCs	TOC			VOC/SVOCs	TOC		
4/22/2024	MON	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC			VOC/SVOCs	TOC	VOC/SVOCs	TOC			VOC/SVOCs	TOC		
4/23/2024	TUE	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC			VOC/SVOCs	TOC	VOC/SVOCs	TOC			VOC/SVOCs	TOC		
4/24/2024	WED	VOC/SVOCs	BC	VOC/SVOCs	BC	VOC/SVOCs	BC			VOC/SVOCs	BC	VOC/SVOCs	BC			VOC/SVOCs	BC		
4/25/2024	THU	VOC/SVOCs		VOC/SVOCs		VOC/SVOCs				VOC/SVOCs		VOC/SVOCs				VOC/SVOCs			
4/26/2024	FRI	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC			VOC/SVOCs	TOC	VOC/SVOCs	TOC			VOC/SVOCs	TOC		
4/27/2024	SAT	VOC/SVOCs		VOC/SVOCs		VOC/SVOCs				VOC/SVOCs		VOC/SVOCs				VOC/SVOCs			
4/28/2024	SUN	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC			VOC/SVOCs	TOC	VOC/SVOCs	TOC			VOC/SVOCs	TOC		
4/29/2024	MON	VOC/SVOCs		VOC/SVOCs		VOC/SVOCs				VOC/SVOCs		VOC/SVOCs				VOC/SVOCs			
4/30/2024	TUE	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC			VOC/SVOCs	TOC	VOC/SVOCs	TOC			VOC/SVOCs	TOC		
5/1/2024	WED	VOC/SVOCs	TOC & TSS	VOC/SVOCs	TOC & TSS	VOC/SVOCs	TOC & TSS			VOC/SVOCs	TOC & TSS	VOC/SVOCs	TOC & TSS			VOC/SVOCs	TOC & TSS		
5/2/2024	THU	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC			VOC/SVOCs	TOC	VOC/SVOCs	TOC			VOC/SVOCs	TOC & TSS		
5/3/2024	FRI	VOC/SVOCs	TOC	VOC/SVOCs		VOC/SVOCs				VOC/SVOCs		VOC/SVOCs				VOC/SVOCs	TOC & TSS		
5/4/2024	SAT	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC			VOC/SVOCs	TOC	VOC/SVOCs	TOC			VOC/SVOCs	TOC & TSS		
5/5/2024	SUN	VOC/SVOCs		VOC/SVOCs		VOC/SVOCs				VOC/SVOCs		VOC/SVOCs				VOC/SVOCs	TOC & TSS		
5/6/2024	MON	VOC/SVOCs	TOC & TSS	VOC/SVOCs	TOC & TSS	VOC/SVOCs	TOC & TSS			VOC/SVOCs	TOC & TSS	VOC/SVOCs	TOC & TSS			VOC/SVOCs	TOC & TSS		
5/7/2024	TUE	VOC/SVOCs		VOC/SVOCs		VOC/SVOCs				VOC/SVOCs		VOC/SVOCs				VOC/SVOCs	TOC & TSS		
5/8/2024	WED	VOC/SVOCs	BC	VOC/SVOCs	BC	VOC/SVOCs	BC			VOC/SVOCs	BC	VOC/SVOCs	BC			VOC/SVOCs	BC		
5/9/2024	THU	VOC/SVOCs		VOC/SVOCs		VOC/SVOCs				VOC/SVOCs		VOC/SVOCs				VOC/SVOCs	TOC & TSS		
5/10/2024	FRI	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC			VOC/SVOCs	TOC	VOC/SVOCs	TOC			VOC/SVOCs	TOC & TSS		
5/11/2024	SAT	VOC/SVOCs		VOC/SVOCs		VOC/SVOCs				VOC/SVOCs		VOC/SVOCs				VOC/SVOCs	TOC & TSS		
5/12/2024	SUN	VOC/SVOCs		VOC/SVOCs		VOC/SVOCs				VOC/SVOCs		VOC/SVOCs				VOC/SVOCs	TOC & TSS		
5/13/2024	MON	VOC/SVOCs		VOC/SVOCs		VOC/SVOCs				VOC/SVOCs		VOC/SVOCs				VOC/SVOCs	TOC & TSS		
5/14/2024	TUE	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC			VOC/SVOCs	TOC	VOC/SVOCs	TOC			VOC/SVOCs	TOC & TSS		
5/15/2024	WED	VOC/SVOCs		VOC/SVOCs		VOC/SVOCs				VOC/SVOCs		VOC/SVOCs				VOC/SVOCs	TOC & TSS		
5/16/2024	THU	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC			VOC/SVOCs	TOC	VOC/SVOCs	TOC			VOC/SVOCs	TOC & TSS		
5/17/2024	FRI	VOC/SVOCs		VOC/SVOCs		VOC/SVOCs				VOC/SVOCs		VOC/SVOCs				VOC/SVOCs	TOC & TSS		
5/18/2024	SAT	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC			VOC/SVOCs	TOC	VOC/SVOCs	TOC			VOC/SVOCs	TOC & TSS		
5/19/2024	SUN	VOC/SVOCs		VOC/SVOCs		VOC/SVOCs				VOC/SVOCs		VOC/SVOCs				VOC/SVOCs	TOC & TSS		
5/20/2024	MON	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC			VOC/SVOCs	TOC	VOC/SVOCs	TOC			VOC/SVOCs	TOC & TSS		
5/21/2024	TUE	VOC/SVOCs		VOC/SVOCs		VOC/SVOCs				VOC/SVOCs		VOC/SVOCs				VOC/SVOCs	TOC & TSS		
5/22/2024	WED	VOC/SVOCs	BC	VOC/SVOCs	BC	VOC/SVOCs	BC			VOC/SVOCs	BC	VOC/SVOCs	BC			VOC/SVOCs	BC		
5/23/2024	THU	VOC/SVOCs		VOC/SVOCs		VOC/SVOCs				VOC/SVOCs		VOC/SVOCs				VOC/SVOCs			
5/24/2024	FRI	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC			VOC/SVOCs	TOC	VOC/SVOCs	TOC			VOC/SVOCs	TOC		
5/25/2024	SAT	VOC/SVOCs		VOC/SVOCs		VOC/SVOCs				VOC/SVOCs		VOC/SVOCs				VOC/SVOCs			
5/26/2024	SUN	VOC/SVOCs		VOC/SVOCs		VOC/SVOCs				VOC/SVOCs		VOC/SVOCs				VOC/SVOCs			
5/27/2024	MON	VOC/SVOCs		VOC/SVOCs		VOC/SVOCs				VOC/SVOCs		VOC/SVOCs				VOC/SVOCs			
5/28/2024	TUE	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC			VOC/SVOCs	TOC	VOC/SVOCs	TOC			VOC/SVOCs	TOC		
5/29/2024	WED	VOC/SVOCs		VOC/SVOCs		VOC/SVOCs				VOC/SVOCs		VOC/SVOCs				VOC/SVOCs	TOC & TSS		
5/30/2024	THU	VOC/SVOCs	TOC & TSS	VOC/SVOCs	TOC & TSS	VOC/SVOCs	TOC & TSS			VOC/SVOCs	TOC & TSS	VOC/SVOCs	TOC & TSS			VOC/SVOCs	TOC & TSS		
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6/1/2024	SAT	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC			VOC/SVOCs	TOC	VOC/SVOCs	TOC			VOC/SVOCs	TOC & TSS		
6/2/2024	SUN	VOC/SVOCs		VOC/SVOCs		VOC/SVOCs				VOC/SVOCs		VOC/SVOCs				VOC/SVOCs	TOC & TSS		
6/3/2024	MON	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC			VOC/SVOCs	TOC	VOC/SVOCs	TOC			VOC/SVOCs	TOC & TSS		
6/4/2024	TUE	VOC/SVOCs		VOC/SVOCs		VOC/SVOCs				VOC/SVOCs		VOC/SVOCs				VOC/SVOCs	TOC & TSS		
6/5/2024	WED	VOC/SVOCs	BC	VOC/SVOCs	BC	VOC/SVOCs	BC			VOC/SVOCs	BC	VOC/SVOCs	BC			VOC/SVOCs	BC		
6/6/2024	THU	VOC/SVOCs	TOC & TSS	VOC/SVOCs	TOC & TSS	VOC/SVOCs	TOC & TSS			VOC/SVOCs	TOC & TSS	VOC/SVOCs	TOC & TSS			VOC/SVOCs	TOC & TSS		
6/7/2024	FRI	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC			VOC/SVOCs	TOC	VOC/SVOCs	TOC			VOC/SVOCs	TOC		
6/8/2024	SAT	VOC/SVOCs		VOC/SVOCs		VOC/SVOCs				VOC/SVOCs		VOC/SVOCs				VOC/SVOCs			
6/9/2024	SUN	VOC/SVOCs	TOC & TSS	VOC/SVOCs	TOC & TSS	VOC/SVOCs	TOC & TSS			VOC/SVOCs	TOC & TSS	VOC/SVOCs	TOC & TSS			VOC/SVOCs	TOC & TSS		
6/10/2024	MON	VOC/SVOCs	BC	VOC/SVOCs	BC	VOC/SVOCs	BC			VOC/SVOCs	BC	VOC/SVOCs	BC			VOC/SVOCs	BC		
6/11/2024	TUE	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC			VOC/SVOCs	TOC	VOC/SVOCs	TOC			VOC/SVOCs	TOC		
6/12/2024	WED	VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		*polish vessel added 6/13		VOC/SVOCs		VOC/SVOCs		*polish vessel added 6/13		VOC/SVOCs			
6/13/2024	THU	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC		
6/14/2024	FRI	VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs			
6/15/2024	SAT	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC		
6/16/2024	SUN	VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs			
6/17/2024	MON	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC		
6/18/2024	TUE	VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs			
6/19/2024	WED	VOC/SVOCs	BC	VOC/SVOCs	BC	VOC/SVOCs	BC	VOC/SVOCs	BC	VOC/SVOCs	BC	VOC/SVOCs	BC	VOC/SVOCs	BC	VOC/SVOCs	BC		
6/20/2024	THU	VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs			
6/21/2024	FRI	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC		
6/22/2024	SAT	VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs			
6/23/2024	SUN	VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs			
6/24/2024	MON	VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs			
6/25/2024	TUE	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC		
6/26/2024	WED	VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs			
6/27/2024	THU	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC		
6/28/2024	FRI	VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs			
6/29/2024	SAT	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC		
6/30/2024	SUN	VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs			
7/1/2024	MON	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC		
7/2/2024	TUE	VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs			
7/3/2024	WED	VOC/SVOCs	BC	VOC/SVOCs	BC	VOC/SVOCs	BC	VOC/SVOCs	BC	VOC/SVOCs	BC	VOC/SVOCs	BC	VOC/SVOCs	BC	VOC/SVOCs	BC		
7/4/2024	THU	VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs			
7/5/2024	FRI	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC		
7/6/2024	SAT	VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs			
7/7/2024	SUN	VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs			
7/8/2024	MON	VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs			
7/9/2024	TUE	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC		
7/10/2024	WED	VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs			
7/11/2024	THU	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC		
7/12/2024	FRI	VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs			
7/13/2024	SAT	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC		
7/14/2024	SUN	VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs			
7/15/2024	MON	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC		
7/16/2024	TUE	VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs			
7/17/2024	WED	VOC/SVOCs	BC	VOC/SVOCs	BC	VOC/SVOCs	BC	VOC/SVOCs	BC	VOC/SVOCs	BC	VOC/SVOCs	BC	VOC/SVOCs	BC	VOC/SVOCs	BC		

Priority of Sample Submission - 1 day Turns

Rank	Sample ID	Note
1	Lag IX-A	Running from low to high volume treated
2	Lead IX-A	

7/18/2024	THU	VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		
7/19/2024	FRI	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	
7/20/2024	SAT	VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		
7/21/2024	SUN	VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		
7/22/2024	MON	VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		
7/23/2024	TUE	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	
7/24/2024	WED	VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		
7/25/2024	THU	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	
7/26/2024	FRI	VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		
7/27/2024	SAT	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	VOC/SVOCs	TOC	
7/28/2024	SUN	VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		
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7/30/2024	TUE	VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		VOC/SVOCs		
7/31/2024	WED	VOC/SVOCs	BC	VOC/SVOCs	BC	VOC/SVOCs	BC	VOC/SVOCs	BC	VOC/SVOCs	BC	VOC/SVOCs	BC	VOC/SVOCs	BC	VOC/SVOCs	BC	

OPERATIONS AND MAINTENANCE MANUAL

APPENDIX F – STANDARD OPERATING PROCEDURES

- **OP-1100 MEDIA CHANGEOUT**
- **OP-4000 BAG FILTER CHANGEOUT**
- **OP-5000 INSTRUMENT READING**

ECT2 File Number	OP Number
038917	OP-1110

Media Loading Procedure (Air Assisted)

OP-1110

Media Changeout – Air Assisted

Document Revision Control Table					
Issue	Date	Description	BY	CHK	APR
Rev 0	17 May 2024	INITIAL RELEASE	TJS	CDT	ASB
Rev 1	22 May 22 2024	Issued for Use – Addendum 1	TJS	CDT	ASB

1. INTRODUCTION

This document outlines the procedure to unload and load media to the Granular Activated Carbon (GAC) treatment vessels.

2. DOCUMENTS REFERENCED

ECT2 site-specific Health and Safety Plan (HASP)

Task Specific JHA

3. EMERGENCY PROCEDURES

In the event of an emergency, follow the procedures in project specific HASP. Client specific requirements are incorporated.

4. WASTE MANAGEMENT

Any waste material generated will be evaluated for compliance with RCRA and local disposal procedures and regulations.

5. PROCEDURES

1. Safety
    a. Don the proper PPE for this process; at minimum it includes work gloves, safety glasses, high visibility vest, safety boots, FR clothing, 5-gas monitor, and respirator.
    b. Inspect Fork Truck/Lull and manlift prior to use to ensure proper working order.
        i. Fork Truck Operation – only staff who are current with training and authorized shall operate the fork truck.
        ii. Ensure the fork truck is suitable size for the maximum load (ie., super sack contents)
    c. Inspect solids roll off bins and ensure liner has been installed properly and bin door hatch is securely latched.
    d. Designate work zone to keep unauthorized staff out of the area.
2. Pre-Startup and Staging Equipment
    a. Park lull near the front of both roll off bins.
    b. Connect 3” hosing to first vessel to the end of the lull forks. Secure down hose with ratchet straps along the length of the forks and allow for 1ft of hose to hang past the lull forks.
    c. Isolate and close vessel, bag filter, backwash, sand filter, and process isolation valves throughout the equipment units.
    d. Ensure all backwash, inlet, and air relief valves are closed on all 4 vessels.
    e. Connect air compressor hose to the air connection in the backwash header line. Secure air hose with hose safety cable
    f. Designate 1 team member for the following roles. This person will be solely responsible for a specific activity during the GAC changeout to ensure clear communication and a safe streamlined process.

i. ECT2 site lead – watches pressure gauge on vessel, communicates with Air Compressor Role to maintain a certain pressure per communication with contractor running lull and discharge hose, communicates with Valve Role on what valves to open and close when during startup and shutdown of each vessel.
ii. Air Compressor Role - individual is responsible for controlling the air flow valve when pressurizing the vessels per direction of site lead.
iii. Valve Role - individual is responsible for opening and closing valves per communication with site lead.
iv. Lull Operator –individual controls the height of the lull to minimize carbon splatter out of the roll off bins during changeout process.

3. Unloading Procedure
   a. With all valves isolated, turn on air compressor.
   b. Open carbon discharge line
   c. Open the inlet valve on the Backwash line for the current vessel.
   d. Open the Backwash header valve.
   e. Slowly start to open the air regulating ball valve.
   f. Pressure will start to build within the vessel. Site lead will communicate with air compressor role to maintain a pressure ~ 20psi.
   g. Carbon will start to flow out the discharge hose tied to the lull forks and into the roll off bins.
   h. Once flow starts to drop off and pressure decreases, lull operator will communicate to shut off air flow.
   i. Close the 2 backwash valves.
   j. Connect water truck to vessel water/air pipe. Rinse out vessel and break up the carbon heel under the vessel laterals. Do not want to add too much water into vessel.
   k. Once flushing is complete, open the 2 backwash valves and reintroduce air into the vessel to maintain a pressure of 20 psi.
   l. Hose will start to jump when all carbon has been pushed out of the vessel. This process takes an average of 10 mins.
   m. Lull operator will communicate to shut off air supply.
   n. Close the 2 backwash valves and close carbon slurry valve.
   o. Contractor will then disconnect the carbon hose from the vessel and connect to the next vessel.
   p. Open the air relief valve once the vessel has been emptied to prepare removing the top manways off to load new carbon.
   q. Repeat Steps 2 – 16 for all 4 GAC vessels.
   r. Once carbon solids have been removed from all 4 vessels, fill each vessel 2/3rds full with water for carbon loading and hydration.
4. Media Loading Procedure
   a. Supporting staff will assist fork truck operator to slide the forks into the straps of the GAC 1,000lb super sack.
   b. Fork truck operator will position and suspend supersack load above vessel top manway.
   c. Two operators will get in the manlift and position basket off to the side of the vessel being loaded. They will assist the fork truck operator to position bag 1ft above the vessel manway.

d. Operator will untie supersack discharge shoot. Once GAC starts to flow into the vessel, fork truck operator will lower down supersack to minimize carbon dust.
e. This process will occur 4 times per vessel.
f. Allow vessel to off gas overnight before closing manways and restarting treatment process.

6. EQUIPMENT MATERIALS

- Boom Lift
- Large Lull
- Rubber mallet
- Roll of bins x 2 for solids containment
- Spill containment for roll off bins
- ~75ft of 3" hoses for solids disposal
- Air compressor and air hose with Chicago coupling
- Water truck
- ~75 ft of 3" hose to hook up to Air/Water vessel connection
- Virgin media
- Tools to remove upper manway
- Bucket to cover upper lateral opening if laterals are removed

ECT2 File Number	OP Number
038917	OP-4000

Bag Filter Change Out

OP-4000

ECT2 RR SERIES PRODUCT LINE

Document Revision Control Table					
Issue	Date	Description	BY	CHK	APR
Rev 0	17 May 2024	ISSUE FOR USE - Chiquita	TJS	CDT	ASB
Rev 1	22 May 22 2024	Issued for Use – Addendum 1	TJS	CDT	ASB

1. INTRODUCTION

The following procedure describes tasks required remove a spent bag filter and replace it with a new filter. The frequency of change out will depend on the influent characteristics and operating parameters specified in the O&M manual.

2. DOCUMENTS REFERENCED

ECT2 site-specific Health and Safety Plan (HASP)
Task Specific JHA

3. EMERGENCY PROCEDURES

In the event of an emergency, follow the procedures in the Client-provided HASP and respond accordingly.

4. WASTE MANAGEMENT

Any waste material generated will be evaluated for compliance with RCRA and local disposal procedures and regulations.

5. PROCEDURES

1. Don the proper PPE for this activity, which, at a minimum will include nitrile gloves and safety boots
2. Completely shut down the system
3. Isolate the vessel to have its filter replaced
    a. CLOSE inlet and outlet valves to vessel
4. Drain the vessel
    a. OPEN drain valve and slightly open upper air relief valve to provide a vent
    b. Ensure mean are in place to collect drained water.
5. Remove spent bag filter
    a. Once vessel is drained of water, remove vessel lid and extract spent bag filter
    b. Place spent bag filter in designated waste disposal bin

6. Install new bag filter
    a. Install new filter in the vessel. Confirm that filter extends to the bottom of the vessel
7. Fill vessel with water
    a. CLOSE drain valve
    b. Slowly open inlet valve to fill vessel with water
    c. Keep upper air relief valve open to vent air as the vessel is filling. Once water starts coming out of valve, close the valve
8. Place in service
    a. Completely open inlet and outlet valves to place the vessel back in service

6. EQUIPMENT MATERIALS

- Nitrile gloves and safety boots
- Portable Transfer Pump
- Tools to remove bag filter vessel lid
- Waste disposal drum
- Clean bag filter

ECT2 File Number	OP Number
038917	OP-5000

INSTRUMENT READINGS

OP-5000

STANDARD OPERATING PROCEDURES

Document Revision Control Table

Issue	Date	Description	BY	CHK	APR
Rev 0	17 May 2024	ISSUE FOR USE – Chiquita	TJS	CDT	ASB
Rev 1	18 July 2024	Polish Vessel Update - Chiquita	ASB	ASB	ASB

1. INTRODUCTION

The PWTS is manually operated. The instruments in the system consist of pressure, temperature and flow instruments. Tracking the pressure and flow over time will allow the Operator to determine the pressure drop across different stages of the system and identify trends. This document provides guidance on how the instrument reading data should be collected.

2. DOCUMENTS REFERENCED

ECT2 site-specific Health and Safety Plan (HASP)

Task Specific JHA

3. EMERGENCY PROCEDURES

In the event of an emergency, follow the procedures in the Client-provided HASP and respond accordingly.

4. WASTE MANAGEMENT

Hazardous waste will not be generated in this procedure.

5. PROCEDURES

Use the following table, or an ECT2 approved equivalent to track instrument readings over time for the PWTS.

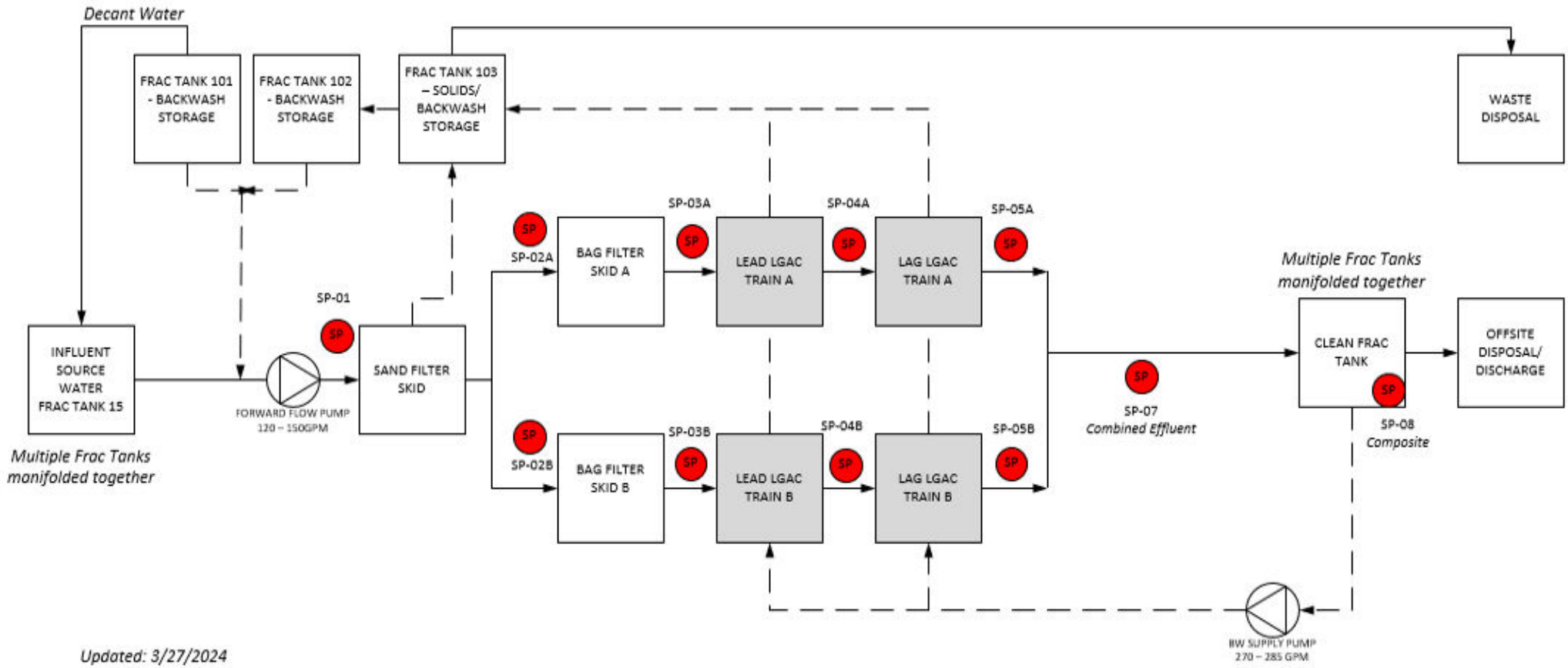
			Date:	Date:	Date:	Date:
Tag Number	Instrument Type	Description	Readings	Readings	Readings	Readings
FI-05A	Flow Transmitter	South Train flow transmitter				
FI-05B	Flow Transmitter	North Train flow transmitter				
PI-01	Pressure Gauge	SKD-110 top pressure gauge				
PI-11	Pressure Gauge	SKD-110 bottom pressure gauge				
PI-02A	Pressure Gauge	SKD-150A top pressure gauge				
PI-12A	Pressure Gauge	SKD-150A bottom pressure gauge				
PI-02B	Pressure Gauge	SKD-150B top pressure gauge				

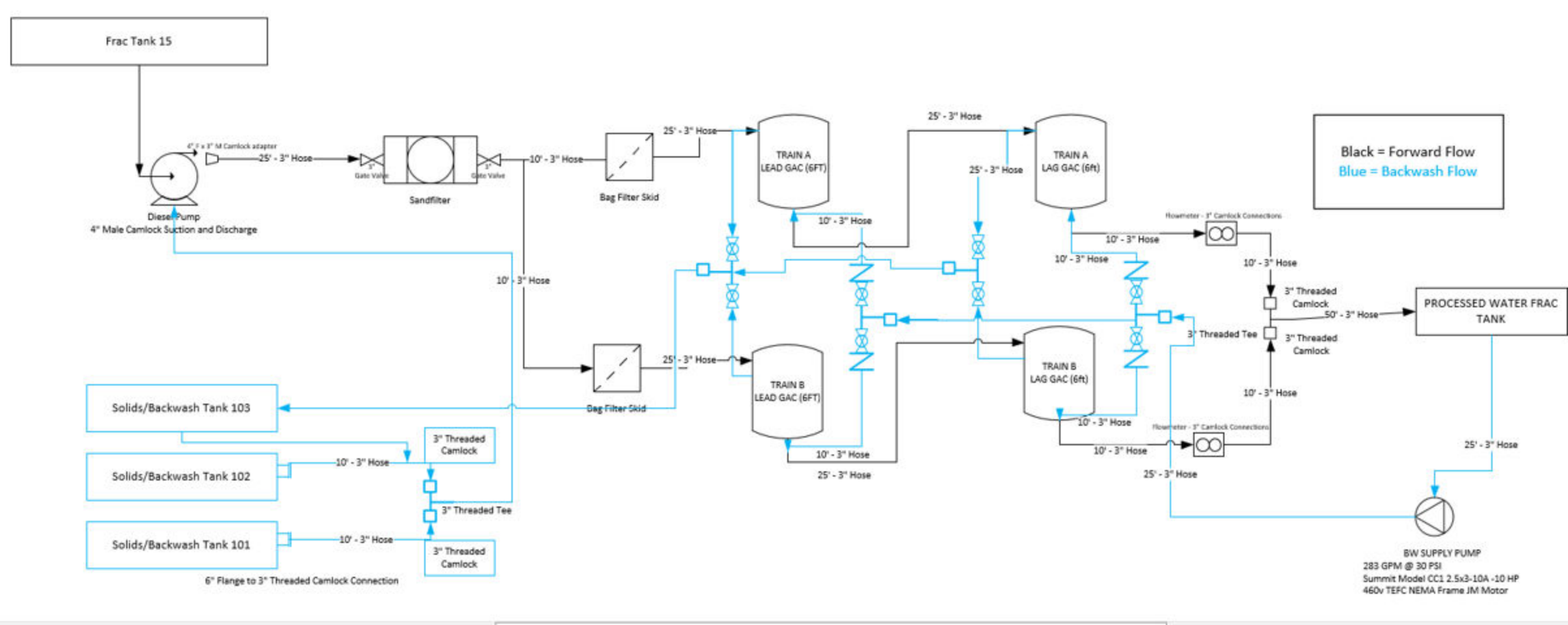
PI-12B	Pressure Gauge	SKD-150B bottom pressure gauge				
PI-03A	Pressure Gauge	V-200A top pressure gauge				
PI-03B	Pressure Gauge	V-200B top pressure gauge				
PI-04A	Pressure Gauge	V-300A top pressure gauge				
PI-05A	Pressure Gauge	V-300A bottom pressure gauge				
PI-04B	Pressure Gauge	V-300B top pressure gauge				
PI-05B	Pressure Gauge	V-300B bottom pressure gauge				
PI-06A	Pressure Gauge	V-400A top pressure gauge				
PI-06B	Pressure Gauge	V-400A bottom pressure gauge				
PI-07A	Pressure Gauge	V-400B top pressure gauge				
PI-07B	Pressure Gauge	V-400B bottom pressure gauge				
COMMENTS						

6. EQUIPMENT MATERIALS

- Nitrile gloves and safety glasses

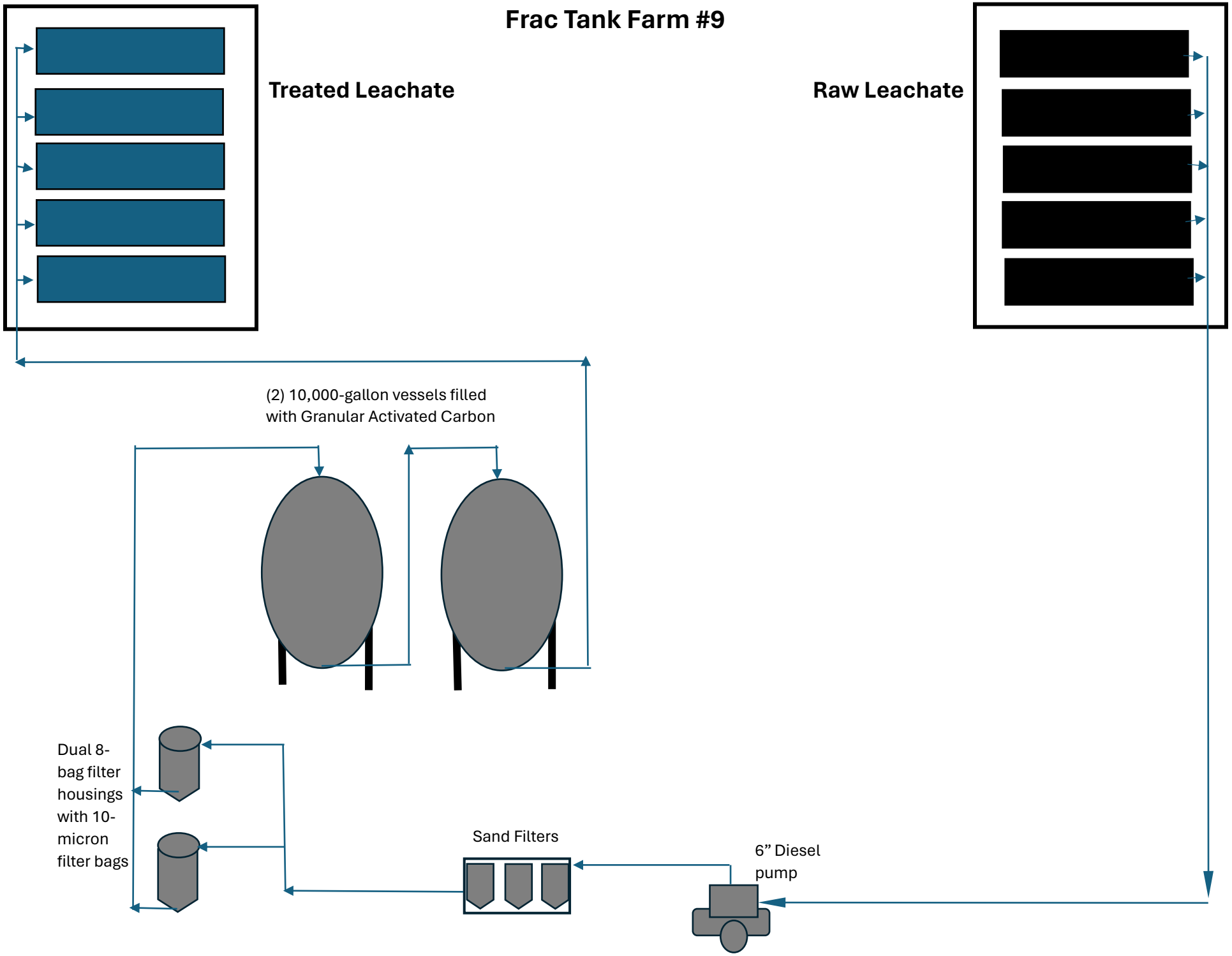
Appendix A.4 – Tank Farm # 7 GAC Treatment Process Flow Diagram


Decant Water
FRAC TANK 101 - BACKWASH STORAGE
FRAC TANK 102 - BACKWASH STORAGE
FRAC TANK 103 – SOLIDS/ BACKWASH STORAGE
WASTE DISPOSAL
INFLUENT SOURCE WATER FRAC TANK 15
Multiple Frac Tanks manifolded together
FORWARD FLOW PUMP 120 – 150GPM
SP-01
SAND FILTER SKID
SP-02A
BAG FILTER SKID A
SP-03A
LEAD LGAC TRAIN A
SP-04A
LAG LGAC TRAIN A
SP-05A
SP-02B
BAG FILTER SKID B
SP-03B
LEAD LGAC TRAIN B
SP-04B
LAG LGAC TRAIN B
SP-05B
SP-07
Combined Effluent
Multiple Frac Tanks manifolded together
CLEAN FRAC TANK
SP-08
Composite
OFFSITE DISPOSAL/ DISCHARGE
BW SUPPLY PUMP 270 – 285 GPM
Updated: 3/27/2024


Frac Tank 15
4" x 3" M Camlock adapter
25' - 3" Hose
3" Gate Valve
Sandfilter
3" Gate Valve
10' - 3" Hose
Bag Filter Skid
25' - 3" Hose
TRAIN A LEAD GAC (6FT)
25' - 3" Hose
TRAIN A LAG GAC (6ft)
Black = Forward Flow
Blue = Backwash Flow
Diesel Pump
4" Male Camlock Suction and Discharge
10' - 3" Hose
10' - 3" Hose
10' - 3" Hose
Flowmeter - 3" Camlock Connections
10' - 3" Hose
3" Threaded Camlock
50' - 3" Hose
PROCESSED WATER FRAC TANK
3" Threaded Tee
3" Threaded Camlock
10' - 3" Hose
Bag Filter Skid
25' - 3" Hose
TRAIN B LEAD GAC (6FT)
TRAIN B LAG GAC (6ft)
10' - 3" Hose
Flowmeter - 3" Camlock Connections
10' - 3" Hose
10' - 3" Hose
25' - 3" Hose
25' - 3" Hose
Solids/Backwash Tank 103
Solids/Backwash Tank 102
Solids/Backwash Tank 101
3" Threaded Camlock
10' - 3" Hose
3" Threaded Tee
10' - 3" Hose
3" Threaded Camlock
6" Flange to 3" Threaded Camlock Connection
BW SUPPLY PUMP
283 GPM @ 30 PSI
Summit Model CC1 2.5x3-10A -10 HP
460v TEFC NEMA Frame JM Motor

Appendix A.5 – Tank Farm # 9 GAC Treatment Process Flow Diagram

Frac Tank Farm #9



Appendix A.6 – Waste Stream Determinations Forms

Chiquita Canyon
Waste Stream Documentation Form

Waste Profile Number:	CH2716662	Waste Stream ID No.:	East Perimeter
Generator Number:	CAL000347030	SAA No. / Site ID No.:	#2
EPA Source Code:	G49 Form Code: W219	Hazardous Waste Codes:	D018, 213

A. GENERAL INFORMATION

Facility: Chiquita Canyon Landfill

Address: 29201 Henry Mayo Dr, Castaic, CA, 91384	Phone No: 330-635-4885
Contact: Dave Matthews	Email Address: dave.matthews@wasteconnections.com

Waste Stream Name: Waste Hazardous Waste Leachate

B. PROCESS INFORMATION

☑ New Process ☐ Process Change ☐ Process Review

Process Description (include any storage requirements):

Chiquita Canyon Landfill is experiencing an underground reaction in an inactive portion of the Landfill (also known as an "Elevated Temperature Landfill" or "ETLF" event). The reaction has caused an increase in the production of landfill gas and leachate. Landfill leachate forms via decomposition of putrescible and organic fractions of landfill material transported by water percolating through the soil profile. This leachate is generated from the East Perimeter wells and collected in frac tanks. The leachate maybe transferred for storage into individual tanks in Tank Farm #7 or #9.

Physical Property of Waste:	☐ Solid	☑ Liquid	☐ Gas	☐ Other

Generation Rate: **140,000** Units: ☑ Gallons OR ☐ Pounds Rate: ☑ Month OR ☐ Year

Collection Mode: 20,000-Gallon Frac Tanks

Material Name (include NSN if available)	Range or Concentration
Leachate	100%

C. EXEMPTIONS AND EXCLUSIONS

1. Is the waste a "solid waste" according to §CFR 261.2?	☑ Yes	☐ No
If no, provide the regulatory exclusion or exemption citation.		
If No, A HW CHARACTERIZATION IS NOT REQUIRED - SKIP TO SECTION F		
2. Is the waste a solid waste excluded or exempted from hazardous waste regulations?	☐ Yes	☑ No
If yes, provide the regulatory citation and justification:		
If Yes, A HW CHARACTERIZATION IS NOT REQUIRED - SKIP TO SECTION F		
3. Is this Used Oil OR an off specification petroleum fuel managed under §CFR 279?	☐ Yes	☑ No
If Yes, A HW CHARACTERIZATION IS NOT REQUIRED - SKIP TO SECTION F		
4. Is the waste a Universal Waste managed under §CFR 273?	☐ Yes	☑ No
If Yes, A HW CHARACTERIZATION IS NOT REQUIRED - SKIP TO SECTION F		

Chiquita Canyon
Waste Stream Documentation Form

Waste Profile Number:	CH2716662	Waste Stream ID No.:	East Perimeter
Generator Number:	CAL000347030	SAA No. / Site ID No.:	#2
EPA Source Code:	G49 Form Code: W219	Hazardous Waste Codes:	D018, 213

D. HAZARDOUS WASTE CHARACTERIZATION

Based on: ☐ User Knowledge ☑ Analytical

Sample ID: See Section F

Analytical Date: N/A

LISTED HAZARDOUS WASTE

Is this an F-listed waste?	☐ Yes	☑ No
1. Are solvents listed 40 CFR 261.31 (a) present at 10% or more and used as a solvent? If yes, identify the solvents.	☐ Yes	☑ No

Solvent	Percent Before Use	Waste Code

1a. Is this an F-listed waste from a specific process? If yes, identify the process.	☐ Yes	☑ No
Waste Code:		
2. Is this a K-listed waste from a specific source as listed in §261.32? If yes, identify the process.	☐ Yes	☑ No
Waste Code:		
3. Is this a P-listed commercial chemical product; (i.e. a pure chemical or sole active ingredient) listed in §261.33(e)?	☐ Yes	☑ No

P Code	CAS	Substance

4. Is this a U-listed commercial chemical product; (i.e. a pure chemical or sole active ingredient) listed in §261.33(f)?	☐ Yes	☑ No

U Code	CAS	Substance

Generators must determine if a waste exhibits any of the characteristics of a HW.

HAZARDOUS WASTE CHARACTERISTICS

Is the waste Ignitable per §261.21? **Waste Code: D001**	☐ Yes	☑ No
1. Is the waste a liquid with a flash point less than 140°F? Flash Point:	☐ Yes	☑ No
2. Is the waste a non-liquid capable, under standard temperature and pressure, of causing fire through friction, absorption of moisture, or spontaneous chemical changes; and when ignited, burns so vigorously and persistently that it creates a hazard?	☐ Yes	☑ No
3. Is the waste an ignitable compressed gas as defined in 49 CFR 173.300?	☐ Yes	☑ No
4. Is the waste an oxidizer as defined by 49 CFR 173.151 (such as a chlorate or peroxide)?	☐ Yes	☑ No
Is the waste Corrosive per §261.22? **Waste Code: D002**	☐ Yes	☑ No
1. Is the waste an aqueous solution with a pH ≤ 2 or ≥ 12.5?	☐ Yes	☑ No
2. Is the waste a liquid that corrodes steel at a rate of at least 0.25 inches per year?	☐ Yes	☑ No

Chiquita Canyon
Waste Stream Documentation Form

Waste Profile Number:	CH2716662	Waste Stream ID No.:	East Perimeter
Generator Number:	CAL000347030	SAA No. / Site ID No.:	#2
EPA Source Code:	G49 Form Code: W219	Hazardous Waste Codes:	D018, 213

Is the waste Reactive per §261.23? **Waste Code: D003**	☐ Yes	☑ No
1. Is the waste normally unstable and readily undergoes violent change without detonating?	☐ Yes	☑ No
2. Water Reactive: Does the waste react violently with water? OR Forms potentially explosive mixture with water? OR When mixed with water does the waste generate toxic gases, vapors, or fumes in a quantity dangerous to human health or the environment?	☐ Yes	☑ No
3. Is the waste a cyanide or sulfide compound that could react at a pH between 2 and 12.5 releasing toxic gases?	☐ Yes	☑ No
4. Is the waste capable of detonation or explosive reaction if subjected to strong ignition sources or when heated under confinement?	☐ Yes	☑ No
5. Is the waste readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure?	☐ Yes	☑ No
6. Is the waste a forbidden Class A or Class B explosive as defined in 49 CFR 173.51, 173.53 or 173.88?	☐ Yes	☑ No
Is the waste Toxic per §261.24? **Waste code(s): D004-D043**	☑ Yes	☐ No
Is the waste a characteristic waste?	☑ Yes	☐ No

E. TREATMENT AND DISPOSAL REQUIREMENTS

1. Is the waste	☐ Recycled (includes UW)?	☐ Burned for Energy Recovery (includes Used Oil)?
	☐ Non hazardous?	☑ Discharged to CWA regulated unit?

If Non Hazardous / Recycled (includes UW) or Burned for Energy Recovery Skip to Section F

2. Is the required one time LDR completed for HW discharged to a CWA unit?	☐ NA	☑ Yes	☐ No
3. Is an exemption claimed from Land Disposal Restrictions (LDR), §268?		☐ Yes	☑ No

Treatment Group:
☐ Wastewater (Contains <1% Total Organic Compounds and <1% Suspended Solids)
☑ Non-wastewater (Not Wastewater)

EPA Code	Constituent	Concentration (Toxicity Characteristic Only)	Regulatory Limit	Subcategory	LDR Treatment Standard (from §268.40)
D018	Benzene	>0.5 mg/L TCLP	0.5 mg/L TCLP	Wastes that exhibit the characteristics of toxicity	0.214 mg/L TCLP and meet §268.48 standard

Chiquita Canyon
Waste Stream Documentation Form

Waste Profile Number:	CH2716662	Waste Stream ID No.:	East Perimeter
Generator Number:	CAL000347030	SAA No. / Site ID No.:	#2
EPA Source Code:	G49 Form Code: W219	Hazardous Waste Codes:	D018, 213

UHCs apply only to characteristic HW (UHCs requirements do not apply to high TOC Ignitable only waste)

4. Are there any Underlying Hazardous Constituents (UHC)? (Characteristic Waste Only)	☐ Yes	☑ No

Constituent	**Universal Treatment Standard (from §268.48)**

F. WASTE STREAM SUMMARY

Waste Stream Name: Waste Hazardous Waste Leachate

Waste Profile Number and Name: CH2716662 - 2 East Perimeter Tank - Leachate mixed with gas well liquids

Shipping Information: UN3082, Environmentally Hazardous Substances, Liquid, N.O.S., (Benzene), 9, PG III

Emergency Guide Book Number: 171	Emergency Guide Year: 2020

Waste Codes: D018, 213

Comments: See attached analytical results ranging from 02/10/24 - 02/20/24.

Analytical Recommendation:

REVISION TABLE

Laboratory Detection Summary | #2 East Perimeter

PROJ-037507 | Chiquita Canyon Landfill Waste Sampling

Data Updated at 4/2/2024 3:08:23 PM

Analytical Method	Analyte	Count of Lab Results	Count of Detections	Count of Samples Outside Regulatory Levels	Range of Detections
EPA 1010	Flash Point	11	11	0	194 - 212 deg F
EPA 6010B	Antimony	11	11	0	0.097 J - 0.93 mg/L
	Arsenic	11	11	0	0.3 - 0.81 mg/L
	Barium	11	11	0	1.2 - 1.8 mg/L
	Chromium	11	11	0	0.27 - 0.33 mg/L
	Cobalt	11	10	0	0.018 J - 0.044 mg/L
	Copper	11	1	0	0.021 J - 0.021 mg/L
	Lead	11	6	0	0.039 J - 0.097 mg/L
	Molybdenum	11	4	0	0.042 J - 0.085 J mg/L
	Nickel	11	11	0	0.13 J - 0.18 mg/L
	Selenium	11	3	0	0.053 J - 0.12 J mg/L
	Vanadium	11	11	0	0.11 J - 0.14 mg/L
	Zinc	11	11	0	3.6 - 5.1 mg/L
EPA 7470A	Mercury	11	9	0	0.029 J - 0.12 mg/L
EPA 8260B	1,2-Dichloroethane	11	3	0	0.03 J - 0.04 J mg/L
	1,4-Dichlorobenzene	11	11	0	0.06 J - 0.3 J mg/L
	2-Butanone	11	11	0	95 - 160 mg/L
	Benzene	11	11	11	1 J - 1.5 mg/L
	Chlorobenzene	11	1	0	0.008 J - 0.008 J mg/L
EPA 8270C	2-Methylphenol	11	11	0	0.4 J - 1.7 mg/L
	3-,4-Methylphenol	11	11	0	12 - 32 mg/L
	Pyridine	11	11	0	0.93 J - 2.5 mg/L
EPA 9040B	pH	11	11	0	5.75 - 6.05 SU
	Temperature	11	11	0	17.1 - 20.3 deg C

Laboratory result qualifiers are reported to the right of corresponding detections. Definitions of reported qualifiers are below:

J: Result is estimated between the laboratory method detection limit and reporting limit.

Laboratory Results | #2 East Perimeter

PROJ-037507 | Chiquita Canyon Landfill Waste Sampling

Data Updated at 4/2/2024 3:08:23 PM

			#2 East Perimeter								
			2/10/2024 East Perimeter Tanks 61,62,&63 CACA0210Z005EP61 502069 Field pH: -	2/11/2024 East Perimeter Tanks 61,62,&63 CACA0211Z005EP 502071 Field pH: -	2/12/2024 East Perimeter Tanks 61,62,&63 CACA0212Z005EP 502175 Field pH: -	2/13/2024 East Perimeter Tanks 61,62,&63 CACA0213Z005EP 502296 Field pH: -	2/14/2024 East Perimeter Tanks 61,62,&63 CACA0214Z005EP 502412 Field pH: -	2/15/2024 East Perimeter Tanks 61,62,&63 CACA0215Z005EP 502537 Field pH: 5.46	2/16/2024 East Perimeter Tanks 61,62,&63 CACA0216Z005EP 502624 Field pH: 5.94	2/17/2024 East Perimeter Tanks 61,62,&63 CACA0217Z005EP 502628 Field pH: 5.91	2/18/2024 East Perimeter Tanks 61,62,&63 CACA0218Z005EP 502630 Field pH: 5.89
Analytical Method	**Analyte**	**Regulatory Levels***									
EPA 9040B	pH	≥2 ≤12.5 SU	5.8 SU	6.05 SU	5.95 SU	6.01 SU	5.83 SU	5.77 SU	5.85 SU	5.99 SU	5.75 SU
	Temperature	NA	20 deg C	19.9 deg C	20.1 deg C	17.1 deg C	20.3 deg C	20 deg C	19.5 deg C	19.4 deg C	19 deg C
EPA 1010	Flash Point	140 deg F	194 deg F	198 deg F	203 deg F	203 deg F	203 deg F	212 deg F	203 deg F	194 deg F	203 deg F
EPA 6010B	Antimony	15 mg/L	0.29 mg/L (J)	0.33 mg/L (J)	0.26 mg/L (J)	0.22 mg/L (J)	0.79 mg/L	0.31 mg/L (J)	0.4 mg/L (J)	0.097 mg/L (J)	0.44 mg/L (J)
	Arsenic	5 mg/L	0.81 mg/L	0.77 mg/L	0.73 mg/L	0.66 mg/L	0.69 mg/L	0.3 mg/L	0.74 mg/L	0.79 mg/L	0.46 mg/L
	Barium	100 mg/L	1.5 mg/L	1.3 mg/L	1.3 mg/L	1.2 mg/L	1.7 mg/L	1.8 mg/L	1.6 mg/L	1.6 mg/L	1.7 mg/L
	Beryllium	0.75 mg/L	< 0.0017 mg/L	< 0.0017 mg/L	< 0.0017 mg/L	< 0.0017 mg/L	< 0.0017 mg/L	< 0.0097 mg/L	< 0.0017 mg/L	< 0.0017 mg/L	< 0.0027 mg/L
	Cadmium	1 mg/L	< 0.015 mg/L	< 0.015 mg/L	< 0.015 mg/L	< 0.015 mg/L	< 0.015 mg/L	< 0.014 mg/L	< 0.015 mg/L	< 0.015 mg/L	< 0.014 mg/L
	Chromium	2 mg/L	0.31 mg/L	0.29 mg/L	0.28 mg/L	0.27 mg/L	0.32 mg/L	0.32 mg/L	0.31 mg/L	0.31 mg/L	0.3 mg/L
	Cobalt	80 mg/L	0.022 mg/L (J)	0.021 mg/L (J)	0.018 mg/L (J)	0.038 mg/L (J)	0.024 mg/L (J)	0.033 mg/L (J)	< 0.016 mg/L	0.021 mg/L (J)	0.044 mg/L (J)
	Copper	25 mg/L	< 0.02 mg/L	< 0.02 mg/L	< 0.02 mg/L	< 0.02 mg/L	< 0.02 mg/L	< 0.099 mg/L	< 0.02 mg/L	0.021 mg/L (J)	< 0.099 mg/L
	Lead	5 mg/L	< 0.034 mg/L	< 0.034 mg/L	0.039 mg/L (J)	0.043 mg/L (J)	< 0.034 mg/L	0.097 mg/L (J)	< 0.034 mg/L	< 0.034 mg/L	0.088 mg/L (J)
	Molybdenum	350 mg/L	< 0.038 mg/L	< 0.038 mg/L	< 0.038 mg/L	0.085 mg/L (J)	0.051 mg/L (J)	< 0.049 mg/L	0.042 mg/L (J)	< 0.038 mg/L	< 0.049 mg/L
	Nickel	20 mg/L	0.15 mg/L (J)	0.13 mg/L (J)	0.18 mg/L (J)	0.18 mg/L (J)	0.18 mg/L (J)	0.17 mg/L (J)	0.14 mg/L (J)	0.14 mg/L (J)	0.14 mg/L (J)
	Selenium	1 mg/L	< 0.098 mg/L	< 0.098 mg/L	< 0.098 mg/L	< 0.098 mg/L	< 0.098 mg/L	0.12 mg/L (J)	0.12 mg/L (J)	< 0.098 mg/L	0.053 mg/L (J)
	Silver	5 mg/L	< 0.016 mg/L	< 0.016 mg/L	< 0.016 mg/L	< 0.016 mg/L	< 0.016 mg/L	< 0.018 mg/L	< 0.016 mg/L	< 0.016 mg/L	< 0.018 mg/L
	Thallium	7 mg/L	< 0.079 mg/L	< 0.079 mg/L	< 0.079 mg/L	< 0.079 mg/L	< 0.079 mg/L	< 0.048 mg/L	< 0.079 mg/L	< 0.079 mg/L	< 0.048 mg/L
	Vanadium	24 mg/L	0.14 mg/L (J)	0.13 mg/L (J)	0.12 mg/L (J)	0.12 mg/L (J)	0.12 mg/L (J)	0.11 mg/L (J)	0.13 mg/L (J)	0.14 mg/L (J)	0.12 mg/L (J)
	Zinc	250 mg/L	4.7 mg/L	4.8 mg/L	4.3 mg/L	4.4 mg/L	3.6 mg/L	4.4 mg/L	5.1 mg/L	4.8 mg/L	5.1 mg/L
EPA 7470A	Mercury	0.2 mg/L	0.033 mg/L (J)	0.055 mg/L (J)	0.06 mg/L (J)	< 0.011 mg/L	0.053 mg/L (J)	0.032 mg/L (J)	0.12 mg/L	0.058 mg/L (J)	< 0.011 mg/L
EPA 8260B	1,1-Dichloroethene	0.7 mg/L	< 0.006 mg/L	< 0.02 mg/L	< 0.03 mg/L	< 0.05 mg/L	< 0.06 mg/L	< 0.03 mg/L	< 0.02 mg/L	< 0.03 mg/L	< 0.03 mg/L
	1,2-Dichloroethane	0.5 mg/L	0.04 mg/L (J)	< 0.02 mg/L	< 0.03 mg/L	< 0.03 mg/L	< 0.06 mg/L	0.03 mg/L (J)	< 0.02 mg/L	< 0.03 mg/L	< 0.03 mg/L
	1,4-Dichlorobenzene	7.5 mg/L	0.06 mg/L (J)	0.09 mg/L (J)	0.07 mg/L (J)	0.1 mg/L (J)	0.2 mg/L (J)	0.09 mg/L (J)	0.07 mg/L (J)	0.3 mg/L (J)	0.07 mg/L (J)
	2-Butanone	200 mg/L	150 mg/L	140 mg/L	140 mg/L	140 mg/L	120 mg/L	150 mg/L	130 mg/L	160 mg/L	130 mg/L
	Benzene	0.5 mg/L	1.4 mg/L	1.4 mg/L	1.2 mg/L	1.4 mg/L (J)	1.5 mg/L (J)	1.3 mg/L	1.4 mg/L	1.4 mg/L	1 mg/L (J)
	Carbon Tetrachloride	0.5 mg/L	< 0.006 mg/L	< 0.02 mg/L	< 0.03 mg/L	< 0.02 mg/L	< 0.05 mg/L	< 0.03 mg/L	< 0.02 mg/L	< 0.03 mg/L	< 0.03 mg/L
	Chlorobenzene	100 mg/L	0.008 mg/L (J)	< 0.02 mg/L	< 0.03 mg/L	< 0.2 mg/L	< 0.05 mg/L	< 0.03 mg/L	< 0.02 mg/L	< 0.03 mg/L	< 0.03 mg/L
	Chloroform	6 mg/L	< 0.01 mg/L	< 0.02 mg/L	< 0.04 mg/L	< 0.04 mg/L	< 0.06 mg/L	< 0.04 mg/L	< 0.02 mg/L	< 0.05 mg/L	< 0.05 mg/L
	Tetrachloroethene	0.7 mg/L	< 0.008 mg/L	< 0.02 mg/L	< 0.03 mg/L	< 0.1 mg/L	< 0.04 mg/L	< 0.03 mg/L	< 0.02 mg/L	< 0.04 mg/L	< 0.04 mg/L
	Trichloroethene	0.5 mg/L	< 0.008 mg/L	< 0.02 mg/L	< 0.03 mg/L	< 0.07 mg/L	< 0.06 mg/L	< 0.03 mg/L	< 0.02 mg/L	< 0.04 mg/L	< 0.04 mg/L
	Vinyl Chloride	0.2 mg/L	< 0.006 mg/L	< 0.02 mg/L	< 0.02 mg/L	< 0.05 mg/L	< 0.05 mg/L	< 0.02 mg/L	< 0.02 mg/L	< 0.03 mg/L	< 0.03 mg/L
EPA 8270C	2-Methylphenol	200 mg/L	0.82 mg/L (J)	0.45 mg/L (J)	1.3 mg/L (J)	0.94 mg/L (J)	1.2 mg/L	0.88 mg/L	0.79 mg/L (J)	1.7 mg/L (J)	1.1 mg/L (J)
	2,4-Dinitrotoluene	0.13 mg/L	< 0.15 mg/L	< 0.037 mg/L	< 0.37 mg/L	< 2.5 mg/L	< 0.42 mg/L	< 0.42 mg/L	< 0.15 mg/L	< 0.15 mg/L	< 0.15 mg/L
	2,4,5-Trichlorophenol	400 mg/L	< 1 mg/L	< 0.26 mg/L	< 2.6 mg/L	< 0.86 mg/L	< 0.14 mg/L	< 0.14 mg/L	< 1 mg/L	< 1 mg/L	< 1 mg/L
	2,4,6-Trichlorophenol	2 mg/L	< 0.49 mg/L	< 0.12 mg/L	< 1.2 mg/L	< 3.3 mg/L	< 0.56 mg/L	< 0.56 mg/L	< 0.49 mg/L	< 0.49 mg/L	< 0.49 mg/L
	3-,4-Methylphenol	200 mg/L	19 mg/L	16 mg/L	24 mg/L	17 mg/L	24 mg/L	16 mg/L	12 mg/L	32 mg/L	19 mg/L
	Hexachlorobenzene	0.13 mg/L	< 0.16 mg/L	< 0.039 mg/L	< 0.39 mg/L	< 0.42 mg/L	< 0.071 mg/L	< 0.071 mg/L	< 0.16 mg/L	< 0.16 mg/L	< 0.16 mg/L
	Hexachlorobutadiene	0.5 mg/L	< 0.27 mg/L	< 0.067 mg/L	< 0.67 mg/L	< 0.47 mg/L	< 0.078 mg/L	< 0.078 mg/L	< 0.27 mg/L	< 0.27 mg/L	< 0.27 mg/L
	Hexachloroethane	3 mg/L	< 0.27 mg/L	< 0.068 mg/L	< 0.68 mg/L	< 0.63 mg/L	< 0.1 mg/L	< 0.1 mg/L	< 0.27 mg/L	< 0.27 mg/L	< 0.27 mg/L
	Nitrobenzene	2 mg/L	< 0.32 mg/L	< 0.079 mg/L	< 0.79 mg/L	< 0.81 mg/L	< 0.13 mg/L	< 0.13 mg/L	< 0.32 mg/L	< 0.32 mg/L	< 0.32 mg/L
	Pentachlorophenol	1.7 mg/L	< 1.3 mg/L	< 0.33 mg/L	< 3.3 mg/L	< 4.8 mg/L	< 0.81 mg/L	< 0.81 mg/L	< 1.3 mg/L	< 1.3 mg/L	< 1.3 mg/L
	Pyridine	5 mg/L	1.2 mg/L (J)	1.1 mg/L	2.5 mg/L (J)	0.93 mg/L (J)	1.9 mg/L	1.3 mg/L	1.1 mg/L (J)	2 mg/L (J)	1.6 mg/L (J)

*Regulatory levels are the lowest value of TCLP, STLC, and TTLC regulatory levels. RCRA regulatory levels used for pH (corrosivity) and Flashpoint (ignitibility).
Laboratory non-detections are reported as less than ("<") the laboratory method detection limit.
Laboratory result qualifiers are reported to the right of corresponding detections (in parentheses). Definitions of reported qualifiers are below:
J: Result is estimated between the laboratory method detection limit and reporting limit.

- Detection
- Detection Outside of Regulatory Level
- Non-Detection
- Non-Detection (MDL Above Regulaory Level)

Laboratory Results | #2 East Perimeter

PROJ-037507 | Chiquita Canyon Landfill Waste Sampling

Data Updated at 4/2/2024 3:08:23 PM

			#2 East Perimeter	
			2/19/2024 East Perimeter Tanks 61,62,&63 CACA0219Z005EP 502700 Field pH:	2/20/2024 East Perimeter Tanks 61,62,&63 CACA0220Z005EP 502840 Field pH:
Analytical Method	Analyte	Regulatory Levels*	6.01	5.79
EPA 9040B	pH	≥2 ≤12.5 SU	5.81 SU	5.77 SU
	Temperature	NA	18.6 deg C	19.4 deg C
EPA 1010	Flash Point	140 deg F	194 deg F	194 deg F
EPA 6010B	Antimony	15 mg/L	0.93 mg/L	0.38 mg/L (J)
	Arsenic	5 mg/L	0.63 mg/L	0.66 mg/L
	Barium	100 mg/L	1.7 mg/L	1.6 mg/L
	Beryllium	0.75 mg/L	< 0.0017 mg/L	< 0.0017 mg/L
	Cadmium	1 mg/L	< 0.015 mg/L	< 0.015 mg/L
	Chromium	2 mg/L	0.33 mg/L	0.32 mg/L
	Cobalt	80 mg/L	0.032 mg/L (J)	0.021 mg/L (J)
	Copper	25 mg/L	< 0.02 mg/L	< 0.02 mg/L
	Lead	5 mg/L	0.067 mg/L (J)	0.05 mg/L (J)
	Molybdenum	350 mg/L	0.057 mg/L (J)	< 0.038 mg/L
	Nickel	20 mg/L	0.16 mg/L (J)	0.16 mg/L (J)
	Selenium	1 mg/L	< 0.098 mg/L	< 0.098 mg/L
	Silver	5 mg/L	< 0.016 mg/L	< 0.016 mg/L
	Thallium	7 mg/L	< 0.079 mg/L	< 0.079 mg/L
	Vanadium	24 mg/L	0.14 mg/L (J)	0.12 mg/L (J)
	Zinc	250 mg/L	4.4 mg/L	4.5 mg/L
EPA 7470A	Mercury	0.2 mg/L	0.042 mg/L (J)	0.029 mg/L (J)
EPA 8260B	1,1-Dichloroethene	0.7 mg/L	< 0.03 mg/L	< 0.03 mg/L
	1,2-Dichloroethane	0.5 mg/L	< 0.02 mg/L	0.03 mg/L (J)
	1,4-Dichlorobenzene	7.5 mg/L	0.1 mg/L (J)	0.06 mg/L (J)
	2-Butanone	200 mg/L	95 mg/L	140 mg/L
	Benzene	0.5 mg/L	1.2 mg/L (J)	1.2 mg/L
	Carbon Tetrachloride	0.5 mg/L	< 0.01 mg/L	< 0.03 mg/L
	Chlorobenzene	100 mg/L	< 0.08 mg/L	< 0.03 mg/L
	Chloroform	6 mg/L	< 0.02 mg/L	< 0.04 mg/L
	Tetrachloroethene	0.7 mg/L	< 0.05 mg/L	< 0.03 mg/L
	Trichloroethene	0.5 mg/L	< 0.04 mg/L	< 0.03 mg/L
	Vinyl Chloride	0.2 mg/L	< 0.03 mg/L	< 0.02 mg/L
EPA 8270C	2-Methylphenol	200 mg/L	0.87 mg/L (J)	0.4 mg/L (J)
	2,4-Dinitrotoluene	0.13 mg/L	< 0.074 mg/L	< 0.074 mg/L
	2,4,5-Trichlorophenol	400 mg/L	< 0.52 mg/L	< 0.52 mg/L
	2,4,6-Trichlorophenol	2 mg/L	< 0.25 mg/L	< 0.25 mg/L
	3-,4-Methylphenol	200 mg/L	20 mg/L	13 mg/L
	Hexachlorobenzene	0.13 mg/L	< 0.078 mg/L	< 0.078 mg/L
	Hexachlorobutadiene	0.5 mg/L	< 0.13 mg/L	< 0.13 mg/L
	Hexachloroethane	3 mg/L	< 0.14 mg/L	< 0.14 mg/L
	Nitrobenzene	2 mg/L	< 0.16 mg/L	< 0.16 mg/L
	Pentachlorophenol	1.7 mg/L	< 0.65 mg/L	< 0.65 mg/L
	Pyridine	5 mg/L	1.1 mg/L	1 mg/L (J)

*Regulatory levels are the lowest value of TCLP, STLC, and TTLC regulatory levels. RCRA regulatory levels used for pH (corrosivity) and Flashpoint (ignitibility).
Laboratory non-detections are reported as less than ("<") the laboratory method detection limit.
Laboratory result qualifiers are reported to the right of corresponding detections (in parentheses). Definitions of reported qualifiers are below:
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- Detection
- Detection Outside of Regulatory Level
- Non-Detection
- Non-Detection (MDL Above Regulaory Level)

Chiquita Canyon
Waste Stream Documentation Form

Waste Profile Number:	CH2712208	Waste Stream ID No.:	Ameresco Condensate
Generator Number:	CAL000347030	SAA No. / Site ID No.:	#3
EPA Source Code:	G15 Form Code: W206	Hazardous Waste Codes:	D001, D004, D018, 213

A. GENERAL INFORMATION

Facility: Chiquita Canyon Landfill

Address: 29201 Henry Mayo Dr, Castaic, CA, 91384	Phone No: 330-635-4885
Contact: Dave Matthews	Email Address: dave.matthews@wasteconnections.com

Waste Stream Name: Waste Hazardous Waste Condensate

B. PROCESS INFORMATION

☑ New Process ☐ Process Change ☐ Process Review

Process Description (include any storage requirements):

Chiquita Canyon Landfill is experiencing an underground reaction in an inactive portion of the Landfill (also known as an "Elevated Temperature Landfill" or "ETLF" event). The reaction has caused an increase in the production of landfill gas and leachate. Landfill leachate forms via decomposition of putrescible and organic fractions of landfill material transported by water percolating through the soil profile. Landfill leachate is liquid that comes in contact with or is released from waste. Condensate is the liquid generated as a result of the gas collection and recovery process. The Ameresco condensate is collected and stored in frac tanks.

Physical Property of Waste:	☐ Solid	☑ Liquid	☐ Gas	☐ Other

Generation Rate: **140,000** Units: ☑ Gallons OR ☐ Pounds Rate: ☑ Month OR ☐ Year

Collection Mode: 20,000-Gallon Frac Tanks

Material Name (include NSN if available)	Range or Concentration
Leachate	100%

C. EXEMPTIONS AND EXCLUSIONS

1. Is the waste a "solid waste" according to §CFR 261.2?	☑ Yes	☐ No

If no, provide the regulatory exclusion or exemption citation.

If No, A HW CHARACTERIZATION IS NOT REQUIRED - SKIP TO SECTION F

2. Is the waste a solid waste excluded or exempted from hazardous waste regulations?	☐ Yes	☑ No

If yes, provide the regulatory citation and justification:

If Yes, A HW CHARACTERIZATION IS NOT REQUIRED - SKIP TO SECTION F

3. Is this Used Oil OR an off specification petroleum fuel managed under §CFR 279?	☐ Yes	☑ No

If Yes, A HW CHARACTERIZATION IS NOT REQUIRED - SKIP TO SECTION F

4. Is the waste a Universal Waste managed under §CFR 273?	☐ Yes	☑ No

If Yes, A HW CHARACTERIZATION IS NOT REQUIRED - SKIP TO SECTION F

Chiquita Canyon
Waste Stream Documentation Form

Waste Profile Number:	CH2712208	Waste Stream ID No.:	Ameresco Condensate
Generator Number:	CAL000347030	SAA No. / Site ID No.:	#3
EPA Source Code:	G15 Form Code: W206	Hazardous Waste Codes:	D001, D004, D018, 213

D. HAZARDOUS WASTE CHARACTERIZATION

Based on: ☐ User Knowledge ☑ Analytical

Sample ID: See Section F

Analytical Date: N/A

LISTED HAZARDOUS WASTE

Is this an F-listed waste?	☐ Yes	☑ No
1. Are solvents listed 40 CFR 261.31 (a) present at 10% or more and used as a solvent? If yes, identify the solvents.	☐ Yes	☑ No

Solvent	Percent Before Use	Waste Code

1a. Is this an F-listed waste from a specific process? If yes, identify the process.	☐ Yes	☑ No
Waste Code:		
2. Is this a K-listed waste from a specific source as listed in §261.32? If yes, identify the process.	☐ Yes	☑ No
Waste Code:		
3. Is this a P-listed commercial chemical product; (i.e. a pure chemical or sole active ingredient) listed in §261.33(e)?	☐ Yes	☑ No

P Code	CAS	Substance

4. Is this a U-listed commercial chemical product; (i.e. a pure chemical or sole active ingredient) listed in §261.33(f)?	☐ Yes	☑ No

U Code	CAS	Substance

Generators must determine if a waste exhibits any of the characteristics of a HW.

HAZARDOUS WASTE CHARACTERISTICS

Is the waste Ignitable per §261.21? **Waste Code: D001**	☑ Yes	☐ No
1. Is the waste a liquid with a flash point less than 140°F? Flash Point: 122-194	☑ Yes	☐ No
2. Is the waste a non-liquid capable, under standard temperature and pressure, of causing fire through friction, absorption of moisture, or spontaneous chemical changes; and when ignited, burns so vigorously and persistently that it creates a hazard?	☐ Yes	☑ No
3. Is the waste an ignitable compressed gas as defined in 49 CFR 173.300?	☐ Yes	☑ No
4. Is the waste an oxidizer as defined by 49 CFR 173.151 (such as a chlorate or peroxide)?	☐ Yes	☑ No
Is the waste Corrosive per §261.22? **Waste Code: D002**	☐ Yes	☑ No
1. Is the waste an aqueous solution with a pH ≤ 2 or ≥ 12.5?	☐ Yes	☑ No
2. Is the waste a liquid that corrodes steel at a rate of at least 0.25 inches per year?	☐ Yes	☑ No

Chiquita Canyon
Waste Stream Documentation Form

Waste Profile Number:	CH2712208	Waste Stream ID No.:	Ameresco Condensate
Generator Number:	CAL000347030	SAA No. / Site ID No.:	#3
EPA Source Code:	G15 Form Code: W206	Hazardous Waste Codes:	D001, D004, D018, 213

Is the waste Reactive per §261.23? **Waste Code: D003**	☐ Yes	☑ No
1. Is the waste normally unstable and readily undergoes violent change without detonating?	☐ Yes	☑ No
2. Water Reactive: Does the waste react violently with water? OR Forms potentially explosive mixture with water? OR When mixed with water does the waste generate toxic gases, vapors, or fumes in a quantity dangerous to human health or the environment?	☐ Yes	☑ No
3. Is the waste a cyanide or sulfide compound that could react at a pH between 2 and 12.5 releasing toxic gases?	☐ Yes	☑ No
4. Is the waste capable of detonation or explosive reaction if subjected to strong ignition sources or when heated under confinement?	☐ Yes	☑ No
5. Is the waste readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure?	☐ Yes	☑ No
6. Is the waste a forbidden Class A or Class B explosive as defined in 49 CFR 173.51, 173.53 or 173.88?	☐ Yes	☑ No
Is the waste Toxic per §261.24? **Waste code(s): D004-D043**	☑ Yes	☐ No
Is the waste a characteristic waste?	☑ Yes	☐ No

E. TREATMENT AND DISPOSAL REQUIREMENTS

1. Is the waste	☐ Recycled (includes UW)?	☐ Burned for Energy Recovery (includes Used Oil)?
	☐ Non hazardous?	☑ Discharged to CWA regulated unit?

If Non Hazardous / Recycled (includes UW) or Burned for Energy Recovery Skip to Section F

2. Is the required one time LDR completed for HW discharged to a CWA unit?	☐ NA	☑ Yes	☐ No
3. Is an exemption claimed from Land Disposal Restrictions (LDR), §268?		☐ Yes	☑ No

Treatment Group:
☐ Wastewater (Contains <1% Total Organic Compounds and <1% Suspended Solids)
☑ Non-wastewater (Not Wastewater)

EPA Code	Constituent	Concentration (Toxicity Characteristic Only)	Regulatory Limit	Subcategory	LDR Treatment Standard (from §268.40)
D001	Ignitable	N/A	<140°F	High TOC Ignitable Characteristic Waste	DEACT and meet § 268.48 standards 8; or RORGS; or CMBST
D004	Arsenic	>5.0 mg/L TCLP	5.0 mg/L TCLP	Wastes that exhibit the characteristics of toxicity	5.0 mg/L TCLP and meet §268.48 standard

Chiquita Canyon
Waste Stream Documentation Form

Waste Profile Number:	CH2712208	Waste Stream ID No.:	Ameresco Condensate
Generator Number:	CAL000347030	SAA No. / Site ID No.:	#3
EPA Source Code:	G15 Form Code: W206	Hazardous Waste Codes:	D001, D004, D018, 213

EPA Code	Constituent	Concentration (Toxicity Characteristic Only)	Regulatory Limit	Subcategory	LDR Treatment Standard (from §268.40)
D018	Benzene	>0.5 mg/L TCLP	0.5 mg/L TCLP	Wastes that exhibit the characteristics of toxicity	10 mg/kg and meet §268.48 standard

UHCs apply only to characteristic HW (UHCs requirements do not apply to high TOC Ignitable only waste)

4. Are there any Underlying Hazardous Constituents (UHC)? (Characteristic Waste Only)	☐ Yes	☑ No

Constituent	Universal Treatment Standard (from §268.48)

F. WASTE STREAM SUMMARY

Waste Stream Name: Waste Hazardous Waste Condensate

Waste Profile Number and Name: CH2712208 - Condensate from the on site ameresco gas to energy plant

Shipping Information: UN1993, Waste Flammable Liquids, n.o.s, (Benzene), 3, PGIII (RQ)

Emergency Guide Book Number: 131 Emergency Guide Year: 2020

Waste Codes: D001, D004, D018, 213

Comments: See attached analytical results ranging from 02/10/24 - 02/19/24.

Analytical Recommendation:

REVISION TABLE

Preliminary Laboratory Results | #3 Ameresco Condensate

PROJ-037507 | Chiquita Canyon Landfill Waste Sampling

Data Updated at 3/26/2024 12:49:48 PM

Analytical Method	Analyte	Regulatory Levels*	2/10/2024 Ameresco condensate CACA0210Z009AM 502069 Field pH: -	2/11/2024 Ameresco condensate CACA0211Z009AM 502071 Field pH: -	2/12/2024 Ameresco condensate CACA0212Z009AM 502175 Field pH: -	2/14/2024 Ameresco condensate CACA0214Z009AM 502412 Field pH: -	2/15/2024 Ameresco condensate CACA0215Z009AM 502537 Field pH: 6.04	2/16/2024 Ameresco condensate CACA0216Z009AM 502624 Field pH: 6.84	2/17/2024 Ameresco condensate CACA0217Z009AM 502628 Field pH: 6.70	2/18/2024 Ameresco condensate CACA0218Z009AM 502630 Field pH: 7.18	2/19/2024 Ameresco condensate CACA0219Z009AM 502700 Field pH: 7.01
EPA 9040B	pH	≥2 ≤12.5 SU	6.59 SU	6.59 SU	6.43 SU	6.67 SU	6.66 SU	6.8 SU	6.95 SU	6.86 SU	7.1 SU
	Temperature	NA	19.9 deg C	19.9 deg C	19.6 deg C	19.7 deg C	19.9 deg C	19.4 deg C	19.1 deg C	18.8 deg C	17.1 deg C
EPA 1010	Flash Point	140 deg F	133 deg F	131 deg F	194 deg F	122 deg F	144 deg F	142 deg F	136 deg F	131 deg F	131 deg F
EPA 6010B	Antimony	15 mg/L	5.9 mg/L	6.1 mg/L	5.8 mg/L	7.9 mg/L	7.4 mg/L	7.9 mg/L	8.2 mg/L	8.2 mg/L	8.6 mg/L
	Arsenic	5 mg/L	35 mg/L	36 mg/L	35 mg/L	43 mg/L	48 mg/L	45 mg/L	50 mg/L	49 mg/L	48 mg/L
	Barium	100 mg/L	0.26 mg/L	0.25 mg/L	0.24 mg/L	0.29 mg/L	0.31 mg/L	0.28 mg/L	0.28 mg/L	0.26 mg/L	0.25 mg/L
	Beryllium	0.75 mg/L	< 0.0017 mg/L	< 0.0017 mg/L	< 0.0017 mg/L	< 0.0017 mg/L	< 0.0097 mg/L	< 0.0017 mg/L	< 0.0017 mg/L	< 0.0027 mg/L	< 0.0017 mg/L
	Cadmium	1 mg/L	< 0.015 mg/L	< 0.015 mg/L	< 0.015 mg/L	< 0.015 mg/L	< 0.014 mg/L	< 0.015 mg/L	< 0.015 mg/L	< 0.014 mg/L	< 0.015 mg/L
	Chromium	2 mg/L	< 0.029 mg/L	< 0.029 mg/L	< 0.029 mg/L	< 0.029 mg/L	< 0.034 mg/L	< 0.029 mg/L	< 0.029 mg/L	< 0.034 mg/L	< 0.029 mg/L
	Cobalt	80 mg/L	< 0.016 mg/L	< 0.016 mg/L	< 0.016 mg/L	< 0.016 mg/L	< 0.013 mg/L	< 0.016 mg/L	< 0.016 mg/L	< 0.013 mg/L	< 0.016 mg/L
	Copper	25 mg/L	0.032 mg/L (J)	< 0.02 mg/L	< 0.02 mg/L	< 0.02 mg/L	< 0.099 mg/L	0.041 mg/L (J)	0.047 mg/L (J)	< 0.099 mg/L	0.023 mg/L (J)
	Lead	5 mg/L	< 0.034 mg/L	< 0.034 mg/L	< 0.034 mg/L	< 0.034 mg/L	< 0.054 mg/L	< 0.034 mg/L	< 0.034 mg/L	< 0.054 mg/L	< 0.034 mg/L
	Molybdenum	350 mg/L	0.042 mg/L (J)	0.055 mg/L (J)	0.05 mg/L (J)	0.066 mg/L (J)	< 0.049 mg/L	0.071 mg/L (J)	0.089 mg/L (J)	0.057 mg/L (J)	0.089 mg/L (J)
	Nickel	20 mg/L	< 0.016 mg/L	< 0.016 mg/L	0.018 mg/L (J)	< 0.016 mg/L	< 0.13 mg/L	< 0.016 mg/L	< 0.016 mg/L	0.031 mg/L (J)	0.029 mg/L (J)
	Selenium	1 mg/L	0.13 mg/L (J)	0.1 mg/L (J)	0.12 mg/L (J)	0.16 mg/L (J)	0.18 mg/L (J)	0.18 mg/L (J)	0.17 mg/L (J)	0.1 mg/L (J)	0.17 mg/L (J)
	Silver	5 mg/L	< 0.016 mg/L	< 0.016 mg/L	< 0.016 mg/L	< 0.016 mg/L	< 0.018 mg/L	< 0.016 mg/L	< 0.016 mg/L	< 0.018 mg/L	< 0.016 mg/L
	Thallium	7 mg/L	< 0.079 mg/L	< 0.079 mg/L	< 0.079 mg/L	< 0.079 mg/L	< 0.048 mg/L	< 0.079 mg/L	< 0.079 mg/L	< 0.048 mg/L	< 0.079 mg/L
	Vanadium	24 mg/L	< 0.013 mg/L	< 0.013 mg/L	< 0.013 mg/L	< 0.013 mg/L	< 0.027 mg/L	0.016 mg/L (J)	0.021 mg/L (J)	0.031 mg/L (J)	0.034 mg/L (J)
	Zinc	250 mg/L	0.23 mg/L (J)	0.22 mg/L (J)	0.23 mg/L (J)	0.21 mg/L (J)	0.23 mg/L (J)	0.18 mg/L (J)	0.21 mg/L (J)	0.15 mg/L (J)	0.16 mg/L (J)
EPA 7470A	Mercury	0.2 mg/L	< 0.011 mg/L	< 0.016 mg/L	< 0.016 mg/L	< 0.016 mg/L	< 0.016 mg/L	< 0.011 mg/L	< 0.011 mg/L	< 0.011 mg/L	< 0.011 mg/L
EPA 8260B	1,1-Dichloroethene	0.7 mg/L	< 0.006 mg/L	< 0.1 mg/L	< 0.06 mg/L	< 0.06 mg/L	< 0.03 mg/L	< 0.03 mg/L	< 0.03 mg/L	< 0.03 mg/L	< 0.03 mg/L
	1,2-Dichloroethane	0.5 mg/L	0.02 mg/L (J)	< 0.1 mg/L	< 0.06 mg/L	< 0.06 mg/L	< 0.03 mg/L	< 0.03 mg/L	< 0.03 mg/L	< 0.03 mg/L	< 0.02 mg/L
	1,4-Dichlorobenzene	7.5 mg/L	0.1 mg/L (J)	< 0.09 mg/L	< 0.1 mg/L	0.09 mg/L (J)	0.1 mg/L (J)	0.09 mg/L (J)	0.08 mg/L (J)	0.08 mg/L (J)	0.08 mg/L (J)
	2-Butanone	200 mg/L	230 mg/L	170 mg/L	200 mg/L	190 mg/L	220 mg/L	200 mg/L	200 mg/L	190 mg/L	140 mg/L
	Benzene	0.5 mg/L	0.3 mg/L	0.2 mg/L (J)	0.2 mg/L (J)	0.3 mg/L (J)	0.3 mg/L (J)	0.3 mg/L (J)	0.2 mg/L (J)	0.2 mg/L (J)	0.2 mg/L (J)
	Carbon Tetrachloride	0.5 mg/L	< 0.006 mg/L	< 0.1 mg/L	< 0.06 mg/L	< 0.05 mg/L	< 0.03 mg/L	< 0.02 mg/L	< 0.03 mg/L	< 0.03 mg/L	< 0.01 mg/L
	Chlorobenzene	100 mg/L	< 0.007 mg/L	< 0.1 mg/L	< 0.07 mg/L	< 0.05 mg/L	< 0.03 mg/L	< 0.03 mg/L	< 0.03 mg/L	< 0.03 mg/L	< 0.08 mg/L
	Chloroform	6 mg/L	< 0.01 mg/L	< 0.1 mg/L	< 0.1 mg/L	< 0.06 mg/L	< 0.05 mg/L	< 0.03 mg/L	< 0.05 mg/L	< 0.05 mg/L	< 0.02 mg/L
	Tetrachloroethene	0.7 mg/L	< 0.008 mg/L	< 0.08 mg/L	< 0.08 mg/L	< 0.04 mg/L	< 0.04 mg/L	< 0.02 mg/L	< 0.04 mg/L	< 0.04 mg/L	< 0.05 mg/L
	Trichloroethene	0.5 mg/L	< 0.008 mg/L	< 0.1 mg/L	< 0.08 mg/L	< 0.06 mg/L	< 0.04 mg/L	< 0.03 mg/L	< 0.04 mg/L	< 0.04 mg/L	< 0.04 mg/L
	Vinyl Chloride	0.2 mg/L	< 0.006 mg/L	< 0.09 mg/L	< 0.06 mg/L	< 0.05 mg/L	< 0.03 mg/L	< 0.02 mg/L	< 0.03 mg/L	< 0.03 mg/L	< 0.03 mg/L
EPA 8270C	2-Methylphenol	200 mg/L	0.52 mg/L (J)	0.52 mg/L	< 0.79 mg/L	0.46 mg/L (J)	0.33 mg/L (J)	0.39 mg/L (J)	0.53 mg/L (J)	0.55 mg/L (J)	0.51 mg/L (J)
	2,4-Dinitrotoluene	0.13 mg/L	< 0.074 mg/L	< 0.037 mg/L	< 0.37 mg/L	< 0.42 mg/L	< 0.42 mg/L	< 0.15 mg/L	< 0.15 mg/L	< 0.15 mg/L	< 0.074 mg/L
	2,4,5-Trichlorophenol	400 mg/L	< 0.52 mg/L	< 0.26 mg/L	< 2.6 mg/L	< 0.14 mg/L	< 0.14 mg/L	< 1 mg/L	< 1 mg/L	< 1 mg/L	< 0.52 mg/L
	2,4,6-Trichlorophenol	2 mg/L	< 0.25 mg/L	< 0.12 mg/L	< 1.2 mg/L	< 0.56 mg/L	< 0.56 mg/L	< 0.49 mg/L	< 0.49 mg/L	< 0.49 mg/L	< 0.25 mg/L
	3-,4-Methylphenol	200 mg/L	< 0.17 mg/L	1.5 mg/L	1.6 mg/L (J)	1.5 mg/L	0.47 mg/L (J)	1.2 mg/L (J)	1.7 mg/L (J)	1 mg/L (J)	1.2 mg/L
	Hexachlorobenzene	0.13 mg/L	< 0.078 mg/L	< 0.039 mg/L	< 0.39 mg/L	< 0.071 mg/L	< 0.071 mg/L	< 0.16 mg/L	< 0.16 mg/L	< 0.16 mg/L	< 0.078 mg/L
	Hexachlorobutadiene	0.5 mg/L	< 0.13 mg/L	< 0.067 mg/L	< 0.67 mg/L	< 0.078 mg/L	< 0.078 mg/L	< 0.27 mg/L	< 0.27 mg/L	< 0.27 mg/L	< 0.13 mg/L
	Hexachloroethane	3 mg/L	< 0.14 mg/L	< 0.068 mg/L	< 0.68 mg/L	< 0.1 mg/L	< 0.1 mg/L	< 0.27 mg/L	< 0.27 mg/L	< 0.27 mg/L	< 0.14 mg/L
	Nitrobenzene	2 mg/L	< 0.16 mg/L	< 0.079 mg/L	< 0.79 mg/L	< 0.13 mg/L	< 0.13 mg/L	< 0.32 mg/L	< 0.32 mg/L	< 0.32 mg/L	< 0.16 mg/L
	Pentachlorophenol	1.7 mg/L	< 0.65 mg/L	< 0.33 mg/L	< 3.3 mg/L	< 0.81 mg/L	< 0.81 mg/L	< 1.3 mg/L	< 1.3 mg/L	< 1.3 mg/L	< 0.65 mg/L
	Pyridine	5 mg/L	2.9 mg/L	4 mg/L	5.6 mg/L	4.9 mg/L	2.5 mg/L	3.3 mg/L	3.6 mg/L	3.9 mg/L	3.5 mg/L

*Regulatory levels are the lowest value of TCLP, STLC, and TTLC regulatory levels. RCRA regulatory levels used for pH (corrosivity) and Flashpoint (ignitibility).

Laboratory non-detections are reported as less than ("<") the laboratory method detection limit.

Laboratory result qualifiers are reported to the right of corresponding detections (in parentheses). Definitions of reported qualifiers are below:

J: Result is estimated between the laboratory method detection limit and reporting limit.

Detection

Detection Outside of Regulatory Level

Non-Detection

Non-Detection (MDL Above Regulaory Level)

Chiquita Canyon
Waste Stream Documentation Form

Waste Profile Number:	Waste Stream ID No.: LC Manifold
Generator Number: CAL000347030	SAA No. / Site ID No.: #4
EPA Source Code: N/A Form Code: N/A	Hazardous Waste Codes: Non-Hazardous

A. GENERAL INFORMATION

Facility: Chiquita Canyon Landfill

Address: 29201 Henry Mayo Dr, Castaic, CA, 91384	Phone No: 330-635-4885
Contact: Dave Matthews	Email Address: dave.matthews@wasteconnections.com

Waste Stream Name: Non-Hazardous Waste Leachate

B. PROCESS INFORMATION

☐ New Process ☐ Process Change ☑ Process Review

Process Description (include any storage requirements):

Chiquita Canyon Landfill is experiencing an underground reaction in an inactive portion of the Landfill (also known as an "Elevated Temperature Landfill" or "ETLF" event). Landfill leachate is forming underneath the reaction area which forms via decomposition of putrescible and organic fractions of landfill material transported by water percolating through the soil profile. This leachate is generated from the LC Manifold wells and collected in 6 x 10,000 gallon FRP tanks and one 20,000 gallon frac tank. The leachate maybe transferred for storage into individual tanks in Tank Farm #7.

Physical Property of Waste:	☐ Solid	☑ Liquid	☐ Gas	☐ Other

Generation Rate: **140,000** Units: ☑ Gallons OR ☐ Pounds Rate: ☑ Month OR ☐ Year

Collection Mode: 10,000 FRP Tanks and 20,000-Gallon Frac Tanks

Material Name (include NSN if available)	Range or Concentration
Leachate	100%

C. EXEMPTIONS AND EXCLUSIONS

1. Is the waste a "solid waste" according to §CFR 261.2?	☑ Yes	☐ No
If no, provide the regulatory exclusion or exemption citation.		
If No, A HW CHARACTERIZATION IS NOT REQUIRED - SKIP TO SECTION F		
2. Is the waste a solid waste excluded or exempted from hazardous waste regulations?	☐ Yes	☑ No
If yes, provide the regulatory citation and justification:		
If Yes, A HW CHARACTERIZATION IS NOT REQUIRED - SKIP TO SECTION F		
3. Is this Used Oil OR an off specification petroleum fuel managed under §CFR 279?	☐ Yes	☑ No
If Yes, A HW CHARACTERIZATION IS NOT REQUIRED - SKIP TO SECTION F		
4. Is the waste a Universal Waste managed under §CFR 273?	☐ Yes	☑ No
If Yes, A HW CHARACTERIZATION IS NOT REQUIRED - SKIP TO SECTION F		

Chiquita Canyon
Waste Stream Documentation Form

Waste Profile Number:	Waste Stream ID No.: LC Manifold
Generator Number: CAL000347030	SAA No. / Site ID No.: #4
EPA Source Code: N/A Form Code: N/A	Hazardous Waste Codes: Non-Hazardous

D. HAZARDOUS WASTE CHARACTERIZATION

Based on: ☐ User Knowledge ☑ Analytical

Sample ID: See Section F

Analytical Date: N/A

LISTED HAZARDOUS WASTE

Is this an F-listed waste?	☐ Yes	☑ No
1. Are solvents listed 40 CFR 261.31 (a) present at 10% or more and used as a solvent? If yes, identify the solvents.	☐ Yes	☑ No

Solvent	Percent Before Use	Waste Code

1a. Is this an F-listed waste from a specific process? If yes, identify the process.	☐ Yes	☑ No
Waste Code:		
2. Is this a K-listed waste from a specific source as listed in §261.32? If yes, identify the process.	☐ Yes	☑ No
Waste Code:		
3. Is this a P-listed commercial chemical product; (i.e. a pure chemical or sole active ingredient) listed in §261.33(e)?	☐ Yes	☑ No

P Code	CAS	Substance

4. Is this a U-listed commercial chemical product; (i.e. a pure chemical or sole active ingredient) listed in §261.33(f)?	☐ Yes	☑ No

U Code	CAS	Substance

Generators must determine if a waste exhibits any of the characteristics of a HW.

HAZARDOUS WASTE CHARACTERISTICS

Is the waste Ignitable per §261.21? **Waste Code: D001**	☐ Yes	☑ No
1. Is the waste a liquid with a flash point less than 140°F? Flash Point:	☐ Yes	☑ No
2. Is the waste a non-liquid capable, under standard temperature and pressure, of causing fire through friction, absorption of moisture, or spontaneous chemical changes; and when ignited, burns so vigorously and persistently that it creates a hazard?	☐ Yes	☑ No
3. Is the waste an ignitable compressed gas as defined in 49 CFR 173.300?	☐ Yes	☑ No
4. Is the waste an oxidizer as defined by 49 CFR 173.151 (such as a chlorate or peroxide)?	☐ Yes	☑ No
Is the waste Corrosive per §261.22? **Waste Code: D002**	☐ Yes	☑ No
1. Is the waste an aqueous solution with a pH ≤ 2 or ≥ 12.5?	☐ Yes	☑ No
2. Is the waste a liquid that corrodes steel at a rate of at least 0.25 inches per year?	☐ Yes	☑ No

Chiquita Canyon
Waste Stream Documentation Form

Waste Profile Number:	Waste Stream ID No.: LC Manifold
Generator Number: CAL000347030	SAA No. / Site ID No.: #4
EPA Source Code: N/A Form Code: N/A	Hazardous Waste Codes: Non-Hazardous

Is the waste Reactive per §261.23? **Waste Code: D003**	☐ Yes	☑ No
1. Is the waste normally unstable and readily undergoes violent change without detonating?	☐ Yes	☑ No
2. Water Reactive: Does the waste react violently with water? OR Forms potentially explosive mixture with water? OR When mixed with water does the waste generate toxic gases, vapors, or fumes in a quantity dangerous to human health or the environment?	☐ Yes	☑ No
3. Is the waste a cyanide or sulfide compound that could react at a pH between 2 and 12.5 releasing toxic gases?	☐ Yes	☑ No
4. Is the waste capable of detonation or explosive reaction if subjected to strong ignition sources or when heated under confinement?	☐ Yes	☑ No
5. Is the waste readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure?	☐ Yes	☑ No
6. Is the waste a forbidden Class A or Class B explosive as defined in 49 CFR 173.51, 173.53 or 173.88?	☐ Yes	☑ No
Is the waste Toxic per §261.24? **Waste code(s): D004-D043**	☐ Yes	☑ No
Is the waste a characteristic waste?	☐ Yes	☑ No

E. TREATMENT AND DISPOSAL REQUIREMENTS

1. Is the waste	☐ Recycled (includes UW)?	☐ Burned for Energy Recovery (includes Used Oil)?
	☑ Non hazardous?	☐ Discharged to CWA regulated unit?

If Non Hazardous / Recycled (includes UW) or Burned for Energy Recovery Skip to Section F

2. Is the required one time LDR completed for HW discharged to a CWA unit?	☐ NA	☐ Yes	☐ No
3. Is an exemption claimed from Land Disposal Restrictions (LDR), §268?		☐ Yes	☐ No

Treatment Group: ☐ Wastewater (Contains <1% Total Organic Compounds and <1% Suspended Solids)
☐ Non-wastewater (Not Wastewater)

EPA Code	Constituent	Concentration (Toxicity Characteristic Only)	Regulatory Limit	Subcategory	LDR Treatment Standard (from §268.40)

UHCs apply only to characteristic HW (UHCs requirements do not apply to high TOC Ignitable only waste)

Chiquita Canyon
Waste Stream Documentation Form

Waste Profile Number:	Waste Stream ID No.: LC Manifold
Generator Number: CAL000347030	SAA No. / Site ID No.: #4
EPA Source Code: N/A Form Code: N/A	Hazardous Waste Codes: Non-Hazardous

4. Are there any Underlying Hazardous Constituents (UHC)? (Characteristic Waste Only)	☐ Yes	☐ No

Constituent	Universal Treatment Standard (from §268.48)

F. WASTE STREAM SUMMARY

Waste Stream Name: Non-Hazardous Waste Leachate

Waste Profile Number and Name:

Shipping Information: Non-Hazardous Liquid

Emergency Guide Book Number: N/A	Emergency Guide Year: N/A

Waste Codes: Non-Hazardous

Comments: See attached analytical results ranging from 02/10/24 - 03/02/24.

Analytical Recommendation:

REVISION TABLE

Laboratory Detection Summary | #4 LC Manifold

PROJ-037507 | Chiquita Canyon Landfill Waste Sampling

Data Updated at 4/2/2024 3:08:23 PM

Analytical Method	Analyte	Count of Lab Results	Count of Detections	Count of Samples Outside Regulatory Levels	Range of Detections
EPA 1010	Flash Point	11	11	0	185 - 212 deg F
EPA 6010B	Antimony	11	7	0	0.081 J - 0.19 mg/L
	Arsenic	11	11	0	0.21 - 0.37 mg/L
	Barium	11	11	0	3.3 - 4.6 mg/L
	Chromium	11	11	0	0.21 - 0.29 mg/L
	Cobalt	11	11	0	0.029 J - 0.067 mg/L
	Copper	11	6	0	0.039 J - 0.055 mg/L
	Molybdenum	11	8	0	0.045 J - 0.097 J mg/L
	Nickel	11	11	0	0.32 - 0.65 mg/L
	Vanadium	11	11	0	0.44 - 0.57 mg/L
	Zinc	11	3	0	0.14 J - 0.61 mg/L
EPA 8260B	1,4-Dichlorobenzene	11	9	0	0.01 J - 0.03 J mg/L
	2-Butanone	11	11	0	1.2 J - 15 mg/L
	Benzene	11	11	0	0.008 J - 0.02 mg/L
	Chloroform	11	1	0	0.02 J - 0.02 J mg/L
EPA 8270C	2-Methylphenol	11	5	0	0.3 J - 0.71 mg/L
	3-,4-Methylphenol	11	10	0	0.2 J - 3.9 mg/L
	Pyridine	11	3	0	0.43 J - 0.56 mg/L
EPA 9040B	pH	11	11	0	7.13 - 7.7 SU
	Temperature	11	11	0	17.2 - 20.3 deg C

Laboratory result qualifiers are reported to the right of corresponding detections. Definitions of reported qualifiers are below:

J: Result is estimated between the laboratory method detection limit and reporting limit.

Laboratory Results | #4 LC Manifold

PROJ-037507 | Chiquita Canyon Landfill Waste Sampling

Data Updated at 4/2/2024 3:08:23 PM

			#4 LC Manifold								
			2/10/2024 LC Manifold Sample point CACA0210Z007LCM1 502069 Field pH: -	2/11/2024 LC Manifold Sample point CACA0211Z007LCM 502071 Field pH: -	2/12/2024 LC Manifold Sample point CACA0212Z007LCM 502175 Field pH: -	2/13/2024 LC Manifold Sample point CACA0213Z007LCM 502296 Field pH: -	2/14/2024 LC Manifold Sample point CACA0214Z007LCM 502412 Field pH: -	2/15/2024 LC Manifold Sample point CACA0215Z007LCM 502537 Field pH: 6.53	2/16/2024 LC Manifold Sample point CACA0216Z007LCM 502624 Field pH: 7.6	2/17/2024 LC Manifold Sample point CACA0217Z007LCM 502628 Field pH: 7.4	2/18/2024 LC Manifold Sample point CACA0218Z007LCM 502630 Field pH: 7.89
Analytical Method	Analyte	Regulatory Levels*									
EPA 9040B	pH	≥2 ≤12.5 SU	7.42 SU	7.59 SU	7.23 SU	7.29 SU	7.3 SU	7.13 SU	7.56 SU	7.52 SU	7.59 SU
	Temperature	NA	20.3 deg C	19.8 deg C	19.3 deg C	17.2 deg C	20.3 deg C	19.8 deg C	19.7 deg C	19.5 deg C	19.4 deg C
EPA 1010	Flash Point	140 deg F	203 deg F	212 deg F	212 deg F	212 deg F	212 deg F	205 deg F	212 deg F	212 deg F	207 deg F
EPA 6010B	Antimony	15 mg/L	0.11 mg/L (J)	0.081 mg/L (J)	< 0.069 mg/L	< 0.069 mg/L	0.19 mg/L (J)	0.14 mg/L (J)	0.095 mg/L (J)	< 0.069 mg/L	< 0.037 mg/L
	Arsenic	5 mg/L	0.35 mg/L	0.33 mg/L	0.33 mg/L	0.35 mg/L	0.37 mg/L	0.37 mg/L	0.36 mg/L	0.34 mg/L	0.21 mg/L
	Barium	100 mg/L	4.1 mg/L	4 mg/L	3.9 mg/L	3.8 mg/L	3.3 mg/L	4 mg/L	4.1 mg/L	3.6 mg/L	4.3 mg/L
	Beryllium	0.75 mg/L	< 0.0017 mg/L	< 0.0017 mg/L	< 0.0017 mg/L	< 0.0017 mg/L	< 0.0017 mg/L	< 0.0097 mg/L	< 0.0017 mg/L	< 0.0017 mg/L	< 0.0027 mg/L
	Cadmium	1 mg/L	< 0.015 mg/L	< 0.015 mg/L	< 0.015 mg/L	< 0.015 mg/L	< 0.015 mg/L	< 0.014 mg/L	< 0.015 mg/L	< 0.015 mg/L	< 0.014 mg/L
	Chromium	2 mg/L	0.29 mg/L	0.25 mg/L	0.25 mg/L	0.24 mg/L	0.21 mg/L	0.25 mg/L	0.26 mg/L	0.24 mg/L	0.24 mg/L
	Cobalt	80 mg/L	0.044 mg/L (J)	0.037 mg/L (J)	0.041 mg/L (J)	0.067 mg/L (J)	0.04 mg/L (J)	0.029 mg/L (J)	0.049 mg/L (J)	0.046 mg/L (J)	0.052 mg/L (J)
	Copper	25 mg/L	0.042 mg/L (J)	< 0.02 mg/L	< 0.02 mg/L	0.041 mg/L (J)	< 0.02 mg/L	< 0.099 mg/L	0.045 mg/L (J)	0.041 mg/L (J)	< 0.099 mg/L
	Lead	5 mg/L	< 0.034 mg/L	< 0.034 mg/L	< 0.034 mg/L	< 0.034 mg/L	< 0.034 mg/L	< 0.054 mg/L	< 0.034 mg/L	< 0.034 mg/L	< 0.054 mg/L
	Molybdenum	350 mg/L	0.045 mg/L (J)	< 0.038 mg/L	0.046 mg/L (J)	0.097 mg/L (J)	0.045 mg/L (J)	< 0.049 mg/L	0.055 mg/L (J)	0.045 mg/L (J)	< 0.049 mg/L
	Nickel	20 mg/L	0.35 mg/L	0.33 mg/L	0.38 mg/L	0.65 mg/L	0.32 mg/L	0.38 mg/L	0.41 mg/L	0.36 mg/L	0.43 mg/L
	Selenium	1 mg/L	< 0.098 mg/L	< 0.098 mg/L	< 0.098 mg/L	< 0.098 mg/L	< 0.098 mg/L	< 0.023 mg/L	< 0.098 mg/L	< 0.098 mg/L	< 0.023 mg/L
	Silver	5 mg/L	< 0.016 mg/L	< 0.016 mg/L	< 0.016 mg/L	< 0.016 mg/L	< 0.016 mg/L	< 0.018 mg/L	< 0.016 mg/L	< 0.016 mg/L	< 0.018 mg/L
	Thallium	7 mg/L	< 0.079 mg/L	< 0.079 mg/L	< 0.079 mg/L	< 0.079 mg/L	< 0.079 mg/L	< 0.048 mg/L	< 0.079 mg/L	< 0.079 mg/L	< 0.048 mg/L
	Vanadium	24 mg/L	0.49 mg/L	0.51 mg/L	0.48 mg/L	0.47 mg/L	0.44 mg/L	0.5 mg/L	0.54 mg/L	0.49 mg/L	0.56 mg/L
	Zinc	250 mg/L	< 0.077 mg/L	< 0.077 mg/L	< 0.077 mg/L	< 0.077 mg/L	0.61 mg/L (J)	0.17 mg/L (J)	< 0.077 mg/L	0.14 mg/L (J)	< 0.064 mg/L
EPA 7470A	Mercury	0.2 mg/L	< 0.011 mg/L	< 0.016 mg/L	< 0.016 mg/L	< 0.011 mg/L	< 0.016 mg/L	< 0.016 mg/L	< 0.011 mg/L	< 0.011 mg/L	< 0.011 mg/L
EPA 8260B	1,1-Dichloroethene	0.7 mg/L	< 0.006 mg/L	< 0.006 mg/L	< 0.006 mg/L	< 0.005 mg/L	< 0.006 mg/L	< 0.006 mg/L	< 0.006 mg/L	< 0.006 mg/L	< 0.006 mg/L
	1,2-Dichloroethane	0.5 mg/L	< 0.006 mg/L	< 0.006 mg/L	< 0.006 mg/L	< 0.003 mg/L	< 0.006 mg/L	< 0.006 mg/L	< 0.006 mg/L	< 0.006 mg/L	< 0.006 mg/L
	1,4-Dichlorobenzene	7.5 mg/L	0.03 mg/L (J)	0.03 mg/L (J)	0.03 mg/L (J)	0.03 mg/L (J)	0.03 mg/L (J)	0.03 mg/L (J)	0.02 mg/L (J)	0.02 mg/L (J)	0.01 mg/L (J)
	2-Butanone	200 mg/L	6.1 mg/L	3.9 mg/L (J)	4.3 mg/L (J)	3.2 mg/L (J)	2.6 mg/L (J)	5.1 mg/L	3.3 mg/L (J)	15 mg/L	3 mg/L (J)
	Benzene	0.5 mg/L	0.01 mg/L (J)	0.01 mg/L (J)	0.01 mg/L (J)	0.008 mg/L (J)	0.01 mg/L (J)	0.01 mg/L (J)	0.01 mg/L (J)	0.01 mg/L (J)	0.02 mg/L (J)
	Carbon Tetrachloride	0.5 mg/L	< 0.006 mg/L	< 0.005 mg/L	< 0.006 mg/L	< 0.002 mg/L	< 0.005 mg/L	< 0.006 mg/L	< 0.005 mg/L	< 0.006 mg/L	< 0.006 mg/L
	Chlorobenzene	100 mg/L	< 0.007 mg/L	< 0.005 mg/L	< 0.007 mg/L	< 0.02 mg/L	< 0.005 mg/L	< 0.007 mg/L	< 0.005 mg/L	< 0.007 mg/L	< 0.007 mg/L
	Chloroform	6 mg/L	< 0.01 mg/L	< 0.006 mg/L	0.02 mg/L (J)	< 0.004 mg/L	< 0.006 mg/L	< 0.01 mg/L	< 0.006 mg/L	< 0.01 mg/L	< 0.01 mg/L
	Tetrachloroethene	0.7 mg/L	< 0.008 mg/L	< 0.004 mg/L	< 0.008 mg/L	< 0.01 mg/L	< 0.004 mg/L	< 0.008 mg/L	< 0.004 mg/L	< 0.008 mg/L	< 0.008 mg/L
	Trichloroethene	0.5 mg/L	< 0.008 mg/L	< 0.006 mg/L	< 0.008 mg/L	< 0.007 mg/L	< 0.006 mg/L	< 0.008 mg/L	< 0.006 mg/L	< 0.008 mg/L	< 0.008 mg/L
	Vinyl Chloride	0.2 mg/L	< 0.006 mg/L	< 0.005 mg/L	< 0.006 mg/L	< 0.005 mg/L	< 0.005 mg/L	< 0.006 mg/L	< 0.005 mg/L	< 0.006 mg/L	< 0.006 mg/L
EPA 8270C	2-Methylphenol	200 mg/L	0.33 mg/L (J)	0.3 mg/L (J)	< 0.79 mg/L	0.67 mg/L (J)	0.57 mg/L (J)	0.71 mg/L (J)	< 0.32 mg/L	< 0.32 mg/L	< 0.32 mg/L
	2,4-Dinitrotoluene	0.13 mg/L	< 0.15 mg/L	< 0.037 mg/L	< 0.37 mg/L	< 2.5 mg/L	< 0.42 mg/L	< 0.42 mg/L	< 0.15 mg/L	< 0.15 mg/L	< 0.15 mg/L
	2,4,5-Trichlorophenol	400 mg/L	< 1 mg/L	< 0.26 mg/L	< 2.6 mg/L	< 0.86 mg/L	< 0.14 mg/L	< 0.14 mg/L	< 1 mg/L	< 1 mg/L	< 1 mg/L
	2,4,6-Trichlorophenol	2 mg/L	< 0.49 mg/L	< 0.12 mg/L	< 1.2 mg/L	< 3.3 mg/L	< 0.56 mg/L	< 0.56 mg/L	< 0.49 mg/L	< 0.49 mg/L	< 0.49 mg/L
	3-,4-Methylphenol	200 mg/L	2.2 mg/L	2.7 mg/L	2.9 mg/L (J)	3.2 mg/L (J)	3.1 mg/L	3.9 mg/L	0.98 mg/L (J)	2 mg/L (J)	0.43 mg/L (J)
	Hexachlorobenzene	0.13 mg/L	< 0.16 mg/L	< 0.039 mg/L	< 0.39 mg/L	< 0.42 mg/L	< 0.071 mg/L	< 0.071 mg/L	< 0.16 mg/L	< 0.16 mg/L	< 0.16 mg/L
	Hexachlorobutadiene	0.5 mg/L	< 0.27 mg/L	< 0.067 mg/L	< 0.67 mg/L	< 0.47 mg/L	< 0.078 mg/L	< 0.078 mg/L	< 0.27 mg/L	< 0.27 mg/L	< 0.27 mg/L
	Hexachloroethane	3 mg/L	< 0.27 mg/L	< 0.068 mg/L	< 0.68 mg/L	< 0.63 mg/L	< 0.1 mg/L	< 0.1 mg/L	< 0.27 mg/L	< 0.27 mg/L	< 0.27 mg/L
	Nitrobenzene	2 mg/L	< 0.32 mg/L	< 0.079 mg/L	< 0.79 mg/L	< 0.81 mg/L	< 0.13 mg/L	< 0.13 mg/L	< 0.32 mg/L	< 0.32 mg/L	< 0.32 mg/L
	Pentachlorophenol	1.7 mg/L	< 1.3 mg/L	< 0.33 mg/L	< 3.3 mg/L	< 4.8 mg/L	< 0.81 mg/L	< 0.81 mg/L	< 1.3 mg/L	< 1.3 mg/L	< 1.3 mg/L
	Pyridine	5 mg/L	< 0.42 mg/L	0.56 mg/L	< 1 mg/L	< 0.69 mg/L	0.43 mg/L (J)	0.51 mg/L (J)	< 0.42 mg/L	< 0.42 mg/L	< 0.42 mg/L

*Regulatory levels are the lowest value of TCLP, STLC, and TTLC regulatory levels. RCRA regulatory levels used for pH (corrosivity) and Flashpoint (ignitibility).
Laboratory non-detections are reported as less than ("<") the laboratory method detection limit.
Laboratory result qualifiers are reported to the right of corresponding detections (in parentheses). Definitions of reported qualifiers are below:
J: Result is estimated between the laboratory method detection limit and reporting limit.

Detection
Non-Detection
Non-Detection (MDL Above Regulaory Level)

Laboratory Results | #4 LC Manifold

PROJ-037507 | Chiquita Canyon Landfill Waste Sampling

Data Updated at 4/2/2024 3:08:23 PM

			#4 LC Manifold	
			2/19/2024 LC Manifold Sample point CACA0219Z007LCM 502700 Field pH:	2/20/2024 LC Manifold Sample point CACA0220Z007LCM 502840 Field pH:
Analytical Method	Analyte	Regulatory Levels*	7.81	7.61
EPA 9040B	pH	≥2 ≤12.5 SU	7.7 SU	7.58 SU
	Temperature	NA	17.3 deg C	18.5 deg C
EPA 1010	Flash Point	140 deg F	194 deg F	185 deg F
EPA 6010B	Antimony	15 mg/L	0.14 mg/L (J)	0.11 mg/L (J)
	Arsenic	5 mg/L	0.26 mg/L	0.3 mg/L
	Barium	100 mg/L	4.6 mg/L	4.4 mg/L
	Beryllium	0.75 mg/L	< 0.0017 mg/L	< 0.0017 mg/L
	Cadmium	1 mg/L	< 0.015 mg/L	< 0.015 mg/L
	Chromium	2 mg/L	0.27 mg/L	0.26 mg/L
	Cobalt	80 mg/L	0.056 mg/L (J)	0.049 mg/L (J)
	Copper	25 mg/L	0.055 mg/L (J)	0.039 mg/L (J)
	Lead	5 mg/L	< 0.034 mg/L	< 0.034 mg/L
	Molybdenum	350 mg/L	0.056 mg/L (J)	0.062 mg/L (J)
	Nickel	20 mg/L	0.42 mg/L	0.42 mg/L
	Selenium	1 mg/L	< 0.098 mg/L	< 0.098 mg/L
	Silver	5 mg/L	< 0.016 mg/L	< 0.016 mg/L
	Thallium	7 mg/L	< 0.079 mg/L	< 0.079 mg/L
	Vanadium	24 mg/L	0.57 mg/L	0.55 mg/L
	Zinc	250 mg/L	< 0.077 mg/L	< 0.077 mg/L
EPA 7470A	Mercury	0.2 mg/L	< 0.011 mg/L	< 0.016 mg/L
EPA 8260B	1,1-Dichloroethene	0.7 mg/L	< 0.005 mg/L	< 0.006 mg/L
	1,2-Dichloroethane	0.5 mg/L	< 0.003 mg/L	< 0.006 mg/L
	1,4-Dichlorobenzene	7.5 mg/L	< 0.007 mg/L	< 0.01 mg/L
	2-Butanone	200 mg/L	1.2 mg/L (J)	1.5 mg/L (J)
	Benzene	0.5 mg/L	0.01 mg/L (J)	0.02 mg/L (J)
	Carbon Tetrachloride	0.5 mg/L	< 0.002 mg/L	< 0.006 mg/L
	Chlorobenzene	100 mg/L	< 0.02 mg/L	< 0.007 mg/L
	Chloroform	6 mg/L	< 0.004 mg/L	< 0.01 mg/L
	Tetrachloroethene	0.7 mg/L	< 0.01 mg/L	< 0.008 mg/L
	Trichloroethene	0.5 mg/L	< 0.007 mg/L	< 0.008 mg/L
	Vinyl Chloride	0.2 mg/L	< 0.005 mg/L	< 0.006 mg/L
EPA 8270C	2-Methylphenol	200 mg/L	< 0.16 mg/L	< 0.16 mg/L
	2,4-Dinitrotoluene	0.13 mg/L	< 0.074 mg/L	< 0.074 mg/L
	2,4,5-Trichlorophenol	400 mg/L	< 0.52 mg/L	< 0.52 mg/L
	2,4,6-Trichlorophenol	2 mg/L	< 0.25 mg/L	< 0.25 mg/L
	3-,4-Methylphenol	200 mg/L	< 0.17 mg/L	0.2 mg/L (J)
	Hexachlorobenzene	0.13 mg/L	< 0.078 mg/L	< 0.078 mg/L
	Hexachlorobutadiene	0.5 mg/L	< 0.13 mg/L	< 0.13 mg/L
	Hexachloroethane	3 mg/L	< 0.14 mg/L	< 0.14 mg/L
	Nitrobenzene	2 mg/L	< 0.16 mg/L	< 0.16 mg/L
	Pentachlorophenol	1.7 mg/L	< 0.65 mg/L	< 0.65 mg/L
	Pyridine	5 mg/L	< 0.21 mg/L	< 0.21 mg/L

*Regulatory levels are the lowest value of TCLP, STLC, and TTLC regulatory levels. RCRA regulatory levels used for pH (corrosivity) and Flashpoint (ignitibility).
Laboratory non-detections are reported as less than ("<") the laboratory method detection limit.
Laboratory result qualifiers are reported to the right of corresponding detections (in parentheses). Definitions of reported qualifiers are below:
J: Result is estimated between the laboratory method detection limit and reporting limit.

Detection
Non-Detection
Non-Detection (MDL Above Regulaory Level)

Chiquita Canyon
Waste Stream Documentation Form

Waste Profile Number:	Waste Stream ID No.: North Perimeter
Generator Number: CAL000347030	SAA No. / Site ID No.: #6
EPA Source Code: G49 Form Code: W219	Hazardous Waste Codes: D018, 213

A. GENERAL INFORMATION

Facility: Chiquita Canyon Landfill

Address: 29201 Henry Mayo Dr, Castaic, CA, 91384	Phone No: 330-635-4885
Contact: Dave Matthews	Email Address: dave.matthews@wasteconnections.com

Waste Stream Name: Waste Hazardous Waste Leachate

B. PROCESS INFORMATION

☑ New Process ☐ Process Change ☐ Process Review

Process Description (include any storage requirements):

Chiquita Canyon Landfill is experiencing an underground reaction in an inactive portion of the Landfill (also known as an "Elevated Temperature Landfill" or "ETLF" event). The reaction has caused an increase in the production of landfill gas and leachate. Landfill leachate forms via decomposition of putrescible and organic fractions of landfill material transported by water percolating through the soil profile. This leachate is generated from the North Perimeter wells and collected in frac tanks. The leachate maybe transferred for storage into individual tanks in Tank Farm #7.

Physical Property of Waste:	☐ Solid	☑ Liquid	☐ Gas	☐ Other

Generation Rate: **140,000** Units: ☑ Gallons OR ☐ Pounds Rate: ☑ Month OR ☐ Year

Collection Mode 20,000-Gallon Frac Tanks

Material Name (include NSN if available)	Range or Concentration
Leachate	100%

C. EXEMPTIONS AND EXCLUSIONS

1. Is the waste a "solid waste" according to §CFR 261.2?	☑ Yes	☐ No
If no, provide the regulatory exclusion or exemption citation.		
If No, A HW CHARACTERIZATION IS NOT REQUIRED - SKIP TO SECTION F		
2. Is the waste a solid waste excluded or exempted from hazardous waste regulations?	☐ Yes	☑ No
If yes, provide the regulatory citation and justification:		
If Yes, A HW CHARACTERIZATION IS NOT REQUIRED - SKIP TO SECTION F		
3. Is this Used Oil OR an off specification petroleum fuel managed under §CFR 279?	☐ Yes	☑ No
If Yes, A HW CHARACTERIZATION IS NOT REQUIRED - SKIP TO SECTION F		
4. Is the waste a Universal Waste managed under §CFR 273?	☐ Yes	☑ No
If Yes, A HW CHARACTERIZATION IS NOT REQUIRED - SKIP TO SECTION F		

Chiquita Canyon
Waste Stream Documentation Form

Waste Profile Number:	Waste Stream ID No.: North Perimeter
Generator Number: CAL000347030	SAA No. / Site ID No.: #6
EPA Source Code: G49 Form Code: W219	Hazardous Waste Codes: D018, 213

D. HAZARDOUS WASTE CHARACTERIZATION

Based on: ☐ User Knowledge ☑ Analytical

Sample ID: See Section F

Analytical Date: N/A

LISTED HAZARDOUS WASTE

Is this an F-listed waste?	☐ Yes	☑ No
1. Are solvents listed 40 CFR 261.31 (a) present at 10% or more and used as a solvent? If yes, identify the solvents.	☐ Yes	☑ No

Solvent	Percent Before Use	Waste Code

1a. Is this an F-listed waste from a specific process? If yes, identify the process.	☐ Yes	☑ No
Waste Code:		
2. Is this a K-listed waste from a specific source as listed in §261.32? If yes, identify the process.	☐ Yes	☑ No
Waste Code:		
3. Is this a P-listed commercial chemical product; (i.e. a pure chemical or sole active ingredient) listed in §261.33(e)?	☐ Yes	☑ No

P Code	CAS	Substance

4. Is this a U-listed commercial chemical product; (i.e. a pure chemical or sole active ingredient) listed in §261.33(f)?	☐ Yes	☑ No

U Code	CAS	Substance

Generators must determine if a waste exhibits any of the characteristics of a HW.

HAZARDOUS WASTE CHARACTERISTIC

Is the waste Ignitable per §261.21? **Waste Code: D001**	☐ Yes	☑ No
1. Is the waste a liquid with a flash point less than 140°F? Flash Point:	☐ Yes	☑ No
2. Is the waste a non-liquid capable, under standard temperature and pressure, of causing fire through friction, absorption of moisture, or spontaneous chemical changes; and when ignited, burns so vigorously and persistently that it creates a hazard?	☐ Yes	☑ No
3. Is the waste an ignitable compressed gas as defined in 49 CFR 173.300?	☐ Yes	☑ No
4. Is the waste an oxidizer as defined by 49 CFR 173.151 (such as a chlorate or peroxide)?	☐ Yes	☑ No
Is the waste Corrosive per §261.22? **Waste Code: D002**	☐ Yes	☑ No
1. Is the waste an aqueous solution with a pH ≤ 2 or ≥ 12.5?	☐ Yes	☑ No
2. Is the waste a liquid that corrodes steel at a rate of at least 0.25 inches per year?	☐ Yes	☑ No

Chiquita Canyon
Waste Stream Documentation Form

Waste Profile Number:	Waste Stream ID No.: North Perimeter
Generator Number: CAL000347030	SAA No. / Site ID No.: #6
EPA Source Code: G49 Form Code: W219	Hazardous Waste Codes: D018, 213

Is the waste Reactive per §261.23? **Waste Code: D003**	☐ Yes	☑ No
1. Is the waste normally unstable and readily undergoes violent change without detonating?	☐ Yes	☑ No
2. Water Reactive: Does the waste react violently with water? OR Forms potentially explosive mixture with water? OR When mixed with water does the waste generate toxic gases, vapors, or fumes in a quantity dangerous to human health or the environment?	☐ Yes	☑ No
3. Is the waste a cyanide or sulfide compound that could react at a pH between 2 and 12.5 releasing toxic gases?	☐ Yes	☑ No
4. Is the waste capable of detonation or explosive reaction if subjected to strong ignition sources or when heated under confinement?	☐ Yes	☑ No
5. Is the waste readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure?	☐ Yes	☑ No
6. Is the waste a forbidden Class A or Class B explosive as defined in 49 CFR 173.51, 173.53 or 173.88?	☐ Yes	☑ No
Is the waste Toxic per §261.24? **Waste code(s): D004-D043**	☑ Yes	☐ No
Is the waste a characteristic waste?	☑ Yes	☐ No

E. TREATMENT AND DISPOSAL REQUIREMENTS

1. Is the waste	☐ Recycled (includes UW)?	☐ Burned for Energy Recovery (includes Used Oil)?
	☐ Non hazardous?	☑ Discharged to CWA regulated unit?

If Non Hazardous / Recycled (includes UW) or Burned for Energy Recovery Skip to Section F

2. Is the required one time LDR completed for HW discharged to a CWA unit?	☐ NA	☑ Yes	☐ No
3. Is an exemption claimed from Land Disposal Restrictions (LDR), §268?		☐ Yes	☑ No

Treatment Group:
☐ Wastewater (Contains <1% Total Organic Compounds and <1% Suspended Solids)
☑ Non-wastewater (Not Wastewater)

EPA Code	Constituent	Concentration (Toxicity Characteristic Only)	Regulatory Limit	Subcategory	LDR Treatment Standard (from §268.40)
D018	Benzene	>0.5 mg/L TCLP	0.5 mg/L TCLP	Wastes that exhibit the characteristics of toxicity	10 mg/kg and meet §268.48 standard

UHCs apply only to characteristic HW (UHCs requirements do not apply to high TOC Ignitable only waste)

Chiquita Canyon
Waste Stream Documentation Form

Waste Profile Number:	Waste Stream ID No.: North Perimeter
Generator Number: CAL000347030	SAA No. / Site ID No.: #6
EPA Source Code: G49 Form Code: W219	Hazardous Waste Codes: D018, 213

4. Are there any Underlying Hazardous Constituents (UHC)? (Characteristic Waste Only)	☐ Yes	☑ No

Constituent	Universal Treatment Standard (from §268.48)

F. WASTE STREAM SUMMARY

Waste Stream Name: Waste Hazardous Waste Leachate

Waste Profile Number and Name:

Shipping Information: NA3082, Hazardous Waste, Liquid, n.o.s., (Benzene), 9, PGIII

Emergency Guide Book Number: 131	Emergency Guide Year: 2020

Waste Codes: D018, 213

Comments: See attached analytical results ranging from 02/11/24 - 04/13/24

Analytical Recommendation:

REVISION TABLE

Comment	User	Date

Laboratory Results : #6 North Perimeter Tank 65

PROJ-037507 | Chiquita Canyon Landfill Waste Sampling

Data Updated at 5/8/2024 1:19:05 PM

			#6 North Perimeter Tank 65								
			2/11/2024 CACA0211Z006NP65 502071 Field pH:	2/12/2024 CACA0212Z006NP65 502175 Field pH:	2/13/2024 CACA0213Z006NP65 502296 Field pH:	2/14/2024 CACA0214Z006NP65 502412 Field pH:	2/15/2024 CACA0215Z006NP65 502537 Field pH:	2/16/2024 CACA0216Z006NP65 502624 Field pH:	2/17/2024 CACA0217Z006NP65 502628 Field pH:	2/18/2024 CACA0218Z006NP65 502630 Field pH:	2/19/2024 CACA0219Z006NP65 502700 Field pH:
Analytical Method	Analyte	Regulatory Levels*	-	-	-	-	5.76	6.24	5.99	6.21	6.18
EPA 9040B	pH	≥2 ≤12.5 SU	6.2 SU	6.12 SU	6.15 SU	6.14 SU	6.07 SU	6.17 SU	6.15 SU	6.01 SU	6.06 SU
	Temperature	NA	19.8 deg C	19.3 deg C	17.2 deg C	20.4 deg C	19.7 deg C	19.5 deg C	19.4 deg C	19 deg C	16.9 deg C
EPA 1010	Flash Point	140 deg F	203 deg F	124 deg F	212 deg F	194 deg F	207 deg F	203 deg F	136 deg F	203 deg F	185 deg F
EPA 6010B	Antimony	15 mg/L	< 0.069 mg/L	< 0.069 mg/L	< 0.069 mg/L	0.57 mg/L (J)	0.097 mg/L (J)	0.43 mg/L (J)	< 0.069 mg/L	0.048 mg/L (J)	0.7 mg/L
	Arsenic	5 mg/L	0.31 mg/L	0.28 mg/L	0.24 mg/L	0.27 mg/L	0.056 mg/L (J)	0.27 mg/L	0.32 mg/L	< 0.048 mg/L	0.32 mg/L
	Barium	100 mg/L	4.2 mg/L	4.2 mg/L	4.3 mg/L	4.3 mg/L	4.5 mg/L	4.2 mg/L	4.4 mg/L	4.7 mg/L	4.8 mg/L
	Beryllium	0.75 mg/L	< 0.0017 mg/L	< 0.0017 mg/L	< 0.0017 mg/L	< 0.0017 mg/L	< 0.0097 mg/L	< 0.0017 mg/L	< 0.0017 mg/L	< 0.0027 mg/L	< 0.0017 mg/L
	Cadmium	1 mg/L	< 0.015 mg/L	< 0.015 mg/L	< 0.015 mg/L	< 0.015 mg/L	< 0.014 mg/L	< 0.015 mg/L	< 0.015 mg/L	< 0.014 mg/L	< 0.015 mg/L
	Chromium	2 mg/L	0.48 mg/L	0.47 mg/L	0.48 mg/L	0.49 mg/L	0.58 mg/L	0.49 mg/L	0.51 mg/L	0.55 mg/L	0.56 mg/L
	Cobalt	80 mg/L	0.027 mg/L (J)	0.033 mg/L (J)	0.049 mg/L (J)	0.031 mg/L (J)	0.046 mg/L (J)	0.028 mg/L (J)	0.025 mg/L (J)	0.044 mg/L (J)	0.041 mg/L (J)
	Copper	25 mg/L	< 0.02 mg/L	< 0.02 mg/L	< 0.02 mg/L	< 0.02 mg/L	< 0.099 mg/L	0.021 mg/L (J)	0.02 mg/L (J)	< 0.099 mg/L	< 0.02 mg/L
	Lead	5 mg/L	< 0.034 mg/L	< 0.034 mg/L	0.042 mg/L (J)	< 0.034 mg/L	0.13 mg/L (J)	< 0.034 mg/L	< 0.034 mg/L	< 0.054 mg/L	0.06 mg/L (J)
	Molybdenum	350 mg/L	< 0.038 mg/L	< 0.038 mg/L	0.072 mg/L (J)	< 0.038 mg/L	< 0.049 mg/L	< 0.038 mg/L	< 0.038 mg/L	< 0.049 mg/L	0.046 mg/L (J)
	Nickel	20 mg/L	0.051 mg/L (J)	0.11 mg/L (J)	0.11 mg/L (J)	0.11 mg/L (J)	0.15 mg/L (J)	0.089 mg/L (J)	0.093 mg/L (J)	0.13 mg/L (J)	0.13 mg/L (J)
	Selenium	1 mg/L	< 0.098 mg/L	< 0.098 mg/L	< 0.098 mg/L	< 0.098 mg/L	0.12 mg/L (J)	< 0.098 mg/L	< 0.098 mg/L	0.026 mg/L (J)	< 0.098 mg/L
	Silver	5 mg/L	< 0.016 mg/L	< 0.016 mg/L	< 0.016 mg/L	< 0.016 mg/L	< 0.018 mg/L	< 0.016 mg/L	< 0.016 mg/L	< 0.018 mg/L	< 0.016 mg/L
	Thallium	7 mg/L	< 0.079 mg/L	< 0.079 mg/L	< 0.079 mg/L	< 0.079 mg/L	< 0.048 mg/L	< 0.079 mg/L	< 0.079 mg/L	< 0.048 mg/L	< 0.079 mg/L
	Vanadium	24 mg/L	0.21 mg/L	0.2 mg/L	0.21 mg/L	0.21 mg/L	0.22 mg/L	0.22 mg/L	0.25 mg/L	0.25 mg/L	0.29 mg/L
	Zinc	250 mg/L	0.46 mg/L (J)	0.32 mg/L (J)	0.27 mg/L (J)	0.15 mg/L (J)	0.3 mg/L (J)	0.088 mg/L (J)	0.11 mg/L (J)	0.14 mg/L (J)	0.26 mg/L (J)
EPA 7470A	Mercury	0.2 mg/L	< 0.016 mg/L	< 0.016 mg/L	< 0.011 mg/L	< 0.016 mg/L	< 0.016 mg/L	< 0.011 mg/L	< 0.011 mg/L	< 0.011 mg/L	< 0.011 mg/L
EPA 8260B	1,1-Dichloroethene	0.7 mg/L	< 0.02 mg/L	< 0.01 mg/L	< 0.01 mg/L	< 0.006 mg/L	< 0.01 mg/L	< 0.01 mg/L	< 0.006 mg/L	< 0.01 mg/L	< 0.01 mg/L
	1,2-Dichloroethane	0.5 mg/L	< 0.02 mg/L	< 0.01 mg/L	< 0.006 mg/L	< 0.006 mg/L	< 0.01 mg/L	< 0.01 mg/L	< 0.006 mg/L	< 0.01 mg/L	< 0.01 mg/L
	1,4-Dichlorobenzene	7.5 mg/L	< 0.02 mg/L	< 0.02 mg/L	0.02 mg/L (J)	0.01 mg/L (J)	0.03 mg/L (J)	0.01 mg/L (J)	0.03 mg/L (J)	0.03 mg/L (J)	0.04 mg/L (J)
	2-Butanone	200 mg/L	23 mg/L	28 mg/L	24 mg/L	19 mg/L	59 mg/L	22 mg/L	63 mg/L	52 mg/L	86 mg/L
	Benzene	0.5 mg/L	0.6 mg/L (J)	0.6 mg/L	0.8 mg/L	0.7 mg/L	1.7 mg/L	0.6 mg/L	1.5 mg/L	1.4 mg/L	2.7 mg/L
	Carbon Tetrachloride	0.5 mg/L	< 0.02 mg/L	< 0.01 mg/L	< 0.005 mg/L	< 0.005 mg/L	< 0.01 mg/L	< 0.01 mg/L	< 0.006 mg/L	< 0.01 mg/L	< 0.01 mg/L
	Chlorobenzene	100 mg/L	< 0.02 mg/L	< 0.01 mg/L	< 0.03 mg/L	< 0.005 mg/L	< 0.01 mg/L	< 0.01 mg/L	0.01 mg/L (J)	< 0.01 mg/L	< 0.01 mg/L
	Chloroform	6 mg/L	< 0.02 mg/L	< 0.02 mg/L	< 0.008 mg/L	< 0.006 mg/L	< 0.02 mg/L	< 0.01 mg/L	< 0.01 mg/L	< 0.02 mg/L	< 0.02 mg/L
	Tetrachloroethene	0.7 mg/L	< 0.02 mg/L	< 0.02 mg/L	< 0.02 mg/L	< 0.004 mg/L	< 0.02 mg/L	< 0.008 mg/L	< 0.008 mg/L	< 0.02 mg/L	< 0.02 mg/L
	Trichloroethene	0.5 mg/L	< 0.02 mg/L	< 0.02 mg/L	< 0.01 mg/L	< 0.006 mg/L	< 0.02 mg/L	< 0.01 mg/L	< 0.008 mg/L	< 0.02 mg/L	< 0.02 mg/L
	Vinyl Chloride	0.2 mg/L	< 0.02 mg/L	< 0.01 mg/L	< 0.01 mg/L	< 0.005 mg/L	< 0.01 mg/L	< 0.009 mg/L	< 0.006 mg/L	< 0.01 mg/L	< 0.01 mg/L
EPA 8270C	2-Methylphenol	200 mg/L	0.16 mg/L (J)	< 0.79 mg/L	< 0.54 mg/L	0.15 mg/L (J)	0.15 mg/L (J)	< 0.32 mg/L	< 0.32 mg/L	< 0.32 mg/L	0.19 mg/L (J)
	2,4-Dinitrotoluene	0.13 mg/L	< 0.037 mg/L	< 0.37 mg/L	< 2.5 mg/L	< 0.42 mg/L	< 0.42 mg/L	< 0.15 mg/L	< 0.15 mg/L	< 0.15 mg/L	< 0.074 mg/L
	2,4,5-Trichlorophenol	400 mg/L	< 0.26 mg/L	< 2.6 mg/L	< 0.86 mg/L	< 0.14 mg/L	< 0.14 mg/L	< 1 mg/L	< 1 mg/L	< 1 mg/L	< 0.52 mg/L
	2,4,6-Trichlorophenol	2 mg/L	< 0.12 mg/L	< 1.2 mg/L	< 3.3 mg/L	< 0.56 mg/L	< 0.56 mg/L	< 0.49 mg/L	< 0.49 mg/L	< 0.49 mg/L	< 0.25 mg/L
	3-,4-Methylphenol	200 mg/L	17 mg/L	21 mg/L	21 mg/L	18 mg/L	14 mg/L	12 mg/L	18 mg/L	22 mg/L	15 mg/L
	Hexachlorobenzene	0.13 mg/L	< 0.039 mg/L	< 0.39 mg/L	< 0.42 mg/L	< 0.071 mg/L	< 0.071 mg/L	< 0.16 mg/L	< 0.16 mg/L	< 0.16 mg/L	< 0.078 mg/L
	Hexachlorobutadiene	0.5 mg/L	< 0.067 mg/L	< 0.67 mg/L	< 0.47 mg/L	< 0.078 mg/L	< 0.078 mg/L	< 0.27 mg/L	< 0.27 mg/L	< 0.27 mg/L	< 0.13 mg/L
	Hexachloroethane	3 mg/L	< 0.068 mg/L	< 0.68 mg/L	< 0.63 mg/L	< 0.1 mg/L	< 0.1 mg/L	< 0.27 mg/L	< 0.27 mg/L	< 0.27 mg/L	< 0.14 mg/L
	Nitrobenzene	2 mg/L	< 0.079 mg/L	< 0.79 mg/L	< 0.81 mg/L	< 0.13 mg/L	< 0.13 mg/L	< 0.32 mg/L	< 0.32 mg/L	< 0.32 mg/L	< 0.16 mg/L
	Pentachlorophenol	1.7 mg/L	< 0.33 mg/L	< 3.3 mg/L	< 4.8 mg/L	< 0.81 mg/L	< 0.81 mg/L	< 1.3 mg/L	< 1.3 mg/L	< 1.3 mg/L	< 0.65 mg/L
	Pyridine	5 mg/L	0.5 mg/L	< 1 mg/L	< 0.69 mg/L	0.29 mg/L (J)	0.38 mg/L (J)	< 0.42 mg/L	< 0.42 mg/L	< 0.42 mg/L	0.36 mg/L (J)

*Regulatory levels are the lowest value of TCLP, STLC, and TTLC regulatory levels. RCRA regulatory levels used for pH (corrosivity) and Flashpoint (ignitibility).
Laboratory non-detections are reported as less than ("<") the laboratory method detection limit.
Laboratory result qualifiers are reported to the right of corresponding detections (in parentheses). Definitions of reported qualifiers are below:
J: Result is estimated between the laboratory method detection limit and reporting limit.

Detection
Detection Outside of Regulatory Level
Non-Detection
Non-Detection (MDL Above Regulaory Level)

Laboratory Results : #6 North Perimeter Tank 65

PROJ-037507 | Chiquita Canyon Landfill Waste Sampling

Data Updated at 5/8/2024 1:19:05 PM

			#6 North Perimeter Tank 65								
			2/20/2024 CACA0220Z006NP65 502840 Field pH:	2/21/2024 CACA0221Z006NP65 502960 Field pH:	2/22/2024 CACA0222Z006NP65 503055 Field pH:	2/23/2024 CACA0223Z006NP65 503145 Field pH:	2/24/2024 CACA0224Z006NP65 503152 Field pH:	2/25/2024 CACA0225Z006NP65 503153 Field pH:	2/26/2024 CACA0226Z006NP65 503231 Field pH:	2/27/2024 CACA0227Z006NP65 503300 Field pH:	2/28/2024 CACA0228Z006NP65 503407 Field pH:
Analytical Method	Analyte	Regulatory Levels*	6.13	6.29	6.17	6.17	6.11	6.27	6.19	6.10	6.02
EPA 9040B	pH	≥2 ≤12.5 SU	6.09 SU	6.07 SU	6.07 SU	6.11 SU	6.19 SU	6.08 SU	6.07 SU	6.11 SU	6.11 SU
	Temperature	NA	18.8 deg C	19.5 deg C	17.9 deg C	16.5 deg C	19 deg C	21.5 deg C	20.6 deg C	20.1 deg C	21.8 deg C
EPA 1010	Flash Point	140 deg F	203 deg F	198 deg F	198 deg F	189 deg F	194 deg F	185 deg F	203 deg F	189 deg F	203 deg F
EPA 6010B	Antimony	15 mg/L	0.22 mg/L (J)	0.33 mg/L (J)	0.49 mg/L (J)	0.28 mg/L (J)	< 0.069 mg/L	0.24 mg/L (J)	0.06 mg/L (J)	< 0.069 mg/L	0.18 mg/L (J)
	Arsenic	5 mg/L	0.32 mg/L	0.29 mg/L	0.4 mg/L	0.26 mg/L	0.26 mg/L	0.37 mg/L	< 0.048 mg/L	< 0.048 mg/L	0.3 mg/L
	Barium	100 mg/L	4.5 mg/L	4.3 mg/L	4.5 mg/L	3.9 mg/L	4.3 mg/L	4.2 mg/L	4.2 mg/L	4.1 mg/L	4.3 mg/L
	Beryllium	0.75 mg/L	< 0.0017 mg/L	< 0.0017 mg/L	< 0.0017 mg/L	< 0.0017 mg/L	< 0.0017 mg/L	< 0.0017 mg/L	< 0.0097 mg/L	< 0.0097 mg/L	< 0.0017 mg/L
	Cadmium	1 mg/L	< 0.015 mg/L	< 0.015 mg/L	< 0.015 mg/L	< 0.015 mg/L	< 0.015 mg/L	< 0.015 mg/L	< 0.014 mg/L	< 0.014 mg/L	< 0.015 mg/L
	Chromium	2 mg/L	0.51 mg/L	0.5 mg/L	0.51 mg/L	0.46 mg/L	0.5 mg/L	0.51 mg/L	0.54 mg/L	0.5 mg/L	0.52 mg/L
	Cobalt	80 mg/L	0.03 mg/L (J)	0.023 mg/L (J)	0.056 mg/L (J)	0.027 mg/L (J)	0.029 mg/L (J)	0.027 mg/L (J)	0.042 mg/L (J)	0.025 mg/L (J)	0.028 mg/L (J)
	Copper	25 mg/L	0.037 mg/L (J)	< 0.02 mg/L	0.098 mg/L (J)	0.041 mg/L (J)	0.022 mg/L (J)	< 0.02 mg/L	< 0.099 mg/L	0.098 mg/L (J)	< 0.02 mg/L
	Lead	5 mg/L	0.049 mg/L (J)	0.036 mg/L (J)	0.088 mg/L (J)	< 0.034 mg/L	< 0.034 mg/L	0.065 mg/L (J)	< 0.054 mg/L	< 0.054 mg/L	0.04 mg/L (J)
	Molybdenum	350 mg/L	< 0.038 mg/L	< 0.038 mg/L	0.049 mg/L (J)	< 0.038 mg/L	< 0.038 mg/L	0.042 mg/L (J)	< 0.049 mg/L	< 0.049 mg/L	< 0.038 mg/L
	Nickel	20 mg/L	0.12 mg/L (J)	0.098 mg/L (J)	0.13 mg/L (J)	0.1 mg/L (J)	0.11 mg/L (J)	0.1 mg/L (J)	0.13 mg/L (J)	0.083 mg/L (J)	0.097 mg/L (J)
	Selenium	1 mg/L	< 0.098 mg/L	< 0.098 mg/L	< 0.098 mg/L	< 0.098 mg/L	< 0.098 mg/L	< 0.098 mg/L	0.14 mg/L (J)	< 0.098 mg/L	0.1 mg/L (J)
	Silver	5 mg/L	< 0.016 mg/L	< 0.016 mg/L	< 0.016 mg/L	< 0.016 mg/L	< 0.016 mg/L	< 0.016 mg/L	< 0.018 mg/L	13 mg/L	< 0.016 mg/L
	Thallium	7 mg/L	< 0.079 mg/L	< 0.079 mg/L	< 0.079 mg/L	< 0.079 mg/L	< 0.079 mg/L	< 0.079 mg/L	< 0.048 mg/L	< 0.048 mg/L	< 0.079 mg/L
	Vanadium	24 mg/L	0.23 mg/L	0.21 mg/L	0.23 mg/L	0.21 mg/L	0.23 mg/L	0.22 mg/L	0.23 mg/L	0.22 mg/L	0.24 mg/L
	Zinc	250 mg/L	0.091 mg/L (J)	0.085 mg/L (J)	0.11 mg/L (J)	< 0.077 mg/L	< 0.077 mg/L	< 0.077 mg/L	0.21 mg/L (J)	< 0.077 mg/L	< 0.077 mg/L
EPA 7470A	Mercury	0.2 mg/L	< 0.016 mg/L	< 0.016 mg/L	< 0.016 mg/L	< 0.016 mg/L	< 0.016 mg/L	< 0.011 mg/L	< 0.011 mg/L	< 0.011 mg/L	< 0.016 mg/L
EPA 8260B	1,1-Dichloroethene	0.7 mg/L	< 0.01 mg/L	< 0.01 mg/L	< 0.01 mg/L	< 0.006 mg/L	< 0.006 mg/L	< 0.006 mg/L	< 0.006 mg/L	< 0.005 mg/L	< 0.005 mg/L
	1,2-Dichloroethane	0.5 mg/L	< 0.01 mg/L	< 0.01 mg/L	< 0.006 mg/L	< 0.006 mg/L	< 0.006 mg/L	< 0.006 mg/L	< 0.006 mg/L	< 0.003 mg/L	< 0.003 mg/L
	1,4-Dichlorobenzene	7.5 mg/L	< 0.02 mg/L	0.02 mg/L (J)	0.02 mg/L (J)	0.01 mg/L (J)	0.01 mg/L (J)	0.01 mg/L (J)	0.02 mg/L (J)	0.01 mg/L (J)	0.01 mg/L (J)
	2-Butanone	200 mg/L	32 mg/L	29 mg/L	18 mg/L	27 mg/L	33 mg/L	41 mg/L	37 mg/L	27 mg/L	27 mg/L
	Benzene	0.5 mg/L	0.8 mg/L	0.8 mg/L	0.7 mg/L	0.6 mg/L	0.7 mg/L	0.7 mg/L	0.8 mg/L	0.6 mg/L	0.8 mg/L
	Carbon Tetrachloride	0.5 mg/L	< 0.01 mg/L	< 0.01 mg/L	< 0.005 mg/L	< 0.006 mg/L	< 0.006 mg/L	< 0.006 mg/L	< 0.006 mg/L	< 0.002 mg/L	< 0.002 mg/L
	Chlorobenzene	100 mg/L	< 0.01 mg/L	< 0.01 mg/L	< 0.03 mg/L	< 0.007 mg/L	< 0.007 mg/L	< 0.007 mg/L	< 0.007 mg/L	< 0.02 mg/L	< 0.02 mg/L
	Chloroform	6 mg/L	< 0.02 mg/L	< 0.01 mg/L	< 0.008 mg/L	< 0.01 mg/L	< 0.01 mg/L	< 0.01 mg/L	< 0.01 mg/L	< 0.004 mg/L	< 0.004 mg/L
	Tetrachloroethene	0.7 mg/L	< 0.02 mg/L	0.01 mg/L (J)	< 0.02 mg/L	< 0.008 mg/L	< 0.008 mg/L	< 0.008 mg/L	< 0.008 mg/L	< 0.01 mg/L	< 0.01 mg/L
	Trichloroethene	0.5 mg/L	< 0.02 mg/L	< 0.01 mg/L	< 0.01 mg/L	< 0.008 mg/L	< 0.008 mg/L	< 0.008 mg/L	< 0.008 mg/L	< 0.007 mg/L	< 0.007 mg/L
	Vinyl Chloride	0.2 mg/L	< 0.01 mg/L	< 0.009 mg/L	< 0.01 mg/L	< 0.006 mg/L	< 0.006 mg/L	< 0.006 mg/L	< 0.006 mg/L	< 0.005 mg/L	< 0.005 mg/L
EPA 8270C	2-Methylphenol	200 mg/L	0.2 mg/L (J)	< 0.16 mg/L	0.22 mg/L (J)	0.17 mg/L (J)	< 0.16 mg/L	0.13 mg/L (J)	0.18 mg/L (J)	0.18 mg/L (J)	0.21 mg/L (J)
	2,4-Dinitrotoluene	0.13 mg/L	< 0.074 mg/L	< 0.074 mg/L	< 0.074 mg/L	< 0.074 mg/L	< 0.074 mg/L	< 0.5 mg/L	< 0.5 mg/L	< 0.5 mg/L	< 0.5 mg/L
	2,4,5-Trichlorophenol	400 mg/L	< 0.52 mg/L	< 0.52 mg/L	< 0.52 mg/L	< 0.52 mg/L	< 0.52 mg/L	< 0.17 mg/L	< 0.17 mg/L	< 0.17 mg/L	< 0.17 mg/L
	2,4,6-Trichlorophenol	2 mg/L	< 0.25 mg/L	< 0.25 mg/L	< 0.25 mg/L	< 0.25 mg/L	< 0.25 mg/L	< 0.67 mg/L	< 0.67 mg/L	< 0.67 mg/L	< 0.67 mg/L
	3-,4-Methylphenol	200 mg/L	20 mg/L	13 mg/L	20 mg/L	16 mg/L	14 mg/L	14 mg/L	17 mg/L	20 mg/L	16 mg/L
	Hexachlorobenzene	0.13 mg/L	< 0.078 mg/L	< 0.078 mg/L	< 0.078 mg/L	< 0.078 mg/L	< 0.078 mg/L	< 0.085 mg/L	< 0.085 mg/L	< 0.085 mg/L	< 0.085 mg/L
	Hexachlorobutadiene	0.5 mg/L	< 0.13 mg/L	< 0.13 mg/L	< 0.13 mg/L	< 0.13 mg/L	< 0.13 mg/L	< 0.093 mg/L	< 0.093 mg/L	< 0.093 mg/L	< 0.093 mg/L
	Hexachloroethane	3 mg/L	< 0.14 mg/L	< 0.14 mg/L	< 0.14 mg/L	< 0.14 mg/L	< 0.14 mg/L	< 0.13 mg/L	< 0.13 mg/L	< 0.13 mg/L	< 0.13 mg/L
	Nitrobenzene	2 mg/L	< 0.16 mg/L	< 0.16 mg/L	< 0.16 mg/L	< 0.16 mg/L	< 0.16 mg/L	< 0.16 mg/L	< 0.16 mg/L	< 0.16 mg/L	< 0.16 mg/L
	Pentachlorophenol	1.7 mg/L	< 0.65 mg/L	< 0.65 mg/L	< 0.65 mg/L	< 0.65 mg/L	< 0.65 mg/L	< 0.97 mg/L	< 0.97 mg/L	< 0.97 mg/L	< 0.97 mg/L
	Pyridine	5 mg/L	0.51 mg/L (J)	0.28 mg/L (J)	0.51 mg/L (J)	0.38 mg/L (J)	0.28 mg/L (J)	0.15 mg/L (J)	< 0.14 mg/L	0.46 mg/L (J)	0.37 mg/L (J)

*Regulatory levels are the lowest value of TCLP, STLC, and TTLC regulatory levels. RCRA regulatory levels used for pH (corrosivity) and Flashpoint (ignitibility).
Laboratory non-detections are reported as less than ("<") the laboratory method detection limit.
Laboratory result qualifiers are reported to the right of corresponding detections (in parentheses). Definitions of reported qualifiers are below:
J: Result is estimated between the laboratory method detection limit and reporting limit.

Detection
Detection Outside of Regulatory Level
Non-Detection
Non-Detection (MDL Above Regulaory Level)

Laboratory Results : #6 North Perimeter Sample Port

PROJ-037507 | Chiquita Canyon Landfill Waste Sampling

Data Updated at 5/8/2024 1:19:15 PM

			#6 North Perimeter Sample Port							
Analytical Method	Analyte	Regulatory Levels*	4/6/2024 CACA0406Z006NP 505913 Field pH: 5.90	4/7/2024 CACA0407Z006NP 505915 Field pH: 6.0	4/8/2024 CACA0408Z006NP 505994 Field pH: 5.95	4/9/2024 CACA0409Z006NP 506077 Field pH: 5.95	4/10/2024 CACA0410Z006NP 506182 Field pH: 6.0	4/11/2024 CACA0411Z006NP 506277 Field pH: 6.00	4/12/2024 CACA0412Z006NP 506343 Field pH: 6.0	4/13/2024 CACA0413Z006NP 506344 Field pH: 6.03
EPA 9040B	pH	≥2 ≤12.5 SU	5.9 SU	5.89 SU	6.02 SU	5.93 SU	5.96 SU	5.9 SU	5.97 SU	5.98 SU
	Temperature	NA	16 deg C	17.3 deg C	23.5 deg C	16.4 deg C	18.1 deg C	21 deg C	18.9 deg C	18.9 deg C
EPA 1010	Flash Point	140 deg F	203 deg F	196 deg F	77 deg F	189 deg F	203 deg F	199 deg F	190 deg F	198 deg F
EPA 6010B	Antimony	15 mg/L	0.077 mg/L (J)	< 0.083 mg/L	< 0.069 mg/L	< 0.069 mg/L	< 0.069 mg/L	< 0.069 mg/L	0.071 mg/L (J)	< 0.037 mg/L
	Arsenic	5 mg/L	< 0.048 mg/L	0.21 mg/L	0.23 mg/L	0.21 mg/L	0.22 mg/L	< 0.048 mg/L	< 0.048 mg/L	< 0.048 mg/L
	Barium	100 mg/L	3.5 mg/L	3.6 mg/L	3.7 mg/L	3.3 mg/L	3.5 mg/L	3.3 mg/L	3.6 mg/L	3.6 mg/L
	Beryllium	0.75 mg/L	< 0.0097 mg/L	< 0.0027 mg/L	< 0.0017 mg/L	< 0.0017 mg/L	< 0.0017 mg/L	< 0.0097 mg/L	< 0.0097 mg/L	< 0.0097 mg/L
	Cadmium	1 mg/L	< 0.014 mg/L	< 0.0092 mg/L	< 0.015 mg/L	< 0.015 mg/L	< 0.015 mg/L	< 0.014 mg/L	< 0.014 mg/L	< 0.014 mg/L
	Chromium	2 mg/L	0.54 mg/L	0.47 mg/L	0.47 mg/L	0.44 mg/L	0.46 mg/L	0.47 mg/L	0.5 mg/L	0.5 mg/L
	Cobalt	80 mg/L	0.047 mg/L (J)	0.039 mg/L (J)	0.035 mg/L (J)	0.03 mg/L (J)	0.03 mg/L (J)	0.05 mg/L (J)	0.051 mg/L (J)	0.051 mg/L (J)
	Copper	25 mg/L	< 0.099 mg/L	< 0.037 mg/L	0.024 mg/L (J)	< 0.02 mg/L	0.055 mg/L (J)	< 0.099 mg/L	< 0.099 mg/L	< 0.099 mg/L
	Lead	5 mg/L	< 0.054 mg/L	< 0.04 mg/L	< 0.034 mg/L	< 0.034 mg/L	< 0.034 mg/L	< 0.054 mg/L	< 0.054 mg/L	< 0.054 mg/L
	Molybdenum	350 mg/L	< 0.049 mg/L	< 0.025 mg/L	< 0.038 mg/L	< 0.038 mg/L	0.05 mg/L (J)	< 0.049 mg/L	< 0.049 mg/L	< 0.049 mg/L
	Nickel	20 mg/L	0.15 mg/L (J)	0.15 mg/L (J)	0.062 mg/L (J)	0.058 mg/L (J)	0.097 mg/L (J)	< 0.016 mg/L	0.14 mg/L (J)	0.13 mg/L (J)
	Selenium	1 mg/L	0.26 mg/L (J)	< 0.18 mg/L	< 0.098 mg/L	< 0.098 mg/L	0.14 mg/L (J)	0.12 mg/L (J)	0.18 mg/L (J)	0.16 mg/L (J)
	Silver	5 mg/L	< 0.018 mg/L	< 0.027 mg/L	< 0.016 mg/L	< 0.016 mg/L	< 0.016 mg/L	< 0.016 mg/L	< 0.018 mg/L	< 0.018 mg/L
	Thallium	7 mg/L	< 0.048 mg/L	< 0.2 mg/L	< 0.079 mg/L	< 0.079 mg/L	< 0.079 mg/L	< 0.048 mg/L	< 0.048 mg/L	< 0.048 mg/L
	Vanadium	24 mg/L	0.18 mg/L (J)	0.18 mg/L (J)	0.19 mg/L (J)	0.16 mg/L (J)	0.17 mg/L (J)	0.19 mg/L (J)	0.18 mg/L (J)	0.17 mg/L (J)
	Zinc	250 mg/L	1.3 mg/L	1.4 mg/L	1.2 mg/L	1.3 mg/L	1.2 mg/L	1.5 mg/L	1.7 mg/L	1.7 mg/L
EPA 7470A	Mercury	0.2 mg/L	< 0.039 mg/L	< 0.039 mg/L	< 0.039 mg/L	< 0.039 mg/L				
		200 ug/L					< 39 ug/L	< 39 ug/L	< 39 ug/L	< 39 ug/L
EPA 8260B	1,1-Dichloroethene	0.7 mg/L	< 0.006 mg/L	< 0.006 mg/L	< 0.005 mg/L	< 0.006 mg/L	< 0.006 mg/L	< 0.006 mg/L	< 0.005 mg/L	< 0.005 mg/L
	1,2-Dichloroethane	0.5 mg/L	< 0.006 mg/L	< 0.006 mg/L	< 0.003 mg/L	< 0.006 mg/L	< 0.006 mg/L	< 0.006 mg/L	< 0.003 mg/L	< 0.003 mg/L
	1,4-Dichlorobenzene	7.5 mg/L	0.02 mg/L (J)	0.02 mg/L (J)	0.02 mg/L (J)	0.02 mg/L (J)	0.01 mg/L (J)	0.01 mg/L (J)	0.01 mg/L (J)	0.01 mg/L (J)
	2-Butanone	200 mg/L	34 mg/L	19 mg/L	21 mg/L	26 mg/L	14 mg/L	22 mg/L	22 mg/L	21 mg/L
	Benzene	0.5 mg/L	1.3 mg/L	1.2 mg/L	1.4 mg/L	1.2 mg/L	1.2 mg/L	1.3 mg/L	1.1 mg/L	1.1 mg/L
	Carbon Tetrachloride	0.5 mg/L	< 0.006 mg/L	< 0.005 mg/L	< 0.002 mg/L	< 0.006 mg/L	< 0.005 mg/L	< 0.006 mg/L	< 0.002 mg/L	< 0.002 mg/L
	Chlorobenzene	100 mg/L	< 0.007 mg/L	0.005 mg/L (J)	< 0.02 mg/L	< 0.007 mg/L	< 0.005 mg/L	< 0.007 mg/L	< 0.02 mg/L	< 0.02 mg/L
	Chloroform	6 mg/L	< 0.01 mg/L	< 0.006 mg/L	< 0.004 mg/L	< 0.01 mg/L	< 0.006 mg/L	< 0.01 mg/L	< 0.004 mg/L	< 0.004 mg/L
	Tetrachloroethene	0.7 mg/L	< 0.008 mg/L	< 0.004 mg/L	< 0.01 mg/L	< 0.008 mg/L	< 0.004 mg/L	< 0.008 mg/L	< 0.01 mg/L	< 0.01 mg/L
	Trichloroethene	0.5 mg/L	< 0.008 mg/L	< 0.006 mg/L	< 0.007 mg/L	< 0.008 mg/L	< 0.006 mg/L	< 0.008 mg/L	< 0.007 mg/L	< 0.007 mg/L
	Vinyl Chloride	0.2 mg/L	< 0.006 mg/L	< 0.005 mg/L	< 0.005 mg/L	< 0.006 mg/L	< 0.005 mg/L	< 0.006 mg/L	< 0.005 mg/L	< 0.005 mg/L
EPA 8270C	2-Methylphenol	200 mg/L	0.2 mg/L (J)	0.44 mg/L (J)	0.47 mg/L (J)	0.21 mg/L (J)	0.22 mg/L (J)	0.18 mg/L (J)	0.25 mg/L (J)	0.27 mg/L (J)
	2,4-Dinitrotoluene	0.13 mg/L	< 0.5 mg/L	< 0.074 mg/L	< 0.074 mg/L	< 0.074 mg/L	< 0.074 mg/L	< 0.5 mg/L	< 0.074 mg/L	< 0.074 mg/L
	2,4,5-Trichlorophenol	400 mg/L	< 0.17 mg/L	< 0.52 mg/L	< 0.52 mg/L	< 0.52 mg/L	< 0.52 mg/L	< 0.17 mg/L	< 0.52 mg/L	< 0.52 mg/L
	2,4,6-Trichlorophenol	2 mg/L	< 0.67 mg/L	< 0.25 mg/L	< 0.25 mg/L	< 0.25 mg/L	< 0.25 mg/L	< 0.67 mg/L	< 0.25 mg/L	< 0.25 mg/L
	3-,4-Methylphenol	200 mg/L	19 mg/L	14 mg/L	18 mg/L	20 mg/L	19 mg/L	17 mg/L	22 mg/L	25 mg/L
	Hexachlorobenzene	0.13 mg/L	< 0.085 mg/L	< 0.078 mg/L	< 0.078 mg/L	< 0.078 mg/L	< 0.078 mg/L	< 0.085 mg/L	< 0.078 mg/L	< 0.078 mg/L
	Hexachlorobutadiene	0.5 mg/L	< 0.093 mg/L	< 0.13 mg/L	< 0.13 mg/L	< 0.13 mg/L	< 0.13 mg/L	< 0.093 mg/L	< 0.13 mg/L	< 0.13 mg/L
	Hexachloroethane	3 mg/L	< 0.13 mg/L	< 0.14 mg/L	< 0.14 mg/L	< 0.14 mg/L	< 0.14 mg/L	< 0.13 mg/L	< 0.14 mg/L	< 0.14 mg/L
	Nitrobenzene	2 mg/L	< 0.16 mg/L	< 0.16 mg/L	< 0.16 mg/L	< 0.16 mg/L	< 0.16 mg/L	< 0.16 mg/L	< 0.16 mg/L	< 0.16 mg/L
	Pentachlorophenol	1.7 mg/L	< 0.97 mg/L	< 0.65 mg/L	< 0.65 mg/L	< 0.65 mg/L	< 0.65 mg/L	< 0.97 mg/L	< 0.65 mg/L	< 0.65 mg/L
	Pyridine	5 mg/L	0.58 mg/L (J)	0.61 mg/L (J)	0.81 mg/L (J)	0.31 mg/L (J)	0.51 mg/L (J)	0.37 mg/L (J)	0.68 mg/L (J)	0.85 mg/L (J)
SM 5310B	Total Organic Carbon	NA								34,000 mg/L
SM2540D	Total Suspended Solids	NA								650 mg/L

*Regulatory levels are the lowest value of TCLP, STLC, and TTLC regulatory levels. RCRA regulatory levels used for pH (corrosivity) and Flashpoint (ignitibility).
Laboratory non-detections are reported as less than ("<") the laboratory method detection limit.
Laboratory result qualifiers are reported to the right of corresponding detections (in parentheses). Definitions of reported qualifiers are below:
J: Result is estimated between the laboratory method detection limit and reporting limit.

- Detection
- Detection Outside of Regulatory Level
- Non-Detection
- Non-Detection (MDL Above Regulaory Level)

Chiquita Canyon
Waste Stream Documentation Form

Waste Profile Number:	Waste Stream ID No.: Tank Farm Group A
Generator Number: CAL000347030	SAA No. / Site ID No.: #7
EPA Source Code: G49 Form Code: W219	Hazardous Waste Codes: D018, 213

A. GENERAL INFORMATION

Facility: Chiquita Canyon Landfill

Address: 29201 Henry Mayo Dr, Castaic, CA, 91384	Phone No: 330-635-4885
Contact: Dave Matthews	Email Address: dave.matthews@wasteconnections.com

Waste Stream Name: Waste Hazardous Waste Leachate

B. PROCESS INFORMATION

☑ New Process ☐ Process Change ☐ Process Review

Process Description (include any storage requirements):

Chiquita Canyon Landfill is experiencing an underground reaction in an inactive portion of the Landfill (also known as an "Elevated Temperature Landfill" or "ETLF" event). The reaction has caused an increase in the production of landfill gas and leachate. Landfill leachate forms via decomposition of putrescible and organic fractions of landfill material transported by water percolating through the soil profile. This leachate is generated from Module 2B/3/4/ P2 and Module 2B/3 and Module 4 wells. The wells are connected via pipes and transferred into the Tank Battery A within Tank Farm #7.

Physical Property of Waste:	☐ Solid	☑ Liquid	☐ Gas	☐ Other

Generation Rate: **100,000** Units: ☑ Gallons OR ☐ Pounds Rate: ☑ Day OR ☐ Year

Collection Mode: 20,000-Gallon Frac Tanks

Material Name (include NSN if available)	Range or Concentration
Leachate	100%

C. EXEMPTIONS AND EXCLUSIONS

1. Is the waste a "solid waste" according to §CFR 261.2?	☑ Yes	☐ No

If no, provide the regulatory exclusion or exemption citation.

If No, A HW CHARACTERIZATION IS NOT REQUIRED - SKIP TO SECTION F

2. Is the waste a solid waste excluded or exempted from hazardous waste regulations?	☐ Yes	☑ No

If yes, provide the regulatory citation and justification:

If Yes, A HW CHARACTERIZATION IS NOT REQUIRED - SKIP TO SECTION F

3. Is this Used Oil OR an off specification petroleum fuel managed under §CFR 279?	☐ Yes	☑ No

If Yes, A HW CHARACTERIZATION IS NOT REQUIRED - SKIP TO SECTION F

4. Is the waste a Universal Waste managed under §CFR 273?	☐ Yes	☑ No

If Yes, A HW CHARACTERIZATION IS NOT REQUIRED - SKIP TO SECTION F

Chiquita Canyon
Waste Stream Documentation Form

Waste Profile Number:	Waste Stream ID No.: Tank Farm Group A
Generator Number: CAL000347030	SAA No. / Site ID No.: #7
EPA Source Code: G49 Form Code: W219	Hazardous Waste Codes: D018, 213

D. HAZARDOUS WASTE CHARACTERIZATION

Based on: ☐ User Knowledge ☑ Analytical

Sample ID: See Section F

Analytical Date: N/A

LISTED HAZARDOUS WASTE

Is this an F-listed waste?	☐ Yes	☑ No
1. Are solvents listed 40 CFR 261.31 (a) present at 10% or more and used as a solvent? If yes, identify the solvents.	☐ Yes	☑ No

Solvent	Percent Before Use	Waste Code

1a. Is this an F-listed waste from a specific process? If yes, identify the process.	☐ Yes	☑ No
Waste Code:		
2. Is this a K-listed waste from a specific source as listed in §261.32? If yes, identify the process.	☐ Yes	☑ No
Waste Code:		
3. Is this a P-listed commercial chemical product; (i.e. a pure chemical or sole active ingredient) listed in §261.33(e)?	☐ Yes	☑ No

P Code	CAS	Substance

4. Is this a U-listed commercial chemical product; (i.e. a pure chemical or sole active ingredient) listed in §261.33(f)?	☐ Yes	☑ No

U Code	CAS	Substance

Generators must determine if a waste exhibits any of the characteristics of a HW.

HAZARDOUS WASTE CHARACTERISTICS

Is the waste Ignitable per §261.21? **Waste Code: D001**	☐ Yes	☑ No
1. Is the waste a liquid with a flash point less than 140°F? Flash Point:	☐ Yes	☑ No
2. Is the waste a non-liquid capable, under standard temperature and pressure, of causing fire through friction, absorption of moisture, or spontaneous chemical changes; and when ignited, burns so vigorously and persistently that it creates a hazard?	☐ Yes	☑ No
3. Is the waste an ignitable compressed gas as defined in 49 CFR 173.300?	☐ Yes	☑ No
4. Is the waste an oxidizer as defined by 49 CFR 173.151 (such as a chlorate or peroxide)?	☐ Yes	☑ No
Is the waste Corrosive per §261.22? **Waste Code: D002**	☐ Yes	☑ No
1. Is the waste an aqueous solution with a pH ≤ 2 or ≥ 12.5?	☐ Yes	☑ No
2. Is the waste a liquid that corrodes steel at a rate of at least 0.25 inches per year?	☐ Yes	☑ No

Chiquita Canyon
Waste Stream Documentation Form

Waste Profile Number:	Waste Stream ID No.: Tank Farm Group A
Generator Number: CAL000347030	SAA No. / Site ID No.: #7
EPA Source Code: G49 Form Code: W219	Hazardous Waste Codes: D018, 213

Is the waste Reactive per §261.23? **Waste Code: D003**	☐ Yes	☑ No
1. Is the waste normally unstable and readily undergoes violent change without detonating?	☐ Yes	☑ No
2. Water Reactive: Does the waste react violently with water? OR Forms potentially explosive mixture with water? OR When mixed with water does the waste generate toxic gases, vapors, or fumes in a quantity dangerous to human health or the environment?	☐ Yes	☑ No
3. Is the waste a cyanide or sulfide compound that could react at a pH between 2 and 12.5 releasing toxic gases?	☐ Yes	☑ No
4. Is the waste capable of detonation or explosive reaction if subjected to strong ignition sources or when heated under confinement?	☐ Yes	☑ No
5. Is the waste readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure?	☐ Yes	☑ No
6. Is the waste a forbidden Class A or Class B explosive as defined in 49 CFR 173.51, 173.53 or 173.88?	☐ Yes	☑ No
Is the waste Toxic per §261.24? **Waste code(s): D004-D043**	☑ Yes	☐ No
Is the waste a characteristic waste?	☑ Yes	☐ No

E. TREATMENT AND DISPOSAL REQUIREMENTS

1. Is the waste	☐ Recycled (includes UW)?	☐ Burned for Energy Recovery (includes Used Oil)?
	☐ Non hazardous?	☑ Discharged to CWA regulated unit?

If Non Hazardous / Recycled (includes UW) or Burned for Energy Recovery Skip to Section F

2. Is the required one time LDR completed for HW discharged to a CWA unit?	☐ NA	☑ Yes	☐ No
3. Is an exemption claimed from Land Disposal Restrictions (LDR), §268?		☐ Yes	☑ No

Treatment Group:
☐ Wastewater (Contains <1% Total Organic Compounds and <1% Suspended Solids)
☑ Non-wastewater (Not Wastewater)

EPA Code	Constituent	Concentration (Toxicity Characteristic Only)	Regulatory Limit	Subcategory	LDR Treatment Standard (from §268.40)
D018	Benzene	>0.5 mg/L TCLP	0.5 mg/L TCLP	Wastes that exhibit the characteristics of toxicity	0.14 mg/L and meet § 268.48 standards 8

UHCs apply only to characteristic HW (UHCs requirements do not apply to high TOC Ignitable only waste)

Chiquita Canyon
Waste Stream Documentation Form

Waste Profile Number:	Waste Stream ID No.: Tank Farm Group A
Generator Number: CAL000347030	SAA No. / Site ID No.: #7
EPA Source Code: G49 Form Code: W219	Hazardous Waste Codes: D018, 213

4. Are there any Underlying Hazardous Constituents (UHC)? (Characteristic Waste Only)	☐ Yes	☑ No

Constituent	Universal Treatment Standard (from §268.48)

F. WASTE STREAM SUMMARY

Waste Stream Name: Waste Hazardous Waste Leachate

Waste Profile Number and Name:

Shipping Information: NA3082, Hazardous Waste, Liquid, n.o.s., (Benzene), 9, PGIII

Emergency Guide Book Number: 131	Emergency Guide Year: 2020

Waste Codes: D018, 213

Comments: See attached analytical results ranging from 02/10/24 - 02/19/24.

Analytical Recommendation:

REVISION TABLE

Laboratory Detection Summary | #7 Tank Farm - Group A

PROJ-037507 | Chiquita Canyon Landfill Waste Sampling

Data Updated at 4/2/2024 3:08:23 PM

Analytical Method	Analyte	Count of Lab Results	Count of Detections	Count of Samples Outside Regulatory Levels	Range of Detections
EPA 1010	Flash Point	11	11	0	176 - 190 deg F
EPA 6010B	Antimony	11	5	0	0.12 J - 0.73 mg/L
	Arsenic	11	11	0	0.13 J - 0.31 mg/L
	Barium	11	11	0	1.6 - 2.8 mg/L
	Chromium	11	11	0	0.37 - 0.75 mg/L
	Cobalt	11	11	0	0.028 J - 0.056 mg/L
	Copper	11	6	0	0.021 J - 0.28 mg/L
	Lead	11	1	0	0.06 J - 0.06 mg/L
	Molybdenum	11	5	0	0.039 J - 0.081 J mg/L
	Nickel	11	11	0	0.13 J - 0.32 mg/L
	Selenium	11	2	0	0.058 J - 0.13 J mg/L
	Silver	11	1	0	0.044 J - 0.044 mg/L
	Thallium	11	1	0	0.64 - 0.64 mg/L
	Vanadium	11	11	0	0.14 J - 0.22 mg/L
	Zinc	11	9	0	0.12 J - 0.57 mg/L
EPA 8260B	1,4-Dichlorobenzene	11	5	0	0.007 J - 0.01 J mg/L
	2-Butanone	11	11	0	5.8 J - 42 mg/L
	Benzene	11	11	9	0.4 J - 0.7 mg/L
	Chlorobenzene	11	1	0	0.01 J - 0.01 J mg/L
	Tetrachloroethene	11	1	0	0.02 J - 0.02 J mg/L
EPA 8270C	2-Methylphenol	11	4	0	0.15 J - 0.2 mg/L
	3-,4-Methylphenol	11	11	0	12 - 22 mg/L
	Pyridine	11	3	0	0.33 J - 0.42 mg/L
EPA 9040B	pH	11	11	0	6.69 - 7.05 SU
	Temperature	11	11	0	16.8 - 20.4 deg C

Laboratory result qualifiers are reported to the right of corresponding detections. Definitions of reported qualifiers are below:

J: Result is estimated between the laboratory method detection limit and reporting limit.

Laboratory Results | #7 Tank Farm - Group A

PROJ-037507 | Chiquita Canyon Landfill Waste Sampling

Data Updated at 4/2/2024 3:08:23 PM

			Tank Farm A								
			2/10/2024	2/11/2024	2/12/2024	2/13/2024	2/14/2024	2/15/2024	2/16/2024	2/17/2024	
			Tank Group A - Tank 13	Tank Group A - Tank 13	Tank Group A - Tank 13	Tank Group A - Tank 13	Tank Group A - Tank 13	Tank Group A - Tank 13	Tank Group A - Tank 13	Tank Group A - Tank 8	Tank Group A - Tank 13
			CACA0210Z001A13	CACA0211Z001A13	CACA0212Z001A13	CACA0213Z001A13	CACA0214Z001A13	CACA0215Z001A13	CACA0216Z001A13	CACA0217Z001A08	CACA0217Z001A13
			502069	502071	502175	502296	502412	502537	502624	502628	502628
			Field pH:	Field pH:	Field pH:	Field pH:	Field pH:	Field pH:	Field pH:	Field pH:	Field pH:
Analytical Method	Analyte	Regulatory Levels*	-	-	-	-	-	6.39	6.97	6.66	6.77
EPA 9040B	pH	≥2 ≤12.5 SU	7.05 SU	6.85 SU	6.73 SU	6.88 SU	6.85 SU	6.78 SU	6.93 SU	6.79 SU	6.95 SU
	Temperature	NA	20.4 deg C	19.2 deg C	19.3 deg C	16.8 deg C	20.3 deg C	19.6 deg C	19.6 deg C	19.3 deg C	18.3 deg C
EPA 1010	Flash Point	140 deg F	176 deg F	180 deg F	176 deg F	185 deg F	190 deg F	190 deg F	176 deg F	185 deg F	176 deg F
EPA 6010B	Antimony	15 mg/L	< 0.069 mg/L	< 0.069 mg/L	< 0.069 mg/L	< 0.069 mg/L	0.73 mg/L	0.12 mg/L (J)	0.44 mg/L (J)	< 0.069 mg/L	< 0.069 mg/L
	Arsenic	5 mg/L	0.27 mg/L	0.27 mg/L	0.27 mg/L	0.28 mg/L	0.3 mg/L	0.13 mg/L (J)	0.29 mg/L	0.31 mg/L	0.31 mg/L
	Barium	100 mg/L	2.8 mg/L	2.8 mg/L	2.8 mg/L	2.5 mg/L	2.7 mg/L	2.7 mg/L	2.4 mg/L	2.5 mg/L	2.7 mg/L
	Beryllium	0.75 mg/L	< 0.0017 mg/L	< 0.0017 mg/L	< 0.0017 mg/L	< 0.0017 mg/L	< 0.0017 mg/L	< 0.0097 mg/L	< 0.0017 mg/L	< 0.0017 mg/L	< 0.0017 mg/L
	Cadmium	1 mg/L	< 0.015 mg/L	< 0.015 mg/L	< 0.015 mg/L	< 0.015 mg/L	< 0.015 mg/L	< 0.014 mg/L	< 0.015 mg/L	< 0.015 mg/L	< 0.015 mg/L
	Chromium	2 mg/L	0.52 mg/L	0.5 mg/L	0.54 mg/L	0.5 mg/L	0.54 mg/L	0.55 mg/L	0.52 mg/L	0.75 mg/L	0.56 mg/L
	Cobalt	80 mg/L	0.031 mg/L (J)	0.028 mg/L (J)	0.033 mg/L (J)	0.056 mg/L (J)	0.038 mg/L (J)	0.028 mg/L (J)	0.037 mg/L (J)	0.039 mg/L (J)	0.037 mg/L (J)
	Copper	25 mg/L	< 0.02 mg/L	< 0.02 mg/L	< 0.02 mg/L	0.022 mg/L (J)	< 0.02 mg/L	< 0.099 mg/L	0.021 mg/L (J)	0.28 mg/L	0.032 mg/L (J)
	Lead	5 mg/L	< 0.034 mg/L	< 0.034 mg/L	< 0.034 mg/L	< 0.034 mg/L	< 0.034 mg/L	0.06 mg/L (J)	< 0.034 mg/L	< 0.034 mg/L	< 0.034 mg/L
	Molybdenum	350 mg/L	< 0.038 mg/L	< 0.038 mg/L	< 0.038 mg/L	0.081 mg/L (J)	0.039 mg/L (J)	< 0.049 mg/L	< 0.038 mg/L	0.074 mg/L (J)	0.043 mg/L (J)
	Nickel	20 mg/L	0.13 mg/L (J)	0.13 mg/L (J)	0.21 mg/L	0.32 mg/L	0.21 mg/L	0.22 mg/L	0.19 mg/L (J)	0.28 mg/L	0.21 mg/L
	Selenium	1 mg/L	< 0.098 mg/L	< 0.098 mg/L	< 0.098 mg/L	< 0.098 mg/L	< 0.098 mg/L	0.058 mg/L (J)	< 0.098 mg/L	< 0.098 mg/L	< 0.098 mg/L
	Silver	5 mg/L	< 0.016 mg/L	< 0.016 mg/L	< 0.016 mg/L	0.044 mg/L (J)	< 0.016 mg/L	< 0.018 mg/L	< 0.016 mg/L	< 0.016 mg/L	< 0.016 mg/L
	Thallium	7 mg/L	< 0.079 mg/L	< 0.079 mg/L	< 0.079 mg/L	< 0.079 mg/L	< 0.079 mg/L	< 0.048 mg/L	< 0.079 mg/L	< 0.079 mg/L	0.64 mg/L
	Vanadium	24 mg/L	0.19 mg/L (J)	0.19 mg/L (J)	0.19 mg/L (J)	0.18 mg/L (J)	0.19 mg/L (J)	0.19 mg/L (J)	0.18 mg/L (J)	0.22 mg/L	0.2 mg/L (J)
	Zinc	250 mg/L	0.57 mg/L (J)	0.39 mg/L (J)	0.35 mg/L (J)	0.23 mg/L (J)	0.19 mg/L (J)	0.26 mg/L (J)	0.12 mg/L (J)	0.16 mg/L (J)	0.14 mg/L (J)
EPA 7470A	Mercury	0.2 mg/L	< 0.011 mg/L	< 0.016 mg/L	< 0.016 mg/L	< 0.011 mg/L	< 0.016 mg/L	< 0.016 mg/L	< 0.011 mg/L	< 0.011 mg/L	< 0.011 mg/L
EPA 8260B	1,1-Dichloroethene	0.7 mg/L	< 0.006 mg/L	< 0.02 mg/L	< 0.01 mg/L	< 0.005 mg/L	< 0.006 mg/L	< 0.006 mg/L	< 0.006 mg/L	< 0.01 mg/L	< 0.006 mg/L
	1,2-Dichloroethane	0.5 mg/L	< 0.006 mg/L	< 0.02 mg/L	< 0.01 mg/L	< 0.003 mg/L	< 0.006 mg/L	< 0.006 mg/L	< 0.006 mg/L	< 0.01 mg/L	< 0.006 mg/L
	1,4-Dichlorobenzene	7.5 mg/L	< 0.01 mg/L	< 0.02 mg/L	< 0.02 mg/L	0.009 mg/L (J)	0.007 mg/L (J)	< 0.01 mg/L	0.007 mg/L (J)	< 0.02 mg/L	0.01 mg/L (J)
	2-Butanone	200 mg/L	42 mg/L	32 mg/L	15 mg/L	5.8 mg/L	6.1 mg/L	10 mg/L	8.4 mg/L	42 mg/L	11 mg/L
	Benzene	0.5 mg/L	0.6 mg/L	0.7 mg/L (J)	0.7 mg/L	0.7 mg/L	0.7 mg/L	0.7 mg/L	0.7 mg/L	0.4 mg/L (J)	0.7 mg/L
	Carbon Tetrachloride	0.5 mg/L	< 0.006 mg/L	< 0.02 mg/L	< 0.01 mg/L	< 0.002 mg/L	< 0.005 mg/L	< 0.006 mg/L	< 0.005 mg/L	< 0.01 mg/L	< 0.006 mg/L
	Chlorobenzene	100 mg/L	< 0.007 mg/L	< 0.02 mg/L	< 0.01 mg/L	< 0.02 mg/L	< 0.005 mg/L	0.01 mg/L (J)	< 0.005 mg/L	< 0.01 mg/L	< 0.007 mg/L
	Chloroform	6 mg/L	< 0.01 mg/L	< 0.02 mg/L	< 0.02 mg/L	< 0.004 mg/L	< 0.006 mg/L	< 0.01 mg/L	< 0.006 mg/L	< 0.02 mg/L	< 0.01 mg/L
	Tetrachloroethene	0.7 mg/L	< 0.008 mg/L	< 0.02 mg/L	< 0.02 mg/L	< 0.01 mg/L	< 0.004 mg/L	< 0.008 mg/L	< 0.004 mg/L	< 0.02 mg/L	0.02 mg/L (J)
	Trichloroethene	0.5 mg/L	< 0.008 mg/L	< 0.02 mg/L	< 0.02 mg/L	< 0.007 mg/L	< 0.006 mg/L	< 0.008 mg/L	< 0.006 mg/L	< 0.02 mg/L	< 0.008 mg/L
	Vinyl Chloride	0.2 mg/L	< 0.006 mg/L	< 0.02 mg/L	< 0.01 mg/L	< 0.005 mg/L	< 0.005 mg/L	< 0.006 mg/L	< 0.005 mg/L	< 0.01 mg/L	< 0.006 mg/L
EPA 8270C	2-Methylphenol	200 mg/L	0.2 mg/L (J)	0.16 mg/L (J)	< 0.79 mg/L	< 0.54 mg/L	0.18 mg/L (J)	0.15 mg/L (J)	< 0.32 mg/L	< 0.32 mg/L	< 0.32 mg/L
	2,4-Dinitrotoluene	0.13 mg/L	< 0.074 mg/L	< 0.25 mg/L	< 0.37 mg/L	< 2.5 mg/L	< 0.42 mg/L	< 0.42 mg/L	< 0.15 mg/L	< 0.15 mg/L	< 0.15 mg/L
	2,4,5-Trichlorophenol	400 mg/L	< 0.52 mg/L	< 0.086 mg/L	< 2.6 mg/L	< 0.86 mg/L	< 0.14 mg/L	< 0.14 mg/L	< 1 mg/L	< 1 mg/L	< 1 mg/L
	2,4,6-Trichlorophenol	2 mg/L	< 0.25 mg/L	< 0.33 mg/L	< 1.2 mg/L	< 3.3 mg/L	< 0.56 mg/L	< 0.56 mg/L	< 0.49 mg/L	< 0.49 mg/L	< 0.49 mg/L
	3-,4-Methylphenol	200 mg/L	20 mg/L	17 mg/L	20 mg/L	17 mg/L	22 mg/L	17 mg/L	21 mg/L	14 mg/L	20 mg/L
	Hexachlorobenzene	0.13 mg/L	< 0.078 mg/L	< 0.042 mg/L	< 0.39 mg/L	< 0.42 mg/L	< 0.071 mg/L	< 0.071 mg/L	< 0.16 mg/L	< 0.16 mg/L	< 0.16 mg/L
	Hexachlorobutadiene	0.5 mg/L	< 0.13 mg/L	< 0.047 mg/L	< 0.67 mg/L	< 0.47 mg/L	< 0.078 mg/L	< 0.078 mg/L	< 0.27 mg/L	< 0.27 mg/L	< 0.27 mg/L
	Hexachloroethane	3 mg/L	< 0.14 mg/L	< 0.063 mg/L	< 0.68 mg/L	< 0.63 mg/L	< 0.1 mg/L	< 0.1 mg/L	< 0.27 mg/L	< 0.27 mg/L	< 0.27 mg/L
	Nitrobenzene	2 mg/L	< 0.16 mg/L	< 0.081 mg/L	< 0.79 mg/L	< 0.81 mg/L	< 0.13 mg/L	< 0.13 mg/L	< 0.32 mg/L	< 0.32 mg/L	< 0.32 mg/L
	Pentachlorophenol	1.7 mg/L	< 0.65 mg/L	< 0.48 mg/L	< 3.3 mg/L	< 4.8 mg/L	< 0.81 mg/L	< 0.81 mg/L	< 1.3 mg/L	< 1.3 mg/L	< 1.3 mg/L
	Pyridine	5 mg/L	< 0.21 mg/L	0.34 mg/L (J)	< 1 mg/L	< 0.69 mg/L	0.42 mg/L (J)	0.33 mg/L (J)	< 0.42 mg/L	< 0.42 mg/L	< 0.42 mg/L

*Regulatory levels are the lowest value of TCLP, STLC, and TTLC regulatory levels. RCRA regulatory levels used for pH (corrosivity) and Flashpoint (ignitibility).

Laboratory non-detections are reported as less than ("<") the laboratory method detection limit.

Laboratory result qualifiers are reported to the right of corresponding detections (in parentheses). Definitions of reported qualifiers are below:

J: Result is estimated between the laboratory method detection limit and reporting limit.

- Detection
- Detection Outside of Regulatory Level
- Non-Detection
- Non-Detection (MDL Above Regulaory Level)

Laboratory Results | #7 Tank Farm - Group A

PROJ-037507 | Chiquita Canyon Landfill Waste Sampling

Data Updated at 4/2/2024 3:08:23 PM

			Tank Farm A	
			2/18/2024	2/19/2024
			Tank Group A - Tank 13	Tank Group A - Tank 8
			CACA0218Z001A13	CACA0219Z001A08
			502630	502700
			Field pH:	Field pH:
Analytical Method	Analyte	Regulatory Levels*	7.01	7.08
EPA 9040B	pH	≥2 ≤12.5 SU	6.69 SU	6.93 SU
	Temperature	NA	17.9 deg C	17.4 deg C
EPA 1010	Flash Point	140 deg F	185 deg F	189 deg F
EPA 6010B	Antimony	15 mg/L	0.13 mg/L (J)	0.43 mg/L (J)
	Arsenic	5 mg/L	0.3 mg/L	0.21 mg/L
	Barium	100 mg/L	2.7 mg/L	1.6 mg/L
	Beryllium	0.75 mg/L	< 0.0017 mg/L	< 0.0017 mg/L
	Cadmium	1 mg/L	< 0.015 mg/L	< 0.015 mg/L
	Chromium	2 mg/L	0.57 mg/L	0.37 mg/L
	Cobalt	80 mg/L	0.046 mg/L (J)	0.035 mg/L (J)
	Copper	25 mg/L	0.065 mg/L (J)	0.058 mg/L (J)
	Lead	5 mg/L	< 0.034 mg/L	< 0.034 mg/L
	Molybdenum	350 mg/L	0.077 mg/L (J)	< 0.038 mg/L
	Nickel	20 mg/L	0.23 mg/L	0.14 mg/L (J)
	Selenium	1 mg/L	0.13 mg/L (J)	< 0.098 mg/L
	Silver	5 mg/L	< 0.016 mg/L	< 0.016 mg/L
	Thallium	7 mg/L	< 0.079 mg/L	< 0.079 mg/L
	Vanadium	24 mg/L	0.19 mg/L (J)	0.14 mg/L (J)
	Zinc	250 mg/L	< 0.077 mg/L	< 0.077 mg/L
EPA 7470A	Mercury	0.2 mg/L	< 0.011 mg/L	< 0.011 mg/L
EPA 8260B	1,1-Dichloroethene	0.7 mg/L	< 0.006 mg/L	< 0.01 mg/L
	1,2-Dichloroethane	0.5 mg/L	< 0.006 mg/L	< 0.006 mg/L
	1,4-Dichlorobenzene	7.5 mg/L	0.008 mg/L (J)	< 0.01 mg/L
	2-Butanone	200 mg/L	6.4 mg/L	8.3 mg/L (J)
	Benzene	0.5 mg/L	0.6 mg/L	0.4 mg/L (J)
	Carbon Tetrachloride	0.5 mg/L	< 0.005 mg/L	< 0.005 mg/L
	Chlorobenzene	100 mg/L	< 0.005 mg/L	< 0.03 mg/L
	Chloroform	6 mg/L	< 0.006 mg/L	< 0.008 mg/L
	Tetrachloroethene	0.7 mg/L	< 0.004 mg/L	< 0.02 mg/L
	Trichloroethene	0.5 mg/L	< 0.006 mg/L	< 0.01 mg/L
	Vinyl Chloride	0.2 mg/L	< 0.005 mg/L	< 0.01 mg/L
EPA 8270C	2-Methylphenol	200 mg/L	< 0.32 mg/L	< 0.16 mg/L
	2,4-Dinitrotoluene	0.13 mg/L	< 0.15 mg/L	< 0.074 mg/L
	2,4,5-Trichlorophenol	400 mg/L	< 1 mg/L	< 0.52 mg/L
	2,4,6-Trichlorophenol	2 mg/L	< 0.49 mg/L	< 0.25 mg/L
	3-,4-Methylphenol	200 mg/L	21 mg/L	12 mg/L
	Hexachlorobenzene	0.13 mg/L	< 0.16 mg/L	< 0.078 mg/L
	Hexachlorobutadiene	0.5 mg/L	< 0.27 mg/L	< 0.13 mg/L
	Hexachloroethane	3 mg/L	< 0.27 mg/L	< 0.14 mg/L
	Nitrobenzene	2 mg/L	< 0.32 mg/L	< 0.16 mg/L
	Pentachlorophenol	1.7 mg/L	< 1.3 mg/L	< 0.65 mg/L
	Pyridine	5 mg/L	< 0.42 mg/L	< 0.21 mg/L

*Regulatory levels are the lowest value of TCLP, STLC, and TTLC regulatory levels. RCRA regulatory levels used for pH (corrosivity) and Flashpoint (ignitibility).
Laboratory non-detections are reported as less than ("<") the laboratory method detection limit.
Laboratory result qualifiers are reported to the right of corresponding detections (in parentheses). Definitions of reported qualifiers are below:
J: Result is estimated between the laboratory method detection limit and reporting limit.

- Detection
- Detection Outside of Regulatory Level
- Non-Detection
- Non-Detection (MDL Above Regulaory Level)

Chiquita Canyon
Waste Stream Documentation Form

Waste Profile Number:	Waste Stream ID No.: Tank Farm Group B
Generator Number: CAL000347030	SAA No. / Site ID No.: #7
EPA Source Code: N/A Form Code: N/A	Hazardous Waste Codes: Non-Hazardous

A. GENERAL INFORMATION

Facility: Chiquita Canyon Landfill

Address: 29201 Henry Mayo Dr, Castaic, CA, 91384	Phone No: 330-635-4885
Contact: Dave Matthews	Email Address: dave.matthews@wasteconnections.com

Waste Stream Name: Non-Hazardous Waste Leachate

B. PROCESS INFORMATION

☑ New Process ☐ Process Change ☐ Process Review

Process Description (include any storage requirements):

Chiquita Canyon Landfill is experiencing an underground reaction in an inactive portion of the Landfill (also known as an "Elevated Temperature Landfill" or "ETLF" event). The reaction has caused an increase in the production of landfill gas and leachate. Landfill leachate forms via decomposition of putrescible and organic fractions of landfill material transported by water percolating through the soil profile. This leachate is collected in frac tanks within Tank Farm #7.

Physical Property of Waste:	☐ Solid	☑ Liquid	☐ Gas	☐ Other

Generation Rate: **140,000** Units: ☑ Gallons OR ☐ Pounds Rate: ☑ Month OR ☐ Year

Collection Mode 20,000-Gallon Frac Tanks

Material Name (include NSN if available)	Range or Concentration
Leachate	100%

C. EXEMPTIONS AND EXCLUSIONS

1. Is the waste a "solid waste" according to §CFR 261.2?	☑ Yes	☐ No

If no, provide the regulatory exclusion or exemption citation.

If No, A HW CHARACTERIZATION IS NOT REQUIRED - SKIP TO SECTION F

2. Is the waste a solid waste excluded or exempted from hazardous waste regulations?	☐ Yes	☑ No

If yes, provide the regulatory citation and justification:

If Yes, A HW CHARACTERIZATION IS NOT REQUIRED - SKIP TO SECTION F

3. Is this Used Oil OR an off specification petroleum fuel managed under §CFR 279?	☐ Yes	☑ No

If Yes, A HW CHARACTERIZATION IS NOT REQUIRED - SKIP TO SECTION F

4. Is the waste a Universal Waste managed under §CFR 273?	☐ Yes	☑ No

If Yes, A HW CHARACTERIZATION IS NOT REQUIRED - SKIP TO SECTION F

Chiquita Canyon
Waste Stream Documentation Form

Waste Profile Number:	Waste Stream ID No.: Tank Farm Group B
Generator Number: CAL000347030	SAA No. / Site ID No.: #7
EPA Source Code: N/A Form Code: N/A	Hazardous Waste Codes: Non-Hazardous

D. HAZARDOUS WASTE CHARACTERIZATION

Based on: ☐ User Knowledge ☑ Analytical

Sample ID: See Section F

Analytical Date: N/A

LISTED HAZARDOUS WASTE

Is this an F-listed waste?	☐ Yes	☑ No
1. Are solvents listed 40 CFR 261.31 (a) present at 10% or more and used as a solvent? If yes, identify the solvents.	☐ Yes	☑ No

Solvent	Percent Before Use	Waste Code

1a. Is this an F-listed waste from a specific process? If yes, identify the process.	☐ Yes	☑ No
Waste Code:		
2. Is this a K-listed waste from a specific source as listed in §261.32? If yes, identify the process.	☐ Yes	☑ No
Waste Code:		
3. Is this a P-listed commercial chemical product; (i.e. a pure chemical or sole active ingredient) listed in §261.33(e)?	☐ Yes	☑ No

P Code	CAS	Substance

4. Is this a U-listed commercial chemical product; (i.e. a pure chemical or sole active ingredient) listed in §261.33(f)?	☐ Yes	☑ No

U Code	CAS	Substance

Generators must determine if a waste exhibits any of the characteristics of a HW.

HAZARDOUS WASTE CHARACTERISTIC

Is the waste Ignitable per §261.21? **Waste Code: D001**	☐ Yes	☑ No
1. Is the waste a liquid with a flash point less than 140°F? Flash Point:	☐ Yes	☑ No
2. Is the waste a non-liquid capable, under standard temperature and pressure, of causing fire through friction, absorption of moisture, or spontaneous chemical changes; and when ignited, burns so vigorously and persistently that it creates a hazard?	☐ Yes	☑ No
3. Is the waste an ignitable compressed gas as defined in 49 CFR 173.300?	☐ Yes	☑ No
4. Is the waste an oxidizer as defined by 49 CFR 173.151 (such as a chlorate or peroxide)?	☐ Yes	☑ No
Is the waste Corrosive per §261.22? **Waste Code: D002**	☐ Yes	☑ No
1. Is the waste an aqueous solution with a pH ≤ 2 or ≥ 12.5?	☐ Yes	☑ No
2. Is the waste a liquid that corrodes steel at a rate of at least 0.25 inches per year?	☐ Yes	☑ No

Chiquita Canyon
Waste Stream Documentation Form

Waste Profile Number:	Waste Stream ID No.: Tank Farm Group B
Generator Number: CAL000347030	SAA No. / Site ID No.: #7
EPA Source Code: N/A Form Code: N/A	Hazardous Waste Codes: Non-Hazardous

Is the waste Reactive per §261.23? **Waste Code: D003**	☐ Yes	☑ No
1. Is the waste normally unstable and readily undergoes violent change without detonating?	☐ Yes	☑ No
2. Water Reactive: Does the waste react violently with water? OR Forms potentially explosive mixture with water? OR When mixed with water does the waste generate toxic gases, vapors, or fumes in a quantity dangerous to human health or the environment?	☐ Yes	☑ No
3. Is the waste a cyanide or sulfide compound that could react at a pH between 2 and 12.5 releasing toxic gases?	☐ Yes	☑ No
4. Is the waste capable of detonation or explosive reaction if subjected to strong ignition sources or when heated under confinement?	☐ Yes	☑ No
5. Is the waste readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure?	☐ Yes	☑ No
6. Is the waste a forbidden Class A or Class B explosive as defined in 49 CFR 173.51, 173.53 or 173.88?	☐ Yes	☑ No
Is the waste Toxic per §261.24? **Waste code(s): D004-D043**	☐ Yes	☑ No
Is the waste a characteristic waste?	☐ Yes	☑ No

E. TREATMENT AND DISPOSAL REQUIREMENTS

1. Is the waste	☐ Recycled (includes UW)?	☐ Burned for Energy Recovery (includes Used Oil)?
	☑ Non hazardous?	☑ Discharged to CWA regulated unit?

If Non Hazardous / Recycled (includes UW) or Burned for Energy Recovery Skip to Section F

2. Is the required one time LDR completed for HW discharged to a CWA unit?	☐ NA	☐ Yes	☐ No
3. Is an exemption claimed from Land Disposal Restrictions (LDR), §268?		☐ Yes	☐ No

Treatment Group: ☐ Wastewater (Contains <1% Total Organic Compounds and <1% Suspended Solids)
☐ Non-wastewater (Not Wastewater)

EPA Code	Constituent	Concentration (Toxicity Characteristic Only)	Regulatory Limit	Subcategory	LDR Treatment Standard (from §268.40)

UHCs apply only to characteristic HW (UHCs requirements do not apply to high TOC Ignitable only waste)

Chiquita Canyon
Waste Stream Documentation Form

Waste Profile Number:	Waste Stream ID No.: Tank Farm Group B
Generator Number: CAL000347030	SAA No. / Site ID No.: #7
EPA Source Code: N/A Form Code: N/A	Hazardous Waste Codes: Non-Hazardous

4. Are there any Underlying Hazardous Constituents (UHC)? (Characteristic Waste Only)	☐ Yes	☐ No

Constituent	Universal Treatment Standard (from §268.48)

F. WASTE STREAM SUMMARY

Waste Stream Name: Non-Hazardous Waste Leachate

Waste Profile Number and Name:

Shipping Information: Non-Hazardous Liquid

Emergency Guide Book Number: N/A

Emergency Guide Year: N/A

Waste Codes: Non-Hazardous

Comments: See attached analytical results ranging from 02/10/24 - 03/09/24.

Analytical Recommendation:

REVISION TABLE

Comment	User	Date
Record edited. Comment:Form updates from QC	MSE Group	3/26/2024 12:14:49 PM
Record approved.	MSE Group	3/26/2024 12:14:57 PM

Laboratory Detection Summary | #7 Tank Farm - Group B

PROJ-037507 | Chiquita Canyon Landfill Waste Sampling

Data Updated at 4/2/2024 3:08:23 PM

Analytical Method	Analyte	Count of Lab Results	Count of Detections	Count of Samples Outside Regulatory Levels	Range of Detections
EPA 1010	Flash Point	17	17	0	144 - 212 deg F
EPA 6010B	Antimony	17	12	0	0.078 J - 0.72 mg/L
	Arsenic	17	17	0	0.13 J - 0.79 mg/L
	Barium	17	17	0	4.5 - 7.3 mg/L
	Beryllium	17	14	0	0.0025 J - 0.0044 J mg/L
	Chromium	17	17	0	0.31 - 0.54 mg/L
	Cobalt	17	15	0	0.016 J - 0.046 mg/L
	Copper	17	3	0	0.046 J - 0.11 mg/L
	Lead	17	15	0	0.046 J - 0.73 mg/L
	Molybdenum	17	14	0	0.038 J - 0.086 J mg/L
	Nickel	17	15	0	0.038 J - 0.25 mg/L
	Selenium	17	8	0	0.098 J - 0.21 J mg/L
	Vanadium	17	17	0	0.21 - 0.36 mg/L
	Zinc	17	17	0	2.2 - 5.9 mg/L
EPA 7470A	Mercury	17	2	0	0.019 J - 0.19 mg/L
EPA 8260B	1,2-Dichloroethane	17	1	0	0.02 J - 0.02 J mg/L
	1,4-Dichlorobenzene	17	1	0	0.02 J - 0.02 J mg/L
	2-Butanone	17	17	0	40 - 110 mg/L
	Benzene	17	17	0	0.1 J - 0.3 mg/L
	Tetrachloroethene	17	2	0	0.02 J - 0.05 J mg/L
EPA 8270C	2-Methylphenol	17	17	0	1 J - 3.2 mg/L
	3-,4-Methylphenol	17	17	0	12 - 21 mg/L
	Pyridine	17	17	0	1 J - 3.3 mg/L
EPA 9040B	pH	17	17	0	5.26 - 5.42 SU
	Temperature	17	17	0	15 - 21.7 deg C

Laboratory result qualifiers are reported to the right of corresponding detections. Definitions of reported qualifiers are below:

J: Result is estimated between the laboratory method detection limit and reporting limit.

Laboratory Results | #7 Tank Farm - Group B

PROJ-037507 | Chiquita Canyon Landfill Waste Sampling

Data Updated at 4/2/2024 3:08:23 PM

Analytical Method	Analyte	Regulatory Levels*	2/10/2024 Tank Group B - Tank 18 CACA0210Z002B18 502069 Field pH: -	2/11/2024 Tank Group B - Tank 18 CACA0211Z002B18 502071 Field pH: -	2/12/2024 Tank Group B - Tank 18 CACA0212Z002B18 502175 Field pH: -	2/13/2024 Tank Group B - Tank 18 CACA0213Z002B18 502296 Field pH: -	2/14/2024 Tank Group B - Tank 18 CACA0214Z002B18 502412 Field pH: -	2/15/2024 Tank Group B - Tank 18 CACA0215Z002B18 502537 Field pH: 5.16	2/16/2024 Tank Group B - Tank 18 CACA0216Z002B18 502624 Field pH: 5.55	2/17/2024 Tank Group B - Tank 18 CACA0217Z002B18 502628 Field pH: 5.42	Tank Farm B 3/1/2024 Tank Group B - Sample Port CACA0301Z002B 503562 Field pH: 5.71
EPA 9040B	pH	≥2 ≤12.5 SU	5.26 SU	5.39 SU	5.29 SU	5.36 SU	5.33 SU	5.37 SU	5.4 SU	5.42 SU	5.3 SU
	Temperature	NA	18.9 deg C	19.6 deg C	18.8 deg C	17.5 deg C	19.8 deg C	19.6 deg C	19.3 deg C	18.9 deg C	18.9 deg C
EPA 1010	Flash Point	140 deg F	212 deg F	194 deg F	212 deg F	212 deg F	212 deg F	212 deg F	203 deg F	144 deg F	212 deg F
EPA 6010B	Antimony	15 mg/L	0.078 mg/L (J)	< 0.069 mg/L	< 0.069 mg/L	< 0.069 mg/L	0.7 mg/L	0.11 mg/L (J)	0.72 mg/L	< 0.069 mg/L	0.31 mg/L (J)
	Arsenic	5 mg/L	0.54 mg/L	0.52 mg/L	0.47 mg/L	0.48 mg/L	0.51 mg/L	0.17 mg/L (J)	0.47 mg/L	0.53 mg/L	0.49 mg/L
	Barium	100 mg/L	6.1 mg/L	6.2 mg/L	5.6 mg/L	5.8 mg/L	5.8 mg/L	5.8 mg/L	5.6 mg/L	5.8 mg/L	5.2 mg/L
	Beryllium	0.75 mg/L	0.0035 mg/L (J)	0.0027 mg/L (J)	0.0031 mg/L (J)	0.003 mg/L (J)	0.003 mg/L (J)	< 0.0097 mg/L	0.003 mg/L (J)	0.0029 mg/L (J)	0.0025 mg/L (J)
	Cadmium	1 mg/L	< 0.015 mg/L	< 0.015 mg/L	< 0.015 mg/L	< 0.015 mg/L	< 0.015 mg/L	< 0.014 mg/L	< 0.015 mg/L	< 0.015 mg/L	< 0.015 mg/L
	Chromium	2 mg/L	0.53 mg/L	0.44 mg/L	0.41 mg/L	0.41 mg/L	0.42 mg/L	0.45 mg/L	0.51 mg/L	0.54 mg/L	0.35 mg/L
	Cobalt	80 mg/L	0.031 mg/L (J)	0.019 mg/L (J)	0.022 mg/L (J)	0.045 mg/L (J)	0.024 mg/L (J)	< 0.026 mg/L	0.024 mg/L (J)	0.027 mg/L (J)	< 0.016 mg/L
	Copper	25 mg/L	< 0.02 mg/L	< 0.02 mg/L	< 0.02 mg/L	< 0.02 mg/L	< 0.02 mg/L	< 0.099 mg/L	0.11 mg/L (J)	0.1 mg/L (J)	< 0.02 mg/L
	Lead	5 mg/L	0.73 mg/L	0.075 mg/L (J)	0.2 mg/L (J)	0.079 mg/L (J)	< 0.034 mg/L	0.12 mg/L (J)	0.046 mg/L (J)	< 0.034 mg/L	0.094 mg/L (J)
	Molybdenum	350 mg/L	0.044 mg/L (J)	0.046 mg/L (J)	0.049 mg/L (J)	0.086 mg/L (J)	0.05 mg/L (J)	< 0.049 mg/L	0.071 mg/L (J)	0.082 mg/L (J)	0.038 mg/L (J)
	Nickel	20 mg/L	0.061 mg/L (J)	0.038 mg/L (J)	0.1 mg/L (J)	0.25 mg/L	0.095 mg/L (J)	< 0.13 mg/L	0.13 mg/L (J)	0.14 mg/L (J)	0.079 mg/L (J)
	Selenium	1 mg/L	< 0.098 mg/L	< 0.098 mg/L	< 0.098 mg/L	< 0.098 mg/L	0.098 mg/L (J)	0.16 mg/L (J)	< 0.098 mg/L	< 0.098 mg/L	< 0.098 mg/L
	Silver	5 mg/L	< 0.016 mg/L	< 0.016 mg/L	< 0.016 mg/L	< 0.016 mg/L	< 0.016 mg/L	< 0.018 mg/L	< 0.016 mg/L	< 0.016 mg/L	< 0.016 mg/L
	Thallium	7 mg/L	< 0.079 mg/L	< 0.079 mg/L	< 0.079 mg/L	< 0.079 mg/L	< 0.079 mg/L	< 0.048 mg/L	< 0.079 mg/L	< 0.079 mg/L	< 0.079 mg/L
	Vanadium	24 mg/L	0.36 mg/L	0.3 mg/L	0.29 mg/L	0.28 mg/L	0.29 mg/L	0.28 mg/L	0.32 mg/L	0.32 mg/L	0.27 mg/L
	Zinc	250 mg/L	5.9 mg/L	4 mg/L	3.8 mg/L	3.7 mg/L	3.5 mg/L	3.7 mg/L	3.7 mg/L	3.8 mg/L	3.5 mg/L
EPA 7470A	Mercury	0.2 mg/L	0.19 mg/L	< 0.016 mg/L	0.019 mg/L (J)	< 0.011 mg/L	< 0.016 mg/L	< 0.016 mg/L	< 0.011 mg/L	< 0.011 mg/L	< 0.011 mg/L
EPA 8260B	1,1-Dichloroethene	0.7 mg/L	< 0.006 mg/L	< 0.02 mg/L	< 0.03 mg/L	< 0.02 mg/L	< 0.01 mg/L	< 0.01 mg/L	< 0.01 mg/L	< 0.01 mg/L	< 0.01 mg/L
	1,2-Dichloroethane	0.5 mg/L	< 0.006 mg/L	< 0.02 mg/L	< 0.03 mg/L	< 0.01 mg/L	< 0.01 mg/L	< 0.01 mg/L	< 0.01 mg/L	< 0.01 mg/L	< 0.01 mg/L
	1,4-Dichlorobenzene	7.5 mg/L	< 0.01 mg/L	< 0.02 mg/L	< 0.04 mg/L	< 0.03 mg/L	< 0.009 mg/L	< 0.02 mg/L	< 0.009 mg/L	< 0.02 mg/L	< 0.02 mg/L
	2-Butanone	200 mg/L	40 mg/L	41 mg/L	54 mg/L	40 mg/L	40 mg/L	51 mg/L	42 mg/L	64 mg/L	60 mg/L
	Benzene	0.5 mg/L	0.1 mg/L (J)	0.2 mg/L (J)	0.2 mg/L (J)	0.2 mg/L (J)	0.2 mg/L (J)	0.1 mg/L (J)	0.2 mg/L (J)	0.1 mg/L (J)	0.2 mg/L (J)
	Carbon Tetrachloride	0.5 mg/L	< 0.006 mg/L	< 0.02 mg/L	< 0.03 mg/L	< 0.01 mg/L	< 0.01 mg/L	< 0.01 mg/L	< 0.01 mg/L	< 0.01 mg/L	< 0.01 mg/L
	Chlorobenzene	100 mg/L	< 0.007 mg/L	< 0.02 mg/L	< 0.03 mg/L	< 0.06 mg/L	< 0.01 mg/L	< 0.01 mg/L	< 0.01 mg/L	< 0.01 mg/L	< 0.01 mg/L
	Chloroform	6 mg/L	< 0.01 mg/L	< 0.02 mg/L	< 0.04 mg/L	< 0.02 mg/L	< 0.01 mg/L	< 0.02 mg/L	< 0.01 mg/L	< 0.02 mg/L	< 0.02 mg/L
	Tetrachloroethene	0.7 mg/L	< 0.008 mg/L	< 0.02 mg/L	< 0.03 mg/L	< 0.04 mg/L	< 0.008 mg/L	< 0.02 mg/L	< 0.008 mg/L	0.02 mg/L (J)	0.05 mg/L (J)
	Trichloroethene	0.5 mg/L	< 0.008 mg/L	< 0.02 mg/L	< 0.03 mg/L	< 0.03 mg/L	< 0.01 mg/L	< 0.02 mg/L	< 0.01 mg/L	< 0.02 mg/L	< 0.02 mg/L
	Vinyl Chloride	0.2 mg/L	< 0.006 mg/L	< 0.02 mg/L	< 0.02 mg/L	< 0.02 mg/L	< 0.009 mg/L	< 0.01 mg/L	< 0.009 mg/L	< 0.01 mg/L	< 0.01 mg/L
EPA 8270C	2-Methylphenol	200 mg/L	1.7 mg/L (J)	1.5 mg/L	2.1 mg/L (J)	1.8 mg/L (J)	2.3 mg/L	1.7 mg/L	1.6 mg/L (J)	1.5 mg/L (J)	2 mg/L
	2,4-Dinitrotoluene	0.13 mg/L	< 0.15 mg/L	< 0.25 mg/L	< 0.37 mg/L	< 2.5 mg/L	< 0.42 mg/L	< 0.42 mg/L	< 0.15 mg/L	< 0.15 mg/L	< 0.074 mg/L
	2,4,5-Trichlorophenol	400 mg/L	< 1 mg/L	< 0.086 mg/L	< 2.6 mg/L	< 0.86 mg/L	< 0.14 mg/L	< 0.14 mg/L	< 1 mg/L	< 1 mg/L	< 0.52 mg/L
	2,4,6-Trichlorophenol	2 mg/L	< 0.49 mg/L	< 0.33 mg/L	< 1.2 mg/L	< 3.3 mg/L	< 0.56 mg/L	< 0.56 mg/L	< 0.49 mg/L	< 0.49 mg/L	< 0.25 mg/L
	3-,4-Methylphenol	200 mg/L	19 mg/L	15 mg/L	19 mg/L	14 mg/L	21 mg/L	12 mg/L	15 mg/L	13 mg/L	18 mg/L
	Hexachlorobenzene	0.13 mg/L	< 0.16 mg/L	< 0.042 mg/L	< 0.39 mg/L	< 0.42 mg/L	< 0.071 mg/L	< 0.071 mg/L	< 0.16 mg/L	< 0.16 mg/L	< 0.078 mg/L
	Hexachlorobutadiene	0.5 mg/L	< 0.27 mg/L	< 0.047 mg/L	< 0.67 mg/L	< 0.47 mg/L	< 0.078 mg/L	< 0.078 mg/L	< 0.27 mg/L	< 0.27 mg/L	< 0.13 mg/L
	Hexachloroethane	3 mg/L	< 0.27 mg/L	< 0.063 mg/L	< 0.68 mg/L	< 0.63 mg/L	< 0.1 mg/L	< 0.1 mg/L	< 0.27 mg/L	< 0.27 mg/L	< 0.14 mg/L
	Nitrobenzene	2 mg/L	< 0.32 mg/L	< 0.081 mg/L	< 0.79 mg/L	< 0.81 mg/L	< 0.13 mg/L	< 0.13 mg/L	< 0.32 mg/L	< 0.32 mg/L	< 0.16 mg/L
	Pentachlorophenol	1.7 mg/L	< 1.3 mg/L	< 0.48 mg/L	< 3.3 mg/L	< 4.8 mg/L	< 0.81 mg/L	< 0.81 mg/L	< 1.3 mg/L	< 1.3 mg/L	< 0.65 mg/L
	Pyridine	5 mg/L	1.6 mg/L (J)	1.4 mg/L	1.4 mg/L (J)	1 mg/L (J)	2.8 mg/L	1.8 mg/L	1.1 mg/L (J)	1.3 mg/L (J)	1.9 mg/L

*Regulatory levels are the lowest value of TCLP, STLC, and TTLC regulatory levels. RCRA regulatory levels used for pH (corrosivity) and Flashpoint (ignitibility).
Laboratory non-detections are reported as less than ("<") the laboratory method detection limit.
Laboratory result qualifiers are reported to the right of corresponding detections (in parentheses). Definitions of reported qualifiers are below:
J: Result is estimated between the laboratory method detection limit and reporting limit.

Detection
Non-Detection
Non-Detection (MDL Above Regulaory Level)

Laboratory Results | #7 Tank Farm - Group B

PROJ-037507 | Chiquita Canyon Landfill Waste Sampling

Data Updated at 4/2/2024 3:08:23 PM

			Tank Farm B							
			3/2/2024 Tank Group B - Sample Port CACA0302Z002B 503568 Field pH:	3/3/2024 Tank Group B - Sample Port CACA0303Z002B 503570 Field pH:	3/4/2024 Tank Group B - Sample Port CACA0304Z002B 503660 Field pH:	3/5/2024 Tank Group B - Sample Port CACA0305Z002B 503775 Field pH:	3/6/2024 Tank Group B - Sample Port CACA0306Z002B 503883 Field pH:	3/7/2024 Tank Group B - Sample Port CACA0307Z002B 504007 Field pH:	3/8/2024 Tank Group B - Sample Port CACA0308Z002B 504089 Field pH:	3/9/2024 Tank Group B - Sample Port CACA0309Z002B 504106 Field pH:
Analytical Method	Analyte	Regulatory Levels*	5.35	5.49	5.51	5.67	5.52	5.49	5.40	5.42
EPA 9040B	pH	≥2 ≤12.5 SU	5.32 SU	5.35 SU	5.38 SU	5.31 SU	5.3 SU	5.42 SU	5.36 SU	5.38 SU
	Temperature	NA	18.9 deg C	20.4 deg C	20 deg C	20.9 deg C	19.7 deg C	21.7 deg C	20.1 deg C	15 deg C
EPA 1010	Flash Point	140 deg F	212 deg F	212 deg F	212 deg F	207 deg F	212 deg F	212 deg F	212 deg F	212 deg F
EPA 6010B	Antimony	15 mg/L	0.096 mg/L (J)	0.16 mg/L (J)	0.15 mg/L (J)	0.11 mg/L (J)	0.088 mg/L (J)	0.18 mg/L (J)	0.12 mg/L (J)	< 0.037 mg/L
	Arsenic	5 mg/L	0.45 mg/L	0.56 mg/L	0.49 mg/L	0.4 mg/L	0.41 mg/L	0.79 mg/L	0.32 mg/L	0.13 mg/L (J)
	Barium	100 mg/L	6.5 mg/L	6.8 mg/L	6.5 mg/L	6.9 mg/L	6.6 mg/L	4.5 mg/L	6.1 mg/L	7.3 mg/L
	Beryllium	0.75 mg/L	0.0033 mg/L (J)	0.0044 mg/L (J)	0.0035 mg/L (J)	0.0042 mg/L (J)	0.0035 mg/L (J)	0.0031 mg/L (J)	< 0.0097 mg/L	< 0.0097 mg/L
	Cadmium	1 mg/L	< 0.015 mg/L	< 0.015 mg/L	< 0.015 mg/L	< 0.015 mg/L	< 0.015 mg/L	< 0.0092 mg/L	< 0.014 mg/L	< 0.014 mg/L
	Chromium	2 mg/L	0.44 mg/L	0.45 mg/L	0.44 mg/L	0.43 mg/L	0.43 mg/L	0.31 mg/L	0.43 mg/L	0.52 mg/L
	Cobalt	80 mg/L	0.016 mg/L (J)	0.024 mg/L (J)	0.026 mg/L (J)	0.024 mg/L (J)	0.019 mg/L (J)	0.028 mg/L (J)	0.041 mg/L (J)	0.046 mg/L (J)
	Copper	25 mg/L	< 0.02 mg/L	< 0.02 mg/L	< 0.02 mg/L	< 0.02 mg/L	< 0.02 mg/L	0.046 mg/L (J)	< 0.099 mg/L	< 0.099 mg/L
	Lead	5 mg/L	0.12 mg/L (J)	0.077 mg/L (J)	0.094 mg/L (J)	0.095 mg/L (J)	0.1 mg/L (J)	0.053 mg/L (J)	0.062 mg/L (J)	0.12 mg/L (J)
	Molybdenum	350 mg/L	0.045 mg/L (J)	0.06 mg/L (J)	0.072 mg/L (J)	0.039 mg/L (J)	0.042 mg/L (J)	0.063 mg/L (J)	< 0.049 mg/L	< 0.049 mg/L
	Nickel	20 mg/L	0.081 mg/L (J)	0.1 mg/L (J)	0.088 mg/L (J)	0.1 mg/L (J)	0.11 mg/L (J)	< 0.13 mg/L	0.097 mg/L (J)	0.1 mg/L (J)
	Selenium	1 mg/L	< 0.098 mg/L	0.14 mg/L (J)	0.15 mg/L (J)	0.13 mg/L (J)	0.15 mg/L (J)	< 0.18 mg/L	0.21 mg/L (J)	0.21 mg/L (J)
	Silver	5 mg/L	< 0.016 mg/L	< 0.016 mg/L	< 0.016 mg/L	< 0.016 mg/L	< 0.016 mg/L	< 0.027 mg/L	< 0.018 mg/L	< 0.018 mg/L
	Thallium	7 mg/L	< 0.079 mg/L	< 0.079 mg/L	< 0.079 mg/L	< 0.079 mg/L	< 0.079 mg/L	< 0.2 mg/L	< 0.048 mg/L	< 0.048 mg/L
	Vanadium	24 mg/L	0.33 mg/L	0.34 mg/L	0.35 mg/L	0.33 mg/L	0.32 mg/L	0.21 mg/L	0.28 mg/L	0.36 mg/L
	Zinc	250 mg/L	3.8 mg/L	3.9 mg/L	4.1 mg/L	3.7 mg/L	3.1 mg/L	2.2 mg/L	3.5 mg/L	4.7 mg/L
EPA 7470A	Mercury	0.2 mg/L	< 0.011 mg/L	< 0.011 mg/L	< 0.011 mg/L	< 0.011 mg/L	< 0.011 mg/L	< 0.016 mg/L	< 0.039 mg/L	< 0.039 mg/L
EPA 8260B	1,1-Dichloroethene	0.7 mg/L	< 0.01 mg/L	< 0.01 mg/L	< 0.01 mg/L	< 0.01 mg/L	< 0.01 mg/L	< 0.01 mg/L	< 0.01 mg/L	< 0.01 mg/L
	1,2-Dichloroethane	0.5 mg/L	< 0.01 mg/L	< 0.01 mg/L	< 0.01 mg/L	< 0.01 mg/L	< 0.01 mg/L	< 0.006 mg/L	< 0.01 mg/L	0.02 mg/L (J)
	1,4-Dichlorobenzene	7.5 mg/L	< 0.02 mg/L	0.02 mg/L (J)	< 0.02 mg/L	< 0.02 mg/L	< 0.009 mg/L	< 0.01 mg/L	< 0.02 mg/L	< 0.02 mg/L
	2-Butanone	200 mg/L	92 mg/L	110 mg/L	67 mg/L	59 mg/L	91 mg/L	68 mg/L	80 mg/L	66 mg/L
	Benzene	0.5 mg/L	0.3 mg/L (J)	0.3 mg/L (J)	0.2 mg/L (J)	0.2 mg/L (J)	0.2 mg/L (J)	0.2 mg/L (J)	0.2 mg/L (J)	0.2 mg/L (J)
	Carbon Tetrachloride	0.5 mg/L	< 0.01 mg/L	< 0.01 mg/L	< 0.01 mg/L	< 0.01 mg/L	< 0.01 mg/L	< 0.005 mg/L	< 0.01 mg/L	< 0.01 mg/L
	Chlorobenzene	100 mg/L	< 0.01 mg/L	< 0.01 mg/L	< 0.01 mg/L	< 0.01 mg/L	< 0.01 mg/L	< 0.03 mg/L	< 0.01 mg/L	< 0.01 mg/L
	Chloroform	6 mg/L	< 0.02 mg/L	< 0.01 mg/L	< 0.02 mg/L	< 0.02 mg/L	< 0.01 mg/L	< 0.008 mg/L	< 0.02 mg/L	< 0.02 mg/L
	Tetrachloroethene	0.7 mg/L	< 0.02 mg/L	< 0.008 mg/L	< 0.02 mg/L	< 0.02 mg/L	< 0.008 mg/L	< 0.02 mg/L	< 0.02 mg/L	< 0.02 mg/L
	Trichloroethene	0.5 mg/L	< 0.02 mg/L	< 0.01 mg/L	< 0.02 mg/L	< 0.02 mg/L	< 0.01 mg/L	< 0.01 mg/L	< 0.02 mg/L	< 0.02 mg/L
	Vinyl Chloride	0.2 mg/L	< 0.01 mg/L	< 0.009 mg/L	< 0.01 mg/L	< 0.01 mg/L	< 0.009 mg/L	< 0.01 mg/L	< 0.01 mg/L	< 0.01 mg/L
EPA 8270C	2-Methylphenol	200 mg/L	1.5 mg/L	1.7 mg/L	1 mg/L	1.8 mg/L	1.3 mg/L	3.2 mg/L	1.8 mg/L	1.4 mg/L
	2,4-Dinitrotoluene	0.13 mg/L	< 0.074 mg/L	< 0.5 mg/L	< 0.5 mg/L	< 0.074 mg/L	< 0.5 mg/L	< 0.5 mg/L	< 0.5 mg/L	< 0.074 mg/L
	2,4,5-Trichlorophenol	400 mg/L	< 0.52 mg/L	< 0.17 mg/L	< 0.17 mg/L	< 0.52 mg/L	< 0.17 mg/L	< 0.17 mg/L	< 0.17 mg/L	< 0.52 mg/L
	2,4,6-Trichlorophenol	2 mg/L	< 0.25 mg/L	< 0.67 mg/L	< 0.67 mg/L	< 0.25 mg/L	< 0.67 mg/L	< 0.67 mg/L	< 0.67 mg/L	< 0.25 mg/L
	3-,4-Methylphenol	200 mg/L	15 mg/L	17 mg/L	16 mg/L	20 mg/L	15 mg/L	18 mg/L	15 mg/L	16 mg/L
	Hexachlorobenzene	0.13 mg/L	< 0.078 mg/L	< 0.085 mg/L	< 0.085 mg/L	< 0.078 mg/L	< 0.085 mg/L	< 0.085 mg/L	< 0.085 mg/L	< 0.078 mg/L
	Hexachlorobutadiene	0.5 mg/L	< 0.13 mg/L	< 0.093 mg/L	< 0.093 mg/L	< 0.13 mg/L	< 0.093 mg/L	< 0.093 mg/L	< 0.093 mg/L	< 0.13 mg/L
	Hexachloroethane	3 mg/L	< 0.14 mg/L	< 0.13 mg/L	< 0.13 mg/L	< 0.14 mg/L	< 0.13 mg/L	< 0.13 mg/L	< 0.13 mg/L	< 0.14 mg/L
	Nitrobenzene	2 mg/L	< 0.16 mg/L	< 0.16 mg/L	< 0.16 mg/L	< 0.16 mg/L	< 0.16 mg/L	< 0.16 mg/L	< 0.16 mg/L	< 0.16 mg/L
	Pentachlorophenol	1.7 mg/L	< 0.65 mg/L	< 0.97 mg/L	< 0.97 mg/L	< 0.65 mg/L	< 0.97 mg/L	< 0.97 mg/L	< 0.97 mg/L	< 0.65 mg/L
	Pyridine	5 mg/L	1.3 mg/L	1.8 mg/L	1.6 mg/L	2.1 mg/L	1.2 mg/L	3.3 mg/L	1.8 mg/L	1.1 mg/L

*Regulatory levels are the lowest value of TCLP, STLC, and TTLC regulatory levels. RCRA regulatory levels used for pH (corrosivity) and Flashpoint (ignitibility).
Laboratory non-detections are reported as less than ("<") the laboratory method detection limit.
Laboratory result qualifiers are reported to the right of corresponding detections (in parentheses). Definitions of reported qualifiers are below:
J: Result is estimated between the laboratory method detection limit and reporting limit.

Detection
Non-Detection
Non-Detection (MDL Above Regulaory Level)

Chiquita Canyon
Waste Stream Documentation Form

Waste Profile Number:	Waste Stream ID No.: Tank Farm Group C
Generator Number: CAL000347030	SAA No. / Site ID No.: # 7
EPA Source Code: N/A Form Code: N/A	Hazardous Waste Codes: Non-Hazardous

A. GENERAL INFORMATION

Facility: Chiquita Canyon Landfill

Address: 29201 Henry Mayo Dr, Castaic, CA, 91384	Phone No: 330-635-4885
Contact: Dave Matthews	Email Address: dave.matthews@wasteconnections.com

Waste Stream Name: Waste Non-Hazardous Waste Leachate

B. PROCESS INFORMATION

☑ New Process ☐ Process Change ☐ Process Review

Process Description (include any storage requirements):

Chiquita Canyon Landfill is experiencing an underground reaction in an inactive portion of the Landfill (also known as an "Elevated Temperature Landfill" or "ETLF" event). The reaction has caused an increase in the production of landfill gas and leachate. Landfill leachate forms via decomposition of putrescible and organic fractions of landfill material transported by water percolating through the soil profile.

Physical Property of Waste:	☐ Solid	☑ Liquid	☐ Gas	☐ Other

Generation Rate: **140,000** Units: ☑ Gallons OR ☐ Pounds Rate: ☑ Month OR ☐ Year

Collection Mode Frac Tanks

Material Name (include NSN if available)	Range or Concentration
Leachate	100%

C. EXEMPTIONS AND EXCLUSIONS

1. Is the waste a "solid waste" according to §CFR 261.2?	☑ Yes	☐ No
If no, provide the regulatory exclusion or exemption citation.		
If No, A HW CHARACTERIZATION IS NOT REQUIRED - SKIP TO SECTION F		
2. Is the waste a solid waste excluded or exempted from hazardous waste regulations?	☐ Yes	☑ No
If yes, provide the regulatory citation and justification:		
If Yes, A HW CHARACTERIZATION IS NOT REQUIRED - SKIP TO SECTION F		
3. Is this Used Oil OR an off specification petroleum fuel managed under §CFR 279?	☐ Yes	☑ No
If Yes, A HW CHARACTERIZATION IS NOT REQUIRED - SKIP TO SECTION F		
4. Is the waste a Universal Waste managed under §CFR 273?	☐ Yes	☑ No
If Yes, A HW CHARACTERIZATION IS NOT REQUIRED - SKIP TO SECTION F		

Chiquita Canyon
Waste Stream Documentation Form

Waste Profile Number:	Waste Stream ID No.: Tank Farm Group C
Generator Number: CAL000347030	SAA No. / Site ID No.: # 7
EPA Source Code: N/A Form Code: N/A	Hazardous Waste Codes: Non-Hazardous

D. HAZARDOUS WASTE CHARACTERIZATION

Based on: ☐ User Knowledge ☑ Analytical

Sample ID: See Section F

Analytical Date: N/A

LISTED HAZARDOUS WASTE

Is this an F-listed waste?	☐ Yes	☑ No
1. Are solvents listed 40 CFR 261.31 (a) present at 10% or more and used as a solvent? If yes, identify the solvents.	☐ Yes	☑ No

Solvent	Percent Before Use	Waste Code

1a. Is this an F-listed waste from a specific process? If yes, identify the process.	☐ Yes	☑ No
Waste Code:		
2. Is this a K-listed waste from a specific source as listed in §261.32? If yes, identify the process.	☐ Yes	☑ No
Waste Code:		
3. Is this a P-listed commercial chemical product; (i.e. a pure chemical or sole active ingredient) listed in §261.33(e)?	☐ Yes	☑ No

P Code	CAS	Substance

4. Is this a U-listed commercial chemical product; (i.e. a pure chemical or sole active ingredient) listed in §261.33(f)?	☐ Yes	☑ No

U Code	CAS	Substance

Generators must determine if a waste exhibits any of the characteristics of a HW.

HAZARDOUS WASTE CHARACTERISTIC

Is the waste Ignitable per §261.21? **Waste Code: D001**	☐ Yes	☑ No
1. Is the waste a liquid with a flash point less than 140°F? Flash Point:	☐ Yes	☑ No
2. Is the waste a non-liquid capable, under standard temperature and pressure, of causing fire through friction, absorption of moisture, or spontaneous chemical changes; and when ignited, burns so vigorously and persistently that it creates a hazard?	☐ Yes	☑ No
3. Is the waste an ignitable compressed gas as defined in 49 CFR 173.300?	☐ Yes	☑ No
4. Is the waste an oxidizer as defined by 49 CFR 173.151 (such as a chlorate or peroxide)?	☐ Yes	☑ No
Is the waste Corrosive per §261.22? **Waste Code: D002**	☐ Yes	☑ No
1. Is the waste an aqueous solution with a pH ≤ 2 or ≥ 12.5?	☐ Yes	☑ No
2. Is the waste a liquid that corrodes steel at a rate of at least 0.25 inches per year?	☐ Yes	☑ No

Chiquita Canyon
Waste Stream Documentation Form

Waste Profile Number:	Waste Stream ID No.: Tank Farm Group C
Generator Number: CAL000347030	SAA No. / Site ID No.: # 7
EPA Source Code: N/A Form Code: N/A	Hazardous Waste Codes: Non-Hazardous

Is the waste Reactive per §261.23? **Waste Code: D003**	☐ Yes	☑ No
1. Is the waste normally unstable and readily undergoes violent change without detonating?	☐ Yes	☑ No
2. Water Reactive: Does the waste react violently with water? OR Forms potentially explosive mixture with water? OR When mixed with water does the waste generate toxic gases, vapors, or fumes in a quantity dangerous to human health or the environment?	☐ Yes	☑ No
3. Is the waste a cyanide or sulfide compound that could react at a pH between 2 and 12.5 releasing toxic gases?	☐ Yes	☑ No
4. Is the waste capable of detonation or explosive reaction if subjected to strong ignition sources or when heated under confinement?	☐ Yes	☑ No
5. Is the waste readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure?	☐ Yes	☑ No
6. Is the waste a forbidden Class A or Class B explosive as defined in 49 CFR 173.51, 173.53 or 173.88?	☐ Yes	☑ No
Is the waste Toxic per §261.24? **Waste code(s): D004-D043**	☐ Yes	☑ No
Is the waste a characteristic waste?	☐ Yes	☑ No

E. TREATMENT AND DISPOSAL REQUIREMENTS

1. Is the waste	☐ Recycled (includes UW)?	☐ Burned for Energy Recovery (includes Used Oil)?
	☑ Non hazardous?	☑ Discharged to CWA regulated unit?

If Non Hazardous / Recycled (includes UW) or Burned for Energy Recovery Skip to Section F

2. Is the required one time LDR completed for HW discharged to a CWA unit?	☐ NA	☐ Yes	☐ No
3. Is an exemption claimed from Land Disposal Restrictions (LDR), §268?		☐ Yes	☐ No

Treatment Group:
☐ Wastewater (Contains <1% Total Organic Compounds and <1% Suspended Solids)
☐ Non-wastewater (Not Wastewater)

EPA Code	Constituent	Concentration (Toxicity Characteristic Only)	Regulatory Limit	Subcategory	LDR Treatment Standard (from §268.40)

UHCs apply only to characteristic HW (UHCs requirements do not apply to high TOC Ignitable only waste)

Chiquita Canyon
Waste Stream Documentation Form

Waste Profile Number:	Waste Stream ID No.: Tank Farm Group C
Generator Number: CAL000347030	SAA No. / Site ID No.: # 7
EPA Source Code: N/A Form Code: N/A	Hazardous Waste Codes: Non-Hazardous

4. Are there any Underlying Hazardous Constituents (UHC)? (Characteristic Waste Only)	☐ Yes	☐ No

Constituent	Universal Treatment Standard (from §268.48)

F. WASTE STREAM SUMMARY

Waste Stream Name: Waste Non-Hazardous Waste Leachate

Waste Profile Number and Name:

Shipping Information: Non-Hazardous Liquid

Emergency Guide Book Number: N/A | Emergency Guide Year: N/A

Waste Codes: Non-Hazardous

Comments: See attached analytical results ranging from 04/01/24 - 04/07/24

Analytical Recommendation:

REVISION TABLE

Comment	User	Date

Chiquita Canyon
Waste Stream Documentation Form

Waste Profile Number:	CH2732983	Waste Stream ID No.:	Tank Farm
Generator Number:	CAL000347030	SAA No. / Site ID No.:	#7
EPA Source Code:	G49 Form Code: W002	Hazardous Waste Codes:	D018,352

A. GENERAL INFORMATION

Command/Activity: Chiquita Canyon Landfill

Facility: 29201 Henry Mayo Dr, Castaic, CA, 91384	Phone No: 330-635-4885
Address: Dave Matthews	Email Address: dave.matthews@wasteconnections.com

Waste Stream Name: Waste Sampling and PPE Debris

B. PROCESS INFORMATION

☑ New Process ☐ Process Change ☐ Process Review

Process Description (include any storage requirements):

Used landfill leachate sampling equipment including plastic bailers, empty used plastic and glass containers, paper towels, rags, absorbent pads, trash bags, empty 5-gallon buckets, plastic tubing, personal protective equipment (PPE) including nitrile gloves and respirator cartridges.

Physical Property of Waste:	☑ Solid	☐ Liquid	☐ Gas	☐ Other

Generation Rate: **2,000** Units: ☑ Gallons OR ☐ Pounds Rate: ☑ Month OR ☐ Year

Collection Mode: 25-Yard Roll-Off

Material Name (include NSN if available)	Range or Concentration
PPE, Debris, Dirt, Sampling Equipment, etc.	100%

C. EXEMPTIONS AND EXCLUSIONS

1. Is the waste a "solid waste" according to §CFR 261.2?	☑ Yes	☐ No
If no, provide the regulatory exclusion or exemption citation.		
If No, A HW CHARACTERIZATION IS NOT REQUIRED - SKIP TO SECTION F		
2. Is the waste a solid waste excluded or exempted from hazardous waste regulations?	☐ Yes	☑ No
If yes, provide the regulatory citation and justification:		
If Yes, A HW CHARACTERIZATION IS NOT REQUIRED - SKIP TO SECTION F		
3. Is this Used Oil OR an off specification petroleum fuel managed under §CFR 279?	☐ Yes	☑ No
If Yes, A HW CHARACTERIZATION IS NOT REQUIRED - SKIP TO SECTION F		
4. Is the waste a Universal Waste managed under §CFR 273?	☐ Yes	☑ No
If Yes, A HW CHARACTERIZATION IS NOT REQUIRED - SKIP TO SECTION F		

Chiquita Canyon
Waste Stream Documentation Form

Waste Profile Number:	CH2732983	Waste Stream ID No.:	Tank Farm
Generator Number:	CAL000347030	SAA No. / Site ID No.:	#7
EPA Source Code:	G49 Form Code: W002	Hazardous Waste Codes:	D018,352

D. HAZARDOUS WASTE CHARACTERIZATION

Based on: ☑ User Knowledge ☐ Analytical

Sample ID: N/A

Analytical Date: N/A

LISTED HAZARDOUS WASTE

Is this an F-listed waste?	☐ Yes	☑ No
1. Are solvents listed 40 CFR 261.31 (a) present at 10% or more and used as a solvent? If yes, identify the solvents.	☐ Yes	☑ No

Solvent	Percent Before Use	Waste Code

1a. Is this an F-listed waste from a specific process? If yes, identify the process.	☐ Yes	☑ No
Waste Code:		
2. Is this a K-listed waste from a specific source as listed in §261.32? If yes, identify the process.	☐ Yes	☑ No
Waste Code:		
3. Is this a P-listed commercial chemical product; (i.e. a pure chemical or sole active ingredient) listed in §261.33(e)?	☐ Yes	☑ No

P Code	CAS	Substance

4. Is this a U-listed commercial chemical product; (i.e. a pure chemical or sole active ingredient) listed in §261.33(f)?	☐ Yes	☑ No

U Code	CAS	Substance

Generators must determine if a waste exhibits any of the characteristics of a HW.

HAZARDOUS WASTE CHARACTERISTICS

Is the waste Ignitable per §261.21? **Waste Code: D001**	☐ Yes	☑ No
1. Is the waste a liquid with a flash point less than 140°F? Flash Point:	☐ Yes	☑ No
2. Is the waste a non-liquid capable, under standard temperature and pressure, of causing fire through friction, absorption of moisture, or spontaneous chemical changes; and when ignited, burns so vigorously and persistently that it creates a hazard?	☐ Yes	☑ No
3. Is the waste an ignitable compressed gas as defined in 49 CFR 173.300?	☐ Yes	☑ No
4. Is the waste an oxidizer as defined by 49 CFR 173.151 (such as a chlorate or peroxide)?	☐ Yes	☑ No
Is the waste Corrosive per §261.22? **Waste Code: D002**	☐ Yes	☑ No
1. Is the waste an aqueous solution with a pH ≤ 2 or ≥ 12.5?	☐ Yes	☑ No
2. Is the waste a liquid that corrodes steel at a rate of at least 0.25 inches per year?	☐ Yes	☑ No

Chiquita Canyon
Waste Stream Documentation Form

Waste Profile Number:	CH2732983	Waste Stream ID No.:	Tank Farm
Generator Number:	CAL000347030	SAA No. / Site ID No.:	#7
EPA Source Code:	G49 Form Code: W002	Hazardous Waste Codes:	D018,352

Is the waste Reactive per §261.23? **Waste Code: D003**	☐ Yes	☑ No
1. Is the waste normally unstable and readily undergoes violent change without detonating?	☐ Yes	☑ No
2. Water Reactive: Does the waste react violently with water? OR Forms potentially explosive mixture with water? OR When mixed with water does the waste generate toxic gases, vapors, or fumes in a quantity dangerous to human health or the environment?	☐ Yes	☑ No
3. Is the waste a cyanide or sulfide compound that could react at a pH between 2 and 12.5 releasing toxic gases?	☐ Yes	☑ No
4. Is the waste capable of detonation or explosive reaction if subjected to strong ignition sources or when heated under confinement?	☐ Yes	☑ No
5. Is the waste readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure?	☐ Yes	☑ No
6. Is the waste a forbidden Class A or Class B explosive as defined in 49 CFR 173.51, 173.53 or 173.88?	☐ Yes	☑ No
Is the waste Toxic per §261.24? **Waste code(s): D004-D043**	☑ Yes	☐ No
Is the waste a characteristic waste?	☑ Yes	☐ No

E. TREATMENT AND DISPOSAL REQUIREMENTS

1. Is the waste	☐ Recycled (includes UW)? ☐ Non hazardous?	☐ Burned for Energy Recovery (includes Used Oil)? ☐ Discharged to CWA regulated unit?

If Non Hazardous / Recycled (includes UW) or Burned for Energy Recovery Skip to Section F

2. Is the required one time LDR completed for HW discharged to a CWA unit?	☐ NA	☑ Yes	☐ No
3. Is an exemption claimed from Land Disposal Restrictions (LDR), §268?		☐ Yes	☑ No

Treatment Group:
☐ Wastewater (Contains <1% Total Organic Compounds and <1% Suspended Solids)
☑ Non-wastewater (Not Wastewater)

EPA Code	Constituent	Concentration (Toxicity Characteristic Only)	Regulatory Limit	Subcategory	LDR Treatment Standard (from §268.40)
D018	Benzene	>0.5 mg/L TCLP	0.5 mg/L TCLP	Wastes that exhibit the characteristics of toxicity	10 mg/kg and meet §268.48 standard

UHCs apply only to characteristic HW (UHCs requirements do not apply to high TOC Ignitable only waste)

Chiquita Canyon
Waste Stream Documentation Form

Waste Profile Number:	CH2732983	Waste Stream ID No.:	Tank Farm
Generator Number:	CAL000347030	SAA No. / Site ID No.:	#7
EPA Source Code:	G49 Form Code: W002	Hazardous Waste Codes:	D018,352

4. Are there any Underlying Hazardous Constituents (UHC)? (Characteristic Waste Only)	☐ Yes	☑ No

Constituent	**Universal Treatment Standard (from §268.48)**

F. WASTE STREAM SUMMARY

Waste Stream Name: Waste Sampling and PPE Debris

Waste Profile Number and Name: CH2732983 - Used Landfill Leachate Sampling Equipment, Bailers, PPE ETC.

Shipping Information: UN3077, Environmentally Hazardous Substances, Solid, n.o.s., (Benzene), 9, PGIII, Benzene Debris

Emergency Guide Book Number: 171	Emergency Guide Year: 2020

Waste Codes: D018,352

Comments:

Analytical Recommendation:

REVISION TABLE

Chiquita Canyon
Waste Stream Documentation Form

Waste Profile Number:	Waste Stream ID No.: Primary Canyon
Generator Number: CAL000347030	SAA No. / Site ID No.: #8
EPA Source Code: N/A Form Code: N/A	Hazardous Waste Codes: Non-Hazardous

A. GENERAL INFORMATION

Facility: Chiquita Canyon Landfill

Address: 29201 Henry Mayo Dr, Castaic, CA, 91384	Phone No: 330-635-4885
Contact: Dave Matthews	Email Address: dave.matthews@wasteconnections.com

Waste Stream Name: Non-Hazardous Waste Leachate

B. PROCESS INFORMATION

☐ New Process ☐ Process Change ☑ Process Review

Process Description (include any storage requirements):

Landfill leachate forms via decomposition of putrescible and organic fractions of landfill material transported by water percolating through the soil profile. This leachate is generated from the closed cells of the landfill known as the primary canyon. The leachate is collected in a 5,000 gallon aboveground storage tank.

Physical Property of Waste:	☐ Solid	☑ Liquid	☐ Gas	☐ Other

Generation Rate: **1,000** Units: ☑ Gallons OR ☐ Pounds Rate: ☑ Month OR ☐ Year

Collection Mode: 5,000-Gallon Aboveground Storage Tank

Material Name (include NSN if available)	Range or Concentration
Leachate	100%

C. EXEMPTIONS AND EXCLUSIONS

1. Is the waste a "solid waste" according to §CFR 261.2?	☑ Yes	☐ No
If no, provide the regulatory exclusion or exemption citation.		
If No, A HW CHARACTERIZATION IS NOT REQUIRED - SKIP TO SECTION F		
2. Is the waste a solid waste excluded or exempted from hazardous waste regulations?	☐ Yes	☑ No
If yes, provide the regulatory citation and justification:		
If Yes, A HW CHARACTERIZATION IS NOT REQUIRED - SKIP TO SECTION F		
3. Is this Used Oil OR an off specification petroleum fuel managed under §CFR 279?	☐ Yes	☑ No
If Yes, A HW CHARACTERIZATION IS NOT REQUIRED - SKIP TO SECTION F		
4. Is the waste a Universal Waste managed under §CFR 273?	☐ Yes	☑ No
If Yes, A HW CHARACTERIZATION IS NOT REQUIRED - SKIP TO SECTION F		

Chiquita Canyon
Waste Stream Documentation Form

Waste Profile Number:	Waste Stream ID No.: Primary Canyon
Generator Number: CAL000347030	SAA No. / Site ID No.: #8
EPA Source Code: N/A Form Code: N/A	Hazardous Waste Codes: Non-Hazardous

D. HAZARDOUS WASTE CHARACTERIZATION

Based on: ☐ User Knowledge ☑ Analytical

Sample ID: See Section F

Analytical Date: N/A

LISTED HAZARDOUS WASTE

Is this an F-listed waste?	☐ Yes	☑ No
1. Are solvents listed 40 CFR 261.31 (a) present at 10% or more and used as a solvent? If yes, identify the solvents.	☐ Yes	☑ No

Solvent	Percent Before Use	Waste Code

1a. Is this an F-listed waste from a specific process? If yes, identify the process.	☐ Yes	☑ No
Waste Code:		
2. Is this a K-listed waste from a specific source as listed in §261.32? If yes, identify the process.	☐ Yes	☑ No
Waste Code:		
3. Is this a P-listed commercial chemical product; (i.e. a pure chemical or sole active ingredient) listed in §261.33(e)?	☐ Yes	☑ No

P Code	CAS	Substance

4. Is this a U-listed commercial chemical product; (i.e. a pure chemical or sole active ingredient) listed in §261.33(f)?	☐ Yes	☑ No

U Code	CAS	Substance

Generators must determine if a waste exhibits any of the characteristics of a HW.

HAZARDOUS WASTE CHARACTERISTICS

Is the waste Ignitable per §261.21? **Waste Code: D001**	☐ Yes	☑ No
1. Is the waste a liquid with a flash point less than 140°F? Flash Point:	☐ Yes	☑ No
2. Is the waste a non-liquid capable, under standard temperature and pressure, of causing fire through friction, absorption of moisture, or spontaneous chemical changes; and when ignited, burns so vigorously and persistently that it creates a hazard?	☐ Yes	☑ No
3. Is the waste an ignitable compressed gas as defined in 49 CFR 173.300?	☐ Yes	☑ No
4. Is the waste an oxidizer as defined by 49 CFR 173.151 (such as a chlorate or peroxide)?	☐ Yes	☑ No
Is the waste Corrosive per §261.22? **Waste Code: D002**	☐ Yes	☑ No
1. Is the waste an aqueous solution with a pH ≤ 2 or ≥ 12.5?	☐ Yes	☑ No
2. Is the waste a liquid that corrodes steel at a rate of at least 0.25 inches per year?	☐ Yes	☑ No

Chiquita Canyon
Waste Stream Documentation Form

Waste Profile Number:	Waste Stream ID No.: Primary Canyon
Generator Number: CAL000347030	SAA No. / Site ID No.: #8
EPA Source Code: N/A Form Code: N/A	Hazardous Waste Codes: Non-Hazardous

Is the waste Reactive per §261.23? **Waste Code: D003**	☐ Yes	☑ No
1. Is the waste normally unstable and readily undergoes violent change without detonating?	☐ Yes	☑ No
2. Water Reactive: Does the waste react violently with water? OR Forms potentially explosive mixture with water? OR When mixed with water does the waste generate toxic gases, vapors, or fumes in a quantity dangerous to human health or the environment?	☐ Yes	☑ No
3. Is the waste a cyanide or sulfide compound that could react at a pH between 2 and 12.5 releasing toxic gases?	☐ Yes	☑ No
4. Is the waste capable of detonation or explosive reaction if subjected to strong ignition sources or when heated under confinement?	☐ Yes	☑ No
5. Is the waste readily capable of detonation or explosive decomposition or reaction at standard temperature and pressure?	☐ Yes	☑ No
6. Is the waste a forbidden Class A or Class B explosive as defined in 49 CFR 173.51, 173.53 or 173.88?	☐ Yes	☑ No
Is the waste Toxic per §261.24? **Waste code(s): D004-D043**	☐ Yes	☑ No
Is the waste a characteristic waste?	☐ Yes	☑ No

E. TREATMENT AND DISPOSAL REQUIREMENTS

1. Is the waste	☐ Recycled (includes UW)?	☐ Burned for Energy Recovery (includes Used Oil)?
	☑ Non hazardous?	☐ Discharged to CWA regulated unit?

If Non Hazardous / Recycled (includes UW) or Burned for Energy Recovery Skip to Section F

2. Is the required one time LDR completed for HW discharged to a CWA unit?	☐ NA	☐ Yes	☐ No
3. Is an exemption claimed from Land Disposal Restrictions (LDR), §268?		☐ Yes	☐ No

Treatment Group: ☐ Wastewater (Contains <1% Total Organic Compounds and <1% Suspended Solids)
☐ Non-wastewater (Not Wastewater)

EPA Code	Constituent	Concentration (Toxicity Characteristic Only)	Regulatory Limit	Subcategory	LDR Treatment Standard (from §268.40)

UHCs apply only to characteristic HW (UHCs requirements do not apply to high TOC Ignitable only waste)

Chiquita Canyon
Waste Stream Documentation Form

Waste Profile Number:	Waste Stream ID No.: Primary Canyon
Generator Number: CAL000347030	SAA No. / Site ID No.: #8
EPA Source Code: N/A Form Code: N/A	Hazardous Waste Codes: Non-Hazardous

4. Are there any Underlying Hazardous Constituents (UHC)? (Characteristic Waste Only)	☐ Yes	☐ No

Constituent	**Universal Treatment Standard (from §268.48)**

F. WASTE STREAM SUMMARY

Waste Stream Name: Non-Hazardous Waste Leachate

Waste Profile Number and Name:

Shipping Information: Non-Hazardous Liquid

Emergency Guide Book Number: N/A	Emergency Guide Year: N/A

Waste Codes: Non-Hazardous

Comments: Sample ID #: CACA0210Z008PC; CACA0211Z008PC; CACA0212Z008PC; CACA0218Z008PC; CACA0219Z008PC; CACA0220Z008PC; and CACA0224Z008PC88.

Analytical Recommendation:

REVISION TABLE

Laboratory Detection Summary | #8 Primary Canyon Tank

PROJ-037507 | Chiquita Canyon Landfill Waste Sampling

Data Updated at 4/2/2024 3:08:23 PM

Analytical Method	Analyte	Count of Lab Results	Count of Detections	Count of Samples Outside Regulatory Levels	Range of Detections
EPA 1010	Flash Point	8	8	0	208 - 212 deg F
EPA 6010B	Antimony	8	8	0	0.073 J - 0.24 mg/L
	Arsenic	8	7	0	0.08 J - 0.46 mg/L
	Barium	8	8	0	0.025 J - 6 mg/L
	Beryllium	8	1	0	0.0025 J - 0.0025 J mg/L
	Chromium	8	2	0	0.17 J - 0.4 mg/L
	Cobalt	8	1	0	0.019 J - 0.019 mg/L
	Copper	8	6	0	0.072 J - 1.5 mg/L
	Lead	8	3	0	0.037 J - 0.098 mg/L
	Molybdenum	8	1	0	0.04 J - 0.04 J mg/L
	Nickel	8	1	0	0.11 J - 0.11 mg/L
	Vanadium	8	3	0	0.024 J - 0.3 mg/L
	Zinc	8	6	0	0.23 J - 3.8 mg/L
EPA 8260B	1,4-Dichlorobenzene	8	8	0	0.008 J - 0.03 J mg/L
	2-Butanone	8	8	0	3.1 J - 17 mg/L
	Benzene	8	5	0	0.008 J - 0.07 mg/L
EPA 8270C	2-Methylphenol	8	3	0	0.16 J - 0.18 mg/L
	3-,4-Methylphenol	8	8	0	0.91 J - 5.8 mg/L
	Pyridine	8	5	0	0.31 J - 0.6 mg/L
EPA 9040B	pH	8	8	0	5.05 - 6.54 SU
	Temperature	8	8	0	17.8 - 20.5 deg C

Laboratory result qualifiers are reported to the right of corresponding detections. Definitions of reported qualifiers are below:

J: Result is estimated between the laboratory method detection limit and reporting limit.

Laboratory Results | #8 Primary Canyon Tank

PROJ-037507 | Chiquita Canyon Landfill Waste Sampling

Data Updated at 4/2/2024 3:08:23 PM

			#8 Primary Canyon Tank							
			2/10/2024 Primary Canyon Condensate Tank CACA0210Z008PC 502069 Field pH:	2/11/2024 Primary Canyon Condensate Tank CACA0211Z008PC 502071 Field pH:	2/12/2024 Primary Canyon Condensate Tank CACA0212Z008PC 502175 Field pH:	2/18/2024 Primary Canyon Condensate Tank CACA0218Z008PC 502630 Field pH:	2/19/2024 Primary Canyon Condensate Tank CACA0219Z008PC 502700 Field pH:	2/20/2024 Primary Canyon Condensate Tank CACA0220Z008PC 502840 Field pH:	2/24/2024 Primary Canyon Storage Tank 88 CACA0224Z008PC88 503152 Field pH:	3/14/2024 Primary Canyon Storage Tank 88 CACA0314Z008PC88 504439 Field pH:
Analytical Method	Analyte	Regulatory Levels*	-	-	-	5.21	5.90	5.23	5.62	6.32
EPA 9040B	pH	≥2 ≤12.5 SU	5.05 SU	5.21 SU	5.17 SU	5.16 SU	5.34 SU	5.29 SU	5.78 SU	6.54 SU
	Temperature	NA	20.2 deg C	19.8 deg C	19.4 deg C	18.5 deg C	17.8 deg C	18.7 deg C	18.7 deg C	20.5 deg C
EPA 1010	Flash Point	140 deg F	212 deg F	212 deg F	212 deg F	212 deg F	212 deg F	212 deg F	212 deg F	208 deg F
EPA 6010B	Antimony	15 mg/L	0.08 mg/L (J)	0.12 mg/L (J)	0.096 mg/L (J)	0.17 mg/L (J)	0.24 mg/L (J)	0.21 mg/L (J)	0.073 mg/L (J)	0.099 mg/L (J)
	Arsenic	5 mg/L	0.092 mg/L (J)	0.085 mg/L (J)	0.08 mg/L (J)	< 0.048 mg/L	0.08 mg/L (J)	0.1 mg/L (J)	0.46 mg/L	0.15 mg/L (J)
	Barium	100 mg/L	0.047 mg/L (J)	0.041 mg/L (J)	0.039 mg/L (J)	0.043 mg/L (J)	0.025 mg/L (J)	0.043 mg/L (J)	6 mg/L	0.61 mg/L
	Beryllium	0.75 mg/L	< 0.0017 mg/L	< 0.0017 mg/L	< 0.0017 mg/L	< 0.0027 mg/L	< 0.0017 mg/L	< 0.0017 mg/L	0.0025 mg/L (J)	< 0.0027 mg/L
	Cadmium	1 mg/L	< 0.015 mg/L	< 0.015 mg/L	< 0.015 mg/L	< 0.014 mg/L	< 0.015 mg/L	< 0.015 mg/L	< 0.015 mg/L	< 0.0092 mg/L
	Chromium	2 mg/L	< 0.029 mg/L	< 0.029 mg/L	< 0.029 mg/L	< 0.034 mg/L	< 0.029 mg/L	< 0.029 mg/L	0.4 mg/L	0.17 mg/L (J)
	Cobalt	80 mg/L	< 0.016 mg/L	< 0.016 mg/L	< 0.016 mg/L	< 0.013 mg/L	< 0.016 mg/L	< 0.016 mg/L	0.019 mg/L (J)	< 0.026 mg/L
	Copper	25 mg/L	1.5 mg/L	1.4 mg/L	< 0.02 mg/L	1.1 mg/L	0.78 mg/L	0.59 mg/L	< 0.02 mg/L	0.072 mg/L (J)
	Lead	5 mg/L	< 0.034 mg/L	< 0.034 mg/L	< 0.034 mg/L	< 0.054 mg/L	0.043 mg/L (J)	0.037 mg/L (J)	0.098 mg/L (J)	< 0.04 mg/L
	Molybdenum	350 mg/L	< 0.038 mg/L	< 0.038 mg/L	< 0.038 mg/L	< 0.049 mg/L	< 0.038 mg/L	< 0.038 mg/L	0.04 mg/L (J)	< 0.025 mg/L
	Nickel	20 mg/L	< 0.016 mg/L	< 0.016 mg/L	< 0.016 mg/L	< 0.031 mg/L	< 0.016 mg/L	< 0.016 mg/L	0.11 mg/L (J)	< 0.13 mg/L
	Selenium	1 mg/L	< 0.098 mg/L	< 0.098 mg/L	< 0.098 mg/L	< 0.023 mg/L	< 0.098 mg/L	< 0.098 mg/L	< 0.098 mg/L	< 0.18 mg/L
	Silver	5 mg/L	< 0.016 mg/L	< 0.016 mg/L	< 0.016 mg/L	< 0.018 mg/L	< 0.016 mg/L	< 0.016 mg/L	< 0.016 mg/L	< 0.027 mg/L
	Thallium	7 mg/L	< 0.079 mg/L	< 0.079 mg/L	< 0.079 mg/L	< 0.048 mg/L	< 0.079 mg/L	< 0.079 mg/L	< 0.079 mg/L	< 0.2 mg/L
	Vanadium	24 mg/L	< 0.013 mg/L	< 0.013 mg/L	< 0.013 mg/L	< 0.027 mg/L	0.024 mg/L (J)	< 0.013 mg/L	0.3 mg/L	0.045 mg/L (J)
	Zinc	250 mg/L	0.64 mg/L (J)	0.52 mg/L (J)	< 0.077 mg/L	0.47 mg/L (J)	0.33 mg/L (J)	0.23 mg/L (J)	3.8 mg/L	< 0.075 mg/L
EPA 7470A	Mercury	0.2 mg/L	< 0.011 mg/L	< 0.016 mg/L	< 0.016 mg/L	< 0.011 mg/L	< 0.011 mg/L	< 0.016 mg/L	< 0.016 mg/L	< 0.039 mg/L
EPA 8260B	1,1-Dichloroethene	0.7 mg/L	< 0.006 mg/L	< 0.006 mg/L	< 0.006 mg/L	< 0.005 mg/L	< 0.005 mg/L	< 0.006 mg/L	< 0.006 mg/L	< 0.006 mg/L
	1,2-Dichloroethane	0.5 mg/L	< 0.006 mg/L	< 0.006 mg/L	< 0.006 mg/L	< 0.003 mg/L	< 0.003 mg/L	< 0.006 mg/L	< 0.006 mg/L	< 0.006 mg/L
	1,4-Dichlorobenzene	7.5 mg/L	0.02 mg/L (J)	0.02 mg/L (J)	0.03 mg/L (J)	0.02 mg/L (J)	0.02 mg/L (J)	0.02 mg/L (J)	0.02 mg/L (J)	0.008 mg/L (J)
	2-Butanone	200 mg/L	7.1 mg/L	6.5 mg/L	7.2 mg/L	4.3 mg/L (J)	3.1 mg/L (J)	5.5 mg/L	7.8 mg/L	17 mg/L
	Benzene	0.5 mg/L	0.008 mg/L (J)	0.008 mg/L (J)	0.009 mg/L (J)	< 0.004 mg/L	< 0.004 mg/L	< 0.007 mg/L	0.008 mg/L (J)	0.07 mg/L (J)
	Carbon Tetrachloride	0.5 mg/L	< 0.006 mg/L	< 0.005 mg/L	< 0.006 mg/L	< 0.002 mg/L	< 0.002 mg/L	< 0.006 mg/L	< 0.006 mg/L	< 0.005 mg/L
	Chlorobenzene	100 mg/L	< 0.007 mg/L	< 0.005 mg/L	< 0.007 mg/L	< 0.02 mg/L	< 0.02 mg/L	< 0.007 mg/L	< 0.007 mg/L	< 0.005 mg/L
	Chloroform	6 mg/L	< 0.01 mg/L	< 0.006 mg/L	< 0.01 mg/L	< 0.004 mg/L	< 0.004 mg/L	< 0.01 mg/L	< 0.01 mg/L	< 0.006 mg/L
	Tetrachloroethene	0.7 mg/L	< 0.008 mg/L	< 0.004 mg/L	< 0.008 mg/L	< 0.01 mg/L	< 0.01 mg/L	< 0.008 mg/L	< 0.008 mg/L	< 0.004 mg/L
	Trichloroethene	0.5 mg/L	< 0.008 mg/L	< 0.006 mg/L	< 0.008 mg/L	< 0.007 mg/L	< 0.007 mg/L	< 0.008 mg/L	< 0.008 mg/L	< 0.006 mg/L
	Vinyl Chloride	0.2 mg/L	< 0.006 mg/L	< 0.005 mg/L	< 0.006 mg/L	< 0.005 mg/L	< 0.005 mg/L	< 0.006 mg/L	< 0.006 mg/L	< 0.005 mg/L
EPA 8270C	2-Methylphenol	200 mg/L	0.18 mg/L	0.17 mg/L (J)	< 0.79 mg/L	< 0.32 mg/L	< 0.16 mg/L	< 0.16 mg/L	< 0.16 mg/L	0.16 mg/L (J)
	2,4-Dinitrotoluene	0.13 mg/L	< 0.0074 mg/L	< 0.037 mg/L	< 0.37 mg/L	< 0.15 mg/L	< 0.074 mg/L	< 0.074 mg/L	< 0.074 mg/L	< 0.5 mg/L
	2,4,5-Trichlorophenol	400 mg/L	< 0.052 mg/L	< 0.26 mg/L	< 2.6 mg/L	< 1 mg/L	< 0.52 mg/L	< 0.52 mg/L	< 0.52 mg/L	< 0.17 mg/L
	2,4,6-Trichlorophenol	2 mg/L	< 0.025 mg/L	< 0.12 mg/L	< 1.2 mg/L	< 0.49 mg/L	< 0.25 mg/L	< 0.25 mg/L	< 0.25 mg/L	< 0.67 mg/L
	3-,4-Methylphenol	200 mg/L	1.9 mg/L	1.7 mg/L	1.5 mg/L (J)	1.9 mg/L (J)	0.91 mg/L (J)	1.9 mg/L	1.2 mg/L	5.8 mg/L
	Hexachlorobenzene	0.13 mg/L	< 0.0078 mg/L	< 0.039 mg/L	< 0.39 mg/L	< 0.16 mg/L	< 0.078 mg/L	< 0.078 mg/L	< 0.078 mg/L	< 0.085 mg/L
	Hexachlorobutadiene	0.5 mg/L	< 0.013 mg/L	< 0.067 mg/L	< 0.67 mg/L	< 0.27 mg/L	< 0.13 mg/L	< 0.13 mg/L	< 0.13 mg/L	< 0.093 mg/L
	Hexachloroethane	3 mg/L	< 0.014 mg/L	< 0.068 mg/L	< 0.68 mg/L	< 0.27 mg/L	< 0.14 mg/L	< 0.14 mg/L	< 0.14 mg/L	< 0.13 mg/L
	Nitrobenzene	2 mg/L	< 0.016 mg/L	< 0.079 mg/L	< 0.79 mg/L	< 0.32 mg/L	< 0.16 mg/L	< 0.16 mg/L	< 0.16 mg/L	< 0.16 mg/L
	Pentachlorophenol	1.7 mg/L	< 0.065 mg/L	< 0.33 mg/L	< 3.3 mg/L	< 1.3 mg/L	< 0.65 mg/L	< 0.65 mg/L	< 0.65 mg/L	< 0.97 mg/L
	Pyridine	5 mg/L	0.32 mg/L	0.6 mg/L	< 1 mg/L	< 0.42 mg/L	< 0.21 mg/L	0.47 mg/L (J)	0.31 mg/L (J)	0.56 mg/L (J)

*Regulatory levels are the lowest value of TCLP, STLC, and TTLC regulatory levels. RCRA regulatory levels used for pH (corrosivity) and Flashpoint (ignitibility).
Laboratory non-detections are reported as less than ("<") the laboratory method detection limit.
Laboratory result qualifiers are reported to the right of corresponding detections (in parentheses). Definitions of reported qualifiers are below:
J: Result is estimated between the laboratory method detection limit and reporting limit.

Detection
Non-Detection
Non-Detection (MDL Above Regulaory Level)

Appendix A.7 – Summary of Current Treatment and Disposal Facilities

Chiquita Canyon Landfill Offsite Disposal Capacity

Waste Stream	Facility	Maximum Acceptance Capacity (gallon)	Transportation
Hazardous Leachate	Clean Harbors - UT	5,000	1 Truck per Day
	Clean Harbors - NE	20,000	3 – 4 Trucks per Day
	Clean Harbors - TX	60,000/week	3 Rail Cars per Week
Non-Hazardous Leachate	Avalon - CA	150,000	30 Trucks per Day
	East Valley Remediation - CA	65,000	13 Trucks per Day
	US Ecology - NV	25,000	5 Trucks per Day
	Clean Harbors - ISO	20,000	4 Trucks per Day
	Durham (RAD) Landfill	80,000	16 Trucks per Day
Daily Total:		**377,000 gal/day**	
This table represents current activity as of 8/1/2024 and is subject to change			

Non-Hazardous Waste Disposal Facilities

- Avalon Industrial Wastewater Treatment Facility - 14700 S. Avalon Blvd., Gardena, California 90248
- East Valley Remediation Facility - 62150 Gene Welmas Wy, Mecca, CA 92254
- US Ecology - 11455 S US-95, Beatty, NV 89003
- Clean Harbors ISO - 4101 Industrial Way Benicia, CA 94510
- Waste Connections Durham (RAD) Landfill – 22316 South Harmon Rd, Florence AZ 85132

Hazardous Waste Disposal Facilities

- Clean Harbors Aragonite Incineration Facility - 11600 North Aptus Road, Grantsville, UT 84029
- Clean Harbors Kimball Incineration Facility - 2247 South Highway 71, Kimball, Nebraska 69145
- Clean Harbors Deer Park - 2027 Independence Parkway South, La Porte, TX 77571

Appendix D

LEACHATE CONTINGENCY PLAN

CHIQUITA CANYON LANDFILL
29201 HENRY MAYO DR.
CASTAIC, CALIFORNIA 91384

CHIQUITA CANYON
A Waste Connections Company

Revision 0
August 2024

TABLE OF CONTENTS

LIST OF ACRONYMS AND ABBREVIATIONS

BOD	Biochemical Oxygen Demand
CCL	Chiquita Canyon Landfill
CCR	California Code of Regulations
CFR	Code of Federal Regulations
CUPA	Certified Unified Program Agencies
DAF	Dissolved Air Flotation
DTSC	Department of Toxic Substances Control
EPA	U.S. Environmental Protection Agency
ETLF	Elevated Temperature Landfill
FOSC	Federal On-Scene Coordinator
GAC	Granular Activated Carbon
LCM	Leachate Collection Manifold
LDR	Land Disposal Restriction
MG	Million Gallons
OSR	Off-Site Rule
QA	Quality Assurance
QC	Quality Control
RCRA	Resource Conservation Recovery Act
RMAC	Response Multiagency Coordination
RQ	Reportable Quantity
RWQCB	Regional Water Quality Control Board
SCAQMD	South Coast Air Quality Management District
SAP	Sampling and Analysis Plan
SVOC	Semi-Volatile Organic Compound
TDS	Total Dissolved Solids
UHC	Underlying Hazardous Constituent
UAO	Unilateral Administrative Order
VOC	Volatile Organic Compound
WMU	Waste Management Unit
WSD	Waste Stream Determination

1 INTRODUCTION

1.1 Background

The Chiquita Canyon Landfill (Landfill) operated by Chiquita Canyon, LLC (CCL) has been experiencing a subsurface reaction in an inactive portion of the Landfill, also known as an Elevated Temperature Landfill (ETLF) event.

As a result of the ongoing subsurface reaction, the Landfill has been producing significant amounts of leachate. Extensive leachate testing and analysis has demonstrated that some of the leachate is characteristically hazardous, due solely to its concentration of the organic constituent benzene. CCL is actively working to install additional well pumps to remove the leachate in the waste mass which will aid in controlling the reaction event. The increased leachate production and hazardous characteristics have required the setup of treatment units, as well as temporary onsite accumulation areas until suitable disposal outlets or storage have been established.

1.2 Purpose and Scope of the Plan

This Plan was prepared at the request of the EPA by letter dated June 17, 2024, regarding the Leachate Management Plan. This plan outlines contingency procedures and protocols for the effective management of leachate at the Landfill. This plan outlines potential contingency measures, as well as applicability in certain example scenarios:

- Scenario One - describes the procedure if an offsite disposal facility (or combinations of facilities) stopped accepting waste tomorrow or in the event the leachate production increased or doubled.
- Scenario Two - describes the process for ensuring the leachate treatment system does not fail.
- Scenario Three - describes the next steps should a RCRA permit (or equivalent state authorization) for on-site treatment not be approved for the site.
- Scenario Four - describes the process should slope failure occur and the tank farm be destroyed.

2 CONTINGENCY MEASURE OVERVIEW

This section provides an overview of steps that CCL could take in the event circumstances change that impact CCL's management of its leachate.

2.1 Production and Capacity Tracking

CCL's first step in the event of a change in circumstances impacting the management of leachate would be to review the current production rate and remaining tank capacity at the site. CCL currently maintains an online tracking tool known as the Leachate Dashboard. The data originates from the field team dispersed around CCL. The CCL onsite Controller compiles the data and uploads it into the dashboard daily.

The Liquids Dashboard also contains the Year-to-Date (January 2024 – Current) total inventory in gallons of leachate that CCL has produced, treated, disposed, and stored onsite on a monthly basis. The Dashboard also contains the number of frac tanks and their status, as well as the number of active pumps.

Based on the disposal facility acceptance limitations presented, CCL would be able to determine the number of days remaining until total tank capacity would be reached. As an example, CCL has a total onsite capacity to accumulate approximately 4,228,000 gallons of leachate as of July 31, 2024. CCL would be able to create a countdown schedule to ensure steps are taken before running out of tank capacity to store leachate. With an available capacity of 4,228,000 gallons, CCL would have approximately 54 days of empty inventory if onsite treatment is operating, or 22 days without onsite treatment.

2.2 Offsite Disposal

Once CCL had identified its capacity outlook and needs, CCL's second step would be to use this information in its continued efforts to identify more offsite disposal facilities, taking into account any relevant criteria in the acceptance process (ex. Waste Acceptance Plan, Universal Treatment Standards, Total Dissolved Solids, etc). With continued onsite treatment of the leachate and development of new processes, additional offsite facilities may become available.

2.2.1 Receiving Facilities

CCL maintains a disposal facility tracking spreadsheet with over 400 offsite treatment and disposal facilities, which includes those that can receive both hazardous and non-hazardous waste. As directed by EPA, CCL has contacted the Off-Site Rule lead contacts in each EPA region about offsite management options that are already approved under the Off-Site Rule (OSR). CCL is currently working to verify any additional disposal facilities through the OSR list and update the facility tracking spreadsheet. CCL also submitted a FOIA request on July 15, 2024, to facilitate that process.

2.2.2 Renewed Efforts

In the event of an emergency, CCL will redouble its efforts to identify offsite facilities. In addition to continuing to contact new facilities, CCL will use the changed circumstances to press facilities that are accepting materials to take more, facilities that have considered but not committed to accepting waste to begin accepting, and renewing requests to facilities that have previously declined.

2.3 Onsite Treatment

CCL's robust efforts have been unable to identify offsite capacity for more than a small fraction of the total volume of the characteristically hazardous leachate. Thus, another step is to increase the onsite treatment of the leachate to maximize offsite disposal options.

Treating the hazardous leachate onsite is the safest and most environmentally protective option, as it renders the leachate non-hazardous as quickly as possible and creates opportunities for offsite storage.

2.3.1 Current Treatment System

The CCL GAC treatment systems have been designed on the basis that each individual primary treatment train can operate at its respective maximum capacity of 75 gallons per minute per train. The systems have a maximum design flow rate of 150 gallons per minute and are designed to enhance the removal of volatile organic compounds (VOC) and semi-volatile organic compounds (SVOC). The treatment process renders the leachate non-hazardous. CCL currently has two different treatment systems from two different vendors, who both can expand their treatment capacity on relatively short notice. CCL's treatment capacity with current on-site systems could achieve and sustain approximately 280,000 gallons per day of treatment if utilized 24/7. This is roughly double the current generation rate of characteristically hazardous waste at the landfill. If hazardous production increases beyond this or current hazardous waste facilities were no longer available to CCL, CCL would expand the treatment systems.

2.3.2 Dissolved Air Flotation and Clarifier Unit

CCL has installed Dissolved Air Flotation (DAF) and clarifier systems after their respective GAC systems, which are designed to remove total dissolved solids (TDS) from the treated leachate stream. CCL is seeking approval to test these systems. The removal of TDS from the leachate waste stream may allow CCL to re-evaluate additional disposal outlets. CCL is also trying to meet the Universal Treatment Standards (UTS) under the Land Disposal Restrictions (LDR), which has the potential to allow for greater disposal options with solidification, evaporation ponds, and deep well injection. CCL is seeking authorization from SCAQMD to conduct a bench trial to confirm the effectiveness of these systems. CCL could expand this treatment system as necessary to expand the list of potential offsite disposal or storage opportunities.

2.3.2.1 Potential Disposal Capacity with Successful DAF / Clarifier Treatment

CCL will have increased disposal facility options with the addition of an operational DAF and clarifier onsite. CCL is working to setup additional disposal agreements and logistics for DAF and clarifier-treated leachate. The table below lists the current and potential daily capacities for the following disposal facilities for DAF and clarifier-treated leachate.

Current Disposal Outlet and Daily Capacity for Non-LDR Compliant Material	**Potential Disposal Outlet and Daily Capacity with DAF for LDR Compliant Material**
Clean Harbors ISO – 0 gallons	Clean Harbors ISO – 75,000 gallons daily
Waste Connections RAD – 0 gallons	Waste Connections RAD – 80,000 gallons daily
US Ecology Beatty – 25,000 gallons daily every other week (alternate weeks with LDR-compliant material)	US Ecology Beatty – 25,000 gallons / every other week (alternate weeks with non-LDR-compliant material)
US Ecology Grandview – 0 gallons	US Ecology Grandview – 25,000 gallons daily
Clean Harbors Subtitle C Landfills Buttonwillow, CA – 0 gallons Deer Trail, TX – 0 gallons Lone Mountain, OK – 0 gallons	Clean Harbors Subtitle C Landfills Buttonwillow, CA – Pending Approvals Deer Trail, TX – Pending Approvals Lone Mountain, OK – Pending Approvals
Current Total: 25,000 gallons	**Potential Total:** 205,000 gallons

The ongoing treatment efforts along with the DAF and clarifier technology should allow for CCL to maintain current onsite storage and fully utilize the identified disposal outlets to replace any facility or combination of facilities if they were no longer able to accept waste.

2.3.3 Alternatives

CCL is continuously assessing new solutions, including new technologies, engineering solutions, or authorization pathways.

2.4 Offsite Storage

Another contingency step would be to consider off-site storage locations as a stopgap measure. Currently, the leachate produced from Leachate Collection Manifold (LCM), Group B, Group C, and Primary Canyon (about 40% of the site's leachate) is characteristically non-hazardous and would be considered priority for offsite storage. The non-hazardous leachate does not require treatment prior to offsite transportation or storage permitting.

Leachate produced from Group A, East Perimeter, and North Perimeter is characteristically hazardous (approximately 60% of total leachate) and if moved offsite from CCL without treatment would require proper hazardous waste transportation as well as hazardous waste tank storage and permitting. As noted above, CCL has inquired about offsite management and disposal opportunities with approximately 400 facilities. Despite these diligent efforts, CCL has been unable to identify any facilities with the appropriate insurance, permits, and permissions from regulatory authorities to store the hazardous leachate.

Due to the difficulty in locating any potential offsite storage options, CCL has asked the agencies to assist by providing a list of locations for CCL to contact and coordinate. CCL has not received any contact information related to potential storage options. CCL has therefore considered other properties over which it has control.

2.4.1 Wolcott Property

CCL currently owns the property adjacent to the Landfill known as Wolcott (Corner of Wolcott and Highway 126 / approximately 14 acres). CCL would initially plan to install a storage tank on the property around the ridgeline on Wolcott. This storage tank would allow CCL to collect treated liquids in the landfill area and transport them via vacuum or tanker truck to one larger tank location that outbound trucks could collect from. Depending on the size and type of tank, CCL may need permits from Department of Toxic Substances Control (DTSC) and/or the local Certified Unified Program Agencies (CUPA). Permits (or authorizations) ensure that the tank design, installation, operation, and closure meet environmental standards. The work may also require permits from the County, such as a grading permit.

2.4.2 Affiliate Subtitle D Landfills

CCL is also prepared to source and install tanks on their nearest affiliate Waste Connections landfill properties, as available and as needed. CCL has conducted an initial evaluation of potential affiliate properties to identify those with space suitable for installation of tanks and related equipment. The tanks would be setup to temporarily hold non-hazardous leachate until an ultimate disposal location could be identified. CCL would prioritize the following facilities based on their proximity to the Landfill and available space at the facility:

- Avenal Landfill: 201 Hydril Road, Avenal, CA 93204
- Cold Canyon Landfill: 2268 Carpenter Canyon Rd, San Luis Obispo, CA 93401
- Red Rock Landfill (Formerly RAD) 22316 South Harmon Rd, Florence, AZ 85132

Use of these facilities would similarly necessitate evaluation of permitting requirements.

2.5 Onsite Storage

If additional capacity is required following the assessment of available offsite storage and disposal facilities, CCL will reevaluate its available onsite capacity in consideration of the timing for increasing offsite shipment. If there is a period of time in which CCL might need additional onsite storage, CCL would evaluate the potential volume

needed and increase onsite storage capacity as a stopgap measure. These options would each have their own permitting requirements, which would need to be addressed to facilitate implementation.

2.5.1 Primary Canyon Waste Management Unit Bladder Tanks

CCL is prepared to design additional onsite storage locations on an area on the deck of the closed Primary Canyon Waste Management Unit (WMU). The Primary Canyon WMU is an unlined landfill within the Chiquita Canyon Landfill complex that stopped receiving waste in the early 1990's. The site is officially closed for disposal operations and has a constructed clay/soil cover. The deck area has been utilized for temporary stockpiling of daily cover soils, and serves as a storage area for landfill equipment and supplies, and a low-permeability soil stockpile for future landfill liner projects in the East Canyon. A portion of the closed landfill deck could be utilized for additional onsite frac tanks, pillow tanks, or bladders. The durable bladder and pillow tanks can be used as temporary and long-term storage solutions for the leachate water. The bladder tanks are available in different volumes but can range from 50,000-gallon up to 200,000-gallon tanks. Tank connections are made in poly, stainless steel, or aluminum that may be used to connect hoses to tanks.

Leachate could be piped from wells and sumps that are integral parts of the Landfill's infrastructure to the Primary Canyon accumulation tanks/bladders where it would be stored for a brief period prior to treatment. The leachate will then be pumped from the accumulation tanks to a series of tanks that filter the material and treat it using GAC. The leachate exiting the GAC units will be rendered non-hazardous, and the treated non-hazardous leachate will be piped to separate handling tanks (post-GAC units).

2.5.2 Evaporative Water Disposal

CCL could also source and set up mobile evaporators to process the decharacterized leachate. Waste Connections currently has vendors that could provide 24/7 process oversight through a combination of on-site manpower, remote nighttime operation, and technical support systems. The evaporation systems could be equipped with a stripper system that removes light hydrocarbons. Water that is high in dissolved solids requires specialized metallurgies, pumping, and separation equipment. The evaporation, emission control, and solids removal system can be built into the process.

2.5.3 Surface Impoundments

CCL previously submitted the conceptual design for a segmented impoundment facility comprised of eight individual surface impoundment basins with individual storage capacities ranging from 900,000 gallons to 1,350,000 gallons. The total volume storage proposed for this facility is 8.58 million gallons (MG). As these units are proposed on the deck of the unlined WMU, each unit is proposed to be a double lined impoundment constructed in accordance with the standards and requirements of the California Code of Regulations Title 27. It is envisioned that the liner system for the proposed impoundments would be two 60 mil flexible membrane liners (FML) separated by a detection layer on the floor of 6" of uniform sand or drainage geocomposite, as approved by the local agency. Each unit with the group is proposed to be 12-foot overall depth with liquid storage of ten foot of depth and 2 feet of freeboard (as required by title 27). For odor control, each unit would have an 80 mil FML cover and be placed under system vacuum to prevent excessive ballooning of the cover. Liquids will be introduced and removed from the basin in dedicated pipes (one for inflow, one for outflow) with the cover penetrations booted to prevent loss of vacuum and release of odors. Each unit would have side slope walls at 2:1 horizontal to vertical and will be separated from each adjacent unit by a 15-foot-wide accessway. The units would be arranged on the deck so that the bottom elevation of each unit would coincide with the original top elevation of the clay/soil barrier that constituted the original closed landfill deck. The side berms that would form each impoundment unit would be constructed with placed and compacted fill; no excavation into the original closed landfill deck and its associated clay/soil cover would be envisioned for this project. Such an approach would likely require permitting with South Coast AQMD and RWQCB.

2.6 Well Pump Reduction

A final step, to be taken in only the most extreme circumstances, would be to temporarily reduce well pumps. In such a circumstance, CCL would proceed strategically to minimize disruption. CCL would analyze existing data on liquid levels, temperatures, and gas flow and quality to identify if any pumps would need to be turned off to reduce the production rate of leachate as a bridge while actively developing the additional off- or on-site management options discussed above.

To date, CCL has 56 active pumps and is continuing to install and operate more, as increasing leachate extraction mitigates the underlying reaction. CCL would first prioritize any option that allowed pumping to remain on for the characteristically hazardous leachate. CCL would then stagger the selections to ensure general areas would still be pumped. CCL would then make sure flows were constant to each Tank Farm # 7 and Tank Farm # 9 within treatment and tank space. CCL cannot accurately predict the maximum daily leachate generation once all pumps are placed and in operation; however, CCL's engineers have estimated that the Landfill may ultimately produce as much as 400,000 – 500,000 gallons of leachate per day. It is therefore necessary to consider the appropriate procedure for approaching this potential temporary solution in the event no other options remain.

3 CONTINGENCY SCENARIOS

EPA has identified several scenarios of particular concern, which CCL has evaluated using the potential contingency steps identified.

3.1 Scenario 1 – Loss of Disposal Facilities or Doubling of Production

CCL has considered what steps it would take if a facility (or any combination of facilities) stopped accepting waste tomorrow, or if its leachate production suddenly doubled. In either event, CCL would have a larger volume of leachate onsite to manage. In such a circumstance, CCL would follow all of the procedures outlined above.

3.2 Scenario 2 – Onsite Treatment System Failure

CCL has designed its treatment system to have redundancies to avoid a scenario where the system would fail in the first instance. CCL has two separate vendors providing treatment who have successfully treated millions of gallons of CCL leachate to date. Both vendors have also secured local storage of the granular activated carbon and are available to scale operations upon request.

In the event that one or both systems nevertheless failed, CCL would follow the procedures outlined above, with a focus on expanding offsite hazardous waste disposal and storage options in light of the increase in expected hazardous leachate. CCL also would undertake a root cause analysis to determine the cause of the onsite treatment failure. CCL would work with its vendors to repair its existing systems and would investigate alternative treatment options, in addition to the standard contingency steps.

3.3 Scenario 3 – Permit Denial

As CCL has documented in prior letters, CCL is currently operating under the immediate response exemption and is addressing the appropriate long-term treatment process with the local CUPA. CCL is actively working to transition from operating under the exemption to operating in compliance with normally applicable hazardous waste requirements, including obtaining authorization under California's hazardous waste tiered permitting program. In the event the permitting plan is disapproved, the emergency circumstances would be continuing while another option is pursued.

On July 2, 2024, CCL met with the local CUPA, Los Angeles County Fire, to discuss CCL's intent to submit notification seeking coverage under California's Conditional Authorization tier (HSC § 25200.3). The CUPA described the information it would need to evaluate the application.

CCL prepared an overview of the leachate management protocol with the necessary data to support the use of the Conditional Authorization tier. CCL submitted these materials to the CUPA on July 19, 2024. Pending agreement from the CUPA that the planned leachate management protocol is conceptually eligible, CCL plans to submit notification as soon as possible under the circumstances.

If CCL is not able to operate under the Conditional Authorization tier, CCL would continue to operate in emergency conditions that warrant the immediate response exemption.

CCL would also take the following steps:

1. Assess CCL production and capacity (2.1).
2. Identify additional offsite disposal options (2.2), focusing on outlets that can accept hazardous waste for disposal.
3. Continue the treatment process under the immediate response exemption (2.3.4) while evaluating alternative technologies and alternative authorization pathways. CCL would consider all potential treatment options and permitting tiers.

   Additionally, CCL is reviewing the Land Disposal Restrictions (LDR) Treatability Variances and Determinations of Equivalent Treatment guidance and procedures. If it were unable to obtain authorization, CCL also would explore the applicability of the treatability variance which allows facilities to temporarily treat hazardous waste using methods that deviate from standard treatment requirements, provided the facility can demonstrate that the proposed method is effective and protective of human health and the environment.

4. Explore offsite storage options and permitting requirements for offsite storage of hazardous waste (2.4).
5. Implement onsite storage options (2.5), with a focus on options that could support storage of hazardous waste. CLL would also address applicable permitting requirements.

If presented with no other feasible alternative, CCL would systematically decrease pumping (2.6).

3.4 Scenario 4 – Slope Failure

CCL has considered what steps it can take if the Landfill experienced slope failure that damaged the treatment area and tank farm. In the event of impending slope failure, CCL would implement the existing West Slope Pre-emptive Secondary Containment Plan which provides the proposed measures in the unlikely event of slope failure. The contingency measures identified in that plan are intended to contain a resulting leachate release.

CCL is in the process of evaluating slope stability and conducts daily visual inspections for slope failure indicators in conjunction with weekly Propeller drone flights analyzed for lateral movement and settlement over the reaction area. This Pre-emptive West Slope Plan also provides measures involving procurement and staging of materials and equipment in the event an unlikely catastrophic failure emergency response is triggered.

Even in the event of a slope failure, CCL's treatment program would be unlikely to be halted. CCL has established two separate tank farms in order to build redundancy into its treatment process. One slope failure would not damage both tank farms. Therefore, CCL would continue operating treatment at the tank farm that remained available in the event the other was impacted. CCL would also evaluate setting up a new treatment process in another location or expanding the remaining system.

CCL would also follow the other contingency steps outlined above to mitigate any accumulation of leachate.

BEFORE THE HEARING BOARD OF THE

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

In The Matter Of

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT,

Petitioner,

vs.

CHIQUITA CANYON, LLC a Delaware Corporation,
[Facility ID No. 119219]

Respondent.

Case No. 6177-4

EXHIBIT B TO DECLARATION OF NEAL BOLTON, P.E.: MODEL OF LIQUID GENERATION AND TOTAL QUANTITY REPORT

Health and Safety Code § 41700, and District Rules 402, 431.1, 3002, 203, 1150

Hearing Date: August 17 and 20, 2024
Time: 10:00 am
Place: Santa Clarita Performing Arts Center
College for the Canyons
26455 Rockwell Canyon Rd.
Santa Clarita, CA 91355

Model of Liquid Generation and Total Quantity Report

Prepared For:

June 25, 2024

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June 25, 2024

Steve Cassulo,

RE: Stipulated Order for Abatement, Case No. 6177-4, Condition No. 12(g)(vii)

In accordance with Condition No. 12(g)(vii) of the Stipulated Order for Abatement (Stipulated Order) with the South Coast Air Quality Management District in Case No. 6177-4, Blue Ridge Services Montana, Inc. has prepared this **MODEL OF LIQUID GENERATION AND TOTAL QUANTITY REPORT**. Condition No. 12(g)(vii) requires the following:

The development of a model to estimate the rate of liquid generation in the landfill, and total quantity of liquid existing within the landfill waste mass at any given time (including supporting assumptions, references, and calculations). By no later than June 25, 2024, Respondent shall submit to South Coast AQMD a report summarizing the model and results of modeling.

This report describes the model requested per the above-listed condition.

Respectfully,

Neal Bolton, P.E.
President
Blue Ridge Services Montana, Inc.
neal@blueridgeservices.com

CONTENTS

ACRONYMS

Acronym	Meaning
BRS	Blue Ridge Services Montana, Inc.
CY	Cubic Yard
CCL	Chiquita Canyon Landfill
LFG	Landfill Gas
MOLO	Manager of Landfill Operations
PCY	Pounds per Cubic Yard
SCAQMD	South Coast Air Quality Management District
SWANA	Solid Waste Association of North America

EXECUTIVE SUMMARY

In accordance with Condition No. 12(g)(vii) of the Stipulated Order for Abatement in Case No. 6177-4, this report summarizes a model to estimate the rate of liquid generation in the landfill and the quantity of liquid existing within the landfill waste mass. This report also provides the supporting assumptions, references, and calculations used to develop the model and provide initial modeling results.

We modeled the quantity of liquid within the waste mass by estimating the overall moisture content within the waste mass and extrapolating from there the volume of liquid that would be released from the entrained moisture as free liquid within the landfill. We first estimated overall moisture content by applying industry-typical moisture content factors to the categories of solid waste that can be found in CCL's waste mass. Through this process, we estimated that, on average, every ton of fill within the waste mass contains approximately 46.37 gallons of entrained moisture. We then looked at settlement data to determine the approximate volume of the waste mass that may be affected by the reaction—as it is this volume of the waste mass from which the free liquid is being generated by the reaction. We estimated that approximately 50% of the entrained moisture within this volume of waste mass may be liberated during full reaction. Using this estimate, along with the volume of leachate that we have extracted from this area to date, we estimate that 24,707,124 gallons of liquid may be present within the saturated layers of waste within and adjacent to the reaction area.

We modeled the rate of liquid generation by taking the estimate of the volume of liquids that have been liberated from the entrained moisture within the waste mass and dividing by the length of time this volume of the waste mass has been settling. Using this process, we estimate that the landfill has generated approximately 6,203,849 gallons of liquid per month. Note, however, that the rate of settlement appears to be decreasing, which may significantly affect this rate estimate in the future.

Please note that this integrated model and initial modeling results are based upon multiple layered assumptions. If any of these assumptions changes as new data is collected, or if any are proven untrue, then these figures may change significantly. For this reason, along with the ever-present need for more data in order to confirm assumptions and analyses, we recommend updating this model and modeling results semi-annually.

DEFINITIONS

LEACHATE

Liquid exists within the landfill as moisture that is held (i.e., entrained) within municipal solid waste (MSW) material, as free liquid that is present in static perched zones in the form of layers of saturated waste, and as free liquid that may be in the process of flowing through the waste.

Some "free liquid" exists within the waste mass of CCL. Waste, soil, and other materials within the landfill also contain entrained moisture that, if liberated, may also become free liquid. In terms of scale, the vast majority of liquid in any landfill, including CCL, is entrained in the waste. Some of this liquid may be liberated to become free liquid, but some moisture always remains entrained in the waste mass. The free liquid is referred to as leachate.

When it comes to landfill leachate, and in the context of this model, we are assuming that leachate is any free liquid (or moisture) that has contacted waste.

Leachate may exist as it flows downward toward the liner where it is collected by the leachate collection and recovery system (LCRS), or as it flows laterally toward a surface leachate seep. It may also exist as a saturated layer or "lens" within the waste mass that when encountered during drilling, will result in a flooded well. Entrained moisture within solid waste material may become leachate when it is liberated during the reaction process.

This total liquid/moisture volume, along with liquid that is added in various ways, represents the total potential source of liquid generation. In this context, liquid generation refers to the rate at which free liquid is liberated within the waste mass. Liquid generation is discussed later in this document.

When discussing liquid and/or moisture volume within the landfill, there are two important terms one must understand, saturation and field capacity. These terms are often confused and may mistakenly be used interchangeably, but they represent two related, but different, conditions.

SATURATION

Saturation is when all the pore space within an object or material is filled with water. Suppose you placed a sponge into a bowl and then added water until the sponge was completely submerged. If you pressed on the submerged sponge – or patiently watched – you would observe air bubbles coming out of the sponge. After enough pressing and/or enough time, there would be no more bubbles, because all the pores within the sponge would be filled with water. At this point, the sponge would be saturated.

Items or materials within a landfill may become saturated if they are in an area where liquid has pooled, or if excess water is unable to leave because it is in a confined area – it is compartmentalized. This concentration of liquid may occur on top of the landfill liner, a low-permeability layer of cover soil, an old access road, or another confining (i.e., limiting) layer within the landfill. Please note that this does not refer to a "lake" of liquid, but rather to a layer of waste that is at some point of saturation.

Full or partial saturation may also occur if liquid is added to an object or material faster than it can drain out. To illustrate, if you continue pouring water on the sponge and do not allow time for it to naturally drain, it will continue to be at some degree of saturation. In other words, it is unable to drain and reach its field capacity.

FIELD CAPACITY

We can think of field capacity as a point of equilibrium in terms of an item or material that has reached its maximum moisture holding capacity, though is not necessarily saturated. If we removed the saturated sponge from the bowl and set it on a drying rack, water would drain from the sponge. After a while, no more water would drip from the sponge. However, if, at that point, we used an eye dropper to add a single drop of water to the sponge, a single drop of water would drop out the bottom. When the sponge has all the water it can hold and cannot retain even a single drop more, it is at field capacity. It may not be fully saturated, in that all pores are filled with water, but still the sponge has all the water it can hold.

A similar state of equilibrium may exist within a landfill. However, it should be considered an equilibrium at a specific point in time. Because waste material is continually decomposing, settling, and changing state (from solid to liquid or gas), the equilibrium that defines field capacity is constantly changing. In the process, the quantity of moisture entrained in the waste or liberated as free liquid is changing too. This equilibrium is also affected by free liquid that may be held or that is passing through the waste mass.

INTRODUCTION

Per Condition No. 12(g)(vii) of the Stipulated Order for Abatement in Case No. 6177-4, the South Coast Air Quality Management District (SCAQMD) required Chiquita Canyon, LLC (Chiquita) to develop a model that accomplishes 2 things:

1. Estimates the volume of liquid within the waste mass of the Chiquita Canyon Landfill (CCL), and
2. Estimates the generation (i.e., liberation) rate of liquid from that waste mass.

The model described herein integrates several variables that can be updated on a periodic basis. These variables include settlement, liquid levels, inbound waste tonnage, precipitation, and liquid volumes extracted from the landfill. We recommend this model be updated semi-annually because any trends in either liquid volume or liberation rate will occur slowly.

VOLUME OF LIQUID

We began our analysis by stating our base assumption that liquid (or moisture) within the landfill can neither be created nor destroyed. We recognize that some chemical bonding of hydrogen and oxygen may occur to produce water (H_2O), but not on a scale that would significantly increase the volume of liquid or moisture within the waste mass.

We considered several approaches to the creation of this model, including the gravimetric model, the use of a neutron probe, the use of time domain reflectometry sensors, the use of electrical resistance sensors, the partitioning gas tracer test, the use of tensiometers, and the use of capacitance sensors. One of the most complete evaluations of various options for measuring moisture content within solid waste landfills was described in a research paper produced by the Solid Waste Association of North America's (SWANA's) Applied Research Foundation. This 2004 study, entitled "*Moisture Measurement in Municipal Solid Waste Landfills,*" evaluated several different methods that have been used to measure moisture content in soil for agricultural and/or civil construction projects, and might potentially be used for measuring the moisture content of landfilled waste.

However, we have not seen these various methods used to accurately measure moisture content in solid waste, and certainly not across the breadth, width, and depth of an entire landfill. We believe this is due to the wide variability of conditions and materials present within a landfill. These systems may be used in soil testing, but are generally not applicable to measuring moisture content in waste.

Similarly, SWANA's Applied Research Foundation staff determined that, *"None of the available methods can currently provide accurate measurements of the gravimetric moisture content of the landfilled waste. The major reason for this is the inability of the methods to accommodate the changing conditions of the waste surrounding the measuring probe. These conditions change due to processes – such as waste biodegradation and settling and leachate formation – that naturally occur in MSW landfills."*

Through our experience and research, we determined that the most accurate method for estimating overall moisture content within CCL's waste mass is to apply industry-typical moisture content factors to various types of solid waste.

To estimate the total liquid volume within CCL's waste mass, we first had to estimate the total volume of entrained moisture within the waste. Remember, entrained moisture within the waste can only

become liquid (i.e., leachate) if it is liberated during the reaction process. We began by analyzing CCL's most recent 15 years of inbound tonnage data and subdividing it by type of waste material.

CATEGORIZE BY WASTE TYPE

We categorized the percentages of the various waste material types present in CCL using available scale records, historical knowledge of landfill operations, applicable waste characterization studies, and our own experience with CCL, landfills in general, and California landfills in particular.

Using that 15-year block of inbound tonnage data, we estimated the percentage of various types of waste received at CCL (see Figure 1). Where applicable, we utilized data from a 2021 CalRecycle report on *Disposal Facility-based Characterization of Solid Waste in California* to determine detailed waste characterization. This study was based on data collected from numerous landfills throughout California, including CCL. This study provided detailed estimates of waste characterization for the following general categories of solid waste, grouped by pre-landfill source.

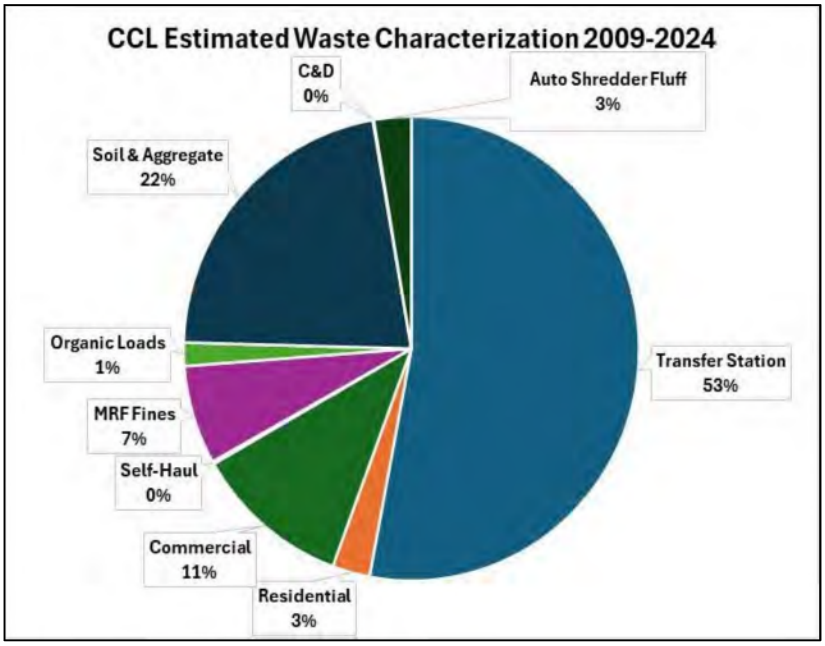

Figure 1 - CCL Inbound Waste Categories

- Mixed Waste (i.e., California Overall Values)[1]
- Mixed Waste (i.e., Commercial and Multi-Family)[2]
- Mixed Waste (i.e., Single Family)[3]
- Mixed Waste (i.e., Self-Haul)[4]
- Mixed Waste (i.e., Transfer Station)[5]

These waste types are listed in terms of the type of customer or vehicle bringing the waste. They were defined in the referenced CalRecycle report and, where possible, were matched with CCL's inbound tonnage classifications. This correlation served as the foundation for calibrating CCL's waste stream in terms of entrained moisture content.

[1] CalRecycle Disposal Facility-based Characterization of Solid Waste in California (page 10)
[2] CalRecycle Disposal Facility-based Characterization of Solid Waste in California (page 19)
[3] CalRecycle Disposal Facility-based Characterization of Solid Waste in California (page 26)
[4] CalRecycle Disposal Facility-based Characterization of Solid Waste in California (page 38)
[5] CalRecycle Disposal Facility-based Characterization of Solid Waste in California (page 46)

ENTRAINED MOISTURE CONTENT

We then assigned an estimated moisture content to each type of waste. The typical moisture content and potential field capacity varies widely by waste material type. Most organic materials, such as green waste, food waste, wood waste, paper, cardboard, and other organics, often have a relatively high moisture content and significant field capacity. Accordingly, much of the waste that comes into a landfill already contains lots of moisture. Non-organic wastes like glass, metal, plastic, and some other manufactured materials do not contain much, if any, moisture. The moisture content varies widely by waste material type.

Other non-organic earthen materials, such as soil, aggregate, rocks, and concrete, typically contain less moisture than organic waste, and their field capacity may vary considerably.

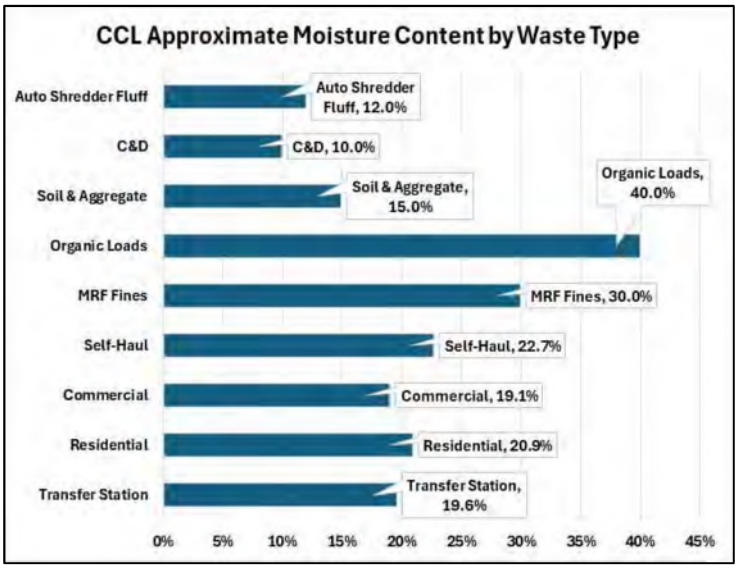

Figure 2 - Estimated moisture content of various waste types.

Data within the waste industry varies widely in terms of estimated moisture content for various types of waste. We considered numerous sources, including SWANA's "*2012 Manager of Landfill Operations (MOLO)*" course manual, CalRecycle's "*2021 Disposal Facility-based Characterization of Solid Waste in California*," and "*Solid Wastes: Engineering Principles and Management Issues*," (Tchobanoglous, Theisen, and Eliassen). Finally, we adjusted these various moisture content estimates based on our team's experience (see Figure 2). Through this process, we estimated that, on average, every ton of fill within the CCL waste mass contains approximately 46.37 gallons of entrained moisture.

LANDFILL SETTLEMENT

Research and our experience indicate that landfills may ultimately settle at least 20% of their initial depth, due to physical, chemical, biological, and mechanical factors – mostly related to decomposition of organic matter. Reaction conditions can result in much greater ultimate settlement. We believe this continues to occur within and adjacent to the reaction area.

Of course, we recognize that a finite block of the waste mass did not achieve full, ultimate settlement, while surrounding waste was unaffected. Rather, we believe a region of the underlying waste mass has achieved varying degrees of decomposition, resulting in a cumulative settlement of 704,355 cy. Using the 20% ultimate settlement factor, we estimate that 3,521,675 cy of traditional landfill mass settled 20%, thus resulting in 704,335 cy of settlement.

This rapid decomposition has clearly liberated lots of leachate and landfill gas. We also know that a significant quantity of liquid still exists as free liquid within the landfill waste mass, but we do not know how much. All of this is associated with the 704,335 cy of settlement.

Using the estimate of 46.37 gallons of entrained moisture per ton (same as per cy) of waste, the 3,521,675 cy of waste that is in some stage of reaction initially contained 163,300,070 gallons of

entrained moisture. Based on our experience, we are estimating that approximately 50% of the entrained moisture may be liberated during full decomposition. Accordingly, of the total entrained moisture in that 3,521,675 cy of waste, approximately 81,650,035 gallons have been liberated. Of those 81,650,035 gallons of liberated moisture (i.e., now categorized as leachate), we have extracted 56,942,911 gallons. Accordingly, we estimate that the remainder (24,707,124 gallons) may be present within the saturated layers of waste within and adjacent to the reaction area.

We've also estimated that the volume of waste associated with the area of settlement is 12,616,374 cy. At one time, this volume of waste contained 585,047,763 gallons of entrained moisture. Clearly, a portion of that entrained moisture has also been liberated – nearly 57 million gallons pumped out plus the nearly 25 million gallons of free liquid still in the saturated zone(s).

Remember, the vast majority of this moisture is entrained with the solid waste mass. Much of it will remain as entrained moisture until it is liberated during the reaction process, and even then, much of it will never be liberated. Some will be retained with the field capacity of the waste mass. A portion if it may at some point be liberated and may appear as free liquid in the landfill's LCRS. Some moisture may also be liberated as landfill gas condensate, and some will be stored in lenses of free liquid (i.e., leachate) in the form of layers of saturated waste.

ADDED MOISTURE

In addition to the moisture inherent in the current, existing waste, soil, and other materials, some moisture is continually added to the landfill – most of it in the form of entrained moisture in the inbound waste stream. This added moisture should be considered when updating the model to show future leachate volume. Accordingly, we have created our model based on the concept that moisture (i.e., liquid) can be added through three different sources:

1. Moisture entrained in inbound waste;
2. Stormwater infiltration; and
3. Liquid added as part of the operation of the landfill.

The inherent moisture content of the inbound waste and soil, along with these other two mechanisms for added moisture, represents the only past, current, or future sources of moisture within the landfill. By summing these values, we can estimate the quantity of moisture within the landfill. We can also make updated estimates of future liquid volumes as that moisture is liberated to become free liquid (i.e., leachate). We suggest this be done semi-annually.

LIQUID GENERATION RATE

The second part of this model calculates the estimated rate at which liquid is being generated within the waste mass. As previously noted, some moisture is present in waste, soil, and other materials within the landfill. In some cases, that moisture may be retained in those materials until they reach their respective field capacity. When entrained moisture is liberated into a "free liquid" within the waste mass, it becomes *leachate*.

LEACHATE THROUGH THE LCRS

Pumping data from 2020 and 2021 establishes a good baseline for leachate generation. For lack of data, we are assuming that leachate extraction equals liquid generation. During those years, leachate generation rates averaged 416,825 gallons per month, or approximately 5,001,901 gallons per year (see Figure 3).

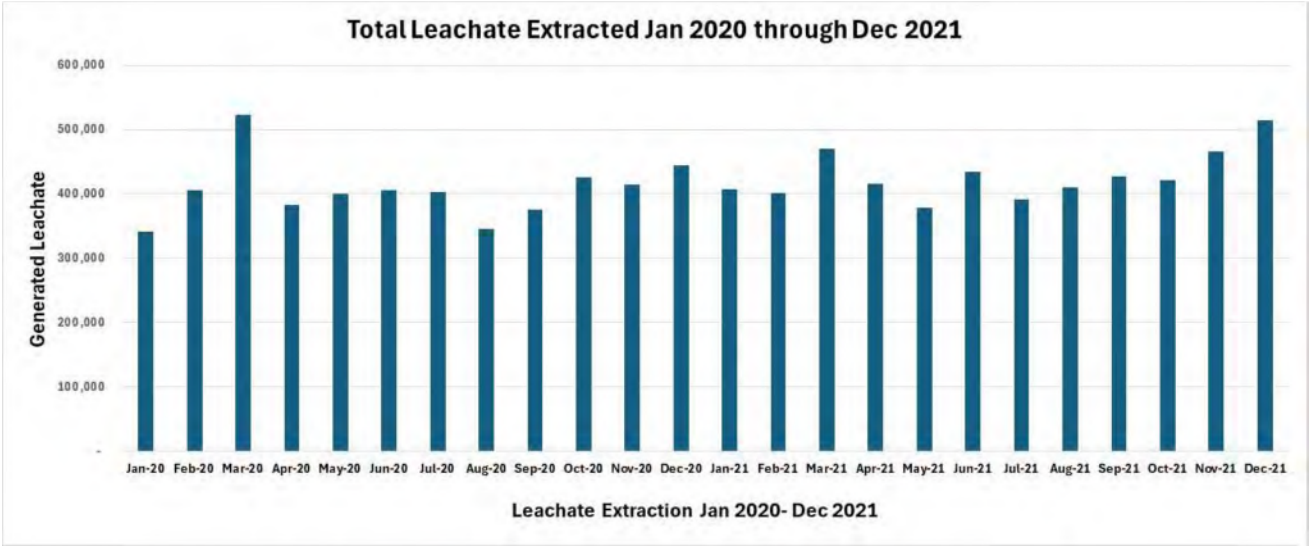

Figure 3 - Leachate extracted through the LCRS in 2020 and 2021.

However, beginning in January 2022, it appears that the leachate generation rate began to increase (see Figure 4). During the following 29-month period, through May 2024, 56,942,911 gallons of leachate were removed. This leachate production averaged 1,963,549 gallons per month, but note that the rate of increase was not linear. In calendar year 2022, the leachate generation was 6,453,495 gallons. However, in the most recent 12-month period (June 2023-May2024) the leachate removal rate was 42,307,689 gallons (see Figure 4). Note: We believe the dip in leachate production in February and March of 2024 was directly related to shutting off pumps.

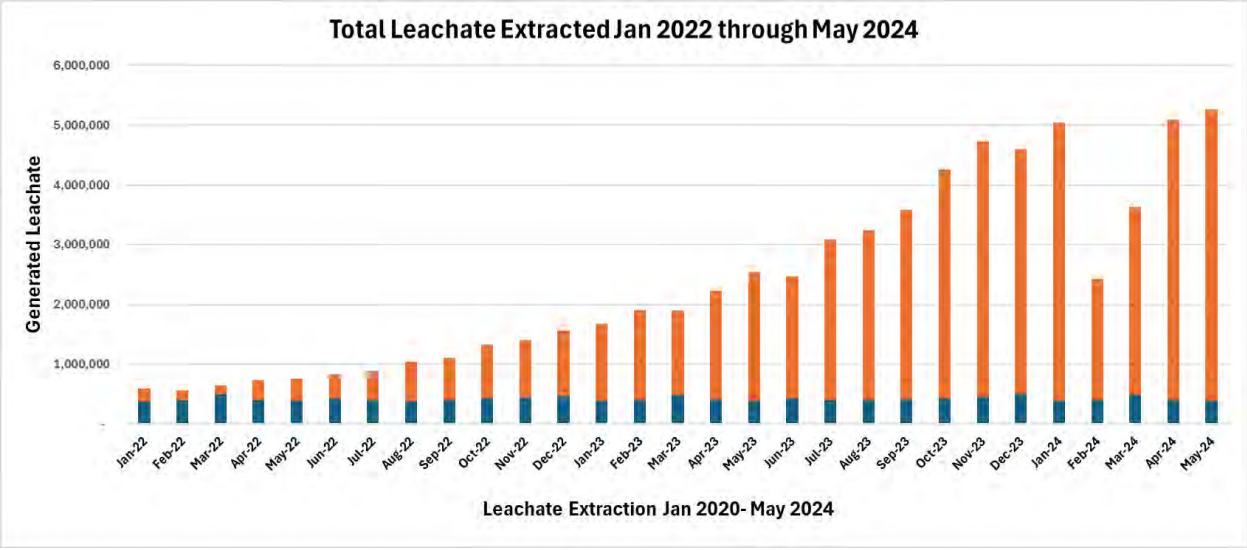

Figure 4 - Leachate extracted Jan 2022 through May 2024.

The leachate extracted includes what comes from the LCRS and what comes from additional pumping of wells and leachate seeps.

SATURATED WASTE LAYERS

Please note that the previously described leachate removal figures understate the actual production of leachate within the waste mass because some of the moisture that has been liberated from the waste mass is being stored in the form of leachate-saturated layers of waste.

Consequently, our model of leachate generation in the landfill is currently limited to empirical data based on the volume of leachate extracted. At some point, data from existing and additional wells in and near the reaction area will provide the spatial information needed to calculate the quantity of leachate stored within saturated zones. Currently, the data is not adequate for us to provide that estimate.

We have, however, considered potential leachate generation based on physical settlement of waste within and adjacent to the reaction area. The area defined by the extent of settlement (3' or greater) encompasses approximately 1,231,465 square feet (28.27 acres). If we assume a column of waste below this area, it represents a volume of 12,616,374 cy.

By comparing the surface topography on May 18, 2023, to the same area on June 12, 2024, we measured 584,335 cy of settlement. This is in addition to an estimated 120,000cy of soil that was added to this same area to mitigate settlement, crack repair, etc. Combined, this represents an estimated 704,335cy of total settlement.

We previously estimated approximately 50% of the entrained moisture may be liberated during full reaction. Accordingly, of the total entrained moisture in the 'reacted' waste, approximately 81,650,035 gallons has been liberated. Divided over the 13-month period of settlement, this means that the landfill has generated 6,203,849 gallons of liquid per month. Note, however, that recent settlement information seems to show that the rate of settlement is decreasing, which may significantly affect these estimates in the future.

Along that same line of thinking, if the remaining waste mass within the area of settlement (12,616,374 cy – 3,521,675 cy = 9,094,699 cy) were to also liberate 50% of its entrained moisture, an additional 210,860,596 gallons of free liquid (i.e., leachate) could be generated.

SUMMARY

At this point, our integrated model can do the following.

ESTIMATE TOTAL LIQUID VOLUME

The model can estimate leachate volume within the CCL waste mass by tracking inbound waste and applying an estimated 46.37 gallons of entrained moisture per ton of waste. Applying this model, we estimate that the remainder (24,707,124 gallons) may be present within the saturated layers of waste within and adjacent to the reaction area.

ESTIMATE LIQUID GENERATION RATE

The model can also track the liquid generation rate using the process described in the previous section(s). That process includes future settlement within and near the reaction area. This is a simple

and accurate process of comparing before/after topographic maps of the areas in and around the reaction area.

Additionally, the model can track extracted leachate based on recorded leachate records. This is again a simple and accurate process based on actual volumes of leachate removed from the landfill.

Finally, the model can also continue making estimates of free liquid (i.e., leachate) that may be present in saturated layers of waste material.

The accuracy of the model in terms of tracking the liquid generation rate will improve as additional site data is obtained. Of specific value will be additional well logs, liquid levels, and spatial data within and near the reaction area.

The above-listed data should be monitored over time to determine whether these liquid generation rate variables (i.e., settlement, leachate volumes, etc.) have peaked and begun to decline. We suggest the model be updated on a semi-annual basis.

We estimate that the reaction area is producing approximately 67,014,813 gallons of leachate, or approximately 5,584,568 gallons per month. This estimate is based on 42,307,689 gallons removed over the past 12 months, and our estimate that 24,707,124 gallons may be present in saturated layers.

These estimates will be much more accurate as additional data becomes available.

Our estimate of liquid leachate in the saturated zones of the reaction area is based on limited data. Therefore, we will continue tracking key information and will continue refining this model accordingly.

BEFORE THE HEARING BOARD OF THE

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

In The Matter Of

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT,

Petitioner,

vs.

CHIQUITA CANYON, LLC a Delaware Corporation,
[Facility ID No. 119219]

Respondent.

Case No. 6177-4

EXHIBIT C TO DECLARATION OF NEAL BOLTON, P.E.: EXECUTIVE SUMMARY OF WEST SLOPE CONSTRUCTION

Health and Safety Code § 41700, and District Rules 402, 431.1, 3002, 203, 1150

Hearing Date: August 17 and 20, 2024
Time: 10:00 am
Place: Santa Clarita Performing Arts Center
College for the Canyons
26455 Rockwell Canyon Rd.
Santa Clarita, CA 91355

CHIQUITA CANYON
A Waste Connections Company

June 28, 2024

Via E-Mail
Ben Castellana and Harry Allen
U.S. Environmental Protection Agency
On-Scene Coordinators
castellana.ben@epa.gov
Allen.Harry@epa.gov

Re: West Toe Drain Installation and Scrim Removal

Dear Mr. Castellana and Mr. Allen:

The purpose of this letter is to provide notice to the on-scene coordinators of the planned project at Chiquita Canyon Landfill (the "Landfill"). The proposed project is part of Chiquita Canyon, LLC's ("Chiquita") efforts to control and mitigate leachate seepage on the west slope of the Landfill. To accomplish this, Chiquita intends to install a toe drain and sumps along and on the west slope, followed by the completion of the installation of a geomembrane cover over the west slope area.

On June 17, 2024, Chiquita met with representatives from the Water Board, LEA, CalRecycle, EPA and DTSC to notify the agencies of the project scope, purpose, and proposed start date. As discussed on the call, Chiquita provides the following overview of the project as requested by the agencies. A work plan was already submitted and approved by the LEA, as discussed below. An additional work plan and Health and Safety Plan are in development and will be circulated to the agencies upon completion. Chiquita expects to begin work on this project within the next 30 days, however Chiquita will need to begin the preparatory work for this project as early as this week. Work on the project is expected to start on July 15 and continue until August 23, 2024.

Executive Summary

Approximately 1.8 acres of the west slope at the Landfill are currently covered by a temporary scrim liner. Below the scrim liner is an existing toe drain that drains leachate to a collection sump at the southerly end of the scrim. The existing toe drain does not currently span the entire length of the scrim area and is susceptible to clogging due to the heavy sediment loading in that area. The adjacent perimeter access road has been built up along the edge of the scrim to ensure that leachate that currently flows beneath the liner does not flow into the concrete perimeter channel.

The proposed project to install a toe drain and remove and replace the temporary scrim liner with the 30-mil high-density polyethylene ("HDPE") geomembrane cover will allow for better leachate drainage into the leachate collection system, thus providing relief to minimize leachate seeps occurring along the north and west slope, improve gas collection by having a continuous geosynthetic cover, and allow for stormwater collected on top of the liner to flow directly into the concrete stormwater channel.

General Project Description

The existing scrim area must be covered by a 30-mil HDPE geomembrane in accordance with the Unilateral Administrative Order ("UAO") issued by the U.S. Environmental Protection Agency on February 21, 2024, as well as Condition 31 of the Stipulated Order for Abatement from the South Coast AQMD ("Stipulated Order") and Mitigation Measure #2A of the June 6, 2024 LEA Compliance Order. Prior to the installation of the 30 mil HDPE geomembrane, the existing toe drain will be replaced to ensure adequate liquid collection below the geomembrane cover. The proposed toe drain is an 18" diameter HDPE pipe with cleanouts spaced approximately every 200 feet, with sumps placed between the cleanouts also spaced approximately every 200 feet, to provide access for maintenance and redundancy.

Leading up to the start of construction, in preparation for mobilizing equipment, steel plates will be placed over the length of the concrete stormwater channel that is in the work zone and will remain in place for the duration of the project. These plates and the soil that will be placed on top of them will provide equipment and contractors safe access to the work area. If a storm event occurs, site personnel will strategically remove some of the plates to allow for drainage of stormwater into the concrete channel.

Removal of the scrim and subsequent installation of the toe drain will occur in sections to minimize the potential for odors. Vertical sections of the scrim will be removed as the project progresses from north to south until all scrim is removed and replaced by the geosynthetic cover.

The installation of the toe drain is an extension of the current leachate collection system. The toe drain is specifically designed to collect and convey leachate seeps on the north and west side of the Landfill within the reaction area to corresponding leachate tanks onsite.

Chiquita estimates that around 25,000 cubic yards of material will be excavated over the course of the project. We anticipate that the excavated material will include soil, leachate-contaminated soil, and refuse. All refuse excavation, transportation and disposal will be done in accordance with Condition 42 of the Stipulated Order. A summary of Condition 42 and its requirements is attached to this letter as **Attachment A**.

All excavated material will be removed from and redeposited within the same Area of Contamination ("AOC"), consisting of the reaction area as defined in the Stipulated Order. The west slope area where excavation is taking place is within the reaction area, and the excavated

material will simply be moved to a different portion of the reaction area. The AOC concept allows for the consolidation of this material within the AOC in this manner, without triggering further requirements. After the excavated material is redeposited in the reaction area, it will be capped.

Implementation Process

1. Place steel plates over the top of the length of the existing concrete perimeter channel that is in the work zone.
2. Place earthen fill (1 to 5 feet) over the top of the steel plates to widen the existing perimeter access road and provide a safe working area for the excavator and haul trucks.
3. Excavate to expose the toe of slope as necessary to provide access for installation of the toe drain.
4. Place soil over existing waste as necessary to provide access and stabilize the work zone.
5. Excavation will be performed in 75 – 100-foot wide slot cuts similar to landslide remediation methods to limit the surface area that is uncovered at one time. The area excavated will be covered by at least 6 inches of soil within 2 hours of ceasing active work, as well as at the end of each working day.
6. Temporary back cuts will be sloped in accordance with the slope stability requirements.
7. Repair the existing bottom liner as needed.
8. Place gravel, HDPE collection piping, and backfill as necessary to reach permanent slope configuration per the slope stability requirements.
9. Install 30-mil HDPE geomembrane liner.
10. Remove earthen fill above the steel plates and remove steel plates.
11. Remove all debris from concrete stormwater channel and clean up

Health and Safety, Environmental Monitoring and Controls

All work will be done in accordance with the approved sitewide Health and Safety Plan. Chiquita is in the process of developing a supplemental Health and Safety Plan to address work tasks related to the toe drain installation, including scrim removal, excavation, toe drain installation, liner repair, and air and environmental monitoring. The supplemental Health and Safety Plan will assess hazards, detail air and environmental monitoring, and list safety controls and procedures.

As mentioned above, a work plan dated May 14, 2024 for the project was conditionally approved by the LEA on May 29, 2024. The work plan details the necessary activities for installation of the toe drain and provides engineering plans on the precise work to be conducted. The LEA approved the work plan subject to two conditions:

1) The toe drain is installed only after waste temperatures are confirmed to be below the recommended maximum temperature limit of the pipe material.
2) The drain is not installed on days when odor emission complaints are high.

Chiquita will comply with these two conditions as it completes the project and will provide a written section in the work plan addressing these conditions. To avoid odor issues as a result of the excavation, Chiquita will follow the requirements of the South Coast AQMD Stipulated Order, as detailed in **Attachment A**.

Conclusion

As stated above, Chiquita is in the process of developing a comprehensive workplan for this project that supplements the May 14, 2024 work plan that was already approved by the LEA. This comprehensive workplan will include a supplemental Health and Safety Plan. These documents will be provided to the various agencies upon completion and prior to starting work. Please reach out with any questions you have by emailing me at Steve.Cassulo@WasteConnections.com.

Regards,

Steve Cassulo
District Manager
Chiquita Canyon Landfill

Attachment A – Summary of Landfill Excavation Requirements

Condition No. 42 of Chiquita's Stipulated Order for Abatement in Case No. 6177-4 requires Chiquita Canyon, LLC ("Chiquita") to implement numerous additional mitigation measures when conducting excavation subject to South Coast AQMD Rule 1150 until South Coast AQMD approves Chiquita's Rule 1150 landfill excavation plan. These mitigation measures are aimed at mitigating potential impacts from the landfill excavation activities, specifically focusing on preventing related odors. The requirements of Condition No. 42 include:

- Chiquita must notify South Coast AQMD at least two days prior to starting excavation, and again within five days after its completion.
- Excavation cannot be conducted between 6pm and 6am, on weekends, or on legal holidays.
- Excavation cannot be conducted on days where the South Coast AQMD forecasts high levels of pollution.
- Chiquita must continuously monitor and record wind speed and direction during excavation. If Chiquita either receives an odor nuisance NOV from South Coast AQMD, or any complaints for dust, Chiquita must stop excavation in the Reaction Area if winds exceed certain thresholds (average and instantaneous).
- Chiquita must water down all working excavation areas, excavated material, and unpaved roadways during excavation without creating a safety hazard.
- Chiquita must monitor for methane during excavation using an organic vapor analyzer ("OVA") or other approved monitor.
    - If the monitor shows a sustained reading (greater than 15 seconds) of 2,000 parts per million by volume ("ppmv") total organic compounds as methane or greater at the working face of the excavation, Chiquita must stop the excavation and the area generating the emissions must be covered with a minimum of six inches of South Coast AQMD approved cover.
    - If the monitor shows a sustained reading of 200 ppmv total organic compounds as methane or greater downwind from the site at the property line (or other approved locations), Chiquita must stop the excavation and the area generating the emissions must be covered with a minimum of six inches of South Coast AQMD approved cover.
    - Excavations cannot resume until the readings return to their pre-excavation level.
- Within two hours, any excavated landfill material and refuse must be relocated for burial onsite, deposited into trucks/trailers for off-site transport, and completely covered with automated vinyl tarps with the covers tied down. Excavated soil will not be spread onsite, used for landfill cover, or stockpiled.

- When the excavated material is in transit, no material can extend above the sides or rear of the truck/trailer. The excavated material must be completely covered with automated vinyl tarps with the covers tied down.
- Chiquita must ensure that there is no track-out from the excavation area. Any trucks used for excavation in the Reaction Area must go through a rumble strip before exiting the area, and Chiquita must ensure that all trucks are free of excavation materials following the end of the excavation and at least once per day.
- Any landfill materials and refuse that have been exposed to the atmosphere because of the excavation and that have not been relocated for burial or transported off-site must be covered with a minimum of six inches of South Coast AQMD approved cover within two hours whenever excavation is not actively in progress, as well as at the end of each working day.
- Chiquita must inspect any covered excavation area daily to ensure the integrity of the cover is maintained and secured. If Chiquita identifies any issues with the cover, Chiquita must take immediate corrective action. Chiquita must maintain an inspection and corrective action log.