August 17, 2023

Ms. Tiffany Butler Senior Management Analyst II Department of City Planning 200 N. Spring St., Room 525 Los Angeles, CA 90012

Subject:

Report to the Joint Sunshine Canyon Landfill

**Technical Advisory Committee** 

Dear Ms. Butler,

Attached please find an electronic copy of the Report to the Joint Sunshine Canyon Landfill Technical Advisory Committee for the August 31,2023 TAC meeting.

Please do not hesitate to contact me should you have any questions regarding this report.

Sincerely,

Kimberly Peña

Environmental Specialist

Sunshine Canyon Landfill

Cc:

Andrew Thompson, South West Area Environmental Manager Kate Downey, Team Environmental Manager

August 17, 2023

Ms. Lisa Webber SCL TAC Co-Chair City of Los Angeles Department of City Planning 200 N. Spring Street Los Angeles, CA 90012

Mr. Jon Sanabria SCL TAC Co-Chair Los Angeles County Department of Regional Planning 320 W. Temple St, 13<sup>th</sup> Floor Los Angeles, CA 90012

Subject: Report to the Joint Sunshine Canyon Landfill Technical Advisory Committee

SCL TAC Meeting Date - August 31st, 2023

Ms. Webber and Mr. Sanabria:

This report provides an update of items requested to be included in the report to the Joint Sunshine Canyon Landfill Technical Advisory Committee (TAC) for the meeting to be held on August 31, 2023. Sunshine Canyon Landfill Team provided a draft copy of the report to the City of Los Angeles Department of City Planning on August 17, 2023 for review.

#### 1.0 Cell Development

#### 1.1 Cell CC-4, Part 4B & 4C

CC-4 Part 4B & 4C cell construction was completed in July 2022. The cell has 17.2 acres of overliner. Approval for disposal operations in Cell CC-4 Part 4B&C was received from the LARWQCB on July 18, 2022 (Attachment A).

#### 1.2 Future Cells

The ultimate access way into Sunshine Canyon Landfill from San Fernando Road and the Cascade Oilfield Road shall be designed to accommodate a geotechnical stability toe berm to complete the future cell construction of CC-5. The new road will house the main road access onto the site for access to the Administration offices & breakroom,

SCL-LEA building, Scalehouse, Maintenance Shop, and access to the Cascade Oilfield office. The geotechnical and structural engineering consultant, Geo-Logic Associates designed the ultimate entryway. As part of the design the east and west stormwater drainage channels and dampener structures were also modified as part of the projects redesign. Ongoing construction activities for this project commenced in early March 2021, and are anticipated to continue through 2024, pending final approvals. The approval letter from the Los Angeles Department of Building and Safety Grading Division for Phases 1 and 2 of the project is provided (Attachment L).

#### 2.0 Fill Sequence, Soil Usage, Stockpile/Borrow Areas and Disposal on County Top Deck

#### 2.1 Fill Sequence

Disposal operations were conducted in CC-4 Part 4A, 4B, 4C, and CC3B and CC3A from January of 2022 (the date of the last TAC Report) to the end of July 2022. Disposal operations in CC-4 Part 4B/C began at the end of July 2022 after the cell was certified by LARWQCB.

#### 2.2 Soil Usage

Based on soil usage logs, approximately 16% of airspace volume consumed year to date (2023) is daily cover.

#### 2.3 Stockpile/Borrow Areas

Placement and subsequent removal of stockpile material is an operational activity that occurs over the life of the landfill. There are two primary stockpile areas on site that have been designated for such purpose. These stockpile areas are shown on the figure included in Attachment B.

#### 3.0 Landfill Gas Collection and Control System

Improvements to the site's landfill gas collection and control system (GCCS) are conducted on an annual basis. This year's improvements to date include the installation of vertical and horizontal gas collection wells and the continuation of improvements as a component of our robust monitoring, maintenance, and operations program. Summaries of these activities have been provided in prior TAC reports.

The following is a summary of the GCCS activities that have been completed in 2023 to date:

- Installation and activation of 40 new and replacement vertical collection points
- Installation and activation of approximately 8,000 LF of horizontal/slope collectors in the working face

- Installation of approximately 20 dewatering pumps in vertical gas extraction wells
- Installation of approximately 1,500 LF of 18-inch header

A robust operations and maintenance program continues to ensure all components of the GCCS are working effectively and efficiently. A force main line maintenance program has been implemented. Gauges installed on wells with pumps monitor the force main back pressure. This information is plotted and reviewed on a weekly basis to identify the location of blockages or restrictions in the force main piping. Once identified the blockages can then be remediated. A blockage prevention program includes the installed electronic de-scalers, dosing of de-scaling chemical strategically into specific force main lines, and/or jetting of the force main lines as needed to prevent the accumulation of scaling.

Republic Services continues to conduct gas well monitoring and tuning of the wellfield on a semi-monthly basis.

#### 3.1 Surface Emissions Monitoring

#### Fourth Quarter 2022 SEM Results

Instantaneous SEM monthly monitoring:

- During the month of October, 2022, the City side of the landfill had 6 out of 233 grids monitored indicating instantaneous surface emissions over 500 ppm Total Organic Carbon, measured as methane (TOC). This resulted in 13 locations having monitoring results higher than 500 ppm. The County side of the landfill had 177 grids monitored, 4 of which produced 6 locations where readings greater than 500 ppm were recorded.
- During the month of November 2022, the City side of the landfill had 4 out of 233 gids monitored indicating instantaneous surface emissions over 500 ppm Total Organic Carbon, measured as methane (TOC). This resulted in 8 locations having monitoring results greater than 500 ppm. The County side of the landfill had 162 grids monitored, 9 of which produced 15 locations where readings greater than 500 ppm were recorded.
- During the month of December 2022, the City side of the landfill had 3 out of 233 individual grids monitored indicating instantaneous surface emissions over 500 ppm Total Organic Carbon, measured as methane (TOC). This resulted in 7 locations having monitoring results greater than 500 ppm. The County side of the landfill had 145 grids monitored, 4 of which produced 7 locations where readings greater than 500 ppm were recorded.

 These locations were repaired and re-monitored in accordance with SCAQMD Rule 1150.1. Each of the locations originally identified as being in excess of the 500 ppm threshold passed on either the first or second 10-day re-check as allowed by Rule 1150.1.

#### Integrated SEM monitoring:

- During the month of October 2022, the City side of the landfill had 233 grids monitored for integrated surface emissions greater than 25 ppm Total Organic Carbon, measured as methane (TOC). The integrated surface monitoring results showed 8 of the grids had readings higher than 25 ppm. The County side of the landfill had 177 grids monitored, 8 of which had readings greater than 25 ppm.
- During the month of November, 2022 the City side of the landfill had 233 grids monitored for integrated surface emissions greater than 25 ppm Total Organic Carbon, measured as methane (TOC). The integrated surface monitoring results showed 7 of the grids had readings higher than 25 ppm. The County side of the landfill had 162 grids monitored, 7 of which had readings greater than 25 ppm.
- During the month of December, 2022 the City side of the landfill had 233 grids monitored for integrated surface emissions greater than 25 ppm Total Organic Carbon, measured as methane (TOC). The integrated surface monitoring results showed 5 of the grids had readings higher than 25 ppm. The County side of the landfill had 154 grids monitored, 7 of which had readings greater than 25 ppm.
- The exceedances were addressed and re-monitored in accordance with Rule 1150.1. Each of the locations originally identified as being in excess of the 25 ppm threshold passed on either the first or second 10-day re-check as allowed by Rule 1150.1.

#### First Quarter 2023 SEM Results

#### Instantaneous SEM monthly monitoring:

- During the month of January 2023, no instantaneous surface emission monitoring was performed.
- During the month of February 2023, had 6 out of 233 grids monitored indicating instantaneous surface emissions over 500 ppm Total Organic Carbon, measured as methane (TOC). This resulted in 10 locations having monitoring results greater than 500 ppm. The County side of the landfill had 166 grids monitored, 12 of which produced 17 locations where readings greater than 500 ppm were recorded.

- During the month of March 2023, had 26 out of 233 grids monitored indicating instantaneous surface emissions over 500 ppm Total Organic Carbon, measured as methane (TOC). This resulted in 28 locations having monitoring results greater than 500 ppm. The County side of the landfill had 166 grids monitored, 41 of which produced 52 locations where readings greater than 500 ppm were recorded.
- These locations were repaired and re-monitored in accordance with SCAQMD Rule 1150.1. Each of the locations originally identified as being in excess of the 500 ppm threshold passed on either the first or second 10-day re-check as allowed by Rule 1150.1.

#### Integrated SEM monitoring:

- During the month of January 2023, the City side of the landfill had 233 grids monitored for integrated surface emissions greater than 25 ppm Total Organic Carbon, measured as methane (TOC). The integrated surface monitoring results showed 7 of the grids had readings higher than 25 ppm. The County side of the landfill had 158 grids monitored, 11 of which had readings greater than 25 ppm.
- During the month of February 2023, the City side of the landfill had 227 grids monitored for integrated surface emissions greater than 25 ppm Total Organic Carbon, measured as methane (TOC). The integrated surface monitoring results showed 2 of the grids had readings higher than 25 ppm. The County side of the landfill had 165 grids monitored, 2 of which had readings greater than 25 ppm.
- During the month of March 2023, the City side of the landfill had 226 grids monitored for integrated surface emissions greater than 25 ppm Total Organic Carbon, measured as methane (TOC). The integrated surface monitoring results showed 3 of the grids had readings higher than 25 ppm. The County side of the landfill had 163 grids monitored, 4 of which had readings greater than 25 ppm.
- The exceedances were addressed and re-monitored in accordance with Rule 1150.1. Each of the locations originally identified as being in excess of the 25 ppm threshold passed on either the first or second 10-day re-check as allowed by Rule 1150.1.

#### 3.2 Perimeter Probe Monitoring

Rule 1150.1 monitoring requires monthly monitoring of the site's perimeter probes. There were no readings higher than 3.0% during the probe monitoring in the third and

fourth quarter of 2022. There were no readings higher than 3.0% during the probe monitoring in the first quarter of 2023.

#### 4.0 Gas-to-Energy Facility (City/County)

Sunshine Gas Producers, L.L.C. (SGP) is the owner and operator of the turbine power plant. The power plant began commercial power generation on September 1, 2014 and currently places approximately 18.5 MW per hour or 445 MW per day of renewable energy onto the grid. The plant consists of five (5) Solar Mercury turbines rated at 4.6 MW per hour each.

#### 5.0 Groundwater Monitoring (City/County)

The groundwater monitoring program approved by the LA-RWQCB for Sunshine Canyon Landfill is based on quarterly and semi-annual monitoring of 18 groundwater monitoring wells. Samples are analyzed by an EPA-approved analytical laboratory for more than 100 individual potential contaminants as specified by the approved monitoring program. Statistical analyses are used to identify any trends or changes in concentrations of constituents that could indicate a potential release from the site. In addition to the groundwater wells, samples are collected from sub-drains and lysimeters. Reports of sampling and monitoring activities, including all analytical results, are submitted to the LA-RWQCB on a semiannual and annual basis.

# 5.1 Summary of Results of Second Semi-Annual Groundwater Monitoring Period of 2022

During the second semi-annual 2022 monitoring period, environmental monitoring was conducted on a quarterly basis during September (third quarter) and December (fourth quarter). The results were generally similar to past monitoring event results, as most analyte/well pairs were previously in tracking mode.

During the second semi-annual 2022 monitoring period, samples were not obtainable from Subdrain N due to the pumping system offline from nearby construction. Samples were collected form the Combined Subdrains. These findings are consistent with historical results, and as a result, the liquids collected at the subdrains are conveyed to the nearby sewer system under a City of Los Angeles Bureau of Sanitation permit. Currently, none of the collected liquid is being reused onsite and all of the subdrain liquids are discharged to the sewer. With the exception of cis-1,2-dichloroethene, 1,2 dichloroethane, benzene, and 1,4-dichlorobenzene results in combined subdrain samples, all VOC concentrations in subdrain samples were measured below State and federal drinking water standards. As is typical for Sunshine Canyon Landfill subdrain

samples, concentrations of sulfate, fluoride, TDS, iron and manganese exceeded state secondary drinking water standards.

Lysimeters LY-6 and LY-7 are sampled on a quarterly basis if there is a presence of liquids. During the monitoring period, they were monitored in September (third quarter) and December (fourth quarter). LY-6 was dry during both quarterly monitoring events. Due to a malfunctioning pump, no samples were obtained from LY-7 during either monitoring periods. This was also documented in the 2<sup>nd</sup> Semi-Annual Groundwater Report uploaded to GeoTracker on February 15, 2023. In March 2023, the pump on LY-7 was repaired and samples were able to be obtained for both quarters 1 and 2 of 2023.

#### 6.0 Leachate Collection and Treatment System (City/County)

A revised sewer discharge permit (Permit W-535428) was issued on September 1, 2020 and is currently in effect with an expiration of August 31, 2023 (as shown as Attachment D). A new waste discharge permit application was submitted on May 18, 2023 and is expected to be approved by September 1, 2023.

A Revised Fact Sheet was prepared and submitted to the City to support the industrial wastewater application; this Fact Sheet is also included in Attachment D. The fact sheet provides a description of the liquids generated at the facility as well as the site liquids management plan (provided as Figure 2 in the Fact Sheet) and other supporting documentation. As shown on Figure 2, liquids generated at the facility include, leachate, gas well liquids, condensate, seep water, subdrain and cut-off wall water. The major components of the site's liquid management plan include:

- Direct discharge of all site liquids including leachate, gas well liquids and condensate to the sewer with hydrogen peroxide as needed;
- Optional on-site treatment of seep, subdrain and cut-off wall water after which the effluent can be used on-site for dust control

Figure 3 in the Fact Sheet provides the process flow schematic for the optional on-site water reuse treatment system. This treatment system (formerly call the LTF treatment system in prior TAC reports) has not changed operationally. As shown on Figure 3, the treatment system consists of filters and granular activated carbon (GAC) vessels configured in series. The second and third GAC vessels serve as polishing units, ensuring effective removal of low level VOCs. The effluent routinely meets the WDR limits for VOCs.

# 7.0 Surface Water Management System, Including Drainage and Erosion Control (City/County)

Management of surface water from the site and the substantial upland non-landfill area that drains to it is a major part of the site's environmental compliance and operational programs.

Functions of the surface water management system include the following:

- Prevent or minimize erosion from the landfill surface;
- Prevent discharge of sediments from the site in excess of regulatory standards;
- Maintain peak stormwater discharges at levels no greater than the prelandfill condition of the site; and,
- Manage the 100-year, 24 hour storm as required by Title 27 of the California Code of Regulations (CCR).

The surface water management system at Sunshine Canyon has been designed according to requirements of CCR Title 27 and the County of Los Angeles. Its major components were evaluated in the Joint Technical Document for the City/County Landfill, and determined to be in conformance with all requirements.

#### 7.1 Existing Stormwater Management System

The existing surface water management system at Sunshine Canyon consists of three subsystems of drainage controls:

- Permanent Perimeter Drainage System;
- Interim Interior Drainage System; and
- Temporary Erosion and Sediment Control Measures

Elements of each system are described below. Elements of existing permanent drainage facilities at the site as well as some interim facilities such as concrete drainage channels, are shown on the figure included in Attachment E.

#### 7.1.1 Permanent Perimeter Drainage System

The perimeter drainage systems are the major permanent control systems for the landfill. It intercepts all run-on of surface water from non-landfill areas and diverts it away from the landfill area, and manages runoff from landfill areas where refuse elevations are above the site perimeter drainage elevations. Existing elements of the perimeter system include the following, all of which have been designed to handle the peak discharge from a minimum of a 100-year, 24-hour storm:

Sedimentation Basin D, located at the far north end of the County area, which
receives run-on from the native canyons north of the landfill area;

- Sedimentation Basin B, located on the east side of the County area, which
  receives runoff from the native East Canyon area and from portions of the
  landfill area. Basin B is concrete-lined and has a discharge structure
  designed to level out peak discharges of stormwater;
- Sedimentation Basin A, located on the west side of the County area, which
  receives run-on from slope and canyon areas west of the landfill area, and
  runoff from portions of the landfill area on the County side. Basin A is lined
  with concrete;
- East Perimeter Drainage Channel is currently completed from Basin D to the Terminal Basin. The final phase of this channel improvement was completed in September 2012;
- Terminal Sedimentation Basin, located near the site entrance at San Fernando Road. All surface water discharge from the site passes through this concrete-lined basin, which is designed to manage the peak flow from the 100-year storm and discharge no greater flow than the pre-landfill condition of the site. Upgrades in the form of water discharge skimmers and new outfall structures have been installed in early 2018 to extend the retention time and optimize the capacity of this basin.
- The West Perimeter Drainage Channel is currently completed from Basin D to roughly 3,627 feet south of Basin A. It presently discharges to the interim interior drainage system, as described in the following section. When completed, the West Perimeter Drainage Channel will collect all drainage from the west side of the Closed City Landfill and discharge directly to the Terminal Basin. Approval of the Revised West Drainage Channel Master Plan was received from the LARWQB by letter dated October 24, 2016 (Attachment F). Comments on the West Drainage Channel Master Plan were received from DPW on June 15, 2016 (Attachment F). Since the construction of the West Perimeter Drainage Channel cannot be implemented until the CC4 Stability Buttress is in place, no action has been taken to date to address the comments from DPW.
- The Front Entrance Toe Berm Project when completed will provide a new access roadway for traffic and improved surface water drainage to the Terminal Basin and completion of the West Drainage Channel. At this time, the project is undergoing construction in the first two phases of the project and temporary BMPs will be utilized as needed until final construction activities have been completed in 2024.

#### 7.1.2 Interim Interior Drainage System

Until all areas of the City/County Landfill have been developed and filled to elevations above the site perimeter, run-off from areas of the site interior must be managed in a system of basins and channels discharging through the center of the site to the Terminal Basin. At present, this includes the entire west side of the Closed City Landfill, currently areas of Cells CC-1, CC-2, CC-3, CC-4 Parts 1,

2, 3, and 4 parts A, B & C, and most of Cell A. The interim interior system is modified to accommodate ongoing construction activity. Construction includes drainage elements to ensure stormwater is directed to existing stormwater conveyance systems which ultimately discharge to the Terminal Basin.

The interim interior drainage system consists of an asphalt and concrete-lined trapezoidal channel which runs along the western side of the main haul road. This channel discharges to a box culvert which directs discharge from the trapezoidal channel along the temporary Phase 1 By-Pass Road that discharges to the Terminal Basin.

The drainage system for the Closed City Landfill features one large shallow sedimentation basin and a series of semi-permanent and temporary channels that collect runoff and convey it to the primary interior drainage channel described above. In the future, this system will discharge to the West Perimeter Drainage Channel.

#### 7.1.3 Temporary Erosion and Sediment Control Measures

Temporary erosion control systems are installed on an annual basis in advance of the rainy season. A drainage plan is prepared annually which includes a variety of measures that not only reduce soil erosion but also reduce peak flows by slowing down and leveling discharges from the site. These measures are included in the annual Wet Weather Preparedness plan, and include the following:

- Installed 26 acres of ClosureTurf (2017) to provide slope protection on slope areas east of the administration buildings (See Drawing 2).
- Inspected Filtrex compost rolls at the toe of disturbed slopes throughout various areas of the site and replaced/added rolls on an as needed basis.
- Track-walked slopes throughout the site to reduce slope erosion and allow establishment of seeded or native vegetation in non-active areas.
- Inspected the basin risers filter fabric in Basins A, B, and D, replaced or repaired as needed.
- Repaired damaged riser in terminal basin.
- Cleaned the skimmer systems in the Terminal Basin to make sure they are functioning properly.
- Plan to install ±20 acres of fiber rolls spaced at 15-feet vertically on western facing slope in Part 4 and 25-feet vertically in Part 3-A/B.
- Graded active landfill decks to prevent erosion by avoiding overly steepened swales and decks.
- Based in operational wet weather deck with recycled asphalt concrete.
- Installed rumble strips at the exit to help prevent drag out.

- Graded soil cover in active landfill areas to prevent surface ponding.
- Removal of silt, gravel check dams, and vegetation from the perimeter channels.
- Cleanout of sediment from Basins A, B, D, and the Terminal Basin.
- Cleaned out the access road trench drain systems.
- Graded benches to promote positive drainage and reduce overtopping.
- Cleaned pipes and inlets of vegetation and litter.
- Fiber rolls were installed prior to down drain flumes/channels, and at the base of all stockpiles.
- Construction of Diversion Berms and swales were created or reconstructed to create flows towards drainage inlets/perimeter channels.
- Repaired a perimeter drainage pipe.
- Repaired pipe joints and reset down-drains as required.

Temporary erosion and sediment control measures are documented and reported to the LEA, the Los Angeles Regional Water Quality Control Board and the County of Los Angeles, Department of Public Works. The most recent Wet Weather Preparedness Plan (2022) submitted to these agencies is included in Attachment G. The 2023 Wet Weather Preparedness Plan will be avaible October 1<sup>st</sup>, 2023. After each rain event, erosion and sediment control measures are inspected and evaluated, and repairs made as needed prior to the next rain event.

#### 8.0 Current Odor Control Mitigation Measures (City/County)

This section provides an overview of the odor control mitigation measures that have been on-going as well as providing the current status of odor control systems in place.

#### 8.1 On-Going Odor Control Measures

As part of regular daily operations, the site employs several aggressive odor control measures, such as placing odor-neutralizing chemicals on stationary equipment strategically positioned throughout the site, altering fill operations to reduce odors during unfavorable wind conditions, and implementing a rigorous program for monitoring, operating, and maintaining landfill gas. These actions are continuously assessed for efficiency and changed in real time as required. Three new "Vapor Units" have been installed in three key locations throughout the site that started operating at the beginning of 2023 as part of new odor mitigation technology. We continue to test and evaluate the effectiveness of the new odor control equipment to improve our efforts and plan for future odor control measures. The site continues to have full time positions filled for odor controlled-related activities with personnel specifically tasked with upkeeping odor management initiatives such as daily on-site and neighborhood odor patrols.

During the most recent rainy season (October 2022 – April 2023) Sunshine Canyon Landfill received 56 inches of rain. This atmospheric river hit the site heavily in the first three months of year: January (18.44 in), February (9.73 in), and March (14.71 in). This

increase in rain also caused an increase in complaint calls (748) and NOVs (29) (Appendix H). The intensity of rain also caused significant levels of erosion throughout the site and the frequency of rain events made it difficult and unsafe to rectify the affected areas immediately. However, the operations team moved as quickly as possible to address problem areas. Once the rain subsided in April 2023 and conditions became safe for personell and equipment to operate, these areas were addressed and corrected. The number of calls to the site decreased in May and June. The site continues to reject particularly odorous loads, or delays the delivering of materials during challenging conditions. Odor control remains a top priority for the site team and the landfill remains committed to its goal of zero odor complaints.

9.0 Revegetation Plans and Recent Hydroseeding Efforts on Temporary Slopes and Stockpiles (City/County)

A quarterly vegetation report is submitted which provides discussions on the vegetation efforts and any hydroseeding activities conducted during the quarter. The vegetation reports for the fourth quarter of 2022 and first quarter of 2023, submitted on January 31, 2023 and April 30, 2023 respectively. These reports are included in Attachment M.

10.0 Venturan Coastal Sage Mitigation Plan (City's M.4.4.1 (60) &(61))

As reported in previous TAC reports, a landscape architecture and planning contractor, Architerra Design Group (Architerra), was hired to design and develop a habitat restoration and landscape improvement plan for the City South C Trial Plot. This project is intended to be a pilot or demonstration project to determine the most effective course of action for re-vegetation of the closed deck and slopes area on the City South area of the site. Work on this project began in the first quarter of 2013 with construction/planting activities completed in May of 2013. Weekly activities have been conducted in the pilot project area since that time consisting of maintenance, selective pruning and repairs to the irrigation system when needed.

An assessment of the site's sage mitigation areas, including the pilot project area, is conducted by a qualified biologist on a quarterly basis and is included in the quarterly vegetation reports. The quarterly monitoring consists of an overall assessment of the site's sage mitigation areas (City and County mitigation areas) as well as a sampling and assessment of the pilot project area in accordance with the procedure presented in the First Quarter Vegetation Report entitled "Methodology for Monitoring Percent Cover and Species Richness within Each Seeded Application Method on the Coastal Sage Scrub Pilot Project at the Sunshine Canyon Landfill".

The most recent observations of the Deck C sage mitigation area noted that overall the area looks healthy, and is recovering well from the impacts of the 2019 Saddleridge Fire. The area will continue to be monitored on a quarterly basis and those observations will be included in the quarterly vegetation reports.

#### 10.1 Phase 2 Coastal Sage Scrub Pilot Mitigation Project

On August 15, 2016, a proposal for a second phase of the Venturan Coastal Sage Scrub (CSS) mitigation was submitted to the TAC. This proposal presented two options to be considered for the Phase 2 CSS mitigation; the option to implement the second phase on Deck B was selected. This includes approximately 9.5 acres with the majority of the area being relatively flat although there are some shallow slopes along the edges. The area contains established CSS which would be protected during the construction of the area.

The construction of the Phase 2 CSS mitigation area on Deck B was initiated in October 2017. Grading of the area was completed in early November 2017 and the project has been completed in December 2018. Ongoing maintenance for the first year's establishment was underway for 2019 and monitoring and reporting for Deck B has been implemented during the CSS quarterly vegetation program.

#### 11.0 Chatsworth Mitigation (City Q.C.9)

The following presents a summary of the work conducted in 2017 related to the Chatsworth Mitigation project.

#### 11.1 Ordinance Amending Section 12.04 of the Los Angeles Municipal Code

The ordinance amending Section 12.04 of the Los Angeles Municipal Code has not been finalized as of the date of this report. Comments on the draft Ordinance were received from the Army Corps of Engineers (ACOE) on April 17, 2015 and forwarded to the City the same day. A conference call was held on July 7, 2016 to discuss the status of the draft Ordinance. Based on that call, Republic Services proceeded with work to develop an Addendum to the Mitigated Negative Declaration (MND) as a supporting document to the Ordinance (Section 11.2).

A conference call was held with representatives from the California Department of Fish and Wildlife (CDFW) in June 2017 to discuss their comments on the draft Ordinance. Fish and Wildlife personnel stated they could not agree with the Ordinance since the site permit required a Conservation Agreement. In addition, Republic Services was informed that the original Streambed Alteration Agreement (SAA) R5-2002-0163 had expired and could not be amended to include a reference to the City Ordinance. In response to this, Republic Services submitted a Notification of Lake or Streambed Alteration Notification to the CDFW on October 26, 2017. By letter dated November 27, 2017, the CDFW notified Republic Services the submitted Notification was deemed complete (Attachment I). CDFW also stated that if it is determined an Agreement is required for the project, a draft Agreement will be issued no later than January 26, 2018.

By letter dated January 26, 2018, CDFW notified Republic Services that because the CDFW did not submit a draft Lake or Streambed Alteration Agreement by January 26, 2018, Republic Services does not need an agreement to proceed with the proposed work given that all federal, state and local laws are observed. Currently, Republic Services is awaiting the approval of the City Ordinance (Attachment J).

#### 12.0 Status of Alternative Fuels Vehicles (City/County)

The filling station located at 12881 Encinitas Avenue, Sylmar intermittently has E-85 fuel available. When available, pickup trucks used onsite fuel with E-85. When E-85 is not available, unleaded fuel is used. There is no other E-85 filling station close enough to Sunshine Canyon Landfill that is viable for this purpose.

#### 13.0 Backup Generator (City/County)

As reported in previous TAC reports, SCL is in compliance with CUP Condition 83. Generators needed to provide power to the landfill gas flaring system have been identified and secured by a contractual arrangement with Quinn Power Systems.

The transfer switches for Flares 1, 3, 9, 10 and 11 have been installed. One generator has been purchased and is staged on-site. The permit to operate this generator was received from SCAQMD in April 2017 (Permit No. G46227).

#### 14.0 Soil Importation

On July 28, 2015, Republic Services submitted a request to LA County DPW for approval to import clean soil that will be made available from the Los Angeles County's Devil's Gate Reservoir Sediment Removal and Management Project located in Pasadena, California. By letter dated May 4, 2016, DPW approved the importation of this material to Sunshine Canyon Landfill (Attachment K).

By email dated September 12, 2016, Mr. Ken Zimmer (Senior Civil Engineer, Water Conservation Planning, LA County Department of Public Works) informed Republic Services personnel there would be a delay in the Devil's Gate Reservoir Sediment Removal Project and stated the LA County Flood Control District would plan on sending a portion or all of the material from the Pacoima Spreading Grounds to Sunshine Canyon Landfill.

Sunshine Canyon Landfill met with representatives from Sunshine Canyon Landfill Local Enforcement Agency and the LA County Flood Control District on June 14, 2018. The Pacoima Spreading Grounds project subsequently has commenced in the Fall of 2021.

A letter from the Los Angeles County Department of Public Works (LADPW) approved the additional soil importation and stockpiling (up to 2,500 tpd) from outside sources dated June 15, 2021 and is also provided an update in this report in section 2.3 and Attachment K.

A letter from LADPW approved an increase to the approved soil importation by 500 tdp was granted on February 23, 2022 to a maximum of 3,000 tdp. However, that was then reduced to 2,500 tdp per LADPW's letter dated April 27,2022. Copies of these letters are also included in Attachment K.

#### 15.0 Current and Planned Projects Outside the Disposal Area

The site plans to relocate the existing maintenance shop to outside the disposal area. An application for grading approval will be submitted to the County of Los Angeles in 2023 with anticipation to complete the grading work and relocate the maintenance shop in 2024.

#### 15.1 Front Entrance Toe Berm

The ultimate access way into Sunshine Canyon Landfill from San Fernando Road and the Cascade Oilfield Road shall be designed to accommodate a geotechnical stability toe berm to complete the future cell construction of CC-5. The new roads will house the main road access on to the site for access to the Administration offices & breakroom, SCL-LEA building, Scalehouse, Maintenance Shop, and access to the Cascade Oilfield office. The geotechnical and structural engineering consultant, Geo-Logic Associates designed the ultimate entryway. As part of the design the east and west stormwater drainage channels and dampener structures were also modified as part of the projects redesign. Ongoing construction activities for this project commenced in early March 2021, and are anticipated to continue through 2024. The approval letter from the Los Angeles Department of Building and Safety Grading Division is provided (Attachment L).

#### 16.0 Current Monitoring Activities

The following monitoring activities have been conducted during the reporting period:

Third Party Mitigation Monitoring

Scope: Third-party Mitigation Monitoring

Consultant: UltraSystems

Surface Emission Monitoring

Scope: Monitoring required by SCAQMD Rule 1150.1 (Surface Emission

Monitoring, etc.)

Consultant: RES Environmental

Biological Monitoring

Scope: Coastal Sage, Oak Tree and Big Cone Fir Mitigation Monitoring

Consultant: Rincon Consultants (Formerly JMA)

Ambient Air Monitoring

Scope: Third-party Ambient Air Monitoring Consultant: Sonoma Technology, Inc. (STI)

Gas Well & Perimeter Probe Monitoring

Scope: NSPS Monitoring Consultant: SCS Engineers

Please note that off-site odor monitoring conducted in nearby neighborhoods is conducted by Republic Services' employees.

#### 17.0 Response to Third Party Mitigation Monitor Observations

UltraSystems provides the third party mitigation monitoring as required by Q Condition C.12.c. UltraSystems personnel perform monitoring visits in order to observe operational site activities and determine compliance status with conditions and/or mitigation measures. After each site visit, UltraSystems and Republic personnel meet to discuss the findings and observations.

18.0 Recent Landfill Activities and Planned Activities for Next Six Months

Recent activities conducted at the landfill are discussed in previous sections and also include the following:

- Continued maintenance of City South Coastal Sage Mitigation Area;
- Future design and construction of 5.4 acres of VCSS on Deck B City South;
- Grade low areas in Deck A to prevent ponding
- Stormwater channel's and basins cleaned, sediment and debris removed
- Develop plan for mitigation of Deck A
- Installed 40 vertical extraction wells and installed 20 pumps
- Installed over 8,000 linear feet of horizontal gas collectors

Planned activities for the third quarter of 2023 include:

- Installation of 40 wells, with an additional 15 wells designed
- Liquids management designed for new wells, as needed
- Approximately 2,000 linear feet of header pipe installed

- Quarterly liquid level data reviewed, improvements suggested, and implemented as needed
- SEM data managed and improvements made by the second 10-day check
- Waste excavation for new cell development
- Construction and grading of subsequent phases of Front Entrance Toe Berm as well as temporary, internal access road grading
- Phase 2 Coastal Sage Scrub Pilot Mitigation Project;
- Continued maintenance of City South Coastal Sage Mitigation Project area.

Please do not hesitate to contact me at (818) 362-2124 if you have any questions.

Sincerely,

Kate Downey

Team Environmental Manager Sunshine Canyon Landfill

Cc:

Tiffany Butler, City Planning
Lisa Webber, City Planning
Jon Sanabria, LA County Planning
David Nguyen, LA County Planning
Alex Garcia, LA County Planning
Edgar DeLaTorre, LA County Planning
Timothy Fargo, City Planning
Claudia Rodriguez, City Planning
Jason Valencia, City Planning
David Thompson, SCL-LEA
Dorcas Hanson-Lugo, SCL-LEA







### Los Angeles Regional Water Quality Control Board

July 18, 2022

Ms. Valorie Moore, Environmental Manager Sunshine Canyon Landfill 14747 San Fernando Road Sylmar, CA 91342 VMoore3@republicservices.com

APPROVAL OF CONSTRUCTION QUALITY ASSURANCE REPORT FOR CC 4, PARTS 4B&C, LINER INSTALLATION - SUNSHINE CANYON LANDFILL, SYLMAR, CALIFORNIA (FILE NO. 58-076, ORDER NO. R4-2008-0088, GEOTRACKER GLOBAL ID L10006014618)

Dear Ms. Moore:

The Los Angeles Regional Water Quality Control Board (Regional Water Board) has received the report titled *Final Report of Construction Quality Assurance Report, CC-4 Parts 4B&C, Sunshine Canyon Landfill* (Report), which was prepared by Geo-Logic Associates (GLA) for Republic Service (Discharger), dated July 2022, and submitted to the Regional Water Board on July 1, 2022. The Report documents the construction quality assurance (CQA) services performed by GLA during the construction of the CC-4, Parts 4B and 4C, liner system at the Sunshine Canyon Landfill (Landfill) in Sylmar, California, which is owned and operated by the Discharger.

The Report is submitted to comply with waste discharge requirements (WDRs) Order No. R4-2008-0088, which was adopted by the Regional Water Board for the Landfill on October 2, 2008, and applicable requirements in title 27 of the California Code of Regulations (27 CCR). In addition to documenting CQA activities during the construction of the liner system, the Report also includes a *Geology Report* that describes the geologic conditions encountered during subgrade excavation and a *Geotechnical Assessment of Uncertified Fill* that provides geotechnical data to demonstrate that soils excavated on site from 2004 to 2010 and stockpiled in the Cell CC-4, Part 4B and 4C, area meet the requirements for prepared subgrade for liner installation.

The CC-4, Parts 4B and 4C, liner system consists of approximately 17.2 acres, including approximately 13 acres of decks and side slopes in Part 4B and 4.2 acres of side slopes in Part 4C. The composite liner system consists of the following components (from top to bottom):

• 2-foot-thick protective soil layer, 10 feet up from the base of the slopes;

JAMES STAHL, ACTING CHAIR | RENEE PURDY, EXECUTIVE OFFICER

- - 80-mil thick double-sided textured high-density polyethylene (HDPE) geomembrane;
  - Geosynthetic clay liner;

16 ounces per square yard geotextile;

- 60-mil thick double-sided textured HDPE geomembrane;
- Geosynthetic clay liner;
- 30-mil thick double-sided textured HDPE geomembrane;
- Prepared subgrade.

The Report indicates that construction of the CC-4 Parts 4B and 4C liner system commenced with earthwork on September 22, 2021, and liner placement was completed on May 20, 2022. During the construction of the liner system, GLA provided CQA services on both earthwork and geosynthetic components installation. The earthwork tasks included geologic mapping, mass excavation, subgrade preparation, granular drainage materials, and the protective operations layer. The geosynthetics tasks included installing the HDPE geomembrane, geosynthetic clay liner, and geotextile.

Regional Water Board staff has reviewed the Report and, based on the information provided and our observations during site inspections conducted on October 25, 2021, March 9, 2022, and May 25, 2022, determined that the CC-4, Parts 4B and 4C, liner system at the Landfill meets the requirements in Section D of the WDRs (Requirements for Containment Structures) and Section 20310 et seq. of 27 CCR (Waste Management Construction Standards). Discharge of municipal solid wastes, as defined in Section A of the WDRs (Acceptable Materials), in this area of the Landfill is hereby approved.

If you have any questions, please contact Dr. Wen Yang, Supervisor of the Regional Water Board Land Disposal Unit, at wen.yang@waterboards.ca.gov or (213) 620-2253.

Sincerely,

Renee Purdy Executive Officer

Cc:

Michael Wochnick, CalRecycle (<u>Michael.Wochnick@CalRecycle.ca.gov</u>)
Dorcus Hanson-Lugo, Sunshine Canyon Landfill LEA (dlugo@ph.lacounty.gov)
David Thompson, Sunshine Canyon Landfill LEA (<u>david.thompson@lacity.org</u>)
Wayde Hunter, North Valley Coalition, Granada Hills (WHunter01@aol.com)





### Los Angeles Regional Water Quality Control Board

August 3, 2021

Mr. Chris Coyle, General Manager Sunshine Canyon Landfill 14747 San Fernando Road Sylmar, CA 91342 CCoyle@republicservices.com

APPROVAL OF DESIGN REPORT ADDENDUM 1, PHASE CC-4 PARTS 1 TO 5 - SUNSHINE CANYON LANDFILL (FILE NO. 58-076, ORDER NO. R4-2008-0088, CI-2043, GEOTRACKER GLOBAL NO. L10006014618)

Dear Mr. Coyle:

The Los Angeles Regional Water Quality Control Board (Regional Water Board) has received a document titled *Design Report – Addendum 1, Phase CC-4 Parts 1 to 5* (Addendum), dated May 2021 and prepared by Geo-Logic Associates for the Sunshine Canyon Landfill (Landfill), which is owned and operated by Republic Services (Discharger). The Addendum documents the revisions of phasing limits of Landfill liner construction that were originally proposed in the *Design Report Phase CC-4 Parts 1 to 5 for Sunshine Canyon Landfill* (Design Report), dated September 2015, that was approved by the Regional Water Board Executive Officer in a letter dated March 15, 2015. The Addendum indicates that the revisions were due to business and permit considerations and stability concerns, and are summarized in the following table:

Proposed Original Design		As-Buil	Construction Completion Date	
Description of Unit	Areas (Acres)	Description of Unit	Areas (Acres)	
Phase CC-4 Part 1	8.8	Phase CC-4 Part 1	8.6	February 27, 2017
Phase CC-4 Part 2	8.1	Phase CC-4 Part 2	6.2	October 11, 2017
Phase CC-4 Part 3	14.3	Phase CC-4 Part 3A	9.6	September 20, 2019
		Phase CC-4 Part 3B	6.4	December 19, 2019
Phase CC-4 Part 4	4.4	Phase CC-4 Part 4A	4.0	October 16, 2020
DI 00 4 D 4 5	40.5	Phase CC-4 Part 4B	13.0	2021 (anticipated)
Phase CC-4 Part 5	19.5	Phase CC-4 Part 4C	4.0	2022 (anticipated)
Total	55.1	Total	51.9	

Lawrence Yee, Chair | Renee Purdy, executive officer

The Addendum includes updated drawings showing the revised liner limits and the asbuilt subgrade, top of liner grade, and liner limits of CC-4 Parts 1 though CC-4 Part 4A and the proposed grading and liner limits of CC-4 Parts 4B and 4C. No other revisions are proposed to the original Design Report. The configurations of the double composite liner system for the Landfill, which are required in the Regional Water Board Waste Discharge Requirements Order No. R4-2008-0088, are not changed.

We have reviewed and herein approve the Addendum. If you have any questions regarding this matter, please contact Dr. Wen Yang, Chief of Land Disposal Unit, by calling (213) 620-2253 or wen.yang@waterboards.ca.gov.

Sincerely,

Renee Purdy Executive Officer

cc: Michael Wochnick, CalRecycle (Michael.Wochnick@CalRecycle.ca.gov)
Shikari Nakagawa-Ota, Sunshine Canyon Landfill LEA (sota@ph.lacounty.gov)
David Thompson, Sunshine Canyon Landfill LEA (david.thompson@lacity.org)
Martin Aiyitiwa, LA County Department of Public Works (maiyet@dpw.lacounty.gov)
Courtney Barrett, Geo-Logic Associates (cbarrett@geo-logic.com)







### SUNSHINE CANYON COUNTY PERIMETER PROBE MONITORING DATA

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1			,					2	REMOVED DUE TO CONSTRUCTION
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10	27	16:42	05	0.0	1.2	19.9	78.9	3	
1.	11 22	1000	03	Ø _	9.7	9.4	J. 08	2	
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1-	27.22	1010	1.01	0	16.5	9.0	76.5	3	
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1-	31-17	0744	-13	4	.7	18.8	80-5	2	
1	31-71	0746	.01	.4			79.7	2	
1-	31-27	0121	2	.3	.9	19.4	39.7	3	
1-	17.12	-152	D8	0	1	20.3	79.6	2	
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1-	74.22	811	37	Ø	4	20 3	71.3	3	
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1-	19.11	752	18	P	1.2	19.0	7.1	3	
1-	27/17	855	16	<b>@</b>	7.1	7.8	35.1	4	
	27.12		14	O	27	14.3	8i.C	4	
1-	27	9:15	-015	0.1	6.0	11.6	823	2	
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1-	27	9:30	.04	0.0	2.2	19.3	78.5	3	
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### SUNSHINE CANYON - COUNTY PERIMETER PROBE MONITORING DATA

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B-21	1.27-22	112+	13	0	14.4			2	
C-36	1-17-11	727	- 48	T)	4.9	17.0	78.1	3	
245									
A-11	1-27	9:56	03		9.2	9.7	81.0	2	
B-20	1-27	9:59		0.6	21.9	3.2	748	2	
C-35	1-27	10:02	10	0.0	19.7	3.Z	76-6	3	
D-50	1.27	10:71	-,03	0.0	16.9	3.2	79.9	4	
E-64	1.27	10:12	03	0.0		20.8	79.1	4	
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B-16		1							
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A-11	_	8:28	203	0.0	10.7	7.7	77.4	2	
B-20	1-27	8:30	25	0.0	13.7	20.8	11.7	2	
C-33	1-27	8:34	54	1.5		3.0	56.4	3	
D-48	1-27	8:38			30.9		465	4	
E-62	1-27	8:4/3	-1.34	00	23.5	0.5	76.0	4	
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239	,								
A-11	1-27/2	1715	-118	Ø	12.1		72.+	2	
B-20	1-4.12	KIA	-,15	80	1.2		71.0	2	
C-35	177.77	319	-19	0	1.1	20.9	74.0	3	
D-50		\$22	35	6		20,71	79.0	4	
E-64	1-27-27	-	18	0	1.1		79.0	4	
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240	1-17-72	175	-73	(3)	16	705	75.1	2	
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C-33		_	. 18		-	209	73.	3	
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## SUNSHINE CANYON - COUNTY PERIMETER PROBE MONITORING DATA

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NUMBER			(+7-7	CH				(MIN)	
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PV203D	1-28:22	2:07	-63	0.0	1.6	19-1	19.3		
	1-27-12	KILL	102		.4	11.3	313		
PV204D	1-CT-CC	14-1-	-07			-	0 40		
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### SUNSHINE CANYON COUNTY PERIMETER PROBE MONITORING DATA

TECHNICIAN:	Majco	5m.	TEMPERA	TURE:	10_	BARO. PRE	SSURE:	8-90	
GEM SERIAL #:	6501	081		WEATHER (	CONDITION	s: 8	unn;		
PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% CH4	% CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
202R A	1-27 1-27 1-37	10,21	09	<del>D</del>	1.9	13.8	84.3	2 2	
	1-87	11:00	7.70	D	.2	21-0	18.8	3	
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### SUNSHINE CANYON CITY PERIMETER PROBE MONITORING DATA

	AROM		TEMPER	ATURE: 6	5	BARO. PR	ESSURE: 28	·1		
M SERIAL	#G5027	62		WEATHER	CONDITIO	vs: SUN	MY			
		1						PURGE	 	
PROBE			PRESSURE	1				TIME		
NUMBER	DATE	TIME	(+/-)	% CH4	% CO2	<u>%</u> 02	% BAL	(MIN)	 COMMENTS	
213									 	
A-13	1-25-12	774	18	0	1.1	20.9	79.0	2		
B-29	1-25-22	738	1.15	0	2	705	79.3	2		
C-45	1-14-12	410	-82	G	1.7	20.7	78.1	3		
D-61	1-132	743.	1.23	0		20 1	71.0	4	 	
E-77	1-12-22	ナイナ	-19.26	9	il.		79.0	4	 	
214										
A-13	1-23-4	-	01	. 1	1-1	20.8	78,41	2		
B-30	1-25.22	818	-13.85	, 1	, (	4.0	77. Y'	2		
C-48	1-25-12	820.	3.0	0	•	20.9	79.0	3	 	
	-						1			
215	1.50.72	CA 17	1.1.1.4		1 1		07 1			
A-13	1-25.22	-	-1.14	P	6.3	5.5	58,1	2	 	
B-30	1.25.22	047	- :13	0	4.4	12.4	53.2	2	 	
C-47	1-18.72	2116	17	0		207	79.7	3	 	
D-64	1-15.22	5-1 ( 8-3	13	(E)	4.1	19.4	50.02	4	 	
E-81	1-15.00	812	01	<u>u</u> '	4.1	11.6	7. 1 -1	4	 	
216		_							 	
A-14	1-25-22	912	14	$\mathcal{O}$	1	20.5	794	2	 <u> </u>	
B-43	1-4.12	110	18	Ó		20.5	79.4	2		
C-62	1-25-12	916	09	0	21	20.0	7.4	3		
D-86	1-25.02	3/9	-14	0		20.5	79.4	4	 	
E-110	1-25.70	373	09	(7)		20.5	79.11	4	 	
		100			-		1 1	-	 	
217		14							 	
A-13	1-25.20	755	03	0	3.1	17.0	79.4	2		
B-30	1-15.17	17.	64	0	2.6		P.08	2		
		1. /								
218R	1.0: 0:	• • • • • • • • • • • • • • • • • • • •					3.			
A-11	124.22		- 26	6	20.5	0	79.5	2		
B-26.5	1-15-22	341	25	P	7.1		76,4	2		
B-30	1-16-72	A)	4.82	Ø	16	18.5	80 G	2		
219	1 2- 27	142.4	- b-7			16. 1			 	
A-13	1-25-22	1020	05	0	-	18.1	Q Q	2	 	_
B-64	1-25-22			(C)	13	205	£.3.	2		
C-115	1-25-72	1004	7.01		1.7	18.1	30.2	3	 	
D-166	1-25-22	INZ.		0	3.2	20.0	71.7	4		
E-217	1-2.11	IO>	<b>Ø</b>	<b>(7)</b>	)・レ	15.7	81.1	4		

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#### SUNSHINE CANYON - CITY PERIMETER PROBE MONITORING DATA

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	%VOL CH4	% VOL CO2	% 02	% BAL	PURGE TIME (MIN)	COMMENTS
220	++								
A 14	01/25/22	10:35	0 06	00	1-3	18.8	79.9	2	1.
B-40	01/25/27	10:36.	0.04	00	0.4	20.2	79.5	2	
C-87	01/25/22	0.38	0.09	00	0.5	202	79.2	3	- 4
D-124	01/22/22	10.41	D.DLI	0.0	01	20.9	79.0	4	
E-158	01/25/22	10:44	0.15	D.D	0.1	209	79.D	4	
220B									
A-14	01/25/22	9:51	0.01	0.0	0.9	18.2	81.0	2	
B-38	01/25/2	9:53	-D.06	00	3.6	15.7	80.6	2	
C-62	oipspa	9:54	70.04	0-0	5.1	10.5	84.4	3	
0.86	11/25/22	9:57	-0.10	0.0	5-5	10.4	841	4	
E-110	01/25/22	10.02	0.00	0-11	5.3	10.4	84.7	4	
721								1	
A-13	01/25/20	9:28	-0.07	0.0	4.0	14.4	81.7	2	
8-56	01/25/22	9:29	0.01	0.0	0.1	19.8	801	2	
C-99	oilesha	9:31	0.03	00	0.9	18.8	80.7	3	
0-142	01/24/22	9:33	0.05	0.0	5-7	10.5	83.8	4	
E-185	0/125/22	9:36	093	0.0	5.6	2.1	92.3	4	
222									
A-13	01/25/22	8:56	0.06	0.0	0.5	19.8	79.7	2	
B-54.8	01/25/20	4:58	-0.09	0.0	8.5	0.9	90.6	2	
C-96.5	pilish	9:01	-0.13	0.0	10.5	0.5	89.0	3	
D-138.3	01/24/22	9:04	-0.03	D.D	2.7.	15.3	82.5	4	<u> </u>
E-180	01/25/22	9:09	0.07	0.0	3.4	12.2	84.5	4	
223									
A-13	01/25/27	8 27	-0.12	0.0	3.9	14.3	81.8	2	
8-37.5	01/25/2	8:22	0.04	1.0	2.7	16.7	80.6	2	
C 62	0/12/27	8:20	-0 D7		5.8		85.5		
D-86.5	01/25/27	8:19	70.03	0.0	2.3	17.0	80.6	4	
E-111	01/25/22								
									1111
224	1			- 0		1.00	-	-	
A-13	0 125/20		D.17			15.8		2	
B-67.5	01/25/22		0.09			9.3		2	
C-122			0.12				84.9	3	
D-177 5	01/24/22	7:50	71.02	00	0.2	19.9	80. D	4	
E-232	01/25/22	7:54	-6.67	0.0	0.1	20.2	79.6	4	

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### SUNSHINE CANYON - CITY PERIMETER PROBE MONITORING DATA

PROBE NUMBER	DATE	TIME	PRESSURE	% VOL					
NOMBER				CH4	% VOL ÇO2	% O2	% BAL	PURGE TIME	COMMENTS
			(+/-)	CH4	(02	02	l bac	(MIN)	
225						_			
A-13	1-25	9:56	12	0.0	0.9	11.2	87.9	2	
	1-25	9:58	12	0.0			78.9	2	
	1-25	10:02	08	0.1	0.3	17.8	81.7	3	
							81.4		
	1-25	10:04	07	0.1	01			4	
E-244	1-25	10:08	11	0.0	0.1	19.6	803	4	
226					<u> </u>				
A-13	1-25	8:42	0.01	0.0	0.1	20.9		2	
	1-25		9.79	0.0	0.2	20.8	79.0	2	
00,	1-25		-9.18	0.0	0.1	20.7	79.1	3	
				0.0	0.1	20.6		4	
5 101					0.3	20.2	79.4		
E-208	1-25	8:58	-9.90	0.0	U.S	20.0	1 1 1	4	
				<u> </u>		-			
227						ļ			
A-13	1-25	9:03	01	0.1	2.8	7./	90.0	2	
B-48.7	1-25	9:05	.82	0.1	5.2	1.0	93.8	2	
C-84.4	1-25	9:09	.48	0.1	4.7	2.0	93.3	3	
	1-25	9:14	.71	0.1	3.2	0.2	96.5	4	
	1-25	9:18	.76	0.0	4.3	0.6	95.1	4	
E-115 7	1-65	7 110	- 75	0	, ,	-	70	<del></del>	
		<del>                                     </del>			<del> </del>	<del>                                      </del>	-	<del>                                     </del>	
228		-		ļ		101		-	
A-13	1-25	8:17	47	0.0	2.0	16.4	81.6	2	
B-63	1-25	8:20	61	0.1	0.9	18.8	80.2	2	
C-113	1-25	8:23	3.91	0.1	0.1	20.9	78.9	3	
D-163	1-25	8:28	-15.27	0.0	1.3	17.8	80.9	4	
E-213	1-25	8:32		0.0	10	18.6	80.3	4	
	<u> </u>	5.00			-				
		-		-	-	+			
229	,	0.1		20	0.8	/77	81.4		
A-13	1-25		07	0.0		17.7		2	
B-48.7	1-25	9:35	0.75	0.0	2.4	13.4	84.2	2	
C-84.4	1-25	9:38		0.4	7.2		92.4	3	
D-114	1-25	9:43	.07	0.0	1.6	11.1	873	4	
E-155.7	1-25	9:47	.65	0.0	5.1	0.3	94.7	4	
1 200.7	·	<del>'</del>							
			†	1					
230		-		<del> </del>	1		+	-	REMOVED DUE TO CONSTRUCTION
A-16			-			-	-	2	
B-33				<u> </u>	-	-	-	2	REMOVED DUE TO CONSTRUCTION
C-50		_				<del> </del>	-	3	REMOVED DUE TO CONSTRUCTION
					ļ				
231			1						
A-13		1						2	REMOVED DUE TO CONSTRUCTION
			<del>                                     </del>	1				2	REMOVED DUE TO CONSTRUCTION
B-26		-	-	<del> </del>	+	+	1	3	REMOVED DUE TO CONSTRUCTION
C-39		<u> </u>	<del>                                     </del>	_	-	+	+		REMOVED DUE TO CONSTRUCTION
D-51		-	-	-	-		-	4	
E-66			-	-				4	REMOVED DUE TO CONSTRUCTION
	4	1	1	1			1	1	



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#### SUNSHINE CANYON CITY PERIMETER PROBE MONITORING DATA

PROBE	DATE	TIME	PRESSURE	% VOL	% VOL	%	%	PURGE TIME	COMMENTS
NUMBER			(+/-)	CH4	CO2	02	BAL	(MIN)	
241						00.11	71.0		
A-13	1-13-12 1-13-12 1-13-12 1-13-12	1036.	-4.[7]	Ø 630	, (	20.4	74.5	2	
B-28	1-4.12	IRA	01.11.	Ø	1	20.4	79.5 19.5	2	
C-47	1-13-12	1100	H D	8	(	20.5	79.5	3	
D-64	1-05-00	1102	14.74	0	0	20.4	20 C	4	
E-85	1-23 . (1	TIVT:	1431	V	• 1	<i>u</i> ). 4	71.5	4	
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## SUNSHINE CANYON COUNTY PERIMETER PROBE MONITORING DATA

		SURE: 28	BARO. PRE	3		TEMPERAT		A Romo	NICIAN:
		4 Clo	TALT	ONDITIONS	WEATHER C		6	650392	SERIAL #:
COMMENTS	PURGE TIME (MIN)	% BAL	% O2	% CO2	% CH4	PRESSURE	TIME	DATE	PROBE UMBER
									202
REMOVED DUE TO CONSTRUCTION	2								A-10
REMOVED DUE TO CONSTRUCTION	2								B-25
REMOVED DUE TO CONSTRUCTION	3								C-38
									203
	2	15.6	17.7		0.0	1,04	10-18	2-29	A-10
	2	78.5			00		10120		B-25
	3	76.6	19,0	2.4	6.0	01	16:23	2.29	C-40
		2	10 5						206
	2	17.3	12.3	10.1	0	4.01	1022		A-10
	2	78.3	9.8	11.9	000	0		2-24-12	B-25
	3	76-1	6.7	17.2	$\mathcal{D}$	+.02	1026	224-12	C-40
		77	01 -						207
	2	77.6		7.9	00	-1.17		4-14-12	A-10
	2	81.3				04		7-24-22	8-25
	3	83-7	U.I	1.2	L	-4.99	1046	2211-22	C-40
		C/ 2	16.0						208
	2	80.3	15.2	4.5	0		1005	2-24 22	A-9.1
	2	80 -2	197	- 1	0	10	1007	2-24-12	B-25
	3	80-1	19.7	2	P	+.05	1009	224-22	C-40
		7G /	20 -						210
	2	77.6	20.0	,4	Ø		853	2-24.12	A-10
		47.0		13	0	62		2-2411	8-25
	3	79.8	20.0		Ø	+.12	85+.	2-24-12	C-39
		917	12.4	1.1		1 00/			242
	3	81.2	17.2	1.6	0	1.08	717	2-24-21	C-42
	4	67 1	12 3	3-6	<u> </u>	0	920	2-21-20	D-60
	4	83.1	13-3	2-6	0	+.03	924	2-24-22	E-78
		0.0	1117	(:-		-0			243
	2	805	14.7	41.7	0.1	,03			A-11
	1	796	166	3.8	0.0	.041	7'29		B-20
	3	80.3	13.3	6.4	0.0	20	9:37	2-29	C-33
		-			-				

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### SUNSHINE CANYON - COUNTY PERIMETER PROBE MONITORING DATA

PROBE	DATE	TIME	PRESSURE	% VOL	% VOL	%	%	PURGE	COMMENTS
NUMBER			(+/-)	CH4	CO2	02	BAL	- TIME (MIN)	
244	1						1	(IVIIIV)	
244 A-11	2-24-22	948	01	0	10.1	8.9	81.0	2	
B-21	7-24-27	1 1 0	09	Ø	10.0	10.3			
C-36	1-14-12		1.07	0	6.0	14.4	796	3	
C-30	1.500 60	13	7	-10	0.0	1	1(8		
245							İ		
245	724	9.25	05	().b	6.8	175	806	2	
A-11 B-20	7-7-	9:41	109	0.5	16.2	10,4	72.9	2	
	2-20	9.44	- 04	0.0	20.7	1	77.0	3	
C-35 D-50	274	9.49	- 03	0.1	19.8		709	4	
E-64	7.7A	9.00	01	0.0	0.1	20.9	79.0	4	
E-04		1 , 1 . 1	.01	00	1	. 1	1		
246			1						
A-9							Ì	2	REMOVED DUE TO CONSTRUCTION
B-16			1		<u> </u>		İ	2	REMOVED DUE TO CONSTRUCTION
0-10							Ì		
2050							İ		
205R A-11	2-2	8.27	07	0.0	80	7.0	84.0	2	
B-20	2-2	8.56	31	0.0		20.7	75.8	2	
C-33	2-2	8:39	67	1.8	411.6		22.7	3	
D-48		8-43	38	7.7	464		50.8		
E-62	27	8:47	-1.59	0.1	233	2,2	74.3	4	
L-02		0-17	1.01	0-7	3.0	1	-		
239		-	i		1		1		
A-11	7-74-17	874	1 61	0	10.6	15.2	74.2	2	
B-20	7-24-27	506	1.15	0	1010	28.6	79.3	2	
C-35	7-74-27	V7.0	CIL	0	11		79.7	3	
D-50	7-74-72	031 -	- 12-	Ø	1	20.0	79.3	4	
E-64	7-74-71	tic	1.02	d	1	206	79.3	4	
C-04	Cereu	A33 -	00	70		70.33	1.1.7	_	
240									
240	7-24-72	170	4.61	0	7.4	194	78.2	2	
A-11 B-20	7-14-12	VYC	1.01	U	7.0	20.9	78.1	2	
C-33	24-22	-	401	Ø		21.0	78.9	3	
D-49			0	Ø	14	20.9	78.7	4	
E-61	2-24-12		1.02	0	.1	21.0	78.9	4	
E-01		142	1-00		£ 8	4.0	78.	4	
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PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
VADOSE									
ZONE									
PV203D	2-24	10:0S	7.15	0.0	0.7	20.5	79,0		
PV204D	24-22	1057-	13.95	دا	-4	15-8	83.7		
PV211D	2-24	10:11	02	9.0	0.2	209	79.0		
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TECHNICIAN:	MARIO	· //	TEMPERA	TURE: 5	_ "ر	BARO. PRI	SSURE: 2	70	
GEM SERIAL#	GS06	081		WEATHER	CONDITION	15: 5VM	INY		
PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% CH4		% 02	% BAL	PURGE TIME (MIN)	COMMENTS
202R A B C	7-14 2-29 2-29	10:31	-,0  1.3) 0	0,6 0,0	7,0	1.1	97.0 80.4 <b>7</b> 9.0	2 2 3 3 3	

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3C3 31G147 (1 G1(E:	

TECHNICIAN:			TEMPERA	1	2		ESSURE: 2	8-31	
EM SERIAL#	G50392	6		WEATHER	CONDITION	vs: Cla	UDY	1	
		_		<u> </u>	ļ			BURGE	
PROBE			PRESSURE					PURGE TIME	
NUMBER	DATE	TIME	(+/-)	% CH4	% CO2	% 02	% BAL	(MIN)	COMMENTS
213	2 21 27	700	1 00		Ci	2 . 2	26.0		
A-13	2000	177	4.02	0	. 8	20-2	79.0	2	
B-29	1-12:00	474	-01	Ø	.3	19-7	80.0	2	
C-45_	2-Will	10/20	-1-26	0	1. /	21.0	48.7	3	
D-61	2-11-11	+49	04	Ø	. 1	21.0	78.9	4	
E-77	2-11-11	126-	-19.40	0	. !	21-0	78.9	4	
					-				
214	ח ביות היות	A1 -	110		-	2.1	26.0		
A-13	2-22-12		40	0	.3	2.0	38.7	2	
B-30	LU.N	812	-13:38	0		21.1	78.8	2	
C-48	LIVU	XIA.	-2.96	Ø	1.5	20.9	4-1-1	3	
215	- 70.00	000							
A-13	7-72-12	32.	01	0	5.7	83	80.0	2	
B-30	200:00	134	78	Ø	4.0	13.3	82.7	2	
C-47	2722	136	08	$\mathcal{O}$		21.0	78.9	3	
D-64	7-72-12	839	t. 01	8	, 6		79.2	- 4	
E-81	2-22-22	843.	.02	Ø	3.6	13.8	82.6	4	
216									
A-14	2-22-22	14	01	Ø	i	20.8	79. [	2	
_B-43	222	113	01	Ø	. 1	20.8	79.1	2	
C-62	2122	915	01	0	1.7-	18.8	68	3	
D-86	2-20-22	918	201	Ø	. ]	20.8	79.1	4	
E-110	2-11/2	122	4.03	0	.3	20.4	19.3	4	
217									
A-13	2-22-22	144	4.02-	Ø	3.8	16-5	79,7	2	
B-30	2-22-22	446	4-01	0	3.7	16-5	80,7	2	
218R									
	222-22	958	0	0	187	1	81.2	_ 2	
B-26.5	2-12-22	1000	407	8	8-2	19.0	44.8	2	
B-30	Lun	1017	tin1	Ø	15.6	1.3	83-1	2	
		4.2 1			-	1 5 60	V - \		
219									
	7-12-22	10th	64	6	1-3	18.8	79,9	2	
	2-22-22		4. 17.	0	2.0	17.1	80.9	2	
C-115	222-12	mr	100	0	1.3	18.3	80.08		
	2-22-12	1070	7.05	0		20-1	79.3	3	
	Lau		6		Y.]	14.0	81.9	4	
E-217		VJU		<u>v</u> l	1.1	1.0	8111	4	

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NUM			ATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL	% 02	% BAL	PURGE TIME	COMMENTS
22		26	ala	10						(MIN)	
A-1	4	4/2	142	10:59	-0.07	0.10	0.4	203	78.7		
8-4	0	2/2	2/27	11.00	0.01	DE	05	20.5	75./	2	
C-8	7	2/22	17.7	11:04	000	11 =	0 -	20.6	18.	2	
D-12	4	117	奶	11:15	600	20	5	40.4	18.6	3	
E-15		11/3	115	11:01	2.6	1.5	0.2	209	78.4	4	
6,13	+	74	14	11.//	0.06	0.5	0.2	209	78.4	4	
****	-	, ,	-						1		
2208		1100	in	10							
A-14	1	10	14	0.19	0.03	1.5	1.4	202	18.8		
8-38	12	122	22/	0:21	D.17 V	2.5	03	200	70.0	2	
C-62	12	422	271	1:22	0111	20	2 2	4.1	3.7	2	
D-86	7	122	27/	11.24	-011	0	2.4		8/.3	3	
E-110	5	1177	133/	1.20	0.04	6	4.7		81.2	4	
	1	144	12/1	10	1.430	1.5	3.3	15.8	80.3	4	
200	-	-	-	-			10				
221	1	1-	-								
A-13	12	1221	229	19	0.011	2.10	14	190	0/1		
8-56	2	1221	229	:2/1/	2.01/	1/2	2 /	1.3/	0.6	2	
C-99	2	1221	29	122/	2251	11	6/	0.18	7	2	
D-142	12	1251	120	120	2 200	0 2	.4/	7.71	7.3	3	
E-185	7	1231	220	200	2000	50	2 2	0.87	8.5	4	
F-703	19	4	47	29-	0.000	.5 3	3.2/	2.78	4.1	4	
	+	-	+						1		
222	101	2-1-	-							-	
A-13	2	42	29:	45 -	0.430	5 2	41	7 0 70	9 2	-	
3-54.8	121	22/2	29:	47-	0120	50	2 2	0.37	1.3	2	
-96.5	12	77/7	29:	49-	2130	75	6	0. 1/2	5.5	2	
138.3	21	72/1	79.	13 -1	070	20	. 8 2	0.17	8-6	3	
-180	71	17/17.	19	240	010	86	4/1	.08	1.8	4	
-100	190	44	7.	210	990.	67	20	1.391	10	4	
	-		-	_					-		
223	-1	-	-							-	
-13	2/2	2/22	18	50 0	050.	1.5	9 12	100	2 /		
37.5	2/2	2/22	8	53 1)	14/12	10 6	111	1 1 30	- /		
-62	2/12	2/27	18:	50-1	2/10	2	4/7	.67	1.8		
36.5	2/2	2/2	8:1	570	130	05	1/2	05/.	7 3		
111	1/2	3/2-	0	10.	650	6 1	8 18	.078	9 4		
-	7	74	-1-6	13 0.	040.1	03.	117	179	2 4		
				-							
4	-	1	,							1	1
13	2,2	712	8:1	80	0501	60.	620	7 78	1	-	
7.5 2	42	427	8:2	10	230	00	E 20	2	1 2		
22 2	2/72	172	8.2	1-0	12 0	00	3 20	8 18	1 2		
7.5	1/23	1725	2.	4/12	1200	0.	- 20	778.	3 3		
2 2	6/21	1/2	7.5	155	10.6	0,1	120.	2 78.	3 4		
- 1	14	14	5.5	41,	150.6	0.	1 20.	978	4 4		
-	- 1	-						1	1		
-											
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			POECELIBE	00.00	N VOI	%	%	PURGE	COMMENTS
PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	02	BAL	TIME	
NO WELL								(MIN)	
225									
A-13	2-72	10:19	.03	0.1	6.7		82.3	2	
B-72	2-22	10:21	.01	0.0_	07		788	2	
C-1131	2-22	10:26	0.1	0.1_	2.1	15.9	79.0	3	
D-190	2.22	10:30	8.11	0.1	62		78.8	4	
E-244	2.22	10/34		0.0	0.1	20,9	78.9	4	
226									
A-13	2-22	9:12	01	0.0	0.1	20.9	79.0	2	
B-64		9:15	-9.37		0.1	20.9		2	
		9118	7.16	0.0	0.1	21.0	78.9	3	
C-114			- 26		0.1	20.9	79.0	4	
D-164	2-22	9:29				20.4	78.7	4	
E-208		1121	,,,,,	<del></del>	<u> </u>		/		
		<del>                                     </del>			<del>                                     </del>	-	-		
227		01/12		0.0	07	20.6	78.6		
A-13	2.22	9:42	.02		0.7	19.3	76.9	2	
B-48.7	2-22	9:44	095	0.1	3.7	$\overline{}$	81.9	2	
C-84.4	2.22	9:47	.04	0.1	0.4	17.6		3	
D-114	2,22	9:50	0Z	0.0	0.2	26.9		4	
E-115.7	2-22	9:54	.77	0.1	3.7	19.5	76.7	4	
228				ļ		ļ			
A-13	2.22	9:57	.02	0.1	0.9	18.3	86.7	2	
B-63	2.22	9:59	.68	0.0	5.1	7.6	873	2	
C-113	2.22	10:03	.52	0.8	7.4	0.0	91.9	3	
D-163	2.22	10:07	. 29	0.1	2.6	9.7	87.6	4	
E-213	2-22	10:12		0.1	54	0.0	94.5	4	
L-213									
330									
229	7-22	8:46	62	0.0	1.9	17.0	81.1	2	
A-13		£:48	40	0-1	0.3	26.6	789	2	
B-48.7	1	5.52	-4.12	0 -1		20.6		3	
C-84.4	222	5166	14.50	0.7	13	184	80.2		
D-114	222	0.56	17.50	0.0	60	19.6		4	
E-155.7	222	1,01	-22.41	0.0	0.0	17.8	r ".)	+ 4	
	-		-	-	-	+	-	-	
230	ļ		-		-	+	-		OCALOUS OUT TO SOMETHIATION
A-16				1		+	-	2	REMOVED DUE TO CONSTRUCTION
B-33			1	1	-	-	-	2	REMOVED DUE TO CONSTRUCTION
C-50					<del> </del>	ļ	<u> </u>	3	REMOVED DUE TO CONSTRUCTION
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231								ļ	
A-13								2_	REMOVED DUE TO CONSTRUCTION
B-26			1					2	REMOVED DUE TO CONSTRUCTION
C-39			1					3	REMOVED DUE TO CONSTRUCTION
D-51			Ì	Î				4	REMOVED DUE TO CONSTRUCTION
E-66			Ì	Ī	1			4	REMOVED DUE TO CONSTRUCTION
E-00			1	Î	1	1			
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PROBE	DATE	TIME	PRESSURE	% VOL	% VOL	%	%	PURGE	COMMENTS
NUMBER	DATE	THALE	(+/-)	CH4	CO2	02	BAL	TIME	
								(MIN)	
241	22 10	11 - 5			8	20 00	ne u		
A-13	1-U.11	1101	-3.43	8888		20.5	79.4	2	
B-28	2-4-4	1103 -	4.78	<u> </u>	1	0.5	79.4	2	
C-47	2-22-11	1105-	-3-13	<u>_</u> Ø	1]	20.6	17.5	3	
D-64	2-12-20	1109-	-4.63	<b>Ø</b>	.1	20.6	79.3 79.3 79.1	4	
E-85	2-12-12 2-12-14 1-12-14 1-12-14 2-14-14	1113.	14.19	<b>Ø</b>	e	20.6	791	_ 4	
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	. 14	511BE 78	BARO. PRES	,	75	, JUKC	VENILA	A PARA	
		A A	C. 14		TURE:	TEMPERAT	7 240 0	HKOMO	ECHNICIAN:
		147	SUN	ONDITIONS	WEATHER C		<u> </u>	A Rond GSOSY(	EM SERIAL #
COMMENTS	PURGE TIME (MIN)	% BAL	% O2	% CO2	% CH4	PRESSURE (+/-)		DATE	PROBE NUMBER
REMOVED DUE TO CONSTRUCTION									202
REMOVED DUE TO CONSTRUCTION	2								A-10
REMOVED DUE TO CONSTRUCTION	3								B-25
									C-38
									203
	2	78.8		3.7	Ø	01	1015	3.24-72	A-10
	2	79.0		5.2	Ø	02	1019	3.24.22	8-25
	3	79.1	17.6	3.2	Ø	t.02	1022	3.24-22 3.44-22 3-14-22	C-40
				-					
	2	80.2	In e	0.2	0	, ;;	.0.20	h 1 - 0	206
	2	39.1	10.5	9.3	0	+. L(	1029		A-10
	3	76.1	19	16.0	0	1.12	103]		B-25
		10.	1, [	10.0	0	7-13	1027	3-24-22	C-40
								-	707
	2	79.9	20.0	-1	P	90	1050.	3-24-72	207 A-10
	2	74.7	19.5	.8	0	4.19		3.24.22	B-25
	3	48 F	20.3		0	4.38	1055	3.74.22	C-40
		CA 7	10.0	-					208
	2	30.7	13.5	20	0	07	1009	1	A-9.1
	2	71.0	17.3	5.9	8	4.05	1011		B-25
	3	80-6	170	1.8	<u> </u>	7.08	1013	3-24.22	C-40
			-			-			
	2	79.3	20.4	.7	9)	40	559	8.24.22	210
	2	71.3	20.5	12	0	05	701	124.00	A-10 B-25
	3	79.3	20.6	, l	0	80	903	यंग	C-39
									C-33
		C0 7	100	1					242
	1 1	80.7	18.0	1.3	0	03	716	1.14.22	C-42
	4	17.1	6.7	3.6	Q	4.02	119	3.14.22	D-60
	4	81.T	15.2	2.6	Φ	4.03	123	3-74.22	E-78
				-	+				
	2	88.4	0	10.1	.9	4.03	CCC	3.21/22	243
	2	85.3		10.1	Ø	+.08	902	3-24-22	A-11
	3	82-8	3.3	11.4	0	0	906	5-24.22	B-20
			J. B	11111	1	- W	100	1.17	C-33

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6502	765	70%	28	.10"	C	lear			
PROBE	DATE	TIME	PRESSURE	% VOL	% VOL	% O2	% BAL	PURGE TIME	COMMENTS
NUMBER			(+/-)	CH4	CO2	02	BAL	(MIN)	
244									
	3.24.22	952	Ø	Ø	11.3	(10	828	2	
B-21	3-24.22	954	t-09	Ø	8.3	11.9	75.8	2	
C-36	3.24.22	956	4-08	Ø	5-1	15.1	79.8	3	
C-30		120	£-40			13.	1-(-0-		
245									
245	3/24/22	19.16	+0.01	0.0	12.0	5.3	82.8	2	
A-11			+0.01	0.9	23.7	0.9	74.5	2	
B-20	3/24/22	09.30	+0.04	0.0	16.7	5.5	77.7	3	
C-35			+0.09	0.1	16.5	2.3	81.1	4	
D-50			10.07	0.0	2.7	15.7	81.6		
E-64	3/29/4	07.70	70.07	0.0	6.1	12. 1	81.4	4	
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246	-								
A-9			-				-	2	REMOVED DUE TO CONSTRUCTION
8-16								2	REMOVED DUE TO CONSTRUCTION
205R							200		
A-11	3/24/22		+0.14	0.0	9.3	11.0	79.8	2	
08:20 B-20		08:29	+0.08	0.1	21.4	2.5	74.0	2	
C-33	3/24/22	08:24	+0.16	1.2	37.7		58.6	3	
D-48	3/24/22	08:28	+0.16	2.1	43.7		53.6	4	
E-62	3/24/22	08:32	-1.01	0.0	22.3	2.7	75.0	4	
	7								
239	-								
	3-24.22	871	02	. (	12.8	14-7-	72.9	2	
B-20	3.24.22	FLY	-,01	Ø	U	20.2	79.4	2	
C-35	1	826	03	0	1	20.9	790	3	
	3.24.22	829		Ø		26 8	39.1	4	
D-50	3-24.22	0-	34	Ø	1.	20. Y	79.1	4	
E-64	5-24.00	\$ >>	121	<i>y</i>		2018	71.1	- 4	
						1			
240	7 71 -7	7117		<b>1</b>	6.11	(11)	70 5		
A-11	5.74.7	7()	05	0	6.4	17:	11.3	2	
B-20	3,00.00	447	- 06		1	711.9	4821	2	
C-33	1.24,0	14+	10	. (		20.9	78,7	3	
D-4 <u>9</u>	3.24.22	180	10	0	.2	20.8	44.0	4	
E-61	3.24.22	754	06		12	20,8	78.9	4	
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TECHNICIAN:	Saulo D	m_	TEMPERA	TURE: 7	o°_	BARO. PR	ESSURE: 2	8.10"	
GEM_SERIAL #:	65027	65		WEATHER	CONDITION	s: Cl	our		
PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% CH4	% CO2	% 02	% BAL	PURGE TIME (MIN)	COMMENTS
202R A	3/24/22	10:36	+0.07	0.0	8.7	0.0	91.2	2	
B C	3/24/22 3/24/22 3/24/22	10:38	-0.59 +0.45	0.0	2.2	17.9	81.4	3	
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							1	DUDGE T	COMMENTS
	745 DATE	TIME	PRESSURE	% VOL	% VOL CO2	% O2	% BAL	PURGE TIME	COMMENTS
UMBER			(+/-)	CH4	02	02	DAL	(MIN)	
ADOSE									
ZONE									
	,								
V203D	3/24/22	10:00	-0.102	0.0	1.3	19.4	79.3		
V203D	3/01/00	10-00	0.02	0.0			.,,		
	7 1 -	11.50	0	^	1	10.1	ca /		
V204D	3.24.2	1100-	7.60	Ψ	. L	17.6	85.2		
Ī	` .					_			
V211D	3/24/22 3-24-72 3/24/22	09:5	-70.02	0.0	0.2	20.5	79.4		
VZIID	3/24/00	7.					,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
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TECHNICIAN			TEMPERA	TURE:	76	BARO. PR	ESSURE: 2	37	(A seed) with
GEM SERIAL #	# <b>6</b> 5054	65		WEATHER	CONDITIO	O	NNY		
PROBE			PRESSURE					PURGE	
NUMBER	DATE	TIME	(+/-)	% CH4	% CO2	% O2	% BAL	TIME (MIN)	COMMENTS
213									
A-13	3-22-22	738	02	0	1.3	19.1	79.6	2	
B-29	3-22-12	740	1.00	0	1	20.8	79.1	2	
C-45	3-222	742	4.45	0	ul	20.9	80.0	3	
D-61	3-72U	745	5.33	0	-(	21.0	78.9	4	
E-77	3244	749.	3.04	0	.1	20.9	79.0	4	
	Ī								
214							[ i		
A-13	3-12-20	827.	08	Ø	5.8	13.3	10.9	2	
B-30	3-222	829	1.04		.1	20.9	79.0	2	
C-48	3-2022	832	5.74	90	14	20.3	19.0	3	
							, ,		
215									
A-13	3-224	2V7	1.01	Ø	4.2	10-7	85.1	2	
B-30	31212	-114	4.02	Ø	.3	w.2	79.5	2	
C-47	3-12-12	6	19	0	1	20.7	79.Z	3	
D-64	3-222	9	4.03	0	u	20.0	19 L	4	
E-81	3-13-12	25	7.06	8	3.1	13.5	\$7.4	4	
	2 C W	حد	11.04		-	13.5	03.	4	
216									
A-14	3-72-22	910	4.01	0	11	20.5	39.4	2	
B-43	3-17-17	17	63	8		20.6	19.3	2	
C-62	7-11-12	Ý	-03	0	1	20.7	397	3	
D-86	3-77-12	17	07	0	.(	2 n. C	79-1	4	
E-110	7-12-2	772	2	$\overline{\mathscr{O}}$		20.5	79.7		
E-110	5 00 1	101	V		- 3	~ /	104	4	
217									
217 A-13	3-22-22	94L	0	Ø	4.2	15.4	80.4		
B-30	2-21-22	UC.	-112	0	2.3	18.0	39 3	2	
D-30	-	119	10	V	V. J	10 .0	701	2	-
218R									
A-11	3-200	M	4.06	0	18 5	1.0	80.5		
B-26.5	3-2-12	IN	1.02	Ø	19.9	12	79.9	2	
	3-200	NA	+x=	9)	61	17-8	51:1	2	
B-30	ال مال الم	ואהר	COT	W_	P. [	1-1-1	/ \ \	2	
310									
219	2-22-6	1038	102	1	10.	19.4	79 1	_	
A-13	3-2-20	100	1.07	0	1-4		79.7	2	
B-64	7 -79'	CANI	1. UX		7.0	20.5	39.3	2	<u> </u>
C-115	3-22:11	101/2	7. UX	8		-	O	3	
D-166	2-12-1	1043	1 70	0	251	1505	793	4	
E-217	5-16-	1049	4.04	Ψ	3-4	15.8	80.X	4	

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PROBE	DATE	TIME	PRESSURE	% VOL	% VOL	%	%	PURGE	COMMENTS
NUMBER			(+/-)	CH4	CO2	02	BAL	TIME (MIN)	
220								(14(1).4)	
220 A-14	3/22/22	11.07	10.12	00	7.7	196	79.2	2	ri.
B-40	327	11.08	-17 70	1.0	0.6	20.2	79 1	2	
	177/22	11:10	1011	an	07	20.3	79.1	3	
C-87	2/2/2	11.12	-n 19	-17 17	00	20.9	79 1	4	
D-124	3/2/127	11-16	0 21	20	12 1	209	79	4	
E-158	2/2012	11-15	10.51	0.0	0.0	20.1	1.0	- 4	
	, ,								
220B	2/20/22	10:37	10 47	20	2.4	7/19	7/ 7	2	
A-14	2/2/27	10:35	-242	10.0	0.0	209	79 1		_
B-38	322/27	10:55	0.77	2 1	,	11/1	d2 21	2	
C-62	- I	10:39	1.71	0.0	3.6	16.3	27.5	3	
D-86	3/22/22	10:40	0.50	0.0	<u> </u>	17.5	00.1	4	
E-110	322/22	10:44	0.04	0.0	2.3	11.3	80.2	4	
	ļ								
221	2/00/00		-	0.7	2/	200	78.9		-
A-13	3/22/22	7:29	0.56	0.0	0.1	20,9	78.9	2	
B-56	3/22/21	9:3/	0.38	0.0	0.5	209	18.	2	
C-99	3/22/22	9:34	0.51	0.0	0.8	20.7	78.5	3	
D-142	3/22/22	9.36	0.49	0.0	0.0	20.9	[9.]	4	
E-185	3/22/22	9:42	0.75	0.0	02	20.4	79.4	4	
	' /			ļ					
222	1 1						50 6		
A-13	32272	10:07	0.30	0.0	0.8	17.7	17.5	2	
B-54.8	32222	10:03	-0.31	0.0	0.0	20.7	77.1	2	
C-96.5	3/22/2	10,04	0.31	0.0	0.4	20.4	79.2	3	
D-138.3	4/22/22	1007	10.30	0.0	3.2	16.5	80.3	4	
E-180	3/22/22	10:11	0.89	0.0	2.0	17.9	80.0	4	
	111	1							
223									
A-13	3/22/22	9:01	-0.29	0.0	0.5	20.2	79.3	2	
B-37.5	3 22 22	9:03	0.33	0.0	5.60	12.7	81.7	2	
C-62	3/22/22	T	70.31	0.0	1.0	19.1	79.9	3_	
D-86.5	2/2/127	9:07	-0.31	0.0	2.3	17.5	80.1	4	
E-111	3 22 22			0.0		17.5		4	
E-111	1-1-1-1	1-11	7.40	0.0	دنم	7.3			1
224									
224	2/22/22	7:49	0.03	00	0.1	191	80.3	2	
A-13	7/7/1/2	7.6	-2 27	0.0	0.1	200	80.0	2	
B-67.5	3536	2.113	0. 21	BB	0.1	20.0	79 4	3	
C-122	3/29/75	0.75	113 1.11	D D	201	20.8	79 3	4	
D-177.5	9-15-7-	0.10	17.00	100	10.0	20.8	701		
E-232	3/22/27	D. 7	10.91	0.0	0.0	40.8	1/-/-	4	
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PROBE	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	% BAL	TIME	COMMENTS
NUMBER			(+/-)	CH4	CO2	02	37.2	(MIN)	
225									
A-13	3.77	10:04	-,13	0.0	0.7	19.5	79.8	2	
B-72	322	6.07	-,10	0.0	0.4	20,5	791	2	
	5.27	10:12	-9,74	0.0	0.3	20.6	79.1	3	
C-1131	3.25	16:18	25	0.6	0.1	21.0	75.9	4	
D-190	3.22	10,22	-10 6S	00	03	30.8	78.9	4	
E-244	3 - 2	10,22	1000	0,0	C .5	<u>.</u>	70 1		
226	2 77	8:32	01	0.0	1 1	18.2	80.7	2	
A-13		8:34		0.0	<del></del>	20.8	79.1	2	
B-64	5,22		-11.02		0.1	20.8	79.1		
C-114	3.22	8:38	11.36	0.0	0.1	208	7912	3	
D-164	3 22	8:43	~11.56	0.6	0,1		79.2	4	
E-208	3:22	5:47	-12.3/	0,0	0.	20.7	1112	4	
227	2 7 .	0 - 4	/ v			7	700		
A-13	3.22	8:56	- 07	00	01	20.7	79.2	2	
B-48.7	3.22	8:59	66	00	04	20.1	79.5	_2	
C-84.4	3.22	7:02	-69	0.0	06	19.7	79.7	3	
D-114	3.22	9:07	72	0.0	07	19.6	79.7	4	
E-115.7	2.27	9:12	- 57	0-0	0.9	18.5	806	4	
228									
A-13	3.22	3:22	04	00	0.8	18.6	80.5	2	
B-63	5.22	7125	7.06	00	5.3	€3	08.3	2	
C-113	3.22	9:29	- 62	0.0	0.2	20.8	79.0	3	
D-163	3.27	9:33	69	0.0	2.1	16.9	81.0	4	
E-213	3.22	9:39	-,14	0.0	2.1	16.9	810	4 _	
229									
A-13	3-22	5:05	-39	0.0	0.1	20.3	79.5	2	
B-48.7	13.22	8:07	47	0.0	01	205	79.3	2	
C-84.4	3.22	8:11	-4.69		0.2	207	79.4	3	
	3 27	5:16	715,87		16	17.2	80.7	4	
D-114	3-27	8:20	-24.69	<del></del>	1.3	17.9	80.8	4	
E-155.7	1	010	_ ,,		1.3	†			
330						1			
230								2	REMOVED DUE TO CONSTRUCTION
A-16	1				+	1		2	REMOVED DUE TO CONSTRUCTION
B-33	1	+						3	REMOVED DUE TO CONSTRUCTION
C-50	+	-		<del> </del> -		-		1 -	
	-	-				+ -		1	
231	1	-	_		-			-	REMOVED DUE TO CONSTRUCTION
A-13	+	+		-	-			2	REMOVED DUE TO CONSTRUCTION
B-26	-	-		-		-	-	2 _	
C-39		-	-		-	<del> </del>		3	REMOVED DUE TO CONSTRUCTION
D-51		-	-		-			4	REMOVED DUE TO CONSTRUCTION
E-66			-		-			4	REMOVED DUE TO CONSTRUCTION
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	EA SIGNATURE:	

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	% BAL	PURGE TIME (MIN)		COMMENTS	
241											
A-13	312-12 312-12 3-12-12 3-12-12 3-12-22	1107.	3.12	0	0	4.07	79.3	2			
B-28	32-W	1109	9.78	<b>898</b>	0	20.8	79.2	2			
C-47	3-22-20	1111	7.10	0	0	208	79.2	3			
D-64_	2-22-22	1119	5.96	φ_	(A)	20.8	19.V	4			
E-85	320	1118-	17.01		Ψ_	70.8	TU	4			
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TECHNICIAN AMATMET			TENADEDA	TILBE. 7	5	BARO. PRE	1.08		
ECHNICIAN A MINTWEZ TEMPERATURE: TS BARO, PRESSURE: 8									
SERIAL #:	0707	6-		WEATHER	CONDITION	20101	1		
ROBE JMBER	DATE	TIME	PRESSURE (+/-)	% CH4	% CO2	% 02	% BAL	PURGE TIME (MIN)	COMMENTS
202								2	REMOVED DUE TO CONSTRUCTION
A-10								2	REMOVED DUE TO CONSTRUCTION
B-25		_						3	REMOVED DUE TO CONSTRUCTION
C-38									
203									
A-10	4.18.22	900	1.41	Ø	4.0	17-8	78.2	2	
B-25	4.28.22	903	-132	0	3.9	17.7	J8-7	2	
C-40	4.28.22	906	39	O	2.8	18.7	78.9	3	
206	11 36 02	172 7	1 63	-	9.0	12.3	70 1	3	
A-10	4.4.22	1320	1.06	0	<del></del>	10.0	33.0	2	
B-25	4.28.22	1322	t.04 t.02	0	12.2	3 4	75.0	3	
C-40	4.00.00	1300	7.00	Ψ	17.1	7.1			
207									
207 A-10	4.21.22	1335	-80-	\$	2.6	27.9	79.5	2	
B-25	4:21.22	1337	YD- 1	Ø	LY	19.1	79.5	2	
C-40	4.24.2	340	4.07	Φ	.2	20.4	79.4	3	
208		1				10.0	GA 7		
A-9 1	4.4.2	1121	4.09	0	80	193	30-7	2	
B-25	4.4.0	1123	4.03	0	6-0	18-4	80.8	2	
C-40	4.20.00	1175	05	W_	.8	1017	00.48	3	
			-		-				
210	4.78.77	107 4	4.07	0	.1	20-7	79.2	2	
A-10 B-25	4.4.22	1070	1.03	00	1.2	20.6	19.2	2	
C-39	4.28.22	1/37	1.04	Ø	11	20.4	78.5	3	
23	1	1000	1						
242							0.4		
C-42	4.11.22	1041	05	6	.1	20.3	79.6	3	
D-60	4.28.22	1014	4.25	900	79	60	80.	4	
E-78	4.28.22	1048	4.31	0	3-7	12.6	83.7	4	
			ļ					-	
243	11.6.77	1437	70	2	75	(.V	85-4		
A-11	4.4.22	1017	29	.3	4.7	6.1	53-2	2 2	
B-20	4.29.22	11040	17-LY	Ø	7.5 4.8 F.8	8.0	81.9	3	
C-33	4. 4.22	10-4	P.30	Ø	10.T	10-(-	01:1	-	
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SCS SIGNATURE:	MATINEZ/ARON
SCS SIGNATURE:	MATINEZ/ARW

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PROBE	DATE	TIME	PRESSURE	% VOL	% VOL	%	%	PURGE	COMMENTS
NUMBER			(+/-)	CH4	CO2	02	BAL	TIME (MIN)	
244								(IVIIIV)	
244 A-11	4-28-22	1059	21	0	16.4	1.7	81.9	2	
B-21	128.22	1101	4.01	0	11.7	8.5	79.8	2	
C-36	4.25.22	103	0	0_	6.0	14.5	79.5	3	
C-30	1 90				8.0	,	7.		
245									
A-11	4.78.22	918	33	Ø	12.5	6.0	81.5	2	
B-20	4.28-22		34	S	13.D	9.7	76.7	2	
C-35		924	32	0	14.6	8-1	77.3	3	
D-50	4.28.22	978	2.31	.1	14.5	5.2	79.7	4	
E-64	4.28-22		17	Ø	(-1	14.8	74.1	4	
		(22							
246									
A-9								2	REMOVED DUE TO CONSTRUCTION
8-16								2	REMOVED DUE TO CONSTRUCTION
205R									
A-11	4.28.22	1038	22	8)	8-0	12.4	74.6	2	
B-20	4.28.22		42	Ø	8-1	13.3	78-6	2	
C-33	4 28.22	1045	31	1.1	36.7	1.5	60.7	3	
D-48	428-22	1050	25	1.3	35.4	3.2	60-1	4	
E-62	4.28-22	12W	22	Ø	25.5	1.3	37	4	
239									
A-11	44.22	1006	4.04	0	14.2	13.3	72.5	2	
B-20	4.29.22	1008		0	.2	20.9	78.9	2	
C-35		10/0	4.07	0	0	21-0	79.0	3	
D-50		1013	4.31	0	-1	20.9	79.0	4	
E-64	4.20.22	1017	4.05	0	. [	20.9	79.0	4	
				•					
240									
A-11	4-24-22	944	4.06	Ø	19.8	1.4	78.7	2	
B-20	4.28-22	946	4.04	P	.9	20.4	78.7	2	
C-33	4-28-22	948	4.03		_1	21.2	78.6	3	
D-49	4.28.24	951	4.05	$\mathcal{D}$	4	20.9	E. VE	4	
E-61	4:28-22	956	4.03	11	.1	21.D	78.8	4	

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SCS SINGNATURE:	MATINER

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ECHNICIAN:	AMANDO	MARTI	W. PEMPERA	TURE		BARO. PRESSURE:			
EM SERIAL #:				WEATHER		NS:			
PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% CH4	% CO2	% 02	% BAL	PURGE TIME (MIN)	COMMENTS
202R									
A B C	4/28/11 W/18/01	2:13	-0.43	.8	9.6	18.	90.1	2	
С	4/28/11 4/18/11 4/18/11	8:21	+0-59	-0-	2.7	0.0	97.3	3	
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SCS SIGNATURE: AMANDO MARTINEZ

LEA SIGNATURE

NUMBER  (I/-) CH4 CO2 O2 BAL TIME  VADOSE  ZONE  DV2030 4/28/12 7:59 -2.96 D	PROBE	DATE	TIME	PRESSURE	% VOL	% VOL	%	%	PURGE	COMMENTS
VADOSE ZONE		Ditte		(+/-)					TIME	
ZONE									(MIN)	
	/ADOSE	_								
PV2030 4/23/12 9:59 -2.96 & 1.4 19.7 78.9  PV2040 4/28/21 9:47 -0.34 & 0.1 20.9 79.0  PV2110 4/28/21 9:47 -0.34 & 0.1 20.9 79.0	ZONE									
PV204D 4-29:12/542 5:33 © . 8 70-1 20.9 79-0  PV2110 4/28/22 9:47 -0.34 & 0.1 20.9 79-0			r)	0.07		1.77	10 '7	720		
PV204D 4-128-124/342-5.33 D 8 20-1 20-9 79-0  PV211D 4-128-122 9-47-0-34 & 0-1 20-9 79-0	PV203D	7/28/22	7:59	-2.96	<del>-</del>	144	17./	18.9		
PV2010 4/18/12 9:47 -0.34 & 0.1 20.9 79.0		′ /	,							
W2110 4/28/22 9:47 -0.34 & 0.1 20.9 79.0	PV204D	4-28.22	1342-	-\$ 33	Ø	· <b>%</b> _	70.	721		
PV2110 4/28/22 9:47 -0.34 & 0.1 20.9 79.0			1							
	PV211D	4/28/22	9:47	-0.34	<del>6</del>	01	20.9	79.0		
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TECHNICIAN:	AROM	0	TEMPERA	TURE:	15_	BARO. PRESSURE 28-44			
GEM SERIAL #	G5045	43		WEATHER	CONDITIO	NS:_ SU	NNY		
PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% CH4	% CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
213				_					
A-13	4-26.22	833	4.12	(1)	·Y	19.8	79.8	2	
B-29	42-4	837	1.12	0	1	20.4	79.5	2	
C-45	4-16-12	839-	2.57	0	1	20.5	79.4	3	
D-61	1-16-12	RYC L	-3.32	0_	1	20.6	19.5	4	
E-77	4-24-22	046-	-17.72	Ø	• (	20.6	79.3	4	
214									
214 A-13	4-26-12	F58	03	0	3.0	16.7	80.3		
B-30		900 -		· (D)	Ø	20.7	79.3	2	-
C-48	4-26-12	902	15.46	8	1.4	19.3	79.3	3	
			m 19	~		فرو	11		
215									
A-13	4.26.22	912	4.05	Ø	5.2	7.4	87.4	2	
B-30	4-26-22	914	4.05	0	.1	20.5	PR	2	
C-47	4-26-22	916.	03	Ø	4	20.6	<del>2</del> 9.3	3	
D-64	476-22	919	DI	Ø	.3	20.0	79.7	4	
E-81	4-26-22	703	+-02	Φ	3.5	12.2	84.3	4	
216	4 20 22	1000	1 41	_	-	201 0	20. 2		
A-14	4-76-22		+.01	0	_	20.8	70.0	2	
B-43	- U.U		t.16	0	.1	20.7	F916	2	
	426.22	N5	T. L	0	· L	50.0	70.5	3	
E-110	4-21.2	1019	4.01	$\overset{\mathcal{O}}{\mathcal{O}}$	3	19.2	369	4	
2-110	1 4	tor (	7.01	$\Psi$		17.0	11.	4	
217									<u> </u>
	1-16.22	1038	1.47	Ø	5.0	14.4	80.6	2	
B-30	Libri	040-	-01	Ø	2.4	17.8	79.7	2	
		-10				V			
218R		-,,,-							
A-11	1-26 U	1882	02	88	21.3	2	78.5	2	
B-26.5	4-26-22	1414	63	0	.2	17.7	82-1	2	
B-30	4-26-22	146	.06	0	16-8	14.5	4.7	2	
219	126.22	11/2	~~	<b>A</b>	-3	70.0	70		
77.20	4-26.22	1059	08	0	- 1		79.7	2	
B-64	1-26-121	100	- · ll	0		20.2	<b>式</b> 过	2	
	121-22	107	- 11	0	1.6	17.5	P. 08	3	
D-166	1-26-24		06	8	1.1		33.2	4	
E-217	7 05 -	<u> </u>	(.,, 0)	V	7. [	11.8	2-5	4	

LEA SIGNATURE	

## John Palos

#### SUNSHINE CANYON - CITY PERIMETER PROBE MONITORING DATA

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL	% O2	% BAL	PURGE TIME	COMMENTS
			( , ,					(MIN)	
220	1/21/	101-1	n. /	٠, ١	2	10 5	70 -		
A-14	4/6/22		10.04		1.2	19.5	79.3	2	10
B-40	4/6/62	10:57	0.3/		0.1	709	79.0	2	
C-87	4/16/12	10:55	-0.03	0.0	0.1	10.1	79.0	3	
D-124	4/26/22	10:57	-0.03	12.0	0.0	20.9	19.1	4	
E-158	4/26/22	11-01	-0.03	0.0	0.1	20.7	17.0	) 4	_
220B	412622	10:22	-n 101	0.0	0.8	10 7	701 5		
A-14	11/1/1/12	10.05	70.19		3.2	11.5	80.7	2	
B-38	1111/17	10.21	-0.11	0.0	0.5	112	83.8	3	
C-62	1/2/17	10:30	-0.0	0.0	0.3	12.8	82.9	4	-
D-86	11/2/22	10.34	-0.01	00	3.60	141.8	411		
E-110	Talat	77. 77	0.15	0.0	<u> </u>	1.1.0	01.0	4	
221		-							
A-13	1/21/20	9:13	-0.21)	12.17	010	197	797	2	
B-56	11/22/22	9:15	-120	D.D	1.6	16.0	82.4	2	
C-99	4/7/27	9:17	7074	12.12	10.3	0.7	89.0	3	
D-142	13/2/1/23	9:20	12.19	10.0	1.1	718	79 1	4	
E-185	1/21/22	9:25	0 20	1.0	3.60	11.1	85.4	4	
2-103	10000	1.03	7.20	<i>D</i> · <i>U</i>	3.W	,,,,	05.1		
222									
A-13	1/2/27	7:47	0.27	11.11	2.7	18.3	79.5	2	
B-54.8	4/21/22	9:49	0.19	10.0	0.2	20.9	18.9	2	
C-96.5	4/26/22	9:52	0.19	0.0	1.5	206	79.0	3	
D-138.3	412622	7:54	10.29	0.0	1.7	18.2	80.1	4	
E-180	4/21/27	7:58	0.17	10	6.3	3.6	90.2	4	
	1 1							_	
223	4 1								
A-13	4/26/22	8:40	0.25	0.0	3.5	16.0	80.5	2	
B-37.5	4/26/22	8:47	0.29	0.0	6.9.	11.2	81.9	2	
C-62	11/26/22	8:44	0.38	0.0	3.8	14.8	81.4	3	
D-86.5	4/26/22	8:47	0.30	20	2.9	17.0	30.0	4	
E-111	4/26/22	8:51	0.31	0.0		16.D	80.5	4	
	' '								91
224							=0 =		
A-13	4/26/22	5:13	0.34	0.0	1.1	20.0	79.9	2	
B-67.5	4/26/22	6:14	0.49	0.0	1.1	18.5	80.4	2	
C-122	4/26/22	8:17	0.38	0.0	D.Z	20.2	79.6	3	
D-177.5		8.19	13.37	<u>U.D</u>		20.4	79.5	4	
E-232	1/26/22	8:23	9.14	0.0	0.1	20.5	79.4	4	
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SCS SINGNATURE:

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		T. 10.05	PRESCURE	0/ 1/01	9/ 1/01	%	%	PURGE	COMMENTS
PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL	% VOL CO2	O2	BAL	TIME	
NOMBEN								(MIN)	
225									
A-13	4126	9.34	=.1/	00	0.0	208	79.2	2	
B-72	4/21	9:37	-3.94	0.0	05	20.3	79.1	2	
C-1131	4/25	9:411	8.23	0.0	14	19.4	72.2	3	
	4/26	9:46	16	0.0	5.0	21.0	79.0	4	
D-190	4/26	9,50	821	0.0	0.0	21.0	78.9	4	
E-244	7/ 00	1,50	0 21	0.0	0.0		, ,		
226	1:1/	700	- 6-1	06	-	0 - 0	78.9		
A-13	4/26	R131	-,67	0.0	0.2	20.9		22	
B-64	1 /26	8:34	-9.84	06	0.1	21.0	78.8	2	
C-114_	9/26	8:39	01	06	01	20.9	79.0	3	
D-164	4/26	8:43	7/0.25	0.0	21	21.0	75.9	4	
E-208	Ling	8:48	-10.47	00	0.6	205	78.9	4	
					]				
227							_		
A-13	4/26	8:51	07	Ð. O	0.4	206	79.6	2	
B-48 7	4126	8:54	.20	00	4.3	4.6	91.1	2	
	4/26	8:57	12	20	30	8.5	88.5	3	
C-84.4	4/20	9:02	08	00	2.4	4.9	92.7	4	
D-114	1-0	9:06	.09	0.1	30	5.6	91.3	4	
E-115.7	4/260	7,00	.07	0.1	5 0	0.0	1	4	
		-							
228	to 10 1	0		-		14.4	85.4		
A-13	4 126	9:11	12	0:0	0.2			2	
B-63	4/76	9:13	06	0.0	0.2	26.5	793	2	
C-113	4/26	9:17	03	0.0	4.2	5.2	90.6	3	
D-163	4/26	9:22	01	00	0.8	17.8	815	4	
E-213	21/26	9:28	- 05	6.0	42	40	91.7	4	
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229									
A-13	41/26	7:32	48	0.0	0.1	21.0		2	
B-48.7	4/26	7:35	38	0.0	2.2	14.1	83.7	2	
C-84.4	4/26	7:39	-3.96	0.0	2.2	20.7	79.1	3	
	4/26	7:44	-14.74		1.7	17.6			
D-114	4/26		-24.13			18.3	805	4	
E-155 7	1706	1,10	- 110	0.0	<del> </del>	_در_		<del>                                     </del>	
					+	1			
230	-	+	<del>                                     </del>	_	1			1	REMOVED DUE TO CONSTRUCTION
A-16			-		-		+	2	
B-33	-				1	-		2	REMOVED DUE TO CONSTRUCTION
C-50			-		1		-	3	REMOVED DUE TO CONSTRUCTION
						-			
231					1				
A-13								2	REMOVED DUE TO CONSTRUCTION
B-26					1			2	REMOVED DUE TO CONSTRUCTION
C-39								3	REMOVED DUE TO CONSTRUCTION
D-51	†				1			4	REMOVED DUE TO CONSTRUCTION
E-66	<del>                                     </del>	1			I			4	REMOVED DUE TO CONSTRUCTION
E-00			<del>                                     </del>		Ì			$\top$	
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SCS SIGNATURE.		<u> </u>

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NUMBER  201  ALIS & L.G. 27 337 2.38 6 1 2.1. 1 18 7 2  B-32 V. 27 27 337 2.38 6 1 2.1. 1 18 7 2  C-27 V. 3. 27 337 1.3 1	PROBE	DATE	TIME	PRESSURE	% VOL	% VOL	%	%	PURGE	COMMENTS
241 A-13	NUMBER	DATE	THAIL	(+/-)			02		TIME	
A-13 Y-26.22 33+ 2.78 6 . 1 21.1 78.8 2  B-28 Y-26.22 339 7.78 6 . 1 21.1 78.8 2  C-47 Y-26.22 341 t.27 6 . 1 20.9 79.0 3  D-64 Y-26.22 344 t.02 6 . 1 20.5 79.4 4										
A-13 Y-26.22 33+ 2.78 6 . 1 21.1 78.8 2  B-28 Y-26.22 339 7.78 6 . 1 21.1 78.8 2  C-47 Y-26.22 341 t.27 6 . 1 20.9 79.0 3  D-64 Y-26.22 344 t.02 6 . 1 20.5 79.4 4	241									
$0.64  9^{2} \mathcal{U} \cdot \mathcal{G} \cdot    (299 + 1.0$	4.12	U 20.72	1237	1.78	A	. (	21.2.	78-7	2	
$0.64  9^{2} \mathcal{U} \cdot \mathcal{G} \cdot    (299 + 1.0$	A-13	171.72	1279	2 70	6	1		JC (		
$0.64  9^{2} \mathcal{U} \cdot \mathcal{G} \cdot    (299 \text{ Hz}, 0 \text{ L} + 0) \cdot    (10.8 \text{ Hz}, 10.9 \text{ L} + 1) \cdot    (10.8 \text{ Hz}, 10.9  L$	B-28	414.00	175 (	1778	$\omega$	, (		14.		
$0.64  9^{2} \mathcal{U} \cdot \mathcal{G} \cdot    (299 + 1.0$	C-47	4.11.12	1341	t. Ct	Ø	-1	20.7	7 (.0	3	
	D-64	4-11.17	1747	せ.0レ	0	.1	20.5	77.41	4	
		4 10.72	13110/	1277	0	1	701 1	79.7	4	
	E-85	1.000	12-18-	13010			10.0			
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		1	S: SCIN	ONDITIONS	WEATHER (	6081	C/GX	050372	SERIAL #
COMMENTS	PURGE TIME (MIN)	% BAL	% 02	% CO2	% CH4	PRESSURE (+/-)	TIME	DATE	PROBE IUMBER
REMOVED DUE TO CONSTRUCTION	2								202
REMOVED DUE TO CONSTRUCTION	2					-			A-10
REMOVED DUE TO CONSTRUCTION	3								B-25 C-38
	2	7.1	PI I		90	15	ious	5.26-22	203 A-10
	3	マ、1 71.0 元8:5	18.4	2.8	<u>5</u>	27	1081	54.22	8-25 C-40
	2	79.5	11.9	8.6	0	-,40	)20j	5.26-22	206 A-10
	3	138	7.0	16.4	0	-30	1100.	5-16-12	8-25 C-40
	2	80.3	17.7	2.1	0	-1.15	((5-	5-26-12	207 A-10
	3	76.5	20-0	2.0	0	1.12	1124-	3.4-12	B-25 C-40
	2	80.5	19.2	13	0	51	1344	5.76-11	208 A-9 1
	3	79.5	18.0	8.1	0	40 34	1046	3.4.12	B-25 C-40
	2	A 0	20 ]	.1	Ø	30	137	5.422	210 A-10
	3	79.1	20.6	1.2	0	L+	139	5-21-12	8-25 C-39
	3	71-3	16.8	1.9	a	-, 25	757	5 7C-72	242 C-42
	4	83.1	(3.0	39	O	30	1000	5.4.11	D-60 E-78
	2	87.5	1.0	106	.8	09	957	5.16-21	243 A-11
	3	21.5	9.5	7.1	8	02	959	5.26. L1 5.26. L1	B-20 C-33

505	SIGNATURE
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EA SIGNATURE	 

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
244									
A-11	5-26.22	1025	31	0	14.5	3.1	82.4	2	
B-21	5.26.22	1027	-30	0	9.2	10.4	80.4	2	
C-36	5.26.22	1029	+.04	0	11.1	10.V	78.7	3	
	7	1							
245									
A-11	5-26.22	INNE	-8	Ø	10.7	7.2	821	2	
B-20	5.26.22	16.11	_ 17	1.2	23. Y	. 1	47.7E	2	
C-35	5-16.22	701	- 14		17.0	5.4	775	3	
D-50	5-26-22	100	18		17.7	G1	43	4	
E-64	5.16.22	1023	~.22	0	15	20.3	79.2	4	
		100							
246									
A-9	1							2	REMOVED DUE TO CONSTRUCTION
B-16								2	REMOVED DUE TO CONSTRUCTION
205R									
A-11	F21.22	921	6	Ø	6.3	13.8	29.9	2	
B-20	C-76-22	974	26	. 1	20.0	5.3	74.6	2	
C-33	5-76-72	978	45	1.3	41.2	1.0	56.4	3	
D-48	5.76-22	337	39	2.9	4.51	0	(9.7	4	
E-62	5-76-72	936	1.19	0	26.9	16	FIF	4	
	7-14 25								
239									
A-11	5-21-22	556	-,34	0	12.0	14.1	72.9	2	
B-20	5-16-12	1-1	32	0	.1	20.6	71.3	2	
C-35	C26.77	900	33	Ø Ø	.1	20.7	79.2	3	
D-50	5-76-12	205	30	7)	.2		79.2	4	
E-64	E-75-12	907	- 29	Ø	I	20.9	79.0	4	
	- A	101							
240									
A-11	(2/12)	235	29	<b>(</b>	32	17.3	71.5	2	
B-20	5-16-22	977	1.29	<b>(</b>	G	19.9	19.2	2	
C-33	51672	839	03	0	11	20.5	79.4	3	
D-49		842	31	Φ	.3	20.4	79.3	4	
E-61	5.26.22	346	- 34	.1	.2	20.4		4	
L-01	- 112 (1	7 ( 0	1	•					
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TECHNICIAN:	MARIES	N	TEMPERA	TURE:		BARO. PR	ESSURE: 2	1.07		
	GSOFA			WEATHER	ONDITION	S: 9	NW			
PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% CH4	% 002	% 02	% BAL	PURGE TIME (MIN)	COMM	ENTS
202R A B	5-26 5-26 5-26	10:59 11:01 11:04	- 14	0.0 0.0	0.1	205 173 20.8	79.4 827 79.1	2 2 3		
								3		

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PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
VADOSE ZONE									
PV203D	5-26	io:33	-1.23	00	1.3	19.4	79,3		
PV204D	5.20.22								
PV211D	5-20	10:37	20	0.0	0.0	21,0	79.0		
	_								
				_					
					_				
		<u> </u>			<u></u>	J	1		

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TECHNICIAN: A ROMO		TEMPERA	TURE:	<u> </u>	BARO. PR				
M SERIAL #	-G50391	SS03926 WEATHER CONDITIONS: SUUNY							
PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% CH4	% CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
213									
A-13	5-25-U 5-25-U	838.	10	Ø	.5	19.5	0.0	2	
B-29	5-25-a	840.	1.02	0	. [	20.1	79.5	2	
C-45	5-25-12	842	331		H	20.0	79.9	3	
D-61	5-15-2	842.	-1.73	Ø		20.0	79.9	4	
E-77	5-15-22	347.	18.52	Ø	-1	20.1	79.8	4	
214		,							
A-13	5-25-22		ar. 04	0	3.9	16.1	G.08	2	
B-30	E-45-12	700.	-12.19	<b>(</b> )	il	203	79.6	2	
<u>C-48</u>	5-15-12	902.	15.07	Ø	Let	19.3	39.6	3	
215									
A-13	5-25-2	914	Ø	0	5.3	8.0	867	2	
B-30	5-25-12		10.		.1	20.3	71.6	2	
C-47	5-25-22		t.28	Ø	0	205	79.5	3	
D-64	5-25-02	721	04	87	٧.	19.8	Y.PF	4	
E-81	5-15-22	925	- 01	Ø	3.5	125	84.0	4	
216									
A-14	5-25-12	944	MO.~	Ø	6	206	794	2	
D 42	F' 1 12	OU CI	11	P	CD	20-1	79.3	2	
C-62	5-25-22	951	07	Ø	.1	20.7	79.2	3	
D-86	5-15-12 5-15-12	754	- 07	0	Ø	203	79.2	4	
E-110	C.25-12	758	23	0	.2	20.5	79.3	4	
217									<del></del>
A-13	5-25-CC	1014	O't	0	4.2	15.5	81.3	2	
B-30	5-25-22	1016.	PO.	<b>Ø</b>	2.6	17.9	79.5	2	
218R									
A-11	5-25-12	MIA	4.64	0	74-1	1.2	78.7	2	
B-26.5	5-15-12	1029	05		21.8		78.1	2	
B-30	9-43.22	1051	20	Ø	13.6	15.6	71.7	2	
219									
A-13	5-15-22	053 -	05	0	1.1	18.9	5.08	2	-
B-64	5-15-22	7261	+.21	Ø	d	19.9	6.08	2	
C-115	C-4,22	1057	- 57	0	1.1	17.9	81.0	3	
D-166	5-15-12	1100	07	0	.8	18.4	50 3	4	
E-217	5-45.22	1184	- D-F	0	30		82.8	4	

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DDODE	DATE	TINAL	nnrecunr	R/ V/OI	- N VOI		n/	DUDGE	COMMENTS
PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	% BAL	PURGE TIME	COMMENTS
NO WIELL			(., ,				D/12	(MIN)	
220	4-1								
A-14	ElachA	11.00	70.05	n.n	0.2	20.7	79 /	2	111
	12-127	11:11	-0.21	DD	0.1	20.9	79 1		
B-40	- Flor	<u> </u>	0.40	0.0		20.1	11.1	2	
C-87	11711	11:12	0.02	0.0	0.1	20.7	17.0	3	
D-124	62912	11:15	0.04	00	0.0	20.9	79.1	4	
E-158	50-02	11:19	to 04	10.0	0.0	20.7	79-7	4	
	1 1								
220B								1	
	6/22/22	10:33	70.05	2 0	0.1	19.5	79 5	- 1	
A-14	17/1	1		0.0		-	729	2	
B-38	July	10:34	t0.16	0.0	0.2	20.9	78.9	2	
C-62	47900	10:38	-0-10	0.0	3.6	157	82. ]	3	
D-86	92922	10:40	-D.13	0.0	2.8	2/./	80-0	4	
E-110	01222	10:44	t0.10	n.O	2.5	17.5	79.9	4	
	11-1-6								
224	,							1	
221	chilm	d. 11	en is	n n	1 1	197	79.2	- 1	
A-13	JAMAN	8:46	D.15	0.0	1.1	1.1	71.4	. 2	
B-56	425/22	4.44	0.17	0.0	0.4	17.7	17.8	2	
C-99	5/25/22	4:50	0.30	0.0	1.1	19.3	79.E	3	
D-142	52522	3:54	0.08	0.0	0.1	20.5	79.5	4	
E-185	229/22	8 59	TO.DL	0.0	2.9	13.1	84.1	4	
L 105	- Aller	V 21	0.00		2.1	ر ، د_ر	011	1	
-									<del></del>
222	dodo	2:0.1	/ 11	0 0	, 0	120	70.2		
A-13	92722	7:34	0.10	0.0	1.9	18.8	79.3	2	
B-54.8	97572	7:36	0.06	0.0	0.1	209	79.D	2	
C-96.5	92422	9:39	D.09	0.0	0.4	20.4	79.2	3	
D-138.3	920122	7:41	10.00	2.3	47	11.9	82 1	4	
E-180	62227	9:45	1024	0.0	6.7	04	92 6	4	
E-100	19 Com	1.7.2	10.57	0.0	0.1	0, 7	12.1	-	
							-	-	
223	alast.	4 0		0 0			×0 -		
A-13	5/2022	8:14	D.22	0.0	2.0	18.0	80.0	2	
B-37.5	5 25/27	6:15	0.31		43	104	82.3	2	
C-62	5 25/22	4:18		0.0	4.2	14.3	61.6	3	
D-86.5	472/17	4:71	~0.20 ~0.52	D.D	2.9	16.8	80.3	4	
	120122	8:24	10.18	00	3.5	15.8	80.7	1	
E-111	ninger	0.17	Dily	U.U	2.2	12.0	30.	4	V
	, ,						-		
224	11								
A-13	5/24/20	7:42	-D.33	0.0	0.2	19.5	80.4	2	
B-67.5	6/22hm	7:43	4	0.0	0.1	19.6	80.3	2	
C-122	12215	7,45	0.47	00	21	197	80.1	3	N .
	( 20 22	7:17	0271	100	21	Ab.	7 -		
D-177.5	2000	1.71	13.16	0.11	4.1	11.7	80.1	4	
E-232	71422	1:50	9.74	0.0	11.1	20.0	11.7	4	
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PROBE    Market   Mar									011000	COMMENTS
1975   1974   1975	PROBE	DATE	TIME	PRESSURE	% VOL	% VOL	%	% BAI	PURGE	COMMENTS
A-13	NOMBER			(+/-)	CH4	1	02	DAL		
A-13	225									
B-72		2/15	0.04	- 26	0.0	0.0	18.4	81.5	7	
C-1131   S/ZJ   9:30     9						0.2				
D-190   \$\frac{7}{25}   \frac{9}{1}\frac{9}{7}   \frac{7}{7}\frac{4}{7}      \frac{7}{7}\frac{4}{7}   \qu	B-72	5/0		-1/2		0.3	20.7			
1.244   5/25   9:39  20   0   0   20.5   79.3   4	C-1131		9:30			0.2				
226  8725  8725  8736  874  8757  876  877  877  878  877  878  878	D-190		9:35						4	
A13	E-244	5/25	9:39	20	0.0	0.2	20.5	79.3	4	
A13										
A13	226						<u> </u>			
Belia   S/Z5   7:06   0   0   0   0   0   0   7:1   2		5/75	7.02	06	0.0	08	20.2	79.0	2	
C114								79.1	2	
D164		5/25						<del></del>		
S   S   S   S   S   S   S   S   S   S										
277 A:13	D-164				0.0					
A-13	E-208	2/65	0:19	~11.00	0	0.7	3.5	77.3	4	
A-13								-		
B-487	227									
B-887	A-13	5/25	8:33	- 09	0.0				2	
C844   5/E   5   4/9 - 1/0   0.0   4.7   2.3   93   3     D114   5/E   5   4/5   2.0   0.0   4/1   0.3   95.5   4     E115.7   5/E   5   8.49   - 04   0.0   4/5   0.9   94.6   4     228   A.13   5   2.5   8.58   - 1/5   0.0   2.0   17.5   80.5   2     B63   5   27   9.00   - 33   0.0   5.0   6.9   78.1   2     C113   5   2.5   9.10   - 1/2   0.3   4/1   7.8   7.78   3     D163   5/E   5/10   - 1/2   0.0   1.4   13.9   84.8   4     E213   5   2.5   9.16   0.4   0.0   4/4   1.0   94.6   4     229   A.13   5/E   7.32  49   0.0   1.8   17.4   80.7   2     B48.7   7.47   7.49   0.0   0.1   2.9   79.0   2     C84.4   5/U   7.49   -9.419   0.0   1.0   7.9   80.8   4     E155.7   5/E   5   7.49   -24.19   0.0   1.0   7.4   80.5   4     E155.7   5/E   5   7.49   -24.19   0.0   1.0   7.4   80.5   4     E155.7   5/E   5   7.49   -24.19   0.0   1.0   7.4   80.5   4     E155.7   5/E   5   7.49   -24.19   0.0   1.0   7.4   80.5   4     E155.7   8.38   0.1   1.4   17.8   80.8   4     E155.7   8.38   0.1   1.4   17.8   80.8   4     E155.7   8.39   0.1   1.0   7.4   80.5   4     E155.7   8.30   0.1   0.0   1.0   7.4   80.5   4     E155.7   8.30   0.1   0.0   1.0   7.4   80.5   4     E155.7   8.30   0.0   1.0   7.4   80.5   4     E155.7   8.30   0.0   1.0   7.4   80.5   4     E155.7   8.30   0.0   1.0   7.4   80.5   4     E155.7   8.30   0.0   1.0   7.4   80.5   4     E155.7   8.30   0.0   1.0   7.4   80.5   4     E155.7   8.30   0.0   1.0   7.4   80.5   4     E155.7   8.30   0.0   1.0   7.4   80.5   4     E155.7   8.30   0.0   1.0   7.4   80.5   4     E155.7   8.30   0.0   1.0   7.4   80.5   4     E155.7   8.30   0.0   1.0   7.4   80.5   4     E155.7   8.30   0.0   1.0   7.4   80.5   4     E155.7   8.30   0.0   0.0   0.0   0.0   0.0   0.0   0.0     E150.				07			0.6	93.8	2	
E-115.7							2.3		3	
E-115.7						4.1	0.3			
228 A-13										
A-13	E-115 7	5/65	8.11	09	0.0	7.3	0.9	7 7.0	4	
A-13			-							
B-63	228							m. c		
C-113	A-13				0.0				2	
D-163	B-63	5/25		<b>33</b>		5.0	6.9		2	
D-163   5/25   9:10     2   0.0     1.4   3.9   84.8   4	C-113	5/25	9:05	14	0.3	4.1	l l		3	
E-213			9:10			1.4	13.9	84.8	4	
229 A-13					$\leftarrow$				4	
A-13   \$\int 12 \cdot 7:32  49   0.0   1.8   17.4   80.7   2     B-487   \$\int 72 \cdot 7:37  20   0.0   0.1   20.9   79.0   2     C-84.4   \$\int 12 \cdot 7:40   -4.42   0.0   0.1   20.7   79.2   3     D-114   \$\int 12 \cdot 7:45   75.58   0.1   1.4   17.8   80.8   4     E-155.7   \$\int 12 \cdot 7:49   -24.18   0.0   1.0   78.4   80.5   4     B-33   2   REMOVED DUE TO CONSTRUCTION     C-50   3   REMOVED DUE TO CONSTRUCTION     C-50   3   REMOVED DUE TO CONSTRUCTION     B-26   2   REMOVED DUE TO CONSTRUCTION     B-26   2   REMOVED DUE TO CONSTRUCTION     C-39   3   REMOVED DUE TO CONSTRUCTION     C-39   3   REMOVED DUE TO CONSTRUCTION     C-50   4   REMOVED DUE TO CONSTRUCTION     C-39   7   REMOVED DUE TO CONSTRUCTION     C-50   7   REMOVED DUE TO CONSTRUCTION     C-50   7   REMOVED DUE TO CONSTRUCTION     C-50   7   REMOVED DUE TO CONSTRUCTION     C-50   7   REMOVED DUE TO CONSTRUCTION     C-50   7   REMOVED DUE TO CONSTRUCTION     C-50   7   REMOVED DUE TO CONSTRUCTION     C-50   7   REMOVED DUE TO CONSTRUCTION     C-50   7   REMOVED DUE TO CONSTRUCTION     C-50   7   REMOVED DUE TO CONSTRUCTION     C-50   7   REMOVED DUE TO CONSTRUCTION     C-50   7   REMOVED DUE TO CONSTRUCTION     C-50   7   REMOVED DUE TO CONSTRUCTION     C-50   7   REMOVED DUE TO CONSTRUCTION     C-50   7   REMOVED DUE TO CONSTRUCTION     C-50   7   REMOVED DUE TO CONSTRUCTION     C-50   7   REMOVED DUE TO CONSTRUCTION     C-50   7   REMOVED DUE TO CONSTRUCTION     C-50   REMOVED DUE TO CONSTRUCTION     C-50   REMOVED DUE TO CONSTRUCTION     C-50   REMOVED DUE TO CONSTRUCTION     C-50   REMOVED DUE TO CONSTRUCTION     C-50   REMOVED DUE TO CONSTRUCTION     C-50   REMOVED DUE TO CONSTRUCTION     C-50   REMOVED DUE TO CONSTRUCTION     C-50   REMOVED DUE TO CONSTRUCTION     C-50   REMOVED DUE TO CONSTRUCTION     C-50   REMOVED DUE TO CONSTRUCTION     C-50   REMOVED DUE TO CONSTRUCTION     C-50   REMOVED DUE TO CONSTRUCTION     C-50   REMOVED DUE TO CONSTRUCTION     C-50   REMOVED DUE TO CONSTRUCTION     C-50   REMOVED DUE TO CONSTRU	E-213	770	' ' '	107		<u> </u>		<u> </u>		
A-13   \$\int 12 \cdot 7:32  49   0.0   1.8   17.4   80.7   2     B-487   \$\int 72 \cdot 7:37  20   0.0   0.1   20.9   79.0   2     C-84.4   \$\int 12 \cdot 7:40   -4.42   0.0   0.1   20.7   79.2   3     D-114   \$\int 12 \cdot 7:45   75.58   0.1   1.4   17.8   80.8   4     E-155.7   \$\int 12 \cdot 7:49   -24.18   0.0   1.0   78.4   80.5   4     B-33   2   REMOVED DUE TO CONSTRUCTION     C-50   3   REMOVED DUE TO CONSTRUCTION     C-50   3   REMOVED DUE TO CONSTRUCTION     B-26   2   REMOVED DUE TO CONSTRUCTION     B-26   2   REMOVED DUE TO CONSTRUCTION     C-39   3   REMOVED DUE TO CONSTRUCTION     C-39   3   REMOVED DUE TO CONSTRUCTION     C-50   4   REMOVED DUE TO CONSTRUCTION     C-39   7   REMOVED DUE TO CONSTRUCTION     C-50   7   REMOVED DUE TO CONSTRUCTION     C-50   7   REMOVED DUE TO CONSTRUCTION     C-50   7   REMOVED DUE TO CONSTRUCTION     C-50   7   REMOVED DUE TO CONSTRUCTION     C-50   7   REMOVED DUE TO CONSTRUCTION     C-50   7   REMOVED DUE TO CONSTRUCTION     C-50   7   REMOVED DUE TO CONSTRUCTION     C-50   7   REMOVED DUE TO CONSTRUCTION     C-50   7   REMOVED DUE TO CONSTRUCTION     C-50   7   REMOVED DUE TO CONSTRUCTION     C-50   7   REMOVED DUE TO CONSTRUCTION     C-50   7   REMOVED DUE TO CONSTRUCTION     C-50   7   REMOVED DUE TO CONSTRUCTION     C-50   7   REMOVED DUE TO CONSTRUCTION     C-50   7   REMOVED DUE TO CONSTRUCTION     C-50   7   REMOVED DUE TO CONSTRUCTION     C-50   7   REMOVED DUE TO CONSTRUCTION     C-50   REMOVED DUE TO CONSTRUCTION     C-50   REMOVED DUE TO CONSTRUCTION     C-50   REMOVED DUE TO CONSTRUCTION     C-50   REMOVED DUE TO CONSTRUCTION     C-50   REMOVED DUE TO CONSTRUCTION     C-50   REMOVED DUE TO CONSTRUCTION     C-50   REMOVED DUE TO CONSTRUCTION     C-50   REMOVED DUE TO CONSTRUCTION     C-50   REMOVED DUE TO CONSTRUCTION     C-50   REMOVED DUE TO CONSTRUCTION     C-50   REMOVED DUE TO CONSTRUCTION     C-50   REMOVED DUE TO CONSTRUCTION     C-50   REMOVED DUE TO CONSTRUCTION     C-50   REMOVED DUE TO CONSTRUCTION     C-50   REMOVED DUE TO CONSTRU			-					<del> </del>	<u> </u>	
B-48.7   \$7.37  20   0.0   72.9   74.0   2	229	e in a	-1, 77 2	- (10		10	1-11	0-7		
C-84.4 5/V 7:40 -4.42 0.0 0.1 2-7 79.2 3  D-114 5/V 7:45 75.58 0.1 1.4 17.8 50.8 4  E-155.7 5/ES 7:49 724.78 0.0 1.0 18.4 80.5 4  230  A-16 2 REMOVED DUE TO CONSTRUCTION  B-33 2 2 REMOVED DUE TO CONSTRUCTION  C-50 3 REMOVED DUE TO CONSTRUCTION  231  A-13 2 2 REMOVED DUE TO CONSTRUCTION  B-26 2 REMOVED DUE TO CONSTRUCTION  C-39 3 REMOVED DUE TO CONSTRUCTION  A REMOVED DUE TO CONSTRUCTION  C-39 3 REMOVED DUE TO CONSTRUCTION  A REMOVED DUE TO CONSTRUCTION  A REMOVED DUE TO CONSTRUCTION  A REMOVED DUE TO CONSTRUCTION  A REMOVED DUE TO CONSTRUCTION	A-13				<del></del>					
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E-155.7	C-84.4	5/2	7:40	-4.42	0.0	0.1		19.2	3	
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A-16   2   REMOVED DUE TO CONSTRUCTION	220	1				Î				
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C-50   3   REMOVED DUE TO CONSTRUCTION	A-16	<del> </del>	-			1	+	-		
231	B-33	<del> </del>	-	-		-	-			
2   REMOVED DUE TO CONSTRUCTION	C-50					1	-	-	3	REMOVED DUE TO CONSTRUCTION
2   REMOVED DUE TO CONSTRUCTION						1	ļ		-	
B-26   2   REMOVED DUE TO CONSTRUCTION	231									
B-26   2   REMOVED DUE TO CONSTRUCTION	A-13								2	REMOVED DUE TO CONSTRUCTION
C-39 3 REMOVED DUE TO CONSTRUCTION  D-51 4 REMOVED DUE TO CONSTRUCTION  4 REMOVED DUE TO CONSTRUCTION									2	REMOVED DUE TO CONSTRUCTION
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E-66 4 REMOVED DUE TO CONSTRUCTION				<del> </del>		1	-		_	
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		=12.45	Lancecupe	24.401	0/ )/01	n/	%	PURGE	COMMENTS
PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	BAL	TIME	
NUMBER			(17-)	CITY	COL	02		(MIN)	
-									
241		1330	-1/7	<i>~</i>	1-	249	70 G		
A-13	5.25.12 5.25.12 5.25.12 5.25.10	1320	- 33	© © ©	,2	20.9	78.9	2	
B-28	C-1672	1322	- 81	Ø	·l	209	77.0	2	
C-47	5-25 22	1770	906	_	0	29.9 20.3 20.3	79.1	3	
L-47	3 13.12	320	7.0	m	~	701 9	JC 1		
D-64	5-25-20	1778	59	<u>V</u>	(D)	0 1	30.0	4	
E-85	15.25. 2	1332	-15.2	CD	(P)	20,7	44.7	4	
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	11	SSURE 27		TECHNICIAN: AREMO					
		V4	NIZ :	ONDITIONS	VEATHER C	6	SEM SERIAL #: 65 503926		
COMMENTS	PURGE TIME (MIN)	% BAL	% O2	% CO2	% CH4	PRESSURE (+/-)		DATE	PROBE NUMBER
		1							202
REMOVED DUE TO CONSTRUCTION	1	-			$\rightarrow$				A-10
REMOVED DUE TO CONSTRUCTION	-					<del></del>			8-25
REMOVED DUE TO CONSTRUCTION	7	- 1	-		-				C-38
			4						203
	2	79.5	17.9	2.7	-0-	40-14	10:19	6/23/11	A-10
	2	79.6	17.9 17.4 17.8	2.9	D D	+0.13	10:21	6/23/22	9-25
	3	79.8	17.8	2.5	0	+0.19	/0:24	6/23/20	C-40
		20.0					- 3 - 3		206
	2	79.2	10.8 8.2	10.0	Ø	.37	1312	6/23/22	A-10
		48.5	4.2	13.3	0	30	327	6/23/22	8-25
	3	44.Y	2.3	19.5	8	45	324	6/23/22 6/23/22 6/23/22	C-40
		76.							207
<u> </u>	4	79.6		1.4	0	-1.09	360	6/23/22	A-10
<u></u>	- 3	30.7	21.3		0	-1.10	348	6/23/12	8-25
<u>.                                    </u>	1	79.7	19 6	.5	0	-35	357	6/23/11	C-40
									208
	1	82.5	12.0	5.5	9	10	1121	6/23/22	A-9.1
	1	82.81	11.5	5.6	Ø_	444	123	6/13/22	B-25
	3	82.5 82.1	13.0	22	Ø	- 32	1/25	6/23/22	C-40
		70 =							210
	1		20.4		0		1017	6/23/22	A-10
	. 2	79.C	20.3		<u>φ</u>	-30 31	019	6/23/12	8-25
	3	77.Y	20.1.	<u>-()</u>	<b>Ø</b>	3t	1020	6/23/12 6/23/11	C-39
		1							242
	3		16.7		Ø	-,32	034	6/23/22	C-42
	4	86.8	23	7.3	O O	-1-38	1037	6/23/20	D-60
	4	82.9	13 7	3.4	<u> </u>	52	0.41	6/13/15 6/13/17	€-78
									243
	7	86-6	2.8	9.9	0.8	+0.25	11:12	6/23/22	A-11
	2	83.8		7.0	e-	+0.12	11:15	6/23/22	8-20
	3	84.6	7.2	8.2	0	+0.12	11:18	6/23/11 6/23/11 6/23/11	E-33
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PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% 02	% BAL	PURGE TIME (MIN)	COMMENTS
244	1 73 24	1.00	***				07.14		
A-11 ·	1.23 W	1053	- 59	Φ	11.6		834	3	
8-21	6-13-22	1072	04	0	7.0	11.6	817	3	
C-36	6-23-22	いい。	25	Ø	9.0	11.2	79.1	3	
245	4 Tet 2 -	0.4.	1				6.4 W		
A-11		<u> 941 -</u>	1.63	0	14.1	5.1	50.7	2	
8-20	₹-23.27		4 06	1.	24.5	1.2	-3.5	2	
C-35 /	6-12-22		1.19	P	17.8		76.7		
D-50 -	(-13-11	37.7	4.16	0	13.1	1.4	80.5		
£-64	C3-21	(2)	4.10	B	٠,3	2801	79.1	4	
246									
A-9								4.	REMOVED DUE TO CONSTRUCTION
B-16								1	REMOVED DUE TO CONSTRUCTION
205R									
	6-73.22	(33Y	4.10	Ф Ф	2.2	14.1	80.4	19.1	
B-20	5-73.12		4.49		26.5	2.1	P.JF	2	
C-33	(-23.22	<u> </u>	407		41.9		F. 02	3.	
D-48	(-23.12		t.21	4	211	0	43.2	4	
€-62 .	C-23-LL	1322	f. 22	0	30.0	3	69.4	4	
		Ť		ľ	]				
239									
A-11	15 <del></del> 1 - 1	<u> 144</u>	35	$\varphi$	ll.t	14.9	74.6	2	
8-20	6-23.22	946	- 32	$\mathcal{D}$	.2	20.9	78.3	1	
C-35	(-73-22	949	32	Φ	0	209	29.7	1.	
D-50	(-23-22	152	- 37	0	.2		79.7	_ 4	
	(-23-72	551	29	9	ଜ	20.7		4	
					7	-			i i
240									
A-11	6-13-12	122	26	Φ	3.2	16.8	6.08	1	
8-20	6-13-12 6-13-12	125	32	Ø	.9	20.0	37.1	1	
C-33	- 27-22	373	28	i i		20 8	79.0	1	
0-49	6 B.n	30	- 18	Ø	2	20.9	77.5	4	-
E-61	6-23.22	134	32	1	1	21.0	78.8	4	
	V: 77 -	:- (		•	•		14.0		
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EM SERIAL#	450045	75		WEATHER	COMOITION	is:	א אא א	<del>//</del>	
							7		
PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% CH4	% CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
2028	<u> </u>				1				
A	6/23/21 6/23/22 6/23/22	9:14	+0.14	0-	10.3	0.1	89.6	2	
A B	6/23/22	9:16	-0.60	0	0.5	19.1	80.4	2	
c	6/23/22	9:30	+0.38	Ð	1.7	6.3	92.0	3	
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PROBE	DATE	TIME	PRESSURE	% VOL	% VOL	%	%	PURGE	COMMENTS
NUMBER			(+/-)	CH4	CO2	OZ	BAL	TIME	
_				_				(MIN)	<u> </u>
VADOSE									
ZONE	1								
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	1./22 ba	1007	622	n	Δ.	20 /	3-6 1		<del> </del>
PV203D	423 m	105 X	82	D	A	20.9	79.1		
		,	·				' '		
PV2040	4/23/27	120		2	4	20.2	79.3		<u> </u>
PV2040	4/2/11/		-2.0	70		70.7	77.		
PV211D	4/23/22	1011	4.10	0	A	20.6	79.4		
	1000								
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PROBE UMBER	DATE	TIME	PRESSURE (+/-)	% CH4	% CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
213	_				-			_	<u> </u>
A-13	6-21-11	837	-:48	Ø	1.3	17.5	80.5	2	<u>-</u>
6-29	6-21-12	839	- 19	0	-1	20.3	2.74		<del>-</del>
C-45	L21-4	841.	-3.07	0	1	20.2	49.4	-1	
D-61	6-21-12	844	F 4	$\mathcal{O}$	d	204	78.5	4	
£-77	(2+12	E13.	· 5.74	Ø	-	20.4	79.5	4	
214 A-13	6-21-20	301	39		·) f	16 57	<u> </u>		
B-30		103	13.34	0	3.1		2.65	2	
C-48		105	16.19	$\frac{\omega}{O}$	1.2	705	31.5	2	
		173	10.51 (	V/_	L	11.7	11.5	3	
215					_				
A-13	6-21-22	918	D'1	CP	4.9	1.2	85.7	2	
B-30	621-11	120	03	0	<b>D</b>	29.4	73.6	2	
C-47	6-21-0-	922	- 62	P	0	20.0	नांगी	5	
D-64	6-21-12	125	46	0	- 4	19-9-1	79.7	4	
€-81	<u>5-71-22</u>	12)	14	0	34	130	33-6	4	
216	6-L1-Z2	202	-,-	0)		7	-0.5		
A-14	(-11-17	યુપાન <u> </u> જપદ		0	3		79.3	2	
9-43	5-21-22	121	7.41	0		20.1	36.2	2	
C-62 D-86		354	<del>. ())</del>	0			32.[]	9.1	
-110		-68 T	35	0		21.0	<del>33.3</del>	4	<u> </u>
-110	0 0 0	130	1731	Ψ.	-4-	<u>ا د. نک</u>	16.3	4	
217			+				-		
	4-21-77	07.01	-, YA	2	7 V	16.2	80.08	i	
3-30	-11-22	1031	7~			17.6	79.6	2	
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18R									
·11	4-21-22	013	-15		21.1	1.3	12.61	2	
26.5	(-21-24.	12101	·. 33		3.1	,2	F. 26	2	
-30 .	(-21-22	(D) -	32	0 3	34.2	11.2	4.7	2	
19	6-21-22 1	1756	- 7/	<u></u>		P - 1	M >		
10	-L1-12	000		Ø	1.3	8-7	10.0	2	
115		970	34	Ø	-		9.9	2	
166		104		<del>8</del> 1			817	18	
217	-11.121		-,41				7.8	4	
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NUMBER 		Ying di	PRESSURE (+/-)	OHE	507 507	05	IAI	PURGE TIME DAIN)	COMMENTS
7,50	1.1-1-								
A-14	6/21/22	3:18	0.37	0.0	1.3	183	80.4	2	
3:40	6/2/12	3.19	0.36	0.0	0.1	19.8	80.1	2	
C-87	6/2/122	3:20	70.35	0.0	0.1	20.0	60.0	1	
D-124	6 1/22	327	0.09	0.0	0.0	20.2	77.8	4	
E-158	13/21/22	3:25	0.32	0.0	0.0	20.1	79.8	4	
2208									
A-14	6/21/22	2:53	10.37	0.0	09	18.3	150.8	2 1	
8-38	1/12/127	2:41	10.36	0.0	0.1	198	180.2	7	
061	6/2/127	7:56	0.34	0.0	3.6	13 3	83 /	3	
D-86	1/12/1/2	2:50	0.54	1.0		16.4	80 9	4	
-110	1121/27	301	10.43				808		
771									
1-13	6/2/12	1:56	10.29	n.D	1.0	17.6	8.3	2	
1-56	6/21/17	1:50	10 37	1.1	02	18 3	8/1	1	
- 99	Wziha.	1:00	1020	1.0	0.7	18.4	259	2	
147	ah 1/27	201	044		00	7 ' · · · · · · · · · · · · · · · · · ·	800	1	
185	6/2//27	Zinil	-07	00		194 18.8	000	4	
14.7	Palled	ary.	0.247		//	(0.1)	00.		
222	Links	2:27	سرد ھ	22	<u>م</u> ر ا	19 3	en l		
-43	Illallan	2:10	2.25	20	0.0		80.1	2	
54.5	1/2/122	550	0.38	0.0	47	400	503	2	
965	99112	222	0.61	0.0	0.4	47.5	80./	3	
236.7	11992	221	050	0.0	3./	15.7	809	6	
150	gape	636	2.46	0.0	1,7	17.3	8/.0	±	
(1)	dain	4.40	امما			,,,,	-10		
433	4419	1:297	0.07		6.8	10.3	82.8	2	
57.5	0/2/127	30		0.11	5./	12.2	82.6	2	
6.1	0/2/1/27	:32	12:12	01	<u>3.3</u>	14.10	52.1	9-	
66.5	6/24/27	1:34	W 29	0.0	2.7)	15.81	8/4	Α.	-
III	6/1/1/2 6/14/1/2 6/14/14	1 37	0.44	2.0	2.8	15.2	81.9		
20		5.54			Į				
11	6/21/22/	114	0.41	0.17	0.7	20.9	78.4	2	
175	6/21/22 V	11:16	0.74	0.01	0.4	20.7	18.7	1	
122	121/22/	1:19	0.41	0.0	0.0	20.9	79.1	3	
JV.5	42122	11:22	14.74	0.01	0.0	20.9	79.1	4	
232	62122	11:27	10.81	0.0	0.0	209	79:1	4	
	1	1	-			-	1		
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NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
225	1/2/127	10:47	033	0.0	0.8	209	78.2		
A-13	2/21/27	10.49	441	D.D	0.4	20.9	587	2	
8-72	1/2/127	10:47	-708	DD	04	700	76.5	2	
C-1131	1/20/20	10:50	1013	00	0.7	200	791	3	
D-190	1/2/1/2	10.54	10 17	0.0	DD	207	297	4	
E-244	Harmon	19.71	10.11	2.0	0.0	-	1-1-6	4	
F-24-	1 1		-						· · ·
226									
A-13	5/22/21	7:16	-1775	21	12.12	19.6	80 2		·
8-64	1:127/22	2:11	1011	2/	00	108	Zn 1	-	-
C-114	1 19 119	2:13	-11.01	0.1	$D \wedge$	20 1	79 5		
	1473171	2110	11110	0/	0.0	20 2	54 7	3	· <del></del>
D-164	1/2.122	2:22	11 00	500	0.0	2/2	79 3	4	
E-208	EIVEN	v.u.	r//·//	D	11.7	20.1	<del>//:-&gt;</del>	4	·
					_		+	 	
227	1/20/22	1.7:	10.21	0 11	<b>Δ</b> /	20 0	70:1		
	6/2/22	2.31	1029	00	0.1	20.8	27.1	_1	
8-48.7	ann	2.56	0.86	0.0	0.0	20.8	17./	1	_
C-84.4	12212	U33	DLI	0.0	0.1	209	19.0	) 3	
D-114	12012	2.35	71:01	0.0	0.4	20.	28.9	4	
E-115.7	67422	2.39	0.05	0.0	0.5	20.2	17.3	4	
	1 '								
228	1 1			- 1			V2		
A-13	1/2/22	2:49	0.24	0.0	1.8	17.0	19.2	Z	
B-63	4/21/22	10:14	7.00	0.0	1.1	20.4	<u> 78.6</u>	2	<u> </u>
C-113	6/21/22	2:51	TO.11	0.0	0.2	20.9	78.9	3.	
D-163	6.77 22	24	0.46	0.0	0.1	20.9	78.9	4	
E-213	6/21/22	10,22	0.9	0.0	1.6	196	78.6	4	
	///								· · · · · · · · · · · · · · · · · · ·
229		,							
A-13	6/21/22	8:00	0.20	0.0	2.2	16.2	81.5	1	
9457	6/21/27	8:01	70.71	0.0	D. /	204	775		
1.844	1/1/1/2	8:02	4.85	00	0.1	205	79~	3	
D-114	1/3/15	8 IDC	11 112	00	11.	17 3	8/2	4	
E-18E7	27/155	K. 199	96461	0.0	14	209	77	4	
F-2-1	9412	W. W. I	2.7	- 10	1.1	-V. 1	1		
230									-
								. 1	REMOVED DUE TO CONSTRUCTION
A-16								1	REMOVED DUE TO CONSTRUCTION
B-33			<del></del>						
C-50								1	REMOVED DUE TO CONSTRUCTION
231									· · · · · · · · · · · · · · · · · · ·
A-13								1	REMOVED DUE TO CONSTRUCTION
B-26								1	REMOVED DUE TO CONSTRUCTION
C-39								1	REMOVED DUE TO CONSTRUCTION
D-51								4	REMOVED DUE TO CONSTRUCTION
E-66								4	REMOVED DUE TO CONSTRUCTION

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PROBE NUMBER	OATE	TIME	PRESSURE (•/-)	% VOL CH4	% VOL CO2	% 02	BA	PURGE TIME _(MIN)	COMMENTS
241									
A-13	1 U N 6- U·U	1316	1.48	<u>(b</u>	Φ Φ	20.0	30.0	2	
B-28	6-11-12	1319	-9.58	Ø	<b>O</b>	20.1	799	2.	
C-47	K-21.21	177 1	-42	9	Ø	26.1	75 9	0.1	
0-64	6-4-U 6-21-U	1314	13	0		20-1	79. Y	4	
€-85	6-21-11	328	6.15	0	Ø	20.4	すかく	4	<u> </u>
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TECHNICIAN: MINCOS M.		TEMPERATURE: 75°			BARO. PRI	SSURE: 28	7 05		
EM SERIAL#:	50608	")	i		CONDITION		VNY		
PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% CH4	% CO2	% 02	% BAL	PURGE TIME (MIN)	COMMENTS
202									
A-10								2	REMOVED DUE TO CONSTRUCTION
B-25				_				2	REMOVED DUE TO CONSTRUCTION
C-38		_						3	REMOVED DUE TO CONSTRUCTION
203									
A-10	7/21	1:36	09	Ø.0	0.0	17.2	82.7	2	
B-25	7/21	1:38	05		02	18.9	808	2	
C-40	7/21	1:41	-,12	00	0.2	18.9	80.9	3	
206									
A-10	7/2,	10:06	-,40	0	10.9	9.9	79.2	2	
B-25	7/21	10:08	34	0	13:1	7.9	79.0	2	
C-40	7/4	10:08	10	0	11.7	7.9 8.1	79.0 76.2	3	
207	7 61	10:32	85	0	.9	189	80.2	2	
A-10	7/21	10:34	03	0	3.4	16.4	80.2	2	
B-25 C-40	1/21	10:37	33	0	.3	19.6	80.1	3	
208	- /41	a 1	+ 11	6	24	170	201		
A-9.1	7/21	942	+.26 37	0	3.4	17.0	79.1	2	
B-25 C-40	1/21	9:11	16	0	3.6		31.6	3	
Ç-40	17 0.		70						
210	<u> </u>		211						
A-10	7/21	8:33	-,41	0		20.7		2	
8-25	7/21	8:35	27	0	<del></del>	20.7		2	
C-39	1/4	8:37	~. 13	0	•1	20.8	7-7.1	3	
242									111
C-42	761	8:3	44	0	27		80.8	3	
D-60	7/21	8:35	34	0	8.4	6,0	82.6	4	
E-78	1/2	8:37	6	0	4.7	/z.4	829	4	
243									
A-11	7/21	8:38	.02	0.1	4.3	13.3	82.2	2	
B-20	7/21	8:40	-01	0.1	5.9		83-7	2	
C-33	7/21	8:44	.05		6.2	10.2	83.5	3	

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	T				24.1101	-04	%	PURGE	COMMENTS
PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	BAL	TIME	COMMENTS
NOWIDER			(+/-)	CH	(02	02	07.12	(MIN)	
244									
	5/21	9:16	23	0	17.4	01	825	2	
A-11	7/21	9.10			9.7				
B-21	7/21	9:18	47	0		-	803	2	
C-36	7/21	9:20	44	0_	9,3	12.0	75.7	3	
245									
	7/21	9:10	001	0.0	60	162	77.7	,	
A-11	1							2	
B-20	7/21	9:12	0.01	1.3	25.5	0.6	72.7	2	
C-35	7/21	9:16	-0.01	0.2	23.0	0.6	763	3	
D-50	7/21	9:20	-006	02	18.4	0.8	80.6	4	
E-64	7/21	9:25	- 07	0.0	7.4	10.9	81.7	4	
246					-		-		
A-9								2	REMOVED DUE TO CONSTRUCTION
B-16								2	REMOVED DUE TO CONSTRUCTION
3055									
205R	- 10	7:33	.06	0.1	6.0	14.7	79.2		
A-11	7/21	7.25			24.3			2	
B-20	7/21	7:35	.13	0.1	1	2.9	72.7	2	
C-33	7/4	7:39	09	1.4	44.0	0.4	54.2	3	
D-48	7/2/	7:43	20	2.1	47,7	0.0	50.2	4	
E-62	7/21	7:49	55	0.1	27.3	1.3	71.2	4	
L-02	721	1							
	<u> </u>	<del> </del>				-			
239		ļ				<del>                                     </del>		-	
A-11	7/22	801	57	0	6.7	15.2	78.1	2	
B-20	7/21	803	28	0	-/	20.9	79,0	2	
C-35	7/21	805	50	6	.1	21.0	78.0	3	
	7/21	805	- 35	0	.2	20.7	79.1	4	
D-50	510.			6		209			
E-64	7/21	80.8	-30		-1	20.0	79.0	4 _	
240									
A-11	7/27	733	32	0	80	12.0	80.0	2	
B-20	7/21	735	31	0		19.9		2	
		737	T	-1	<del>+</del>	20.6			
C-33	7/21		19					3	
D-49	7/21	740	36	1		20.7		4	
E-61	7/21	744	36		,2	20.6	79.1	4	
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ECHNICIAN:	MANCOS	M	TEMPERA	TURE: 9	o'	BARO. PR	ESSURE: 28	01	
EM SERIAL #	50608	71			CONDITION		NNY		
PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% CH4	% CO2	96 02	% BAL	PURGE TIME (MIN)	COMMENTS
202R	7/1	1:44	03	0.0	20	11.5	88.4	2	
A. B	7/21	1:46	03  09  1	0.0	0.2	17.4	824	2	
c	7/21	1:50	11	0.0	0.2	208	78.9	3	
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PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
VADOSE ZONE									
PV203D	7/21	1:02	-,54	0.0	1.0	20.7	78.8		
PV204D	7/21	10:38	- 530	Ø	-6	19.3	801	-	
PV211D	7/21	1:16	- 201	0.0	02	209	78.9		
		1							

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	AROMO			7.42	4.65				
GEM SERIAL	#G50392	6		WEATHER	CONDITION	NS: SUA	s: SUNWY		
PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% CH4	% CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
213 A-13 B-29 C-45 D-61	7-19-12 7-19-12 7-19-12 7-19-12	756 758 801	32 31 3.87 -4.43	Ø Ø Ø	2.2	20.7 20.1 20.1 20.1	77. 1 79. 1 79. 1 79. 1	2 2 3 4	÷.
E-77 214 A-13	7-19-22	rox	-7.51 48	0	3.0	W.3	19.7	2	
B-30 C-48	7-19.22	n; 823.	11.70 -13.90	Ø	1.4	16.8	71.9 79.8	3	
215 A-13 B-30 C-47 D-64 E-81	719.22	950 957 954 901	- 41 - 24 - 35 - 34 - 32	8000	6.0 Ø	7.7 20.0 20.2 19.6 15.7	80.0 79.4 80.0 80.0	2 2 3 4 4 4	
216 A-14 B-43 C-62 D-86 E-110	7.19.22 7.19.22 7.19.22 7.19.22 7.19.22	921	41 47 36 34	000000	0 0 0 0 2	20.4 20.5 20.5 20.5 20.3	4.6 4.7 4.5 4.5 4.5 4.5	2 2 3 4	
217 A-13 B-30	7-19-12	1000	- 09 -/35	Q Ø			80-3 79-7	2 2	
218R A-11 B-26.5 B-30	7-19-22	1020	31 35 33	Φ Φ <i>Φ</i>	2-3	14.8	71.9 80.0	2 2 2	
219 A-13 B-64 C-115 D-166	1-19-72 2-19-72 2-19-72 2-19-72 1-19-73	107A	40 34 31	88888	100	18.6 19.6 14.9 18.7 18.7	\$2.5 \$0.5 \$0.5 \$0.5	2 2 3 4	

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	2.75	TIME	PDECCURE	% VOL	% VOL	%	%	PURGE	COMMENTS
PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	CH4	CO2	02	BAL	TIME	
NONBER								(MIN)	
225									
A-13	7/19	9:44	3,09	0.0	0.0	20.2	79.7	2	
	7/19	9:46		0.0	0.1		79.5	2	
B-72					0.0	20.7	79.3		
C-1131	7/19		-5.06	0.0		120		3	
D-190	7/19		-16.21	0.0		17.8	81.0	4	
E-244	7/19	7157	.02	00	1.2	181	€5.7	4	
226									
	7/19	8133	.01	0.0	0.0	20.9	79.1	2	
A-13	7/19	8:37	~ 0	0.0		209	79.1	2	
B-64	1		-			21.0	79.0		
C-114	7/19	8:41	-11.60	00	0.0	<del></del>		3	
D-164	7/19	8:45	-11.58	0,0	0.0	21.0	79.0	4	
E-208	7/19	8:49	-12.30	0.0	0.3	20.4	79.3	4	
227									
227	7/19	9:00	- 07	0.0	0.3	207	79.0	2	
A-13	-/				0.0	20.9	79.1		
B-48 7	7/19	9:03	- 01	0.0				2	
C-84 4	7/17	9:07	65	00	0.7	26.1	79.2	3	
D-114	7/19	9:13	-1.13	0.0	0.7	19.8	79.5	4	
E-115.7	7/19	9:20	7517	0.0	0.7	19.9	79.3	4	
	1/								
228	5/10	9:23	- 02			220	520	2	
A-13	7/19		- 03	0.0	01		80.0		
B-63	7/19	9:25	96	00	0.7	17.9		2	
C-113	7/9	7:29	63	0.0	01	20.2	79.7	3	
D-163	7/19	9:33	32	0.0	01	202	79.7	4	
E-213	7/19	9:37	15	0.0	0.1	202	79.7	4	
229	7/10				2.0	101	79.9		
A-13	7/19	8:07	09			18.1		2	
B-48 7	7/19	8:09	•35	0.1	17		81.9	2	
C-84 4	7/19	8:14		0.0		20.9		3	
D-114	7/19	8:18	-16.22	0.0	1.3	19.1	79.5	4	
E-155 7	7/19	8:22	1	0.0	12	19.4	79.5	4	
_ 1331/	10				1	1			
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230	1			-	t -	+	-	1	REMOVED DUE TO CONSTRUCTION
A-16	1				<del></del>		-	2	
B-33	ļ				1			2	REMOVED DUE TO CONSTRUCTION
C-50					1			3	REMOVED DUE TO CONSTRUCTION
231									
	1				1			2	REMOVED DUE TO CONSTRUCTION
A-13	+	-			1				REMOVED DUE TO CONSTRUCTION
B-26	1	_		-	1		+	2	
C-39		-			1		-	3_	REMOVED DUE TO CONSTRUCTION
D-51								4	REMOVED DUE TO CONSTRUCTION
E-66	T				1			4	REMOVED DUE TO CONSTRUCTION
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PROBE	DATE	TIME	PRESSURE	% VOL	% VOL	%	%	PURGE	COMMENTS
NUMBER			(+/-)	CH4	CO2	02	BAL	TIME (MIN)	
220	,								
A-14	7/20/22	11:13	0.04	0.0	10.0	20.7	79.7	2	1
B-40	7/20/27	11:14	0.10	0.1)	0.0	20.7	79.7	2	
C-87	77177	11:15	0.32	0.0	1.12	203	79.10	3	
D-124	17027	11:17	10.19	0.0	0.0	204	79.10	4	
E-158	1/2/12	11:21	D. DU	0.0	20	203	79.	4	
	1127	1 20	1	0.25			/	_	
220B									
A-14	1/20/20	10.49	0.05	D.D	1.2	20.7	79.6	2	
B-38	7/20/20	D: 50	D.ZH	12.12	0.0	20.3	79.6	2_	
C-62	1/20/2	10.51	10 74	0.0	21	155	81 4	3	
D-86	7/20/2	10:51	1072	12.12	2.7	17 3	20.17	4	
E-110	7/20/20	10:68	Dill	D.D	2.0	18 1	800	4	
L-110	1000	V. 7V	-1-1	<i>y</i> . <i>y</i>	-, -		W. ( )	т	
221					_				
A-13	7/20/2	4.20	1201	D.D	198	200	78/3	2	
B-56	7/22/20	2011	10 70	nn	57	205	79 1	2	
C-99	-ladha	2:111	D EN	0.0	05	205	70	3	
	12/12	0.99	021	00	00	200	79 1	4	
D-142	Wa Han	8:50	0.18	11 11	0.0	101	76 5		
E-185	1440	p. 90	0110	0.0	0.6	PUIL	11.2	4	
222	7/20127	1.0-11	1012	0.3	10	100	707	_	
A-13	7/20/22	10.19	0.01	07	01	10 6	79.	2	
B-54.8	2016	10 20	100	0.0	0.1	20 4	10.2	2	
C-96.5	3666	10:20	0.01	0.0	2,2	16.7	70, 2	3	
D-138.3	July	10:00	10.12	0,0	K.V	10.	70.0	4	
E-180	Ilmin	10.11	1,66	0.0	/ / /	MIL	[-11	4	
		_							
223	معلد مام	0.40	-0 02	OD	,	167	100		
A-13	runce	0.09	0.00	-0.0	113	11.1	17.0	2	
B-37.5		8: D	9.10	0.0	3.3	16.	80.V	2	
C-62	7/20/22	& Ola	0.11	0,0	2.1	16 Z	Sy. I	3	
D-86.5	12022	6.00	0.09	0.0	28	11.0	DV.L	4	
E-111	7/2022	8: 12	0.61	0.0	3.1	16.5	80.7	4	
	11								T .
224	1					1	707 -		
A-13	72022	1:30	0.15	0.0	O.B	20.7	78.3	2	
B-67.5	HZU122	7:33	0.75	0:0	0.6	20.9	78.5	2	
C-122	7/2012	7:35	0.27	0.0	0.1	20.9	71.0	3	
D-177.5	7/2012	7:40	15.24	0.0	0.1	20.9	79.0	4	
E-232	7/26/2	7 44	11.39	0.0	0.1	20.9	71.1)	4	
	71								
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PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	% BAL	PURGE TIME	COMMENTS
					-			(MIN)	
241 A-13	7-19-12	1316	2.24	0	Ø	20.3	79.7	2	
B-28	7-19-22	1318	186	6		20.2	79.8	2	
C <u>-47</u>	719-71	1320	34	8 8 8 B	Ŏ.	202	79.9 79.9 79.4	3	
D-64_	4-14-71	13/3	1200	_Ø	7	20 O WV	19.7	4	
E-85	7-17-12	1501	-13.01	V)	0	N.V	7 [ . ]	4	
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		-06_	temperature: 83 BARO, PRESSURE 28:06			ECHNICIAN:				
		s: SUNNY			CONDITION	WEATHER		GSOY543		M SERIAL#
COMMENTS	(4)	PURGE TIME (MIN)	% BAL	% O2	% CO2	% CH4	PRESSURE (+/-)	TIME	DATE	PROBE NUMBER
REMOVED DUE TO CONSTRUCTION		2								202 A-10
REMOVED DUE TO CONSTRUCTION REMOVED DUE TO CONSTRUCTION		3								B-25 C-38
										203
		2	78.9 79.0	16.3	4.8	2	-0.06		8/25/22	A-10
		3	79.5	17.9	2.8	0	-0.02	9:14		B-25 C-40
										206
		2 2	78.0	よう	14.3	0	10	959.		A-10 B-25
		3	8.26	5-4	18 8	0	17	003	8-75.22	C-40
			80-0	19-2	.8	Ø	85	/071	8-43.U	207
		2	80.0	17.0	3-0	80	08	024.	8-25.22	A-10 B-25
		3	79.6	[אַרַ	2.1	$\omega$	t-15	027	9-5-21	C-40
		2	80-4	19.3	13	0	06	143	P-25.22 C	208_ A-9.1_
		3	79.7	15.5	4.8	0	18	941	8-25.22	B-25 C-40
										210
		1	79.2	20.7		Ø Ø	0	831	8-25.72	A-10
		3		20.8		Ø	10	36	8-25-U	B-25 C-39
-0-				1/	- 0	2		216	0 05 72	242
		3 4	1 - D		7.9	0	10	848	8-25.22	C-42 D-60
		4	81.7	12.7	8.6	0	- 06	150	7-25.22	E-78
	_	2	86.	0.5	12.0	0.8	-0.15	8:42	8/25/22	243 A-11
		2	83.5	9.2	7.2	0	-0.09	8:46	8/25/22	B-20
		3	81.7	12.8	3,3	B	-0.06	8:49	8/25/22	C-33

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PROBE	DATE	TIME	PRESSURE	% VOL	% VOL	%	%	PURGE	COMMENTS
NUMBER			(+/-)	CH4	CO2	02	BAL	TIME (MIN)	
244									
A-11	8-25.72	91-6	ا، ال	<u> </u>	14.6	4.5	80.9	2	
B-21		919	23	0	9.2	10.6	80.2	2	
C-36	8-18-11	121.	-12		11-2	105	j8.2	3	
245	-1/-	0.55	1 - 4		1	1	7 % /		
A-11	8/25/22			0	13.2	606	30.1	2	
B-20	8/25/22	9:58	00	14	23.5	1.7	1/	2	
C-35	7/25/12	10:00	+0.4	0.1	18.3	4.6	77.0	3	
D-50	8/25/27		40.2	0.1	16.6	2-5	79.3		
E-64	8/25/12	10:09	16,4	8	0.1	2016	14.7	4	
246									REMOVED DUE TO CONSTRUCTION
A-9								2	REMOVED DUE TO CONSTRUCTION
B-16									NEWIOVED BOE TO CONSTRUCTION
205R		_							
A-11	8/15/26	7:44	-0.08	8	5.9	13.9	80.2	2	
B-20	\$115/22	7:47	,	0	23.5	3.9	72.6		
C-33	8/25/22	7:52	-0.48		40.9		57.0	3	
D-48	8/25/22	7.57	-0.15	9.1	46.4	0,0	51.4	4	
E-62	X/25/12	2 02	-0,03	2	26.2		72.1	4	
	1 1								
239									
A-11	8-25-22	757	4.17	0	13-4	14.0	72.7	2	
B-20	8-25-2	759	1.67	0	d	20.9	79.0	2	
C-35	8-15-12	861,	4.10	Ø	0	21.0	79.D	3	
D-50	8-25.12	KOA	4.13	0	.2	20-6	79.2	4	
E-64	8.25-22	808	+.15	0_	Ø	20.9	19.1	4	
240	- 01	40 CV	1 18-4	_		1. 11	7 C. C.		
A-11	7-15-22	1178	+.15	$\varphi$	10.8	10.4	78.8	2	
B-20		700	1.13	$\varphi$	9		77.1		
C-33	8.25-12	#3 <u>F</u>	t-15	P	1	20.7	71. L	3	
D-49	8-28-12	738	7-18	Ø	-2	20.7	39.7	4	
E-61	8-28.22	734	tell	<u>v</u>	. 1	20.7	71.	4	
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TECHNICIAN:	50 334 6	7/N Z	TEMPERA	TURE:	83	BARO, PRI	SSURE 2	8.06"		
SEM SERIAL	503346	<u></u>		WEATHER	CONDITION	15:	SUNI	vy		
PROBE NUMBER	DATE		PRESSURE (+/-)		% CO2	% 02	% BAL	PURGE TIME (MIN)		COMMENTS
202R										
Α	8/25/2	9:36	-0.05	0	163	198	79.9	2		
С	8/25/2 8/25/2 8/25/2	9:42	-0-42	8	2.2	0-3	97.5	3		
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PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
VADOSE									
ZONE									
PV203D						T I			
. 1	8/25/22 8/25/22	10:35	-0.52		1.0	19.9	79.1		
PV204D		1 - 00				1/-1	1. [.]		
1120.0	2/25/29	10:19	-516	0	0,5	10.9	70/		
PV211D	8/25/11	11/0	100 DT	0-	01.3	187	79.4		
FVZIID	1 /	10.17	70.07	To and the second	01	2011	11.7		
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	- 46	PRESSURE: 18 - 26				TEMPERA		ARON	ECHNICIAN:
		M	15: 51/N	CONDITION	WEATHER (		43	: G5045	M SERIAL #
COMMENTS	PURGE TIME (MIN)	% BAL	% O2	% CO2	% CH4	PRESSURE (+/-)	TIME	DATE	PROBE NUMBER
s,	2	79.9	19.1	[.0	Ø	06	731	8-23-22	213 A-13
	3	79.2	20.8	<u> </u>	0	+.14 -1.81	733	F-23-22	B-29 C-45
	4	79.7 79.4	20.5	. (	0	2.29	738- 742-	8-23-22	D-61 E-77
	2	79.3 79.4	13-1	7.6 Ø	-	- 15	801 803 -	8-23-22	214 A-13 B-30
	3	805		-3	0_	13.15	805 -		C-48
	2	9.3	4.4 20.5	7.8	0	03 +.01	231 833	8-23-22	215 A-13 B-30
	3 4	79.C' 18.S	20.4	5.8	D.	D + 63	75	F-23.12 F-23.21 F-23.21	C-47 D-64
	4	85.0	7-6	7.8	V	+12	140	1 6 4	E-81 216
	2	1.0	17.2	1.9	Ø Ø Ø	4.13	100	6-23-22 8-23-22 8-23-22	A-14 B-43
j	4	3.4	14.0	2.6		7.03 +.09	40-}. 1Li	8-23.22	C-62 D-86 E-110
	2	79.2	16-7	4.1	P	t-04	133	8-73.22	217 A-13
	2	79.2	17-4	3.4		4-01	135	P. B. 22	B-30
	2 2 2	73.i 80.6	19.2		Ø	0 t.02 03	isy	7-23-22 8-13-22 6-23-72	218R A-11 3-26.5 B-30
	-								219
	2	79.9 19.9 10.3	19.2	.9 .3 (.4	Ø	06	018	8-23-12/2-23-12/	A-13 B-64 C-115
	4	80.3	18.8	3.7	0	[[	1023	8-13-12	C-115 D-166 E-217

SCS SIGNATURE

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL	% O2	% BAL	PURGE TIME	COMMENTS
HOMBER			(17)			"	5.1.2	(MIN)	
220	deals			0.0	1 3 4	10 5	70 /		
A-14	423/22	10:12	-018	0.0	1.0	17.7	17.1	2	1
B-40	8 23 22	10:14	0.04	0.0	0.0	20.7	77.1	2	
C-87	3123122	10 16	0.21	0.0	0.1	20.9	79.1	3	
D-124	8123122	10:18	-0.07	0.0	0.0	20.9	79.1	4	
E-158	6/23/22	1021	0.12	0.0	0.0	20.9	79./	4	
220B									
A-14	8/23/22	9:34	0.01	0.0	0.7	19.5	79.8	2	
B-38	4 23 22	7:35	-0.10	0.0	8.4	2.0	89.7	2	
C-62	8/23/22	7:37	0.04	0.0	3.7	13.9	82.5	3	
D-86	8/23/22	7:40	-0.19	0.0	8.2	2.6	89.2	4	
E-110	8 23 22	7:43	0.04	0.0	6.7	7./	86.2	4	
	, ,						-		
221	8/23/12	1.20	(D.D.	DA	2.9	ad	87.3		
A-13	1/2/19/19	8:32	-0.00	20	3.8	9.8		-	_
8-56	412117	70:34	0.13	0.0		10.1	86.1	2	
C-99	4 12 152	1.20	50.01	0.0	10.5	0.0		3_	
D-142	SIMPLE	4:38	0.01	0.0	3.3	9.9	86.8	4	
E-185	Sirvier	5 42	0.05	0.0	4.6	8.0	87.4	4	
222									
A-13	6/13/12	8'59	-0.18	0.0	1.1		80.1	2	
B-54.8	6/13/12	9:01	-0.10	0.0	7.1	7.2	85.7	2	
C-96.5	8 29 22	9:03	0.24	0.0	0.4	20.0	79.5	3	
D-138.3	8 23 m	9:05	0.05	0.0	8.0	15.1	60.9	4	
E-180	4/23/22	2.08	0.92	0.0	5.8		90.0	4	
223									
A-13	823/22	7:50	-0.04		7.1	10.1	82.8	2	
B-37.5	8/23/22	7:51	0.02	0.0	6.3	11.3	82.4	2	
C-62	8232	7:53	-0.12	0.0	6.7	10.1	83.2	3	
D-86.5	823m	7:55	-0.06	0.0	3.0	16.4	80.6	4	
E-111	42322	7:59	-0.06	8.0	3.8	15.0	81.2	4	
_	71								
224	, ,								
A-13	2/13/2	7:12	10.02	0.0	0.6	18.6	80.8	2	
B-67.5	8/23/22	7:14	0.11			12.7	85.0	2	
C-122	8/12/22	712	-0.09	2.2	3.2	10.3	86.3	3	
D-177.5	8/13/12	7:14	72.0	0.0	12.2	20. i	79.1	4	
E-232	8/13/11	7:22	-862	D.D	0.2	20.2	79.6		
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	I DATE	TIME	DDECCUDE !	% VOL	% VOL	%	%	PURGE	COMMENTS
PROBE NUMBER	DATE	TIME	PRESSURE ( +/-)	CH4	CO2	02	BAL	TIME	
								(MIN)	
225									
A-13	8/23	10:09	15	0.0	3.5	6.9	90:1	2	
B-72	8/23	10:06	16	0.0	0.1	20.2	79.7	2	
C-1131	8/23		5	0.0	02	20.9	79.3	3	
D-190	8/23	10:19	-,12	0.0		20.6	79.2	4	
	7/23	10:18	-,12	0.0		20.7	79.0	4	
E-244	1700	10,10	7.1				7 7		
226_	# 112	6.11	14	0.0	1.2	17.7	81.1		
A-13	1/23	8156	•64		0.1			2	
B-64	8/23	8:59				20.6		2	
C-114	8/23	9:02				207	79.5	3	
D-164	8/23	9:07		0.0	0.0	20.7	79.3	4	
E-208	8/23	9:11	10 25	00	0.9	20.2	79.4	4	
227									
A-13	8/23	9:14	09	00	04	20.2	79.4	2	
B-48 7	8/23	9:17	574	0.0	4.5	60	89.4	2	
C-84.4	8/13	9:20	-32	0.0	3.2	10.2	86.6	3	
D-114	8/23	9:29	.59		3.2	4.5	92.3	4	
	8/23	9:29	-34	0.0	2.6	4.0	93.4	4	
E-115 7	0/-	1.61	-5-1	0,0		-/·	13.1	1	
		<u> </u>	_		-	<del>                                     </del>			
228	- 10 -	(2.4)	- 20			0.1	a. n		
A-13	8/23	9:41	06		0.2	9.1	90.7	2	
8-63	1/23	9:43		0.0	2.3	14.0	83.6	2	
C-113	8/73	9:47	-42	0.0	3.9	4.1	92,0	3	
D-163	8/23	9:52	-13	0.0	0.9	16.9	82.4	4	
E-213	8/23	9:56	.65	0.0	3.8	3.4	929	4	
229									
A-13	8/23	8:31	45	0.0	2.5	15.3	82.2	2	
B-48.7	3/23	8:33	.29		0.1	19.8	80.1	2	
	3/23	837	-3.05	00	0.1	20.1	79.8		
C-84 4	8/23	8:42	-14.74			16.8	81.5	4	
D-114	8/23	8: 76	-7250	0.0	1.4	17.4	81.3	4	
E-155.7	0/ 0	0-16	25.00	1	1 . /	1 1	01.5	<del>-</del>	
		+		-	<del>                                     </del>	-			
230		ļ		-	+		-	-	REMOVED DUE TO CONSTRUCTION
A-16	-	1			-			2	
B-33		1	-		-	-	-	2	REMOVED DUE TO CONSTRUCTION
C-50		1					-	3	REMOVED DUE TO CONSTRUCTION
				ļ		-		-	
231									
A-13								2	REMOVED DUE TO CONSTRUCTION
B-26								2_	REMOVED DUE TO CONSTRUCTION
C-39		1						3	REMOVED DUE TO CONSTRUCTION
D-51		Ì						4	REMOVED DUE TO CONSTRUCTION
		Î						4	REMOVED DUE TO CONSTRUCTION
E-66		1	1 = 1						
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	DATE	710.45	PRESCURE	% VOL	1 0/ VOI	0/	%	PURGE	COMMENTS
PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL	% VOL CO2	% O2	BAL	TIME	COMMENTS
NUMBER			(+/-)	CH4	CO2	02	DAL	(MIN)	
	-							1,11,11,1	
241	-		- 00			2 0	200	_	
A-13	8-13-12-8-13-12	1050-	-2.55	0000	80 R 7 B	20.7	79.7	2	
B-28	8-23-22	1007	1.27	<i>(1)</i>	0	2a.4	7.76	2	
D-20	C 22-77-	100	11	~	0	20 1	70 U		
C-47	8-05-0	1077	_ط]٠	9	70	20.6	79.4	3	
D-64	8-12-11	P701	71.7	$\Omega$	12	10.7	79.1	4	
E-85	8-13-ZL	1111	17 74	0	R	210	79.0	4	
E-03	0	WUI -	10.01			2(10	CLV		
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PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% 02	% BAL	PURGE TIME (MIN)	COMMENTS
244	2 2 2 2 2	A A P 4							
A-11	9.12.20	JON -	04	0	15.0	3.7	81.1	2	
B-21	1-12-22	410	- 06	Φ	11.8	8.4	79.8	2	
C-36	9-22:12	912	10.	0	10.1	11.9	27.9	3	
245		710	10		1	0.0			
A-11	4/22	8:20	019	0.0	14.4	6.6	79.1	2	
B-20	9/22	8:28	.22	1.4	25.6	0.4	72.5	2	
C-35	9/12	8:32	-21	0.2				3	-
D-50	9/22	8:36	.18	0.1	18.4		86.K	4	
E-64	11.00	6 193	210	0.0	0.1	20,9	79.0	4	
246									
A-9								2	REMOVED DUE TO CONSTRUCTION
B-16								2	REMOVED DUE TO CONSTRUCTION
-510								-	MEMORES SEE TO CONSTRUCTION
205R									
A-11	9/12	7:19	.03	<b>a</b> .o	5.9	/4.3	79.5	2	
B-20	9/22	7.22	05	Ø,0	24.3	3.4	723	2	
C-33	9/22	7:25	~. 31	1.2	407	1.5	56.6	3	
D-48	9/22	7:29	31	2.1	45.8	0.0	57.0	4	
E-62	9/22	7:34	70	0.7	27.3	2.2	70.4	4	
239	2 - 4 - 22					11/0	20.1	_	
A-11	9-22-22		4.02	0	14.4	14.2	71.4	2	
B-20	91222		1.01	0	1	21.1	71.8	_ 2	
C-35	1-12-12	10 F -	01	Ø	12:3	20.9	78.7	3	
D-50	7771	107	-05	0_	24.7	6.1	(3.5	4	
E-64	1-1010	812 -	-,15	Ø	.2	20.8	79.0	4	
740									
240 A-11	G-21-77°	736	00	Ø	~ /	IL D	76.3	2	
B-20	7-22-12	177	4.03	Ø	11	20.4	78.9	2	
C-33	7-12-17	179.	-03	Ī	.2		18.7	3	
D-49	9-77-12	747	4.01	Ø	.4	21.0	28.3	4	
E-61	9-77.72	741	70.	. 1	.3	20.5	78.3	4	
	T CO		-0.2		1				
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TECHNICIAN: A ROALD  GEM SERIAL #: GS V39 26		TEMPERATURE:			BARO. PRESSURE: 28 · 65					
		26		WEATHER CONDITION		is: SU/	VNY			
PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% <u>C</u> H4	% CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS	
202 A-10 B-25 C-38								2 2 3	REMOVED DUE TO CONSTRUCTION  REMOVED DUE TO CONSTRUCTION  REMOVED DUE TO CONSTRUCTION	
203 A-10 B-25 C-40		9:35 9:37 9:44	·02 02	0.1 0.0 0.0	0.3	20.4 21.0 20.9	79.1 78.7 79.0	2 2 3		
206 A-10 B-25 C-40	9-11-11	944 941 948	01 03 +.02	988	9.3 5.1 18.5	12.5	78.2 77.3 76.0	2 2 3		
207 A-10 B-25 C-40	972.22 -27.22 14.22	1014	-:72 +.01 +.03	0	1.1		79. 9 79.8 79.9	2 2 3		
208 A-9.1 8-25 C-40	9-11-71 9-11-11 9-11-11	929 931 933	+.11 +.03 P	Ø Ø	1.7.8° 5.0	20.4 13.5 14.7	79.7	2 2 3		
210 A-10 B-25 C-39	9-22-72	825 825	65 +.64 +.05	000	.3	20.7 20.7 20.7	79.0 79.1 71.2	2 2 3		
242 C-42 D-60 E-78	9-12-12 9-12-12 9-12-12	339	01 +.01 01	Ø Ø Ø	3.4 8:5 6.4	16.3	10.3 10.3 10.3 10.3	3 4 4		
243 A-11 B-20 C-33	12/27	8:13	01	0.0	5.6 4.9	11.6	82.9 83.2 82.6	2 2 3		
A-11 B-20	12/27	5	113	113 - 01	3/0 7.07 0.1 0/3 7.01 0.0 0/19 05 0.0	370 7.07 0.1 5.4 273 7.07 0.0 5.6 219 05 0.0 4.9	370 7.07 0.1 5.4 11.6 2.13 7.01 0.0 5.6 11.2 2.19 .05 0.0 4.9 12.6	1/3 1.0/ 0.0 5.6 11.2 83,2	3/07,07 0.1 5.4 11.6 82.9 2 2/37.01 0.0 5.6 11.2 83,2 2 2/19 05 0.0 4.9 /2.6 82.6 3	

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TECHNICIAN:	MARCY 1	<b>U</b>	TEMPERA	TURE: 8	٥	BARO. PR	SSURE: Z	8.09	
GEM SERIAL #	50608	7/		WEATHER CONDITIONS:_		15: 50	VNY		
PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% CH4	% CO2	% 02	% BAL	PURGE TIME (MIN)	COMMENTS
202R		4				4			
А В С	9/12 9/12	4105	-,01	0,0	0.7	19,7	806	2	
С	9/22	4:09	-,05	0.0	0,2	19.9	741.8	3	
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PROBE NUMBER	DATÉ	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
VADOSE									_
ZONE									
	0/			_			-		
PV203D	9/22	4:04	-,98	0.0	1.0	20.1	78.8		
	2 4	3				1 2	F 3 0 8 %		
PV204D	7-22-12	1018-	-2-02	(D)	.6	19.6	74.8		
PV211D	9/22	9:27	,04	0.0	1.4	20.2	78,9		
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TECHNICIAN: A PAMO SEM SERIAL #: (5507974			TEMPERA	TURE: 8	)		SSURE LE	22	
				WEATHER	CONDITION	s: SUM	NY		*****
PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% CH4	% CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
B-29 C-45 D-61	9 20 U 9 20 U 9 20 U 9 20 U	435	107 5.77 4.24 14.56	Ø Ø Ø	7 .1 .2 .	20.7	71.4 19.0 71.1 79.1	2 2 3 4	
214 A-13 B-30 C-48	9.10.21 9.20.21 9.20.21 9.20.21	754	- 07 -11.62	8	6.0	19.9	₹4.1	2 2 3	
B-30 C-47	9.20.22 9.20.22 9.20.22 7.30.22	810	1.01 01 63 15	Ø Ø Ø	7.6	7.8 20.8 20.9 20.9 12.6	84.6 79.1 79.0 79.0	2 2 3 4	
216 A-14 B-43 C-62 D-86 E-110	9.11.12 9.21.22 9.20.22 9.20.22 9.20.22	878 840 843	38 08 01 07 +.01	0 0 0 0	.1	20.9 20.9 20.9 20.9 20.9	79.0 79.0 79.0 79.0	2 2 3 4 4	
217 A-13 B-30	9.28.77	910	D3	Ø Ø	5.3 2.2	16.8	78.7 79.0	2 2	
A-11 B-26.5 B-30	9-20-22 9-20-22 9-20-22	920	- 01 - 01 +1.33	0 0	28.4	18.9	79.2 78.0	2 2 2	
219 A-13 B-64 C-115 D-166 E-217	9.20.22 9.20.22 9.20.22 9.20.22	1014	4.01	0 0	1.1	19.4 18.1 18.1 18.8	79.5 80.1 80.1 81.9	2 2 3 4 4	

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PROBE	DATE	TIME	PRESSURE	% VOL	% VOL	%	%	PURGE	COMMENTS
NUMBER			(+/-)	CH4	CO2	02	BAL	TIME (MIN)	
220									
A-14	9/20/22		0.04			20.Z	19.6	2	A.
B-40	9/20/22	11:11	2.37	0.0	0.0	20.5	79.5	2	
C-87	4/20/12		0.02	0.0	0.3	20.3	79.4	3	
D-124	0/20/2	11:16	t0.01	0.0	0.0	20.6	79.4	4	
E-158	9/20/22	11:19	to.ac	0.0	0.0	20.6	79.4	4	
220B	1006	4		- 0		00.1			
A-14		9:51	0.07	- 4			77.1	2	
B-38	a/20/22	9:58	0.12		0.1	20.9	19.0	2	
C-62	apopul	10.05	0.11	0.0	4.0	14.3	81. 1	3	
D-86	9 MIL	10:04	0.27		2.3	17.8	79.8	4	
E-110	ajugu	10:07	0.12	D.D	1.8	18.4	11.8	4	
221	hoize	5:38	0.12	12 /2	0.8	20.1	79.0		
A-13	delantes		TO.07		0.1	20.7	79.2	2	
B-56	9/20/27	9:41	10.07	0.0	0.5		79.2	3	-
C-99	0/20/21	8:44	0.03	0.0	0.1	20.7	797	4	
D-142 E-185	9/28/22		10.15	0.0	0.5	19.9	79 1	4	
£-103	HOUNT	0.4-1	0.17	0.0	0, 7	2 1. /	11.60	4	
222									
A-13	9/20/22	9:16	10.01	D.D	1.2	19.3	79.4	2	
B-54.8	9/20/22	4:17	to.04	0.0	0.1	109	79.0	2	
C-96.5		9:19	0.07	0.0	0.3	20.6	79.1	3	
D-138.3			t0.01		24		80.0	4	
E-180		9:25	0.69	0.0	0.5	20.2	79.4	4	
	/ /								
223									
A-13	9/20/22	8:14	10.03	0.0		10.7	82.6	2	
B-37.5	apola	8:15	2.01	0.0	6.8	11.3	8/9	2	
C-62	<i>વાચ્છા</i> વાયાય	5:17	10.02	0.0	1.7	18.0	40.4	3	
D-86.5	9/20/22	8:19		0.0	3.0	16.5	40,5	4	
E-111	9/2022	8:13	10.01	0.0	<u>3. L</u>	16.3	80.7	4	
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224	O la ala		<i>t</i> 0		-	40 :	40 0		
A-13	4/11/22	1:31	0.00	0.0	0.1	100	14,9	2	
B-67.5	917012	7:33	0.40	0. V	0.1	10.1	78.8	2	
C-122	9/20/22	7:35	70.15	UIU	0.1	20.3	79,6	3	
D-177 5	7/20/22	7:37	14.5	0.0	0. [	45	19.4	4	
E-232	912022	7:41	10.54	V. 0	0.1	20.6	19.3	4	
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PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	% BAL	PURGE TIME	COMMENTS
NOWBER			(177	CIT		02		(MIN)	
225									
A-13	9/20	8.50	-,04	0.0	0,1	15.1	81.9	2	
B-72	9/20	8:53	01	0.0	_	20.1	79.8	2	
	9/20	1_		0.0		201	79.8	3	
C-1131				_		20.0	79.8		
D-190	9/20	7,'00	003	0.0	<del></del>			4	
E-244	9 Ro	9:05	001	0.0	0.2	19.9	79.8	4	
					-				
226									
A-13	9/20	7:36	.09	0.0	0.6	20.6	787	2 _	
B-64	9/20	7:39	.08	0.0	0.1	20.9	79.0	2	
C-114	9/20	7:43	-11.20	0.0	0.1	21.0	78.9	3	
D-164	9/20	7:49	-10.20	<del></del>	0.1	20.9	79.10	4	
	9/20	7:53	-11.59	0.0	03	20.7	78.9	4	
E-208	1/2	1.25	11.37	0.0	03		70.7	4	
	-		_	<u> </u>					
227									
A-13	7/20	8:03	.07	0.0	Ø5	19.4	80.1	2	
B-48.7	9/20	8:05	~.55	0.0	1-1	17,6	81.9	2	
C-84.4	9/20	8:08	49	0.0	1.8	16.4	81.7	3	
D-114	9/20	8:17	- 45	0.0	1.4	17,3	81.2	4	
	9/20	8:17	41		1.3	17-1	817	4	
E-115.7	1/20	0.17	77	0.0	7.5	1 191	5 K /	-	-
			-		-				<u> </u>
228	/			_			700		
A-13	4/20	8:29	25	00	1.3	18.9	79.8	2	
B-63	9/20	8:32		0.0	4.4	913	86.2	2	
C-113	9/20	836	33	0.0	0.1	203	79.6	3	
D-163	9/20	8:41	.02	600	0.1	203	79.6	4	
E-213	9/20	8:40	-,53	00	1.8	164	81.8	4	
	1,75								
770		1				1			
229	9/20	-7.10	- 20.	0.0	2.1	1-2 -	80.9	_	
A-13	T	7:12	~,38					2	<del>                                     </del>
B-48 7	9/20	7:14	41	0.0	0.1		789	2	
C-84.4	9/10		- 30		0.1	20.9		3	
D-114	9/20		-16.06		1.6		803	4	
E-155 7	9/20	7:28	-25.06	0.0	1.1	19.0	79.9	4	
230									
A-16								2	REMOVED DUE TO CONSTRUCTION
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B-33		-				-			
C-50	_	-			-	-		3	REMOVED DUE TO CONSTRUCTION
					_	-			
231									
A-13								2	REMOVED DUE TO CONSTRUCTION
B-26								_2	REMOVED DUE TO CONSTRUCTION
C-39								3	REMOVED DUE TO CONSTRUCTION
D-51			1					4	REMOVED DUE TO CONSTRUCTION
			1					4	REMOVED DUE TO CONSTRUCTION
E-66	1		1					4	TILLITOTES SUL TO CONSTITUCION
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DDODE T	DATE	TIME	PRESSURE	% VOL	% VOL	%	%	PURGE	COMMENTS
PROBE NUMBER	DATE	TIVIE	(+/-)	CH4	% VOL CO2	02	BAL	TIME	COMMENTS
NONBER			( '' '	C// .	552	0.2		(MIN)	
241				_					
241	9-2012 9-2012 9-2012 9-2012 9-2022	INER	2.14	0	1	165	79.4	2	
A-13	9 7. 22	1070	5 116	0		3	26 (		
B-28	1.10.11	105 L	-7.67	0000	04.1	20.5	79.4 79.4 79.4 19.3	2	
C-47	720.11	1054	0		:12	20.5 20.4	77.4	3	
D-64	9.20.22	1057	10.	Ø	.2	20.4	79.4	4	
E-85	9.11.72	1/0/	12 97	. 0	1,1	20.6	19.3	4	
E-03	1 40 20	1101	- 10.19		4.3	W 6			
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SERIAL		8.15	SSURE: 2	BARO. PRE	<u>U</u>	TURE: _ \$	TEMPERA	)	A POMI	ECHNICIAN:
PROBE NUMBER DATE TIME PRESSURE (-/-) N C-14 N C-02 N C-22 N C-20			M	SUM	ONDITION:			ر کھا	E50397	M SERIAL#:
A10		TIME	`				PRESSURE			
208 A-10   18-10-21   718   - 11   0   2.2   15-0   717   2   E-25   (0-2)-12   718   - 11   0   2.2   15-1   717   3    208 A-10   (0-2)-12   718   - 11   0   2.2   15-1   717   2   E-25   (0-2)-12   719   - 0.5   0   11-0   11-1   11-1   2   E-26   (0-10-12   15-12										202
38 REMOVED DUE TO CONSTRUCTION  203 203 203 203 203 203 203 203 203 20	REMOVED DUE TO CONSTRUCTION	2								A-10
203 A10 B-25 C-20-12-940 S1 0-23-12-940 EMOVED DUE TO CONSTRUCTION	2								B-25	
A10 18-10-12 978 - 11 0 12 19-0 78 2  E25 10-20-12 946 .32 0 2.9 821 78-7 2  C40 10-20-12 944 .15 0 1.4 19-7 3  206  A10 10-20-12 944 .15 0 1.4 19-7 3  E25 10-20-12 900 - 0.5 0 8-1 12.3 78-7 2  E26 10-20-12 92 - 0.9 0 11-0 10-7 71-1 2  C40 10-20-12 92 - 0.9 0 11-0 10-7 71-1 2  E27 10-20-12 92 - 0.9 0 11-0 10-7 71-1 2  E28 10-20-12 92 - 0.0 0 - 1 12.3 71-1 2  E29 10-20-12 92 - 0.0 0 - 1 12.3 71-1 2  E20 10-20-12 92 - 0.0 0 - 1 12.3 71-1 2  E20 10-20-12 92 - 0.0 0 - 1 12.3 71-1 2  E20 10-20-12 92 - 0.0 0 - 1 12.3 71-1 2  E20 10-20-12 93 - 1-1 0 0 - 1 12.8 80-1 3  E20 10-20-12 93 - 1-0 0 7-0 12.8 80-1 3  E20 10-20-12 93 - 1-0 0 7-0 12.8 80-1 3  E20 10-20-12 93 - 1-0 0 7-0 12.8 80-1 3  E20 10-20-12 93 - 1-0 0 7-0 12.8 80-1 3  E20 10-20-12 93 - 0.0 0 1 20-9 93 93 93 93 93 93 93 93 93 93 93 93 93	REMOVED DUE TO CONSTRUCTION	3								C-38
A10 18-10-12 978 - 11 0 1.2 19.0 78.7 2  E25 10-20-12 946 .32 0 2.9 18.1 78.7 2  C40 10-70-72 944 .1.5 0 1.4 19.4 78.7 3  206  A10 10-20-12 944 .0.5 0 8.7 12.3 78.7 2  E25 10-20-12 90.0 - 10 10 10.7 78.1 2  C40 10-70-72 152 - 70 0 17.3 1.4 2  207  A:0										
8-25 (0-20-12 944 15 0 1.4 (9.4 48-7 3  206 A10 (0-2)-12 944 15 0 1.4 (9.4 48-7 3  8-25 (0-20-12 850 8) 0 11.0 10.9 36.1 2  207 A30 (0-20-12 850 8) 0 11.0 10.9 36.1 2  207 A30 (0-20-12 850 8) 0 11.0 10.9 36.1 2  208 B-25 (0-10-12 850 + 8) 0 1 12.3 80.1 2  208 A-9.1 (0-10-12 850 + 8) 0 1.2 80.1 3  208 B-25 (0-10-12 850 + 8) 0 1.2 80.1 3  208 B-25 (0-10-12 850 + 8) 0 1.2 80.1 3  208 B-26 (0-10-12 850 + 8) 0 1.2 80.1 3  209 B-27 (0-10-12 850 + 8) 0 1.2 80.1 3  200 B-28 (0-10-12 850 + 8) 0 1.2 80.1 3  201 B-29 (0-10-12 850 + 8) 0 1.2 80.1 3  202 B-29 (0-10-12 850 + 8) 0 1.2 80.1 3  203 B-29 (0-10-12 850 + 8) 0 1.2 80.1 3  204  244 B-29 (0-10-12 850 + 8) 0 1.2 80.1 3  245 B-29 (0-10-12 850 + 8) 0 1.2 80.1 3  246 B-29 (0-10-12 850 + 8) 0 1.2 80.1 3  247 B-29 (0-10-12 850 + 8) 0 1.2 80.1 3  248 B-11 (0-10-12 851 8) 0 1.2 80.1 3  249 B-11 (0-10-12 852 8) 0 1.2 80.1 3  240 B-11 (0-10-12 852 8) 0 1.2 80.1 3  241 (0-10-12 852 8) 0 1.2 80.1 3  242 B-11 (0-10-12 852 8) 0 1.2 80.1 3  243 B-11 (0-10-12 852 8) 0 1.2 80.1 3  244 B-11 (0-10-12 852 8) 0 1.2 80.1 3  247 B-11 (0-10-12 852 8) 0 1.3 80.1 2  248 B-11 (0-10-12 852 8) 0 1.3 80.1 2  249 B-11 (0-10-12 852 8) 0 1.3 80.1 2  240 B-11 (0-10-12 852 8) 0 1.3 80.1 2  241 (0-10-12 852 8) 0 1.3 80.1 3  242 B-11 (0-10-12 852 8) 0 1.3 80.1 3  243 B-11 (0-10-12 852 8) 0 1.3 80.1 3  244 B-11 (0-10-12 852 8) 0 1.3 80.1 3  245 B-11 (0-10-12 852 8) 0 1.3 80.1 3  247 B-11 (0-10-12 852 8) 0 1.3 80.1 3  248 B-11 (0-10-12 852 8) 0 1.3 80.1 3  249 B-11 (0-10-12 852 8) 0 1.3 80.1 3  240 B-11 (0-10-12 852 8) 0 1.3 80.1 3  241 (0-10-12 852 8) 0 1.3 80.1 3  242 (0-10-12 852 8) 0 1.3 80.1 3  243 (0-10-12 852 8) 0 1.3 80.1 3  244 (0-10-12 852 8) 0 1.3 80.1 3  245 (0-10-12 852 8) 0 1.3 80.1 3  247 (0-10-12 852 8) 0 1.3 80.1 3  248 (0-10-12 852 8) 0 1.3 80.1 3  249 (0-10-12 852 8) 0 1.3 80.1 3  240		2	78.8	19.0	2 7	0	- 11	910	12.20.21	
206 A10 FO 20:21 944 15 0 1.4 19.4 97.7 3  207 A10 FO 20:21 947 05 0 8.7 12.3 78.7 2  C40 FO 20:21 952 20 0 11.0 10.7 77.1 2  C40 FO 20:21 952 20 0 17.3 6.7 15.8 3  207 A10 FO 20:21 952 20 0 17.3 6.7 15.8 3  208 A9.1 FO 20:21 955  f. 61 0 19.7 19.7 3  208 A9.1 FO 20:21 950 f. 61 0 19.7 19.7 3  208 A9.1 FO 20:21 950 f. 61 0 19.7 19.7 3  208 A9.1 FO 20:21 950 f. 61 0 19.7 19.7 3  208 A9.1 FO 20:21 950 f. 61 0 19.7 19.7 3  208 A9.1 FO 20:21 950 f. 61 0 19.7 19.7 3  208 A9.1 FO 20:21 950 f. 61 0 19.7 19.7 3  208 A9.1 FO 20:21 950 f. 61 0 19.7 19.7 2  C40 FO 20:21 950 f. 61 0 19.7 19.7 2  C40 FO 20:21 950 f. 61 0 19.7 19.7 2  C40 FO 20:21 950 f. 61 0 19.7 19.7 2  C40 FO 20:21 950 f. 61 0 19.7 19.7 19.7 2  C40 FO 20:21 950 f. 61 0 19.7 19.7 2  C41 FO 20:21 950 f. 61 0 19.7 19.7 2  C42 FO 20:21 950 f. 61 0 19.7 19.7 2  C43 FO 20:21 950 f. 61 0 19.7 19.7 2  C44 FO 20:21 950 f. 61 0 19.7 19.7 2  C45 FO 20:21 950 f. 61 0 19.7 19.7 2  C46 FO 20:21 950 f. 61 0 19.7 19.7 2  C47 FO 20:21 950 f. 61 0 19.7 19.7 2  C48 FO 20:21 950 f. 61 0 19.7 19.7 2  C49 FO 20:21 950 f. 61 0 19.7 19.7 2  C40 FO 20:21 950 f. 61 0 19.7 19.7 2  C41 FO 20:21 950 f. 61 0 19.7 19.7 2  C42 FO 20:21 950 f. 61 0 19.7 19.7 2  C43 FO 20:21 950 f. 61 0 19.7 19.7 2  C44 FO 20:21 950 f. 61 0 19.7 19.7 2  C45 FO 20:21 950 f. 61 0 19.7 19.7 2  C46 FO 20:21 950 f. 61 0 19.7 2  C47 FO 20:21 950 f. 61 0 19.7 2  C48 FO 20:21 950 f. 61 0 19.7 2  C49 FO 20:21 950 f. 61 0 19.7 2  C40 FO 20:21 950 f. 61 0 19.7 2  C40 FO 20:21 950 f. 61 0 19.7 2  C40 FO 20:21 950 f. 61 0 19.7 2  C40 FO 20:21 950 f. 61 0 19.7 2  C40 FO 20:21 950 f. 61 0 19.7 2  C40 FO 20:21 950 f. 61 0 19.7 2  C40 FO 20:21 950 f. 61 0 19.7 2  C40 FO 20:21 950 f. 61 0 19.7 2  C40 FO 20:21 950 f. 61 0 19.7 2  C40 FO 20:21 950 f. 61 0 19.7 2  C40 FO 20:21 950 f. 61 0 19.7 2  C40 FO 20:21 950 f. 61 0 19.7 2  C40										
206 A-10 (0-20-12-13-12-12-12-12-12-13-13-12-12-13-13-13-13-13-13-13-13-13-13-13-13-13-			38.2		1.4			944		
A-10 (0-20-12-152				1-1	-		-1.00	र नप्	0 20.20	<u>C-40</u>
8-25 (0-20-21 152 9)			2 9 C	12 2	D- 1/		2~	Ou C	6 00 00	206
207 A-10 (0-20-72/010 - 1, 0					8 - 1			748	10-21) 13	A-10
207 A-10 (0-30-71/010 - 1, 0 , 9   19.3   11.1   2 B-25 (0-20-71/010 - 1, 5			11.2		130	0		120	(V-12)-22	B-25
A-10 (0-10-12 010 - 1 0		3	77.9	6.7	14.3	U	70	150	10-10-2	C-40
A-10 (0-10-12 010 - 1 0										207
208 A-9.1 10-70-72 13 15 1 0		2	41.8	19.3	.9	0	-46	010	10-20-22	A-10
208 A-9.1 10-70-72 13 15 15 15 15 15 15 15 15 15 15 15 15 15		2	796	28.3		Ø	65	1012	10-20-22	B-25
A-9.1 (D) D) P(K + 1) D		3	79.7	19.9	.2	Q	4.61	ids	10-10-22	
A-9.1 (D) D) P(K + 1) D								1		
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210 A-10 (0-10·12/24 - 0%			-	15.1	حد	C	1.12	970	(0-20.72	
210 A-10 (0-10·12/24 - 0%			80.2	12.8	7.0	Ó				
A-10 (0-10-12-72-4 - 04 0 .2 20.9 31.5 2  B-25 (0-10-12-72-5 0 .2 20.9 37.0 2  C-39 (0-10-12-87-8 + .03 0 .1 20.9 37.0 3  242  C-42 (0-10-12-87-105 0 2-7 11.7 80.1 3  D-60 (0-10-12-87101 0 8.4 6.3 85.3 4  E-78 (0-70-12-87111 0 5.2 12-4 82.0 4									,0 00	
242 C-42 (O-10-1287505 (O 2-7 11-7 80-1 3 D-60 (O-10-12871 - O1 (O 8-4 6-3 85-3 4 E-78 (O-10-1287111 (O 5.2 1287111 (O 2-7 6.3 82-0 4  243 A-11 (O-20-2287111 (O 2-7 6.3 82-0 2 B-20 (O-70-2287109 (O 6-5 7 1 8.44 2			78 6	74.0	1		201	RO L	12 64 -2	210
242 C-42 (O-10-1287505 (O 2-7 11-7 80-1 3 D-60 (O-10-12871 - O1 (O 8-4 6-3 85-3 4 E-78 (O-10-1287111 (O 5.2 1287111 (O 2-7 6.3 82-0 4  243 A-11 (O-20-2287111 (O 2-7 6.3 82-0 2 B-20 (O-70-2287109 (O 6-5 7 1 8.44 2			20.01	10.4 20.4	1	Ψ	r. 08	677	(0-10-W	
242 C-42 (O-10·128) \( \frac{1}{2} \cdot \) \( \frac{1} \cdot \) \( \frac{1}{2} \cdot \) \( \frac{1}{2} \cdot \) \( \frac{1}{2} \cdot \) \( \frac{1}{2} \cdot \) \( \frac{1}{2} \cdot \) \( \frac{1} \cdot \) \( \frac{1}{2} \cdot \) \( \frac{1}{2} \			10 7	2000	14		1,57	100		
242 C-42  (0-10-1281202  0-60  0-10-1281202  0-8-4  6-3  85-3  4  E-78  (0-70-1281201  0  5-2  1282-0  4  243  A-11  (0-70-7282101  0  2-7  (5-3  2-0  2  B-20  (0-70-7282109  0  6-5  7  8-4  2  4		3	100	10)51			7,05	8 48	(0-W W	C-39
C-42 (O-10-U8) \( \frac{1}{2} \) - O \( \frac{1}{2} \) \( \frac{1}	(II)									242
D-60 (0-10-11347 - 5) (0 8-4 6-3 85-3 4 E-78 (0-70-11345 - 1) (0 5.2 12 82-0 4 A-11 (0-70-218:21 - 1) (0 2-7 (5.3 22-0 2 B-20 (0-70-2) 824 - 65 7 1 8-4 2		3		F. 81			20.	839.	10-20-W	
243 A-11 (0-70-72-8:21   0		4		6.3	8.4	Ø	-02	34L	10-20-22	D-60
A-11 (0.70.72 8:21 - 11 0 Z.7 (S.3 F2.0 2 B-20 (0-70.72 824 - 05 0 6.5 7 1 8.4 2		4	85-0	128	5.2	Φ_	4	846	10-20-12	
A-11 (0.70.72 8:21 - 11 0 Z.7 (S.3 F2.0 2 B-20 (0-70.72 824 - 05 0 6.5 7 1 8.4 2										242
B-20 (0-70-7) 824-109 0 6.5 71 8.4 2 C-33 (0-70-7) 823-117 0 6.0 7.7 8.4 3		2	82.0	15.7	2.7	(7)	[[	8:71	10.24.71	
C33 (0-70-22 823-17- 0 6:0 3.7 8.V 3				71		Ø	100	874-	(0-20.7)	
			86 Y	7.7	60	0	.17_	827	O-20-21	C-33

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PROBE	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL	% O2	% BAL	PURGE TIME	COMMENTS
NUMBER			(+/-)	Cn4	C02	02	DAL	(MIN)	
244	(0.24.72	0 11	67	A	11 1	1 2	Calt	_	
A-11	10-10-12	0.2	- 162	0	16.6	1.0	72.4	2	
B-21	10-10-11	213	+.22	6	9.8	21	79.9	2	
C-36_	10-10-11	715	24	W	1.1	141	70.	3	
	+		-		ļ				
245	(2.72.3)	200	٨٦ -	Ø	14.2	c.7	79.7		
A-11	10-20-22	V-38	ξή. Fo.	1.4	25 X	.7	71.7	2	
B-20		8169	07_	1-7	23.4	13	76.2	3	
C-35	10-20-22	860		0	18.7	.7	81.0	4	
D-50 E-64	10-20-22	228	7.15	Ø Ø	(01	20.5	39.0	4	
E-04	10-20-21	0 20	1.13	V.J		22).	700		
246	1		_		<del>                                     </del>				
A-9								2	REMOVED DUE TO CONSTRUCTION
B-16	+							2	REMOVED DUE TO CONSTRUCTION
5 10									
205R							_		
A-11	10-20.22	737_	.02	Φ	6.0	14.0	80.0	2	
B-20	10-20.22		.02	0	27.3		71.L	2	
C-33	10-20-22	738	19	1.1	429	, (	56.9	3	
D-48	10-70-22	743	-37	1.8	45.7	0	12.4	4	
E-62	10200	FYF	6Y	6	29.9	.9	71.2	4	
						- 7			
239									
A-11	10-20.12	358	1.05	0		14.0	71.6	2	
B-20	10-20-22	800	01	0	.2	20.9	78.9	2	
C-35	10-10-12	801	1.11	Q	1	21.0	78.9	3	
D-50	10-20-27	805	4.20	Ø	13	20.7	PR.O	4	
E-64	10-20-W	1809	4.10	0	.2	21.0	28.8	4	
			-						
240	014	220			17 6	1= Q	79 2		
A-11	10-20-21	13L		0	7.7	3.1	79.2	2	
B-20	10.2021	177	1.01	0	,		# 7		
C-33	(0-10-12	476	03	0	1	21.0	700	3	
D-49	10.10·11	157	4(1	0	1.3	200	44 18	4	
E-61	10-20 u	HYS	4:02		1.2	20.8	71.7	4	
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GEM SERIAL #:				WEATHER	CONDITION	IS:	1	·	
PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% CH4	% CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
202R									
A	10/20	10:00	- 04	0.0	0.3	14.1	85.7	2	
В	10/20	10:64	02	00	0.2	20.4	79.4	2	
С	10/10	10:07	14	0.0	0.3	19.3	80.4	3	
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PROBE	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL	% O2	% BAL	PURGE TIME	COMMENTS
NUMBER			(+/-)	CH4		02	BAL	(MIN)	
VADOSE									
ZONE									
PV203D	10/20	9:17	13	0.0	14	204	78.5		
	10-20-22							_	
PV211D	10/20	9:26	-13	0.0	0.6	20.6	78.8		
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IEA	SIGNATURE:	
LEA	SIGNATURE:	

TECHNICIAN: A ROMO			TEMPERATURE: BARO, PRESSURE B.9						
GEM SERIAL #: G503926				WEATHER	CONDITION	is: CUN	NY		
PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% CH4	% CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
213 A-13 B-29 C-45 D-61 E-77	10 18:22 6-8-22 10-18:22 10-18:22		05 03 -3.68 -4.19 -3.40	0000	3.3	16.1 20.8 20.9 20.7 20.7	801 79.1 79.1 19.2	2 2 3 4 4	
214 A-13 B-30 C-48	10-18-11	87F	-13 FI	Ø Ø	5.1	16.2 20.6 19.3	77,7 79.3 72.1	2 2 3	
215 A-13 B-30 C-47 D-64 E-81	10-18-12 10-18-12 10-18-12 10-18-12 10-18-22	919 92 92 923 826	- 07 + 04 - 07 - 04 - 04	999	7.3 4.0 .1 0.5 5.0	7.6 14.2 20.7 20.0	85.1 11.7 11.7 13.4	2 2 3 4	
216 A-14 B-43 C-62 D-86 E-110	10-18-22 10-18-22 10-18-22 10-18-22	852 854 856 851 901	+03 09 00 00 07	00000	.	20.4 20.4 20.4 19.9	17.3 29.3 77.3 49.3	2 2 3 4 4	
217 A-13 B-30	10-18-12 10-18-12	934 939	17 +.01	0	5.8	15.2	176,7 79.2	2	
A-11  B-26.5  B-30	10-18-2	953 950 950	+.03 +.03 +1.33	000	24.2 9.3 8.6	16.5	五十十十十十十十十十十十十十十十十十十十十十十十十十十十十十十十十十十十十十	2 2 2	
A-13  B-64  C-115  D-166  E-217	10-18-1 10-18-1 10-18-1 10-18-1	1021	- 07 - 07 - 05 - 06	© Ø Ø Ø	1.2	13.8 11.7 13.8 14.0	81.8	2 2 3 4 4	

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PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL	% O2	% BAL	PURGE TIME	COMMENTS
								(MIN)	
220	11		*		4 5	: 02 /01	C 3 0		
A-14	0/15/12	11:04	0.15	0.2		18.8	80.0	2	1
B-40	14/18/12	11205			1.5			2	
C-87	10/18/42		0.10	0.1	0.4	20.0	19.5	3	
D-124	10/18/2	11:09	0.09	0.1		19.8	79.6	4	
E-158	10/18/22	11:12	10.21	01	0.0	20.7	79.2	4	
220B									
A-14	17/18/22	10:18	0.12	0.11	0.7	20.7	79.1	2	
B-38	10/18/77	10:19	0.10	0.0	0.1	209	79.0	2	
C-62	10/18/22	10:23	10.04	0.0	3.9	14.3	81.8	3	
D-86	1 1 1 1	10:25	0.07	0.0	2.1	18.1	79.8	4	
E-110		10.30	-0.01		1.5	187	79.8	4	
L 110	11300	10.00	0.07	0.0	,,,_	124	77.5		
221									
A-13	10/18/22	8:46	0.08	0.0	0.6	20.2	79.1	2	
B-56			017		0.2	20.5	79.Z	. 2	
C-99	10/18/22	8:51	70.14	0.0	0.4	20.3	79.3	3	
D-142	10/18/22		-D.DL	19.17	12.1	20.6	79.4	4	
E-185		8:59	t0.07	1.10	0.4	19.7	79.9	4	
			7				- A - A		
222	, ,					,			
A-13	10/18/22	126	0.14	0.0	1.7	18.5	79.8	_2	
B-54.8	10/1822	9:29	10.09	0.0	D.D	209	79.1	2	
C-96.5	10/18/22	9:30	0.10	0.0	0.3	20.6	79:1	3	
D-138.3	104/8/22	9:33	0.04		2.2	17.8	80.0	4	
E-180	10/14/22	9:37	-0.87	0.0	1.1	19.2	79.7	4	
223	10/18/22	C/· 12	10.08	20	In D	11.8	82.2		
A-13		11.12.	10.00	0.0	7.4	9.9	82.7	, 2	
B-37.5	14/17/22	013	0.11	0.0	20	177	001	2	
C-62	1918/22 10/18/22 10/18/22	0.16	to 0:0	110	27	11.9	00.0	3	
D-86.5	12/18/12	17:21	10.04	0.0	21	110	00.5	4	
E-111	10/18/07	8.21	0.13	0.0	2.0	16, 1	00.5	4	3
224									
A-13	inide/2	7:41	0.06	nn	12.7	19.8	79.5	2	
	10/18/20		0.33		0.1	20.5		2	
B-67.5	10/18/22	7.115	+0.01	0.0	0.1	20.6	79 ?		
C-122					0.1	20.7	797	3	
D-177.5	10/11/12	-7:51	74.33	110	0.1	20.8	797	4	
E-232	MISIN	1.51	קב,טו	0.0	1.1	VV. 0	11.6	4	
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Problem   Date   The   Problem   CO2   O2   DA   IMBRE   DATE									000000	COMMENTS
25		DATE	TIME					1		COMMENTS
A-13   19/18   P-1/17   P-1/3   D-0   P-1/1   D-3   SS-6   2	NOMBER			(+/-)	CH			57.12		
A-13	225									
S-72		:0/18	4:17	13	0.0	4/1	10.3	85-6	2	
C1131 19/6 9:24 7.13 0.0 0.3 19.9 72.7 3  0.190 19/7 9:25 1.5 0.0 0.2 2.2 73.5 4  E244 19/18 9:33 -1/4 0.0 2.2 2.3 72.5 4  B256 19/18 7:57 7.08 0.6 0.5 19.6 79.9 2  D161 10/18 7:57 7.08 0.6 0.1 20.5 72.5 3  D161 10/18 5:03 11.52 0.0 0.1 20.5 72.5 3  D161 10/18 5:03 11.52 0.0 0.1 20.5 72.5 3  D161 10/18 5:03 11.52 0.0 0.1 20.5 72.5 3  D161 10/18 5:03 -1.72 1 0.0 0.3 20.0 72.7 4  E270 10/18 5:21 -0.0 0.0 1.2 0.0 72.7 4  E271 10/18 5:21 -0.0 0.0 1.2 0.0 72.7 4  E272 10/18 5:27 -1.15 0.0 0.3 19.9 72.7 2  E273 10/18 5:37 -0.0 0.0 0.3 19.9 72.9 4  E274 10/18 5:37 -0.0 0.0 0.3 19.9 72.9 4  E285 10/18 5:37 -0.0 0.0 0.3 19.9 72.9 4  E286 10/18 5:37 -0.0 0.0 0.3 19.9 72.9 4  E287 10/18 5:37 -0.0 0.0 0.3 19.9 72.9 4  E288 10/18 5:37 -0.0 0.0 0.1 20.1 72.7 1.2 50.0 2  E288 10/18 5:38 -1.17 0.0 0.3 19.9 72.9 4  E289 10/18 5:37 -0.0 0.0 0.1 20.1 72.7 1.2 50.0 2  E280 10/18 7:37 -7.17 0.0 0.1 20.1 72.7 1.2 50.0 2  E281 10/18 7:37 -7.27 0.0 0.1 20.1 72.7 1.2 50.0 2  E290 10/18 7:37 -7.27 0.0 0.1 20.1 72.7 1.2 50.0 2  E291 10/18 7:37 -7.27 0.0 0.1 20.1 72.7 1.2 50.0 2  E292 10/18 7:37 -7.27 0.0 0.1 20.1 72.7 1.2 50.0 2  E293 10/18 7:37 -7.38 -8.59 0.0 0.1 20.1 72.7 1.2 50.1 2  E294 10/18 7:37 -7.38 -8.59 0.0 0.1 20.1 72.9 72.9 4  E295 10/18 7:37 -7.38 -8.59 0.0 0.1 20.1 72.9 72.9 4  E296 10/18 7:37 -7.38 -8.59 0.0 0.1 20.5 72.9 4  E297 10/18 7:37 -7.38 -8.59 0.0 0.1 20.5 72.9 4  E298 10/18 7:37 -7.38 -8.59 0.0 0.1 20.5 72.9 4  E299 10/18 7:47 -7.26 0.0 0.0 0.1 20.5 72.9 4  E200 10/18 7:47 -7.26 0.0 0.0 0.1 20.5 72.9 4  E201 10/18 7:47 -7.26 0.0 0.0 0.1 20.5 72.9 4  E202 10/18 7:47 -7.26 0.0 0.0 0.1 20.5 72.9 4  E203 10/18 7:47 -7.26 0.0 0.0 0.1 20.5 72.9 4  E204 10/18 7:47 -7.47 -7.60 0.0 0.0 0.1 20.5 72.9 4  E205 10/18 7:47 -7.47 -7.60 0.0 0.0 0.1 20.5 72.9 4  E207 10/18 7:47 -7.47 -7.60 0.0 0.0 0.1 20.5 72.9 4  E208 10/18 7:47 -7.47 -7.60 0.0 0.0 0.1 20.5 72.9 4  E209 10/18 7:47 -7.47 -7.60 0.0 0.0 0.1 20.5 72.9 4  E209 10/18 7:47 -7.47 -7.60 0.0 0.0 0.1 20.5 72.9 4  E209 10/18 7:47 -7.47 -7.60 0.0 0.0 0.1 20.5 72.9 4  E200 1		10/19							2	
D-190   10/18   71.27   71.5   O O O O O O O O O O O O O O O O O O		1216				03			3	
F744   10/18		<del></del>	9.18							
226  A-13										
A-13   O     O   O   O   O   O   O   O   O	E-244	19/10	7.55		0 0	0.2		7,1.5		
A-13   O / Id   7:57 - 03   O O O   S   I9.6   79.9   2     B-64   19   B   7:59   70.80   O O O   O O O O O O O O O O O O O O		<u> </u>								
B-64   19   8   7:59   70.50   0.6   0.1   20.5   79.4   2		10 00	-7-1-1	- 02	06	0 0	19/	79 a		
C-114										
D-164 16/18 5:08 -11.92 0.0 0.1 20.4 79.5 4  E-208 10/18 5:2107 0.0 0.3 20.0 79.7 4  227  A-13 10/18 5:2107 0.0 0.3 20.0 79.7 2  B-8.7 19/18 5:2207 0.0 0.7 20.0 79.8 2  C-8.4 10/18 5:37 -1.24 0.0 0.7 19.5 80.0 4  E-1157 10/18 5:37 -1.24 0.0 0.7 19.5 80.0 4  E-1157 10/18 5:37 -1.24 0.0 0.3 19.9 79.8 2  A-18 10/18 5:50 -1.17 0.0 3.7 1.12 55.0 2  A-19 10/18 6:55 -1.17 0.0 3.7 1.12 55.0 2  A-19 10/18 6:55 -1.17 0.0 3.7 1.2 55.0 2  A-10 10/18 7:37 -1.23 0.0 0.1 20.1 79.7 3  B-83 10/18 7:38 8.59 0.0 0.1 20.5 79.7 4  B-84.7 10/18 7:38 8.59 0.0 0.1 20.5 79.7 3  B-84.7 10/18 7:38 8.59 0.0 0.1 20.5 79.7 3  B-83 10/18 7:38 8.59 0.0 0.1 20.5 79.7 3  B-83 10/18 7:38 8.59 0.0 0.1 20.5 79.7 3  B-83 10/18 7:47 26.0 0.0 0.7 19.1 80.1 4  E-155.7 10/18 7:47 26.0 0.0 0.1 20.5 79.9 4  B-33 10/18 7:47 26.0 0.0 0.1 20.5 79.9 4  B-33 10.5 10/18 7:47 26.0 0.0 0.1 20.5 79.9 4  B-34 13 10/18 7:47 26.0 0.0 0.1 20.5 79.9 4  B-35 10/18 7:47 26.0 0.0 0.1 20.5 79.9 4  B-36 10/18 7:47 26.0 0.0 0.1 20.5 79.9 4  B-37 10/18 7:47 26.0 0.0 0.1 20.5 79.9 4  B-38 10 10/18 7:47 26.0 0.0 0.1 20.5 79.9 4  B-39 10/18 7:47 26.0 0.0 0.1 20.5 79.9 4  B-30 10/18 7:47 26.0 0.0 0.1 20.5 79.9 4  B-31 10/18 7:47 26.0 0.0 0.1 20.5 79.9 4  B-31 10/18 7:47 26.0 0.0 0.1 20.5 79.9 4  B-31 10/18 7:47 26.0 0.0 0.1 20.5 79.9 4  B-31 10/18 7:47 26.0 0.0 0.1 20.5 79.9 4  B-31 10/18 7:47 26.0 0.0 0.1 20.5 79.9 4  B-31 10/18 7:47 26.0 0.0 0.1 20.5 79.9 4  B-31 10/18 7:47 26.0 0.0 0.1 20.5 79.9 4  B-32 10/18 7:47 26.0 0.0 0.1 20.5 79.9 4  B-33 10 10/18 7:47 26.0 0.0 0.1 20.5 79.9 4  B-31 10/18 7:47 26.0 0.0 0.1 20.5 79.9 4  B-32 10/18 7:47 26.0 0.0 0.1 20.5 79.9 4  B-33 10 10/18 7:47 26.0 0.0 0.1 20.5 79.9 4  B-31 10/18 7:47 26.0 0.0 0.1 20.5 79.9 4  B-32 10/18 7:48 7.59 7.0 0.0 0.1 20.5 79.9 4  B-32 10/18 7:48 7.59 7.0 0.0 0.1 20.5 79.9 4  B-32 10/18 7:48 7.59 7.0 0.0 0.1 20.5 79.9 4  B-32 10/18 7:48 7.59 7.0 0.0 0.1 20.5 79.9 4  B-33 10/18 7:48 7.59 7.0 0.0 0.1 20.5 79.9 4  B-32 10/18 7.59 7.0 0.0 0.1 20.5 79.9 5  B-33 10/18 7.59 7.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	B-64									
E 208   10/18   5:13   12 21   0.0   0.3   20.0   73.7   4    227 A.13   10/18   8:21   -0.0   0.0   0.3   20.0   79.7   2    B-48.7   10/18   8:24   -1.15   0.0   0.7   20.0   79.7   2    B-48.7   10/18   8:25   -8.8   0.0   0.6   19.3   70.0   3    D-114   10/18   8:37   -0.7   0.0   0.3   19.8   79.7   4    E-115.7   10/18   8:37   -0.9   0.0   0.3   19.8   79.7   4    E-115.7   10/18   8:50   -1.17   0.0   0.3   19.9   79.8   2    E-113   19/18   8:53   -6.3   0.0   0.1   20.1   79.7   3    E-213   10/18   9:03   -1.23   0.0   0.1   20.1   79.7   4    E-229   A.13   10/18   7:37   7.55   0.0   1.2   19.8   79.7   4    E-115.7   10/18   7:37   7.55   0.0   1.2   19.9   80.5   2    E-115.7   10/18   7:43   7/690   0.0   0.7   19.1   80.1   4    E-115.7   10/18   7:47   26.00   0.0   0.7   19.6   79.9   4    E-115.7   10/18   7:47   26.00   0.0   0.7   19.6   79.9   4    E-115.7   10/18   7:47   26.00   0.0   0.7   19.6   79.9   4    E-155.7   10/18   7:47   26.00   0.0   0.7   19.6   79.9   4    E-155.7   10/18   7:47   26.00   0.0   0.7   19.6   79.9   4    E-155.7   10/18   7:47   26.00   0.0   0.7   19.6   79.9   4    E-155.7   10/18   7:47   26.00   0.0   0.7   19.6   79.9   4    E-155.7   10/18   7:47   7:40	C-114		8:05	-11.52						
227 A-13	D-164								4	
A-13   10/18   \$2.1   07   0.0   0.3   20   0.79.7   2	E-208	10/8	8:13	-1221	0.0	0.3	20.0	19.7	4	
A-13										
B-88.7   10/18   8.24   7.15   0.0   0.7   20.079.8   2	227									
B-48.7   10/18   8'.2f   71.15   0.0   0.7   20.079.8   2	A-13	10/18	8:21	07	0.0	0-3			2	
C-84.4   O/R   8:26				-1.15	0.0		20.0		2	
D-114   10/18   5:37   7.24   0.0   0.9   19.5   80.0   4			8:28			0.6	19.3	80.0	3	
E-115.7			8:37			0.9			4	)
228 A-13		16/18		1				79.9	4	
A-13	E-113.7	19/18	10.07	1	<u> </u>					
A-13										
B-63		2-11-1	0.117	P 17	0.2	0.3	109	798	7	
C-113		1918								
D-163 19/8 6:5819 0 0 0.1 20.3 79.7 4  E-213 10/8 9:03 -1.23 0.0 0.4 19.8 79.8 4  229  A-13 10/8 7:3185 0.0 1.2 18.4 80 5 2  B-48.7 10/8 7:39 -5.59 0.0 0.1 20.5 79.9 2  C-84.4 10/18 7:38 -8.59 0 0 0.1 20.5 79.9 3  D-114 10/18 7:43 1/690 0.0 0.7 19.1 80.1 4  E-155.7 10/18 7:47 -26.00 0 0 0.5 19.6 79.9 4  230  A-16  B-33  C-50  2 REMOVED DUE TO CONSTRUCTION  231  A-13  A-13  B-26  C-39  D-51  D-51  A REMOVED DUE TO CONSTRUCTION  REMOVED DUE TO CONSTRUCTION  REMOVED DUE TO CONSTRUCTION  REMOVED DUE TO CONSTRUCTION  REMOVED DUE TO CONSTRUCTION  REMOVED DUE TO CONSTRUCTION  REMOVED DUE TO CONSTRUCTION  REMOVED DUE TO CONSTRUCTION  REMOVED DUE TO CONSTRUCTION  REMOVED DUE TO CONSTRUCTION  REMOVED DUE TO CONSTRUCTION  REMOVED DUE TO CONSTRUCTION  REMOVED DUE TO CONSTRUCTION  REMOVED DUE TO CONSTRUCTION  REMOVED DUE TO CONSTRUCTION  REMOVED DUE TO CONSTRUCTION  REMOVED DUE TO CONSTRUCTION  REMOVED DUE TO CONSTRUCTION  REMOVED DUE TO CONSTRUCTION		0/10								
E-213     0   8     9   0   3   -1,23   0   0   0   1   9   8   79   8   4		19/16			0.0					
229  A-13   O/	D-163									
A-13	E-213	10/18	9:03	-1.23	0.0	0.4	19.0	17.8	4	
A-13		<u> </u>								
B-48.7	229				<u> </u>		1.0	0.0		
C-84.4   O/   B   7:38   8:59   O   O   O   20:5   79.4   3    D-114   O/   B   7:43   76:90   D   O   O   7   19.1   80.1   4    E-155.7   O/   R   7:47   726.00   O   O   O   O   O   O   O   O   O	A-13	10/18				-	-1-	805	2	
C-844	B-48 7	10/8	7:34	3.59	0.0		20.5	79.9	2	
D-114   10   16   7:43   76.90   0.0   0.7   19.1   80.1   4    E-155.7   10   18   7:47   726.00   0   0.5   19.6   79.9   4    230   A-16   2   REMOVED DUE TO CONSTRUCTION  B-33   2   REMOVED DUE TO CONSTRUCTION  C-50   3   REMOVED DUE TO CONSTRUCTION  231   2   REMOVED DUE TO CONSTRUCTION  B-26   2   REMOVED DUE TO CONSTRUCTION  C-39   3   REMOVED DUE TO CONSTRUCTION  D-51   4   REMOVED DUE TO CONSTRUCTION  REMOVED DUE TO CONSTRUCTION  REMOVED DUE TO CONSTRUCTION  REMOVED DUE TO CONSTRUCTION	C-84.4	10/18			0.0	0.1	20.5	79.4	3 _	
E-155.7 10/18 7:47 - 26. © 0 0 0.5 19.6 79.9 4  230  A-16  B-33  C-50  3 REMOVED DUE TO CONSTRUCTION  231  A-13  B-26  C-39  D-51  B-37  A-19  A-19  A-19  B-20  B				-1690	0.0				4	
230  A-16  B-33  C-50  2 REMOVED DUE TO CONSTRUCTION  REMOVED DUE TO CONSTRUCTION  3 REMOVED DUE TO CONSTRUCTION  231  A-13  B-26  2 REMOVED DUE TO CONSTRUCTION  2 REMOVED DUE TO CONSTRUCTION  2 REMOVED DUE TO CONSTRUCTION  3 REMOVED DUE TO CONSTRUCTION  4 REMOVED DUE TO CONSTRUCTION  4 REMOVED DUE TO CONSTRUCTION								79.9	4	
A-16	2 100 /	1.10	1	<del>                                     </del>						
A-16	330	+	1							
B-33   2   REMOVED DUE TO CONSTRUCTION		1			<b> </b>				2	REMOVED DUE TO CONSTRUCTION
C-50   3   REMOVED DUE TO CONSTRUCTION		+		-						
231   2   REMOVED DUE TO CONSTRUCTION		-		-		<del> </del>	<del> </del>			
A-13   2   REMOVED DUE TO CONSTRUCTION	C-50	+				+	-	<del> </del>	3	REMOVED DUE TO CONSTRUCTION
A-13   2   REMOVED DUE TO CONSTRUCTION		<u> </u>		-		-	+ -	-	-	
B-26   2   REMOVED DUE TO CONSTRUCTION	231	-			-		-		-	
C-39   3   REMOVED DUE TO CONSTRUCTION	A-13								2	
D-51  4 REMOVED DUE TO CONSTRUCTION  4 REMOVED DUE TO CONSTRUCTION	B-26						-		22	
D-51 4 REMOVED DUE TO CONSTRUCTION	C-39								3	REMOVED DUE TO CONSTRUCTION
4 REMOVED DUE TO CONSTRUCTION									4	REMOVED DUE TO CONSTRUCTION
1 E-66	E-66								4	REMOVED DUE TO CONSTRUCTION
	2 30			1	1					



LEA SIGNATURE:
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PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL	% O2	% BAL	PURGE	COMMENTS
NOMBER			(+/-)	CH4	CO2	02	DAL	(MIN)	
241	12 10 14	1000	2 10	00		2h 7	20 /		
A-13	10-18-12 10-18-22 10-18-22 10-18-22 10-18-22	102 5.	12.12	0	.1_	20-3.	19.6	2	
B-28	10-18.00	1022 -	7.13	0		20.5	79.6 79.6	2	
C-47	10-18.26	102+	09	0	13	10.7	71.6	3	
D-64	10-10-22	1100	11	0	13	20.1	1 2	4	
E-85	10-18-W	LIDA.	12.43	0	, 1	20.4	79.5	4	
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SCS SIGNATURE

PROBE	DATE	TIME	PRESSURE	1 00 000	1 % 1/01	1 1	T n/ 1	DURCE	COMMATNITC
NUMBER	DATE	TIME	(+/-)	% VOL CH4	% VOL CO2	% O2	% BAL	PURGE TIME	COMMENTS
								(MIN)	
244									
A-11	11/17	9:25	.01	0	12.4	5.6	82.0	2	
	11/17	9:27	1 03	O	9,4	11.0	1		
B-21							99.6	2	
C-36	11/17	7:29	04	0	11.6	11.0	77.4	3	
245									
A-11	11/17	9.39	1,25	0.0	13.0	6.1	80.9	2	
B-20	11/17	9:43	43	1.6	24,1	1,6	72.8	2	
	11/17	9:47	38			2.8			
C-35				0.3	23.7	10.0	73.2	3	
D-50	11/17	9:50	33	03	13.9	5.8	800	4	
E-64	11/17	9:53	01	0.0	01	209	74.0	4	
				ļ					
246			ļ						
									D5440WED DW5 TO 001/07/07/07
A-9		-			-	-		2	REMOVED DUE TO CONSTRUCTION
B-16		ļ			1			2	REMOVED DUE TO CONSTRUCTION
205R									
A-11	11/17	6:38	.20	0.0	7.1	10.9	82.2	2	
	11/17	8:41	.17	00	20.1	201	73.9		
B-20								2	
C-33	11/17	8:45	15	1.2	39.8	07	58.3	3	
D-48	11/17	3,50	71.17	1.7	42.4		55.9	4	
E-62	11/17	8:54	30	0.0	23.1	1.7	73.2	4	
239						_			
	11/07	8:13	- 02		10 :	17 2	101	_	
A-11	1/17		- 03	0	18.1	12.3	686	2	
B-20	11/17	8:15	03	0	2	20.9	78.9	2	
C-35	1/17	8:17	03	0	2	20.4	78.9	3	
D-50	11/17	8:20	4.91	6	2	20.8	79.0	4	
E-64	11/17	8:24	-,07	0	.2	20.8	79.0	4	
L-04	7	101	-, 0 .			- 0	14.0	4	
					-				
240									
	11/17	7:49	0/	0	7.0	14.4	78.6	2	
	11/17	7151	08	0	1.1	20.6	78.3	2	
C-33	11/17		- 01	0	.2	209	2.2	3	
	11/17		01	0			78.9	4	
D-49	1/17			1		220	7011		
E-61	1/1/	8:02	-, <i>0</i> j	• (	, 3	20.8	78.8	4	
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C3 3INGNATORE	

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FA	SIGNATURE		

TECHNICIAN: A 120MO			TEMPERATURE: 55			BARO. PRESSURE: 25.21			
EM SERIAL#:	<u>G5039</u>	26	ı	WEATHER			NNY		
PROBE NUMBER	DATE	TIME_	PRESSURE (+/-)	% CH4	% CO2	% 02	% BAL	PURGE TIME (MIN)	COMMENTS
202									DEMONST DUE TO CONSTRUCTION
A-10		_		ĺ				2	REMOVED DUE TO CONSTRUCTION REMOVED DUE TO CONSTRUCTION
B-25				_				3	REMOVED DUE TO CONSTRUCTION
C-38									NEWOVED DOE TO CONSTRUCTOR
203									
A-10	11/19	10:29	.03	0.1	29	18.7	78.9	2	
B-25		16:32	.06	0.1		17.2	78.5°	2	
C-40	11/17	10:36	.06	0-1	21	19.0	78.9	3	
206									
A-10	11-19.12	758	02	0	7.4	13.0	79.6	2	
B-2 <u>5</u>	11-17-22	1000	05	O	10 i	12.1	77.7	2	
C-40	17-17-12	1002	06	0	16.1	8.0	75.9	3	
				_					
207	11.12	11000	Unt			10.0	70 6		
A-10	11-17-12	1000	48	0	io	19.2	79.8	2	
B-25	11-11-1	1024.		Ø		19.7	71.6	2	
C-40	11-17-22	1027-	-105	Ψ	-	26.4	4.1.2	3	
		<u> </u>				I .			
208	11-17-12	947	-102	(7)		20.5	79.4	2	
A-9.1	11-17-12		07	0	7.2	14.4	78.4	2	
B-25	11-17-12		03	Ø	C.8	14.7	78.2	3	
C-40	1-17-0	110	1.05	4	7.0		11.5		
210			_						
A-10	11-17-22	740	- 03	Ø	. 6	20 1	79.3	2	
B-25	11-17-12	847	-,07	P	,4	20.4		2	
C-39	11-17-12	81/4.	- Di	(I)	, [	208	79.1	3	
		1							
242									
C-42		153.	04	(¢)	2.(	17.3	80.6	3	
D-60_	11-172		0	<b>(7)</b>	81	69	N 0	4	
E-78	11-4-22	100	02	₫	4.3	14.7	87.6	4	
243	11	0100		00	10.0	-	181		
A-11		9:22		0.8	10.9	0.0	48.3	2	
	11/17	9:26	.04	0.0	6.0	183	857	2	
C-33	11/17	9:30	015	0.0	7-1-7	10.3	65.0	3	
	_					1	_		

SCS SIGNATURE

TECHNICIAN:			TEMPERA	TURE:		BARO. PR	ESSURE:		
					CONDITION	VS:	· · · · · ·		
PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% CH4	% CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
2028									
202R A B	11/17	11:22 11:24 12:55	0.02	0.1	10.0	0.2	80.7	2	
c	11/17	12:55	.07	0.5	0.2	205	79.4	3	
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PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
VADOSE									
ZONE									
PV203D	11/17	10:00	-,57	0.1	0.8	20.0	79.1		
PV204D	1417.22	1009	-3.87	<b>€</b>	. 8	19.7	79.5		
PV211D	11/17	10:24	0.07	0.1	1,0	19.8	79.1		
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LEA SIGNATURE	:

TECHNICIAN:	AROM	TEMPERA	TURE:	66	BARO. PRI	SSURE:	14.3		
GEM SERIAL #: GCD3926				WEATHER	CONDITION	is: SUNNY			4.
PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% CH4	% CO2	% 02	% BAL	PURGE TIME (MIN)	COMMENTS
213 A-13	11-15 4	727	9		2.8	16.2	809	2	
B-29 C-45	<u>11-1572</u> 11-1572	731 733.	7.24 13.24	.1'	12	20.9	78.4 78.4	3	
D-61 E-77	14572	739. 749.	-3.49 -1.63	Ø	.7	17.6	82.2 71.7	4	
214	11 1 70	803	-1.30	<u></u>	1.0	20.5	<b>₹.</b> ९		
A-13 B-30 C-48	11-15-22 11-15-22	105	-1.36 -12.19 -3.32	Ø	1.0	21.0 20.9	77.57 28.8	2 2 3	
215	1 (3 12)		7.52				10.0	_	
A-13 B-30	11-15-22	844	01	Ø	6.7	8.8	84.7	2	
C-47 D-64	11-15-22-	851 854	44	(D)	.7	20.2	79.7	3	
E-81	11-15-12	901	4.10	0	0.4	13.9	85.1	4	
216 A-14	llisir	926	04	.	. (	20.4	194	2	
B-43 C-62	11-15.22	932	- 03	1	1	20.3	36.71	3	
D-86 E-110	11-15-22	939	36	0	.1	20.7 20.4	29.4	4	
217 A-13	1115-22	1105	01	0	8.2	16.Q 17.7	71.2	2	
B-30	1145-22 145-22	1107	1/2	0	2.8	17.7	2.14	2	
	11-15-72	1043	- 102	0	28.7 40.0	· 4 7.7	70.9	2	
B-26.5 B-30	4-15-22	1000	F.07	0	71.0	2.2	23.5	2	
219 A-13	11-15-12	95F	-12	Ø	1.9	LE 5	79.5	2	
B-64 C-115	11-15-12	1000	01 +.22	0	2.8	20-0	79.8	2	
D-166 E-217	11-15-22	000	4.01	Ø	6.8	11.7	11.7	4	

28:00

LEA SIGNATURE	_
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PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
220	1 1								
A-14			0.02					2	9
B-40	11/15/27	11:07	-p 09	0.0	2.8	18.3	78.8	2	
C-97	11/15/22	11.08	10.11	0.0	1.1	19.4	79.5	3	
D-124	11/15/22	11:10	0.09	0.0	3/	14.8		4	<u> </u>
E-158	11/15/22	11:13	-0.02	0.0	0.6	20.7	78.7	4	
2208								1	
A-14			0.02					2	
6-35			10.03					2	
C-62	11/15/22	10:39	0.10	0-0	4.4	14.0	81.6	3	
D-86	11/15/22	10:41	0.14	0.0	2.2	17.4	80.5	4	
€-110	11/15/22	10:44	0.10	0.0	1.6	17.9	804	4	
221									
A-13	11/15/21	9:20	0.00	0.0	0.7	20.60	78.6	2	
8-56	11/15/22	7:21	0.01	0.0	0.1	20.8	79.1	2	
C-99	11/15/22	9:23	10.02	00	0.6	20.2	79.2	3	u
D-142	1/15/22	9:25	0.10	0.0	2.1	20.5	794	4	
E-185	11/15/22							4	
222			2 - 1				-		
A-13	11/15/27	9:57	0.01	0.0	2.7	17.2	80.1	2	
B-54.8			0.03			20.5		2	
C-96.5			6.14				794	3	
0-138.3			to.01				80.2	4	
E-180					0.6		79.4	4	
223		- 1	1						
A-13	11/15/2	217	0.01	20	7. 2	101	87 9	7	
-	11/15/22						82.7	2	
8-37.5	11/15/22	8-21	TO 00	0.0	1.0	18 2	80 2	2	
C-62	With	0.21	-0.01	0.0	2 1	11 11	00.2	3	
D-86.5	11/15/22 11/15/22	0.70	60 000	00	3./	16 9	00 5	4	
6111	11/2/61	0.09	0.04	0.0	4.8	16. 1	80.4	4	
OI I		-	-			1	-		
224	1.1 -1-	7, 7			0 -	13 -	20 0	1	
A-13	11/15/27	1:35	0.04	0.0	0.7	77.3	77.7	2	
8-67.5	11/15/22	7:37	0.42	0,0	0.2	20.4	19.5	2	
C-122	11/15/27	7:39	0.03	0.0	0.1	20.7	79.1	3	
-177.5	11/15/22	7:44	11.25	0.0	0.1	209	78.9	4	
E-232	11/15/22	7:49	824	0:0	0.1	20.9	79.0	4	
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PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	% BAL	PURGE TIME	COMMENTS
					1		J	(MIN)	
220									
A-14	11/2/12	10:51	to.04	0.0	1.3	18.3	80.5	_ 2	in the second se
B-40	1/1/2/127		to.01		1.9	18.0	80.1	2	
C-87	11/2/27	10:55			4.1	15.9	80.0	3	
D-124	1/12/127	10:57			1		80.7	4	
E-158	11/2/27	11:01	to.03	_	0.2	2010	79.1	4	
	11	77.07.				<u></u>	7.7		
220B									
A-14	11/21/72	10:10	0.21	00	22	227	797	2	
B-38	11/21/22		0.09				747		
	1.171/22						CIL	. 2	
C-62			0.17			13.8	81.5	3	
D-86	1 4 1 1		-0.06	F-			80.Z	4	
E-110	MAIL	10:27	-0.14	0.0	1,8	18.1	80.1	4	
	,								
221	1/2/25			,7	-	3.5.6	70 .		
A-13	11/21/22		-0.29				17./	2	
B-56	11/2/127	8:57	0.04	_	0.2	20.7	79.1	2	
C-99	11/4/22	8:59			0.7	20.1	79.2	. 3	
D-142	11/2/12	9:01	0.15	0.0	0.1	20.6	79.3	4	
E-185	11/2/21	9:04	0.05	0.0	0.5	19.8	79.7	4	
	1 1								
222									
A-13	11/21/22	9:13	to.01	0.0	3.4	16.3	80.3	2	
B-54.8	4 4 4 1	9:14	0.06				79.1	2	
C-96.5	11/2/12	7:16	0.03	0.0		20.0	79.6	3	
0-138.3	11/2/127	9:19	0.05	0.0			80.7	4	
E-180	1/12/27	7:23	2	0.0			79 7	4	
L-100	MANDE	1.23	/ 6 / /	0.0	1.0	7.3	1-1	4	
222			_	-	-				
223_	11/2./2.	dian	TA 20	C 20	· 4 1	10.0	010		
A-13	11/11/12	0.63	0.39	0:0	7.4	10:0	81.8	2	
B-37.5	11/21/22	8:25	0.04	0.0	75	10.8	81.7	_ 2	
C-62	11/21/22	8:28	0.18	0.0	1.5	18.5	80.0	3	
D-86.5	11/21/22	8:31	0.02	0.0	3./	16.7	80. Z	4	
E-111	11/21/22	8:34	0.07	00	3.3	16.4	80.3	4	
	′ /								*6
224	1								
A-13	11/2/22	7:46	0.05	0.0	07	19.5	79.8	2	
3-67 5	11/21/22	7:48	-0.28	0.0	02	20.2	79.6	2	
C-122	11/2/127	7:50	011	10.15	0.2	20.5	19.3	3	
-177 5	11/2/127	7:24	10.78	0.0	0.7	208	79.D	4	
E-232	11/71/27	7:59	-7.72	1.0	1.7	709	78.9	4	
	111111	364		V1 60	4 7 6-			7	
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PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL	% VOL	% O2	% BAL	PURGE TIME	COMMENTS
		-	, , , ,					(MIN)	
225	1.1.0		20				0 -		
A-13	1416	9:19	02	00	1.8	17.8	80,9	2	
B-72	1y s	9:21	-,01	00	0.4	185	81.1	2	
C-1131	IVIS	9:24	0.01	0.0	0.2	20.3	79.5	3	
D-190	11/15	9:28	_	00			79.9	4	
E-244	1715	9:33	0.01	0.0	02	203	79.5	4	
						<u> </u>			
226		0.4							
A-13	11/15	8:16	T.	0.0		20.9		2	
B-64	11/15		-10.40			20.3	79.6	2	
C-114	11/15		-11.21			203		3	
D-164	11/15					20.3		4	
E-208	11/15	5:32	~12.00	0.0	10.Z	20.2	79.5	4	
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227									
A-13	11/15	8158	01	0.0	01	20.3	79.6	2	
B-48.7	11/5	8:91	-1.07			20.9		2	
C-84.4	11/15	8:95	.53	0.0		203		3	
D-114	11/15	850	-1.22			202	795	4	
E-115.7	11/15	8:59	7.71	0.0	0.3	20,1	79,5	4	
228									
A-13	1/15	8:57	0.01		0.3	20.	796	2	
B-63	11/15	9:00	93	0.0	1.1	19,2	79.7	2	
C-113	11/15	9:09	-,95		0.3	20.2	79.5	3	
D-163	11/15	9:08	57		0.3	20.3	74.3	4	
E-213	11/15	9:13	106	00	1.9	17.8	80.9	4	
229									
A-13	11/13	7:49	99	0.1	1.3	19.3	79.3	2	
B-48.7	11/15	7:53	·		01		79.0	2	
C-84.4	11/15	7:58	9	0.0	0.1	20.9	79.0	3	
D-114	11/15		7/6.75			19.7	79.6	4	
E-155.7	11/15		-10.20		0.1	20.9	70.0	4	
	1.7		, - ,						
230		T							
A-16								2	REMOVED DUE TO CONSTRUCTION
B-33		1						2	REMOVED DUE TO CONSTRUCTION
C-50								3	REMOVED DUE TO CONSTRUCTION
C-30				-					
231						<del>                                     </del>			
								2	REMOVED DUE TO CONSTRUCTION
A-13						<u> </u>		2	REMOVED DUE TO CONSTRUCTION
B-26		1				<u> </u>		3	REMOVED DUE TO CONSTRUCTION
C-39	<del> </del>		-		-	+		4	REMOVED DUE TO CONSTRUCTION
D-51 E-66			-		-	<del>                                     </del>		4	REMOVED DUE TO CONSTRUCTION
	1	1							

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PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
241						<u> </u>	-	(,	
A-13	11-15-22 11-15-22 11-15-22 1-15-22 1-15-22	1120	2.36	Ø Ø	1.1	20. U	79.9	2	
B-28	11-15-22	1122	7.60	0	1.1	20. U 70.0	99.9	2	
C-47	11-15-22	1124-	01	0	1-1	20.1	79.6	3	
D-64	11-15-22	1127.	197	0	1.1	20.3	79.6	4	
E-85	48.W	1131-	12.12	Ø		20.4	79.5	4	
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	BARO. PRESSURE: 28-80			TURE:		MACA	AKINO	HNICIAN:		
	vs: SUVMY				WEATHER CONDITION		ARMO = MACY 6504543		EM SERIAL #:	
COMMENTS	PURGE TIME (MIN)	% BAL	% O2	% CO2	% CH4	PRESSURE (+/-)	TIME _	DATE	PROBE NUMBER	
REMOVED DUE TO CONSTRUCTION	2								202 A-10	
REMOVED DUE TO CONSTRUCTION REMOVED DUE TO CONSTRUCTION	3								B-25 C-38	
									203	
	2	79 9	19.9	3	~\ ~\	08	902		A-10	
	3	39.8	19-9	,3	8	04	905	12:2(-72	B-25 C-40	
	2	Gi \	1(6	7.3	0	- 12	1072	12-71-12	206	
	2	39.0	12.2	8.8	88	- 09	1029 -	7-11.12	A-10 B-25	
	3	45.7	4.7	17.2	0	45°	1031 -	17-74-72	C-40	
	. 2	79.5	20.9	Ø	0	- O.U	1257	12-11-11	207 A-10	
	3	79.1	28.7	1.4	Ø	13	1301- 1304-	12-21-22	B-25 C-40	
									208	
	2	79.3	13.0	7.7 4.7	0	70.	63	7-4-21	A-9.1	
	3	36'3	13-1	7.2	0	30.=	F101	1011	B-25 C-40	
	2	795	20.1	Ч	0	05	wa 3	12-21-21	210	
	2	74.4	20.2	, 4	Ø	4.05	925	12-11.12	A-10 B-25	
	3	47.Y	28.1	. [	<i>D</i>	04	427	121.12	C-39	
	3	8(.4	4.41	1.2	Ø	7.29	936	12-21.2	242	
	4	85.0	7.4	3.0	0	08 04	939	12-12-12	D-60 E-78	
	2	18.2	3.2	/ 7	Y	1 }	7.02	47-71.71	243	
	2 2	8,60	4.9	7.3	0_	107	750	12-11-12	A-11 B-20	
	3	83.6	16-1	·Ψ	Ø	.03	754	12-21-72	C-33	

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PROBE	DATE	TIME	PRESSURE	% VOL	% VOL	%	%	PURGE	COMMENTS
NUMBER			(+/-)	CH4	CO2	02	BAL	TIME	
244			_			_		(MIN)	
244 A-11	17.21.76	1000	107	0	6-0	1.4	82.6	2	
B-21	12 51 00		08	. \	9.1	11.6	79.2	2	
C-36	12.21.22	Pont	04	<u>6</u>	22.6	<del></del>	74.1	3	
C-36	12301. 11	1001	104		10.0	7-5			
245									
A-11	0-21-22	-8716	02	0	119	3.4	KY2	2	
B-20	12-21-22	109	.61	1.7	17.31	13	73,0	2	
C-35	2-21.22	211	01	iy	712	17_	37.2	3	
D-50	1221.22	817	103	,2	17.7	1.2	81-9	4	
E-64	1221-22	873	0[	0		20-9	GYE	4	
		0	- W -	W-			100	· · · ·	
246									
A-9								2	REMOVED DUE TO CONSTRUCTION
B-16								2	REMOVED DUE TO CONSTRUCTION
5-10									
205R									
A-11	12:21-12	720	.03	0	10-1	7.1	7.7	2	
B-20	12-21-22	777-	-01	11	18.0	0.2	27.8	2	
C-33	17-11-71	776	1.18	1.0	34.8	7.1	17-1	3	
D-48	17:71:72	730	. 03	1.5	40.9	17	56-8	4	
E-62	12-21-12	734.	43	0	22.6	1.9	Y. F	4	
	2532		1		- 3		-		
239									
A-11	1271.72	838.	01	0	12.5	15.0	72.5	2	
B-20	\	960	01	Ø	, [	20.8	79.1	2	
C-35	17/1.72	907	D4	$\varphi$	Ø	21.0	79.0	3	
D-50	17-21.12	305	63	Ø	Ø 13	205	79.2	4	
E-64	17-21.12	909	70 -	0	Ø	21.0	79.0	4	
240									
A-11	12-71-22	1831	t. 01		7.)	9.1	79.7	2	
B-20	12-11.2	<del>\$33</del>	05	.	8	20.2	78.9	2	
C-33	12:21.22	835.	70.	. 1	0	21.0	78.9	3	
D-49	1221.22	839.	103	0	.11	20.9	79.8	4	
E-61	12-21.12	844.	- 63	6	. (	20 87	36.0	4	
		-							
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VADOSE  ZONE  PV203D 12-21-72 FCG OD J J J J J J J J J J J J J J J J J J	
PV203D 12-21-22 FV3 · OD .   -3 19-4 74-7  PV204D 12-21-22-391 0 · 6 19.8 79-6  PV211D 12-11-21-25 01 0 · 1 19.9 78.8	
PV204D 12-U-721052-391 0 6 19.8 79.6  PV211D 1221-725 01 0 1 19.9 78.8	
PV211D 1221-24-25 Ul 0 17 19.8	
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LEA SIGNATURE:	
LLA JIUNATUNE.	

TECHNICIAN:	Arons	MARES	TEMPERA	TURE:	٥	BARO. PR	BARO. PRESSURE: 25-80		
EM SERIAL#:				WEATHER	CONDITION	IS: SLNNY			
PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% CH4	% CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
202R									
А	12/21 12/21 12/21	9:21	01	0-1	8.6	0.2	91.1	2	
А В С	12/21	7:24	-01	0.1	0.2	167	83.0	2	
С	13/21	9:28	- 03	00	0.1	20.2	79.7	3	
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	8.17	BARO. PRESSURE: 28.17			TURE: 6	TEMPERAT	,	John/M	
					WEATHER CO		4	G50546	M SERIAL #:
COMMENTS	PURGE TIME (MIN)	% BAL	% O2	% CO2	% CH4	PRESSURE (+/-)	TIME	DATE	PROBE NUMBER
		1	1					1	213
	2	82.Z	16.5	1.4	0.0	-D.DE	1:19	12/20/21	A-13
	2	79.5	20.5		0.0	12.110	1.21	15/20/27	8-29
	3	19.5	20.5	0.0	0.0	-3.14	1:23	12/20/22	C-45
	4	79.5	20.5	0.0	0.0	-0.88	1:210	12/20/22	D-61
	4	79.5	20.5	0.0	0.0	18.95	1:30	12/20/21	E-77
		400							214
	2		19.9	21		-0.00		12/20/22	A-L3
	2	79.0	Charles and the		0.0		3:03	12/2/22	B-30
	3	78.9	208	03	0.0	19.44	3:01a	rzpidzz	C:48
		- /							215
	2	81.4	7.1	5.5	0.0	0.46	1:37	12/20/22	A-13
	2	639	11.1	5.1	0.0	0.03	1:39	12-12-0127	8-30
	3	77.47	217.7	0.0	0.0	-0.110	1:41	12/10/22	C-47
	4	803	19.4	0.3	0.0	0.03	1:44	12/21/22	D-64
	4	86.7	8.9	4.4	0.0	70.03	1:49	12/24/22	E-81
	1	01 -7							216
	2	81.7	17.2	1.0	0.0	12.01	2:00	12/20122	A-14
	2	80.2	17.2	0.1	0.0	-0.00	2:02	12/20/22	8-43
	3	79.9	200	D.I	0.0	0.14	2:04	12/2012	C-62
	4	80.42	19.0	0.2	0.0	D. 34	2:07	12/20/22	D-86
	4	80.3	19.1	0.5	0.0	10.09	2:12	17/2/22	E-110 -
		C	100 1						217
	2	80.3 80.7	12.6	0.1	0.0		11:28		A-13
	2	80.7	19.7	0.1	0.0	0.01	11:30	Mign	8-30
									718R
	2	77.7	0.	22.2	0.0	0.30	2:33	12/2022	A-11
	2	38.4	0.5	61.2	12.0	0.01	2:35	12/20/22	8-26.5
	2	11.1	0.5	86.3	0.0	-0.07	2:38	12/2/22	8-30
		771 5	10.0	6				1,1	219
	2	81.0	18.9	0.1	0.0	8.00	11:02	12/2012	A-13
	2	80.1	19.1	0.1	0.0	0.01	11:04	12/20/22	B-64
	3	80.5	19.4	0.1	0.0	0.03	11:06	12/20/22	C-115
	4	180.2	19.7	0.1	0.0	0.02	11:09	12/2012	D-166
	4	80.D	20.0	0.1	0.0	0.01	11:13	ithan.	E-217

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PROBE	DATE	TIME	PRESSURE	% VOL	% VOL	%	%	PURGE	COMMENTS
NUMBER	DATE	111112	(+/-)	CH4	CO2	02	BAL	TIME	
						-		(MIN)	
220									
A-14	12/20/22	957	0.02	0.6	0.1	20.9	79.0	2	1
B-40	12/2012	10,30	0.03	0.0	0 1_	204	790	2	
C-87	12/20/22			0.0	0-1	20.9	79.0	3	
D-124	12/20/20	10:00	0.01	U.O	0.1	20.9		4	
E-158	12/20/12	13017	0.02	0.0	0.1	20.9		4	
L-136	17 001 1	1/10 1/2-	0.02	0.0	V-1	20 .			
			_						
220B	A1161 -	0.19	70 000	2.2	A :	221.	79.3		
A-14	9/20/22		007	<del></del>	0. j	20.6		2_	
B-38	12/20122	9.31	-0.06	0.0	0.1	20.7	79.2	2	
C-62	12/20/22	9:33	-0 il	0.0	4.2	14.8	80.9	3	
D-86	12/20/22	9.38	-009	(D. U	4.1	14.8	હાં.)	4	
E-110	12/20/22	9,43	000	00_	0.j	20.9	79.0	4	
221									
A-13	12/20/22	8.71	0.01	0.0	1.0	20.2	78.8	2	
	11/2/2	4 20	- N 15	DB	0.2	20,8	789	2	
B-56	14/24/12	d.72	10.10	000	0.2	20,0	70 7		
C-99	14014	0.76	10.15	0.0	0.3	20.0	77.7	- 3	
D-142	MAM	3:48	0.05		0.1	20.2	19.1	4	
E-185	12/20/22	8.52	10.01	0.0	0.3	19.8	79.9	4	
						_			
222									
A-13	12/10/21	9:05	0.03	0.0	2.1	17.6	80.2	2	
B-54.8		4:06	-0.11	11.17	Di	19.9	30.0	2	
C-96.5		9:09	0.04	00	04	19.8	74.8	3	
		9:12	-004	0.0	3.7	16.2	801	4	
D-138.3		9:10		00	2.3	12.4	80.2		
E-180	MANIN	7.10	-2.10	0.0	2.3	1.7	00.2	4	
223	1	<i>4</i> 2	0						
A-13	1420/22	5.11	0.03	00	0.5	20.5	79.0	2	
B-37.5	142012	813	0.17	0.0	4.5	14.7	81.0	2	
C-62	142411	814	0.06	0.0	0.6	20.2	79.2	. 3	
D-86.5	12/20127	417	17.01	0.0	2.60	11.3	80.1	4	
E-111	12/20/27	3:21	12.01	10.10	1.2	19.3	79.5	4	
	1-1-6	7-1			,		1 - 2		
22.1									
224	10/2-12-	7.11.1	- 1 - 1	Λ =	A -4	1	700		-
A-13	Militage	7:44	70.01			20,1	17.	2	
B-67.5	MUA	1.46	0.35		0.2	40.3	17.5	2	
C-122	144122	7:48	-0.22	0:0	02	20.6	11.2	3	
D-177.5	12/2012	7:52	12.30	10.0	0.2	209	78.9	4	
E-232	12/20/22	7:57	7.43	0.0	0.2	209	78.9	4	
		-							
-									
								_	
			_			<u> </u>			

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					24.401	04 1	%	PURGE	COMMENTS
PROBE NUMBER	DATE	TIME	PRESSURE   (+/-)	% VOL CH4	% VOL CO2	% O2	BAL	TIME	
NOIVIDEN								(MIN)	
225									
A-13	12/20	9:24	- 08	0.0	1.3		80.1	2	
B-72		7:27	03	0.0	0.5	19.6	79.9	2	
C-1131	12/20	9:29	01	0.0	0.3	203	79.4	3	
D-190	12/20	9:34	05	00		20.3	79.4	4	
	12/20		04	ຄ.0	03	20.2		4	
L-244	, _ , _ ,								
226		<del>                                     </del>							
226	12/20	8:05	.04	0.0	01	204	79.5	2	
A-13	12/20	8:08	-10.80		0.1	203	796	2	
B-64	12/20		-12.04		0.1	202	79.7	3	
C-114			-11.77			203	79.6	4	
D-164	12/20	8.17		0.0	0.3	20.2	79.5		
E-208	12/20	6.22	-12.93	0.0	E1. 3	L	79.3	4	
					<del>                                     </del>				
227		-	1.7.50				701		
A-13	12/20	8:37	-12.93	0.0		20.2	79.5	2	
B-48.7	1460	8:38	-1.75	00	0.1	200	798	2	
C-84 4	1420	830	1.52	00	01	201	798	3	1
D-114	12/20	8:43	-1.92	-	03	19.8	79.9	4	
E-115.7	12/20	8:47	-1.44	00	0.3	19.8	79.9	4	
228									
A-13	12/20	8:56	49	0.0	1.2	18.4	80.4	2	
B-63	12/20	8:59	-1.72	0.0	0.8	19.5	79.7	2	
C-113	14/20	9:03		0.0	0.1	20.2		3	
	12/20	9:08	.59	0.0	0.2	20.3	79.5	4	
D-163	12/20	9:14	-1.62	1	1.5	18.5	80.1	4	
E-213	140	117	-1.62	0.0	1.3	10	0 - 1	<del></del>	
			<del> </del> -		-				
229	10 10 0	-2.20	- 65		10	18.6	80.3	-	
A-13	12/20				1.0			2	
B-48.7	12/20		-5.20		0.2	208			
C-84 4	12/20	7:43	10	00	0.1	209	79.0	3	
D-114	12/20	7:47	-17.02	0.0	0.6	20.8	79.4	4	
E-155 7	12/20	7:53	-10.0	0.0	0.2	20.9	78.9	4	
						ļ <u>.</u>	ļ		
230							-		
A-16								2_	REMOVED DUE TO CONSTRUCTION
B-33								2	REMOVED DUE TO CONSTRUCTION
C-50								3	REMOVED DUE TO CONSTRUCTION
221			1						
231	-	-				1	1	2	REMOVED DUE TO CONSTRUCTION
A-13					-			2	REMOVED DUE TO CONSTRUCTION
B-26		-	+	-		+	-		REMOVED DUE TO CONSTRUCTION
C-39			-			-		3	
D-51				-		-	+	4	REMOVED DUE TO CONSTRUCTION
					1			4	REMOVED DUE TO CONSTRUCTION

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	24		BARO. PRE	<u>to</u> _		TEMPERA		1/1/WS	
		MY	15: SU	CONDITION	WEATHER	_	05	650271	SERIAL#
COMMENTS	PURGE TIME (MIN)	% BAL	% O2	% CO2	% CH4	PRESSURE (+/-)	TIME	DATE	PROBE IUMBER
									202
REMOVED DUE TO CONSTRUCTION	2					4	+		A-10
REMOVED DUE TO CONSTRUCTION	2					2	L		B-25
REMOVED DUE TO CONSTRUCTION	3		1	<u>-</u>		. ]			C-38
		-							
	2	79.5	20,1	0.4	0.0	•.06	9:24	101	203
	2	79.7				.03	9:25	1/2	A-10
	3	79.7	20.0		0.0	~. 07	9:31	nt	B-25
	3	7.1.1		<u> </u>	0.0	/	1. 71	7	C-40
								124	206
	2	99.5	-	9.0	0.0	-0.01	10:12	1124	A-10
	2	79.6		13.7	0.0	LH.	10:i5	1/24	B-25
	3	75 4	5.2	19.4	0.0	0,02	10:18	1/24	C-40
									207
	2	78.3	16.6	51	0.0	0.72	8:02	1/27	207
	2	784		36	0.0	18.57		1/27	A-10
	3	94.0	20.9	ונט	0.0		3.08	1/27	B-25 C-40
		• • •			0.0	ر ,,,,	808	1161	C-40
									208
	2	78.8		hele	0.0	-0.05	9:32	1/24	A-9_1
	2	20.4		127	0.0	-0-12		1/24	B-25
	3	81.3	14.4	4.3	0:0	-i.0Z	1:40	1/24	C-40
								_	210
	2	78-8	18-3	2.8	0.1	-0.31	10:65	124	210 A-10
	2		194	0,1		-0.03		<del></del>	B-25
	3	\$1.3			0.0				C-39
				<u> </u>	<u> </u>	<u> </u>	ر د	123	
101			675 21						242
	3	74.8	18.81	1,5	0-6	0.13	8.52	1/24	C-42
	4	85.1	4.8	8.1	0-0		858	1 24	D-60
	4	80-5	16.3	3.2	0-0	-0,09	9:02	1/26	E-78
		_							242
	2	79.6	209	0.1	0.0	0.01	8:25	1/26	243 A-11
	2	84.4		2-5			8:27	1/26	B-20
	3	828		1.4	0.0		8:32		C-33
			1- /-	, ,		,	-	17 00	

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DDODE	DATE	TIME	DDECEUDE	I 0/ 1/01	T 9/ 1/01	1 %	%	PURGE	COMMENTS
PROBE NUMBER	DATE	HIVE	PRESSURE (+/-)	% VOL CH4	% VOL CO2	02	BAL	TIME	COMMENTS
NOWIDER			'''	CITY	602		)	(MIN)	
244									
	1/24	9:12	039	0.0	11.0	4.1	84.9		
A-11								2	
B-21	1/24		-6.14	0.0	0.3	20.2	74.5	2	
C-36	1/26_	19:18	6.44	0.0	14.3	4.7	70.0	3	
245							<u> </u>		
A-11	1/2/	8:42	.02	0.0	6.9	12.7	80.4	2	
	1/0/	8:44	06		4.9	20.0	75.0		
B-20	1/26							2	
C-35	1/26	8:48	.20		19.3	4.9	75.4	3	
D-50	1/26	8:52	.66	0.0	3.1	17.9	79.1	4	
E-64	1/26	8:58	0.01	0.0	0.3	20.9	78.8	4	
245		<del>                                     </del>							
246		+			-	1			
A-9		1				1		2	REMOVED DUE TO CONSTRUCTION
B-16								2	REMOVED DUE TO CONSTRUCTION
205R						1			
A-11	1/26	7:34	- 07	0.0	9.2	4.9	85.9	2	
	1/26	7:36				1			
B-20					20.0	7.0	76.0	2	
C-33	1/26	7:41	22	1.1	43.1	0.7	55.2	3	
D-48	1/26	7:45	35	2.1	48.9		48.5	4	
E-62	1/26	7:51	-8.22	0.0	18.6	5.6	75.9	4	
770									
239	11-1	8:13	016	4.6	18.5	100	210	-	
A-11	1/24			0.0	<del>+</del>		71.0	2	
B-20	1 24	8:19	-0,20	0.0	1.0	20,9	78.0	2	
C-35	1124	8.12.	6.10	0.0	0.1	20.9	790	3	i i i
D-50	1/26	8:25	0.36	00	0.2	20.7	24.1	4	
E-64	1124	8:29	-0.05	0.0	0.1	20.9	74.0	4	
L-04	11.4	0.2.	-,-0	UP	0.1		, , , ,		
		-				-			
240	11		e. 1 2	-0 -	11 10	16 -	neg		
A-11	1/24	17:35	~0,11	0.6	11-0	10.0	78.2	2	
B-20	1124	7-35 7-39 7-46 7-58	-0-14	0.6	0.1	20.9	79.0	2	
C-33	1/24	7-96	-0-04	0.0	0.(	70.9	790	3	
D-49	1176	758	-0.13	0.0	0.2	709	78-9	4	
	1/26	0,03	- 1	0 A	Oct	7A 4	78-9		
E-61	1124	8-UJ	77.11	Q, Q	10.1	20.7	10-4	4	
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TECHNICIAN:	Marios	М	TEMPERA	TURE: 7	0	BARO. PR	ESSURE: 8	2.4_	
GEM SERIAL#	65076!	5		WEATHER	CONDITION	is: Suni	14		
PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% CH4	% CO2	% 02	% BAL	PURGE TIME (MIN)	COMMENTS
202R A	1/26	9:39	25	0.0	0.4	19.7	79.9	2	
В	1/26	9:41	-4.20	0.0	0.8	18.3 20.9	81. o 79.1	3	
D	,							3	

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LLM	210INATORE	

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
VADOSE									
ZONE	ļ								1
PV203D	1/26	9:11	16	0.0	0.7	20.3	79.0		
PV204D	1/24	9:55	-11.15	0-0	2-2	184	79.5		
PV211D	1/26	9:20	24	0.0	0.6	20.0	79.3		
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	7		_						
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TECHNICIAN MARCELINO B		B	TEMPERA	TURE 6	4	BARO. PRE	SSURE 8	4.4	
	650608		,	WEATHER (	ONDITIONS	:Sunu	My.		
CIN SCHOOL I							,	D116.55	
PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% CH4	% CO2	% O2	% BAL	TIME (MIN)	COMMENTS
NUMBER	DAIL								
213									
A-13	1/24/23	7:36	0.06	0.0	0.1		78,9	2	
B-29	11 24/23	7:48	0.09	0.0	0.1	21.0	78 9	2	
C-45			-1.08	0.0			79.0	3	
D-61		7:56	-231	00		20.9		4	
E-77	1/24/23	8 00	-22.37	0.0	01	20.9	79.0	4	
200	11-11-7								
214									
A-13	1/24/23	0.19	0.08	0.0	0,2	20.7	79.1	2_	
8-30	1/24/23	38.4	-16.89	00	0.1		791	2	
C-48			-2037	0.0	1.9	20.3	77.8	3	
C-40	1700-								
215	1								
A-13	1/24/23	8 28	-0.19	0.0	01	20.7	79.2	2	
	1/24/23			0.0	4.5	11.6	83.9	2_	
B-30	124/23	8:33		0.0	0.1	20.7	79.2	3	
C-47	1/24/23			0.0	0.5	_	79.6	4	
D-64	1/24/23	8:42	-0.65	1	35	13.6	82.6	4	
E-81	1101103	0-1-	0.00	0.0	1				
	+								
216	124/25	9:00	-0.73	00	0.1	20.4	79.5	2	
A-14	1/24/23	9:05	0.09		0.1	20.4	79.5	2	
B-43		9:10	-0.27		0.1	70.4	795	3	
C-62	1/24/23	9.15	-0.25	1.04	0.1	20.3	79.6	4	
D-86	124/23	9:20	0.00		0.1	20.3	796	4	
E-110	1124103	1.20	0.0	0.0	0/1	2.0		1	
		-	1	1					
217_	1/24/23	9:41	0.05	0.0	9.2	10.0	80.8	2	
A-13	1/24/23				4.6	7.8	85.6		
B-30	1127123	1171	0.03	0.0	4.0		2019		
		-	-		1	1			
218R	lanta.	10-40	1-1.61	0.0	18.5	0.0	8/5	2	
A-11	1/24/23	10:44	1		2.0		81.7	2	
B-26.5	1/24/23		10.02	0.0	820	0.4		- 1	
B-30	1/24/23	10.48	-0.22	0.0	040	0.4	11.	-	
	-	-	+ -	-	+	1	-	+ -	
219				-	. 5	10.1	799	1	
A-13	1/24/23		רר.ט נ	0.0	1.5	18.6			
B-64	1/24/23	10-16	1-0.0	10.0	9.4	4.2	86.4		
C-115	1/24/23	10:19	-0.34	00	2.0	16.9	31.1	3	
D-166		10. 22	-0.38	0.0	0.9	19.2	79.9		
E-217	1124/23	10:2"	7 0.03	0.0	41.9	12.2	104.7	4	

SCS SIGNATURE: Alexander

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PROBE	DATE	TIME	PRESSURÉ	% VOL	% VOL	%	%	PURGE	COMMENTS
NUMBER			(+/-)	CH4	CO2	02	BAL	TIME	
					-			(MIN)	
220	1/24/23	111101	FROE	n (2	1 1	17.1	010		1-
A-14	10103	1117		000	1.1	169 7	01,5	2	
B-40	1124125	11.13	10.16	2.0	0.2	100	80.1	2	
C-87	1/2/1/25	11:11	0.05	0.0	0:1	200	73 9	3	
D-124	1/24/23	11:20	to 24	0.0	0.0	20.1	70 1	4	
E-158	11416	11.00	0.24	0.0	0.1	20.4	17/2	4	
220B	12.1142	191.11	שים חפי	20	01	10 4	012		
A-14	124/23	10:52	0.00	0.0	0.1	18.0	0/. 5	2	
B-38			70.05					2	
C-62	124125	10:36	0.05	0.0	4.0	11.60	87.4	3	
D-86	1/24/12	10:37	0.46	0.0	3.8	11.6	84.6	4	
E-110	1/24/23	10:42	-0.10	0.0	3.7	11.9	94.2	4	
	1 1								
221						12 m	-		
A-13	1/24/23	9:08	10.05	0.0	0.1	40.4	14.6	2	
B-56	1/24/23	7:10	10.04	0.0	0.9	19.9	79.2	2	
C-99	1/24/23	9:12	0.33	0.0	2.5	17.4	80.2	3	
D-142	1/24/23	9:15	0.30	0.0	0.1	20.0	79.9	4	
E-185	1/24/23	9:19	10.06	0.0	1.1	19.0	79.9	4	10.0
	1 7								
222									
A-13	1/24/23	9:50	TO.06	0.0	2.8	16.6	80.6	2	
B-54.8	1/24/23	7:52	0.07	0.0	0.1	19.8	80.Z	2	
C-96.5	1/24/23	7:53	10.07	0.0	0.3	19.5	80.Z	3	
D-138.3	1/24/23	9:55	-0.19	0.0	5.5	13.9	80.7	4	
E-180	1/24/22		233		3.6	15.6	80.8	4	
	11-11-1	,							
223		-							
A-13	1/24/23	8:31	PD 117	0.0	1.1	19.5	79.3	2	
B-37.5	1114122	8 27	to 14	0.0	2.0	11.7	81.4	2	
C-62	1/24/23	4:29	1007	0.0	0.7	20 7	79.7	3	
D-86.5	1/24/23	8:41	to or	00	1. 2	17.8	809	4	
E-111	1/24/23	C. 44	-nil	00	0.7	19 1	807	4	
E-111	11-11-1	51-1	UITO	U.U		7 1 . 1		7	
224									
224	Jailan	-1. Li	-0.0b	n A	21	70 i-	79 2	2	
A-13	1/2/12/1	7150	-0.00	200	21	20.00	76		
B-67.5	1/23/22	71.01	0.85	0.0	0.7	100	76 ~	2	
C-122	1/2/1/20	1.34	0.01	0.0	0.1	200	70 0	3	
D-177.5	1104104	1.58	15.22	10.0	01	100	100	4	
E-232	1/4/05	8 . DE	-11:52	00	0.1	20.9	11.0	4	
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				24.1401	2/ 1/01	n/	%	PURGE	COMMENTS
PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	BAL	TIME	l Comments
MOMBEN			(17)					(MIN)	
225									
A-13	1/14	9:46	35	0.0	1.3	20.2	78.5	2	
B-72	1/29	9:48	40	0.0	0.4	20.1	79.5	2	
	1/29	9:52	21	0.0	0.2	20.7	79.2	3	
C-1131	1/29	9:67	19	0.0	0-1	206	743	4	
D-190	1/29	10:01	37	0.0	0.1	20.4	79.4	4	
E-244	1/61	101	-57	0,0	0.7	20.7	11.	4	
226		_					7011		
A-13	1/24	8:21	06	0.0	0.1	20.5	79.4	2	
B-64	1/29		-11.73	00	0.1	20.9		22	
C-114	1/24	8:28	-12.90	0.0	0.1		79.5	3	
D-164	1/24	8:33	-12.69	0.0	0-1	20.5	79.4	4	
E-208	1/24	8.38	-13.59	0.0	0.2	20.6	79.2	4	
E-208	1/61	1	13						
						-			
227	1/24	0.01	- 12	00	0.2	20.4	70 4		
A-13	1/24	8:46	15	0.0	<del></del>	20.4	20.	2	
B-48.7	1/24	D:T7	-247	0.0	0.1			2	
C-84.4	1/29	8:52	-1.92	00	0.1	20.3	79.7	3	
D-114	1/27	8:57	-2.26	0.0	0-1	20.1	79.8	4	
E-115 7	1/24	9:02	-1.15	0.0	0.3	19.5	80.2	4	
	1							]	
228									
	1/24	9:17	=.13	0.0	0.3	19.5	80.2	2	
A-13	1/24	9:19	27	0.0	0.1	20.0	79.9	2	
B-63		9:21	-1.62	0.0	0.7	19.8	79.5	3	0.0
C-113	1/24			<del></del>		207	79.2		
D-163	1/24	9.26	65	0.0	0-1			4	
E-213	1/24	9:30	-1.71	0.0	1.3	20.2	78.5	4	
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229								<u> </u>	
A-13	1/24	7:44	48	0.0	1.5	17.3	81.1	2	
B-48.7	1/24	7:48	i2	0.0	0.2	20.9	78.9	2	
	1/24	7:53	10	0.0	0.2	20.9	78.9	3	
C-84_4	1/24	7:58	-19.01		1.0		79.9	4	
D-114	+-/	8:05		0.0	0.1	20.9		4	
E-155.7	1/24	0.05	- [1	0.0	10-1	120.1	76.1		
		-	-		-	1	-	<del> </del>	
230	-		-		-	1	-		
A-16	<u> </u>			ļ				2	REMOVED DUE TO CONSTRUCTION
B-33								2	REMOVED DUE TO CONSTRUCTION
C-50								3	REMOVED DUE TO CONSTRUCTION
331									
231	-	+		-				2	REMOVED DUE TO CONSTRUCTION
A-13	-		+	-			<del>                                     </del>	+	REMOVED DUE TO CONSTRUCTION
B-26	-	-	-	-	-	1	-	2	
C-39		-	-	-			-	3	REMOVED DUE TO CONSTRUCTION
D-51	<u> </u>	-			-	-		4	REMOVED DUE TO CONSTRUCTION
E-66					<u> </u>		<del> </del>	4	REMOVED DUE TO CONSTRUCTION
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FOOR   DATE   TAME   RESSURE WAVE   WAVE   WAVE   WAVE   WAVE   WAVE   THREE   DATE   DATE   THREE   DATE   DATE   THREE   DATE		_								COLA (CALTE
(MIN)	PROBE	DATE	TIME						PURGE	COMMENTS
				(+/-)	CH4	CO2	02	BAL		
124   124   123   11   102   13   25   27   20   20   27   20   20									(IVIIN)	
124 23 1102-325 0.0 14 11,0 824 2  129 124 23 1105 142 0.0 0.1 202 179,5 3  049 124 23 1102-325 0.0 0.1 29,179,5 3  049 124 23 1102-325 0.0 0.1 19,7 202 4  124 125 1114 -0.00 0.0 0.1 19,7 202 4  125 124 25 1114 -0.00 0.0 0.1 19,7 202 4	241									
	Λ 12	1124122	11:02	-3.25	0.0	1.6	16.0	82,4	2	
	A-13	110100	11:05	1.113	A ()	- 1	26 2	707		
C47    24   25    17   27    2	B-28	1124125	11,05	1,92	0.0	0.1	20.2	77.7		
	C-47	1/24/23	11708	-0.02	0.0	0.1	20.1	19.6	3	
1	D.C4	1/24/123	11-12	-).145	00	(1)	199	80.0	4	
	D-64	11210	111/	A 0/	0.0	0.7	101 3	002		
	E-85	1124 123	11.14	-0,01	9,0	0.	17.1	80.0	4	
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T	TECHNICIAN: MARCOS M  GEM SERIAL #: 506061		5 M		TURE: 4			essure: 2	1173	
GE	EM SERIAL#	5060	81		WEATHER	CONDITION	is: CU	OUDY		
	PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% CH4	% CO2	% O2	% BAL	PURGE TIME: (MIN)	COMMENTS
-	202									
	A-10								2	REMOVED DUE TO CONSTRUCTION
	8-25								2	REMOVED DUE TO CONSTRUCTION
-	C-38				_				3	REMOVED DUE TO CONSTRUCTION -
╬	203						-			
	A-10	2-23	9.27	07	0.0	0.1	160	83.9	2	
	B-2 <u>5</u>	2-23		07	0.0	0.2	19.6	80.2	2	
	C-40	2.23	9:33	- 09	0.0	0.3	200	79.7	3	
+	206						3			
	A-10	2-23	9:04		0	9.7	11.0	79.3	2	
	B-25	2.23	9:07		6	14.4	7.8	77.8	2	
	C-40	2-23	9:10	0.0	Ø	63	6.3	76.2	3	
-	207									
	A-10	2-21	10:10	-11	0.0	0.8	20.2	79.1	2	
	B-25	2-21	10:13		0.0		20.2	79.1	2	
	C-40	2-21	10:18	.12	0.0	0.6	20.4	79.1	3	
-	208						_			
	A-9.1	2-21	10:37	2.50	0.0	3.7	15.5	80.8	2	
	B-25	2-21	10:39	02	0.0	3.6	7.8	89.5	2	
	C-40	2-21	10:43	,	0.0	1.0	19.3	79.7	3	
H	210		-							
	A-10	2-21	10:53	,09	0.0	0.8	19.8	79.4	2	
	B-25		10:56			07	19 K		2	
	C-39	2-21	11:64	.08	0.0	0.7	19.8	79.5 79.7	3	
+	242									l a
	C-42	2-23	7:55	.04	0	1.9	17.0	81.1	3	
	D-60	2-23	8:00	.02	0_	6.8	96	83.6	4	
	E-78	2-23	8:05	.06	0	3.9	13.3	82.8	4	
\	243									
	A-11	2-23	8:24	.0	0.0	0.3	13.9	85.8	2	
	B-20	2-73	8:27	.02	0.0	0.3	11.5	88.7	2	
	C-33_	2-23	8:31	,01	0.0	0.5	15.8	83.7	3	

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	PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
	244									
	A-11	2-23_	8:16	14	0	13.0	5.8	81.2	2	
	B-21	2.23	8:19	04	0.1	18.1	2.4	79.3	2	
-	C-36	2-23	8:23	- 36	0	7.3	15.5	77.1	3	
in ex	245									
` "	A-11	2-23	8:37	03	0.0	0.2	12.1	876	2	
-	B-20	2-23	8:41	~. 07	0.0	0.3	19.7	80.0	2	
	C-35	2-23	8:46	09	0.2	12.0	10.0	77.8	3	
	D-50	2-23	8:51	03	0.0	0.8	16.4	82.8	4	
	E-64	2-23	8:56	05	0.6	0.3		80.3	4	
-										
-	246 A-9								2	REMOVED DUE TO CONSTRUCTION
	B-16		<u> </u>			_			2	REMOVED DUE TO CONSTRUCTION
	2 10									
Wh	205R	1.09	7.25	1.1			10 1	010		
-	A-11	2-23	7:37		0.0	0.2	13.6	86.2		
-	B-20	2-23	7:40	.10	0.0	0.1	12.2	87.6	2	
-	C-33	2-23	7:44	20	1.0	37.1	1.1	60.8	3	
-	D-48	2-23			1.0	29.9	6.2 5.1	62.9 93.7	4	
	E-62	- 52	7:53	-01	0.0	1.2	3.1	/3. /	4	
	239									
	A-11	2-23	9:42		0	14.9	10.9	74:1	2	
	B-20	2-23	9:44	-03	0	0.2	204	79.4	2	
	C-35	2-23	9:47	-01	0	0.1	20.6	79.3	3	
	D-50	223	9:52	01	0	0.4	20.3	79.3	4	
-	E-64	2-23	9:56	01	0	0.1	25.8	79.1	4	
-	240					<u></u>	-			
	A-11	2=23	10:07	1 -	0			78.9	2	
	B-20	2-23		02	0	1.0	20.3	787	2	
	C-33	2-23		03	Ð	0.1		789	3	
	D-49	2-23	+	0.0	0	<del></del>	20.8		4	10
	E-61	2-23	10:24	-16	0	0-2	20.8	79.0	4	
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GEM SERIAL #:		M	TEMPERA	TURE: 4	0	BARO. PR	ESSURE: 2	7.93	
	5060	81		WEATHER					
PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% CH4	% CO2	% 02	% BAL	PURGE TIME (MIN)	COMMENTS
202R A B	-2-23 2-23 2-23	9:43 9:45 9:52	02 08 09	0.0	0.2	12.0	87.9 83.6 80.3	2 2 3	
D								3	
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PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
VADOSE									
ZONE									4
PV203D	2-23	9:10	- 03	0.0	0.3	20.0	79.7		
1 7 2 0 3 5		,,,,							
	2-23	0.01	2600	-	1.9	19.0	791		
PV204D	2-23	7.4	6.50		1.1	17.0	77.1	_	
		0					500		
PV211D	2-23	7:23	06	0.0	0.2	19.0	80.8		
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PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
VADOSE									
ZONE									
DU 2005									
PV203D		-							
PV204D									
PV211D	2-21	12:41	15	0.0	0.2	20.8	79.0		
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RIAI #	John	164		WEATHER	CONDITION		SSURE: 2		
KIAL #	- 70 2	10	1						
_		1	1					PURGE TIME	
OBE	DATE	TIME	PRESSURE (+/-)	% CH4	% CO2	% O2	% BAL	(MIN)	COMMENTS
/IBER_	DATE	TIIVIE	(+/-)	70 0114	70 COZ	7,02	7,007		
12		1							
13	2/21/22	7:57	0.00	0.0	DA	70.8	79.0	2	
29	2/2/23			DD	0.7	70.6		2	
	1/21/22		10.12	0.0	0.1	20.6	79.0	3	
45	7/2/2	7:09	10.52	0.0	0.1	20.9	79.0	4	
-61	7 15 1 127	do	15.82	00	0-2	209	79.0	4	
77	de la	10.01	BILL			1	110		
1.0		† –						i i	
14	2/2/1/2	14:21	TO.08	0.0	0.5	20.7	78.7	2	
30	7 2 12 112		1093			20.9		2	
	2/2/17	28 2	14.01	DD	10.1	20.9	79.0	3	
48	MAIL	20-71	1.01		1	1	1		
15			Î						
-13	2/21/23	28:10	40.03	0.0	0.1	20.9	74.0	2	
30	2 2 2 7	14:12	TA 02	0.0	7.4	3.5	89.1	2	
47	1/2/12	24:15	12.02	1.0	0.1	20.9	79.0	3	
-54	2/2/12	22:19	10.01	10.0	10.5	19.9	79.6	4	
-81	2 212	34 27	1007	10.0	5.1	8.6	86.2	4	
	1 to the	1		0.0					
16		1		Ì	İ				
-14	7/21/2	3 6:52	10.01	0.0	1.5	16.0	82.5	2	
43	1 23 12	9:5	10.00	0.0	2.7	14.8	181.5	2	
-62	7/21/27	305	10.00	D.D	7.2	8.0	94.9	3	
-86		8:50	10.01	0.0	3.2	11.7	85.1	4	
110		39:07		0.0	1.5	17.5	181,0	4_	
2.20	199	1							
17									
-13	2212	49:10	10.43	0.0	3.0	16.9	83.6	2	
-30	22127	34:2	10.01	0.0	4,8	11.5	83.6	2	
		1	1						
ISA									
-11	2/2/12	3 10:30	0.72	10.1	15.6	0.1	84.3	2	
26 5	2212		0.00	- 0	12.0	2.0	859	2	
-30	2212	310.41	00.0Z	0.0	54.6	5.8	40.2	2	
	11								
19	I	1							
-13	2 31/2	3 10-0	5 0.01	10.0	1.0	19.2	179.5	2	
-64	2/21/2	3 10:0	44	1 - 0	0.1	20.€	19 -	2	
115	2/2/12	3 10:0	9-0.0	10.0	11.	17.6	181.	3	
-166	The state of the s	3 10 1	-		0.9	19.7	180.1	4	
-217	221	7 0	50.30	0.0	5.7	10.7		1 4	

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PROBE	DATE	TIME	PRESSURE	% VOL	% VOL	%	%	PURGE	COMMENTS
NUMBER			(+/-)	CH4	CO2	02	BAL	TIME (MIN)	
220									
A-14	2/21/23	8:50		-0-	1.6	18.6	79.7	2	J. Committee of the com
B-40	2/21/23	9:03	29	8	17	17-3	89.9	2	
C-87	2/21/23	9:06	~-33	0	6-2	13-3	80.4	3	
D-124	2/2//23	9:10	27	e	0.2	28.8	79.0	4	
E-158	2/21/23	9:14	31	8	7.2	10.1	82.7	4	
	, ,								
220B									
A-14	2/21/23	9:25	32	8	2.1	16.1	81-2	2	
B-38	2/21/27	9:28	- 35	0	10.0	0.4	89.5	2	
C-62	2/21/23	9:32	17	E	10.6	0.3	89.2	3	
D-86	2/41/13	9.36	26	B	10.4	8.0	88.9	4	
E-110	2/2/123	9.41	28	8	8-9	9.3	R6-7	4	
	1								
221	<b>,</b> ,								
A-13	2/21/23	9:51	16	8	4.2	10.8	85-0	2	
B-56		9:54	22	15	5.1	7.4	87.4	2	
C-99	2/21/23		7.01	A	10.6	0.0	89.9	3	
D-142	2/21/23				605	5.8	87.8	4	
E-185	2/21/23	10:06	14	8	4.9	8-3	86.8	4	
222	- 1 /					1 -	V		
A-13	2/21/23	10:16	16	8	10.2	6.0	83-8	2	
B-54.8	2/21/23	10:19	-16	D	10.3	3.0	86-7	2	
C-96.5	1/2//23	10:21	18	8	2.5	16-8	80-7	3	
D-138.3	2/21/27	10:26	-,09	0.6	8.9	2:9	81.6	4	
E-180	2/21/23	10:31	+ 1-98	8	706	0.0	91-3	4	
	_								
223	1 1 1	far ci	- 11	<b>0</b> -		12 (			
A-13	2/21/23	10:51	14	0		13 6	81.4	2	
B-37.5	2/21/27	10:54	58	8	87	9.4	818	2	
C-62	2/2/27	10 57	- <u>    </u>	2	7.8	6-3	26.0		
	2/21/23	11:02	19		24	17.1	80.5	4	
E-111	2/21/23	11:01	-,41	B	2.5	16.9	80-6	4	
224	1016	115.00	4.5		1 67	6/1 -	927		
A-13	1/21/23	11.20	15	8	1.5	14.5	12/ 0	2	
B-67.5	2/11/23	11:23	7.49	0.6	4.8	8-4	86.7	2	
C-122	2/21/23	11:26		0.6	1.8	4.3	K 145	3	
	2/2//23	11.25	11	D	0.3	20.5	19.3	4	
E-232	2/4/23	11:38	-5.97	10	001	20.9	17.0	4	
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SCS SINGNATURE: AMANDO MARTINEL

B0005	DATE	TINAS	DDECCURE	R/ VOI	% VOL	%	%	PURGE	COMMENTS
PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	CO2	02	BAL	TIME	COMMENTS
NOMBER			( , , ,					(MIN)	
225				_					
A-13	2-21	9:36	0/4	00	1.3	13.2	85.4	2	
B-72	2-21	9:38	.16	0.0	1.5	19.3	79.2	2	
	22	9:43	011	0.0	1.5	19.9	78.6	3	
C-1131	221		011		1.2		78.7		
D-190		9:47		0.0	-	20.1		4	
E-244	2-21	9:51	.15	0.0	0.9	20 2	79.0	4	
226	2								
A-13	2-21	8:09	.21	0.0	0.1	20.1	79.8	2	
B-64	2-21	8:12	-7.21	0.0	0.1	20.1	79.7	2	
C-114	2-21	8:16	-7.34	0.0	0.1	20.2	79.6	3	
	2-21	8:20		0.0	01	20.3	79.6	4	
D-164						20.3	79.5		
E-208	2-21	8:25	8.20	0.0	0.2	120.5	17.5	4	
				_					
227						ļ			
A-13	2-21	8:36	.14	0.0	1.5	14.0	84.5	2	
B-48.7	2-21	8:39	2.23	0.0	5.8	0.8	93.4	2	
C-84.4	2-21	8:45	1.92	0.0	5.2	1.3	93.5	3	
	2-21	8:49	2.08	00	4.1	0.1	95.7	4	
D-114	2-21	8:54	1.81	0.0	4.9	0.1	95.0		
E-115.7	C-21	6.31	1.01	0.0	7.1	0.1	73.0_	4	
				<u> </u>					
228						1			
A-13	2-21	9:05	.20	0.0	2.3	14.6	83.1	22	
B-63	2-21	9:09	2.23	0.0	1.6	18.4	80.0	2	
C-113	2-21	9:12	.89	0.4	6.9	0.0	92.7	3	
D-163	2.21	9:19	.51	0.0	2.9	7.0	901	4	
	2-21	9:23		0.0	49	0/	95.0	4	
E-213	[2-2]	/1-3	1.70	0.0	/=/	- '-	75.0		
ļ ———		-	<del>                                     </del>						
229		7.05				-	1-7.		
A-13	2-21	7:35	13	0.0	1.0	18.0		2	
B-48.7	2-21	7:38	-5.35	00	0.2	20.0		2	
C-84.4	2-21	7:41	-6.66	0.0	0.2	26.0	79.9	3	
D-114	2-21	7:46	-14.55		0.7	18.4	80.9	4	
E-155.7	2-21	7:51	-25.33		0.2	20.2	79.6	4	
E-133./		1.,5/-						-	
	-								
230									
A-16							ļ	2	REMOVED DUE TO CONSTRUCTION
B-33						ļ		2	REMOVED DUE TO CONSTRUCTION
C-50					<u></u>			3	REMOVED DUE TO CONSTRUCTION
221		1 -							
231			_		<del>                                     </del>			2	REMOVED DUE TO CONSTRUCTION
A-13	-	-				1			
B-26		-		-	-	-	-	2_	REMOVED DUE TO CONSTRUCTION
C-39		1				1		3	REMOVED DUE TO CONSTRUCTION
D-51							<u> </u>	4	REMOVED DUE TO CONSTRUCTION
E-66								4	REMOVED DUE TO CONSTRUCTION
<u> </u>				-			1		

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PROBE	DATE	TIME	PRESSURE	% VOL	% VOL	%	%	PURGE	COMMENTS
NUMBER	DAIL	111112	(+/-)	CH4	CO2	02	BAL	TIME	
								(MIN)	
241									
A-13	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	7:21	-7.37	0.0	12.7	20.9	78.9	2	
B-28	7/2/12	7.77	-aca	12.11	12.7	209	78 6	2	
D-20	2/1/12	7:00	10 360	0.0	12	200	70 G	3	
C-47	PININ	1:28	0.00	0.0	0.2	20.1	10.1	3	
D-64	2 4/11	7:30	70.06	0.0	0.2	20.7	13.7	4	
E-85	221/11	7:33	8.51	0.0	0.1	209	79.0	4	
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CHNICIAN:	MARLCOS		TEMPERA	TURE: 4	l"	BARO. PRE	SSURE: 24	- 10	
M SERIAL #:	50606	31		WEATHER (	CONDITION	s: Sun	NY		
			PRESSURE					PURGE TIME	1
PROBE NUMBER	DATE	TIME	(+/-)	% CH4	% CO2_	% 02	% BAL	(MIN)	COMMENTS
202									DEMOVED DUE TO CONSTRUCTION
A-10		<del>                                     </del>						2	REMOVED DUE TO CONSTRUCTION REMOVED DUE TO CONSTRUCTION
B-25		-				-		3	REMOVED DUE TO CONSTRUCTION
C-38								3	REWOVED BUE TO CONSTRUCTION
203									
A-10	3.23	10:21	.04	0.0	0.1		80.1	2	
B-25	3:23	10:24	, 05	0.0		20.0	79.8	2	
C-40	3.23	10:28	.02	00	0.2	203	79.5	3	
206									
A-10	3/23	10:42		0	10.9	3.6	85.5	2	
B-25	3/23	10.12	0.0	0	17.3	6.9	ブフ	2	
C-40	3/23	12:48	01	0	15.9	5.7	78.4	3	
207							200		
A-10_	3/28	11:27	1-2.03	D	5.2		78-2	. 2	
B-25	3/18	11:30	-26·16	8		17-2	20.0	2	
C-40	3/28 3/28	11:34	+18.6	8 0	1.1	17.7	81.2	3	
208									
A-9.1	3/23	10:26	- 04	0	0.2	20.1	79.8	2	
B-25	3/23	10:29	0.0	0	14.9	6.8	78.3	2	
C-40	3/23	10:32	.05	0	2.5	18.6	75.9	3	
210									
A-10	3/23		32	0_	2.4		78.9	2	
B-25	3/23		-1.57	0	0.7	19.5	79.7	2	
C-39	3/23	9:18	-17	0	0.8	18.3	810	3	
242_									
C-42	3/23	9:40			3.2	13.7	83.1	3	
D-60	3/23	9:44		6	11.4	00	88.6	4	
E-78	3/23	7:48	03	6	6.9	5.0	88.1	4	
243									
A-11_	3-23	9:06				20.7		2	
B-20	3.23	9:10	.08			13.3	86.4	2	
C-33	3.23	9:14	.09	0.0	0.1	15.4	84.5	3	
			<del>                                     </del>	-		ř .	-		

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PROBE	DATE	TIME	PRESSURE	% VOL	% VOL	%	%	PURGE	COMMENTS
NUMBER	DATE	1	(+/-)	CH4	CO2	02	BAL	TIME	
<u> </u>								(MIN)	
244	12/00	112.02	24.		411	- //	000		
A-11	3/23	10:03	-,34	0_	1)./		88.5	2	
B-21	3/23	+	32	0	0.2	19.9	79.9	2	
C-36	3/23	10:10	+.07	0	9.6	12.7	77.7	3	
			_			ļ			
245									
A-11	3-23	9:26	82		8.2	2.0	89.8	2	
B-20	3-23	7:29	80	1.9	19.1	6.4	72.5	2	
C-35	3-23	9:33	- 66	0.5	17.4	4.4	77.8	3	
D-50	3-23	9:37	.16	0.0	9.1	6.7	84.2	4	
E-64	3-23	9:45	-01	0.0	0.1	20.9	79.0	4	
246									
A-9								2	REMOVED DUE TO CONSTRUCTION
B-16	1							2	REMOVED DUE TO CONSTRUCTION
D-10									
2052		-				-	_		
205R	3.23	8:15	5.87	0.2	8.4	3.4	88.1	2	
A-11	3.23	8:17	.11	0.2	16.4	7.5	75.9	2	
B-20	3.23	8:20	09	1.1	39.9	0.6	58.5	3	
C-33		8:25	59	3.0	46.8	0.0	50.1	4	
D-48	3.23		-5.86		7.2	13.7	79.0		
E-62	3, 23	8:29	2.06	0.2	1.6	15./	77.0	4	
						_			
239	- /				10.0	1165	2/7		
A-11	3/23	8:33	7.07	0	13.2	11.0	75.8	2	
B-20	3/23	8:38	02	5	0.1	20.9	79.6	2	
C-35	3/23	8:44	90	0	0.1	21.0	78.9	3	
D-50	3/23	8:51	~. 03	<del> </del>	07	19.8	79.4	4	
E-64	3/23	8:55	22	6	0.2	208	79.0	4	
240						_			
A-11	3/23	7:57	02	0	11.7	7.6	800	2	
B-20	3/23	8:01	01	0	1.0	20.6	78.9	2	
C-33	3/23	8:23	03	0.2	0.1	20.9	78:7	3	
D-49	3/23	8:11	02	0.1	0.1	20.9	78.9	4	
E-61	3/23	8:19	-, 03	0	0.2	20.9	78.9	4	
		1							
						<u> </u>	1		
	-	1							
	_	1	<del>                                     </del>	-	<del>                                     </del>	<u> </u>	<del>                                     </del>		
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EEM SERNAL #: SOCO 87  PROBE   DATE   TIME   PRESSURE   H-/-)   % CH4   % CO2   % O2   % BAL   MINN   COMMENTS    202R   A   3 * 2 * 3   10 * 37   - 0.7   0.0   7, 6   0.5   91.9   2   B   3 * 2 * 3   10 * 45   - 9.0   0.0   2.0   6, 79.3   2   C   3 * 2 * 3   10 * 45   - 9.0   0.0   2.0   8, 96.9   3	TECHNICIAN:	MARICO	SM	TEMPERA	TURE: 5	0,	BARO. PR	SSURE: 2	7.81	
PROBE NUMBER  DATE  TIME  (+/-)  % CH4  % CO2  % O2  % BAL  TIME  (MIN)  COMMENTS  COMMENTS  COMMENTS  COMMENTS  COMMENTS  COMMENTS  COMMENTS	GEM SERIAL#	5060	81		WEATHER	CONDITION	IS: SUN	vv7		
A 3.23  0:3707   0.0   7.6   0.5   91.9   2   3   3   2   3   2   3   2   3   2   3   2   3   2   3   2   3   3	PROBE				% CH4	% CO2	% 02	% BAL_	TIME	COMMENTS
	202R A	3.23	10:37	07	0.0	7.6	0.5	91.9		
	С	3.23	10:45	90	0.0	2.2	20.6	96.9	3	
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PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% O2	% BAL	PURGE TIME (MIN)	COMMENTS
VADOSE									
ZONE					ļ				1
	0.00					20		-	
PV203D	3-23	10:08	.14	0.0	0.4	20.8	78.7		
	6 . 2	, ,		_	- / -	17.7			
PV204D	3.23	11:06	36.04	<u> </u>	3.4	16.6	79.9		
PV211D	3-23	10:15	.04	0.0	0.5	20.5	18.1		
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ECHNICIAN:	Mance	MARCOS M TEMPERATURE: 50 BARO. PRESSURE: Z7. 86							
VI SERIAL#:	5060	81_		WEATHER	CONDITION	s: 50 M	/~\y		5 0
PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% CH4	% CO2	% O2	- % BAL	PURGE TIME (MIN)	COMMENTS
213 A-13	3/24	9:04	ان.	0.0	ଚ.	20.9	790	2	
B-29		4:07	0.01	0.1		21.0	76.9	2	
C:45		7:11	, 01	0.0		20.9	79.6	3	
D-61 E-77	3/24	9:16	-1.22	0.0	0.1	20,9	78.9 79.0	4	
214 A-13	3/24	9:37	./0	0.0	0.7	20:2	79.2	2	
B-30	<del></del>		-13.86	0.0	0.1	20.5	79.4	2	
C-48	3/24	9:44	<u>13</u>	0.0	3.4	10.8	85.8	3	
215 A-13	3/24	9156	.24	0,0	0,1	20,5	79.4	2	
B-30	3/24	9:59		0.0	3.6	13,3	83.1	2	
C-47	3/24	10:03	1.60	0.0	0.	206	79.3	3	
D-64	3/24	10:08	66	0.0	04	20.1	79.5	4	
E-81	3/24	10:13	36	0.0	28	14.6	825	4	
216	2/24	10:26	-06	00	0.1	20.4	79.5	2	
A-14	3/24	10:29	14	0.0	0.1	20.5	79.4	2	
B-43 C-62	3/24	10:21	02	0.0	0.1	20.7	79.2	3	
D-86	3/24	10:39	-08	00	0.1	209	79.0	4	
E-110	3/24	10:45	.01	0.6	6.1	21.0	79,6	4	
217						1/ =	700		
A-13	3/24	10:53			44	20.3	78.9	2	
B-30	3/24	10:56	.06	0.6	0.1	20.5	79.5	2	
218R	5/24	1:19	25.05	00	15.3	1.0	83.6	2	
A-11 B-26.5	11/24	1:22	.65	$\overline{}$	0.6	9.2	90.2		
B-30	3/24	1:25	1.15	00	44.3	8.7	47.0	2	
219	3 m ::				2.1	170	70.9		
A-13	3/24	1:37	.15	0.0	107	17.9	79.9 86.5	2	
B-64	3/24	+	1	0.0	2.6	15.7		3	
C-115	3/24	1:45	.15	0.0	1.2		80.4		
D-166	3/24	1:49	.22	0.0	4.9		84.5		

SCS SIGNATURE:	-

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# SUNSHINE CANYON - CITY PERIMETER PROBE MONITORING DATA

PROBE NUMBER	DATE	TIME	PRESSURE (+/-)	% VOL CH4	% VOL CO2	% 02	% BAL	PURGE TIME (MIN)	COMMENTS
220								(,,,,,,,	
A-14	3/24/23	10:42	-0.10	0.0	1.5	14.8	83.7	2	
B-40	3 24 23	10:44	-0.35	0.0	0.1	19.4		2	
C-87	324/23	10:46	-0.18		0.1	19.8	80.1	3	
D-124	424 23	11):45	1-018	0.0	0.1	20.7	79.8	4	
E-158 (	3/24/22	0:51	-0.17	0.0	0.1	20.3	79.5	4	
	TT								
220B								I	
A-14	3/24/22	9:44	-0.16	0.0	0.1	203	79.6	2	
B-38	3/24/23	9:46	0.22	1.0	0.1	20.6	79.3	2	
C-62	3/24/22	9:47	-0.37	0.0	2.4	15.9	81.7	3	
D-86	3/24/22	9:49	-0.70	0.0	6.3	6.1	87.6	4	
E-110	3/24/8-1	9.53	-0.27	0.0	5-5		86.1	4	
	11								
221									
A-13	3/24/23	8:50	0.08	0.0	0.1	20.7	79.2	2	
8-56	2 24 23	8:51	70.20	0.0	01	207	79.2	2	
C-99	3/24/22	4:52	70.51	0.0	3.7	15.4	81.4	3	
D-142	3/24/12	4:46	70.19	0.0	01	207	79.7	4	
£-185		8:59	70.110	0.0	1.2	18:10	80.7	. 4	
C 103	1		0.70			3.0			
222	1.4								
A-13	3/24/23	9:15	-0.10	0.0	1.8	18.7	79.5	2	
B-54.8	3/24/234	7:17	-0.11	0.0	0.1	20.6	79.3	2	
C-96.5	324/23	9:19	0.11	0.0	0.9	19.5	79.6	3	
D-138.3	3 24 23	7:22	0.55	0.0	4.1	16.6	79.3	4	
E-180 V	3/24/23	9:25	-1.37	0.0	6.4	12.9	90.7	4	
	1 1		-						
223	3 24 23	8:19	-2 00	A A	0 /	20.5	19.4		
A-13	-1- · [ ]	4 1				17 1	00	2	<del></del>
B-37.5	3 24 23	8:21	0.11	0.0	1. 7	11.6	80.1	2	
C-62	3 24 23	70.00	1.04	0.0	0.1	40.5	60.4	3	
	3/24/22	8:05	0.01	0.0	0.7	18.7	80.3	4	
E-111	3 24 23	8:29	0.84	0.0	0.1	20.	17.2	4	
	' '								<u> </u>
224	2 10.1100	7.01	-20 12	0 0	0 -	100	On N		
A-13	3 24 23	1.30	0.12	0.0	0.2	11.X	00.0	2	
	324 23	1.51	0.72	11.0	0.1	20.2	17.1	2	
C-122	3 24 23		111				17.2	3	
D-177.5	5 24 23		-13.2/0		0.1	20.9	M.O	4	
E-232	3 74/23	7:47	10.47	0.0	0.1	20.9	19.17	4	
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# SUNSHINE CANYON - CITY PERIMETER PROBE MONITORING DATA

22025	T BATE I	TIME	PRESSURE	% VOL	% VOL	%	%	PURGE	COMMENTS
PROBE NUMBER	DATE	TIME	(+/-)	CH4	CO2	02	BAL	TIME	
			```					(MIN)	
225									
A-13	3/24/13	8:37	0.0	0.2	6.7	8.0	85.2	2	
B-72	3/14/23	8:40	-4.15	0	1.5	18.4	80.1	2	
C-1131	3/94/93	0:43	-12.60	0.2	1.3	18.5	80.1	3	
	3/24/23	8:44	-12.41	0	0.1	20.6	79.3	4	
D-190	3/4/1/2	8. CD	-11.0	8	0.1	25.6	79.3	4	
E-244	1/47/4	8.57	-61 4-	-0	0.7	20.6	110		
226	- 4 . 7	0	3 2			00/	79.3		
A-13	3/24/23	9:04	+ .05	0	0.1	20.6			
B-64	3/24/23	9:08	-9.44	_6	0.1	20.5	79.4	_2	
C-114	3/24/23	9:12	-10.39	8	0.1	10.3		3	
D-164	3/24/23	9:17	-8.87	10	0.	20.2	79.7	4	
E-208	3/24/2	9:21	-10.39 -8.87 -11-22	0	0-2	19.9	79.9	4	
	1-1/2								
227									
A-13	3/14/12	9:20	+-12	10	0.2	19.3	80.5	2	
	2124/02	0:33	-713	0.1	0.1	19.8		2	
B-48.7	3/14/23 3/24/23 3/24/23 3/24/23	9.77	-1-66	0.1	0.1	19.7	80.2	3	
C-84.4	3/27/20	6:31	1 60	0-		1	70-3	4	
D-114	5/21/23	9.72	-1.38	0	0.1	19.5	80.4		
E-115.7	3/24/23	7:48	-1.88	0	0.1	17.0	80.1	4	
228					<u> </u>				
A-13	3/24/23	10:00	60	6	2.1	15.5	82.4	2	
B-63	3/24/23	10:03	<i>₹~I-</i> 77	D	7.2	3.7	89.1	22	
C-113	3/24/23	10:07	-1.25 -1.71 -1.36	8	2.4	17.3	80-2	3 _	
D-163	3/24/23	10:11	71	Ø	0.5		80.0	4	
E-213	3/24/23	16:15	-1.36	B	4.1	15.5	80.3	4	
L-213	1/4/1/6	7000							
229	7/41/42	7.50	11	<i>-</i>	1.0	18.1	80.9	2	
A-13	3/24/23	7:52		8			1 .		
B-48 7	3/24/23	1.09	-6.11	0	01	2110		3	
C-84.4	3/24/23	8:08	-10.56		0.7	17.1	80,2		
D-114	3/24/23	8:11	-19.57	6	6.3	20.4	17.3	4	
E-155.7	3/24/23	8:17	-26-66	8	0.1	20.8	79.1	4	
	7				<u> </u>				
230									
A-16								2	REMOVED DUE TO CONSTRUCTION
8-33								2	REMOVED DUE TO CONSTRUCTION
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C-50									
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231					+	-	<del> </del>	-	REMOVED DUE TO CONSTRUCTION
A-13						<del>  -</del>	+	2	
B-26		-	-		<del> </del>	-		2	REMOVED DUE TO <b>CO</b> NSTRUCTION
C-39					-			3	REMOVED <b>OU</b> E TO CONSTRUCTION
D-51							1	4	REMOVED DUE TO CONSTRUCTION
E-66								4	REMOVED DUE TO CONSTRUCTION
	-	1					1		

SCS SIGNATURE:	AMANDO	MARTINEZ-	LEA SIGNATURE:
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# SUNSHINE CANYON CITY PERIMETER PROBE MONITORING DATA

		-							COLUMENTS
PROBE	DATE	TIME	PRESSURE	% VOL	% VOL	%	%	PURGE	COMMENTS
NUMBER			(+/-)	CH4	CO2	02	BAL	TIME	
								(MIN)	
241									
A-13	3/24 3/24 3/24 3/24 3/24	8:25	-4.97	0.1	0.1	209	76.9	2	
H-13	2/211	7.00	-2-20	0.1	21	220	200		
B-28	3/29	15:21	20,30	0.	0.1	01	70.7	2	
C-47	3/29	8:31	.14	(0.)	0.1	20.9	78.8	. 3	
D-64	2/14	8120	30	0/	0.2	210	950	4	
D-64	3/ 21	0133	-10-0	0 /	0 1	0:0	78.8 78.8 78.8		
E-85	3/24	8:41	72.75	011	0,1	21.0	18.8	44	
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# CITY OF LOS ANGELES

BOARD OF PUBLIC WORKS MEMBERS

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PRESIDENT

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TIMEYIN DAFETA HYPERION EXECUTIVE PLANT MANAGER

> INDUSTRIAL WASTE MANAGEMENT DIVISION 2714 MEDIA CENTER DRIVE LOS ANGELES, CA 90065 OFFICE: (323) 342-6200 FAX: (323) 342-6111

In Reply Refer to IU128862.prm/jnc

September 01, 2020

SUNSHINE CANYON LANDFILL 14747 San Fernando Road Sylmar, CA 91342

Attn. Tuong-Phu Ngo, Environmental Manager

RENEWAL OF INDUSTRIAL WASTEWATER PERMIT FOR 1U128862

PERMIT: W-535428

C:

The LA Sanitation and Environment (LASAN) has completed a review of SUNSHINE CANYON LANDFILL's application to discharge industrial wastewater to the City of Los Angeles sewer system. Pursuant to the LASAN audit, it has been determined that this facility is subject to requirements as a Non-Categorical Significant Industrial User, and other applicable Federal, State and Local wastewater discharge requirements. Therefore, in accordance with provisions of the Los Angeles Municipal Code (L.A.M.C.) Section 64.30, this Industrial Wastewater Permit is being issued to include comprehensive permit conditions which identify the requirements that are applicable to SUNSHINE CANYON LANDFILL. All discharges from this facility and actions and reports relating thereto shall be in accordance with the terms and conditions of this permit.

This permit shall become effective at midnight on September 01, 2020 and shall expire at midnight on August 31, 2023. During the term of this permit, the permittee shall immediately notify the LASAN of any changes to the facility, process, production, or pretreatment system that may change the characteristics which causes it to be different from that expressly allowed under this permit.

If there are any questions regarding these permit conditions, please contact JOCELYN CARRILLO of my staff at (323) 342-6082

Sincerely,

Enrique C. Zaldivar, P.E.Director and General Manager LA Sanitation and Environment

By Michael Simpson

Michael Simpson, Division Manager Industrial Waste Management Division

SIU Permitting Section Bhupendra Patel, Chief Environmental Compliance Inspector II SIU Enforcement Section

zero waste • one water

# INDUSTRIAL USER PERMIT REQUIREMENTS AND CONDITIONS

Legal Name: Browning-Ferris Industries of Calif., Inc.
Dba Name: SUNSHINE CANYON LANDFILL
Industrial User No: IU128862

INDUSTRIAL WASTEWATER PERMIT NO. W-535428

# **CITY OF LOS ANGELES**

DEPARTMENT OF PUBLIC WORKS

LA Sanitation and Environment



INDUSTRIAL WASTE MANAGEMENT DIVISION 2714 MEDIA CENTER DRIVE LOS ANGELES, CA 90065 (323) 342-6200

# INDUSTRIAL WASTEWATER PERMIT

INDUSTRIAL USER NO: IU128862

PERMIT NO: W-535428

EFFECTIVE DATE: 09/01/2020

AMENDED DATE: NA

EXPIRATION DATE: 08/31/2023

LEGAL BUSINESS NAME:

BROWNING-FERRIS INDUSTRIES OF CALIF., INC.

DOING BUSINESS AS:

SUNSHINE CANYON LANDFILL

MAILING ADDRESS:

14747 SAN FERNANDO ROAD

SYLMAR, CA 91342

LOCATION ADDRESS:

14747 SAN FERNANDO ROAD

SYLMAR, CA 91342

CATEGORY:

NON-CATEGORICAL SIU

POINT OF DISCHARGE:

PUBLIC SEWER

In accordance with the provisions of the Los Angeles Municipal Code (L.A.M.C.) Section 64.30, the above identified industrial user is hereby authorized to discharge industrial wastewater through the approved point of discharge identified herein in accordance with the discharge limitations, conditions, and requirements set forth in this permit and the L.A.M.C. Compliance with this permit does not relieve the industrial user of its obligation to comply with all pretreatment regulations, standards or requirements under local, State and Federal laws, including any such laws, regulations, standards or requirements that may become effective during the term of this permit.

The industrial user must comply with the provisions of L.A.M.C. Section 64.30 and all terms and conditions of this permit. Noncompliance with the terms and conditions of this permit shall constitute a violation of the L.A.M.C. Section 64.30 and may subject the industrial user to administrative actions or other legal proceedings. This permit becomes void upon any change of ownership or location whatsoever.

Enrique C. Zaldivar, Director and General Manager LA Sanitation and Environment

BY: Michael Simpson

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	Attachment 4 - Sewer Capacity Availability Request (SCAR)	
	Attachment 5 – 14747 San Fernando Road Sewer Map	
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# PART 1 - SAMPLE POINT DESCRIPTION AND FACILITY FLOW INFORMATION

#### A. Sample Point

The industrial user is authorized to discharge industrial wastewater to the City of Los Angeles sewer system from the sample point(s) listed below.

INDUSTRIAL WASTEWATER	SAMPLE POINT	FLOW PER OPERATIONAL DAY (GPD)		DESCRIPTION
PERMIT		TOTAL	PROCESS	
W-535428	01	300,000	300,000	Secured Sampling Facility is located at Magnetic Flow meter Vault.

#### B. Industrial User Flow

Facility Flow	Total (GPD)	Process (GPD)
Information <sup>1</sup>	300,000	300,000

# Footnotes to Sample Point Description and Industrial User Flow Information

Sunshine Canyon Landfill shall not discharge greater than 300,000 gpd of leachate to the City sewer system. Refer to Part 5. C – Special Conditions.

#### **PART 2 - DISCHARGE LIMITATIONS**

The discharge from the designated sample points shall not exceed the following discharge limitations:

# A. Industrial Wastewater Permit W-535428

1. Sample Point 01- Significant Non-Categorical Industrial User

DISCHARGE LIMITATIONS					
Constituent		cal us Maximum			
Arsenic (Total)	3.00	mg/l			
Cadmium (Total)	15.00	mg/l			
Chromium (Total)	10.00	mg/l			
Copper (Total)	15.00	mg/l			
Cyanide (Free) <sup>1</sup>	2.00	mg/l			
Cyanide (Total)	10.00	mg/l			
Dissolved Sulfides	0.10	mg/l			
Lead (Total)	5.00	mg/l			
Nickel (Total)	12.00	mg/l			
Oil & Grease (Total)	600.00	mg/l			
pH (Standard Units)	5.50 - 11.00	SU			
Silver (Total)	5.00	mg/l			
Zinc (Total)	25.00	mg/l			

Footnotes to Discharge Limitations

<sup>&</sup>lt;sup>1</sup>Cyanide (Free) shall mean cyanide amenable to chlorination as defined by 40 CFR 136.

# **PART 3 - MONITORING REQUIREMENTS**

The industrial user shall monitor the designated sample point, for the following constituents, at the indicated frequency and by the indicated sample type.

# A. Industrial Wastewater Permit W-535428

#### 1. Sample Point 01

Sunshine Canyon Landfill

MONITORING REQUIREMENTS FOR REGULATED PARAMETERS						
Constituent	Measurement Frequency	Sample Type				
Daily Flow	Continuous	Not Applicable				
Arsenic (Total)	Semi-Annual	Grab				
Cadmium (Total)	Semi-Annual	Grab				
Chloride <sup>1</sup>	Semi-Annual	Grab				
Chromium (Total)	Semi-Annual	Grab				
Copper (Total)	Semi-Annual	Grab				
Cyanide (Free)	Semi-Annual	Grab				
Cyanide (Total)	Semi-Annual	Grab				
Dissolved Sulfides	Semi-Annual	Grab				
Lead (Total)	Semi-Annual	Grab				
Nickel (Total)	Semi-Annual	Grab				
Oil & Grease (Total)	Semi-Annual	Grab				
pH <sup>2</sup>	Semi-Annual	Grab				
Silver (Total)	Semi-Annual	Grab				
Zinc (Total)	Semi-Annual	Grab				

# B. Representative Monitoring and Sampling

- 1. Monitoring and sampling shall be carried out during a period of normal operations.
- 2. All handling and preservation of collected samples and laboratory analyses of samples shall be performed in accordance with 40 CFR Part 136 and amendments thereto unless specified otherwise in the monitoring conditions of this permit. The handling, storage and analyses of all samples taken for the determination of the wastewater characteristics discharged shall be performed by taboratories certified by the State of California or approved by the Director of the LA Sanitation.
- The detection limits employed for wastewater analysis shall be lower than the permit limits established for a given parameter.
- 4. The industrial user is responsible for maintaining and cleaning the designated sample point(s) to prevent any build-up of oil and grease, sediment or sludge. Failure to do so does not invalidate sampling test results. Analytical results from samples taken from designated sample points according to accepted sampling procedure shall be accepted as binding.
- 5. Sample Points identified in the Industrial Wastewater Permit shall not be changed without notification and approval by the Director.

#### **FOOTNOTES TO MONITORING REQUIREMENTS**

<sup>&</sup>lt;sup>1</sup>The City of Los Angeles is establishing a database for chlorides.

<sup>&</sup>lt;sup>2</sup>Refer to Part 5A- Special Conditions.

#### **PART 4 - REPORTING REQUIREMENTS**

#### A. Self-Monitoring

The industrial user shall implement a self-monitoring program for the designated Industrial Wastewater Permit. Monitoring results obtained shall be summarized and reported on the enclosed report form entitled "Periodic Compliance Report" and submitted with a US Post Office postmark date by the 15th day of the month following the monitoring period. Facsimiles (faxes) of self-monitoring reports shall not be accepted. Reports with original signatures must be submitted by the due date.

The first self-monitoring report for the monitoring period of **July 1** – **December 31, 2020** shall be submitted by **January 15, 2021**. Subsequent reports shall be submitted in accordance with the following schedule:

SELF-MONITORING REPORT SCHEDULE			
Industrial Wastewater Permit	Type of Report	Молitoring Period	Report Due Date
W-535428 Sample Point 01	Local Limits Periodic Compliance Report	Jan 1 - Jun 30 Jul 1 - Dec 31	Jul 15 Jan 15

- All portions of the Periodic Compliance Report form must be completed or the report may not be accepted.
- 3. The report shall indicate the nature and concentration of all pollutants in the effluent for which sampling and analyses were performed including measured or estimated maximum and average daily flows. The report shall be based upon data obtained through appropriate sampling and analyses performed which represents the conditions occurring during the period covered by the report.
- Copies of all laboratory results shall be submitted with each report.
- The LA Sanitation will not accept reports where monitoring was conducted outside the monitoring period specified in this permit.

#### B. Self-Monitoring Report Submittal

All self-monitoring reports required by this permit shall be submitted to the Director at the following address:

City of Los Angeles LA Sanitation and Environment Industrial Waste Management Division 2714 Media Center Drive Los Angeles, CA 90065

Attn: Information Systems Support Squad

#### C. Additional Monitoring

If the industrial user monitors any pollutant at the designated sample point more frequently than required by this permit, using test procedures prescribed in 40 CFR 136 or amendments thereto or otherwise approved by EPA or specified in this permit, the results of such monitoring shall be reported in the compliance report and submitted to the Director.

#### D. Automatic Resampling

If the results of the industrial user's wastewater analysis indicate a violation has occurred, the industrial user must comply with the following:

- Inform the Director of the violation within 24 hours by contacting the LA Sanitation Industrial Waste Management Division SIU Inspection Group at (323) 342-6200; and
- 2. Repeat the sampling and pollutant analysis and submit, in writing, the results of this second analysis within 30 days after becoming aware of the violation.

#### E. Pre-notification of Monitoring and Sampling

The industrial user shall notify the SIU Inspection Group by telephone at (323) 342-6200 at least 48 hours in advance of any monitoring or sampling to be performed. Notification shall include the date, time and location of proposed monitoring or sampling. Monitoring and sampling shall be carried out during a period of normal operations. Prior to the commencement of any sampling or monitoring, the Director may request that the industrial user furnish to the Director a split sample and all supporting data (i.e., methodology, flow measuring data, strip chart recordings and other pertinent information). The Director reserves the right to refuse any data developed from the monitoring or sampling activity if the industrial user fails to comply with the pre-notification procedure or other requirements of sampling and analysis.

#### **PART 5 - SPECIAL CONDITIONS**

#### A. pH MONITORING AND RECORDING SYSTEM

The pH of the wastewater discharge to the sewer system shall be monitored and recorded continuously using a pH meter and recording device. To ensure the proper operation and continued accuracy of the pH meter, Sunshine Canyon Landfill shall clean, maintain, and calibrate the device periodically in accordance with the manufacturer's requirements. A logbook for pH calibration must be kept. The pH chart must be initialed daily by an operator at the facility to validate the proper operation of the pH monitoring and recording system.

# **B. FLOW METER MAINTENANCE AND CALIBRATION**

To ensure proper operation and continued accuracy of the industrial wastewater flow measurement device, Sunshine Canyon Landfill shall clean, maintain, and calibrate the device periodically in accordance with the manufacturer's requirements. If there are no stated requirements, the flow meter shall be calibrated annually at a minimum. A maintenance record shall be available at all times for Bureau of Sanitation review.

#### C. DISCHARGE REQUIREMENTS

Sunshine Canyon Landfill is allowed to discharge a total of 300,000 gpd (208.33 gpm) of landfill leachate at a maximum flow rate of 250 gpm, not exceeding 300,000 gallons per day through the sewer connection located at 14747 N. San Fernando Road, Sylmar into the City of Los Angeles sewer system.

#### PART 6 - STANDARD CONDITIONS

#### A. Prohibitions

### General Prohibitive Standards

The Industrial User shall comply with all the general prohibitive discharge standards in the General Pretreatment Regulations, 40 CFR 403, and the L.A.M.C. Section 64.30. Except as expressly allowed in an Industrial Wastewater Permit, no Industrial User shall introduce or cause to be introduced into the POTW any of the following:

Industrial User No.: IU128862

- Gasoline, mercury, total identifiable chlorinated hydrocarbons, kerosene, naphtha, benzene, toluene, xylene, ethers, alcohols, ketones, aldehydes, peroxides, chlorates, perchlorates, bromates, carbides, hydrides, solvents, pesticides or jet fuel;
- b) Liquids, solids or gases which by reason of their nature or quantity are flammable, reactive, explosive, corrosive, or radioactive, or by interaction with other materials could result in fire, explosion or injury. Pollutants which create a fire or explosion hazard in the POTW, including, but not limited to, wastewater with a closed cup flashpoint of less than 140 degrees Fahrenheit or 60 degrees Centigrade using the test methods specified in 40CFR261;
- c) Solid or viscous materials which could cause obstruction to the flow or operation of the POTW;
- d) Toxic pollutants in sufficient quantity to injure or interfere with any wastewater treatment process, including private pretreatment systems, to constitute a hazard or cause injury to human, animal, plant or fish life, or to exceed any limitation set forth in this Permit;
- Noxious or malodorous liquids, gases, or solids in sufficient quantity either singly or by interaction with other materials to create a public nuisance, hazard to life, or to prevent entry of any person to the POTW;
- f) Pollutants which result in the presence of toxic gases, vapors or fumes within the POTW in a quantity that may cause acute worker health and safety problems;
- g) Material of sufficient quantity to interfere with any POTW treatment plant process or to render any product thereof unsuitable for reclamation and reuse;
- h) Material in sufficient quantity to cause the POTW to be in noncompliance with biosolids use or disposal criteria, guidelines or regulations in conjunction with Section 405 of the Act, the Solid Waste Disposal Act (SWDA), the Clean Air Act, the Toxic Substances Control Act, the Marine Protection Research and Sanctuaries Act, or State criteria (including those contained in any state sludge management plan prepared pursuant to Title II of SWDA) applicable to the biosolids management method being used;
- Material which will cause the POTW to violate its NPDES Permit, applicable Federal and State statutes, rules or regulations;
- j) Wastewater containing pigment which is not removed in the ordinary POTW treatment process and which creates a visual contrast with the material appearance of the POTW discharge observable at the point of POTW discharge;
- k) Wastewater having a heat content in such quantities that the temperature of the wastewater at the introduction into the POTW Collection system exceeds 140 degrees Fahrenheit, or at the introduction into the POTW treatment plant exceeds 104 degrees Fahrenheit;
- Petroleum oil, nonbiodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through;

m) Pollutants, including oxygen demanding pollutants, released at a flow rate or pollutant concentration

Industrial User No.: IU128862

n) Storm water collected and discharged to the POTW;

which will cause or contribute to interference:

- o) Single pass cooling water in excess of 200 gallons per day discharged to the POTW;
- p) Wastewater which constitutes a hazard or causes injury to human; animal, plant or fish life or creates a public nuisance;
- q) Recognizable portions of the human or animal anatomy;
- r) Floatable material which is readily removable;
- s) Radioactive wastes or isotopes;
- t) Grinder food wastes from commercial kitchens, markets, or food plants:
- u) Trucked or hauled pollutants, except at discharge points designated by the City;
- v) Human or animal blood suspected or known to contain bloodborne pathogen(s);
- w) Pharmaceutical wastes;
- x) Medical wastes; or
- y) Sharps.

#### **B.** Permit Provisions

#### Severability

The provisions of this permit are severable, and if any provision of this permit or the application of any provision of this permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this permit shall not be affected thereby.

#### 2. Duty to Comply

The Industrial User must comply with the provisions of L.A.M.C. 64.30 and all conditions of this permit. Failure to comply with the requirements of this permit may be grounds for administrative action or enforcement proceedings, including civil or criminal penalties, injunctive relief and summary abatements.

#### 3. Duty to Mitigate

The Industrial User shall take all reasonable steps to minimize or correct any adverse impact to the public treatment plant or the environment resulting from noncompliance with this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

#### 4. Modification or Revision of the Permit

This permit may be modified, revoked and reissued or terminated for good causes including, but not limited to, the following:

- a) The incorporation of any new or revised Federal, State or Local pretreatment standards or requirements;
- b) Material or significant alterations or additions to the Industrial User's operational processes or discharge volume or character which were not covered in the effective permit;

c) A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge:

Industrial User No.: IU128862

- d) Information indicating that the permitted discharge poses a threat to the City of Los Angeles' collection and treatment systems, POTW personnel or the receiving waters;
- e) A violation of any terms or conditions of this permit;
- f) Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts;
- g) A revision of or a grant of variance from such categorical standards pursuant to 40 CFR 403.13.
- h) A request of the Industrial User, provided such request does not create a violation of any existing applicable requirements, standards, laws or rules and regulations; or
- A correction of typographical or other errors in the permit.

#### 5. Property Rights

The issuance of this permit does not convey any property rights of any sort or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor does it authorize any violation of Federal, State or Local laws or regulations.

#### 6. Limitation of Permit Transfer

An Industrial Wastewater Permit shall not be transferable by operation of law or otherwise, either from one location to another or from one person to another. Statutory mergers or name changes shall not constitute a transfer or a change in ownership.

#### 7. Duty to Reapply

To continue an activity regulated by this permit after the expiration date, the Industrial User must file an application for permit renewal at least 90 days before the expiration date of this permit.

#### 8. Dilution

The Industrial User shall not increase the use of potable or process water or, in any way, attempt to dilute an effluent as a partial or complete substitute for adequate treatment to achieve compliance with the limitations contained in this permit.

#### 9. Compliance with Applicable Pretreatment Standards and Requirements

The Industrial User shall comply at all times with any and all applicable Local, State and Federal pretreatment standards and requirements including Best Management Practices and any such standards or requirements that may become effective during the term of this permit. In addition, the Industrial User may be required to prepare a pollution prevention plan.

#### 10. Confidentiality

- a) Any information, except for discharge and effluent data, submitted to the City pursuant to this Permit may be claimed by the Industrial User to be confidential. Any such claim must be asserted at the time of submission of the information or data to the City. The claim may be asserted by stamping the words "Confidential Business Information" on each page containing such information or by other means; however, if no claim is asserted at the time of submission, the City may make the information available to the public without further notice. If such a claim is asserted, the information will be treated in accordance with the procedures set forth in 40 CFR Part 2 (Public Information).
- Information and data provided to the City which is effluent data shall be available to the public without restriction.

Sunshine Canyon Landfill Industrial User No.: IU128862

#### C. Operation and Maintenance of Pollution Controls

#### 1. Proper Operation and Maintenance

The Industrial User shall at all times properly operate and maintain all facilities and systems for treatment and control (and related appurtenances) which are installed or used by the Industrial User to achieve compliance with the conditions of this permit. Proper operation and maintenance includes but is not limited to effective performance, adequate funding, adequate operator staffing and training and adequate laboratory and process controls including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.

#### 2. Duty to Halt or Reduce Activity

Upon reduction of efficiency of operation or loss or failure of all or part of the pretreatment facility, the Industrial User shall, to the extent necessary to maintain compliance with its permit, control its production or discharge (or both) until operation of the pretreatment facility is restored or an alternative method of pretreatment is provided. This requirement applies, for example, when the primary source of power of the pretreatment facility fails or is reduced. It shall not be a defense for an Industrial User in an enforcement action to state that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

#### 3. Removed Substances

Solids, sludge, filter backwash or other pollutants removed in the course of treatment or control of wastewaters shall be disposed of in accordance with section 405 of the Clean Water Act and Subtitles C and D of the Resource Conservation and Recovery Act.

#### 4. Bypass of Treatment Facilities

- a) Bypass is prohibited unless it is unavoidable to prevent loss of life, personal injury or severe property damage or no feasible alternatives exist.
- b) The Industrial User may allow bypass to occur which does not cause effluent limitations to be exceeded, but only if it is also for essential maintenance to assure efficient operation.

#### c) Notification of bypass:

- (1) Anticipated bypass. If the Industrial User knows in advance of the need for a bypass, written notice shall be submitted to the Director at least ten days prior to the anticipated date of bypass.
- (2) Unanticipated bypass. The Industrial User shall provide oral notice of an unanticipated bypass that exceeds applicable Pretreatment Standards to the Director at (323) 342-6200 within 24 hours from the time the Industrial User becomes aware of the bypass. A written notice shall also be provided within 5 days of the time the Industrial User becomes aware of the bypass. The written notice shall contain the following:
  - (i) A description of the bypass including its cause and duration;
  - (ii) Whether the bypass has been corrected; and
  - (iii) The steps taken or to be taken to reduce, eliminate and prevent reoccurrence of bypassing.

#### D. Monitoring and Records

#### 1. Flow Measurements

If flow measurement is required by this permit, the appropriate flow measurement devices and methods consistent with approved scientific practices shall be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharge. The devices shall be installed.

calibrated and maintained to ensure that the accuracy of the measurements are consistent with the accepted capability of that type of device. Devices selected shall be capable of measuring flows with a maximum deviation of less than 5 percent from true discharge rates throughout the range of expected discharge volumes.

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#### 2. Monitoring Waiver from a Categorical Pretreatment Standard

The Industrial User subject to a Categorical Pretreatment Standard may seek a waiver from the Director to forego sampling of a pollutant regulated by a Categorical Pretreatment Standard if the Industrial User has demonstrated through sampling and other technical factors that the pollutant is neither present nor expected to be present in the discharge, or is present only at background levels from intake water and without any increase in the pollutant due to activities of the Industrial User. To qualify for the waiver, the Industrial User shall:

- a) Request for a monitoring waiver signed by an authorized or duly authorized representative of the Industrial User and include the following certification statement: "I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations";
- b) Provide data from at least one sampling of the facility's process wastewater prior to any treatment present at the facility that is representative of all wastewater from all processes; and
- c) Submit a new request for the waiver before the waiver can be granted for each subsequent individual wastewater discharge permit.

#### 3. Inspection and Entry

The Industrial User shall allow the Director or an authorized representative, upon the presentation of credentials and other documents, entry to and inspection of the premises. The applicant, by accepting any permit issued pursuant to L.A.M.C. Section 64.30, does hereby consent and agree to the entry upon the premises, described in the permit, by Department personnel for the following purposes as required by this permit or L.A.M.C Section 64.30 or other applicable laws. The City shall be afforded access at all reasonable times:

- a) for the purposes of inspection, sampling, flow measurement, examination of records in the performance of other authorized duties;
- to set up on the Industrial User's property such devices as are necessary to conduct sampling inspections, compliance monitoring, flow measuring or metering operations;
- c) to inspect and copy any records, reports, test results or other information required to carry out the provisions of L.A.M.C. Section 64.30, the industrial wastewater permit, or other applicable laws; and
- d) to photograph any waste, waste container, vehicle, waste treatment process, discharge location, or violation discovered during an inspection.

The applicant, by accepting any permit issued, does hereby consent and agree to entry upon the premises as described herein. Any person violating this authority shall be guilty of a misdemeanor.

#### 4. Retention of Records

a) The Industrial User shall retain records of all monitoring information, including documentation associated with Best Management Practices and all calibration and maintenance records, all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit and records of all data used to complete the application for this permit, for a period of at least three years from the date of the sample, measurement, report or application. This period may be extended by request of the City of Los Angeles at any time.

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b) All records that pertain to matters that are the subject of special orders or any other enforcement or litigation activities brought by the City of Los Angeles shall be retained and preserved by the Industrial User until all enforcement activities have concluded and all periods of limitation with respect to any and all appeals have expired.

#### Record Contents

Records of sampling and analyses shall include the following:

- a) the date, exact place, time and methods of sampling or measurement, and sample preservation techniques or procedures;
- b) Who performed the sampling or measurements;
- c) The date(s) analyses were performed;
- d) Who performed the analyses;
- e) The analytical techniques or methods used; and
- f) The results of such analyses.

#### 6. Falsifying Information

No person shall knowingly make any false statement, representation or certification in any application, record, report, plan or other document filed with the City of Los Angeles. In addition, no person shall tamper with or knowingly render inaccurate any monitoring device required under this permit.

The reports and other documents required to be submitted or maintained under this Industrial Wastewater Permit shall be subject to:

- a) The provisions of 18 U.S.C. Section 1001 relating to fraud and false statements;
- b) The provisions of Section 309 (c) (4) of the Clean Water Act (CWA), as amended, governing false statements, representation or certification; and
- c) The provisions of Section 309 (c) (6) of the Clean Water Act (CWA), as amended, regarding responsible corporate officers.

#### D. Additional Reporting Requirements

#### 1. Notification of Planned Changes

The Industrial User shall immediately notify the Director in advance of any significant change to the Industrial User's operations or system which might alter the nature, quality, or volume of its wastewater including the listed or characteristic hazardous wastes for which the Industrial User had submitted initial notification under 40 CFR 403.12(p). The Director may require that a new Industrial Wastewater Permit application be filed and a new permit obtained before any planned changes take place.

#### 2. Duty to Provide Information

The Industrial User shall furnish to the Director any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing or terminating this permit. The Industrial User shall also furnish to the Director, upon request, copies of records required to be kept by this permit.

# 3. Notification of a Slug or Potential Slug Discharge

The Industrial User shall notify the Director immediately upon the occurrence of a slug discharge or any changes at its facility affecting the potential for a slug discharge of substance(s) prohibited by L.A.M.C. Section 64.30 that may enter the public sewer. The Director shall be notified by telephone at (323) 342-6200. The notification of a slug discharge shall include location of discharge, date and time thereof, type of waste, including concentration and volume, and corrective action taken. The Industrial User's notification of accidental cases in accordance with this permit does not relieve it of other reporting requirements that arise under Local, State or Federal laws.

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#### 4. Operating Upsets

Any Industrial User that experiences an upset in operations that places the Industrial User in a temporary state of noncompliance with the provisions of either this permit or with L.A.M.C. Section 64.30 shall notify the Director within 24 hours of becoming aware of the upset at (323) 342-6200. The notification shall include the location of discharge, type of material, concentration and volume, and corrective actions taken.

A written follow-up report of the upset shall be filed by the Industrial User with the Director within five (5) days. The report shall contain the following information:

- a) A description of the upset, the cause(s) thereof and the upset's impact on the Industrial User's compliance status;
- b) The duration of noncompliance, including exact dates and times of noncompliance, and if the noncompliance continues, the time by which compliance is reasonably expected to occur; and
- c) All steps taken or to be taken to reduce, eliminate and prevent recurrence of such an upset or other conditions of noncompliance.

The report must also demonstrate that the treatment facility was being operated in a prudent and workmanlike manner.

A documented and verified operating upset shall be an affirmative defense to any enforcement action brought against the Industrial User for violations attributable to the upset event.

#### 5. Slug Discharge Control Plan

Upon request by the LA Sanitation, the Industrial User is required to submit a Slug Discharge Control Plan to address how the Industrial User will respond to spills, bypass, and any accidental discharges that could violate any permit limits or conditions or impact the City sewer system. The plan shall contain detailed procedures to be followed by the Industrial User in the event a slug discharge occurs. The Slug Discharge Control Plan must contain, at a minimum, the following:

- Description of sewer discharge practices, including non-routine batch discharges;
- b) Description of stored chemicals including type and characteristic, volume, and chemical hazard classification;
- Procedures for promptly notifying the City of slug discharges, including any discharges that would violate a prohibition under 40 CFR 403.5(b), with procedures for follow-up written notification within five days;
- Any necessary procedures to prevent adverse impact from accidental spills, including inspection and maintenance of storage areas, handling and transfer of materials, loading and unloading operation, control of plant site run-off and worker training;

- e) Any necessary measures for building any containment structures or equipment;
- f) Any necessary measures for controlling toxic organics (including solvents); and/or
- g) Measures and equipment for emergency response.

#### 6. Notification of Hazardous Waste Discharged into POTW

An Industrial User not exempt from the requirements under 40 CFR 403.12(p) shall notify the City of Los Angeles, LA Sanitation; the EPA Region 9, Hazardous Waste Management Division; and the California Environmental Protection Agency, Department of Toxic Substances Control in writing of any discharge into the City of Los Angeles sewer system of a substance, which, if otherwise disposed of, would be a hazardous waste under 40 CFR part 261. The written notification shall be submitted to the City of Los Angeles LA Sanitation, the EPA Region 9 and the California Environmental Protection Agency.

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#### 7. Signatory Requirements

All applications, reports or information submitted by the Industrial User to the Director must contain the following certification statement and be signed by an authorized representative indicated below:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

An authorized representative shall mean the following:

- a president, secretary, treasurer, or vice-president in charge of a principal business function, or any other person who performs similar policy or decision-making functions, if the Industrial User is a corporation;
- (b) the manager of one or more manufacturing, production, or operating facilities, provided the manager is authorized to (1) make management decisions that govern the operation of the regulated facility including having the explicit or implicit duty of making major capital investment recommendations, and initiate and direct other comprehensive measures to assure long-term environmental compliance with environmental laws and regulations; (2) ensure that the necessary systems are established or actions taken to gather complete and accurate information for control mechanism requirements; and (3) sign documents in accordance with corporate procedures;
- (c) a general partner or proprietor if the Industrial User is a partnership or proprietorship, respectively;
- (d) a principal executive officer or director having responsibility for the overall operation of the discharging facility or a ranking elected official if the Industrial User is a governmental entity, charitable organization or other such unincorporated entity; or
- (e) a representative authorized in writing by any individual designated above, if the authorization is submitted to the Director and specifies an individual or a position having responsibility for the overall operation of the facility. This includes the position of plant manager, a position of equivalent responsibility, or an individual having overall responsibility for environmental matters for the company. If an authorization under Paragraph (e) is no longer accurate because a different individual or position has the responsibility for the overall operation of the facility, or overall responsibility for environmental matters of the company, a new authorization satisfying the requirements of Paragraph (e) of this Permit must be submitted to the Director prior to, or together with, any reports to be signed by an authorized representative.

#### 8. Annual Publication Of Significant Noncompliance

The Industrial User in noncompliance with applicable Federal Pretreatment Standards, Best Management Practices or other Pretreatment Requirements during the twelve (12) previous months may lead to an enforcement action resulting in publication of its name in a newspaper(s) of general circulation that provides meaningful public notice within the jurisdiction(s) served by the POTW. For purposes of this

provision, significant noncompliance is defined under 40 CFR 403.8 (f)(2)(viii) and L.A.M.C. Section 64.30.E.8.

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#### 9. Civil and Criminal Liability

Nothing in this permit shall be construed to relieve the Industrial User from civil and/or criminal penalties for noncompliance under L.A.M.C. Section 64.30 or State or Federal laws and regulations.

#### 10. Penalties for Violations of Permit Conditions

The L.A.M.C. Section 64.30 provides that any person who violates a permit condition is subject to a civil penalty in the maximum sum provided by law for each day in which such violation occurs. Any person who willfully or negligently violates permit conditions is subject to criminal penalties of up to \$1000.00 per violation per day and/or by imprisonment in the County Jail for a period of not more than six (6) months. The Industrial User may also be subject to sanctions under State and/or Federal law.

#### 11. Liability For Costs Incurred From Unlawful Discharge

Whenever any Industrial User introduces or causes to be introduced wastewater in violation of this permit or the L.A.M.C. and such discharge, either singly or by interaction with other discharges, results in damage to or is otherwise detrimental to or adversely affects the P.O.T.W., the storm drain system, or any Waters of the State, said Industrial User shall be liable to the City for reasonable costs necessary to correct that discharge, detriment or adverse effect, including, but not limited to labor, material, inspection, transportation, overhead, and incidental expenses associated with the corrective action. The Industrial User shall additionally be liable to the City for the reasonable costs of investigation by the City arising from the unlawful discharge.

#### 12. Civil Liability

Violation of any pretreatment standards or requirements or any term or condition or applicable compliance schedule of this permit, the Industrial User shall be civilly liable to the City in a sum of not to exceed twenty-five thousand dollars (\$25,000) a day for each violation.

# 13. Resource Conservation Recovery Act Notification and California Hazardous Waste Control Law

It is the responsibility of the Industrial User to ensure that the operations performed at their site comply with federal hazardous waste management regulations under subtitles C & D of the Resource Conservation and Recovery Act (RCRA) and California hazardous waste management regulations under the Hazardous Waste Control Law (Chap. 6.5, HSC, Sec. 25100 et. seq.) and California Code of Regulations (CCR), Titles 8 and 22. For information on federal and state hazardous waste regulations, contact the California Environmental Protection Agency, Department of Toxic Substances Control.

#### F. Definitions

- 1. Best Management Practices (BMP) Activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce pollutants in discharges. BMP also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw materials storage.
- 2. Bi-Monthly Once every other month.
- 3. <u>Bypass</u> The intentional diversion of wastestreams from any portion of an Industrial User's treatment facility.
- 4. <u>Categorical Pretreatment Standards</u> Limitations on pollutant discharges to POTWs, promulgated by EPA in accordance with Section 307 of the Clean Water Act, that apply to specified process wastewaters of particular industrial categories.
- 5 Commercial Establishment A private establishment such as a restaurant, hotel, laundry, store, filling station, or recreational facility. A nonprofit private or government entity such as a church, school,

Sunshine Canyon Landfill Industrial User No.: IU128862

hospital, military facility, correctional institution recreational facility or a facility owned or operated by a charitable organization is considered a commercial establishment.

- Commingled Load A load of septage which includes septage generated both within and outside the City's boundaries.
- 7. Composite Sample A sample that is collected over time, formed either by continuous sampling or by mixing discrete samples. The sample may be composited either as a <u>flow proportional composite sample</u> (collected either as a constant sample volume at time intervals proportional to stream flow or collected by increasing the volume of each aliquot as the flow increases while maintaining a constant time interval between the aliquot) or as a <u>time composite sample</u> (composed of discrete sample aliquot collected in one container at constant time intervals providing representative samples irrespective of stream flow).

#### Cooling Water

- a) Uncontaminated Water used only for cooling purposes which has no direct contact with any raw material, intermediate or final product and which does not contain a level of contaminants detectably higher than that of the intake water.
- b) Contaminated Water used only for cooling purposes which may become contaminated either through the use of water treatment chemicals used for corrosion inhibitors or biocides or by direct contact with process materials and/or wastewater.
- 9. <u>Daily Maximum</u> The maximum allowable discharge of a pollutant during a calendar day. Where daily maximum limitations are expressed in units of mass, the daily discharge is the total mass discharged over the course of the day. Where daily maximum limitations are expressed in terms of a concentration, the daily discharge is the arithmetic average measurement of the pollutant concentration derived from all measurements taken that day.
- 10. <u>Director</u> The Director of the LA Sanitation of the Department of Public Works of the City of Los Angeles or the duly authorized representative thereof.
- 11. <u>Domestic Septage</u> The liquid or solid material removed from a private sewage disposal system (PSDS), portable toilet or other holding device that receives only domestic sewage.
- 12. <u>Domestic Wastewater (Domestic Sewage)</u> Sanitary wastewater and wastewater generated from household type operations.
- 13. <u>Establishment</u> An economic unit, generally at a single physical location, where business is conducted or where services or industrial operations are performed.
- 14. Facility All buildings, equipment, structures, and other stationary items which are located on a single site or on contiguous or adjacent sites and which are owned or operated by the same person ( or by any person which controls, is controlled by, or under common control with such person) and is authorized by the City of Los Angeles to discharge industrial wastewater to the POTW. A facility may contain more than one establishment.
- 15. <u>Food Service Establishment</u> A facility engaged in preparing food for consumption by the public such as, but not limited to, a restaurant, bakery, commercial kitchen, caterer, hotel, school, hospital, prison, correctional facility, or care institution.
- 16. Four (4) Day Average The average of daily values for four consecutive monitoring days.
- 17. Grab Sample An individual sample collected in less than 15 minutes, without regard for flow.
- 18. Gravity Grease Interceptor (GGI) An approved device with a minimum total volume of 300 gallons that is specifically designed to separate, trap, and hold nonpetroleum fats, oil, and grease (FOG) from an industrial wastewater discharge, and which shall be remotely located from where food is handled, and

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is identified by the following: volume, a minimum retention time of 30 minutes, baffle(s), a minimum of two compartments, and gravity separation.

- 19. Hydromechanical Grease Interceptor (HGI) An approved device that is installed in an industrial wastewater drainage system to separate, trap, and hold nonpetroleum fats, oil, and grease (FOG) from a wastewater discharge and is identified by flow rate, retention time, and separation efficiency. HGI design incorporates, in combination or separately, air entrainment, hydromechanical separation, interior baffling, and internal barriers.
- 20. <u>Industrial User</u> A person that has been authorized to discharge industrial wastewater into the City of Los Angeles POTW.
- Industrial Wastewater Liquid and any water carried waste other than domestic sewage. Wastewater generated from household type operations, including, but not limited to dishwashing, laundry, and car washing, performed at commercial establishments for or to support commercial purposes is considered industrial wastewater.
- Instantaneous Maximum The allowable maximum concentration determined from the analysis of any
  discrete or composited sample collected, independent of the industrial flow rate and the duration of the
  sampling event.
- 23. <u>Interference</u> A discharge which alone or in conjunction with a discharge or discharges from other sources both:
  - Inhibits or disrupts the POTW, its treatment processes or operations or its sludge processes, use or disposal; and
  - b) Causes a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation) or prevents the use of disposal of sewage sludge. The following statutory provisions and regulations or permits issued thereunder apply (or more stringent State or Local regulations): Section 405 of the Clean Water Act, the Solid Waste Disposal Act (SWDA) (including Title II, more commonly referred to as the Resource Conservation and Recovery Act (RCRA) and including State regulations contained in any State sludge management plan prepared pursuant to Subtitle D of the SWDA), the Clean Air Act, the Toxic Substances Control Act and the Marine Protection, Research and Sanctuaries Act.
- 24. Monthly Average The maximum allowable value for the average of all observations obtained during one calendar month. Compliance with the monthly average discharge limit is required regardless of the number of samples analyzed and averaged. Therefore, if only one sample is taken during the calendar month, results of the one analysis will be used to determine compliance with the monthly average.
- Non-Domestic Septage The liquid or solid material removed from a private sewage disposal system (PSDS) or other sanitation holding device that receives industrial wastewater or a combination of domestic and industrial wastewater.
- 26. Pass Through A discharge which exits the POTW into waters of the United States in quantities or concentrations which, alone or in conjunction with a discharge or discharges from other sources, cause a violation of any requirement of the POTW's NPDES permit (including an increase in the magnitude or duration of a violation).
- 27. Person Any individual, partnership, co-partnership, firm, company, corporation, association, joint stock company, trust, estate, governmental entity or any other legal entity, or their legal representatives, agents or assigns. The masculine gender shall include the feminine, the singular shall include the plural where indicated by the context.
- 28. Portable Toilet Any portable or permanently installed sanitation apparatus or system which includes a tank for toilet waste retention. Portable Toilet includes sanitation holding devices from airplanes, trains, boats with type III marine sanitation devices, buses, movie dressing room trailers, recreational vehicles, or other similar transport vehicles.

29. <u>Private Septage Disposal Facility (PSDF)</u> – A disposal site, other than a City designated discharge location, with a direct connection to the City sewer, which accommodates the discharge of hauled septage.

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- 30. <u>Publicly Owned Treatment Works (POTW)</u> A treatment works as defined by Section 212 of the Clean Water Act which is owned by the State or municipality. This definition includes any devices and systems used in the storage, treatment, recycling and reclamation of municipal sewage or industrial wastes of a liquid nature. It also includes sewers, pipes and other conveyances only if they convey wastewater to a POTW treatment plant.
- 31. Resource Conservation and Recovery Act (RCRA) A Federal statute regulating the management of hazardous waste from its generation through ultimate disposal. The Act contains requirements for waste generators, transporters and owners and operators of treatment, storage and disposal facilities.
- Sanitary Wastewater Wastewater of human origin derived from toilets, urinals, showers, baths and restroom sinks.
- Septage The liquid or solid material removed from a private sewage disposal system (PSDS), portable toilet or other sanitation holding device that receives wastewater.
- 34. <u>Septage Hauler</u> A person or an owner/operator of a business that holds Septage Disposal Permit(s) issued by the Director to discharge septage to the City's P.O.T.W.
- 35. <u>Slug Discharge</u> Any discharge of a non-routine, episodic nature, including but not limited to an accidental spill or a non-customary batch discharge, which has a reasonable potential to cause Interference or Pass Through, or in any other way violate the POTW's regulations, local limits or permit conditions.
- 36. <u>Total Toxic Organics (TTO)</u> The sum of the masses or concentrations greater than 0.01 mg/l of the specific toxic organic compounds regulated by specific categorical pretreatment regulations which is found in the discharge at specific quantifiable concentrations.
- 37. Type III Marine Sanitation Device A device that is designed to prevent the overboard discharge of treated or untreated domestic sewage.
- 38. Upset An exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the Industrial User, excluding such factors as operational error, improperly designed or inadequate treatment facilities or improper operation and maintenance or lack thereof.
- 39. Wastewater Liquid and water carried industrial and/or domestic wastes and sewage from facilities including, but not limited to, dwellings, commercial buildings, industrial facilities, agricultural activities, hospitals, medical facilities and other institutions, together with other wastes which may be present, whether treated or untreated, which enter the POTW.

# APPENDIX A Fact Sheet

#### FACT SHEET Renewal Date: 09/01/2020

#### A. INDUSTRIAL USER INFORMATION

SUNSHINE CANYON LANDFILL 14747 San Fernando Road Sylmar, CA 91342

IU128862 W-535428

Tuong-Phu Ngo, Environmental Manager (818) 362-2096

#### B. DESCRIPTION OF FACILITY OPERATIONS

Sunshine Canyon Landfill is primarily engaged in receiving and processing municipal waste (SIC 4953). The landfill generates various liquid streams at the site including mildly contaminated seep water, leachate, gas system condensate, and gas well liquids. The seep water consists of three different streams which include cutoff wall water, mildly contaminated seep water impacted by the landfill, and subdrain water.

The different liquid streams generated at the landfill are presented below:

- 1. Gas Well Liquids: Gas well liquids are liquids pumped from the gas extraction wells in order to allow for removal of landfill gas (LFG) from the landfill. The gas condensate is collected at the low points in the gas collection system throughout the site and at the flare stations. The gas well liquids are stored in frac tank storage area and are pumped to the sewer lift station for direct sewer discharge.
- 2. Condensate: Gas condensate is produced due to the temperature drop that takes place as the LFG is conveyed from the gas extraction wells to the flare stations for combustion. Condensate is pumped to the frac tank storage area and then pumped to the sewer lift station for direct sewer discharge.
- 3. Seep Water: Spring (Seep) and underdrain water emerges and is collected throughout the landfill area. Seep water contains trace levels of VOCs. Seep Water sources may be treated in the on-site water reuse treatment systems or may be directly discharged. There are three types of Seep Water, each treated separately, as described below.
  - · City Seep Water: collected from gravity drains under the old city portion of the landfill.
  - Cutoff Wall Water: subsurface water (groundwater) pumped from area near the front entrance of the site. This stream is similar in characteristics to the Seep Water.
  - Subdrain Water: spring water collected underneath the County landfill, and conveyed by gravity to the front entrance area of the landfill.
- 4. Leachate: The leachate is collected at the bottom of the lined disposal areas. Extraction pumps convey leachate streams to the treatment systems for on-site water reuse or directly to the direct sewer discharge.

Operation at the facility began in 1958. Sunshine Canyon Landfill operates six days per week and employs 60 personnel.

# C. SAMPLE POINT DESCRIPTION/FACILITY FLOW INFORMATION

INDUSTRIAL WASTEWATER	SAMPLE	FLOW PER OPERATIONAL DAY (GPD)		DESCRIPTION
PERMIT	POINT	TOTAL	PROCESS	DESCRIPTION
W-535428	01	300,000	300,00	Secured Sampling Facility is located at the Magnetic Flow meter Vault.
TOTAL		300,00	300,00	

# D. PROCESS UNIT OPERATION/FLOW INFORMATION

PERMIT	SAMPLE	PROCESS UNIT	PROCESS
NUMBER	POINT	OPERATION CODE	DESCRIPTION
W-535428	01	LWDB000	Landfill Leachate Collection

# E. DILUTION/AUXILIARY OPERATION/FLOW INFORMATION

Sunshine Canyon Landfill does not generate any dilution wastestream that combines with a process wastestream prior to Sample Point 01\_

#### F. FLOW MEASURING DEVICE

Sunshine Canyon Landfill has installed a flow measuring device to monitor the wastewater discharge to the City Sewer.

# G. PRETREATMENT UNIT OPERATION(S)

Process wastewater generated from Gas Well Liquids, Condensate, Seep Water and Leachate flows through an on-site treatment system. Treatment consists of hydrogen peroxide injection at three locations: after initial liquids are added to the tanks, at the head of the 2,100-foot force main to the compliance monitoring point, and near the sample location to polish the effluent before discharge. There are three inline oxidation reduction potential (ORP) meters: ORP1 is after the initial hydrogen peroxide injection point, ORP2 is after the second hydrogen peroxide injection point, and ORP3 is just prior to the compliance monitoring point. Treatment systems were installed to treat the cutoff water, seep water, subdrain water, and leachate streams; these streams may be treated for use on site for dust control and/or may be directly discharged to the sewer. The gas well liquids and gas system condensate flows do not undergo any pre-treatment and are discharged directly to the City Sewer through Sample Point 01.

# INDUSTRIAL WASTEWATER PERMIT W-535428

PRETREATMENT UNIT OPERATION CODE	PRETREATMENT UNIT OPERATION DESCRIPTION
AD0010	ADSORPTION - ACTIVATED CARBON
CX0010	CHEMICAL OXIDATION - DISSOLVED SULFIDE OXIDATION
NE0010	NEUTRALIZATION
0110TR	RECIRCULATION

# H. POLLUTION PREVENTION

SUNSHINE CANYON LANDFILL has implemented the following pollution prevention practice(s).

POLLUTION PREVENTION PRACTICE CODE	POLLUTION PREVENTION PRACTICE DESCRIPTION
OPM60	Employee training
OPM70	Housekeeping

# I. DISCHARGE LIMITATIONS AND MONITORING

See permit, PART 2 - DISCHARGE LIMITATIONS. See permit, PART 3 - MONITORING REQUIREMENTS

# J. REPORTING REQUIREMENTS

See permit, PART 4 - REPORTING REQUIREMENTS.

#### K. SPECIAL CONDITIONS

See permit, PART 5 - SPECIAL CONDITIONS.

#### L. STANDARD CONDITIONS

See permit, PART 6 - STANDARD CONDITIONS.

#### M. RATIONALE FOR EFFLUENT LIMITATIONS

Sunshine Canyon Landfill does not perform any of the operations covered under the Federal Pretreatment Categorical Standards. However, the Federal definition of Significant Industrial User applies to this facility because the process wastewater generated and discharged is greater than 25,000 gpd. As a result, Sunshine Canyon Landfill is required to comply with 40 CFR 403.12.

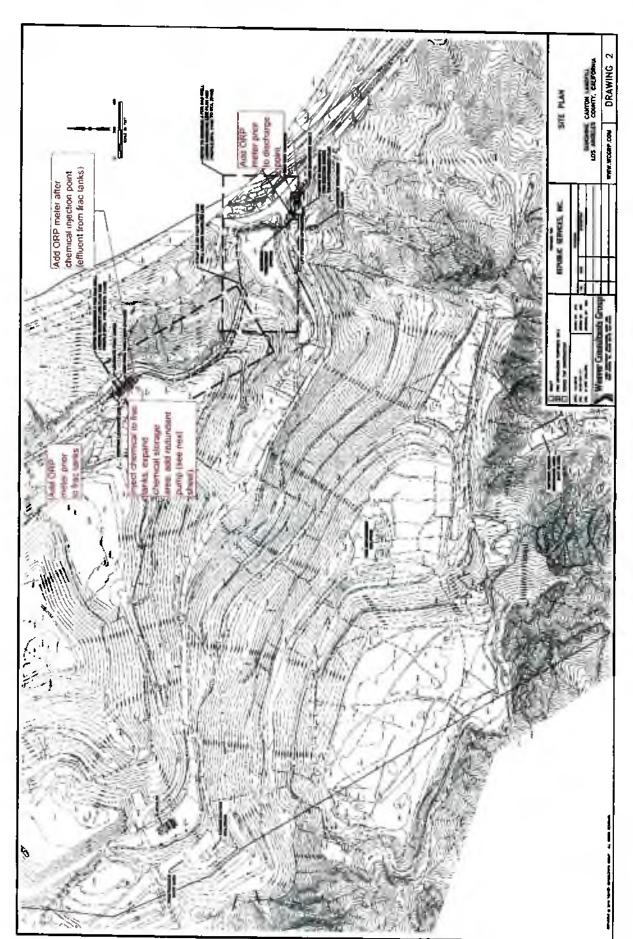
Since the total process wastewater from this facility is greater than 25,000 gallons per day, this facility is classified as a Significant Industrial User.

Sample Point 01 is the last point of discharge to the sewer system and the Local Limit applies at this point. One set of limits apply to the discharges from this facility to the City of Los Angeles sewer system: the Local Limits. Therefore, Sunshine Canyon Landfill is required to self-monitor for Local Limits semi-annually.

Sunshine Canyon Landfill has chosen to measure the average daily flow to sewer as stated in 40CFR 403.12. (e)(1).

Prepared By:	Date: <u>08/25/2020</u>
Reviewed By: Nataly Dakak	Date: <u>08/26/2020</u>

# APPENDIX B Attachments

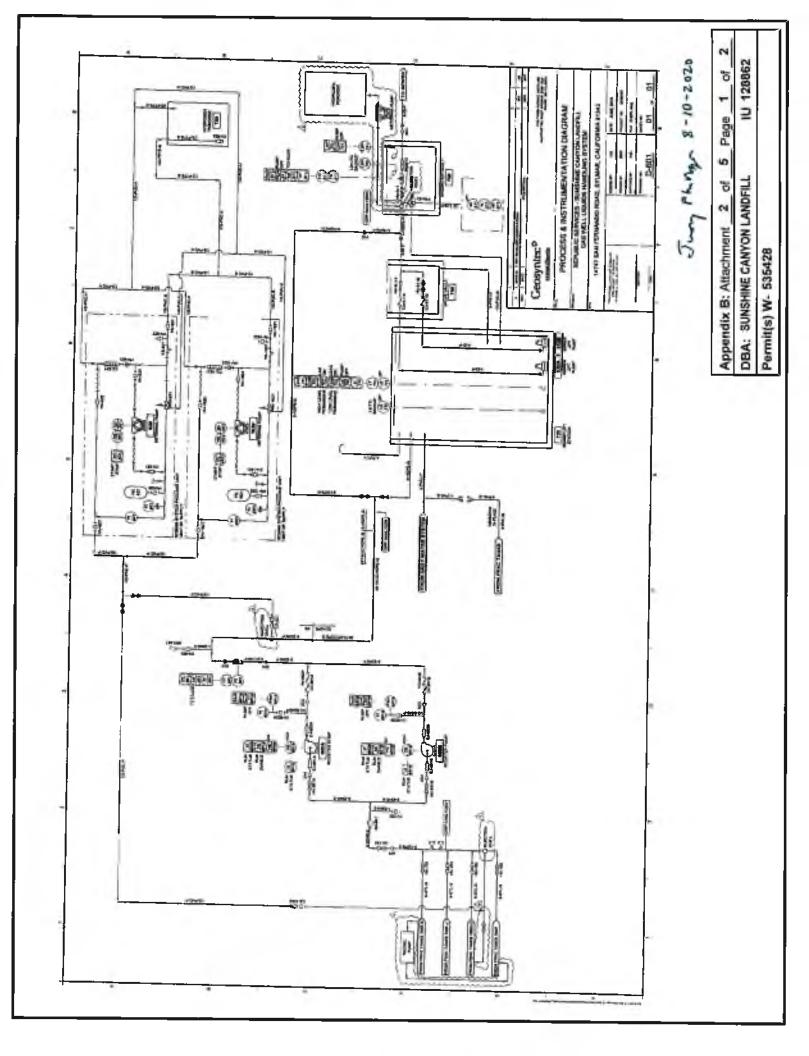


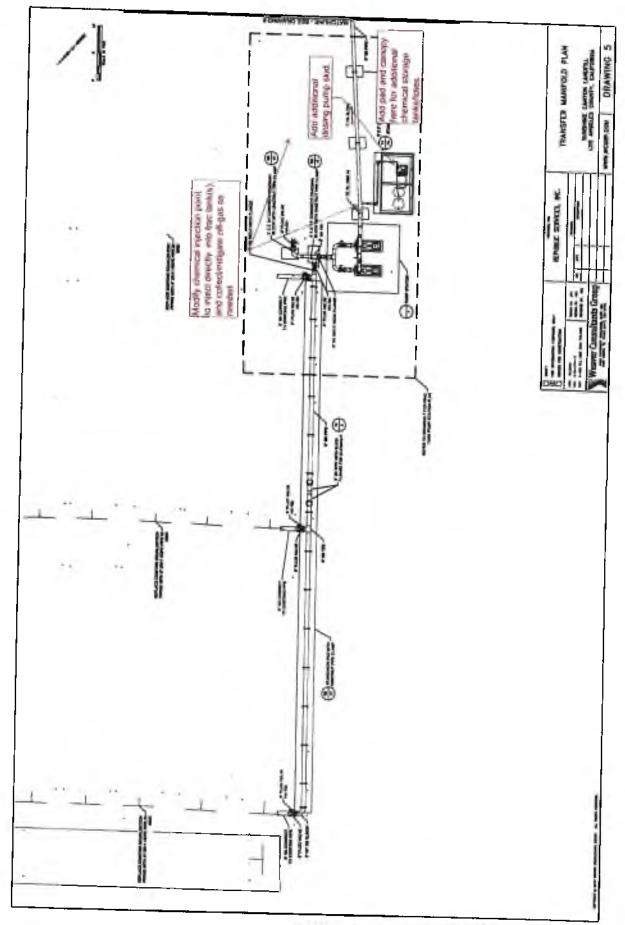
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Appendix B. Attachment 1 of 5 Page 1 of DBA: SUNSHINE CANYON LANDFILL 1U 128862

Permit(s) W- 535428

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Appendix B: Attachment 2 of 5 Page 2 of 2

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Permit(s) W- 535428

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# BONDED AND SPECIAL SEWER CONNECTION CERTIFICATE SEWER FACILITIES CHARGE (SFC)



JOB ADDRESS: 14747 N SAN FERNANDO ROAD Applicant Name: REPUBLIC SERVICES, INC City PHOEMIX State AZ Zip Code: 85054 Phone No. 818,362 2151 Address: 18500 N ALLIED WAY

Sever Map No: 225-135-2,228-133-4,228-133-2 saudd By Lea guilbeaux , VALLEY DISTRICT Tract No. TR 10422 Issued, 2014811132 2015810613 Sewer Permit No.: S2014810129 Engineering District: Valley Deta tsaued: 05/24/2017 Previous Certificate APN 2601011012 Lot No.: LT 9

Remarks SUNSHINE CANYON LANDFILL INDUSTRIAL WASTE PERMIT WESSAZE

SEWER FACILITIES CHARGE CREDIT FLOW AFTER JULY 1, 1994

RATE

FACILITY DESCRIPTION

Q

Department of Public Works Bureau of Engineering

City of Los Angeles

QUANTITY

SEWER FACILITIES CHARGE FLOW FEE

RATE

GPD 

386.00

INDUSTRIAL DISCHARGE

159708

FACILITY DESCRIPTION

Subtotal SFC Credited = \$0.00

AMOUNT

AMOUNT

QUANTITY

\$702,520,00

182,000 00

Subtotal SFC Fee = \$702,520.00

Total SFC Amount Due =\$702,520.00 - \$0.00= \$702,520.00

**BONDED SEWER FEES** 

Bonded Sewer Fee = \$74.00 x = \$0.00 Bonded Lateral Fee = \$84.00 x = \$0.00 7% Surcharge for Bonded Lateral Fees \$0.00 Total Bonded Amount Duc= \$0.00

CERTIFICATE NO.: C-2017810921 The following Sewerage Facilities Charges have been paid for the above described property by the above signed in behalf of the owner and succeeding owners in accordance with Sections 64.11.2, 64.11.3,64.16.1, of the L.A.M.C.

have been paid for (all) (a portion) of the property described above by the above signed in behalf of the owner and succeeding The following Sawer Fees (SPECIAL FEE)(BONDED) House Connection Sener in accordance with Section 64.15 (B)64.18

CERTIFICATE NO.: D.

Page 1 of 1 IU 128862 S DBA: SUNSHINE CANYON LANDFILL ъ Appendix B: Attachment

Permit(s) W- 535428

# City of Los Angeles Bureau of Engineering

# Sewer Capacity Availability Request (SCAR)

To Bureau of Sanitation

The following request is submitted to you on behalf of the applicant requesting to connect to the public sewer system. Please verify that the capacity exists at the requested location for the proposed developments shown below. The results are good for 180 days from the date the sewer capacity approval from the Bureau of Sanitation.

Job Address	14747 SAN FERNANDO RD	Sanitation Scar ID	60-3563-0317
Date Submitted	03/10/2017	Request Will Serve Letter?	°Z
BOE District	Valley District		
Applicant:	GEO-LOGIC ASSOCIATES, INC		
Address:	2777 E GUASTI RD STE 1	City	ONTARIO
State	CA	Zíp:	91761
Рһопе	530-632-1215	Fax:	
Email:	CBARRETT@GEO-LOGIC.COM BPA No.	BPA No.	14042-20000-05291
Ѕ-мар:	350	Wye Map	228-137-3

		SIMM	Map - Mainter	Map - Maintenance Hole Locations	ocations		
No.	Street Name	HW S/N	HW S/Q	Diam. (in)	Approved Flow %		Votes
1	SAN FERNANDO RD	35001001	35001002	18	100.00		
		ā.	roposed Fac	roposed Facility Description	no		
No.	Propose	Proposed Use Description	lon	Sewage Generation (GPD)	Cnit	aty	GPD
+	DEWATERING			-	GPD	300,000	300,000

300,000 1] Approved for the maximum allowable capacity of 300,000 GPD.(208.33 gpm). 2] Maximum allowable flow rate will be 250 gpm, not exceeding 300,000 gallons per day. 3] IWP is required. Proposed Total Flow (gpd): Remarks

Note: Results are good for 180 days from the date of approval by the Bureau of Sanitation Expires On: 03/13/2017 Date Processed:

Submitted by: Bureau of Sanitation Processed by:

Bureau of Engineering

Phone

IRENE CHIA

Phone: 323-342-6207
Sanitation Status: SAN Review
Completed
Reviewed by: Ricardo Avendano
on 03/13/2017

Fees Collected

Date Collected

≺es

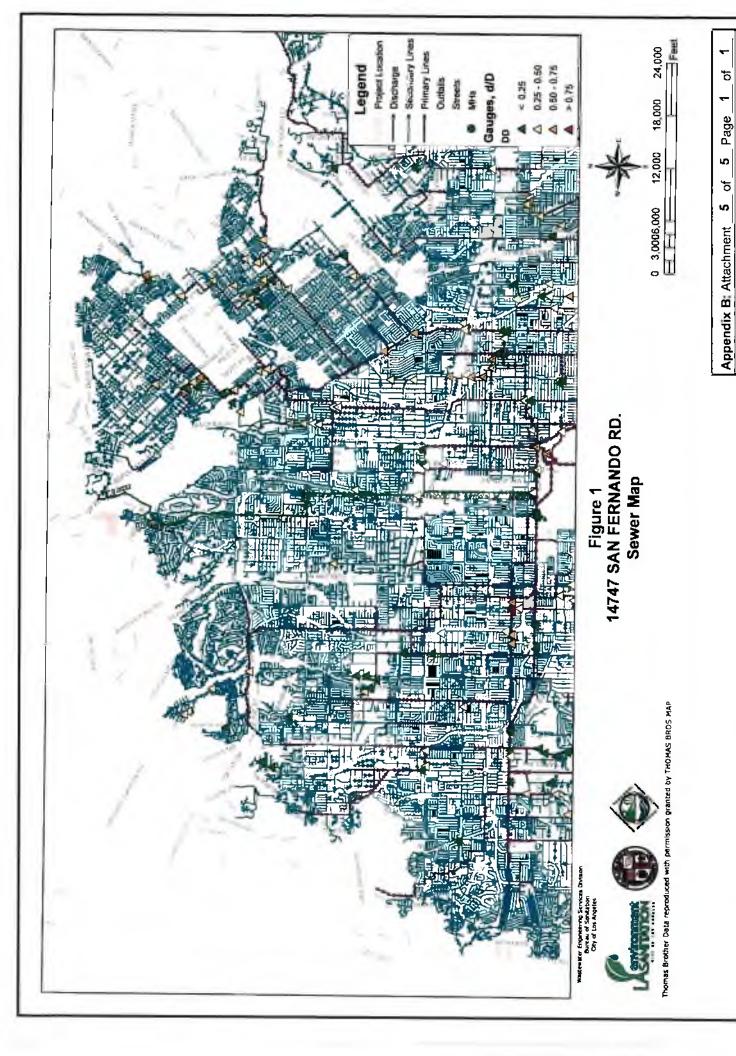
03/10/2017 S

SCAR FEE (W.37 / QC.707) **\$2,568.50** SCAR Status:

SAN Review Completed

Appendix B: Attachment 4 of 5 Page 1 of DBA: SUNSHINE CANYON LANDFILL IU 128862

Permit(s) W- 535428



**1U 128862** 

DBA: SUNSHINE CANYON LANDFILL

Permit(s) W- 535428

## APPENDIX C

Self-Monitoring Report Form and Instructions

. D	CITY OF LOS ANGELES BUREAU OF SANITATION	NGELES			INDUSTRIAL	INDUSTRIAL WASTE MANAGEMENT DIVISION PERIODIC COMPLIANCE REPORT	MENT DIVISION REPORT	SEND REPORT TO CITY OF LOS ANGELES INDUSTRIAL WASTE MANAGEMENT DIVISION 2714 MEDIA CENTER DR. LOS ANGELES, CA 90065	Q AGEMENT DIVISION COS ANGELES, CA 90065
PERMIT W - 535428		IU- 128862		-	PH # (818) 362-2096	960			
DBA SUNSHINE	SUNSHINE CANYON LANDFILL	IDFILL					SAMPLE POINT NO 01-001	1-001	
ADDRESS: 14747	14747 San Fernando Road Sylmar, CA 91342	o Road Syln	ıar, CA	91342			SAMPLE DESC: Secured Sampling Facility is Magnetic Flow meter Vault - Normal Operations	red Sampling Faci Vault – Normal Oper	Facility is located at Operations
					FLOW	FLOW INFORMATION			
DAILY FLOWRATES	S			AUXILIA	RY FLOW ON DA	AUXILIARY FLOW ON DAY OF SAMPLING		BATCH DISCHARGE ONLY	RGE ONLY
1) SAMPLE DAY FLOW,	LOW.			1) BOILER	R BLOWDOWN		GPD, [ ]M [ ]E [ ]C		1) NO OF OPERATIONAL DAYS
2) AVE. FLOW FOR THE		GPD, [ JM [ JE [ ]C	ರ	2) NON-C	2) NON-CONTACT COOLING	NG	GPD, [ ]M [ ]E [ ]C		8)
MONITORING PERIOD		GPD [ ]M [ ]E [		3) DEMIN	3) DEMINERALIZATION/BACKWASH	ACKWASH	GPD, [ ]M [ ]E [ ]C	2) NO OF DAYS FOR ACCUM,	S FOR ACCUM.
3) MAX. FLOW FOR THE MONITORING PERIOD	R THE ERIOD:		`	4) COOLII	4) COOLING TOWER BLEEDOFF;	EDOFF;	GPD, [ ]M [ ]E [ ]C	C 3) DISCHARGE VOLUME	VOLUME
	GPD, [	]M { ]E [		5) OTHERS (	(S.(		GPD, [ JM [ ]E [ ]C		GALLONS
			-		SAMPLIN	SAMPLING INFORMATION	!		
SAMPLE	DATE		TIME	ш	SPLIT	* PRE-	SAMPLED	LABORATORY	LABORATORY
TYPE	START E	END S.	START	END	SAMPLE (Y/N)	NOTIFICATION DATE	BY	NAME	CERT.#
COMP							i		
GRAB									
DCC-Discharge Case Condition, TTO-Total Toxic Organic; CN-Cyanide MO-Monthly; BM-BiMonthly; QT-Quarterly, SA-SemiAnnual; AN-Annual; GPO-Galions Per Day, M-Measured, E-Estimated; C-Calculated; COMP-Composite G-Grab; Mg/I-Milligrams Per Liter, PPD-Pounds Per Day	on TTO-Total Toxic QT-Quarterly, SA-Se asured, E-Estimated	Organic; CN-Cyan miAnnual; AN-Anr ; C-Calculated; CO	ide tual: MP-Compo	Stie		NOTE. *TO PRE-NOTIF 1. Report must be submit by the 15th day of the n 2. Facsimiles (faxes) of th	NOTE. •TO PRE-NOTIFY CALL (323) 342-6200  1. Report must be submitted with U.S. Post Office postmark date by the 15th day of the month following the monitoring period.  2. Facsimiles (faxes) of these reports shall not be accepted.	ate 1	
FOR OFFICIAL USE ONLY	POSTMARK DATE	OSTMARK DATE			SMR DATA INPUT BY	CA INPUT BY		REVIEWED BY	
;	NEVER					UAIE		KEVIEW DATE	

SAMPLE POINT NO : 01-001 IU- 128862 PERMIT W- 535428	INDUSTRIAL	INDUSTRIAL WASTE MANAGEMENT DIVISION PERIODIC COMPLIANCE REPORT	ENT DIVISION EPORT	CITY OF LOS ANGELES BUREAU OF SANITATION	ANGELES	7
SAMPLE DESC End-of-pipe Normal Operations						
GRAB DATE GRAB TIME	COMP START DATE	END DATE	COMP START	TIME	END TIME	
	LABORATORY RESULTS	RESULTS				
		SAMPLE TYPE	LABORATO	LABORATORY RESULTS	VIOLATION	NOI
ANALYTE		COMP GRAB	CONCENTRATION	UNITS	YES	SN ON
Arsenic, Total					-	
Cadmium, Total						
Chromium, Total				ļ	_	
Copper, Total						
Lead, Total		_				
Nickel, Total		:				
Silver, Total					_	
Zinc, Total						
Chloride	·					
Cyanide (Free)						
Cyanide (Total)						
Oil & Grease (Total)						
Dissolved Sulfides						
Hd						
* SEE PERMIT FOR THE DISCHARGE LIMITS IF IN VIOLATION ATTACH A STATEMENT OF REASON FOR VIOLATION AND CORRECTIVE ACTION TAKEN	TEMENT OF REASON FOR VIOLATION A	ND CORRECTIVE ACTION TA	IKEN			
I CERTIFY UNDER PENALTY OF LAW THAT THIS DOCUMENT AND ALL ATTACHMENTS WERE PREPARED UNDER MY DIRECTION OR SUPERVISION IN ACCORDANCE WITH A SYSTEM DESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE THE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION. THE INFORMATION AND SUBMITTED IS, TO THE BEST OF MY KNOWLEDGE AND BELIEF, TRUE, ACCURATE, AND COMPLETE I AM AWARE THAT THERE ARE SIGNIFICANT PENALTIES FOR SUBMITTING FALSE INFORMATION, INCLUDING THE POSSIBILITY OF FINE AND IMPRISONMENT FOR KNOWING VIOLATIONS	TACHMENTS WERE PREPARED UNDER MATION SUBMITTED. BASED ON MY INC BMITTED IS, TO THE BEST OF MY KNOW ILITY OF FINE AND IMPRISONMENT FOR	MY DIRECTION OR SUPEI LURY OF THE PERSON OF LEDGE AND BELIEF, TRUE, KNOWING VIOLATIONS	AVISION IN ACCORDANCE WITH A PERSONS WHO MANAGE THE SY ACCURATE, AND COMPLETE I AM.	SYSTEM DESIGNED TO AS STEM OR THOSE PERSON AWARE THAT THERE ARE S	SSURE THAT IS DIRECTLY SIGNIFICANT	
AUTH REPRESENTATIVE SIGNATURE	PRINT NAME	TITLE		DATE		
						7

PERMIT W- 535428	IU- 128862	PE	PERIODIC COMPLIANCE REPORT	CE REPORT	CITY OF LO	S ANGELES B	CITY OF LOS ANGELES BUREAU OF SANITATION	NOITATION
DBA: SUNSHINE CANYON LANDFILL	ANDFILL		SAMPL	SAMPLE POINT 01-001				
		SIG	DISCHARGE LIMITS: LOCAL	OCAL				
			INSTANTANEOUS	NEOUS	φO	DAILY	MONTHLY	THLY
ANALYTE	W	MONITORING	LIMIT	UNIT	LIMIT	UNIT	LIMIT	LINO
Arsenic, Total	Se	Semi-Annual	3.00	0 mg/l				
Cadmium, Total	Se	Semi-Annual	15.00	0 mg/l				
Chloride	Se	Semi-Annual						
Chromium, Total	Se	Semi-Annual	10.00	0 mg/l				
Copper, Total	Se	Semi-Annual	15.00	0 mg/1				
Cyanide (Free)	Se	Semi-Annual	2.00	0 mg/1				
Cyanide (Total)	Se	Semi-Annual	10.00	0 mg/1				
Dissolved Sulfides	Se	Semi-Annual	0.10	0 mg/l				
Lead, Total	Se	Semi-Annual	5.00	0 mg/1				
Nickel, Total	Se	Semi-Annual	12.00	0 mg/1			i	
Oil & Grease (Total)	Se	Semi-Annual	600.00	0 mg/1				
нd	Se	Semi-Annual	5.50-11.00	os o				
Silver, Total	Ω.	Semi-Annual	5.00	0 mg/1				
Zinc, Total	S.	Semi-Annual	25.00	0 mg/1				
			-	i				
	_							

### SELF-MONITORING REPORT FORM INSTRUCTIONS

### SECTION I: <u>FLOW INFORMATION</u>

Report all flows in terms of Gallons Per Day (GPD) unless noted otherwise and check  $(\checkmark)$  if the reported flow was (M) Measured, (E) Estimated, or (C)Calculated.

### A. DAILY FLOWRATES

- A.1 SAMPLE DAY FLOW Enter the discharge flow during the sampling period (the day/s the sample was collected).
  - A.2 AVERAGE FLOW FOR THE MONITORING PERIOD Enter the average daily discharge flow throughout the monitoring period. For example, if the report was submitted for the 1st Bi-Monthly monitoring period, the flow should be the average daily flow during the months of January thru February.
  - A.3 MAXIMUM FLOW FOR THE MONITORING PERIOD Enter the maximum discharge flow for a single day throughout the monitoring period.
- B. <u>AUXILLARY FLOW ON DAY OF SAMPLING</u> Provide a breakdown of the sources of auxillary flows *during the sampling period*. Possible sources are: B.1) Boiler Blowdown; B.2) Non-Contact Cooling; B.3) Demineralizer\ Backwash; B.4) Cooling Tower Bleedoff; and, B.5) Others (specify).
- C. BATCH DISCHARGER ONLY Applies to industrial users that discharge wastewater on a batch basis.
  - C.1 NO. OF OPERATIONAL DAYS Enter the number of days that manufacturing has been performed since last batch discharge.
  - C.2 NO. OF DAYS FOR ACCUMULATION Enter the number of days the wastewater has been accumulated since last batch discharge.
  - C.3 DISCHARGE VOLUME Enter the total volume of wastewater discharged per batch in gallons.

### SECTION II: SAMPLING INFORMATION

- A SAMPLING DATES (COMPOSITE) Enter the start date and end date for the duration of the composite sampling.
- B. SAMPLING TIME (COMPOSITE) Enter the start time and end time for the duration of the composite sampling.
- C SAMPLING DATE/TIME (GRAB) Enter the date and time the grab sample was collected.
- D SPLIT SAMPLE (Y/N) Enter "Y=Yes" if the sample collected is a City split sample. Enter "N=No" if not.
- E PRE-NOTIFICATION DATE Enter the date the City was pre-notified prior to planned sampling.
- F SAMPLED BY Enter the name of the person who collected the sample.
- G LABORATORY NAME Enter the name of the laboratory who performed the analysis.
- H. LABORATORY CERT. NO. Enter the State Certificate Number of the laboratory who performed the analysis.

### SECTION III: LABORATORY TEST RESULTS

- A GRAB SAMPLE DATE/TIME Enter the same information reported in Section II.C of instruction above.
- B. COMPOSITE DATE/TIME Enter the same information reported in Section II.A and II.B of instruction above.
- C SAMPLE TYPE Check (✓) whether a composite sample or grab sample was used to analyze the analyte.
- D LABORATORY RESULTS Enter the result (concentration) of the laboratory analysis and their corresponding units (e.g., mg/l, ppm). The laboratory report must be submitted along with the self-monitoring report.
- E. VIOLATION Check (<) if any of the analytes exceeded the discharge limit. Refer to the discharge limits in Section IV of these instructions or the permit for the analyte of concern.
- F. SIGNATURE OF AUTHORIZED REPRESENTATIVE, ETC... Self Explanatory

### SECTION IV: FEDERAL AND LOCAL DISCHARGE LIMITS

A list of the federal and local discharge limits are attached as a guide for the industrial user to determine discharge violations as noted in Section III.E of instruction above. These pages need not be submitted.

### SECTION V : CERTIFICATES/PRODUCTION DATA

These forms apply to an industrial user (IU) required to submit any of the following: 1) Cyanide Certification, 2) Zero Discharge Certification, 3) TTO Certification, and, 4) Production Data.

- A FROM (date ) TO (date) Enter the inclusive dates (monitoring period) on the form.
- B SIGNATURE OF AUTHORIZED REPRESENTATIVE, ETC.. Self Explanatory
- C. FOR PRODUCTION BASED IU ONLY Enter the production data <u>during the monitoring period</u> including product description, quantity, and unit.

### **Revised SCL Permit Fact Sheet and Amendments**

Permit Information – Application for upgrading from Local Industrial User to Significant Industrial User due to increased discharge capacity [Industrial User: IU128862; Replace Permit No. W-535428]

### A. Industrial User Information

Republic Services Inc. BFI Sunshine Canyon Landfill 14747 San Fernando Road, Sylmar, CA 91342

Mr. Josh Mills – Environmental Manager (818) 362-2124

### **B.** Description of Facility Operations

Republic Services Inc. operates BFI Sunshine Canyon Landfill (SCL), a sanitary landfill in Sylmar, California, which receives and processes municipal waste brought in from the City, County and other sources. SCL currently holds an industrial sewer discharge permit No. W-535428.

The landfill generates various liquid streams at the site including mildly contaminated seep water, leachate, gas system condensate, and gas well liquids. The seep water consists of three different streams which include cutoff wall water, mildly contaminated seep water impacted by the landfill, and subdrain water. Treatment systems were previously installed to treat the cutoff water, seep water, subdrain water, and leachate streams; these streams may be treated for use on site for dust control and/or may be directly discharged to the sewer with or without treatment. The gas well liquids and gas system condensate flows do not undergo any pre-treatment and are discharged directly to the sewer and off-site to the POTW.

**Figure 1** presents a facility plan of the Sunshine Canyon Landfill, showing the location of the optional on-site water reuse treatment. **Figure 2** presents a simplified schematic illustrating liquid routing to the sewer discharge and the as-needed addition of chlorine prior to direct discharge. **Figure 3** presents details on the optional on-site water reuse treatment systems.

### C. Landfill Liquid Sources

The different liquid streams generated at the landfill are presented below.

Gas Well Liquids:

SCL Permit Amendment 2017 (Final).DOCX

Permit Information – Application for upgrading from Local Industrial User to Significant Industrial User due to increased discharge capacity [Industrial User: IU128862; Replace Permit No. W-535428]

Gas well liquids are liquids pumped from the gas extraction wells in order to allow for removal of landfill gas (LFG) from the landfill. The gas condensate is collected at the low points in the gas collection system throughout the site and at the flare stations. The gas well liquids are stored in frac tank storage area and are pumped to the sewer lift station for direct sewer discharge.

### Condensate:

Gas condensate is produced due to the temperature drop that takes place as the LFG is conveyed from the gas extraction wells to the flare stations for combustion. Condensate is pumped to the frac tank storage area and then pumped to the sewer lift station for direct sewer discharge.

### Seep Water:

Spring (Seep) and underdrain water emerges and is collected throughout the landfill area. Seep water contains trace levels of VOCs. Seep Water sources may be treated in the on-site water reuse treatment systems or may be directly discharged. There are three types of Seep Water, each treated separately, as described below.

- City Seep Water: collected from gravity drains under the old city portion of the landfill.
- Cutoff Wall Water: subsurface water (groundwater) pumped from area near the front entrance of the site. This stream is similar in characteristics to the Seep Water.
- Subdrain Water: spring water collected underneath the County landfill, and conveyed by gravity to the front entrance area of the landfill.

### Leachate:

The leachate is collected at the bottom of the lined disposal areas. Extraction pumps convey leachate streams to the treatment systems for on-site water reuse or directly to the direct sewer discharge.

### D. Sample Point Description/Facility Flow Information

The sewer discharge connection from the Sunshine Canyon Landfill runs along San Fernando Road to a sewer manhole at the intersection of San Fernando Road and Balboa Avenue (see Figure 3). The discharge system will include:

• Sample Point 01

SCL Permit Amendment 2017 (Final).DOCX

Permit Information – Application for upgrading from Local Industrial User to Significant Industrial User due to increased discharge capacity [Industrial User: IU128862; Replace Permit No. W-535428]

### • Inline Flow Meter/Totalizer

**Figure 2** shows the proposed configuration and location of the sewer monitoring system including Sample Point 01. The description of the sewer sampling point and the discharge flow is listed below.

Industrial Wastewater Permit	Sample Point	Daily Flow (GPD)	Description
	01	300,000	Secured sampling station will be installed in accordance with IWD Requirements

### E. Sewer Discharge System

The current sampling point will be moved to the magmeter vault which will be used for sampling and tracking of the total daily discharge to the sewer. As part of the daily responsibilities, the Operator will log the flow totalizer during discharge of wastewater to the sewer. If required by the City, additional treatment such as addition of chlorine will be added as necessary to meet direct discharge requirements. The current existing treatment is currently for on-site water reuse and not for discharge. Sanitary sewage is assumed to have standard sewer service.

### F. Spill Control/Emergency Storage

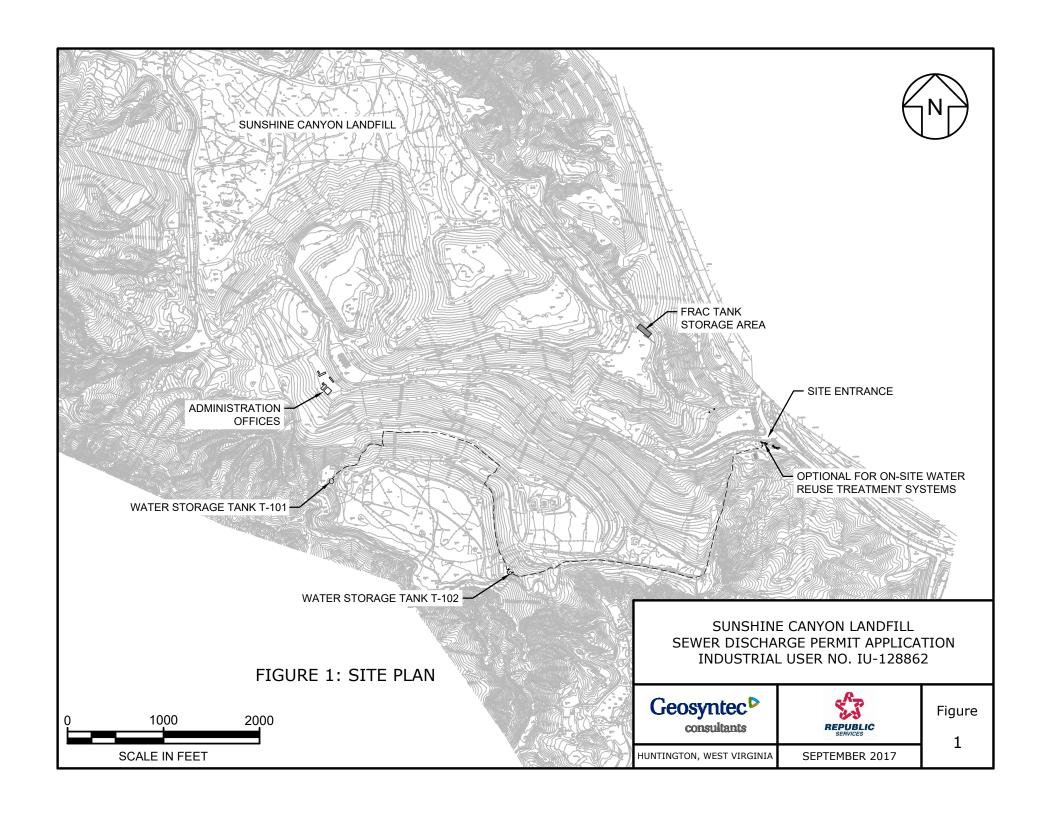
All treatment systems are built in a secondary containment structure to contain any spills. The seep water streams, including field pumps, as well as the treatment systems for on-site water reuse operation will shut off in the event the Gray Water Transfer Tank (T-402) reaches high level and cannot accept any water. Under such conditions, there will be no input of water to the Gray Water System.

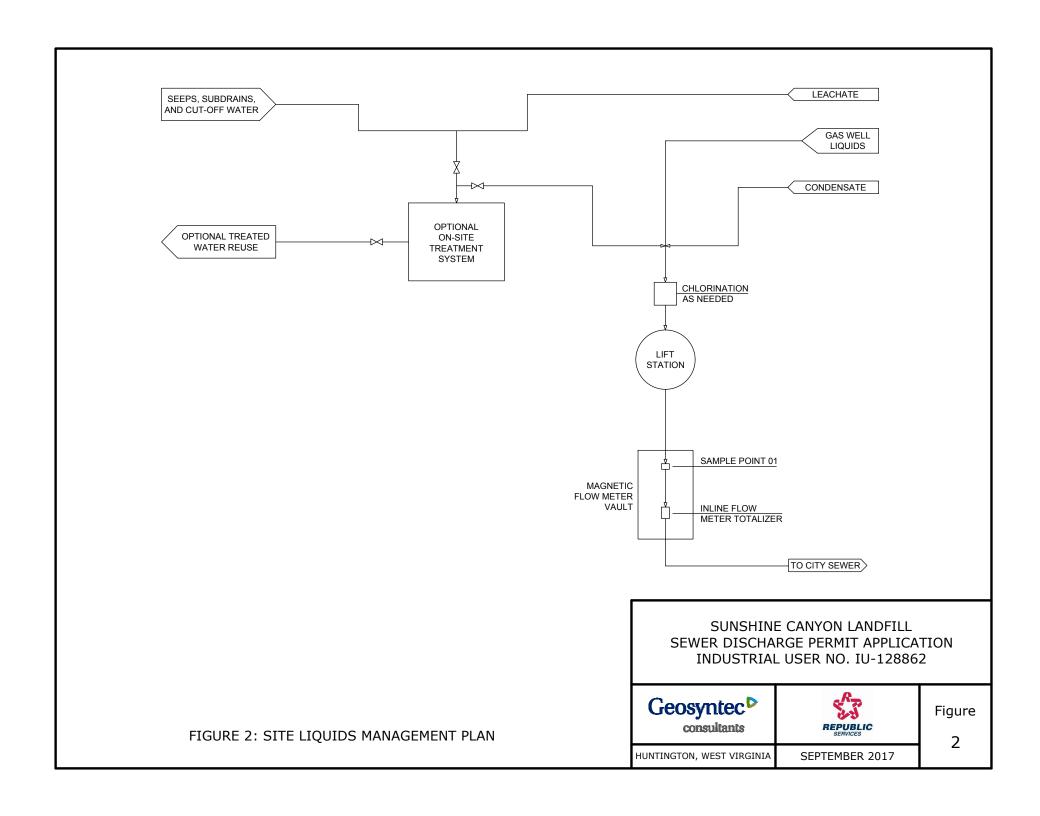
If the high level is a result of high level conditions in the Gray Water Storage Tanks, the Gray Water PLC will turn on the sewer discharge pumps and begin discharge of water to the sewer. Under such conditions or when high level alarm is experienced in the Gray Water System, the PLC will initiate a phone communication to alert site operators.

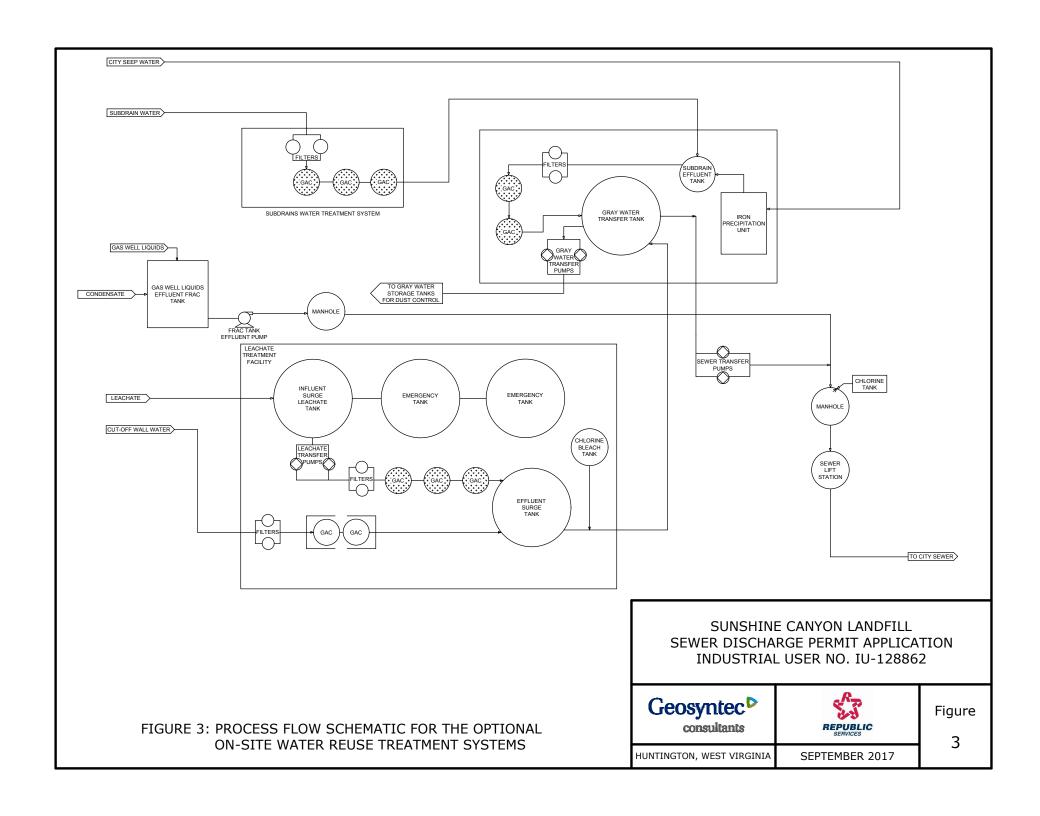
The frac tanks are located inside a containment structure with the conveyance line being double contained and discharging into the manhole near the lift station. If the high level in the lift station is triggered, the gas well liquid pumps will shut off. If the high high level alarm is experienced, the PLC will initiate a phone communication to alert site operators.

Permit Information – Application for upgrading from Local Industrial User to Significant Industrial User due to increased discharge capacity [Industrial User: IU128862; Replace Permit No. W-535428]

### **FIGURES**







### ATTACHMENT 1 SAFETY DATA SHEETS



Suite 450 One North Shore Center 12 Federal Street Pittsburgh, PA 15212

### Safety Data Sheet

### **KR-DF7022**

### 1. IDENTIFICATION

Product name KR-DF7022

**Description** Water based silicone emulsion

Product class Antifoam Defoamer

Supplier address Suite 450

One North Shore Center 12 Federal Street Pittsburgh, PA 15212

**Telephone numbers** 

Company Phone Number (412) 321-9800

Emergency Telephone CHEMTREC 1-800-424-9300

### 2. HAZARDS IDENTIFICATION

**OSHA Regulatory Status**This chemical is not considered hazardous by the 2012

OSHA Hazard Communication Standard (29 CFR

1910.1200).

Hazard classification NA

Signal word NA Hazard statements NA

Pictograms of related hazards

### **Precautionary statements**

### Prevention

Wash face, hands and any exposed skin thoroughly after handling Wear protective gloves/protective clothing/eye protection/face protection Keep only in original container

### Response

IF IN EYES: Flush eyes with gently flowing water for a minimum of fifteen minutes. Check for and remove contact lenses. Hold eyelids apart to ensure rinsing of the entire surface of the eye and lids with water. If irritation develops, seek medical attention immediately.

IF ON SKIN: Wash exposed areas with soap and water. Remove contaminated clothing while washing continuously. Discard contaminated clothing and shoes.

Safety Data Sheet Product: KR-DF7022

IF SWALLOWED: dilute with two glasses of water. Seek medical attention immediately. INDUCE VOMITING ONLY UPON ADVICE OF A PHYSICIAN. Never give anything by mouth if victim is unconscious or having convulsions.

Absorb spillage to prevent material damage

### Storage

Keep container closed during any storage. Protect from moisture and foreign materials. Keep away from heat, sparks, and open flames. Avoid direct sunlight. Do not re-use this container. Store product away from combustible materials. Product contains water and will freeze if internal temperature falls below 32°F. For optimum storage conditions, store between 50°F and 95°F or in properly insulated structures.

### Disposal

Dispose of in accordance with local, regional, national and international regulations. Contact the Hazardous Waste representative at the nearest EPA Regional Office for guidance. Container Disposal: Triple rinse container (or equivalent) promptly after emptying and offer for reconditioning if appropriate. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

### **Chemical characterization**

**Hazardous or Regulated Components** 

Chemical Name	CAS#	Weight %
None		

4. FIRST-AID MEASURES

Eye contact	Flush eyes with gently flowing water for a minimum of
	fifteen minutes. Check for and remove contact lenses. Hold

eyelids apart to ensure rinsing of the entire surface of the eye and lids with water. If irritation develops, seek medical

attention immediately.

**Skin contact** Wash exposed areas with soap and water. Remove

contaminated clothing while washing continuously.

Discard contaminated clothing and shoes.

Ingestion If swallowed, dilute with two glasses of water. Seek

> medical attention immediately. INDUCE VOMITING ONLY UPON ADVICE OF A PHYSICIAN. Never give anything by mouth if victim is unconscious or having convulsions.

Inhalation Move victim to fresh air. Assist in breathing, if necessary,

and seek immediate medical attention.

Safety Data Sheet Product: KR-DF7022

### 5. FIRE-FIGHTING MEASURES

### Suitable extinguishing media

This product is water based and will not ignite at its boiling point of 212°F. This product will ignite when exposed to an ignition source while at a temperature at or above its flash point. Use carbon dioxide, dry chemical or alcohol-type foam or universal-type foams to extinguish flames. Water spray may be used to cool fire-exposed containers.

Unsuitable extinguishing media

No information available.

Protective equipment and precautions for firefighters

Wear self-contained breathing apparatus and protective clothing when combating a chemical fire in a confined area.

Specific hazards

This product contains methyl-polysiloxane which can generate formaldehyde at approximately 300°F (150°C) and above in atmospheres that contain oxygen. Other decomposition products from thermal breakdown are aldehydes, ketones, carbon oxides, sulfur oxides, nitrogen oxides and silica.

### 6. ACCIDENTAL RELEASE MEASURES

### **Personal precautions**

Remove spills promptly as they may make floors slippery. Several washes and/or the use of detergents may be necessary to completely clean any spill. Wear recommended protective equipment outlined in Section 8 of this document and provide adequate ventilation during clean-up.

### **Methods for clean-up**

Spills should be contained, solidified with absorbent, noncombustible material and placed in labeled containers for disposal. Material should be disposed of at a licensed facility. As supplied, this material is not regulated by RCRA or CERCLA.

### 7. HANDLING AND STORAGE

### Advice on safe handling

Avoid contact with eyes, skin and clothing. Use with adequate ventilation. Wash thoroughly after handling. Ensure that containers are properly secured prior to moving.

Page 3 of 8

**Storage conditions** Keep container closed during any storage. Protect from

moisture and foreign materials. Avoid direct sunlight. Do not re-use this container. Store product away from combustible materials. Product contains water and will freeze if internal temperature falls below 32°F. For optimum storage conditions, store between 50°F and

95°F or in properly insulated structures.

Materials to avoid Store away from oxidizing materials.

**Storage Stability** Keep out of sun and away from heat or open flame.

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational exposure controls General ventilation expected to be satisfactory.

Skin protection Use reasonable care and store away from oxidizing

materials.

**Respiratory protection**No respiratory protection should be needed.

**Eye protection** Safety glasses with side shields are recommended as a

minimum, but chemical goggles or a face shield provide

better protection.

Chemical Name	OSHA PEL	ACGIH TLV
None		

### 9. PHYSICAL AND CHEMICAL PROPERTIES

рН	7.0 – 9.0
Appearance	White opaque liquid
Odor	Mild odor
Specific Gravity	1.005 g/mL
Melting/freezing point	No data available
Boiling point/boiling range	> 100°C (212°F)
Flash point	> 100°C (212°F)
Evaporation rate	No data available
Flammability (solid, gas)	Non-Flammable liquid
Upper/lower flammability	No information available
Vapor pressure	No data available
Vapor density	No data available
VOC content	None
Solubility	Dispersible
Partition coefficient	Not determined
n-octanol/water	

Auto-ignition temperature	No information available
Decomposition temperature	No information available
Viscosity	1000-2000 cP

### 10. STABILITY AND REACTIVITY

**Chemical stability** Stable under normal conditions of storage and handling.

**Hazardous polymerization** Polymerization will not occur.

Conditions to avoid None.

**Incompatibilities** Concentrated acids or oxidizing agents.

Hazardous decomposition

products

Thermal decomposition may release oxides of carbon and

silicon.

### 11. TOXICOLOGICAL INFORMATION

### Likely routes of exposure

Skin, eyes, ingestion

### **Acute toxicity**

Test Material	Parameter	Result
Product	LD50, Oral (rat)	No data available at published date.
	LD50, Dermal (rabbit)	No data available at published date.
	LD50, Inhalation (rat)	No data available at published date.

### Irritation and corrosion

**Eye** Exposure may cause mild transient irritation, redness

and/or tearing.

**Skin** No irritation is likely to develop following repeated or

prolonged contact with skin.

### Long term toxicity

Other than short term effects, none established.

Reproductive effects

Mutagenicity

None known.

Embryotoxicity

None known.

Sensitization to product

None known.

Synergistic products

None known.

Carcinogenicity

None known.

Safety Data Sheet Product: KR-DF7022

Chronic None known.

### 12. ECOLOGICAL INFORMATION

Test Material	Parameter	Result
	Oral LD50 (species): Inhalation LC50 (species): Dermal LD50 (species): Aquatic LC50 (species):	No data available at published date.

MobilityNo information.Biological degradability:No information

Bioaccumulative potential No information

### 13. DISPOSAL CONSIDERATIONS

**Disposal** Discarded product is not considered a hazardous waste

under RCRA, 40 CFR 261. Please dispose of in

accordance with all local, state and federal regulations. It is recommended that the waste be incinerated or land filled at a licensed facility. Do not distribute, make available, furnish or reuse empty container except for

storage and shipment of original product.

Contaminated Packaging Container Disposal: Triple rinse container (or equivalent)

promptly after emptying and offer for reconditioning if appropriate. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal.

### 14. TRANSPORT INFORMATION

**US Department of Transportation (DOT)** Not classified as dangerous in the meaning of transport regulations.

**UN Number** 

Proper shipping name

Primary hazard class/division

**Packing group** 

Label

### 15. REGULATORY INFORMATION

### **SARA Title III Section 311 Categories**

Immediate (Acute) Health Effects: No; Delayed (Chronic) Health Effects: No;

Fire Hazard: No; Sudden Release Of Pressure Hazard: No; Reactivity Hazard: No;

### **SARA 302 Extremely Hazardous Substances**

None Present ()

### SARA 313 - Specific Toxic Chemical Listings

None Present ()

### **California Proposition 65**

This product does not intentionally contain any chemicals known by the State of California to cause birth defects, cancer and/or other reproductive harm.

### **Notification status**

- :All components of this product are included in the United States TSCA Chemical Inventory or are not required to be listed on the United States TSCA Chemical Inventory.
- : All components of this product are included in the Canada Domestic Substance List (DSL) or are not required to be listed on the Canada Domestic Substance List (DSL).
- : All components of this product are included in the Australian Inventory of Chemical Substances (AICS) or are not required to be listed on the Australian Inventory of Chemical Substances (AICS).
- : All components of this product are included on the Chinese inventory or are not required to be listed on the Chinese inventory.
- : All components of this product are included in the Korean (ECL) inventory or are not required to be listed on the Korean (ECL) inventory.
- : All components of this product are included on the Philippine (PICCS) inventory or are not required to be listed on the Philippine (PICCS) inventory.
- : All components of this product are included on the Japanese (ENCS) inventory or are not required to be listed on the Japanese (ENCS) inventory.
- : All components of this product are included in the European Inventory of Existing Chemical Substances (EINECS) or are not required to be listed on EINECS.

### Miscellaneous Information

### 16. OTHER INFORMATION

**HMIS Ratings** 

Health—1; Flammability—0; Reactivity—0

Product: KR-DF7022

**NFPA Codes** Health—1; Flammability—0; Reactivity—0;

Special Hazard—None

**Hazard Rating Scale** Minimal—0; Slight—1; Moderate—2; Serious—3;

Severe—4

**SDS Issue Date** February 22, 2019

**Revision Date** Version 1

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information, and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

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Suite 450 One North Shore Center 12 Federal Street Pittsburgh, PA 15212

### Safety Data Sheet KR-LF0754

1. IDENTIFICATION

Product name KR-LF0754

**Description** Proprietary solution

Product class Landfill
Supplier address Suite 450

One North Shore Center

12 Federal Street Pittsburgh, PA 15212

**Telephone numbers** 

Company Phone Number (412) 321-9800

Emergency Telephone CHEMTREC 800-424-9300

### 2. HAZARDS IDENTIFICATION

**Hazard classification** Not hazardous pursuant to 29 CFR 1910.1200.

Signal word None
Hazard statements None
Pictograms of related hazards None

**Precautionary statements** 

### **Prevention**

Read label before use.

Wash skin thoroughly after handling.

Wear protective gloves, protective clothing, eye protection, and face protection.

### Response

IF SWALLOWED: Contact a POISON CENTER or health care provider if you feel unwell.

IF ON SKIN: Wash with soap and water.

### <u>Storage</u>

Store in a well-ventilated place. Keep container tightly closed.

### Disposal

Dispose of contents and container in accordance with local, state, and federal regulations.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS#	Weight %
Non-hazardous substances	Proprietary	100

Safety Data Sheet Product: KR-LF0754

4. FIRST-AID MEASURES

Immediately flush eyes with plenty of water for at least Eve contact

> 15 minutes, lifting lower and upper eyelids occasionally to ensure complete rinsing. Remove contact lenses if present and easy to do, then resume rinsing. Get medical attention

immediately.

Skin contact Immediately remove all contaminated clothing. Rinse with

copious amounts of water; use an emergency shower if available. Wash contaminated clothing before reuse.

Ingestion If swallowed, DO NOT induce vomiting. Do not give

anything by mouth unless instructed to do so by a poison

center or health care provider.

If inhaled, move victim to fresh air. Seek emergency Inhalation

medical attention if breathing is difficult; perform artificial

respiration if breathing stops.

Note to health care provider No specific information—treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media Use extinguishing media appropriate for the surrounding

Unsuitable extinguishing media No information available

Protective equipment and precautions for firefighters Stay upwind of the fire. Full protective equipment including self-contained breathing apparatus should be used. Use water to cool closed containers. Contain water runoff if

possible.

Specific hazards Combustion may produce toxic gases.

**Hazardous combustion products** Carbon oxides, nitrogen oxides. sulfur oxides.

phosphorous oxides

6. ACCIDENTAL RELEASE MEASURES

**Personal precautions** Evacuate the area of all non-essential personnel. Do not

> touch spilled material without proper protective equipment. Ventilate the area and mitigate further release if it is safe

to do so. Avoid contact with eyes.

Methods for clean-up

Small spills Contain spill and soak up with an inert absorbent material

and place residues in a properly labeled container for

disposal. Avoid discharge into sewer or surface water.

Large spills Contain spill using trenches, diking, or absorption with an

> inert material (i.e. sand or earth). Reclaim spilled material into recovery or salvage drums or tank truck for proper

disposal.

7. HANDLING AND STORAGE

Avoid contact with eyes, skin, and clothing. Avoid Advice on safe handling

breathing vapor or mist. Wash hands thoroughly after

handling.

Safety Data Sheet Product: KR-LF0754

Storage conditions Store in a cool, dry, well-ventilated area away from

incompatible materials. Keep containers closed when not

in use.

Suitable materials of

construction

No information available

Unsuitable materials of

construction

No information available

### 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Eye/face protection** Chemical splash goggles

**Skin protection** Chemical-resistant gloves and body-covering clothing

Respiratory protection Respiratory protection is not normally required. A

respirator is recommended if significant mists, vapors, or

aerosols are generated.

**Engineering controls** Adequate ventilation, eye-wash station, and emergency

shower

**General hygiene considerations** Do not eat, drink, or smoke while handling this product.

Chemical Name	OSHA PEL	ACGIH TLV
Non-hazardous substances	None established	None established

### 9. PHYSICAL AND CHEMICAL PROPERTIES

pH	2.0-2.2
Appearance	Clear colorless to pale yellow liquid
Odor	Mild
Odor Threshold	No information available
Melting/freezing point	No information available
Initial boiling point/boiling	No information available
range	
Flash point	No information available
Evaporation rate	No information available
Flammability (solid, gas)	No information available
Upper/lower flammability or	No information available
explosive limits	
Vapor pressure	No information available
Vapor density	No information available
VOC content	No information available
Specific gravity	1.194-1.274
Solubility	Complete
Partition coefficient	No information available
n-octanol/water	
Auto-ignition temperature	No information available
Decomposition temperature	No information available
Viscosity	No information available

Safety Data Sheet Product: KR-LF0754

### 10. STABILITY AND REACTIVITY

**Chemical stability** Stable under normal conditions of storage and handling.

**Hazardous polymerization** Polymerization will not occur.

**Conditions to avoid** Extreme temperatures, incompatibilities

**Incompatibilities** Strong bases, oxidizers

**Hazardous decomposition** 

products

No known non-thermal decomposition hazards.

### 11. TOXICOLOGICAL INFORMATION

**Likely routes of exposure** Skin, eyes, ingestion

Acute symptoms and effects

**Eye** Eye irritation with or without pain, burning, itching, redness,

discharge, and serious eye damage.

**Skin** Skin irritation with or without pain, burning, itching,

redness, and swelling. Symptoms may be exacerbated by open wounds, excoriations, rashes, or other skin breaches.

**Ingestion** Gastrointestinal distress with or without nausea, vomiting,

and diarrhea.

**Inhalation** Upper respiratory irritation with or without cough, watering

of the eyes, and postnasal drip.

Reproductive effectsNo information availableTeratogenicityNo information availableMutagenicityNo information availableEmbryotoxicityNo information available

Sensitization to product Synergistic products

Carcinogenicity No components have been identified as carcinogenic by

OSHA, NTP, or IARC.

**Chronic** No information available

### 12. ECOLOGICAL INFORMATION

### **Aquatic toxicity**

### **Product**

Parameter	Result
96 hr LC <sub>50</sub> , Pimephales promelas	1361 mg/L
48 hr EC <sub>50</sub> , Daphnia magna	1361 mg/L

Persistence No information available
Bioaccumulative potential No information available
Mobility No information available

### 13. DISPOSAL CONSIDERATIONS

**Disposal** Dispose of in accordance with federal, state, and local

regulations.

**Safety Data Sheet** Product: KR-LF0754

Discarded product, as sold, would not be considered a RCRA status

RCRA Hazardous Waste.

### 14. TRANSPORT INFORMATION

### **US Department of Transportation (DOT)**

**UN Number** 

Proper shipping name Not regulated

### 15. REGULATORY INFORMATION

**OSHA Hazard Communication** 

**Status** 

Not hazardous pursuant to 29 CFR 1910.1200.

**EPA Registration Number** 

Not applicable

**TSCA** 

The ingredients of this product are listed on the Toxic

Substances Control Act (TSCA) Chemical Substances

Inventory.

### **CERCLA**

### EPA Hazardous Substances (40 CFR 302)

Chemical Name	Reportable Quantity (RQ)
Non-hazardous substances	None

### SARA Title III (Sections 302, 311, 312, and 313)

### Section 302 Extremely Hazardous Substances (40 CFR 355)

Chemical Name	CAS#	RQ	TPQ
None			

### Section 311 and 312 Health and Physical Hazards

Immediate	Delayed	Fire	Pressure	Reactivity
No	No	No	No	No

### Section 313 Toxic Chemicals (40 CFR 372)

Chemical Name	CAS Number	Percent by Weight
None		

### 16. OTHER INFORMATION

**HMIS Ratings** Health—0; Flammability—0; Reactivity—0 Health—0; Flammability—0; Reactivity—0 **NFPA Ratings** 

HMIS/NFPA Rating Scale Minimal—0; Slight—1; Moderate—2; Serious—3; Severe—4

**SDS Issue Date** 5/27/2022

Version 2

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information, and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Revision Date 07/22/2021

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

Trade name INTEROX® Technical Grade 27/D

Chemical name Hydrogen peroxide

Synonyms Hydrogen peroxide, aqueous solution

Molecular formula H2O2

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

### Uses of the Substance / Mixture

- Bleaching agents
- Chemical industry
- Electronic industry
- Metal treatment
- Odor agents
- Oxidizing Agents
- Textile industry
- Water treatment
- Manufacture of pulp, paper and paper products
- Food additive

### 1.3 Details of the supplier of the safety data sheet

### Company

SOLVAY CHEMICALS, INC. 3737 Buffalo Speedway, Suite 800, Houston, TX 77098 USA Tel: +1-800-7658292; +1-713-5256800

Fax: +1-713-5257804

### 1.4 Emergency telephone

FOR EMERGENCIES INVOLVING A SPILL, LEAK, FIRE, EXPOSURE OR ACCIDENT, CONTACT CHEMTREC (24-Hour Number): +1-800-424-9300 within the United States and Canada, or +1-703-527-3887 for international collect calls.

### Disclaimer

The ® indicates a Registered Trademark in the United States and the ™ indicates a trademark in the United States. The mark may also be registered, subject of an application for registration, or a trademark in other countries.

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Revision Date 07/22/2021

### **SECTION 2: Hazards identification**

Although OSHA has not adopted the environmental portion of the GHS regulations, this document may include information on environmental effects.

### 2.1 Classification of the substance or mixture

### HCS 2012 (29 CFR 1910.1200)

Acute toxicity, Category 4 Serious eye damage, Category 1 H302: Harmful if swallowed.

H318: Causes serious eye damage.

### 2.2 Label elements

### HCS 2012 (29 CFR 1910.1200)

### **Pictogram**





### Signal Word

Danger

### **Hazard Statements**

- H302 Harmful if swallowed.

- H318 Causes serious eye damage.

### **Precautionary Statements**

### **Prevention**

- P264 Wash skin thoroughly after handling.

P270 Do not eat, drink or smoke when using this product.

P280 Wear eye protection/ face protection.

### Response

P301 + P312 + P330
 P305 + P351 + P338 + P310
 IF SWALLOWED: Call a POISON CENTER/ doctor if you feel unwell. Rinse mouth.
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if

present and easy to do. Continue rinsing. Immediately call a POISON CENTER/ doctor.

### Disposal

- P501 Dispose of contents/ container to an approved waste disposal plant.

### 2.3 Other hazards which do not result in classification

- H401: Toxic to aquatic life.

### **SECTION 3: Composition/information on ingredients**

### 3.1 Substance

Not applicable, this product is a mixture.

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### 3.2 Mixture

- Synonyms Hydrogen peroxide, aqueous solution

- Formula H2O2

- Chemical name Hydrogen peroxide

### **Hazardous Ingredients and Impurities**

Chemical name	Identification number CAS-No.	Concentration [%]
Hydrogen peroxide (H2O2)	7722-84-1	>= 26.5 - <= 27.5

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

### **SECTION 4: First aid measures**

### 4.1 Description of first-aid measures

### **General advice**

- Show this material safety data sheet to the doctor in attendance.

### In case of inhalation

- Move to fresh air.
- If symptoms persist, call a physician.
- IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- Call a POISON CENTER/ doctor if you feel unwell.

### In case of skin contact

- Remove and wash contaminated clothing before re-use.
- Wash off with soap and water.
- If symptoms persist, call a physician.

### In case of eye contact

- Call a physician or poison control center immediately.
- Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.
- In the case of difficulty of opening the lids, administer an analgesic eye wash (oxybuprocaine).
- Take victim immediately to hospital.

### In case of ingestion

- Call a physician or poison control center immediately.
- Take victim immediately to hospital.
- If swallowed, rinse mouth with water (only if the person is conscious).
- Do NOT induce vomiting.
- Artificial respiration and/or oxygen may be necessary.
- If victim is unconscious:
- Artificial respiration and/or oxygen may be necessary.
- If victim is conscious:
- If swallowed, rinse mouth with water (only if the person is conscious).
- Do NOT induce vomiting.

### 4.2 Most important symptoms and effects, both acute and delayed

### In case of inhalation

### **Symptoms**

- Nose bleeding
- sore throat
- Cough

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### **Effects**

- irritation of the upper respiratory tract

### In case of skin contact

### **Symptoms**

- Redness
- Swelling of tissue

### **Effects**

- Prolonged skin contact may cause skin irritation.

### In case of eye contact

### **Symptoms**

- Redness
- Lachrymation
- Swelling of tissue

### **Effects**

- Corrosive
- Causes severe burns.
- Small amounts splashed into eyes can cause irreversible tissue damage and blindness.

### In case of ingestion

### **Symptoms**

- Nausea
- Abdominal pain
- Bloody vomiting
- Diarrhea
- Suffocation
- Cough
- Severe shortness of breath

### **Effects**

- If ingested, severe burns of the mouth and throat, as well as a danger of perforation of the esophagus and the stomach.
- Risk of respiratory disorder

### 4.3 Indication of any immediate medical attention and special treatment needed

### Notes to physician

- Take victim immediately to hospital.
- Immediate medical attention is required.
- Consult with an ophthalmologist immediately in all cases.
- If swallowed
- Avoid gastric lavage (risk of perforation).
- Keep under medical supervision for at least 48 hours.

### **SECTION 5: Firefighting measures**

<u>Flash point</u> Not applicable

**Autoignition temperature** The product is not flammable.

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### Flammability / Explosive limit

No data available

### 5.1 Extinguishing media

### Suitable extinguishing media

- Water
- Water spray

### Unsuitable extinguishing media

- None.

### 5.2 Special hazards arising from the substance or mixture

### Specific hazards during fire fighting

- Decomposition will cause oxygen release which may intensify fire
- Contact with combustible material may cause fire.
- Contact with flammables may cause fire or explosions.
- Risk of explosion if heated under confinement.

### **Hazardous combustion products:**

- Oxygen

### 5.3 Advice for firefighters

### Special protective equipment for fire-fighters

- In the event of fire, wear self-contained breathing apparatus.
- Use personal protective equipment.
- Wear chemical resistant oversuit

### **Further information**

- Keep product and empty container away from heat and sources of ignition.
- Keep containers and surroundings cool with water spray.
- Approach from upwind.
- Prevent fire extinguishing water from contaminating surface water or the ground water system.

### **SECTION 6: Accidental release measures**

### 6.1 Personal precautions, protective equipment and emergency procedures

### Advice for non-emergency personnel

- Evacuate personnel to safe areas.
- Keep people away from and upwind of spill/leak.

### Advice for emergency responders

- Use personal protective equipment.
- Drying of this product on clothing or combustible materials may cause fire.
- Keep wetted with water.
- Prevent further leakage or spillage.
- Keep away from incompatible products

### 6.2 Environmental precautions

- Should not be released into the environment.
- If the product contaminates rivers and lakes or drains inform respective authorities.

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### 6.3 Methods and materials for containment and cleaning up

- Dilute with plenty of water.
- Dam up.
- Do not mix waste streams during collection.
- Soak up with inert absorbent material.
- Keep in suitable, closed containers for disposal.
- Keep in properly labeled containers.
- Never return spills in original containers for re-use.
- Treat recovered material as described in the section "Disposal considerations".

### 6.4 Reference to other sections

- Refer to protective measures listed in sections 7 and 8.

### **SECTION 7: Handling and storage**

### 7.1 Precautions for safe handling

- Use only in well-ventilated areas.
- Use only clean and dry utensils.
- Never return unused material to storage receptacle.
- Keep away from heat.
- Avoid inhalation, ingestion and contact with skin and eyes.
- Keep away from incompatible products

### Hygiene measures

- Ensure that eyewash stations and safety showers are close to the workstation location.
- Take off contaminated clothing and shoes immediately.
- Wash contaminated clothing before re-use.
- When using do not eat, drink or smoke.
- Wash hands before breaks and at the end of workday.
- Handle in accordance with good industrial hygiene and safety practice.

### 7.2 Conditions for safe storage, including any incompatibilities

### **Technical measures/Storage conditions**

- Keep only in the original container.
- Store in a receptacle equipped with a vent.
- Store in a well-ventilated place. Keep cool.
- Keep container closed.
- Keep in a contained area
- Keep away from heat/ sparks/ open flames/ hot surfaces. No smoking.
- Regularly check the condition and temperature of the containers.
- Keep away from:
- Incompatible products

### Packaging material

### Suitable material

- aluminum 99.5%
- stainless steel 304L / 316L
- Approved grades of HDPE.

### 7.3 Specific end use(s)

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- Contact your supplier for additional information

### **SECTION 8: Exposure controls/personal protection**

Introductory Remarks: These recommendations provide general guidance for handling this product. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. Assistance with selection, use and maintenance of worker protection equipment is generally available from equipment manufacturers.

### 8.1 Control parameters

### Components with workplace occupational exposure limits

Components	Value type	Value	Basis
Hydrogen peroxide (H2O2)	TWA	1 ppm 1.4 mg/m3	National Institute for Occupational Safety and Health
Hydrogen peroxide (H2O2)	TWA	1 ppm	American Conference of Governmental Industrial Hygienists
Hydrogen peroxide (H2O2)	TWA The value in m	1 ppm 1.4 mg/m3 ng/m3 is approximat	Occupational Safety and Health Administration - Table Z-1 Limits for Air Contaminants e.

### NIOSH IDLH (Immediately Dangerous to Life or Health Concentrations)

Components	CAS-No.	Concentration
Hydrogen peroxide (H2O2)	7722-84-1	75 parts per million

### 8.2 Exposure controls

### Control measures

### **Engineering measures**

- Provide adequate ventilation.
- Apply technical measures to comply with the occupational exposure limits.

### **Individual protection measures**

### Respiratory protection

- Self-contained breathing apparatus in confined spaces/insufficient oxygen/in case of large uncontrolled emissions/in all circumstances when the mask and cartridge do not give adequate protection.
- Use only respiratory protection that conforms to international/ national standards.
- Use NIOSH approved respiratory protection.
- Wear an approved full-face air supplied respirator for excessive or unknown concentrations. Selected chemical cartridges for respirators, i.e. OV, OV/AG, GME have been tested successfully under lab conditions to remove hydrogen peroxide and peracetic acid vapors in concentrations exceeding the applicable exposure limits. Further information is available in a Solvay Chemicals, Inc. Technical Communication, located at http://www.solvaychemicals.us/resource.htm in the Peractic Acid section.
- In case of insufficient ventilation, wear suitable respiratory equipment.

### Hand protection

- Impervious gloves
- Take note of the information given by the producer concerning permeability and break through times, and of special workplace conditions (mechanical strain, duration of contact).

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#### Suitable material

- Nitrile rubber

Break through time: > 480 minGlove thickness: 1.3 mm

Nitrile/Neopren glovesBreak through time: 190 minGlove thickness: 0.2 mm

#### Eye protection

- Chemical resistant goggles must be worn.
- If splashes are likely to occur, wear:
- Tightly fitting safety goggles
- Face-shield

#### Skin and body protection

- Impervious clothing
- If splashes are likely to occur, wear:
- Chemical resistant apron
- Boots
- Suitable material
- PVC
- Natural Rubber

#### Hygiene measures

- Ensure that eyewash stations and safety showers are close to the workstation location.
- Take off contaminated clothing and shoes immediately.
- Wash contaminated clothing before re-use.
- When using do not eat, drink or smoke.
- Wash hands before breaks and at the end of workday.
- Handle in accordance with good industrial hygiene and safety practice.

#### **SECTION 9: Physical and chemical properties**

Physical and Chemical properties here represent typical properties of this product. Contact the business area using the Product information phone number in Section 1 for its exact specifications.

#### 9.1 Information on basic physical and chemical properties

<u>Physical state</u> liquid

<u>Color</u> colorless <u>Odor</u> pungent

Odor Threshold No data available

Melting point/freezing point Freezing point: -27 °F (-33 °C)

H2O2 35 %

<u>Initial boiling point and boiling range</u>

Boiling point/boiling range: 226 °F (108 °C)

H2O2 35 %

Flammability (solid, gas) Not applicable

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Flammability (liquids) The product is not flammable.

Flammability / Explosive limit No data available

Flash point Not applicable

<u>Autoignition temperature</u> No data available

<u>Decomposition temperature</u> >= 140 °F (>= 60 °C)

Self-Accelerating decomposition temperature (SADT)

< 140 °F (< 60 °C) Slow decomposition

<u>pH</u> 2.0 ( 70 °F (21 °C))

H2O2 50 %

pKa: 11.6 (77 °F (25 °C))

<u>Viscosity</u>, <u>dynamic</u>: 1.07 mPa.s

Solubility: Water solubility:

completely miscible, in all proportions

Partition coefficient: n-octanol/water log Pow: -1.57

Method: Calculation method

Vapor pressure 0.75 mmHg (1 hPa) (86 °F (30 °C))

H2O2 50 %

<u>Density</u>: Not applicable

Relative density 1.1

Relative vapor density 1

H2O2 50 %

Particle characteristics No data available

**Evaporation rate (Butylacetate = 1)** No data available

9.2 Other information

**Explosiveness** Not explosive

With certain materials (see section 10).

Oxidizing properties Not considered as oxidizing.

<u>Self-ignition</u> The product is not flammable.

<u>Surface tension</u> 74 mN/m ( 68 °F (20 °C))

Molecular weight 34 g/mol

Henry's Constant 0.00075 Pa.m3 / mol ( 68 °F (20 °C))

not significant, Air, Volatility

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#### **SECTION 10: Stability and reactivity**

#### 10.1 Reactivity

- Decomposes on heating.
- Potential for exothermic hazard

#### 10.2 Chemical stability

- Stable under recommended storage conditions.

#### 10.3 Possibility of hazardous reactions

- Contact with combustible material may cause fire.
- Contact with flammables may cause fire or explosions.
- Contact with incompatible material may cause exothermic decomposition with gas release.
- Risk of explosion if heated under confinement.
- Fire or intense heat may cause violent rupture of packages.

#### 10.4 Conditions to avoid

- Contamination
- To avoid thermal decomposition, do not overheat.

#### 10.5 Incompatible materials

- Acids
- Bases
- Metals
- Heavy metal salts
- Powdered metal salts
- Reducing agents
- Organic materials
- Flammable materials

#### 10.6 Hazardous decomposition products

Oxygen

#### **SECTION 11: Toxicological information**

#### 11.1 Information on toxicological effects

#### Acute toxicity

Acute oral toxicity

Hydrogen peroxide (H2O2) Acute toxicity estimate: 431 mg/kg - Rat , male and female

Method: OECD Test Guideline 401

This product is classified as acute toxicity category 4

Unpublished reports

Acute inhalation toxicity

Hydrogen peroxide (H2O2) LC50 - 4 h ( vapor ) : > 0.17 mg/l - Rat

Method: OECD Test Guideline 403

Not classified as hazardous for acute inhalation toxicity according to GHS.

Unpublished reports

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Acute dermal toxicity

Hydrogen peroxide (H2O2) Acute toxicity estimate: 6,440 mg/kg - Rabbit

Method: OECD Test Guideline 402

Not classified as hazardous for acute dermal toxicity according to GHS.

Unpublished reports

Acute toxicity (other routes of

administration)

No data available

Skin corrosion/irritation Not classified as irritating to skin

<u>Serious eye damage/eye irritation</u> Causes serious eye damage.

Respiratory or skin sensitization

Hydrogen peroxide (H2O2) Does not cause skin sensitization.

**Mutagenicity** 

Genotoxicity in vitro

Hydrogen peroxide (H2O2) Ames test

with and without metabolic activation

positive Published data

Chromosome aberration test in vitro with and without metabolic activation

positive

Unpublished reports

Genotoxicity in vivo

Hydrogen peroxide (H2O2) In vivo micronucleus test - Mouse

Oral

Method: OECD Test Guideline 474

negative

Unpublished reports

Carcinogenicity

Hydrogen peroxide (H2O2)

No data available

This product does not contain any ingredient designated as probable or suspected human carcinogens by:

NTP IARC OSHA

Toxicity for reproduction and development

Toxicity to reproduction / fertility

Hydrogen peroxide (H2O2)

No toxicity to reproduction

**Developmental Toxicity/Teratogenicity** 

Hydrogen peroxide (H2O2)

No toxicity to reproduction

<u>STOT</u>

STOT-single exposure

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Hydrogen peroxide (H2O2) Routes of exposure: Inhalation

Target Organs: Respiratory Tract May cause respiratory irritation.

STOT-repeated exposure

Hydrogen peroxide (H2O2)

The substance or mixture is not classified as specific target organ toxicant,

repeated exposure according to GHS criteria.

Hydrogen peroxide (H2O2) Inhalation (vapor) 90-day - Rat

NOAEC: 7 ppm

Target Organs: Respiratory Tract Method: OECD Test Guideline 413

Unpublished reports

90-day - Rat NOAEL: 100 ppm

Target Organs: Gastrointestinal tract Method: OECD Test Guideline 408

drinking water Unpublished reports

**Experience with human exposure** No data available

Aspiration toxicity No data available

#### **SECTION 12: Ecological information**

#### 12.1 Toxicity

#### **Aquatic Compartment**

Acute toxicity to fish

Hydrogen peroxide (H2O2) LC50 - 96 h: 16.4 mg/l - Pimephales promelas (fathead minnow)

semi-static test

Analytical monitoring: yes

Method: according to a standardized method

Harmful to fish.

Unpublished internal reports

#### Acute toxicity to daphnia and other aquatic invertebrates

Hydrogen peroxide (H2O2) EC50 - 48 h: 2.4 mg/l - Daphnia pulex (Water flea)

semi-static test

Analytical monitoring: yes

Method: according to a standardized method

Toxic to aquatic invertebrates. Unpublished internal reports

Toxicity to aquatic plants

Hydrogen peroxide (H2O2) ErC50 - 72 h: 2.62 mg/l - Skeletonema costatum (marine diatom)

static test

Analytical monitoring: yes

Method: according to a standardized method

Toxic to algae.

Unpublished internal reports

#### Toxicity to microorganisms

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Hydrogen peroxide (H2O2) EC50 - 0.5 h: 466 mg/l - activated sludge

static test

Analytical monitoring: yes

Method: OECD Test Guideline 209 Unpublished internal reports

Chronic toxicity to fish No data available

Chronic toxicity to daphnia and other aquatic invertebrates

Hydrogen peroxide (H2O2) NOEC: 0.63 mg/l - 21 Days - Daphnia magna (Water flea)

flow-through test

Analytical monitoring: yes

Method: according to a standardized method

Harmful to aquatic invertebrates with long lasting effects.

Published data

12.2 Persistence and degradability

<u>Abiotic degradation</u> No data available

Physical- and photo-chemical

elimination

No data available

Biodegradation

Biodegradability

Hydrogen peroxide (H2O2) Ready biodegradability study:

Method: Degradation in sewage treatment plants

The substance fulfills the criteria for ultimate aerobic biodegradability and ready

biodegradability

Inoculum: activated sludge Unpublished internal reports

Degradability assessment

Hydrogen peroxide (H2O2) The product is considered to be rapidly degradable in the environment

12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water

Hydrogen peroxide (H2O2) Not potentially bioaccumulable

**Bioconcentration factor (BCF)** 

Hydrogen peroxide (H2O2) Not potentially bioaccumulable

12.4 Mobility in soil

Adsorption potential (Koc)

Hydrogen peroxide (H2O2) Adsorption/Soil

Koc: 1.58 Log Koc: 0.2

Method: Structure-activity relationship (SAR)

Unpublished reports

Known distribution to environmental compartments

Hydrogen peroxide (H2O2)

Ultimate destination of the product: Water

12.5 Results of PBT and vPvB assessment

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Hydrogen peroxide (H2O2)

This substance is not considered to be persistent, bioaccumulating, and toxic

(PBT).

This substance is not considered to be very persistent and very bioaccumulating

(vPvB).

12.6 Other adverse effects

**Ecotoxicity assessment** 

Short-term (acute) aquatic hazard Toxic to aquatic life.

Long-term (chronic) aquatic hazard Not classified due to data which are conclusive although insufficient for

classification.

#### **SECTION 13: Disposal considerations**

#### 13.1 Waste treatment methods

#### **Product Disposal**

- Limited quantity
- Dilute with plenty of water.
- Flush into sewer with plenty of water.
- Maximum quantity
- Contact manufacturer.
- Contact waste disposal services.
- In accordance with local and national regulations.

#### Advice on cleaning and disposal of packaging

- Empty containers.
- Clean container with water.
- Dispose of rinse water in accordance with local and national regulations.
- Where possible recycling is preferred to disposal or incineration.
- In accordance with local and national regulations.

#### **SECTION 14: Transport information**

Transportation status: IMPORTANT! Statements below provide additional data on listed transport classification.

The listed Transportation Classification does not address regulatory variations due to changes in package size, mode of shipment or other regulatory descriptors.

#### **DOT**

**14.1 UN number** UN 2014

14.2 Proper shipping name HYDROGEN PEROXIDE, AQUEOUS SOLUTIONS

14.3 Transport hazard class5.1Subsidiary hazard class8Label(s)5.1 (8)

14.4 Packing group

Packing group II ERG No 140

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14.5 Environmental hazards

Marine pollutant

NO

**TDG** 

**14.1 UN number** UN 2014

**14.2 Proper shipping name** HYDROGEN PEROXIDE, AQUEOUS SOLUTION

14.3 Transport hazard class5.1Subsidiary hazard class8Label(a)5.1

Label(s) 5.1 (8)

14.4 Packing group

Packing group II ERG No 140

14.5 Environmental hazards NO

Marine pollutant

<u>NOM</u>

**14.1 UN number** UN 2014

14.2 Proper shipping name HYDROGEN PEROXIDE, AQUEOUS SOLUTION

14.3 Transport hazard class5.1Subsidiary hazard class8Label(s)5.1 (8)

14.4 Packing group

Packing group II ERG No 140

14.5 Environmental hazards NO

Marine pollutant

IMDG

**14.1 UN number** UN 2014

**14.2 Proper shipping name** HYDROGEN PEROXIDE, AQUEOUS SOLUTION

IMDG Code segregation group Peroxides (SGG16)

14.3 Transport hazard class5.1Subsidiary hazard class8

Label(s) 5.1 (8)

14.4 Packing group

Packing group II

14.5 Environmental hazards NO

Marine pollutant

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#### 14.6 Special precautions for user

EmS F-H, S-Q

For personal protection see section 8.

#### 14.7 Transport in bulk vessels according to IMO instruments

No data available

#### <u>IATA</u>

**14.1 UN number** UN 2014

14.2 Proper shipping name HYDROGEN PEROXIDE, AQUEOUS SOLUTION

14.3 Transport hazard class5.1Subsidiary hazard class:8Label(s):5.1 (8)

14.4 Packing group

Packing group II

Packing instruction (cargo aircraft) 554

Max net qty / pkg 5.00 L

Packing instruction (passenger aircraft) 550

Max net qty / pkg 1.00 L

14.5 Environmental hazards NO

14.6 Special precautions for user

For personal protection see section 8.

Remarks : IATA: permitted under 40%

Note: The above regulatory prescriptions are those valid on the date of publication of this sheet. Given the possible evolution of transportation regulations for hazardous materials, it would be advisable to check their validity with your sales office.

#### **SECTION 15: Regulatory information**

#### 15.1 Notification status

Inventory Information	Status
United States TSCA Inventory	All substances listed as active on the TSCA inventory
Canadian Domestic Substances List (DSL)	One or more components not listed on inventory
Australian Inventory of Industrial Chemicals	Listed on Inventory; we have not determined if this product contains substances with regulatory obligations and/or restrictions
Japan. CSCL - Inventory of Existing and New Chemical Substances	- Listed on Inventory

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Korea. Korean Existing Chemicals Inventory (KECI)	- Listed on Inventory
China. Inventory of Existing Chemical Substances in China (IECSC)	- Listed on Inventory
Philippines Inventory of Chemicals and Chemical Substances (PICCS)	One or more components not listed on inventory
Taiwan Chemical Substance Inventory (TCSI)	- Listed on Inventory
New Zealand. Inventory of Chemical Substances	All components are listed on the NZIoC inventory. Additional HSNO obligations may apply. Please refer to Section 15 of SDS for New Zealand.
EU. European Registration, Evaluation, Authorization and Restriction of Chemical (REACH)	- When purchased from a Solvay legal entity based in the EEA ("European Economic Area"), this product is compliant with the registration provisions of the REACH Regulation (EC) No. 1907/2006 as all its components are either excluded, exempt, and/or registered. When purchased from a legal entity outside of the EEA, please contact your local representative for additional information.

#### 15.2 Federal Regulations

#### **US. EPA EPCRA SARA Title III**

SARA HAZARD DESIGNATION SECTIONS 311/312 (40 CFR 370)

Acute toxicity (any route of exposure)	Yes
Serious eye damage or eye irritation	Yes

The categories not mentioned are not relevant for the product.

#### Section 313 Toxic Chemicals (40 CFR 372.65)

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Components	CAS-No.	Threshold planning quantity	Remarks	
Hydrogen peroxide (H2O2)	7722-84-1	1000 lb	Form: >52-100%	
Section 302 Emergency Planning Extremely Hazardous Substance Reportable Quantity (40 CFR 355)				
Components	CAS-No.	Rep	ortable quantity	

Components	CAS-No.	Reportable quantity
Hydrogen peroxide (H2O2)	7722-84-1	1000 lb

Section 304 Emergency Release Notification Reportable Quantity (40 CFR 355)

υ ο ο ο ο ο ο ο ο ο ο ο ο ο ο ο ο ο ο ο		
Components	CAS-No.	Reportable quantity
Hydrogen peroxide (H2O2)	7722-84-1	1000 lb

#### US. EPA CERCLA Hazardous Substances and Reportable Quantities (40 CFR 302.4)

Components	CAS-No.	Reportable quantity
•		· · · · · ·

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| Phosphoric acid | 7664-38-2 | 5000 lb

#### 15.3 State Regulations

#### US. California Safe Drinking Water & Toxic Enforcement Act (Proposition 65)

This product does not contain any chemicals known to the State of California to cause cancer, birth, or any other reproductive defects.

#### **SECTION 16: Other information**

#### Further information

- Distribute new edition to clients
- See section 3
- See section 15

Date Prepared: 07/22/2021

#### Key or legend to abbreviations and acronyms used in the safety data sheet

- PEL: Permissible exposure limit
- TWA: 8-hour, time-weighted average
- ACGIH: American Conference of Governmental Industrial Hygienists
- OSHA: Occupational Safety and Health Administration
- NTP: National Toxicology Program
- IARC: International Agency for Research on Cancer
- NIOSH: National Institute for Occupational Safety and Health
- ADR: European Agreement on International Carriage of Dangerous Goods by Road.
   ADN: European Agreement on the International Carriage of Dangerous Goods by Inland

Waterways.

- RID: European Agreement concerning the International Carriage of Dangerous Goods by Rail.

- IATA: International Air Transport Association.

- ICAO-TI: Technical Specification for Safe Transport of Dangerous Goods by Air.

IMDG: International Maritime Dangerous Goods.

TWA: Time weighted average

ATE: Estimated value of acute toxicity
 EC: European Community number
 CAS: Chemical Abstracts Service.

- LD50: Substance that causes 50% (half) death in the test animals group (Median Fatal Dose).

LC50: Substance concentration causing 50% (half) death in the test animals group.
 EC50: Effective Concentration of the substance causing the maximum of 50%.

PBT: Persistent, Bioaccumulative and Toxic substance.
 vPvB: Very Persistent and Very Bioaccumulative.
 SEA: Classification, labeling, packaging regulation

- DNEL: Derived No Effect Level

PNEC: Predicted No Effect Concentration
 STOT: Specific Target Organ Toxicity

#### Not all acronyms listed above are referenced in this SDS.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information, and belief at the date of its publication. Such information is only given as a guidance to help the user handle, use, process, store, transport, dispose, and release the product in satisfactory safety conditions and is not to be considered as a warranty or quality specification. It should be used in conjunction with technical sheets but do not replace them. Thus, the information only relates to the designated specific product and may not be applicable if such product is used in combination with other materials or in any other manufacturing process, unless otherwise specifically indicated. It does not release the user from ensuring he is in conformity with all regulations linked to its activity.

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## ATTACHMENT 2 SPCC PLAN

### SPILL PREVENTION CONTROL AND COUNTERMEASURE PLAN (SPCC PLAN)

FOR

### SUNSHINE CANYON LANDFILL

14747 San Fernando Road Sylmar, CA 91342

## SPILL PREVENTION CONTROL & COUNTERMEASURE PLAN GENERAL INFORMATION

Name of Facility Sunshine Canyon Landfill	
2 Type of Facility Municipal Solid Waste Landfill	
3 Location of Facility 14747 San Fernando Road, Sylmar, CA 91342	
4 Name and address of Owner or Operator:	
Name: Sunshine Canyon Landfill, a Republic Services Company	
Address: 14747 San Fernando Road, Sylmar, CA 91342	
5 Designated Person Accountable For Oil Spill Prevention at Facility (SPCC Coordinator):	
Name: Bill Carr	
Title: <u>Division Manager</u>	
MANAGEMENT APPROVAL	
This SPCC Plan will be implemented as herein described.	
Cionalius.	
Name: Chris Covle	
Title: General Manager	
PERIODIC PLAN REVIEW	
In accordance with 40 CFR 112.5(b), a review and evaluation of this SPCC Plan is conducted at least once e	VAN
five years. As a result of this review and evaluation, Sunshine Canyon Landfill will amend the SPCC Plan within months of the review to include more effective prevention and spill technology if: (1) such technology significantly reduce the likelihood of a spill event from the facility, and (2) if such technology has been field-proat the time of review. Any amendment to the SPCC Plan shall be certified by a Professional Engineer within months after a change in the facility design, construction, operation or maintenance occurs which materially aff the facility's potential for the discharge of oil into or upon the navigable waters of the United States or adjoint shorelines.	n six will oven n six
Review Date Signature of Reviewer  1 10 2021	

## SPILL PREVENTION CONTROL & COUNTERMEASURE PLAN GENERAL INFORMATION

	Name of FacilitySunshine Canyon Landfill			
	2 Туре	of Facility	Municipal Solid Waste Landfill	
	3 Loca	ation of Facility	14747 San Fernando Road, Sylmar, CA 91342	
	4. Nam	e and address of	Owner or Operator:	
	Name:	Sunshine Car	nyon Landfill, a Republic Services Company	
	Address:	14747 San Fe	ernando Road, Sylmar, CA 91342	
	5 Desi	gnated Person Ad	ecountable For Oil Spill Prevention at Facility (SPCC Coordinator):	
	Name:	Bill Carr		
	Title:	Division Mana	<u>ger</u>	
-				
			MANAGEMENT APPROVAL	
			This SPCC Plan will be implemented as herein described.	
	Signature:			
	Name:	Chris Coyle		
	Title:	General Mana	ger	
			PERIODIC PLAN REVIEW	
	months of the significantly re at the time of months after a	e review to included the review to include the likelihoo review. Any amed the factorian the factorian the factorian the factorian the factorian the factorian the factorian the factorian the factorian the factorian the factorian the factorian the factorian the factorian the factorian the factorian three factorians.	2.5(b), a review and evaluation of this SPCC Plan is conducted at least once every riew and evaluation, Sunshine Canyon Landfill will amend the SPCC Plan within six de more effective prevention and spill technology if: (1) such technology will ad of a spill event from the facility, and (2) if such technology has been field-proven and the SPCC Plan shall be certified by a Professional Engineer within six existing design, construction, operation or maintenance occurs which materially affects excharge of oil into or upon the navigable waters of the United States or adjoining the of Reviewer	

## SPILL PREVENTION CONTROL & COUNTERMEASURE PLAN GENERAL INFORMATION

	Name of FacilitySunshine Canyon Landfill			
2	Type of Facility Municipal Solid Waste Landfill			
3_	Location of Facility 14747 San Fernando Road, Sylmar, CA 91342			
4	Name and address of Owner or Operator:			
Name:	Sunshine Canyon Landfill, a Republic Services Company			
Address	14747 San Fernando Road, Sylmar, CA 91342			
5,	Designated Person Accountable For Oil Spill Prevention at Facility (SPCC Coordinator):			
Name:	Kate Louan			
Title:	Interim Operations Manager			
	MANAGEMENT APPROVAL			
	This SPCC Plan will be implemented as herein described.			
Signatur	- (V SI -			
	e:			
Name:	Rob Sherman			
Name: Title:	<del></del>			
	Rob Sherman			
	Rob Sherman			

#### **EMERGENCY CONTACTS**

A. SPCC COORDINATOR

Bill Carr (661) 478-6383

B. ASSISTANT SPCC COORDINATOR

Valorie Moore (818) 822-2177

C. GENERAL MANAGER

Chris Coyle (480) 369-0024

D. LOS ANGELES FIRE DEPARTMENT 911

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Appendix C Sample Special Occurrence Report Form

## OIL SPILL PREVENTION, CONTROL AND COUNTERMEASURE (SPCC) PLAN SUNSHINE CANYON LANDFILL

#### 1. INTRODUCTION

This SPCC Plan has been prepared, in accordance with Republic Services, Inc. policies and 40 CFR 112.7, for Sunshine Canyon Landfill in Los Angeles County, California to address the storage and management of petroleum products. The plan describes procedures, structures, and equipment at the facility to prevent spills and to prevent or mitigate any impact on the environment.

#### 2. FACILITY DESCRIPTION

#### 2.1 General

The Sunshine Canyon Landfill is a municipal solid waste disposal site located on a 1,036-acre parcel of land in Los Angeles County.

Potential petroleum products spill hazards at Sunshine Canyon Landfill are related to storage and use of fuels and lubricants required for the operation of heavy equipment. The site stores and/or uses petroleum products in the form of diesel fuel, motor oils, waste oil, gear oil, and hydraufic oil. Provisions for prevention of spills of the landfill liquids are documented in this SPCC Plan, although the management of such liquids is not mandated under 40 CFR 112.7.

Drawing 1 is an overall site plan and a detailed plan of the industrial and maintenance areas of the site, showing the location of the storage tanks and related facilities.

#### 2.2 Petroleum Products Storage Tanks

Table 1 lists the storage tanks at Sunshine Canyon Landfill. All are aboveground storage tanks (AST). Additional information on the tanks is as follows:

Tank No. 1 is an unused 1,000-gallon double-walled AST stored in the boneyard. This tank is empty and is not permitted for use at the present time.

Tanks 2-6 are double-walled steel AST's located in the landfill equipment maintenance area, containing waste oil and various lubricant products. These tanks are located under a canopy alongside the maintenance shop.

In addition to the petroleum products stored in the tanks listed in Table 1, bulk tanks and smaller quantities of lubricants and related products are stored and used in several places in the maintenance area. Small quantity containers are kept in storage bins, and drums are placed on containment pallets in covered locations.

Landfill heavy equipment is fueled on the landfill by a mobile service truck.

TABLE 1 STORAGE TANK INVENTORY

NO.	TYPE	PRODUCT	TANK MATERIAL	CONTAIN- MENT	CAPACITY (gal.)	LOCATION
1	AST	Empty – Not Used	Steel tank, concrete vault	Double Walled	1,000	Maintenance Area
2	AST	Trans Oil	Steel	Double Walled	480	Maintenance Area
3	AST	Motor Oil	Steel	Double Walled	480	Maintenance Area
4	AST	Gear/ Differential Oil	Steel	Double Walled	480	Maintenance Area
5	AST	Drive train fluid; Hydraulic Oil	Steel	Double Walled	Split tank; 2 @ 240	Maintenance Area
6	AST	Waste Oil	Steel	Double Walled	500	Maintenance Area
7	AST	Waste Oil	Steel	Double Walled	200	Maintenance Area

#### 2.3 Hazardous Waste Temporary Storage

Hazardous or other unacceptable waste discovered at the landfill is stored temporarily in a locked storage container. Secondary containment is provided within the container. Materials are typically stored in this location for less than 90 days before being removed by a licensed contractor from the site for disposal at a licensed hazardous waste facility.

#### 2.4 Regulatory Applicability

#### 2.4.1 Navigable Waters

Stormwater runoff from Sunshine Canyon Landfill is controlled by a series of permanent and temporary drainage structures. All stormwater is conveyed to the site's Terminal Basin. Stormwater discharges through three inlet structures then to a concrete box channel underneath San Fernando Road into the Weldon Creek Flood Control Channel which is part of the City of Los Angeles flood control system. This channel ultimately flows to the Los Angeles River. The Los Angeles River is considered navigable waters of the United States for purposes of 40 CFR 112.

#### 2.4.2 Oil Storage

Sunshine Canyon Landfill is required to prepare an SPCC plan under 40 CFR 112.1 et. seq. because its total above ground storage capacity is greater than 1,320 gallons of petroleum products. (40 CFR 112.1 (d)(2)).

#### 3. SPILL HISTORY AND POTENTIAL

#### 3.1 Past Spill Occurrences - 112.7(a)

The only known spill events at Sunshine Canyon Landfill in the last 5 years have been minor spills

related to hydraulic line breaks, and fuel line or fuel tank leaks on landfill equipment or customer vehicles. These spills have been cleaned up immediately in accordance with with the procedures in this plan. Procedures for prevention of such occurrences are contained herein.

#### 3.2 Potential Spill Occurrences - 112.7(b)

Although it is unlikely that a major spill event would occur at the facility, small spills may occur due to tank overflows and pipe or pump leaks. In the event of containment failure, on site adsorbents, shovels, and "absorbent snakes" are located in at the maintenance shop and spotter bins and are used to prevent spills from leaving the property. Should any significant release of diesel fuel occur during transfers or equipment fueling, the flow from the release would not drain into the storm water drainage system.

#### 4. SPILL PREVENTION MEASURES

#### 4.1 Containment and Diversionary Structures - 112.7(c)

As noted above, all AST's handling petroleum products on the site are of double walled construction, providing control of any major leak in the primary container. Other AST's are located inside containment structures, as detailed in Section 4.3 below.

#### 4.2 Facility Drainage Control – 112(e)(1)

Stormwater runoff from Sunshine Canyon Landfill is controlled by a series of permanent and temporary drainage structures. All stormwater is conveyed to the site's Terminal Basin. Stormwater discharges through three inlet structures then to a concrete box channel underneath San Fernando Road into the Weldon Creek Flood Control Channel which is part of the City of Los Angeles flood control system.

- 4.3 Bulk Storage Tanks / Secondary Containment 112.7(e)
  - 4.3.1 Materials of Construction 12.7(e)(2)(I)

Materials of construction of each storage tank are listed in Table 1. To date, the tanks have exhibited no significant corrosion or deterioration.

4.3.2 Capacity And Impermeability Of Secondary Containment - 112.7(e)(2)(ii); 112.7(e)(2)(iii)(B)

All tanks on site are of double walled construction, providing integral secondary containment.

#### 4.3.3 Testing Of Aboveground Tanks - 112.7(e)(2)(vi)

All above ground tanks are visually inspected daily to assess tank integrity. These inspections are documented as described in Section 4.6. Areas inspected include the following, if applicable:

- Leak and spills
- Corrosion deterioration
- Foundation deterioration
- · Tank auxiliary equipment (valve, piping and pumps)
- · Secondary containment structure

4.3.4 Fail-Safe Engineering For Tank Installation - 112.7(e)(2)(viii)

All tanks on site are of double walled construction, providing integral secondary containment.

4.3.5 Plant Effluent Discharged Into Navigable Waters - 112.7(e)(2)(ix)

The facility produces no plant effluent.

4.3.6 Correction Of Visible Leaks - 112.7(e)(2)(x)

As cited above, the AST's are regularly inspected visually to determine integrity and assess condition of operating equipment. Steps will be immediately taken to correct any visible leaks.

4.3.7 Mobile/Portable Oil Storage Tanks - 112.7(e)(2)(xi)

Motor oils, gear lube, transmission and hydraulic fluids are stored in 55-gallon drums located in the maintenance area, as described in Sections 2.2 and 4.1 above. Most drums are kept on portable containment pallets. The site maintains an adequate supply of absorbents on hand to provide additional containment for spills.

- 4.4 Facility Transfer Operations, Pumping, And In-Plant Process 112.7(E) (3)
  - 4.4.1 Buried Piping 112.7(e)(3)(I)

There is no buried piping conveying petroleum liquids on site.

4.4.2 Inspection of Above-Ground Valves and Pipelines - 112.7(e)(3)(iv)

All exposed valves/hoses units associated with AST's are regularly inspected for leaks as part of the inspection program described in Section 4.6 below.

4.4.3 Vehicular Traffic - 112.7(e)(3)(v)

There are no above ground pipelines exposed to vehicular traffic.

- 4.5 Facility Truck Loading/Unloading 112.7(e)(4)
  - 4.5.1 Tank Truck Loading Procedures 112.7(e)(4)(I)

All loading and unloading procedures meet the minimum requirements and regulations of the Department of Transportation. Site personnel involved with loading and unloading operations will familiarize themselves with these requirements.

4.5.2 Interlocked Warning System - 112.7(e)(4)(iii)

(Not applicable)

4.5.3 Examination of Tank Truck Drains - 112.7 (e)(4)(iv)

(Not applicable)

#### 4.5.4 Procedures for Fueling Vehicles and Equipment

The following procedures are followed when transferring diesel fuel to vehicles or landfill operating equipment via a mobile service truck.

The following spill cleanup equipment shall be on hand at the location of fueling:

- a) A drip bucket/pan.
- b) Two watertight covered containers, one labeled 'Clean Absorbent' and the other 'Used Absorbent'.
- c) A supply of clean, dry absorbent.
- d) A shovel.
- e) A yard brush.

The fueling operation shall observe the following precautions and procedures:

- a) The fueler must hold the nozzle while filling the vehicle.
- b) The fueler must not overfill the tank.
- The fueler must not keep the nozzle open using a device or method other than his/her hand.
- d) The fueler must place the drip pan/bucket on the ground beneath the vehicle fill opening to catch any overfill. Any overfill must be replaced immediately in the fuel storage tank.
- e) If a spill of less than 25 gallon occurs, the fueler must immediately place absorbent on the spilled fuel, and immediately pick up the absorbed material with a sweeping brush and shovel, and place it in the 'Used Absorbent' receptacle
- f) The 'Clean Absorbent' and 'Used Absorbent' storage containers must be protected from rain at all times.
- Used absorbent must be disposed of in accordance with State and Federal regulations.
- The fuel pad must be dry cleaned (sweep and shovel absolutely no water) at the end of every workday.
- The shovel, yard brush, and drip pan/bucket must always be kept in the vicinity
  of the fueling activities.
- j) The drip pan/bucket must be stored up-side down when not in use.
- If a spill of 25 gallons or more occurs, take immediate steps to contain the spill, get help, and make sure the incident is reported to the SPCC Coordinator.

#### 4.6 Inspection And Records - 112.7(e)(8)

This inspection program plan is intended to provide a system to prevent and detect system malfunctions, equipment deterioration, and operator errors. The inspection program is designed to provide an early warning of the potential for such events in order that corrective and preventive actions may be taken in a timely manner.

#### 4.7 Inspection Program Administration

The Environmental Managers and the Division Manager are assigned responsibility to detect any unsafe conditions at the facility and prevent adverse consequences. These individuals have the authority to #(1) implement the required inspections, (2) perform necessary evaluations and hazard assessments, and (3) recommend appropriate corrective or remedial actions.

The level of response to a problem and its timing is determined by the nature and seriousness of the

problem identified with protection of personnel and the prevention of adverse environmental impact being of paramount concern. The Division Manager and the Environmental Manager are responsible for directing any remedial and corrective measures that may be required.

The inspection is performed according to a schedule based on operational knowledge and experience with the systems and processes involved. Each inspection item has the content and frequency necessary to alert facility personnel prior to development of a serious problem.

#### 4.8 Documentation and Record Keeping

Inspections (and re-inspection) are documented on a monthly inspection form contained in Appendix A. The Environmental Manager is responsible for planning and implementing any required remedial actions. Records of any remedial actions are kept in the site's records.

All completed forms and attachments are filed in the facility's operating records. These are retained on site for a minimum period of three years from the date of the inspection

#### 4.8.1 Monthly Facility Inspection

Potential spill sources and spill prevention facilities are inspected on a monthly basis as part of the site's overall monthly facility inspection, with results recorded on a monthly inspection form similar to the form located in Appendix A. The following inspection items are most applicable to the SPCC Program:

- a <u>Aboveground Storage Tanks</u>: Inspection will include aboveground foundation and tank structural supports. The outside of the tanks will be observed for signs of deterioration; leaks from seams, rivets, bolts, and gaskets; and accumulation of oil or hazardous substances inside containment structures. Liquid levels will be checked to verify the tanks have not been overfilled. Aboveground tanks may need to be subjected to periodic integrity testing.
- b <u>Aboveground Piping.</u> All aboveground valves and piping will be examined for general condition of items such as supports, flange joints, expansion joints, valve glands and bodies, and drip pans. Periodic pressure or other non-destructive integrity testing may be warranted for piping where facility drainage is such that a failure might lead to a spill event.
- c <u>Containment Structures.</u> Containment walls and berms will be inspected for accumulation of oil or hazardous substances and the source determined. Periodic visual inspections will be performed to ensure the integrity of containment walls and earthen berms.
- d <u>Drum Storage Areas.</u> Areas where lubricants or temporarily stored hazardous wastes are stored will be inspected for evidence of leaks, corrosion or damage. Proper labeling and storage practices will be verified.

#### 4.9 Security - 112.7(e)(9)

#### 4.9.1 Access Control - 112.7(e)(9)(i)

Access to the facility is controlled by a chain link fence or impassible terrain. Vehicular access in and out of the facility is controlled at the entrance gate.

4.9.2 Flow Drains and Valves - 112.7(e)(9)(ii)

There are no flow drains or valves on tanks located at this facility.

#### 4.9.3 Facility Lighting - 112.7(e)(9)(v)

Fuel handling operations are conducted only during daylight hours, or under mobile lighting plants in event of an emergency. Adequate lighting is provided in the administrative area.

#### 4.10 Personnel Training And Spill Prevention Procedures - 112.7(e)(10)

#### 4.10.1 Personnel Training - 112.7(e)(10)(i)

#### Facility Personnel

- a Facility personnel will participate in annual training that teaches them to perform their duties in a way to prevent the discharge of harmful quantities of oil or hazardous substances. This training will include familiarization with material safety data sheets appropriate to the job assignment and emergency response procedures, and equipment.
- b. Facility personnel will be instructed annually on their responsibilities for compliance with the requirements of the spill laws and emergency response regulations applicable to the facility.
- c. Accurate records will be maintained of all spill prevention and emergency response training. All personnel training will be recorded on a form similar to the one located in Appendix B.

#### Tank Truck Drivers

Tank truck drivers loading or unloading materials at the facility shall adhere to the following guidelines:

- Remain with the vehicle at all times while loading/unloading;
- Drain the loading/unloading lines to the storage tank and close the drain valves before disconnecting said lines and make sure a drain pan or other appropriate containment device is located under all connections;
- Inspect the vehicle before departure to be sure all loading/unloading lines have been disconnected and all drain and vent valves are closed; and immediately report any leakage or spillage, including quantity, to the SPCC Coordinator.

#### 4.10.2 SPCC Coordinator - 112.7(e)(10)(ii)

The SPCC Coordinator designated on page (i) of this Plan is responsible for spill prevention and control, training of other personnel and also for response to any site emergency and for reporting emergencies to the appropriate authorities.

#### 4.11 Spill Prevention and Response Briefings - 112.7(e)(10)(iii)

Appropriate facility personnel will be trained annually in spill and emergency response procedures. This training includes reporting, stopping, containing, cleaning up, and disposing of all spill materials, emergency communications, etc. The facility uses environmental self-assessments, monthly safety meetings and monthly inspections as a forum to assure adequate understanding of SPCC

#### 5. EMERGENCY PROCEDURES / SPILL RESPONSE

#### 5.1 General

The following sections describe procedures to be followed in the event of a spill or release of a petroleum product or other liquid addressed in the SPCC plan. Hazardous chemical spills are not covered under this plan and are handled per a separate Emergency Response Plan.

USEPA regulations define a spill event as the discharge of oil into, or upon, the navigable waters of the United States or adjoining shorelines, in harmful quantities. Harmful quantities are defined as a discharge that violates applicable water quality standards or causes a sheen upon, or discoloration of, the surface of the water or the adjoining shorelines. Contaminated ground water may also have the potential to seep, leach, or flow into navigable water that would be included in this definition. Storm sewers are considered to fall under the definition of a "navigable waterway" since most storm sewers discharge into a navigable waterway.

An important facet of an effective response procedure during an oil or substance release incident is to keep the material separated from water to minimize migration and the resulting potential increase in human and environmental exposure. Every effort should be made to prevent spills and emphasize substance containment at the source rather than resort to separation of the material from expanded portions of the environment or downstream waters.

#### 5.2 Discovery of a Release

The person discovering a release of material from a container, tank, or operating equipment should initiate certain actions immediately.

- Extinguish any sources of ignition. Until the material is identified as nonflammable and noncombustible, all potential sources of ignition in the area will be removed. Vehicles will be turned off. If the ignition source is stationary, an attempt will be made to move spilled material away from the ignition source. Movement that could potentially create static electricity will be avoided.
- Attempt to stop the release at its source. Assure that no danger to human health exists first. Simple procedures (turning valves, plugging leaks, etc.) may be attempted by the discoverer if there is no health or safety hazard and there is a reasonable certainty of the origin of the leak. All efforts to control leaks must be under the supervision of the SPCC Coordinator or Assistance SPCC Coordinator. (This policy applies to the handling of petroleum-based products as described in this Plan. No Site personnel shall come into contact with unknown or hazardous substances illegally brought into the facility.)
- Initiate spill notification and reporting procedures. Report the incident immediately to the Supervisor and the SPCC Coordinator. If there is an immediate threat to human life (e.g. a fire in progress or fumes overcoming workers), an immediate alarm should be sounded to evacuate the building, and the fire department should be called. Request the assistance of the fire department's hazardous materials response team if an uncontrollable spill has occurred and/or if the spill has migrated beyond the site boundaries (see Section 6.2).

#### 5.3 Containment of a Release

Most of the materials at the facility can be safely contained within secondary containment structures if a release occurs. However, if material is released outside the containment areas, it is critical that the material is accurately identified and appropriate control measures are taken in the safest possible manner. SDSs for petroleum products used at the facility are kept on file in the administrative office and maintenance shop and will be reviewed if a release outside of a containment area occurs.

- Attempt to stop the release at the source. If the source of the release has not been found; if special protective equipment is necessary to approach the release area; or if assistance is required to stop the release, the fire department will be called to halt the discharge at its source. Facility personnel will be available to guide the fire department's efforts.
- b. <u>Contain the material released into the environment.</u> Following proper safety procedures, the spill will be contained by absorbent materials and dikes using shovels and brooms. Applicable SDSs for material compatibility, safety, and environmental precautions will be reviewed.
- Continue the notification procedure. Inform the SPCC Coordinator of the release (the Coordinator shall perform immediate notification as appropriate). Outside contractors will be hired to clean up the spill, if necessary.

#### 5.4 Spill Cleanup

Appropriate personal protective equipment and clean-up procedures can be found in safety data sheets. Care must be taken when cleaning up spills in order to minimize the generation of waste. The Environmental Manager can provide assistance for the issues discussed below.

- Recover or clean up the material spilled As much material as possible should be recovered and reused where appropriate. Material that cannot be reused must be declared waste. Liquids absorbed by solid materials shall be shoveled into open top, 55-gallon drums; or if the size of the spill warrants, into a roll-off container(s). When drums are filled after a cleanup, the drum lids shall be secured and the drums shall be appropriately labeled (or re-labeled) identifying the substance(s), the date of the spill/cleanup, and the facility name and location. Combining non-compatible materials can cause potentially dangerous chemical and/or physical reactions or may severely limit disposal options. Compatibility information can be found in safety data sheets.
- b <u>Cleanup of the spill area</u> Surfaces that are contaminated by the release shall be cleaned by the use of an appropriate substance or water. Cleanup water must be minimized, contained and properly disposed. Occasionally, porous materials (such as wood, soil, or oil-dry) may be contaminated; such materials will require special handling for disposal.
- Decontaminate tools and equipment used in cleanup Even if dedicated to cleanup efforts, tools and equipment that have been used must be decontaminated before replacing them in the spill control kit.

#### 5.5 Post-Cleanup Procedures

a <u>Notification and reports to outside agencies</u>. - The SPCC Coordinator shall determine if a reportable spill has occurred (See Sections 5.1 and 6.2). Verbal notifications to government agencies and emergency planning committees shall be executed, if necessary. In all cases where verbal notification is given, a confirming written report shall be sent to the same entity.

- b. Arrange for proper disposal of any waste materials. The waste material from the cleanup must be characterized per the State and Federal Regulations. Representative sampling and analysis may be necessary to make this determination. In any case, the SPCC Coordinator shall assure that the waste is transported and disposed of in compliance with applicable laws and regulations. When manifests are needed, the SPCC Coordinator shall see that they are prepared and, when appropriate, returned in the allotted time by the disposal site.
- Review the contingency and spill plans. Management and operating personnel shall review spill response efforts, notification procedures, and cleanup equipment usage to evaluate their adequacy during the episode. Where deficiencies are found, the plan shall be revised and amended.

#### 5.6 Internal Report

Spills that are regulated per this plan must be documented using the Log of Special Occurrence (Appendix C). The SPCC Coordinator, a site Environmental Manager or Environmental Specialist, shall prepare the report. At a minimum, the report will document the following items:

- Date, time, and duration of release.
- Source and total volume of the release.
- Spill cleanup procedures.
- d. Personnel who discovered and/or participated in the spill remediation.
- Equipment used during the cleanup.
- f Waste disposal method.
- Unusual events, injuries, or agency inspections.

#### 5.7 Communications

In case of a fire, spill, or other emergency, paging systems and two-way radios can be used to contact personnel. Telephones are available at the landfill office; cellular phones are also available at the facility.

#### 5.8 Spill, Fire, and Safety Equipment

Portable fire extinguishers are located throughout the facility, are well marked, and are easily accessible. Records are kept on all fire equipment in service and regular testing is performed in accordance with established procedures. Table 2 lists the fire extinguishers, spill, and safety equipment located on site.

Spill control equipment is kept primarily at the maintenance facility. Supplies of absorbent should be kept in the hazardous materials storage bin and any bins used for storage of petroleum products.

TABLE 2
SPILL, FIRE AND SAFETY EQUIPMENT

Purpose	Equipment	Location	
Fire Protection	Fire Extinguishers  Each building – See D  Landfill heavy equipm  Landfill operations wa		
Spill Control / Containment	Disposal drum Oil Dry (or equivalent absorbent) Sorbent socks Shovels Brooms Drain pans	Maintenance Area	
Safety Equipment	First Aid Kits Eyewash Stations Showers Portable radios & phones	Each building – See Drawing 1 Leachate treatment plant and maintenance area Locker rooms in break room (Bldg. C) All key personnel	

#### 6. IMMEDIATE REPORTING PROCEDURES/EMERGENCY CONTACTS

In the event of an accident or spill at the facility, the manager with direct responsibility for the day-to-day operation of the facility will contact the individuals listed below as soon as practical after the incident has occurred. Contact preference is in the order listed. If spill discharge to surface waters is imminent, the regulatory emergency agencies will be notified of the potential immediately as described below.

#### 6.1 Internal Reporting

In the event of a spill on dry land or in on-site surface water drainage that is contained and recovered, the Local Enforcement Agency (LEA) will be notified as well as the following internal contacts shall be made:

#### Internal Call List

Name	Position	Office Phone Pager / Cel		
Bill Carr	Division Manager	(818) 362-2092	(661) 478-6383	
Valorie Moore	Environmental Manager	(818) 362-2145	(818) 822-2177	
Chris Coyle	General Manager	(818) 362-2141	(480) 369-0024	

#### 6.2 Reporting to Outside Agencies

After the SPCC Coordinator (or designee) has been notified, he/she will conduct reporting to outside agencies.

#### 6.2.1 Releases / Spills to Land, Air, Navigable or Other Waters

If a spill threatens to reach an off-site waterway, and the spill cannot be contained and recovered by facility personnel, then the following contacts shall be made in addition to the contacts in Section 6.1.

#### LOS ANGELES REGIONAL WATER QUALITY CONTROL BOARD

o (213) 576-6600

#### • FIRE DEPARTMENT

o 911

#### 6.2.2 Reporting Procedures

The following information shall be communicated in reporting to outside agencies:

- a name, title, telephone number, and address of reporter;
- b name, telephone number, and address of facility/spill;
- c time, type and amount of materials involved;
- d extent of injuries/illness, if known;
- e possible hazards to human health and environment;
- f any body of water involved;
- g the cause of accident/spill; and
- h the action taken or proposed by the facility/personnel.

#### 6.3 Other Emergency Contacts

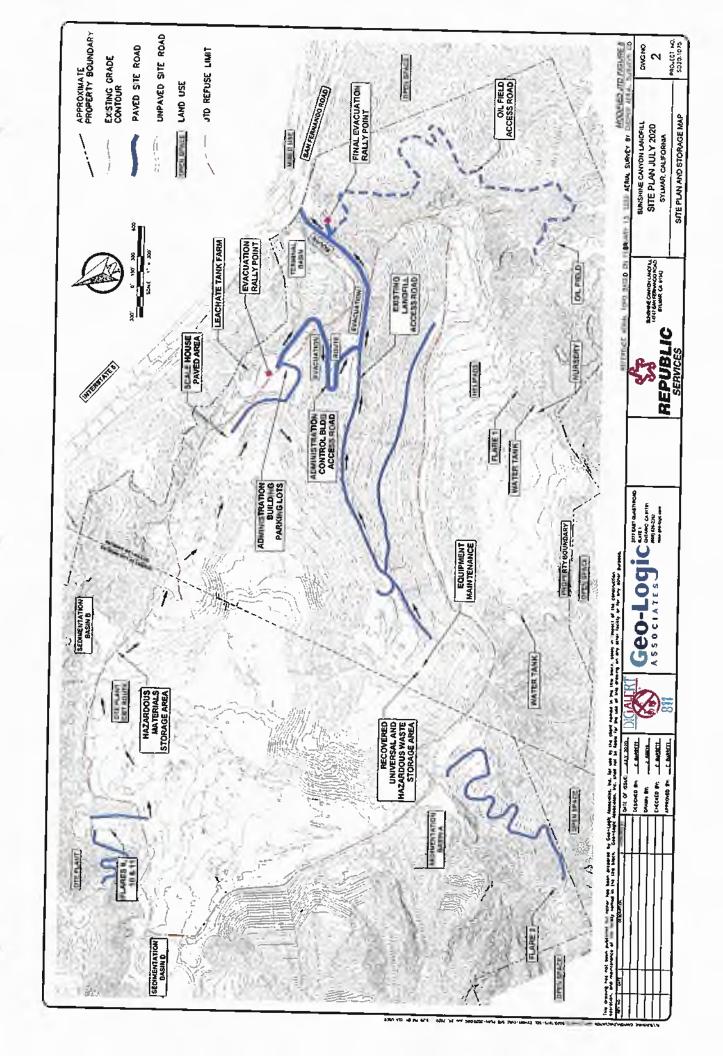
a Hospital / Ambulance

911

#### b. Spill Cleanup

If landfill personnel cannot contain and re-cover a spill, and the Fire Department is not able or available to do so, the following private spill cleanup contractor will be contacted to provide assistance:

Patriot Environmental Services (661) 287-3737



# APPENDIX A MONTHLY INSPECTION FORM (SAMPLE)

# APPENDIX A MONTHLY INSPECTION FORM (SAMPLE)

## SUNSHINE CANYON LANDFILL FACILITY INSPECTION CHECKLIST - MONTHLY

LOCATION INSPECTED BY		TODAY'S DATE
1 HOUSEKEEPING	S/U/NA	DATE CORRECTED
A. Yard and storage area orderly and well maintained		
Fluid materials (fuel , lubes, solvents, paints, etc.) stored in		
inside secondary containment		
- Any drums stored outside are securely tarped.		
Closed containers provided for soiled rag disposal.		<del>_</del> .
- All materials piled, racked or stored in a safe manner.		
- Ladders in working order, slip feet maintained; no cradled or		
- Secondary containment free of oil/water		
- Protected from collision damage with barriers		
- Fire extinguishers available		<u>.</u>
B. Condensate tank levels acceptable. No visible leaks.		
C. Leachate tank levels acceptable. No visible leaks.	<u> </u>	
2. FIRE PREVENTION / EMERGENCY EQUIPMENT	S/U/NA	DATE CORRECTED
A Extinguishers inspected and serviced properly.	O. O. I.	00111120122
- Serviced a minimum of annually by licensed company.		
- Checked monthly by designated company employee.		
Extinguishers accessible, location marked properly	<del>                                     </del>	
Tagged as to service date/repairman		_
Hoses, standpipes, sprinkler heads in good condition		
B. All equipment equipped with appropriate fire extinguishers or fire suppression systems		
C Smoking restrictions observed.		
D Fire blanket mounted and accessible.		
E Test fire, security detection / protection devices as required.		
F Test emergency lighting equipment if so equipped.		
3. HAZARDOUS MATERIALS AND INSPECTION CHECKLIST	S/U/NA	DATE CORRECTED
A Perimeter fencing is intact.		
B Gate lock in working condition.		
C Proper signage in place.		_
<ul> <li>Hazardous Waste Storage Area signs are legible and securely hung.</li> </ul>		
No Smoking signs posted.		
- 4-colored hazardous waste placard hung.		
D. No incompatible waste storage exists.		
- Bleach / Peroxide / Oxidizers are not stored by gasoline, batteries,		
- Batteries are stored in vented, water-tight plastic containers.		
- Miscellaneous reactive waste is stored away from flammable waste.		
Acids are stored away from bases and lime.		· -
- All hydrocarbons are stored separately from acids and bases	$\overline{}$	

## SUNSHINE CANYON LANDFILL FACILITY INSPECTION CHECKLIST - MONTHLY

E. All waste container	s are in	tact				
Leaking containers are in plastic totes						
- Containers showing signs of corrosion are placed in plastic totes.						
- Check secondary containment pallets for holes or leaks						
<ul> <li>Check base of</li> </ul>	- Check base of hazardous lockers for corrosion / holes					
F All drums are label	ed					
<ul> <li>Drums and sto</li> </ul>	Drums and storage areas with materials are clearly labeled for					
Drums holding hazardous waste have been labeled with an accumulation sticker listing:     date of initial waste accumulation     landfill name and address     composition and physical state of the waste     California Waste Identification Number     Landfill RCRA identification number						
ABOVE-GROUND STOR	RAGE T	ANK INSPECTIO	N RECORD		·	
Tank Name / Number	Tank Name / Number					
Location						
Contents	Contents					
Liquid level indicator inspected and found working properly; liquid levels acceptable.						
Signs of damage of deterioration to	Yes					
piping, supports, valve or joints?	No					
Signs of damage or deterioration of	Yes					
containment?	No					
Comments						

#### SUNSHINE CANYON LANDFILL

## FACILITY INSPECTION CHECKLIST - MONTHLY

Describe Leaks and/or Spills		
Corrective Action Taken		
SUMMARY AND COMMENTS	s	
		_
	<del></del>	
SIGNATURE		TODAY'S DATE

# APPENDIX B PERSONNEL TRAINING RECORD (SAMPLE)

#### PERSONNEL TRAINING RECORD SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PLAN SUNSHINE CANYON LANDFILL

**Description of Training** 

Instructor	Date					
EMPLOYEES' NAMES						
Printed Name						
	Signature					
· · · · · · · · · · · · · · · · · · ·						
	_					

# **APPENDIX C**

# SPECIAL OCCURRENCES REPORT FORM (SAMPLE)

#### Sunshine Canyon Landfill

## **SUNSHINE CANYON LANDFILL**



14747 San Fernando Rd.

Sylmar, CA 91342 Tel: 818/362-1567 Fax: 818/362-5484

#### CITY/COUNTY - REPORT OF SPECIAL OCCURRENCES

CHITCOUNTI-REFORT OF SI ECIAL	OCCURRENCE #:
DATE: SAMPLE	TIME: SAMPLE
REPORT MADE BY SAMPLE	POSITION: SAMPLE
Check One:	
☐ Fire	☐ Accident
☐ Earthquake	☐ Explosion
Unusual and Sudden Settlement	Presence of Hazardous Waste
☐ Injury	Flooding
☐ Other Unusual Occurrences	☐ Landslide
Detailed Description of Occurrence:	
Actions taken to mitigate this occurrence:	

rev: 8/18/2016

# ATTACHMENT 3 WASTE MANIFESTS

A	NON-HAZARDOUS	1, Generator ID Number	2. Page 1 of	1 3. Emergency Respon	se Phone	4. Waste Tr	acking Nu	mber		
	WASTE MANIFEST  NYA  5. Generator's Name and Malling Address  Generator's Site Address (if different than mailing address)									
	Sunshine Gas Producers, LLC 14747 San Fernando Road Generator's Phone: Syltmar, CA 91342									
	6. Transporter 1 Company Name					U.S. EPAID I	Vumber			
	7. Transporter 2 Company Name	t, Inc.	·			U.S. EPAID I	Number		<del></del>	
	8. Designated Facility Name and					U.S. EPA ID I	Number			
	2) V	alifornia Carbon 325 East Grant Street /limington, CA 90744	:			N/A 				
H	Facility's Phone: 56	32-435-1952	<del></del>	10. Cor	ntainers	11. Total	12. Unit			
1.	4.59.7630	·	; <u>.</u>	No.	Турэ	Quantity	Wt./Vol.			
ERATOR	Spent Non-Ha:	z Carbon Media		2	BA	1200			17. Š	10 M
(SEN	2. ant Non-Haz Carbon Med	ila 7 55 - 1 C		Sidet-	Du		P			
	3.	3AC sent to activation.	rung							* 1
	Spent (	BAC sent to	Cal. Car	rboyn_		<del> </del>				
	13. Special Handling Instruction		;	,				4		
	Always V	Vear Proper PPE	1							,
			:	•						
	14. GENERATOR'S/OFFEROR marked and labeled/placard	'S CERTIFICATION: I hereby declare that the o	contente of this consignment or transport according to appl	are fully and accurately c licable international and n	lescribed above ational governm	by the proper sh ental regulations	ipping nam	e, and are classifie	d, packag	ed,
Ų,	Generator's/Offeror's Printed/Ty	• "	. s	Ignature	00 LH			Month 8	Day	Year
TT.	15. International Shipments	Import to U.S.	Export from		eniny/exit:					
=	Transporter Signature (for exported 16. Transporter Acknowledgmer			Date le	aving U.S.:			·		
ORTE	Transporter 1 Printed/Typed Na	Jose Hon		ignature	j he.			Month   8	Day	Year
TRANSPORTER	Transporter 2 Printed/Typed Na	me 030 71072		ignature				Month	Day	Year
4	17. Discrepancy	· · · · · · · · · · · · · · · · · · ·		<u></u>			<u>-</u>			
	17a. Discrepancy Indication Spa	ace Quantity	Туре	Residue		Partial Re	jection	□F	Full Rejecti	ion
	17b. Alternate Facility (or Gener	rator)		Manifest Reference	e Number:	U.S. EPA ID	Number			
FACILITY	, , , , , , , , , , , , , , , , , , , ,	·,				1				
5 2	Facility's Phone: 17c. Signature of Alternate Fact	ilty (or Generator)			<del></del>			Month	Day	Year
DESIGNATED		t militaria de la companya de la companya de la companya de la companya de la companya de la companya de la co	. [.							W27.50.5
- DESI										
	18. Designated Facility Owner of Printed/Typed Name	or Operator: Certification of receipt of materials		ept as noted in Item 17a Signature	and market also also before	and the same of a section state.		Month	Day	Year
¥	- гишеол урва матіе			Ny Italia				wonin	⊅ay 	1981



Date: 1-26-2016

#### **PACKING SLIP**

Quote No: PE0119163-CTO

Company:	Republic Services Procurement, Inc.		Ship To:	Sunshi	ne Canyon Landfill
Address:	Sunshine Canyon Landfi	11	Address:	14747	San Fernando Road
	14747 San Fernando Roa	ad		Sylma	r, CA 91342
	Sylmar, CA 91342				
Attn:	Achaya Kelapanda		Contact:	Darry	
Phone:	818-833-6508		Phone:	818-6	52-5330
Fax:	818-362-5484		Fax:		
Project Nar	ne:		Customer	Repre	sentative: Caleb Osborne
			Pure Effec	t Job#	: 16-104 #1
<b>F.O.B.</b> :	lobsite	Terms:	Net 30 Days		P.O. #: PO5568811
Shipping: 1	Pure Effect Truck	Scheduled:	1-27-2016 @ 6an	1	Order Date: 1-20-2016
Quantity			Description		
10,000 lbs	Vacuum and Rebed Ser	rvice Includes –	Transportation, La	abor to	
				lefill w	Activated Carbon (4mm) – Liquid Phase
	Vessels (Sub-Drain Sys		Vall Site)		
1	Reach Lift Rental Char	ge per Day			
		<u> </u>			
		. 1		L 1	
	1 ) pent c	ar bon i	ras sen	1 7	o calitornia Carpor
	for react	tivation	^		o California Carbon
			,		
	<u> </u>				
Any controversy or claim arising out of or relating to this contract, or the breach thereof, shall be settled by arbitration in accordance with the Uniform Rules of Better Business Arbitration, and judgment upon the award rendered by the Arbitrator (s) may be entered					
in any Court h	aving jurisdiction thereof.				
	<u></u>				
Signature:_	Daniell Holan			Date:_	\ /2 <u>7</u>
_					



**Date:** 5-17-2016

Signature:

#### **PACKING SLIP**

Quote No: PE0119163-CTO

Company: Address:	Address: Sunshine Canyon Landfill 14747 San Fernando Road Sylmar, CA 91342		Ship To: Sunshine Canyon Landfill Address: 14747 San Fernando Road Sylmar, CA 91342		
Attn:	Achaya Kelapanda		Contact:	Darry	d
Phone:	818-833-6508		Phone:	-	52-5330
	818-362-5484		Fax:	010-0	32-3330
Project Nan	ne:			Repre	sentative: Caleb Osborne
F.O.B.: Jo	obsite	T#	75Pure Effec	ct Job#	:16-104#2 16-103#2
		Terms:	Net 30 Days		P.O. #: PO5797371
Camphing: 1	ure Effect Truck	Scheduled:	5-19-2016 @ 6an	n	Order Date: 5-09-2016
Quantity	<del></del>	<del></del>			
6,000 lbs	Vacuum and Rebed Ser		Description	on	
1	Reach Lift Rental Char	ge per Day			Activated Carbon (4mm) - Liquid Phase  Cali fornia Carbon
	or claim arising out of or rel Rules of Better Business Aring jurisdiction thereof.	lating to this cont	ract, or the breach the dgment upon the awa	ereof, sh	all be settled by arbitration in accordance red by the Arbitrator (s) may be entered

601 W. Valencia Dr. Fullerton, CA 92832 (714) 639-PURE Fax (714) 639-8530

Date: 5/19/16



#### **PACKING SLIP**

Quote No: PE111816-CTO

Company:

Republic Services Procurement, Inc.

Address:

Sunshine Canyon Landfill

14747 San Fernando Road

Sylmar, CA 91342

Attn:

Achaya Kelapanda

Phone:

818-833-6508

Fax:

818-362-5484

**Project Name:** 

Ship To: Sunshine Canyon Landfill

Address: 14747 San Fernando Road

Sylmar, CA 91342

Contact:

Darryl

Phone:

818-652-5330

Fax:

Customer Representative: Caleb Osborne

Pure Effect Job#: 16-103 #3

F.O.B.: Jobsite	Terms:	Net 30 Days	P.O. #: PO6203629
Shipping: Pure Effect Truck	Scheduled:	12-08-2016 @ 7am	Order Date: 11-21-2016

Quantity	Description
6,000 lbs	Vacuum and Rebed Service Includes - Transportation, Labor to
<u> </u>	Vacuum and Dispose of Non-Hazardous Spent Carbon, Refill w/ Activated Carbon (4mm) – Liquid Phase Vessels (Gray Water System)
1	Reach Lift Rental Charge per Day
	Spent Carbon was sent to California Carbon for reactivation.
	for reactivation.

Any controversy or claim arising out of or relating to this contract, or the breach thereof, shall be settled by arbitration in accordance with the Uniform Rules of Better Business Arbitration, and judgment upon the award rendered by the Arbitrator (s) may be entered in any Court having jurisdiction thereof.

Signature:

Date;

601 W. Valencia Dr. Fullerton, CA 92832 (714) 639-PURE Fax (714) 639-8530



**Date:** 10-07-2015

#### **PACKING SLIP**

**Quote No: 30620151-JHS/MS** 

Company:	Republic Services Procus		_	ne Canyon Landfill
Address:	Sunshine Canyon Landfi 14747 San Fernando Roa Sylmar, CA 91342			San Fernando Road rr, CA 91342
Attn:	Achaya Kelapanda		Contact: Darry	Al .
Phone:	818-833-6508		•	552-5330
Fax:	818-362-5484		Fax:	
Project Nar	ne:		Customer Repre	esentative: Michael Slaby
			Pure Effect Jobs	#: 15-241 #2
<b>F.O.B.:</b> J	obsite	Terms:	Net 30 Days	P.O. #: PO5339774
Shipping: I	Pure Effect Truck	Scheduled:	10-12-2015 @ 7am	Order Date: 10-02-2015
Quantity		5	Description	
6,000 lbs	Vacuum and Rebed Ser	rvice Includes -	- Transportation, Labor to	
	Vacuum and Dispose o Vessels	f Non-Hazardo	us Spent Carbon, Refill w	/ Activated Carbon (4mm) - Liquid Phase
1	Reach Lift Rental Char	ge per Day		
	Spent Car	rbon w	las sent to	California Carbon
	for reac	tivation	>n	
		-		
with the Unifor	sy or claim arising out of or remaining out of or remaining of Better Business Auving jurisdiction thereof.	elating to this co Arbitration, and j	ntract, or the breach thereof, udgment upon the award ren	shall be settled by arbitration in accordance dered by the Arbitrator (s) may be entered
Signature:_	Waren Who	ens or	Date:_	10/12/15



#### **PACKING SLIP**

Date:	10-07-2015		Quote No: 803201511-JHS/MS

Company: Republic Services Procurement, Inc.

Address: Sunshine Canyon Landfill

14747 San Fernando Road

Sylmar, CA 91342

Attn:

Achaya Kelapanda 818-833-6508

Phone: Fax:

818-362-5484

**Project Name:** 

Ship To: Sunshine Canyon Landfill

Address: 14747 San Fernando Road

Sylmar, CA 91342

Contact: Darryl

Phone: 818-652-5330

Fax:

Customer Representative: Michael Slaby

Pure Effect Joh#: 15-536

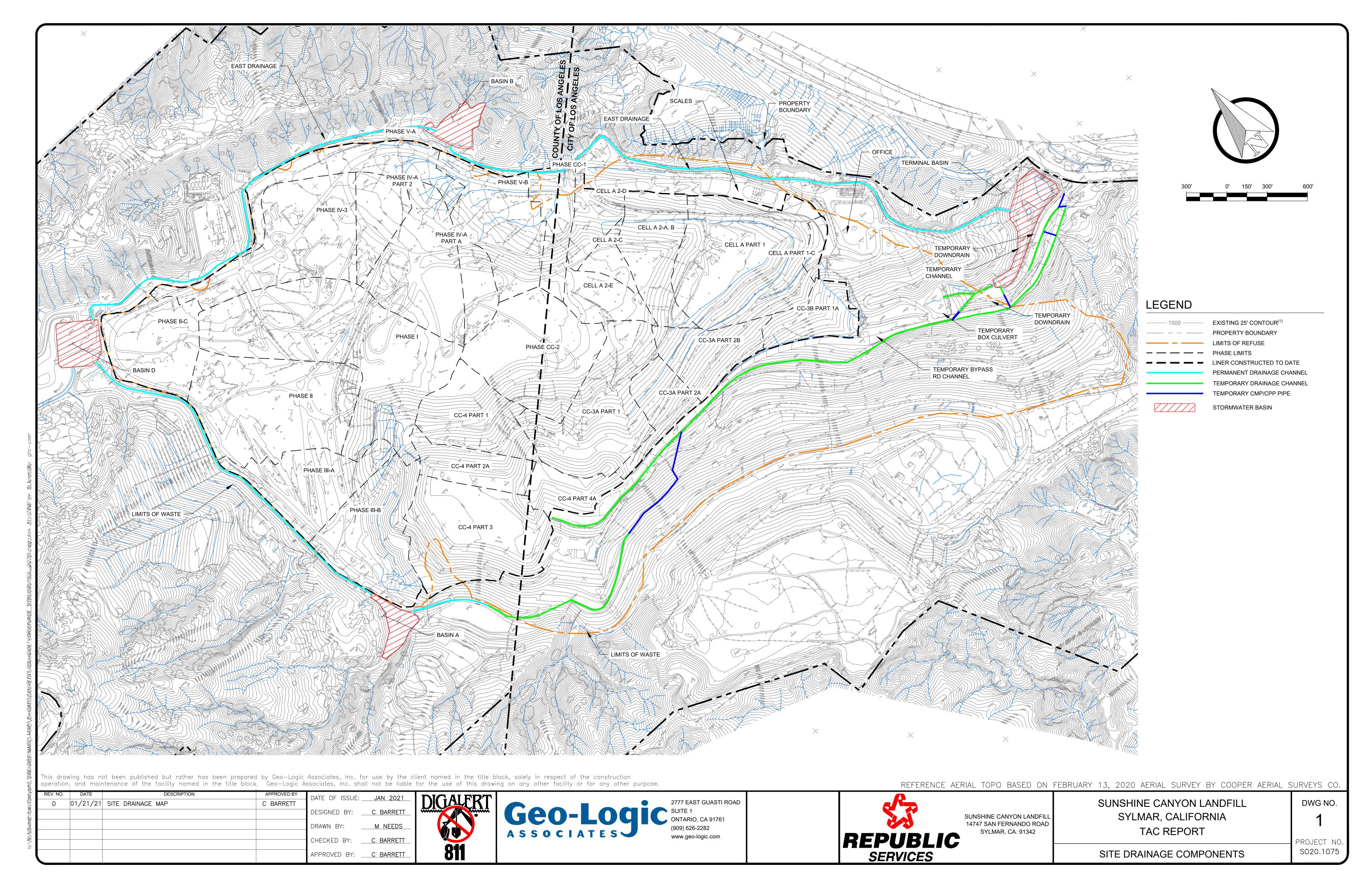
	I die Blieet Gobii	12000
F.O.B.: Jobsite	Terms: Net 30 Days	P.O. #: PO5339776
Shipping: Pure Effect Truck	Scheduled: 10/13/15 & 10/14/15 @ 7am	Order Date: 10-02-2015

Quantity	Description
10,000 lbs	Vacuum and Rebed Service Includes - Transportation, Labor to
	Vacuum and Dispose of Non-Hazardous Spent Carbon, Refill w/ Activated Carbon (4mm) - Liquid Phase Vessels
2 Days	Reach Lift Rental Charge per Day
2	Pure Effect Fee for Manifold Cleaning
	Spent Carbon was sent to California Carbon
	Spent Carbon was sent to California Carbon for reactivation

Any controversy or claim arising out of or relating to this contract, or the breach thereof, shall be settled by arbitration in accordance with the Uniform Rules of Better Business Arbitration, and judgment upon the award rendered by the Arbitrator (s) may be entered in any Court having jurisdiction thereof.

Signature: D. Hawsen	Date: 10/14 (15
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#### Los Angeles Regional Water Quality Control Board

October 24, 2016

Ms. Patti Costa, Environmental Manager Sunshine Canyon Landfill 14747 San Fernando Road Sylmar, CA 91342

APPROVAL OF REVISED WEST DRAINAGE CHANNEL MASTER PLAN - SUNSHINE CANYON LANDFILL, SYLMAR, CALIFORNIA (FILE NO. 58-076, ORDER NO. R4-2008-0088, GEOTRACKER GLOBAL ID NO. L10006014618)

Dear Ms. Costa:

The California Regional Water Quality Control Board, Los Angeles Region (Regional Board), is in receipt of your letter dated April 27, 2016, transmitting a revised *Surface Water Drainage Analysis, West Drainage Channel Master Plan, Sunshine Canyon Landfill* (Revised Plan), dated January 7, 2015, that was submitted to the State Water Resources Control Board Geotracker data system on April 27, 2016. The Revised Plan provides updated analysis and design details for the construction of the West Drainage Channel at the Sunshine Canyon City/County Landfill (Landfill), which is owned and operated by Republic Services (Discharger) and regulated under waste discharge requirements (WDRs) included in Order No. R4-2008-0088 adopted by this Regional Board on October 2, 2008.

The initial plan was submitted to the Regional Board on March 28, 2014. In a letter dated July 1, 2014 (copy attached), Regional Board staff provided comments that, among others, expressed concerns about potential damages that may be caused by differential settlements of the closed City Landfill No. 1, over which part of the drainage channel will be constructed. In addition, the letter included comments from the Los Angeles County Department of Public Works (LACDPW) on the technical aspects of the plan.

Reginal Board staff have reviewed the Revised Plan and has determined that comments included in our July 1, 2014, letter have been adequately addressed. Specifically, the Revised Plan proposes to use Geocell-reinforced concrete with a geogrid reinforcement layer in the foundation of the channel in areas underlain by the closed landfill unit. We concur that such a design is expected to be able to offset the effects of potential differential settlements of the existing waste mass. The Revised Plan is therefore approved. In accordance with Section K (Provisions for Drainage and Erosion Control) of the WDRs, all drainage structures at the Landfill shall be protected and maintained continuously to ensure their effectiveness. The Discharger is responsible to inspect, repair, and replace the drainage channel if damages occur during the active life and post-closure period of the Landfill

Please note that approval of the Revised Plan by the Reginal Board staff is in conjunction with its approval and clearance by other regulatory agencies, including the LADPW. In accordance

with Requirement M.3. of the WDRs<sup>1</sup>, approval of the Revised Plan by the Regional Board does not release the Discharger from the responsibility of complying with any other laws and regulations that may be enforced by other regulatory agencies.

A public notice regarding this approval was sent to known interested parties on September 12, 2016, to meet General Provision No. M.22. of the WDRs, which states: "During oversight of this Order, wherever the Executive Officer is authorized to grant any approval under a particular provision of this Order, the Executive Officer is directed to assess if there is controversy associated with the decision following public notice and, if so, bring the decision to the Regional Board for approval." The deadline for submitting comments regarding this matter was October 12, 2016. We received no comments regarding this matter during the period.

If you have any questions, please contact Dr. Wen Yang, Chief of the Land Disposal Unit, at (213) 620-2253 or wyang@waterboards.ca.gov.

Sincerely,

Samuel Unger, P.E Executive Officer

Enclosure

#### **Mailing List:**

Leslie Graves, State Water Resources Control Board (Leslie.Graves@Waterboards.ca.gov)

Michael Wochnick, CalRecycle (Michael Wochnick@CalRecycle.ca.gov)

Gerardo Villalobos, Sunshine Canyon Landfill LEA (gvillalobos@ph.lacounty.gov)

David Thompson, Sunshine Canyon Landfill LEA (david.thompson@lacity.org)

Martin Aiyitiwa, Los Angeles County Department of Public Works (MAIYET@dpw.lacounty.gov)

Mohsen Nazemi, South Coast Air Quality Management District (MNazemi1@agmd.gov)

Richard Slade, Upper Los Angeles River Area Watermaster (ularawatermaster@rcslade.com)

Mitchell Englander, Councilmember, 12th District, City of LA

(councilmember.Englander@lacity.org)

Ly Lam, City of Los Angeles Department of City Planning (ly.t.lam@lacity.org)

Dave Nguyen, Los Angeles County Department of Public Works

(DNGUYEN@dpw.lacounty.gov)

Wayde Hunter, North Valley Coalition, Granada Hills (WHunter01@aol.com)

Wayne Aller, Knollwood Property Owners Association, Granada Hills

(wavnealler07@hotmail.com)

Becky Bendickson, Granada Hills North Neighborhood Council (bebend99@gmail.com)

Kim Thompson, Granada Hill North Neighborhood Council (kimthompson@socal.rr.com)

Requirement M.3. of the WDRs states: "These requirements do not exempt the Discharger from compliance with any other current or future law that may be applicable. They do not legalize this waste management facility, and they leave unaffected any further restraints on the disposal of wastes at this waste management facility that may be contained in other statutes."

Wayne Adelstein, North Valley Regional Chamber of Commerce (wayne@nvrcc.com)
Ralph Kroy, LA City Sunshine Canyon Landfill Community Advisory Committee
(REKroy@aol.com)

Robert Sherman, Republic Services (RSherman@republicservices.com)
Patti Costa, Republic Services (PCosta@republicservices.com)





#### Los Angeles Regional Water Quality Control Board

July 1, 2014

Ms. Patti Costa, Environmental Manager Sunshine Canyon Landfill 14747 San Fernando Road Sylmar, CA 91342

COMMENTS ON WEST DRAINAGE CHANNEL MASTER PLAN - SUNSHINE CANYON LANDFILL, SYLMAR, CALIFORNIA (FILE NO. 58-076, ORDER NO. R4-2008-0088, WDID NO. 4B190329001)

Dear Ms. Costa:

The California Regional Water Quality Control Board, Los Angeles Region (Regional Board), has received from you a report titled Surface Water Drainage Analysis, West Drainage Channel Master Plan. Sunshine Canyon Landfill, Los Angeles County, California (Plan), dated March 2014, prepared by GeoLogic Associates, and submitted to the Regional Board on March 28, 2014.

The Sunshine Canyon (Landfill) is a Class III municipal solid waste landfill that is owned and operated by Republic Services Company and regulated under wasted discharge requirements (WDRs) included in Order No. R4-2008-0088 adopted by the Regional Board on October 2, 2008. In a letter dated August 29, 2013, the Regional Board staff approved a design report for the Phase CC-3B liner construction at the Landfill, with the condition that a detailed design plan for the West Drainage Channel, a permanent storm drain that will be constructed concurrently with the proposed Phase CC-3B liner system, be submitted for the approval of Regional Board staff. The Plan was submitted to meet this condition. Meanwhile, the Plan was also submitted to the Los Angeles County Department of Public Works (LACDPW) for its review.

Regional Board staff has reviewed the Plan and consulted with staff of the LACDPW on the technical aspects of the proposed design. The LACDPW provided its comments on the Plan with a letter addressed to you dated June 16, 2014 (copy attached). The Regional Board staff concurs with those comments in the LACDPW letter and has additional comments on the Plan as follows:

A significant portion of the proposed drainage channel will be constructed on top of the City Landfill Unit 1, which has been closed since 1971. A major concern is that differential settlement within the waste mass of the closed landfill could cause serious damage to the proposed concrete channel once it is constructed. Although the Plan proposes a cross section for the portion of the drainage channel over the waste mass (Drawing No. C12) that is different from the cross section for the portion of the channel over native soil (Drawing No. C11), it does not include a discussion to demonstrate that such a design will be adequate to prevent significant damages to the channel that may be caused by differential settlement

- Attachment C of the Plan includes drawings of maps, cross sections, and detailed layout of the proposed drainage channel. However, there is no discussion in the Plan to illustrate the purpose of each drawing. Many features and symbols in those drawings are not adequately labeled or referenced. This makes the drawing hard to following and in some cases, not legible. For example, Drawing No. C10 presents two cross sections (Section A-A' and Section B-B'), but there is not a map showing where those cross sections are located and no explanation on the purpose of such cross sections is found in the Plan.
- Section 5 and Attachment H of the Plan discuss an alternative outfall alignment for the proposed West Drainage Channel. Since the alternative layout involves an extension of the proposed channel line and the excavation of wastes that have been disposed of at the closed City Landfill, a revised design plan must be reviewed and approved by the Regional Board and other regulatory agencies with jurisdiction over the landfill, if the drainage channel is constructed following the alternative outfall alignment.
- 4. Section D.1. of the WDRs requires that "All containment structures and erosion and drainage control systems at the Landfill shall be designed and constructed under direct supervision of a California-registered civil engineer or certified engineering geologist, and shall be certified by the individual as meeting the prescriptive standards and/or performance goals of 27 CCR." Such a certification is not included in the Plan.

Please address the above comments and the comments provided by the LACDPW in its letter dated June 16, 2014, and submit a revised design plan for the project. Construction of the proposed drainage channel shall not be started until a design plan and final construction plans for the project are approved by the Regional Board staff.

If you have any questions, please contact Dr. Wen Yang, Chief of the Land Disposal Unit, at (213) 620-2253 or wyang@waterboards.ca.gov.

Sincerely,

Samuel Unger, P.E.

**Executive Officer** 

Enclosure: Letter from Los Angeles County Department of Public Works, dated June 16, 2014

cc: Emiko Thompson, Los Angele County Department of Public Works Gerardo Villalobos, Sunshine Canyon Landfill LEA David Thompson, Sunshine Canyon Landfill LEA Eugene Tseng, City of Los Angeles, Environmental Affairs Department Wayde Hunter, North Valley Coalition, Granada Hills



#### **COUNTY OF LOS ANGELES**

#### DEPARTMENT OF PUBLIC WORKS

"To Ennch Lives Through Effective and Caring Service"

900 SOUTH FREMONT AVENUE ALHAMBRA, CALIFORNIA 91803-1331 Telephone (626) 458-5100 http://dpw.lacounty.gov

ADDRESS ALL CORRESPONDENCE (D)
P O BOX 1460
ALHAMBRA CALIFORNIA 94802 (146)

IN REPLY PLEASE REFER TO FILE

EP-5

June 16, 2014

Ms Patti K Costa Environmental Manager Sunshine Cariyon Landfill 14747 San Fernando Road Sylmar, CA 91342-1021

Dear Ms. Costa:

WEST DRAINAGE CHANNEL MASTER PLAN SURFACE WATER DRAINAGE ANALYSIS REPORT SUNSHINE CANYON CITY/COUNTY LANDFILL

We reviewed your Surface Water Drainage Analysis report for the West Drainage Channel Master Plan dated March 2014 pursuant to Condition No. 38 of the Sunshine Canyon City/County Landfill Conditional Use Permit No. 00-194-(5) and have the following comments:

- The Drainage Map, Figure 1, provided under Attachment D shall include adequate topography, clarity, and resolution to depict watershed delineation Each subarea shall be clearly labeled, and subarea collection points shall be shown. The Time of Concentration path from the most remote point of the subarea to the outlet of the subarea shall also be clearly identified. Elevations at the top and at the outlet point of each subarea shall be shown. The paths through which surface flows from the subareas are conveyed to the proposed West Drainage Channel shall also be shown. All drawings including any details, as well as any attachments must be clearly legible in order to facilitate proper review.
- The final outlet from the downdrain/impact basin area into the Terminal Basin is not clearly depicted in any of the design plans or drainage plans. This information shall be provided in the resubmittal which shall include details for the connection of the West Drainage Channel to the Terminal Basin. Details should include but not be limited to alignment profile and cross sections.

- Subarea SA1 is greater than 40 acres and should be further divided to meet Public Works' hydrology standards. The optimum size for a subarea in the County approved Modified Rational Method model is 40 acres. However, smaller subareas are acceptable.
- Section 3.0 "Surface Water Drainage Analysis," references the Santa Clara River Watershed. However, the receiving drainage system for the Sunshine Canyon Landfill's watershed is Bull Creek, a tributary to the Los Angeles River which is part of the Los Angeles River Watershed Accordingly, all drainage run-off analyses shall utilize parameters including fire factors, debris production rates, and peak bulk factors, attributable to the Los Angeles River Watershed, rather than the Santa Clara River Watershed.
- The assumption made in Section 4.0 "Control Structure Sizing," regarding the non-additive nature of runoff flows generated by the surrounding tributary areas to the Western Drainage Channel cannot be claimed. Some flows will be additive to the 480 cubic feet per second peak outflow rate from Basin A. In order to identify the peak flow rate conveyed within the channel and the downdrain, hydrographs from Basin A and each subarea tributary to the West Drainage Channel must be routed together along the reaches of the West Drainage Channel to the Terminal Basin. The resulting peak outflow rate into the Terminal Basin shall be reevaluated to determine the cumulative flow routing effects due to various factors such as channel storage and timing.
- The current hydrologic analysis for the West Drainage Channel is not based on the topography at the point of the landfill's built-out condition. At build-out a substantial area, shown as the area highlighted in red on the enclosed Drainage Map, will become tributary to the West Drainage Channel. Also, not included in the hydrologic analysis is the contribution from the immediate area south of the trapezoidal channel shown as the area highlighted in yellow on the enclosed Drainage Map. Both of these areas shall be included in the hydrologic analysis.
- Under Attachment C. some of the "Alignment Profile" drawings did not reference
  the correct "Details" drawings. Detailed call-outs on drawings should be labeled
  correctly with appropriate symbols (as shown in Drawing No. G01) to ensure that
  all "Alignment Profile" and "Details" drawings are referenced appropriately

Ms. Patti Costa June 16, 2014 Page 3

Please address these comments and resubmit a revised West Drainage Master Plan for further review. If you have any questions, please contact Ms. Emiko Thompson at (626) 458-3521, Monday to Thursday, 7 a.m. to 5:30 p.m.

Very truly yours,

**GAIL FARBER** 

Director of Public Works

PAT PROANO

**Assistant Deputy Director** 

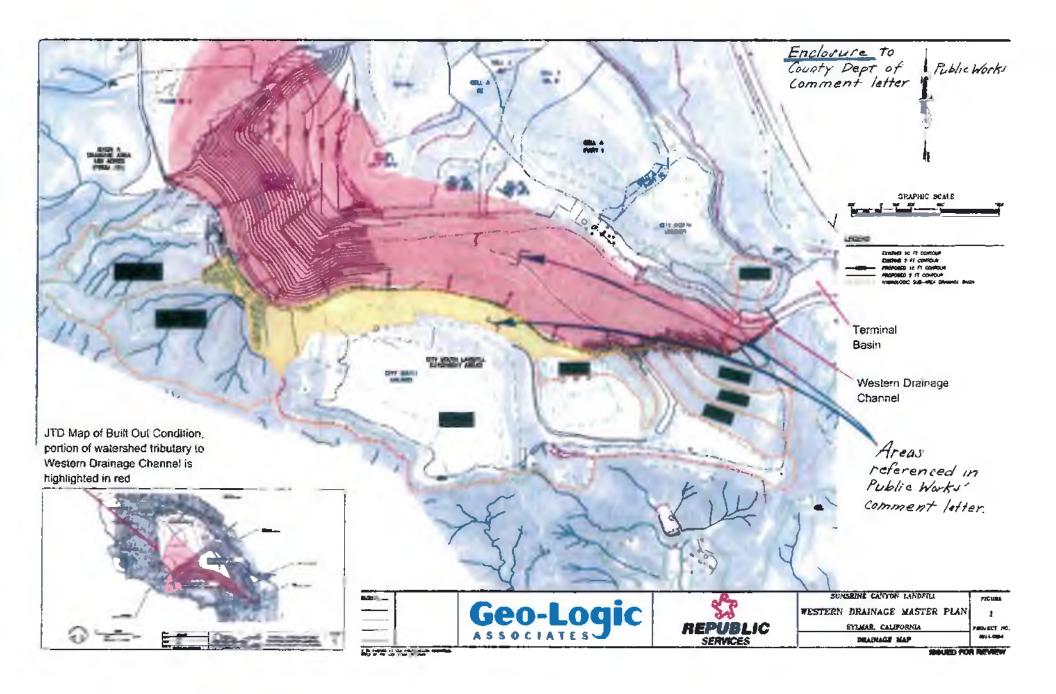
**Environmental Programs Division** 

KM:dy

P \Sec Western Drainage Master Plan

Enc.

cc: Regional Water Quality Control Board, Los Angeles Region (Wen Yang)
Sunshine Canyon Landfill Local Enforcement Agency (Gerry Villalobos)
Department of Regional Planning (Maria Masis)
City of Los Angeles Department of City Planning (Ly Lam)





#### GAIL FARBER, Director

### **COUNTY OF LOS ANGELES**

#### DEPARTMENT OF PUBLIC WORKS

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900 SOUTH FREMONT AVENUE ALHAMBRA, CALIFORNIA 91803-1331 Telephone: (626) 458-5100 http://dpw.lacounty.gov

June 15, 2016

ADDRESS ALL CORRESPONDENCE TO: P.O. BOX 1460 ALHAMBRA, CALIFORNIA 91802-1460

IN REPLY PLEASE
REFER TO FILE: EP-5

Mr. Rob Sherman, General Manager Sunshine Canyon Landfill Republic Services, Inc. 14747 San Fernando Road Sylmar, CA 91342-1021

SUNSHINE CANYON CITY/COUNTY LANDFILL CONDITIONAL USE PERMIT NO. 00-194-(5) COMMENTS ON THE REVISED WEST DRAINAGE CHANNEL MASTER PLAN

Dear Mr. Sherman:

We have reviewed the following documents submitted by Republic Services, Inc. (Republic) to the Los Angeles County Department of Public Works (Public Works) for the revised West Drainage Channel Master Plan Project:

- Private Drain No. XXXX Sunshine Canyon Landfill West Drainage, submitted by Republic to Public Works on December 10, 2015; and
- Surface Water Drainage Analysis West Drainage Master Plan, submitted by Republic to the Los Angeles Regional Water Quality Control Board on January 9, 2015.

Based on our review, the following are our comments:

#### General Design

Please see enclosed plans containing comments on the Revised WDC Master Plan.

#### **Geotechnical and Materials**

The Surface Water Drainage Analysis for the Landfill's WDC Master Plan appears to conceptually meet the proposed development needs. However, in order for the design to be accepted as permanent, it will be necessary to meet all minimum County standards and those standards set forth in the California Code of Regulations, Title 27, Section 21750; Conditional Use Permit No. 00-194-(5) Condition No. 38; and applicable portions of the 2014 County of Los Angeles Building Code.

The following comments must be addressed prior to recommendation of the proposed West Drainage Private Drain for approval by Public Works.

1. Provide a geotechnical map that complies with the provisions of the County of Los Angeles Department of Public Works *Manual for Preparation of Geotechnical Reports*. The geotechnical map shall be based on the proposed improvement plans.

As outlined in the Department of Public Works Manual for Preparation of Geotechnical Reports, the geotechnical map must show the following:

- a. The aerial distribution of geologic materials with sufficient lateral extent beyond the property limits to determine the potential adverse effects on existing landfill operations and off-site properties, as appropriate, with sufficient geologic symbols to depict clearly site geology.
- b. Existing landfill cell limits; landslides and their limits; all geotechnical cross-sections, including those utilized for slope stability analyses; springs and seeps (discharge rate should be noted); subdrains; limits of shear keys, keyway excavations, and buttress fills; geotechnical hazard setback lines/planes; exploratory excavations and borings locations, including those not removed by grading; and any areas of over-excavation and replacement.
- 2. All relevant subsurface data and associated logs (soil borings, groundwater wells, borings with inclinometers, gas monitoring wells, etc.) referenced on the geotechnical map must be provided in the report.
- 3. Natural and manmade slopes with slope gradients steeper than 2:1 (horizontal:vertical) (h:v) or where geologic structure may adversely affect slopes with shallower slope gradients shall be analyzed for slope stability with respect to the proposed improvements.
- 4. Geotechnical cross-sections shall include all relevant subsurface explorations; illustrate geologic contacts; indicate true and apparent dips of bedding and other discontinuities, such as joints, fractures, faults, etc.; potentiometric surface; seeps; and all other relevant geologic details.
- 5. Appropriate bedding plane and joint/fracture shear strengths representative of site-specific geologic materials shall be represented in the stability analyses, as appropriate. Provide supporting data for all material strengths utilized in slope stability analyses.

Note: Shear strength values provided in Table No. 20 of the JTD may be used only in seismic slope stability analyses. They are not appropriate for use in static slope stability analyses.

- 6. Provide static, seismic, and surficial slope stability analyses for all conditions that may impact or alter (i.e. horizontal and/or vertical displacement) the drainage paths of the channel alignment.
- 7. For each stability analysis presented, a corresponding detailed geotechnical cross-section shall be provided that shows the distribution of geologic materials. The critical failure plane and the various shear strength parameters used in the appropriate segments of each failure plane shall be shown on the analyses. If factors of safety are below County minimum standards then mitigation measures shall be presented.
- 8. Stability analyses shall investigate the various slope stabilities that may be affected by the proposed development. Methods of analyses (i.e. circular, translational or block, non-circular, etc.), the limit equilibrium methods (i.e. Ordinary Method of Slices, Modified Bishop Method, Morgenstern-Price based General Limit Equilibrium, etc.), and their related analyzed slip surfaces shall be comprehensive and determine the critical failure plane and factor of safety.
- 9. The Surface Water Drainage Analysis for Sunshine Canyon Landfill West Drainage Channel Master Plan document acknowledged a potential for settlement to occur over those portions of the proposed private drain alignment that traverse existing waste areas.
  - a. Provide specific numerical values for the potential total static and seismically induced settlements. All settlement values shall be supported by appropriate data and analyses. Provide mitigation recommendations for all areas where values exceed County settlement policies.
  - b. Provide specific distances over which the differential settlement may occur. Refer to the aforementioned Department of Public Works Manual for Preparation of Geotechnical Reports for County standards.
  - c. Recommended mitigation measures shall be made part of the plans.

Note: All mitigation measures on the plans shall be constructed.

- 10. Address the flow gradient for the proposed West Drainage Private Drain that may experience settlement (even tolerable differential settlement). Provide specific recommendations for preventing areas to create ponding within the private drain. Any section that exceeds permitted flow levels within the channel shall include protective slope improvements to prevent concentrated slope erosion and potentially exposure of buried waste. Provide recommended mitigation measures and details on the plans as necessary.
- 11. Provide chemical test results (sulfate, chloride, resistivity, etc.) for the on-site soils to address the presence of chemicals deleterious to construction materials and utility lines. The chemical tests must be in accordance with California Test Methods, Department of Transportation, or equivalent. Aqueous solution tests, such as EPA Tests or similar methods, are not acceptable for determination of resistivity. Resistivity tests must be performed on soils in a saturated condition. Recommend mitigation as necessary.
- 12. In accordance with Section 111 of the County of Los Angeles Building Code, the geotechnical consultant(s) shall make a finding regarding the safety of the site of the proposed work against hazard from landslide, settlement, or slippage and a finding regarding the effect that the proposed building or grading construction will have on the geotechnical stability of the area outside of the proposed work. The finding must be substantiated by appropriate data and analyses and be included in the geotechnical report.
- 13. Include details for fill placed over existing terrain steeper than 5:1 gradient and a keying and benching detail with all dimensions as determined by a Soils Engineer in the Design Report and plans.
- 14. Submit plans for verification of compliance with County codes and policies. Plans (scaled at 1-inch ≤ 40-feet) shall include, at a minimum, the following, where applicable:
  - a. Existing and proposed grades;
  - b. Slope gradients;
  - c. Subdrain systems;
  - d. Removal and recompaction depths and limits;
  - e. Location of existing and proposed channels and related drainage features;
  - f. Grading sequences (e.g. ABC slot-cutting or removal of landslide driving force before removing supporting toe, etc.); and

g. All standard general geotechnical notes and fill notes regarding fill compaction and density testing requirements.

Additional drainage and grading requirements of the Department of Public Works can be accessed at http://dpw.lacounty.gov/bsd/publications, typical grading requirements provided the Grading Review Sheet are on (see http://dpw.lacounty.gov/bsd/lib/fp/Drainage Grading/Plan and Check Documents/Grading Review Sheet (12-23-15).pdf). All applicable grading and drainage requirements shall be incorporated into the plans.

15. All geotechnical reports submitted for review must include an electronic copy of the report on a Compact Disk in Adobe® Portable Document Format (PDF). The electronic version shall include an electronically generated representation of the licensee's seal, signature, and date of signing.

#### **Review Exclusions**

The following list of items are beyond the scope of this geotechnical review and are assumed to be addressed by others agencies, such as the Regional Water Quality Control Board, except for when those design items potentially affected slope stability analyses of interim and final slope gradients that may have potential health and safety issues or adverse effects to off-site properties:

- Surficial stability of final cover slopes shallower than 2:1 (h:v);
- Potential deformation of final cover under static and seismic loading;
- Design and evaluation of base liner section, alternate liner section, and slope liner section;
- Protective layer (operation layer);
- Landfill gas collection system;
- Leachate collection and removal system.

#### **Water Resources**

The following comments on the Private Drain No. XXXX – Sunshine Canyon Landfill West Drainage Plans:

- 1. **DWG No. 02.** Within the Hydraulic Element table, double-check whether Line C should be from Sta 71+00 to 76+47.46, instead of from 71+00 to 75+47.46.
- 2. **DWG No. 03.** The interim flow of 700 cubic feet per second (cfs) does not appear in the hydrology of the West Drainage Channel. Please discuss the interim flow of 700 cfs, its source, timing, and impact to the receiving drain

Mr. Rob Sherman, General Manager June 15, 2016 Page 6

"Line A." Without further context, it appears the incoming flows to Line A consist of 700 cfs from Line E and 1,245 cfs from Line B while the capacity of Line A is 1266 cfs.

- 3. **DWG No. 06.** Pertaining to the upper chart, the capacity of 724 cfs should be depicted downstream from Sta 37+00.
- 4. **DWG No. 06.** Pertaining to the upper chart, double check whether the capacity should be shown as Q = 764 cfs, instead of Q = 760 cfs.
- 5. **DWG No. 10.** Pertaining to Line F, the pipe should be able to pass the burned flow rate of 86 cfs instead of 81 cfs. Pertaining to Line E: the pipe should be able to pass the burned flow rate of 60 cfs instead of 56 cfs.
- 6. **DWG No. 11.** Pertaining to Debris Basin No. 2, there appears to be duplicate labeling of the concrete channel.

Final review of this Project is contingent upon the approval of Cell CC-4 Development Project and/or any future projects or grading that may alter the design and analysis of the WDC Master Plan.

If you have any questions, please contact Mr. Martins Aiyetiwa at (626) 458-3553, Monday to Thursday, 7 a.m. to 5:30 p.m.

Very truly yours,

GAIL FARBER

Director of Public Works

MARTIN AIYETIWA Senior Civil Engineer

**Environmental Programs Division** 

KM:jl

P:\Sec\PW Comments to SCL West Drainage.doc

Enc.



# 2022 WET WEATHER PREPAREDNESS REPORT AND WINTER OPERATIONS PLAN

# SUNSHINE CANYON CITY/COUNTY LANDFILL



September 30, 2022

Mr. Dorcas Hanson-Lugo SCL – LEA Program Manager Los Angeles County Department of Public Health – LEA Program 5050 Commerce Dr Baldwin Park, CA 91706

# SUBJECT: 2022 WET WEATHER PREPAREDNESS REPORT AND WINTER OPERATIONS PLAN - SUNSHINE CANYON CITY/COUNTY LANDFILL

Mr. Dorcas Hanson-Lugo

In accordance with the Sunshine Canyon City/County Landfill (SCL), Solid Waste Facility Permit (SWFP) (Facility #19-AA-2000), Condition 16.I, SWT Engineering (SWT) has prepared this Wet Weather Preparedness Report and Winter Operations Plan (Wet Weather Preparedness Report) on behalf of Browning Ferris Industries of California, Inc. dba Sunshine Canyon Landfill, Inc. As reported in prior years, the goals of the Wet Weather Improvements installed at the SCL are classified under four categories:

- 1. **Sediment Management:** Consists of constructed measures to minimize suspended solids from the site runoff exiting the terminal basin;
- 2. **Erosion Control Measures:** Consists of features to prevent rainfall and runoff erosion of daily and intermediate soil layers that cover active refuse fill areas with the purpose of preventing storm water contact to buried refuse. This includes grading of soil covers to prevent surface ponding and subsequent storm water infiltration into the existing refuse fill;
- 3. **Maintenance:** Consists of maintaining existing storm water control structures serving both the active and the closed refuse fill areas; and
- 4. **Expansion:** Consists of installing new runoff control systems to meet the changing needs of the site due to ongoing fill operations.

The following report breaks down the four classified categories listed above for the SCL.

#### **Sediment Management and Erosion Control Measures – (Categories 1 and 2):**

The following is a list of work that has been completed to address sediment management and erosion control on site:



- Installed 26 acres of ClosureTurf (2017) to provide slope protection on slope areas east of the administration buildings (See Drawing 2);
- Inspected Filtrex compost rolls at the toe of disturbed slopes throughout various areas of the site, and replaced/added rolls on an as needed basis;
- Track-walked slopes throughout the site to reduce slope erosion and allow establishment of seeded or native vegetation in non-active areas;
- Inspected the basin risers filter fabric in Basins A, B, and D, replaced as needed;
- Cleaned the skimmer systems in the Terminal Basin to make sure they are functioning properly;
- Installed ±11 acres of fiber rolls spaced at 15-feet vertically on western facing slope in Part 4 and 25-feet vertically in Part 3-A/B;
- Graded active landfill decks to prevent erosion by avoiding overly steepened swales and decks;
- Based in operational wet weather deck with recycled asphalt concrete;
- Installed rumble strips at the exit to help prevent drag out; and
- Graded soil cover in active landfill areas to prevent surface ponding.

#### Maintenance and Expansion of Storm Water Control Systems - (Categories 3 and 4):

The following is a list of maintenance and new stormwater project that have been completed on site:

- Removal of silt, gravel check dams, and vegetation from the perimeter channels;
- Cleanout of sediment from Basins A, B, D, and the Terminal Basin;
- Cleaned out the access road trench drain systems;
- Graded benches to promote positive drainage and reduce overtopping;
- Cleaned pipes and inlets of vegetation and litter;
- Fiber rolls were installed prior to down drain flumes/channels, and at the base of all stockpiles;
- Construction of Diversion Berms and swales were created o reconstructed to create flows towards drainage inlets/perimeter channels;
- Cleaned the gabion check dams along the fire road on City South;
- Repaired a perimeter drainage pipe;
- Installed a pumping system (prior to the first rain) in low points; and
- Repaired pipe joints and reset down-drains as required.



#### **Constructed/Maintained Sediment Management and Erosion Control Measures:**

The following control systems were constructed prior to the 2022-2021 wet weather season that have remained in place as part of the site's overall stormwater management plan:

- Installation of a gabion cage wall in the terminal basin to slow storm water flow and allow deposition of silt;
- 26 Acres of Closure Turf (2017) and 15+ acres of coconut matting (2017-2019) on interim refuse fill slopes;
- Drainage improvements along the northeast perimeter road; and
- Graded landfill decks to ensure drainage to the perimeter channels/basins in the northwest via pumping system.

#### **Planned Sediment Management and Erosion Control Measures:**

There are currently no projects scheduled for completion after October 2022, therefore there are no "Planned" Drawings 3 & 4 apart of this submittal.

#### **Sediment Management and Erosion Control Measures:**

The SCL has the Entrance Road Improvements Construction Project of which consists of 2 separate phases is currently under a construction SWPPP with Sukut Construction. The project has its own SWPPP and has final BMP's to be installed at the end of the project as shown on the figures within Attachment 1.

The following link can be used to download the entire SWPPP:

https://www.dropbox.com/sh/cpanwvrqr5lcs45/AABnisfsvUXWn0r-k\_rFKWswa?dl=0



#### **Wet Weather Preparedness:**

The Site's Operational Plan included a Wet Weather Preparedness plan including actions that would be taken prior to a predicted severe wet weather event. These measures will be taken at least 24 hours prior to the projected on-set of the event. The application of these additional measures will be based on an assessment of the existing site conditions prior to the event and what additional measures will be most effective in minimizing surface erosions. The additional measures may include some or all of the following actions:

- Benches will be cambered at 3% to prevent stormwater from flowing onto slope areas and creating erosion rills;
- Additional fiber rolls/straw wattles will be placed on slope areas at a minimum of 20 vertical feet to slow stormwater flow;
- Application of soil stabilizer containing polymers formulated specifically for stabilization of slopes on appropriate slope areas, where applicable;
- Construction of additional stormwater control berms as necessary to direct stormwater flow to the appropriate existing on-site structures; and

Site inspections by SCL Staff will be conducted prior to each rain event to ensure that all controls remain in place and any items that need to be addressed are completed prior to a rain event. Erosion and sediment controls will be assessed after each rain event and any actions needed to repair or replace a control will be addressed.

If you have any questions or require any additional information about this report or the SCL itself, please feel free to contact the Site's Team Environmental Manager Valorie Moore at 818-362-2145.

#### **Enclosures:**

Constructed Northern Winterization Plan 1 Drawing 1: Drawing 2: Constructed Southern Winterization Plan 2

Drawing 3: Planned Northern Winterization Plan 1 (none planned not included) Planned Southern Winterization Plan 2 (none planned not included) Drawing 4: Attachment 1: Entrance Road Improvements Construction Project Erosion Control

14747 San Fernando Road Sylmar, CA 91342

#### Site Inspection Performed By:

The SCL was inspected throughout the summer of 2022 to prepare the site for the 2022-2023 wet weather season by the following staff and 3<sup>rd</sup> party consultants:

Paul Koster
Environmental Manager
Sunshine Canyon Landfill
PKoster@republicservices.com
818-362-2258

Jeremy A. Botica, P.E. 81230, M.S., Project Manager SWT Engineering jab@swteng.com 805-479-3844

Jacob Friedman
Environmental Specialists
Sunshine Canyon Landfill
IFriedman@republicservices.com
661-190-3213

Sincerely,

Valorie Moore

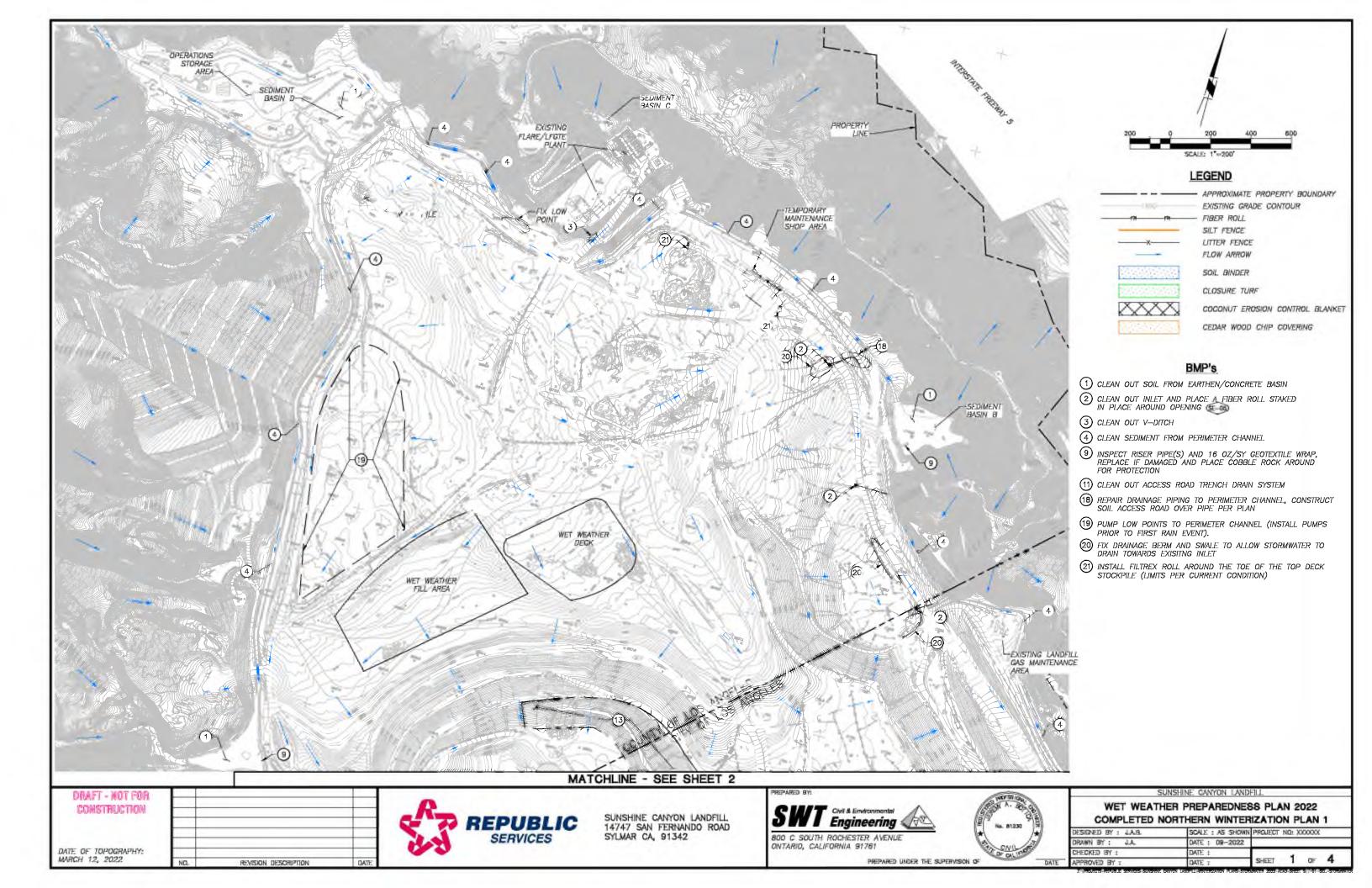
Team Environmental Manager

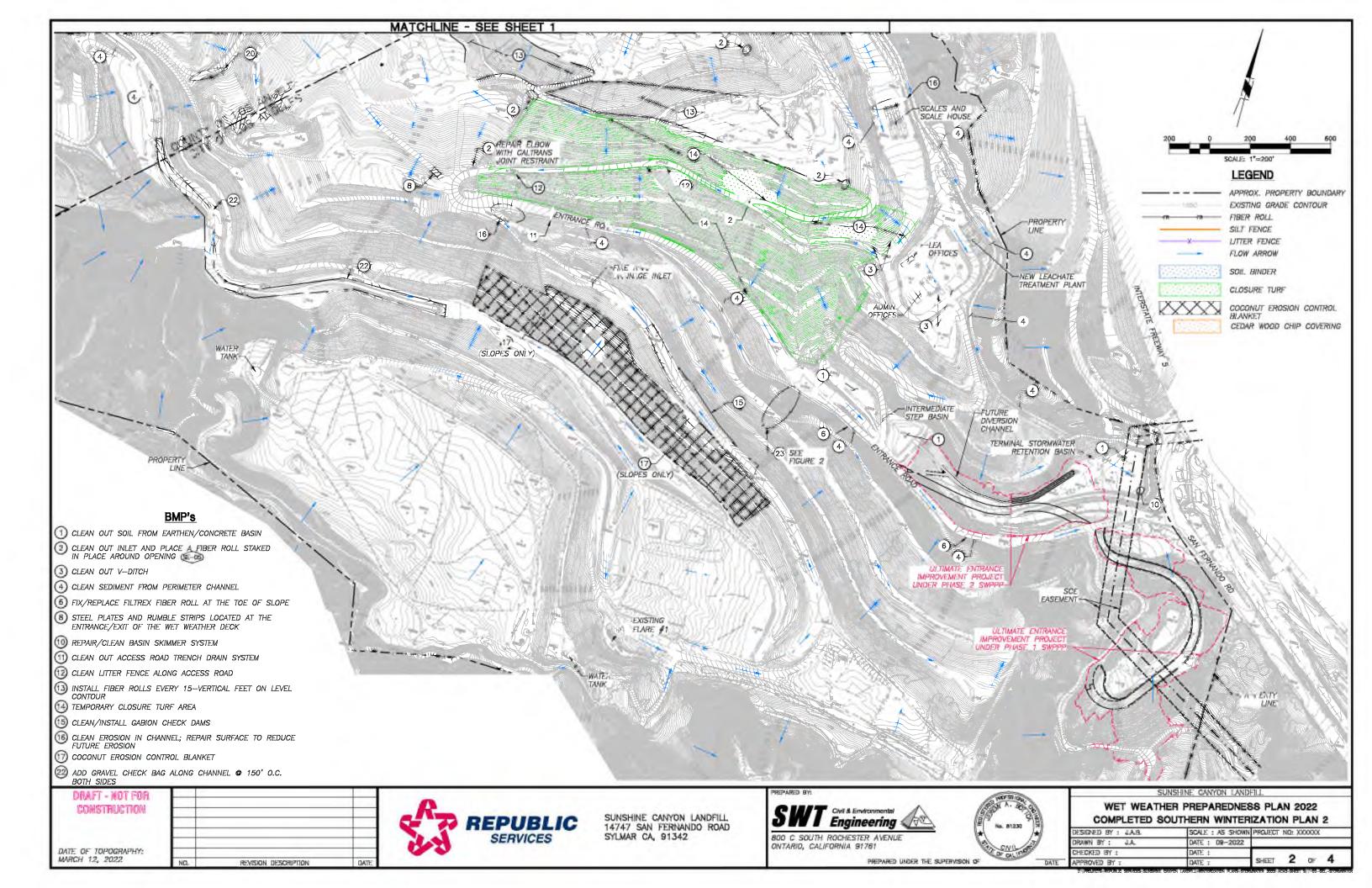
Sunshine Canyon Landfill

Environmental Manager

Date

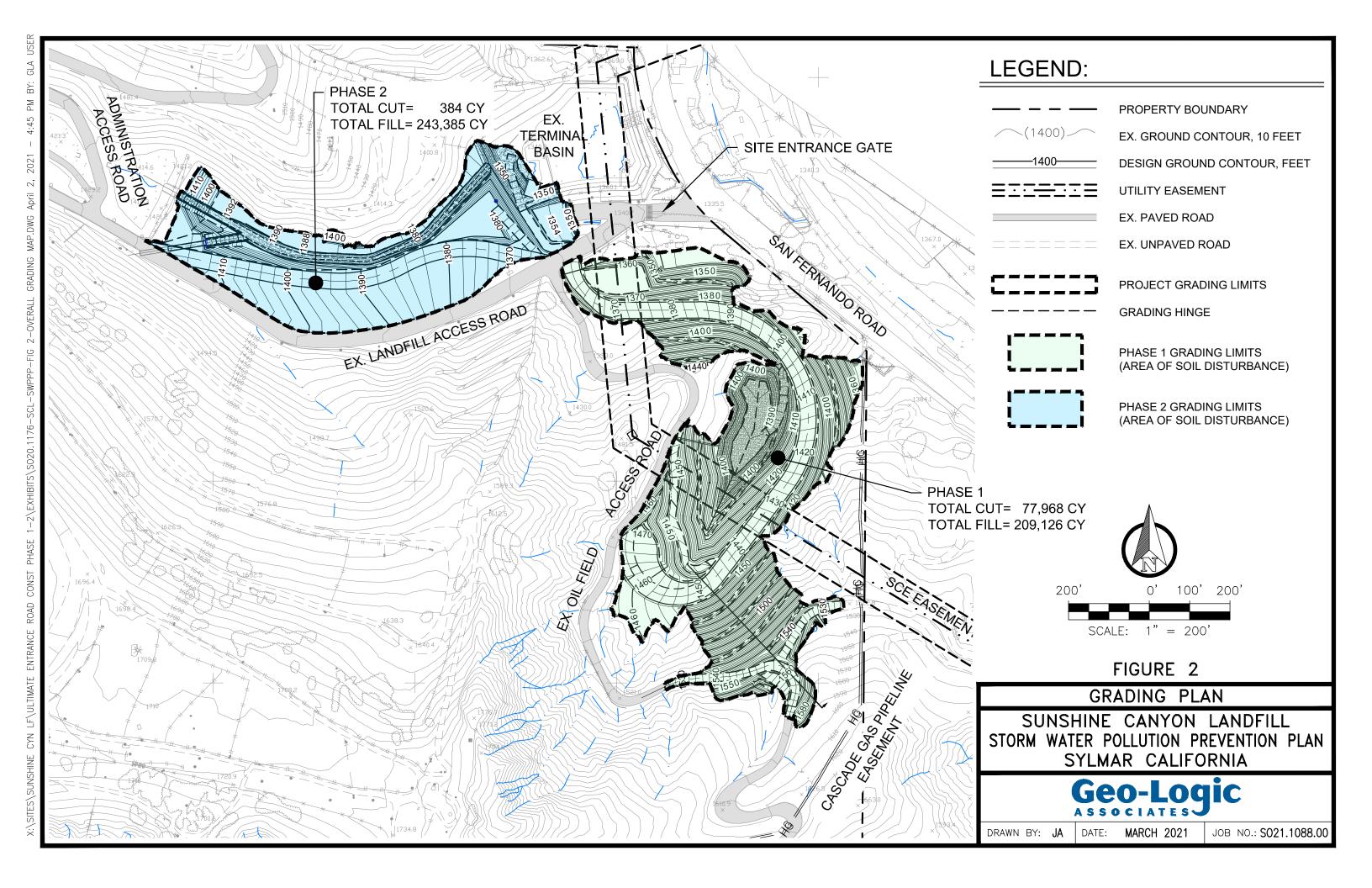
9/30/2022





#### ATTACHMENT 1

## ENTRANCE ROAD IMPROVEMENTS CONSTRUCTION PROJECT EROSION CONTROL MEASURES





#### SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT

#### Sunshine Canyon Landfill, Facility ID No. 49111

Odor Complaints Reported to South Coast AQMD Alleging SCL; and Notices of Violation (NOV) Summary from 2009 through May 2023

Public Nuisance: South Coast AQMD Rule 402; Calif. H&S 41700

														Total	Total
		Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec	NOVs	Complaints
2014	Complaints	32	37	164	122	52	28	83	81	302	223	80	278		1482
	NOVs	0	0	4	5	1	0	2	4	6	5	3	7	37	
2015	Complaints	260	119	297	60	12	41	23	126	337	370	85	65		1795
	NOVs	5	3	7	2	0	0	0	2	11	7	2	0	39	
2016	Complaints	100	188	185	181	30	74	52	85	206	193	206	59		1559
	NOVs	2	4	6	5	0	1	1	1	2	4	4	1	31	
2017	Complaints	200	254	274	116	19	10	14	30	44	27	22	18		1028
	NOVs	6	7	6	1	0	0	0	0	0	0	0	0	20	
2018	Complaints	32	18	21	9	5	9	16	6	33	21	2	36		208
	NOVs	0	0	0	0	0	0	0	0	0	0	0	1	1	
2019	Complaints	17	17	76	12	2	5	7	7	95	82	14	16		350
	NOVs	0	1	1	0	0	0	0	0	1	2	0	0	5	
2020	Complaints	29	17	12	33	98	20	23	82	105	121	18	22		580
	NOVs	0	0	0	0	2	1	0	1	3	4	0	1	12	
2021	Complaints	7	10	3	22	4	31	27	71	55	74	59	83		446
	NOVs	0	0	0	1	0	0	0	2	1	2	0	0	6	
2022	Complaints	158	84	58	38	17	40	12	40	85	64	25	32		653
	NOVs	5	1	0	1	0	2	0	0	2	1	0	0	12	
2023	Complaints	226	191	146	185	32									780
	NOVs	6	7	5	11	1								30	

45/8524.0

Total R402 NOVs Issued to Date

Total Complaints \* 14,018

Total R402 NOVs Issued \*\* 280

\* Includes 5,137 Complaints from 2009 through 2013

<sup>\*\*</sup> Includes 87 NOVs from 2009 through 2013

<sup>\*\*\*</sup> Includes eight NOVs from 2011 through 2013

NOVs for Other South Coast AQMD Rules

I	Souin Coasi Au							T				_	
	Jan	Feb	March	April	May	June	July	August	Sept	Oct	Nov	Dec	
2014	0	0	0	0	0	0	0	0	0	0	0	0	0
Rule													
2015	0	0	0	0	0	0	0	0	0	0	0	0	0
Rule	·	0	Ü	· ·	U	Ŭ	U	Ü	· ·	0	· ·	Ü	
Ruio													
2016	0	0	0	0	0	0	0	0	0	0	0	0	0
Rule													
2017	0	0	0	0	0	0	0	0	0	0	0	0	0
Rule	· ·	U	Ü	· ·	U	Ü	U	Ü	U	U	Ü	Ü	
Kuic													
2018	1	0	0	0	0	0	0	0	0	0	0	0	1
Rule	3002, 431.1												
2019	0	0	0	0	0	0	0	0	0	0	0	0	0
Rule						<u>I</u>					<u>I</u>		
	l	1	1	1	1	ı	1	1		1	ı	1	
2020	0	0	0	0	0	0	0	0	0	0	0	0	0
Rule													
2021	0	0	0	0	0	0	0	0	0	0	0	0	0
Rule													
2022	0	0	0	0	0	0	0	0	0	0	0	0	0
2022	0	0	0	0	0	0	0	0	0	0	0	0	0
Rule													
2023	1	0	0	0									1
Rule	403		-			-		-			-		

Total Other NOVs Issued***	10				

<sup>\*</sup> Includes 5,137 Complaints from 2009 through 2013
\*\* Includes 87 NOVs from 2009 through 2013

<sup>\*\*\*</sup> Includes eight NOVs from 2011 through 2013





# State of California – Natural Resources Agency DEPARTMENT OF FISH AND WILDLIFE South Coast Region 3883 Ruffin Road San Diego, CA 92123 (858) 467-4201

November 27, 2017

www.wildlife.ca.gov

Chris Coyle
Republic Services, Inc.
14747 San Fernando Road
Sylmar, CA 91342
CCoyle@republicservices.com

Dear Mr. Coyle:

Complete Notification of Lake or Streambed Alteration Notification No. 1600-2017-0220-R5 Chatsworth Reservoir Wetland/Riparian Mitigation Program

On October 26, 2017, the California Department of Fish and Wildlife (CDFW) received your Notification of Lake or Streambed Alteration (Notification). On November 27, 2017, your Notification was deemed complete.

CDFW is required to submit a draft Lake or Streambed Alteration Agreement (Agreement) to you within 60 calendar days from the date the Notification is complete, if CDFW determines that an Agreement is required for the project. An Agreement will be required if CDFW determines that your project could substantially adversely affect an existing fish or wildlife resource. Therefore, CDFW has until January 26, 2018, to issue you a draft Agreement or inform you that an Agreement is not required.

Please be advised that you may not proceed with any work until CDFW executes an Agreement, informs you that an Agreement is not needed, or does not provide you with a draft Agreement within 60 days of the date your notification was deemed complete.

If you have questions regarding this letter, please contact Brock Warmuth, Environmental Scientist, at 805-962-4698 or by email at <a href="mailto:brock.warmuth@wildlife.ca.gov">brock.warmuth@wildlife.ca.gov</a>.

Since My,

Ering Wilson

senior Environmental Scientist (Supervisory)





## State of California – Natural Resources Agency DEPARTMENT OF FISH AND WILDLIFE South Coast Region/Region 5 3883 Ruffin Road San Diego, CA 92123



January 26, 2018

Chris Coyle Republic Services, Inc. 14747 San Fernando Road Sylmar, CA 91342 CCoyle@republicservices.com

(858) 467-4201 www.wildlife.ca.gov

Subject:

Notification of Lake or Streambed Alteration No. 1600-2017-0220-R5 Chatsworth Reservoir Wetland/Riparian Mitigation Program Project

Dear Mr. Chris Coyle:

As the California Department of Fish and Wildlife (Department) explained in a previous letter to you dated November 27, 2017, the Department had until January 26, 2018 to submit a draft Lake or Streambed Alteration Agreement (Agreement) to you or inform you that an Agreement is not required. The Department did not meet that date. As a result, by law, you may now complete the project described in your notification without an Agreement.

Please note that pursuant to Fish and Game Code section 1602(a)(4)(D), if you proceed with this project, it must be the same as described and conducted in the same manner as specified in the notification and any modifications to that notification received by the Department in writing prior to November 27, 2017. This includes completing the project within the proposed term and seasonal work period and implementing all avoidance and mitigation measures to protect fish and wildlife resources specified in the notification. If the term proposed in your notification has expired, you will need to re-notify the Department before you may begin your project. Beginning or completing a project that differs in any way from the one described in the notification may constitute a violation of Fish and Game Code section 1602.

Also note that while you are entitled to complete the project without an Agreement, you are still responsible for complying with other applicable local, state, and federal laws. These include, but are not limited to, the state and federal Endangered Species Acts and Fish and Game Code sections 5650 (water pollution) and 5901 (fish passage).

Finally, if you decide to proceed with your project without an Agreement, you must have a copy of this letter <u>and</u> your notification with all attachments available at all times at the work site. If you have any questions regarding this matter, please contact Erinn Wilson at (562) 342-7172 or Erinn.Wilson@wildlife.ca.gov

Sincerely,

Senior Environmental Scientist (Supervisory)



To: Republic Services and LADWP

From: Ray Corbett, JMA

Date: March 17, 2018

Subject: Native American Consultation regarding Chatsworth Reservoir project

After completion of the draft report on the results of Phase II Investigations at the Chatsworth Reservoir APE, I circulated the draft report (attached) along with the consultation letter (attached) among our consulting Native American Tribes for this project. Subsequently I followed up with phone calls to the respective Tribal representatives. All of the comments were positive and each tribe expressed satisfaction with the Phase II Investigation program and the ensuing draft report. All of the comments except one came through phone conversations. The single written response is attached.

I will finalize the Phase II Investigation report and submit it to the South Central Coastal Information Center of the California Historical Resource Information System located at California State University, Fullerton.

This completes the Native American consultation process for this phase of the project. In light of this, it would be appropriate to resurrect work on the MND Addendum.

If I can answer any questions please let me know.

Sincerely,

Ray Corbett, Ph.D., RPA Principal Archaeologist

JMA

February 27, 2018

Dear Dr. Corbett,

Thank you for providing the draft report on the Chatsworth Reservoir Phase II Investigations. After review of the document provided by your office I would like to commend John Minch & Associates for generating an excellent report on the project. I am satisfied with the results of the Phase II archaeological field work performed in response to Tribal concerns surrounding the proximity of known prehistoric archaeological sites and the project's APE.

The Gabrielino Tongva Nation will look forward to continuing consultation and participation as the Chatsworth Reservoir Wetland and Riparian Mitigation Project progresses. As discussed in previous conversations, we look forward in providing tribal cultural resource monitoring when the need arises.

Sincerely,

Sam Dunlap Cultural Resource Director Gabrielino Tongva Nation (909) 262-9351 cell Tribal responses to a request for Native American Consultation regarding the *Initial Study and Draft Mitigated Negative Declaration for Chatsworth Reservoir Wetland and Riparian Mitigation Program* and *Phase I Cultural Resources Survey for the Chatsworth Reservoir Wetland Riparian Restoration Project.* 

\_\_\_\_\_\_

Dear Dr. Corbett,

In response to the Chatsworth Reservoir Wetland and Riparian Mitigation Project. After reading the Phase 1 Cultural Resource Survey, I strongly feel that the disturbance to this area would affect cultural resources along with various plant communities. As documented, there are sensitive sites, the water that has pushed through at one time could have very well carried any items of significance.

Thank you for you conscious effort in supporting Cultural Resources.

Sincerely,

Eleanor Arellanes Fishburn Barbareno/Ventureno Band of Mission Indians PO Box 5687 Ventura, CA 93005

\_\_\_\_\_\_

Notes from phone conversation with Mr. Anthony Morales, Chairperson, Gabrielino/Tongva San Gabriel Band of Mission Indians.

The fact that there was a reservoir there indicates there was water and this means there would be villages in the area, so we consider this to be important to our tribe and we, (the Gabrielino/Tongva San Gabriel Band of Mission Indians) want to be involved with any monitoring regarding this project.

------

Dr. Corbett,

The SYBCI Elders will not be getting involved in this project, but would like to make some comments about the protection and preservation of cultural resources;

- 1. They agree that additional survey and studies need to take place in and around the area are in order to better categorize the sites that do exist within the APE;
- 2. The survey plan for this project needs to be completed in consultation with tribes and agreed to by those involved;
- 3. Native American advisor/consultant need to be present during the surveys, as well as during any ground disturbing activities;

- 4. A plan needs to be created for long term preservation, in consultation with tribes. because once completed, this will more than likely become a refuge for wildlife and with that comes folks that interested in nature, i.e. bird watching, walking, plant viewing, etc.;
- 5. If at all possible, it would be nice to have available for tribes to possibly gather in the area plants that they would traditionally use.

These would be the comments and suggestions for this area. If there is no response from any of tribes, please advise and I will inform the Elders to see if they may want me to participate based on non-involvement by the tribes.

I look forward to hearing from you.

Freddie Romero Cultural Resources Coordinator SYBCI Elders Council 805-688-7997 X4109 805-403-2873

\_\_\_\_\_\_

Notes from phone conversation with Mr. Robert Dorame, Chairperson, Gabrielino Tongva Indians of California Tribal Council. In the course of our phone conversation he said that he believed that the area was "highly sensitive" and that any ground disturbing activity be monitored by Native Americans. He went on to say that the monitoring should be rotated among Tribes. He informed me that he would not submit written comments (because of his busy schedule), but that he wanted what he conveyed to me by phone to serve as his Tribe's comments.

\_\_\_\_\_\_

#### Dear Dr. Corbett,

Thank you for contacting the Gabrielino Tongva Nation for the purpose of Native American consultation regarding the Chatsworth Reservoir Project. The project area lies within the traditional tribal territory of the Gabrielino Tongva Nation and the following comments are intended to express the concerns of our Tribe.

After review of the material provided by your office I am of the opinion that further archaeological investigation is needed to properly assess the recent discovery of the archaeological sites found within the project area by JMA during their site survey. I believe archaeological data recovery is warranted given the history of the project area.

As the project area is within our tribal territory the Gabrielino Tongva Nation is culturally affiliated to any prehistoric cultural items that may be discovered during new archaeological testing as well as any archaeological items already recorded within the project area and its vicinity.

The Gabrielino Tongva Nation also requests that a Native American monitor from our tribal group be present during all phases of archaeological testing and future subsurface construction activity associated with the Chatsworth Reservoir project. The Native American monitor will be a documented tribal member of the Gabrielino Tongva Nation.

I hope that my comments and concerns are helpful to this consultation process. Please feel free to contact me as this project moves forward.

Sincerely,

Sam Dunlap Cultural Resource Director Gabrielino Tongva Nation 909-262-9351 cell

\_\_\_\_\_\_

Attn: Dr. Corbett, JMA

Thank you for providing the Torres Martinez Desert Cahuilla Indians with the notifications of your projects. However after having reviewed the information you have been providing and the locations of your projects it is apparent that you are out of our traditional use area. Therefore we wish to defer projects to other tribes closer to the area.

Respectfully, Michael Miralez Cultural Resource Coordinator Torres-Martinez DCI

Office: 760-397-0300 Ext: 1213 Email: mmirelez@tmdci.org

\_\_\_\_\_\_

The Gabrielino Band of Mission Indians – Kizh Nation communicated through a phone conversation that they wanted subsurface testing of the archaeological sites within the APE and that all ground disturbing activity be monitored by a Native American representative. Furthermore, by email the Tribe provided the following:

"The Chatsworth Reservoir area is definitely in Kizh Tribal Territory. Bernice Johnston (1962) identifies the Chatsworth area as in Gabrielino (Kizh) territory and states as to its sensitivity:

"Many a modern community in the San Fernando Valley can boast of an Indian predecessor. From Tujunga to Chatsworth archeological sites (i.e. village sites) abound..."(Johnston 1962:125).

McCawley (1996) also includes the Chatsworth area as Gabrielino (Kizh) territory and specifically about Chatsworth Reservoir:

"Melendrez (Kizh informant) reported to Harrington that a rancheria, or Indian community, existed near Chatsworth Reservoir. 'Melendrez v'd [volunteered]. . . that one long rancheria extended from where we were [probably northwest of Chatsworth Reservoir] a couple of miles to the

Triunfo ward [southwestward] of where we were and that fragments of shell, etc., are picked up in this whole stretch.' According to Harrington, Melendrez implied that 'the name of that rancheria was El Escurpion de las Salinas'. . . ""

\_\_\_\_\_\_

Respectfully submitted,

Ray Corbett, Ph.D., RPA Principal Archaeologist

JMA

April 28, 2017

ERIC GARCETTI
Mayor

Commission
MEL LEVINE, President
WILLIAM W. FUNDERBURK JR., Vice President
JILL BANKS BARAD
CHRISTINA E. NOONAN
AURA VASQUEZ
BARBARA E. MOSCHOS, Secretary

DAVID H. WRIGHT General Manager

June 13, 2017

Ms. Patti K. Costa, P.E. Environmental Manager Sunshine Canyon Landfill 14747 San Fernando Road Sylmar, CA 91342

Dear Ms. Costa

This letter is to request that Republic authorize its consultant, JMA, to conduct additional studies as requested by the Native American Consultation survey findings. As discussed in our conference call on May 31, 2017, due to the request from some Tribes for additional studies, Republic/JMA will perform the requested additional studies, with permission from the Los Angeles Department of Water and Power (LADWP)

JMA will conduct additional studies on some or all of the archaeological sites in the Chatsworth Mitigation Project Area (Project Area), including additional survey, testing, and data recovery. There should be monitoring during of all ground-disturbing activity related to the project, and, to the extent possible, Native American tribes that specifically requested that their Tribe be involved with the monitoring should be included in the plan.

LADWP gives Republic permission to perform additional archaeological studies to include Tribes that request to be involved in the monitoring. Additionally, LADWP will allow tribal members who request to collect plants from the Project Area, to do so, subject to the scheduling of appointments and the availability of resources to provide access to the site.

If you have any questions regarding this matter, please contact Ms. Julie Van Wagner, Environmental Supervisor at <a href="mailto:julie.vanwagner@ladwp.com">julie.vanwagner@ladwp.com</a> or me at <a href="mailto:heidi.hiraoka@ladwp.com">heidi.hiraoka@ladwp.com</a>.

We look forward to continue working with you on this project.

Sincerely.

Heidi HK Hiraoka

dudtk thenox

Manager of Property Management

bc: Julie Van Wagner Chuck Holloway Mark Sedleck

June 13, 2017

Ms. Patti K. Costa, P.E. Environmental Manager Sunshine Canyon Landfill 14747 San Fernando Road Sylmar, CA 91342

Dear Ms. Costa:

This letter is to request that Republic authorize its consultant, JMA, to conduct additional studies as requested by the Native American Consultation survey findings. As discussed in our conference call on May 31, 2017, due to the request from some Tribes for additional studies, Republic/JMA will perform the requested additional studies, with permission from the Los Angeles Department of Water and Power (LADWP).

JMA will conduct additional studies on some or all of the archaeological sites in the Chatsworth Mitigation Project Area (Project Area), including additional survey, testing, and data recovery. There should be monitoring during of all ground-disturbing activity related to the project, and, to the extent possible, Native American tribes that specifically requested that their Tribe be involved with the monitoring should be included in the plan.

LADWP gives Republic permission to perform additional archaeological studies to include Tribes that request to be involved in the monitoring. Additionally, LADWP will allow tribal members who request to collect plants from the Project Area, to do so, subject to the scheduling of appointments and the availability of resources to provide access to the site.

If you have any questions regarding this matter, please contact Ms. Julie Van Wagner, Environmental Supervisor at <u>julie.vanwagner@ladwp.com</u> or me at <u>heidi.hiraoka@ladwp.com</u>.

We look forward to continue working with you on this project.

Sincerely,

Heidi HK Hiraoka Manager of Property Management



January 31, 2018

Dear Tribal Chairperson,

As the Archaeological Principal Investigator on the Chatsworth Reservoir Wetland and Riparian Mitigation Project, I am following up with an update regarding the results of Native American Consultation and the subsequent Phase II investigation for the sites in the project APE. In March 2017, I sent to Tribes the document titled *Initial Study and Draft Mitigated Negative Declaration for Chatsworth Reservoir Wetland and Riparian Mitigation Program* as well as the draft of our report documenting the archival research and the results of our pedestrian survey titled, *Phase I Cultural Resources Survey for the Chatsworth Reservoir Wetland Riparian Restoration Project, Los Angeles County, California.* My accompanying letter requested consultation, solicited input and welcomed any comments or questions from Tribes regarding cultural resources on this project. In April I followed up with phone calls and emails to tribes.

Gratefully, I received substantive comments and input from a number of Tribes which I compiled and forwarded to the property owner, the Los Angeles Department of Water and Power (LADWP). Summarizing the responses, the substantive comments primarily concerned three issues. 1) A number of Tribes requested that additional studies be conducted on some or all of the archaeological sites in the Chatsworth Area of Potential Effect (APE). Comments specifically mentioned additional survey, testing, and data recovery. 2) Virtually all Tribes commented that there should be Native American monitoring of all ground-disturbing activity related to the project and a few Tribes specifically requested that their Tribe be involved with the monitoring. 3) One Tribe requested that tribal members be allowed to gather plants from the Chatsworth Reservoir site for traditional purposes.

In the subsequent discussions in response to the Native American comments, The LADWP authorized the mitigation contractor, Republic Services, to commission additional investigation of the archaeological sites, Tribal monitoring of ground disturbing activity, and for tribal members to collect traditional plants. In August-September 2017, John Minch and Associates Inc. (JMA) conducted the Phase II investigations with the assistance and participation of tribal members. Attached is the recently-completed report on these investigations. Please review the draft report and I welcome and appreciate any comments or feedback. And if I can answer any questions please let me know.

Sincerely,

Ray Corbett, Ph.D., RPA Principal Archaeologist JMA



November 29, 2016

Patti Costa Sunshine Canyon Landfill Republic Services, Inc. 14747 San Fernando Road Sylmar, CA 91342

Subject: Update on Archaeological Services Performed for Chatsworth Reservoir Mitigation MND Addendum.

Dear Patti Costa,

As requested, John Minch and Associates, Inc. (JMA) is conducting an investigation to identify and document cultural resources in the proposed project area for the Chatsworth Reservoir Mitigation Project and prepare a report to satisfy requirements in compliance with the California Environmental Quality Act (CEQA). JMA staff performed the proposed archaeological services Tasks 1-3 on November 17<sup>th</sup>-18<sup>th</sup>. The tasks included: **Task 1**) a comprehensive archaeological records and literature search of a One-mile radius of the project area in order to identify known cultural resources and the potential impacts that may result from construction activities; **Task 2**) a pedestrian survey of the project area; **Task 3**) the recordation two newly discovered archaeological site locations that were located during the original 2010 field survey, and the recordation of a new site that was located during the November 2016 survey.

The results of the pedestrian survey include the identification of a new site location, and three isolated artifacts. All of the identified site locations are outside of the footprint of the mitigation area and can be avoided. However, the results of the Sacred Lands File check performed for Task 1 indicated a change in status of Sacred Lands within the Chatsworth Reservoir Mitigation Project area. The Native American Heritage Commission has informed us that the "Sacred Lands Inventory has records of sacred sites within the Chatsworth Reservoir APE". The items contained therein are confidential and exempt from the California Public Records Act pursuant to California Government Code Section 6254.10. Therefore information regarding the nature and location of these sacred sites must be obtained through direct consultation with Native Americans. Such information would then be used to assess the potential effects of the mitigation project on these sacred sites pursuant to CEQA and California Assembly Bill No. 52. In our opinion, due diligence addressing this issue would need to be exercised before a Mitigated Negative Declaration regarding cultural resources could be asserted.

JMA will continue progress on the additional two Tasks: **Task 4)** production of a comprehensive narrative report for review, and provide final revisions for the



Addendum; and as needed, **Task 5)** participation in any necessary meetings and/or conference calls during the remaining course of the project.

Respectfully submitted,

**Edwin Minch** 

**Managing Principal** 





#### **COUNTY OF LOS ANGELES**

#### DEPARTMENT OF PUBLIC WORKS

"To Enrich Lives Through Effective and Caring Service"

900 SOUTH FREMONT AVENUE ALHAMBRA, CALIFORNIA 91803-1331 Telephone: (626) 458-5100 http://dpw.lacounty.gov

ADDRESS ALL CORRESPONDENCE TO: P.O. BOX 1460 ALHAMBRA, CALIFORNIA 91802-1460

IN REPLY PLEASE
REFER TO FILE: EP-5

May 4, 2016

Mr. Rob Sherman, General Manager Republic Services, Inc. Sunshine Canyon Landfill 14747 San Fernando Road Sylmar, CA 91342-1021

SUNSHINE CANYON CITY/COUNTY LANDFILL
CONDITIONAL USE PERMIT NO. 00-194-(5)
AUTHORIZATION TO IMPORT CLEAN DIRT FROM THE LOS ANGELES COUNTY
FLOOD CONTROL DISTRICT

Dear Mr. Sherman:

We have reviewed your request dated July 28, 2015, and subsequent revision dated October 9, 2015, to import clean dirt from the Los Angeles County Flood Control District (District), beginning on April 2017, and ending on December 2021. Your request for importation of clean dirt for beneficial use at the Sunshine Canyon Landfill is hereby approved pursuant to Conditional Use Permit 00-194-(5), Conditions 1.D and 23.E, which requires Republic Services to obtain prior authorization from the Department of Public Works prior to importation and acceptance of clean dirt material for beneficial use and disposal at the site.

This authorization is being granted in order to allow the landfill to import soil for the site's daily and intermediate soil cover needs and other beneficial uses. Based on your submittal, the volume of on-site soil stockpile will be exhausted by October 2019 and importation of soil is necessary for effective landfilling operations at the site. This approval is subject to the following conditions:

- 1. The quantity of soil to be imported shall not exceed the following:
  - 2,200 tons per day average or 13,200 tons per week and
  - 2.5 million tons total for a 5-year duration of the project

- 2. The quantity of soil imported (tonnage) shall be included in the total permitted weekly tonnage capacity of materials (Solid Waste, Inert Debris and Beneficial Use Materials), which is limited to 72,600 tons per week. Pursuant to the CUP, in no event shall the daily tonnage of all materials received by the Landfill exceed 12,100 tons on any given day, six working days per week.
- 3. Limited only to Clean Dirt and sediments from the District
- 4. The soil importation schedule shall be from Monday to Friday, between the hours of 7:00 am to 6:00 pm.
- 5. The imported soil shall only be used for on-site daily and intermediate soil cover needs and other beneficial uses at the site.
- 6. All incoming and departing truck routes associated with this soil importation project shall be limited to Roxford Street, Sepulveda Boulevard and San Fernando Road.
- 7. The imported soil shall be placed adjacent to the working face area for immediate usage in a designated location, or, if soil is not needed at the working face, it will be taken to a designated stockpile location as defined in the Joint Technical Document. Additionally, all stockpile areas shall be vegetated if left unused longer than 180 days.
- 8. The operator shall comply with the currently approved Fugitive Dust Control Program to minimize dust resulting from the importation project
- 9. The operator shall follow the approved Waste Load Checking Program and the Waste Discharge Requirements issued by the California Regional Water Quality Control Board to ensure the imported soil's quality is acceptable under this program and permit.
- 10. Republic shall keep records of all materials received from the District including quantities accepted, stockpiled, beneficially used, and disposed of.

- 11. The operator shall submit a monthly summary of these records on an annual basis, including a stockpile location map, to Public Works' Environmental Programs Division at the end of each calendar year for the duration of this project.
- 12. The Director of Public Works, at his/her sole discretion may rescind or terminate this approval if the Department determines that any of the conditions of approval has been violated and/or that such termination is necessary to protect public health, safety, welfare, and/or the environment.

If you have any questions, please contact me at (626) 458-3553, Monday to Thursday, 7:00 a.m. to 5:30 p.m.

Very truly yours,

GAIL FARBER

Director of Public Works

MARTIN AIYETIWA Senior Civil Engineer

**Environmental Programs Division** 

DN:il

P:\Sec\Sunshine Canyon Landfill Importation of Soil from FCD

cc: Sunshine Canyon Landfill Local Enforcement Agency (Gerry Villalobos, David Thompson)

Department of Regional Planning (Maria Masis, Tim Stapleton)

Department of Public Health (Gerry Villalobos)

City of Los Angeles Department of City Planning (Nicholas Hendricks, Ly Lam)

Sunshine Canyon Landfill Technical Advisory Committee (Lisa Webber, Jon Sanabria)

Sunshine Canyon Landfill Community Advisory Committee (Wayde Hunter, Gale Gunderson, Joe Vitti)

Members of the Los Angeles County Solid Waste Management Committee/Integrated Waste Management Task, Force

County of Los Angeles Public Works, Water Resources Division (Chris Stone, Ken Zimmer)



#### **COUNTY OF LOS ANGELES**

#### DEPARTMENT OF PUBLIC WORKS

"To Enrich Lives Through Effective and Caring Service"

900 SOUTH FREMONT AVENUE ALHAMBRA, CALIFORNIA 91803-1331 Telephone: (626) 458-5100 http://dpw.lacounty.gov

ADDRESS ALL CORRESPONDENCE TO: P.O. BOX 1460 ALHAMBRA, CALIFORNIA 91802-1460

IN REPLY PLEASE
REFER TO FILE: EP-5

June 15, 2021

Mr. Chris Coyle General Manager Republic Services, Inc. Sunshine Canyon Landfill 14747 San Fernando Road Sylmar, CA 91342-1021

## SUNSHINE CANYON CITY/COUNTY LANDFILL CONDITIONAL USE PERMIT NO. 00-194-(5) AUTHORIZATION TO IMPORT CLEAN SOIL

Dear Mr. Coyle:

Public Works has reviewed Republic Services' revised soil importation request, dated May 21, 2021, (Enclosure 1) and supporting information. Republic submitted the revised request in response to Public Works letter of November 11, 2020, and as further discussed with Public Works on February 23, 2021. The revised request seeks Public Works approval to import clean soil at a maximum rate of 2,500 tons per day to the Sunshine Canyon Landfill, six days per week (Monday – Saturday) for the next five years.

Your request for importation of clean soil for beneficial use at the Landfill is hereby approved pursuant to Conditional Use Permit (CUP) 00-194-(5), Conditions 1.D and 23.E, which requires Republic Services to obtain prior authorization from Public Works prior to importation and acceptance of clean soil material for beneficial use.

This authorization is being granted in order to allow the Landfill to import soil to the site for beneficial uses. Based on your submittal, the volume of on-site soil stockpile will be exhausted in 2021 and importation of soil is necessary for effective landfilling operations at the site. This approval is subject to the following conditions:

- 1. The quantity of soil to be imported shall not exceed the following:
  - 2,500 tons per day or 15,000 tons per week
  - o 3.9 million tons total for the 5-year duration of the project.

- The quantity of soil imported (tonnage) shall be included as part of the total permitted daily and weekly tonnage capacity of materials (Solid Waste, Inert Debris, and Beneficial Use Materials). Pursuant to the CUP, in no event shall the daily tonnage of all materials received by the Landfill exceed 12,100 tons on any given day, six working days per week, nor the total permitted weekly tonnage limit of 72,600 tons per week.
- 2. The soil importation shall occur during the normal operating hours of the site from Monday to Saturday.
- All incoming and departing truck routes associated with this soil importation project shall be limited to the same route from the Interstate 5 Freeway to the Landfill as do loads of refuse, by taking the Roxford Exit and San Fernando Road to the Landfill entrance.
- 4. The imported soil shall be placed adjacent to the working area for immediate usage in a designated location, or if soil is not needed at the working area, it shall be taken to a designated stockpile location as defined in the Landfill's Joint Technical Document. Additionally, all stockpile areas shall be vegetated if left unused longer than 180 days and will require soil stockpile grading and drainage plans to be provided within 30 days from the date of this letter for further review and approval (pursuant to CUP Condition 37).
- 5. The operator shall comply with the currently approved Fugitive Dust Control Program to minimize dust resulting from the importation project.
- 6. The operator shall follow all applicable local, State, and Federal standards and requirements for the importation of clean soil from off-site sources, including but not limited to, the approved Waste Load Checking Program and the Waste Discharge Requirements issued by the California Regional Water Quality Control Board to ensure the imported soil's quality is acceptable under this program and permit.
- Republic shall keep records of all soil materials received, including but not limited to, source of imported soil, quantities accepted/imported and use of onsite soil and purpose, delivery schedules, usage schedules, stockpiled, beneficially used, and disposed of.
- 8. The operator shall submit monthly summaries of these records on a semi-annual basis, including a stockpile location map, to Public Works Environmental Programs

Division for the duration of this project. The first semi-annual report shall be submitted six months from the date of this letter.

9. The Director of Public Works, at his/her sole discretion, may rescind or terminate this approval if Public Works determines that any of the conditions of approval has been violated and/or that such termination is necessary to protect public health, safety, welfare, and/or the environment.

If you have any questions, please contact me or your staff may contact Mr. Gabriel Esparza at (626) 458-4946 or <a href="mailto:gesparza@dpw.lacounty.gov">gesparza@dpw.lacounty.gov</a>, Monday through Thursday, 7:00 a.m. to 5:30 p.m.

Very truly yours,

MARK PESTRELLA, PE Director of Public Works

MARTINS AIYETIWA Senior Civil Engineer

**Environmental Programs Division** 

MA:rw

P:\SEC\RW\EP5\SCL IMPORT SOIL APPROVAL LETTER.DOCX

Enc.

cc: Department of Regional Planning (Edgar De La Torre, Alex Garcia, Maria Masis) City of Los Angeles Department of City Planning (Tiffany Butler, Nicholas Hendricks, Lisa Webber)

Sunshine Canyon Landfill Community Advisory Committee (Wayde Hunter) Sunshine Canyon Landfill Technical Advisory Committee (Lisa Webber, Jon Sanabria)

Sunshine Canyon Landfill Local Enforcement Agency (Dorcas Hanson-Lugo, Shikari Nakagawa-Ota, David Thompson)

Each Member of the Los Angeles County Solid Waste Management Committee Integrated Waste Management Task Force

### SUNSHINE CANYON Landfill

14747 San Fernando Road Sylmar, CA 91342

May 21, 2021

Mr. Martin Aiyetiwa Senior Civil Engineer - Environmental Programs Division 900 South Fremont Avenue Alhambra, CA 91803-1331

Subject: Clean Soil Material Importation and Stockpile – Sunshine Canyon City/County Landfill Conditional Use Permit No. 00-194-(5)

Dear Mr. Aiyetiwa:

In response to the last soil importation meeting with the County of Los Angeles Department of Public Works (DPW) on February 23, 2021, Sunshine Canyon Landfill (SCL) would like to provide the following responses and request the department's approval to import 2,500 tons per day of clean soil; 6 days per week (Monday – Saturday) for the next 5 years (2026).

Please see Republic's response to your Specific Comments:

1. The submittal references, "the soil analysis data from different projects." Are these different projects referred to "Enclosure 3 Melrose Triangle - Analytical Report" and "Enclosure 3 Purple Line?" are they the only source of imported soil? Or will there be other sources? What is the intention for Enclosure 2? Please clarify.

Response: Enclosure 3, Melrose Triangle and Purple Line Analytical Report, are two different projects obtained by the site but soils have not been received due to the delay in DPW's approval. We are constantly searching for soil sources as they become available so these two projects will not be the only source of soil for the site and may no longer be available to the site. The intent of Enclosure 2 was labelled to show the proposed year 2020 on-site haul route for the importation of clean dirt and the stockpile area. It also shows the fill area for the build-out of CC4-P3. The haul routes will change from year to year based on the areas that need soil. It is not feasible to show haul routes for future years as there are too many variables (waste diversion programs; SB 1383; jurisdictional disposal generation rates; the obtaining or loss of disposal agreements with various customers) dictating how fast the landfill will build out. However, we can provide information on projected annual onsite haul routes in SCL's semi-annual reports to DPW.

- 2. The September 21, 2020, submittal is still incomplete and inadequate in providing information necessary to evaluate the landfill's request to import Clean Dirt, as discussed in Public Works' letters dated June 24, 2020, and August 20, 2020. Listed below are some of the deficiencies:
  - a. There is no comprehensive information on the soil balance analysis to support the need for soil importation.
    - i. The soil balance analysis shall include, but not be limited to, the amount of soil needed for daily cover operations and other activities as detailed in the proposal. Additionally, the analysis should include technical justifications for the usage and need, taking into consideration the implementation of the Alternative Daily Cover Program since October 2015. The soil balance analysis shall also be similar and/or consistent with your previous soil evaluation report dated October 9, 2015 (Enclosure 3).
  - b. There is no delivery schedule and frequency or information on potential offsite hauling route for the imported soil,
  - c. There is no in-depth description of proposed dust control measures,
  - d. There is no information on source and quality of soil, soil importation vs depletion or usage schedule, etc. There is no comprehensive tracking and reporting program of the imported soil vs. usage with information on potential shortage or surplus in soil importation where semi-annual reports would be submitted to Public Works for information and review.
  - e. There is no Soil Stockpile plans to show how it complies with requirements including grading and drainage.
  - f. There is no vegetation plan for stockpiling area (if it will be there for more than 180 days)

#### Response:

- a. Please see Enclosure 1 "Sunshine Canyon Landfill Soil Balance Analysis" prepared for SCL by Geo-Logic Associates (GLA).
- b. The sources of imported soils come from off-site construction projects that are under the control of third parties. Therefore, the future sources, quantities and delivery schedules for imported soils are not possible to predict. We can provide information when it becomes available and also in the semi-annual reports in the imported soils activities section for the prior 6-months. Incoming soil loads will follow the same route from the freeway to SCL as do loads of refuse, by taking the Roxford Exit and San Fernando Road to the landfill entrance.
- c. The dust impacts of onsite-soil needs have already been analyzed in the site's FEIR. These impacts should be the same whether the soil is mined

onsite or imported from off-site. The site has provided a dust control plan to DPW which is consistent with the site's past dust control practices which have not been shown to create any off-site impacts. In addition, the FEIR analyzed truck traffic volumes and, as previously stated, the site will be well within the truck volumes analyzed in the FEIR with all trucks importing waste included in the total truck count. Similarly, the FEIR has already analyzed the noise from site operations involving clean soil import because the noise associated with importation would be from truck traffic which have not been shown to have any off-site impacts. We are re-attaching SCL's dust control plan (Enclosure 2) and South Coast Air Quality Management District's (SCAQMD) Rule 403 (Enclosure 3). The site complies with SCAQMD's Rule 403 by paving and placing rock base along the main haul roads in addition to implementing other control measures. In addition, the site Supervisors are Rule 403 certified.

- d. Information on source and quality of soil, soil importation vs depletion or usage schedule, etc. can be provided in the semi-annual report which can include the following: Source of job/location, Analytical information on imported soil, quantity of soil imported and use of onsite soil (broken down by daily cover, berms, etc). We provided you with SCL's screening protocols for the importation of off-site soil as Enclosure 1 to our letter to you dated September 21, 2020. Please note that our screening protocols require advance analyticals from each off-site source. The soil balance analysis from GLA, attached as enclosure 2, also responds to your request for soil balance importation and depletion.
- e. Please see Enclosure 4 (County Deck Stockpile)
- f. Please see Enclosure 4 (County Deck Stockpile)
- 3. It appears that the 1998 and 2004 Traffic Study and Final EIR does not support a daily tonnage of 17,100 tons per day at the site. Therefore, provide analysis and justification that will show the additional 5,000 tons per day of imported soil traffic impacts on the existing 12,100 tons per day coming into the landfill based on existing traffic analysis.

Response: We do not understand this comment. Truck traffic to the landfill is well below the traffic volumes analyzed in both the most recent City and County environmental documents used to permit the Joint City/County landfill. These documents considered that the landfill may receive as many as 1,380 trucks per day for the County side of the landfill and 1,150 trucks per day for the City side. (See, 2004 FEIR Addendum, pp. 3-58 and 3-64.) The landfill currently only averages 560 trucks per day. Please also see Enclosure 1, section 5.

### SUNSHINE CANYON Landfill

14747 San Fernando Road Sylmar, CA 91342

If you have any questions or require any additional information, please contact Chris Coyle at 818-362-2141 or Valorie Moore at 818-362-2145.

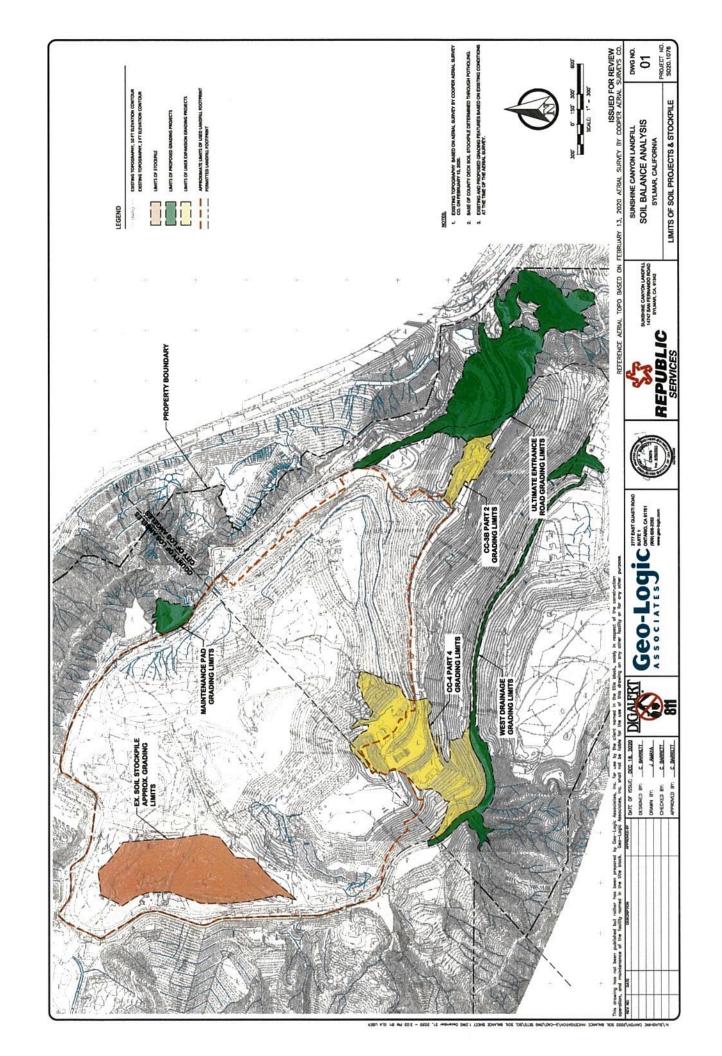
Sincerely, Sunshine Canyon Landfill

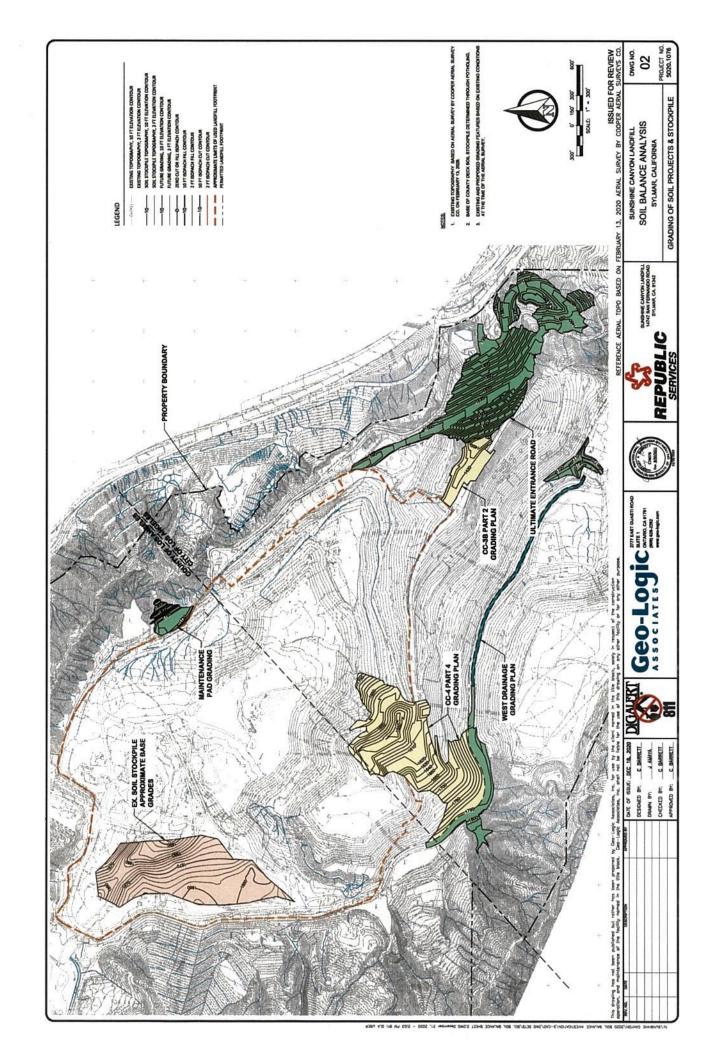
My. M	5/21/2021
Chris Coyle	Date Signed
General Manager	0

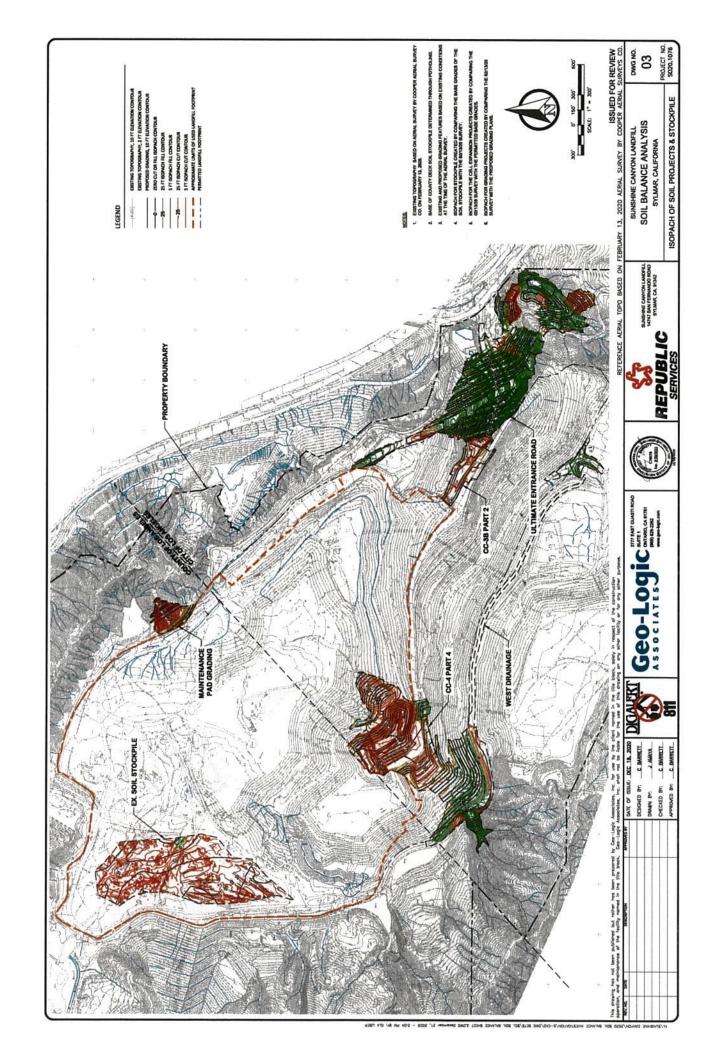
#### Enclosures:

- 1. SCL Soil Balance Analysis
- 2. SCL Fugitive Dust Control Form (SCAQMD Rule 403 Table 2 and 3 Control Measures)
- 3. SCAQMD Rule 403
- 4. SCL County Deck Drainage Plan

**Enclosure 1** 







# SOIL USAGE - INTERMEDIATE ENHANCED COVER

# 9-INCH COMPACTED DAILY COVER USAGE SHICH COVER AVENUE MONTHLY VOLDBIN-2015 + 84

YEAR	PROJECT	į	
2000	B INCH COMPACTED DAILY COVER (OCT - DEC)	200,010	0
2010	9 INCH COMPACTED DAILY COVER	800,040	6
1107	9 INCH COMPACTED DALLY COVER	860,040	6
2012	9 NICH COMPACTED DAILY COVER	800,040	6
2013	B INCH COMPACTED DAILY COVER	860,040	ò
7017	# INCH COMPACTED DALLY COVER	880,040	6
2015	8 INCH COMPACTED DAILY COVER (JAN - OCT)	000,030	5
	SUBTOTAL - INTERMEDIATE COVER PROJECTS	4,800,340	5
YEAR	PROJECT	ī	
2017	CLOSURE TURF (21 AC)	20,000	6
2817	POSI-SI-SILL (3.8 AC)	8,810	6
2817	VEGETATIVE COVER OVER POSH-SHELL (28.2 AC)	45,500	6
2017	VEGETATIVE COVER WI HYDROSEED (19 AC)	30,650	5
	SUBTOTAL -	101,960	ò
20.00	CLOBURE TURY (4 AC)	807	ò
	- SISTOTALIA	100	5

TOTAL SOIL USED .

# SOIL BALANCE REQUIREMENTS AS OF JANUARY 1, 2020

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PCS FOR COAPS	٠	33,900	·	33,800			٠	(000'00)				
PCS FOR COAPIA (4 AC)	,	24,400	v	28,400				(38,400)				
OPERATIONS DAY, YINTERMEDIATE COVER					442,800			(442,800)				
IMPORTED SOIL						30,000	30,900					
		SUBTOTAL - (385,209)	(305,200)	59,400	442,800	30,000	425,200	(502,200)	(74,801)	175,449	4	DECEMBER 34, 2020
CCAPAGMEST DRAMAGE CHAMBEL PH 2	(85,866)	175.254		109,386				(108,286)				
PCS FOR CCAPMS (13 AC)		48.340	,	44.240				(48.240)				
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		SUBTOTAL -	(62,080)	423,376	442,800		62,080	(864,176)	(904,004)	(828,647)	ò	CY DECEMBER 31, 2021
CONFIC												
PCS FOR CCAPAC (3.9 AC)		14,670		14,470				(14,478)				
ENTRY ROAD PHASE 3-8	(94,536)	1,279,800		1,175,465				(1,175,488)				
WEST DRABBAGE CHANNEL PH 3	(3,000)	25.200		29,200				(30,300)				
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MPORTED BOX.												
		SUBTOTAL -		1,210,135	442,800			(1,652,935)	(1,852,935)	(2,281,582)	5	CY DECEMBER 31, 2022
OCCUPANCES PART 1A		10,000		10,800			3	(10,000)				
PCS FOR CC38P2A (8.8 AC)	¥	28,230		28,230			¥	(28,230)				
PCS far CCSP1A (9 AC)		33,400		33,400				(33,400)				
OPERATIONS DALYSHTERMEDIATE COVER					442,800			(442,800)				
APORTED SOL						9						
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CORNI	70	10.000		10,000			8	(10,000)				
PCS FOR CCAP18 (It AC)		29,890	•	29,600				(29,600)				
OPERATIONS DALYBYTERMEDIATE COVER					442,800			(442,880)				
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		SUBTOTAL =			442,800	r		(742,488)	(742,800)	(2,535,812)	b	CY DECEMBER 31, 2034
CCSPTC		10,000	٠	10,000				(10,000)				
PCS far CCSP1C (8.1 AC)	ř	313,770	×	33,770			*	(33,778)				
OPERATIONS DALYINTERMEDIATE COVER					442,800			(442,800)				
MPORTED BOIL					W.			100 M		-		
		SUBTOTAL =			442,800			(484,578)	(444,570)	(4,022,382)	ò	DECEMBER 31, 2025
REMANNO LINER PROJECTS	*	900'05	×	90,000				(30,000)				
PCS FOR REMANING LINER (45.2 AC)		167,720		147,720				(167,720)				
OPERATIONS DALYSNTERMEDIATE COVER					442,800		•	(442,800)				
FINAL COVER					8,227,700			(0,227,700)				
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ISSUED FOR REVIEW REFERENCE AERM, TOPO BASED ON FEBRUARY 13, 2020 AERM, SURVEYS GO.

SUNSHINE CANYON LANDFILL SOIL BALANCE ANALYSIS SYLMAR, CALIFORNIA

PROJECT NO. SOZO,1076 DWG NO. SOIL BALANCE CALCULATIONS

### **Enclosure 2**

# FUGITIVE DUST CONTROL (SCAQMD Rule 403 Table 2 and 3 Control Measures)

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Earth Moving - Control Measures			$\vdash$	t			t		1	-		-	-			-	_	-		_		9		_
Conduct watering as necessary to prevent visible	F		╀	L				+	-	-	-		╀			T	Ť	+	+	+	+	I	t	+
emissions from extending more than 100' beyond the			_																[4]					
active cut unless the area is inaccessible to watering														Res					_					
due to slope conditions or other safety factors																								
Earth Moving Activities - Contingency Control			╀	t	F		t	t	+	+	+	1				t	t	+	+	+	+	I	$\dagger$	+
Cease all active operations OR			╀				t	╁	-	╀	╀	1	L			t	t	+	+	+	1			+
Apply water to soil not more than 15 minutes prior to			-	Ė			t	╁	ŀ	╀	╀	-	L				+	1	+	-			t	+
Disturbed Surface Area - Control Measure			H	E	F			╁	┝	╀	-	L			T	t	t	+	+	╀	1	İ	+	+
Applied dust suppression to maintain stablized							t	╁	H	╀	╀				T	t	$^{+}$	t	╀	+		İ	t	+
Applied soil sealant on benches			-	L	F	t	t	╀	╀	╀	1				T	t	+	+	+	+			+	+
Apply soil sealant on stockpiles and closed landfill	F			L	F	T	t	╁	+	-	_				t	t	+	+	+	+			$^{\dagger}$	+
Inactive Disturbed Surface - Control Measure	F		F		F	t	-	╁	╀	-	╀				T	t	+	╁	+	+	$\perp$	T	+	+
Apply water on an as-needed basis			F				H	╀	╀	╀	╀			T	t	t	+	╀	╀	+	I	1	+	+
Inactive Disturbed Surface - Contingency Control				$\vdash$	F	t	t	╁	╀	╀	1	1			t	$^{+}$	+	+	-	+		1	$^{+}$	+
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Utilize wood chips/mulch for long term dust control as			4.85																					
consistent with federal, state, and local regulations						_														244				
Unpaved roads - Control Measures					Ė	H	H	╀	╀	╀	L	L			t	+	+	+	+	1		t	+	+
Water all roads used for any vehicular traffic on an as-			F	$\vdash$	F	t	╁	╀	╀	1	L			$\dagger$	t	+	+	╀	+	1	I	t	+	+
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Reduce road travel as much as possible			F		İ	t	H	╁	-	L	L			t	t	+	t	+	+	1		t	+	+
Unpaved roads - Contingency Control Measures			F		Ė	t	┝	╀	1	L	L			t	t	t	+	+	+	1		t	+	+
Stop all vehicular traffic		H		H	İ	t	╀	1	L	L				T	t	+	+	+	+	1		Ť	+	+
Open Storage Piles - Control Measure		H	F	F	t	t	╀	╀		L				t	+	+	+	+	$\perp$	1		1	+	+
Apply water on an as-needed basis		$\vdash$	F		t	t	╀	+	_	_				t	$^{+}$	+	+	╀	$\downarrow$			t	+	+
Minimize disturbance to the surface crust		H	L				╁	┞	L	L				t	t	+	╀	+	+	1		$^{\dagger}$	+	+
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# FUGITIVE DUST CONTROL (SCAQMD Rule 403 Table 2 and 3 Control Measures)

Month:

11234567891011112131415181121314151813		Operate water truck on an as-needed basis  Operate sweeper on an as-needed basis	No track-out to extend 25' or more in cumulative length from the piont of origin from an active operation. All	track-out from an active opation shall be removed at the conclusion of each work day.	Inspected by (name): Fred Jones				
	Paved Road Trac	Operate sweeper	No track-out to ex from the piont of o	track-out from an the conclusion of	Inspected by (nam		Notes:		

**Enclosure 3** 

(Adopted May 7, 1976) (Amended November 6, 1992) (Amended July 9, 1993) (Amended February 14, 1997) (Amended December 11, 1998)(Amended April 2, 2004) (Amended June 3, 2005)

#### RULE 403. FUGITIVE DUST

#### (a) Purpose

The purpose of this Rule is to reduce the amount of particulate matter entrained in the ambient air as a result of anthropogenic (man-made) fugitive dust sources by requiring actions to prevent, reduce or mitigate fugitive dust emissions.

#### (b) Applicability

The provisions of this Rule shall apply to any activity or man-made condition capable of generating fugitive dust.

#### (c) Definitions

- (1) ACTIVE OPERATIONS means any source capable of generating fugitive dust, including, but not limited to, earth-moving activities, construction/demolition activities, disturbed surface area, or heavy- and light-duty vehicular movement.
- (2) AGGREGATE-RELATED PLANTS are defined as facilities that produce and / or mix sand and gravel and crushed stone.
- (3) AGRICULTURAL HANDBOOK means the region-specific guidance document that has been approved by the Governing Board or hereafter approved by the Executive Officer and the U.S. EPA. For the South Coast Air Basin, the Board-approved region-specific guidance document is the Rule 403 Agricultural Handbook dated December 1998. For the Coachella Valley, the Board-approved region-specific guidance document is the Rule 403 Coachella Valley Agricultural Handbook dated April 2, 2004.
- (4) ANEMOMETERS are devices used to measure wind speed and direction in accordance with the performance standards, and maintenance and calibration criteria as contained in the most recent Rule 403 Implementation Handbook.
- (5) BEST AVAILABLE CONTROL MEASURES means fugitive dust control actions that are set forth in Table 1 of this Rule.

- (6) BULK MATERIAL is sand, gravel, soil, aggregate material less than two inches in length or diameter, and other organic or inorganic particulate matter.
- (7) CEMENT MANUFACTURING FACILITY is any facility that has a cement kiln at the facility.
- (8) CHEMICAL STABILIZERS are any non-toxic chemical dust suppressant which must not be used if prohibited for use by the Regional Water Quality Control Boards, the California Air Resources Board, the U.S. Environmental Protection Agency (U.S. EPA), or any applicable law, rule or regulation. The chemical stabilizers shall meet any specifications, criteria, or tests required by any federal, state, or local water agency. Unless otherwise indicated, the use of a non-toxic chemical stabilizer shall be of sufficient concentration and application frequency to maintain a stabilized surface.
- (9) COMMERCIAL POULTRY RANCH means any building, structure, enclosure, or premises where more than 100 fowl are kept or maintained for the primary purpose of producing eggs or meat for sale or other distribution.
- (10) CONFINED ANIMAL FACILITY means a source or group of sources of air pollution at an agricultural source for the raising of 3,360 or more fowl or 50 or more animals, including but not limited to, any structure, building, installation, farm, corral, coop, feed storage area, milking parlor, or system for the collection, storage, or distribution of solid and liquid manure; if domesticated animals, including horses, sheep, goats, swine, beef cattle, rabbits, chickens, turkeys, or ducks are corralled, penned, or otherwise caused to remain in restricted areas for commercial agricultural purposes and feeding is by means other than grazing.
- (11) CONSTRUCTION/DEMOLITION ACTIVITIES means any on-site mechanical activities conducted in preparation of, or related to, the building, alteration, rehabilitation, demolition or improvement of property, including, but not limited to the following activities: grading, excavation, loading, crushing, cutting, planing, shaping or ground breaking.
- (12) CONTRACTOR means any person who has a contractual arrangement to conduct an active operation for another person.
- (13) DAIRY FARM is an operation on a property, or set of properties that are contiguous or separated only by a public right-of-way, that raises cows or

- produces milk from cows for the purpose of making a profit or for a livelihood. Heifer and calf farms are dairy farms.
- (14) DISTURBED SURFACE AREA means a portion of the earth's surface which has been physically moved, uncovered, destabilized, or otherwise modified from its undisturbed natural soil condition, thereby increasing the potential for emission of fugitive dust. This definition excludes those areas which have:
  - (A) been restored to a natural state, such that the vegetative ground cover and soil characteristics are similar to adjacent or nearby natural conditions;
  - (B) been paved or otherwise covered by a permanent structure; or
  - (C) sustained a vegetative ground cover of at least 70 percent of the native cover for a particular area for at least 30 days.
- (15) DUST SUPPRESSANTS are water, hygroscopic materials, or non-toxic chemical stabilizers used as a treatment material to reduce fugitive dust emissions.
- (16) EARTH-MOVING ACTIVITIES means the use of any equipment for any activity where soil is being moved or uncovered, and shall include, but not be limited to the following: grading, earth cutting and filling operations, loading or unloading of dirt or bulk materials, adding to or removing from open storage piles of bulk materials, landfill operations, weed abatement through disking, and soil mulching.
- (17) DUST CONTROL SUPERVISOR means a person with the authority to expeditiously employ sufficient dust mitigation measures to ensure compliance with all Rule 403 requirements at an active operation.
- (18) FUGITIVE DUST means any solid particulate matter that becomes airborne, other than that emitted from an exhaust stack, directly or indirectly as a result of the activities of any person.
- (19) HIGH WIND CONDITIONS means that instantaneous wind speeds exceed 25 miles per hour.
- (20) INACTIVE DISTURBED SURFACE AREA means any disturbed surface area upon which active operations have not occurred or are not expected to occur for a period of 20 consecutive days.
- (21) LARGE OPERATIONS means any active operations on property which contains 50 or more acres of disturbed surface area; or any earth-moving operation with a daily earth-moving or throughput volume of 3,850 cubic

- meters (5,000 cubic yards) or more three times during the most recent 365-day period.
- (22) OPEN STORAGE PILE is any accumulation of bulk material, which is not fully enclosed, covered or chemically stabilized, and which attains a height of three feet or more and a total surface area of 150 or more square feet.
- (23) PARTICULATE MATTER means any material, except uncombined water, which exists in a finely divided form as a liquid or solid at standard conditions.
- (24) PAVED ROAD means a public or private improved street, highway, alley, public way, or easement that is covered by typical roadway materials, but excluding access roadways that connect a facility with a public paved roadway and are not open to through traffic. Public paved roads are those open to public access and that are owned by any federal, state, county, municipal or any other governmental or quasi-governmental agencies. Private paved roads are any paved roads not defined as public.
- (25) PM<sub>10</sub> means particulate matter with an aerodynamic diameter smaller than or equal to 10 microns as measured by the applicable State and Federal reference test methods.
- (26) PROPERTY LINE means the boundaries of an area in which either a person causing the emission or a person allowing the emission has the legal use or possession of the property. Where such property is divided into one or more sub-tenancies, the property line(s) shall refer to the boundaries dividing the areas of all sub-tenancies.
- (27) RULE 403 IMPLEMENTATION HANDBOOK means a guidance document that has been approved by the Governing Board on April 2, 2004 or hereafter approved by the Executive Officer and the U.S. EPA.
- (28) SERVICE ROADS are paved or unpaved roads that are used by one or more public agencies for inspection or maintenance of infrastructure and which are not typically used for construction-related activity.
- (29) SIMULTANEOUS SAMPLING means the operation of two PM<sub>10</sub> samplers in such a manner that one sampler is started within five minutes of the other, and each sampler is operated for a consecutive period which must be not less than 290 minutes and not more than 310 minutes.
- (30) SOUTH COAST AIR BASIN means the non-desert portions of Los Angeles, Riverside, and San Bernardino counties and all of Orange

- County as defined in California Code of Regulations, Title 17, Section 60104. The area is bounded on the west by the Pacific Ocean, on the north and east by the San Gabriel, San Bernardino, and San Jacinto Mountains, and on the south by the San Diego county line.
- (31) STABILIZED SURFACE means any previously disturbed surface area or open storage pile which, through the application of dust suppressants, shows visual or other evidence of surface crusting and is resistant to winddriven fugitive dust and is demonstrated to be stabilized. Stabilization can be demonstrated by one or more of the applicable test methods contained in the Rule 403 Implementation Handbook.
- (32) TRACK-OUT means any bulk material that adheres to and agglomerates on the exterior surface of motor vehicles, haul trucks, and equipment (including tires) that have been released onto a paved road and can be removed by a vacuum sweeper or a broom sweeper under normal operating conditions.
- (33) TYPICAL ROADWAY MATERIALS means concrete, asphaltic concrete, recycled asphalt, asphalt, or any other material of equivalent performance as determined by the Executive Officer, and the U.S. EPA.
- (34) UNPAVED ROADS means any unsealed or unpaved roads, equipment paths, or travel ways that are not covered by typical roadway materials. Public unpaved roads are any unpaved roadway owned by federal, state, county, municipal or other governmental or quasi-governmental agencies. Private unpaved roads are all other unpaved roadways not defined as public.
- (35) VISIBLE ROADWAY DUST means any sand, soil, dirt, or other solid particulate matter which is visible upon paved road surfaces and which can be removed by a vacuum sweeper or a broom sweeper under normal operating conditions.
- (36) WIND-DRIVEN FUGITIVE DUST means visible emissions from any disturbed surface area which is generated by wind action alone.
- (37) WIND GUST is the maximum instantaneous wind speed as measured by an anemometer.

#### (d) Requirements

(1) No person shall cause or allow the emissions of fugitive dust from any active operation, open storage pile, or disturbed surface area such that:

- the dust remains visible in the atmosphere beyond the property line of the emission source; or
- (B) the dust emission exceeds 20 percent opacity (as determined by the appropriate test method included in the Rule 403 Implementation Handbook), if the dust emission is the result of movement of a motorized vehicle.
- (2) No person shall conduct active operations without utilizing the applicable best available control measures included in Table 1 of this Rule to minimize fugitive dust emissions from each fugitive dust source type within the active operation.
- (3) No person shall cause or allow PM<sub>10</sub> levels to exceed 50 micrograms per cubic meter when determined, by simultaneous sampling, as the difference between upwind and downwind samples collected on high-volume particulate matter samplers or other U.S. EPA-approved equivalent method for PM<sub>10</sub> monitoring. If sampling is conducted, samplers shall be:
  - (A) Operated, maintained, and calibrated in accordance with 40 Code of Federal Regulations (CFR), Part 50, Appendix J, or appropriate U.S. EPA-published documents for U.S. EPA-approved equivalent method(s) for PM<sub>10</sub>.
  - (B) Reasonably placed upwind and downwind of key activity areas and as close to the property line as feasible, such that other sources of fugitive dust between the sampler and the property line are minimized.
- (4) No person shall allow track-out to extend 25 feet or more in cumulative length from the point of origin from an active operation. Notwithstanding the preceding, all track-out from an active operation shall be removed at the conclusion of each workday or evening shift.
- (5) No person shall conduct an active operation with a disturbed surface area of five or more acres, or with a daily import or export of 100 cubic yards or more of bulk material without utilizing at least one of the measures listed in subparagraphs (d)(5)(A) through (d)(5)(E) at each vehicle egress from the site to a paved public road.
  - (A) Install a pad consisting of washed gravel (minimum-size: one inch) maintained in a clean condition to a depth of at least six inches and extending at least 30 feet wide and at least 50 feet long.

- (B) Pave the surface extending at least 100 feet and at least 20 feet wide.
- (C) Utilize a wheel shaker/wheel spreading device consisting of raised dividers (rails, pipe, or grates) at least 24 feet long and 10 feet wide to remove bulk material from tires and vehicle undercarriages before vehicles exit the site.
- (D) Install and utilize a wheel washing system to remove bulk material from tires and vehicle undercarriages before vehicles exit the site.
- (E) Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the actions specified in subparagraphs (d)(5)(A) through (d)(5)(D).
- (6) Beginning January 1, 2006, any person who operates or authorizes the operation of a confined animal facility subject to this Rule shall implement the applicable conservation management practices specified in Table 4 of this Rule.

#### (e) Additional Requirements for Large Operations

- (1) Any person who conducts or authorizes the conducting of a large operation subject to this Rule shall implement the applicable actions specified in Table 2 of this Rule at all times and shall implement the applicable actions specified in Table 3 of this Rule when the applicable performance standards can not be met through use of Table 2 actions; and shall:
  - submit a fully executed Large Operation Notification (Form 403 N) to the Executive Officer within 7 days of qualifying as a large operation;
  - (B) include, as part of the notification, the name(s), address(es), and phone number(s) of the person(s) responsible for the submittal, and a description of the operation(s), including a map depicting the location of the site;
  - (C) maintain daily records to document the specific dust control actions taken, maintain such records for a period of not less than three years; and make such records available to the Executive Officer upon request;

- install and maintain project signage with project contact signage that meets the minimum standards of the Rule 403 Implementation Handbook, prior to initiating any earthmoving activities;
- (E) identify a dust control supervisor that:
  - is employed by or contracted with the property owner or developer;
  - (ii) is on the site or available on-site within 30 minutes during working hours;
  - (iii) has the authority to expeditiously employ sufficient dust mitigation measures to ensure compliance with all Rule requirements;
  - (iv) has completed the AQMD Fugitive Dust Control Class and has been issued a valid Certificate of Completion for the class; and
- (F) notify the Executive Officer in writing within 30 days after the site no longer qualifies as a large operation as defined by paragraph (c)(18).
- (2) Any Large Operation Notification submitted to the Executive Officer or AQMD-approved dust control plan shall be valid for a period of one year from the date of written acceptance by the Executive Officer. Any Large Operation Notification accepted pursuant to paragraph (e)(1), excluding those submitted by aggregate-related plants and cement manufacturing facilities must be resubmitted annually by the person who conducts or authorizes the conducting of a large operation, at least 30 days prior to the expiration date, or the submittal shall no longer be valid as of the expiration date. If all fugitive dust sources and corresponding control measures or special circumstances remain identical to those identified in the previously accepted submittal or in an AQMD-approved dust control plan, the resubmittal may be a simple statement of no-change (Form 403NC).

#### (f) Compliance Schedule

The newly amended provisions of this Rule shall become effective upon adoption. Pursuant to subdivision (e), any existing site that qualifies as a large operation will have 60 days from the date of Rule adoption to comply with the notification and recordkeeping requirements for large operations. Any Large Operation

Notification or AQMD-approved dust control plan which has been accepted prior to the date of adoption of these amendments shall remain in effect and the Large Operation Notification or AQMD-approved dust control plan annual resubmittal date shall be one year from adoption of this Rule amendment.

#### (g) Exemptions

- (1) The provisions of this Rule shall not apply to:
  - (A) Dairy farms.
  - (B) Confined animal facilities provided that the combined disturbed surface area within one continuous property line is one acre or less.
  - (C) Agricultural vegetative crop operations provided that the combined disturbed surface area within one continuous property line and not separated by a paved public road is 10 acres or less.
  - (D) Agricultural vegetative crop operations within the South Coast Air Basin, whose combined disturbed surface area includes more than 10 acres provided that the person responsible for such operations:
    - voluntarily implements the conservation management practices contained in the Rule 403 Agricultural Handbook;
    - (ii) completes and maintains the self-monitoring form documenting sufficient conservation management practices, as described in the Rule 403 Agricultural Handbook; and
    - (iii) makes the completed self-monitoring form available to the Executive Officer upon request.
  - (E) Agricultural vegetative crop operations outside the South Coast Air Basin whose combined disturbed surface area includes more than 10 acres provided that the person responsible for such operations:
    - voluntarily implements the conservation management practices contained in the Rule 403 Coachella Valley Agricultural Handbook; and
    - (ii) completes and maintains the self-monitoring form documenting sufficient conservation management practices, as described in the Rule 403 Coachella Valley Agricultural Handbook; and
    - (iii) makes the completed self-monitoring form available to the Executive Officer upon request.

- (F) Active operations conducted during emergency life-threatening situations, or in conjunction with any officially declared disaster or state of emergency.
- (G) Active operations conducted by essential service utilities to provide electricity, natural gas, telephone, water and sewer during periods of service outages and emergency disruptions.
- (H) Any contractor subsequent to the time the contract ends, provided that such contractor implemented the required control measures during the contractual period.
- (I) Any grading contractor, for a phase of active operations, subsequent to the contractual completion of that phase of earthmoving activities, provided that the required control measures have been implemented during the entire phase of earth-moving activities, through and including five days after the final grading inspection.
- (J) Weed abatement operations ordered by a county agricultural commissioner or any state, county, or municipal fire department, provided that:
  - mowing, cutting or other similar process is used which maintains weed stubble at least three inches above the soil;
     and
  - (ii) any discing or similar operation which cuts into and disturbs the soil, where watering is used prior to initiation of these activities, and a determination is made by the agency issuing the weed abatement order that, due to fire hazard conditions, rocks, or other physical obstructions, it is not practical to meet the conditions specified in clause (g)(1)(H)(i). The provisions this clause shall not exempt the owner of any property from stabilizing, in accordance with paragraph (d)(2), disturbed surface areas which have been created as a result of the weed abatement actions.
- (K) sandblasting operations.
- (2) The provisions of paragraphs (d)(1) and (d)(3) shall not apply:
  - (A) When wind gusts exceed 25 miles per hour, provided that:

- The required Table 3 contingency measures in this Rule are implemented for each applicable fugitive dust source type, and;
- (ii) records are maintained in accordance with subparagraph(e)(1)(C).
- (B) To unpaved roads, provided such roads:
  - (i) are used solely for the maintenance of wind-generating equipment; or
  - (ii) are unpaved public alleys as defined in Rule 1186; or
  - (iii) are service roads that meet all of the following criteria:
    - (a) are less than 50 feet in width at all points along the road;
    - (b) are within 25 feet of the property line; and
    - (c) have a traffic volume less than 20 vehicle-trips per day.
- (C) To any active operation, open storage pile, or disturbed surface area for which necessary fugitive dust preventive or mitigative actions are in conflict with the federal Endangered Species Act, as determined in writing by the State or federal agency responsible for making such determinations.
- (3) The provisions of (d)(2) shall not apply to any aggregate-related plant or cement manufacturing facility that implements the applicable actions specified in Table 2 of this Rule at all times and shall implement the applicable actions specified in Table 3 of this Rule when the applicable performance standards of paragraphs (d)(1) and (d)(3) can not be met through use of Table 2 actions.
- (4) The provisions of paragraphs (d)(1), (d)(2), and (d)(3) shall not apply to:
  - (A) Blasting operations which have been permitted by the California Division of Industrial Safety; and
  - (B) Motion picture, television, and video production activities when dust emissions are required for visual effects. In order to obtain this exemption, the Executive Officer must receive notification in writing at least 72 hours in advance of any such activity and no nuisance results from such activity.
- (5) The provisions of paragraph (d)(3) shall not apply if the dust control actions, as specified in Table 2, are implemented on a routine basis for

- each applicable fugitive dust source type. To qualify for this exemption, a person must maintain records in accordance with subparagraph (e)(1)(C).
- (6) The provisions of paragraph (d)(4) shall not apply to earth coverings of public paved roadways where such coverings are approved by a local government agency for the protection of the roadway, and where such coverings are used as roadway crossings for haul vehicles provided that such roadway is closed to through traffic and visible roadway dust is removed within one day following the cessation of activities.
- (7) The provisions of subdivision (e) shall not apply to:
  - (A) officially-designated public parks and recreational areas, including national parks, national monuments, national forests, state parks, state recreational areas, and county regional parks.
  - (B) any large operation which is required to submit a dust control plan to any city or county government which has adopted a Districtapproved dust control ordinance.
  - (C) any large operation subject to Rule 1158, which has an approved dust control plan pursuant to Rule 1158, provided that all sources of fugitive dust are included in the Rule 1158 plan.
- (8) The provisions of subparagraph (e)(1)(A) through (e)(1)(C) shall not apply to any large operation with an AQMD-approved fugitive dust control plan provided that there is no change to the sources and controls as identified in the AQMD-approved fugitive dust control plan.
- (h) Fees

Any person conducting active operations for which the Executive Officer conducts upwind/downwind monitoring for  $PM_{10}$  pursuant to paragraph (d)(3) shall be assessed applicable Ambient Air Analysis Fees pursuant to Rule 304.1. Applicable fees shall be waived for any facility which is exempted from paragraph (d)(3) or meets the requirements of paragraph (d)(3).

Source Category	Control Measure	Guidance
Backfilling	01-1 Stabilize backfill material when not actively handling; and 01-2 Stabilize backfill material during handling; and 01-3 Stabilize soil at completion of activity.	<ul> <li>✓ Mix backfill soil with water prior to moving</li> <li>✓ Dedicate water truck or high capacity hose to backfilling equipment</li> <li>✓ Empty loader bucket slowly so that no dust plumes are generated</li> <li>✓ Minimize drop height from loader bucket</li> </ul>
Clearing and grubbing	<ul> <li>02-1 Maintain stability of soil through pre-watering of site prior to clearing and grubbing; and</li> <li>02-2 Stabilize soil during clearing and grubbing activities; and</li> <li>02-3 Stabilize soil immediately after clearing and grubbing activities.</li> </ul>	<ul> <li>✓ Maintain live perennial vegetation where possible</li> <li>✓ Apply water in sufficient quantity to prevent generation of dust plumes</li> </ul>
Clearing forms	03-1 Use water spray to clear forms; or 03-2 Use sweeping and water spray to clear forms; or 03-3 Use vacuum system to clear forms.	✓ Use of high pressure air to clear forms may cause exceedance of Rule requirements
Crushing	04-1 Stabilize surface soils prior to operation of support equipment; and 04-2 Stabilize material after crushing.	<ul> <li>✓ Follow permit conditions for crushing equipment</li> <li>✓ Pre-water material prior to loading into crusher</li> <li>✓ Monitor crusher emissions opacity</li> <li>✓ Apply water to crushed material to prevent dust plumes</li> </ul>

Source Category	Control Measure	Guidance
Cut and fill	05-1 Pre-water soils prior to cut and fill activities; and 05-2 Stabilize soil during and after cut and fill activities.	<ul> <li>✓ For large sites, pre-water with sprinklers or water trucks and allow time for penetration</li> <li>✓ Use water trucks/pulls to water soils to depth of cut prior to subsequent cuts</li> </ul>
Demolition – mechanical/manual	06-1 Stabilize wind erodible surfaces to reduce dust; and 06-2 Stabilize surface soil where support equipment and vehicles will operate; and 06-3 Stabilize loose soil and demolition debris; and 06-4 Comply with AQMD Rule 1403.	✓ Apply water in sufficient quantities to prevent the generation of visible dust plumes
Disturbed soil	07-1 Stabilize disturbed soil throughout the construction site; and 07-2 Stabilize disturbed soil between structures	<ul> <li>✓ Limit vehicular traffic and disturbances on soils where possible</li> <li>✓ If interior block walls are planned, install as early as possible</li> <li>✓ Apply water or a stabilizing agent in sufficient quantities to prevent the generation of visible dust plumes</li> </ul>
Earth-moving activities	08-1 Pre-apply water to depth of proposed cuts; and 08-2 Re-apply water as necessary to maintain soils in a damp condition and to ensure that visible emissions do not exceed 100 feet in any direction; and 08-3 Stabilize soils once earth-moving activities are complete.	Grade each project phase separately, timed to coincide with construction phase     Upwind fencing can prevent material movement on site     Apply water or a stabilizing agent in sufficient quantities to prevent the generation of visible dust plumes

Source Category	Control Measure	Guidance
Importing/exporting of bulk materials	<ul> <li>O9-1 Stabilize material while loading to reduce fugitive dust emissions; and</li> <li>O9-2 Maintain at least six inches of freeboard on haul vehicles; and</li> <li>O9-3 Stabilize material while transporting to reduce fugitive dust emissions; and</li> <li>O9-4 Stabilize material while unloading to reduce fugitive dust emissions; and</li> <li>O9-5 Comply with Vehicle Code Section 23114.</li> </ul>	<ul> <li>✓ Use tarps or other suitable enclosures on haul trucks</li> <li>✓ Check belly-dump truck seals regularly and remove any trapped rocks to prevent spillage</li> <li>✓ Comply with track-out prevention/mitigation requirements</li> <li>✓ Provide water while loading and unloading to reduce visible dust plumes</li> </ul>
Landscaping	10-1 Stabilize soils, materials, slopes	<ul> <li>✓ Apply water to materials to stabilize</li> <li>✓ Maintain materials in a crusted condition</li> <li>✓ Maintain effective cover over materials</li> <li>✓ Stabilize sloping surfaces using soil binders until vegetation or ground cover can effectively stabilize the slopes</li> <li>✓ Hydroseed prior to rain season</li> </ul>
Road shoulder maintenance	<ul> <li>11-1 Apply water to unpaved shoulders prior to clearing; and</li> <li>11-2 Apply chemical dust suppressants and/or washed gravel to maintain a stabilized surface after completing road shoulder maintenance.</li> </ul>	<ul> <li>✓ Installation of curbing and/or paving of road shoulders can reduce recurring maintenance costs</li> <li>✓ Use of chemical dust suppressants can inhibit vegetation growth and reduce future road shoulder maintenance costs</li> </ul>

Source Category	Control Measure	Guidance
Screening	<ul> <li>12-1 Pre-water material prior to screening; and</li> <li>12-2 Limit fugitive dust emissions to opacity and plume length standards; and</li> <li>12-3 Stabilize material immediately after screening.</li> </ul>	<ul> <li>Dedicate water truck or high capacity hose to screening operation</li> <li>Drop material through the screen slowly and minimize drop height</li> <li>Install wind barrier with a porosity of no more than 50% upwind of screen to the height of the drop point</li> </ul>
Staging areas	<ul> <li>13-1 Stabilize staging areas during use; and</li> <li>13-2 Stabilize staging area soils at project completion.</li> </ul>	✓ Limit size of staging area ✓ Limit vehicle speeds to 15 miles per hour ✓ Limit number and size of staging area entrances/exists
Stockpiles/ Bulk Material Handling	<ul> <li>14-1 Stabilize stockpiled materials.</li> <li>14-2 Stockpiles within 100 yards of off-site occupied buildings must not be greater than eight feet in height; or must have a road bladed to the top to allow water truck access or must have an operational water irrigation system that is capable of complete stockpile coverage.</li> </ul>	<ul> <li>✓ Add or remove material from the downwind portion of the storage pile</li> <li>✓ Maintain storage piles to avoid steep sides or faces</li> </ul>

(Amended June 3, 2005)

Source Category	Control Measure	Guidance
Traffic areas for construction activities	<ul> <li>15-1 Stabilize all off-road traffic and parking areas; and</li> <li>15-2 Stabilize all haul routes; and</li> <li>15-3 Direct construction traffic over established haul routes.</li> </ul>	<ul> <li>✓ Apply gravel/paving to all haul routes as soon as possible to all future roadway areas</li> <li>✓ Barriers can be used to ensure vehicles are only used on established parking areas/haul routes</li> </ul>
Trenching	<ul> <li>16-1 Stabilize surface soils where trencher or excavator and support equipment will operate; and</li> <li>16-2 Stabilize soils at the completion of trenching activities.</li> </ul>	<ul> <li>✓ Pre-watering of soils prior to trenching is an effective preventive measure. For deep trenching activities, pre-trench to 18 inches soak soils via the pre-trench and resuming trenching</li> <li>✓ Washing mud and soils from equipment at the conclusion of trenching activities can prevent crusting and drying of soil on equipment</li> </ul>
Truck loading	17-1 Pre-water material prior to loading; and 17-2 Ensure that freeboard exceeds six inches (CVC 23114)	<ul> <li>✓ Empty loader bucket such that no visible dust plumes are created</li> <li>✓ Ensure that the loader bucket is close to the truck to minimize drop height while loading</li> </ul>
Turf Overseeding	18-1 Apply sufficient water immediately prior to conducting turf vacuuming activities to meet opacit and plume length standards; and 18-2 Cover haul vehicles prior to exiting the site.	✓ Haul waste material immediately off-site

#### Rule 403 (cont.) (Amended June 3, 2005)

Source Category	Control Measure	Guidance
Unpaved roads/parking lots	<ul> <li>19-1 Stabilize soils to meet the applicable performance standards; and</li> <li>19-2 Limit vehicular travel to established unpaved road (haul routes) and unpaved parking lots.</li> </ul>	unpaved travel paths and parking lots can
Vacant land	20-1 In instances where vacant lots are 0.10 acre or large and have a cumulative area of 500 square feet or more that are driven over and/or used by motor vehicles and/or off-road vehicles, prevent motor vehicle and/or off-road vehicle trespassing, parking and/or access by installing barriers, curbs, fences, gates, posts, signs, shrubs, trees or other effective control measures.	g

Table 2
DUST CONTROL MEASURES FOR LARGE OPERATIONS

DUST CONTROL MEASURES FOR LARGE OPERATIONS		
FUGITIVE DUST SOURCE CATEGORY		CONTROL ACTIONS
Earth-moving (except construction cutting and filling areas, and mining operations)	(1a)	Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D-2216, or other equivalent method approved by the Executive Officer, the California Air Resources Board, and the U.S. EPA. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations each subsequent four-hour period of active operations; OR
	(1a-1)	For any earth-moving which is more than 100 feet from all property lines, conduct watering as necessary to prevent visible dust emissions from exceeding 100 feet in length in any direction.
Earth-moving: Construction fill areas:	(1b)	Maintain soil moisture content at a minimum of 12 percent, as determined by ASTM method D-2216, or other equivalent method approved by the Executive Officer, the California Air Resources Board, and the U.S. EPA. For areas which have an optimum moisture content for compaction of less than 12 percent, as determined by ASTM Method 1557 or other equivalent method approved by the Executive Officer and the California Air Resources Board and the U.S. EPA, complete the compaction process as expeditiously as possible after achieving at least 70 percent of the optimum soil moisture content. Two soil moisture evaluations must be conducted during the first three hours of active operations during a calendar day, and two such evaluations during each subsequent four-hour period of active operations.

Table 2 (Continued)

		able 2 (Continued)
FUGITIVE DUST SOURCE CATEGORY		CONTROL ACTIONS
Earth-moving: Construction cut areas and mining operations:	(1c)	Conduct watering as necessary to prevent visible emissions from extending more than 100 feet beyond the active cut or mining area unless the area is inaccessible to watering vehicles due to slope conditions or other safety factors.
Disturbed surface areas (except completed grading areas)	(2a/b)	Apply dust suppression in sufficient quantity and frequency to maintain a stabilized surface. Any areas which cannot be stabilized, as evidenced by wind driven fugitive dust must have an application of water at least twice per day to at least 80 percent of the unstabilized area.
Disturbed surface areas: Completed grading areas	(2c)	Apply chemical stabilizers within five working days of grading completion; OR  Take actions (3a) or (3c) specified for inactive disturbed surface areas.
Inactive disturbed surface areas	(3a) (3b) (3c)	Apply water to at least 80 percent of all inactive disturbed surface areas on a daily basis when there is evidence of wind driven fugitive dust, excluding any areas which are inaccessible to watering vehicles due to excessive slope or other safety conditions; OR Apply dust suppressants in sufficient quantity and frequency to maintain a stabilized surface; OR Establish a vegetative ground cover within 21 days after active operations have ceased. Ground cover must be of sufficient density to expose less than 30 percent of unstabilized ground within 90 days of planting, and at all times thereafter; OR Utilize any combination of control actions (3a), (3b), and (3c) such that, in total, these actions apply to all inactive disturbed surface areas.

Table 2 (Continued)

	Table 2 (Continued)		
FUGITIVE DUST SOURCE CATEGORY		CONTROL ACTIONS	
Unpaved Roads	(4a)	Water all roads used for any vehicular traffic at least once per every two hours of active operations [3 times per normal 8 hour work day]; OR	
	(4b)	Water all roads used for any vehicular traffic once daily and restrict vehicle speeds to 15 miles per hour; OR	
	(4c)	Apply a chemical stabilizer to all unpaved road surfaces in sufficient quantity and frequency to maintain a stabilized surface.	
Open storage piles	(5a) (5b)	Apply chemical stabilizers; OR Apply water to at least 80 percent of the surface area of all open storage piles on a daily basis when there is evidence of wind driven fugitive dust; OR	
	(5c) (5d)	Install temporary coverings; OR Install a three-sided enclosure with walls with no more than 50 percent porosity which extend, at a minimum, to the top of the pile. This option may only be used at aggregate-related plants or at cement manufacturing facilities.	
All Categories	(6a)	Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the methods specified in Table 2 may be used.	

TABLE 3
CONTINGENCY CONTROL MEASURES FOR LARGE OPERATIONS

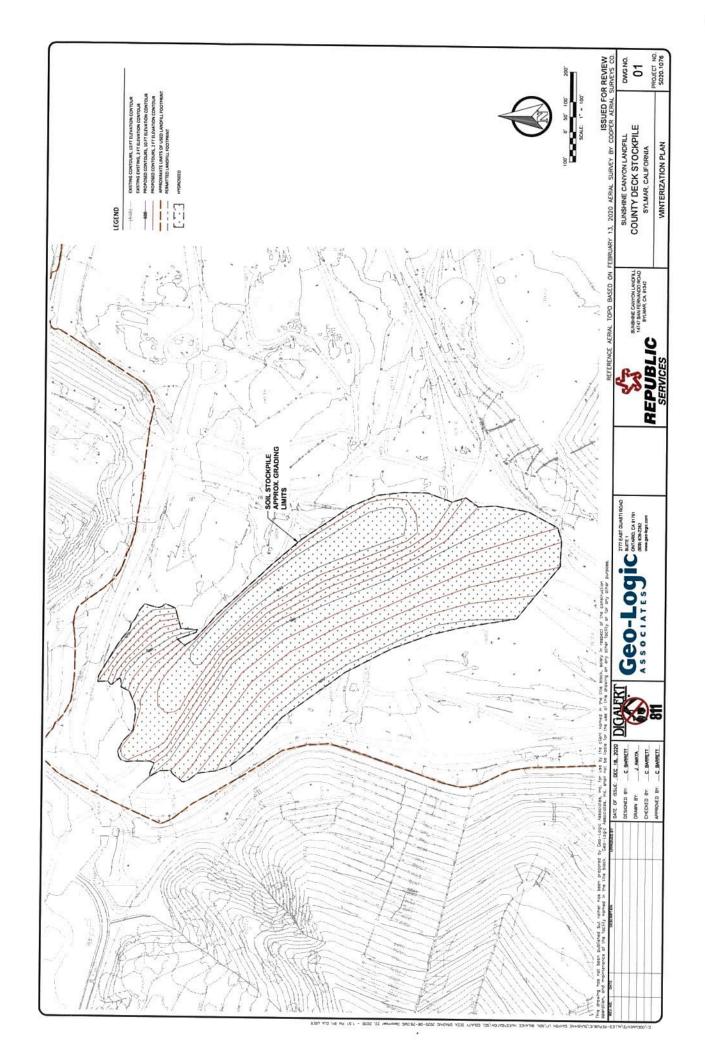
-		OL MEASURES FOR LARGE OF ERATIONS
FUGITIVE DUST SOURCE CATEGORY		CONTROL MEASURES
Earth-moving	(1A)	Cease all active operations; OR
	(2A)	Apply water to soil not more than 15 minutes prior to moving such soil.
Disturbed surface areas	(0B)	On the last day of active operations prior to a weekend, holiday, or any other period when active operations will not occur for not more than four consecutive days: apply water with a mixture of chemical stabilizer diluted to not less than 1/20 of the concentration required to maintain a stabilized surface for a period of six months; OR
	(1B)	Apply chemical stabilizers prior to wind event; OR
	(2B)	Apply water to all unstabilized disturbed areas 3 times per day. If there is any evidence of wind driven fugitive dust, watering frequency is increased to a minimum of four times per day; OR
	(3B)	Take the actions specified in Table 2, Item (3c); OR
	(4B)	Utilize any combination of control actions (1B), (2B), and (3B) such that, in total, these actions apply to all disturbed surface areas.
Unpaved roads	(1C)	Apply chemical stabilizers prior to wind event; OR
	(2C)	Apply water twice per hour during active operation; OR
	(3C)	Stop all vehicular traffic.
Open storage piles	(1D)	Apply water twice per hour; OR
	(2D)	Install temporary coverings.
Paved road track-out	(1E)	Cover all haul vehicles; OR
	(2E)	Comply with the vehicle freeboard requirements of Section 23114 of the California Vehicle Code for both public and private roads.
All Categories	(1F)	Any other control measures approved by the Executive Officer and the U.S. EPA as equivalent to the methods specified in Table 3 may be used.

(Amended June 3, 2005)

Table 4 (Conservation Management Practices for Confined Animal Facilities)

,	Management Practices for Confined Animal Facilities)
SOURCE CATEGORY	CONSERVATION MANAGEMENT PRACTICES
Manure Handling	<ul><li>(1a) Cover manure prior to removing material off-site; AND</li><li>(1b) Spread the manure before 11:00 AM and when wind conditions</li></ul>
(Only applicable to Commercial	are less than 25 miles per hour; AND  (1c) Utilize coning and drying manure management by removing manure at laying hen houses at least twice per year and maintain a base of no less than 6 inches of dry manure after clean out; or
Poultry Ranches)	in lieu of complying with conservation management practice (1c), comply with conservation management practice (1d).  (1d) Utilize frequent manure removal by removing the manure from laying hen houses at least every seven days and immediately thin bed dry the material.
Feedstock Handling	(2a) Utilize a sock or boot on the feed truck auger when filling feed storage bins.
Disturbed Surfaces	<ul> <li>(3a) Maintain at least 70 percent vegetative cover on vacant portions of the facility; OR</li> <li>(3b) Utilize conservation tillage practices to manage the amount, orientation and distribution of crop and other plant residues on the soil surface year-round, while growing crops (if applicable) in narrow slots or tilled strips; OR</li> <li>(3c) Apply dust suppressants in sufficient concentrations and frequencies to maintain a stabilized surface.</li> </ul>
Unpaved Roads	<ul> <li>(4a) Restrict access to private unpaved roads either through signage or physical access restrictions and control vehicular speeds to no more than 15 miles per hour through worker notifications, signage, or any other necessary means; OR</li> <li>(4b) Cover frequently traveled unpaved roads with low silt content material (i.e., asphalt, concrete, recycled road base, or gravel to a minimum depth of four inches); OR</li> <li>(4c) Treat unpaved roads with water, mulch, chemical dust suppressants or other cover to maintain a stabilized surface.</li> </ul>
Equipment Parking Areas	<ul> <li>(5a) Apply dust suppressants in sufficient quantity and frequency to maintain a stabilized surface; OR</li> <li>(5b) Apply material with low silt content (i.e., asphalt, concrete, recycled road base, or gravel to a depth of four inches).</li> </ul>

**Enclosure 4** 





#### **COUNTY OF LOS ANGELES**

#### DEPARTMENT OF PUBLIC WORKS

"To Enrich Lives Through Effective and Caring Service"

900 SOUTH FREMONT AVENUE ALHAMBRA, CALIFORNIA 91803-1331 Telephone: (626) 458-5100 http://dpw.lacounty.gov

ADDRESS ALL CORRESPONDENCE TO: P.O. BOX 1460 ALHAMBRA, CALIFORNIA 91802-1460

IN REPLY PLEASE
REFER TO FILE: EP-5

February 23, 2022

Mr. Chris Coyle General Manager Republic Services, Inc. Sunshine Canyon Landfill 14747 San Fernando Road Sylmar, CA 91342-1021

# SUNSHINE CANYON CITY/COUNTY LANDFILL CONDITIONAL USE PERMIT NO. 00-194-(5) AUTHORIZATION TO IMPORT CLEAN SOIL

Dear Mr. Coyle:

Public Works has reviewed Republic Services' request dated November 19, 2021, (Enclosure 1), soil importation submittal dated December 15, 2021, (Enclosure 2), and updated submittal dated January 31, 2022, (Enclosure 3), in conjunction with the First Semi-Annual Soil Importation Summary and the requirements set forth in Public Works June 15, 2021, letter (Enclosure 4). The request seeks Public Works' approval for an increase in soil importation to supplement previous soil importation approval of 2,500 tons per day (tpd) as approved by Public Works on June 15, 2021.

Pursuant to Conditional Use Permit (CUP) 00-194-(5), Conditions 1.D and 23.E, which require Republic Services to obtain prior authorization from Public Works for the importation and acceptance of clean soil material for beneficial use, Public Works has reviewed your request and hereby approves Republic Services to import an additional 500 tpd of clean soil to Sunshine Canyon Landfill for a maximum of 3,000 tpd. Approval for an additional 500 tpd, in addition to the previous approval for importation of 2,500 tpd, is granted for the sole purpose of making additional soil available for Republic Services for the application of soil cover over the weekend, as required by Sections 3a and 3b of Public Works January 15, 2019, approval for the use of Alternative Daily Cover (ADC) (Enclosure 5).

As such, Republic Services is required to prioritize the use of the imported soil for the purposes of cover on Saturdays in order to reduce and/or eliminate the odor nuisance

Mr. Chris Coyle February 23, 2022 Page 2

impacting the community, and to protect public health and safety. However, this approval does not preclude Republic Services from utilizing the remaining volume of soil for other beneficial uses once the Landfill has achieved full compliance with the January 15, 2019, requirements.

Republic Services must come into compliance with the January 15, 2019, working face soil cover requirements immediately, or Public Works will refer the matter to the Department of Regional Planning for the issuance of a Notice of Violation.

In addition, this approval is subject to the following conditions:

- 1. The quantity of soil to be imported shall not exceed the following:
  - o 3,000 tons per day or 18,000 tons per week.
  - The duration of this project approval is for a total period of 5-years, starting on June 15, 2021, and will terminate on June 14, 2026, unless otherwise terminated sooner by Public Works.
  - The quantity of soil imported (tonnage) shall be included as part of the total permitted daily and weekly tonnage capacity of materials (Solid Waste, Inert Debris, and Beneficial Use Materials). Pursuant to the CUP, in no event shall the daily tonnage of all materials received by the Landfill exceed 12,100 tons on any given day, six working days per week, nor the total permitted weekly tonnage limit of 72,600 tons per week.
- 2. The soil importation shall occur during the normal operating hours of the site from Monday to Saturday.
- 3. All incoming and departing truck routes associated with this soil importation project shall be limited to the same route from the Interstate 5 Freeway to the Landfill as do loads of refuse, by taking the Roxford Exit and San Fernando Road to the Landfill entrance.
- 4. The imported soil shall be placed adjacent to the working area for immediate usage in a designated location, or if soil is not needed at the working area, it shall be taken to a designated stockpile location as defined in the Landfill's Joint Technical Document. Additionally, all stockpile areas shall be vegetated if left unused longer than 180 days and will require soil stockpile grading and drainage plans to be provided within 30 days from the date of this letter for further review and approval (pursuant to CUP Condition 37).

- 5. Republic Services shall comply with the currently approved Fugitive Dust Control Program to minimize dust resulting from the importation project.
- 6. Republic Services shall follow all applicable local, State, and Federal standards and requirements for the importation of clean soil from off-site sources, including but not limited to, the approved Waste Load Checking Program and the Waste Discharge Requirements issued by the California Regional Water Quality Control Board to ensure the imported soil's quality is acceptable under this program and permit.
- 7. Republic Services shall keep records of all soil materials received, including but not limited to, the sources of all imported soil, quantities accepted/imported and use and purpose of onsite soil, delivery schedules, usage schedules, and the amount of soil that is stockpiled, beneficially used, and disposed of.
- 8. Republic Services shall submit summaries of these records on a quarterly basis, including a stockpile location map, to Public Works Environmental Programs Division for the duration of this project.
- 9. Republic Services shall submit monthly reports on the usage of the import soil tonnage including the status of compliance with the weekend soil cover requirements as stated in Sections 3a and 3b of Public Works' January 15, 2019, approval for the ADC, and other beneficial uses. The first monthly report shall be submitted within 30 days of this letter.
- 10. In the event that Public Works: 1) approves a temporary 48-hour Enviro-cover pilot program, or 2) approves the 48-hour Enviro-cover material for permanent use, and/or 3) grants a waiver of the soil cover requirement (Sections 3a and 3b of Public Works' January 15, 2019, approval), the approval for an additional tonnage of 500 tons per day shall be terminated. In such case the allowed soil importation shall remain at a maximum rate of 2,500 tpd, as approved on Public Works' letter dated June 15, 2021.
- 11. This soil importation approval of additional 500 tpd shall terminate if Republic Services fails to comply with the January 15, 2019, ADC requirements within 30 days commencing on the date of this letter. Going forward, if Republic Services is found to be out of compliance with the January 15, 2019, ADC requirement, the additional 500 tpd shall terminate.

Mr. Chris Coyle February 23, 2022 Page 4

The Director of Public Works or his designee, at his/her sole discretion, may rescind or terminate this approval if Public Works determines that any of the conditions of approval has been violated and/or that such termination is necessary to protect public health, safety, welfare, and/or the environment. Public Works also reserves the authority to modify or apply additional measures for the soil importation approval in the future, as deemed necessary, in accordance with Condition 45N of the Landfill's Conditional Use Permit.

If you have any questions, please contact me or your staff may contact Mr. David Nguyen at (626) 458-5189 or <a href="mailto:dnguyen@dpw.lacounty.gov">dnguyen@dpw.lacounty.gov</a>, Monday through Thursday, 7 a.m. to 5:30 p.m.

Very truly yours,

MARK PESTRELLA, PE Director of Public Works

PATRICK HOLLAND

Patrick Holland

Principal Engineer

**Environmental Programs Division** 

MA:kp

P:\SEC\KP\EP5\SCL IMPORT SOIL APPROVAL LETTER

Enc.

cc: Department of Regional Planning (Edgar De La Torre, Alex Garcia, Maria Masis) City of Los Angeles Department of City Planning (Tiffany Butler, Nicholas Hendricks, Lisa Webber)

Sunshine Canyon Landfill Community Advisory Committee (Wayde Hunter)

Sunshine Canyon Landfill Technical Advisory Committee (Jon Sanabria, Lisa Webber)

Sunshine Canyon Landfill Local Enforcement Agency (Dorcas Hanson-Lugo, Shikari Nakagawa-Ota, David Thompson)

Each Member of the Los Angeles County Solid Waste Management Committee Integrated Waste Management Task Force

## Enclosure 1

November 19, 2021

Mr. Martin Aiyetiwa Senior Civil Engineer - Environmental Programs Division 900 South Fremont Avenue Alhambra, CA 91803-1331

Subject: Clean Soil Material Importation and Stockpile – Sunshine Canyon City/County Landfill Conditional Use Permit No. 00-194-(5)

Dear Mr. Aiyetiwa:

As you are aware, Sunshine Canyon Landfill (SCL) obtained approval from County of Los Angeles Department of Public Works (DPW) to import 2,500 tons per day (tpd) of clean soil for beneficial use at the landfill, per your letter dated June 15, 2021.

As previously discussed with DPW, Sunshine Canyon Landfill has historically incurred a large soil deficit. This deficit was created in part by past operational practices imposed by permit conditions which led to the original request for import (July 2020). Since that submittal, the site has made some minor operational changes which have resulted in an increase in the need for soil.

The site is now operating two working faces daily to accommodate the volume of incoming waste, due to the configuration and size of the cells with available airspace. This, in addition to other daily, routine operations to maintain and keep the site in compliance deplete the available on-site soil supply more quickly. Furthermore, we anticipate that soil available for import will be significantly reduced over the coming winter months as rain slows or stops groundwork altogether. Therefore, it is vital the site maintains an adequate stockpile of soil available for both daily cover and other operational needs at all times.

SCL would like to formally request approval for an increase in soil import to a total of 3,500 tpd or 21,000 tons per week. No changes are requested to any other conditions listed in the June 15, 2021 approval.

If you have any questions or require any additional information, please contact Chris Coyle at 818-362-2141 or Valorie Moore at 818-362-2145.

Sincerely,

Sunshine Canyon Landfill

Chais Coyle General Manager

## **Enclosure 2**

December 15, 2021

Martins Aiyetiwa Los Angeles County Public Works 900 South Fremont Avenue Alhambra, CA 91803-1331

Subject:

Sunshine Canyon Landfill - First Semi-Annual Soil Importation

Summary

Dear Mr. Aiyetiwa:

Sunshine Canyon Landfill (SCL) obtained approval from County of Los Angeles Department of Public Works (DPW) to import up to 2,500 tons per day of clean soil material for beneficial use per your letter dated June 15, 2021. Within that approval, a condition was included requiring SCL to provide monthly summaries related to the incoming material on a semi-annual basis, with the first report due six months after date of approval (Condition #s 7 and 8).

The following is the first Semi-Annual Summary, which covers all requested information regarding daily soil import activities from June 15, 2021 through November 30 2021.

Table 1. June 2021 Daily Import<sup>1</sup>

Date	Quantity (Tons)	Stockpile d (Y/N)	Use of Soil	Dates Usage	of	Stockpile Location
21-Jun	1459.6	N	Daily Cover/Landfill Maintenance	Week 6/21/21	of	N/A
22-Jun	2047.81	N	Daily Cover/Landfill Maintenance	Week 6/21/21	of	N/A
23-Jun	2009.79	N	Daily Cover/Landfill Maintenance	Week 6/21/21	of	N/A
24-Jun	1935.33	N	Daily Cover/Landfill Maintenance	Week 6/21/21	of	N/A
25-Jun	1961.93	N	Daily Cover/Landfill Maintenance	Week 6/21/21	of	N/A
28-Jun	1396.26	N	Daily Cover/Landfill Maintenance	Week 6/28/21	of	N/A

29-Jun	1646.86	N	Daily Cover/Landfill	Week	of	N/A
	li .		Maintenance	6/28/21		
30-Jun	1659.49	N	Daily Cover/Landfill	Week	of	N/A
			Maintenance	6/28/21		
TOTAL	14117.07					

<sup>&</sup>lt;sup>1</sup>June 21 through June 30 material was received from: LA Reservoir

Table 2. July 2021 Daily Import<sup>2</sup>

Date	Quantity (Tons)	Stockpiled (Y/N)	Use of Soil	Dates Usage	of	Stockpile Location
1-Jul	2067.51	N	Daily	Week	of	N/A
r-jui	2007.31	IN	Cover/Landfill	6/28/21	OI	INA
			92 92 90 90	0/20/21		
211	2020.76		Maintenance	14/ 1	-	
2-Jul	2029.76	N	Daily	Week	of	N/A
			Cover/Landfill	6/28/21		
**************************************			Maintenance	100000000000000000000000000000000000000		
6-Jul	2048.87	N	Daily	Week	of	N/A
			Cover/Landfill	7/5/21		
			Maintenance			
7-Jul	1965.95	N	Daily	Week	of	N/A
			Cover/Landfill	7/5/21		
			Maintenance			
8-Jul	2227.25	N	Daily	Week	of	N/A
			Cover/Landfill	7/5/21		
			Maintenance	Account According to the		
9-Jul	2059.1	N	Daily	Week	of	N/A
		1	Cover/Landfill	7/5/21		10.000 MR4000 MM
			Maintenance			
12-Jul	1969.02	N	Daily	Week	of	N/A
-	1 3 58 8		Cover/Landfill	7/12/21	1078B	
			Maintenance			
13-Jul	1995.4	N	Daily	Week	of	N/A
. 5 , 5,			Cover/Landfill	7/12/21	O1	13773
			Maintenance	1112121		1
			I Mairiteriance			

14-Jul	1745.71	N	Daily Cover/Landfill		of N	I/A
			Maintenance	7/12/21		
15-Jul	1940.66	N	Daily		of N	I/A
	. C		Cover/Landfill Maintenance	7/12/21		
16-Jul	1936.05	N	Daily	Week	of N	I/A
		10.00	Cover/Landfill	7/12/21		
			Maintenance			
19-Jul	1930.95	N	Daily		of N	I/A
			Cover/Landfill	7/19/21		
20-Jul	1867.02	N	Maintenance Daily	Week	of N	I/A
20-jui	1007.02	18	Cover/Landfill	7/19/21	01   1	
			Maintenance			
21-Jul	1884.65	N	Daily	Week	of N	I/A
			Cover/Landfill	7/19/21		
		200	Maintenance			2000
22-Jul	1911.76	N	Daily		of N	I/A
			Cover/Landfill Maintenance	7/19/21		
23-Jul	2035.83	N	Daily	Week	of N	I/A
		1.00	Cover/Landfill	7/26/21		M.D.N.
			Maintenance	No. On the Section Control		
26-Jul	2216.06	N	Daily	Week	of N	I/A
			Cover/Landfill	7/26/21		
27.1.1	100100	1	Maintenance			
27-Jul	1824.98	N	Daily		of N	I/A
			Cover/Landfill Maintenance	7/26/21		
28-Jul	1829.75	N	Daily	Week	of N	I/A
			Cover/Landfill	7/26/21		
			Maintenance			
29-Jul	1977.93	N	Daily		of N	I/A
			Cover/Landfill	7/26/21		
			Maintenance			

30-Jul	1907.42	N	Daily Cover/Landfill Maintenance	Week o	f N/A
TOTAL	41371.63				

<sup>&</sup>lt;sup>2</sup>From July 1 through July 31 material was received from: LA Reservoir

Table 3. August 2021 Daily Import<sup>3</sup>

Date	Quantity (Tons)	Stockpiled (Y/N)	Use of Soil	Dates Usage	of	Stockpile Location
2-Aug	1857.18	N	Daily Cover/Landfill Maintenance	Week 8/2/21	of	N/A
3-Aug	2039.63	N	Daily Cover/Landfill Maintenance	Week 8/2/21	of	N/A
4-Aug	1995.02	N	Daily Cover/Landfill Maintenance	Week 8/2/21	of	N/A
5-Aug	1952.7	N	Daily Cover/Landfill Maintenance	Week 8/2/21	of	N/A
6-Aug	1858.22	N	Daily Cover/Landfill Maintenance	Week 8/2/21	of	N/A
9-Aug	2015.43	N	Daily Cover/Landfill Maintenance	Week 8/9/21	of	N/A
10- Aug	1949.33	N	Daily Cover/Landfill Maintenance	Week 8/9/21	of	N/A
11- Aug	1203	N	Daily Cover/Landfill Maintenance	Week 8/9/21	of	N/A
24- Aug	167.47	N	Daily Cover/Landfill Maintenance	Week 8/23/21	of	N/A

25-	145.27	N	Daily	Week o	f N/A
Aug			Cover/Landfill	8/23/21	
562			Maintenance		
26-	1017.995	N	Daily	Week o	f N/A
Aug			Cover/Landfill	8/23/21	
			Maintenance		
27-	961.02	N	Daily	Week o	f N/A
Aug			Cover/Landfill	8/23/21	
			Maintenance		
30-	146.49	N	Daily	Week o	f N/A
Aug			Cover/Landfill	8/30/21	
			Maintenance		
31-	251.65	N	Daily	Week o	f N/A
Aug			Cover/Landfill	8/30/21	ÿ
=70			Maintenance		
TOTAL	17560.405				

<sup>&</sup>lt;sup>3</sup>From August 1 through August 31 material was received from LA Reservoir, Quest, and CWS

Table 4. September 2021 Daily Import<sup>4</sup>

Date	Quantity (Tons)	Stockpiled (Y/N)	Use of Soil	Dates of Usage	Stockpile Location
1-Sep	868.33	N	Daily Cover/Landfill Maintenance	Week of 8/30/21	N/A
2-Sep	622.2	N	Daily Cover/Landfill Maintenance	Week of 8/30/21	N/A
3-Sep	451.12	N	Daily Cover/Landfill Maintenance	Week of 8/30/21	N/A
4-Sep	26.52	N	Daily Cover/Landfill Maintenance	Week of 8/30/21	N/A

7-Sep	1360.22	N	Daily Cover/Landfill Maintenance	Week of 9/6/21	f N/A
8-Sep	534.3	N	Daily Cover/Landfill Maintenance	Week of 9/6/21	f N/A
9-Sep	904.99	N	Daily Cover/Landfill Maintenance	Week of 9/6/21	f N/A
10- Sep	938.05	N	Daily Cover/Landfill Maintenance	Week of 9/6/21	f N/A
11- Sep	44.2	N	Daily Cover/Landfill Maintenance	Week of 9/6/21	f N/A
13- Sep	1122.3	N	Daily Cover/Landfill Maintenance	Week o	f N/A
14- Sep	865.69	N	Daily Cover/Landfill Maintenance	Week o	f N/A
15- Sep	547.86	N	Daily Cover/Landfill Maintenance	Week of 9/13/21	f N/A
16- Sep	818.65	N	Daily Cover/Landfill Maintenance	Week of 9/13/21	f N/A
17- Sep	1152.68	N	Daily Cover/Landfill Maintenance	Week of 9/13/21	f N/A
20- Sep	945.04	N	Daily Cover/Landfill Maintenance	Week of 9/20/21	f N/A
21- Sep	858.81	N	Daily Cover/Landfill Maintenance	Week of 9/20/21	f N/A

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22-	932.54	N	Daily	Week	of	N/A
Sep			Cover/Landfill	9/20/21		
957	,		Maintenance			
23-	1012.54	N	Daily	Week	of	N/A ·
Sep			Cover/Landfill	9/20/21		
			Maintenance			
24-	670.05	N	Daily	Week	of	N/A
Sep			Cover/Landfill	9/20/21		
			Maintenance			
25-	860.67	N	Daily	Week	of	N/A
Sep			Cover/Landfill	9/20/21		
			Maintenance			
27-	992.66	N	Daily	Week	of	N/A
Sep			Cover/Landfill	9/27/21		
			Maintenance			
28-	1039.7	N	Daily	Week	of	N/A
Sep			Cover/Landfill	9/27/21		
421			Maintenance			
29-	1025.64	N	Daily	Week	of	N/A
Sep			Cover/Landfill	9/27/21		
45	ļ		Maintenance			
30-	630.41	N	Daily	Week	of	N/A
Sep			Cover/Landfill	9/27/21		
			Maintenance			
TOTAL	19225.17					

<sup>&</sup>lt;sup>4</sup>From September 1 through September 30 material was received from: Quest, CWS, Santa Monica

Table 5. October 2021 Daily Import<sup>5</sup>

Date	Quantity (Tons)	Stockpile d (Y/N)	Use of Soil	Dates of Usage	of Stockpile Location
1-Oct	400.62	N	Daily	Week o	of N/A
			Cover/Landfill Maintenance	9/27/21	

2-Oct	54	N	Daily Cover/Landfill Maintenance	Week of 9/27/21	N/A
4-Oct	594.69	N	Daily Cover/Landfill Maintenance	Week of 10/4/21	N/A
	477.82	N	Daily Cover/Landfill Maintenance	Week of 10/4/21	N/A
5-Oct	1306.14	N	Daily Cover/Landfill Maintenance	Week of 10/4/21	N/A
	54.86	N	Daily Cover/Landfill Maintenance	Week of 10/4/21	N/A
6-Oct	1291.37	N	Daily Cover/Landfill Maintenance	Week of 10/4/21	N/A
	897.1775	N	Daily Cover/Landfill Maintenance	Week of 10/4/21	N/A
7-Oct	1348.24	N	Daily Cover/Landfill Maintenance	Week of 10/4/21	N/A
	690	N	Daily Cover/Landfill Maintenance	Week of 10/4/21	N/A
8-Oct	1327.01	. N	Daily Cover/Landfill Maintenance	Week of 10/4/21	N/A
9-Oct	409.03	N	Daily Cover/Landfill Maintenance	Week of 10/4/21	N/A
11-Oct	471.39	N	Daily Cover/Landfill Maintenance	Week of 10/11/21	N/A

12-Oct	1353.88	N	Daily Cover/Landfill Maintenance	Week of 10/11/21	N/A
	178.57	N	Daily Cover/Landfill Maintenance	Week of 10/11/21	N/A
13-Oct	1320.03	N	Daily Cover/Landfill Maintenance	Week of 10/11/21	N/A
	73.97	N	Daily Cover/Landfill Maintenance	Week of 10/11/21	N/A
14-Oct	1296.24	N	Daily Cover/Landfill Maintenance	Week of 10/11/21	N/A
	196.7	N	Daily Cover/Landfill Maintenance	Week of 10/11/21	N/A
15-Oct	1313.16	N	Daily Cover/Landfill Maintenance	Week of 10/11/21	N/A
	235.13	N	Daily Cover/Landfill Maintenance	Week of 10/11/21	N/A
16-Oct	40.86	N	Daily Cover/Landfill Maintenance	Week of 10/11/21	N/A
18-Oct	649.56	N	Daily Cover/Landfill Maintenance	Week of 10/18/21	N/A
	98.16	N	Daily Cover/Landfill Maintenance	Week of 10/18/21	N/A
19-Oct	1223.67	N	Daily Cover/Landfill Maintenance	Week of 10/18/21	N/A

	116.68	N	Daily Cover/Landfill Maintenance	Week of 10/18/21	N/A
20-Oct	1098.99	N	Daily Cover/Landfill Maintenance	Week of 10/18/21	N/A
	176.27	N	Daily Cover/Landfill Maintenance	Week of 10/18/21	N/A
21-Oct	1113.23	N	Daily Cover/Landfill Maintenance	Week of 10/18/21	N/A
	220.1	N	Daily Cover/Landfill Maintenance	Week of 10/18/21	N/A
22-Oct	781.78	N	Daily Cover/Landfill Maintenance	Week of 10/18/21	N/A
	172.35	N	Daily Cover/Landfill Maintenance	Week of 10/18/21	N/A
26-Oct	160.95	N	Daily Cover/Landfill Maintenance	Week of 10/25/21	N/A
27-Oct	978.28	N	Daily Cover/Landfill Maintenance	Week of 10/25/21	N/A
	67.36	N	Daily Cover/Landfill Maintenance	Week of 10/25/21	N/A
28-Oct	908.62	N	Daily Cover/Landfill Maintenance	Week of 10/25/21	N/A
	42.68	N	Daily Cover/Landfill Maintenance	Week of 10/25/21	N/A

29-Oct	818.75	N	Daily	Week of	N/A
			Cover/Landfill	10/25/21	
			Maintenance		
	67.58	N	Daily	Week of	N/A
			Cover/Landfill	10/25/21	
			Maintenance		
TOTAL	24025.8975				

<sup>&</sup>lt;sup>5</sup>From October 1 through October 31 material was received from Pacoima Spreading Grounds, CWS, Pena, Santa Monica

Table 6. November 2021 Daily Import<sup>6</sup>

Date	Quantity (Tons)	Stockpile d (Y/N)	Use of Soil	Dates Usage	of	Stockpile Location
1-Nov	648.44	N	Daily Cover/Landfill Maintenance	Week 11/1/21	of	N/A
	282.81	N	Daily Cover/Landfill Maintenance	Week 11/1/21	of	N/A
2-Nov	993.68	N	Daily Cover/Landfill Maintenance	Week 11/1/21	of	N/A
	828.49	N	Daily Cover/Landfill Maintenance	Week 11/1/21	of	N/A
3-Nov	748.7	N	Daily Cover/Landfill Maintenance	Week 11/1/21	of	N/A
8	535.78	N	Daily Cover/Landfill Maintenance	Week.: 11/1/21	of	N/A
4-Nov	914.12	N	Daily Cover/Landfill Maintenance	Week 11/1/21	of	N/A
	953.67	N	Daily Cover/Landfill Maintenance	Week 11/1/21	of	N/A

5-Nov	770.65	N	Daily	Week of	N/A
			Cover/Landfill	11/1/21	
			Maintenance		
	927.55	N	Daily	Week of	N/A
	fi.		Cover/Landfill	11/1/21	
	V		Maintenance		
8-Nov	655.48	N	Daily	Week of	N/A
			Cover/Landfill	11/8/21	
			Maintenance		
	1666.935	N	Daily	Week of	N/A
			Cover/Landfill	11/8/21	
			Maintenance		
9-Nov	1320.39	N	Daily	Week of	N/A
			Cover/Landfill	11/8/21	
			Maintenance		
	720.4	N	Daily	Week of	N/A
			Cover/Landfill	11/8/21	
			Maintenance		
10-Nov	982.98	N	Daily	Week of	N/A
			Cover/Landfill	11/8/21	
			Maintenance		
	1447.68	N	Daily	Week of	N/A
			Cover/Landfill	11/8/21	
			Maintenance		
11-Nov	2361.13	N	Daily	Week of	N/A
			Cover/Landfill	11/8/21	
			Maintenance		
12-Nov	911.35	N	Daily	Week of	N/A
			Cover/Landfill	11/8/21	
			Maintenance		
	1565.07	N	Daily	Week of	N/A
			Cover/Landfill	11/8/21	
			Maintenance		
13-Nov	123.95	N	Daily	Week of	N/A
	h h		Cover/Landfill	11/8/21	
			Maintenance		

15-Nov	268.17	N	Daily Cover/Landfill	Week of 11/15/21	N/A
			Maintenance		
	2200.77	N .	Daily	Week of	N/A
			Cover/Landfill	11/15/21	1
	V.		Maintenance		
16-Nov	706.98	N	Daily	Week of	N/A
	-	1	Cover/Landfill	11/15/21	•
			Maintenance		
	1718.85	N	Daily	Week of	N/A
			Cover/Landfill	11/15/21	
			Maintenance		
17-Nov	547.8	N	Daily	Week of	N/A
			Cover/Landfill	11/15/21	100000000
			Maintenance		
	1814.5	N	Daily	Week of	N/A
			Cover/Landfill	11/15/21	
			Maintenance		
18-Nov	717.81	N	Daily	Week of	N/A
	18		Cover/Landfill	11/15/21	*
			Maintenance		
	1674.13	N	Daily	Week of	N/A
		1	Cover/Landfill	11/15/21	
	1		Maintenance	11113121	
19-Nov	1075.37	N	Daily	Week of	N/A
15 1101	1073.37	1.	Cover/Landfill	11/15/21	1477
			Maintenance	11/13/21	
20-Nov	196	N	Daily	Week of	N/A
201101	150	1 ***	Cover/Landfill	11/15/21	14//
			Maintenance	11/13/21	
22-Nov	786.7	N	Daily	Week of	N/A
22-INUV	700.7	IN	Cover/Landfill	11/22/21	14/74
			Maintenance	11/22/21	
	600 55	NI		Mast: -f	NI/A
	688.55	N	Daily	Week of	N/A
			Cover/Landfill	11/22/21	
			Maintenance		

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23-Nov	194.24	N	Daily	Week of	N/A
			Cover/Landfill	11/22/21	
			Maintenance		
	533.36	N	Daily	Week of	N/A
			Cover/Landfill	11/22/21	201
			Maintenance		
24-Nov	1075.26	N	Daily	Week of	N/A
			Cover/Landfill	11/22/21	
			Maintenance		
26-Nov	112.32	N	Daily	Week of	N/A
			Cover/Landfill	11/22/21	
			Maintenance		
29-Nov	886.58	N	Daily	Week of	N/A
			Cover/Landfill	11/29/21	
			Maintenance		
	384.67	N	Daily	Week of	N/A
-			Cover/Landfill	11/29/21	
			Maintenance		
30-Nov	828.85	N	Daily	Week of	N/A
	= ~		Cover/Landfill	11/29/21	
			Maintenance		
	133.67	N	Daily	Week of	N/A
			Cover/Landfill	11/29/21	
			Maintenance		
TOTAL	35903.835				

<sup>&</sup>lt;sup>6</sup>From November 1 through November 30<sup>th</sup> material was received from: Pacoima Spreading Grounds, Pena, CWS, Santa Monica

As shown in Tables 1 through 6 above, the daily tonnage of import did not exceed 2,500 on any given day. All of the material imported was utilized for daily cover and other daily maintenance activities, such as road and gas infrastructure maintenance. To date, no material from the import has been stockpiled on-site for future use. When material is delivered, it is staged in a designated area of cell CC4-Part 3 for easier accessibility to the operations team. The staging area is identified in the map in Attachment A of this summary. However, during the reporting period, no material has remained in this staging area longer than one week. In the future, should any material be stockpiled on-site for future use, the subsequent Semi-Annual Summary will include a map indicating the location and quantity of the stockpile.

The next Semi-Annual Summary will be provided to DPW by June 15, 2022 and will cover import activities from December 2021 through May 2022.

Should you have any questions please don't hesitate to reach me at 818.362.2141.

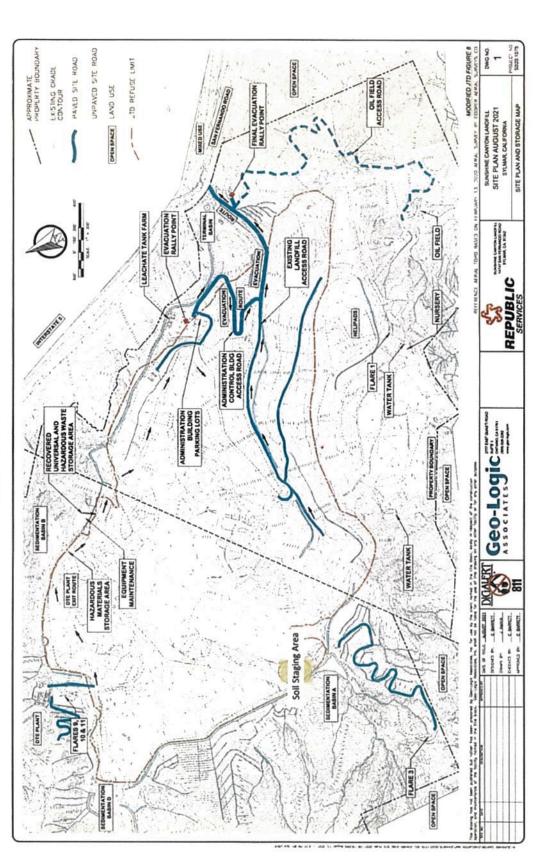
Sincerely,

Chas Coyle General Manager

Sunshine Canyon Landfill

Copies To: Michael Harmon Dave Nguyen Gabriel Esparza Vu Truong Omid Mazdiyasni

14747 San Fernando Road Sylmar, CA 91342 Attachment A



## Enclosure 3

January 31, 2022

Martins Aiyetiwa Los Angeles County Public Works 900 South Fremont Avenue Alhambra, CA 91803-1331

Subject: Sunshine Canyon Landfill – First Semi-Annual Soil Importation

Summary

Dear Mr. Aiyetiwa:

Sunshine Canyon Landfill (SCL) obtained approval from County of Los Angeles Department of Public Works (DPW) to import up to 2,500 tons per day of clean soil material for beneficial use per your letter dated June 15, 2021. Within that approval, a condition was included requiring SCL to provide monthly summaries related to the incoming material on a semi-annual basis, with the first report due six months after date of approval (Condition #s 7 and 8).

The following is the first Semi-Annual Summary, which covers all requested information regarding daily soil import activities from June 15, 2021 through November 30, 2021.

Table 1. June 2021 Daily Import<sup>1</sup>

Date	Quantity (Tons)	Stockpile d (Y/N)	Use of Soil	Dates Usage	of	Stockpile Location
21-Jun	1459.6	N	Daily Cover/Landfill Maintenance	Week 6/21/21	of	N/A
22-Jun	2047.81	N	Daily Cover/Landfill Maintenance	Week 6/21/21	of	N/A
23-Jun	2009.79	N	Daily Cover/Landfill Maintenance	Week 6/21/21	of	N/A
24-Jun	1935.33	N	Daily Cover/Landfill Maintenance	Week 6/21/21	of	N/A
25-Jun	1961.93	N	Daily Cover/Landfill Maintenance	Week 6/21/21	of	N/A
28-Jun	1396.26	N	Daily Cover/Landfill Maintenance	Week 6/28/21	of	N/A

29-Jun	1646.86	N	Daily Cover/Landfill	Week	of	N/A
			Maintenance	6/28/21		
30-Jun	1659.49	N	Daily Cover/Landfill	Week	of	N/A
			Maintenance	6/28/21		
TOTAL	14117.07					

<sup>&</sup>lt;sup>1</sup>June 21 through June 30 material was received from: LA Reservoir

Table 2. July 2021 Daily Import<sup>2</sup>

Date	Quantity	Stockpiled	Use of Soil	Dates	of	•
	(Tons)	(Y/N)		Usage		Location
1-Jul	2067.51	N	Daily	Week	of	N/A
			Cover/Landfill	6/28/21		
			Maintenance			
2-Jul	2029.76	N	Daily	Week	of	N/A
			Cover/Landfill	6/28/21		
			Maintenance			
6-Jul	2048.87	N	Daily	Week	of	N/A
			Cover/Landfill	7/5/21		
			Maintenance			
7-Jul	1965.95	N	Daily	Week	of	N/A
			Cover/Landfill	7/5/21		
			Maintenance			
8-Jul	2227.25	N	Daily	Week	of	N/A
			Cover/Landfill	7/5/21		
			Maintenance			
9-Jul	2059.1	N	Daily	Week	of	N/A
			Cover/Landfill	7/5/21		
			Maintenance			
12-Jul	1969.02	N	Daily	Week	of	N/A
			Cover/Landfill	7/12/21		
			Maintenance			
13-Jul	1995.4	N	Daily	Week	of	N/A
			Cover/Landfill	7/12/21		
			Maintenance			

14-Jul	1745.71	N	Daily Cover/Landfill Maintenance	Week of 7/12/21	N/A
15-Jul	1940.66	N	Daily Cover/Landfill Maintenance	Week of 7/12/21	N/A
16-Jul	1936.05	N	Daily Cover/Landfill Maintenance	Week of 7/12/21	N/A
19-Jul	1930.95	N	Daily Cover/Landfill Maintenance	Week of 7/19/21	N/A
20-Jul	1867.02	N	Daily Cover/Landfill Maintenance	Week of 7/19/21	N/A
21-Jul	1884.65	N	Daily Cover/Landfill Maintenance	Week of 7/19/21	N/A
22-Jul	1911.76	N	Daily Cover/Landfill Maintenance	Week of 7/19/21	N/A
23-Jul	2035.83	N	Daily Cover/Landfill Maintenance	Week of 7/26/21	N/A
26-Jul	2216.06	N	Daily Cover/Landfill Maintenance	Week of 7/26/21	N/A
27-Jul	1824.98	N	Daily Cover/Landfill Maintenance	Week of 7/26/21	N/A
28-Jul	1829.75	N	Daily Cover/Landfill Maintenance	Week of 7/26/21	N/A
29-Jul	1977.93	N	Daily Cover/Landfill Maintenance	Week of 7/26/21	N/A

30-Jul	1907.42	N	Daily	Week of	N/A
			Cover/Landfill	7/26/21	
			Maintenance		
TOTAL	41371.63				

<sup>&</sup>lt;sup>2</sup>From July 1 through July 31 material was received from: LA Reservoir

Table 3. August 2021 Daily Import<sup>3</sup>

Date	Quantity (Tons)	Stockpiled (Y/N)	Use of Soil	Dates Usage	of	Stockpile Location
2-Aug	1857.18	N	Daily Cover/Landfill	Week 8/2/21	of	N/A
			Maintenance	0/2/21		
3-Aug	2039.63	N	Daily	Week	of	N/A
			Cover/Landfill Maintenance	8/2/21		
4-Aug	1995.02	N	Daily	Week	of	N/A
			Cover/Landfill Maintenance	8/2/21		
5-Aug	1952.7	N	Daily	Week	of	N/A
			Cover/Landfill Maintenance	8/2/21		
6-Aug	1858.22	N	Daily	Week	of	N/A
			Cover/Landfill	8/2/21		
			Maintenance			
9-Aug	2015.43	N	Daily	Week	of	N/A
			Cover/Landfill	8/9/21		
			Maintenance			
10-	1949.33	N	Daily	Week	of	N/A
Aug			Cover/Landfill	8/9/21		
			Maintenance			
11-	1203	N	Daily	Week	of	N/A
Aug			Cover/Landfill	8/9/21		
			Maintenance			
24-	167.47	N	Daily	Week	of	N/A
Aug			Cover/Landfill	8/23/21		
			Maintenance			

25-	145.27	N	Daily	Week of	N/A
Aug			Cover/Landfill	8/23/21	
			Maintenance		
26-	1017.995	N	Daily	Week of	N/A
Aug			Cover/Landfill	8/23/21	
			Maintenance		
27-	961.02	N	Daily	Week of	N/A
Aug			Cover/Landfill	8/23/21	
			Maintenance		
30-	146.49	N	Daily	Week of	N/A
Aug			Cover/Landfill	8/30/21	
			Maintenance		
31-	251.65	N	Daily	Week of	N/A
Aug			Cover/Landfill	8/30/21	
			Maintenance		
TOTAL	17560.405				

<sup>&</sup>lt;sup>3</sup>From August 1 through August 31 material was received from LA Reservoir, Quest, and CWS

Table 4. September 2021 Daily Import<sup>4</sup>

Date	Quantity	Stockpiled	Use of Soil	Dates	of	Stockpile
	(Tons)	(Y/N)		Usage		Location
1-Sep	868.33	Ν	Daily	Week	of	N/A
			Cover/Landfill	8/30/21		
			Maintenance			
2-Sep	622.2	N	Daily	Week	of	N/A
			Cover/Landfill	8/30/21		
			Maintenance			
3-Sep	451.12	N	Daily	Week	of	N/A
			Cover/Landfill	8/30/21		
			Maintenance			
4-Sep	26.52	Ν	Daily	Week	of	N/A
			Cover/Landfill	8/30/21		
			Maintenance			

7-Sep	1360.22	N	Daily Cover/Landfill Maintenance	Week of 9/6/21	
8-Sep	534.3	N	Daily Cover/Landfill Maintenance	Week of 9/6/21	N/A
9-Sep	904.99	N	Daily Cover/Landfill Maintenance	Week of 9/6/21	N/A
10- Sep	938.05	N	Daily Cover/Landfill Maintenance	Week of 9/6/21	N/A
11- Sep	44.2	N	Daily Cover/Landfill Maintenance	Week of 9/6/21	N/A
13- Sep	1122.3	N	Daily Cover/Landfill Maintenance	Week of 9/13/21	N/A
14- Sep	865.69	N	Daily Cover/Landfill Maintenance	Week of 9/13/21	N/A
15- Sep	547.86	N	Daily Cover/Landfill Maintenance	Week of 9/13/21	N/A
16- Sep	818.65	N	Daily Cover/Landfill Maintenance	Week of 9/13/21	N/A
17- Sep	1152.68	N	Daily Cover/Landfill Maintenance	Week of 9/13/21	N/A
20- Sep	945.04	N	Daily Cover/Landfill Maintenance	Week of 9/20/21	N/A
21- Sep	858.81	N	Daily Cover/Landfill Maintenance	Week of 9/20/21	N/A

22-	932.54	N	Daily	Week	of	N/A
Sep			Cover/Landfill	9/20/21		
'			Maintenance			
23-	1012.54	N	Daily	Week	of	N/A
Sep			Cover/Landfill	9/20/21		
			Maintenance			
24-	670.05	N	Daily	Week	of	N/A
Sep			Cover/Landfill	9/20/21		
			Maintenance			
25-	860.67	N	Daily	Week	of	N/A
Sep			Cover/Landfill	9/20/21		
			Maintenance			
27-	992.66	Ν	Daily	Week	of	N/A
Sep			Cover/Landfill	9/27/21		
			Maintenance			
28-	1039.7	Ν	Daily	Week	of	N/A
Sep			Cover/Landfill	9/27/21		
			Maintenance			
29-	1025.64	Ν	Daily	Week	of	N/A
Sep			Cover/Landfill	9/27/21		
			Maintenance			
30-	630.41	Ν	Daily	Week	of	N/A
Sep			Cover/Landfill	9/27/21		
			Maintenance			
TOTAL	19225.17					

<sup>&</sup>lt;sup>4</sup>From September 1 through September 30 material was received from: Quest, CWS, Santa Monica

Table 5. October 2021 Daily Import<sup>5</sup>

Date	Quantity	Stockpile	Use of Soil	Dates of	Stockpile
	(Tons)	d (Y/N)		Usage	Location
1-Oct	400.62	Ν	Daily	Week of	N/A
			Cover/Landfill	9/27/21	
			Maintenance		

2-Oct	54	N	Daily Cover/Landfill Maintenance	Week of 9/27/21	N/A
4-Oct	594.69	N	Daily Cover/Landfill Maintenance	Week of 10/4/21	N/A
	477.82	N	Daily Cover/Landfill Maintenance	Week of 10/4/21	N/A
5-Oct	1306.14	N	Daily Cover/Landfill Maintenance	Week of 10/4/21	N/A
	54.86	N	Daily Cover/Landfill Maintenance	Week of 10/4/21	N/A
6-Oct	1291.37	N	Daily Cover/Landfill Maintenance	Week of 10/4/21	N/A
	897.1775	N	Daily Cover/Landfill Maintenance	Week of 10/4/21	N/A
7-Oct	1348.24	N	Daily Cover/Landfill Maintenance	Week of 10/4/21	N/A
	690	N	Daily Cover/Landfill Maintenance	Week of 10/4/21	N/A
8-Oct	1327.01	N	Daily Cover/Landfill Maintenance	Week of 10/4/21	N/A
9-Oct	409.03	N	Daily Cover/Landfill Maintenance	Week of 10/4/21	N/A
11-Oct	471.39	N	Daily Cover/Landfill Maintenance	Week of 10/11/21	N/A

12-Oct	1353.88	N	Daily Cover/Landfill Maintenance	Week of 10/11/21	N/A
	178.57	N	Daily Cover/Landfill Maintenance	Week of 10/11/21	N/A
13-Oct	1320.03	N	Daily Cover/Landfill Maintenance	Week of 10/11/21	N/A
	73.97	N	Daily Cover/Landfill Maintenance	Week of 10/11/21	N/A
14-Oct	1296.24	N	Daily Cover/Landfill Maintenance	Week of 10/11/21	N/A
	196.7	N	Daily Cover/Landfill Maintenance	Week of 10/11/21	N/A
15-Oct	1313.16	N	Daily Cover/Landfill Maintenance	Week of 10/11/21	N/A
	235.13	N	Daily Cover/Landfill Maintenance	Week of 10/11/21	N/A
16-Oct	40.86	N	Daily Cover/Landfill Maintenance	Week of 10/11/21	N/A
18-Oct	649.56	N	Daily Cover/Landfill Maintenance	Week of 10/18/21	N/A
	98.16	N	Daily Cover/Landfill Maintenance	Week of 10/18/21	N/A
19-Oct	1223.67	N	Daily Cover/Landfill Maintenance	Week of 10/18/21	N/A

	116.68	N	Daily Cover/Landfill Maintenance	Week of 10/18/21	N/A
20-Oct	1098.99	N	Daily Cover/Landfill Maintenance	Week of 10/18/21	N/A
	176.27	N	Daily Cover/Landfill Maintenance	Week of 10/18/21	N/A
21-Oct	1113.23	N	Daily Cover/Landfill Maintenance	Week of 10/18/21	N/A
	220.1	N	Daily Cover/Landfill Maintenance	Week of 10/18/21	N/A
22-Oct	781.78	N	Daily Cover/Landfill Maintenance	Week of 10/18/21	N/A
	172.35	N	Daily Cover/Landfill Maintenance	Week of 10/18/21	N/A
26-Oct	160.95	N	Daily Cover/Landfill Maintenance	Week of 10/25/21	N/A
27-Oct	978.28	N	Daily Cover/Landfill Maintenance	Week of 10/25/21	N/A
	67.36	N	Daily Cover/Landfill Maintenance	Week of 10/25/21	N/A
28-Oct	908.62	N	Daily Cover/Landfill Maintenance	Week of 10/25/21	N/A
	42.68	N	Daily Cover/Landfill Maintenance	Week of 10/25/21	N/A

29-Oct	818.75	N	Daily	Week of	N/A
			Cover/Landfill	10/25/21	
			Maintenance		
	67.58	Ν	Daily	Week of	N/A
			Cover/Landfill	10/25/21	
			Maintenance		
TOTAL	24025.8975				

<sup>&</sup>lt;sup>5</sup>From October 1 through October 31 material was received from Pacoima Spreading Grounds, CWS, Pena, Santa Monica

Table 6. November 2021 Daily Import<sup>6</sup>

Date	Quantity	Stockpile	Use of Soil	Dates o	•
	(Tons)	d (Y/N)		Usage	Location
1-Nov	648.44	N	Daily	Week o	f N/A
			Cover/Landfill	11/1/21	
			Maintenance		
	282.81	N	Daily	Week o	f N/A
			Cover/Landfill	11/1/21	
			Maintenance		
2-Nov	993.68	N	Daily	Week o	f N/A
			Cover/Landfill	11/1/21	
			Maintenance		
	828.49	N	Daily	Week o	f N/A
			Cover/Landfill	11/1/21	
			Maintenance		
3-Nov	748.7	N	Daily	Week o	f N/A
			Cover/Landfill	11/1/21	
			Maintenance		
	535.78	N	Daily	Week o	f N/A
			Cover/Landfill	11/1/21	
			Maintenance		
4-Nov	914.12	N	Daily	Week o	f N/A
			Cover/Landfill	11/1/21	
			Maintenance		
	953.67	N	Daily	Week o	f N/A
			Cover/Landfill	11/1/21	
			Maintenance		

5-Nov	770.65	N	Daily Cover/Landfill Maintenance	Week of 11/1/21	
	927.55	N	Daily Cover/Landfill Maintenance	Week of 11/1/21	N/A
8-Nov	655.48	N	Daily Cover/Landfill Maintenance	Week of 11/8/21	N/A
	1666.935	N	Daily Cover/Landfill Maintenance	Week of 11/8/21	N/A
9-Nov	1320.39	N	Daily Cover/Landfill Maintenance	Week of 11/8/21	N/A
	720.4	N	Daily Cover/Landfill Maintenance	Week of 11/8/21	N/A
10-Nov	982.98	N	Daily Cover/Landfill Maintenance	Week of 11/8/21	N/A
	1447.68	N	Daily Cover/Landfill Maintenance	Week of 11/8/21	N/A
11-Nov	2361.13	N	Daily Cover/Landfill Maintenance	Week of 11/8/21	N/A
12-Nov	911.35	N	Daily Cover/Landfill Maintenance	Week of 11/8/21	N/A
	1565.07	N	Daily Cover/Landfill Maintenance	Week of 11/8/21	N/A
13-Nov	123.95	N	Daily Cover/Landfill Maintenance	Week of 11/8/21	N/A

15-Nov	268.17	N	Daily Cover/Landfill Maintenance	Week of 11/15/21	N/A
	2200.77	N	Daily Cover/Landfill Maintenance	Week of 11/15/21	N/A
16-Nov	706.98	N	Daily Cover/Landfill Maintenance	Week of 11/15/21	N/A
	1718.85	N	Daily Cover/Landfill Maintenance	Week of 11/15/21	N/A
17-Nov	547.8	N	Daily Cover/Landfill Maintenance	Week of 11/15/21	N/A
	1814.5	N	Daily Cover/Landfill Maintenance	Week of 11/15/21	N/A
18-Nov	717.81	N	Daily Cover/Landfill Maintenance	Week of 11/15/21	N/A
	1674.13	N	Daily Cover/Landfill Maintenance	Week of 11/15/21	N/A
19-Nov	1075.37	N	Daily Cover/Landfill Maintenance	Week of 11/15/21	N/A
20-Nov	196	N	Daily Cover/Landfill Maintenance	Week of 11/15/21	N/A
22-Nov	786.7	N	Daily Cover/Landfill Maintenance	Week of 11/22/21	N/A
	688.55	N	Daily Cover/Landfill Maintenance	Week of 11/22/21	N/A

23-Nov	194.24	N	Daily	Week of	N/A
			Cover/Landfill	11/22/21	
			Maintenance		
	533.36	N	Daily	Week of	N/A
			Cover/Landfill	11/22/21	
			Maintenance		
24-Nov	1075.26	N	Daily	Week of	N/A
			Cover/Landfill	11/22/21	
			Maintenance		
26-Nov	112.32	N	Daily	Week of	N/A
			Cover/Landfill	11/22/21	
			Maintenance		
29-Nov	886.58	Ν	Daily	Week of	N/A
			Cover/Landfill	11/29/21	
			Maintenance		
	384.67	Ν	Daily	Week of	N/A
			Cover/Landfill	11/29/21	
			Maintenance		
30-Nov	828.85	N	Daily	Week of	N/A
			Cover/Landfill	11/29/21	
			Maintenance		
	133.67	N	Daily	Week of	N/A
			Cover/Landfill	11/29/21	
			Maintenance		
TOTAL	35903.835				

<sup>&</sup>lt;sup>6</sup>From November 1 through November 30<sup>th</sup> material was received from: Pacoima Spreading Grounds, Pena, CWS, Santa Monica

As shown in Tables 1 through 6 above, the daily tonnage of import did not exceed 2,500 on any given day. All of the material imported was utilized for daily cover and other daily maintenance activities, such as road and gas infrastructure maintenance. To date, no material from the import has been stockpiled on-site for future use. When material is delivered, it is staged in a designated area of cell CC4-Part 3 for easier accessibility to the operations team. The staging area is identified in the map in Attachment A of this summary. However, during the reporting period, no material has remained in this staging area longer than one week. In the future, should any material be stockpiled on-site for future use, the subsequent Semi-Annual Summary will include a map indicating the location and quantity of the stockpile.

As material is imported, the operations team assesses the current needs of the site and will make real-time decisions to stage for daily cover, or use immediately for road and other maintenance throughout the site. On days where the incoming material exceeds the need for daily cover for the remainder of the week (including Saturday full cover), and road and other maintenance activities, that material will then be stockpiled. Given the site's current shortage and daily needs, we anticipate that material will not be stockpiled in the immediate future. However, an update will be provided as to the status of the stockpile, if any, in the next Semi-Annual Soil Import Summary Report.

Although SCL is currently requesting an increase in import from 2,500 tpd to 3,500 tpd of clean soil, under no circumstances will the site exceed the current inbound volume cap of 12,100 tpd. SCL is able to monitor the inbound tonnage in real time, and can make instantaneous changes to the inbound volumes to ensure that our cap is not exceeded. If necessary, Republic has the ability to divert volume to other disposal sites, or stop receiving material altogether. The site has had approval for 2,500 tpd import of soil since June 2021 and has never exceeded the 12,100 tpd cap due to the volume tracking procedures already in place.

The next Semi-Annual Summary will be provided to DPW by June 15, 2022 and will cover import activities from December 2021 through May 2022.

Should you have any questions please don't hesitate to reach me at 818.362.2141.

Sincerely,

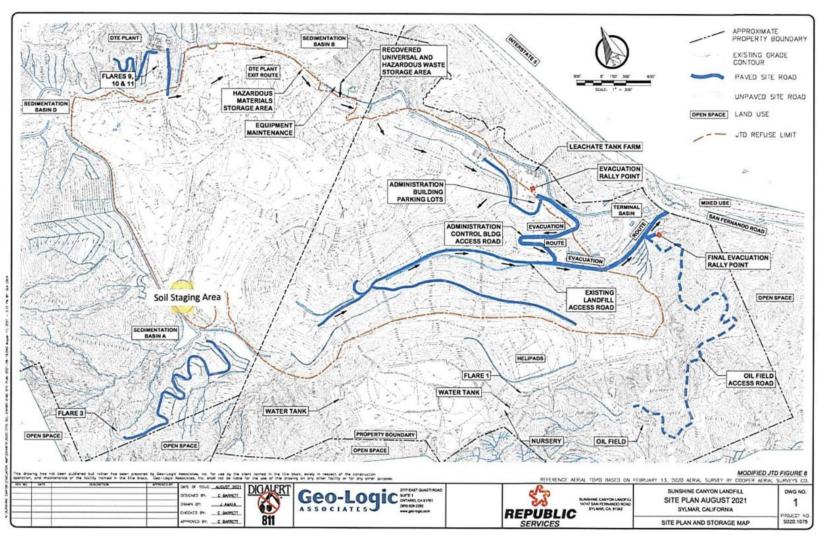
Chris Coyle General Manager Sunshine Canyon Landfill

Copies To: Michael Harmon Dave Nguyen Gabriel Esparza Vu Truong Omid Mazdiyasni





#### Attachment A



# Enclosure 4



#### **COUNTY OF LOS ANGELES**

#### DEPARTMENT OF PUBLIC WORKS

"To Enrich Lives Through Effective and Caring Service"

900 SOUTH FREMONT AVENUE ALHAMBRA, CALIFORNIA 91803-1331 Telephone: (626) 458-5100 http://dpw.lacounty.gov

ADDRESS ALL CORRESPONDENCE TO: P.O. BOX 1460 ALHAMBRA, CALIFORNIA 91802-1460

IN REPLY PLEASE
REFER TO FILE: EP-5

June 15, 2021

Mr. Chris Coyle General Manager Republic Services, Inc. Sunshine Canyon Landfill 14747 San Fernando Road Sylmar, CA 91342-1021

## SUNSHINE CANYON CITY/COUNTY LANDFILL CONDITIONAL USE PERMIT NO. 00-194-(5) AUTHORIZATION TO IMPORT CLEAN SOIL

Dear Mr. Coyle:

Public Works has reviewed Republic Services' revised soil importation request, dated May 21, 2021, (Enclosure 1) and supporting information. Republic submitted the revised request in response to Public Works letter of November 11, 2020, and as further discussed with Public Works on February 23, 2021. The revised request seeks Public Works approval to import clean soil at a maximum rate of 2,500 tons per day to the Sunshine Canyon Landfill, six days per week (Monday – Saturday) for the next five years.

Your request for importation of clean soil for beneficial use at the Landfill is hereby approved pursuant to Conditional Use Permit (CUP) 00-194-(5), Conditions 1.D and 23.E, which requires Republic Services to obtain prior authorization from Public Works prior to importation and acceptance of clean soil material for beneficial use.

This authorization is being granted in order to allow the Landfill to import soil to the site for beneficial uses. Based on your submittal, the volume of on-site soil stockpile will be exhausted in 2021 and importation of soil is necessary for effective landfilling operations at the site. This approval is subject to the following conditions:

- 1. The quantity of soil to be imported shall not exceed the following:
  - o 2,500 tons per day or 15,000 tons per week
  - 3.9 million tons total for the 5-year duration of the project.

- The quantity of soil imported (tonnage) shall be included as part of the total permitted daily and weekly tonnage capacity of materials (Solid Waste, Inert Debris, and Beneficial Use Materials). Pursuant to the CUP, in no event shall the daily tonnage of all materials received by the Landfill exceed 12,100 tons on any given day, six working days per week, nor the total permitted weekly tonnage limit of 72,600 tons per week.
- 2. The soil importation shall occur during the normal operating hours of the site from Monday to Saturday.
- 3. All incoming and departing truck routes associated with this soil importation project shall be limited to the same route from the Interstate 5 Freeway to the Landfill as do loads of refuse, by taking the Roxford Exit and San Fernando Road to the Landfill entrance.
- 4. The imported soil shall be placed adjacent to the working area for immediate usage in a designated location, or if soil is not needed at the working area, it shall be taken to a designated stockpile location as defined in the Landfill's Joint Technical Document. Additionally, all stockpile areas shall be vegetated if left unused longer than 180 days and will require soil stockpile grading and drainage plans to be provided within 30 days from the date of this letter for further review and approval (pursuant to CUP Condition 37).
- 5. The operator shall comply with the currently approved Fugitive Dust Control Program to minimize dust resulting from the importation project.
- 6. The operator shall follow all applicable local, State, and Federal standards and requirements for the importation of clean soil from off-site sources, including but not limited to, the approved Waste Load Checking Program and the Waste Discharge Requirements issued by the California Regional Water Quality Control Board to ensure the imported soil's quality is acceptable under this program and permit.
- Republic shall keep records of all soil materials received, including but not limited to, source of imported soil, quantities accepted/imported and use of onsite soil and purpose, delivery schedules, usage schedules, stockpiled, beneficially used, and disposed of.
- 8. The operator shall submit monthly summaries of these records on a semi-annual basis, including a stockpile location map, to Public Works Environmental Programs

Division for the duration of this project. The first semi-annual report shall be submitted six months from the date of this letter.

9. The Director of Public Works, at his/her sole discretion, may rescind or terminate this approval if Public Works determines that any of the conditions of approval has been violated and/or that such termination is necessary to protect public health, safety, welfare, and/or the environment.

If you have any questions, please contact me or your staff may contact Mr. Gabriel Esparza at (626) 458-4946 or <a href="mailto:gesparza@dpw.lacounty.gov">gesparza@dpw.lacounty.gov</a>, Monday through Thursday, 7:00 a.m. to 5:30 p.m.

Very truly yours,

MARK PESTRELLA, PE Director of Public Works

MARTINS AIYETIWA Senior Civil Engineer

**Environmental Programs Division** 

MA:rw

P:\SEC\RW\EP5\SCL IMPORT SOIL APPROVAL LETTER.DOCX

Enc.

cc: Department of Regional Planning (Edgar De La Torre, Alex Garcia, Maria Masis) City of Los Angeles Department of City Planning (Tiffany Butler, Nicholas Hendricks, Lisa Webber)

Sunshine Canyon Landfill Community Advisory Committee (Wayde Hunter) Sunshine Canyon Landfill Technical Advisory Committee (Lisa Webber, Jon Sanabria)

Sunshine Canyon Landfill Local Enforcement Agency (Dorcas Hanson-Lugo, Shikari Nakagawa-Ota, David Thompson)

Each Member of the Los Angeles County Solid Waste Management Committee Integrated Waste Management Task Force

## Enclosure 5



#### COUNTY OF LOS ANGELES

#### DEPARTMENT OF PUBLIC WORKS

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ADDRESS ALL CORRESPONDENCE TO: P.O. BOX 1460 ALHAMBRA, CALIFORNIA 91802-1460

IN REPLY PLEASE

REFER TO FILE:

EP-5

January 15, 2019

Mr. Chris Coyle, General Manager Sunshine Canyon Landfill Republic Services, Inc. 14747 San Fernando Road Sylmar, CA 91342-1021

Dear Mr. Coyle:

## SUNSHINE CANYON CITY/COUNTY LANDFILL ALTERNATIVE DAILY COVER PILOT PROJECT UTILIZING GEOSYNTHETIC PANEL PRODUCT

On September 21, 2018, Republic Services submitted a Report titled "Evaluation of Alternative Daily Cover (ADC) Using Geosynthetic Panel Product" for the third year of the Pilot Project at Sunshine Canyon Landfill. The report presents the findings for the timeframe of October 1, 2017, to August 31, 2018. The pilot project began on October 12, 2015 and has been approved for two 1-year extensions by Los Angeles County Public Works.

Based on the data and information presented in this report, Public Works hereby approves Republic's request for a modification of the additional corrective measures imposed by Public Works in accordance with Condition 45N of the Conditional Use Permit (CUP) and the use of the geosynthetic panel product as ADC on a permanent basis and the cessation of the pilot project. The approval is subject to the following conditions:

#### **General Conditions of Approval**

Effective Area – These requirements apply to all areas within the "Limits of Fill" of Exhibit "A-2" as defined in the combined "City/County Project" pursuant to the Los Angeles County CUP.

#### Standards and Program Requirements

- ADC Material Specifications The ADC material to be used shall be limited to a non-reusable, geosynthetic Extended Enviro<sup>™</sup> cover with a thickness of 1.75 millimeters, as stated in the Republic Services' orgional proposal. Any proposed change of this ADC material will require prior approval from Public Works.
- 2. <u>Equipment Specifications</u> The Extended Enviro<sup>™</sup> cover shall only be deployed using EPI's extended Enviro<sup>™</sup> Cover System Deployer Model 800 (Deployer). Any proposed change to this equipment will require prior approval from Public Works.
- 3. <u>ADC Material Procedures</u> The ADC material shall only be applied as described in the following restrictions:
  - a. The ADC material shall be applied at the end of each operating day or at more frequent intervals (except Saturday) and shall be left in place at the start of the following day's operations.
    - i. No removal of this ADC material shall be conducted after it is applied at the Working Face.
    - ii. The ADC material will be placed over the entire deck of the operating day's Working Face.
    - iii. The maximum exposure time for the ADC material shall not exceed 5 days.
    - iv. The ADC material shall not be placed on any outside slopes or slopes that will not be part of the operating day's Working Face for longer than 180 days.
    - v. The ADC material shall not be used for intermediate or final cover.
  - b. Six inches of soil shall be used for daily cover at the close of operations on Saturdays and shall remain in place on Monday mornings.
    - i. Republic is allowed "peel back" operations of the soil cover Monday mornings at the Working Face.
    - ii. There shall be no "peel back" in places where the cover soil has been in place for more than 30 days.
    - iii. The "peel back" operations shall be managed in a manner to minimize odors.
    - iv. Only soil may be used as cover on the outside and temporary slopes.

- c. The ADC material will be used on one lift per day.
- d. The maximum size of the Working Face deck area shall be no larger than 3 acres.
- 4. <u>Material Placement</u> The ADC material shall be placed as detailed in Republic Services' Report as follows:
  - a. General Placement Procedure
    - i. The Deployer is loaded with a roll of the Extended Enviro<sup>™</sup> cover and on-site ballast material.
    - ii. The Deployer is positioned on the outside edge of the cover area to deploy the first panel of the ADC material. The outside edge shall be positioned at a minimum of 5 feet from the outside of the waste material.
    - iii. During the application process, the ADC material is unrolled from the Deployer while ballast material is simultaneously discharged at a controlled rate to securely anchor the ADC material onto the Working Face.
    - iv. On successive adjacent runs to deploy the ADC material. The material is placed so that it overlaps by not less than 10 percent, thus forming a compression-type seal creating a continuous closure and impermeable barrier between the waste and the environment.
  - b. Placement During Windy Conditions During high-wind conditions, the following operational measures shall be implemented and maintained:
    - i. Wind direction and speed must be established to better determine how the ADC material will be deployed.
    - ii. Upon determination of the wind direction, the ADC material will be placed parallel to the wind direction to minimize the potential uplifting of the material.
    - iii. Additional overlap of the ADC material can be applied, provided that natural tearing and puncturing of the overlapped material as a result of the heavy equipment operating on top of previously covered trash is maintained.
  - c. Placement During Rainy/Stormy Conditions During rainy/stormy conditions, the following operational measures shall be implemented and maintained:

Mr. Chris Coyle January 15, 2019 Page 4

- i. Intactness of the ballast material shall be maintained to ensure that the ballast material is not washed away by water runoff.
- ii. No ponding on the surface of the ADC material shall occur. If ponding occurs, appropriate measures shall be taken to resolve this issue.
- iii. Placement of the ADC material on the working face shall be appropriately deployed to prevent stormwater run-off underneath the ADC material and to inhibit continuous contact of stormwater on the disposed solid waste.
- d. If conditions such as high-winds or heavy rains prevent compliance with these restrictions and prevent the ADC material from functioning properly, the operator shall cover the Working Face with 9 inches of soil, which shall be kept in place at the beginning of the next operating day. Republic can "peel back" the next day following the same ADC material procedures as on Monday mornings.

Public Works reserves the authority and discretion to modify or apply additional measures to the use of the ADC in the future, as deemed necessary, in accordance with Condition 45N of the Landfill's CUP.

Mr. Chris Coyle January 15, 2019 Page 5

For questions regarding this matter, please contact Mr. David Nguyen of Environmental Programs Division, at (626) 458-5189 or <a href="mailto:dnguyen@dpw.lacounty.gov">dnguyen@dpw.lacounty.gov</a>.

Very truly yours,

MARK PESTRELLA
Director of Public Works

Cases Ref C.
CARLOS RUIZ

Principal Engineer

**Environmental Programs Division** 

MC:il

P:\Sec\01.14.19 ADC Approval of Pilot Project 01.docx

cc: Los Angeles County Department of Regional Planning (Maria Masis, Tim Stapleton)

Los Angeles County Department of Public Health (Shikari Nakagawa-Ota, Maurice Pantoja, Dorcas Hanson-Lugo)

City of Los Angeles Department of City Planning (Tiffany Butler, Nicholas Hendricks)

Sunshine Canyon Landfill Local Enforcement Agency (Shikari Nakagawa-Ota, Maurice Pantoja, Dorcas Hanson-Lugo, David Thompson)

Sunshine Canyon Landfill Technical Advisory Committee (Lisa Webber, Jon Sanabria)

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Members of the Los Angeles County Solid Waste Management Committee/Integrated

Waste Management Task Force



### **COUNTY OF LOS ANGELES**

#### DEPARTMENT OF PUBLIC WORKS

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ADDRESS ALL CORRESPONDENCE TO: P.O. BOX 1460 ALHAMBRA, CALIFORNIA 91802-1460

IN REPLY PLEASE
REFER TO FILE: EP-5

April 27, 2022

Mr. Chris Coyle General Manager Republic Services, Inc. Sunshine Canyon Landfill 14747 San Fernando Road Sylmar, CA 91342-1021

SUNSHINE CANYON CITY/COUNTY LANDFILL CONDITIONAL USE PERMIT NO. 00-194-(5) IMPORTATION OF CLEAN SOIL

Dear Mr. Coyle:

In its February 23, 2022, letter (Enclosure 1), Public Works approved Republic Services to import an additional 500 tons per day (tpd) of clean soil to the Sunshine Canyon Landfill for a maximum of 3,000 tpd. Public Works also indicated that the approval for an additional 500 tpd, in addition to the previous approval for importation of 2,500 tpd, is granted for the sole purpose of making additional soil available to Republic Services for the application of soil cover over the weekend, as required by Sections 3a and 3b of Public Works January 15, 2019, letter regarding approval for the use of Alternative Daily Cover (ADC) (Enclosure 2). Public Works also indicated that Republic Services is required to prioritize the use of the imported soil for the purposes of cover on Saturdays in order to reduce and/or eliminate the odor nuisance impacting the community and to protect public health and safety.

Condition 11 of the February 23, 2022, letter also stated that the soil importation approval of additional 500 tpd shall terminate if Republic Services fails to comply with the January 15, 2019, ADC requirements within 30 days commencing on the date of the February 23, 2022, letter.

The February 23, 2022, letter also reiterated that Republic Services must come into compliance with the January 15, 2019, working face soil cover requirements immediately, or Public Works will refer the matter to the Department of Regional Planning for the issuance of a Notice of Violation.

Mr. Chris Coyle April 27, 2022 Page 2

Since the issuance of the February 23, 2022, letter, Public Works has inspected the Landfill for compliance with Sections 3a and 3b of Public Works January 15, 2019, letter and determined that the Landfill was out of compliance during the weekends of February 26, March 5, 12, 26, April 2, 9, 16, and 23, 2022.

Consequently, per Condition 11 of Public Works February 23, 2022, letter, the approval for additional 500 tpd of soil importation is hereby terminated within 10 days from the date of this letter, and the allowed soil importation shall remain at a maximum rate of 2,500 tpd, as approved in Public Works letter dated June 15, 2021, (see enclosure 3). In any case, Republic Services is required to prioritize the use of the imported soil for the purposes of cover on Saturdays in order to reduce and/or eliminate the odor nuisance impacting the community and to protect public health and safety. However, this approval does not preclude Republic Services from utilizing the remaining volume of soil for other beneficial uses once the Landfill has achieved full compliance with the January 15, 2019, requirements. In addition, the landfill shall continue to abide by all the conditions as prescribed in the June 15, 2021, approval letter and Condition 8 of the June 15, 2021, letter shall be modified as follows:

"Republic Services shall submit summaries of these records on a monthly basis, including a stockpile location map to Public Works Environmental Programs Division for the duration of this project. The monthly reports shall include the weekly tonnage break down of the uses of the import soil and the status of compliance with the weekend soil cover requirements as stated in Sections 3a and 3b of Public Works January 15, 2019, approval for the ADC and other beneficial uses. The first monthly report shall be submitted within 30 days of April 26, 2022".

Mr. Chris Coyle April 27, 2022 Page 3

If you have any questions, please contact me or your staff may contact Mr. David Nguyen at (626) 458-5189 or <a href="mailto:dnguyen@pw.lacounty.gov">dnguyen@pw.lacounty.gov</a>, Monday through Thursday, 7 a.m. to 5:30 p.m.

Very truly yours,

MARK PESTRELLA, PE Director of Public Works

PATRICK HOLLAND

Principal Engineer

**Environmental Programs Division** 

DN:tl

P:\SEC\TL\EP-5\DRAFT SCL IMPORT SOIL LETTER

Enc.

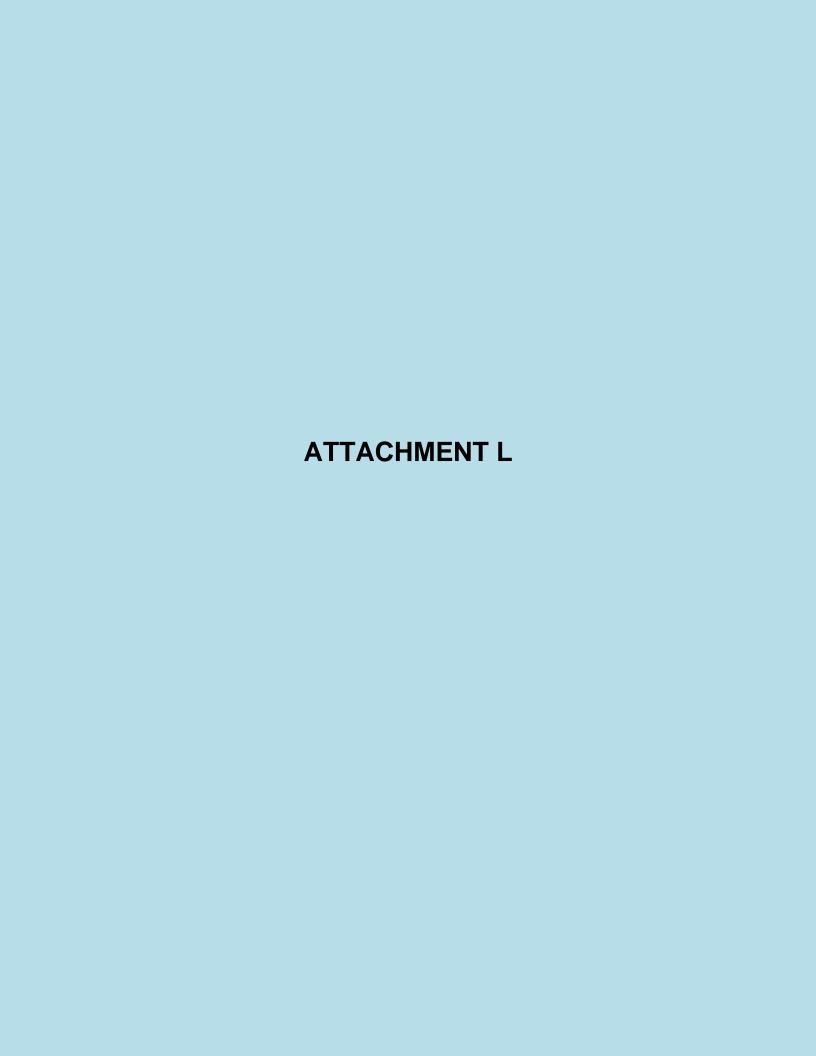
cc: Department of Regional Planning (Edgar De La Torre, Alex Garcia, Maria Masis) City of Los Angeles Department of City Planning (Tiffany Butler, Nicholas Hendricks, Lisa Webber)

Sunshine Canyon Landfill Community Advisory Committee (Wayde Hunter)

Sunshine Canyon Landfill Technical Advisory Committee (Jon Sanabria, Lisa Webber)

Sunshine Canyon Landfill Local Enforcement Agency (Dorcas Hanson-Lugo, Shikari Nakagawa-Ota, David Thompson, Karen Gork)

Each Member of the Los Angeles County Solid Waste Management Committee Integrated Waste Management Task Force



CITY OF LOS ANGELES

CALIFORNIA

ERIC GARCETTI **MAYOR** 

DEPARTMENT OF **BUILDING AND SAFETY** 201 NORTH FIGUEROA STREET LOS ANGELES, CA 90012

OSAMA YOUNAN, P.E. GENERAL MANAGER SUPERINTENDENT OF BUILDING

#### GEOLOGY AND SOILS REPORT APPROVAL LETTER

August 7, 2020

**BOARD OF** 

**BUILDING AND SAFETY** 

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LOG # 112559-01 SOILS/GEOLOGY FILE - 2 LIQ/LAN/AP-Exempt

Republic Services 14747 N. San Fernando Road Sylmar, CA 91344

10422 TRACT:

LOT(S): FR 9 (Arbs. 1 & 2)

LOCATION: 14747 N. San Fernando Road

CURRENT REFERENCE	REPORT	DATE OF	
REPORT/LETTER(S)	No.	<b>DOCUMENT</b>	PREPARED BY
Request for Modification	RFM 27303	08/07/2020	LADBS
Geology/Soils Report	SO19.1200	06/11/2020	Geo-Logic Associates
Oversized Doc(s).	**	**	**

CURRENT REFERENCE	REPORT	DATE OF	
REPORT/LETTER(S)	No.	<b>DOCUMENT</b>	PREPARED BY
Dept. Review Letter	112559	03/31/2020	LADBS
Geology/Soils Report	SO19.1200	03/09/2020	Geo-Logic Associates

The Grading Division of the Department of Building and Safety has reviewed the referenced report that provides recommendations for the proposed termination fill berm ranging up to 200 feet in height, cut slopes ranging up to 100 feet in height, and retaining walls ranging up to 15 feet in height. The new berm will be located at the main entrance area and is intended to expand the capacity of the landfill area to accommodate future municipal solid waste. The fill berm will be at a gradient of 1½:1 (H:V) on the westfacing side of the berm and 13:1 (H:V) on the east-facing side. Additionally, the eastern portion of the berm will range in gradient from 11/4:1 to 2:1 (H:V) to accommodate a new access road. The consultants recommend to support the proposed retaining walls on conventional foundations bearing on properly placed fill and/or competent bedrock.

Subsurface exploration performed by the consultant consisted of six hollow stem borings and one core boring to a maximum depth of 103 feet. The geotechnical exploration was supplemented with borings from groundwater monitoring and gas probe monitoring wells. The earth materials at the subsurface exploration locations consist of up to 75 feet of uncertified fill underlain by alluvium and sandstone and siltstone bedrock. Geologic structure observed by the consultant within the grading area generally consisted of northeast to southeast dipping bedding between 21 and 62 degrees. Groundwater was encountered at a depth of 13 feet at the main entrance area near San Fernando Road.

A "Request for Modification of Building Ordinances" (RFM 27303) has been reviewed and approved by the Department to allow the placement of fill at gradients of 1½:1 and 1¾:1 (H:V) for the construction of the landfill termination berm.

The project is located within a Fault Zone identified by the State of California Alquist-Priolo Act and in a designated seismically induced landslide and liquefaction hazard zones as shown on the Seismic Hazard Zones map issued by the State of California. However, the proposed construction is currently exempt (P/BC 2020-044).

As of January 1, 2020, the City of Los Angeles has adopted the new 2020 Los Angeles Building Code (LABC). The 2020 LABC requirements will apply to all projects where the permit application submittal date is after January 1, 2020.

The referenced report is acceptable, provided the following conditions are complied with during site development:

(Note: Numbers in parenthesis () refer to applicable sections of the 2020 City of LA Building Code. P/BC numbers refer the applicable Information Bulletin. Information Bulletins can be accessed on the internet at LADBS.ORG.)

- 1. Conformance with the Zoning Code Section 12.21 C8, which limits the heights and number of retaining walls, will be determined during structural plan check.
- 2. A detailed geologic mapping of the subgrade slope shall be performed during clearing and grubbing of slopes and during excavations, as recommended on page 34 of the 03/09/2020 report.
- 3. The geologist and soils engineer shall review and approve the detailed plans prior to issuance of any permits. This approval shall be by signature on the plans that clearly indicates the geologist and soils engineer have reviewed the plans prepared by the design engineer and that the plans include the recommendations contained in their reports (7006.1).
- 4. All recommendations of the report that are in addition to or more restrictive than the conditions contained herein shall be incorporated into the plans.
- 5. A copy of the subject and appropriate referenced reports and this approval letter shall be attached to the District Office and field set of plans (7006.1). Submit one copy of the above reports to the Building Department Plan Checker prior to issuance of the permit.
- 6. A grading permit shall be obtained for all structural fill and retaining wall backfill (106.1.2).
- 7. All graded, brushed or bare slopes shall be planted with low-water consumption, native-type plant varieties to protect slopes against erosion (7012).
- 8. All new graded slopes shall be no steeper than 2H:1V, except as specifically approved by the RFM (7010.2 & 7011.2).
- 9. Prior to the issuance of any permit, an accurate volume determination shall be made and included in the final plans, with regard to the amount of earth material to be exported from the site. For grading involving import or export of more than 1000 cubic yards of earth materials within the grading hillside area, approval is required by the Board of Building and Safety. Application for approval of the haul route must be filed with the Board of Building and Safety Commission Office. Processing time for application is approximately 8 weeks to hearing plus 10-day appeal period.
- 10. Man-mad fill placed in the upper 40 feet shall be compacted to a minimum of 90 percent of the maximum dry density and 93 percent below 40 feet.

#### 14747 N. San Fernando Road

- 11. All man-made fill shall be compacted to a minimum 90 percent of the maximum dry density of the fill material per the latest version of ASTM D 1557. Where cohesionless soil having less than 15 percent finer than 0.005 millimeters is used for fill, it shall be compacted to a minimum of 95 percent relative compaction based on maximum dry density. Placement of gravel in lieu of compacted fill is only allowed if complying with LAMC Section 91.7011.3.
- 12. If import soils are used, no footings shall be poured until the soils engineer has submitted a compaction report containing in-place shear test data and settlement data to the Grading Division of the Department; and, obtained approval (7008.2).
- 13. Compacted fill shall extend beyond the footings a minimum distance equal to the depth of the fill below the bottom of footings or a minimum of three feet whichever is greater, except at locations where lateral over excavation is not possible (i.e., foundations adjacent to property lines or structures), in which case the foundations may be deepened to bear in competent bedrock, as recommended (7011.3).
- 14. Existing uncertified fill shall not be used for support of footings, concrete slabs or new fill (1809.2, 7011.3).
- 15. Drainage in conformance with the provisions of the Code shall be maintained during and subsequent to construction (7013.12).
- 16. Grading shall be scheduled for completion prior to the start of the rainy season, or detailed temporary erosion control plans shall be filed in a manner satisfactory to the Grading Division of the Department and the Department of Public Works, Bureau of Engineering, B-Permit Section, for any grading work in excess of 200 cubic yards (7007.1).

6262 Van Nuys Blvd. Ste 351, Van Nuys (818) 374-4605

- 17. The applicant is advised that the approval of this report does not waive the requirements for excavations contained in the General Safety Orders of the California Department of Industrial Relations (3301.1).
- 18. Excavations shall not remove lateral support from a public way, adjacent property or an existing structure. Note: Lateral support shall be considered to be removed when the excavation extends below a plane projected downward at an angle of 45 degrees from the bottom of a footing of an existing structure, from the edge of the public way or an adjacent property. (3307.3.1)
- 19. A supplemental report shall be submitted to the Grading Division of the Department containing recommendations for shoring, underpinning, and sequence of construction in the event that any excavation would remove lateral support to the public way, adjacent property, or adjacent structures (3307.3). A plot plan and cross-section(s) showing the construction type, number of stories, and location of the structures adjacent to the excavation shall be part of the excavation plans (7006.2).
- 20. All foundations shall derive entire support from properly placed fill or competent bedrock, as recommended and approved by the geologist and soils engineer by inspection.
- 21. Foundations adjacent to a descending slope steeper than 3:1 (horizontal to vertical) in gradient shall be a minimum distance of one-third the vertical height of the slope but need not exceed 40 feet measured horizontally from the footing bottom to the face of the slope (1808.7.2).
- 22. Footings supported on approved compacted fill or expansive soil shall be reinforced with a minimum of four (4), ½-inch diameter (#4) deformed reinforcing bars. Two (2) bars shall be placed near the bottom and two (2) bars placed near the top of the footing.

- 23. The foundation/slab design shall satisfy all requirements of the Information Bulletin P/BC 2017-116 "Foundation Design for Expansive Soils" (1803.5.3).
- 24. The seismic design shall be based on a Site Class C as recommended. All other seismic design parameters shall be reviewed by LADBS building plan check.
- 25. Retaining walls shall be designed for the lateral earth pressures specified in Appendix F of the 03/2020 report. All surcharge loads shall be included into the design.
- 26. Retaining walls higher than 6 feet shall be designed for lateral earth pressure due to earthquake motions as specified in Appendix F of the 03/2020 report (1803.5.12).
- 27. Retaining walls at the base of ascending slopes shall be provided with a minimum freeboard of 12 inches, as recommended.
- 28. The recommended equivalent fluid pressure (EFP) for the proposed retaining wall shall apply from the top of the freeboard to the bottom of the wall footing.
- 29. All retaining walls shall be provided with a standard surface backdrain system and all drainage shall be conducted in a non-erosive device to the street in an acceptable manner (7013.11).
- 30. With the exception of retaining walls designed for hydrostatic pressure, all retaining walls shall be provided with a subdrain system to prevent possible hydrostatic pressure behind the wall. Prior to issuance of any permit, the retaining wall subdrain system recommended in the soils report shall be incorporated into the foundation plan which shall be reviewed and approved by the soils engineer of record (1805.4).
- 31. Installation of the subdrain system shall be inspected and approved by the soils engineer of record and the City grading/building inspector (108.9).
- 32. Prefabricated drainage composites (Miradrain, Geotextiles) may be only used in addition to traditionally accepted methods of draining retained earth.
- 33. All concentrated drainage shall be conducted in an approved device and disposed of in a manner approved by the LADBS (7013.10).
- 34. Any recommendations prepared by the geologist and/or the soils engineer for correction of geological hazards found during grading shall be submitted to the Grading Division of the Department for approval prior to use in the field (7008.2, 7008.3).
- 35. The geologist and soils engineer shall inspect all excavations to determine that conditions anticipated in the report have been encountered and to provide recommendations for the correction of hazards found during grading (7008, 1705.6, & 1705.8).
- 36. Prior to pouring concrete, a representative of the consulting soils engineer shall inspect and approve the footing excavations. The representative shall post a notice on the job site for the LADBS Inspector and the Contractor stating that the work inspected meets the conditions of the report. No concrete shall be poured until the LADBS Inspector has also inspected and approved the footing excavations. A written certification to this effect shall be filed with the Grading Division of the Department upon completion of the work. (108.9 & 7008.2)
- 37. Prior to excavation an initial inspection shall be called with the LADBS Inspector. During the initial inspection, the sequence of construction, protection fences, and dust and traffic control will be scheduled (108.9.1).

- 38. Prior to the placing of compacted fill, a representative of the soils engineer shall inspect and approve the bottom excavations. The representative shall post a notice on the job site for the LADBS Inspector and the Contractor stating that the soil inspected meets the conditions of the report. No fill shall be placed until the LADBS Inspector has also inspected and approved the bottom excavations. A written certification to this effect shall be included in the final compaction report filed with the Grading Division of the Department. All fill shall be placed under the inspection and approval of the soils engineer. A compaction report together with the approved soil report and Department approval letter shall be submitted to the Grading Division of the Department upon completion of the compaction. In addition, an Engineer's Certificate of Compliance with the legal description as indicated in the grading permit and the permit number shall be included (7011.3).
- 39. Where foundations and/or slabs are to be supported on certified fill, no footing/slab shall be poured until the compaction report is submitted and approved by the Grading Division of the Department.

EDMOND LEE

Engineering Geologist Associate III

DAN RYANEV INGELISTA

Structural Engineering Associate III

Log No. 112559-01 213-482-0480

cc: Geo-Logic Associates, Project Consultant

VN District Office

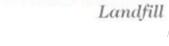
### CITY OF LOS ANGELES DEPARTMENT OF BUILDING AND SAFETY Grading Division

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January 31, 2022

Mr. David Nguyen County of Los Angeles, Department of Public Works 900 South Fremont Avenue Alhambra, CA 91803-1331

Subject: Sunshine Canyon Landfill, Quarterly Vegetation Report

Fourth Quarter 2022 Vegetation Report

Mr. Nguyen,

This report has been prepared in accordance with the following:

- Condition 18B of the Finding of Conformance
- Condition 44A of the Condition Use Permit (CUP)
- Los Angeles City Condition [Q] C.8 of the Ordinance No. 172,933

This report presents the progress of the site's landscaping and revegetation activities for the fourth quarter of 2022. The intent of these reports is to provide detailed information regarding the site's efforts related to vegetation including vegetation of interim and permanent slopes and activities conducted for the on-site sage mitigation areas.

Architerra Design Group continues to assist site personnel in evaluating current site conditions relating to vegetation and provide recommendations for future efforts. This report includes their assessment of the pilot sage vegetation area as well as recommendations for this area. Architerra's evaluation is in addition to the required quarterly monitoring performed by our consulting biologist.

#### 1.0 Interim Slopes

For the purposes of this report, interim slopes are those defined as slope areas where no activities have taken place for 180 days or longer. CUP Condition 44A requires "a temporary hydroseed vegetation cover on any slope or landfill area that is projected to be inactive for a period of greater than 180 days".

#### 1.1 Hydroseeding Activities

Based on the results of the trial project completed in August 2017, a 57-acre vegetative cover project using the approved seed mix was completed in mid-December 2017. Additionally, the site completed hydroseeding approximately 155 acres; application of the approved seed mix was completed during 2019. The increase in hydroseeding application is a result of our normal winterization efforts along with slope revegetation as a result of the Saddle Ridge Fire that impacted Sylmar, CA on October 2019. These areas had successful vegetation growth after the recent rains.

#### 2.0 Permanent Slopes

Permanent slopes are defined as those where no landfilling activities will be conducted in the future.

As part of our Saddle Ridge Fire recovery efforts both the City and County permanent slopes of the landfill had hydroseed applied as necessary. This application of hydroseed was completed for soil stabilization purposes.

#### 3.0 Non-Permanent Cut Slopes

Prior quarterly vegetation reports have illustrated one area above the front terminal sedimentation basin and one area near the temporary bypass road as "non-permanent cut slopes". An evaluation of these areas has been conducted and it has been determined that these areas are "permanent slopes" because no landfilling activities will be conducted against these slopes in the future.

#### 4.0 Activities Conducted in Sage Mitigation Areas – 4Q2022

During the fourth quarter of 2022, the following activities were conducted in the sage mitigation areas at the landfill.

#### 4.1 City South Sage Pilot Project Area – Deck C

The lower Deck C mitigation project area was impacted by the Saddle Ridge fire in October 2019. As noted in Rincon's (formerly JMA) City-Side Sage Mitigation Area Lower Deck report a substantial amount of the lower deck was burned or scorched. However, in previous reports they note that because this was an established site, they expect natural re-establishment of the native vegetation within the first two to three years. Rincon has noted a substantial amount of regrowth has occurred following the fire and included the most prevalent natives such as California Sunflower, Saltbush, Horseweed, and pockets of Wild Ryegrass. Rincon also indicated the intense weeding efforts implemented has greatly reduced the cover of the noxious non-native annual species.

As reported previously, Architerra Design Group indicates that there has been an abundance of Venturan CSS species germinating and crown-sprouting since the fire. The species following the rebound include Purple Sage, Coast Sunflower,

White Sage, Creeping Wild Rye, Deerweed, Black Sage, and Mexican Elderberry. Surprisingly there are also new species from the original seed mix are now sprouting up in decent numbers and included in the list below:

- Purple Sage (Salvia leucophylla)
- Coast Sunflower (Encelia californica)
- White Sage (Salvia apiana)
- Creeping Wild Rye (Leymus triticoides)
- Deerweed (Lotus scoparius)
- Black Sage (Salvia mellifera)
- Mexican Elderberry (Sambucus mexicana)
- Scarlet Bugler (Penstemon centranthifolia)
- Telegraph Weed (Heterotheca grandiflora)
- Monkey Flower (Mimulus aurantiacus)
- Smooth-Leaf Yerba Santa (Eriodictyon trichocalyx)
- Thickleaf Yerba Santa (Eriodictyon crassifolium)
- Sunflower (Helianthus annuus)
- California Bush Sunflower (Encelia californica)
- California Sagebrush (Artemisia californica)
- California Buckwheat (Eriogonum fasciculatum)
- Quail Bush (Atriplex lentiformis)
- Four-Wing Saltbush (Atriplex canescens)
- Cattle Spinach (Atriplex polycarpa)
- Spinescale (Atriplex spinifera)
- Toyon (Heteromeles arbutifolia)
- Foothill Needlegrass (Nassella lepida)
- Coyote Bush (Baccharis pilularis)
- Showy Penstemon (Penstemon spectabilis)
- Wright's Cudweed (Pseudognaphalium microcephalum)
- White Horehound (Marrubium vulgare) Non-Native
- Australian Saltbush (Atriplex semibaccata) Non-Native

As reported from Architerra, early fall rains and cooler temperatures have encouraged the existing Venturan Coastal Sage Scrub to rebound with new growth. This is evident among the group of Coast Sunflower (*Encelia californica*), Mexican Elderberry (*Sambucus Mexicana*), Deerweed (*Acmispon glaber*), White Sage (*Salvia apiana*), Black Sage (*Salvia mellifera*), and Purple Sage (*Salvia leucophylla*) have started to produce new blooms over the last several months. This has also begun the germination period where a mix of native and non-native species are beginning to emerge, creating challenges in identification of species.

Also noted were new emerging seedlings of several invasive species; Shortpod Mustard (*Hirshfeldia incana*), Low Barley (*Hordeum depressum*), and Red Brome Grass (*Bromus madritensis*). It was recommended maintenance personnel work on removing these before they flower and seed. Eucalyptus seedlings are also present and should be removed before they get larger.

The Deck B sage mitigation project began on April 9, 2018 and planting was completed by the end of the fourth quarter 2018. Soil samples indicated low pH and high salinity, as a result Deck B underwent a leaching schedule. Additional soil amendments and resampling were completed before planting began, which took place during the fourth quarter 2018. Pacific Restoration Group, Inc (PRG) has been working with Architerra for the completion of project. A summary of the progress is included in Attachment 3. The northwest portion of the Middle Deck burned during the Saddle Ridge Fire in October 2019. Architerra Design Group (ADG) indicates Deck B is doing quite well and there is evidence of desiccation of the seedlings especially the Common Yarrow and other native species that have recently spouted and are beginning to harden off and defoliate. Architerra have indicated the plant diversity on Deck B is impressive and many of the species in the seed mix have germinated and the containerized plants also are doing well and are blooming or just finished which are the White Sage, Mexican Elderberry, Menzie's Goldenbush, and Prickly Pear.

Architerra reported a large portion of Deck B that burned in the Saddle Ridge Fire, has rebounded back over the last two years. Revegetation efforts have been successful in the establishment of the Venturan Coastal Sage Scrub habitat and evidence of species and age diversity and resprouting of larger species. Several areas struggle to germinate due to soil salinity and salt wicking from recent rains. Architerra has previously indicated that within a few years, evidence of the fire will be virtually unnoticeable in this area. Weed removal has been more successful than Deck C most likely due to timing and native outcompeting exotic species. The fire ecology working within the landfill area and the weeding within this zone has also helped to build this area back to its pre-fire condition.

There are also some isolated areas that have an abundanceof Shortpod Mustard (*Hirshfeldia incana*), Low Barley (*Hordeum depressum*), and Red Brome Grass (*Bromus madritensis*) seedlings. Immediate removal of these new weeds will benefit the establishment of the native seedlings growing on the deck. Some invasive Iceplant species have also begun to establish on the deck; those include Hottentot-fig (*Carpobrotus edulis*) and Slenderleaf Iceplant (*Mesembryanthemum nodiflorum*)

#### 4.3 County Sage Mitigation Area

The County sage mitigation area is located on the western side of the County portion of Sunshine Canyon Landfill (Drawing 1). As noted in the fourth quarter Rincon County-Side Sage Mitigation Area report the upper half of the mitigation site was burned in the Saddle Ridge fire in October of 2019. No revegetation activities were conducted in this area during the fourth quarter of 2022, and as noted in multiple Rincon progress reports, the conditions in this mitigation area have remained unchanged for some time. Rincon notes in their attached 2022 fourth

quarter vegetation report that this area remains problematic for establishment of vegetation due to barren soil. Soil samples from this location indicate low pH, high salinity, and Boron present in native soils. A trail test pilot plan is being evaluated at this time with Architerra.

In December 2022, Conversations with Architerra were started to discuss a plan to address the potential mitigation plans for Deck A. An onsite meeting is planned for January 2023 for an initial assessment of Deck A and determine what will need to be done. We anticipate a tentative schedule to b established in the coming months.

#### 5.0 Assessments of Sage Mitigation Areas

Assessments of the site's sage mitigation areas are conducted by a qualified biologist on a quarterly basis. The following sections present a summary of the recommendations for the sage mitigation areas from Rincon (City and County sage mitigation areas) and Architerra (City South Sage Pilot Project Area (Deck C) and Middle Deck (Deck B) and the proposed actions in response to the recommendations.

#### 5.1 Rincon Recommendations for City Sage Mitigation Areas

Rincon's progress reports for the City Sage Mitigation Areas for the fourth quarter of 2022 are provided in Attachment 1. These reports include recommendations based on the assessments. Table 1 presents a summary of these recommendations and the proposed actions

Table 1 – Rincon Recommendations and Proposed Actions – City Sage Mitigation Areas, Fourth Quarter 2022

AREA		RECOMMENDATION	PROPOSED ACTION		
Lower, Middle, and Upper Decks (Decks C, B, and A)	1	Weed Control – Implement a year-round weed control program to control non- native species.	A weed control program is already in place on Deck C and B as part of the pilot project and will continue. A weed control program on A will be implemented along with the mitigation plans for these areas.		
Lower, Middle Decks (Decks C, B)	2	Irrigation – Reinstall irrigation system if drought conditions continue to the areas to alleviate stress on regrowth	The fourth quarter of 2022 had below rainfall, and therefore irrigation systems be reinstalled to promote germination and growth of native plants.		
Lower, Middle, and Upper Decks (Decks C, B, and A)	3	Prohibit Access – Continue to prohibit vehicle access to mitigation areas.	Repairs to the T-post fencing will be made as needed.		
Upper Deck (Deck A)	3	Improve root zone and soil conditions	This will be addressed when the plans for Deck A is developed. Actions were taken to address improving the root zone in Decks B & C; it is expected that similar actions will be incorporated into the plans for Deck A.		
Upper Deck (Deck A)	4	Plant natives in areas dominated with non- natives	This will be addressed when the plans for Deck A are developed. Various planting methods were used for the construction of the pilot project on Decks B & C; it is expected that similar actions will be incorporated into the plans for Deck A.		
Upper Deck (Deck A)	5	Reseeding – apply native seeds during the rainy season after soil mounds have been established	This will be addressed when plans for Deck A are developed.		

Rincon also recommended that a monitoring biologist should be present during weed control activities or the native plants should be flagged to ensure only non-native species are removed. A monitoring biologist will be consulted prior to any weed control activities to ensure native plants are protected.

Architerra and Rincon continue to provide support to the Oakridge maintenance personnel to assist in removal of the invasive weeds on both Deck B and C.

Architerra has pointed out some of the more aggressive weeds that have flourished since the Saddle Ridge Fire. Architerra provided them with images of the invasive weeds to help identify and target these invasive species. Oakridge Landscape have been diligently removing Russian Thistle, Wild Oat, Shortpod Mustard, Red Brome Grass, False Barley, Tree Tobabcco, and Yellow Star Thistle that took hold in the burned barren areas.

#### 5.2 Rincon Recommendations for County Sage Mitigation Area

Table 2 presents a summary of the recommendations proposed by Rincon based on the assessment of the County Sage Mitigation Area and the proposed actions. Please refer to the full recommendations in the Rincon reports in Attachment 2.

Table 2 – Rincon Recommendations and Proposed Actions – County Sage
Mitigation Area, Fourth Quarter 2022

Mitigation Area, Fourth Quarter 2022							
AREA	REG	COMMENDATION	PROPOSED ACTION				
County Sage Mitigation Area	1	Create benches to control soil erosion and improve soil conditions to improve plant establishment and seed dispersal	Rincon and ADG are evaluating recommendations from the County Task Force and UltraSystems.				
County Sage Mitigation Area	2	Reseed and plant container plants	A trail test pilot plan will be discussed with California Native shrubs.				
County Sage Mitigation Area	3	Use soil amendments	A trial test plot would need to be developed. This recommendation will be considered at a later date.				
County Sage Mitigation Area	5	Signage – Install signage indicating revegetation efforts.	Due to the slopes, stormwater channel and overall difficulty to access this area, personnel are limited to access this area.				
County Sage Mitigation Area	6	Weed Control – Continue weeding as needed on a quarterly basis.	Personnel continues to evaluate the current status.				
County Sage Mitigation Area	7	Prohibit Access – continue to prohibit vehicle access to mitigation deck.	Upper entrance has a locked gate, no further action is required.				

5.3 Architerra Inspection for City South Sage Mitigation Pilot Project Area – Fourth Quarter 2022

The inspection report is included in Attachment 3 along with photos of the area taken at the photo stations.

#### 5.4 Quarterly Assessment of City South Sage Pilot Project Area

The methodology for assessment of the City South Sage Pilot Project Area developed by Rincon (formerly JMA) was included in the first quarter 2015 Vegetation Report. The evaluation report for the fourth quarter of 2022 based on this methodology is included in Attachment 4 and Attachment 5 for Deck C and Deck B, respectively.

#### 6.0 Status of Other Vegetated Areas

#### Big Cone Douglas Fir Tree Mitigation

As reported in the vegetation report for the first quarter of 2015, 200 Big Cone Douglas fir tree saplings were planted the third week of March 2015. These big cone Douglas fir pine trees continue to be monitored and maintenance activities will be conducted in this mitigation area for 2022 and into the future.

A meeting with Rincon biologist was conducted on November 18, 2022 at the Big Cone Mitigation area. We will begin to work with local nurseries to help replace and replant some of the existing dead big cone pine and canyon oak. We are also evaluating a new location for planting more big cone pines and canyon oak in this area, and finally to establish healthy big cone pine and canyon oak in a timely established schedule. We look forward to working with the LA County forester, local nurseries in 2023.

#### PM10 Berm

Republic Services hosted an Adopt-A-Tree event for employees and their family members. On Saturday, November 14<sup>th</sup>, 2020, at 2:00 pm, Fourteen (14) Coast Live Oak trees were planted in critical areas of the PM10 Berm that was damaged during the Saddleridge Fire. Architerra and JMA (i.e. Rincon) assisted in the planting efforts with their expertise and knowledge of tree growth and ideal planting locations. Republic Services will consider hosting more Adopt-A-Tree events in the near future.



#### Front Entrance Toe Berm

The proposed project involves the development of a landfill termination berm and construction of a roadway. There were 20 coast live oak trees surveyed within the project footprint by Rincon and project leads. One of the oak trees was dead, and all of them would be removed by the project activities. There are currently 48 coast live oak trees in the landfill's mitigation bank. As noted, the 20 coast live oak trees would be removed by the proposed project, therefore at a mitigation ratio of 2:1, a total of 40 coast live oak trees will be deducted from the landfill's oak tree mitigation bank, leaving 4 oak trees remaining in the bank for future removals at the landfill, if needed. A report detailing the survey is located in Attachment 6.

#### **Donation to Local Community**

As part of community outreach, a rancher in the area asked if he could plant some oaks trees on his ranch nearby, and Sunshine Canyon agreed it would be a great idea. Thereafter on September 9<sup>th</sup> 2021, twenty-two (22) coast live oaks and two sycamores were donated from the Sunshine Canyon nursery and given to the rancher. The rancher mentioned the oak trees shall provide shade for his livestock and beautify the surrounding private property and was very pleased with the trees.



Please do not hesitate to contact me at (661) 208-9796 if you have any questions.

Regards,

Paul D. Koster II

**Environmental Manager** 

Sunshine Canyon Landfill

Cc: Ms. Dorcas Dee Hanson-Lugo, SCL LEA

Mr. David Thompson, SCL LEA

Ms. Tiffany Butler, City of Los Angeles, Department of City Planning

Ms. Devon Zatorski, City of Los Angeles Department of City Planning

Ms. Ly Lam, City of Los Angeles, Department of City Planning

Mr. Nicholas Hendricks, City of Los Angeles, Department of City Planning

Dr. Wen Yang, Los Angeles Regional Water Quality Control Board

Ms. Maria Masis, County of Los Angeles, Department of Regional Planning

Mr. Wayde Hunter, SCL CAC

Mr. Jim Aidukus, UltraSystems

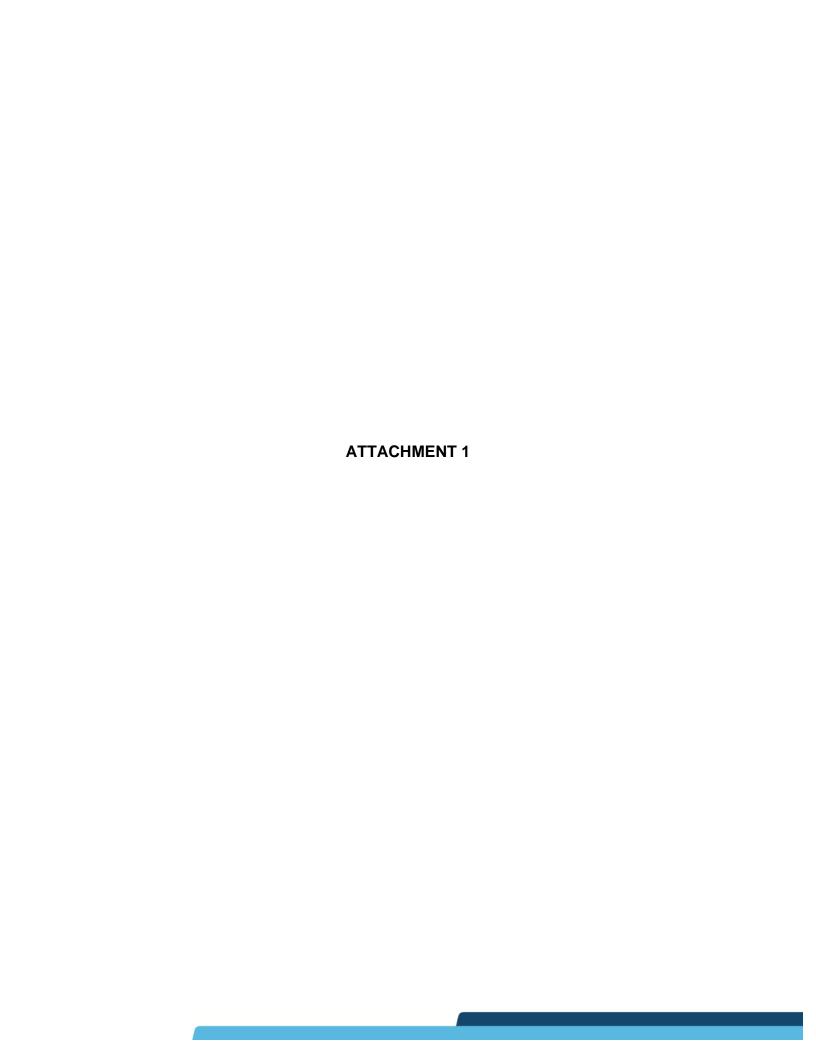
County DPW Landfill Unit

#### Attachments

Attachment 1 Rincon Progress Report, 3Q2022 City-Side Sage Mitigation Area Rincon Progress Report, 3Q2022 County-Side Sage Mitigation Area Attachment 2 Attachment 3 Architerra Design Group, Field Observation Report, South City Sage Mitigation Pilot Project - 3Q2022 with Photo Log Attachment 4 Rincon Quarterly Monitoring Report - Coastal Sage Scrub Deck C Pilot Study, 3Q2022 Attachment 5 Rincon Quarterly Monitoring Report - Coastal Sage Scrub Deck B Pilot Study, 3Q2022 Rincon Sunshine Canyon Landfill Ultimate Entry Improvement Attachment 6 Project, Oak Tree Survey Report

## Drawing

Drawing 1 Site Vegetation Status and Activity





Rincon Consultants, Inc.

180 North Ashwood Avenue Ventura, California 93003

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info@rinconconsultants.com www.rinconconsultants.com

December 30, 2022 Project No: 21-11086

Kate Downey Environmental Manager Republic Services 14747 San Fernando Road Sylmar, California 91342

Via email: KDowney@republicservices.com

Subject: Qualitative Monitoring Report for the City-Side Sage Mitigation Area - 4<sup>th</sup> Quarter 2022

Sunshine Canyon Landfill, Sylmar, California

Dear Ms. Downey,

On December 15, 2022, Rincon Consultants conducted the fourth quarter qualitative monitoring of 2022 for the Republic Services City-Side Sage Mitigation Area. This report qualitatively documents the current conditions of the City-Side Sage Mitigation Area with regards to the Landfill's coastal sage scrub restoration efforts. The City-Side Sage Mitigation Area consists of the Lower Deck, Middle Deck, and Upper Deck (including slope between middle and upper decks), which are discussed in detail below.

# **General Conditions**

#### Lower Deck

In 2014, the Landfill initiated a pilot study at the Lower Deck (Deck C) to assess three different seeding applications of native species that included hand broadcasting, imprinting, and hydroseeding. Some container plants were also planted at the Lower Deck, but in low quantities. Germination, establishment, and natural recruitment of native plants ensued; however, the Lower Deck and surrounding area burned during the Saddleridge Fire in October 2019. The fire burned a substantial amount of the Lower Deck, scorching some of the vegetation entirely and partially burning some of the vegetation. The fire also burned the irrigation system, and the vegetation has been without supplemental water ever since.

A substantial amount of regrowth has occurred following the fire, including germination from the seed bank in the soil and resprouting of below- and above-ground plant parts. The Lower Deck appears to have almost fully recovered from the fire. The most prevalent native plant species observed within the Lower Deck in the fourth quarter of 2022 was California sunflower (*Encelia californica*), followed by big saltbush (*Atriplex lentiformis*), allscale saltbush (*Atriplex polycarpa*), and beardless wild rye (*Elymus triticoides*). Immediately following the Saddleridge Fire, areas that were previously dominated with saltbush species were largely replaced by mats of non-native grasses such as red brome (*Bromus rubens*), ripgut brome (*Bromus diandrus*), foxtail barley (*Hordeum murinum*), and non-native forbs such as redstem filaree (*Erodium cicutarium*). Native shrub species have resprouted and are almost fully reestablished, and have shown signs of continuous growth since the fire.



Exotic annual plant species, which declined between the second and third quarters of 2022, have increased in cover between the third and fourth quarters of 2022 because of early December rainfall events. Exotic annual plant species were observed germinating in high quantities in the Lower Deck in the fourth quarter of 2022. Exotic annual plants appear to be successfully managed through hand pulling and ongoing weed control activities. However, some native grass species (i.e., beardless wild rye) have also been inadvertently cut and may have been misidentified as non-native species during the weed control activities. Non-native plant species cover is anticipated to increase throughout the winter months and into the spring of 2023 as a result of increased rainfall. The majority of non-native vegetation observed at the Lower Deck in the fourth quarter of 2022 consisted of non-native annual grasses, short podded mustard (*Hirschfeldia incana*), redstem filaree, Russian thistle (*Salsola tragus*), and tocalote (*Centaurea melitensis*). Most non-native plant species were observed germinating during the fourth quarter of 2022.

## Middle Deck

In 2019, the Landfill initiated a pilot study at the Middle Deck (Deck B) to assess germination and establishment rates (e.g., percent cover) of soil imprinting and broadcast seeding methods. Some container plants were also planted at the Middle Deck, but in low quantities. Germination and establishment of native plants ensued; however, there was not much evidence of natural recruitment due to the short timeframe from when the deck was seeded to when it burned during the Saddleridge Fire, which also decimated the irrigation system.

As described in previous monitoring reports, the vegetation composition at the Middle Deck before the Saddleridge Fire was approximately 35 percent of sage scrub plantings/seedlings and 30 percent non-native grasses. The remainder of the area was comprised of bare ground and/or rock substrate. A substantial amount of the planted vegetation on the Middle Deck burned in the fire; however, a large amount has resprouted and appears to have almost fully recovered. Native vegetation observed at the Middle Deck consists of woody species such as brittlebush (*Encelia farinosa*), scarlet burglar (*Penstemon centranthifolius*), deerweed (*Acmispon glaber*), California buckwheat (*Eriogonum fasciculatum*), California sagebrush (*Artemisia californica*), coastal goldenbush (*Isocoma menziesii*), white sage (*Salvia apiana*), coyote brush (*Baccharis pilularis*), and herbaceous species such as beardless wild rye. Of all the observed native species, brittlebush, coastal goldenbush, and deerweed have shown the greatest increase in abundance since the fire. Almost all native shrub species had set seed by the fourth quarter monitoring event of 2022.

Non-native plant establishment was also observed within the Middle Deck; however, this establishment is lower than what has been observed within the Lower Deck. Non-native plants observed include exotic grasses such as foxtail barley, Mediterranean grass (*Schismus arabicus*), red brome, and forbs such as short podded mustard, tocalote, redstem filaree, and small flowered iceplant (*Mesembryanthemum nodiflorum*). These species were observed germinating during the fourth quarter of 2022. In general, non-native weed cover is low to moderate, and has slightly increased since the third quarter of 2022 as a result of recent rainfall events. Non-native plants are anticipated to increase throughout the winter of 2022 as they continue to establish.

# **Upper Deck**

Overall, the Upper Deck (Deck A) continues to be sparsely covered with native vegetation, and total vegetation coverage (native and non-native) is generally sparse due to compacted and poor soil

conditions. However, in the southern-center of the Upper Deck, vegetation cover is higher than in other areas and includes native species such as California buckwheat, as well as non-native species such as foxtail barley, redstem filaree, and Australian saltbush (*Atriplex semibaccata*). The presence of vegetation in the southern-center portion of the Upper Deck generally demonstrates that the soils in this area are suitable for supporting vegetation, both native and exotic. However, the soils elsewhere on the Upper Deck appear to be heavily compacted and gravelly, and vegetation coverage in these areas is sparse. Evidence of previous seeding is no longer discernible within the portions of the Upper Deck where plant establishment is visibly poor.

Non-native herbaceous species that dominate the Upper Deck currently include wild oats (*Avena fatua*), Russian thistle, ripgut brome, red brome, short podded mustard, and redstem filaree. California buckwheat is the most dominant native perennial woody plant species on the Upper Deck, and it had completely set seed by the fourth quarter of 2022; however, as described in previous monitoring reports, overall natural recruitment of native plant species within the Upper Deck is low due to poor and dry soil conditions.

Table 1 Summary of Observations in the Lower, Middle, and Upper Decks in Fourth Quarter 2022

		Native Plan	Exotic Plant Vegetation			
Location	Native Plant Cover	Plant Health Issues	Height of Native Species	Native Species Richness	Exotic Plant Cover	Phenological State
Lower Deck	Moderate	Recovering from fire, drought	12"-36"	Shrubs: Moderate Herbs: Low	Moderate	Germinating
Middle Deck	Moderate	Recovering from fire, drought	12"-36"	Shrubs: Moderate Herbs: Low	Low to Moderate	Germinating
Upper Deck	Minimal	Poor soils, drought	12"-24"	Shrubs: Low Herbs: Low	High	Germinating

# Recommendations

## Lower and Middle Decks

### **Weed Control**

- Implement a year-round weed control program to control non-native species. The weed control
  program should incorporate both chemical and mechanical control practices and should be
  initiated in the late winter to early spring prior to seed set, which typically occurs between the
  months of February and April. This will prevent further dispersal of exotic plants within the
  Lower and Middle Decks.
- Following weed control, any dead material harboring seeds should be removed to an off-site
  location to the extent feasible. Dense areas covered with red brome, ripgut brome, foxtail
  barley, and short podded mustard should be controlled by removing flowers and immature
  seeds heads before they drop. These areas should be reseeded with native herbaceous species



that are known to grow well in the Lower (and Middle) Decks, such as beardless wild rye and yarrow (Achillea millefolium).

- A qualified biologist should be present during weed control activities or flag the native plants
  that should remain prior to weed control activities to ensure only non-native species are
  removed and to minimize damage to native plant species to the greatest extent feasible. If a
  contractor is responsible for weed control, the contractor should verify with the Landfill that all
  personnel are experienced in native and non-native plant identification.
- Weeding is best performed just before, or at the onset of flowering, but before seed set. If seeds are already present, additional care should be taken to remove the plants with the seeds attached, or the seeds should be removed from the plants prior to the plant removal. A consistent weed abatement schedule will reduce the potential for non-natives to set seed. Soil disturbance should be limited by hand weeding, wherever possible, and weeds should be disposed of off-site to avoid any reinfestation through reseeding or from plant propagules. If hand weeding is not possible, the monitoring biologist should be consulted regarding the appropriate method of weed removal. For example, using mechanical equipment to remove flowers and immature seed heads may be appropriate where dense mats of non-native grasses have established. If there continues to be high incidence of weed infestation, weed control may need to be increased to every four to six weeks. Otherwise, weeds should continue to be monitored and controlled on a quarterly basis.

# Irrigation

The Lower and Middle Decks burned during the Saddleridge Fire in October 2019. The fire
burned the irrigation system that was installed prior to the fire, and the vegetation has been
without supplemental water ever since. Vegetation within the Lower and Middle Decks are
showing signs of desiccation stress due to the persistent drought occurring in southern
California. If drought conditions persist, it is recommended that the irrigation system within the
Lower and Middle Decks are re-installed to promote germination and growth of native plant
species.

#### **Prohibit Access**

• Continue to prohibit vehicle access to mitigation areas.

# Upper Deck

## Improve Root Zone and Soil Conditions

- Continue to investigate ways to import the soil layer to improve the root penetration and saturation zone to enable plant growth in heavily compacted areas. Consider applying soil in random undulations or uneven mounds to improve soil porosity and filtration and to control soluble salts from leaching from existing layer.
- Prior to seeding (broadcast, hydroseeding, or drilling) of native species, incorporate a soil
  amendment or mulch with high organic content by tilling it into the top 12 inches of the existing
  compacted soils to improve soil texture, drainage, porosity, and aerobic conditions. If an organic
  mulch or soil amendment is not feasible or available, incorporate available soil from borrow

sites within the landfill that have the appropriate soil properties, so long as these borrowed soils have been determined to not have toxic conditions, such as boron or high salinity.

#### Plant Natives in Areas Dominated with Non-Natives

• The vegetated areas on the Upper Deck that are currently dominated with non-native annual species have decent soil-texture conditions. These areas are less compacted than adjacent areas that are gravelly and mostly devoid of vegetation. In general, the soil texture within the vegetated areas with non-native vegetation is friable down to approximately 8-12 inches in depth. Various planting methods (i.e., planting container plants and hydroseeding) may be used to re-establish native plants on the Upper Deck where non-natives currently dominate.

# **Weed Control**

- Implement a year-round weed control program to control non-native species. The weed control
  program should incorporate both chemical and mechanical control practices. Following weed
  control, any dead material harboring seeds should be removed to an off-site location to the
  extent feasible.
- A qualified biologist should be present during weed control activities or flag the native plants
  that should remain prior to weed control activities to ensure only non-native species are
  removed and to minimize damage to native plant species to the greatest extent feasible. A
  biologist should verify that the weed removal methodology does not encourage re-colonizing of
  non-native plant species.
- Weeding is best performed just before, or at the onset of flowering, but before seed set. If seeds are already present, additional care should be taken to remove the plants with the seeds attached, or the seeds should be removed from the plants prior to the plant removal. A consistent weed abatement schedule will reduce the potential for non-natives to set seed. Soil disturbance should be limited by hand weeding, wherever possible, and weeds should be disposed of off-site to avoid any reinfestation through reseeding or from plant propagules. If hand weeding is not possible, the monitoring biologist should be consulted regarding the appropriate method of weed removal. For example, using mechanical equipment to remove flowers and immature seed heads may be appropriate where dense mats of non-native grasses have established. If there continues to be high incidence of weed infestation, weed control frequency may need to be increased. Otherwise, weeds should continue to be monitored and controlled on a quarterly basis.

### Reseeding

 Following the application of soil mounds as previously described, apply native seed (by means of broadcast seeding, hydroseeding or drilling) during the rainy season, between December and March, or prior to a forecasted rain event.

### **Prohibit Access**

• Continue to prohibit vehicle access to mitigation areas.



Thank you for the opportunity to work with you on this important project. Please contact Greg Ainsworth if you have questions concerning the contents of this report. He may be reached by telephone at (818) 564-5544, or by email at <a href="mailto:gainsworth@rinconconsultants.com">gainsworth@rinconconsultants.com</a>.

Sincerely,

Rincon Consultants, Inc.

**Greg Ainsworth** 

Natural Resources Director

Kyle Gern Biologist

## **Attachments**

Attachment A Figure 1. Photograph Locations

Attachment B Site Photographs

# Attachment A

Figure 1. Photograph Locations



Figure 1 Photograph Locations



# Attachment B

Site Photographs





Photograph 1. Facing west at Lower Deck. View of eastern limits dominated by Atriplex spp. and California sunflower (December 15, 2022).



**Photograph 2.** Facing east at Lower Deck from western boundary (December 15, 2022).





Photograph 3. Facing east at the Middle Deck from western boundary (December 15, 2022).



**Photograph 4.** Facing west at the easterly-facing slope located between the Middle and Upper Decks. The vegetation on the slopes between the Upper Deck is dominated by California buckwheat (currently vegetative) and non-native annual grasses (December 15, 2022).





**Photograph 5.** Facing northeast at the Upper Deck. This area is compacted and gravelly and continues to be problematic for supporting vegetation. Non-native annual grasses and forbs, and California buckwheat shrubs are evident in the background (December 15, 2022).

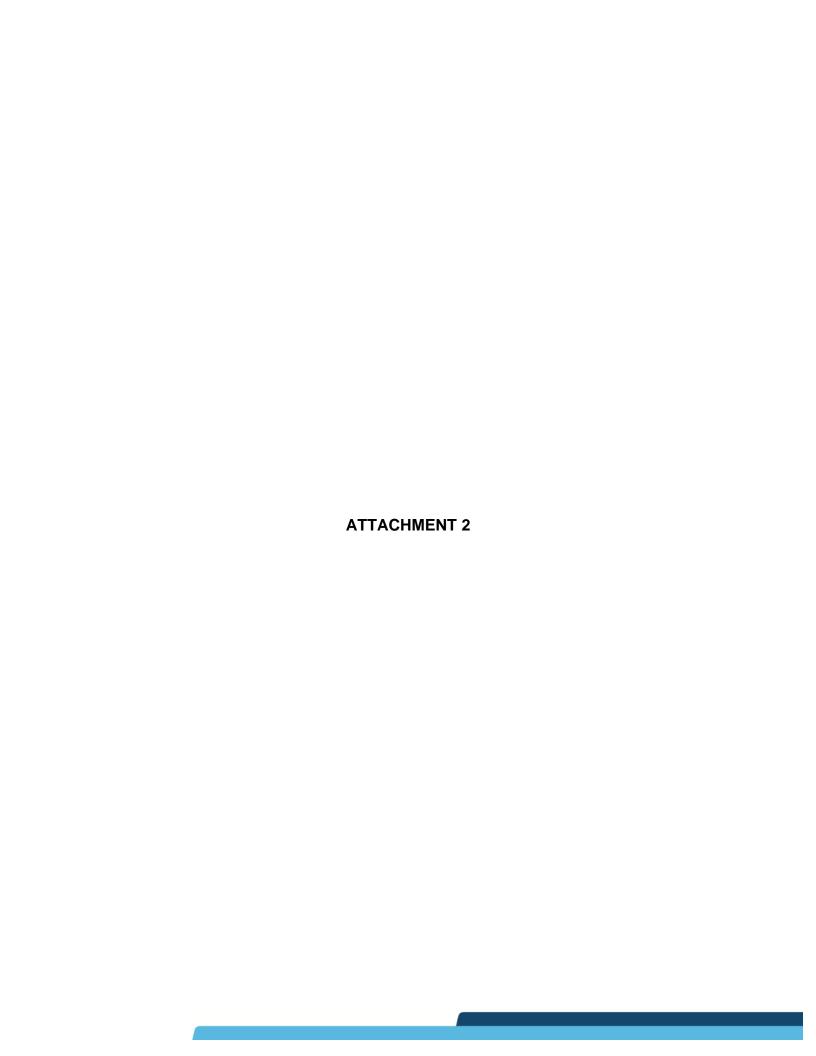


**Photograph 6.** Facing southwest at the Upper Deck. This area is dominated by wild oats, brome grasses, redstem filaree, and short podded mustard (December 15, 2022).





Photograph 7. Facing southeast at the western portion of the Upper Deck. This area is dominated by short podded mustard, Australian saltbush, and Russian thistle (December 15, 2022).





December 30, 2022 Project No: 21-11086

Kate Downey Environmental Manager Republic Services 14747 San Fernando Road Sylmar, California 91342

Via email: KDowney@republicservices.com

Subject: Qualitative Monitoring Report for the County-Side Sage Mitigation Area - 4<sup>th</sup> Quarter 2022

Sunshine Canyon Landfill, Sylmar, California

Dear Ms. Downey,

On December 15, 2022, Rincon Consultants conducted the fourth quarter qualitative monitoring of 2022 for the County-Side Sage Mitigation Area (mitigation area). This report documents the current conditions of the mitigation area.

# **General Conditions**

# Hydroseeded Areas

Germination and plant growth from hydroseeding that occurred several years ago is not discernible in some portions of the mitigation area. Conditions on the mitigation area remain relatively unchanged since the third quarter of 2022. Areas that are moderately covered with native and non-native vegetation are concentrated in the southeastern portion of the mitigation area. The northern and upper portions of the mitigation area continue to be bare and problematic for establishment of vegetation, primarily because of highly eroded soils, steep slopes, and Boron-toxic soils (See *Recommendations* section). However, there are some small patches of vegetation that have established in the northern-central portion of the mitigation area and include shrubs such as California buckwheat (*Eriogonum fasciculatum*), deerweed (*Acmispon glaber*), and California sagebrush (*Artemisia californica*).

Native plant coverage is similar to the previous quarterly monitoring reports. The southern half of the mitigation area has relatively good coverage of native species, mostly California buckwheat and California sunflower (*Encelia californica*). Established laurel sumac (*Malosma laurina*) individuals are present as well. All native shrub species had already set seed and are currently in their vegetative state, while some native herbaceous species (e.g., annual sunflower [*Helianthus annuus*]) are currently setting seed. The native vegetation coverage is assumed to be a direct result of seeding; however, some natural recruitment of native plant species is apparent based on the various sizes of shrubs and the presence of California sunflower seedlings within the understory. Due to rocky (hydrophobic) soil conditions, soil erosion and Boron-toxic soils on the northern-half and upper portions of the mitigation area, minimal plant growth is present. Due to the lack of plant establishment in these areas, erosional features have become prominent following recent rainfall events.

Annual non-native grasses and forbs currently dominate the understory and serve as ground cover in most of the vegetated areas. Brome grasses (*Bromus* spp.), wild oats (*Avena fatua*), short podded

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mustard (*Hirschfeldia incana*), Russian thistle (*Salsola tragus*), and tocalote (*Centaurea melitensis*) are the most dominant non-native species present, and comprise approximately 25 to 30 percent of the total cover. California buckwheat dominates the native vegetation coverage with California sagebrush and California sunflower as co-dominants. Native species comprise of approximately 75 to 80 percent of the native vegetation cover in areas where vegetation is present. Other less dominant native species observed include golden bush (*Ericameria linearifolia*), coyote brush (*Baccharis pilularis*), black sage (*Salvia mellifera*), deerweed, and laurel sumac.

## Seed Mix Areas

Like the hydroseeded areas, germination and plant growth from the seed mix areas that occurred several years ago is not discernible. As described in previous monitoring reports, a substantial portion of the mitigation area continues to be bare and problematic, which has inhibited the establishment and growth of vegetation. However, in areas where vegetation is present, there is a moderate coverage of native species (e.g., California buckwheat and California sunflower).

As described in the *Hydroseeded Areas* discussion above, a moderate cover of native plants exists within vegetated areas in the southeastern portion of the mitigation area, and annual non-native grasses and forbs currently dominate the understory.

### Native Plant Conditions

The plant cover rating indicated further below in



Table 1 applies where vegetation is dominant in the southeastern portion of the mitigation area. Vegetation cover is moderate in the southeastern portion of the mitigation area and sparse along the upper slopes where rocky and eroded soil conditions occur, and in the northern portion of the mitigation area due to problematic soil conditions. As a result, most of the northern and upper portions of the mitigation area continue to have minimal coverage. Native vegetation coverage is good in vegetated areas and non-native plant cover is relatively low. Bare areas and non-native annual grasses are intermixed; however, as noted the northern and upper areas continue to be mostly bare where erosion and rocks are apparent.

California buckwheat is dominant and California sunflower is sub-dominant. Establishment of vegetation is problematic due to rocky soils with poor soil structure, and Boron toxicity has made plant growth (i.e., seed germination and recruitment) difficult. The species richness is low to medium within vegetated areas; however, species richness is considerably low when considering the entire county-sage mitigation area.

### **Exotic Plant Conditions**

Annual non-native weed species consist primarily of brome grasses, wild oats, and mustards, which have already set seed. Non-native plant cover is anticipated to increase throughout the winter months from increased rainfall. Other established weeds that were observed include redstem filaree (*Erodium cicutarium*) and telegraph weed (*Heterotheca grandiflora*; a weedy native plant species).

Table 1 Summary of Native and Exotic Plant Cover in the County-Side Sage Mitigation Area in Fourth Quarter 2022

		Native P	Exotic Plant Vegetation			
Location	Native Plant Cover	Plant Health Issues	Height of Native Species	Native Species Richness	Exotic Plant Cover	Phenological State
County-Side Sage Mitigation Area	Moderate	Drought	12"-36"	Medium	Moderate	Germinating

# Recommendations

The following recommendations within the County-Side Sage Mitigation are suggested based upon the field survey conducted in the fourth quarter of 2022.

- Create Benches. Consider creation of several benches throughout the mitigation area to control soil erosion and to improve soil conditions to improve plant establishment and seed dispersal. This technique has been widely used on steep slopes and in areas where soil erosion is problematic. This technique also allows for opportunities to introduce a high-quality soil layer above the poor soils that exist.
- Reseed and Plant Container Plants With Irrigation. If creation of benches is feasible, planting methods should include hydroseeding, broadcast seeding, and/or imprinting no more than 10 days prior to a forecasted rain event, unless an irrigation system is installed. Planting with container plants with supplemental irrigation should also be considered.
- Use Soil Amendments. Incorporate a soil amendment or mulch with high organic content in select areas as determined by a restoration specialist.
- **Signage.** Install signs indicating that the area is undergoing revegetation.
- Weed Control. Continue weed control program as needed on a quarterly basis.
- Prohibit Access. Prohibit equipment access to mitigation area.

Thank you for the opportunity to work with you on this important project. Please contact Greg Ainsworth if you have questions concerning the contents of this report. He may be reached by telephone at (818) 564-5544, or by email at <a href="mailto:gainsworth@rinconconsultants.com">gainsworth@rinconconsultants.com</a>.

Sincerely,

Rincon Consultants, Inc.

Greg Ainsworth

Natural Resources Director

Kyle Gern Biologist

#### **Attachments**

Attachment A Figure 1. Photograph Locations

Attachment B Site Photographs

# Attachment A

Figure 1. Photograph Locations



Figure 1 Photograph Locations



# Attachment B

Site Photographs





Photograph 1. Facing southwest at the County-Side Sage Mitigation Area (December 15, 2022).



Photograph 2. Facing northwest at the northern portion of the County-Side Sage Mitigation Area where plant growth has been problematic due to poor soil conditions (December 15, 2022).



### ARCHITERRA DESIGN GROUP

### FIELD OBSERVATION REPORT

DATE OF VISIT:	12/27/22
PROJECT:	Sunshine Canyon Mitigation Sites
PROJECT NUMBER:	1214
PROJECT MANAGER:	Gregg Denson
SITE INSPECTION #:	
PURPOSE OF VISIT:	Review site conditions/Photo Catalog
TIME OF SITE VISIT:	9:30am
WEATHER/TEMPERATURE:	Sunny 55°
ESTIMATED % COMPLETED:	100%
CONFORMANCE WITH SCHEDULE (+, -)	

WORK IN PROGRESS:	Weed abatement / Monitoring Period /Construction Observation
PRESENT ON SITE:	Gregg Denson

A site visit walk and evaluation has been completed to review the Venturan CSS vegetation establishment on the Trial Site (Deck C), Deck B and County Mitigation Slopes. Additional items noted during the site visit are as follows:

#### City-Side Sage Mitigation (Trial Site Deck C):

- Cooler Fall temperatures and an abundance of early rainfall have encouraged the
  existing Venturan Coastal Sage Scrub to rebound in new growth after the summer/early
  fall dormancy period. Newly germinated seedlings can be found throughout the deck,
  along with exotic weed growth. Coast Sunflower (Encelia californica), Mexican
  Elderberry (Sambucus Mexicana), Deerweed (Acmispon glaber), White Sage (Salvia
  apiana), Black Sage (Salvia mellifera), and Purple Sage (Salvia leucophylla), have been
  producing new foliage over the last few months and some plants are even beginning to
  bloom.
- There are now new emerging seedlings taking hold on the deck due to the cooler temperatures and moist soil conditions. Shortpod Mustard (Hirshfeldia incana), Low Barley (Hordeum depressum), and Red Brome Grass (Bromus madritensis) are growing aggressively in many open areas and in the understory of the shrubs and maintenance personnel should focus on the removal of these species before these plants flower and set seed. Russian Thistle (Salsola ssp.) is also actively growing on the eastern side of Deck C. The surrounding PM10 Berm and other perimeter edges should be reviewed, and exotic weeds removed in conjunction with removals on the Deck.
- The drainage areas where the native Creeping Rye Grass (Leymus triticoides) was scalped have emerged with new growth. However, since the area is now more exposed, exotic weeds are also germinating in these areas where they previously did not exist. As

mentioned in the last report, Creeping Rye Grass should be left to naturalize, without being cut, scalped or removed from the deck. Maintenance personnel should be educated to recognize the dormancy stage of this VCSS native, so that it is left untouched in the future.

- New seedlings are emerging from sediment trap areas behind straw wattles that were
  installed after the Saddleridge Fire. There are areas on Deck C, devoid of vegetation. It
  may be beneficial to install additional straw wattles in these areas to help promote
  sediment and seed traps so that vegetation can establish.
- Eucalyptus seedlings are also growing on Deck C and should be removed before they get any larger.



Newly germinated Red Brome Grass (Bromus madritensis)





ARCHITERRA DESIGN GROUP 10221-A TRADEMARK STREET, RANCHO CUCAMONGA, CA 91730 Phone (909) 484-2800, Fax (909) 484-2802



Newly germinated Red Brome Grass (Bromus madritensis) at PM10 Berm



ARCHITERRA DESIGN GROUP 10221-A TRADEMARK STREET, RANCHO CUCAMONGA, CA 91730 Phone (909) 484-2800, Fax (909) 484-2802



Creeping Rye Grass (Leymus triticoides) scalped in Summer 2022



Creeping Rye Grass (Leymus triticoides) new growth Winter 2022



Coast Sunflower (Encelia californica) emerging at bare area at Deck



Coast Sunflower (Encelia californica) rejuvenating foliage and beginning to flower



Deerweed (Acmispon glaber) with new foliage emerging



White Sage (Salvia apiana) foliage emerging from Summer/Fall dormancy

ARCHITERRA DESIGN GROUP

10221-A TRADEMARK STREET, RANCHO CUCAMONGA, CA 91730

Phone (909) 484-2800, Fax (909) 484-2802



Desertbroom Baccharis (Baccharis sarothroides) in full bloom



Mexican Elderberry (Sambucus Mexicana) beginning to pull out new vegetation



New exotic weed seedlings: Shortpod Mustard (Hirshfeldia incana), Low Barley (Hordeum depressum), Red Brome Grass (Bromus madritensis), and Redstem Stork's Bill (Erodium cicutarium)



ARCHITERRA DESIGN GROUP 10221-A TRADEMARK STREET, RANCHO CUCAMONGA, CA 91730 Phone (909) 484-2800, Fax (909) 484-2802



Native VCSS seedlings dispersed amongst exotic weeds



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Eucalyptus Tree species that need to be removed from Deck



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## City-Side Sage Mitigation (Trial Site Deck B):

- The majority of the revegetation site on Deck B has been successful in the establishment of the Venturan Coastal Sage habitat. There is evidence of species and age diversity and resprouting of larger species since the Saddleridge Fire. Imprint seeding efforts on Deck B have proven to have been successful, even with the limited use of the temporary irrigation system due to damage from the Saddleridge Fire. There are some areas of the Deck B revegetation site though that have struggled to germinate. Some areas are also showing salt wicking, due to the high salinity of the soils and recent moisture from seasonal rains.
- Container plantings of Coastal Prickly Pear (Opuntia littoralis) and Our Lord's Candle (Yucca whipplei) have been very successful and are well established and flourishing. These species should be included on all future revegetation plans.
- We recommend the installation of straw wattles along the old vehicular access road, since water quickly moves down this feature and erodes the soils, washing away any potential seeds that can grow. In some locations, native plants have established where water has slowed down enough to provide sediment deposits where seeds can germinate from. Straw wattles should be placed perpendicular to the directional flow of the deck and set every 20'-30' on-center. Rill erosion should be repaired prior to the installation of the Straw Wattles.
- Weed eradication efforts on this Deck have been more successful than Deck B. This is most likely due to the timing of weed removals and the "closed canopy" effect of the quick establishing plants shading out and out competing exotic weeds. There are some isolated areas though that have an abundance of Shortpod Mustard (Hirshfeldia incana), Low Barley (Hordeum depressum), and Red Brome Grass (Bromus madritensis) seedlings. Immediate removal of these new weeds will benefit the establishment of the native seedlings growing on the deck. Some invasive Iceplant species have also begun to establish on the deck; those include Hottentot-fig (Carpobrotus edulis) and Slenderleaf Iceplant (Mesembryanthemum nodiflorum).
- Deck B has collected significant trash/debris over the last quarter. ADG recommends removing the trash so that natives are not compromised by overheating/solarization due to an abundance of plastic trash debris.



Invasive Saltcedar (Tamarisk sp.) at southeast section of Deck B needs to be removed



Invasive California Pepper (Schinus molle) needs to be removed ARCHITERRA DESIGN GROUP

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Phone (909) 484-2800, Fax (909) 484-2802



Native VCSS species growth in mulch ring from container planting. Species include: California Sagebrush (*Artemisia californica*), Creeping Wild Rye (*Leymus triticoides*), Black Sage (*Salvia mellifera*), and Saltbush (*Atriplex sp.*)



New Purple Sage (Salvia leucophylla) seedling

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Invasive Hottentot-fig (Carpobrotus edulis) and Slenderleaf Iceplant (Mesembryanthemum nodiflorum)



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Signed: Gregg Denson	Date: 1/04/23					
	<u>DISTRIBU</u>	<u>rion</u>				
Republic Services	left	Contractor	ゼ			
Project Manager (Gregg Denson)		Other				

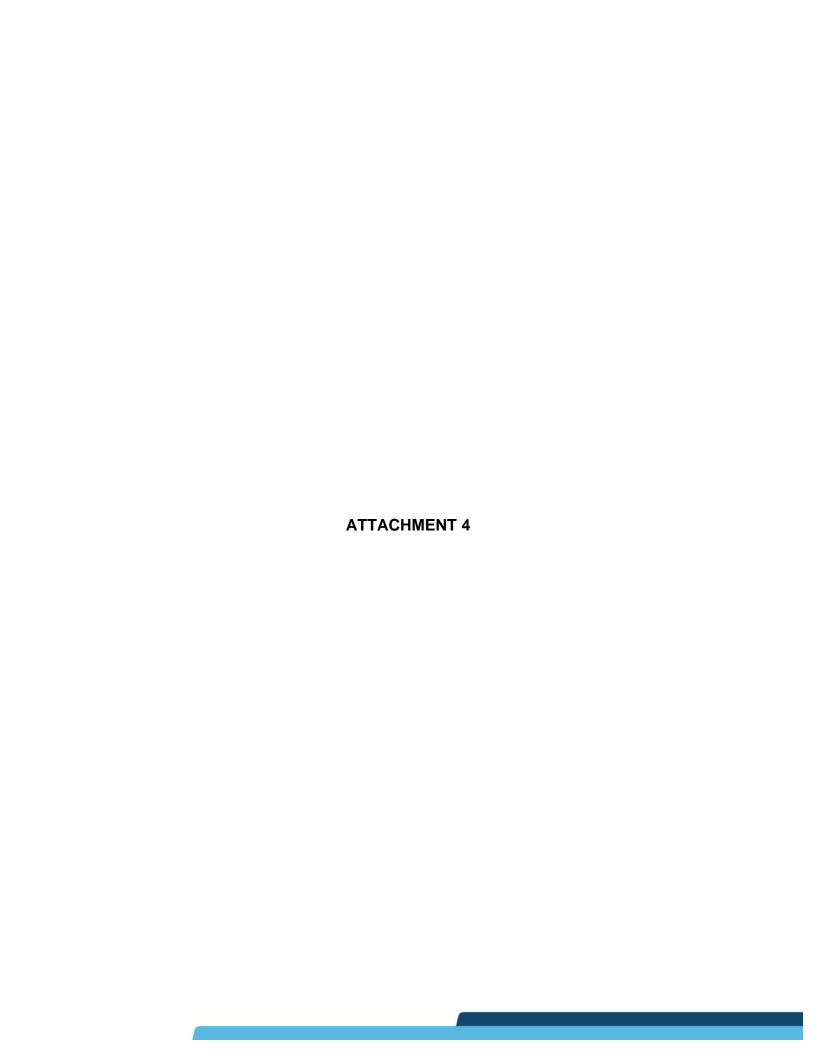




Photo Station #1 - December 2021 (East)



Photo Station #1 - December 2022 (East)



Photo Station #1 - December 2021 (North)



Photo Station #1 - December 2022 (North)



Photo Station #1 - December 2021 (West)



Photo Station #1 - December 2022 (West)



Photo Station #2 - December 2021 (East)



Photo Station #2 - December 2022 (East)



Photo Station #2 - December 2021 (North)



Photo Station #2 - December 2022 (North)



Photo Station #2 - December 2021 (South)



Photo Station #2 - December 2022 (South)



Photo Station #3 - December 2021 (East)



Photo Station #3 - December 2022 (East)



Photo Station #3 - December 2021 (North)



Photo Station #3 - December 2022 (North)



Photo Station #3 - December 2021 (West)



Photo Station #3 - December 2022 (West)



Photo Station #4 - December 2021 (South)



Photo Station #4 - December 2022 (South)



Photo Station #4 - December 2021 (East)



Photo Station #4 - December 2022 (East)



Photo Station #4 - December 2021 (West)



Photo Station #4 - December 2022 (West)



Photo Station #5 - December 2021 (East)



Photo Station #5 - December 2022 (East)



Photo Station #5 - December 2021 (North)



Photo Station #5 - December 2022 (North)



Photo Station #5 - December 2021 (West)



Photo Station #5 - December 2022 (West)



Photo Station #6 - December 2021 (East)



Photo Station #6 - December 2022 (East)



Photo Station #6 - December 2021 (South)



Photo Station #6 - December 2022 (South)



Photo Station #6 - December 2021 (West)



Photo Station #6 - December 2022 (West)



Photo Station #7 - December 2021 (South)



Photo Station #7 - Decemer 2022 (South)



Photo Station #7 - December 2021 (West)



Photo Station #7 - December 2022 (West)



Photo Station #7 - December 2021 (North)



Photo Station #7 - December 2022 (North)



Photo Station #8 - December 2021 (East)



Photo Station #8 - December 2022 (East)



Photo Station #8 - December 2021 (North)



Photo Station #8 - December 2022 (North)



Photo Station #8 - December 2021 (West)



Photo Station #8 - December 2022 (West)



Photo Station #9 - December 2021 (East)



Photo Station #9 - December 2022 (East)



Photo Station #9 - December 2021 (South)



Photo Station #9 - December 2022 (South)



Photo Station #9 - December 2021 (West)



Photo Station #9 - December 2022 (West)





Photo Station #1 - December 2021 (North)



Photo Station #1 - December 2022 (North)



Photo Station #1 - December 2021 (East)





Photo Station #1 - December 2021 (West)



Photo Station #1 - December 2022 (West)



Photo Station #2 - December 2021 (North)



Photo Station #2 - December 2022 (North)



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Photo Station #8 - December 2021 (North)



Photo Station #8 - December 2022 (North)



Photo Station #8 - December 2021 (East)



Photo Station #8 - December 2022 (East)



Photo Station #8 - December 2021 (West)



Photo Station #8 - December 2022 (West)





March 22, 2021 Project No: 21-11086

Tuong-phu Ngo Republic Services 14747 San Fernando Road Sylmar, California 91342 Via email: <u>email address</u>

#### Rincon Consultants, Inc.

180 North Ashwood Avenue Ventura, California 93003

805 644 4455 OFFICE AND FAX

info@rinconconsultants.com www.rinconconsultants.com

Subject: Sunshine Canyon Landfill Ultimate Entry Improvement Project, Oak Tree Survey

14747 San Fernando Road, Sylmar, California, 91342

Dear Mr. Ngo:

Rincon Consultants, Inc. (Rincon) prepared this report for the Ultimate Entry Improvement Project (project) located at the Sunshine Canyon Landfill (landfill) in Sylmar, Los Angeles County, California. This report, prepared by ISA certified arborist Greg Ainsworth, documents the results of an oak tree survey and assessment of impacts to protected oak trees from the project and provides a current tally on the remaining oak trees in the landfills' s oak tree mitigation bank.

# Introduction

This oak tree report was prepared to disclose information on native oak (*Quercus sp.*) trees that would be removed by the proposed project.

Pursuant to the Los Angeles County Oak Tree Ordinance, any tree of the oak genus that is 25 inches in circumference (8 inches in diameter) or has a combined trunk circumference of any two trunks of at least 38 inches (12 inches in diameter), as measured 4.5 feet above the mean natural grade (i.e., diameter at breast height [DBH]), is considered a "protected tree" (Ordinance 88-0157 1, 82-0168 2, Section 22.56.2050, 1988). An oak tree that has a trunk DBH equal to or greater than 36 inches is considered a heritage tree, as defined in the Los Angeles County Oak Tree Ordinance. In accordance with the Ordinance, no damage shall occur within the protective zone (the area within the dripline of an oak tree and extending to a point at least 5 feet outside the dripline, or 15 feet from the trunk[s] of the tree, whichever distance is greater) of a protected oak tree. Damage is defined as any act causing or tending to cause injury to the root system or other parts of an oak tree, including, but not limited to, burning, application of toxic substances, operation of equipment or machinery, paving, changing of natural grade, and trenching or excavating.

# Sunshine Canyon Landfill Oak Tree Mitigation Bank

In accordance with landfill's Conditional Use Permit (CUP) and Oak Tree Permit (OTP) #86312-(5) (dated February 19, 1991) for the Sunshine Canyon Landfill Extension Project, all native oak trees that will be removed for any project-related impact shall be mitigated at a ratio of 2:1, and heritage-size oak trees (36-inch DBH or greater) shall be mitigated at a ratio of 10:1. All mitigation oaks shall be monitored for 7 years after the tree reaches 0.5 inches in diameter.



A surplus of coast live oak trees was previously planted in the landfill's mitigation areas, which now serves as a mitigation bank for the landfill to draw from for future removals of coast live oak trees. There are currently 48 coast live oaks remaining in the mitigation bank (JMA, Sunshine Canyon Landfill Oak Tree and Bigcone Douglas Fir Monitoring Report No. 28, March 8, 2021).

## **Project Description**

The proposed project involves the development of a landfill termination berm and cut/fill graded entrance roadway that will provide a down-slope buttress and access for a proposed landfill expansion. The nearly 190-foot-high proposed roadway and berm embankment across the mouth of the main canyon of Sunshine Canyon Landfill is designed to buttress the expanded landfill refuse prism that will be situated to the west. This new road embankment includes the associated cut and fill grading, three retaining walls, and a sedimentation basin with stormwater controls.

# Methods

All oak trees located within and immediately adjacent to the project footprint that could be impacted by the proposed project were surveyed by certified arborist Greg Ainsworth (I.S.A. Cert# WE-7473A). The tree survey was conducted on March 4, 2021. Using a forester's diameter-equivalent tape, the diameter of all native oak trees having a trunk diameter of 8 inches or greater (or combined trunk diameter of 12 inches or greater) were measured at 4.5 feet above the mean natural grade to obtain the DBH. The location of each tree was recorded from the base of the tree using a Global Positioning System (GPS) with sub-meter accuracy. The following parameters were assessed from the base of each tree (or from the nearest vantage point):

### **Tree Characteristics**

- Trunk diameter (DBH)
- Height
- Crown radius in all directions (north, south, east, and west).
- Balance or symmetry of the tree based on the crown radius measurements and whether the tree leans or is unstable.

### **Physical Condition**

- Identification of damage caused by pathogens or insect pests, by natural causes such as lightning, or by human activity.
- Evaluation of vigor based on such parameters as amount of new growth, leaf color, abnormal bark, dead wood, evidence of wilt, excessive necrosis or leaf chlorosis, thinning of crown, etc.
- Assessment of the overall health of the tree based on the evaluation of vigor, presence of damage, and comparison to the typical archetype tree of the same species.



### Health Grade

A subjective alphabetical ranking was assigned for overall health (vigor, aesthetic value, and balance) for each native oak and big cone fir tree based on the criteria described below:

- "A" = Excellent: A healthy and vigorous tree characteristic of its species and reasonably free of any visible signs of stress, disease, or pest infestation.
- "B" = Good: A healthy and vigorous tree with minor visible signs of stress, disease, and/or pest infestation. Some maintenance measures may need to be implemented, such as pruning of dead wood or broken branches.
- "C" = Fair: Although healthy in overall appearance, there is abnormal amount of stress or disease/insect infestation, and a substantial amount of maintenance may be needed.
- "D" = Poor: A tree that may be exhibiting a substantial amount of stress, disease, or insect damage than what the amount that is expected for the species. The tree may be in a state of rapid decline, and may show various signs of dieback, necrosis, or other symptoms caused by pathogens or insect pests.
- "F" = Dead: This tree has no foliage and exhibits no sign of life or vigor.

# Results

There are 20 coast live oak trees located within the project footprint, one of which is dead, and all of which would be removed by the proposed project. No other oak trees would be encroached or otherwise impacted by the proposed project. Data on these 20 oak trees is presented in Table 1 below.

Table 1 Oak Tree Survey Data

Tree #	Species	DBH	Canopy Spread				Haalth	Physical	Impact	Reason for
			North	West	South	East	- Health	Condition	Status	Impact
1	Coast live oak	13	14	3	8	21	Fair		Removal	Grading
2	Coast live oak						Dead		Removal	Grading
3	Coast live oak	16	3	8	25	35	Poor	fire scar	Removal	Grading
4	Coast live oak	12	12	7	18	15	Good	fire scar	Removal	Grading
5	Coast live oak	18	11	15	30	7	Good	fire scar	Removal	Grading
6	Coast live oak	9	4	8	18	2	Fair	fire scar	Removal	Grading
7	Coast live oak	15	7	16	15	8	Fair	fire scar	Removal	Grading
8	Coast live oak	9	7	3	18	8	Good	fire scar	Removal	Grading
9	Coast live oak	18	30	15	22	10	Good	fire scar	Removal	Grading
10	Coast live oak	16	8	17	15	6	Fair	fire scar	Removal	Grading
11	Coast live oak	10	15	14	1	2	Fair	fire scar	Removal	Grading
12	Coast live oak	10	20	6	4	2	Fair	fire scar	Removal	Grading
13	Coast live oak	22	18	21	16	10	Fair	fire scar	Removal	Grading
14	Coast live oak	10	19	1	1	1	Fair	fire scar	Removal	Grading
15	Coast live oak	21	10	7	18	22	Fair	fire scar	Removal	Grading

### Sunshine Canyon Landfill Ultimate Entrance Improvement Project Oak Tree Report

Tree #	Species	DBH	Canopy Spread				طفاحمال	Physical	Impact	Reason for
			North	West	South	East	- Health	Condition	Status	Impact
16	Coast live oak	18	1	22	19	8	Fair	fire scar, split trunk	Removal	Grading
17	Coast live oak	19	15	11	15	10	Fair	fire scar	Removal	Grading
18	Coast live oak	12	15	7	15	7	Fair	fire scar	Removal	Grading
19	Coast live oak	12	17	10	4	8	Good		Removal	Grading
20	Coast live oak	8	4	12	6	1	Fair		Removal	Grading

# Mitigation

There are currently 48 coast live oak trees in the landfill's mitigation bank. As noted in Table 1, 20 coast live oak trees would be removed by the proposed project. Therefore, at a mitigation ratio of 2:1, 40 coast live oak trees will be deducted from the landfill's oak tree mitigation bank, leaving 4 oak trees remaining in the bank for future removals at the landfill.

Please contact Greg Ainsworth at (818) 564-5544 or email at gainsworth@rinconconsultants.com if you have any question or comments regarding the information provided in this report.

Sincerely,

Rincon Consultants, Inc.

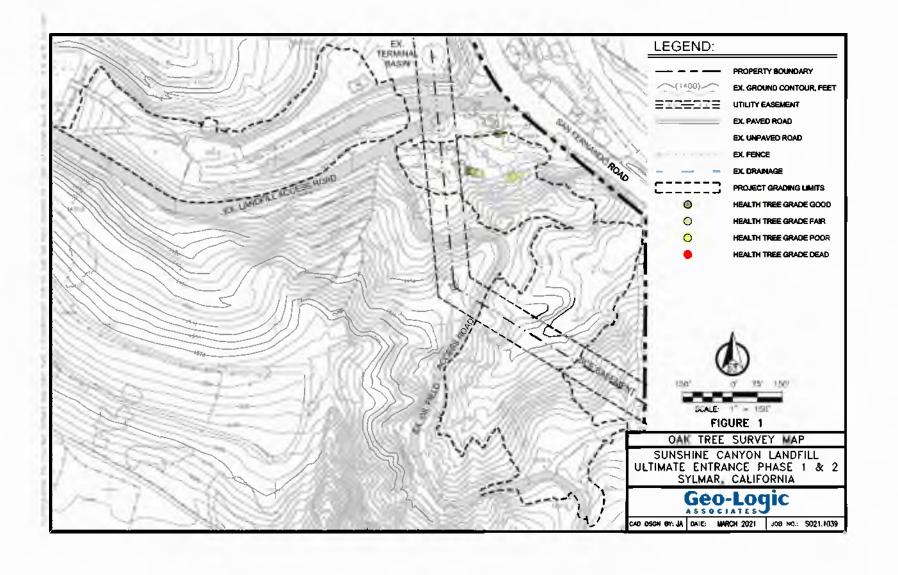
Greg Ainsworth, I.S.A. Cert # WE-7473A

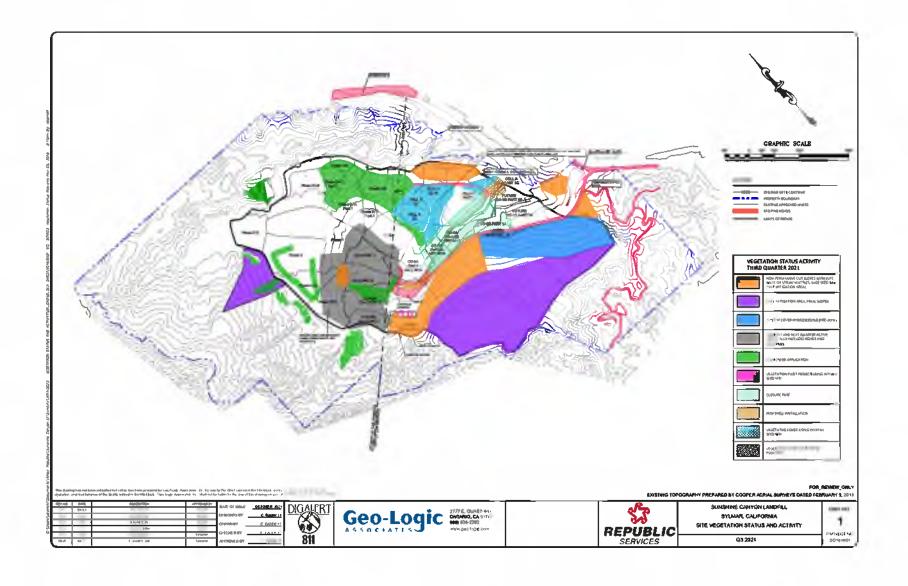
**Director of Urban Forestry** 

### **Attachments**

Oak Tree Map









April 30, 2023

Mr. David Nguyen County of Los Angeles, Department of Public Works 900 South Fremont Avenue Alhambra, CA 91803-1331

Subject: Sunshine Canyon Landfill, Quarterly Vegetation Report

First Quarter 2023 Vegetation Report

Mr. Nguyen,

This report has been prepared in accordance with the following:

- Condition 18B of the Finding of Conformance
- Condition 44A of the Condition Use Permit (CUP)
- Los Angeles City Condition [Q] C.8 of the Ordinance No. 172,933

This report presents the progress of the site's landscaping and revegetation activities for the first quarter of 2023. The intent of these reports is to provide detailed information regarding the site's efforts related to vegetation including vegetation of interim and permanent slopes and activities conducted for the on-site sage mitigation areas.

Architerra Design Group continues to assist site personnel in evaluating current site conditions relating to vegetation and provide recommendations for future efforts. This report includes their assessment of the pilot sage vegetation area as well as recommendations for this area. Architerra's evaluation is in addition to the required quarterly monitoring performed by our consulting biologist.

#### 1.0 Interim Slopes

For the purposes of this report, interim slopes are those defined as slope areas where no activities have taken place for 180 days or longer. CUP Condition 44A requires "a temporary hydroseed vegetation cover on any slope or landfill area that is projected to be inactive for a period of greater than 180 days".

### 1.1 Hydroseeding Activities

Based on the results of the trial project completed in August 2017, a 57-acre vegetative cover project using the approved seed mix was completed in mid-December 2017. Additionally, the site completed hydroseeding approximately 155 acres; application of the approved seed mix was completed during 2019. The increase in hydroseeding application is a result of our normal winterization efforts along with slope revegetation as a result of the Saddle Ridge Fire that impacted Sylmar, CA on October 2019. These areas had successful vegetation growth after the recent rains.

## 2.0 Permanent Slopes

Permanent slopes are defined as those where no landfilling activities will be conducted in the future.

As part of our Saddle Ridge Fire recovery efforts both the City and County permanent slopes of the landfill had hydroseed applied as necessary. This application of hydroseed was completed for soil stabilization purposes.

## 3.0 Non-Permanent Cut Slopes

Prior quarterly vegetation reports have illustrated one area above the front terminal sedimentation basin and one area near the temporary bypass road as "non-permanent cut slopes". An evaluation of these areas has been conducted and it has been determined that these areas are "permanent slopes" because no landfilling activities will be conducted against these slopes in the future.

### 4.0 Activities Conducted in Sage Mitigation Areas – 1Q2023

During the first quarter of 2023, the following activities were conducted in the sage mitigation areas at the landfill.

### 4.1 City South Sage Pilot Project Area – Deck C

The lower Deck C mitigation project area was impacted by the Saddle Ridge fire in October 2019. As noted in Rincon's (formerly JMA) City-Side Sage Mitigation Area Lower Deck report a substantial amount of the lower deck was burned or scorched. However, in previous reports they note that because this was an established site, they expect natural re-establishment of the native vegetation within the first two to three years. Rincon has noted a substantial amount of regrowth has occurred following the fire and included the most prevalent natives such as California Sunflower, Saltbush, Horseweed, and pockets of Wild Ryegrass. Rincon also indicated the intense weeding efforts implemented has greatly reduced the cover of the noxious non-native annual species and non-native plant cover has slightly declined between fourth quarter 2022 and first quarter 2023.

As reported previously, Architerra Design Group indicates that there has been an abundance of Venturan CSS species germinating and crown-sprouting since the

fire. The species following the rebound include Purple Sage, Coast Sunflower, White Sage, Creeping Wild Rye, Deerweed, Black Sage, and Mexican Elderberry. Surprisingly there are also new species from the original seed mix are now sprouting up in decent numbers and included in the list below:

- Purple Sage (Salvia leucophylla)
- Coast Sunflower (Encelia californica)
- White Sage (Salvia apiana)
- Creeping Wild Rye (Leymus triticoides)
- Deerweed (Lotus scoparius)
- Black Sage (Salvia mellifera)
- Mexican Elderberry (Sambucus mexicana)
- Scarlet Bugler (Penstemon centranthifolia)
- Telegraph Weed (Heterotheca grandiflora)
- Monkey Flower (Mimulus aurantiacus)
- Smooth-Leaf Yerba Santa (Eriodictyon trichocalyx)
- Thickleaf Yerba Santa (Eriodictyon crassifolium)
- Sunflower (Helianthus annuus)
- California Bush Sunflower (Encelia californica)
- California Sagebrush (Artemisia californica)
- California Buckwheat (Eriogonum fasciculatum)
- Quail Bush (Atriplex lentiformis)
- Four-Wing Saltbush (Atriplex canescens)
- Cattle Spinach (Atriplex polycarpa)
- Spinescale (Atriplex spinifera)
- Toyon (Heteromeles arbutifolia)
- Foothill Needlegrass (Nassella lepida)
- Coyote Bush (Baccharis pilularis)
- Showy Penstemon (Penstemon spectabilis)
- Wright's Cudweed (Pseudognaphalium microcephalum)
- White Horehound (Marrubium vulgare) Non-Native
- Australian Saltbush (Atriplex semibaccata) Non-Native

As reported from Architerra, the abundance of historic level rains has assisted in the emergence of many of the Ventruan CSS Species; however, due to the the cooler temperatures, many of the species are a few weeks behind of the typical blooming season. Many species of the Saltbush which appeared dead over the last few years show signs of new life. Emergent growth is also evident of the Coast Sunflower (*Encelia californica*), Deerweed (*Acmispon glaber*), White Sage (*Salvia apiana*), Black Sage (*Salvia mellifera*), and Purple Sage (*Salvia leucophylla*) and have started to produce new growth and blooms over the last few months. This has also begun the germination period where a mix of native and non-native species are beginning to emerge, creating challenges in identification of species.

Also noted were new emerging seedlings of several invasive species; Shortpod Mustard (*Hirshfeldia incana*) and Red Brome Grass (*Bromus madritensis*). It was recommended maintenance personnel work on removing these before they flower and seed. Also noted were to identify native species prior to any invasive removals

In addition, the majority of the Coast Live Oaks at the PM 10 berm have recovered from fire damage in 2020.

## 4.2 City South Deck B

The Deck B sage mitigation project began on April 9, 2018 and planting was completed by the end of the fourth quarter 2018. Soil samples indicated low pH and high salinity, as a result Deck B underwent a leaching schedule. Additional soil amendments and resampling were completed before planting began, which took place during the fourth quarter 2018. Pacific Restoration Group, Inc (PRG) has been working with Architerra for the completion of project. A summary of the progress is included in Attachment 3. The northwest portion of the Middle Deck burned during the Saddle Ridge Fire in October 2019. Architerra Design Group (ADG) indicated previously Deck B was doing quite well and there was evidence of desiccation of the seedlings especially the Common Yarrow and other native species that have recently spouted and are beginning to harden off and defoliate. Architerra has, in the past, also indicated the plant diversity on Deck B is impressive and many of the species in the seed mix have germinated and the containerized plants also are doing well and are blooming or just finished which are the White Sage, Mexican Elderberry, Menzie's Goldenbush, and Prickly Pear.

Revegetation efforts have been successful in the establishment of the Venturan Coastal Sage Scrub habitat and evidence of species and age diversity and resprouting of larger species. Architera also noted Deck B site is similar to those found on Deck C in the growth of the VCSS. However, the downslopes are primarily covered with little to no native species and should be addressed to remove the invasive weeds as soon as possible. The south side of the slope has been overtaken by invasive Slenderleaf Iceplant (*Mesembryanthemum nodiflorum*) and was growing in the revegetation area and has spread northward. The northern part of Deck B has been completely filled in and is well established with shading to prevent weed growth.

#### 4.3 County Sage Mitigation Area

The County sage mitigation area is located on the western side of the County portion of Sunshine Canyon Landfill (Drawing 1). As noted in the fourth quarter Rincon County-Side Sage Mitigation Area report the upper half of the mitigation site was burned in the Saddle Ridge fire in October of 2019. No revegetation activities were conducted in this area during the fourth quarter of 2022, and as noted in multiple Rincon progress reports, the conditions in this mitigation area have remained unchanged for some time. Rincon notes in their attached 2022 fourth quarter vegetation report that this area remains problematic for establishment of vegetation due to barren soil. Soil samples from this location indicate low pH, high salinity, and Boron present in native soils. A trail test pilot plan is being evaluated at this time with Architerra.

In December 2022, Conversations with Architerra were started to discuss a plan to address the potential mitigation plans for Deck A. An onsite meeting is planned for January 2023 for an initial assessment of Deck A and determine what will need to be done. We anticipate a tentative schedule to be established in the coming months.

## 5.0 Assessments of Sage Mitigation Areas

Assessments of the site's sage mitigation areas are conducted by a qualified biologist on a quarterly basis. The following sections present a summary of the recommendations for the sage mitigation areas from Rincon (City and County sage mitigation areas) and Architerra (City South Sage Pilot Project Area (Deck C) and Middle Deck (Deck B) and the proposed actions in response to the recommendations.

#### 5.1 Rincon Recommendations for City Sage Mitigation Areas

Rincon's progress reports for the City Sage Mitigation Areas for the first quarter of 2023 are provided in Attachment 1. These reports include recommendations based on the assessments. Table 1 presents a summary of these recommendations and the proposed actions.

- To address the concerns and recommendations in Table 1, a Republic representative met with Gregg Denson of Architerra on 1/11 to discuss plans for Deck A. Due to the extensive rains, all work planned has been delayed. Republic is working to get back up to deck A in the coming months once drier weather is established to determine best path forward for this area. Prior to any mitigation on Deck A, the low area prone to ponding will need to be filled in. This low area was identified during the January Ultrasystems inspection. The initial plan is to split Deck A up into 4 parcels into more manageable 4-5 acre plots.
- The booster pump and power that was destroyed in the Saddleridge Fire will
  need to be replaced for irrigation to deck A. Architerra's initial recommendation
  is to get a team on site to walk the deck and determine best strategy moving
  forwards to tackle the approx.25 acres.

Table 1 – Rincon Recommendations and Proposed Actions – City Sage Mitigation Areas, Fourth Quarter 2022

	mingation Areas, 1 out in Quarter 2022				
AREA		RECOMMENDATION	PROPOSED ACTION		
Lower, Middle, and Upper Decks (Decks C, B, and A)	1	Weed Control – Implement a year-round weed control program to control non- native species.	A weed control program is already in place on Deck C and B as part of the pilot project and will continue. A weed control program on A will be implemented along with the mitigation plans for these areas.		
Lower, Middle Decks (Decks C, B)	2	Irrigation – Reinstall irrigation system if drought conditions continue to the areas to alleviate stress on regrowth	The fourth quarter of 2022 had below rainfall, and therefore irrigation systems be reinstalled to promote germination and growth of native plants.		
Lower, Middle, and Upper Decks (Decks C, B, and A)	3	Prohibit Access – Continue to prohibit vehicle access to mitigation areas.	Repairs to the T-post fencing will be made as needed.		
Upper Deck (Deck A)	3	Improve root zone and soil conditions	This will be addressed when the plans for Deck A is developed. Actions were taken to address improving the root zone in Decks B & C; it is expected that similar actions will be incorporated into the plans for Deck A.		
Upper Deck (Deck A)	4	Plant natives in areas dominated with non- natives	This will be addressed when the plans for Deck A are developed. Various planting methods were used for the construction of the pilot project on Decks B & C; it is expected that similar actions will be incorporated into the plans for Deck A.		
Upper Deck (Deck A)	5	Reseeding – apply native seeds during the rainy season after soil mounds have been established	This will be addressed when plans for Deck A are developed.		

Rincon also recommended that a monitoring biologist should be present during weed control activities or the native plants should be flagged to ensure only non-native species are removed. A monitoring biologist will be consulted prior to any weed control activities to ensure native plants are protected.

Architerra and Rincon continue to provide support to the Oakridge maintenance personnel to assist in removal of the invasive weeds on both Deck B and C. Architerra has pointed out some of the more aggressive weeds that have flourished since the Saddle Ridge Fire. Architerra provided them with images of the invasive weeds to help identify and target these invasive species. Oakridge Landscape have been diligently removing Russian Thistle, Wild Oat, Shortpod Mustard, Red Brome Grass, False Barley, Tree Tobabcco, and Yellow Star Thistle that took hold in the burned barren areas. During May 2023, An Architerra biologist will be present during weeding activities to ensure native species are properly identified within the heavily non-native vegetation.

### 5.2 Rincon Recommendations for County Sage Mitigation Area

Table 2 presents a summary of the recommendations proposed by Rincon based on the assessment of the County Sage Mitigation Area and the proposed actions. Please refer to the full recommendations in the Rincon reports in Attachment 2.

Table 2 – Rincon Recommendations and Proposed Actions – County Sage Mitigation Area, Fourth Quarter 2022

Willigation Area, I out the Quarter 2022						
AREA REC		COMMENDATION	PROPOSED ACTION			
County Sage Mitigation Area	1	Create benches to control soil erosion and improve soil conditions to improve plant establishment and seed dispersal	Rincon and ADG are evaluating recommendations from the County Task Force and UltraSystems.			
County Sage Mitigation Area	2	Reseed and plant container plants	A trail test pilot plan will be discussed with California Native shrubs.			
County Sage Mitigation Area	3	Use soil amendments	A trial test plot would need to be developed. This recommendation will be considered at a later date.			
County Sage Mitigation Area	5	Signage – Install signage indicating revegetation efforts.	Due to the slopes, stormwater channel and overall difficulty to access this area, personnel are limited to access this area.			
County Sage Mitigation Area	6	Weed Control – Continue weeding as needed on a quarterly basis.	Personnel continues to evaluate the current status.			
County Sage Mitigation Area	7	Prohibit Access – continue to prohibit vehicle access to mitigation deck.	Upper entrance has a locked gate, no further action is required.			

# 5.3 Architerra Inspection for City South Sage Mitigation Pilot Project Area – First Quarter 2023

The inspection report is included in Attachment 3 along with photos of the area taken at the photo stations.

## 5.4 Quarterly Assessment of City South Sage Pilot Project Area

The methodology for assessment of the City South Sage Pilot Project Area developed by Rincon (formerly JMA) was included in the first quarter 2015 Vegetation Report. The evaluation report for the first quarter of 2023 based on this methodology is included in Attachment 4 and Attachment 5 for Deck C and Deck B, respectively. Concerns for the county-side stability for soil erosion will be addressed in the coming months. Current plans require some regrading and infrastructure repairs due to the extremely heavy rains over this past winter.

#### 6.0 Status of Other Vegetated Areas

## Big Cone Douglas Fir Tree Mitigation

As reported in the vegetation report for the first quarter of 2015, 200 Big Cone Douglas fir tree saplings were planted the third week of March 2015. These big cone Douglas fir pine trees continue to be monitored and maintenance activities will be conducted in this mitigation area for 2023and into the future.

A meeting with Rincon biologist was conducted on November 18, 2022 at the Big Cone Mitigation area. We will begin to work with local nurseries to help replace and replant some of the existing dead Big Cone Pine and Canyon Oak. We are also evaluating a new location for planting more Big Cone Pines and Canyon Oak in this area, and finally to establish healthy Big Cone Pine and Canyon Oak in a timely established schedule. We look forward to working with the LA County forester, local nurseries in 2023. Plans to replenish the mitigation bank will commence with seed collection in the fall of 2023. Once the seeds are collected and stratified, seed will then be potted in the spring of 2024 whereas they will be allowed to germinate for a year at a nursery. Once saplings are viable, they will be brought to site to be planted in the mitigation area on site. This planting is anticipated the fall of 2025.

#### PM10 Berm

Republic Services hosted an Adopt-A-Tree event for employees and their family members. On Saturday, November 14<sup>th</sup>, 2020, at 2:00 pm, Fourteen (14) Coast Live Oak trees were planted in critical areas of the PM10 Berm that was damaged during the Saddleridge Fire. Architerra and JMA (i.e. Rincon) assisted in the planting efforts with their expertise and knowledge of tree growth and ideal planting locations. Republic Services is currently looking into hosting another Adopt-A-Tree event in 2023.



#### Front Entrance Toe Berm

The proposed project involves the development of a landfill termination berm and construction of a roadway. There were 20 coast live oak trees surveyed within the project footprint by Rincon and project leads. One of the oak trees was dead, and all of them would be removed by the project activities. There are currently 48 coast live oak trees in the landfill's mitigation bank. As noted, the 20 coast live oak trees would be removed by the proposed project, therefore at a mitigation ratio of 2:1, a total of 40 coast live oak trees will be deducted from the landfill's oak tree mitigation bank, leaving 4 oak trees remaining in the bank for future removals at the landfill, if needed. A report detailing the survey is located in Attachment 6.

## **Donation to Local Community**

As part of community outreach, a rancher in the area asked if he could plant some oaks trees on his ranch nearby, and Sunshine Canyon agreed it would be a great idea. Thereafter on September 9<sup>th</sup> 2021, twenty-two (22) coast live oaks and two sycamores were donated from the Sunshine Canyon nursery and given to the rancher. The rancher mentioned the oak trees shall provide shade for his livestock and beautify the surrounding private property and was very pleased with the trees.



Please do not hesitate to contact me at (818) 200-3016 if you have any questions.

Regards,

Paul D. Koster II

**Environmental Manager** 

Sunshine Canyon Landfill

Cc: Ms. Dorcas Dee Hanson-Lugo, SCL LEA

Mr. David Thompson, SCL LEA

Ms. Tiffany Butler, City of Los Angeles, Department of City Planning

Ms. Devon Zatorski, City of Los Angeles Department of City Planning

Ms. Ly Lam, City of Los Angeles, Department of City Planning

Mr. Nicholas Hendricks, City of Los Angeles, Department of City Planning

Dr. Wen Yang, Los Angeles Regional Water Quality Control Board

Ms. Maria Masis, County of Los Angeles, Department of Regional Planning

Mr. Wayde Hunter, SCL CAC

Mr. Jim Aidukus, UltraSystems

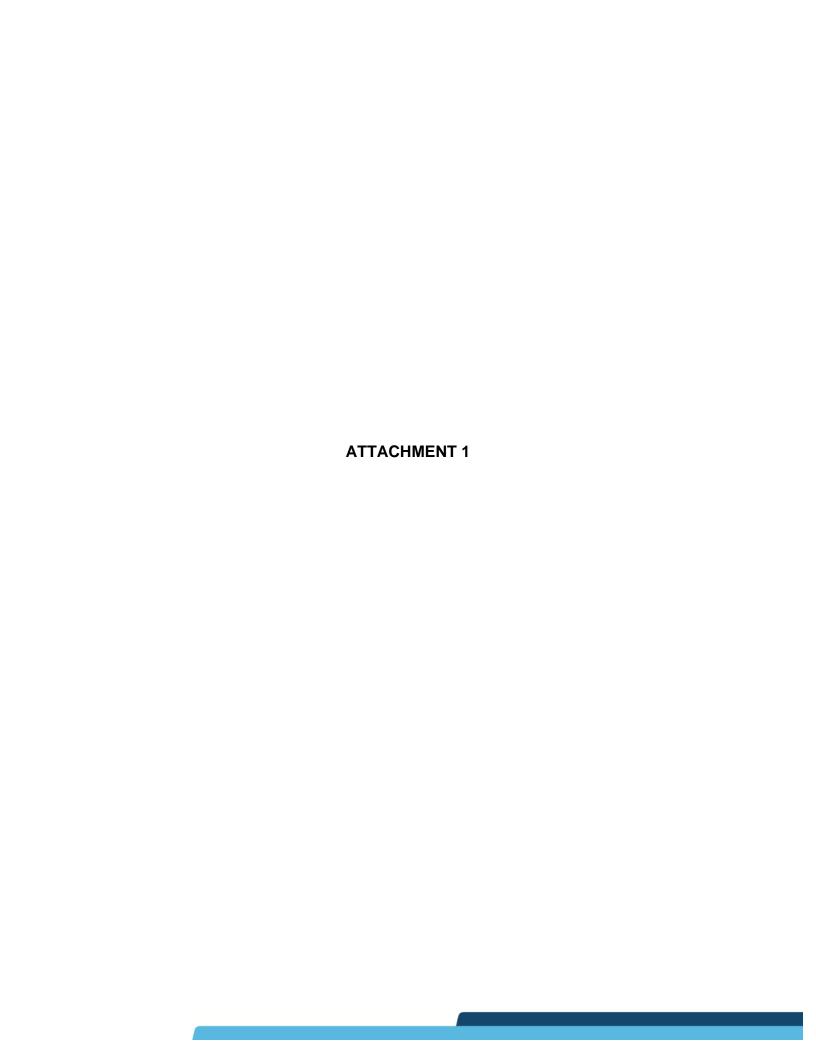
County DPW Landfill Unit

#### Attachments

Attachment 1 Rincon Progress Report, 1Q2023 City-Side Sage Mitigation Area Rincon Progress Report, 1Q2023 County-Side Sage Mitigation Area Attachment 2 Attachment 3 Architerra Design Group, Field Observation Report, South City Sage Mitigation Pilot Project - 1Q2023 with Photo Log Attachment 4 Rincon Quarterly Monitoring Report - Coastal Sage Scrub Deck C Pilot Study, 1Q2023 Attachment 5 Rincon Quarterly Monitoring Report - Coastal Sage Scrub Deck B Pilot Study, 1Q2023 Rincon Sunshine Canyon Landfill Ultimate Entry Improvement Attachment 6 Project, Oak Tree Survey Report

# Drawing

Drawing 1 Site Vegetation Status and Activity





Rincon Consultants, Inc.

180 North Ashwood Avenue Ventura, California 93003

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info@rinconconsultants.com www.rinconconsultants.com

April 17, 2023

Project No: 21-11086

Kate Downey Environmental Manager Republic Services 14747 San Fernando Road Sylmar, California 91342

Via email: KDowney@republicservices.com

Subject: Qualitative Monitoring Report for the City-Side Sage Mitigation Area – 1<sup>st</sup> Quarter 2023

Sunshine Canyon Landfill, Sylmar, California

Dear Ms. Downey,

On March 28, 2023, Rincon Consultants conducted the first quarter qualitative monitoring of 2023 for the Republic Services City-Side Sage Mitigation Area. This report qualitatively documents the current conditions of the City-Side Sage Mitigation Area with regards to the Landfill's coastal sage scrub restoration efforts. The City-Side Sage Mitigation Area consists of the Lower Deck, Middle Deck, and Upper Deck (including slope between middle and upper decks), which are discussed in detail below.

# **General Conditions**

#### Lower Deck

In 2014, the Landfill initiated a pilot study at the Lower Deck (Deck C) to assess three different seeding applications of native species that included hand broadcasting, imprinting, and hydroseeding. Some container plants were also planted at the Lower Deck, but in low quantities. Germination, establishment, and natural recruitment of native plants ensued; however, the Lower Deck and surrounding area burned during the Saddleridge Fire in October 2019. The fire burned a substantial amount of the Lower Deck, scorching some of the vegetation entirely and partially burning some of the vegetation. The fire also burned the irrigation system, and the vegetation has been without supplemental water ever since.

A substantial amount of regrowth has occurred following the fire, including germination from the seed bank in the soil and resprouting of below- and above-ground plant parts. The Lower Deck appears to have almost fully recovered from the fire. The most prevalent native plant species observed within the Lower Deck in the first quarter of 2023 was California sunflower (*Encelia californica*), followed by big saltbush (*Atriplex lentiformis*), allscale saltbush (*Atriplex polycarpa*), and beardless wild rye (*Elymus triticoides*). Immediately following the Saddleridge Fire, areas that were previously dominated with saltbush species were largely replaced by mats of non-native grasses such as red brome (*Bromus rubens*), ripgut brome (*Bromus diandrus*), foxtail barley (*Hordeum murinum*), and non-native forbs such as redstem filaree (*Erodium cicutarium*). Native shrub species have resprouted and are almost fully reestablished, and have shown signs of continuous growth since the fire.



#### City-Side Sage Mitigation Area Qualitative Progress Report – 1st Quarter, 2023

Exotic annual plant species, which increased between the third and fourth quarters of 2022, have increased slightly in the first quarter of 2023 following winter and spring rainfall events. A majority of exotic annual plant species were observed in their vegetative state or in flower in the Lower Deck in the first quarter of 2023, with a few mid-season non-native plants (e.g., Russian thistle [Salsola tragus]) observed germinating. Exotic annual plants appear to be successfully managed through hand pulling and ongoing weed control activities. However, some native grass species (i.e., beardless wild rye) have also been inadvertently cut and may have been misidentified as non-native species during the weed control activities. Non-native plant species cover is anticipated to increase throughout the spring and into summer of 2023. The majority of non-native vegetation observed at the Lower Deck in the first quarter of 2023 consisted of non-native annual grasses, short podded mustard (Hirschfeldia incana), redstem filaree, and tocalote (Centaurea melitensis).

## Middle Deck

In 2019, the Landfill initiated a pilot study at the Middle Deck (Deck B) to assess germination and establishment rates (e.g., percent cover) of soil imprinting and broadcast seeding methods. Some container plants were also planted at the Middle Deck, but in low quantities. Germination and establishment of native plants ensued; however, there was not much evidence of natural recruitment due to the short timeframe from when the deck was seeded to when it burned during the Saddleridge Fire, which also decimated the irrigation system.

As described in previous monitoring reports, the vegetation composition at the Middle Deck before the Saddleridge Fire was approximately 35 percent of sage scrub plantings/seedlings and 30 percent non-native grasses. The remainder of the area was comprised of bare ground and/or rock substrate. A substantial amount of the planted vegetation on the Middle Deck burned in the fire; however, a large amount has resprouted and appears to have mostly recovered. Native vegetation observed at the Middle Deck consists of woody species such as brittlebush (*Encelia farinosa*), California sunflower (*Encelia californica*), scarlet bugler (*Penstemon centranthifolius*), deerweed (*Acmispon glaber*), California buckwheat (*Eriogonum fasciculatum*), California sagebrush (*Artemisia californica*), coastal goldenbush (*Isocoma menziesii*), white sage (*Salvia apiana*), coyote brush (*Baccharis pilularis*), and herbaceous species such as beardless wild rye. Of all the observed native species, brittlebush, coastal goldenbush, California sagebrush, and deerweed have shown the greatest increase in abundance since the fire. Almost all native shrub species were in their vegetative state, with the exception of brittlebush and California sunflower, which were in flower.

Non-native plant establishment was also observed within the Middle Deck; however, this establishment is lower than what has been observed within the Lower Deck. Non-native plants observed include exotic grasses such as foxtail barley, Mediterranean grass (*Schismus arabicus*), red brome, and forbs such as short podded mustard, tocalote, redstem filaree, and small flowered iceplant (*Mesembryanthemum nodiflorum*). These species were observed in their vegetative or flowering state during the first quarter of 2023. In general, non-native weed cover is low to moderate, and has slightly increased since the fourth quarter of 2023. Small flowered iceplant saw the greatest increase in cover of all non-native species. Non-native plants are anticipated to increase in cover throughout the spring and summer of 2023.



# **Upper Deck**

Overall, the Upper Deck (Deck A) continues to be sparsely covered with native vegetation, and total vegetation coverage (native and non-native) is generally sparse due to compacted and poor soil conditions. However, in the southern-center of the Upper Deck, vegetation cover is higher than in other areas and includes native species such as California buckwheat, as well as non-native species such as foxtail barley, redstem filaree, and Australian saltbush (*Atriplex semibaccata*). Notably, California goldfields (*Lasthenia californica*) were observed in flower in this area during the first quarter of 2023 (Attachment B, Photograph 6). The presence of vegetation in the southern-center portion of the Upper Deck generally demonstrates that the soils in this area are suitable for supporting vegetation, both native and exotic. However, the soils elsewhere on the Upper Deck appear to be heavily compacted and gravelly, and vegetation coverage in these areas is sparse. Evidence of previous seeding is no longer discernible within the portions of the Upper Deck where plant establishment is visibly poor.

Non-native herbaceous species that dominate the Upper Deck currently include wild oats (*Avena fatua*), Russian thistle, ripgut brome, red brome, short podded mustard, and redstem filaree. California buckwheat is the most dominant native perennial woody plant species on the Upper Deck, and it is currently in its vegetative state. However, as described in previous monitoring reports, overall natural recruitment of native plant species within the Upper Deck is low due to poor and dry soil conditions.

Table 1 Summary of Observations in the Lower, Middle, and Upper Decks in Quarter 1, 2023

	Native Plant Vegetation				<b>Exotic Plant Vegetation</b>	
Location	Native Plant Cover	Plant Health Issues	Height of Native Species	Native Species Richness	Exotic Plant Cover	Phenological State
Lower Deck	Moderate	Recovering from fire, drought	12"-48"	Shrubs: Moderate Herbs: Low	Moderate	Vegetative and flowering
Middle Deck	Moderate	Recovering from fire, drought	12"-48"	Shrubs: Moderate Herbs: Low	Low to Moderate	Vegetative and flowering
Upper Deck	Minimal	Poor soils, drought	12"-24"	Shrubs: Low Herbs: Low	High	Vegetative and flowering

# Recommendations

# Lower and Middle Decks

#### Weed Control

Implement a year-round weed control program to control non-native species. The weed control
program should incorporate both chemical and mechanical control practices and should be
initiated in the late winter to early spring prior to seed set, which typically occurs between the
months of February and April. This will prevent further dispersal of exotic plants within the
Lower and Middle Decks.



- Following weed control, any dead material harboring seeds should be removed to an off-site
  location to the extent feasible. Dense areas covered with red brome, ripgut brome, foxtail
  barley, and short podded mustard should be controlled by removing flowers and immature
  seeds heads before they drop. These areas should be reseeded with native herbaceous species
  that are known to grow well in the Lower (and Middle) Decks, such as beardless wild rye and
  yarrow (Achillea millefolium).
- A qualified biologist should be present during weed control activities or flag the native plants
  that should remain prior to weed control activities to ensure only non-native species are
  removed and to minimize damage to native plant species to the greatest extent feasible. If a
  contractor is responsible for weed control, the contractor should verify with the Landfill that all
  personnel are experienced in native and non-native plant identification.
- Weeding is best performed just before, or at the onset of flowering, but before seed set. If seeds are already present, additional care should be taken to remove the plants with the seeds attached, or the seeds should be removed from the plants prior to the plant removal. A consistent weed abatement schedule will reduce the potential for non-natives to set seed. Soil disturbance should be limited by hand weeding, wherever possible, and weeds should be disposed of off-site to avoid any reinfestation through reseeding or from plant propagules. If hand weeding is not possible, the monitoring biologist should be consulted regarding the appropriate method of weed removal. For example, using mechanical equipment to remove flowers and immature seed heads may be appropriate where dense mats of non-native grasses have established. If there continues to be high incidence of weed infestation, weed control may need to be increased to every four to six weeks. Otherwise, weeds should continue to be monitored and controlled on a quarterly basis.

# **Irrigation**

• The Lower and Middle Decks burned during the Saddleridge Fire in October 2019. The fire burned the irrigation system that was installed prior to the fire, and the vegetation has been without supplemental water ever since. While southern California received above-average rainfall in the winter of 2022 and spring of 2023, supplemental irrigation may be necessary if native plants show signs of desiccation stress. If indicators of drought stress are observed, it is recommended that the irrigation system within the Lower and Middle Decks are re-installed to promote germination and growth of native plant species.

#### **Prohibit Access**

Continue to prohibit vehicle access to mitigation areas.

# **Upper Deck**

## Improve Root Zone and Soil Conditions

 Continue to investigate ways to import the soil layer to improve the root penetration and saturation zone to enable plant growth in heavily compacted areas. Consider applying soil in random undulations or uneven mounds to improve soil porosity and filtration and to control soluble salts from leaching from existing layer.



Prior to seeding (broadcast, hydroseeding, or drilling) of native species, incorporate a soil
amendment or mulch with high organic content by tilling it into the top 12 inches of the existing
compacted soils to improve soil texture, drainage, porosity, and aerobic conditions. If an organic
mulch or soil amendment is not feasible or available, incorporate available soil from borrow
sites within the landfill that have the appropriate soil properties, so long as these borrowed soils
have been determined to not have toxic conditions, such as boron or high salinity.

#### Plant Natives in Areas Dominated with Non-Natives

• The vegetated areas on the Upper Deck that are currently dominated with non-native annual species have decent soil-texture conditions. These areas are less compacted than adjacent areas that are gravelly and mostly devoid of vegetation. In general, the soil texture within the vegetated areas with non-native vegetation is friable down to approximately 8-12 inches in depth. Various planting methods (i.e., planting container plants and hydroseeding) may be used to re-establish native plants on the Upper Deck where non-natives currently dominate.

#### **Weed Control**

- Implement a year-round weed control program to control non-native species. The weed control
  program should incorporate both chemical and mechanical control practices. Following weed
  control, any dead material harboring seeds should be removed to an off-site location to the
  extent feasible.
- A qualified biologist should be present during weed control activities or flag the native plants
  that should remain prior to weed control activities to ensure only non-native species are
  removed and to minimize damage to native plant species to the greatest extent feasible. A
  biologist should verify that the weed removal methodology does not encourage re-colonizing of
  non-native plant species.
- Weeding is best performed just before, or at the onset of flowering, but before seed set. If seeds are already present, additional care should be taken to remove the plants with the seeds attached, or the seeds should be removed from the plants prior to the plant removal. A consistent weed abatement schedule will reduce the potential for non-natives to set seed. Soil disturbance should be limited by hand weeding, wherever possible, and weeds should be disposed of off-site to avoid any reinfestation through reseeding or from plant propagules. If hand weeding is not possible, the monitoring biologist should be consulted regarding the appropriate method of weed removal. For example, using mechanical equipment to remove flowers and immature seed heads may be appropriate where dense mats of non-native grasses have established. If there continues to be high incidence of weed infestation, weed control frequency may need to be increased. Otherwise, weeds should continue to be monitored and controlled on a quarterly basis.

#### Reseeding

 Following the application of soil mounds as previously described, apply native seed (by means of broadcast seeding, hydroseeding or drilling) during the rainy season, between December and March, or prior to a forecasted rain event.



#### City-Side Sage Mitigation Area Qualitative Progress Report – 1st Quarter, 2023

## **Prohibit Access**

• Continue to prohibit vehicle access to mitigation areas.

Thank you for the opportunity to work with you on this important project. Please contact Greg Ainsworth if you have questions concerning the contents of this report. He may be reached by telephone at (818) 564-5544, or by email at <a href="mailto:gainsworth@rinconconsultants.com">gainsworth@rinconconsultants.com</a>.

Sincerely,

Rincon Consultants, Inc.

**Greg Ainsworth** 

**Natural Resources Director** 

Kyle Gern Biologist

# **Attachments**

Attachment A Figure 1. Photograph Locations

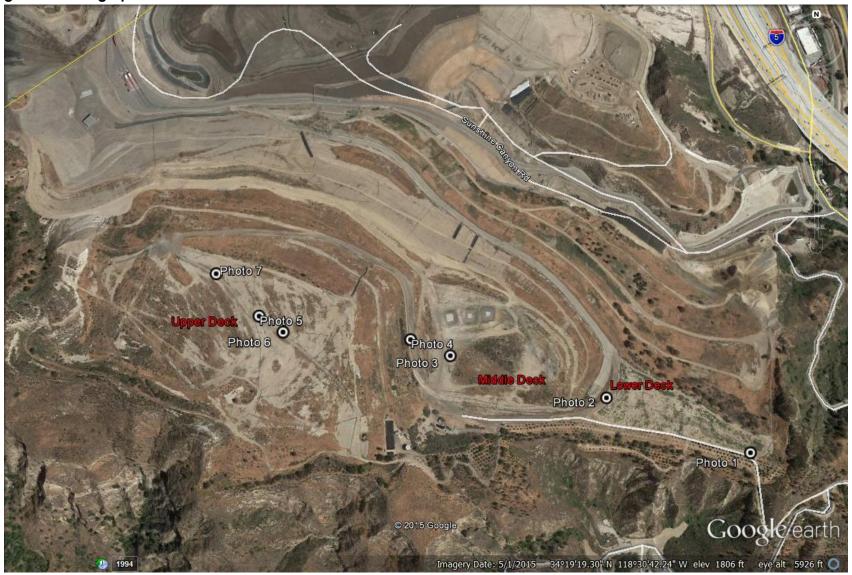
Attachment B Site Photographs

# Attachment A

Figure 1. Photograph Locations



Figure 1 Photograph Locations



# Attachment B

Site Photographs





Photograph 1. Facing west at Lower Deck. View of eastern limits dominated by Atriplex spp. and California sunflower (March 28, 2023).



Photograph 2. Facing east at Lower Deck from western boundary (March 28, 2023).





Photograph 3. Facing east at the Middle Deck from western boundary (March 28, 2023).



Photograph 4. Facing west at the easterly-facing slope located between the Middle and Upper Decks. The vegetation on the slopes between the Upper Deck is dominated by California buckwheat (currently vegetative) and non-native annual grasses (March 28, 2023).





**Photograph 5.** Facing northeast at the Upper Deck. This area is compacted and gravelly and continues to be problematic for supporting vegetation. Non-native annual grasses and forbs, and California buckwheat shrubs are evident in the background (March 28, 2023).

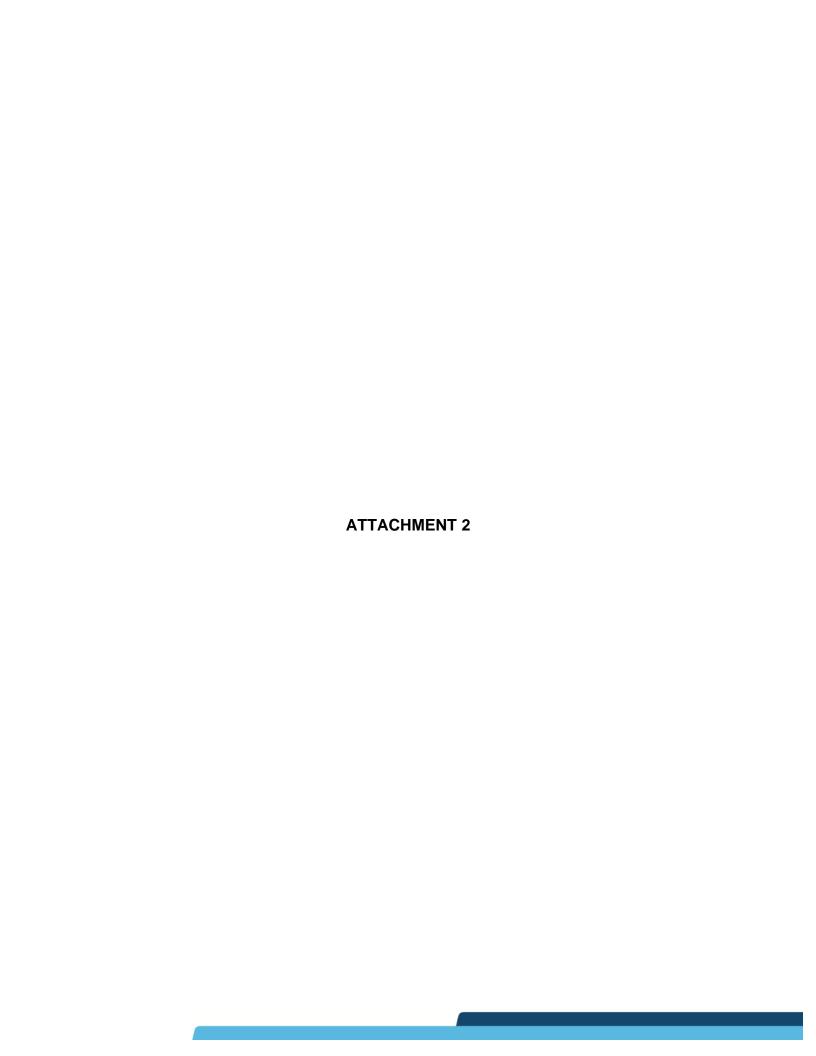


**Photograph 6.** Facing southwest at the Upper Deck. This area is primarily dominated by wild oats, brome grasses, redstem filaree, and short podded mustard. Note flowering California goldfields on the right side of the photograph (March 28, 2023).





Photograph 7. Facing southeast at the western portion of the Upper Deck. This area is dominated by short podded mustard, Australian saltbush, and Russian thistle (March 28, 2023).





April 17, 2023 Project No: 21-11086

Kate Downey Environmental Manager Republic Services 14747 San Fernando Road Sylmar, California 91342

Via email: KDowney@republicservices.com

Subject: Qualitative Monitoring Report for the County-Side Sage Mitigation Area – 1<sup>st</sup> Quarter 2023 Sunshine Canyon Landfill, Sylmar, California

Dear Ms. Downey,

On March 28, 2023, Rincon Consultants conducted the first quarter qualitative monitoring of 2023 for the County-Side Sage Mitigation Area (mitigation area). This report documents the current conditions of the mitigation area.

# **General Conditions**

# Hydroseeded Areas

Germination and plant growth from hydroseeding that occurred several years ago is not discernible in some portions of the mitigation area. Conditions on the mitigation area remain relatively unchanged since the fourth quarter of 2022. Areas that are moderately covered with native and non-native vegetation are concentrated in the southeastern portion of the mitigation area. The northern and upper portions of the mitigation area continue to be bare and problematic for establishment of vegetation, primarily because of highly eroded soils, steep slopes, and Boron-toxic soils (See *Recommendations* section). However, there are some small patches of vegetation that have established in the northern-central portion of the mitigation area and include shrubs such as California buckwheat (*Eriogonum fasciculatum*), deerweed (*Acmispon glaber*), and California sagebrush (*Artemisia californica*).

Native plant coverage is similar to the previous quarterly monitoring reports. The southern half of the mitigation area has relatively good coverage of native species, mostly California buckwheat and California sunflower (*Encelia californica*), which was in flower during the first quarter of 2023. Established laurel sumac (*Malosma laurina*) individuals are present as well. A majority of native shrub species were in their vegetative state, while California sunflower was in full flower during the monitoring event. The native vegetation coverage is assumed to be a direct result of seeding; however, some natural recruitment of native plant species is apparent based on the various sizes of shrubs and the presence of California sunflower seedlings within the understory. Due to rocky (hydrophobic) soil conditions, soil erosion and Boron-toxic soils on the northern-half and upper portions of the mitigation area, minimal plant growth is present. Due to the lack of plant establishment in these areas, erosional features have become prominent, especially following recent above-average rainfall events.

Annual non-native grasses and forbs currently dominate the understory and serve as ground cover in most of the vegetated areas. Brome grasses (*Bromus* spp.), wild oats (*Avena fatua*), short podded

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#### County-Side Sage Mitigation Area Qualitative Progress Report – 1st Quarter, 2023

mustard (*Hirschfeldia incana*), Russian thistle (*Salsola tragus*), and tocalote (*Centaurea melitensis*) are the most dominant non-native species present, and comprise approximately 25 to 30 percent of the total cover. California buckwheat dominates the native vegetation coverage with California sagebrush and California sunflower present as co-dominants. Native species comprise of approximately 75 to 80 percent of the native vegetation cover in areas where vegetation is present. Other less dominant native species observed include golden bush (*Ericameria linearifolia*), coyote brush (*Baccharis pilularis*), black sage (*Salvia mellifera*), deerweed, and laurel sumac.

# Seed Mix Areas

Like the hydroseeded areas, germination and plant growth from the seed mix areas that occurred several years ago is not discernible. As described in previous monitoring reports, a substantial portion of the mitigation area continues to be bare and problematic, which has inhibited the establishment and growth of vegetation. However, in areas where vegetation is present, there is a moderate coverage of native species (e.g., California buckwheat and California sunflower).

As described in the *Hydroseeded Areas* discussion above, a moderate cover of native plants exists within vegetated areas in the southeastern portion of the mitigation area, and annual non-native grasses and forbs currently dominate the understory.

## Native Plant Conditions

The plant cover rating indicated further below in



#### County-Side Sage Mitigation Area Qualitative Progress Report – 1st Quarter, 2023

Table 1 applies where vegetation is dominant in the southeastern portion of the mitigation area. Vegetation cover is moderate in the southeastern portion of the mitigation area and sparse along the upper slopes where rocky and eroded soil conditions occur, and in the northern portion of the mitigation area due to problematic soil conditions. As a result, most of the northern and upper portions of the mitigation area continue to have minimal coverage. Native vegetation coverage is good in vegetated areas and non-native plant cover is relatively low. Bare areas and non-native annual grasses are intermixed; however, as noted the northern and upper areas continue to be mostly bare where erosion and rocks are apparent.

California buckwheat is dominant and California sunflower is sub-dominant. Establishment of vegetation is problematic due to rocky soils with poor soil structure, and Boron toxicity has made plant growth (i.e., seed germination and recruitment) difficult. The species richness is low to medium within vegetated areas; however, species richness is considerably low when considering the entire county-sage mitigation area.

## **Exotic Plant Conditions**

Annual non-native weed species consist primarily of brome grasses, wild oats, and mustards, which are currently in their vegetative state and/or flowering. Additionally, some mid-season non-native plants (e.g., Russian thistle) are currently germinating. Non-native plant cover is anticipated to increase throughout the spring months and into summer. Other established weeds that were observed include redstem filaree (*Erodium cicutarium*) and telegraph weed (*Heterotheca grandiflora*; a weedy native plant species).

Table 1 Summary of Native and Exotic Plant Cover in the County-Side Sage Mitigation Area in Quarter 1, 2023

	Native Plant Vegetation				<b>Exotic Plant Vegetation</b>		
Location	Native Plant Cover	Plant Health Issues	Height of Native Species	Native Species Richness	Exotic Plant Cover	Phenological State	
County-Side Sage Mitigation Area	Moderate	Drought	12"-36"	Medium	Moderate	Germinating, vegetative, and in flower	

# Recommendations

The following recommendations within the County-Side Sage Mitigation are suggested based upon the field survey performed in the first quarter of 2023.

- Create Benches. Consider creation of several benches throughout the mitigation area to control soil erosion and to improve soil conditions to improve plant establishment and seed dispersal. This technique has been widely used on steep slopes and in areas where soil erosion is problematic. This technique also allows for opportunities to introduce a high-quality soil layer above the poor soils
- Reseed and Plant Container Plants With Irrigation. If creation of benches is feasible, planting methods should include hydroseeding, broadcast seeding, and/or imprinting no more than 10 days prior to a forecasted rain event, unless an irrigation system is installed. Planting with container plants with supplemental irrigation should also be considered.
- Use Soil Amendments. Incorporate a soil amendment or mulch with high organic content in select areas as determined by a restoration specialist.
- **Signage.** Install signs indicating that the area is undergoing revegetation.
- **Weed Control.** Continue weed control program as needed on a quarterly basis.
- **Prohibit Access.** Prohibit equipment access to mitigation area.

Thank you for the opportunity to work with you on this important project. Please contact Greg Ainsworth if you have questions concerning the contents of this report. He may be reached by telephone at (818) 564-5544, or by email at gainsworth@rinconconsultants.com.

Sincerely,

Rincon Consultants, Inc.

**Greg Ainsworth** 

**Natural Resources Director** 

**Biologist** 

#### **Attachments**

Attachment A Figure 1. Photograph Locations

Attachment B Site Photographs

# Attachment A

Figure 1. Photograph Locations



Figure 1 Photograph Locations



# Attachment B

Site Photographs





Photograph 1. Facing southwest at the County-Side Sage Mitigation Area (March 28, 2023).



Photograph 2. Facing northwest at the northern portion of the County-Side Sage Mitigation Area where plant growth has been problematic due to poor soil conditions (March 28, 2023).



### ARCHITERRA DESIGN GROUP

# FIELD OBSERVATION REPORT

DATE OF VISIT:	03/30/23
PROJECT:	Sunshine Canyon Mitigation Sites
PROJECT NUMBER:	1214
PROJECT MANAGER:	Gregg Denson
SITE INSPECTION #:	
PURPOSE OF VISIT:	Review site conditions/Photo Catalog
TIME OF SITE VISIT:	10:00am
WEATHER/TEMPERATURE:	Partly Sunny/Rainy 60°
ESTIMATED % COMPLETED:	100%
CONFORMANCE WITH SCHEDULE (+, -)	

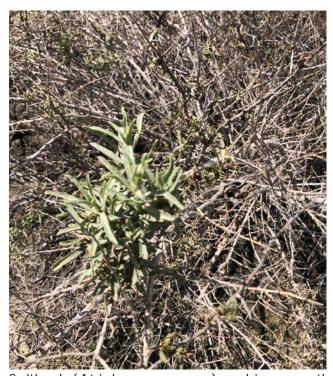
WORK IN PROGRESS:	Weed abatement / Monitoring Period /Construction Observation
PRESENT ON SITE:	Gregg Denson

A site visit walk and evaluation has been completed to review the Venturan CSS vegetation establishment on the Trial Site (Decks B/C) and County Mitigation Slopes. Additional items noted during the site visit are as follows:

### City-Side Sage Mitigation (Trial Site Deck C):

- After this historic year of rainfall (200%+ annual average & 400%+ average for March), many of the Venturan CSS species have been emerging from the dormancy period. Due to the cooler temperatures, most species are at least a few weeks behind of the typical blooming season, including some of the invasive grasses and annuals. Some species of Saltbush which appeared to be dead over the last year, are now showing evidence of life with new emerging foliage on what is mostly brittle defoliated branches. Due to the excessive rainfall and repeated storm events, erosion has removed much of the topsoil, leaving a rockier appearance to the soil surface in some areas. Many of the existing straw wattles are buried in silt. It may be beneficial before next Fall, to place new straw wattles in the flowlines and across slopes where erosion was heaviest.
- Encelia californica (California Sunflower) is the most identifiable and dominant species on the deck with yellow blooms becoming more apparent as days grow longer. Other blooming species include Salvia mellifera—Black Sage, Salvia leucophylla – Purple Sage, Acmispon glaber – Deerweed. Some of the other VCSS species are beginning to flush new growth as well.
- The understory of the PM10 Berm Oak Trees is a mix of invasive weeds like Shortpod Mustard (Hirshfeldia incana) and Red Brome Grass (Bromus madritensis) and VCSS natives like Encelia californica (California Sunflower) and California Sagebrush (Artemisia californica). We recommend that the PM10 areas adjacent to Decks B and C receive weed abatement as soon as possible. Identification of the native species should be established prior to any weed removal. The majority of the Coast Live Oak Trees at the PM10 Berm have recovered from fire damage in 2020.

- Weed abatement has been on-going, however due to the consistent soil moisture over the last few months from rains, weed growth is taking off. Several zones on Deck C have a number of exotic weeds. These include: Shortpod Mustard (Hirshfeldia incana), Red Brome Grass (Bromus madritensis), Yellow Star Thistle (Centaurea solstitialis), Hordeum depressum (Low Barley), Redstem Filaree (Erodium cicutarium), and Russian Thistle (Salsola tragus). All weeds should be carefully identified prior to removal and handled carefully to minimize any seed distribution during removals. Some areas where weeds are prevalent, also have emerging seedlings of natives. Maintenance personnel should flag natives prior to removals so that they may be preserved in place.
- Last year during the 1st Quarter report, it was noted that the VCSS native Creeping Wild Rye (Elymus triticoides) was scalped to the ground during that winter. That appears to be a continued practice by the maintenance personnel and should stop immediately. Not sure if this is due to misidentification, however the practice of scalping and/or spraying the grass with herbicide has now opened up large areas on the deck to exotic weeds. We have noticed that weeds are becoming established due to the new exposure of the soils, whereby that condition did not exist when the Creeping Wild Rye was left to naturalize as a large grass mass.
- On the eastern side of the deck there is an area where mature Encelia californica (California Sunflower), Black Sage (Salvia mellifera), and California Sagebrush (Artemisia californica) look to have been potentially over-sprayed with herbicide (Glyphosate). Foliage is either completely brown or wilting, next to healthy foliage. This is also the case within the north swale area where Creeping Wild Rye (Elymus triticoides) looks to have been sprayed and adjacent natives have been affected. This is concerning and maintenance personnel should confirm if this is the case. If misidentification of exotic versus native species is occurring, it can have negative outcomes on the establishment of the Venturan Coastal Sage Scrub on the decks.





Saltbush (Atriplex canescens) pushing growth in response to moisture from recent rains



Mushrooms (Strophariaceae) bloom on decaying plant material



Sediment fines collected at backside of straw wattle

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Red Brome Grass (*Bromus madritensis*), *Hordeum depressum* (Low Barley), and Redstem Filaree (*Erodium cicutarium*) blooming and pushing new seed heads.





Germinated Shortpod Mustard (Hirshfeldia incana) establishing and blooming



Low Barley and Red Brome Grass weeds intermixed with native species at PM10 berm



View looking west down maintenance road (PM10 berm left, Deck C revegetation site right)



California Buckwheat (Eriogonum fasciculatum) sprouts from under dormant Saltbush



Dead/damaged Coast Sunflower and California Sagebrush potentially due to herbicide overspray at eastern side of Deck C



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More damage of natives by herbicide spraying



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Scalping and/or spraying of Creeping Wild Rye (Elymus triticoides)



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New Black Sage (Salvia mellifera) seedlings





Black Sage (Salvia mellifera) with yellow foliage possibly due to an iron deficiency (chlorosis)



Eucalyptus species seedling (to be removed)

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View looking west with Deck C in the foreground and Deck B and A in the background

# City-Side Sage Mitigation (Deck B):

- Observations on Deck B Trail site are similar to those found on Deck C. The downslopes of Deck B/C are mostly covered with weed growth with little to no native plants: Shortpod Mustard (Hirshfeldia incana), Red Brome Grass (Bromus madritensis), Hordeum depressum (Low Barley), Redstem Filaree (Erodium cicutarium), and Russian Thistle (Salsola tragus). This slope area should be addressed for weed abatement soon, since the area is directly between both trial sites and seeds are developing and can easily be distributed into each revegetation area with winds, erosion from rainfall, etc.
- Deck B has a low point on the far easterly edge. There is a large area of standing water
  that also eroded part of the slope as it filled and spilled over the slope during the heavier
  rainstorms. As part of the revegetation improvements, ADG's grading plans show
  microtopography and drainage swales along that edge, eliminating the low spots and
  providing positive drainage to the concrete channel on the south edge of Deck B.
- The south side of the trial deck area has rapidly been taken over by invasive Slenderleaf Iceplant (Mesembryanthemum nodiflorum). It was observed growing within the revegetation site in the last quarterly report and has aggressively spread northward. The maintenance personnel should fashion a plan for removal of this spreading weed. This succulent-like weed spreads by seed which is dispersed by water. It is possible that spreading may be evident to the east side of the deck as well where the flow of water goes during storm events.
- The northern side of Deck B has completely filled in and is well established and the canopy has closed in, shading out most potential weed growth. There is a small California pepper (Schinus molle) along the maintenance road, which should be removed. VCSS species diversity within this established patch is abundant.
- Soil erosion at the top of the deck (west side), is the most prevalent, with at least 2"-3" of soil washed away since the last observation and report. We recommend the installation of additional straw wattles this Fall prior to next years rainy season.
- Photo Station Stakes for Stations #3 and #8 were missing and are not shown in the photos. Those photo stations will be mapped and restaked during the next quarter.



Invasive Slenderleaf Iceplant (Mesembryanthemum nodiflorum).



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Creeping Wild Rye (*Elymus triticoides*) growing along swale where soil sediment has collected



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Exposed rock after topsoil erosion of 2"-3"

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Current conditions of topsoil



Topsoil condition in 2020



Grouping of VCSS natives growing from original container planting (Mexican Elderberry, California Sagebrush, California Buckwheat, Bladderpod Plant)

Invasive Slenderleaf Iceplant (Mesembryanthemum nodiflorum) shown at ground level



California Pepper Tree (Schinus molle) for removal



North/West boundary of Deck B Trial Site where canopy of the VCSS has filled in



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Ponding at east edge of Deck B



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Slope Erosion where ponding spills over slope edge during storm events



Ponding at top of slope and seepage at the toe of slope ARCHITERRA DESIGN GROUP 10221-A TRADEMARK STREET, RANCHO CUCAMONGA, CA 91730

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Sediment debris trapped by fallen trash net

Signed: Gregg Denson	Date: 4-6-23		
	<u>DISTRIBUT</u>	TION .	
Republic Services		Contractor	<b>☑</b>
Project Manager (Gregg Denson)		Other	



Photo Station #1 - April 2022 (North)



Photo Station #1 - April 2023 (North)



Photo Station #1 - April 2022 (East)



Photo Station #1 - April 2023 (East)



Photo Station #1 - April 2022 (West)



Photo Station #1 - April 2023 (West)



Photo Station #2 - April 2022 (North)



Photo Station #2 - April 2023 (North)



Photo Station #2 - April 2022 (South)



Photo Station #2 - April 2023 (South)



Photo Station #2 - April 2022 (West)



Photo Station #2 - April 2023 (West)



Photo Station #4 - April 2022 (North)



Photo Station #4 - April 2023 (North)



Photo Station #4 - April 2022 (East)



Photo Station #4 - April 2023 (East)

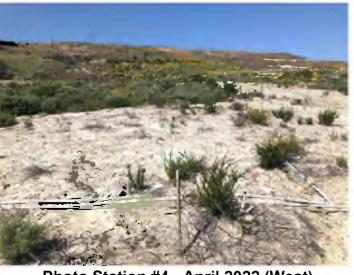


Photo Station #4 - April 2022 (West)



Photo Station #4 - April 2023 (West)



Photo Station #5 - April 2022 (North)



Photo Station #5 - April 2023 (North)



Photo Station #5 - April 2022 (East)



Photo Station #5 - April 2023 (East)



Photo Station #5 - April 2022 (West)



Photo Station #5 - April 2023 (West)



Photo Station #6 - April 2022 (North)



Photo Station #6 - April 2023 (North)



Photo Station #6 - April 2022 (East)



Photo Station #6 - April 2023 (East)



Photo Station #6 - April 2022 (West)



Photo Station #6 - April 2023 (West)



Photo Station #7 - April 2022 (North)



Photo Station #7 - April 2023 (North)



Photo Station #7 - April 2022 (East)



Photo Station #7 - April 2023 (East)



Photo Station #7 - April 2022 (West)



Photo Station #7 - April 2023 (East)



Photo Station #1 - April 2022 (East)



Photo Station #1 - April 2023 (East)



Photo Station #1 - April 2022 (North)



Photo Station #1 - April 2023 (North)



Photo Station #1 - April 2022 (West)



Photo Station #1 - April 2023 (West)



Photo Station #2 - April 2022 (East)



Photo Station #2 - April 2023 (East)



Photo Station #2 - April 2022 (North)



Photo Station #2 - April 2023 (North)



Photo Station #2 - April 2022 (South)



Photo Station #2 - April 2023 (South)



Photo Station #3 - April 2022 (East)



Photo Station #3 - April 2023 (East)



Photo Station #3 - April 2022 (North)



Photo Station #3 - April 2023 (North)



Photo Station #3 - April 2022 (West)



Photo Station #3 - April 2023 (West)



Photo Station #4 - April 2022 (South)



Photo Station #4 - April 2023 (South)



Photo Station #4 - April 2022 (East)



Photo Station #4 - April 2023 (East)



Photo Station #4 - April 2022 (West)



Photo Station #4 - April 2023 (West)



Photo Station #5 - April 2022 (East)



Photo Station #5 - April 2023 (East)



Photo Station #5 - April 2022 (North)



Photo Station #5 - April 2023 (North)



Photo Station #5 - April 2022 (West)



Photo Station #5 - April 2023 (West)



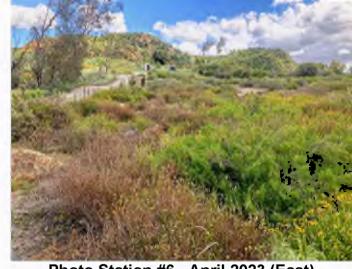


Photo Station #6 - April 2023 (East)



Photo Station #6 - April 2022 (North)



Photo Station #6 - April 2023 (North)



Photo Station #6 - April 2022 (West)



Photo Station #6 - April 2023 (West)



Photo Station #7 - April 2022 (East)



Photo Station #7 - April 2023 (East)



Photo Station #7 - April 2022 (West)



Photo Station #7 - April 2023 (West)



Photo Station #7 - April 2022 (North)



Photo Station #7 - April 2023 (North)



Photo Station #8 - April 2022 (East)



Photo Station #8 - April 2023 (East)



Photo Station #8 - April 2022 (North)



Photo Station #8 - April 2023 (North)



Photo Station #8 - April 2022 (West)



Photo Station #8 - April 2023 (West)



Photo Station #9 - April 2022 (East)



Photo Station #9 - April 2023 (East)



Photo Station #9 - April 2022 (North)



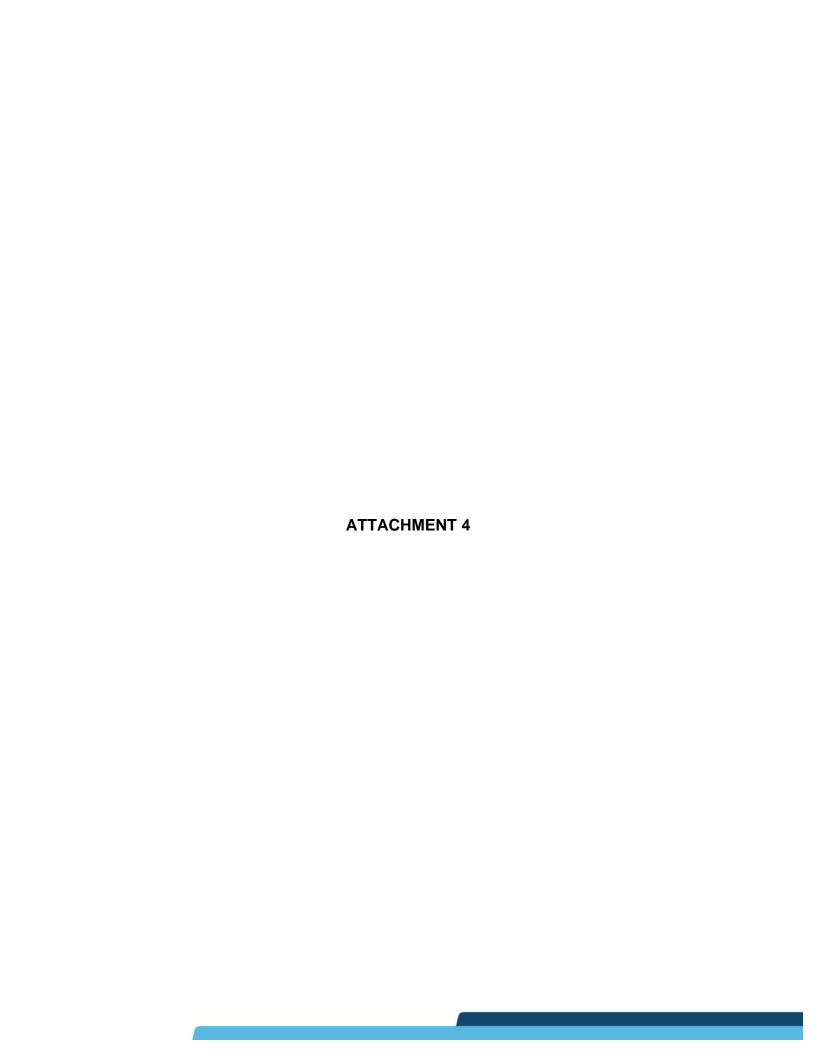
Photo Station #9 - April 2023 (North)



Photo Station #9 - April 2022 (West)



Photo Station #9 - April 2023 (West)





April 17, 2023

Project No: 21-11086

**Kate Downey Environmental Manager Republic Services** 14747 San Fernando Road Sylmar, California 91342

Via email: KDowney@republicservices.com

Subject: Coastal Sage Scrub City South C Trial Plot 1st Quarter 2023 Monitoring Report, Sunshine

**Canyon Landfill** 

Dear Ms. Downey,

This monitoring report has been prepared by Rincon Consultants, Inc. (Rincon) to inform Republic Services on the status of coastal sage scrub restoration at the Sunshine Canyon Landfill located at 14747 San Fernando Road, Sylmar, California 91342. Specifically, this letter report serves to document the abundance of vegetation at the Coastal Sage Scrub City South C Trial Plot in the first quarter of 2023.

# Methods

On March 28, 2023, Rincon Consultants monitored the Coastal Sage Scrub City South C Trial Plot (trial plot) at the Sunshine Canyon Landfill, which constitutes the first quarter of monitoring for 2023. The sample methodology generally followed the Methodology for Monitoring Percent Cover and Species Richness within Each Seeded Application Method on the Coastal Sage Scrub Pilot Project at the Sunshine Canyon Landfill (JMA, April 23, 2014). Quadrat sampling of the Coastal Sage Scrub City South C Trial Plot consists of four 50-meter<sup>2</sup> quadrats that are randomly sampled within each of the following three seeded areas: hydroseed, imprint, and hand broadcast. The twelve quadrats sampled were randomly selected prior to the first initial monitoring event from a grid that was placed over the entire trial plot, and each quadrat was given a letter (A-L) and delineated in the field with wooden stakes (Attachment A).

As shown in Attachment A, three different seeding methods were used as follows:

- Hydroseed (Quadrats A, B, C, and D)
- Imprint (Quadrats E, F, G, and H)
- Hand broadcast (Quadrats I, J, K, and L)

#### Absolute Cover

The following qualitative data was collected in each quadrat to determine the absolute cover of native and non-native herbaceous and woody species:

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# Coastal Sage Scrub City South C Trial Plot, Sunshine Canyon Landfill Monitoring Report 1st Quarter, 2023

- Percent basal cover (shrubs). Visual estimate of the amount of basal cover within each quadrat for all shrub species.
- Percent basal cover (herbs). Visual estimate of the amount of basal cover within each quadrat for all herb species.
- Percent bare ground. Visual estimate of the amount of available bare ground with no vegetation, but suitable for plant growth.
- Percent rock or other. Visual estimate of the amount of unavailable ground for supporting plant growth. Inhibitors generally included rocks and boulders, irrigation lines and valve boxes, and mulch.
- Percent canopy. Visual estimate of the percent canopy of each shrub and herbaceous species.
- Photographs. A photograph was taken from the southwest corner (facing northeast) of each quadrat.

#### Percent Cover

The following quantitative data was collected in each quadrat to determine the percent cover of native and non-native species.

Point intercept method. Sampling began at the southwest corner of each quadrat and continued around the quadrat in a clockwise direction. The species located precisely at every meter point was tallied, including areas of bare ground, rock and other.

# Field Results

Below are the average data collected for each planting method.

# Absolute Cover (Qualitative)

Hydroseed – Quadrats A, B, C, and D (average)

- Percent basal cover (shrubs) 15%
- Percent basal cover (herbs) 4%
- Percent bare ground 49%
- Percent rock or other 6%
- Percent canopy (shrubs) 43%
- Percent canopy (herbs) 11%

#### Imprint – Quadrats E, F, G, and H (average)

- Percent basal cover (shrubs) 18%
- Percent basal cover (herbs) 4%
- Percent bare ground 44%
- Percent rock or other 5%
- Percent canopy (shrubs) 45%
- Percent canopy (herbs) 9%





Coastal Sage Scrub City South C Trial Plot, Sunshine Canyon Landfill Monitoring Report 1st Quarter, 2023

### Hand broadcast – Quadrats I, J, K, and L (average)

- Percent basal cover (shrubs) 13%
- Percent basal cover (herbs) 25%
- Percent bare ground 36%
- Percent rock or other 3%
- Percent canopy (shrubs) 27%
- Percent canopy (herbs) 36%

# Percent Cover (Quantitative)

The representation of each species within a quadrat was estimated by broad cover classes (<1%, 1-5%, 5-25%, 25-50%, 50-75%, and >75%). The percent cover of each species based upon the point intercept method is presented in Table 1 through Table 3 below.



#### Hydroseed – Quadrats A, B, C, and D (Average) Table 1

	Plo	ot A	Plo	ot B	Plot C		Plot D	
Species	Number of Hits	Percent Cover	Number of Hits	Percent Cover	Number of Hits	Percent Cover	Number of Hits	Percent Cover
Native Shrubs								
Acmispon glaber								
Artemisia californica								
Atriplex lentiformis			8	16%	8	16%	7	14%
Atriplex polycarpa	5	10%	7	14%	1	2%		
Atriplex spinosa								
Baccharis pilularis								
Diplacus aurantiacus								
Encelia californica	14	28%	9	18%	7	14%	15	30%
Salvia apiana								
Salvia mellifera								
Native Herbs								
Achillea millefolium								
Cryptantha intermedia								
Helianthus annuus							1	2%
Elymus triticoides			3	6%				
Nasella pulchra								
Sisyrinchium bellum								
Vulpia microstachys								
Non-Native Herbs								
Bromus diandrus							1	2%
Bromus rubens							1	2%
Centaurea melitensis							1	2%
Erodium cicutarium					3	6%		
Hirschfeldia incana			1	2%	1	2%	2	4%
Hordeum murinum			7	14%	6	12%	3	6%
Salsola tragus								
Bare ground	31	62%	15	30%	24	48%	19	38%
		Plot A	PI	ot B	Plot C	Plot	D P	A,B,C,D ercent Cover
Percent Cover Native Shr	ub	38%		18%	32%	449	6	41%
Percent Cover Native He	rb	0%		6%	0%	29	6	2%
Percent Cover Non-Nativ	e Shrub	0%		0%	0%	0%	6	0%
Percent Cover Non-Nativ	e Herb	0%	1	.6%	20%	16%	6	13%
Percent Bare Ground		62%	3	30%	48%	38%	6	45%



Table 2 Imprint – Quadrats E, F, G, and H (Average)

	Plot		Plot F		Plo	Plot G		ot H
Species	Number of Hits	Percent Cover	Number of Hits	Percent Cover	Number of Hits	Percent Cover	Number of Hits	Percent Cover
Native Shrubs								
Acmispon glaber								
Artemisia californica								
Atriplex lentiformis			4	8%	2	4%		
Atriplex polycarpa	2	4%	10	20%			2	4%
Atriplex spinosa			2	4%				
Baccharis pilularis								
Diplacus aurantiacus								
Encelia californica	14	28%	4	8%	29	58%	32	64%
Salvia leucophylla								
Salvia mellifera								
Native Herbs								
Achillea millefolium								
Cryptantha intermedia								
Helianthus annuus								
Elymus triticoides								
Nasella pulchra								
Sisyrinchium bellum								
Vulpia microstachys								
Non-Native Herbs								
Bromus rubens			1	2%			2	4%
Centaurea melitensis								
Echinochloa crus-galli								
Erigeron canadensis								
Erodium cicutarium	2	4%	2	4%				
Hirschfeldia incana	3	6%	2	4%	2	4%	2	4%
Hordeum murinum			7	14%	1	2%		
Salsola tragus								
Bare ground	29	58%	18	36%	16	32%	12	24%
		Plot E	Plot F		Plot G	Plot F		E,F,G,H cent Cover
Percent Cover Native Shrub		32%	40%		62%	68%		51%
Percent Cover Native Herb		0%	0%		0%	0%		0%
Percent Cover Non-Native S	hrub	0%	0%		0%	0%		0%
Percent Cover Non-Native H	lerb	10%	24%		6%	8%		12%
Percent Bare Ground		58%	36%		32%	24%		38%



Table 3 Hand Broadcast – Quadrats I, J, K, and L (Average)

	Plo	ot I	Plo	ot J	Plot K		Plo	Plot L	
Species	Number of Hits	Percent Cover	Number of Hits	Percent Cover	Number of Hits	Percent Cover	Number of Hits	Percent Cover	
Native Shrubs									
Acmispon glaber									
Artemisia californica			2	4%					
Atriplex lentiformis			2	4%					
Atriplex polycarpa							4	8%	
Atriplex spinosa									
Baccharis pilularis							1	2%	
Diplacus aurantiacus									
Encelia californica	21	42%	4	8%			26	52%	
Non-Native Shrubs									
Atriplex semibaccata									
Native Herbs									
Achillia mellifoluim									
Cryptantha intermedia									
Helianthus annuus									
Elymus triticoides					21	42%	8	16%	
Nasella pulchra									
Sisyrinchium bellum									
Vulpia microstachys									
Non-Native Herbs									
Avena barbata					2	4%			
Bromus diandrus	1	2%	2	4%	1	2%			
Bromus rubens			4	8%			1	2%	
Centaurea melitensis									
Erodium cicutarium	1	2%	5	10%					
Hirschfeldia incana			2	4%	3	6%			
Hordeum murinum	1	2%	18	36%	1	2%			
Bare ground	26	52%	11	22%	22	44%	10	20%	
		Distri	DI-+		DI-+ I/	Dist.		C. Percent	
Percent Cover Native Shrub		Plot I 42%	Plot J 16%		Plot K 0%	Plot L 62%		Cover 30%	
Percent Cover Native Herb		0%	0%		42%	16%		15%	
Percent Cover Non-Native S	hruh	0%	0%		0%	0%		0%	
Percent Cover Non-Native H		6%	62%		14%	2%		21%	
Percent Bare Ground	ici b	52%	22%		44%	20%		35%	
reiteilt baie Glouilu		JZ70	22%		4470	20%		33%	



Table 4 below provides a summary of the vegetation cover of shrubs and herbs, including areas of bare ground. The percent cover of native and non-native species is summarized above in Tables 1-3.

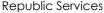
Table 4 Summary of Vegetation Cover for Each Planting Method at the Coastal Sage Scrub City South C Trial Plot

	Hydroseed (Quadrats A, B, C, and D)		Imprint (Quadrats E, F, G, and H)		Hand Broadcast (Quadrats I, J, K, and L)	
	Qualitative	Quantitative	Qualitative	Quantitative	Qualitative	Quantitative
Percent Cover Shrub	43%	41%	45%	51%	27%	30%
Percent Cover Herb	11%	15%	9%	12%	36%	36%
Percent Bare Ground	49%	45%	44%	38%	36%	35%

As discussed in previous reports, most of the trial plot (except for quadrats A, B E, F and G) substantially burned during the Saddleridge Fire in October 2019, and much of the vegetation was removed and/or crushed by fire equipment (e.g., bulldozers). Following the fire, non-native species such as brome grasses (Bromus spp.), foxtail barley (Hordeum murinum), and short podded mustard (Hirschfeldia incana) established in areas that were previously dominated by saltbush (Atriplex spp.). However, the trial plot has almost fully recovered from the fire, as evidenced by the establishment, growth, and reproduction of native shrub species such as allscale saltbush (Atriplex polycarpa), big saltbush (Atriplex lentiformis), California sunflower (Encelia californica), California sagebrush (Artemisia californica), purple sage (Salvia leucophylla), and black sage (Salvia mellifera) that previously dominated the trial plot prior to the fire.

The quantitative percent cover of native shrub species currently has an average of 41 percent within the hydroseed quadrats, 51 percent within the imprint quadrats, and 30 percent within the hand broadcast quadrats (Tables 1-3). Native shrub quantitative percent cover did not substantially change from the fourth quarter monitoring event in 2022. All shrub species within the trial plot were either vegetative or in flower during the first quarter of 2023. Most notably, California sunflower was in full bloom during the monitoring event. As described in previous monitoring reports from 2022, beardless wild rye (Elymus triticoides) was trimmed as part of the weeding effort implemented by Republic Services in spring of 2022 (Attachment B, Photograph 11); consequently, quantitative native herb cover declined in all quadrats since the fourth quarter of 2021 (hydroseed quadrats: 2 percent cover; imprint quadrats: zero percent cover; hand broadcast quadrats: 15 percent cover).

Non-native plant cover has slightly declined in cover within the trial plot between the fourth quarter of 2022 and the first quarter of 2023. Non-native annual grasses and forbs such as foxtail barley, Mediterranean grass (Schismus arabicus), red brome (Bromus rubens), and short podded mustard (Hirschfeldia incana), which were vegetative during the fourth quarter of 2022, appear to have been negatively impacted by recent above-average rainfall events. Large amounts of sediment deposition and scouring is evident throughout the trial plot following recent storm events, which likely uprooted nonnative herbaceous vegetation. Non-native plant species cover is expected to increase throughout the spring and into summer of 2023, as winter storm events subside. Total non-native herbaceous cover currently has an average of 13 percent within the hydroseed quadrats (down from 16 percent in the fourth quarter of 2022), 12 percent within the imprint quadrats (up from 10 percent in the fourth





Coastal Sage Scrub City South C Trial Plot, Sunshine Canyon Landfill
Monitoring Report 1st Quarter, 2023

quarter of 2022), and 21 percent (down from 30 percent in the fourth quarter of 2022) within the hand broadcast quadrats (Tables 1-3).

# Recommendations

#### **Successional Growth and Weed Control**

Wildfires in Southern California have become more common in recent years and have impacted the native landscape, including established restoration sites. Non-native weed control is essential in establishing post-fire restoration sites and is recommended by such organizations as the California Department of Fish and Wildlife Service and the California Society of Ecological Restoration. Successional regrowth of herbaceous non-native species is to be expected within the first two to three years following a wildfire, which is currently being observed at the trial plot. Native shrubs are expected to recover over a longer period through germination of existing seed within the topsoil and basal growth from charred plants. Native shrubs have shown notable growth following the fire and appear to be well established in the trial plot.

Successional growth of herbaceous species is also important, as native herbaceous species provide natural erosion of topsoil. To control the spread non-native herbaceous species such as foxtail barley, red brome, and short podded mustard, and minimize competition with native herbaceous and woody species for water, nutrients, and sunlight, weed maintenance should occur no less than every four months, and special attention should be afforded to minimizing impacts to native grasses that may appear to be non-native (i.e., beardless wild rye), native seedlings, and native shrub resprouts. Weed maintenance should be scheduled to maximize removal of non-native species prior to seed set, which typically occurs in spring between the months of February and April, but may also occur throughout the growing season based upon precipitation events.

#### **Supplemental Irrigation**

While southern California received above-average rainfall in the winter of 2022 and spring of 2023, supplemental irrigation is a valuable restoration technique to promote re-establishment of native vegetation, particularly during the dry months of the year (i.e., summer and fall). If native herbaceous vegetation continues to be sparse throughout the trial plot, and/or if native shrubs senesce or show indicators of drought stress, the irrigation system within the trial plot should be re-installed to increase water availability and promote seed germination and re-establishment of native vegetation.



# Coastal Sage Scrub City South C Trial Plot, Sunshine Canyon Landfill Monitoring Report 1st Quarter, 2023

# References

John Minch and Associates, Inc. (JMA). 2014. Methodology for Monitoring Percent Cover and Species Richness within Each Seeded Application Method on the Coastal Sage Scrub Pilot Project at the Sunshine Canyon Landfill.

Thank you for the opportunity to work with you on this important project. Please contact Greg Ainsworth if you have questions concerning the contents of this report. He may be reached by telephone at (818) 564-5544, or by email at <a href="mailto:gainsworth@rinconconsultants.com">gainsworth@rinconconsultants.com</a>.

Sincerely,

Rincon Consultants, Inc.

**Greg Ainsworth** 

**Natural Resources Director** 

Kyle Gern Biologist

#### **Attachments**

Attachment A Deck C Revegetation Area Quadrat Layout and Planting Plan

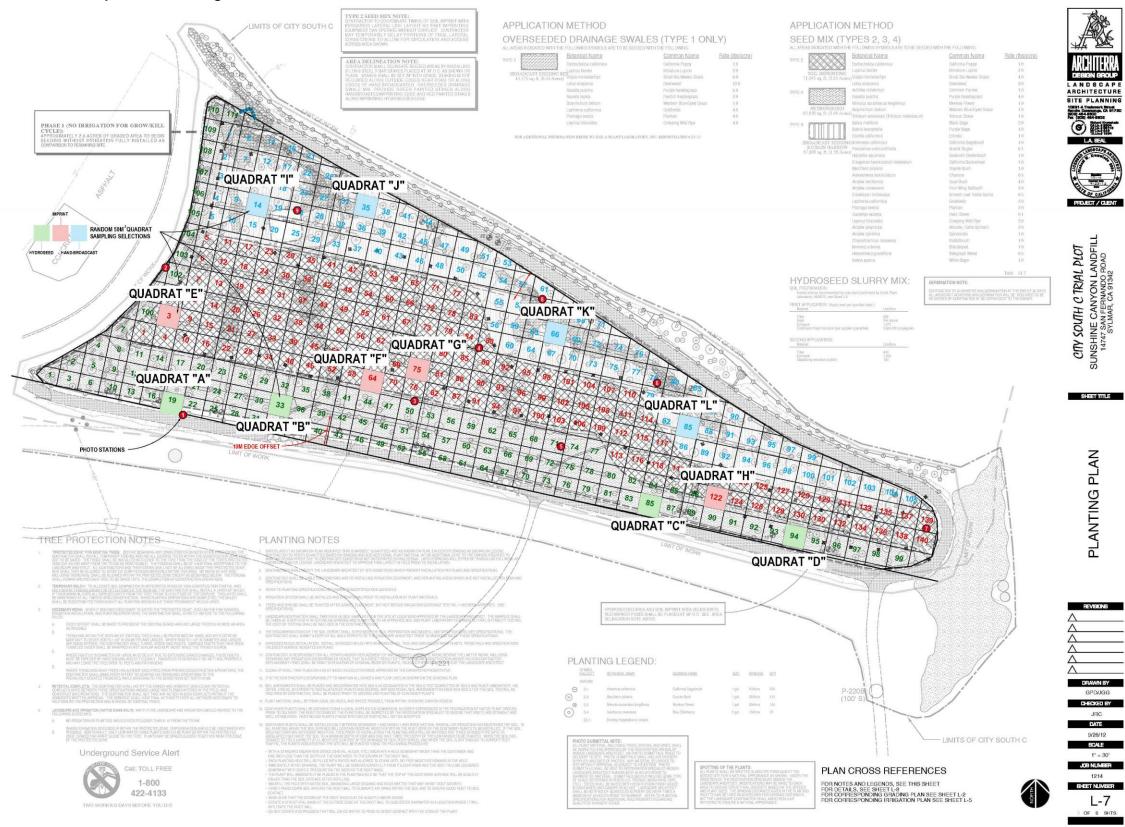
Attachment B Representative Site Photographs



Deck C Revegetation Area Quadrat Layout and Planting Plan



### Deck C Revegetation Area Quadrat Layout and Planting Plan





Photographs of Sample Plots



Photograph 1. Quadrat A facing northeast from southwest corner (March 28, 2023).



Photograph 2. Quadrat B facing northeast from southwest corner (March 28, 2023).



Photograph 3. Quadrat C facing northeast from southwest corner (March 28, 2023).



Photograph 4. Quadrat D facing northeast from southwest corner (March 28, 2023).



Photograph 5. Quadrat E facing northeast from southwest corner (March 28, 2023).



Photograph 6. Quadrat F facing northeast from southwest corner (March 28, 2023).





Photograph 7. Quadrat G facing northeast from southwest corner (March 28, 2023).



Photograph 8. Quadrat H facing northeast from southwest corner (March 28, 2023).



Photograph 9. Quadrat I facing northeast from southwest corner (March 28, 2023).



Photograph 10. Quadrat J facing northeast from southwest corner (March 28, 2023).



Photograph 11. Quadrat K facing northeast from southwest corner (March 28, 2023).



Photograph 12. Quadrat L facing northeast from southwest corner (March 28, 2023).





April 17, 2023

Project No: 21-11086

Kate Downey **Environmental Manager Republic Services** 14747 San Fernando Road Sylmar, California 91342

Via email: KDowney@republicservices.com

Coastal Sage Scrub City South B Trial Plot 1st Quarter 2023 Monitoring Report, Sunshine Subject: **Canyon Landfill** 

Dear Ms. Downey,

This monitoring report has been prepared by Rincon Consultants, Inc. (Rincon) to inform Republic Services on the status of coastal sage scrub restoration at the Sunshine Canyon Landfill located at 14747 San Fernando Road, Sylmar, California 91342. Specifically, this letter report serves to document the abundance of vegetation at the Coastal Sage Scrub City South B Trial Plot in the first quarter of 2023.

# Methods

On March 28, 2023, Rincon Consultants monitored the Coastal Sage Scrub City South B Trial Plot (trial plot) at the Sunshine Canyon Landfill, which constitutes the first quarter of monitoring for 2023. The sample methodology generally followed the Methodology for Monitoring Percent Cover and Species Richness within Each Seeded Application Method on the Coastal Sage Scrub Pilot Project at the Sunshine Canyon Landfill (JMA, April 23, 2014). Quadrat sampling of the revegetation area consists of nine 50meter<sup>2</sup> quadrats that are randomly located throughout the revegetation area. The quadrats were randomly selected prior to the first initial monitoring event from a grid that was placed over the entire trial plot, and each quadrat was given a letter (A-I) and delineated in the field with wooden stakes. As shown in Attachment A, five different planting methods were used as follows:

- Soil imprinting with hand broadcast overseeded drainage swales (Quadrats A and G)
- Soil imprinting (Quadrats B, F and H)
- Broadcast seeding (Quadrat C)
- Broadcast seeding with soil imprinting (Quadrat D and I)
- Soil imprinting and hand broadcast (Quadrat E)

#### Absolute Cover

The following qualitative data was collected in each quadrat to determine the absolute cover of native and non-native herbaceous and woody species:

Percent basal cover (shrubs). Visual estimate of the amount of basal cover within each quadrat for all shrub species.

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# Coastal Sage Scrub City South B Trial Plot, Sunshine Canyon Landfill Monitoring Report 1st Quarter, 2023

- Percent basal cover (herbs). Visual estimate of the amount of basal cover within each quadrat for all herbaceous species.
- **Percent bare ground.** Visual estimate of the amount of available bare ground with no vegetation.
- Percent rock or other. Visual estimate of the amount of unavailable ground for supporting plant growth. Inhibitors generally included rocks and boulders, irrigation lines and valve boxes, and mulch.
- Percent canopy. Visual estimate of the percent canopy of each shrub and herbaceous species.
- Photographs. A photograph was taken from the southwest corner (facing northeast) of each quadrat.

### Percent Cover

The following quantitative data was collected in each quadrat to determine the percent cover of native and non-native species.

Point intercept method. Sampling began at the southwest corner of each quadrat and continued around the quadrat in a clockwise direction. The species located precisely at every meter point was tallied, including areas of bare ground, rock and other.

# Field Results

Below are the average data collected for each planting method.

# Absolute Cover (Qualitative)

Soil imprinting with hand broadcast overseeded drainage swales – Quadrats A and G (average)

- Percent basal cover (shrubs) 3%
- Percent basal cover (herbs) 9%
- Percent bare ground 69%
- Percent rock or other 3%
- Percent canopy (shrubs) 19%
- Percent canopy (herbs) 21%

Soil imprinting – Quadrats B, F, and H (average)

- Percent basal cover (shrubs) 9%
- Percent basal cover (herbs) 5%
- Percent bare ground 56%
- Percent rock or other 3%
- Percent canopy (shrubs) 25%
- Percent canopy (herbs) 17%

#### Broadcast seeding – Quadrat C

■ Percent basal cover (shrubs) – 20%



# Coastal Sage Scrub City South B Trial Plot, Sunshine Canyon Landfill Monitoring Report 1st Quarter, 2023

- Percent basal cover (herbs) 15%
- Percent bare ground 15%
- Percent rock or other 3%
- Percent canopy (shrubs) 78%
- Percent canopy (herbs) 26%

### Broadcast seeding with soil imprinting – Quadrats D and I (average)

- Percent basal cover (shrubs) 4%
- Percent basal cover (herbs) 9%
- Percent bare ground 73%
- Percent rock or other 7%
- Percent canopy (shrubs) 16%
- Percent canopy (herbs) 24%

## Soil Imprinting and hand broadcast – Quadrat E

- Percent basal cover (shrubs) 7%
- Percent basal cover (herbs) 3%
- Percent bare ground 75%
- Percent rock or other 1%
- Percent canopy (shrubs) 30%
- Percent canopy (herbs) 12%

# Percent Cover (Quantitative)

The representation of each species within each quadrat was estimated by broad cover classes (<1%, 1-5%, 5-25%, 25-50%, 50-75%, and >75%). The percent cover of each species based upon the point intercept method is presented in Table 1 through Table 5 below.



Coastal Sage Scrub City South B Trial Plot, Sunshine Canyon Landfill
Monitoring Report 1st Quarter, 2023

Table 1 Soil Imprinting with Hand Broadcast Overseeded Drainage Swales – Quadrats A and G (Average)

	Quad	rat A	Quad	rat G
Species	Number of Hits	Percent Cover	Number of Hits	Percent Cover
Native Shrubs				
Acmispon glaber	1	2%	1	2%
Artemisia californica			1	2%
Atriplex lentiformis			4	8%
Atriplex polycarpa			9	18%
Atriplex spinosa				
Baccharis pilularis	2	4%		
Baccharis salicifolia				
Encelia californica				
Salvia apiana				
Salvia mellifera				
Non-Native Shrubs				
Atriplex semibaccata			1	2%
Native Herbs				
Achillea millefolium				
Eschscholzia californica				
Elymus triticoides			4	8%
Nasella pulchra				
Sisyrinchium bellum				
Non-Native Herbs				
Centaurea melitensis				
Erodium cicutarium	1	2%		
Hirschfeldia incana	4	8%		
Hordeum murinum	4	8%	1	2%
Salsola tragus				
Bare ground	38	76%	29	58%
	Quadrat A	Quadrat G	A and G (	% Cover)
Percent Cover Native Shrub	6%	30%	189	%
Percent Cover Native Herb	0%	8%	49	%
Percent Cover Non-Native Shrub	0%	2%	19	%
Percent Cover Non-Native Herb	18%	2%	109	%
Percent Bare Ground	76%	58%	679	%



Table 2 Soil Imprinting – Quadrats B, F, and H (Average)

	Quadrat B		Quad	Quadrat F		Quadrat H	
Species	Number of Hits	Percent Cover	Number of Hits	Percent Cover	Number of Hits	Percent Cover	
Native Shrubs							
Acmispon glaber	5	10%					
Artemisia californica	14	28%					
Atriplex lentiformis			3	6%	2	4%	
Atriplex polycarpa							
Baccharis pilularis	3	6%					
Encelia californica	2	4%					
Encelia farinosa	2	4%					
Eriogonum fasciculatum	2	4%	2	4%	5	10%	
Hesperoyucca whipplei							
Isocoma menziesii	5	10%					
Lepidospartum squamatum							
Salvia leucophylla	1	2%					
Salvia mellifera	9	18%					
Sambucus nigra ssp. caerulea	1	2%					
Native Herbs							
Elymus triticoides					1	2%	
Helianthus annuus							
Sisyrinchium bellum							
Vulpia microstachys							
Non-Native Herbs							
Bromus diandrus			1	2%			
Bromus rubens			2	4%	2	4%	
Centaurea melitensis	1	2%					
Festuca myuros					1	2%	
Hordeum murinum			2	4%	3	6%	
Mesembryanthemum nodiflorum			22	44%	2	4%	
Bare ground	5	10%	18	36%	34	68%	
	Qua	adrat B	Quadrat F	Quadra	t H B	, F, H (% cover)	
Percent Cover Native Shrub		88%	10%	149	6	37%	
Percent Cover Native Herb		0%	0%	29	6	1%	
Percent Cover Non-Native Shru		0%	0%	0%		0%	
Percent Cover Non-Native Herb		2%	54%	16%		24%	
Percent Bare Ground		10%	36%	68%	6	38%	



# Table 3 Broadcast Seeding – Quadrat C

	Quadrat C					
Species	Number of Hits	Percent Cover				
Native Shrubs						
Acmispon glaber	14	28%				
Artemisia californica	21	42%				
Atriplex lentiformis						
Atriplex polycarpa						
Atriplex spinosa						
Baccharis pilularis						
Encelia californica						
Encelia farinosa	2	4%				
Eriogonum fasciculatum						
Lepidospartum squamatum						
Salvia apiana	1	2%				
Native Herbs						
Achillea millefolium						
Eschscholzia californica						
Elymus triticoides						
Nasella pulchra						
Sisyrinchium bellum						
Vulpia microstachys						
Non-Native Herbs						
Centaurea melitensis	12	24%				
Echinochloa crus-galli						
Erodium cicutarium						
Hirschfeldia incana						
Hordeum vulgare						
Marrubium vulgare						
Bare ground	0	0%				
	Qua	drat C (% cover)				
Percent Cover Native Shrub		76%				
Percent Cover Native Herb		0%				
Percent Cover Non-Native Shrub		0%				
Percent Cover Non-Native Herb		24%				
Percent Bare Ground		0%				

Republic Services
Coastal Sage Scrub City South B Trial Plot, Sunshine Canyon Landfill
Monitoring Report 1st Quarter, 2023

Table 4 Broadcast Seeding with Soil Imprinting – Quadrats D and I (Average)

	Quad	Quadrat D		adrat I
Species	Number of Hits	Percent Cover	Number of Hits	Percent Cover
Native Shrubs				
Acmispon glaber				
Artemisia californica				
Atriplex lentiformis	2	4%		
Atriplex polycarpa			1	2%
Eriogonum fasciculatum			3	6%
Isocoma menziesii				
Opuntia littoralis				
Non-Native Shrubs				
Atriplex semibaccata			3	6%
Native Herbs				
Achillea millefolium				
Descurainia pinnata				
Elymus triticoides	2	4%	1	2%
Nasella pulchra				
Sisyrinchium bellum				
Vulpia microstachys				
Non-Native Herbs				
Avena barbata				
Bromus diandrus			1	2%
Bromus rubens	4	8%	11	22%
Erodium cicutarium	1	2%		
Festuca myuros			4	8%
Hirschfeldia incana	1	2%		
Hordeum murinum	2	4%	5	10%
Mesembryanthemum nodiflorum	8	16%		
Polygonum aviculare	1	2%	1	2%
Salsola tragus	1	2%		
Bare ground	28	56%	20	40%
	Quadr	at D	Quadrat I	D and I (% cover)
Percent Cover Native Shrub		1%	8%	6%
Percent Cover Native Herb		1%	2%	3%
Percent Cover Non-Native Shru	b (	0%	6%	3%
Percent Cover Non-Native Herk	36	5%	44%	40%
Percent Bare Ground	56	5%	40%	48%



Table 5 Soil Imprinting and Hand Broadcast – Quadrat E

	Quadrat E					
Species	Number of Hits	Percent Cover				
Native Shrubs						
Acmispon glaber						
Artemisia californica	1	2%				
Atriplex lentiformis	4	8%				
Atriplex polycarpa	5	10%				
Atriplex spinosa						
Baccharis pilularis						
Encelia californica	1	2%				
Encelia farinose	2	4%				
Eriodictyon californicum	1	2%				
Eriogonum fasciculatum	4	8%				
Isocoma menziesii	4	8%				
Opuntia littoralis						
Salvia apiana						
Salvia mellifera						
Native Herbs						
Achillia mellifoluim						
Eschscholzia californica						
Elymus triticoides						
Nasella pulchra						
Sisyrinchium bellum						
Vulpia microstachys						
Non-Native Herbs						
Bromus diandrus						
Centaurea melitensis						
Hirschfeldia incana	1	2%				
Hordeum vulgare						
Mesembryanthemum nodiflorum	4	8%				
Bare ground	23	46%				
		Quadrat E (% cover)				
Percent Cover Native Shrub		44%				
Percent Cover Native Herb		0%				
Percent Cover Non-Native Shrub		0%				
Percent Cover Non-Native Herb		10%				
Percent Bare Ground		46%				



Table 6 below provides a summary of the percent cover of native and non-native shrubs and herbs, including areas of bare ground within the Coastal Sage Scrub City South B Trial Plot.

Table 6 Summary of Percent Cover for Each Planting Method Using the Point Intercept Method

	Soil Imprinting with Hand Broadcast Overseeded Drainage Swales (Quadrats A and G)	Soil Imprinting (Quadrats B, F, and H)	Broadcast Seeding (Quadrat C)	Broadcast Seeding with Soil Imprinting (Quadrats D and I)	Soil Imprinting and Hand Broadcast (Quadrat E)
Percent Cover Native Shrub	18%	37%	76%	6%	44%
Percent Cover Native Herb	4%	1%	0%	3%	0%
Percent Cover Non-Native Shrub	1%	0%	0%	3%	0%
Percent Cover Non-Native Herb	10%	24%	24%	40%	10%
Percent Bare Ground	67%	38%	0%	48%	46%

The trial plot was established in November 2018. As described in previous monitoring reports, the 2019 Saddleridge Fire burned a large portion of the trial plot, but mostly spared the sample plots. The fire damaged the irrigation system, which is no longer functioning.

As discussed in previous reports, native species have established since the fire, and primarily include shrub species such as brittlebush (Encelia farinosa), coast prickly pear (Opuntia littoralis), big saltbush (Atriplex lentiformis), deerweed (Acmispon glaber), California buckwheat (Eriogonum fasciculatum), California sagebrush (Artemisia californica), white sage (Salvia apiana), and coastal goldenbush (Isocoma menziesii). Native shrub species resprouted from burned stumps following the Saddleridge Fire, from the pre-existing seedbank, and from seeds installed during the seeding treatments performed during creation of the trial plot. The trial plot appears to have mostly recovered from the fire, evidenced by continual native shrub establishment and growth within the trial plot. As discussed in previous reports, below-average rainfall in 2021 and 2022 throughout southern California negatively impacted native species growth in the trial plot. In particular, native herbaceous species quantitative cover remained at or below five percent cover in 2021 and 2022. In the winter of 2022 and spring of 2023, above-average rainfall was observed throughout southern California. While this above-average rainfall appears to have positively influenced native shrub cover, it does not appear that native herbaceous species have responded to the above-average rainfall (Table 6). This may be a result of a lack of native plant species within the seedbank. Additionally, during the 2023 Quarter 1 monitoring event, sediment deposition was observable within the trial plot. This is likely a result of high-velocity water flows that occurred following winter storm events, and may have uprooted or washed out native vegetation.

Non-native plant cover increased in all of the treatment types between the fourth quarter of 2022 and the first quarter of 2023 (Table 6). The increase in non-native plant cover likely occurred as a result above-average rainfall events prior to the monitoring effort, which allowed for the germination of annual non-native species. Species such as small flowered iceplant (*Mesembryanthemum nodiflorum*), redstem filaree (*Erodium cicutarium*), tocalote (*Centaurea melitensis*), short podded mustard (*Hirschfeldia incana*), foxtail barley (*Hordeum murinum*), and red brome (*Bromus rubens*) were observed in their vegetative and flowering forms in the first quarter of 2022. Small flowered iceplant saw the





greatest increase in cover between the fourth quarter of 2022 and the first quarter of 2023. Most notably, small flowered iceplant was at 44 percent cover in Quadrat F (using the point intercept method) in the first quarter of 2023. Non-native plant species cover is expected to increase through the spring months and into summer of 2023.

Broadcast seeding (Quadrat C) had the highest percent cover of native shrubs using the point intercept method (76 percent) and represents an increase in cover (12 percent) since the fourth quarter of 2022. This increase is likely a result of the aforementioned above-average rainfall that southern California received in the months prior to the monitoring event. Deerweed, which is one of the most dominant species in Quadrat C, is an early-successional shrub species that is extremely beneficial for restoration purposes, as it fixes nitrogen into the soil and thereby increases soil fertility for other native plant species. The second highest percent cover of native shrubs was in the soil imprinting and hand broadcast treatment (Quadrat E; 44 percent), and the third highest was the soil imprinting treatment (Quadrats B, F, and H; 37 percent; Table 6). As described above, the percent cover of native herbaceous plant species was low in all planting methods, ranging between zero and four percent in the first quarter of 2023.

# Recommendations

#### **Successional Growth and Weed Control**

Wildfires in Southern California have become more common in recent years and have impacted on the native landscape. Non-native weed control is essential in establishing post-fire restoration sites and is recommended by organizations such as the California Department of Fish and Wildlife Service and the California Society of Ecological Restoration. Successional regrowth of herbaceous non-native species is to be expected within the first two to three years following a wildfire, which is currently occurring at the trial plot. Native shrubs are expected to recover over a longer period through germination of existing seed within the topsoil and basal growth from charred plants. Native shrubs have shown notable growth in the past two years, and now appear to be well established in the trial plot.

Successional growth of herbaceous species is also important, as native herbaceous species provide natural erosion of topsoil. To promote establishment and growth of native herbaceous species, controlling the spread of non-native herbaceous species such as foxtail barley, red brome, and short podded mustard is essential. Reducing non-native herbaceous species growth minimizes negative competitive effects on native herbaceous and woody species for water, nutrients, and sunlight. Weed maintenance should occur no less than every four months, and special attention should be afforded to minimizing impacts to native grasses that may appear to be non-native (i.e., beardless wild rye), native seedlings, and native shrub resprouts. Weed maintenance should be scheduled to maximize removal of non-native species prior to seed set, which typically occurs in spring between the months of February and April, but may also occur throughout the growing season based upon water availability.

#### **Supplemental Irrigation**

While southern California received above-average rainfall in the winter of 2022 and spring of 2023, supplemental irrigation is a valuable restoration technique to promote re-establishment of native vegetation, particularly during the dry months of the year (i.e., summer and fall). As described above, native herbaceous vegetation has continued to be notably low throughout all planting methods. If native herbaceous vegetation continues to be sparse throughout the trial plot, and/or if native shrubs senesce





Coastal Sage Scrub City South B Trial Plot, Sunshine Canyon Landfill Monitoring Report 1st Quarter, 2023

or show indicators of drought stress, the irrigation system within the trial plot should be re-installed to increase water availability and promote seed germination and re-establishment of native vegetation.



Coastal Sage Scrub City South B Trial Plot, Sunshine Canyon Landfill Monitoring Report 1st Quarter, 2023

# References

John Minch and Associates, Inc. (JMA). 2014. Methodology for Monitoring Percent Cover and Species Richness within Each Seeded Application Method on the Coastal Sage Scrub Pilot Project at the Sunshine Canyon Landfill.

Thank you for the opportunity to work with you on this important Project. Please contact Greg Ainsworth if you have questions concerning the contents of this report. He may be reached by telephone at (818) 564-5544, or by email at <a href="mailto:gainsworth@rinconconsultants.com">gainsworth@rinconconsultants.com</a>.

Sincerely,

Rincon Consultants, Inc.

**Greg Ainsworth** 

**Natural Resources Director** 

Kyle Gern Biologist

#### **Attachments**

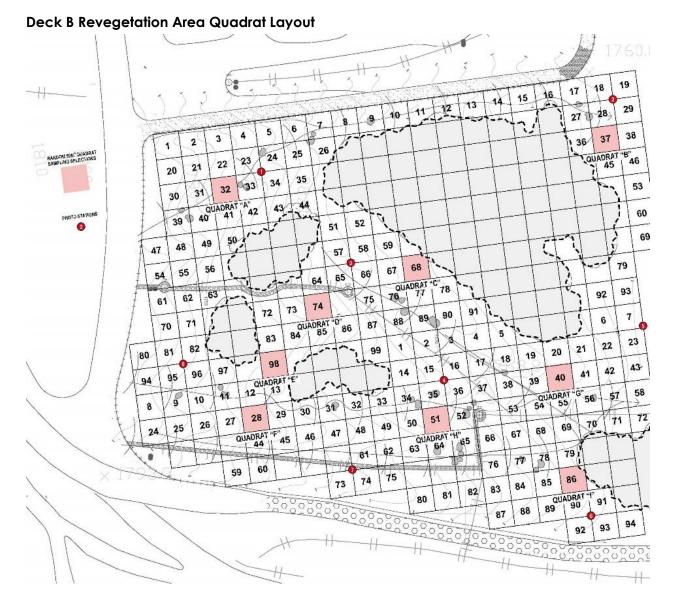
Attachment A Deck B Revegetation Area Quadrat Layout

Attachment B Representative Site Photographs

# Attachment A

Deck B Revegetation Area Quadrat Layout







Photographs of Sample Plots



Photograph 1. Quadrat A facing northeast from southwest corner (March 28, 2023).



Photograph 2. Quadrat B facing northeast from southwest corner (March 28, 2023).



**Photograph 3.** Quadrat C facing northeast from southwest corner (March 28, 2023).



Photograph 4. Quadrat D facing northeast from southwest corner (March 28, 2023).



Photograph 5. Quadrat E facing northeast from southwest corner (March 28, 2023).



Photograph 6. Quadrat F facing northeast from southwest corner (March 28, 2023).



Photograph 7. Quadrat G facing northeast from southwest corner (March 28, 2023).



Photograph 8. Quadrat H facing northeast from southwest corner (March 28, 2023).



Photograph 9. Quadrat I facing northeast from southwest corner (March 28, 2023).



# Sunshine Canyon Landfill

Oak Tree and Bigcone Douglas Fir Monitoring Report No. 30

prepared for

Sunshine Canyon Landfill Republic Services 14747 San Fernando Road Sylmar, CA 91342

prepared by

Rincon Consultants, Inc. 180 North Ashwood Avenue Ventura, California 93003

March 2023



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### **Appendices**

Appendix A Big Cone Douglas Fir Tree Location Map

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## 1 Executive Summary

### Oak Trees

Coast live oak

Number of coat live oak removed in 2022	9						
<ul> <li>Current balance of coast live oaks in the mitigation bank</li> </ul>	30						
Canyon oak							
No canyon oak trees removed between 2019-2022	0						
<ul> <li>Number of canyon oaks required for removals prior to 2019</li> </ul>	40						
Big Cone Douglas Fir Trees							
Number of big cone Douglas firs removed in 2022 0							

## 2 Background

This monitoring report has been prepared to meet the requirements of Conditional Use Permit (CUP) and Oak Tree Permit (OTP) #86312-(5), dated February 19, 1991, for the Sunshine Canyon Landfill Extension Project. This is the 30th annual monitoring report that has been prepared in accordance with the OTP.

#### 2.1 Oak Trees

As of 2007, all oak trees planted on the "city-side" of the Sunshine Canyon Landfill (Landfill) for city-side mitigation had met their minimum size requirement. Therefore, the monitoring period for city-side coast live oak mitigation is completed. Below is summary of oak tree removals, required mitigation, and oak trees remaining in the Landfill's oak tree mitigation bank.

#### Coast Live Oak

A surplus of coast live oak (*Quercus agrifolia*) trees was previously planted in the Landfill's mitigation areas, which now serves as a mitigation bank for the Landfill to draw from for future removals of coast live oak trees located on the "county-side" of the Landfill.

- 2018 Twenty-four (24) coast live oaks were removed for the CC-4 project
- 2019-2020 no coast live oak trees removed.
- 2021 Nine (9) coast live oak trees removed for the CC4 Buttress Part 4B & 4C Project

The mitigation ratio for coast live oaks is 2:1 (10:1 for heritage-size trees). Prior to 2018, there were 96 coast live oak trees remaining in the Landfill's mitigation bank. Twenty-four (24) coast live oak tree were removed in 2018 resulting in a deduction of 48 coast live oak trees from the mitigation bank. No coast live oak trees were removed in 2019 or 2020. In 2021, nine (9) coast live oaks were removed as part of the CC4 Part 4B & 4C Project resulting in a deduction of 18 coast live oak trees from the mitigation bank. No coast live oak trees were removed in 2022. There are currently 30 coast live oaks remaining in the mitigation bank. Table 1 below summarizes the coast live oak tree removals and number of trees remaining in the Landfill's mitigation bank.

Table 1 Coast Live Oak Tree Removals and Remaining Trees in Mitigation Bank

Removals	No. of Coast Live Oak Trees Removed	Mitigation Ratio	Mitigation Trees Deducted from Bank
2018	24	2:1	48
2019-2020	0		0
2021 CC4 Part 4B & 4C Project	9	2:1	18
2022	0		0
Number of	30		

#### Canyon Live Oak

- 2011 seven (7) canyon live oaks, and one (1) heritage-size canyon live oak, were removed for the construction of a detention basin.
- 2016 one (1) canyon live oak removed for the SCE Power Pole Project
- 2018 seven (7) canyon live oaks were removed for the CC4 Buttress Project
- 2019-2022 no canyon live oak trees removed

The mitigation ratio for canyon live oaks is 2:1, and 10:1 for heritage-size trees. 40 canyon oaks are required to be planted to meet the Landfill's mitigation requirement. Table 2 below summarizes the canyon live oak tree removals and number of trees required for mitigation.

Table 2 Canyon Oak Tree Removals and Mitigation Requirements

Removals	No. of Canyon Oak Trees Removed	Mitigation Ratio	Total Mitigation Trees
2011 Detention Basin Project	7	2:1	14
2011 Detention Basin Project	1 heritage	10:1	10
2016 SCE Power Pole Project	1	2:1	2
2018 CC4 Buttress Project	7	2:1	14
2022	0		0
	40		

#### 2.2 Big Cone Douglas Fir

According to the CUP and OTP, the required mitigation ratio for big cone Douglas fir removals is 5:1. Each big cone Douglas fir mitigation tree must be a minimum of 0.5-inches in diameter and monitored for a 7-year period for mitigation to be deemed complete. 200 big cone Douglas fir mitigation trees were planted at the Landfill's Mitigation Area 7B for the removals that occurred prior to 2010. Based on monitoring conducted prior to 2010, it was determined that 176 big cone Douglas firs had completed the 7-year monitoring period; however, 24 big cone trees were still required to complete the 7-year monitoring period for the initial 40 that were removed prior to 2010 (See Table 3). As indicated below, 19 big cone Douglas firs were removed in 2011, 2015 and 2018, respectively, and 6 were removed in 2021, requiring an additional 125 big cone Douglas firs needed for mitigation. No big cone Douglas fir trees were removed in 2022. The current total of big cone Douglas fir trees required for mitigation is 149.

Approximately 250 big cone fir saplings were planted in Mitigation Area 7B in 2015, all of which had a trunk diameter less than 0.5 inches when planted. Based on past annual monitoring data, including the most resent for 2020, several of these plantings died due to a lack of adequate irrigation and several additional plantings perished in the 2019 Saddleridge Fire that burned through a substantial portion of the Landfill. Table 3 below summarizes the big cone Douglas fir trees that are required for mitigation because of removals that occurred prior to 2010 through 2021.

- Prior to 2010 forty (40) big cone Douglas fir trees were removed from the County-side of the Landfill
- 2011 eleven (11) big cone Douglas fir trees were removed from the Landfill for the construction of a detention basin
- 2015 one (1) big cone fir was removed during the construction of the Flare 8 Project
- 2018 seven (7) big cone Douglas fir trees removed for the CC4 Buttress project
- 2019 and 2020 no big cone Douglas fir trees removed
- 2021 six (6) big cone Douglas fir trees removed for the CC4 Buttress Part 4B & 4C Project (See Tree Location Map in Appendix B)

Table 3 Big Cone Douglas Fir Removals and Mitigation Requirements

Removals	No. of Big Cone Trees Removed	Mitigation Ratio	Total Mitigation Trees	No. of Mitigation Trees Completed 7 Year Monitoring	No. of Mitigation Trees Required
Prior to 2010	40	5:1	200	176	24
2011 - Detention Basin Project	11	5:1	55		55
2015 - Flare 8 Project	1	5:1	5		5
2018 - CC-4 Buttress Project	7	5:1	35		35
2019	0				0
2020				20	
2021 - CC4 Part 4B & 4C Project	6	5:1	30		30
2022	0				0
Subtotal	65		325	196	149
Number of Trees Completed 7-Ye	ear Monitoring Per	iod		196	
Total Trees Required for Mitigat	ion				149

#### 3 Methods

Data for this No. 30 monitoring report was collected by Certified Arborist Greg Ainsworth on March 9, 2023 (delayed due to seasonal rains and no access to mitigation site). Tree locations and survey data were collected from the base of each tree. A health assessment was performed that included an evaluation of vigor based on such parameters as amount of new growth, leaf color, abnormal bark, dead wood, evidence of wilt, excessive necrosis, or leaf chlorosis, thinning of crown, and severe fire damage. The tree's overall health was determined based on these factors and compared to the typical archetype tree of this species.

A subjective alphabetical ranking ("A" being best and "F" being worst) was assigned for the overall health of each tree. Below are the definitions used to define each health rating.

- A = Excellent: Healthy, vigorous tree, free of signs of stress, disease, or pest infestation. Minimal signs or symptoms of biotic or abiotic related damage.
- B = Good: Less than 25% of the tree affected by signs of stress, disease/pest infestation, herbivory, or fire damage. Some maintenance measures may need to be implemented, such as pruning of dead wood due to biotic or abiotic related damage, including fire damage.
- C = Fair: Overall appearance healthy, 25-50% of tree shows evidence of stress, disease/pest infestation, herbivory, or fire damage. A substantial amount of maintenance may be needed, or tree exhibits sign or symptoms of biotic or abiotic related damage, including fire damage.
- D = Poor: Greater than 50% of tree shows signs of stress, disease/pest infestation, appears to be
  in state of rapid decline, or exhibits sign or symptoms of severe biotic or abiotic related damage,
  including fire damage. Degree of decline may vary. A substantial amount of maintenance may
  be needed.
- F = Dead; exhibits no sign of recovery.

### 4 Results

#### Coast Live Oak

A total of nine (9) coast live oak trees were removed for the CC-4 Buttress Past 4B & 4C Project in 2021. At a 2:1 mitigation ratio, 18 coast live oaks have been deducted from the Landfill's oak mitigation bank, leaving 30 remaining in the bank (See Table 1). No coast live oak trees were removed in 2022.

#### Canyon Oak Trees

In 2011, seven (7) canyon live oaks, and one Heritage-size canyon live oak tree were removed for the construction of a detention basin; in 2016, one (1) canyon live oak was removed for the SCE Power Pole project; and seven (7) canyon live oaks were removed for the 2018 CC4 Buttress project. No canyon oaks were removed in 2019-2022. The mitigation ratio for canyon live oaks is 2:1, and 10:1 for heritage-size trees; therefore, a total of 40 canyon oaks are needed for mitigation (See Table 2).

#### **Bigcone Douglas Fir Trees**

As indicated in Table 1, 149 big cone Douglas fir trees are needed for mitigation. Several big cone mitigation trees burned during the 2019 Saddleridge Fire. There are currently 19 big cone Douglas fir trees over 0.5 inches in (trunk) diameter that are alive, all of which met their 7-year monitoring requirement (a total of 196 trees had completed 7 years of monitoring). Six (6) big cones are currently in excellent [A] condition (compared to seven in 2021), eight (8) are in good [B] condition (compared to eight in 2021), two are in fair [C] condition (compared to two in 2021), two (2) are in poor [D] condition (compared to none in 2021), and one (1) big cone Douglas fir died since the last monitoring period in 2021.

Data collected for the big cone Douglas fir trees are provided below in Table 4.

Table 4 Big Cone Douglas Fir Monitoring Data

		Previous Monitoring Data			t Monitorin			
Tree No.	Dia	(1/28/2020) Height		Dia	(1/27/2022) Height		Comments	Start Date of 7-Year Monitoring
1400	(inches)	(feet)	Grade	(inches)	(feet)	Grade		
	2.2	6.4	Dead	2.5	C 4	Dead		
1401	3.2	6.4	A	3.5	6.4	В		5/23/2013
1402	3.5	7.2	Α	3.6	8.0	D		5/23/2013
1403	3.6	8.2	Α	4.0	9.0	Α		5/23/2013
1404	4.2	9.0	Α	4.4	10.0	Α		5/23/2013
1405	5.2	9.5	В			Dead		5/23/2013
1406	6.5	5.0	Α	6.6	6.6	А		5/23/2013
1407			Dead			Dead		5/23/2013
1408			Dead			Dead		
1409			Dead			Dead		
1410			Dead			Dead		
1411			Dead			Dead		
1412	4.2	9.0	В	4.8	14.0	В		5/23/2013
1413	3.2	8.0	Α	3.5	9.0	А		12/11/2014
1414	2.6	6.0	В	2.6	6.0	В		5/23/2013
1415			Dead			Dead		
1416			Dead			Dead		5/23/2013
1417	2.8	7.8	В	3.0	8.0	В		5/23/2013
1418	3.0	9.0	В	3.2	9.0	В		5/23/2013
1419	5.0	10.0	В	5.2	12.0	А		5/23/2013
1420	5.0	10.0	В	6.0	11.0	В		5/23/2013
1421			Dead			Dead		
1422			Dead			Dead		5/23/2013
1423			Dead			Dead		

Tues No.		Previous Monitoring Data (1/28/2020)			Current Monitoring Data (1/27/2022)		Comments	
Tree No.	Dia	Height		Dia	Height		Comments	Start Date of 7-Year Monitoring
	(inches)	(feet)	Grade	(inches)	(feet)	Grade		<u>,                                      </u>
1424			Dead			Dead		5/23/2013
1425			Dead			Dead		
1426			Dead			Dead		
1427			Dead			Dead		5/23/2013
1428			Dead			Dead		
1429			Dead			Dead		5/23/2013
1430			Dead			Dead		12/30/2015
1431	7.0	18.0	Α	7.3	18.0	Α		5/23/2013
1432			Dead			Dead		5/23/2013
1433			Dead			Dead		
1434			Dead			Dead		5/23/2013
1435			Dead			Dead		
1436			Dead			Dead		12/30/2015
1437			Dead			Dead		
1438			Dead			Dead		
1439			Dead			Dead		5/23/2013
1440			Dead			Dead		
1441			Dead			Dead		5/23/2013
1442			Dead			Dead		5/23/2013
1443			Dead			Dead		
1444	4.0	9.5	А	4.0	10.0	С		5/23/2013
1445			Dead			Dead		5/23/2013
1446			Dead			Dead		
1447			Dead			Dead		5/23/2013
1448			Dead			Dead		

Tree No.	Previous Monitoring Data Current Monitoring Data (1/28/2020) (1/27/2022)			Comments	Start Date of 7-Year Monitoring			
rice No.	Dia	Height		Dia	Height		Comments	Start Date of 7-Tear Monitoring
	(inches)	(feet)	Grade	(inches)	(feet)	Grade		
1449			Dead			Dead		
1450			Dead			Dead		
1451	5.0	13.0	Α	5.5	14.0	В		5/23/2013
1452			Dead			Dead		
1453			Dead			Dead		5/23/2013
1454	3.0	8.0	С	3.0	8.0	D		5/23/2013
1455			Dead			Dead		
1456			Dead			Dead		
1457			Dead			Dead		5/23/2013
1458	3.2	8.0	В	3.5	9.0	В		5/23/2013
1459			Dead			Dead		
1460			Dead			Dead		
1461			Dead			Dead		
1462			Dead			Dead		
1463			Dead			Dead		5/23/2013
1464			Dead			Dead		
1465			Dead			Dead		5/23/2013
1466			Dead			Dead		
1467			Dead			Dead		5/23/2013
1468			Dead			Dead		
1469			Dead			Dead		
1470			Dead			Dead		
1471			Dead			Dead		5/23/2013
1472			Dead			Dead		5/23/2013
1473			Dead			Dead		5/23/2013

Troc No.	Previous Monitoring Data (1/28/2020)			Current Monitoring Data (1/27/2022)			Comments	Chart Data of 7 Vary Manifestina
Tree No.	Dia	Height		Dia	Height		comments	Start Date of 7-Year Monitoring
	(inches)	(feet)	Grade	(inches)	(feet)	Grade		
1474			Dead			Dead		
1475			Dead			Dead		
1476			Dead			Dead		5/23/2013
1477			Dead			Dead		
1478			Dead			Dead		
1479			Dead			Dead		
1480			Dead			Dead		
1481			Dead			Dead		
1482			Dead			Dead		
1483			Dead			Dead		
1484			Dead			Dead		
1485			Dead			Dead		
1486			Dead			Dead		
1487	2.4	6.0	С	2.4	6.0	С		5/23/2013
1488	3.0	7.8	Α	3.2	8.0	С		5/23/2013
1489			Dead			Dead		5/23/2013
1490			Dead			Dead		
1491			Dead			Dead		
1492			Dead			Dead		
1493			Dead			Dead		
1494			Dead			Dead		
1495			Dead			Dead		
1496			Dead			Dead		
BC 19			Dead			Dead		
BC 20			Dead			Dead		

Tree No.	Previous Monitoring Data (1/28/2020)			Current Monitoring Data (1/27/2022)			Comments	Start Date of 7-Year Monitoring
	Dia	Height		Dia	Height		Comments	Start Date of 7-Year Monitoring
	(inches)	(feet)	Grade	(inches)	(feet)	Grade		
BC 21			Dead			Dead		
BC 9			Dead			Dead		

## 5 Recommendations

- 1. Remove herbivore cages around big cones that are "over crowded" in the cages. Retain cages on smaller trees as determined by the monitoring arborist.
- 2. Most of the tree tags are missing on the big cone Douglas fir mitigation trees; therefore, retag all of the mitigation trees for identification purposes.
- 3. Continue to maintain all remaining the big cone Douglas fir trees, including maintenance of irrigation system.
- 4. Consult with the Los Angeles County Forester on options to fulfil mitigation requirements for canyon oak trees and big cone Douglas fir trees.

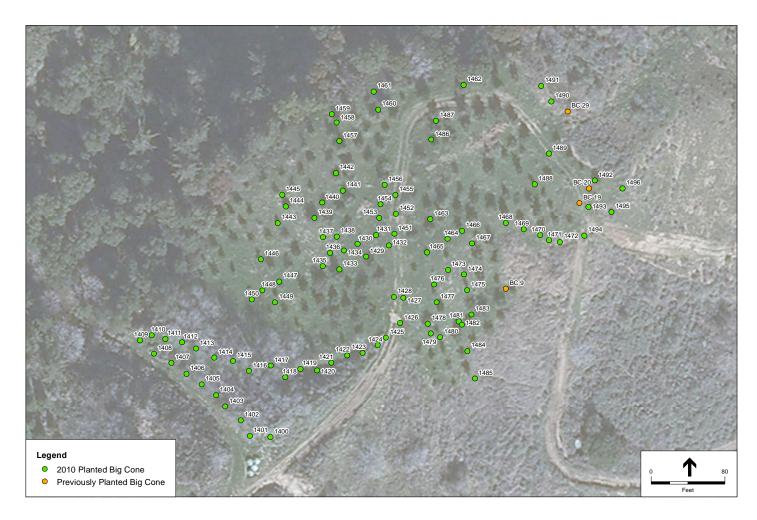
## 6 List of Preparers

#### Rincon Consultants, Inc.

■ Greg Ainsworth, Director / ISA Certified Arborist (#WE-7473A)

# Appendix A

Big Cone Douglas Fir Tree Location Map



Sunshine Canyon Landfill (BFI)
Figure 1
Bigcone Douglas Fir Mitigation Trees in Area 7B



