February 15, 2020

Dr. Wen Yang
Information Technology Unit
California Regional Water Quality Control Board – Los Angeles Region
320 West Fourth Street, Suite 200
Los Angeles, California 90013

SECOND SEMIANNUAL & ANNUAL 2020 MONITORING REPORT
SUNSHINE CANYON CITY/COUNTY LANDFILL, SYLMAR, CALIFORNIA

Please find enclosed the second semiannual & annual 2020 monitoring report for the Sunshine Canyon City/County Landfill to comply with the California Regional Water Quality Control Board – Los Angeles Region (RWQCB) Waste Discharge Requirements Order Number R4-2008-0088 and Monitoring and Reporting Program Cl-2043.

This report has been prepared by Geo-Logic Associates on behalf of Browning Ferris Industries (BFI) of California. It summarizes the results of groundwater, surface water, leachate, vadose zone, liquid management, and waste disposal monitoring activities completed in accordance with M&RP CI-2043 during the July through December 2020 semiannual & annual monitoring period.

During the monitoring period, no violations have been issued for the facility. Groundwater quality conditions beneath the Sunshine Canyon City/County Landfill are generally similar to those observed during previous monitoring periods. Water quality protection standards (WQPS) were exceeded for a few analyte/well pairs; however, most of these analyte/well pairs have historically been detected at concentrations exceeding WQPS and their presence has previously been confirmed in retest samples. Accordingly, these analyte/well pairs are analyzed in tracking mode and no significant trends are noted for analyte/well pairs in tracking mode. With respect to WQPS exceedances for analyte/well pairs that are not in tracking mode, no retest samples confirmed WQPS exceedances, and therefore, no new analyte/well pairs were added to tracking mode during the monitoring period. Following three years of consistent results falling below WQPS, the following were removed from tracking mode in 2020: alkalinity at wells DW-3 and PZ-4, chloromethane at well PZ-4, and chemical oxygen demand at well MW-6.

During the second semiannual & annual 2020 monitoring period, methane concentrations did not exceed 5%V at any landfill gas monitoring probe during monthly monitoring.

Leachate, landfill gas condensate, groundwater extracted near the cut-off wall, and groundwater collected from subdrains at the Sunshine Canyon Landfill were discharged to the Los Angeles City sanitary sewer system under City of Los Angeles Bureau of Sanitary permit W-535428.

I certify that all wastes placed at the Sunshine Canyon City/County Landfill were deposited in accordance with the RWQCB's requirements, and that no wastes were deposited outside of the limits permitted for waste disposal at this facility.

I, under penalty of perjury, do hereby state that I have personally examined and am familiar with the information submitted in this document, and to the best of my knowledge, and based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information contained in the attached report is true, complete, and correct.

If you have any questions regarding this report, please do not hesitate to call Mr. Josh Mills at (818) 362-2154 or email him at JMills3@RepublicServices.com.

Sincerely,

Chris Coyle
General Manager
Sunshine Canyon Landfill

Water Quality Monitoring Report
Second Semiannual (July – December) & Annual 2020

Sunshine Canyon Landfill

Facility WDID #L0006014618

Submitted to

Los Angeles Regional Water Quality Control Board
320 West Fourth Street, Suite 200
Los Angeles, California 90013

Submitted by

Republic Services, Inc.
Sunshine Canyon Landfill
14747 San Fernando Road
Los Angeles, California 91342

Prepared by

Geo-Logic ASSOCIATES

11415 W. Bernardo Court, Suite 200
San Diego, California 92127
www.geo-logic.com
Project SO20.1006

February 2021

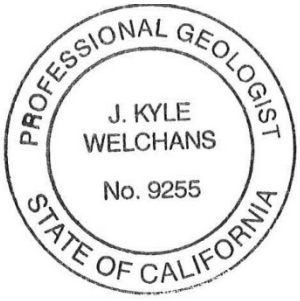
Certification

This Report was prepared in accordance with generally accepted professional hydrogeologic principles and practices. This Report makes no other warranties, either expressed or implied as to the professional advice or data included in it. This Report has not been prepared for use by parties or projects other than those named or described herein. It may not contain sufficient information for other parties or purposes.

GEO-LOGIC ASSOCIATES

Kyle Welchans, PG
Project Geologist
kwelchans@geo-logic.com
11415 West Bernardo Court, Suite 200
San Diego, CA 92127

William B. Lopez, CHG, CEG
Senior Geologist
wlopez@geo-logic.com
11415 West Bernardo Court, Suite 200
San Diego, CA 92127



Date signed: 2/12/2021

Table of Contents

1. Introduction 1
2. General Site Information 1
   2.1 Site Description 1
   2.2 Climate and Surface Water Hydrology 2
   2.3 Hydrogeologic Setting 2
   2.4 Groundwater Geochemistry 2
3. Groundwater Monitoring 3
   3.1 Water Quality Monitoring Network 3
   3.2 Sampling and Laboratory Analysis 4
   3.3 QA/QC Results 4
   3.4 Groundwater Elevations 6
   3.5 Groundwater Chemistry Results 6
      3.5.1 Second Quarter 2020 Retest Groundwater Chemistry Results 6
      3.5.2 Third Quarter 2020 Groundwater Chemistry Results 7
      3.5.3 Fourth Quarter 2020 Groundwater Chemistry Results 9
      3.5.4 Tracking Mode Evaluation 9
4. Vadose Zone Monitoring 11
   4.1 Subdrain Monitoring 11
      4.1.1 Subdrain Liquid Monitoring Points 11
      4.1.2 Third and Fourth Quarter 2020 Subdrain Monitoring Results 12
   4.2 Lysimeter Monitoring 12
      4.2.1 Lysimeter Monitoring Points 12
      4.2.2 Third and Fourth Quarter 2020 Lysimeter Monitoring Results 13
5. Vadose Zone Gas Monitoring 13
6. Surface Water Monitoring 13
   6.1 NPDES Stormwater Monitoring 14
   6.2 Stream Diversion Monitoring 14
   6.3 Other Surface Water Monitoring 14
7. Leachate Monitoring 14
8. Liquid Generation and Management 15
   8.1 Liquid Management 15

9. Drainage Structure Monitoring 15
10. Waste Disposal Monitoring 16
11. Waste Acceptance 17
11.1 Second Semiannual 2020 Waste Acceptance Results 18
12. Annual Summary 18
References 21

List of Figures

1 Site Location Map
2 Groundwater Monitoring Point Location Map
3A September 2020 Groundwater Equipotential Contours
3B December 2020 Groundwater Equipotential Contours
3C September 2020 Groundwater Equipotential Contours
3D December 2020 Groundwater Equipotential Contours
4 Vadose Zone Gas Monitoring Point Location Map

List of Tables

1 Regulatory Compliance Checklist
2 Analytical Parameters and Methods
3A Summary of Blank Sample Results – Third Quarter 2020
3B Summary of Blank Sample Results – Fourth Quarter 2020
4A Summary of Duplicate Sample Results – Third Quarter 2020
4B Summary of Duplicate Sample Results – Fourth Quarter 2020
5 Groundwater Elevations and Site Monitoring Well Information
6A Summary of Groundwater Analytical Results – Third Quarter 2020
6B Summary of Groundwater Analytical Results – Fourth Quarter 2020
7A Comparision of Intrawell Water Quality Protection Standards to Groundwater Analytical Results – Third Quarter 2020
7B Comparision of Intrawell Water Quality Protection Standards to Groundwater Analytical Results – Fourth Quarter 2020

8A Summary of Analytical Results for Vadose Zone Liquid Monitoring Points – Third Quarter 2020
8B Summary of Analytical Results for Vadose Zone Liquid Monitoring Points – Fourth Quarter 2020
9 Summary of Methane Concentrations for Vadose Zone Gas Monitoring Points – Second Semiannual 2020 Monitoring Period
10 Summary of Analytical Results for Stormwater Samples – Second Semiannual 2020 Monitoring Period
11 Summary of Analytical Results for Leachate Monitoring Points – October 2020
12 Summary of Collected Water Sources – Second Semiannual 2020 Monitoring Period
13 Imported Soil Sampling Summary
14-17 Waste Discharge Sampling Results

List of Appendices

A Sampling and Analysis Plan
B Field Sample Collection Logs and Laboratory Analytical Reports
C Landfill Gas Reports
D NPDES Certification of Completion
E Waste Placement Areas and Tonnage Reports
F Waste Acceptance Analytical Results
G Tracking Mode Trends
H Graphical Presentation of the Analytical Data
I Tabulated Historical Analytical Data

Acronyms and Abbreviations

BFI	Browning-Ferris Industries of California, Inc.
COC	Constituents of Concern
COD	Chemical Oxygen Demand
CY	Cubic Yard
DMP	Detection Monitoring Program
EC	Electrical Conductivity
ft/ft	Feet per Foot
GLA	Geo-Logic Associates
LCRS	Leachate Collection and Removal System
LEA	Local Enforcement Agency
µg/L	Micrograms per Liter
MCL	Maximum Contaminant Level
MDL	Method Detection Limit
mg/L	Milligrams per Liter
MRP	Monitoring and Reporting Program No. CI-2043
MSW	Municipal Solid Waste
ND	Non-Detect
Order	Waste Discharge Requirements R4-2008-0088
ORP	Oxygen Reduction Potential
PQL	Practical Quantitation Limit
QA/QC	Quality Assurance/Quality Control
QCAB	Quality Control Ambient (Field) Blank
QCTB	Quality Control Trip Blank
ROWD	Report of Waste Discharge
RPD	Relative Percent Difference
RWQCB	California Regional Water Quality Control Board – Los Angeles Region
SCLF	Sunshine Canyon Landfill
STLC	Soluble Threshold Limit Concentration
TDS	Total Dissolved Solids
TOC	Total Organic Carbon
TTLC	Total Threshold Limit Concentration
%V	Percent by Volume

VOCs	Volatile Organic Compounds
WAP	Waste Acceptance Plan
WQPS	Water Quality Protection Standards

1. Introduction

On behalf of Browning-Ferris Industries of California, Inc (BFI) and Sunshine Canyon Landfill, Geo-Logic Associates (GLA) presents this report summarizing semiannual water quality and waste intake monitoring and reporting performed for the second semiannual 2020 monitoring period (July through December) at the Sunshine Canyon Landfill (SCLF) in the city of Sylmar, California (Figure 1). Included in this report are the field observations and measurements, and laboratory results, for samples collected from site monitoring wells, lysimeters, extraction wells, piezometers, and other SCLF monitoring stations. This report was prepared to comply with the requirements of California Regional Water Quality Control Board – Los Angeles Region (RWQCB) Waste Discharge Requirements Order No. R4-2008-0088 (WDR) and Monitoring and Reporting Program (MRP) No. CI-2043. An overview of report content required by MRP CI-2043 is summarized in Table 1.

2. General Site Information

The following provides a summary of the site conditions and includes: site description, climate and surface water hydrology, hydrogeologic setting, and groundwater geochemistry.

2.1 Site Description

The SCLF is an active Class III municipal solid waste (MSW) disposal facility located at 14747 San Fernando Road in Sylmar, California. The site property includes approximately 1,030 acres within the City of Los Angeles and an unincorporated area of Los Angeles County. The "County Landfill" Disposal Phases I through V are located north of the City-County boundary, and are equipped with a composite liner and leachate collection and removal system (LCRS). The "City Landfill" includes two waste disposal areas (Unit 1 and Unit 2) that are south of the City-County boundary. City Landfill Unit 1 is a closed, unlined Class III MSW disposal unit that operated between 1958 and 1993. City Landfill Unit 2 is an active, Class III MSW disposal unit that is equipped with a composite liner system and is located generally between City Landfill Unit 1 and the County disposal phases. Cell A of City Landfill Unit 2 began operations during the third quarter of 2005, with subsequent disposal operations expanding into Cells CC-1, CC-2, CC-3, and most recently, CC-4.

2.2 Climate and Surface Water Hydrology

SCLF is located north of the San Fernando Valley, near the junction of the Santa Susana Mountains to the west and the San Gabriel Mountains to the east. Climatic conditions in the area are semi-arid and characterized by mild winters, when most of the precipitation occurs, and warm dry summers. The average annual precipitation in the area of Sunshine Canyon is approximately 22 inches. During the period from 1941 to 1995 the maximum annual precipitation was 55.8 inches; the minimum was 10.2 inches. The maximum expected 100-year, 24-hour storm is approximately 12 inches.

The facility is located within the 900-square-mile Los Angeles River Watershed Basin. Surface water runoff originating in Sunshine Canyon exits through the mouth of the canyon, where it is conveyed in a southerly direction.

2.3 Hydrogeologic Setting

The SCLF is underlain predominantly by marine sedimentary rocks of the late Miocene to early Pliocene Towsley Formation, consisting of siltstone and fine-grained sandstone interbedded with lenses of coarse-grained sandstone and conglomerate. This unit is locally overlain by younger sedimentary deposits consisting of alluvium, colluvium, and/or landslide debris that consist of varying mixtures of unconsolidated sand, gravel, silt, and clay derived from the Towsley Formation. These unconsolidated alluvial materials were originally present in many of the canyon thalwegs that cross the site, but, in most instances, these materials have been removed as part of site development. Where alluvium remains, it may be up to 30 feet thick.

Groundwater beneath the site occurs in two main zones: 1) a shallow, unconfined water-bearing zone consisting of alluvial deposits and/or upper weathered portions of the bedrock, and 2) a deeper, locally confined water-bearing zone in the Towsley Formation. The hydraulic conductivity of the bedrock (including both weathered and unweathered portions) ranges from 2.8 to $2.8e^{-6}$ feet per day (ft/day) with values generally increasing with increasing weathering and fracture density. The hydraulic conductivity of the alluvial deposits is estimated to be from 28.3 to 0.28 ft/day.

2.4 Groundwater Geochemistry

Previous hydrogeologic investigations conducted for the SCLF have identified significant spatial variability in groundwater chemistry beneath the site. The surrounding Santa Susana Mountains

are an area of ongoing, extensive oil exploration and production, as indicated by the oil production facilities surrounding the site. The region is characterized by several east-west trending fault systems that locally serve as large-scale crude oil traps. Upward seepage of crude oil and related brines along these faults, and their subsequent contact with site groundwater, have been documented at numerous locations at the SCLF. The presence of shallow crude oil deposits coupled with the low permeability of bedrock materials has resulted in extensive areas of reduced (poorly oxygenated) groundwater beneath the facility with locally elevated concentrations of alkalinity, ammonia-nitrogen, and, in some cases, sulfide. In addition, pre-landfill monitoring has confirmed the presence of naturally occurring groundwater with locally elevated concentrations of chloride, total organic carbon (TOC), chemical oxygen demand (COD), and potassium. These constituents have also been measured at high concentrations in samples of landfill leachate.

Beneficial uses of groundwater beneath the site are limited as a result of naturally-occurring, elevated concentrations of total dissolved solids (TDS) and the low groundwater production capability for wells screened in the bedrock.

3. Groundwater Monitoring

This section provides a summary of the water quality monitoring program for the site, as well as the monitoring activities, results, and conclusions based on data obtained during the second semiannual 2020 monitoring period.

3.1 Water Quality Monitoring Network

The Monitoring and Reporting Program CI-2043 establishes the following groundwater monitoring network for the SCLF:

MONITORING POINTS	MONITORING POINT ID	MONITORING FREQUENCY
Upgradient Monitoring Wells - Bedrock	CM-9R3, CM-10R, CM-11R	Quarterly
Downgradient Monitoring Wells – Alluvium	MW-1, MW-5, MW-6, MW-13R, MW-14	
Downgradient Monitoring Wells – Bedrock	DW-1, DW-2, DW-3, DW-5, PZ-2, PZ-4	
Corrective Action Evaluation Wells	MW-2A, MW-2B, MW-9, DW-4	
Piezometers	PZ-1, PZ-3, CM-5, MW-8	
Subdrains	Subdrain N, Combined Subdrains	
Lysimeters	LY-6, LY-7	
Leachate Monitoring Points	LR-2R, Deep Leachate*	Annual

Note: In November 2018 Leachate monitoring points "CA-L" and "Leachate" were plumbed together. Moving forward, a composite sample will be collected from "Deep Leachate", which reflects a mixture of leachate from all lined cells at the facility.

3.2 Sampling and Laboratory Analysis

Groundwater samples collected by GLA during the third and fourth quarter 2020 monitoring events were submitted to Eurofins Calscience (Eurofins) of Irvine, California. Eurofins is certified by the state of California and is the project laboratory under contract to BFI/Republic. Samples were analyzed for the indicator parameters during the third and fourth quarter 2020 and also for supplemental parameters during the fourth quarter 2020 (Table 2). In addition to the monitoring parameters, Table 2 includes laboratory analytical methods employed for the project, and the frequency that wells and other media monitoring stations are sampled. Site groundwater monitoring wells and leachate monitoring points are sampled in accordance with the sampling and analysis procedures detailed in Appendix A.

3.3 QA/QC Results

The quality assurance/quality control (QA/QC) program completed for the second semiannual 2020 water quality monitoring period included analyses of field blanks (QCAB), trip blanks (QCTB), laboratory method blanks, and duplicate samples. Field and trip blanks were analyzed

for volatile organic compounds (VOCs) by EPA Method 8260. Laboratory method blanks were analyzed for all monitoring parameters, and duplicate samples were analyzed for the same list of parameters required for its corresponding primary sample. Blank sample results are summarized in Tables 3A and 3B. Duplicate sample results are presented in Tables 4A and 4B. The results of the QA/QC sampling program are as follows:

Third Quarter 2020 Monitoring Event

- All analyses were completed within the recommended holding times prescribed by the respective analytical method.
- As indicated on Table 3A, several common laboratory contaminants (acetone and methylene chloride) and drinking water disinfection byproducts (chloroform, bromodichloromethane, and dibromochloromethane) were measured at trace concentrations in blank samples. In addition, a trace concentration of tetrahydrofuran was measured in a field blank. Most of these results did not affect the interpretation of primary sample results. However, due to similar concentrations of acetone in September 22, 2020 primary samples compared to September 22, 2020 field blank results, acetone has been flagged as a suspected field/laboratory contaminant in Tables 6A and 7A.
- As shown in Table 4A, the relative percent difference (RPD) between quantifiable primary and duplicate water quality samples was eight percent or less, indicating good agreement between primary and duplicate samples.

Fourth Quarter 2020 Monitoring Event

- All analyses were completed within the recommended holding times prescribed by the respective analytical method.
- As indicated on Table 3B, several tentatively identified compounds (TICs) were measured at trace concentrations in blank samples. In addition, a trace concentration of acetone was measured in a trip blank and trace concentrations of iron were measured in method blanks. However, with the exception of iron, these results did not affect the interpretation of primary sample results. Iron is flagged as a suspected field/laboratory contaminant in Table 6B due to similar concentrations of iron in primary samples and method blanks.
- As shown on Table 4B, the RPD for quantifiable primary and duplicate sample results was 10 percent or less.

The results of the QA/QC program completed during the second semiannual 2020 monitoring period are considered acceptable and representative of water quality at the site.

3.4 Groundwater Elevations

During the second semiannual 2020 monitoring period, quarterly depth to groundwater measurements were recorded on September 21 and December 21, 2020. Groundwater equipotential surface contours were developed for wells screened in bedrock using third and fourth quarter 2020 groundwater elevation data. Figures 3A and 3C depict groundwater elevation contours overlain on a topographic map for the September and December 2020 monitoring events (respectively). Because there is an underdrain system at the site which de-waters areas beneath landfill cells, groundwater contours mimic bottom of landfill liner elevations. Accordingly, Figures 3B and 3D depict groundwater contours for the September and December 2020 monitoring events (respectively), and include landfill liner elevations for clarity. As shown in these figures, groundwater generally mimics the canyon topography, converges at the base of the canyon, and flows to the southeast out the mouth of the canyon. The estimated horizontal groundwater velocity within the unweathered bedrock is approximately 1 to 10 feet per year (Geo-Logic Associates, 2009).

Comparison of groundwater elevations for wells screened in alluvium and bedrock suggest the possibility of appreciable vertical gradients may occur near the mouth of the canyon. Assuming communication between these water-bearing zones exists, the vertical gradient near the mouth of the canyon is approximately 0.6 to 0.8 ft/ft near well pairs MW-1/DW-5 and MW-2A/DW-4.

3.5 Groundwater Chemistry Results

Groundwater samples collected from site monitoring wells were analyzed for indicator parameters during the third quarter 2020 monitoring period, and for indicator and supplemental parameters during the fourth quarter 2020 monitoring period. Results for these sampling events are summarized on Tables 6A and 6B (respectively), and are discussed below. The field sample collection logs, laboratory data, certificates of analyses, and chain-of-custody records for the sampling program are included in Appendix B.

3.5.1 Second Quarter 2020 Retest Groundwater Chemistry Results

Groundwater monitoring results for the second quarter 2020 monitoring event indicated that concentrations of chloride at well PZ-2 and TDS at well DW-1 exceeded respective intrawell water quality protection standards (WQPS). Because these analyte/well pairs are not in tracking mode, retest samples were collected on August 24, 2020. The results are summarized in the following table.

WELL	ANALYTE	UNITS	WQPS	2ND QUARTER 2020 RESULT	RETEST RESULT (1)	RETEST RESULT (2)
PZ-2	Chloride	mg/L	16.398	17	11	13
DW-1	Total Dissolved Solids	mg/L	3,600.2	4,300	3,200	3,000

Note: "ND" – Not detected.

As shown in the table above, no retest samples exceeded the respective WQPS. Therefore, these analyte/well pairs will remain in detection mode.

3.5.2 Third Quarter 2020 Groundwater Chemistry Results

During the third quarter 2020 monitoring event, samples from all monitoring wells were analyzed for the indicator parameters identified in Section II.B.3(a) of the MRP. These results are presented on Table 6A. Table 7A compares third quarter 2020 monitoring results with WQPS. The following table summarizes WQPS exceedances and verification retesting results (when applicable).

WELL	ANALYTE	UNITS	WQPS	3RD QUARTER 2020 RESULT	RETEST RESULT (1)	RETEST RESULT (2)
MW-1	1,4-Dioxane	µg/L	VOC	1.8	TM	TM
MW-5	1,4-Dioxane	µg/L	VOC	4.4	TM	TM
	Tetrahydrofuran	µg/L	VOC	1.7j	TM	TM
MW-13R	1,4-Dioxane	µg/L	VOC	11	TM	TM
DW-5	Acetone	µg/L	VOC	5.1j*	ND	ND
	Naphthalene	µg/L	VOC	0.89j	ND	ND
	Toluene	µg/L	VOC	0.67	ND	ND
PZ-2	Total Organic Carbon	mg/L	2.887	3.0	2.5	2.5

Notes: Retesting only performed on analyte/well pairs not currently in Tracking Mode.
TM – Tracking Mode. No retesting conducted for analytes in Tracking Mode.
VOC – WQPS is one quantifiable detection or two or more estimated-trace detections.
ND - Not detected.
j – Estimated-trace concentration.
* - Also detected in blank samples.

With the exception of DW-5 and PZ-2 results, all constituents exceeding respective intrawell WQPS listed in the table above have historically been detected and their presence confirmed in retest samples. Accordingly, these analyte/well pairs are currently in "tracking mode" and retesting was not conducted. As shown in the preceding table, no retest results exceeded a respective WQPS. Therefore, these analyte/well pairs will remain in detection mode.

With respect to corrective action evaluation monitoring wells and excluding suspected field/laboratory contaminants, five VOCs (three quantifiable) were measured in the sample from well MW-9 and one VOC was measured at a quantifiable concentration in the sample from well MW-2A (Table 6A).

None of the analyte concentrations measured in samples collected during the third quarter 2020 monitoring period exceeded Federal or State primary drinking water Maximum Contaminant Levels (Table 6A). However, TDS results for all monitoring wells exceeded state secondary drinking water standards.

3.5.3 Fourth Quarter 2020 Groundwater Chemistry Results

Groundwater samples obtained during the fourth quarter 2020 monitoring event were analyzed for the indicator and supplemental parameters (Table 2). Analytical results for these samples are presented on Table 6B. As summarized below, and shown in Table 7B, the following well/constituent pairs exceeded a WQPS.

WELL	ANALYTE	UNITS	WQPS	4TH QUARTER 2020 RESULT
MW-1	1,4-Dioxane	µg/L	VOC	7.0
MW-5	1,4-Dioxane	µg/L	VOC	3.5
MW-13R	1,4-Dioxane	µg/L	VOC	7.6
DW-1	Total Dissolved Solids	mg/L	3600.2	8300
DW-5	Toluene	µg/L	VOC	0.57

Most of the analyte/well pairs listed above are currently in "tracking mode". However, verification retesting is scheduled for TDS at well DW-1 and for toluene at well DW-5. Retest results will be reported in the upcoming First Semiannual 2021 Monitoring Report.

With respect to corrective action evaluation monitoring wells, one quantifiable VOC (1,4-dioxane) was measured in samples collected from wells MW-9 and well MW-2A (Table 6B).

As shown on Table 6B, with respect to the routine indicator and supplemental monitoring parameters, concentrations of total dissolved solids, sulfate, fluoride, iron, and manganese exceed State of California primary (fluoride) or secondary drinking water standards in samples from many site monitoring wells, including upgradient (background) monitoring wells.

3.5.4 Tracking Mode Evaluation

During the second semiannual 2020 monitoring period, no new analyte/well pairs were added to tracking mode. Alkalinity at wells DW-3 and PZ-4 were removed from tracking mode since these analyte/well pairs have not exceeded respective concentration limits in more than three years. Time-series charts depicting well-analyte pairs in tracking mode are presented in Appendix G. The following table summarizes analytical trends and observations for analyte/well pairs in tracking mode.

WELL/ANALYTE PAIR	CONCENTRATION LIMIT	3RD QUARTER RESULTS	4TH QUARTER RESULTS	HISTORICAL TRENDS AND OBSERVATIONS
MW-1: 1,4-Dioxane	PQL	**1.8**	**7.0**	Decreasing trend over last 6 years.
MW-1: t-Butanol	PQL	ND	ND	No detections in 2019 or 2020.
MW-5: 1,4-Dioxane	PQL	**3.5**	**4.4**	Consistently measured above the PQL. Decreasing trend since 2018
MW-5: t-Butanol	PQL	ND	ND	Not detected since February 2020.
MW-5: Ammonia-N	5.714 mg/L	3.6	3.4	Below WQPS in 2019 and 2020.
MW-5: Alkalinity	727.34 mg/L	490	470	Rarely detected at concentrations above WQPS.
MW-5: Tetrahydrofuran	PQL	1.7j	ND	One measurement above WQPS.
MW-13R: 1,4-Dioxane	PQL	**11**	**7.6**	Variable concentrations between 4 µg/L and 11 µg/L since 2015.
MW-13R: Potassium	27.224 mg/L	21	23	Below WQPS in 2019 & 2020.
MW-13R: Ammonia-N	7.732 mg/L	6.5	5.5	Typically near WQPS (above or below) except one outlier in February 2020.
MW-13R: COD	407.58 mg/L	230	230	Only two historical measurements above WQPS.
MW-14: Alkalinity	587.83	310	310	Only one WQPS since 2018.
MW-14: TDS	5128.5	3500	3300	Variable concentrations since 2017. Typically below the WQPS.
DW-3: Ammonia as N	0.7564 mg/L	0.55	0.58	Results are typically very near (above & below) the WQPS, except for four anomalous results in 2014, 2016, 2018, and 2019.
DW-5: Ammonia as N	0.3918 mg/L	0.19j	0.28j	Decreasing trend; below WQPS in 2020.
DW-5: Allyl Chloride	PQL	ND	ND	Intermittent detections.
PZ-4: Ammonia-N	2.976	2.5	2.3	Only two historical measurements slightly above the WQPS. No exceedances in 2020.

Note: **Bolded Red** = Concentration Limit Exceeded.
ND = Not Detected.
j = Estimated-trace concentration.

4. Vadose Zone Monitoring

Monitoring of the vadose zone at the SCLF is accomplished by collecting samples from the subdrains beneath composite liner systems at the site as well as from the pan lysimeters constructed beneath the leachate collection sumps for the lined portions of the landfill.

4.1 Subdrain Monitoring

Order No. R4-2008-0088 requires quarterly monitoring of landfill subdrain systems. As with groundwater, samples from each subdrain collection point are analyzed for indicator parameters on a quarterly basis and for supplemental parameters on a semiannual basis.

4.1.1 Subdrain Liquid Monitoring Points

Currently, the SCLF is equipped with four subdrain sampling points: Subdrain N, CC2-PER, CC2-5AC, and CC2-3A. Samples for CC2-PER, CC2-5AC, and CC2-3A are composited as one sample called "Combined Subdrains". Accordingly, samples obtained from locations Subdrain N and Combined Subdrains are submitted for laboratory anaylses.

Subdrain N liquid samples are collected from a port on the influent line to the facility's water treatment system, located near San Fernando Road. This sample represents the combined flow from subdrain collection systems installed beneath County Landfill disposal Phases I through V, and Cells A and CC-1 of City Landfill Unit 2.

Subdrain CC2-5AC liquid samples are pumped from a temporary vertical riser pipe located southeast of disposal Cell CC-3A, Part 1. The CC2-5AC liquid samples represent groundwater seepage to a subdrain collection system that underlies the southwest corner of Cell CC-2 at depths of approximately 10 to 30 feet below the CC-2/CC-3A, Part 1 liner system.

Samples from Subdrain CC2-PER are collected from a temporary outlet pipe located southeast of disposal cell CC-3A, Part 1. These samples represent groundwater seepage collected beneath the western margin of disposal cell CC-2. The subdrain CC2-PER collection system is approximately 10 feet below the CC-2/CC-3A Part 1 liner system and is perforated only along the western edge of CC-2 liner system. The CC2-PER subdrain system is hydraulically separated from adjacent (and partially overlapping) portions of subdrain liquid collection system CC2-5AC.

Subdrain CC2-3A likely collects liquids from the area of unlined City Landfill Unit 1. Because of the likelihood of landfill impacts to subdrain CC2-3A liquids, this subdrain outlet was established

with an angled riser and dedicated pumping system, so that liquids are collected and discharged to the sewer (City of Los Angeles Bureau of Sanitation permit W-535428). Subdrain CC2-3A liquid samples are collected from pumped discharge from this angled riser.

4.1.2 Third and Fourth Quarter 2020 Subdrain Monitoring Results

Samples were collected from each subdrain monitoring point on September 21, 2020 for the third quarter and on December 21 and 22, 2020 for the fourth quarter. Samples were delivered to Eurofins for analyses of the indicator parameters (third and fourth quarter) and supplement parameters (fourth quarter).

As shown on Tables 8A and 8B, the samples from Subdrain N and combined subdrains contained up to nine and 12 VOCs (respectively). VOCs with the highest concentrations in third and fourth quarter 2020 Subdrain samples include:

- Subdrain N: t-butanol 1,4-dioxane, and tetrahydrofuran
- Combined Subdrains: Acetone, 1,4-dioxane.

During the monitoring period, all VOC concentrations in subdrain samples were measured below State and federal drinking water standards. As is typical for SCLF subdrain samples, concentrations of sulfate, TDS, iron, and manganese exceeded state secondary drinking water standards.

4.2 Lysimeter Monitoring

Order No. R4-2008-0088 requires construction and monitoring of lysimeters beneath landfill liner systems. On a quarterly basis, the lysimeters are monitored for the presence of liquids, and sampled if the liquid volume is sufficient. Liquids are pumped through a discharge line from the riser pipes and grab samples are collected, and analyzed for the Order-specific list of indicator parameters (quarterly) and supplemental parameters (semiannually).

4.2.1 Lysimeter Monitoring Points

The SCLF is currently equipped with two lysimeters: LY-6 and LY-7 (Figure 2). LY-6 monitors conditions beneath the County Landfill leachate sump, and is accessed through a 600-foot-long inclined riser at the east side of the Phase V disposal area. Lysimeter LY-7 monitors the

conditions between the primary and secondary liners of City Landfill Unit 2, and is accessed using a 360-foot-long inclined riser at the east side of Cell A.

4.2.2 Third and Fourth Quarter 2020 Lysimeter Monitoring Results

Lysimeter samples were collected from LY-7 on September 22 and December 21, 2020. LY-6 was dry during both quarterly monitoring events. As shown on Tables 8A and 8B, up to 10 VOCs were detected in samples from LY-7. The majority of VOCs in the sample from LY-7 are in the form of t-butanol, and to a lesser degree, 1,4-dioxane. No VOC concentrations exceeded a State or federal primary drinking water standard. As is typical for SCLF lysimeter samples, concentrations of chloride, TDS, iron, and manganese exceeded the State of California secondary (e.g., aesthetic) drinking water standard in at least one of the quarterly samples from LY-7.

5. Vadose Zone Gas Monitoring

Gas monitoring of the vadose zone is conducted on a monthly basis to comply with Order No. R4-2008-0088 and South Coast Air Quality Management District Rule 1150.1. Vadose zone gas monitoring is conducted by SCS Engineers and includes field screening for methane, carbon dioxide, oxygen, balance gases, and pressure at perimeter probes and upper subdrain termination points. The locations of vadose zone gas monitoring points are shown on Figure 4. Field reports prepared by SCS Engineers are provided in Appendix C.

During the second semiannual 2020 monitoring period, screening of the permanent vadose zone monitoring locations was conducted on a monthly basis. As shown on Table 9, no results exceeded five percent by volume (%V). The highest concentration of methane measured during the monitoring period was 2.7 %V at probe P-205R in July 2020. Excluding P-205R, no probes contained methane at or above 1.0 %V.

6. Surface Water Monitoring

This section of the report presents the results of the storm water, stream diversion, and seeps and spring monitoring activities conducted during the second semiannual 2020 monitoring period. Locations of surface water sampling points are shown on Figure 2.

6.1 NPDES Stormwater Monitoring

Landfill personnel periodically monitor the quality of storm water as part of the general NPDES Permit adopted for the facility, and additional storm water monitoring is conducted as part of the SCLF waste acceptance monitoring program. No samples were collected during the second half of 2020 due to insufficient rainfall.

6.2 Stream Diversion Monitoring

During the second semiannual 2020 monitoring period, construction activities at the facility were subject to requirements of Stream Bed Alteration Agreement #R5-2003-0005, adopted by the California Department of Fish and Game, though no monitoring of stream water quality was required during the current monitoring period.

6.3 Other Surface Water Monitoring

No new seeps or springs were identified during the current monitoring period.

7. Leachate Monitoring

In accordance with Order No. R4-2008-0088, leachate is to be monitored on an annual basis during the month of October. Grab samples are collected from leachate sumps and are analyzed for 40 CFR Appendix II analytes that are not already a COC for the landfill. Retesting of newly-identified 40 CFR Appendix II constituents (constituents measured at or above respective PQLs) is conducted in April. Those analytes that are present in both the primary and retest samples at concentrations equal to or above respective PQLs are added to the site-specific list of COCs.

The SCLF was equipped with two discrete leachate monitoring points (Figure 2):

- Leachate sample location "LR-2R" monitors leachate accumulation near the base of unlined City Landfill Unit 1.
- Leachate from lined cells (County Landfill Phases I through V and City Landfill Unit 2) collects to a sump and is pumped to above ground tanks before being discharged to the sewer under City of Los Angeles Bureau of Sanitary permit W-535428. This location is referred to as "Deep Leachate" which represents a composite mixture of leachate from all

lined cells at the SCLF. Samples are collected from a sample port on a pipe prior to the above ground tanks.

Leachate samples were collected from monitoring point "Deep Leachate" and "LR-2R" on October 5, 2020. Based on the results obtained, retesting is scheduled in April for naphthalene at LR-2R. Leachate monitoring results are summarized on Table 11.

8. Liquid Generation and Management

Ongoing waste disposal operations at the SCLF result in the generation of significant volumes of liquids, including leachate, landfill gas condensate, subdrain liquids, groundwater collected at the extraction trench, groundwater sampling purge water, and seepage water. In accordance with Order No. R4-2008-0088, the volume of water collected, treated, used onsite, and discharged offsite from each source are required to be recorded on a monthly basis (Table 12).

8.1 Liquid Management

During the second semiannual 2020 monitoring period, approximately 28,431,754 gallons of liquid were collected from the SCLF and transferred to the sewer (Table 12; under City of Los Angeles Bureau of Sanitary permit W-535428). In order to supplement water needs, the site purchased approximately 43,787,145 gallons of water from the City of Los Angeles Department of Water and Power (Table 12).

9. Drainage Structure Monitoring

Order No. R4-2008-0088 requires periodic site inspections as part of the site's current NPDES storm water permit. Between October and April of each year, inspections are to be conducted following each storm that produces significant runoff or on a monthly basis if no storm event produces significant runoff during this period. Between May and September, inspections are to be made on a quarterly basis. Each inspection is to include the following "standard observations":

- Evidence of surface water leaving or entering the site, including an estimate of the size of the affected area and the estimated flow rate;

- Presence or absence of odors, including characterization, source, and distance of travel from the source;
- Evidence of erosion and/or exposed refuse;
- Inspection of all storm water discharge locations for evidence of non-storm water discharges (during dry season) and integrity (during wet season);
- Evidence of ponded water at any point on the waste management facility (show affected areas on a map); and
- Assessment of compliance with the facility's Storm Water Pollution Prevention Plan, including proper implementation of the terms of the General NPDES Storm Water Permit.

During the second semiannual 2020 monitoring period, the required standard observations were made by site personnel. The site's NPDES certification of completion for the second semiannual 2020 monitoring period is included in Appendix D.

10. Waste Disposal Monitoring

During the second semiannual 2020 monitoring period, the quantity of municipal solid waste deposited at the SCLF was monitored daily. The monthly tonnages of waste deposited at the site are summarized in the following table.

MONTH	WASTE DISPOSAL TONNAGE	ESTIMATED VOLUME (CY)
July	232,879	314,701
August	212,671	287,394
September	222,511	300,691
October	212,272	286,854
November	203,213	274,611
December	215,536	291,264
July – December 2020 Totals:	**1,299,082**	**1,755,515**

Note: Waste volumes were calculated using an assumed 1480 pounds per cubic yard of waste.

As summarized in the preceding table, during the second semiannual 2020 monitoring period, approximately 1,299,082 tons of waste was disposed of at the SCLF. The remaining capacity at the SCL is estimated at approximately 70,807,885 cubic yards. Based on the currently approved maximum tonnage acceptance rate, the site has a remaining life of approximately 30 years.

The location of waste placement during the monitoring period is presented on a map in Appendix E.

During the second semiannual 2020 monitoring period, all waste loads accepted at the site were subjected to checking at the scale house. As certified in the transmittal letter for this report, the site allowed no unauthorized waste disposal during the current monitoring period. No wastes were deposited outside of the areas permitted to receive waste.

11. Waste Acceptance

As outlined in the Amended WDRs (March 11, 2011), generators delivering contaminated soils to the SCLF are required to demonstrate that the soil chemistry meets specific requirements through a specific sampling and analysis program. All non-designated, non-hazardous contaminated soils that are brought to the site are disposed of as wastes in the lined sections of the landfill. Accordingly, these soils are required to meet the requirements outlined in Section 2.2 of the Waste Acceptance Plan, Revision 1 (WAP; RMC Geosciences, Inc., 2014).

As required by the Amended WDRs and WAP, prior to delivery to the SCLF, generators are required to collect and analyze representative samples at the following frequency:

- Up to 1000 cubic yards: At least one sample for each 250 cubic yards.
- Between 1000 and 5000 cubic yards: At least 4 samples for the first 1000 cubic yards, and 1 sample for each additional 500 cubic yards.
- More than 5000 cubic yards: At least 12 samples for the first 5000 cubic yards, and 1 sample for each additional 1000 cubic yards.

Samples are required to be analyzed for potential site-specific contaminants by a certified analytical laboratory, and the results are provided to Republic for review, profile development, and determination of acceptability. Republic may request additional sampling or analyses to ensure compliance with the Amended WDRs and WAP.

Analytical results for special wastes are included in Appendix F and are summarized in Tables 13 through 17.

11.1 Second Semiannual 2020 Waste Acceptance Results

The contaminated soil generators, analyses performed, type of special waste, and quantity of special waste disposed of during the monitoring period are summarized in Table 13.

When applicable, constituents measured at or above the Method Detection Limit (MDL) were then compared to calculated threshold limit concentrations as detailed in the site-specific Waste Acceptance Plan, Revision 1 (RMC Geosciences, Inc., 2014), and determined to be acceptable for disposal in lined cells if the measured concentrations were below these levels. As stipulated in the Amended WDRs, wastes containing analytes that exceed PRG or CHHSL levels may be accepted if the analyte concentrations do not exceed the respective State of California Hazardous Waste levels (as listed in Title 22 of the California Code of Regulations Section 66261.24) and Total Designated Levels (as calculated following the guidelines in Section C.3 of the Amended WDRs), whichever is lower. When comparing analyte concentrations to California hazardous waste levels, the total analyte concentration must be below its respective Total Threshold Limit Concentration (TTLC) and it must be below ten times the Soluble Threshold Limit Concentration (STLC). If a total analyte concentration is more than ten times the STLC value, then the sample must be submitted for a Waste Extraction Test to determine its soluble analyte concentration. To be considered acceptable, the soluble analyte concentration must also be below its respective STLC value.

All special wastes that were disposed of at the SCL during the second semiannual 2020 monitoring period met the waste acceptance requirements of the Amended WDRs and the site-specific WAP (Tables 13 through 17).

12. Annual Summary

During the first and second semiannual 2020 monitoring periods, groundwater elevations and chemistries were generally similar to past monitoring events. No evidence of a new release, or changes in existing release conditions was identified.

During the first and second semiannual 2020 monitoring periods, concentration limits were exceeded for several analyte/well pairs that have historically been in tracking mode. Review of

the tracking mode charts (Appendix G) indicates that there are no increasing trends for tracking mode analyte/well pairs. Retesting was conducted for analyte/well pairs that exceeded a concentration limit that were not previously in tracking mode. However, no retest results confirmed concentration limit exceedances during 2020 monitoring and therefore, no new analyte/well pairs were added to tracking mode. Retest results are pending for fourth quarter 2020 exceedances of TDS at well DW-1 and toluene at well DW-5. The results will be reported in the First Semiannual 2021 Water Quality Monitoring Report. Due to insufficient WQPS exceedances in recent years, the following were removed from tracking mode in 2020:

- Alkalinity at DW-3 and PZ-4,
- Chloromethane at well PZ-4, and
- COD at well MW-6.

During the first and second semiannual 2020 monitoring periods, methane concentrations did not exceed 5%V at any landfill gas monitoring probe during monthly monitoring.

No new seeps were identified during the first and second semiannual 2020 monitoring periods.

Leachate, landfill gas condensate, groundwater extracted near the cut-off wall, and groundwater collected from subdrains at the SCLF were discharged to the Los Angeles City sanitary sewer system. Total volumes from each water source are shown in Table 12.

The following construction activities were completed during 2020:

- Following construction in late 2019, approval of disposal operations within Cell CC-4, Part 3 was granted by the RWQCB on January 14, 2020.
- Construction of Cell CC-4, Part 4A commenced, was completed, and SCLF received approval for disposal operations from the RWQCB on November 6, 2020.
- Cell design for Cell CC-5, Part 4B is in progress. The cell is anticipated to be 13 acres in size with construction beginning in 2021.
- Several landfill gas collection and control system upgrades were completed in 2020, including installations/activations of:
    - 46 new replacement vertical extraction wells,

- six horizontal gas collectors,
- six horizontal to gabion cube collector connectors,
- three liner collectors and two trench collectors,
- 96 dewatering pumps in vertical extraction wells,
- Header pipes, Air and force main lines, de-scalers, and pumps associated with the landfill gas collection and control system,
- new sump for flare #3, and
- two passive sumps at the County side of the landfill.

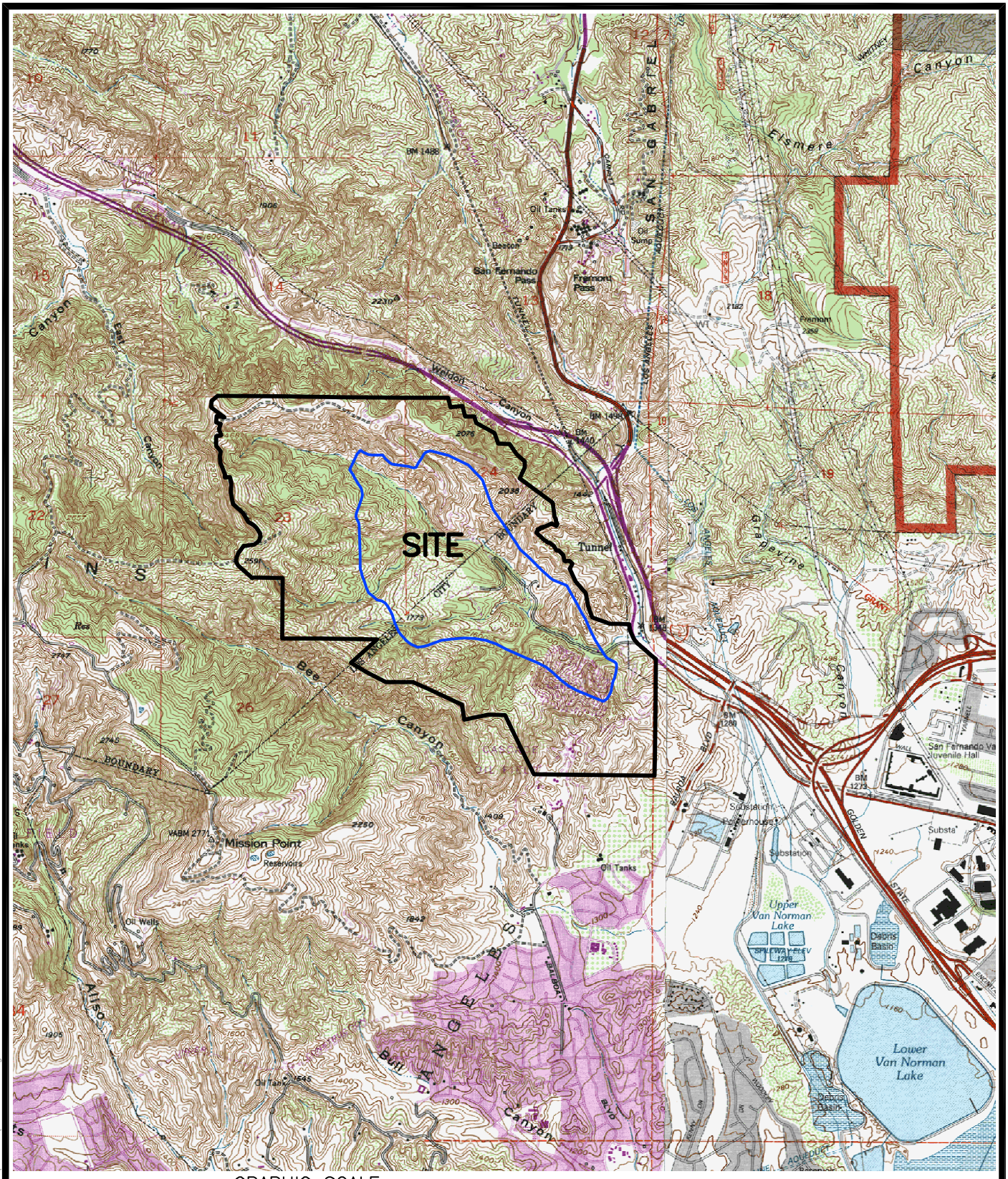
References

California Regional Water Quality Control Board, Los Angeles Region, 2008, "Order No. R4-2008-0088 – Corrective Action Program Waste Discharge Requirements for Browning-Ferris Industries of California, Inc. (Sunshine Canyon City/County Landfill), File No. 58-076," October 2, 2008.

California Regional Water Quality Control Board, Los Angeles Region, 2009, "Revised Monitoring and Reporting Program (No. CI-2043) for Browning-Ferris Industries of California, Inc. (Sunshine Canyon City/County Landfill), File No. 58-076," July 21, 2009.

RMC Geoscience, Inc., 2014 "Waste Acceptance Plan, Revision 1, Sunshine Canyon Landfill, Los Angeles County, California." December.

FIGURES



GRAPHIC SCALE

1500 0 750 1500 3000

(in feet)

FIGURE 1

SITE LOCATION MAP

SECOND SEMIANNUAL 2020 MONITORING REPORT
SUNSHINE CANYON LANDFILL
LOS ANGELES, CALIFORNIA

Geo-Logic ASSOCIATES

DRAFTER/PM: VL/KW	DATE: FEBRUARY 2021	JOB NO. SO20.1006

REFERENCE: USGS 7.5 MINUTE SERIES (TOPOGRAPHIC) OAT MOUNTAIN (1969) AND SAN FERNANDO (1995) CALIFORNIA QUADRANGLES.

N

V:\Dwgs\2020\SO 1006-Sunshine\20-2\site-loc.dwg

GRAPHIC SCALE
350 0 175 350 700
(in feet)

N

EXPLANATION:

- APPROXIMATE PROPERTY BOUNDARY
- APPROXIMATE LIMIT OF REFUSE
- 1650 EXISTING GRADE CONTOUR
- APPROXIMATE LOCATION OF SANTA SUSANA FAULT
- GROUNDWATER MONITORING WELL (SHALLOW)
- GROUNDWATER MONITORING WELL (BEDROCK)
- ABANDONED GROUNDWATER MONITORING WELL
- SURFACE WATER MONITORING POINT
- SUBDRAIN MONITORING POINT
- LYSIMETER MONITORING POINT
- LEACHATE MONITORING POINT
- LEACHATE SUMP

S-C
CM-9R3
CM-10
CM-10R
LY-6
CM-17
CM-17R
CM-15
CM-16R
CM-16
LEACHATE
CM-11R
PZ-1
LY-7
DEEP LEACHATE
COUNTY OF LOS ANGELES
CITY OF LOS ANGELES
CM-5R
CM-5
S-D
CA-L
LR-2
PZ-2
MW-14
DW-1
MW-9
MW-5
MW-8
(PIEZOMETER)
PZ-3
PZ-4
DW-2
DW-3

SCALE: 1"=100'
MW-6
S-AR
MW-13R
MW-1
DW-5

SCALE: 1"=100'
DW-4
MW-2A
SUBDRAIN-N
S-B

BASE TOPOGRAPHY DATED 2/13/2020

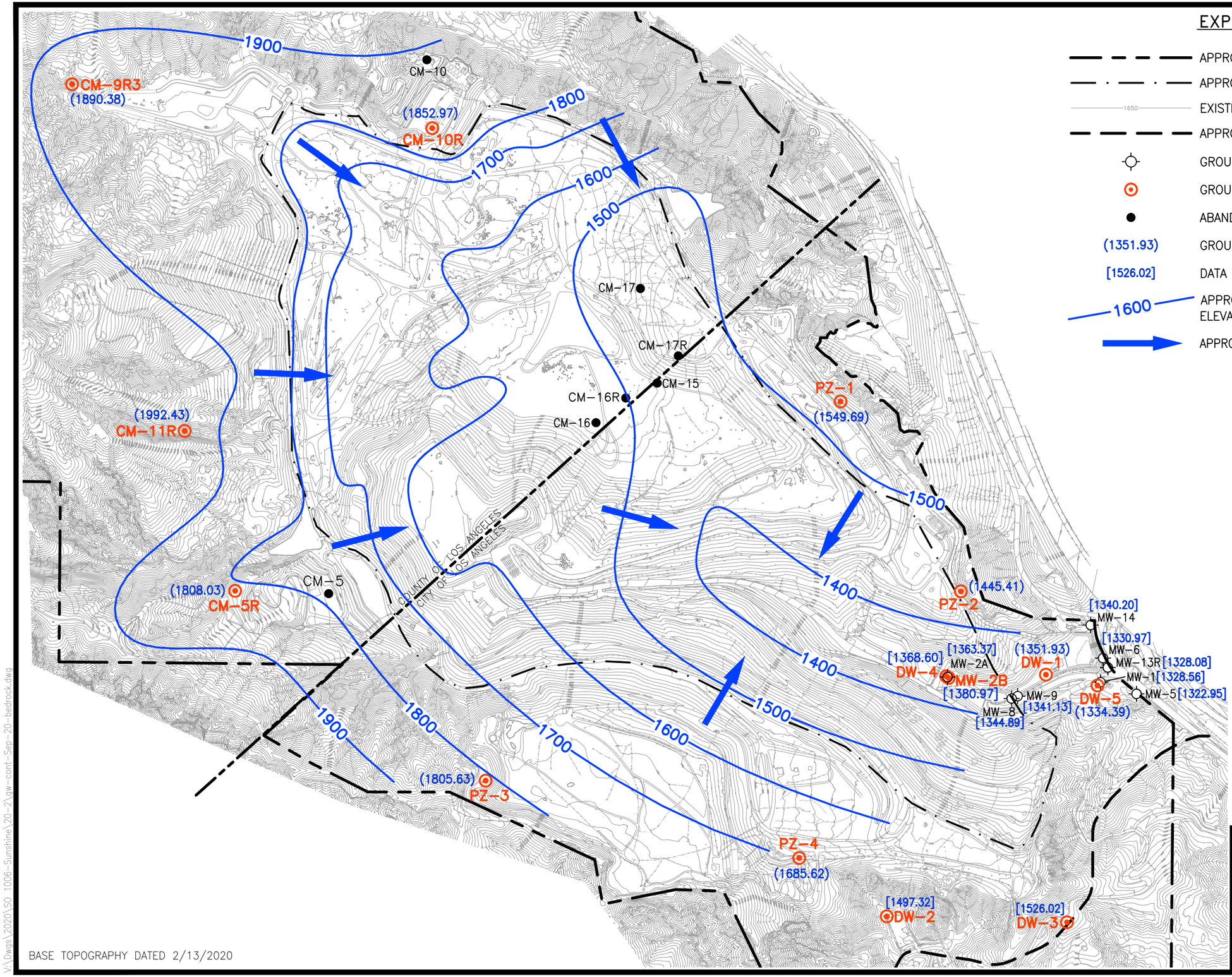
FIGURE 2

SITE MONITORING POINTS LOCATION MAP
SECOND SEMIANNUAL 2020 MONITORING REPORT
SUNSHINE CANYON LANDFILL
LOS ANGELES, CALIFORNIA

Geo-Logic ASSOCIATES

DRAFTER/PM: VL/KW	DATE: FEBRUARY 2021	JOB NO. SO20.1006

V:\Dwgs\2020\SO 1006-Sunshine\20-2\site mon-pnts location map.dwg



BASE TOPOGRAPHY DATED 2/13/2020

EXPLANATION:

- APPROXIMATE PROPERTY BOUNDARY
- APPROXIMATE LIMIT OF REFUSE
- 1650 — EXISTING GRADE CONTOUR
- APPROXIMATE LOCATION OF SANTA SUSANA FAULT
- GROUNDWATER MONITORING WELL (SHALLOW)
- GROUNDWATER MONITORING WELL (BEDROCK)
- ABANDONED GROUNDWATER MONITORING WELL
- (1351.93) GROUNDWATER ELEVATION IN FEET ABOVE MSL
- [1526.02] DATA NOT USED TO CREATE CONTOURS
- 1600 — APPROXIMATE GROUNDWATER POTENTIOMETRIC SURFACE ELEVATION CONTOUR (CONTOUR INTERVAL = 100 FEET)
- APPROXIMATE DIRECTION OF GROUNDWATER FLOW

N

GRAPHIC SCALE
350 0 175 350 700
(in feet)

FIGURE 3A

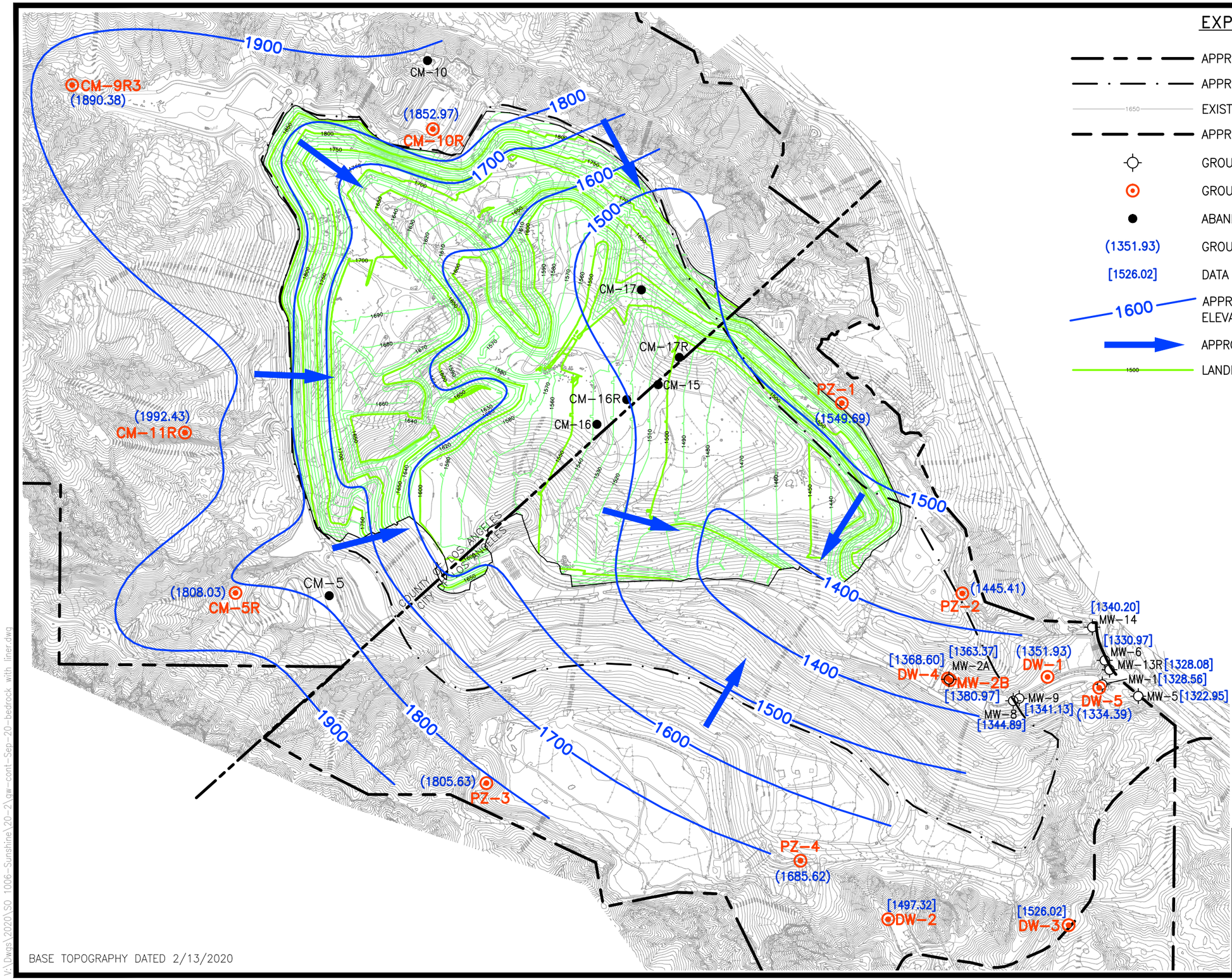
SEPTEMBER 2020 GW EQUIPOTENTIAL CONTOURS (BEDROCK)

SECOND SEMIANNUAL 2020 MONITORING REPORT
SUNSHINE CANYON LANDFILL
LOS ANGELES, CALIFORNIA

Geo-Logic ASSOCIATES

DRAFTER/PM: VL/KW | DATE: FEBRUARY 2021 | JOB NO. S020.1006

V:\Dwgs\2020\SO 1006-Sunshine\20-2\gw-cont-Sep-20-bedrock.dwg



EXPLANATION:

- APPROXIMATE PROPERTY BOUNDARY
- APPROXIMATE LIMIT OF REFUSE
- 1650 EXISTING GRADE CONTOUR
- APPROXIMATE LOCATION OF SANTA SUSANA FAULT
- GROUNDWATER MONITORING WELL (SHALLOW)
- GROUNDWATER MONITORING WELL (BEDROCK)
- ABANDONED GROUNDWATER MONITORING WELL
- (1351.93) GROUNDWATER ELEVATION IN FEET ABOVE MSL
- [1526.02] DATA NOT USED TO CREATE CONTOURS
- 1600 APPROXIMATE GROUNDWATER POTENTIOMETRIC SURFACE ELEVATION CONTOUR (CONTOUR INTERVAL = 100 FEET)
- APPROXIMATE DIRECTION OF GROUNDWATER FLOW
- 1500 LANDFILL LINER ELEVATION CONTOURS

BASE TOPOGRAPHY DATED 2/13/2020

FIGURE 3B

SEPTEMBER 2020 GW EQUIPOTENTIAL CONTOURS (BEDROCK)

SECOND SEMIANNUAL 2020 MONITORING REPORT
SUNSHINE CANYON LANDFILL
LOS ANGELES, CALIFORNIA

Geo-Logic ASSOCIATES

DRAFTER/PM: VL/KW	DATE: FEBRUARY 2021	JOB NO. SO20.1006

V:\Dwgs\2020\SO_1006-Sunshine\20-2_gw-cont-Sep-20-bedrock with liner.dwg

EXPLANATION:

- APPROXIMATE PROPERTY BOUNDARY
- APPROXIMATE LIMIT OF REFUSE
- 1650 — EXISTING GRADE CONTOUR
- APPROXIMATE LOCATION OF SANTA SUSANA FAULT
- GROUNDWATER MONITORING WELL (SHALLOW)
- GROUNDWATER MONITORING WELL (BEDROCK)
- ABANDONED GROUNDWATER MONITORING WELL
- (1351.93) GROUNDWATER ELEVATION IN FEET ABOVE MSL
- [1526.10] DATA NOT USED TO CREATE CONTOURS
- 1600 — APPROXIMATE GROUNDWATER POTENTIOMETRIC SURFACE ELEVATION CONTOUR (CONTOUR INTERVAL = 100 FEET)
- APPROXIMATE DIRECTION OF GROUNDWATER FLOW

CM-9R3 (1889.38)
CM-10
(1852.32) CM-10R
CM-17
CM-17R
CM-15
CM-16R
CM-16
PZ-1 (1549.67)
(1990.53) CM-11R
CM-5
(1807.74) CM-5R
COUNTY OF LOS ANGELES
CITY OF LOS ANGELES
(1805.61) PZ-3
PZ-4 (1685.83)
(1445.59) PZ-2
[1340.51] MW-14
[1331.23] MW-6
MW-13R [1328.19]
MW-1 [1328.49]
MW-5 [1322.92]
[1363.47] MW-2A
[1368.64] DW-4
MW-2B [1381.10]
(1351.93) DW-1
MW-9 [1340.93]
MW-8 [1344.66]
DW-5 (1334.11)
[1496.84] DW-2
[1526.10] DW-3
1900 1800 1700 1600 1500 1400

N

GRAPHIC SCALE
350 0 175 350 700
(in feet)

BASE TOPOGRAPHY DATED 2/13/2020

FIGURE 3C

DECEMBER 2020 GW EQUIPOTENTIAL CONTOURS (BEDROCK)

SECOND SEMIANNUAL 2020 MONITORING REPORT
SUNSHINE CANYON LANDFILL
LOS ANGELES, CALIFORNIA

Geo-Logic ASSOCIATES

DRAFTER/PM: VL/KW	DATE: FEBRUARY 2021	JOB NO. S020.1006

V:\ Dwgs \ 2020 \ SO 1006 - Sunshine \ 20 - 2 \ gw - cont - Dec - 20 - bedrock.dwg

EXPLANATION:

- APPROXIMATE PROPERTY BOUNDARY
- APPROXIMATE LIMIT OF REFUSE
- 1650 — EXISTING GRADE CONTOUR
- APPROXIMATE LOCATION OF SANTA SUSANA FAULT
- GROUNDWATER MONITORING WELL (SHALLOW)
- GROUNDWATER MONITORING WELL (BEDROCK)
- ABANDONED GROUNDWATER MONITORING WELL
- (1351.93) GROUNDWATER ELEVATION IN FEET ABOVE MSL
- [1526.10] DATA NOT USED TO CREATE CONTOURS
- 1600 — APPROXIMATE GROUNDWATER POTENTIOMETRIC SURFACE ELEVATION CONTOUR (CONTOUR INTERVAL = 100 FEET)
- APPROXIMATE DIRECTION OF GROUNDWATER FLOW
- 1500 — LANDFILL LINER ELEVATION CONTOURS

CM-9R3 (1889.38)
CM-10
(1852.32) CM-10R
CM-17
CM-17R
CM-15
CM-16R
CM-16
PZ-1 (1549.67)
(1990.53) CM-11R
(1807.74) CM-5R
CM-5
(1805.61) PZ-3
PZ-4 (1685.83)
(1445.59) PZ-2
[1340.51] MW-14
[1331.23] MW-6
MW-13R [1328.19]
MW-1 [1328.49]
MW-5 [1322.92]
[1368.64] DW-4
[1363.47] MW-2A
MW-2B [1381.10]
(1351.93) DW-1
MW-9 [1340.93]
MW-8 [1344.66]
DW-5 (1334.11)
[1496.84] DW-2
[1526.10] DW-3
CITY OF LOS ANGELES
COUNTY OF LOS ANGELES

N

GRAPHIC SCALE
350 0 175 350 700
(in feet)

BASE TOPOGRAPHY DATED 2/13/2020

FIGURE 3D

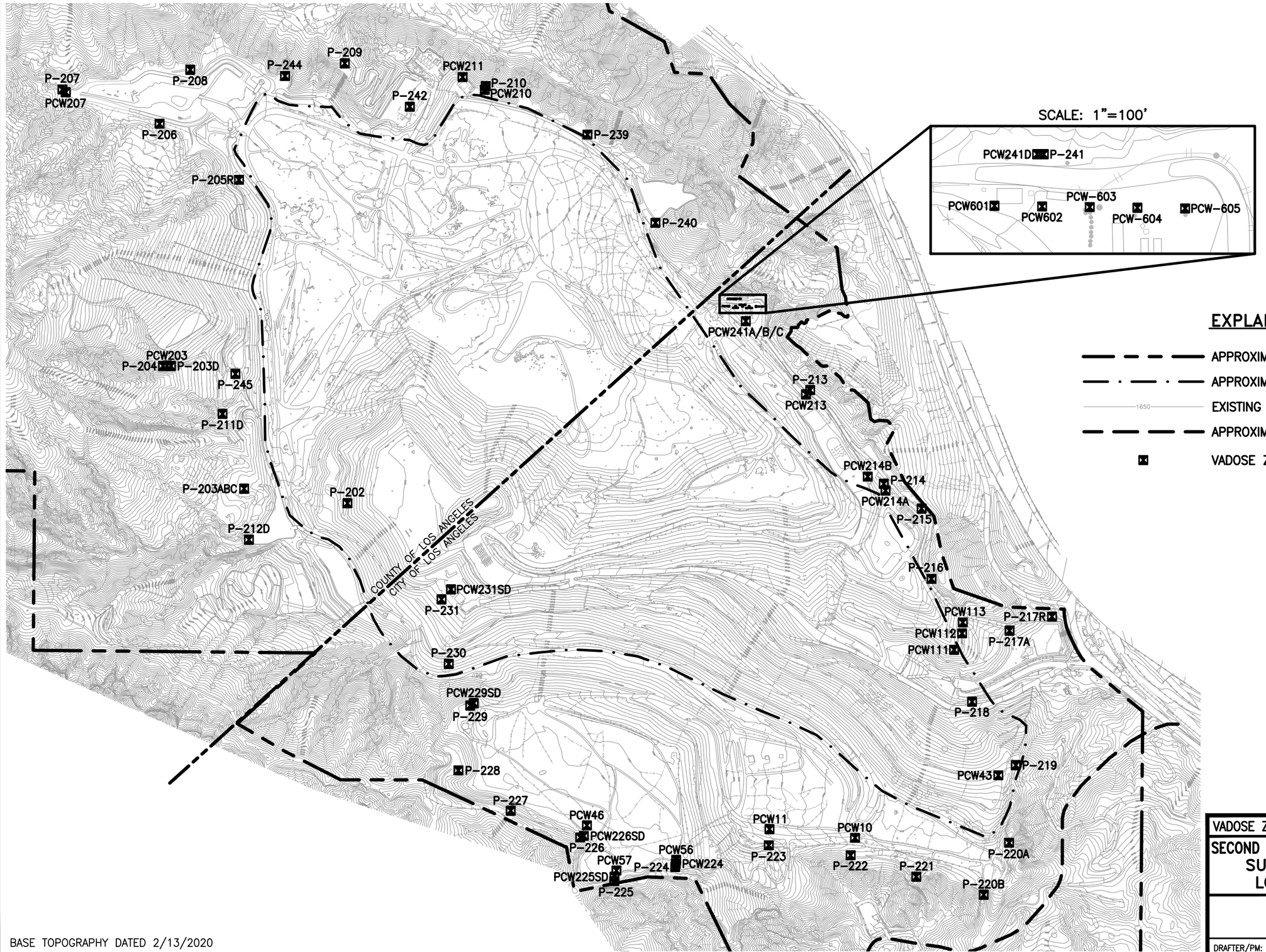
DECEMBER 2020 GW EQUIPOTENTIAL CONTOURS (BEDROCK)

SECOND SEMIANNUAL 2020 MONITORING REPORT
SUNSHINE CANYON LANDFILL
LOS ANGELES, CALIFORNIA

Geo-Logic ASSOCIATES

DRAFTER/PM: VL/KW	DATE: FEBRUARY 2021	JOB NO. SO20.1006

V:\Dwgs\2020\SO_1006-Sunshine\20-2_gw-cont-Dec-20-bedrock with liner.dwg



EXPLANATION:

- APPROXIMATE PROPERTY BOUNDARY
- APPROXIMATE LIMIT OF REFUSE
- 1650 EXISTING GRADE CONTOUR
- APPROXIMATE LOCATION OF SANTA SUSANA FAULT
- VADOSE ZONE GAS MONITORING PROBE

N

GRAPHIC SCALE

350 0 175 350 700

(in feet)

BASE TOPOGRAPHY DATED 2/13/2020

FIGURE 4

VADOSE ZONE GAS MONITORING POINT LOCATION MAP

SECOND SEMIANNUAL 2020 MONITORING REPORT
SUNSHINE CANYON LANDFILL
LOS ANGELES, CALIFORNIA

Geo-Logic ASSOCIATES

DRAFTER/PM: VL/KW | DATE: FEBRUARY 2021 | JOB NO. SO20.1006

V:\Dwgs\2020\SO 1006-Sunshine\20-2\gas mon-pnts map.dwg

TABLES

TABLE 1
REGULATORY COMPLIANCE CHECKLIST - MONITORING AND REPORTING PROGRAM CI-2043
SUNSHINE CANYON LANDFILL

MRP SECTION	REPORTING REQUIREMENT	REPORT SECTION
I.A.1	Transmittal Letter	Republic Transmittal Letter
	Discussion of Violations	Section 12; Republic Transmittal Letter
	Planned Corrective Actions (as applicable)	Section 12; Republic Transmittal Letter
	Signature of Owner/Operator Principal	Republic Transmittal Letter
	Statement of validity, accuracy, and completeness	Republic Transmittal Letter
I.A.2	Summary of Non-Compliance	Section 12; Republic Transmittal Letter
I.A.3	Site Conditions	Section 2
I.A.4	Narrative Description	
	Monitoring Parameters	Section 3.2, Table 2
	Groundawter Monitoring	Section 3
	Water Quality Protection Standards	Section 3.5, Tables 7A, 7B
	Statistical and Non-Statistical Data Analysis	Section 3.5, Tables 7A, 7B
	Groundwater Flow Monitoring	Section 3.4
	Leachate Monitoring	Section 7.0
	Vadose Zone Liquid Monitoring	Section 4.0
	Vadose Zone Gas Monitoring	Section 5.0
	Surface Water Monitoring	Section 6.0
	On-Site Water Use Monitoring	Section 8.0
I.A.5	Laboratory Results	
	Groundwater	Appendix B, Tables 6A and 6B
	Subdrain and Lysimeter Liquid	Appendix B, Tables 8A and 8B
	NPDES Monitoring	Table 10
	Stream Diversion	Section 6.2
	Spring Water	Section 6.3, Appendix D
	Leachate	Appendix B; Table 11
	Trench Liquid	Appendix B
	Non-Target Volatile Organic Compounds	Appendix B
	QA/QC Sample Results	Section 3.3, Tables 3A, 3B, 4A, and 4B, Appendix B
I.A.6	Summary and Certification of Standard Observation in accordance with NPDES requirements	Appendix D
I.A.7	Summary of total volumes of liquids, on a monthly basis, of landfill leachate, condensate, and subdrain water.	Table 12
	Method of managing landfill-generated liquids.	Section 8.0
I.A.8.a	Table of estimated average monthly quantities of deposited waste (tons and cubic yards)	Section 10.0; Appendix E
I.A.8.b	An estimate of the remaining capacity (in tons and cubic yards) and the remaining life of the site in years and months.	Section 10.0
I.A.8.c	Certification that all wastes comply with RWQCB requirements and were placed within the permittied boundary.	Republic Transmittal Letter
I.A.8.d	Description and estimated flow rate of seeps and springs.	Appendix D
I.A.8.e	Estimated amount of water used for landscape irrigation, dust suppression, and operations.	Table 12
I.A.8.f	Date, source, quantity, description, and management of unacceptable wastes received at the facility.	Section 10.0
I.A.9	Map showing waste disposal locations	Appendix E
	Map showing monitoring locations	Figure 2; Figure 4
	Map showing groundwater contours	Figures 3A through 3D
I.B.1	Discussion of compliance record, monitoring system changes, construction plans, corrective action milestones, etc.	Section 12.0
I.B.2	Graphical Presentation of Analytical Data	Appendix H
I.B.3	Analytical data presented in tabular form	Appendix I

TABLE 2
ANALYTICAL PARAMETERS AND METHODS
SUNSHINE CANYON LANDFILL

Parameter	Typical USEPA Method	Frequency
Indicator Parameters		
Liquid Level	Field	Quarterly
Alkalinity, total	310.1	Quarterly
Ammonia as Nitrogen	350.2	Quarterly
Chemical oxygen demand (COD)	410.2	Quarterly
Chloride	300.0	Quarterly
Potassium, total	6010B	Quarterly
Total Organic Carbon (TOC)	415.1	Quarterly
Total Dissolved Solids (TDS)	160.1	Quarterly
Volatile Organic Compounds (Appendix I, MTBE, TBA, dichlorodifluoromethane, tetrahydrofuran, and carbon disulfide)	8260B	Quarterly
1,4-Dioxane	8270 or 8260SIM	Quarterly
Supplemental Parameters		
pH	Field	Semiannual
Electrical Conductivity (EC)	Field	Semiannual
Temperature	Field	Semiannual
Turbidity	Field	Semiannual
Bicarbonate as CaCO3	310.1	Semiannual
Boron, total	6010B	Semiannual
Bromide	300.0	Semiannual
Calcium, total	6010b	Semiannual
Carbon dioxide	SM4500-CO2	Semiannual
Fluoride	340.2	Semiannual
Iron, total	6010B	Semiannual
Magnesium, total	6010B	Semiannual
Manganese, total	6010B	Semiannual
Nitrate-N	300.0	Semiannual
Sodium, total	6010B	Semiannual
Sulfate	300.0	Semiannual
Sulfide	376.2	Semiannual
Constituents of Concern (COCs)		(Last conducted June 2016)
Antimony (dissolved)	6010B	Every Five Years
Arsenic (dissolved)	200.8	Every Five Years
Barium (dissolved)	6010B	Every Five Years
Beryllium (dissolved)	6010B	Every Five Years
Chromium (dissolved)	6010B	Every Five Years
Cobalt (dissolved)	6010B	Every Five Years
Copper (dissolved)	6010B	Every Five Years
Lead (dissolved)	6010B	Every Five Years
Mercury (dissolved)	7470	Every Five Years
Nickel (dissolved)	6010B	Every Five Years
Selenium (dissolved)	6010B	Every Five Years
Silver (dissolved)	6010B	Every Five Years
Thallium (dissolved)	6010B	Every Five Years
Tin (dissolved)	6010B	Every Five Years
Vanadium (dissolved)	6010B	Every Five Years
Zinc (dissolved)	6010B	Every Five Years
Semivolatile Organic Compounds	8270	Every Five Years
Any other pollutants that are detected in leachate	Various	Every Five Years
		(Next COC Sampling: Dec 2021)

TABLE 3A
SUMMARY OF BLANK SAMPLE RESULTS - THIRD QUARTER 2020
SUNSHINE CANYON LANDFILL

Primary Sampling Date	Blank Sampling Date	Blank Sample Collection Type	Reported Analytes
9/21/20	9/21/20	QCAB	Methylene Chloride (0.27j µg/L)
	9/21/20	QCTB	Methylene Chloride (0.16j µg/L)
	9/21/20	Method Blank	Chloroform (0.198j µg/L); Bromodichloromethane(0.134j µg/L)
9/22/20	9/22/20	QCAB	Acetone (5.5j µg/L)
	9/22/20	QCTB	None Detected
	9/22/20	Method Blank	Chloroform (0.198j µg/L); Bromodichloromethane(0.134j µg/L)
9/23/20	9/23/20	QCAB	Acetone (5.1j µg/L); Methylene Chloride (0.26j µg/L); Tetrahydrofuran (0.66j µg/L)
	9/23/20	QCTB	Methylene Chloride (0.26j µg/L)
	9/23/20	Method Blank	Chloroform (0.152j µg/L); Dibromochloromethane (0.113j µg/L); Bromodichloromethane (0.119j µg/L)

TABLE 3B
SUMMARY OF BLANK SAMPLE RESULTS - FOURTH QUARTER 2020
SUNSHINE CANYON LANDFILL

Primary Sampling Date	Blank Sampling Date	Blank Sample Collection Type	Reported Analytes
12/21/20	12/21/20	QCAB	None Detected
	12/21/20	QCTB	2-methyl-1-Buten-3-yne (14j µg/L, TIC)
	12/21/20	Method Blank	Iron (83.7j µg/L)
12/22/20	12/22/20	QCAB	Sulfur dioxide (83j µg/L, TIC), 2H-Pyran-2-acetic acid, tetrahydro-6-methyl-cis- (280j µg/L, TIC)
	12/22/20	QCTB	Acetone (4.7j µg/L), Propanedioic acid (240j µg/L, TIC)
	12/22/20	Method Blank	Iron (83.7j µg/L)
12/28/20	12/28/20	QCAB	Sulfur dioxide (110j µg/L, TIC), 3-nitro-methyl ester-2-Pyridinecarboxylic acid (20j µg/L, TIC)
	12/28/20	QCTB	Sulfur dioxide (68j µg/L, TIC)
	12/28/20	Method Blank	Iron (83.7j µg/L)
12/29/20	12/29/20	QCAB	1,5-Hexadiyne (29j µg/L, TIC)
	12/29/20	QCTB	1,5-Hexadiyne (19j µg/L, TIC), 7-methoxy-1-methyl-1,2,3-Isoquinolin-6-ol-1-carboxylic acid (27j µg/L, TIC), 3-ethoxy-2-nitro-Pyridine (15j µg/L, TIC)
	12/29/20	Method Blank	Iron (92j µg/L)

j: Indicates a trace concentration (between the Method Detection Limit and Practical Quantitation Limit.

TABLE 4A
SUMMARY OF DUPLICATE SAMPLE RESULTS - THIRD QUARTER 2020
SUNSHINE CANYON LANDFILL

ANALYTE	CM-9R3 9/21/20	DUPLICATE 9/21/20	RELATIVE PERCENT DIFFERENCE
GENERAL CHEMISTRY CONSTITUENTS (mg/L):			
Alkalinity, total	250	250	0
Ammonia (as N)	6.3	6.4	2
Chemical Oxygen Demand	10	10	NC
Chloride	14	15	7
Total Dissolved Solids	4000	4000	0
Total Organic Compound	7.1	6.8	4
METALS (mg/L):			
Potassium	12	13	8
VOLATILE & SEMI-VOLATILE ORGANIC COMPOUNDS (µg/L): None Detected			

TABLE 4B
SUMMARY OF DUPLICATE SAMPLE RESULTS -FOURTH QUARTER 2020
SUNSHINE CANYON LANDFILL

ANALYTE	CM-10R 12/22/2020	DUPLICATE 12/22/2020	RELATIVE PERCENT DIFFERENCE
GENERAL CHEMISTRY CONSTITUENTS (mg/L):			
Alkalinity, total	550	550	0
Ammonia (as N)	8.5	8.5	0
Bicarbonate alkalinity	550	550	0
Bromide	0.25	0.25	NC
Carbon Dioxide	42	2	NC
Chemical Oxygen Demand	10	10	NC
Chloride	9.0	9.0	0
Fluoride	1.1	1.1	0
Nitrate (as N)	0.055	0.055	NC
Sulfate	1400	1400	0
Sulfide, total	3.8	3.8	0
Total Dissolved Solids	2000	2000	0
Total Organic Carbon	4.2	4.2	0
METALS (mg/L):			
Boron	0.79	0.83	5
Calcium	230	240	4
Iron	0.28	0.30	7
Magnesium	190	200	5
Manganese	0.29	0.31	7
Potassium	10	11	10
Sodium	160	170	6
VOLATILE AND SEMIVOLATILE ORGANIC COMPOUNDS (µg/L):			
1,4-Dioxane	0.34	0.34	NC

Notes:
Right-justified value, non-shaded box indicates a quantified concentration (above the Practica Quantitation Limit).
Right-justified, bolded value with a shaded box indicates an estimated-trace concentration
Left-justified value, shaded box indicates not detected (method detection limit shown)
NC = Not calculated (relative percent difference only calculated for quantifiable concentrations)
TIC = Tentatively Identified Compound
Only detected constituents shown.
* - Detected in method blank at similar concentration.
** - Detected in field blank at similar concentration.

TABLE 5
GROUNDWATER ELEVATIONS AND SITE MONITORING WELL INFORMATION
SUNSHINE CANYON LANDFILL

Well Number	MW-1	MW-2A	MW-2B	MW-5	MW-6	MW-9	MW-13R	MW-14	DW-1	DW-2	DW-3	DW-4
Well Casing Elevation (ft, MSL)	1344.48	1381.71	1381.98	1341.42	1347.32	1363.32	1345.78	1354.19	1351.93	1521.92	1682.54	1382.02
Approximate Well Casing Elevation (ft, MSL)*	-	1397.01	1398.68	-	-	-	-	-	-	-	-	1400.82
Total Depth of Well (ft)	29.60	26.00	54.40	26.20	23.50	26.70	27.80	28.10	205.80	72.30	256.60	116.00
Pump Depth (ft)	27.30	24.70	52.20	25.00	19.70	24.90	26.40	25.00	199.00	70.00	247.00	
Well Diameter (in)	4	4	4	2	2	4	4	4	4	4	4	4
Type of Pump (ft)	Bladder	Bladder	Bladder	Bladder	Bladder	Bladder	Bladder	Bladder	Drop Tube	Bladder	Bladder	Bladder
Depth to Water (ft below TOC)												
3/9/12	17.08	21.38	5.58	19.03	16.97	20.96	17.59	14.83	0.00	25.74	151.46	5.54
3/28/12	16.85	21.37	5.44	NM	16.72	20.28	16.89	14.79	0.00	NM	NM	5.52
6/22/12	17.31	21.42	5.57	19.37	17.13	15.26	17.83	15.47	0.00	26.64	151.69	5.63
9/18/12	17.56	21.74	5.81	19.70	17.09	13.36	18.10	15.08	0.00	28.38	151.68	5.79
12/17/12	17.94	21.96	5.90	19.24	16.62	12.56	17.51	14.98	0.00	27.33	151.98	5.90
3/11/13	15.88	21.60	5.73	18.84	16.34	14.81	16.57	14.48	0.00	26.88	150.31	5.94
6/25/13	16.13	21.74	5.89	19.36	16.57	16.57	17.36	14.75	0.00	27.68	151.13	6.28
9/16/13	16.95	21.88	6.04	19.71	16.85	16.95	17.71	14.92	0.00	28.78	151.82	6.35
12/16/13	16.58	21.81	5.84	19.44	16.62	17.01	17.62	14.68	0.00	29.48	152.19	6.28
3/24/14	15.92	21.89	5.70	19.82	17.16	13.05	18.00	15.42	0.00	29.42	152.53	6.21
6/9/14	16.41	21.96	7.04	19.14	16.54	12.63	17.74	14.80	0.00	30.47	152.54	6.65
9/15/14	17.16	22.38	6.76	19.67	16.82	12.01	18.04	14.79	0.00	31.82	152.72	6.87
12/15 & 23/2014	16.39	20.60	4.98	19.05	16.17	11.65	18.24	14.35	0.00	32.33	152.89	5.24
3/23/15	16.58	21.65	5.77	19.28	16.59	20.04	18.16	14.65	0.00	31.57	152.88	5.92
6/15/15	16.86	22.10	5.57	19.41	16.72	22.02	18.34	14.73	0.00	32.74	151.25	5.75
9/28/15	17.27	21.91	5.59	19.91	16.69	19.49	18.75	14.80	0.00	33.88	151.11	5.86
12/1/15	17.04	16.08	1.46	19.72	16.70	20.20	18.83	14.92	0.00	34.33	151.56	2.21
3/28/16	16.61	19.05	12.41	19.33	16.46	20.47	18.53	14.61	0.00	33.56	151.71	14.12
6/20/16	16.89	17.14	11.52	19.81	16.67	16.64	18.61	14.85	0.00	34.66	152.51	18.11
9/19/16	17.49	32.29	20.05	20.01	16.83	15.46	19.20	14.87	0.00	35.10	153.10	32.82
12/19/16	17.12	31.33	19.49	19.85	17.33	15.15	19.26	14.61	0.00	35.28	153.56	34.65
3/13/17	15.19	30.43	17.64	17.58	16.38	13.96	17.22	14.44	0.00	23.08	153.54	21.79
6/12/17	15.59	30.84	17.11	18.61	16.53	12.95	17.42	14.58	0.00	23.56	153.21	21.94
9/18/17	15.64	33.57	18.38	19.14	16.69	11.88	17.74	14.50	0.00	24.83	153.77	31.51
12/4/17	15.35	34.01	18.75	19.16	16.85	13.44	17.95	14.74	0.00	25.90	154.74	32.32
3/12/18	14.36	33.71	18.67	19.47	16.11	13.45	16.94	14.67	0.00	25.51	154.38	32.72
6/12/18	14.49	32.56	17.77	18.88	16.47	17.81	16.69	14.52	0.00	25.56	154.63	32.59
9/18/18	15.59	33.81	18.64	19.32	16.78	21.13	17.07	14.55	0.00	26.95	154.82	32.81
12/10/18	13.14	33.62	18.86	18.34	16.20	19.26	16.13	14.17	0.00	27.85	155.37	32.84
3/25/19	8.19	32.25	18.17	15.22	15.38	14.84	16.06	13.84	0.00	19.39	155.32	32.19
6/24/19	8.61	32.37	16.80	16.83	16.15	20.95	16.43	14.31	0.00	21.97	155.45	32.18
9/9/19	10.36	32.71	17.08	17.33	16.38	21.98	14.52	14.51	0.00	23.43	155.62	32.27
12/2/19	14.01	33.52	17.58	17.73	16.24	21.84	16.28	14.01	0.00	24.51	155.84	32.33
2/17/20	15.16	33.56	17.66	18.07	16.30	22.11	16.85	14.09	0.00	24.08	156.01	32.35
6/22/20	15.12	33.44	17.56	18.08	16.36	21.73	17.07	14.03	0.00	23.23	156.28	32.20
9/21/20	15.92	33.64	17.71	18.47	16.35	22.19	17.70	13.99	0.00	24.60	156.52	32.22
12/21/20	15.99	33.54	17.58	18.50	16.09	22.39	17.59	13.68	0.00	25.08	156.44	32.18
Liquid Elevation (ft, MSL)												
3/9/12	1327.40	1360.33	1376.40	1322.39	1330.35	1342.36	1328.19	1339.36	1351.93	1496.18	1531.08	1376.48
3/28/12	1327.63	1360.34	1376.54	NM	1330.60	1343.04	1328.89	1339.40	1351.93	NM	NM	1376.50
6/22/12	1327.17	1360.29	1376.41	1322.05	1330.19	1348.06	1327.95	1338.72	1351.93	1495.28	1530.85	1376.39
9/18/12	1326.92	1359.97	1376.17	1321.72	1330.23	1349.96	1327.68	1339.11	1351.93	1493.54	1530.86	1376.23
12/17/12	1326.54	1359.75	1376.08	1322.18	1330.70	1350.76	1328.27	1339.21	1351.93	1494.59	1530.56	1376.12
3/11/13	1328.60	1360.11	1376.25	1322.58	1330.98	1348.51	1329.21	1339.71	1351.93	1495.04	1532.23	1376.08
6/25/13	1328.35	1359.97	1376.09	1322.06	1330.75	1346.75	1328.42	1339.44	1351.93	1494.24	1531.41	1375.74
9/16/13	1327.53	1359.83	1375.94	1321.71	1330.47	1346.37	1328.07	1339.27	1351.93	1493.14	1530.72	1375.67
12/16/13	1327.90	1359.90	1376.14	1321.98	1330.70	1346.31	1328.16	1339.51	1351.93	1492.44	1530.35	1375.74
3/24/14	1328.56	1359.82	1376.28	1321.60	1330.16	1350.27	1327.78	1338.77	1351.93	1492.50	1530.01	1375.81
6/9/14	1328.07	1359.75	1374.94	1322.28	1330.78	1350.69	1328.04	1339.39	1351.93	1491.45	1530.00	1375.37
9/15/14	1327.32	1359.33	1375.22	1321.75	1330.50	1351.31	1327.74	1339.40	1351.93	1490.10	1529.82	1375.15
12/15 & 23/2014	1328.09	1361.11	1377.00	1322.37	1331.15	1351.67	1327.54	1339.84	1351.93	1489.59	1529.65	1376.78
3/23/2015	1327.90	1360.06	1376.21	1322.14	1330.73	1343.28	1327.62	1339.54	1351.93	1490.35	1529.66	1376.10
6/15/2015	1327.62	1359.61	1376.41	1322.01	1330.60	1341.30	1327.44	1339.46	1351.93	1489.18	1531.29	1376.27
9/28/2015	1327.21	1359.80	1376.39	1321.51	1330.63	1343.83	1327.03	1339.39	1351.93	1488.04	1531.43	1376.16
12/1/2015	1327.44	1365.63	1380.52	1321.70	1330.62	1343.12	1326.95	1339.27	1351.93	1487.59	1530.98	1379.81
3/28/2016	1327.87	1362.66	1369.57	1322.09	1330.86	1342.85	1327.25	1339.58	1351.93	1488.36	1530.83	1367.90
6/20/2016	1327.59	1364.57	1370.46	1321.61	1330.65	1346.68	1327.17	1339.34	1351.93	1487.26	1530.03	1363.91
9/19/2016	1326.99	1349.42	1361.93	1321.41	1330.49	1347.86	1326.58	1339.32	1351.93	1486.82	1529.44	1349.20
12/19/2016	1327.36	1365.68	1379.19	1321.57	1329.99	1348.17	1326.52	1339.58	1351.93	1486.64	1528.98	1366.17
3/13/2017	1329.29	1366.58	1381.04	1323.84	1330.94	1349.36	1328.56	1339.75	1351.93	1498.84	1529.00	1379.03
6/12/2017	1328.89	1366.17	1381.57	1322.81	1330.79	1350.37	1328.36	1339.61	1351.93	1498.36	1529.33	1378.88
9/18/2017	1328.84	1363.44	1380.30	1322.28	1330.63	1351.44	1328.04	1339.69	1351.93	1497.09	1528.77	1369.31
12/4/2017	1329.13	1363.00	1379.93	1322.26	1330.47	1349.88	1327.83	1339.45	1351.93	1496.02	1527.80	1368.50
3/12/18	1330.12	1363.30	1380.01	1321.95	1331.21	1349.87	1328.84	1339.52	1351.93	1496.41	1528.16	1368.10
6/12/18	1329.99	1364.45	1380.91	1322.54	1330.85	1345.51	1329.09	1339.67	1351.93	1496.36	1527.91	1368.23
9/18/18	1328.89	1363.20	1380.04	1322.10	1330.54	1342.19	1328.71	1339.64	1351.93	1494.97	1527.72	1368.01
12/10/18	1331.34	1363.39	1379.82	1323.08	1331.12	1344.06	1329.65	1340.02	1351.93	1494.07	1527.17	1367.98
3/25/19	1336.29	1364.76	1380.51	1326.20	1331.94	1348.48	1329.72	1340.35	1351.93	1502.53	1527.22	1368.63
6/24/19	1335.87	1364.64	1381.88	1324.59	1331.17	1342.37	1329.35	1339.88	1351.93	1499.95	1527.09	1368.64
9/9/19	1334.12	1364.30	1381.60	1324.09	1330.94	1341.34	1331.26	1339.68	1351.93	1498.49	1526.92	1368.55
12/2/19	1330.47	1363.49	1381.10	1323.69	1331.08	1341.48	1329.50	1340.18	1351.93	1497.41	1526.70	1368.49
2/17/20	1329.32	1363.45	1381.02	1323.35	1331.02	1341.21	1328.93	1340.10	1351.93	1497.84	1526.53	1368.47
6/22/20	1329.36	1363.57	1381.12	1323.34	1330.96	1341.59	1328.71	1340.16	1351.93	1498.69	1526.26	1368.62
9/21/20	1328.56	1363.37	1380.97	1322.95	1330.97	1341.13	1328.08	1340.20	1351.93	1497.32	1526.02	1368.60
12/21/20	1328.49	1363.47	1381.10	1322.92	1331.23	1340.93	1328.19	1340.51	1351.93	1496.84	1526.10	1368.64

Note:
MSL = Mean Sea Level
TOC = Top of Casing
BOC = Bottom of Casing
NA = Not Available
NM = Not Measured
All wells resurveyed in 2014, except for the following: PZ-1, PZ-3, & MW-8. Well CM-5R resurveyed in 2015
* - Top of casing elevations are approximate. Wells MW-2A, MW-2B, and DW-4 were raised in September 2016 - survey pending.

TABLE 5, CONTINUED
GROUNDWATER ELEVATIONS AND SITE MONITORING WELL INFORMATION
SUNSHINE CANYON LANDFILL

Well Number	DW-5	PZ-1	PZ-2	PZ-3	PZ-4	CM-9R3	CM-10R	CM-11R	MW-8	CM-5	CM-5R
Well Casing Elevation (ft, MSL)	1347.54	1643.76	1566.52	2029.19	1795.85	1902.40	1901.20	2010.41	1362.37	1892.84	2032.00
Total Depth of Well (ft)	101.00	103.30	160.90	230.00	125.50	29.00	110.90	31.00		60.00	60
Depth of Pump (ft)					122.00	27.40	100.00	29.80			
Well Diameter (in)	4	2	2	2	2	4	4	4		2	2
Type of Pump	Bladder		Bladder		Bladder	Bladder	Bladder	Bladder	Bladder		
Depth to Water (ft below TOC)											
3/9/12	NM	89.25	NM	215.42	110.79	12.15	NM	22.44	17.89	20.46	NM
3/28/12	14.96	NM	123.22	NM	NM	10.01	NM	23.45	NM	NM	NM
6/22/12	14.73	89.33	123.14	215.69	110.73	10.81	46.85	18.26	15.68	21.60	NM
9/18/12	15.03	NM	123.18	215.78	110.92	13.82	48.31	NM	13.80	22.03	NM
12/17/12	14.90	83.27	123.27	215.90	110.80	11.42	47.37	23.11	13.62	19.86	NM
3/11/13	14.26	89.81	123.02	NM	110.11	9.89	47.57	21.02	15.32	17.39	NM
6/25/13	14.04	90.10	122.92	NM	110.23	13.29	48.70	22.62	16.41	19.16	NM
9/16/13	13.99	89.97	122.82	NM	110.10	15.30	49.13	24.31	16.46	19.50	NM
12/16/13	14.23	90.52	122.94	NM	110.18	17.09	49.36	25.56	16.44	18.62	NM
3/24/14	14.88	90.63	122.81	NM	110.38	12.58	49.81	20.88	14.41	18.08	NM
6/9/14	19.14	90.62	122.57	NM	110.37	15.41	50.26	21.90	15.23	19.34	NM
9/15/14	14.47	90.81	122.54	NM	110.46	17.95	50.69	23.54	13.39	20.61	NM
12/15 & 23/2014	14.43	90.81	122.68	NM	110.70	9.59	50.14	23.32	13.74	NM	NM
3/23/15	14.61	91.45	122.71	216.12	110.88	12.92	51.37	19.71	18.03	ABANDONED	198.53
6/15/15	14.44	91.48	122.52	216.42	110.93	16.14	51.55	22.10	18.61	ABANDONED	201.10
9/28/15	14.53	91.82	122.50	217.06	111.14	17.56	51.98	24.40	17.68	ABANDONED	202.46
12/1/15	14.78	92.05	122.67	217.53	111.30	18.87	52.38	26.09	18.18	ABANDONED	204.25
3/28/16	14.39	91.84	122.38	217.74	111.23	12.06	52.41	20.47	18.20	ABANDONED	206.39
6/20/16	14.36	91.97	122.44	218.20	111.56	15.41	52.81	22.39	18.04	ABANDONED	208.15
9/19/16	15.02	92.25	122.34	218.70	111.72	17.80	53.88	27.29	16.13	ABANDONED	210.04
12/19/16	15.06	92.39	122.61	219.13	112.01	19.91	52.94	28.54	16.03	ABANDONED	211.36
3/13/17	14.86	92.63	122.37	219.34	111.89	7.96	48.72	12.13	15.37	ABANDONED	212.49
6/12/17	14.62	92.46	122.37	219.63	111.69	10.55	49.51	15.98	14.46	ABANDONED	213.66
9/18/17	14.56	92.52	122.38	220.08	111.66	13.02	50.14	17.67	13.30	ABANDONED	214.90
12/4/17	14.82	92.92	122.54	220.37	111.81	14.34	50.76	19.66	14.32	ABANDONED	215.90
3/12/18	14.25	93.04	122.34	221.53	111.77	9.62	47.46	13.69	15.03	ABANDONED	216.91
6/12/18	14.02	92.97	122.17	221.04	111.43	11.47	49.55	16.16	16.07	ABANDONED	NM
9/18/18	14.23	93.07	122.13	221.53	111.70	13.39	50.48	18.23	17.28	ABANDONED	NM
12/10/18	14.01	93.44	122.39	221.92	111.94	10.18	49.70	19.11	16.42	ABANDONED	220.28
3/25/19	13.84	93.62	122.17	222.04	111.58	8.69	46.18	10.99	12.96	ABANDONED	220.60
6/24/19	13.42	93.42	121.99	222.24	111.24	10.24	47.16	15.93	16.05	ABANDONED	221.36
9/9/19	13.34	93.47	122.02	222.47	110.80	11.88	47.91	18.59	17.53	ABANDONED	221.72
12/2/19	13.25	93.68	121.79	222.74	110.68	11.53	46.43	21.41	17.68	ABANDONED	222.43
2/17/20	13.28	93.73	121.49	222.88	110.63	10.65	48.09	16.04	17.56	ABANDONED	222.77
6/22/20	13.23	93.83	121.23	223.19	110.51	9.98	47.39	15.97	17.47	ABANDONED	223.56
9/21/20	13.15	94.07	121.11	223.56	110.23	12.02	48.23	17.98	17.48	ABANDONED	223.97
12/21/20	13.43	94.09	120.93	223.58	110.02	13.02	48.88	19.88	17.71	ABANDONED	224.26
Liquid Elevation (ft, MSL)											
3/9/12	NM	1554.51	NM	1813.77	1685.06	1890.25	NM	1987.97	1344.48	1872.38	NM
3/28/12	1332.58	NM	1443.30	NM	NM	1892.39	NM	1986.96	NM	NM	NM
6/22/12	1332.81	1554.43	1443.38	1813.50	1685.12	1891.59	1854.35	1992.15	1346.69	1871.24	NM
9/18/12	1332.51	NM	1443.34	1813.41	1684.93	1888.58	1852.89	NM	1348.57	1870.81	NM
12/17/12	1332.64	1560.49	1443.25	1813.29	1685.05	1890.98	1853.83	1987.30	1348.75	1872.98	NM
3/11/13	1333.28	1553.95	1443.50	NM	1685.74	1892.51	1853.63	1989.39	1347.05	1875.45	NM
6/25/13	1333.50	1553.66	1443.60	NM	1685.62	1889.11	1852.50	1987.79	1345.96	1873.68	NM
9/16/13	1333.55	1553.79	1443.70	NM	1685.75	1887.10	1852.07	1986.10	1345.91	1873.34	NM
12/16/13	1333.31	1553.24	1443.58	NM	1685.67	1885.31	1851.84	1984.85	1345.93	1874.22	NM
3/24/14	1332.66	1553.13	1443.71	NM	1685.47	1889.82	1851.39	1989.53	1347.96	1874.76	NM
6/9/14	1328.40	1553.14	1443.95	NM	1685.48	1886.99	1850.94	1988.51	1347.14	1873.50	NM
9/15/14	1333.07	1552.95	1443.98	NM	1685.39	1884.45	1850.51	1986.87	1348.98	1872.23	NM
12/15 & 23/2014	1333.11	1552.95	1443.84	NM	1685.15	1892.81	1851.06	1987.09	1348.63	NM	NM
3/23/2015	1332.93	1552.31	1443.81	1813.07	1684.97	1889.48	1849.83	1990.70	1344.34	ABANDONED	1833.47
6/15/2015	1333.10	1552.28	1444.00	1812.77	1684.92	1886.26	1849.65	1988.31	1343.76	ABANDONED	1830.9
9/28/2015	1333.01	1551.94	1444.02	1812.13	1684.71	1884.84	1849.22	1986.01	1344.69	ABANDONED	1829.54
12/1/2015	1332.76	1551.71	1443.85	1811.66	1684.55	1883.53	1848.82	1984.32	1344.19	ABANDONED	1827.75
3/28/2016	1333.15	1551.92	1444.14	1811.45	1684.62	1890.34	1848.79	1989.94	1344.17	ABANDONED	1825.61
6/20/2016	1333.18	1551.79	1444.08	1810.99	1684.29	1886.99	1848.39	1988.02	1344.33	ABANDONED	1823.85
9/19/2016	1332.52	1551.51	1444.18	1810.49	1684.13	1884.60	1847.32	1983.12	1346.24	ABANDONED	1821.96
12/19/2016	1332.48	1551.37	1443.91	1810.06	1683.84	1882.49	1848.26	1981.87	1346.34	ABANDONED	1820.64
3/13/2017	1332.68	1551.13	1444.15	1809.85	1683.96	1894.44	1852.48	1998.28	1347.00	ABANDONED	1819.51
6/12/2017	1332.92	1551.30	1444.15	1809.56	1684.16	1891.85	1851.69	1994.43	1347.91	ABANDONED	1818.34
9/18/2017	1332.98	1551.24	1444.14	1809.11	1684.19	1889.38	1851.06	1992.74	1349.07	ABANDONED	1817.1
12/4/2017	1332.72	1550.84	1443.98	1808.82	1684.04	1888.06	1850.44	1990.75	1348.05	ABANDONED	1816.1
3/12/18	1333.29	1550.72	1444.18	1807.66	1684.08	1892.78	1853.74	1996.72	1347.34	ABANDONED	1815.09
6/12/18	1333.52	1550.79	1444.35	1808.15	1684.42	1890.93	1851.65	1994.25	1346.30	ABANDONED	NM
9/18/18	1333.31	1550.69	1444.39	1807.66	1684.15	1889.01	1850.72	1992.18	1345.09	ABANDONED	NM
12/10/18	1333.53	1550.32	1444.13	1807.27	1683.91	1892.22	1851.50	1991.30	1345.95	ABANDONED	1811.72
3/25/19	1333.70	1550.14	1444.35	1807.15	1684.27	1893.71	1855.02	1999.42	1349.41	ABANDONED	1811.40
6/24/19	1334.12	1550.34	1444.53	1806.95	1684.61	1892.16	1854.04	1994.48	1346.32	ABANDONED	1810.64
9/9/19	1334.20	1550.29	1444.50	1806.72	1685.05	1890.52	1853.29	1991.82	1344.84	ABANDONED	1810.28
12/2/19	1334.29	1550.08	1444.73	1806.45	1685.17	1890.87	1854.77	1989.00	1344.69	ABANDONED	1809.57
2/17/20	1334.26	1550.03	1445.03	1806.31	1685.22	1891.75	1853.11	1994.37	1344.81	ABANDONED	1809.23
6/22/20	1334.31	1549.93	1445.29	1806.00	1685.34	1892.42	1853.81	1994.44	1344.90	ABANDONED	1808.44
9/21/20	1334.39	1549.69	1445.41	1805.63	1685.62	1890.38	1852.97	1992.43	1344.89	ABANDONED	1808.03
12/21/20	1334.11	1549.67	1445.59	1805.61	1685.83	1889.38	1852.32	1990.53	1344.66	ABANDONED	1807.74

Note:
MSL = Mean Sea Level
TOC = Top of Casing
BOC = Bottom of Casing
NA = Not Available
NM = Not Measured
All wells resurveyed in 2014, except for the following: PZ-1, PZ-3, & MW-8. Well CM-5R resurveyed in 2015

TABLE 6A
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS -THIRD QUARTER 2020
SUNSHINE CANYON LANDFILL

Analyte	Units	BACKGROUND WELLS			SHALLOW MONITORING WELLS							DEEP MONITORING WELLS								Maximum Contaminant Level
		CM-9R3	CM-11R	CM-10R	MW-1	MW-2A	MW-5	MW-6	MW-9	MW-13R	MW-14	DW-1	DW-2	DW-3	DW-4	DW-5	MW-2B	PZ-2	PZ-4	
		09/21/20	09/21/20	09/21/20	09/22/20	09/23/20	09/22/20	09/21/20	09/22/20	09/21/20	09/21/20	09/21/20	09/22/20	09/22/20	09/23/20	09/22/20	09/23/20	09/22/20	09/21/20	
Inorganic Monitoring Parameters:																				
Alkalinity, total	mg/L	250	49	470	300	370	490	450	700	710	310	530	360	150	350	950	350	360	330	NV
Ammonia-Nitrogen	mg/L	6.3	2.4	10	4.9	3.1	3.6	0.85	4.1	6.5	0.10	2.0	3.2	0.55	4.1	0.19j	2.9	3.1	2.5	NV
Chemical Oxygen Demand	mg/L	10	10	10	11j	10	21	10	38	230	10	10	10	10	10	10	10	10	10	NV
Chloride	mg/L	14	11	9.6	110	31	250	40	200	120	60	14	9.8	13	13	18	13	11	9.1	500(2)
Total Dissolved Solids	mg/L	**4000**	**3500**	**2600**	**1500**	**2800**	**3200**	**3600**	**3800**	**1100**	**3500**	**3200**	**1900**	**1900**	**3000**	**1100**	**2700**	**4200**	**1200**	1000(2)
Total Organic Carbon	mg/L	7.1	5.4	4.3	7.3	4.3	22	6.2	31	26	5.0	3.8	2.0	0.71	2.3	7.9	2.4	3	1.6	NV
Metals:																				
Potassium, total	mg/L	12	10	11	29	5.7	22	5.4	20	21	8.3	1.6	4.6	8.3	4.5	1.2	4.6	3.5	4.1	NV
Volatile and Semivolatile Organic Compounds:																				
Acetone	µg/L	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0j*	16.0	4.0	4.0	4.0	4.0	4.0	5.1j*	4.0	4.0	4.0	NV
1,4-Dichlorobenzene	µg/L	0.073	0.073	0.073	0.073	0.073	0.073	0.073	0.19j	0.290	0.073	0.073	0.073	0.073	0.073	0.073	0.073	0.073	0.073	NV
cis-1,2-Dichloroethene	µg/L	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.34j	0.43	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11	6(1)-70(3)
1,4-Dioxane	µg/L	0.18	0.18	0.18	1.8	1.1	4.4	0.18	40	11	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	0.18	NV
Methyl tert-butyl ether	µg/L	0.067	0.067	0.067	0.067	0.067	0.067	0.067	0.50	0.27	0.067	0.067	0.067	0.067	0.067	0.067	0.067	0.067	0.067	13(1)/5(2)
Naphthalene	µg/L	0.097	0.097	0.097	0.097	0.097	0.097	0.097	0.097	0.39	0.097	0.097	0.097	0.097	0.097	0.89j	0.097	0.097	0.097	NV
Tetrahydrofuran	µg/L	0.57	0.57	0.57	0.57	0.57	1.7j	0.57	5.4	2.3	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	0.57	NV
Toluene	µg/L	0.093	0.093	0.093	0.093	0.093	0.093	0.093	0.093	0.37	0.093	0.093	0.093	0.093	0.093	0.67	0.093	0.093	0.093	150(1)/1000(3)

Notes:
(1) State of California Primary Drinking Water Standard
(2) State of California Secondary Drinking Water Standard
(3) Federal Maximum Contaminant Level
(j) Indicates a trace concentration between the Method Detection Limit and the Practical Quantitation Limit.
* - Analyte also detected in a blank sample at a similar concentration (suspected field/laboratory contaminant).

0.25 Analyte was not detected. Value listed is the Method Detection Limit.

2500 Analyte concentration exceeds ARAR value.

TABLE 6B
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS -FOURTH QUARTER 2020
SUNSHINE CANYON LANDFILL

Analyte	Units	BACKGROUND WELLS			SHALLOW MONITORING WELLS							DEEP MONITORING WELLS								Maximum Contaminant Level
		CM-9R3	CM-11R	CM-10R	MW-1	MW-2A	MW-5	MW-6	MW-9	MW-13R	MW-14	DW-1	DW-2	DW-3	DW-4	DW-5	MW-2B	PZ-2	PZ-4	
		12/22/20	12/22/20	12/22/20	12/29/20	12/28/20	12/29/20	12/21/20	12/28/20	12/21/20	12/21/20	12/22/20	12/28/20	12/29/20	12/28/20	12/29/20	12/28/20	12/21/20	12/28/20	
Inorganic Monitoring Parameters:																				
Alkalinity, total	mg/L	230	61	550	380	390	470	460	640	710	310	550	380	150	340	960	340	360	320	NV
Alkalinity, bicarbonate	mg/L	230	61	550	380	390	470	460	640	710	310	450	380	150	340	960	340	340	320	NV
Ammonia-Nitrogen	mg/L	5.7	2.2	8.5	4.6	2.8	3.4	0.61	3.2	5.5	0.10	1.7	3.1	0.58	4.3	0.28j	3.2	2.1	2.3	NV
Bromide	mg/L	0.50	0.50	0.25	1.8	0.50	3.3	1.2	0.50	1.1	0.57	1.3	0.25	0.25	0.50	0.25j	0.50	1.3	0.25	NV
Carbon Dioxide, free	mg/L	53	53	42	46	33	51	28	160	18	32	2.0	8.8	11	21	11	18	2.0	19	NV
Chemical Oxygen Demand	mg/L	10	10	10	60	10	62	16j	85	230	18j	10	10	10	10	13j	10	10	10	NV
Chloride	mg/L	14	10	9.0	140	39	280	37	190	110	26	14	12	16	14	21	15	12	9.7	500(2)
Fluoride	mg/L	**2.3**	0.56j	1.1	**2.6**	1.1	**2.6**	1.1	1.0	0.40j	0.84	**2.3j**	0.25	0.25	0.50	**3.1**	0.52j	1.3	0.97	2(1)-4(3)
Nitrate-Nitrogen	mg/L	0.11	0.11j	0.055	0.055	0.11	0.055	0.055	0.11	0.055	0.51	0.28	0.055	0.055	0.11	0.055	0.11	0.28	0.055	10(1,3)
Sulfate	mg/L	**2900**	**2500**	**1400**	**1100**	**1800**	**1500**	**1900**	**1800**	340	**1900**	**1900**	**1200**	**1200**	**1900**	0.56	**1800**	**2700**	**610**	500(2)
Sulfide, total	mg/L	0.027	0.027	3.8	0.027	0.027	0.027	8.1	0.027	96	0.027	0.46	0.027	0.027	0.027	0.027	0.027	0.027	0.027	NV
Total Dissolved Solids	mg/L	**4000**	**4400**	**2000**	**2200**	**2900**	**2900**	**3400**	**3800**	**1400**	**3300**	**8300**	**2000**	**1900**	**5400**	**1100**	**2700**	**4000**	**1200**	1000(2)
Total Organic Carbon	mg/L	7.3	5.0	4.2	18	4.1	17	6.6	23	22	4.6	3.2	1.6	0.51	1.9	7.0	1.9	2.4	1.2	NV
Metals:																				
Boron	mg/L	1.7	1.4	0.79	0.67	0.60	1.0	0.73	0.97	0.91	0.34	2.1	0.55	0.047j	0.60	2.7	0.58	1.4	0.15	NV
Calcium	mg/L	380	210	230	290	220	370	340	390	130	410	2.8	100	290	170	5.4	180	16	140	NV
Iron	mg/L	**22**	0.16*	0.28*	**33**	**10**	**30**	0.19*	**32**	0.18*	0.15*	0.050	**1.6**	**0.57***	**1.5**	0.11*	**2.1**	0.050	**1.6**	0.3(2)
Magnesium	mg/L	240	140	190	130	120	150	190	230	100	170	1.7	69	98	120	0.92	110	14	81	NV
Manganese	mg/L	**2.6**	**3.0**	**0.29**	**1.6**	**1.0**	**3.9**	**0.76**	**4.7**	**0.23**	**4.7**	0.015	**0.14**	**0.058**	**0.11**	**0.10**	**0.13**	0.032	**0.15**	0.05(2)
Potassium, total	mg/L	13	9.2	10	30	5.7	22	5.1	18	23	7.8	1.5	4.0	7.9	3.9	0.63	4.2	3.0	4.1	NV
Sodium	mg/L	410	570	160	140	400	300	310	320	170	220	1100	400	63	490	430	440	1200	89	NV
Volatile and Semivolatile Organic Compounds:																				
1,4-Dioxane	µg/L	0.34	0.34	0.34	7.0	3.5	3.5	0.34	49	7.6	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	0.34	NV
Toluene	µg/L	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.66	26	0.33	0.33	0.33	0.33	0.33	0.57	0.33	0.33	0.33	150(1)/1000(3)

Notes:
(1) State of California Primary Drinking Water Standard
(2) State of California Secondary Drinking Water Standard
(3) Federal Maximum Contaminant Level
(j) Indicates a trace concentration between the Method Detection Limit and the Practical Quantitation Limit.
* - Analyte also detected in a blank sample at a similar concentration.

0.25 Analyte was not detected. Value listed is the Method Detection Limit.

2500 Analyte concentration exceeds ARAR value.

TABLE 7A
COMPARISON OF INTRAWELL WATER QUALITY PROTECTION STANDARDS TO ANALYTICAL RESULTS - THIRD QUARTER 2020
SUNSHINE CANYON LANDFILL

Analyte	Units	WELL																					
		MW-1		MW-5		MW-6		MW-13R		MW-14		DW-1		DW-2		DW-3		DW-5		PZ-2		PZ-4	
		9/22/2020		9/22/2020		9/21/2020		9/21/2020		9/21/2020		9/21/2020		9/22/2020		9/22/2020		9/22/2020		9/22/2020		9/21/2020	
		Result	WQPS	Result	WQPS	Result	WQPS	Result	WQPS	Result	WQPS	Result	WQPS	Result	WQPS	Result	WQPS	Result	WQPS	Result	WQPS	Result	WQPS
Inorganic Monitoring Parameters:																							
Alkalinity	mg/L	300	844.76	490	727.34	450	571.59	710	972.24	310	587.83	530	658.76	360	410.47	150	162.81	950	1009.98	360	411.93	330	341.13
Ammonia-Nitrogen	mg/L	4.9	10.634	3.6	5.714	0.85	1.337	6.5	7.732	0.10	0.5703	2.0	2.4	3.2	4.308	0.55	0.7564	0.19j	0.3918	3.1	3.598	2.5	2.976
Chemical Oxygen Demand	mg/L	11j	202.056	21	135.7	10	75.338	230	407.58	10	54.674	10	49.801	10	52.743	10	15.206	10	76.47	10	26.386	10	24.85
Chloride	mg/L	110	408.469	250	469.603	40	70.829	120	213.802	60	88.987	14	17.737	9.8	15.462	13	17.534	18	101.838	11	16.398	9.1	11.706
Potassium, total	mg/L	29	54.763	22	34.393	5.4	10.679	21	27.224	8.3	12.508	1.6	3.838	4.6	6.183	8.3	12.357	1.2	5.262	3.5	4.693	4.1	5.643
Total Dissolved Solids	mg/L	1500	4495	3200	4614.2	3600	4486.5	1100	3450.9	3500	5128.5	3200	3600.2	1900	2178.3	1900	2313.1	1100	1417.3	4200	4403.2	1200	1529.5
Total Organic Carbon	mg/L	7.3	75.928	22	50.696	6.2	15.408	26	54.233	5.0	13.006	3.8	9.947	2.0	3.499	0.71	2.115	7.9	11.745	**3.0**	2.887	1.6	2.085
Volatile Organic Compounds: (The WQPS is the PQL for any single VOC detected or two or more VOC detections at or above the MDL.)																							
Acetone	µg/L	4.0	10	4.0	10	4.0	10	16	40	4.0	10	4.0	10	4.0	10	4.0	10	**5.1j***	10	4.0	10	4.0	10
1,4-Dioxane	µg/L	**1.8**	0.50	**4.4**	0.50	0.18	0.50	**11**	0.50	0.18	0.50	0.18	0.50	0.18	0.50	0.18	0.50	0.18	0.50	0.18	0.50	0.18	0.50
Napthalene	µg/L	0.097	1.0	0.097	1.0	0.097	1.0	0.39	4.0	0.097	1.0	0.097	1.0	0.097	1.0	0.097	1.0	**0.89j**	1.0	0.097	1.0	0.097	1.0
Tetrahydrofuran	µg/L	0.57	2.0	**1.7j**	2.0	0.57	2.0	2.3	8.0	0.57	2.0	0.57	2.0	0.57	2.0	0.57	2.0	0.57	2.0	0.57	2.0	0.57	2.0
Toluene	µg/L	0.093	0.50	0.093	0.50	0.093	0.50	0.37	2.0	0.093	0.50	0.093	0.50	0.093	0.50	0.093	0.50	**0.67**	0.50	0.093	0.50	0.093	0.50

Notes:
(j) Indicates a trace concentration between the Method Detection Limit and the Practical Quantitation Limit.
ND: Analyte was not detected. Detection limit is unknown.
* - Analyte also detected in a blank sample at a similar concentration (suspected field/laboratory contaminant).

0.25 Analyte was not detected. Value listed is the Method Detection Limit.

2500 Analyte concentration exceeds intrawell WQPS.

TABLE 7B
COMPARISON OF INTRAWELL WATER QUALITY PROTECTION STANDARDS TO ANALYTICAL RESULTS - FOURTH QUARTER 2020
SUNSHINE CANYON LANDFILL

Analyte	Units	WELL																			
		MW-1		MW-5		MW-6		MW-13R		MW-14		DW-1		DW-2		DW-3		DW-5		PZ-2		PZ-4	
		12/29/2020		12/29/2020		12/21/2020		12/21/2020		12/21/2020		12/22/2020		12/28/2020		12/29/2020		12/29/2020		12/21/2020		12/28/2020	
		Result	WQPS	Result	WQPS	Result	WQPS	Result	WQPS	Result	WQPS	Result	WQPS	Result	WQPS	Result	WQPS	Result	WQPS	Result	WQPS	Result	WQPS
Inorganic Monitoring Parameters:																							
Alkalinity	mg/L	380	844.76	470	727.34	460	571.59	710	972.24	310	587.83	550	658.76	380	410.47	150	162.81	960	1009.98	360	411.93	320	341.13
Ammonia-Nitrogen	mg/L	4.6	10.634	3.4	5.714	0.61	1.337	5.5	7.732	0.10	0.5703	1.7	2.4	3.1	4.308	0.58	0.7564	0.28j	0.3918	2.1	3.598	2.3	2.976
Chemical Oxygen Demand	mg/L	60	202.056	62	135.7	16j	75.338	230	407.58	18j	54.674	10	49.801	10	52.743	10	15.206	13j	76.47	10	26.386	10	24.85
Chloride	mg/L	140	408.469	280	469.603	37	70.829	110	213.802	26	88.987	14	17.737	12	15.462	16	17.534	21	101.838	**12**	16.398	9.7	11.706
Potassium, total	mg/L	30	54.763	22	34.393	5.1	10.679	23	27.224	7.8	12.508	1.5	3.838	4.0	6.183	7.9	12.357	0.63	5.262	3.0	4.693	4.1	5.643
Total Dissolved Solids	mg/L	2200	4495	2900	4614.2	3400	4486.5	1400	3450.9	3300	5128.5	**8300**	3600.2	2000	2178.3	1900	2313.1	1100	1417.3	4000	4403.2	1200	1529.5
Total Organic Carbon	mg/L	18	75.928	17	50.696	6.6	15.408	22	54.233	4.6	13.006	3.2	9.947	1.6	3.499	0.51	2.115	7.0	11.745	2.4	2.887	1.2	2.085
Volatile Organic Compounds: (The WQPS is the PQL for any single VOC detected or two or more detections between the MDL and PQL.)																							
1,4-Dioxane	µg/L	**7.0**	0.50	**3.5**	0.50	0.34	0.50	**7.6**	0.50	0.34	0.50	0.34	0.50	0.34	0.50	0.34	0.50	0.34	0.50	0.34	0.50	0.34	0.50
Toluene	µg/L	0.33	0.50	0.33	0.50	0.33	0.50	26	40	0.33	0.50	0.33	0.50	0.33	0.50	0.33	0.50	**0.57**	0.50	0.33	0.50	0.33	0.50

Notes:
(j) Indicates a trace concentration between the Method Detection Limit and the Practical Quantitation Limit.
ND: Analyte was not detected. Detection limit is unknown.

0.25 Analyte was not detected. Value listed is the Method Detection Limit.

2500 Analyte concentration exceeds intrawell WQPS.

TABLE 8A
SUMMARY OF ANALYTICAL RESULTS FOR VADOSE ZONE LIQUID MONITORING POINTS
THIRD QUARTER 2020
SUNSHINE CANYON LANDFILL

Analyte	Units	SUBDRAIN MONITORING POINTS		LYSIMETERS		Maximum Contaminant Level
		Subdrain N	Combined Subdrains	LY-6	LY-7	
		9/21/2020	9/21/2020	9/22/2020	9/22/2020	
Field Parameters:						
Electrical Conductivity	mS/cm	4.46	3.50	Dry	5.53	NV
Oxidation Reduction Potential	mV	-179	-29	Dry	-6	NV
Oxygen, dissolved	mg/L	2.08	1.69	Dry	4.02	NV
pH	Units	**6.44**	6.78	Dry	6.52	6.5-8.5(2)
Temperature	°C	32.33	22.83	Dry	29.19	NV
Turbidity	NTU	**>800**	**63.3**	Dry	3.2	5(2)
General Chemistry Parameters:						
Alkalinity, total	mg/L	960	460	Dry	2100	NV
Ammonia-Nitrogen	mg/L	32	8.4	Dry	26	NV
Chemical Oxygen Demand	mg/L	510	18j	Dry	150	NV
Chloride	mg/L	250	170	Dry	**530**	500(2)
Total Dissolved Solids	mg/L	**4100**	**3300**	Dry	**4100**	1000(2)
Total Organic Carbon	mg/L	570	28	Dry	25	NV
Metals:						
Potassium	mg/L	32	17	Dry	46	NV
Volatile and Semivolatile Organic Compounds:						
Acetone	µg/L	4.0	23	Dry	4.0	NV
Benzene	µg/L	0.35j	0.072	Dry	0.90	1(1)-5(3)
t-Butanol	µg/L	4.0	4.0	Dry	990	NV
Chlorobenzene	µg/L	0.088	0.088	Dry	0.31j	70(1)-100(3)
1,2-Dichloropropane	µg/L	0.099	0.099	Dry	0.17j	5(1,3)
cis-1,2-Dichloroethene	µg/L	0.52	2.3	Dry	2.5	6(1)-70(3)
trans-1,2-Dichloroethene	µg/L	0.082	0.32j	Dry	0.082	10(1)-100(3)
Ethylbenzene	µg/L	0.16j	0.087	Dry	0.087	300(1)
1,4-Dichlorobenzene	µg/L	1.3	1.1	Dry	1.3	5(1)-75(3)
1,4-Dioxane	µg/L	36	26	Dry	31	NV
Methyl tert-butyl ether	µg/L	0.71	0.074j	Dry	3.9	13(1)/5(2)
Naphthalene	µg/L	0.097	0.54j	Dry	0.097	NV
Tetrachloroethene	µg/L	0.24	0.38j	Dry	0.24	5(1,3)
Tetrahydrofuran	µg/L	9.7	2.7	Dry	2.1	NV
Toluene	µg/L	0.098j	0.093	Dry	0.093	150(1)-1000(3)
Trichloroethene	µg/L	0.11j	0.52	Dry	0.25j	5(1,3)
m,p-Xylene	µg/L	0.15	0.30j	Dry	0.15	1750(1)-10,000(3)
o-Xylene	µg/L	0.086	0.16j	Dry	0.086	1750(1)-10,000(3)

Notes:
(1) State of California Primary Drinking Water Standard
(2) State of California Secondary Drinking Water Standard
(3) Federal Maximum Contaminant Level
(j) Indicates a trace concentration between the Method Detection Limit and the Practical Quantitation Limit.
NV: No ARAR value.
NS: Not Sampled.
ND: Analyte was not detected. Detection limit is unknown.
* - Analyte also detected in a blank sample at a similar concentration.

0.25 Analyte was not detected. Value listed is the Method Detection Limit.

173 Analyte was detected.

2500 Analyte concentration exceeds ARAR value.

TABLE 8B
SUMMARY OF ANALYTICAL RESULTS FOR VADOSE ZONE LIQUID MONITORING POINTS
FOURTH QUARTER 2020
SUNSHINE CANYON LANDFILL

Analyte	Units	SUBDRAIN MONITORING POINTS		LYSIMETERS		Maximum Contaminant Level
		Subdrain N	Combined Subdrains	LY-6	LY-7	
		12/22/2020	12/21/2020	12/22/2020	12/21/2020	
Field Parameters:						
Electrical Conductivity	mS/cm	3.81	3.08	Dry	4.79	NV
Oxidation Reduction Potential	mV	0	-62	Dry	-61	NV
Oxygen, dissolved	mg/L	1.61	4.91	Dry	1.29	NV
pH	Units	6.49	**6.51**	Dry	6.46	6.5-8.5(2)
Temperature	°C	14.41	20.18	Dry	31.45	NV
Turbidity	NTU	**OR**	**74.4**	Dry	0	5(2)
General Chemistry Parameters:						
Alkalinity, total	mg/L	850	450	Dry	2200	NV
Alkalinity, bicarbonate	mg/L	850	450	Dry	2200	NV
Ammonia-Nitrogen	mg/L	31	8.9	Dry	17	NV
Bromide	mg/L	2.9	2.1	Dry	2.6	NV
Carbon dioxide	mg/L	6.4	63	Dry	150	NV
Chemical Oxygen Demand	mg/L	280	56	Dry	130	NV
Chloride	mg/L	240	210	Dry	430	500(2)
Fluoride	mg/L	1.3	1.0	Dry	0.50	2(1)-4(3)
Nitrate as Nitrogen	mg/L	0.28	1.2	Dry	0.11	10(1,3)
Sulfate	mg/L	**1800**	**1800**	Dry	480	500(2)
Sulfide, total	mg/L	0.027	0.30	Dry	0.027	NV
Total Dissolved Solids	mg/L	**4100**	**2500**	Dry	**3500**	1000(2)
Total Organic Carbon	mg/L	160	28	Dry	52	NV
Metals						
Boron	mg/L	1.4	0.84	Dry	5.5	NV
Calcium	mg/L	490	350	Dry	190	NV
Iron	mg/L	**1200**	**5.2**	Dry	**1.4**	0.3(2)
Magnesium	mg/L	230	250	Dry	130	NV
Manganese	mg/L	**4.4**	**3.1**	Dry	**2.5**	0.05(2)
Potassium	mg/L	26	18	Dry	29	NV
Sodium	mg/L	300	220	Dry	860	NV
Volatile and Semivolatile Organic Compounds:						
Acetone	µg/L	8.0	58	Dry	4.0	NV
Benzene	µg/L	0.53	0.27	Dry	0.59	1(1)-5(3)
Chlorobenzene	µg/L	0.48	0.24	Dry	0.30j	70(1)-100(3)
t-Butanol	µg/L	160	4.0	Dry	660	NV
2-Butanone	µg/L	6.1	3.9j	Dry	3.0	NV
cis-1,2-Dichloroethene	µg/L	0.60	1.3	Dry	2.0	6(1)-70(3)
1,4-Dichlorobenzene	µg/L	1.2	1.7	Dry	1.4	5(1)-75(3)
1,4-Dioxane	µg/L	28	27	Dry	23	NV
Methyl tert-butyl ether	µg/L	0.98j	0.21	Dry	2.9	13(1)/5(2)
Naphthalene	µg/L	0.64	0.52j	Dry	0.32	NV
o-Xylene	µg/L	0.70	0.38j	Dry	0.35	1750(1)-10,000(3)
Tetrachlorothene	µg/L	0.58	0.37j	Dry	0.29	1750(1)-10,000(3)
Tetrahydrofuran	µg/L	7.2	2.9	Dry	1.4j	NV
Trichloroethene	µg/L	0.58	0.39j	Dry	0.29	5(1,3)

Notes:
(1) State of California Primary Drinking Water Standard
(2) State of California Secondary Drinking Water Standard
(3) Federal Maximum Contaminant Level
(j) Indicates a trace concentration between the Method Detection Limit and the Practical Quantitation Limit.
NV: No ARAR value.
NS: Not Sampled.
ND: Analyte was not detected. Detection limit is unknown.
* - Analyte also detected in a blank sample at a similar concentration.

0.25 Analyte was not detected. Value listed is the Method Detection Limit.

173 Analyte was detected.

2500 Analyte concentration exceeds ARAR value.

TABLE 9
SUMMARY OF VADOSE ZONE GAS MONITORING - SECOND SEMIANNUAL 2020 MONITORING PERIOD
SUNSHINE CANYON LANDFILL

Probe ID	Interval	Depth (ft bgs)	7/21/2020 - 7/23/2020	8/18/2020 - 8/20/2020	9/22/2020 - 9/24/2020	10/20/2020 - 10/22/2020	11/17/2020 - 11/29/2020	12/15/2020 - 12/17/2020
P-202	A	10-15	Removed Due to Construction					
	B	25-30						
	C	40-45						
P-202R	A	10-15	0.0	0.0	0.0	0.0	0.0	0.0
	B	25-30	0.0	0.1	0.0	0.0	0.0	0.0
	C	40-45	0.0	0.1	0.0	0.0	0.0	0.0
P-203	A	10-15	0.0	0.0	0.0	0.0	0.0	0.0
	B	25-30	0.0	0.0	0.0	0.0	0.0	0.0
	C	40-45	0.0	0.0	0.0	0.0	0.0	0.0
P-205R	A	6-11	0.0	0.0	0.0	0.1	0.0	0.0
	B	20-25	0.0	0.0	0.0	0.1	0.0	0.0
	C	33-38	1.6	1.6	1.5	1.5	1.4	1.5
	D	48-53	2.7	2.4	2.1	2.5	2.2	2.0
	E	62-67	0.0	0.0	0.0	0.1	0.0	0.0
P-206	A	10-15	0.0	0.0	0.0	0.0	0.0	0.0
	B	25-30	0.0	0.0	0.0	0.0	0.0	0.0
	C	40-45	0.0	0.0	0.0	0.0	0.0	0.0
P-207	A	10-15	0.0	0.0	0.0	0.0	0.0	0.0
	B	25-30	0.0	0.0	0.0	0.0	0.0	0.0
	C	40-45	0.0	0.0	0.0	0.0	0.0	0.0
P-208	A	10-15	0.0	0.0	0.0	0.0	0.0	0.0
	B	25-30	0.0	0.0	0.0	0.0	0.0	0.0
	C	40-45	0.0	0.0	0.0	0.0	0.0	0.0
P-210	A	10-15	0.0	0.0	0.0	0.0	0.0	0.0
	B	25-30	0.0	0.0	0.0	0.0	0.0	0.0
	C	40-45	0.0	0.0	0.0	0.0	0.0	0.0
P-213	A	7-15	0.0	0.0	0.0	0.0	0.1	0.0
	B	23-31	0.0	0.0	0.0	0.0	0.0	0.0
	C	39-47	0.0	0.0	0.0	0.0	0.0	0.0
	D	55-62	0.0	0.0	0.0	0.0	0.0	0.0
	E	71-80	0.0	0.0	0.0	0.0	0.0	0.0
P-214	A	7-16	0.0	0.0	0.0	0.0	0.0	0.0
	B	23-32	0.0	0.0	0.0	0.0	0.0	0.0
	C	42-51	0.0	0.0	0.0	0.0	0.0	0.0
P-215	A	7-14	0.0	0.0	0.0	0.0	0.0	0.0
	B	24-31	0.0	0.0	0.0	0.0	0.0	0.0
	C	41-48	0.0	0.0	0.0	0.0	0.0	0.0
	D	58-65	0.0	0.0	0.0	0.0	0.0	0.0
	E	75-82	0.0	0.0	0.0	0.0	0.0	0.0
P-216	A	8-15	0.0	0.0	0.0	0.0	0.0	0.0
	B	32-37	0.0	0.0	0.0	0.0	0.0	0.0
	C	56-63	0.0	0.0	0.0	0.0	0.0	0.0
	D	80-87	0.0	0.0	0.0	0.0	0.0	0.0
	E	104-111	0.0	0.0	0.0	0.0	0.0	0.0
P-217R	A	6-11	0.1	0.0	0.0	0.1	0.0	0.0
	B	16-21	0.0	0.0	0.0	0.1	0.0	0.0

NR - No reading available.

TABLE 9, CONTINUED
SUMMARY OF VADOSE ZONE GAS MONITORING - SECOND SEMIANNUAL 2020 MONITORING PERIOD
SUNSHINE CANYON LANDFILL

Probe ID	Interval	Depth (ft bgs)	7/21/2020 - 7/23/2020	8/18/2020 - 8/20/2020	9/22/2020 - 9/24/2020	10/20/2020 - 10/22/2020	11/17/2020 - 11/29/2020	12/15/2020 - 12/17/2020
P-218R	A	5-8	0.0	0.0	0.0	0.1	0.0	0.0
	B	26.5-30	0.0	0.0	0.0	0.1	0.0	0.0
	C		0.0	0.0	0.0	0.0	0.0	0.1
P-219	A	7-15	0.0	0.0	0.0	0.0	0.0	0.0
	B	57-66	0.0	0.0	0.0	0.0	0.0	0.0
	C	109-117	0.0	0.0	0.0	0.0	0.0	0.0
	D	158-167	0.0	0.0	0.0	0.0	0.0	0.0
	E	209-218	0.0	0.0	0.0	0.0	0.0	0.0
P-220	A	6.9-14	0.0	0.1	0.1	0.1	0.0	0.1
	B	44-51	0.0	0.0	0.0	0.0	0.0	0.1
	C	79-88	0.0	0.0	0.0	0.0	0.0	0.1
	D	117-127	0.0	0.0	0.0	0.0	0.0	0.1
	E	150-159	0.0	0.0	0.0	0.0	0.0	0.1
P-220B	A	8-15	0.0	0.0	0.0	0.0	0.0	0.1
	B	32-39	0.0	0.0	0.0	0.0	0.0	0.1
	C	56-61	0.0	0.0	0.0	0.0	0.0	0.1
	D	80-87	0.0	0.0	0.0	0.0	0.0	0.1
	E	104-111	0.0	0.0	0.0	0.0	0.0	0.1
P-221	A	5-14	0.0	0.0	0.0	0.0	0.0	0.0
	B	49-58	0.0	0.0	0.0	0.0	0.0	0.0
	C	91-101	0.0	0.0	0.0	0.0	0.0	0.0
	D	134-143	0.0	0.0	0.0	0.0	0.0	0.0
	E	176-186	0.0	0.0	0.0	0.0	0.0	0.0
P-222	A	7-15	0.0	0.0	0.0	0.0	0.0	0.0
	B	48-57	0.0	0.0	0.0	0.0	0.0	0.0
	C	88-98	0.0	0.0	0.0	0.0	0.0	0.0
	D	132-141	0.0	0.0	0.0	0.0	0.0	0.0
	E	173-181	0.0	0.0	0.0	0.0	0.0	0.1
P-223	A	7-15	0.0	0.0	0.0	0.0	0.0	0.0
	B	32-41	0.0	0.0	0.0	0.0	0.0	0.0
	C	51-64	0.0	0.0	0.0	0.0	0.0	0.0
	D	78-88	0.0	0.0	0.0	0.0	0.0	0.0
	E	100-113	0.0	0.0	0.0	0.0	0.0	0.0
P-224	A	5-14	0.0	0.0	0.1	0.0	0.0	0.0
	B	60-70	0.0	0.0	0.0	0.0	0.0	0.0
	C	115-125	0.0	0.0	0.0	0.0	0.0	0.0
	D	168-180	0.0	0.0	0.0	0.0	0.0	0.0
	E	223-236	0.0	0.0	0.0	0.0	0.0	0.0
P-225	A	7-14	0.0	0.0	0.0	0.0	0.0	0.0
	B	65-73	0.0	0.0	0.0	0.0	0.0	0.0
	C	124-133	0.0	0.0	0.0	0.0	0.0	0.0
	D	184-192	0.0	0.0	0.0	0.0	0.0	0.0
	E	243-250	0.0	0.0	0.0	0.0	0.0	0.0
P-226	A	7-14	0.1	0.0	0.0	0.0	0.0	0.0
	B	58-68	0.1	0.0	0.0	0.0	0.0	0.0
	C	108-117	0.0	0.0	0.0	0.0	0.0	0.0
	D	158-168	0.0	0.0	0.0	0.0	0.0	0.0
	E	202-209	0.0	0.0	0.0	0.0	0.0	0.0

NR - No reading available.

TABLE 9, CONTINUED
SUMMARY OF VADOSE ZONE GAS MONITORING - SECOND SEMIANNUAL 2020 MONITORING PERIOD
SUNSHINE CANYON LANDFILL

Probe ID	Interval	Depth (ft bgs)	7/21/2020 - 7/23/2020	8/18/2020 - 8/20/2020	9/22/2020 - 9/24/2020	10/20/2020 - 10/22/2020	11/17/2020 - 11/29/2020	12/15/2020 - 12/17/2020
P-227	A	6-15	0.1	0.0	0.0	0.0	0.0	0.0
	B	46-55	0.4	0.0	0.0	0.0	0.0	0.0
	C	85-95	0.1	0.0	0.0	0.0	0.0	0.0
	D	126-134	0.1	0.0	0.0	0.0	0.0	0.0
	E	164-172	0.0	0.0	0.0	0.0	0.0	0.0
P-228	A	7-14	0.1	0.0	0.0	0.0	0.0	0.0
	B	56-65	0.1	0.0	0.0	0.0	0.0	0.0
	C	107-115	0.4	0.0	0.0	0.3	0.0	0.0
	D	156-165	0.0	0.0	0.0	0.0	0.0	0.0
	E	203-214	0.0	0.0	0.0	0.0	0.0	0.0
P-229	A	4-15	0.0	0.0	0.0	0.0	0.0	0.0
	B	42-50	0.0	0.0	0.0	0.0	0.0	0.0
	C	77-86	0.0	0.0	0.0	0.0	0.0	0.0
	D	106-115	0.0	0.0	0.0	0.0	0.0	0.0
	E	150-159	0.0	0.0	0.0	0.1	0.0	0.0
P-230R	A	7-14	REMOVED DUE TO CONSTRUCTION					
	B	35						
	C	50						
P-231	A	4-14	REMOVED DUE TO CONSTRUCTION					
	B	20-27						
	C	33-40						
	D	45-53						
	E	58-67						
P-239	A	10-15	0.0	0.0	0.0	0.1	0.0	0.0
	B	47-52	0.0	0.0	0.0	0.0	0.0	0.0
	C	78-83	0.0	0.0	0.0	0.0	0.0	0.0
	D	109-114	0.0	0.0	0.0	0.0	0.0	0.0
	E	140-145	0.0	0.0	0.0	0.0	0.0	0.0
P-240	A	10-15	0.0	0.0	0.0	0.0	0.0	0.0
	B	69-74	0.0	0.0	0.0	0.0	0.0	0.0
	C	133-138	0.0	0.0	0.0	0.0	0.0	0.0
	D	206-211	0.0	0.0	0.0	0.0	0.0	0.0
	E	268-273	0.0	0.0	0.0	0.1	0.0	0.0
P-241	A	10-15	0.0	0.0	0.0	0.0	0.0	0.1
	B	37-42	0.0	0.0	0.0	0.0	0.0	0.1
	C	61-66	0.0	0.0	0.0	0.0	0.0	0.1
	D	85-90	0.0	0.0	0.0	0.0	0.0	0.0
	E	109-114	0.0	0.0	0.0	0.0	0.0	0.0
P-242	C	42-47	0.0	0.0	0.0	0.0	0.0	0.0
	D	60-65	0.0	0.0	0.0	0.0	0.0	0.0
	E	78-83	0.0	0.0	0.0	0.0	0.0	0.0
P-243	A	6-11	0.7	0.1	0.2	0.1	0.1	0.1
	B	20-29	0.0	0.0	0.0	0.0	0.0	0.0
	C	33-38	0.0	0.0	0.0	0.0	0.0	0.0
P-244	A	6-11	0.0	0.0	0.0	0.1	0.0	0.0
	B	21-26	0.0	0.0	0.0	0.1	0.0	0.0
	C	36-41	0.0	0.0	0.0	0.0	0.0	0.0

NR - No reading available.

TABLE 9, CONTINUED
SUMMARY OF VADOSE ZONE GAS MONITORING - SECOND SEMIANNUAL 2020 MONITORING PERIOD
SUNSHINE CANYON LANDFILL

Probe ID	Interval	Depth (ft bgs)	7/21/2020 - 7/23/2020	8/18/2020 - 8/20/2020	9/22/2020 - 9/24/2020	10/20/2020 - 10/22/2020	11/17/2020 - 11/29/2020	12/15/2020 - 12/17/2020
P-245	A	6-11	0.0	0.0	0.0	0.1	0.0	0.0
	B	20-25	0.3	0.3	0.3	0.4	0.2	0.3
	C	35-40	0.0	0.0	0.0	0.1	0.0	0.0
	D	50-55	0.0	0.0	0.0	0.1	0.0	0.0
	E	64-69	0.0	0.0	0.0	0.1	0.0	0.0
P-246	A	6-9	REMOVED DUE TO CONSTRUCTION					
	B	12-19						
Subdrains	P-203D		0.0	0.1	0.0	0.0	0.0	0.0
	P204D		0.1	0.0	0.0	0.0	0.0	0.0
	P-211D		0.0	0.0	0.0	0.0	0.0	0.0

NR - No reading available.

TABLE 10
SUMMARY OF ANALYTICAL RESULTS FOR STORMWATER SAMPLES
SECOND SEMIANNUAL 2020 MONITORING PERIOD
SUNSHINE CANYON LANDFILL

Analyte	Units	Stormwater	Stormwater	Stormwater
General Chemistry Parameters: Not Analyzed				
Metals: Not Analyzed				
Volatile Organic Compounds (8260): Not Analyzed				
Semivolatile Organic Compounds (8270C): Not Analyzed				
Polychlorinated Biphenyls (8082): Not Analyzed				

Notes: Due to dry conditions, no stormwater sampling was conducted during the second half of 2020.

TABLE 11
SUMMARY OF ANALYTICAL RESULTS FOR LEACHATE MONITORING POINTS
OCTOBER 2020
SUNSHINE CANYON LANDFILL

Analyte	Units	LEACHATE MONITORING POINTS	
		LR-2R	DEEP LEACHATE
		10/5/2020	10/5/2020
General Chemistry Parameters:			
Ammonia-Nitrogen	mg/L	390	970
Biochemical Oxygen Demand	mg/L	20	7200
Chemical Oxygen Demand	mg/L	1100	8600
Cyanide	mg/L	0.013	0.015j
pH	Units	6.75	7.53
Sulfate	mg/L	5	300
Sulfide	mg/L	0.52	0.11
Total Dissolved Solids	mg/L	5300	12000
Total Kjeldahl Nitrogen	mg/L	260	230
Total Suspsended Solids	mg/L	140	650
Metals:			
Arsenic	mg/L	0.0089	0.068
Barium	mg/L	0.72	0.39
Chromium	mg/L	0.011	0.097
Cobalt	mg/L	0.019	0.0250
Copper	mg/L	0.0052j	0.027j
Nickel	mg/L	0.032	0.099
Vanadium	mg/L	0.0050	0.082
Zinc	mg/L	0.034	0.65
Volatile Organic Compounds (8260B):			
Acetone	µg/L	32	15000
Benzene	µg/L	4.5	29
2-Butanone (MEK)	µg/L	3.7	17000
Chlorobenzene	µg/L	18	35
1,2-Dichlorobenzene	µg/L	1.2j	33
1,4-Dichlorobenzene	µg/L	5.2	29
Methyl tert-butyl ether	µg/L	0.58j	27
Naphthalene	µg/L	16	39
Tetrahydrofuran	µg/L	110	570j
Toluene	µg/L	0.78j	37
Xylenes, o	µg/L	1.1j	34
Semivolatile Organic Compounds (8270):			
1,2-Dichlorobenzene	µg/L	0.87j	3.1
1,4-Dioxane	µg/L	320	310
3-Methylphenol + 4-Methylphenol	µg/L	1.5	380
Bis(2-ethylhexyl) phthalate	µg/L	2.0	7.9j
Naphthalene	µg/L	13	3.1
Organophosphorus Compounds (8141): None Detected			
Chlorinated Herbicides (8151A): None Detected			
Organochlorine Pesticides (8081): None Detected			
Polychlorinated Biphenyls (8082): None Detected			

Notes:
(1) State of California Primary Drinking Water Standard
(2) State of California Secondary Drinking Water Standard
(3) Federal Maximum Contaminant Level
(j) Indicates a trace concentration between the Method Detection Limit and the Practical Quantitation Lim
NV: No ARAR value.
ND: Analyte was not detected. Detection limit is unknown.
* - Analyte also detected in a blank sample at a similar concentration.

0.25	Analyte was not detected. Value listed is the Method Detection Limit.
173	Analyte was detected.
2500	Analyte concentration exceeds ARAR value.

TABLE 12
SUMMARY OF COLLECTED WATER SOURCES - SECOND SEMIANNUAL 2020 MONITORING PERIOD
SUNSHINE CANYON LANDFILL

Month	Total Purchase Water	Subdrains	Landfill Leachate	Landfill Gas Condensate	Seep Collectors	Groundwater Cutoff Wall	MONTHLY TOTALS
JANUARY - JUNE 2020 TOTAL:	**23,344,033**	**13,468,980**	**3,436,584**	**9,731,417**	**817,505**	**5,461,268**	**56,259,787**
July	8,117,269	2,233,334	458,429	1,132,085	202,483	823,242	12,966,842
August	6,544,252	2,143,451	465,716	1,213,692	246,300	790,252	11,403,663
September	6,341,544	2,075,596	424,611	1,935,179	121,005	714,075	11,612,010
October	8,619,952	1,870,095	448,871	1,579,682	96,284	666,117	13,281,001
November	7,131,432	1,980,316	406,329	1,128,597	191,835	710,257	11,548,766
December	7,032,696	1,823,031	431,456	1,170,083	252,341	697,200	11,406,807
JULY - DECEMBER 2020 TOTAL:	**43,787,145**	**12,125,823**	**2,635,412**	**8,159,318**	**1,110,248**	**4,401,143**	**72,219,089**

TABLE 13
SUNSHINE CANYON LANDFILL
IMPORTED SOIL SAMPLING SUMMARY - SECOND SEMIANNUAL 2020 MONITORING PERIOD

GENERATOR	SAMPLER	WASTE TYPE	QUANTITY	CONSTITUENTS ANALYZED
Stericycle, Inc.	No Samples Taken	Treated & Sterilized Medical Waste	26,000 Tons	No Samples Taken
GEHR Industries	Ardent Environmental Group, Inc.	Non Haz Soil	550 Tons	TPH, VOCs,Title 22 Metals
Caruso (Site: The Grove)	Kleinfender	Non Haz Soil	7,000 Tons	TPH, VOCs,Title 22 Metals, STLC Pb and Cr, TCLP Pb
LEBOO Group, Inc	No Samples Taken	Food Product - Longan	600 Pounds	No Samples Taken
Corey Nursery Co, Inc.	No Samples Taken	Plant Leaves (Pothos Hawaiiana Petite Cuttings)	250 Pounds	No Samples Taken
Ultramar Marine Terminal	No Samples Taken	Weathered Wood	50 Tons	No Samples Taken
Green Island Produce, Inc.	No Samples Taken	Food Product - Sweet Potatoes	1,000 Pounds	No Samples Taken
Farm Fresh Produce	No Samples Taken	Food Product - Produce	103 Tons	No Samples Taken
Lucky Taro, Inc.	No Samples Taken	Food Product - Including Animal Food	15,000 Pounds	No Samples Taken
BNSF Railway	Environmental Resources Management Inc	Sweeping Waste	200 Cubic Yards	TPH, VOCs, Title 22 Metals, Mercury
AIRGAS USA	Trihydro Corporation	Excavated Soil from Air Cooler Foundation for Construction	150 Cubic Yards	TPH, VOCs, SVOCs, Title 22 Metals, pH, Flash Point
Fantasy Cookie Corporation	No Samples Taken	Food Waste - Organic Breadcrumbs	21,000 Pounds	No Samples Taken
Live Art Plantscapes, Inc.	No Samples Taken	Plants - Bromeliads	120 Pounds	No Samples Taken
600 E. Rustic Road Trust	No Samples Taken	Weathered Wood	8 Tons	No Samples Taken
Noour, Inc.	No Samples Taken	Food Product - Dry Dates	72 Tons	No Samples Taken
TNT Simmonds	No Samples Taken	Weathered Wood	8 Tons	No Samples Taken
T Fresh Company DBA Yes Produce	No Samples Taken	Food Product - Food/Plants	10 Tons	No Samples Taken
California Yacht Marina	No Samples Taken	Weathered Wood	50 Tons	No Samples Taken
Rio Tinto Materials	No Samples Taken	Weathered Wood	5 Tons	No Samples Taken

Notes:
VOC: Volatile Organic Compound
PCB: Polychlorinated Biphenyls
PAH: Polynuclear Aromatic Hydrocarbons
TPH: Total Petroleum Hydrocarbons
SVOC: Semivolatile Organic Compound
MSDS: Material Safety Data Sheet
*No Samples Taken: Waste previously characterized, or no characterization required (e.g. cured alphalt, treated wood, etc). Special waste decision changed/recertified to extend expi date, account for increases in volume estimates, or to change to ongoing disposal.
Assumptions:
Cubic Yard of Cured Asphalt = 3780 Pounds
Cubic Yard of Weathered Wood = 1134 Pounds
Cubic Yard of Cigarettes = 700 Pounds
Cubic Yard of Soil = 2000 Pounds

TABLE 14
SUNSHINE CANYON LANDFILL
GENERATOR: GEHR INDUSTRIES- COMMERCE
SOIL SAMPLING
ESTIMATED ANNUAL QUANTITY: 200 Tons

SAMPLE	FW-1-2	FW-2-2	Hazardous Level (mg/kg)	Lined Cell Limit	Unrestricted Limit
DATE SAMPLED	06/19/20	06/19/20			
SAMPLED BY	Ardent Environmental Group, Inc.	Ardent Environmental Group, Inc.			
DATE ANALYZED	06/19/20	06/19/20			
METALS (mg/kg) METHOD 6010B/7471A:					
Antimony	1.0	1.0	500	380	30
Arsenic	2.91	3.61	500	500	12
Barium	98.9	119	10,000	10,000	5,200
Beryllium	0.5	0.5	75	75	16
Cadmium	0.5	0.5	100	100	1.7
Chromium	25.3	27.7	2,500	2,500	45
Cobalt	9.02	10.0	8,000	350	23
Copper	16.5	20.7	2,500	2,500	2,500
Lead	6.30	8.44	1,000	350	80
Mercury	0.030	0.050	20	20	9.4
Molybdenum	5.0	5.0	3,500	3,500	380
Nickel	7.20	8.70	2,000	2,000	1,500
Selenium	1.0	1.0	100	100	100
Silver	1.0	1.0	500	500	380
Thallium	1.0	1.0	700	111	0.78
Vanadium	37.5	39.3	2,400	2,400	390
Zinc	45.9	63.1	5,000	5,000	5,000
VOLATILE ORGANIC COMPOUNDS (mg/kg) METHOD 8260B: None Detected					
PETROLEUM HYDROCARBONS (mg/kg) METHOD 8015B:					
*TPH Diesel (13-22)	10	86.5	NS	10,000	10
TPH Motor Oil Range (C23-C32)	10	268	NS	NS (≥C23)	500 (≥C23)

Notes:

ND: Not Detected

NA: Not Analyzed

NS: Not Specified

TTLC: Total Threshold Limit Concentration.

*Threshold for average TPH for Disposal in a lined cell = 50,000 mg/kg

Left justified and shaded: Not detected. Value shown is Practical Quantitation Limit.

Right-Justified and no shading: Qualtifiable result shown.

**Treated wood acceptable

Only detected Organics are shown.

TABLE 15
SUNSHINE CANYON LANDFILL
GENERATOR: CARUSO (SITE: THE GROVE) / LOS ANGELES
SOIL SAMPLING
ESTIMATED ANNUAL QUANTITY: 7,000 Tons

SAMPLE	KLF-1-2'	KLF-1-5'	KLF-1-10'	KLF-1-15'	KLF-2-2'	KLF-2-5'	KLF-2-10'	KLF-2-15'	KLF-3-2'	KLF-3-5'	KLF-3-10'	Hazardous Level (mg/kg)	Lined Cell Limit	Unrestricted Limit
DATE SAMPLED	04/16/20	04/16/20	04/16/20	04/16/20	04/16/20	04/16/20	04/16/20	04/16/20	04/16/20	04/16/20	04/16/20			
SAMPLED BY	Kleinfelder	Kleinfelder	Kleinfelder	Kleinfelder	Kleinfelder	Kleinfelder	Kleinfelder	Kleinfelder	Kleinfelder	Kleinfelder	Kleinfelder			
DATE ANALYZED	04/20/20	04/20/20	04/20/20	04/20/20	04/20/20	04/20/20	04/20/20	04/20/20	04/20/20	04/20/20	04/20/20			
METALS (mg/kg) METHOD 6010B/7000CAM:														
Antimony	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	500	380	30
Arsenic	0.941	2.11	1.13	0.3	1.45	1.22	1.77	0.749	1.79	2.61	1.01	500	500	12
Barium	110	95.2	88.3	164	78.3	108	221	90.4	113	101	90.9	10,000	10,000	5,200
Beryllium	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	75	75	16
Cadmium	0.5	0.501	0.5	0.849	0.715	1.06	0.823	0.5	1.37	0.5	0.975	100	100	1.7
Chromium	43.1	51.9	47.0	50.6	58.1	66.6	71.3	44.1	74.8	58.4	61.7	2,500	2,500	45
Cobalt	10.7	9.93	7.89	16.1	10.60	12.80	13.8	13.2	12.8	8.80	12.6	8,000	350	23
Copper	11.3	19.6	12.4	13.6	14.7	20.0	20.2	8.79	20.2	20.4	17.4	2,500	2,500	2,500
Lead	2.62	17.8	2.87	1.46	3.21	4.68	284	2.12	4.61	25.60	9.60	1,000	350	80
Mercury	0.029	0.037	0.038	0.020	0.024	0.020	0.028	0.017	0.183	0.040	0.021	20	20	9.4
Molybdenum	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	3,500	3,500	380
Nickel	19.3	14.7	12.5	21.1	17.1	22.8	26.0	14.1	23.2	16.9	20.8	2,000	2,000	1,500
Selenium	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	100	100	100
Silver	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	500	500	380
Thallium	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	700	111	0.78
Vanadium	40.9	47.5	42.8	37.9	52.2	64.2	58.4	30.5	66.9	42.7	55.7	2,400	2,400	390
Zinc	34.8	55.0	32.8	32.7	42.0	53.7	211	33.4	55.1	98.2	56.5	5,000	5,000	5,000
METALS (mg/L) METHOD 6010B-TCLP:														
Lead	NA	NA	NA	NA	NA	NA	0.071	NA	NA	NA	NA	5.0 (mg/L)	NS	NS
METALS (mg/L) METHOD 6010B-STLC:														
Chromium	NA	0.092	NA	0.05	0.05	0.086	0.095	NA	0.057	0.068	0.05	5.0 (mg/L)	NS	NS
Lead	NA	NA	NA	NA	NA	NA	0.789	NA	NA	NA	NA	5.0 (mg/L)	500	12
VOLATILE ORGANIC COMPOUNDS (mg/kg) METHOD 8260B:														
n-Butylbenzene	0.005	0.005	0.015	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	NS	58,000	3,900
sec-Butylbenzene	0.005	0.005	0.016	0.049	0.005	0.005	0.005	0.005	0.005	0.005	0.005	NS	58,000	3,900
Isopropyltoluene	0.005	0.005	0.008	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	NS	9,900	1,900
Toluene	0.005	0.005	0.010	0.005	0.005	0.005	0.005	0.005	0.005	0.005	0.005	NS	9,900	1,900
2-Butanone (MEK)	0.020	0.020	0.020	0.040	0.020	0.020	0.020	0.020	0.020	0.020	0.020	NS	9,900	1,900
Carbon Disulfide	0.010	0.010	0.010	0.021	0.010	0.010	0.010	0.010	0.010	0.010	0.010	NS	9,900	1,900
PETROLEUM HYDROCARBONS (mg/kg) METHOD M8015G/M8015D:														
*TPH Gas (6-12)	10	10	29.8	10	10	10	10	10	10	10	10	NS	1,000	10
*TPH Diesel (13-22)	44.0	185	488	156	10	151	46.1	96.4	15.4	48.7	10	NS	10,000	10
*TPH Heavy (23-40)	427	974	198	50	50	361	261	50	53	236	50	NS	NS	500

Notes:

ND: Not Detected

NA: Not Analyzed

NS: Not Specified

*Threshold for average TPH for Disposal in a lined cell = 50,000 mg/kg

Left justified and shaded: Not detected. Value shown is Practical Quantitation Limit.

Right-Justified and no shading: Qualtifiable result shown.

**Treated wood acceptable

Only detected Organics are shown.

TABLE 15 (Continued)
SUNSHINE CANYON LANDFILL
GENERATOR: CARUSO (SITE: THE GROVE) / LOS ANGELES
SOIL SAMPLING
ESTIMATED ANNUAL QUANTITY: 7,000 Tons

SAMPLE	KLF-4-2'	KLF-4-5'	KLF-4-10'	KLF-4-14'	KLF-5-2'	KLF-5-5'	KLF-5-10'	KLF-6-2'	KLF-6-5'	KLF-6-7'	Hazardous Level (mg/kg)	Lined Cell Limit	Unrestricted Limit
DATE SAMPLED	04/20/20	04/20/20	04/20/20	04/20/20	04/20/20	04/20/20	04/20/20	04/20/20	04/20/20	04/20/20			
SAMPLED BY	Kleinfelder	Kleinfelder	Kleinfelder	Kleinfelder	Kleinfelder	Kleinfelder	Kleinfelder	Kleinfelder	Kleinfelder	Kleinfelder			
DATE ANALYZED	04/21/20	04/21/20	04/21/20	04/21/20	04/21/20	04/21/20	04/21/20	04/21/20	04/21/20	04/21/20			
METALS (mg/kg) METHOD 6010B/7000CAM:													
Antimony	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	500	380	30
Arsenic	1.02	0.320	1.03	0.422	0.558	0.585	1.06	2.13	1.56	2.11	500	500	12
Barium	108	101	130	27.2	111	125	59.9	111	115	95.8	10,000	10,000	5,200
Beryllium	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	75	75	16
Cadmium	0.672	0.5	0.5	0.5	0.692	0.5	0.5	0.5	0.5	0.5	100	100	1.7
Chromium	63.1	63.1	63.7	51.8	73.6	68.1	37.3	57.2	47.9	52.3	2,500	2,500	45
Cobalt	10.7	9.78	11.8	10.1	11.4	12.4	9.47	10.4	9.22	8.95	8,000	350	23
Copper	20.3	11.7	18.7	10.9	19.6	16.7	7.24	17.4	16.7	15.3	2,500	2,500	2,500
Lead	17.2	2.67	10.0	2.75	8.26	4.16	1.96	10.2	6.04	14.6	1,000	350	80
Mercury	0.033	0.048	0.040	0.032	0.027	0.034	0.022	0.026	0.026	0.029	20	20	9.4
Molybdenum	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	3,500	3,500	380
Nickel	19.0	19.6	21.6	19.5	22.9	20.4	13.2	12.6	13.9	12.1	2,000	2,000	1,500
Selenium	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	100	100	100
Silver	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	500	500	380
Thallium	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	700	111	0.78
Vanadium	63.1	55.1	61.6	41.6	72.7	61.7	30.7	51.6	43.6	38.7	2,400	2,400	390
Zinc	72.7	36.0	59.5	33.2	60.1	45.5	21.6	51.8	38.0	78.8	5,000	5,000	5,000
METALS (mg/L) METHOD 6010B-STLC:													
Chromium	0.073	0.05	0.097	0.05	0.068	0.092	NA	0.05	NA	0.05	5.0 (mg/L)	NS	NS
VOLATILE ORGANIC COMPOUNDS (mg/kg) METHOD 8260B: None Detected													
PETROLEUM HYDROCARBONS (mg/kg) METHOD M8015G/M8015D:													
*TPH Gas (6-12)	10	10	10	10	10	10	10	10	10	10	NS	1,000	10
*TPH Diesel (13-22)	354	31.0	62.2	10	19.8	10	10	72.4	220	20.2	NS	10,000	10
*TPH Heavy (23-40)	1530	181	207	50	64.6	50	50	198	935	97.8j	NS	NS	500

Notes:

ND: Not Detected
NA: Not Analyzed
NS: Not Specified
j: Trace concentration between MDL & PQL
*Threshold for average TPH for Disposal in a lined cell = 50,000 mg/kg
Left justified and shaded: Not detected. Value shown is Practical Quantitation Limit.
Right-Justified and no shading: Qualtifiable result shown.
**Treated wood acceptable
Only detected Organics are shown.

TABLE 16
SUNSHINE CANYON LANDFILL
GENERATOR: BNSF RAILWAY - VERNON
SOIL SAMPLING
ESTIMATED ANNUAL QUANTITY: 200 Cubic Yards

SAMPLE	BNSF_Sweeper Waste_Hobart	Hazardous Level (mg/kg)	Lined Cell Limit	Unrestricted Limit
DATE SAMPLED	10/21/20			
SAMPLED BY	Environmental Resources Management Inc			
DATE ANALYZED	10/22/20			
METALS (mg/kg) METHOD 6010B/7471A:				
Antimony	10	500	380	30
Arsenic	3.1	500	500	12
Barium	230	10,000	10,000	5,200
Beryllium	0.50	75	75	16
Cadmium	0.50	100	100	1.7
Chromium	29	2,500	2,500	45
Cobalt	4.2	8,000	350	23
Copper	85	2,500	2,500	2,500
Lead	18	1,000	350	80
Mercury	0.020	20	20	9.4
Molybdenum	17	3,500	3,500	380
Nickel	18	2,000	2,000	1,500
Selenium	3.0	100	100	100
Silver	2.1	500	500	380
Thallium	10	700	111	0.78
Vanadium	15	2,400	2,400	390
Zinc	2000	5,000	5,000	5,000
VOLATILE ORGANIC COMPOUNDS (mg/kg) METHOD 8260B: None Detected				
PETROLEUM HYDROCARBONS (mg/kg) METHOD 8015B:				
*TPH Diesel (13-22)	350	NS	10,000	10
*TPH Heavy (23-40)	7100	NS	NS	500

Notes:

ND: Not Detected

NA: Not Analyzed

NS: Not Specified

TTLC: Total Threshold Limit Concentration.

*Threshold for average TPH for Disposal in a lined cell = 50,000 mg/kg

Left justified and shaded: Not detected. Value shown is Practical Quantitation Limit.

Right-Justified and no shading: Qualtifiable result shown.

**Treated wood acceptable

Only detected Organics are shown.

TABLE 17
SUNSHINE CANYON LANDFILL
GENERATOR: AIRGAS USA
SOIL SAMPLING
ESTIMATED ANNUAL QUANTITY: 150 Cubic Yards

SAMPLE	COMP (Airgas_Soil_Bins)	Hazardous	Lined Cell	Unrestricted
DATE SAMPLED	07/20/20	Level	Limit	Limit
SAMPLED BY	Trihydro Corporation	(mg/kg)		
DATE ANALYZED	07/21/20			
GENERAL CHEMISTRY:				
Ignitability (Degrees F)	>212	NS	NS	NS
pH (S.U.)	7.8	< 2 or >12.5	NS	NS
Temperature (Degrees C)	21.2	NS	NS	NS
METALS (mg/kg) METHOD 6010B:				
Antimony	0.769	500	380	30
Arsenic	6.82	500	500	12
Barium	90.5	10,000	10,000	5,200
Beryllium	0.587	75	75	16
Cadmium	0.292j	100	100	1.7
Chromium	25.2	2,500	2,500	45
Cobalt	8.57	8,000	350	23
Copper	28.3	2,500	2,500	2,500
Lead	34.9	1,000	350	80
Mercury	0.912	20	20	9.4
Molybdenum	3.22	3,500	3,500	380
Nickel	15.8	2,000	2,000	1,500
Selenium	0.769	100	100	100
Silver	0.256	500	500	380
Thallium	0.769	700	111	0.78
Vanadium	28.6	2,400	2,400	390
Zinc	122	5,000	5,000	5,000
METALS (mg/kg) METHOD CA LUFT:				
Organic Lead	0.741j	13	NS	NS
VOLATILE ORGANIC COMPOUNDS (mg/kg) METHOD 8260B:				
Acetone	0.03j	NS	NS	NS
Chloroform	0.00032j	NS	NS	NS
SEMIVOLATILE ORGANIC COMPOUNDS (mg/kg) METHOD 8270C:				
Anthracene	0.19j	NS	230,000	17,000
Benzo(a)anthracene	0.54j	NS	2.9	0.15
Benzo(a)pyrene	0.55j	NS	11	0.020
Benzo(b)fluoranthene	0.39j	NS	1.8	0.41
Benzo(g,h,i)perylene	0.39j	NS	NS	NS
Benzo(k)fluoranthene	0.48j	NS	29	1.5
Chrysene	0.57j	NS	290	15
Dibenz(a,h)anthracene	0.16j	NS	0.29	0.02
Di-n-butyl phthalate	0.32j	NS	30,000	2,300
Fluoranthene	0.86j	NS	30,000	2,300
Indeno(1,2,3-cd)pyrene	0.29j	NS	2.9	0.15
Phenanthrene	0.67j	NS	NS	NS
Pyrene	1.0	NS	23,000	17,000
PETROLEUM HYDROCARBONS (mg/kg) METHOD 8015B:				
*TPH Gas (4-12)	0.098	NS	1,000	10
*TPH Diesel (10-28)	71	NS	10,000	10

Notes:

ND: Not Detected
NA: Not Analyzed
NS: Not Specified
TTLC: Total Threshold Limit Concentration.
*Threshold for average TPH for Disposal in a lined cell = 50,000 mg/kg
Left justified and shaded: Not detected. Value shown is Practical Quantitation Limit.
Right-Justified and no shading: Qualtifiable result shown.
**Treated wood acceptable
Only detected Organics are shown.

APPENDIX A

SAMPLING AND ANALYSIS PLAN

APPENDIX A

SAMPLING AND ANALYSIS PLAN FOR THE SUNSHINE CANYON LANDFILL

Water quality monitoring and sampling for the Sunshine Canyon Landfill (SCLF) located within the jurisdiction of the Los Angeles RWQCB Region was conducted by Geo-Logic Associates (GLA). Sampling and analyses were performed in general accordance with Monitoring and Report Program No. CI-2043 of Order R4-2008-0088 issued specifically for the SCLF. A brief summary of the protocols for sample collection is presented below.

Chemical analyses were performed by Eurofins Calscience., a state-certified laboratory. Groundwater, underdrain, leachate, and stormwater samples were analyzed for the list of parameters summarized in Table 1, which also present the laboratory analytical methods used and the sample frequency. Copies of the certificates of analyses and Chain-of-Custody records for the samples collected the current monitoring period are included in Appendix B.

GROUNDWATER SAMPLING

The sampling protocols listed below were generally followed during groundwater sampling operations:

- Upon arrival at the wellhead, each monitoring point was inspected for evidence of tampering and/or vandalism, and the well identification (I.D.) was recorded.

- With the exception of well DW-1, all of the groundwater monitoring wells at the SCLF that are currently sampled are equipped with dedicated bladder pumps. Well construction details including: well depth, depth of pump, well diameter, and top of casing elevation are summarized in Table 5.

- Well DW-1 is under artesian conditions. A drop tube has been installed in the well that allows water to discharge into sample containers under the pressure of water in the well.

- The water level was measured directly using a weighted water-level indicator (sounder) to an accuracy of 0.01 foot. Prior to measuring the water level, the sounder was decontaminated using a non-phosphate soap solution, followed by two rinses with deionized water. The wells were then sounded and the initial water level and the total depth of the well (if obtainable) were recorded on a Well Data Sheet.

Groundwater Sampling Using Low Flow Sampling Methods

- All wells at the SCLF that are equipped with bladder pumps were sampled using low flow purge and sample methods.

- A water level meter was used during low-flow purging to measure changes in water level to

permit operation of submersible pumps at discharge rates that minimized water level decline.

- Discharged water was routed through a sampling chamber equipped with probes for measuring dissolved oxygen, electrical conductivity, pH, temperature, ORP, and turbidity. When three consecutive readings of these field parameters had stabilized to within 10% of each other, with no discernible upward or downward trend, the water quality was determined to be stable and samples were collected.

- Samples were collected into approved pre-labeled containers provided by the laboratory, and each container was filled completely and immediately capped. Samples for VOC analysis were filled by pouring the sample down the sides of the container to minimize aeration, and these sample vials were capped with no airspace.

- Upon collection, samples were placed immediately in an ice-filled cooler for transport to a state-certified testing laboratory. Samples were kept chilled (at about 4ºC) until delivery.

- A completed Chain-of-Custody form, detailing sample identification numbers, date and time of collection, requested analyses, and other project information accompanied each sample to the laboratory. The Chain-of-Custody and Sample Container/Analysis Request forms are provided in Appendix B.

LYSIMETER SAMPLING

The SCLF is equipped with two pan lysimeters, LY-6 and LY-7, that are located beneath leachate sumps in the lined portions of the landfill. Lysimeters are equipped with dedicated electric submersible pumps that are activated based on liquid levels in the pan. Water is pumped to a discharge line that conveys lysimeter liquids to an onsite water treatment facility. Sampling protocols are as follows:

- Upon arrival at each lysimeter, GLA inspected the discharge line to determine if water was actively being extracted.

- The lysimeter pumps are not equipped with flow controls, so water is transferred from the discharge line to a clean 5-gallon bucket. Field parameters are recorded from the bucket.

- Lysimeter liquids are transferred from the bucket into approved pre-labeled containers provided by the laboratory, and each container was filled completely and immediately capped. Samples for VOC analysis were filled by pouring the sample down the sides of the container to minimize aeration, and these sample vials were capped with no airspace.

- As with groundwater samples, lysimeter liquid samples were placed immediately in an ice-filled cooler for transport to a state-certified testing laboratory. Samples were kept chilled (at about 4ºC) until delivery.

- A completed Chain-of-Custody form, detailing sample identification numbers, date and time of collection, requested analyses, and other project information accompanied each sample to the laboratory. The Chain-of-Custody and Sample Container/Analysis Request forms are provided in Appendix B.

SUBDRAIN AND EXTRACTION TRENCH SAMPLING

The SCLF is equipped with four subdrain sampling locations: Subdrain N, CC2-PER, CC2-3A, and CC2-5C and a groundwater extraction trench. Samples from CC2-PER, CC2-3A, and CC2-5C are composited in the field as one sample "Combined Subdrains". Sample methods are as follows:

- Samples from Subdrain N and the groundwater extraction trench are collected at sampling ports near the inlet to the water treatment facility. Samples are collected by opening the port and directly filling each laboratory-supplied container.
- Subdrains CC2-3A and CC2-5C are equipped with electric submersible pumps that operate automatically based on liquid levels in the subdrain sumps. Water is discharged to a one-inch poly hose that connects to a two-inch HDPE pipeline that conveys liquids to the water treatment facility. Samples are collected by disconnecting the one-inch poly hose from the two-inch HDPE pipe and filling a clean five gallon bucket. Subdrain liquids are transferred from the bucket into laboratory-supplied containers.
- Subdrain CC2-PER is also equipped with electric submersible pumps that operates automatically based on liquid levels in the subdrain sump. Water is discharged to a two-inch camflex hose that transfers liquid into a 55-gallon carbon treatment unit, which then discharges to the water treatment facility. Samples are collected by disconnecting the camflex hose and filling a decontaminated five-gallong bucket. Field parameters are measured in the bucket, and then the subdrain liquid is transferred to laboratory-supplied containers.
- As with groundwater samples, all containers are completely filled, capped, labeled, and kept chilled at approximately 4^{o}C in a laboratory-supplied cooler. All sampling is conducted under the same chain-of-custody protocol describe above.

LEACHATE SAMPLING

Leachate at the SCLF is monitored at "LR-2R" and "Deep Leachate".

- Deep Leachate samples are collected from a sample port before leachate reaches the above ground storage tank farm. The port is opened to allow liquids to fill laboratory-supplied sample containers.
- Location LR-2R is sampled with a new, disposable bailer through a riser connected to the leachate sump. Liquids were transferred from the bailer into laboratory-supplied

containers.

- A representative sample was collected and analyzed in the field for EC, odor, ORP, pH, temperature, turbidity, and sheen and recorded on a Well Data Sheet.
- Sample collection, preservation, and Chain-of-Custody procedures described above for groundwater were also adhered to for leachate sample collection.

QUALITY ASSURANCE/QUALITY CONTROL SAMPLING

Quality assurance/quality control (QA/QC) sampling is performed using trip blanks, field blanks, equipment blanks (for non-dedicated equipment), and duplicate samples. For field blanks and equipment blanks, laboratory supplied water is used to collect the sample. In addition, to these field samples, the QA/QC program also included laboratory method blank analyses. Field QA/QC samples were analyzed only for volatile organic compounds EPA Test Method 8260. Laboratory method blanks were conducted for all constituents that were monitored during the monitoring period.

FIELD EQUIPMENT CALIBRATION

Proper maintenance, calibration, and operation of each field instrument will be the responsibility of the field personnel and the instrument technicians assigned to the project. All instruments and equipment used during the program will be maintained, calibrated, and operated according to the manufacturers' guidelines and recommendations.

Field equipment will be calibrated prior to use in the field as appropriate. The calibration procedures will follow standard manufacturers' instructions to ensure that the equipment is functioning within established tolerances and as required by the project. A record of field calibration of analytical instruments will be maintained in the calibration logbook by field personnel. Copies of the instrument manuals and other equipment calibration records (e.g., thermometers, sounders) will be maintained. Any notes on unusual results, changing of standards, battery charging, and operation and maintenance of the field equipment will be included in the calibration logbook.

All instruments are to be stored, transported, and handled with care to preserve equipment accuracy. Damaged instruments will be taken out of service immediately and not used again until a qualified technician repairs and recalibrates the instruments.

Calibration Procedures

Equipment calibration is performed in accordance with the manufacturer's instructions, and calibration checks will be performed each day prior to the start of work. Calibration of rental equipment will be performed by a qualified technician prior to shipment of the equipment.

Calibration standards will be used once. Spent calibration liquids will be placed in plastic bottles and transported off-site for disposal. A brief summary of the calibration procedures for field measurement equipment is provided below:

- pH: Calibration for pH is performed prior to commencement of sampling activities, using standard buffer solutions having pH values of 4, 7, and 10. Calibration checks for pH values using buffer solutions of 4, 7, and 10 will be performed daily. If the reading varies more than 0.10 of a unit between calibration checks, the meter will be recalibrated.

- Conductivity: Calibration for conductivity is performed prior to commencement of sampling activities, using potassium chloride standard solutions with conductivity values of 1,000 and 10,000 microsiemens/cm. The meter must read within one percent of full-scale to be considered calibrated. Calibration checks for conductivity will be performed daily.

- Turbidity Meter: Turbidity range calibration is performed prior to initiation of sampling activities, using turbidity gel standards of 0, 4.4, 45, and 483 NTUs. The meter is also checked daily during the sampling period with the standard most representative of the anticipated turbidity of the purged groundwater (typically 0 NTUs to 10 NTUs). If the reading varies by more than one unit between calibration checks, the meter will be recalibrated. Multiple physical conditions can cause variations in readings, including bubbles in the sampled water, wet or dirty sample containers, a wet or dirty lens, a wet or dirty optical sensor, or leakage of incidental light into the sample chamber.

- Multiple Sensor Meter (pH, Dissolved Oxygen, Conductivity, Temperature, Turbidity): A multiple sensor meter may be used for multiple parameter measurements during sampling. Calibration is performed prior to initiation of sampling activities, using manufacturer auto-calibration solution. If any of the readings are outside of the manufacturers specifications, the meter will be recalibrated for the parameter outside of the calibration range. Calibration checks will be performed daily.

Equipment not listed herein will be calibrated according to manufacturers' recommendations and/or generally accepted practice. Calibration procedures will be documented for the project file. Instruments for which calibration cannot be easily checked will be either tested against another instrument of a similar type, or will be returned to the manufacturer for appropriate calibration. If tested against another instrument capable of making the same measurements, variation between instruments must not exceed five percent. If readings vary more than five percent, the instrument will be returned to the manufacturer for calibration.

Scheduled periodic calibration of testing equipment will not relieve field personnel of the responsibility of employing properly functioning equipment. If equipment malfunction is suspected, the device will be removed from service, tagged so that it is not inadvertently used, and the appropriate personnel notified so that re-calibration can be performed or a substitute piece of equipment can be obtained.

Equipment Maintenance

Maintenance responsibilities for field equipment are coordinated through an instrument technician who is responsible for ensuring that available equipment and instrumentation are ready for use, and that returned equipment is inspected, serviced, and returned to available inventory in a timely manner. Maintenance during use is the responsibility of the field team using the equipment. Calibration logbooks contain information on instrument maintenance, calibration, and repair. A separate logbook is maintained for each instrument. The paperwork will include a detailed listing of the item that was cleaned/replaced, and the make/model/serial number for the particular piece of equipment.

APPENDIX B

FIELD SAMPLE COLLECTION LOGS
AND LABORATORY ANALYTICAL DATA REPORTS

Geo-Logic
ASSOCIATES

Geo-Logic ASSOCIATES

Geologists • Hydrogeologists • Engineers

* Reject *

GROUNDWATER MONITORING PROGRAM
WELL DATA SHEET

Site Name.:	Sunshine Gym.	**Project No.:**	5120.1006
Well I.D.:	DW-1 (A/B)	**Sampling Date:**	8-24-20
Collected By:	BS	**Purge start Time:**	/
Casing Diameter (inches):	4	**Purge Stop time:**	/
Starting Water Level:	TOC	**Sampling Time:**	(A) 0920 (B) 0925
Total Depth (feet):	/	**Ending Water Level (feet):**	TOC
Water column (feet):	/	**Total Purged (gallons):**	/
Screen Length (feet):	/	**PID/FID Reading:**	/
Purge Volume (gallons):	/	**Duplicate Sample:**	YES (NO)
Horiba Model S/N:	RSJS494H		

GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
Grab	—	8.15	4.78	0	1.74	27.78	-108

Purge Sampling Rates: Collect Sample from the eff. drop tube T/A started me on call called Kyle to inform and also called Rossiter

Well condition: OK

DW-1B Sample was collected on a second, new drinking water bottle.

Additional Info/Comments: Sunny, Hot

Name: Bert Salinas **Signature:** Bert

GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Well ID: DW-1 Date: 8-24-20

Access:

Accessibility: Good: ✓ Fair: _____ Poor: _____

Vicinity of well clear of weeds and/or debris: Yes: ✓ No: _____

Presence of depressions or standing water around well: Yes: _____ No: ✓

Remarks:

Concrete Pad:

Integrity: Good: ✓ Inadequate: _____

Presence of depressions or standing water around well: Yes: _____ No: ✓

Remarks:

Protective Outer Casing: Material: Metal

Condition of Protective Casing: Good: corroded Damaged: _____

Condition of Locking Cap: Good: OK Damaged: _____

Condition of Lock: Good: OK Damaged: _____

Condition of Weepholes: Good: OK Damaged: _____

Remarks:

Well Riser: Material: PVC

Condition of Riser: Good: ✓ Damaged: _____

Condition of Riser Cap: Good: ✓ Damaged: _____

Measurment reference point: Yes: ✓ No: _____

Remarks:

Dedicated Pump: Type: Drop tube

Condition: Good: ✓ Damaged: _____ Missing: _____

Pumping Rate (gpm): N/A Current (Hz): N/A

Remarks:

Field Certification: [signature] GW Manager 8-24-20

Signed Title Date

Geo-Logic ASSOCIATES

Geologists • Hydrogeologists • Engineers

GROUNDWATER MONITORING PROGRAM
WELL DATA SHEET

Site Name:	Sunshine Canyon	**Project No.:**	5020.1006
Well I.D.:	PZ-2	**Sampling Date:**	8/24/2023
Collected By:	NR	**Purge start Time:**	0859
Casing Diameter (inches):	2	**Purge Stop time:**	0928
Starting Water Level:	121.09	**Sampling (Well Recovery) Time:**	A: 0943 B: 0948
Total Depth (feet):	157.53	**Ending Water Level (feet):**	127.80
Water column (feet):	36.44	**Total Purged (gallons):**	2+
Screen Length (feet):	—	**Duplicate Sample:**	YES (NO)
Sample Method:	(Micro Purge) Low Flow		
Horiba Model S/N:	U-52/DLLQYV96		

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
0910	1/2	123.95	8.78	5.63	0.4	0.17	24.88	-118
0915	1	124.96	8.87	5.65	0.0	0.03	24.90	-109
0918	1 1/4	125.77	8.92	5.65	0.0	0.00	24.95	-106
0921	1 1/2	126.51	8.97	5.64	0.0	0.00	25.01	-105
0924	1 3/4	127.18	9.01	5.64	0.0	0.00	25.10	-104
0928	2	127.80	9.04	5.64	0.0	0.00	25.18	-103

Purge Sampling Rates: 80 PSI Refill(30) Discharge(22)

Well condition: OK - WATER CLEAR WITH NO ODOR

Additional Info/Comments: SUNNY, WARM, slight breeze

Name: Nicholas Reaser **Signature:**

GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: SUNSHINE CANYON Well ID: PZ-2 Date: 8/24/2023

Access:

Accessibility: Good: _____ Fair: ✓ Poor: _____

Vicinity of well clear of weeds and/or debris: Yes: _____ No: ✓

Presence of depressions or standing water around well: Yes: _____ No: ✓

Remarks: HAD TO CARRY SAMPLING EQUIPMENT ACROSS CHANNEL

Concrete Pad:

Integrity: Good: _____ Inadequate: ✓

Presence of depressions or standing water around well: Yes: _____ No: ✓

Remarks: NO CONCRETE PAD

Protective Outer Casing: Material: METAL

Condition of Protective Casing: Good: ✓ Damaged: _____

Condition of Locking Cap: Good: ✓ Damaged: _____

Condition of Lock: Good: ✓ Damaged: _____

Condition of Weepholes: Good: ✓ Damaged: _____

Remarks:

Well Riser: Material: PVC

Condition of Riser: Good: ✓ Damaged: _____

Condition of Riser Cap: Good: ✓ Damaged: _____

Measurment reference point: Yes: ✓ No: _____

Remarks:

Dedicated Pump: Type: BLADDER

Condition: Good: ✓ Damaged: _____ Missing: _____

Pumping Rate (gpm): N/A Current (Hz): N/A

Remarks:

Field Certification: [signature] Field Tech 8/24/2023

Signed Title Date

Geo-Logic ASSOCIATES

FIELD CALIBRATION DOCUMENTATION FORM

LOCATION (Site/Facility Name) Sunshine **PROJECT NAME / NUMBER** 320.100

Instrument Make/Model #	U-52 R8J549417					
Date/Time 8-24-20 0845	**pH**	**Electrical Conductivity (µMhos/cm)** (4.49 mg/Kg)	**Turbidity (NTU)** (0)	**DO (mg/L or %)**	**Guidance Remarks**	**Comments**
Pre. Cal	4.03	4.66	2.6	7.25		
Calibration	4.01	4.50	←	8.55		
Calibration Successful? (Y/N)	Yes	→	→	→	enter YES or NO	
Satifies Protocol?	Yes	→	→	→	Did calibration meet criteria in the sampling protocol? (Y or N)	
Calibration by	[signature]				Signature or initials	
Physical Condition of Unit	Good					

Geo-Logic ASSOCIATES

FIELD CALIBRATION DOCUMENTATION FORM

LOCATION (Site/Facility Name) Sunshine Canyon **PROJECT NAME / NUMBER** 5020.1006

Instrument Make/Model #	Horiba U-52 (D22CYV06)					
Date/Time 8/24/2020 0830	**pH**	**Electrical Conductivity (µMhos/cm)** (4.49 mg/Kg)	**Turbidity (NTU)** (0)	**DO (mg/L or %)**	**Guidance Remarks**	**Comments**
Pre. Cal	3.98	4.15	0.0	13.04		
Calibration	4.00	4.49	0.0	11.28		
Calibration Successful? (Y/N)	Y				enter YES or NO	
Satifies Protocol?	Y				Did calibration meet criteria in the sampling protocol? (Y or N)	
Calibration by	NR				Signature or initials	
Physical Condition of Unit	Good					

Chain of Custody Record

eurofins | Environment Testing TestAmerica

TAL-8210

Address: _____

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

Client Contact	Project Manager: Kyle Welchman	Site Contact: S. Mills	Date: 8-24-20	COC No:
Company Name: GLA Republic	Tel/Email: 858-451-1136	Lab Contact: R. Romero	Carrier: GLA	1 of 1 COCs
Address: 11415 W. Bernardo Ct.	**Analysis Turnaround Time**			Sampler: RJ, NR
City/State/Zip: S. Diego, CA 92127	☐ CALENDAR DAYS ☐ WORKING DAYS			**For Lab Use Only:**
Phone: 858-451-1136	TAT if different from Below _____			Walk-in Client:
Fax: 858-451-1087	☐ 2 weeks			Lab Sampling:
Project Name: Sunshine Cyn.	☐ 1 week			Job / SDG No.:
Site: Republic Services	☐ 2 days			
P O #	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	TDS (Lab)	Chloride (300.0)	Sample Specific Notes:
DW-1A	8/24/20	0920	G	GW	1			X		
DW-1B		0925			1			X		
PZ-2A		0943			1				X	
PZ-2B	↓	0948	↓	↓	1				X	

Preservation Used: 1= Ice, 2= HCl, 3= H2SO4, 4=HNO3, 5=NaOH, 6= Other

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☒ Disposal by Lab ☐ Archive for_____ Months

Special Instructions/QC Requirements & Comments: DW-1B sample was collected on a new 500 ml. Drinking water bottle from Ready-fresh. The lab did not provide enough sample containers.

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd:_____ Corr'd:_____ Therm ID No.:_____

	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	GLA	8-24-2020/1122			
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company: EC IRV	Date/Time: 8/24/20 11:22

IR89 2-9/2.7°C

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins Calscience Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614-5817
Tel: (949)261-1022

Laboratory Job ID: 440-270774-1
Client Project/Site: Republic Sunshine Canyon

For:
Geo-Logic Associates
11415 West Bernardo Court
Suite 200
San Diego, California 92127

Attn: Kyle Welchans

Authorized for release by:
8/28/2020 4:51:14 PM

Rossina Tomova, Project Manager I
(949)260-3276
Rossina.Tomova@Eurofinset.com

Table of Contents

Cover Page 1
Table of Contents 2
Sample Summary 3
Case Narrative 4
Client Sample Results 5
Method Summary 6
Lab Chronicle 7
QC Sample Results 8
QC Association Summary 9
Definitions/Glossary 10
Certification Summary 11
Chain of Custody 12
Receipt Checklists 13

Sample Summary

Client: Geo-Logic Associates
Project/Site: Republic Sunshine Canyon

Job ID: 440-270774-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
440-270774-1	DW-1A	Water	08/24/20 09:20	08/24/20 11:22	
440-270774-2	DW-1B	Water	08/24/20 09:25	08/24/20 11:22	
440-270774-3	PZ-2A	Water	08/24/20 09:43	08/24/20 11:22	
440-270774-4	PZ-2B	Water	08/24/20 09:48	08/24/20 11:22	

Case Narrative

Client: Geo-Logic Associates
Project/Site: Republic Sunshine Canyon

Job ID: 440-270774-1

Job ID: 440-270774-1

Laboratory: Eurofins Calscience Irvine

Narrative

Job Narrative
440-270774-1

Comments
No additional comments.

Receipt
The samples were received on 8/24/2020 11:22 AM; the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.7º C.

HPLC/IC
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

General Chemistry
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Client: Geo-Logic Associates
Job ID: 440-270774-1
Project/Site: Republic Sunshine Canyon

Client Sample ID: DW-1A
Lab Sample ID: 440-270774-1
Date Collected: 08/24/20 09:20
Matrix: Water
Date Received: 08/24/20 11:22

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	3200		50	25	mg/L			08/26/20 09:32	1

Client Sample ID: DW-1B
Lab Sample ID: 440-270774-2
Date Collected: 08/24/20 09:25
Matrix: Water
Date Received: 08/24/20 11:22

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	3000		50	25	mg/L			08/26/20 09:32	1

Client Sample ID: PZ-2A
Lab Sample ID: 440-270774-3
Date Collected: 08/24/20 09:43
Matrix: Water
Date Received: 08/24/20 11:22

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	11		2.5	1.3	mg/L			08/27/20 22:59	5

Client Sample ID: PZ-2B
Lab Sample ID: 440-270774-4
Date Collected: 08/24/20 09:48
Matrix: Water
Date Received: 08/24/20 11:22

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	13		2.5	1.3	mg/L			08/27/20 23:15	5

Method Summary

Client: Geo-Logic Associates
Project/Site: Republic Sunshine Canyon

Job ID: 440-270774-1

Method	Method Description	Protocol	Laboratory
300.0	Anions, Ion Chromatography	MCAWW	TAL IRV
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL IRV

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.

SM = "Standard Methods For The Examination Of Water And Wastewater"

Laboratory References:

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

Lab Chronicle

Client: Geo-Logic Associates
Job ID: 440-270774-1
Project/Site: Republic Sunshine Canyon

Client Sample ID: DW-1A
Lab Sample ID: 440-270774-1
Date Collected: 08/24/20 09:20
Matrix: Water
Date Received: 08/24/20 11:22

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540C		1	20 mL	100 mL	622161	08/26/20 09:32	XL	TAL IRV

Client Sample ID: DW-1B
Lab Sample ID: 440-270774-2
Date Collected: 08/24/20 09:25
Matrix: Water
Date Received: 08/24/20 11:22

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540C		1	20 mL	100 mL	622161	08/26/20 09:32	XL	TAL IRV

Client Sample ID: PZ-2A
Lab Sample ID: 440-270774-3
Date Collected: 08/24/20 09:43
Matrix: Water
Date Received: 08/24/20 11:22

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		5			622324	08/27/20 22:59	NTN	TAL IRV

Client Sample ID: PZ-2B
Lab Sample ID: 440-270774-4
Date Collected: 08/24/20 09:48
Matrix: Water
Date Received: 08/24/20 11:22

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	300.0		5			622324	08/27/20 23:15	NTN	TAL IRV

Laboratory References:

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 440-622324/6
Matrix: Water
Analysis Batch: 622324

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	ND		0.50	0.25	mg/L			08/27/20 10:48	1

Lab Sample ID: LCS 440-622324/5
Matrix: Water
Analysis Batch: 622324

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			5.00	4.87		mg/L		97	90 - 110		

Lab Sample ID: 440-270984-J-8 MS
Matrix: Water
Analysis Batch: 622324

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	20		5.00	25.7	E	mg/L		115	80 - 120		

Lab Sample ID: 440-270984-J-8 MSD
Matrix: Water
Analysis Batch: 622324

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	20		5.00	25.8	E	mg/L		118	80 - 120	0	20

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 440-622161/1
Matrix: Water
Analysis Batch: 622161

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	ND		10	5.0	mg/L			08/26/20 09:32	1

Lab Sample ID: LCS 440-622161/2
Matrix: Water
Analysis Batch: 622161

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Dissolved Solids			1000	990		mg/L		99	90 - 110		

Lab Sample ID: 440-270846-H-8 DU
Matrix: Water
Analysis Batch: 622161

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Dissolved Solids	660			646		mg/L				2	5

QC Association Summary

Client: Geo-Logic Associates
Project/Site: Republic Sunshine Canyon

Job ID: 440-270774-1

HPLC/IC

Analysis Batch: 622324

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-270774-3	PZ-2A	Total/NA	Water	300.0	
440-270774-4	PZ-2B	Total/NA	Water	300.0	
MB 440-622324/6	Method Blank	Total/NA	Water	300.0	
LCS 440-622324/5	Lab Control Sample	Total/NA	Water	300.0	
440-270984-J-8 MS	Matrix Spike	Total/NA	Water	300.0	
440-270984-J-8 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

General Chemistry

Analysis Batch: 622161

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-270774-1	DW-1A	Total/NA	Water	SM 2540C	
440-270774-2	DW-1B	Total/NA	Water	SM 2540C	
MB 440-622161/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 440-622161/2	Lab Control Sample	Total/NA	Water	SM 2540C	
440-270846-H-8 DU	Duplicate	Total/NA	Water	SM 2540C	

Definitions/Glossary

Client: Geo-Logic Associates
Project/Site: Republic Sunshine Canyon

Job ID: 440-270774-1

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
E	Result exceeded calibration range.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CFU	Colony Forming Unit
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MCL	EPA recommended "Maximum Contaminant Level"
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
MPN	Most Probable Number
MQL	Method Quantitation Limit
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
NEG	Negative / Absent
POS	Positive / Present
PQL	Practical Quantitation Limit
PRES	Presumptive
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)
TNTC	Too Numerous To Count

Accreditation/Certification Summary

Client: Geo-Logic Associates
Job ID: 440-270774-1
Project/Site: Republic Sunshine Canyon

Laboratory: Eurofins Calscience Irvine

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Alaska	State	CA01531	06-30-21
Arizona	State	AZ0671	10-13-20
California	Los Angeles County Sanitation Districts	10256	06-30-21
California	State	2706	06-30-21
Guam	State	20-004R	01-23-21
Hawaii	State	CA01531	01-29-21
Kansas	NELAP	E-10420	07-31-20 *
Nevada	State	CA015312021-1	07-31-21
Oregon	NELAP	4028 - 008	01-29-21
USDA	US Federal Programs	P330-18-00214	07-09-21
Washington	State	C900	09-03-20

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Chain of Custody Record

eurofins | Environment Testing TestAmerica

Address: _____

Regulatory Program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other:

TAL-8210

Client Contact	Project Manager: Kyle Wellenkamp	Site Contact: J. Mills	Date: 8-24-20	COC No:
Company Name: GLA Geotechnic	Tel/Email: 858-451-1136	Lab Contact: R. Romero	Carrier: GLA	1 of 1 COCs
Address: 11413 W. Bernardo Ct.	Analysis Turnaround Time			Sampler: RJ, NR
City/State/Zip: San Diego, CA 92127	☐ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: 858-451-1136	TAT if different from Below _____			Walk-in Client:
Fax: 858-451-1057	☐ 2 weeks			Lab Sampling:
Project Name: Sunshine Gyn.	☐ 1 week			Job / SDG No.:
Site: Republic Services	☐ 2 days			
P O #	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	TDS (A4500)	Chloride (300.0)	Sample Specific Notes:
DW-1A	8/24/20	0920	G	GW	1			X		
DW-1B	↓	0925	↓	↓	1			X		
PZ-2A		0943			1				X	
PZ-2B	↓	0948	↓	↓	1				X	

440-270774 Chain of Custody

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

☐ Return to Client ☒ Disposal by Lab ☐ Archive for _____ Months

Special Instructions/QC Requirements & Comments: DW-1B sample was collected on a new 500 ml. Drinking water bottle from Ready-fresh. The lab did not provide enough sample containers.

Custody Seals Intact: ☐ Yes ☐ No | Custody Seal No.: | Cooler Temp. (°C): Obs'd: _____ Corr'd: _____ | Therm ID No.: _____

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	GLA	8-24-2020 1422			
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:
				EC IRV	8/24/20 11:22

IR89 2.9/2.7°C

8/28/2020

Login Sample Receipt Checklist

Client: Geo-Logic Associates

Job Number: 440-270774-1

Login Number: 270774

List Source: Eurofins Irvine

List Number: 1

Creator: Escalante, Maria I

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	Not present
Sample custody seals, if present, are intact.	N/A	Not Present
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Geo-Logic ASSOCIATES

GROUNDWATER MONITORING PROGRAM
WATER LEVEL SURVEY RECORD SHEET

SITE NAME: Sunshine Cyn.
DATE: 9-21-20
PROJECT NUMBER 5020.1006
WATER LEVEL MAKE/MODEL: Solinst Model 101
FIELD PERSONNEL: RS, CV, MC

WELL ID	CONSTRUCTION TOTAL DEPTH (TD)	ACTUAL TOTAL DEPTH (TD)	DEPTH TO WATER (DTW)	COMMENTS
MW-1			15.92	
MW-2A			33.64	
MW-2B			17.71	
MW-5			18.47	
MW-6			16.35	
MW-8			17.48	
MW-9			22.19	
MW-13R			17.70	
MW-14			13.99	
DW-1			TOC	
DW-2			24.60	
DW-3			156.52	
DW-4			32.22	
DW-5			13.15	
CM-5R			223.97	
CM-9R3			12.02	
CM-10R			48.23	
CM-11R			17.98	
PZ-1			94.07	
PZ-2			121.11	
PZ-3			223.56	
PZ-4			110.23	
EW-2			23.30	
EW-3			17.45	
EW-4			17.46	
OM-3			15.03	

REMARKS:

SIGNATURE:

Geo-Logic ASSOCIATES

Geologists • Hydrogeologists • Engineers

GROUNDWATER MONITORING PROGRAM
WELL DATA SHEET

Site Name:	Sunshine Cyn	**Project No.:**	5020.1006
Well I.D.:	CM-9R3	**Sampling Date:**	9.21.20
Collected By:	MC	**Purge start Time:**	9:48
Casing Diameter (inches):	4	**Purge Stop time:**	10:06
Starting Water Level:	12.03	**Sampling (Well Recovery) Time:**	10:20
Total Depth (feet):	23.35	**Ending Water Level (feet):**	13.58
Water column (feet):	11.32	**Total Purged (gallons):**	2.75
Screen Length (feet):		**Duplicate Sample:**	(YES) NO
Sample Method:	(Micro Purge) Low Flow		
Horiba Model S/N:	U-52/w5K1LBDD	Duplicate taken at this well	

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
9:54	1.0	13.00	6.31	4.25	101.6	1.47	18.01	-26
9:57	1.5	13.24	6.29	4.23	26.7	1.28	17.88	-27
10:00	2.0	13.40	6.29	4.23	25.4	1.27	17.89	-27
10:02	2.25	13.48	6.28	4.24	21.2	1.24	17.86	-27
10:04	2.50	13.52	6.27	4.22	21.7	1.24	17.91	-27
10:06	2.75	13.58	6.27	4.21	22.0	1.22	17.86	-27

Purge Sampling Rates: 25 psi ref. 11 30 discharge 9
water contains reddish Brown color with no oder

Well condition: OK

Additional Info/Comments: Hazy sunshine, hot

Name: M. Ko Compton **Signature:**

C-2

GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: ~~Sunshine Cyn~~ Well ID: CM-9RS Date: 9-21-20

Access:

Accessibility: Good: _____ Fair: ✓ Poor: _____

Vicinity of well clear of weeds and/or debris: Yes: _____ No: ✓

Presence of depressions or standing water around well: Yes: _____ No: ✓

Remarks: vegetation on path to the well

Concrete Pad:

Integrity: Good: _____ Inadequate: _____ NA

Presence of depressions or standing water around well: Yes: _____ No: ✓

Remarks: pad is burried

Protective Outer Casing: Material: mete'

Condition of Protective Casing: Good: ✓ Damaged: _____

Condition of Locking Cap: Good: _____ Damaged: ✓

Condition of Lock: Good: ✓ Damaged: _____

Condition of Weepholes: Good: _____ Damaged: ✓

Remarks: Monument 3/4 burried lid comprimized no secure

Well Riser: Material: ~~Mete'~~ PVC

Condition of Riser: Good: ✓ Damaged: _____

Condition of Riser Cap: Good: ✓ Damaged: _____

Measurment reference point: Yes: ✓ No: _____

Remarks:

Dedicated Pump: Type: Bladder

Condition: Good: ✓ Damaged: _____ Missing: _____

Pumping Rate (gpm): NA Current (Hz): NA

Remarks:

Field Certification: Will Cargill Environmental Tech 9-21-20

Signed Title Date

Geo-Logic ASSOCIATES

Geologists • Hydrogeologists • Engineers

GROUNDWATER MONITORING PROGRAM
WELL DATA SHEET

Site Name:	Sunshine Cyn	Project No.:	5020.1006
Well I.D.:	CM-10R	Sampling Date:	9-21-20
Collected By:	MC	Purge start Time:	10:58
Casing Diameter (inches):	4	Purge Stop time:	11:20
Starting Water Level:	48.23	Sampling (Well Recovery) Time:	11:30
Total Depth (feet):	110.90	Ending Water Level (feet):	48.60
Water column (feet):	62.67	Total Purged (gallons):	2.75
Screen Length (feet):		Duplicate Sample:	YES (NO)
Sample Method:	(Micro Purge) Low Flow		
Horiba Model S/N:	U-52 / W54 / BRD		

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
11:06	1.0	48.47	6.69	2.84	0.0	2.91	21.71	-107
11:10	1.5	48.53	6.69	2.83	0.0	3.45	21.69	-112
11:12	1.75	48.57	6.68	2.83	0.0	3.05	21.64	-116
11:14	2.0	48.59	6.68	2.83	0.0	2.96	21.62	-118
11:16	2.25	48.59	6.68	2.82	0.0	2.92	21.61	-121
11:18	2.50	48.60	6.68	2.82	0.0	2.86	21.63	-124
11:20	2.75	48.60	6.68	2.82	0.0	2.90	21.61	-125

Purge Sampling Rates: 50 psi ref. 11 40 discharge 10

water is clear with a strong no odor

Well condition: OK

Additional Info/Comments: Hazy sunshine, HOT, windy

Name: Mike Campbell Signature: Mike Campbell

C-2

GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshard Gyn Well ID: CM-10R Date: 9-21-20

Access:

Accessibility: Good: ✓ Fair: _____ Poor: _____

Vicinity of well clear of weeds and/or debris: Yes: ✓ No: _____

Presence of depressions or standing water around well: Yes: _____ No: ✓

Remarks:

Concrete Pad:

Integrity: Good: ✓ Inadequate: _____

Presence of depressions or standing water around well: Yes: _____ No: ✓

Remarks:

Protective Outer Casing: Material: Metal

Condition of Protective Casing: Good: ✓ Damaged: _____

Condition of Locking Cap: Good: ✓ Damaged: _____

Condition of Lock: Good: ✓ Damaged: _____

Condition of Weepholes: Good: ✓ Damaged: _____

Remarks:

Well Riser: Material: PVC

Condition of Riser: Good: ✓ Damaged: _____

Condition of Riser Cap: Good: ✓ Damaged: _____

Measurment reference point: Yes: ✓ No: _____

Remarks:

Dedicated Pump: Type: Bladder

Condition: Good: ✓ Damaged: _____ Missing: _____

Pumping Rate (gpm): NA Current (Hz): NA

Remarks:

Field Certification: [signature] Environmental Tech 9-21-20

Signed Title Date

Geo-Logic ASSOCIATES

Geologists • Hydrogeologists • Engineers

GROUNDWATER MONITORING PROGRAM
WELL DATA SHEET

Site Name:	Sunshine Cyn	Project No.:	5020-1006
Well I.D.:	CM-11R	Sampling Date:	9-2-20
Collected By:	ML	Purge start Time:	8:12
Casing Diameter (inches):	4	Purge Stop time:	8:57
Starting Water Level:	17.98	Sampling (Well Recovery) Time:	9:15
Total Depth (feet):	30.70	Ending Water Level (feet):	18.80
Water column (feet):	12.72	Total Purged (gallons):	20
Screen Length (feet):		Duplicate Sample:	YES (NO)
Sample Method:	(Micro Purge) Low Flow		
Horiba Model S/N:	U-52/U54/U8DP		

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
8:29	.5	18.31	6.05	4.50	0.0	.70	17.35	106
8:35	1.0	18.48	6.00	4.44	0.0	.49	17.27	114
8:40	1.25	18.60	5.84	4.36	0.0	.38	17.21	131
8:46	1.50	18.69	5.63	4.24	0.2	.30	17.18	154
8:52	1.75	18.75	5.59	4.18	0.0	.27	17.16	166
8:57	2.0	18.80	5.60	4.16	0.0	.25	17.12	170

Purge Sampling Rates: Psi 30 ~~discharge~~ refill 25 discharge 5

water is clear with no odor

Well condition: OK

Additional Info/Comments: Heavy vegetation on path to well

Heavy sunshine, warm, slight breeze

Name: M. McCampbell Signature: [signature]

C-2

GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Cyn Well ID: CM-11R Date: 9-21-20

Access:

Accessibility: Good: _____ Fair: ✓ Poor: _____

Vicinity of well clear of weeds and/or debris: Yes: _____ No: ✓

Presence of depressions or standing water around well: Yes: _____ No: ✓

Remarks: Required 4X4 to backup drainage channel vegetation on path to well

Concrete Pad:

Integrity: Good: ✓ Inadequate: _____

Presence of depressions or standing water around well: Yes: _____ No: ✓

Remarks: Half of pad burried with soil

Protective Outer Casing: Material: Metal

Condition of Protective Casing: Good: ✓ Damaged: _____

Condition of Locking Cap: Good: ✓ Damaged: _____

Condition of Lock: Good: ✓ Damaged: _____

Condition of Weepholes: Good: ✓ Damaged: _____

Remarks:

Well Riser: Material: PVC

Condition of Riser: Good: ✓ Damaged: _____

Condition of Riser Cap: Good: ✓ Damaged: _____

Measurment reference point: Yes: ✓ No: _____

Remarks:

Dedicated Pump: Type: Bladder

Condition: Good: ✓ Damaged: _____ Missing: _____

Pumping Rate (gpm): NA Current (Hz): NA

Remarks:

Field Certification: Tyler Cook Environmental Tech 9-21-20

Signed Title Date

Geo-Logic ASSOCIATES

Geologists • Hydrogeologists • Engineers

GROUNDWATER MONITORING PROGRAM
WELL DATA SHEET

Site Name:	Sunshine Canyon	**Project No.:**	5020.1006
Well I.D.:	mw-1	**Sampling Date:**	9-22-2020
Collected By:	CV, MC	**Purge start Time:**	1215
Casing Diameter (inches):	4	**Purge Stop time:**	1235
Starting Water Level:	15.93	**Sampling (Well Recovery) Time:**	1245
Total Depth (feet):	28.86	**Ending Water Level (feet):**	16.02
Water column (feet):	12.93	**Total Purged (gallons):**	3
Screen Length (feet):	—	**Duplicate Sample:**	YES (NO)
Sample Method:	(Micro Purge) Low Flow		
Horiba Model S/N:	U-52 WGGP8GR5		

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
1222	1	15.98	7.02	2.37	10.8	1.89	21.84	-96
1225	1 1/2	16.02	7.02	2.27	12.1	1.61	21.50	-100
1227	2	16.02	7.00	2.06	8.0	1.47	21.48	-123
1229	2 1/4	16.02	7.00	2.03	8.3	1.39	21.78	-127
1231	2 1/2	16.02	6.99	2.00	6.7	1.34	21.96	-131
1232	2 3/4	16.02	6.99	1.98	4.1	1.33	21.96	-134
1235	3	16.02	6.99	1.98	3.5	1.26	21.96	-136

Purge Sampling Rates: PSI 26 Refill (30) Discharge (11)

Well condition: OK

Additional Info/Comments: clear, warm yellowish brown color.

Name: Kristian Valenzuela **Signature:** [signature]