

February 15, 2018

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

**FIRST SEMI-ANNUAL 2017 MONITORING REPORT  
SUNSHINE CANYON CITY/COUNTY LANDFILL, SYLMAR, CALIFORNIA**

---

Please find enclosed the second semiannual and annual 2017 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 CI-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 during the July 1, 2017, to December 31, 2017, semiannual monitoring period.

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](mailto:JMills3@RepublicServices.com).

Sincerely,



Chris Coyle  
General Manager  
Sunshine Canyon Landfill

**SEMI-ANNUAL MONITORING REPORT  
SECOND SEMI ANNUAL & ANNUAL 2017**

**SUNSHINE CANYON LANDFILL  
FACILITY WDID #L10006014618**

---

**FEBRUARY 2018  
PROJECT NO. SO18.1024**

**PREPARED FOR:**

**Republic Services, Inc.  
Sunshine Canyon Landfill  
14747 San Fernando Road  
Sylmar, California 91342**



**PREPARED BY:**

**Geo-Logic Associates  
11415 West Bernardo Court, Suite 200  
San Diego, California 92127  
(858) 451-1136**



**TABLE OF CONTENTS**

**EXECUTIVE SUMMARY ..... 1**

**1.0 INTRODUCTION ..... 3**

**2.0 GENERAL SITE INFORMATION ..... 3**

    2.1 Site Description..... 3

    2.2 Climate and Surface Water Hydrology ..... 3

    2.3 Hydrogeologic Setting..... 4

    2.4 Groundwater Geochemistry ..... 4

**3.0 GROUNDWATER MONITORING..... 5**

    3.1 Water Quality Monitoring Network..... 5

    3.2 Sampling and Laboratory Analyses..... 5

    3.3 QA/QC Results ..... 6

    3.4 Groundwater Elevations and Flow Conditions ..... 7

    3.5 Groundwater Chemistry Results..... 8

        3.5.1 Second Quarter 2017 Retest Groundwater Chemistry Results..... 9

        3.5.2 Third Quarter 2017 Groundwater Chemistry Results ..... 9

        3.5.3 Fourth Quarter 2017 Groundwater Chemistry Results..... 10

        3.5.4 Tracking Mode Evaluation ..... 11

**4.0 VADOSE ZONE MONITORING ..... 13**

    4.1 Subdrain Monitoring..... 13

        4.1.1 Subdrain Liquid Monitoring Points ..... 14

        4.1.2 Third Quarter 2017 Subdrain Monitoring Results..... 14

        4.1.3 Fourth Quarter 2017 Subdrain Monitoring Results ..... 15

    4.2 Lysimeter Monitoring ..... 15

        4.2.1 Lysimeter Monitoring Points ..... 15

        4.2.2 Third Quarter 2017 Lysimeter Monitoring Results ..... 15

        4.2.3 Fourth Quarter 2017 Lysimeter Monitoring Results..... 16

**5.0 VADOSE ZONE GAS MONITORING..... 16**

**6.0 SURFACE WATER MONITORING ..... 16**

    6.1 NPDES Storm Water Quality Monitoring ..... 16

    6.2 Stream Diversion Monitoring ..... 17

    6.3 Other Surface Water Monitoring..... 17

**7.0 LEACHATE MONITORING..... 17**

**8.0 LIQUID GENERATION AND MANAGEMENT ..... 17**

    8.1 Liquid Management..... 18

8.2	Monitoring Results For Reuse Water.....	18
<b>9.0</b>	<b>DRAINAGE STRUCTURE MONITORING.....</b>	<b>18</b>
<b>10.0</b>	<b>WASTE DISPOSAL MONITORING .....</b>	<b>19</b>
<b>11.0</b>	<b>WASTE ACCEPTANCE.....</b>	<b>20</b>
11.1	Second Semiannual 2017 Waste Acceptance Results.....	21
<b>12.0</b>	<b>ANNUAL SUMMARY .....</b>	<b>22</b>
12.1	Graphical Presentation of Analytical Data .....	23
12.2	2017 Analytical Data .....	23
<b>13.0</b>	<b>REFERENCES .....</b>	<b>24</b>

**TABLES**

Table 1	Regulatory Compliance Checklist
Table 2	Analytical Parameters and Methods
Table 3A	Summary of Blank Sample Results – Third Quarter 2017
Table 3B	Summary of Blank Sample Results – Fourth Quarter 2017
Table 4A	Summary of Duplicate Sample Results – Third Quarter 2017
Table 4B	Summary of Duplicate Sample Results – Fourth Quarter 2017
Table 5	Groundwater Elevations and Site Monitoring Well Information
Table 6A	Summary of Groundwater Analytical Results – Third Quarter 2017 Monitoring Period
Table 6B	Summary of Groundwater Analytical Results – Fourth Quarter 2017 Monitoring Period
Table 7A	Comparison of Intrawell Water Quality Protection Standards to Analytical Results – Third Quarter 2017 Monitoring Period.
Table 7B	Comparison of Intrawell Water Quality Protection Standards to Analytical Results – Fourth Quarter 2017 Monitoring Period.
Table 8A	Summary of Analytical Results for Vadose Zone Liquid Monitoring Points – Third Quarter 2017 Monitoring Period.
Table 8B	Summary of Analytical Results for Vadose Zone Liquid Monitoring Points – Fourth Quarter 2017 Monitoring Period.
Table 9	Summary of Methane Concentrations for Vadose Zone Gas Monitoring Points – Second Semiannual 2017 Monitoring Period
Table 10	Summary of Analytical Results for Stormwater Samples – Second Semiannual 2017 Monitoring Period
Table 11	Summary of Analytical Results for Leachate Monitoring Points – April 2017
Table 12A	Summary of Collected Water Sources – Second Semiannual 2017 Monitoring Period

Table 12B	Summary of Water Discharges – Second Semiannual 2017 Monitoring Period
Table 13A	Summary of Analytical Results for Treated Water Samples – Third Quarter 2017.
Table 13B	Summary of Analytical Results for Treated Water Samples – Fourth Quarter 2017.
Table 14	Imported Soil Sampling Summary
Tables 15-16	Waste Discharge Sampling Results

## **FIGURES**

Figure 1	Site Location Map
Figure 2	Groundwater Monitoring Point Location Map
Figure 3A	March 2017 Groundwater Equipotential Contours
Figure 3B	June 2017 Groundwater Equipotential Contours
Figure 4	Vadose Zone Gas Monitoring Point Location Map

## **APPENDICES**

Appendix A	Sampling and Analysis Plan
Appendix B	Field Sample Collection Logs and Laboratory Analytical Data Reports
Appendix C	Landfill Gas Reports
Appendix D	NPDES Certification of Completion
Appendix E	Waste Placement Areas – Second Semiannual 2017 Monitoring Period.
Appendix F	Waste Acceptance Analytical Reports
Appendix G	Tracking Mode Trends

## EXECUTIVE SUMMARY

This document presents the results of environmental monitoring activities conducted at the Sunshine Canyon City/County Landfill (SCLF) during the second semiannual 2017 monitoring period, and also presents an annual summary for the site. This report was prepared to address the site-specific reporting requirements contained in Monitoring and Reporting Program CI-2043 issued by the Los Angeles Regional Water Quality Control Board (RWQCB). A summary of principal findings of the current monitoring period are presented below.

During the second semiannual 2017 monitoring period, routine environmental monitoring was conducted on a quarterly basis in September (third quarter) and December (fourth quarter), and included: depth to water measurements; sampling and analysis of groundwater, surface water, vadose zone liquid, leachate, and treated liquids; and field monitoring of vadose zone gas, waste tonnage, water reuse, and drainage structures.

The Water Quality Protection Standard (WQPS) for this site is based on intrawell prediction limits for inorganic constituents. For organic constituents the WQPS is the analyte-specific Practical Quantitation Limit. The following table summarizes WQPS exceedances during the third and fourth quarter 2017 monitoring events:

WELL	ANALYTE	QUARTER(S) OF WQPS EXCEEDANCE	RETEST RESULTS
MW-1	1,4-Dioxane	3 <sup>rd</sup> and 4 <sup>th</sup>	Not Applicable
	t-Butanol	3 <sup>rd</sup> and 4 <sup>th</sup>	Not Applicable
MW-5	1,4-Dioxane	3 <sup>rd</sup> and 4 <sup>th</sup>	Not Applicable
	Ammonia-Nitrogen	4 <sup>th</sup>	Results Pending
MW-13R	1,4-Dioxane	1 <sup>st</sup> and 2 <sup>nd</sup>	Not Applicable
	Potassium	3 <sup>rd</sup> and 4 <sup>th</sup>	<i>Exceeded WQPS</i>
MW-14	Ammonia-Nitrogen	3 <sup>rd</sup>	Below WQPS
	Total Dissolved Solids	3 <sup>rd</sup>	Not Applicable
DW-3	Ammonia-Nitrogen	4 <sup>th</sup>	Not Applicable
DW-5	Ammonia-Nitrogen	4 <sup>th</sup>	Not Applicable
	Allyl Chloride	4 <sup>th</sup>	Not Applicable
PZ-2	Potassium	4 <sup>th</sup>	Results Pending

Notes: Not Applicable – Retesting is not required for analyte/well pairs in “tracking mode”.

\* - Retesting inadvertently not completed. Constituent/well pair automatically placed in tracking mode.

These results are generally similar to past monitoring event results, as most analyte/well pairs were previously in tracking mode. All retest results for samples collected in response to second quarter 2017 WQPS exceedances were measured at concentrations below respective WQPS. Retest results for samples collected following third quarter 2017 WQPS exceedances confirm elevated concentrations of potassium at well MW-13R. Accordingly potassium at well MW-13R was placed in tracking mode during the monitoring period. Results are currently pending for the fourth quarter 2017 WQPS exceedance of the following:

- Ammonia-Nitrogen at well MW-5;
- Potassium at well PZ-2;

Retest results will be presented in the First Semiannual 2018 Water Quality Monitoring Report.

During the second semiannual 2017 monitoring period, a few volatile organic compounds (VOCs) were detected in the third and fourth quarter samples collected from Subdrain N and Combined Subdrains. These findings are consistent with historical results, and as a result, the liquids collected at the subdrains are conveyed to sewer or the water treatment system prior to reuse.

Lysimeter LY-6 was dry and the pump in lysimeter LY-7 was inoperable during both quarterly sampling events in the second half of 2017. Accordingly, no samples were collected from these monitoring locations.

Annual leachate sampling was performed in October 2017. Based on the results obtained, retesting will be performed for cyanide at LR-2R in April 2018.

During the second semiannual 2017 monitoring period, methane concentrations at all perimeter gas probes were below five percent by volume, except for the August results at probe P-207 (59.1 percent by volume [%V]). The landfill gas extraction wells in the vicinity were adjusted and within a week probe P-207 was rechecked and the maximum methane concentration was 0.3 %V. Methane was not detected at probe P-207 during any other monthly monitoring event.

In response to identified impacts to groundwater, a groundwater extraction trench has been constructed across the toe of the canyon to intercept and remove shallow groundwater. Extracted groundwater is conveyed to sewer or the water treatment system to remove VOCs prior to onsite reuse for dust suppression. Combined with other liquids managed by the site, approximately 21,351,207 gallons of liquid were collected and treated at the site during the second semiannual 2017 monitoring period.

## **1.0 INTRODUCTION**

On behalf of Browning-Ferris Industries of California, Inc (BFI) and Sunshine Canyon Landfill, Geo-Logic Associates (GLA) presents this report summarizing water quality and waste intake monitoring and reporting activities for the active Sunshine Canyon Landfill (SCLF) in the city of Sylmar, California (Figure 1), that were completed during the second semiannual 2017 monitoring period. 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 monitoring stations during the third and fourth quarter monitoring events. 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. The information required by MRP CI-2043 to be included in this report with the appropriate report section is summarized in Table 1.

## **2.0 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 and CC-2. Refuse is currently being disposed of in Cells CC-4, Part 1 and CC-4 Part 2.

### **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, which is 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 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  $10^{-3}$  to  $10^{-9}$  centimeters per second with values generally increasing with increasing weathering and fracture density. The hydraulic conductivity of the alluvial deposits is expected to be on the order of 100 to 200 feet per 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.

### 3.0 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 2017 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	CA-L, LR-2R, Leachate	Annual

During the second semiannual 2017 monitoring period, groundwater monitoring was conducted between September 18 and 21 (third quarter) and between December 4 and 6 (fourth quarter). The locations of groundwater monitoring wells, piezometers, and other environmental monitoring points are shown on Figure 2.

#### 3.2 Sampling and Laboratory Analyses

Groundwater samples were collected by GLA during the third and fourth quarter 2017 monitoring events, and submitted to TestAmerica Laboratories, Inc. (TA) of Irvine, California, a state certified laboratory under contract to BFI/Republic. During the third quarter 2017 monitoring period, samples were analyzed for the indicator parameters. During the fourth quarter 2017 monitoring period, groundwater samples were analyzed for the indicator parameters and supplemental parameters. Table 2 summarizes site monitoring parameters,

analytical methods, and monitoring frequency. The groundwater monitoring wells and leachate monitoring points were 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 2017 water quality monitoring event 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 2017 Monitoring Event

- All analyses were completed within the holding times prescribed by the respective analytical method.
- As indicated on Table 3A, no VOCs were detected in QCAB and QCTB samples, and no analytes were detected in method blanks.
- The relative percent difference (RPD) between primary and duplicate samples was eight percent or less for quantifiable results.

#### Fourth Quarter 2017 Monitoring Event

- All analyses were completed within the holding times prescribed by the respective analytical method.
- As indicated on Table 3B, no VOCs were detected in QCTB and QCAB. With the exception of very low trace concentrations of iron and magnesium in one method blank sample, no constituents were detected in method blank samples. Primary samples with similar concentrations as those measured in method blanks are flagged as laboratory contaminants in the tables.
- With one exception, the RPD between primary and duplicate samples was nine percent or less for quantifiable results, which indicates good agreement. Carbon dioxide had an RPD of 24 percent.

The results of the QA/QC program completed during the second semiannual 2017 monitoring period are considered acceptable.

### 3.4 Groundwater Elevations and Flow Conditions

During the second semiannual 2017 monitoring period, quarterly depth to groundwater measurements were measured on September 18 and December 4, 2017. Between March 13 and September 18, 2017, the following changes in the groundwater elevation were measured:

WELL/PIEZOMETER	CHANGE IN GROUNDWATER ELEVATION (FEET)
MW-1	-0.45
MW-2A	-3.14
MW-2B	-0.74
MW-5	-1.56
MW-6	-0.31
MW-8	+2.07
MW-9	+2.08
MW-13R	-0.52
MW-14	-0.06
PZ-1	+0.11
PZ-2	-0.01
PZ-3	-0.74
PZ-4	+0.23

WELL/PIEZOMETER	CHANGE IN GROUNDWATER ELEVATION (FEET)
DW-1	No Change
DW-2	-1.75
DW-3	-0.23
DW-4	-9.72
DW-5	+0.30
CM-9R3	-5.06
CM-10R	-1.42
CM-11R	-5.54
CM-5R	-2.41

Between June 12 and December 4, 2017, the following changes in the groundwater elevation were measured:

WELL/PIEZOMETER	CHANGE IN GROUNDWATER ELEVATION (FEET)
MW-1	+0.24
MW-2A	-3.17
MW-2B	-1.64
MW-5	-0.55
MW-6	-0.32
MW-8	+0.14
MW-9	-0.49
MW-13R	-0.53
MW-14	-0.16
PZ-1	-0.46
PZ-2	-0.17
PZ-3	-0.74
PZ-4	-0.12

WELL/PIEZOMETER	CHANGE IN GROUNDWATER ELEVATION (FEET)
DW-1	No Change
DW-2	-2.34
DW-3	-1.53
DW-4	-10.38
DW-5	-0.20
CM-9R3	-3.79
CM-10R	-1.25
CM-11R	-3.68
CM-5R	-2.24

Groundwater equipotential surface contours were developed using the third and fourth quarter 2017 groundwater elevation data for wells screened in the bedrock are depicted on Figures 3A and 3B, respectively. As shown in these figures, groundwater flow generally mimics the canyon topography, flowing to the southeast, east, and northeast at horizontal gradients ranging from 0.11 foot per foot (ft/ft) to 0.34 ft/ft. 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 in nearby wells screened in alluvium and bedrock suggests the possibility of vertical gradients near the mouth of the canyon. If communication between these water-bearing zones exists, then the vertical gradient near the mouth of the canyon could range from 0.1 ft/ft near wells MW-1 and DW-5 to 0.2 near wells MW-2A and DW-4.

### 3.5 Groundwater Chemistry Results

Groundwater samples collected from site monitoring wells were analyzed for indicator parameters during the third quarter 2017 monitoring period and for indicator and supplemental parameters during the fourth quarter 2017 monitoring period. Results are summarized on Tables 6A and 6B, 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 2017 Retest Groundwater Chemistry Results

During the previous monitoring period (second quarter 2017), the following results were measured above the water quality protection standards (WQPS):

- Alkalinity at wells MW-5 and DW-2;
- Chemical oxygen demand at wells DW-1, DW-3, and PZ-2
- TDS at well MW-6.

Accordingly, retest samples were collected on August 22, 2017. All retest samples were measured at concentrations below respective WQPS. Accordingly, these constituent/well pairs will remain in detection mode.

### 3.5.2 Third Quarter 2017 Groundwater Chemistry Results

During the third quarter 2017 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 2017 monitoring results with water quality protection standards (WQPS). The following table summarizes WQPS exceedances and verification retesting results (when applicable).

WELL	ANALYTE	UNITS	WQPS	3 <sup>RD</sup> QUARTER 2017 RESULT	RETEST RESULT (1)	RETEST RESULT (2)
MW-1	1,4-Dioxane	µg/L	0.99 (PQL)	16	TM	TM
	t-Butanol	µg/L	10 (PQL)	20	TM	TM
MW-5	1,4-Dioxane	µg/L	0.99 (PQL)	12	TM	TM
MW-13R	1,4-Dioxane	µg/L	0.94 (PQL)	7.0	TM	TM
	Potassium	mg/L	27.224	31	29	30
MW-14	Total Dissolved Solids	mg/L	5128.5	5300	TM	TM
	Ammonia-N	mg/L	0.5703	0.80	0.29	0.29

Notes: Retesting only performed on analytes not currently in Tracking Mode.  
TM – Tracking Mode. No retesting required for analytes in Tracking Mode.  
PQL - Practical Quantitation Limit.

Retest samples were collected on October 17, 2017 for analyses of the following:

- Potassium at well MW-13R;
- Ammonia-N at well MW-14.

Retest results confirm elevated potassium at well MW-13R. Accordingly, potassium at well MW-13R has been placed in tracking mode. Retest results for ammonia-N at well MW-14 were measured at concentrations below the respective WQPS. All other constituents exceeding the

respective WQPS listed in the previous table have historically been detected and confirmed in retest samples. Accordingly, these well/constituent pairs are currently in “tracking mode” and retesting is not required.

In addition to quantifiable VOCs measured in samples from the detection monitoring wells shown in the table above, trace concentrations of methyl t-butyl ether and acetone were measured in the samples from wells DW-1 and MW-5 (respectively). With respect to corrective action evaluation monitoring wells, two VOCs were detected in the sample from well MW-9 (Table 6A).

With the exception of the total dissolved solids concentrations in samples from all monitoring wells, none of the analyte concentrations measured in samples collected during the third quarter 2017 monitoring period exceeded a State of California drinking water standard or Federal Maximum Contaminant Level (Table 6A).

### 3.5.3 Fourth Quarter 2017 Groundwater Chemistry Results

During the fourth quarter 2017 monitoring event, samples from all monitoring wells were analyzed for the indicator and supplemental parameters. These results are presented on Table 6B. As shown on Table 7B and summarized below, the following wells/constituents exceeded a WQPS.

WELL	ANALYTE	UNITS	WQPS	4 <sup>TH</sup> QUARTER 2017 RESULT
MW-1	1,4-Dioxane	µg/L	0.94 (PQL)	19
	t-Butanol	µg/L	10	21
MW-5	1,4-Dioxane	µg/L	0.94(PQL)	15
	Ammonia-N	mg/L	5.714	9.6
MW-13R	1,4-Dioxane	µg/L	0.95 (PQL)	7.3
	Potassium	mg/L	27.224	30
DW-3	Ammonia-N	mg/L	0.7564	0.83
DW-5	Ammonia-N	mg/L	0.3918	0.51
	Allyl Chloride	µg/L	1.0	2.9
PZ-2	Potassium	mg/L	4.693	4.7

Note: PQL - Practical Quantitation Limit.

Many of the well/constituent pairs listed above are currently in “tracking mode”. Retesting is currently scheduled for the following:

- Ammonia-N at well MW-5;

- Potassium at well PZ-2.

Retest results will be presented in the First Semiannual 2018 Monitoring Report.

In addition to quantifiable VOCs measured in samples from the detection monitoring wells shown in the table above, trace concentrations tetrahydrofuran and t-butanol were measured in the samples from wells MW-1 and MW-13R (respectively). With respect to corrective action evaluation monitoring wells, four VOCs were detected in the sample from well MW-9 (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. Comparison of upgradient and downgradient water quality data suggests significant natural spatial variability exists at the site.

#### 3.5.4 Tracking Mode Evaluation

Verification retest results obtained during the current monitoring period confirm the presence of potassium that exceeds the WQPS at well MW-13R. Accordingly, this constituent/well pair has been placed in “tracking mode”. The following table summarizes the status of well/constituent pairs in “tracking mode”:

WELL	PARAMETERS IN TRACKING MODE	TRACKING MODE PARAMETERS EXCEEDING WQPS DURING THE CURRENT MONITORING PERIOD	PENDING EXCEEDANCES	PLANNED ACTION
MW-1	1,4-Dioxane, t-Butanol	1,4-Dioxane, t-Butanol	None	Continue Quarterly Monitoring
MW-5	1,4-Dioxane, t-Butanol,	1,4-Dioxane	Ammonia-N	Retest for Ammonia-N; Continue Quarterly Monitoring
MW-6	Chemical Oxygen Demand	None	None	Continue Quarterly Monitoring
MW-13R	1,4-Dioxane Potassium	1,4-Dioxane Potassium	None	Continue Quarterly Monitoring
MW-14	Vinyl Chloride Alkalinity TDS	TDS	None	Continue Quarterly Monitoring
DW-1	Chloride	None	None	Continue Quarterly Monitoring



WELL	PARAMETERS IN TRACKING MODE	TRACKING MODE PARAMETERS EXCEEDING WQPS DURING THE CURRENT MONITORING PERIOD	PENDING EXCEEDANCES	PLANNED ACTION
DW-3	Alkalinity, Ammonia-N	Ammonia-N	None	Continue Quarterly Monitoring
DW-5	Ammonia-N, Allyl Chloride	Ammonia-N	None	Continue Quarterly Monitoring
PZ-2	None	None	Potassium	Retest for Potassium; Continue Quarterly Monitoring
PZ-4	Alkalinity Chloromethane	None	None	Continue Quarterly Monitoring

Time-series charts depicting well-analyte pairs in tracking mode are presented in Appendix G. The following table summarizes trends in the data.

WELL/ANALYTE PAIR	CONCENTRATION LIMIT	3 <sup>RD</sup> QUARTER RESULTS	4 <sup>TH</sup> QUARTER RESULTS	HISTORICAL TRENDS AND OBSERVATIONS
MW-1: 1,4-Dioxane	PQL	16	19	Variable concentrations with slight increasing long-term trend. Concentrations between 10 µg/L and 20 µg/L during the last nine sampling events.
MW-1: t-Butanol	PQL	20	21	Variable (cyclic) concentrations typically between 8 µg/L and 22 µg/L.
MW-5: 1,4-Dioxane	PQL	12	15	Variable concentrations with slight increasing long-term trend; consistently measured above the PQL.
MW-5: t-Butanol	PQL	ND	ND	Only one observation exceeding the WQPS. Not detected during past seven monitoring events.
MW-6: Chemical Oxygen Demand	75.338 mg/L	44	ND	Two sporadic results measured over the concentration limit.
MW-13R: 1,4-Dioxane	PQL	7.0	7.3	Variable concentrations between 4 µg/L and 11 µg/L during the last three years.
MW-13R: Potassium	27.224 mg/L	31	30	Slight increasing trend. First measurement over WQPS in 2017.
MW-14: Vinyl Chloride	PQL	ND	ND	Intermittent detections, generally below the WQPS. Non-detect during last seven sampling events.
MW-14: Alkalinity	587.83	540	520	Variable concentrations typically below the WQPS.

WELL/ANALYTE PAIR	CONCENTRATION LIMIT	3 <sup>RD</sup> QUARTER RESULTS	4 <sup>TH</sup> QUARTER RESULTS	HISTORICAL TRENDS AND OBSERVATIONS
MW-14: TDS	5128.5	<b>5300</b>	4400	Three recent results above the WQPS that are likely associated with elevated rainfall and runoff in early 2017.
DW-1: Chloride	17.737 mg/L	13	14	One anomalous result over the concentration limit. Below WQPS during last nine sampling events.
DW-3: Alkalinity	162.81 mg/L	130	160	Results are typically very near (both above and below) the WQPS.
DW-3: Ammonia as N	0.7564 mg/L	0.59	<b>0.83</b>	Results are typically very near (both above and below) the WQPS, except for two anomalous results in 2014 and 2016.
DW-5: Ammonia as N	0.3918 mg/L	0.33j	<b>0.51</b>	Results are typically very near (both above and below) the WQPS, except for one anomalous result in 2013.
DW-5: Allyl Chloride	PQL	ND	ND	Intermittent detections.
PZ-4: Alkalinity, total	341.13 mg/L	260	330	Concentrations are generally below or slightly above the WQPS.
PZ-4: Chloromethane	PQL	ND	ND	One historical detection.

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

As shown on the charts in Appendix G, VOCs in tracking mode are detected sporadically and at variable concentrations. Concentrations of at least one VOC at wells MW-1, MW-5, and MW-13R typically exceed the respective WQPS. Constituents in tracking mode that have not exceeded a respective concentration limit in more than three years are removed from tracking mode and re-verified if detected in the future.

#### 4.0 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, 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 are submitted for analysis from sample locations Subdrain N and Combined Subdrains.

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 located southeast of disposal Cell CC-3A, Part 1. The CC2-5AC liquid samples represent groundwater seepage to a subdrain liquid collection system that underlies the southwest corner of Cell CC-2, at a depth 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 SCLF water treatment system. Subdrain CC2-3A liquid samples are collected from pumped discharge from this angled riser.

#### 4.1.2 Third Quarter 2017 Subdrain Monitoring Results

During the third quarter 2017 monitoring event, samples from each subdrain monitoring point were collected on September 18, 2017. Samples were delivered to TestAmerica Labs for the indicator parameters.

As shown on Table 8A, the sample from Subdrain N contained two VOCs with a total concentration of 36 µg/L. The sample from Combined subdrains contained two VOCs with a total concentration of 3.38 µg/L. These results are generally similar to those measured during the previous monitoring period. All VOC concentrations were measured below State and federal drinking water standards, or have no established ARAR. TDS concentrations in both samples and the field-measured pH value the sample from Subdrain N exceeded the state secondary drinking water standard.

#### 4.1.3 Fourth Quarter 2017 Subdrain Monitoring Results

During the fourth quarter 2017 monitoring event, samples from subdrain monitoring points were collected on December 4, 2017. Samples were delivered to TestAmerica Labs for the analysis of indicator and supplemental parameters.

As shown on Table 8B, five VOCs were detected in the sample from Subdrain N and two VOCs were detected in the sample from Combined Subdrains, with total VOC concentrations of 26.33 µg/L and 4.61 µg/L (respectively). All VOC concentrations were measured below State and federal drinking water standards.

Concentrations of sulfate, TDS, iron, and manganese exceeded State of California secondary drinking water standards in both fourth quarter 2017 subdrain samples and the field-measured pH value from Subdrain N exceeded the secondary drinking water standard.

Due to the historical presence of VOCs in the samples from Subdrain N and Combined Subdrains, the liquids discharged from these subdrains are collected by the SCLF and routed to the site's water treatment system.

### **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. 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 reached through a 360-foot-long inclined riser at the east side of Cell A. Lysimeter locations are shown on Figure 2.

#### 4.2.2 Third Quarter 2017 Lysimeter Monitoring Results

During the third quarter 2017 monitoring event, sampling of lysimeters was attempted on September 20; however, the pump for lysimeter LY-7 was not working and lysimeter LY-6 was dry at this time.

#### 4.2.3 Fourth Quarter 2017 Lysimeter Monitoring Results

As has been the case in recent monitoring events, lysimeter LY-6 was dry during the second quarter 2017 monitoring event. Sampling of lysimeter LY-7 was attempted on December 4, 2017, though the lysimeter pump was not operational. As a result, no lysimeter samples could be collected during the monitoring period.

### **5.0 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. All other vadose zone gas monitoring is conducted by RES Environmental, Inc. 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 RES Environmental, Inc. are provided in Appendix C.

During the second semiannual 2017 monitoring period, screening of the permanent vadose zone monitoring locations (monthly) was conducted during the following dates: July 10-13, August 22-24, September 19-21, October 24-31, November 14-16, and December 14-21. Monitoring results are presented on Table 9. As shown therein, methane was measured at 59.1 %V in probe P-207 during the August monitoring event. In response, perimeter gas collection wells near probe P-207 (PCW203 and PCW207) were adjusted. Within a week probe P-207 was re-checked and had a methane concentration of 0.3 %V. In addition, methane was not detected during the other five months of the monitoring period at probe P-207. The next highest methane concentration in a perimeter gas probe was measured at 2.7 %V in probe P-205R during the October monitoring event. Methane was detected monthly at probe P-205R, nearly monthly at probe P-240 (five of six months), from September through December at probe P-244 and during one month at probes P-207 and P-239. Methane was not detected at any of the other probes or in subdrains during the second semiannual 2017 monitoring period.

### **6.0 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 2017 monitoring period. Locations of surface water sampling points are shown on Figure 2.

#### **6.1 NPDES Storm Water Quality 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 storm events produced run-off between July and December 2017. Therefore, no stormwater samples were collected (Table 10).

## **6.2 Stream Diversion Monitoring**

During the second semiannual 2017 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 (CDF&G), 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.

## **7.0 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 each leachate sump 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 above respective PQLs are added to the site-specific list of COCs.

The SCLF is currently equipped with three discrete leachate monitoring points (Figure 2):

- A vertical riser located north of the City/County line receives leachate from County Landfill Phases I through V. This location is referred to as “Leachate”. Samples are collected by baling from the County leachate riser.
- Leachate sample location “CA-L” monitors leachate from City Landfill Unit 2. Grab samples are collected at a sample port at the site water treatment facility.
- Leachate sample location “LR-2R” monitors leachate accumulation near the base of unlined City Landfill Unit 1. Samples are collected from a vertical riser.

Annual leachate sampling was conducted at leachate monitoring locations “CA-L” and “LR-2R” on October 17, 2017. Leachate monitoring locations “Leachate” could not be sampled due to a possible bend/fold in the leachate riser at depth (Appendix A). Based on the results obtained, confirmation retesting will be performed to verify the quantifiable concentration of cyanide in the sample from LR-2R in April 2017.

## **8.0 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 2017 monitoring period, approximately 21,351,207 gallons of liquid were collected from the SCLF and transferred to the SCLF water treatment systems prior to being utilized on site for dust control (Table 12A). In order to supplement water needs, the site purchased approximately 27,130,753 gallons of water from the City of Los Angeles Department of Water and Power (Table 12A). Approximately 28,032,579 gallons of water were used for dust control and 18,171,023 gallons of water were discharged to the sewer during the monitoring period.

### **8.2 Monitoring Results For Reuse Water**

Liquids used for dust control (other than potable water) are required to be monitored on a quarterly basis for pH, nitrate, select heavy metals, and VOCs to demonstrate that concentrations of these parameters are below the Primary MCLs established by the State of California for drinking water. During the second semiannual 2017 monitoring period, samples of treated liquids were collected by Invirotreat, Inc. and provided to Western Analytical Laboratories for the requisite analyses. Water quality monitoring results for these samples for the second semiannual 2017 monitoring period are presented on Tables 13A and 13B.

## **9.0 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 2017 monitoring period, the required standard observations were made by site personnel. The site’s NPDES certification of completion for the second semiannual 2017 monitoring period is included in Appendix D.

## 10.0 WASTE DISPOSAL MONITORING

During the second semiannual 2017 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 (CYDS)
January	172,702.22	233,381.38
February	182,918.80	247,187.57
March	170,879.02	230,917.59
April	181,577.96	245,375.62
May	177,542.51	239,922.31
June	153,958.01	208,051.36
<b>January – June 2017 Totals:</b>	<b>1,039,578.52</b>	<b>1,404,835.84</b>

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 2017 monitoring period, approximately 1,039,578.52 tons of waste were disposed at the SCLF. As of January 1, 2018, the remaining capacity at the SCL is estimated at approximately 78,147,663 cubic yards. Based on the currently approved maximum tonnage acceptance rate, the site has a remaining life of approximately 27 years.

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

During the second semiannual 2017 monitoring period, all waste loads accepted at the site were subjected to checking at the scalehouse. 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.



## 11.0 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 following requirements as outlined in Section 2.2 of the Waste Acceptance Plan, Revision 1 (WAP; RMC Geosciences, Inc., 2014):

*“Soils contaminated with TPH, VOCs, SVOCs, organochlorine pesticides, PCBs, or CAM metals may be disposed in lined cells provided the following threshold concentrations are not exceeded:*

- *For petroleum hydrocarbon contaminated soils, the threshold concentrations are 1,000 mg/kg in the C4-C12 carbon chain range, 10,000 mg/kg in the C13-C22 carbon chain range, or an average TPH concentration of 50,000 mg/kg.*
- *Threshold concentration levels for constituents other than petroleum hydrocarbons include:*
  - *Soils with an average, contaminant-specific concentration that does not exceed a Preliminary Remediation Goal (PRG) for industrial sites established by the USEPA.*
  - *Soils with an average, contaminant-specific concentration that does not exceed a California Human Health Screening Level (CHHSL) for industrial sites established by the Cal-EPA.*
  - *Soils with for which a PRG or CHHSL has not been established with an average, contaminant-specific concentration that does not exceed, on a per weight basis, 100 times the MCL established by the USEPA or the State of California Department of Public Health.*

*Soils with VOC, SVOCs, organochlorine pesticide, PCB, or CAM metal contaminant concentrations higher than these limits may be disposed of in lined portions of the landfill based on the results of an evaluation that shows the contaminated soils are not classified as a Designated Waste in accordance with the Central Valley Regional Water Quality Control Board Designated Level Methodology for Waste Classification and Cleanup Level Determination or alternative methodology approved by the Executive Officer.”*

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 are provided in Tables 15 and 16.

### **11.1 Second Semiannual 2017 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 14.

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 CHSL 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 (TTL) 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.

Tables 15 and 16 summarize sample locations, sample dates, samplers, and analytical results for each generator. This table also compares the analytical data for the sample to the respective TTLs, lined cell disposal threshold limits, and unrestricted use threshold limits to illustrate that acceptance criteria were met. Certified analytical reports and waste profiling forms are provided in Appendix F.

Based on the frequency of sampling and the comparison of analytical results to the waste acceptance criteria, all special wastes that were disposed of at the SCL during the second semiannual 2017 monitoring period met the waste acceptance requirements of the Amended

WDRs and the site-specific WAP. One special waste was rejected during the monitoring period due to a conflict with the facilities odor management plan.

## **12.0 ANNUAL SUMMARY**

During the 2017 monitoring year, groundwater elevations and chemistries were generally similar to past monitoring events. No evidence of a new release or changes in existing release conditions were identified.

During the second semiannual 2017 monitoring period, concentration limits were exceeded for VOCs at three of the five shallow, alluvial monitoring wells and at none of the six deep, bedrock wells. Additionally, concentration limits were exceeded for inorganic constituents at three deep, bedrock monitoring wells and four of the shallow, alluvial monitoring wells. With the exception of potassium at well MW-13R, which was added to tracking mode, all other concentration limit exceedances were for well/analyte pairs already in tracking mode (no retesting required) or retest samples did not confirm original results. Retest samples for fourth quarter 2017 results that exceeded concentration limits that require retesting (ammonia-N at well MW-5 and potassium at well PZ-2) will be collected during the first quarter 2018 and presented in the January through June 2018 report.

During the 2017 monitoring year, methane concentrations did not exceed 5%V at any landfill gas monitoring probe, except at probe P-207 (59.1 %V) in August 2017. In response, landfill gas extraction wells near probe P-207. Probe P-207 was rechecked within a week and the highest reading at that time was 0.3 %V. Methane was not detected at probe P-207 in subsequent months.

No new seeps were identified during the 2017 year.

Leachate, landfill gas condensate, groundwater extracted near the cut-off wall, and groundwater collected from subdrains at the SCLF are treated at the site and are subsequently used for dust control. Alternatively, the treated liquids are discharged to the Los Angeles City sanitary sewer system. Total volumes from each water source that were treated during the 2017 monitoring year are shown in Table 12.

During the second semiannual 2017 monitoring period the following construction projects at the site were completed:

- Approval for disposal operations in Cell CC-4 Part 2 was received from the RWQCB on October 23, 2017, and disposal operations in this cell commenced on October 25, 2017.
- Construction of Flare 11 (a 5,000 scfm ultra-low emission flare) was completed on October 31, 2017 and the flare was put into service on November 13, 2017.

- A comprehensive upgrade to the aboveground liquid collection/discharge system for the removal of liquids from vertical gas collection wells affected by liquids began in December 2016 and was completed in the third quarter of 2017. As of August 31, 2017, 250 pumps were installed in gas wells to extract liquids. As part of these upgrades, 16 liquid storage tanks have been staged on site to ensure sufficient storage capacity for site liquids before they are either discharged to the sewer, treated for use as dust control water or taken off-site for disposal. Additional improvements to the site's liquid management system are currently underway and are scheduled for completion during the first quarter of 2018.
- Continued odor control measures have resulted in decreased odor complaints.
- Improvements to areas of the landfill that have intermediate cover include installation of 21 acres of Closure Turf (an impermeable synthetic liner overlain by artificial turf) and application of 38 acres of a thick, flexible spray-on cover in new waste fill areas. Additionally, work commenced to establish vegetation over a 57 acre area.
- Work on a covered aerated static pile composting to compost up to 75 tons of food waste began during the monitoring period.
- The second year of a pilot study for alternative daily cover (ADC) was completed and subsequent report submitted LEA and DPW. The LEA concurred with Republic Services' conclusion that the ADC should continue to be used at the site.
- The construction of the Phase 2 Coastal Sage Scrub mitigation area on Deck B was initiated in October 2017. Grading of the area was completed in early November 2017.
- Repairs were made to a tear in the liner of cell CC4, Part 2 slope area in December 2017. The RWQCB was notified of the incident and subsequent repairs in a letter dated December 21, 2017.

### **12.1 Graphical Presentation of Analytical Data**

Graphs depicting constituent concentrations in site monitoring wells are presented in Appendix H.

### **12.2 2017 Analytical Data**

Historical data is presented in tabular form in Appendix I. Complete data history for each monitoring well is submitted electronically to the Geotracker database.

### **13.0 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.

**CERTIFICATION**

All hydrogeologic and geologic information, conclusions, and recommendations in this document have been prepared under the supervision of and reviewed by a Geo-Logic Associates' California Registered Professional Geologist and Certified Engineering Geologist.



February 15, 2018

---

John M. Hower

Date

California Certified Engineering Geologist #2142



## 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	Executive Summary
	Planned Corrective Actions	Executive Summary
	Signature of Owner/Operator Principal	Republic Transmittal Letter
	Statement of validity, accuracy, and completeness	Republic Transmittal Letter
I.A.2	Summary of Non-Compliance	Executive Summary
I.A.3	Site Conditions	Section 2
I.A.4	Narrative Description	
	Monitoring Parameters	Section 3.2, Table 2
	Groundwater 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	
Seep and Trench Liquid 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 11
	Stream Diversion	Section 6.2
	Spring Water	Section 6.3, Appendix D
	Leachate	Appendix B2; Table 12
	Trench Liquid	Tables 14A and 14B
	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 E
I.A.7	Summary of total volumes of liquids, on a monthly basis, of landfill leachate, condensate, and subdrain water.	Table 13
	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 F
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 permitted 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 13
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 D
	Map showing monitoring locations	Figure 2; Figure 4
	Map showing groundwater contours	Figures 3A and 3B



**TABLE 2  
ANALYTICAL PARAMETERS AND METHODS  
SUNSHINE CANYON LANDFILL**

Parameter	Typical USEPA Method	Frequency
<b><u>Indicator Parameters</u></b>		
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
<b><u>Supplemental Parameters</u></b>		
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
<b><u>Constituents of Concern (COCs)</u></b>		
		(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 2017  
SUNSHINE CANYON LANDFILL**

Primary Sampling Date	Blank Sampling Date	Blank Sample Collection Type	Reported Analytes
9/18/17	9/18/17	QCAB	None Detected
	9/18/17	QCTB	None Detected
	9/18/17	Method Blanks	None Detected
9/19/17	9/19/17	QCAB	None Detected
	9/19/17	QCTB	None Detected
	9/19/17	Method Blanks	None Detected
9/20/17	9/20/17	QCAB	None Detected
	9/20/17	QCTB	None Detected
	9/20/17	Method Blanks	None Detected
9/21/17	9/21/17	QCAB	None Detected
	9/21/17	QCTB	None Detected
	9/21/17	Method Blanks	None Detected

**TABLE 3B  
SUMMARY OF BLANK SAMPLE RESULTS - FOURTH QUARTER 2017  
SUNSHINE CANYON LANDFILL**

Primary Sampling Date	Blank Sampling Date	Blank Sample Collection Type	Reported Analytes
10/17/17	10/17/17	QCAB	None Detected
	10/17/17	QCTB	None Detected
	10/17/17	Method Blank	None Detected
12/4/17	12/4/17	QCAB	None Detected
	12/4/17	QCTB	None Detected
	12/4/17	Method Blank	None Detected
12/5/17	12/5/17	QCAB	None Detected
	12/5/17	QCTB	None Detected
	12/5/17	Method Blanks	Iron: 0.0991j mg/L Magnesium: 0.0122j mg/L
12/6/17	12/6/17	QCAB	None Detected
	12/6/17	QCTB	None Detected
	12/6/17	Method Blanks	None Detected
12/7/17	12/7/17	QCAB	None Detected
	12/7/17	QCTB	None Detected
	12/7/17	Method Blanks	None Detected

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

**TABLE 4A**  
**SUMMARY OF DUPLICATE SAMPLE RESULTS - THIRD QUARTER 2017**  
**SUNSHINE CANYON LANDFILL**

ANALYTE	Combined Subdrain 9-18-17	Duplicate 9-18-17	RELATIVE PERCENT DIFFERENCE
<b>GENERAL CHEMISTRY CONSTITUENTS (mg/L):</b>			
Alkalinity, total	230	250	8
Ammonia (as N)	0.75	0.77	3
Chemical Oxygen Demand	28	<b>17</b>	NC
Chloride	54	53	2
Total Dissolved Solids	2300	2400	4
Total Organic Compound	6.1	6.2	2
<b>METALS (mg/L):</b>			
Potassium	6.6	6.2	6
<b>VOLATILE ORGANIC COMPOUNDS (µg/L):</b>			
cis-1,2-Dichloroethene	<b>0.48</b>	0.51	NC
<b>SEMIVOLATILE ORGANIC COMPOUNDS (µg/L): Not Detected</b>			

**TABLE 4B**  
**SUMMARY OF DUPLICATE SAMPLE RESULTS - FOURTH QUARTER 2017**  
**SUNSHINE CANYON LANDFILL**

ANALYTE	DW-2 12/5/2017	DUPLICATE 12-5-17	RELATIVE PERCENT DIFFERENCE
<b>GENERAL CHEMISTRY CONSTITUENTS (mg/L):</b>			
Alkalinity, total	370	370	0
Ammonia (as N)	3.0	3.0	0
Bicarbonate alkalinity	370	370	0
Bromide	0.50	0.50	NC
Carbon Dioxide	11	14	24
Chemical Oxygen Demand	<b>10</b>	10	NC
Chloride	11	11	0
Fluoride	<b>0.58</b>	<b>0.64</b>	NC
Nitrate (as N)	0.11	0.11	NC
Sulfate	980	1000	2
Sulfide, total	0.081	0.027	NC
Total Dissolved Solids	1900	1900	0
Total Organic Carbon	1.5	1.5	0
<b>METALS (mg/L):</b>			
Boron	0.62	0.64	3
Calcium	81	83	2
Iron	0.82	0.85	4
Magnesium	55	57	4
Manganese	0.11	0.12	9
Potassium	4.3	4.4	2
Sodium	420	430	2
<b>VOLATILE AND SEMIVOLATILE ORGANIC COMPOUNDS (µg/L): Not Detected</b>			

Notes:

Right-justified value, non-shaded box indicates a quantified concentration (above the Practical 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).

Only detected constituents shown.

**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
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	1364.72	1378.63	1321.41	1330.49	1347.86	1326.58	1339.32	1351.93	1486.82	1529.44	1368.00
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

**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 - 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
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	1830.90
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	1817.10
12/4/2017	1332.72	1550.84	1443.98	1808.82	1684.04	1888.06	1850.44	1990.75	1348.05	ABANDONED	1816.10

**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 ANALYTICAL RESULTS - THIRD QUARTER 2017**  
**SUNSHINE CANYON LANDFILL**

Analyte	Units	BACKGROUND WELLS			SHALLOW MONITORING WELLS							DEEP MONITORING WELLS							ARAR	
		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
		9/18/2017	9/18/2017	9/18/2017	9/21/2017	9/20/2017	9/20/2017	9/19/2017	9/19/2017	9/21/2017	9/19/2017	9/19/2017	9/19/2017	9/20/2017	9/20/2017	9/21/2017	9/20/2017	9/19/2017		9/20/2017
Alkalinity	mg/L	24	4.0	470	550	270	510	450	740	590	540	420	290	130	270	730	260	290	260	NV
Ammonia-Nitrogen	mg/L	2.8	1.0	10	2.8	2.8	5.6	0.81	10	5.8	0.80	1.8	2.8	0.59	3.9	0.33j	3.4	3.0	2.0	NV
Chemical Oxygen Demand	mg/L	20	15j	22	120	10	86	44	280	270	38	20	14j	10	10	16j	10	10	10	NV
Chloride	mg/L	15	13	9.6	260	15	260	32	460	140	79	13	10	14	13	17	12	11	7.9	500(2)
Potassium, total	mg/L	14	12	11	32	5.1	28	5.2	31	31	10	2.3	3.8	8.5	4.4	1.4	4.3	4.1	4.5	NV
Total Dissolved Solids	mg/L	5100	4300	2500	3800	2700	3800	3100	3900	2100	5300	3200	1800	2000	2900	1100	2700	4000	1200	1000(2)
Total Organic Carbon	mg/L	6.8	5.0	4.3	48	2.6	35	5.7	96	25	9.6	3.1	1.5	0.45	1.8	6.5	1.8	2.5	1.2	NV
Acetone	µg/L	10	10	10	10	10	11j	10	50	10	10	10	10	10	10	10	10	10	10	NV
t-Butanol	µg/L	5.0	5.0	5.0	20	5.0	5.0	5.0	70	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	NV
1,4-Dioxane	µg/L	0.25	0.24	0.24	16	0.26	12	0.23	28	7.0	0.24	0.24	0.24	0.25	0.25	0.24	0.25	0.24	0.25	NV
Methyl tert-butyl ether	µg/L	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.30j	0.25	0.25	0.25	0.25	0.25	0.25	0.25	13(1)/5(2)

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

NV: No ARAR value.

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 ARAR value.

**TABLE 6B  
SUMMARY OF ANALYTICAL RESULTS - FOURTH QUARTER 2017  
SUNSHINE CANYON LANDFILL**

Analyte	Units	BACKGROUND WELLS			SHALLOW MONITORING WELLS								DEEP MONITORING WELLS								ARAR
		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		
		12/4/17	12/4/17	12/4/17	12/7/2017	12/6/17	12/6/2017	12/5/2017	12/5/2017	12/5/2017	12/5/2017	12/5/2017	12/5/2017	12/5/2017	12/5/2017	12/6/2017	12/7/2017	12/6/2017	12/6/2017	12/6/2017	
<b>Inorganic Monitoring Parameters:</b>																					
Alkalinity, total	mg/L	37	7.5	590	700	330	680	450	1200	740	520	530	370	160	340	930	350	360	330	NV	
Alkalinity, bicarbonate	mg/L	37	7.5	590	700	330	680	450	1200	740	520	430	370	160	340	890	350	330	330	NV	
Ammonia-Nitrogen	mg/L	3.4	1.7	13	3.8	3.4	9.6	1.0	9.6	7.6	0.21j	2.2	3.0	0.83	2.6	0.51	3.6	3.4	2.4	NV	
Bromide	mg/L	2.5	2.5	1.3	4.3	0.50	3.9	0.88j	10	2.4	2.1j	1.3	0.50	0.25	0.50	0.25	0.50	2.5	0.25	NV	
Carbon Dioxide, free	mg/L	140	62	67	95	49	86	39	200	55	51	2.0	11	14	16	5.3	15	2.0	30	NV	
Chemical Oxygen Demand	mg/L	10	10	10	130	10	73	10	360	270	10	10	10	10	10	10	10	10	10	NV	
Chloride	mg/L	16	13	10	310	14	270	38	680	190	77	14	11	16	13	21	13	11	8.6	500(2)	
Fluoride	mg/L	4.6j	2.5	1.6j	1.7	0.98j	2.0	1.1	2.5	0.50	2.3j	2.2j	0.58j	0.40j	0.50j	3.4	0.81j	2.5	0.98	2(1)-4(3)	
Nitrate-Nitrogen	mg/L	0.55	0.55	0.28	0.11	0.11	0.11	0.11	0.55	0.11	0.28	0.28	0.11	0.055	0.11	0.055	0.11	0.55	0.055	10(1,3)	
Sulfate	mg/L	3200	2900	1300	1700	1600	1700	1800	1100	650	2800	1800	980	1200	1800	0.25	1600	2600	540	500(2)	
Sulfide, total	mg/L	0.027	0.30	5.7	0.027	0.027	0.027	7.6	0.027	120	0.027	1.5	0.081	0.027	0.027	0.029j	0.027	0.027	0.027	NV	
Total Dissolved Solids	mg/L	4900	4300	2500	3700	2500	3600	3000	4100	2100	4400	3100	1900	1800	2800	1100	2500	4100	1100	1000(2)	
Total Organic Carbon	mg/L	6.1	4.7	4.1	48	2.4	34	5.2	140	25	7.8	3.0	1.5	0.38	1.8	7.9	1.8	2.6	1.4	NV	
<b>Metals:</b>																					
Boron	mg/L	1.8	1.4	0.84	1.4	0.49	0.99	0.80	2.7	0.86	0.61	2.1	0.62	0.052	0.55	2.8	0.59	1.4	0.16	NV	
Calcium	mg/L	390	310	240	460	180	450	330	440	170	490	2.9	81	300	190	5.6	190	14	110	NV	
Iron	mg/L	24	0.34	0.050	60	2.90	21	0.78*	70	0.050	0.46*	0.050	0.82*	0.66*	1.8	0.15	2.2	0.050	1.0	0.3(2)	
Magnesium	mg/L	320	200	260	210	110	210	190	230	160	260	1.7	55	110	130	0.93	120	12	70	NV	
Manganese	mg/L	6.8	5.9	0.28	3.5	0.45	4.8	0.85	3.7	0.015	4.8	0.015	0.11	0.079	0.12	0.097	0.14	0.029	0.10	0.05(2)	
Potassium, total	mg/L	16	13	13	30	4.3	29	5.8	34	30	9.3	2.3	4.3	9.0	4.3	1.2	4.6	4.7	4.0	NV	
Sodium	mg/L	360	520	170	350	330	270	320	470	210	430	980	420	63	410	440	420	1300	95	NV	
<b>Volatile and Semivolatile Organic Compounds:</b>																					
Allyl Chloride	µg/L	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	2.9	0.50	0.50	0.50	NV	
t-Butanol	µg/L	5.0	5.0	5.0	21	5.0	5.0	5.0	110	5.9j	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	NV	
cis-1,2-Dichloroethene	µg/L	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.79	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	6(1)-70(3)	
1,4-Dioxane	µg/L	0.26	0.28	0.28	19	0.26	15	0.26	47	7.3	0.25	0.24	0.25	0.27	0.25	0.27	0.25	0.25	0.26	NV	
Tetrahydrofuran	µg/L	5.0	5.0	5.0	6.7j	5.0	5.0	5.0	21	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	NV	

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.

ND: Analyte was not detected. Detection limit is unknown.

\* - Analyte also detected in a blank sample at a similar concentration.

<sup>H</sup> - Analyte prepped or analyzed past hold time.

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 2017**  
**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	
		Result	WQPS	Result	WQPS	Result	WQPS	Result	WQPS	Result	WQPS	Result	WQPS	Result	WQPS	Result	WQPS	Result	WQPS	Result	WQPS	Result	WQPS
Alkalinity	mg/L	550	844.76	510	727.34	450	571.59	590	972.24	540	587.83	420	658.76	290	410.47	130	162.81	730	1009.98	290	411.93	260	341.13
Ammonia-Nitrogen	mg/L	2.8	10.634	5.6	5.714	0.81	1.337	5.8	7.732	0.80	0.5703	1.8	2.4	2.8	4.308	0.59	0.7564	0.33j	0.3918	3.0	3.598	2.0	2.976
Chemical Oxygen Demand	mg/L	120	202.056	86	135.7	44	75.338	270	407.58	38	54.674	20	49.801	14j	52.743	10	15.206	16j	76.47	10	26.386	10	24.85
Chloride	mg/L	260	408.469	260	469.603	32	70.829	140	213.802	79	88.987	13	17.737	10	15.462	14	17.534	17	101.838	11	16.398	7.9	11.706
Potassium, total	mg/L	32	54.763	28	34.393	5.2	10.679	31	27.224	10	12.508	2.3	3.838	3.8	6.183	8.5	12.357	1.4	5.262	4.1	4.693	4.5	5.643
Total Dissolved Solids	mg/L	3800	4495	3800	4614.2	3100	4486.5	2100	3450.9	5300	5128.5	3200	3600.2	1800	2178.3	2000	2313.1	1100	1417.3	4000	4403.2	1200	1529.5
Total Organic Carbon	mg/L	48	75.928	35	50.696	5.7	15.408	25	54.233	9.6	13.006	3.1	9.947	1.5	3.499	0.45	2.115	6.5	11.745	2.5	2.887	1.2	2.085
Volatile Organic Compounds: (The WQPS is the PQL for any single VOC detected.)																							
Acetone	µg/L	10	20	11j	20	10	20	10	20	10	20	10	20	10	20	10	20	10	20	10	20	10	20
t-Butanol	µg/L	20	10	5.0	10	5.0	10	5.0	10	5.0	10	5.0	10	5.0	10	5.0	10	5.0	10	5.0	10	5.0	10
1,4-Dioxane	µg/L	16	0.99	12	0.99	0.23	1.0	7.0	0.94	0.24	0.95	0.24	10	0.24	0.99	0.25	0.94	0.24	0.95	0.24	1.1	0.25	0.97
Methyl tert-butyl ether	µg/L	0.25	0.50	0.25	0.50	0.25	0.50	0.25	0.50	0.25	0.50	0.30j	0.50	0.25	0.50	0.25	0.50	0.25	0.50	0.25	0.50	0.25	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 7B  
COMPARISON OF INTRAWELL WATER QUALITY PROTECTION STANDARDS TO ANALYTICAL RESULTS - FOURTH QUARTER 2017  
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	
		12/7/2017	WQPS	12/6/2017	WQPS	12/5/2017	WQPS	12/5/2017	WQPS	12/5/2017	WQPS	12/5/2017	WQPS	12/5/2017	WQPS	12/5/2017	WQPS	12/7/2017	WQPS	12/6/2017	WQPS	12/6/2017	WQPS
Alkalinity	mg/L	700	844.76	680	727.34	450	571.59	740	972.24	520	587.83	530	658.76	370	410.47	160	162.81	930	1009.98	360	411.93	330	341.13
Ammonia-Nitrogen	mg/L	3.8	10.634	9.6	5.714	1.0	1.337	7.6	7.732	0.21j	0.5703	2.2	2.4	3.0	4.308	0.83	0.7564	0.51	0.3918	3.4	3.598	2.4	2.976
Chemical Oxygen Demand	mg/L	130	202.056	73	135.7	10	75.338	270	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	310	408.469	270	469.603	38	70.829	190	213.802	77	88.987	14	17.737	11	15.462	16	17.534	21	101.838	11	16.398	8.6	11.706
Potassium, total	mg/L	30	54.763	29	34.393	5.8	10.679	30	27.224	9.3	12.508	2.3	3.838	4.3	6.183	9.0	12.357	1.2	5.262	4.7	4.693	4.0	5.643
Total Dissolved Solids	mg/L	3700	4495	3600	4614.2	3000	4486.5	2100	3450.9	4400	5128.5	1900	3600.2	1900	2178.3	1800	2313.1	1100	1417.3	4100	4403.2	1100	1529.5
Total Organic Carbon	mg/L	48	75.928	34	50.696	5.2	15.408	25	54.233	7.8	13.006	3.0	9.947	1.5	3.499	0.38	2.115	7.9	11.745	2.6	2.887	1.4	2.085
Volatile Organic Compounds: (The WQPS is the PQL for any single VOC detected.)																							
Allyl Chloride	µg/L	0.50	1.0	0.50	1.0	0.50	1.0	0.50	1.0	0.50	1.0	0.50	1.0	0.50	1.0	0.50	1.0	2.9	1.0	0.50	1.0	0.50	1.0
t-Butanol	µg/L	21	10	5.0	10	5.0	10	5.9j	10	5.0	10	5.0	10	5.0	10	5.0	10	5.0	10	5.0	10	5.0	10
1,4-Dioxane	µg/L	19	0.94	15	0.94	0.26	0.99	7.3	0.95	0.24	1.0	0.24	0.94	0.25	0.94	0.27	1.0	0.27	0.98	0.25	1.0	0.26	0.96
Tetrahydrofuran	µg/L	6.7j	10	5.0	10	5.0	10	5.0	10	5.0	10	5.0	10	5.0	10	5.0	10	5.0	10	5.0	10	5.0	10

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.

\* Field/Laboratory containment (detected in blank samples, see Table 3B)

**TABLE 8A**  
**SUMMARY OF ANALYTICAL RESULTS FOR VADOSE ZONE LIQUID MONITORING POINTS**  
**THIRD QUARTER 2017**  
**SUNSHINE CANYON LANDFILL**

Analyte	Units	SUBDRAIN MONITORING POINTS		LYSIMETERS		ARAR
		Subdrain N	Combined Subdrains	LY-6	LY-7	
		9/18/2017	9/18/2017	9/20/2017	9/20/2017	
<b>Field Parameters:</b>						
Electrical Conductivity	mS/cm	4390	3800	Dry	NS	NV
Oxidation Reduction Potential	mV	113	224	Dry	NS	NV
Oxygen, dissolved	mg/L	2.94	2.12	Dry	NS	NV
pH	Units	6.29	6.69	Dry	NS	6.5-8.5(2)
Temperature	°C	26.60	28.82	Dry	NS	NV
Turbidity	NTU	0.1	26.7	Dry	NS	5(2)
<b>General Chemistry Parameters:</b>						
Alkalinity, total	mg/L	350	230	Dry	NS	NV
Ammonia-Nitrogen	mg/L	3.9	0.75	Dry	NS	NV
Chemical Oxygen Demand	mg/L	60	28	Dry	NS	NV
Chloride	mg/L	140	54	Dry	NS	500(2)
Total Dissolved Solids	mg/L	2500	2300	Dry	NS	1000(2)
Total Organic Carbon	mg/L	29	6.1	Dry	NS	NV
<b>Metals:</b>						
Potassium	mg/L	7.9	6.6	Dry	NS	NV
<b>Volatile and Semivolatile Organic Compounds:</b>						
t-Butanol	µg/L	24	5.0	Dry	NS	NV
cis-1,2-Dichloroethene	µg/L	0.50	0.48J	Dry	NS	6(1)-70(3)
1,4-Dioxane	µg/L	12	2.9	Dry	NS	NV

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 2017**  
**SUNSHINE CANYON LANDFILL**

Analyte	Units	SUBDRAIN MONITORING POINTS		LYSIMETERS		ARAR
		Subdrain N	Combined Subdrains	LY-6	LY-7	
		12/4/2017	12/4/2017	12/7/2017	12/4/2017	
<b>Field Parameters:</b>						
Electrical Conductivity	Ω/cm	2.80	3.42	Dry	NS	NV
Oxidation Reduction Potential	mV	94	189	Dry	NS	NV
Oxygen, dissolved	mg/L	2.60	3.40	Dry	NS	NV
pH	Units	5.95	6.57	Dry	NS	6.5-8.5(2)
Temperature	°C	20.80	17.26	Dry	NS	NV
Turbidity	NTU	0.3	9.6	Dry	NS	5(2)
<b>General Chemistry Parameters:</b>						
Alkalinity, total	mg/L	540	300	Dry	NS	NV
Alkalinity, bicarbonate	mg/L	540	300	Dry	NS	NV
Ammonia-Nitrogen	mg/L	4.1	0.97	Dry	NS	NV
Bromide	mg/L	1.7	.77j	Dry	NS	NV
Carbon dioxide	mg/L	180	42	Dry	NS	NV
Chemical Oxygen Demand	mg/L	56	10	Dry	NS	NV
Chloride	mg/L	110	61	Dry	NS	500(2)
Fluoride	mg/L	1.6j	1.1	Dry	NS	2(1)-4(3)
Nitrate as Nitrogen	mg/L	0.28	2.5	Dry	NS	10(1,3)
Sulfate	mg/L	1400	1300	Dry	NS	500(2)
Total Dissolved Solids	mg/L	2700	2300	Dry	NS	1000(2)
Total Organic Carbon	mg/L	24	5.9	Dry	NS	NV
<b>Metals</b>						
Boron	mg/L	0.62	0.24	Dry	NS	NV
Calcium	mg/L	270	270	Dry	NS	NV
Iron	mg/L	13	0.66	Dry	NS	0.3(2)
Magnesium	mg/L	170	200	Dry	NS	NV
Manganese	mg/L	3.9	0.86	Dry	NS	0.05(2)
Potassium	mg/L	9.8	6.9	Dry	NS	NV
Sodium	mg/L	230	110	Dry	NS	NV
<b>Volatile and Semivolatile Organic Compounds:</b>						
t-Butanol	µg/L	14	5.0	Dry	NS	NV
cis-1,2-Dichloroethene	µg/L	0.66	0.51	Dry	NS	6(1)-70(3)
1,4-Dichlorobenzene	µg/L	2.3	0.25	Dry	NS	5(1)-75(3)
1,4-Dioxane	µg/L	8.6	4.1	Dry	NS	NV
Methyl tert-butyl ether	µg/L	0.77	0.25	Dry	NS	13(1)/5(2)

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 2017 MONITORING PERIOD  
SUNSHINE CANYON LANDFILL**

Probe ID	Interval	Depth (ft bgs)	7/10/2017- 7/13/2017	8/22/2017- 8/24/2017	9/19/2017- 9/21/2017	10/24/2017- 10/31/2017	11/14/2017- 11/16/2017	12/14/2017- 12/21/2017
P-202	A	10-15	Removed Due to Construction					
	B	25-30						
	C	40-45						
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	0.0	0.0	0.0
	B	20-25	0.6	0.7	0.7	0.5	0.2	0.1
	C	33-38	1.6	0.6	1.2	0.6	0.6	0.9
	D	48-53	2.3	0.8	1.9	2.7	1.9	0.8
	E	62-67	2.1	0.9	1.3	0.9	0.7	0.4
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	59.1	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	1.5	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	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0
	B	16-21	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 2017 MONITORING PERIOD**  
**SUNSHINE CANYON LANDFILL**

Probe ID	Interval	Depth (ft bgs)	7/10/2017- 7/13/2017	8/22/2017- 8/24/2017	9/19/2017- 9/21/2017	10/24/2017- 10/31/2017	11/14/2017- 11/16/2017	12/14/2017- 12/21/2017
P-218R	A	5-8	0.0	0.0	0.0	0.0	0.0	0.0
	B		0.0	0.0	0.0	0.0	0.0	0.0
	C		0.0	0.0	0.0	0.0	0.0	0.0
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-220A	A	6.9-14	0.0	0.0	0.0	0.0	0.0	0.0
	B	44-51	0.0	0.0	0.0	0.0	0.0	0.0
	C	79-88	0.0	0.0	0.0	0.0	0.0	0.0
	D	117-127	0.0	0.0	0.0	0.0	0.0	0.0
	E	150-159	0.0	0.0	0.0	0.0	0.0	0.0
P-220B	A	8-15	0.0	0.0	0.0	0.0	0.0	0.0
	B	32-39	0.0	0.0	0.0	0.0	0.0	0.0
	C	56-61	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-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	0.0
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	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0
	B	58-68	0.0	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 2017 MONITORING PERIOD**  
**SUNSHINE CANYON LANDFILL**

Probe ID	Interval	Depth (ft bgs)	7/10/2017-7/13/2017	8/22/2017-8/24/2017	9/19/2017-9/21/2017	10/24/2017-10/31/2017	11/14/2017-11/16/2017	12/14/2017-12/21/2017
P-227	A	6-15	0.0	0.0	0.0	0.0	0.0	0.0
	B	46-55	0.0	0.0	0.0	0.0	0.0	0.0
	C	85-95	0.0	0.0	0.0	0.0	0.0	0.0
	D	126-134	0.0	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	0.0	0.0	0.0	0.0	0.0	0.0
	B	56-65	0.0	0.0	0.0	0.0	0.0	0.0
	C	107-115	0.0	0.0	0.0	0.0	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	0.0	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	0.0	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	0.9	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	0.6	0.9	0.9	0.1	0.0	0.6
P-241	A	10-15	0.0	0.0	0.0	0.0	0.0	0.0
	B	37-42	0.0	0.0	0.0	0.0	0.0	0.0
	C	61-66	0.0	0.0	0.0	0.0	0.0	0.0
	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	0.0	0.0	0.0	0.0	0.0	0.0
	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	0.1	0.1	0.1	0.1
	B	21-26	0.0	0.0	0.1	0.1	0.1	0.1
	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 2017 MONITORING PERIOD**  
**SUNSHINE CANYON LANDFILL**

Probe ID	Interval	Depth (ft bgs)	7/10/2017- 7/13/2017	8/22/2017- 8/24/2017	9/19/2017- 9/21/2017	10/24/2017- 10/31/2017	11/14/2017- 11/16/2017	12/14/2017- 12/21/2017
P-245	A	6-11	0.0	0.0	0.0	0.0	0.0	0.0
	B	20-25	0.0	0.0	0.0	0.0	0.0	0.0
	C	35-40	0.0	0.0	0.0	0.0	0.0	0.0
	D	50-55	0.0	0.0	0.0	0.0	0.0	0.0
	E	64-69	0.0	0.0	0.0	0.0	0.0	0.0
P-246	A	6-9						
	B	12-19						
Subdrains	P-203D		0.0	0.0	0.0	0.0	0.0	0.0
	P204D		0.0	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 2017 MONITORING PERIOD**  
**SUNSHINE CANYON LANDFILL**

No stormwater samples were collected during the monitoring period.



**TABLE 11**  
**SUMMARY OF ANALYTICAL RESULTS FOR LEACHATE MONITORING POINTS - OCTOBER 2017**  
**SUNSHINE CANYON LANDFILL**

Analyte	Units	LEACHATE MONITORING POINTS			ARAR
		LR-2R	CA-L	LEACHATE	
		10/17/2017	10/17/2017	10/17/2017	
<b>General Chemistry Parameters:</b>					
Cyanide	mg/L	0.014	NA	NA	0.15(1)-0.2(3)
<b>Metals: None Detected</b>					
<b>Volatile Organic Compounds (8260B ):</b>					
Acetone	µg/L	27	24	NA	NV
Acrylonitrile	µg/L	1.0	5.6	NA	NV
Benzene	µg/L	<b>3.9</b>	<b>4.8</b>	NA	1(1)-5(3)
t-Butanol	µg/L	530	1400	NA	NV
Carbon disulfide	µg/L	0.50	1.6	NA	NV
Chlorobenzene	µg/L	24	0.43j	NA	70(1)-100(3)
1,2-Dichlorobenzene	µg/L	6.2	0.25	NA	600(1,3)
1,3-Dichlorobenzene	µg/L	0.33j	0.25	NA	NV
1,4-Dichlorobenzene	µg/L	<b>9.9</b>	<b>8.2</b>	NA	5(1)-75(3)
1,2-Dichloroethane	µg/L	0.25	<b>0.65</b>	NA	0.5(1)-5(3)
1,2-Dichloropropane	µg/L	0.25	0.32j	NA	5(1,3)
cis-1,2-Dichloroethene	µg/L	0.25	2.0	NA	6(1)-70(3)
Ethylbenzene	µg/L	1.4	0.25	NA	300(1)-700(3)
Methyl tert-butyl ether	µg/L	0.58	0.81	NA	5(2)-13(1)
Naphthalene	µg/L	<b>17</b>	0.40	NA	NV
Tetrahydrofuran	µg/L	200	13	NA	NV
Trichloroethene	µg/L	0.25	0.37j	NA	5(1,3)
Toluene	µg/L	0.82	0.44j	NA	150(1)-1000(3)
Xylenes, o	µg/L	1.0	0.25	NA	1750(1)-10000(3)
Xylenes, p+m	µg/L	0.70j	0.50	NA	1750(1)-10000(3)
<b>Semivolatile Organic Compounds (8270):</b>					
1,2-Dichlorobenzene	µg/L	4.2	2.0	NA	600(1,3)
1,4-Dichlorobenzene	µg/L	6.9	5.1	NA	5(1)-75(3)
1,4-Dioxane	µg/L	150	130	NA	NV
Naphthalene	µg/L	10	5.1	NA	NV
N-Nitrosomethylethylamine	µg/L	5.0	5.3j	NA	NV
<b>Organophosphorus Compounds (8141): None Detected</b>					
<b>Chlorinated Herbicides (8151A): None Detected</b>					
<b>Organochlorine Pesticides (8081): None Detected</b>					
<b>Polychlorinated Biphenyls (8082): None Detected</b>					

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.

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 12A**  
**SUMMARY OF COLLECTED WATER SOURCES - SECOND SEMIANNUAL 2017 MONITORING PERIOD**  
**SUNSHINE CANYON LANDFILL**

Month	Total Purchase Water	Subdrains	Landfill Leachate	Landfill Gas Condensate	Extraction Trench & Seep Collectors	MONTHLY TOTALS
July	5,100,657	723,712	398,714	1,511,822	1,290,136	9,025,041
August	3,885,860	428,073	533,444	1,416,268	1,356,769	7,620,414
September	6,105,924	210,894	451,482	1,104,638	1,785,878	9,658,816
October	6,246,548	798,163	455,472	829,978	1,583,475	9,913,636
November	4,428,160	808,109	407,907	693,774	1,418,954	7,756,904
December	1,363,604	828,278	354,412	597,095	1,363,760	4,507,149
July-December 2017 Totals	<b>27,130,753</b>	<b>3,797,229</b>	<b>2,601,431</b>	<b>6,153,575</b>	<b>8,798,972</b>	<b>48,481,960</b>
January-June 2017 Totals:	<b>14,830,596</b>	<b>2,315,902</b>	<b>9,717,623</b>	<b>3,063,439</b>	<b>6,943,853</b>	<b>36,871,413</b>
2017 Annual Totals:	<b>41,961,349</b>	<b>6,113,131</b>	<b>12,319,054</b>	<b>9,217,014</b>	<b>15,742,825</b>	<b>85,353,373</b>

**TABLE 12B**  
**SUMMARY OF WATER DISCHARGES - SECOND SEMIANNUAL 2017 MONITORING PERIOD**  
**SUNSHINE CANYON LANDFILL**

Month	Discharged to Sewer	Dust Control (onsite usage)	MONTHLY TOTALS
July	1,798,800	5,941,477	7,740,277
August	2,142,288	5,216,963	7,359,251
September	3,594,443	5,678,509	9,272,952
October	3,568,352	5,809,290	9,377,642
November	3,497,172	4,118,189	7,615,361
December	3,569,968	1,268,152	4,838,120
<b>TOTAL:</b>	<b>18,171,023</b>	<b>28,032,579</b>	<b>46,203,602</b>

**TABLE 13A**  
**SUMMARY OF ANALYTICAL RESULTS FOR TREATED WATER SAMPLES - Q3 2017**  
**SUNSHINE CANYON LANDFILL**

Analyte	Units	T-402	T-101	T-102	Treated Leachate	MCL
		Samples collected on July 18, 2017				
<b>Volatile Organic Compounds (8260):</b>						
cis-1,2-Dichloroethene	ug/L	0.8	0.5	0.5	0.7	6
Acetone	ug/L	10.0	6.0	5.0	7.0	NV
Benzene	ug/L	0.5	0.5	0.5	0.5	1
Bromochloromethane	ug/L	0.5	0.5	2.2	0.5	NV
Chloroform	ug/L	0.5	1.3	4.5	0.5	NV
Dibromochloromethane	ug/L	0.5	0.5	0.7	0.5	NV
Naphthalene	ug/L	0.5	0.5	0.7	0.5	NV
Tetrachloroethene	ug/L	0.5	0.5	0.5	5.0	5

Notes:

MCL = California Primary Maximum Contaminant Level

NV: No MCL value.

- 1234 Analyte not detected. Value listed is the Method Detection Limit.
- 1234 Analyte was detected.
- 1234 Analyte concentration exceeds MCL value.

**TABLE 13A**  
**SUMMARY OF ANALYTICAL RESULTS FOR TREATED WATER SAMPLES - Q3 2017**  
**SUNSHINE CANYON LANDFILL**

Analyte	Units	T-402	T-101	T-102	PW-DWP	Treated Leachate	MCL
		Samples collected on August 10, 2017					
<b>Inorganic Parameters:</b>							
pH	s.u.	7.30	7.60	7.90	8.00	7.30	6 - 9
Nitrate (N)	mg/L	0.53	0.11	0.2	0.055	0.11	10
Calcium	mg/L	360	340	18	14	370	NV
Magnesium	mg/L	300	270	3	2.3	350	NV
Potassium	mg/L	70	54	3	2.4	100	NV
Sodium	mg/L	730	590	17	15	810	NV
Aluminum	mg/L	0.036	0.02	0.013	0.005	0.024	1
Boron	mg/L	2.30	1.9	0.22	0.2	3.5	NV
Iron	mg/L	23	20.0	0.47	1	34	NV
Silica	mg/L	52	49	14	4	66	NV
Antimony	mg/L	0.0023	0.0013	0.0005	0.0005	0.003	0.006
Arsenic	mg/L	0.008	0.009	0.002	0.0005	0.012	0.01
Barium	mg/L	0.084	0.066	0.007	0.010	0.130	1
Chromium (total)	mg/L	0.008	0.006	0.0005	0.0005	0.014	0.05
Cobalt	mg/L	0.014	0.012	0.0005	0.0005	0.007	NV
Copper	mg/L	0.0018	0.002	0.016	0.004	0.0017	1.3
Lead	mg/L	0.001	0.0005	0.0018	0.0005	0.0005	0.015
Manganese	mg/L	3.6	3.7	0.013	0.04	3.8	NV
Nickel	mg/L	0.043	0.035	0.001	0.0016	0.033	NV
Selenium	mg/L	0.005	0.0044	0.0005	0.0005	0.01	0.05
Vanadium	mg/L	0.016	0.007	0.001	0.001	0.028	NV
Zinc	mg/L	0.017	0.007	0.03	0.009	0.005	NV
<b>Volatile Organic Compounds (8260):</b>							
cis-1,2-Dichloroethene	ug/L	1.0	0.5	0.5	0.5	0.9	6
Acetone	ug/L	31.0	35.0	5.0	5.0	49.0	NV
Benzene	ug/L	0.5	0.5	0.5	0.5	0.8	1
Bromochloromethane	ug/L	0.5	0.5	2.7	0.5	0.5	NV
Carbon disulfide	ug/L	0.5	0.5	0.5	0.5	1.0	NV
Chloroform	ug/L	2.0	0.5	6.9	4.9	1.5	NV
Dibromochloromethane	ug/L	0.5	0.5	1.1	0.5	0.5	NV
Methyl isobutyl ketone	ug/L	5.0	5.0	5.0	5.0	7.0	NV

Notes:

MCL = California Primary Maximum Contaminant Level

NV: No MCL value.

1234 Analyte not detected. Value listed is the Method Detection Limit.

1234 Analyte was detected.

1234 Analyte concentration exceeds MCL value.

**TABLE 13A**  
**SUMMARY OF ANALYTICAL RESULTS FOR TREATED WATER SAMPLES - Q3 2017**  
**SUNSHINE CANYON LANDFILL**

Analyte	Units	T-402	T-101	T-102	Treated Leachate	MCL
		Samples collected on September 17, 2017				
<b>Volatile Organic Compounds (8260):</b>						
cis-1,2-Dichloroethene	ug/L	0.8	0.5	0.5	1.1	6
Acetone	ug/L	5.0	11.0	5.0	5.0	NV
Bromochloromethane	ug/L	0.5	2.5	2.0	0.5	NV
Chloroform	ug/L	0.6	1.3	3.9	0.5	NV
Dibromochloromethane	ug/L	0.5	1.2	0.5	0.5	NV

Notes:

MCL = California Primary Maximum Contaminant Level

NV: No MCL value.

1234 Analyte not detected. Value listed is the Method Detection Limit.

1234 Analyte was detected.

1234 Analyte concentration exceeds MCL value.

**TABLE 13B**  
**SUMMARY OF ANALYTICAL RESULTS FOR TREATED WATER SAMPLES - Q4 2017**  
**SUNSHINE CANYON LANDFILL**

Analyte	Units	T-402	T-101	T-102	Treated Leachate	MCL
		Samples collected on October 17th, 2017				
<b>Volatile Organic Compounds (8260):</b>						
Acetone	ug/L	5.0	6.0	5.0	5.0	NV
Bromochloromethane	ug/L	0.5	1.9	1.8	0.5	NV
Chloroform	ug/L	0.5	1.7	1.6	0.7	NV
Dibromochloromethane	ug/L	0.5	1.4	1.4	0.5	NV
Methyl ethyl ketone	ug/L	5.0	7.0	5.0	5.0	NV

Notes:

MCL = California Primary Maximum Contaminant Level

NV: No MCL value.

- 1234 Analyte not detected. Value listed is the Method Detection Limit.
- 1234 Analyte was detected.
- 1234 Analyte concentration exceeds MCL value.

**TABLE 13B**  
**SUMMARY OF ANALYTICAL RESULTS FOR TREATED WATER SAMPLES - Q4 2017**  
**SUNSHINE CANYON LANDFILL**

Analyte	Units	T-402	T-101	T-102	PW-DWP	Treated Leachate	MCL
		Samples collected on November 9, 2017					
<b>Inorganic Parameters:</b>							
pH	s.u.	7.10	8.00	7.90	8.40	6.90	6 - 9
Nitrate (N)	mg/L	0.16	0.12	0.2	0.055	0.11	10
Calcium	mg/L	380	25	22	18	460	NV
Magnesium	mg/L	230	5	5	5.1	240	NV
Potassium	mg/L	18	4	4	3.9	28	NV
Sodium	mg/L	300	31	27	31	370	NV
Aluminum	mg/L	0.044	0.01	0.03	0.005	0.020	1
Boron	mg/L	1.00	0.5	0.43	0.4	1.4	NV
Iron	mg/L	39	0.05	4.80	2	58	NV
Silica	mg/L	52	18	16	5	55	NV
Antimony	mg/L	0.0010	0.0010	0.0006	0.0005	0.0005	0.006
Arsenic	mg/L	0.005	0.001	0.002	0.0008	0.008	0.01
Barium	mg/L	0.038	0.008	0.01	0.006	0.042	1
Cadmium	mg/L	0.0003	0.0003	0.0003	0.0003	0.0003	0.005
Chromium (total)	mg/L	0.002	0.0005	0.005	0.0013	0.001	0.05
Cobalt	mg/L	0.010	0.0005	0.005	0.0005	0.004	NV
Copper	mg/L	0.0025	0.002	0.010	0.004	0.0055	1.3
Lead	mg/L	0.0005	0.0005	0.0013	0.0005	0.0005	0.015
Manganese	mg/L	4.1	0.003	0.030	0.04	4.8	NV
Nickel	mg/L	0.038	0.001	0.01	0.0009	0.012	NV
Selenium	mg/L	0.001	0.0005	0.025	0.0005	0.002	0.05
Tin	mg/L	0.005	0.005	0.06	0.005	0.005	NV
Vanadium	mg/L	0.001	0.001	0.005	0.001	0.001	NV
Zinc	mg/L	0.012	0.008	0.07	0.020	0.005	NV
<b>Volatile Organic Compounds (8260):</b>							
Acetone	ug/L	5.0	10.0	5.0	5.0	5.0	NV
Bromochloromethane	ug/L	0.5	2.1	0.5	0.5	0.5	NV
Carbon disulfide	ug/L	0.5	0.5	0.5	0.5	1.0	NV
Chloroform	ug/L	1.1	6.4	4.5	7.5	1.5	NV
Dibromochloromethane	ug/L	0.5	1.4	1.0	0.5	0.5	NV
Methyl isobutyl ketone	ug/L	5.0	5.0	5.0	5.0	4.0	NV

Notes:

MCL = California Primary Maximum Contaminant Level

NV: No MCL value.

1234 Analyte not detected. Value listed is the Method Detection Limit.

1234 Analyte was detected.

1234 Analyte concentration exceeds MCL value.



**TABLE 13B**  
**SUMMARY OF ANALYTICAL RESULTS FOR TREATED WATER SAMPLES - Q4 2017**  
**SUNSHINE CANYON LANDFILL**

Analyte	Units	T-402	T-101	T-102	Treated Leachate	MCL
		Samples collected on December 11, 2017				
<b>Volatile Organic Compounds (8260):</b>						
Acetone	ug/L	5.0	5.0	7.3	5.0	NV
Bromochloromethane	ug/L	0.5	2.7	3.7	0.5	NV
Bromoform	ug/L	0.5	1.2	0.5	0.5	NV
Chloroform	ug/L	1.8	1.3	3.8	0.5	NV
Dibromochloromethane	ug/L	0.5	3.8	4.9	0.5	NV
Methyl tert-butyl ether	ug/L	0.5	0.5	0.5	0.7	13

Notes:

MCL = California Primary Maximum Contaminant Level

NV: No MCL value.

1234 Analyte not detected. Value listed is the Method Detection Limit.

1234 Analyte was detected.

1234 Analyte concentration exceeds MCL value.

**TABLE 14**  
**SUNSHINE CANYON LANDFILL**  
**IMPORTED SOIL SAMPLING SUMMARY - SECOND SEMI ANNUAL 2016 MONITORING PERIOD**

GENERATOR	SAMPLER	WASTE TYPE	QUANTITY(lbs)	CONSTITUENTS ANALYZED
Amex Farm	No Samples Taken	Food Products	360	No Samples Taken
Be-on Produce	No Samples Taken	Food Products	450	No Samples Taken
Best Oriental Produce	No Samples Taken	Food Products	1,000	No Samples Taken
Branch Produce	No Samples Taken	Food Products	15,000	No Samples Taken
Bulletproof 360	No Samples Taken	Food Products	1,500	No Samples Taken
Bureau of Alcohol Tobacco and Firearms-Compton	No Samples Taken	Cigarettes	2,000	No Samples Taken
Bureau of Alcohol Tobacco and Firearms-Los Angeles	No Samples Taken	Cigarettes	1,600	No Samples Taken
Chadmar Group	No Samples Taken	Weathered Wood	60,000	No Samples Taken
Christopher Hyldahl	No Samples Taken	Weathered Wood	4,000	No Samples Taken
City of Long Beach	No Samples Taken	Weathered Wood	100,000	No Samples Taken
Dai Tan	No Samples Taken	Food Products	810	No Samples Taken
Department of Transportation	No Samples Taken	Weathered Wood	500	No Samples Taken
Ernest Lomeli	No Samples Taken	Weathered Wood	6,000	No Samples Taken
FAA	No Samples Taken	Weathered Wood	500	No Samples Taken
Farm Fresh Produce	No Samples Taken	Food Products	2,000	No Samples Taken
Fifield Company	No Samples Taken	Weathered Wood	10 yd <sup>3</sup> (~3,7800 lbs)	No Samples Taken
FoodLinx Global	No Samples Taken	Food Products	3,000	No Samples Taken
Golden Kingdom Produce	No Samples Taken	Food Products	26,000	No Samples Taken
Golden Kingdom Produce	No Samples Taken	Food Products	30,000	No Samples Taken
Green Island Produce	No Samples Taken	Food Products	1,000	No Samples Taken
IQ Produce	No Samples Taken	Food Products	500	No Samples Taken
Kirkhill Recert 2017	Dan Burley	Filtered Carbon Media	100,000	Anions, Metals
LA Dept of Water and Power	No Samples Taken	High Density Polyethylene - Plastic	492,000	No Samples Taken
Lucky Taro	No Samples Taken	Food Products	10,000	No Samples Taken
Lucky Taro	No Samples Taken	Food Products	15,000	No Samples Taken
May Produce Co Inc	No Samples Taken	Food Products	3,600	No Samples Taken
Mega Produce	No Samples Taken	Food Products	2,000	No Samples Taken
Port of Long Beach	Sean Fulcher	Soil Stockpiles	4,377 yd <sup>3</sup> (~12000000 lbs)	VOC, TPH, Metals, PAH, PCB, Organochlorine Pesticide
T Fresh Company	No Samples Taken	Food Products	930	No Samples Taken
Yi Bao Produce	No Samples Taken	Food Products	1,560,000	No Samples Taken

Notes:

VOC: Volatile Organic Compound

PCB: Polychlorinated Biphenyls

PAH: Polynuclear Aromatic Hydrocarbons

\*No Samples Taken: Waste previously characterized, or no characterization required (e.g. cured asphalt, treated wood, etc). Special waste decision changed/recertified to exte 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

TPH: Total Petroleum Hydrocarbons

SVOC: Semivolatile Organic Compound

MSDS: Material Safety Data Sheet

**TABLE 15**  
**SUNSHINE CANYON LANDFILL**  
**GENERATOR: KIRK HILL RUBBER**  
**SOLID SAMPLING**  
**ESTIMATED ANNUAL QUANTITY: 100,000 lbs**

SAMPLE	Carbon Media	Hazardous Level TTL (mg/kg)	Lined Cell Limit (mg/kg)	Unrestricted Limit (mg/kg)
DATE SAMPLED	09/01/17			
TIME SAMPLED	10:00			
SAMPLED BY	Dan Burley			
DATE ANALYZED	09/06/17			
<b>METALS (mg/kg): NA</b>				
Barium	0.488	10,000	10,000	5,200
<b>ANIONS (mg/kg):</b>				
Sulfate	74	NS	NS	NS

Notes:

ND: Not Detected

TTL: Total Threshold Limit Concentration.

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: Qualifiable result shown.

\*\*Treated wood acceptable

Only detected VOCs listed.



**TABLE 16B**  
**SUNSHINE CANYON LANDFILL**  
**GENERATOR: PORT OF LONG BEACH**  
**SOIL SAMPLING**  
**ESTIMATED ANNUAL QUANTITY: 30,000 lbs**

SAMPLE	SP-1-1	SP-1-2	SP-1-3	SP-1-33	Hazardous	Lined Cell	Unrestricted
DATE SAMPLED	10/12/16	10/12/16	10/12/16	10/12/16	Level TTL (mg/kg)	Limit (mg/kg)	Limit (mg/kg)
TIME SAMPLED	7:30	7:35	7:40	7:45			
SAMPLED BY	Pete S.	Pete S.	Pete S.	Pete S.			
DATE ANALYZED	10/13-20/16	10/13-20/16	10/13-20/16	10/13-20/16			
<b>GENERAL CHEMISTRY (mg/kg): NA</b>							
<b>METALS (mg/kg) METHOD 6010B/7471A:</b>							
Arsenic	5.5	6.9	4.9	5.2	500	500	12
Barium	95	130	89	90	10,000	10,000	5,200
Cadmium	0.22	0.37	0.29	0.25	100	100	1.7
Chromium	15	22	18	19	2,500	2,500	45
Cobalt	7.5	10	8.9	7.7	8,000	350	23
Copper	15	25	18	18	2,500	2,500	2,500
Lead	14	11	7.7	9	1,000	350	80
Nickel	14	19	15	15	2,000	2,000	1,500
Selenium	1.0	1.0	1.0	1.2	100	100	100
Vanadium	33	39	36	33	2,400	2,400	390
Zinc	63	72	54	53	5,000	5,000	5,000
<b>VOLATILE ORGANIC COMPOUNDS (mg/kg) METHOD 8260B: None Detected</b>							
<b>POLYCYCLIC AROMATIC HYDROCARBONS (mg/kg) METHOD 8270:</b>							
Benzo(a)pyrene	0.022	0.011	0.011	0.011	NS	11	0.020
Benzo(k)fluoranthene	0.002	0.011	0.002	0.007	NS	29	1.5
Chrysene	0.0087	0.0053	0.0051	0.0065	NS	290	15
Dibenz(a,h)anthracene	0.002	0.0029	0.0040	0.0032	NS	0.29	0.02
Fluoranthene	0.0230	0.002	0.0048	0.0086	NS	30,000	2,300
Indeno(1,2,3-cd)pyrene	0.049	0.013	0.018	0.002	NS	2.9	0.15
Phenanthrene	0.0062	0.0042	0.0049	0.0029	NS	NS	NS
Pyrene	0.015	0.0048	0.0082	0.0076	NS	23,000	1,700
<b>GCS THC-Diesel (mg/kg) METHOD 8015:</b>							
*TPH-mo (C23-C40)	240	95	150	160	NS	NS	500
TRPH	240	95	150	160	NS	50,000	NS
<b>ORGANOCHLORINE PESTICIDES TCLP (mg/kg) METHOD 8081A:</b>							
4'4'-DDE	0.065	0.005	0.048	0.011	50	28	0.05
<b>POLYCHLORINATED BIPHENYLS (PCBs) (mg/kg) METHOD 8082: None Detected</b>							

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: Qualifiable result shown.

Only detected Organics are shown.

TABLE 16C  
SUNSHINE CANYON LANDFILL  
GENERATOR: PORT OF LONG BEACH  
SOIL SAMPLING  
ESTIMATED ANNUAL QUANTITY: 30,000 lbs

SAMPLE	SP-2-1	SP-2-2	SP-2-3	SP-2-33	Hazardous	Lined Cell	Unrestricted
DATE SAMPLED	10/12/16	10/12/16	10/12/16	10/12/16	Level TTL (mg/kg)	Limit (mg/kg)	Limit (mg/kg)
TIME SAMPLED	8:40	8:45	8:50	8:55			
SAMPLED BY	Pete S.	Pete S.	Pete S.	Pete S.			
DATE ANALYZED	10/13-20/16	10/13-20/16	10/13-20/16	10/13-20/16			
<b>GENERAL CHEMISTRY (mg/kg): NA</b>							
<b>METALS (mg/kg) METHOD 6010B/7471A:</b>							
Arsenic	3.7	5.2	5.2	4.9	500	500	12
Barium	68	81	80	83	10,000	10,000	5,200
Cadmium	0.20	0.28	0.20	0.20	100	100	1.7
Chromium	13	17	15	15	2,500	2,500	45
Cobalt	6.2	7.3	7.4	7.2	8,000	350	23
Copper	12	25	14	14	2,500	2,500	2,500
Lead	5.9	8.4	6.8	6.8	1,000	350	80
Nickel	11	14	13	13	2,000	2,000	1,500
Selenium	1.9	1.5	1.3	1.0	100	100	100
Vanadium	25	31	29	30	2,400	2,400	390
Zinc	40	56	50	48	5,000	5,000	5,000
<b>VOLATILE ORGANIC COMPOUNDS (mg/kg) METHOD 8260B: None Detected</b>							
<b>POLYCYCLIC AROMATIC HYDROCARBONS (mg/kg) METHOD 8270:</b>							
Benzo(a)pyrene	0.0097	0.023	0.021	0.016	NS	11	0.020
Benzo(k)fluoranthene	0.0099	0.0058	0.01	0.01	NS	29	1.5
Chrysene	0.0052	0.0066	0.0053	0.0075	NS	290	15
Dibenz(a,h)anthracene	0.0058	0.0048	0.0052	0.002	NS	0.29	0.02
Fluoranthene	0.002	0.013	0.011	0.022	NS	30,000	2,300
Indeno(1,2,3-cd)pyrene	0.019	0.002	0.002	0.002	NS	2.9	0.15
Phenanthrene	0.0031	0.0072	0.0037	0.0042	NS	NS	NS
Pyrene	0.011	0.011	0.014	0.0093	NS	23,000	1,700
<b>GCS THC-Diesel (mg/kg) METHOD 8015:</b>							
*TPH-mo (C23-C40)	150	47	82	100	NS	NS	500
TRPH	150	47	82	100	NS	50,000	NS
<b>ORGANOCHLORINE PESTICIDES TCLP (mg/kg) METHOD 8081A:</b>							
4'4'-DDE	0.094	0.13	0.057	0.005	50	28	0.05
<b>POLYCHLORINATED BIPHENYLS (PCBs) (mg/kg) METHOD 8082: None Detected</b>							

Notes:

ND: Not Detected                      TTL: Total Threshold Limit Concentration.

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: Qualifiable result shown.

Only detected Organics are shown.



TABLE 16E  
 SUNSHINE CANYON LANDFILL  
 GENERATOR: PORT OF LONG BEACH  
 SOIL SAMPLING  
 ESTIMATED ANNUAL QUANTITY: 30,000 lbs

SAMPLE	SP-4-1	SP-4-2	SP-4-3	SP-4-33	Hazardous	Lined Cell	Unrestricted
DATE SAMPLED	10/13/16	10/13/16	10/13/16	10/13/16	Level TTL (mg/kg)	Limit (mg/kg)	Limit (mg/kg)
TIME SAMPLED	8:15	8:20	8:25	8:30			
SAMPLED BY	Pete S.	Pete S.	Pete S.	Pete S.			
DATE ANALYZED	10/13-20/16	10/13-20/16	10/13-20/16	10/13-20/16			
<b>GENERAL CHEMISTRY (mg/kg): NA</b>							
<b>METALS (mg/kg) METHOD 6010B/7471A:</b>							
Antimony	1.0	1.0	1.0	1.0	500	380	30
Arsenic	5.5	5.2	5.1	5.2	500	500	12
Beryllium					75	75	16
Cadmium	0.25	0.21	0.26	0.26	100	100	1.7
Chromium	16	16	16	23	2,500	2,500	45
Cobalt	8.2	7.4	7.8	7.5	8,000	350	23
Copper	21	15	18	18	2,500	2,500	2,500
Lead	9.5	7.6	9.6	46	1,000	350	80
Nickel	14	13	14	14	2,000	2,000	1,500
Selenium	1.7	1.6	1.6	1.4	100	100	100
Vanadium	34	31	31	31	2,400	2,400	390
Zinc	69	51	67	73	5,000	5,000	5,000
<b>VOLATILE ORGANIC COMPOUNDS (mg/kg) METHOD 8260B: None Detected</b>							
<b>POLYCYCLIC AROMATIC HYDROCARBONS (mg/kg) METHOD 8270:</b>							
Acenaphthene	0.002	0.006	0.002	0.002	NS	45,000	3,500
Benzo(a)anthracene	0.002	0.002	0.002	0.033	NS	2.9	0.15
Benzo(k)fluoranthene	0.021	0.021	0.002	0.017	NS	29	1.5
Chrysene	0.0110	0.0270	0.0078	0.0065	NS	290	15
Dibenz(a,h)anthracene	0.002	0.002	0.002	0.0046	NS	0.29	0.02
Fluoranthene	0.002	0.002	0.002	0.034	NS	30,000	2,300
Indeno(1,2,3-cd)pyrene	0.002	0.002	0.017	0.037	NS	2.9	0.15
Naphthalene	0.005	0.006	0.005	0.005	NS	17	3.8
Phenanthrene	0.0049	0.037	0.0027	0.005	NS	NS	NS
Pyrene	0.02	0.05	0.0098	0.0230	NS	23,000	1,700
<b>GCS THC-Diesel (mg/kg) METHOD 8015:</b>							
*TPH-mo (C23-C40)	200	330	210	120	NS	NS	500
*TPH-d (C13-C22)	11	19	10	10	NS	10,000	10
TRPH	211	349	210	120	NS	50,000	NS
<b>ORGANOCHLORINE PESTICIDES TCLP (mg/kg) METHOD 8081A: None Detected</b>							
<b>POLYCHLORINATED BIPHENYLS (PCBs) (mg/kg) METHOD 8082: None Detected</b>							

Notes:

ND: Not Detected                      TTL: Total Threshold Limit Concentration.

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: Qualifiable result shown.

Only detected Organics are shown.



## FIGURES

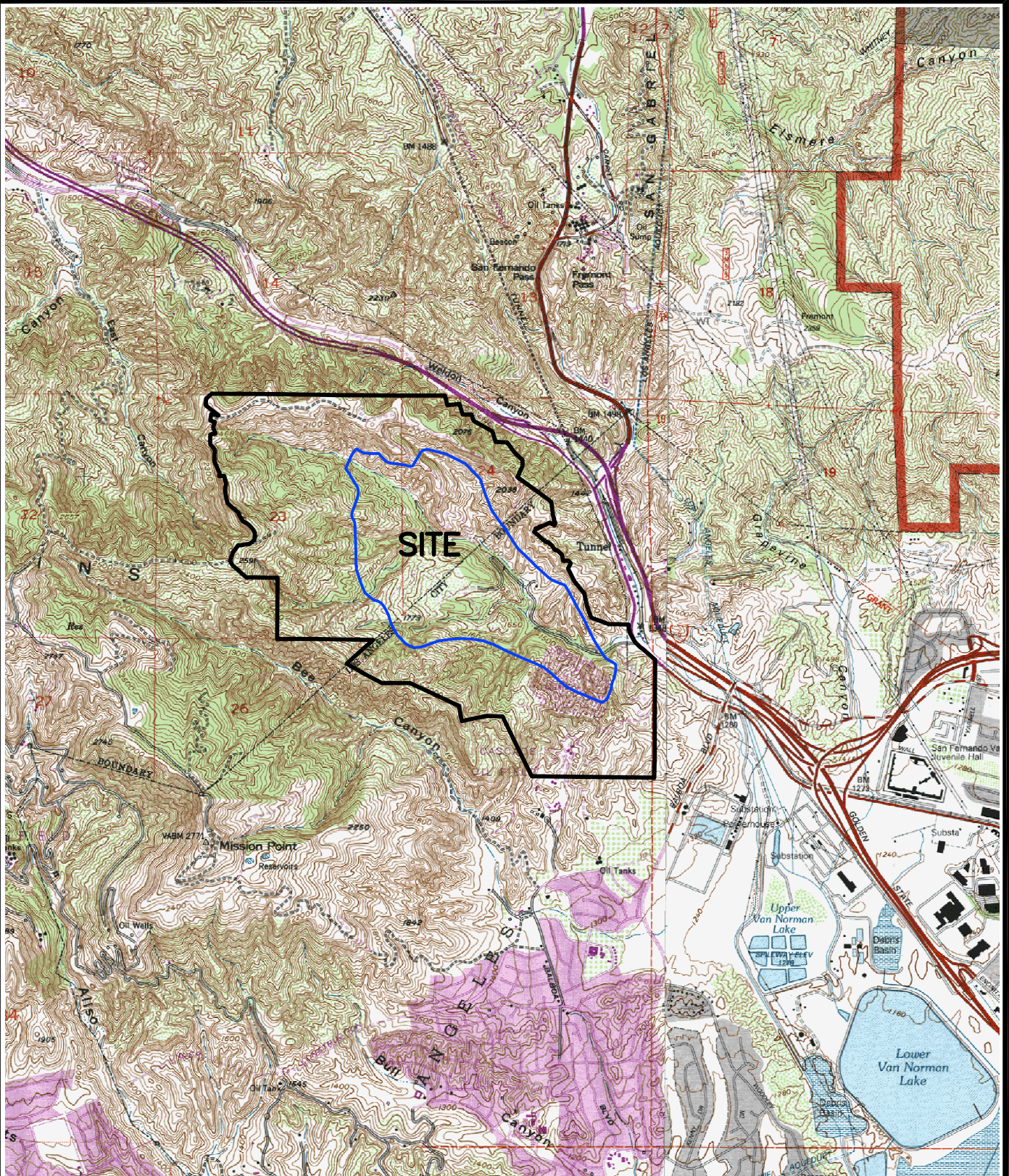


FIGURE 1



SITE LOCATION MAP

SECOND SEMIANNUAL 2017 MONITORING REPORT

SUNSHINE CANYON LANDFILL

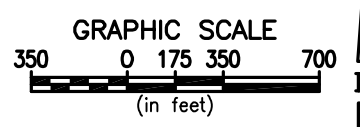
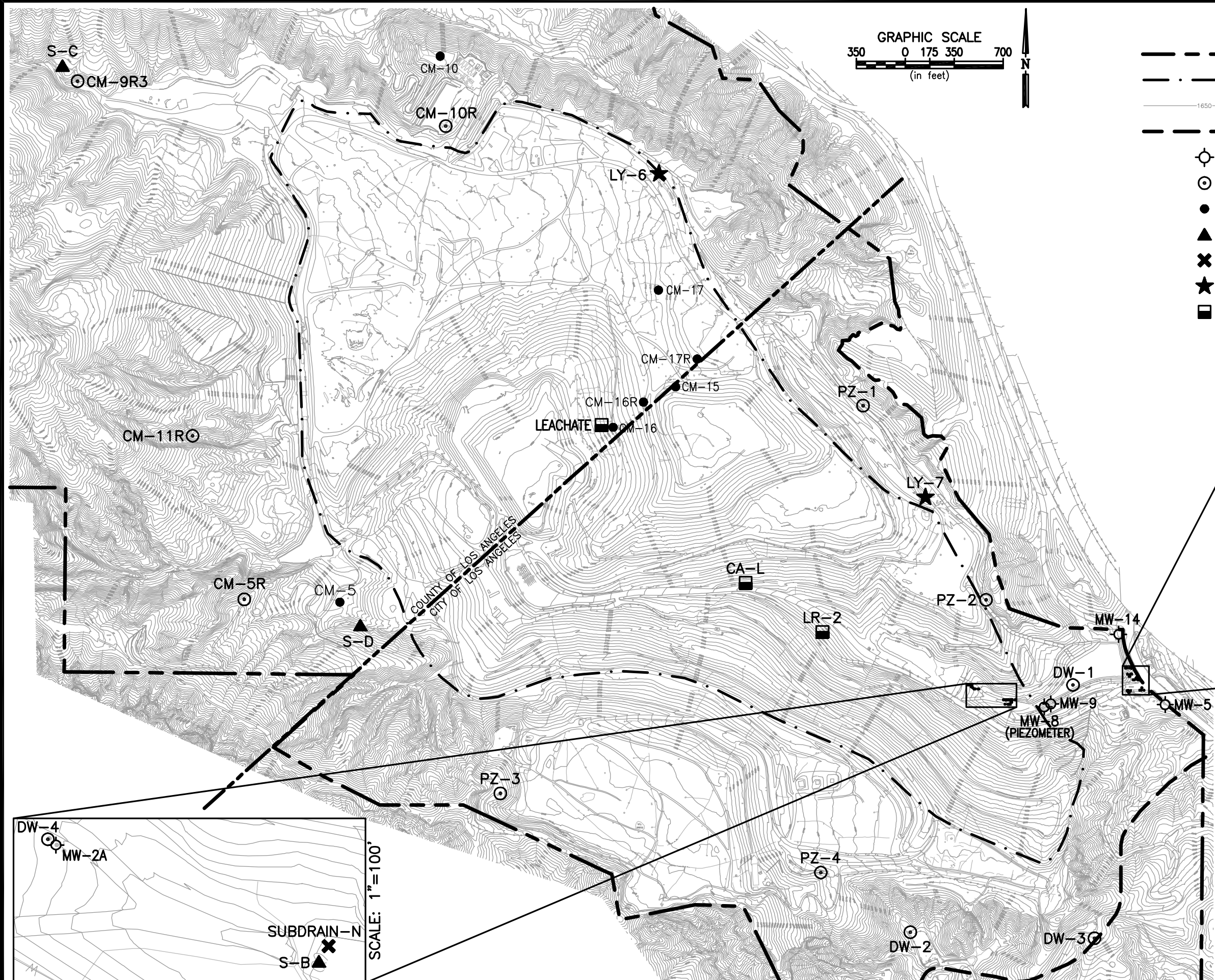
LOS ANGELES, CALIFORNIA

**Geo-Logic**  
ASSOCIATES

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

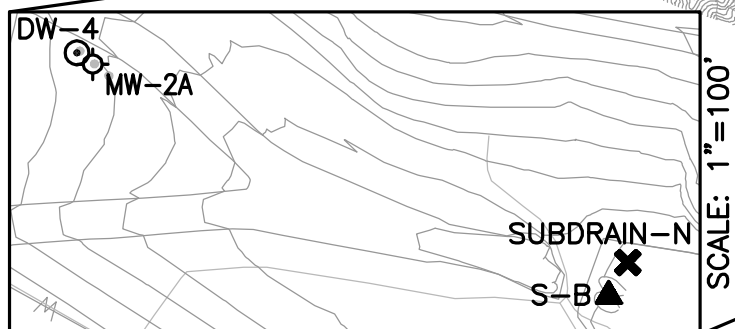
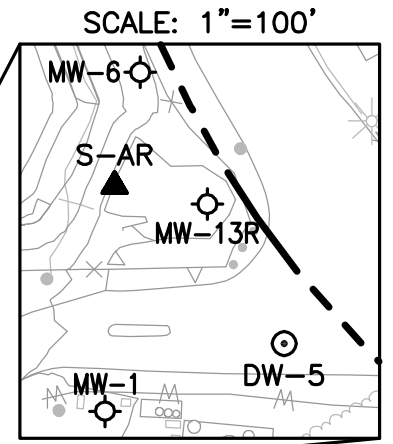
DRAFTER/PM: VL/KW DATE: FEBRUARY 2018 JOB NO. S018.1024

\\vldc\Drawings\2018\S0\_1024-Sunshine\17-2\site-loc.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
- ▲ SURFACE WATER MONITORING POINT
- ✕ SUBDRAIN MONITORING POINT
- ★ LYSIMETER MONITORING POINT
- LEACHATE MONITORING POINT



BASE TOPOGRAPHY DATED 3/01/2017

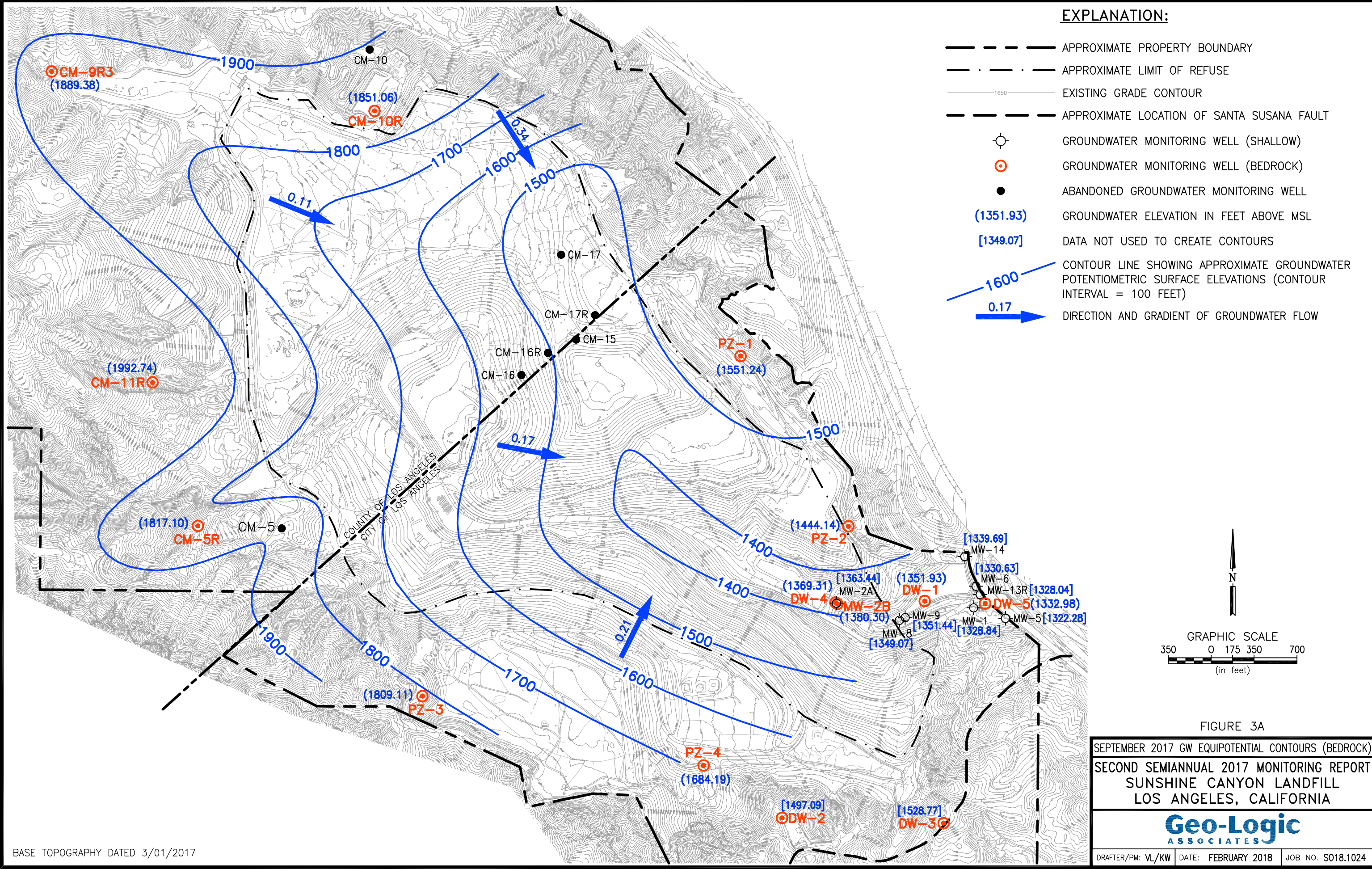
FIGURE 2

SITE MONITORING POINTS LOCATION MAP  
 SECOND SEMIANNUAL 2017 MONITORING REPORT  
 SUNSHINE CANYON LANDFILL  
 LOS ANGELES, CALIFORNIA



DRAFTER/PM: VL/KW | DATE: FEBRUARY 2018 | JOB NO. S018.1024

\\wdr\dwrs\2018\S0\_1024-Sunshine\17-2\site\_mon-pnts\_location\_map.dwg



\\wdr\dwrs\2018\S0\_1024-Sunshine\17-2\aw-cont-Sep17-bedrock.dwg

BASE TOPOGRAPHY DATED 3/01/2017

FIGURE 3A

SEPTEMBER 2017 GW EQUIPOTENTIAL CONTOURS (BEDROCK)

SECOND SEMIANNUAL 2017 MONITORING REPORT

SUNSHINE CANYON LANDFILL

LOS ANGELES, CALIFORNIA

**Geo-Logic**  
ASSOCIATES

DRAFTER/PM: VL/KW | DATE: FEBRUARY 2018 | JOB NO. S018.1024

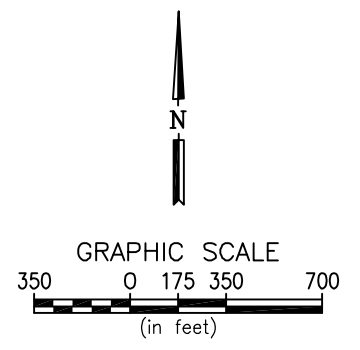
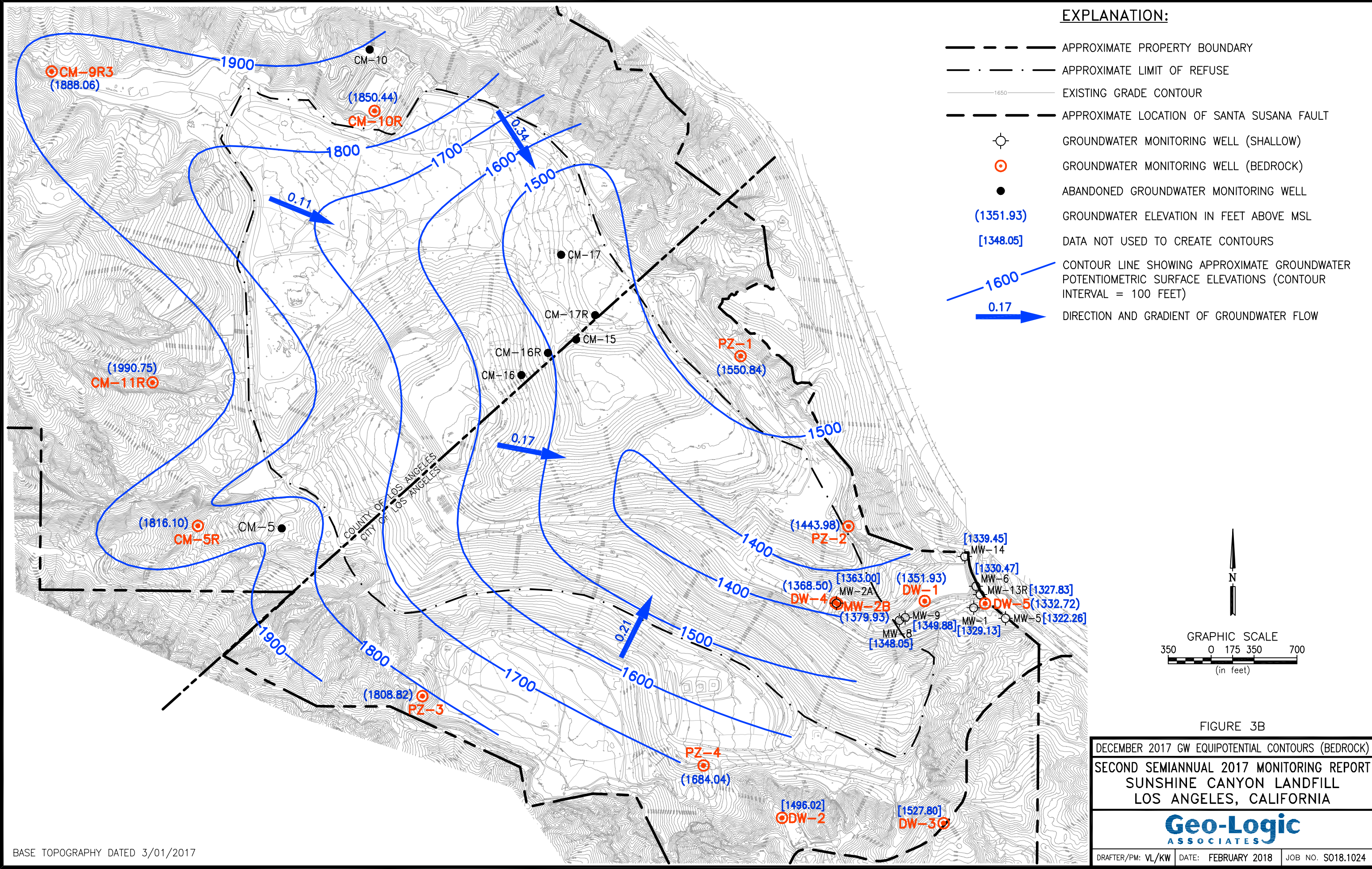


FIGURE 3B  
 DECEMBER 2017 GW EQUIPOTENTIAL CONTOURS (BEDROCK)  
 SECOND SEMIANNUAL 2017 MONITORING REPORT  
 SUNSHINE CANYON LANDFILL  
 LOS ANGELES, CALIFORNIA

**Geo-Logic ASSOCIATES**

DRAFTER/PM: VL/KW | DATE: FEBRUARY 2018 | JOB NO. S018.1024

BASE TOPOGRAPHY DATED 3/01/2017



**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 TestAmerica Laboratories Inc., 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 4°C) 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 4°C) 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-gallon 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°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 CA-L, Leachate, and LR-2R. During the April retest event, samples were collected at CA-L and Leachate.

- CA-L is equipped with a dedicated submersible pump that operates automatically based on liquid levels in the leachate sump. Liquids are discharge to the water treatment facility. Samples are collected at a sampling port located prior to the inlet of the water treatment facility. The port is opened to allow liquids to fill laboratory-supplied sample containers.

- Location Leachate is also equipped with a dedicated submersible pump, but the pump is not operational. Samples were collected using a new, disposable three-inch bailer lowered into 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**

## FIELD SAMPLE COLLECTION LOGS

TestAmerica Irvine  
 17451 Derian Ave  
 Suite 100  
 Irvine, CA 92614  
 Phone: 949.261.1022 Fax:

Chain of Custody Record

141855

TestAmerica  
 THE LEADER IN ENVIRONMENTAL TESTING  
 TestAmerica Laboratories, Inc.  
 TAL-8210 (0713)

Regulatory Program:  DW  NPDES  RCRA  Other:

Client Contact  
 Company Name: Geologic Associates  
 Address: 1415 W. Reservoir Ct.  
 City/State/Zip: SAN CA 92727  
 Phone: 858-451-1137  
 Fax: 858-451-1087  
 Project Name: Republic Services  
 Site: Sunshine Cyn Landfill  
 P O #

Project Manager: Faye Wetchans  
 Tel/Fax:  
 Analysis Turnaround Time  
 CALENDAR DAYS  WORKING DAYS  
 TAT if different from Below \_\_\_\_\_  
 2 weeks  
 1 week  
 2 days  
 1 day

Site Contact: 822-17  
 Lab Contact: ROSSING TA  
 Date: 8-22-17  
 Carrier: TA  
 COC No. 1 of 1 COCs  
 Sampler: AS, MC  
 For Lab Use Only:  
 Walk-in Client:  
 Lab Sampling:  
 Job / SDG No.:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Sample Specific Notes:	
						Filtered Sample (Y/N)	Perform MS / MSD (Y/N)
MW-S-A	8/22/17	1030	G	GW	1	X	
MW-S-B		1050			1	X	
MW-b-A		0940			1	X	
MW-b-B		0940			1	X	
DW-1-A		0745			1	X	
DW-1-B		0745			1	X	
DW-2-A		0910			1	X	
DW-2-B		0910			1	X	
DW-3-A		1000			1	X	
DW-3-B		1000			1	X	
PZ-2-A		1050			1	X	
PZ-2-B		1050			1	X	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other  
 Possible Hazard Identification: 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  
 Return to Client  Disposal by Lab  Archive for \_\_\_\_\_ Months

Special Instructions/QC Requirements & Comments:

Custody Seal No.:  
 Relinquished by: AS Date/Time: 8-22-17 1305  
 Relinquished by: AS Date/Time: 8-22-17 1305  
 Relinquished by: AS Date/Time: 8-22-17 1305

Received by: TA Date/Time: 8-22-17 1305  
 Received by: TA Date/Time: 8-22-17 1305  
 Received in Laboratory by: TA Date/Time: 8-22-17 1305

Therm ID No.:  
 Cooler Temp. (°C): Obs'd: \_\_\_\_\_ Corrd: \_\_\_\_\_  
 Company: TA  
 Company: TA  
 Company: TA



## GROUNDWATER MONITORING PROGRAM WELL DATA SHEET

*Rates +*

Site Name: Sunshine Cyn  
 Well I.D.: DW-3  
 Collected By: AS  
 Casing Diameter (inches): 4  
 Starting Water Level: 153.83  
 Total Depth (feet): 256.60  
 Water column (feet): 102.77  
 Screen Length (feet):           
 Sample Method: Micro Purge Low Flow  
 Horiba Model S/N: U-52 / WGGP8GRS

Project No.: SD17.1047  
 Sampling Date: 8.22.17  
 Purge start Time: 0923  
 Purge Stop time: 0953  
 Sampling (Well Recovery) Time: 1000  
 Ending Water Level (feet): 158.70  
 Total Purged (gallons): 2.5 +  
 Duplicate Sample: YES  NO

*\*Collect + retest samples MW-3-A MW-3-B*

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
0929	0.50	155.20	9.19	2.97	3.1	4.50	22.15	16
0935	1.00	156.00	9.06	2.99	7.7	3.03	21.92	-38
0941	1.50	156.93	9.03	2.99	7.2	2.43	21.85	-49
0944	1.75	157.45	9.03	2.98	6.5	2.41	21.84	-53
0947	2.00	157.87	9.03	2.98	6.6	2.39	21.81	-53
0950	2.25	158.31	9.03	2.98	6.1	2.35	21.80	-54
0953	2.50	158.70	9.03	2.98	5.9	2.34	21.83	-54

Purge Sampling Rates: 100 PSI R: 35 / D: 20  
*Clear water w/ no odor.*

Well condition: O.K.

Additional Info/Comments: Sunny, clear

*\*Collected retest samples MW-3-A and MW-3-B for 410.4 cob analysis.*

Name: A. Shaw

Signature: AC. [Signature]

Retest MW-3-A + MW-3-B  
**GROUNDWATER MONITORING WELL INSPECTION REPORT**

Facility: Sunshine Cyn Well ID: MW-3 (AS) Date: 8.22.17

Access:

Accessibility: Good:  Fair: DW-3 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:

Measurement 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: ACSL Signed Field Tech Title 8.22.17 Date

## GROUNDWATER MONITORING PROGRAM WELL DATA SHEET

*Retest*

Site Name: Sunshine Cyn  
 Well I.D.: MW-5  
 Collected By: AS  
 Casing Diameter (inches): 2  
 Starting Water Level: 19.34  
 Total Depth (feet): 26.20  
 Water column (feet): 6.86  
 Screen Length (feet): -  
 Sample Method: Micro Purge Low Flow  
 Horiba Model S/N: U-52 (WGP8GR5)

Project No.: S017-1047  
 Sampling Date: 8.22.17  
 Purge start Time: 1006  
 Purge Stop time: 1023  
 Sampling (Well Recovery) Time: 1030  
 Ending Water Level (feet): 19.61  
 Total Purged (gallons): 2.04  
 Duplicate Sample: YES  NO

*\* Collect retest samples MW-5-A and MW-5-B*

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
1006	0.50	19.61	8.32	5.97	32.0	3.92	21.59	-48
1015	1.00	"	8.32	5.91	27.4	3.84	21.39	-49
1017	1.25	"	8.31	5.96	17.6	3.64	21.41	-51
1019	1.50	"	8.31	5.95	17.1	3.40	21.40	-55
1021	1.75	"	8.31	5.98	16.8	3.36	21.43	-56
1023	2.00	"	8.31	5.96	16.5	3.33	21.40	-57

Purge Sampling Rates: 20 PSI R:30 / D:10  
*Water has yellowish tint w/ no odor*

Well condition O.K.

Additional Info/Comments: Sunny, clear

*\* Collected retest samples MW-5-A and MW-5-B for Total Alkalinity analysis*

Name: A. Shaw

Signature: [Signature]

Retest Sample MW-S-A + MW-S-B

# GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Cym Well ID: MW-S Date: 8.22.17

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 is not visible / buried

Concrete Pad:  
Integrity: Good:  Inadequate:   
Presence of depressions or standing water around well: Yes:  No:   
Remarks: Concrete pad not visible

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:   
Measurement 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: ACSL Signed: Field Tech Title: 8.22.17 Date:

## GROUNDWATER MONITORING PROGRAM Retest WELL DATA SHEET

Site Name:	<u>Sunshine Cyn</u>	Project No.:	<u>2017.1047</u>
Well I.D.:	<u>DW-2</u>	Sampling Date:	<u>8.22.17</u>
Collected By:	<u>AS</u>	Purge start Time:	<u>0840</u>
Casing Diameter (inches):	<u>4</u>	Purge Stop time:	<u>0903</u>
Starting Water Level:	<u>24.72</u>	Sampling (Well Recovery) Time:	<u>0910</u>
Total Depth (feet):	<u>71.00</u>	Ending Water Level (feet):	<u>27.29</u>
Water column (feet):	<u>46.28</u>	Total Purged (gallons):	<u>2.0+</u>
Screen Length (feet):	<u>—</u>	Duplicate Sample:	YES <input type="radio"/> NO <input checked="" type="radio"/>
Sample Method:	<u>Micro Purge</u> Low Flow	* Collect retest samples MW-2-A MW-2-B	
Horiba Model S/N:	<u>U-52/WGAP8GR5</u>		

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
0845	0.50	25.60	9.33	3.59	3.5	4.07	20.41	-98
0851	1.00	26.41	9.43	3.58	3.8	3.09	20.22	-120
0854	1.25	26.63	9.44	3.58	3.0	2.79	20.25	-120
0857	1.50	26.85	9.44	3.56	2.9	2.45	20.24	-121
0900	1.75	27.07	9.44	3.57	3.0	2.45	20.23	-122
0903	2.00	27.29	9.43	3.57	2.5	2.42	20.22	-121

Purge Sampling Rates: 45 PSI R: 35 / D: 17  
Water is clear, odorless

Well condition: O.K. - Needs weed abatement

Additional Info/Comments: Sunny, Warm

\* Collected retest samples MW-2-A and MW-2-B for Total Alkalinity analysis

Name: A. Shaw Signature: [Signature]

Retest MW-2-A + MW-2-B

# GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: MW-2 Well ID: Sunshine Cg 2 Date: 8.22.17

**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: Needs weed abatement

**Concrete Pad:**

Integrity: Good:  Inadequate: \_\_\_\_\_  
 Presence of depressions or standing water around well: Yes: \_\_\_\_\_ No:   
 Remarks: \_\_\_\_\_

**Protective Outer Casing:**

Material: Metall  
 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: \_\_\_\_\_  
 Measurement 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: ACSH Signed: Field Tech Title: \_\_\_\_\_ Date: 8.22.17

**GROUNDWATER MONITORING PROGRAM  
WELL DATA SHEET**

Site Name.: Sunshine Cyn 1-B  
 Well I.D.: DW-1A & DW-1B  
 Collected By: ML  
 Casing Diameter (inches): 4  
 Starting Water Level: TOC  
 Total Depth (feet): \_\_\_\_\_  
 Water column (feet): \_\_\_\_\_  
 Screen Length (feet): \_\_\_\_\_  
 Purge Volume (gallons): Grch  
 Horiba Model S/N: U-52/m54/m300

Project No.: 5017.1047  
 Sampling Date: 8.22.17  
 Purge start Time: \_\_\_\_\_  
 Purge Stop time: \_\_\_\_\_  
 Sampling Time: 7:45  
 Ending Water Level (feet): \_\_\_\_\_  
 Total Purged (gallons): \_\_\_\_\_  
 PID/FID Reading: \_\_\_\_\_  
 Duplicate Sample: YES  NO

GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
Grch	-	9.21	645	0.7	3.02	23.24	-180

Purge Sampling Rates: water is clear with an odor

Well condition: OK

Additional Info/Comments: clear, warm, windy  
Mike Campbell Trule Craft

C-2

GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility:	<u>Sunbelt Cyn</u>	Well ID:	<u>DW-1</u>	Date:	<u>8-22-17</u>
Access:					
Accessibility:	Good: <u>✓</u>	Fair:	<u>      </u>	Poor:	<u>      </u>
Vicinity of well clear of weeds and/or debris:	Yes: <u>✓</u>	No:	<u>      </u>		
Presence of depressions or standing water around well:	Yes: <u>✓</u>	No:	<u>      </u>		
Remarks:	<u>Some water at base of monument</u>				
Concrete Pad:					
Integrity:	Good: <u>✓</u>	Inadequate:	<u>      </u>		
Presence of depressions or standing water around well:	Yes: <u>✓</u>	No:	<u>      </u>		
Remarks:	<u>CORROSIVE liquid at base of monument</u>				
Protective Outer Casing:					
Material:	<u>metal</u>				
Condition of Protective Casing:	Good: <u>✓</u>	Damaged:	<u>✓</u>		
Condition of Locking Cap:	Good: <u>✓</u>	Damaged:	<u>      </u>		
Condition of Lock:	Good: <u>✓</u>	Damaged:	<u>      </u>		
Condition of Weepholes:	Good: <u>✓</u>	Damaged:	<u>      </u>		
Remarks:	<u><del>Concrete</del> Corrosive metal on well monument</u>				
Well Riser:					
Material:	<u>PVC</u>				
Condition of Riser:	Good: <u>✓</u>	Damaged:	<u>      </u>		
Condition of Riser Cap:	Good: <u>✓</u>	Damaged:	<u>      </u>		
Measurement reference point:	Yes: <u>✓</u>	No:	<u>      </u>		
Remarks:					
Dedicated Pump:					
Type:	<u>Drip tube</u>				
Condition:	Good: <u>✓</u>	Damaged:	<u>      </u>	Missing:	<u>      </u>
Pumping Rate (gpm):	<u>NA</u>	Current (Hz):	<u>NA</u>		
Remarks:					

Field Certification: Amie Campbell Signed      Field Tech Title      8-22-17 Date



## FIELD CALIBRATION DOCUMENTATION FORM

LOCATION (Site/Facility Name) Sunshine Cyn PROJECT NAME / NUMBER SO17.1047

Instrument Make/Model # C.52 / m5Y/m50P

Date/Time	pH	Electrical Conductivity (uMhos/cm)	Turbidity (NTU)	DO (mg/L or %s)	Guidance Remarks	Comments
<u>8-22-17 5:05</u>						
Pre Cal	<u>3.93</u>	<u>4.35</u>	<u>0.4</u>	<u>7.54</u>		
Calibration	<u>4.00</u>	<u>4.49</u>	<u>0.6</u>	<u>8.76</u>		
Calibration Successful? (Y/N)	<u>yes</u>				enter YES or NO	
Satisfies Protocol?	<u>yes</u>				Did calibration meet criteria in the sampling protocol? (Y or N)	
Calibration by	<u>[Signature]</u>				Signature or initials	<u>[Signature]</u>
Physical Condition of Unit				<u>Good</u>		



## GROUNDWATER MONITORING PROGRAM WELL DATA SHEET

Site Name: Sunshine Cyn  
 Well I.D.: PZ-2-A and PZ-2-B  
 Collected By: mc  
 Casing Diameter (inches): 2  
 Starting Water Level: 122.39  
 Total Depth (feet): 160.90  
 Water column (feet): 38.51  
 Screen Length (feet): \_\_\_\_\_  
 Sample Method: Micro Purge  Low Flow   
 Horiba Model S/N: U-52/MSY1WBDP  
 Project No.: 8017.1047  
 Sampling Date: 8-22-17  
 Purge start Time: 10:19  
 Purge Stop time: 10:43  
 Sampling (Well Recovery) Time: 10:50  
 Ending Water Level (feet): 128.27  
 Total Purged (gallons): 2.0  
 Duplicate Sample: YES  NO

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	DO mg/L	TEMPERATURE °C	ORP mV
10:27	1.5	124.26	9.60	8.29	12.0	2.01	24.71	-164
10:32	1.0	125.47	9.60	8.27	4.1	1.46	24.45	-146
10:35	1.25	126.38	9.60	8.25	0.1	1.06	24.45	-138
10:38	1.50	127.03	9.60	8.25	0.0	.97	24.41	-138
10:40	1.75	127.63	9.65	8.24	0.0	.92	24.46	-139
10:43	2.0	128.27	9.67	8.23	0.0	.90	24.47	-140

Purge Sampling Rates: 80 psi rebill 30 discharge 20  
 water is mostly clear with no odor

Well condition: OK  
 Had to carry sampling equipment and sample bottles across concrete chann.  
 Additional Info/Comments: clear, hot breez

Name: Mike Campbell Signature: Mike Campbell

GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: <u>Sunshine Cyn</u>	Well ID: <u>P2-2</u>	Date: <u>8-22-17</u>
Access:		
Accessibility: Good: _____ Fair: _____ Poor: <u>✓</u>		
Vicinity of well clear of weeds and/or debris: Yes: <u>✓</u> No: _____		
Presence of depressions or standing water around well: Yes: _____ No: <u>✓</u>		
Remarks: <u>Required carrying sampling equipment and sample bottles across a concrete channel</u>		
Concrete Pad:		
Integrity: <u>NA</u> Good: _____ Inadequate: _____		
Presence of depressions or standing water around well: Yes: _____ No: <u>✓</u>		
Remarks: <u>NO concrete pad</u>		
Protective Outer Casing: Material: <u>metal</u>		
Condition of Protective Casing: Good: <u>✓</u> Damaged: _____		
Condition of Locking Cap: Good: <u>✓</u> Damaged: _____		
Condition of Lock: Good: <u>✓</u> Damaged: _____		
Condition of Weepholes: Good: <u>✓</u> Damaged: _____		
Remarks: _____		
Well Riser: Material: <u>PVC</u>		
Condition of Riser: Good: <u>✓</u> Damaged: _____		
Condition of Riser Cap: Good: <u>✓</u> Damaged: _____		
Measurement reference point: Yes: <u>✓</u> No: _____		
Remarks: _____		
Dedicated Pump: Type: <u>Bladder</u>		
Condition: Good: <u>X</u> Damaged: _____ Missing: _____		
Pumping Rate (gpm): <u>NA</u> Current (Hz): <u>NA</u>		
Remarks: _____		

Field Certification: Tommy Campbell Signed Field Tech Title 8-22-17 Date

## GROUNDWATER MONITORING PROGRAM WELL DATA SHEET

Site Name: Sunshine Cyn Project No.: 5017-1047  
 Well I.D.: MW-6A and MW 6-B Sampling Date: 8-22-17  
 Collected By: MC Purge start Time: 8:56  
 Casing Diameter (inches): 2 Purge Stop time: 9:32  
 Starting Water Level: 16.81 Sampling (Well Recovery) Time: 9:40  
 Total Depth (feet): 23.50 Ending Water Level (feet): 17.82  
 Water column (feet): 6.69 Total Purged (gallons): 1.5 +  
 Screen Length (feet): \_\_\_\_\_ Duplicate Sample: YES  NO   
 Sample Method: Micro Purge Low Flow  
 Horiba Model S/N: U-52 / W-54 / W-BA

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P mV
9:09	0.5	17.46	8.19	5.72	0.6	1.60	21.73	-246
9:15	.75	17.60	8.17	5.72	0.9	1.18	21.71	-254
9:22	1.0	17.68	8.14	5.70	0.6	0.95	21.73	-261
9:26	1.25	17.74	8.13	5.69	0.5	0.90	21.71	-263
9:32	1.50	17.82	8.13	5.69	0.3	0.88	21.73	-265

Purge Sampling Rates: 25 psi ref. // 25 discharge // 4  
water contains blackish color with a strong odor low yield  
 Well condition: OK  
 Had to carry sampling equipment and sample bottle to well!  
 Additional Info/Comments: clear, warm, breezy

Name: Mike Campbell Signature: Mike Campbell

C-2

GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility:	<u>Sunshine Cyn</u>	Well ID:	<u>MW-6</u>	Date:	<u>8-22-17</u>
Access:	Accessibility: Good: <u>      </u> Fair: <u>✓</u> Poor: <u>      </u>				
	Vicinity of well clear of weeds and/or debris: Yes: <u>✓</u> No: <u>      </u>				
	Presence of depressions or standing water around well: Yes: <u>      </u> No: <u>✓</u>				
Remarks:	<u>Required carrying sampling equipment on samples bottles down a slope and along trail to well</u>				
Concrete Pad:	Integrity: Good: <u>✓</u> Inadequate: <u>      </u>				
	Presence of depressions or standing water around well: Yes: <u>      </u> No: <u>✓</u>				
Remarks:					
Protective Outer Casing:	Material: <u>metal</u>				
	Condition of Protective Casing: Good: <u>✓</u> Damaged: <u>      </u>				
	Condition of Locking Cap: Good: <u>✓</u> Damaged: <u>      </u>				
	Condition of Lock: Good: <u>✓</u> Damaged: <u>      </u>				
	Condition of Weepholes: Good: <u>✓</u> Damaged: <u>      </u>				
Remarks:					
Well Riser:	Material: <u>PVC</u>				
	Condition of Riser: Good: <u>✓</u> Damaged: <u>      </u>				
	Condition of Riser Cap: Good: <u>✓</u> Damaged: <u>      </u>				
	Measurement reference point: Yes: <u>✓</u> No: <u>      </u>				
Remarks:					
Dedicated Pump:	Type: <u>Bladder</u>				
	Condition: Good: <u>✓</u> Damaged: <u>      </u> Missing: <u>      </u>				
	Pumping Rate (gpm): <u>ND</u> Current (Hz): <u>ND</u>				
Remarks:	<u>low yield</u>				

Field Certification: Mike Campbell Signed Field Tech Title 8-22-17 Date

## FIELD CALIBRATION DOCUMENTATION FORM

LOCATION (Site/Facility Name) Sunshine C<sub>4</sub> PROJECT NAME / NUMBER SP17.1047

Instrument Make/Model # <u>Horiba U-52</u>						
Date/Time	pH	Electrical Conductivity (µMhos/cm)	Turbidity (NTU)	DO (mg/L or %)	Guidance Remarks	Comments
<u>8.22.17</u> <u>0730</u>						
Pre. Cal	<u>4.06</u>	<u>4.46</u>	<u>0.4</u>	<u>11.65</u>		
Calibration	<u>4.00</u>	<u>4.49</u>	<u>0.0</u>	<u>8.95</u>		
Calibration Successful? (Y/N)	<u>Y</u>	<u>—</u>	<u>—</u>	<u>—</u>	enter YES or NO	
Satisfies Protocol?	<u>Y</u>	<u>—</u>	<u>—</u>	<u>—</u>	Did calibration meet criteria in the sampling protocol? (Y or N)	
Calibration by	<u>AS</u>				Signature or initials	<u>ac. AS</u>
Physical Condition of Unit		<u>→ Good</u>				

**TestAmerica Irvine**  
 17451 Depian Ave  
 Suite 100  
 Irvine, CA 92614  
 Phone: 949.261.1022 Fax:

# Chain of Custody Record

**TestAmerica**  
 THE LEADER IN ENVIRONMENTAL TESTING  
 TestAmerica Laboratories, Inc.  
 TAL-8210 (07/13)

144501

Regulatory Program:  DW  NPDES  RCRA  Other:

<b>Client Contact</b> Company Name: <u>City of LA / Republic of</u> Address: <u>14451 Depian Ave, Suite 100</u> City/State/Zip: <u>Irvine, CA 92614</u> Phone: <u>949.261.1022</u> Fax: <u>949.261.1022</u> Project Name: <u>Republic Services</u> Site: <u>Sunshine Cm. Landfill</u> P O #: <u>44007851</u>		<b>Project Manager:</b> <u>Kyle Wilchans</u> Tel/Fax: <u>858-451-1136</u> Analysis Turnaround Time <input type="checkbox"/> CALENDAR DAYS <input type="checkbox"/> WORKING DAYS TAT if different from Below <input type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day		<b>Site Contact:</b> <u>R. Dickason</u> Lab Contact: <u>R. Thomas</u> Date: <u>9/21/17</u> Carrier: <u>TIA</u> COC No: <u>1</u> of <u>1</u> COCs				
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	Other
<u>MW-1</u>	<u>9/21/17</u>	<u>0935</u>	<u>G</u>	<u>GW</u>	<u>12</u>	<u>X</u>	<u>X</u>	<u>X</u>
<u>MW-13R</u>	<u>0825</u>	<u>0905</u>	<u>G</u>	<u>↓</u>	<u>12</u>	<u>X</u>	<u>X</u>	<u>X</u>
<u>DW-5</u>	<u>—</u>	<u>—</u>	<u>G</u>	<u>↓</u>	<u>12</u>	<u>X</u>	<u>X</u>	<u>X</u>
<u>SC AB</u>	<u>—</u>	<u>—</u>	<u>G</u>	<u>↓</u>	<u>4</u>	<u>X</u>	<u>X</u>	<u>X</u>
<u>QC TB</u>	<u>—</u>	<u>—</u>	<u>G</u>	<u>↓</u>	<u>1</u>	<u>X</u>	<u>X</u>	<u>X</u>

**Preservation Used:** 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other  
**Possible Hazard Identification:** 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  
 Return to Client  Disposal by Lab  Archive for \_\_\_\_\_ Months

**Special Instructions/QC Requirements & Comments:**

Custody Seal No.:	Cooler Temp. (°C):	Obs'd:	Corrd:	Therm ID No.:
Company: <u>Neo-Logic</u>	Company: <u>Neo-Logic</u>	Company: <u>Neo-Logic</u>	Company: <u>Neo-Logic</u>	Date/Time: <u>9/21/17 11:40</u>
Relinquished by: <u>Christy Salinas</u>	Received by: <u>Neo-Logic</u>	Received by: <u>Neo-Logic</u>	Received in Laboratory by: <u>Neo-Logic</u>	Date/Time: _____
Relinquished by:	Received by:	Received in Laboratory by:	Received by:	Date/Time: _____



**TestAmerica Irvine**  
 17461 Berian Ave  
 Suite 100  
 Irvine, CA 92614  
 Phone: 949.261.1022 Fax: 949.261.1022

# Chain of Custody Record

**TestAmerica**  
 THE LEADER IN ENVIRONMENTAL TESTING  
 TestAmerica Laboratories, Inc.  
 TAL-8210 (0713)

Regulatory Program:  DW  NPDES  RCRA  Other:

<b>Client Contact</b> Company Name: Gal A Redalio Address: 11415 W. Bannockburn Ct. City/State/Zip: S.D., CA 92127 Phone: 858-451-1136 Fax: 858-451-1083 Project Name: Public Services Site: Sunshine Ex. Landfill P O #: 44007851		<b>Project Manager:</b> Kay Weirhaus Tel/Fax: 858-451-1136 Analysis Turnaround Time <input type="checkbox"/> CALENDAR DAYS <input type="checkbox"/> WORKING DAYS TAT if different from Below <input type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day		<b>Site Contact:</b> P. Dickson Lab Contact: R. Tomovic Date: 9-20-17 Carrier: TIA COC No: 1 of 1 COCs Sampler: B.S.A. For Lab Use Only: Walk-in Client: Lab Sampling: Job / SDG No.:														
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS/MSD (Y/N)	EPA 8212-VOC	Tokri Alkalinity	Ammonia as (N)	COD (410.4)	Chloride (60.0)	Total Sulfide (610.8)	TDS (160.1)	TAC (415.1)	EPA 8230 (4)	Dioxane	Sample Specific Notes:
PZ-4	9/20/17	0915	G	SW	12		X	X	X	X	X	X	X	X	X	X	X	
DW-3		1154			12		X	X	X	X	X	X	X	X	X	X	X	
DW-4		1250			12		X	X	X	X	X	X	X	X	X	X	X	
MW-2A		0952			12		X	X	X	X	X	X	X	X	X	X	X	
MW-2B		1127			12		X	X	X	X	X	X	X	X	X	X	X	
MW-5		1342			12		X	X	X	X	X	X	X	X	X	X	X	
OCAB					4		X											
OC7B					4		X											
<b>Preservation Used:</b> 1= Ice, 2= HCl; 3= H2SO4; 4= HNO3; 5= NaOH; 6= Other <b>Possible Hazard Identification:</b> 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. <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown																		
<b>Special Instructions/QC Requirements &amp; Comments:</b> Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return to Client <input checked="" type="checkbox"/> Disposal by Lab <input type="checkbox"/> Archive for _____ Months																		
<b>Chain of Custody:</b> Relinquished by: <i>Robert Talon</i> Date/Time: 9/20/17 13:56 Relinquished by: _____ Date/Time: _____ Relinquished by: _____ Date/Time: _____																		

Regulatory Program:  DW  NPDES  RCR  Other:

<b>Client Contact</b> Company Name: GEA Republic Address: 11415 W. Bernardo Ct. City/State/Zip: S.D., CA. 92127 Phone: 858-451-1136 Fax: 858-451-1087 Project Name: Republic Services Site: Sunshine Cyn. etc PO #: 41007851		<b>Project Manager:</b> Kyle Welch Tel/Fax: 858-451-1136 Analysis Turnaround Time <input type="checkbox"/> CALENDAR DAYS <input type="checkbox"/> WORKING DAYS TAT if different from Below <input type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day		<b>Site Contact:</b> F. Dickerson Date: 9-19-17 Lab Contact: R. Tomava Carrier: T A		COC No: _____ of _____ COCs Sampler: VS, AS For Lab Use Only: Walk-in Client: Lab Sampling: Job / SDG No.:												
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS/MSD (Y/N)	EPA 8260B-VOCs	Total Alkalinity	Ammonia as N	CAD (410.5)	Chloride (30.0)	Total Phosphorus (60.0)	TDS (160.1)	T.O.C. (415.1)	EPA 8230 14-	DiOXide	Sample Specific Notes:
DW-1	9/19/17	1058	G	GW	12		X	X	X	X	X	X	X	X	X	X	X	
DW-2		0910	G	GW	12		X	X	X	X	X	X	X	X	X	X	X	
Extraction Trench		1370	G	WW	12		X	X	X	X	X	X	X	X	X	X	X	
MW-6		1015	G	GW	12		X	X	X	X	X	X	X	X	X	X	X	
MW-9		1345	G	GW	12		X	X	X	X	X	X	X	X	X	X	X	
MW-14		0755	G	GW	12		X	X	X	X	X	X	X	X	X	X	X	
PZ-2		1025	G	GW	12		X	X	X	X	X	X	X	X	X	X	X	
OCAB			G	GW	12		X	X	X	X	X	X	X	X	X	X	X	
GCAB			G	GW	12		X	X	X	X	X	X	X	X	X	X	X	

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:

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.
Custody Seal No.: _____ Relinquished by: <i>Dee Adams</i> Relinquished by: _____ Relinquished by: _____	Company: GEA-logic Date/Time: 9-19-17 12:56 Company: _____ Date/Time: _____ Company: _____ Date/Time: _____
Cooler Temp. (°C): Obs'd: _____ Corrd: _____ Received by: <i>Dee Adams</i> Date/Time: 9/19/17 13:56 Received by: _____ Date/Time: _____ Received in Laboratory by: _____ Date/Time: _____	Therm ID No.: _____ Date/Time: _____ Date/Time: _____ Date/Time: _____



# Geo-Logic

ASSOCIATES

Geologists, Hydrogeologists, and Engineers

## GROUNDWATER MONITORING PROGRAM WATER LEVEL SURVEY RECORD SHEET

Site Sunshine Cyn 4/R  
 Project No.: SON. 1047  
 Date 9-18-17  
 Field Personnel BJS, AS

Page 1 of 2

WELL I.D.	CONSTRUCTED TOTAL DEPTH (TD)	ACTUAL TOTAL DEPTH (TD)	DEPTH TO WATER (DTW)	COMMENTS
MW-1			15.64	
MW-2A			33.57	
MW-2B			18.38	
MW-5			19.14	
MW-6			16.69	
MW-8			13.30	
MW-9			11.88	
MW-13R			17.74	
MW-14			14.50	
DW-1			TOC	
DW-2			24.83	
DW-3			153.77	
DW-4			31.51	
DW-5			14.56	
CM-5R			214.90	
CM-9R3			13.02	
CM-10R			50.14	
CM-11R			17.67	
PZ-1			92.52	
PZ-2			122.38	

REMARKS:

Name: Bert Salinas

Signature: Bert Salinas



# Geo-Logic

ASSOCIATES  
Geologists, Hydrogeologists, and Engineers

## GROUNDWATER MONITORING PROGRAM SURFACE WATER DATA SHEET

SITE: Sunshine Cr.,  
Extraction  
Trench  
Sunshine Cr.,  
 Station I.D.: R28  
 Collected By: RSS  
 Horiba Model S/N: R85540MH  
 Sampling Date: 9-19-17  
 Sampling Time: 1320  
 Duplicate Sample: YES  NO

COLOR	ODOR	pH	CONDUCTIVITY µS/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
clear	yes	6.47	5.82	0.3	3.39	24.83	50

Surface water conditions (including stream flow rate, stream depth): samples taken @ 12cm  
soil no filters.

Additional Info/Comments: overcast, cool  
12 cm. filled  
B. Salinas / B. Salinas

# Geo-Logic

ASSOCIATES  
Geologists, Hydrogeologists, and Engineers

## GROUNDWATER MONITORING PROGRAM SURFACE WATER DATA SHEET

SITE: Sunrise Gap

Station I.D.: Combined Subcamp  
Collected By: RS  
Horiba Model S/N: RFS5494H

Sampling Date: 9-18-17  
Sampling Time: 1345  
Duplicate Sample:  YES  NO

COLOR	ODOR	pH	CONDUCTIVITY <small>µS/cm</small>	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
Clear	Yes	6.69	2.80	26.7	2.12	28.82	224

Surface water conditions (including stream flow rate, stream depth): Samples collected @ filter elements, 2meters deep.

Additional Info/Comments: Clear, Sunny, cool, light winds

Ben Salinas (Ben) Salinas

## GROUNDWATER MONITORING PROGRAM SURFACE WATER DATA SHEET

Site Name: Sunshine

Project No.: S077-1047

Station I.D.: Subdrain (N)

Sampling Date: 9-18-17

Collected By: RES

Sampling Time: 1305

Horiba Model S/N: RJST4944

Duplicate Sample: YES  NO

COLOR	ODOR	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
<u>most yellow</u>	<u>Yes</u>	<u>6.29</u>	<u>4239</u>	<u>0.1</u>	<u>2.94</u>	<u>26.60</u>	<u>113</u>

Surface water conditions (including stream flow rate, stream depth): Collected samples @  
Inlet side to GPC tanks

\* Odor Neutralizer mist for running next to the  
Subdrain.

Additional Info/Comments: Sunny, Cool

Q&A taken here.

B. Salinas / T. But Salinas



## GROUNDWATER MONITORING PROGRAM WELL DATA SHEET

Site Name: <u>Sunshine Cyn</u>	Project No.: <u>2017.1047</u>
Well I.D.: <u>CM-9R3</u>	Sampling Date: <u>9.18.17</u>
Collected By: <u>AS</u>	Purge start Time: <u>1151</u>
Casing Diameter (inches): <u>4</u>	Purge Stop time: <u>1210</u>
Starting Water Level: <u>13.02</u>	Sampling (Well Recovery) Time: <u>1215</u>
Total Depth (feet): <u>29.00</u>	Ending Water Level (feet): _____
Water column (feet): <u>15.98</u>	Total Purged (gallons): <u>2.04</u>
Screen Length (feet): <u>—</u>	Duplicate Sample: YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
Sample Method: <u>Micro Purge</u> <input checked="" type="checkbox"/> Low Flow <input type="checkbox"/>	

Horiba Model S/N: U-52/626P8GR5

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
1156	0.50	13.51	4.93	6.88	39.3	2.39	19.19	78
1200	1.00	13.85	4.91	6.84	21.0	2.15	18.99	87
1203	1.25	13.98	4.88	6.86	12.8	2.08	18.89	90
1205	1.50	14.12	4.87	6.87	12.8	2.05	18.85	98
1207	1.75	14.29	4.85	6.87	13.0	2.01	18.88	101
1210	2.00	14.45	4.86	6.84	12.6	2.02	18.86	103

Purge Sampling Rates: 25 PSI ; R:20 / A:10

Well condition: O.K. - Slightly cloudy water w/ no odor

Additional Info/Comments: Mostly Sunny, Warm, Breezy \* Pump Depth: 27.4 ft.

Name: A. Shaw Signature: AS

# GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Cyn Well ID: CM-9R3 Date: 9.18.17

**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:  Not visible  
 Presence of depressions or standing water around well: Yes: \_\_\_\_\_ No:   
 Remarks: No pad observed - Sediments around well from past erosion out of canyon

**Protective Outer Casing:**

Material: Metel

Condition of Protective Casing: Good:  Damaged: \_\_\_\_\_  
 Condition of Locking Cap: Good: \_\_\_\_\_ Damaged:   
 Condition of Lock: Good:  Damaged: \_\_\_\_\_  
 Condition of Weepholes: Good:  Damaged: \_\_\_\_\_

Remarks: Locking cap/ring cracked and can be lifted off w/out unlocking

**Well Riser:**

Material: PVC

Condition of Riser: Good:  Damaged: \_\_\_\_\_  
 Condition of Riser Cap: Good:  Damaged: \_\_\_\_\_  
 Measurement 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:

AC. [Signature] Field Tech  
 Signed Title

9.18.17  
 Date

## GROUNDWATER MONITORING PROGRAM WELL DATA SHEET

Site Name:	<u>Sunshine Cyn</u>	Project No.:	<u>SD17.1047</u>
Well I.D.:	<u>CM-10R</u>	Sampling Date:	<u>9.18.17</u>
Collected By:	<u>AS</u>	Purge start Time:	<u>1054</u>
Casing Diameter (inches):	<u>4</u>	Purge Stop time:	<u>1118</u>
Starting Water Level:	<u>50.14</u>	Sampling (Well Recovery) Time:	<u>1125</u>
Total Depth (feet):	<u>110.90</u>	Ending Water Level (feet):	<u>50.38</u>
Water column (feet):		Total Purged (gallons):	<u>2.5+</u>
Screen Length (feet):	<u>—</u>	Duplicate Sample:	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
Sample Method:	<u>Micro Purge</u> Low Flow		
Horiba Model S/N:	<u>U-52 (KGGP8GR5)</u>		

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
1102	1.00	50.38	6.67	4.37	∅	5.49	22.49	-159
1107	1.50	"	6.68	4.38	∅	5.19	22.31	-171
1110	1.75	"	6.68	4.38	∅	5.24	22.32	-183
1113	2.00	"	6.68	4.38	∅	5.31	22.30	-193
1115	2.25	"	6.68	4.39	∅	5.35	22.26	-203
1118	2.50	"	6.68	4.39	∅	5.39	22.21	-202

Purge Sampling Rates: SD 25% ; R: 40 / A: 15

Well condition: O.K. - Visually clear water w/ strong odor.

Additional Info/Comments: Mostly Sunny, Warm. Breezy \* Pump depth: 100 ft.

Name: A. Shah Signature: [Signature]

# GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Cyn Well ID: CM-10R Date: 9.18.17

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:

Measurement 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] Signed Title Field Tech Date 9.18.17

## GROUNDWATER MONITORING PROGRAM WELL DATA SHEET

Site Name: <u>Sunshine Cyn</u>	Project No.: <u>9077.1047</u>
Well I.D.: <u>CM-11R</u>	Sampling Date: <u>9.18.17</u>
Collected By: <u>AS</u>	Purge start Time: <u>1302</u>
Casing Diameter (inches): <u>4</u>	Purge Stop time: <u>1330</u>
Starting Water Level: <u>17.67</u>	Sampling (Well Recovery) Time: <u>1345</u>
Total Depth (feet): <u>31.00</u>	Ending Water Level (feet): <u>18.75</u>
Water column (feet): <u>13.33</u>	Total Purged (gallons): <u>1.5+</u>
Screen Length (feet): <u>—</u>	Duplicate Sample: YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
Sample Method: <u>Micro Purge</u> <input checked="" type="checkbox"/> Low Flow <input type="checkbox"/>	
Horiba Model S/N: <u>0-52/W66P8GR5</u>	

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
1308	0.25	18.11	4.50	5.49	∅	2.05	27.36	295
1312	0.50	18.21	4.50	5.53	3.7	1.66	26.92	312
1317	0.75	18.37	4.49	5.56	∅	1.62	26.44	321
1321	1.00	18.49	4.49	5.61	∅	1.60	25.96	329
1325	1.25	18.63	4.48	5.62	∅	1.58	25.89	331
1330	1.50	18.75	4.48	5.62	∅	1.57	25.92	332

Purge Sampling Rates: 30 PSI ; R: 25 / A: 5

Well condition: D.K. - Clear water w/ no odor

Additional Info/Comments: Mostly Sunny, Warm, Breezy  
\* Pump Depth: 29.8 ft.

Name: A. Shal Signature: [Signature]

# GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Cyn Well ID: CM-11R Date: 9.18.17

**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: \_\_\_\_\_  
 Measurement reference point: Yes:  No: \_\_\_\_\_  
 Remarks: \_\_\_\_\_

**Dedicated Pump:**

Type: Bladder

Condition: Good:  Damaged: \_\_\_\_\_ Missing: \_\_\_\_\_  
 Pumping Rate (gpm): N/A Current (Hz): N/A

Remarks: Low-yield

\* Pump Depth: 29.8 ft

Field Certification:

AC SL  
Signed

Field Tech  
Title

9.18.17  
Date

## GROUNDWATER MONITORING PROGRAM WELL DATA SHEET

Site Name: Sunshine Cyn Project No.: SO17.1047  
 Well I.D.: DW-1 Sampling Date: 9-19-17  
 Collected By: BS Purge start Time: /  
 Casing Diameter (inches): 4 Purge Stop time: /  
 Starting Water Level: TOC Sampling (Well Recovery) Time: 1058  
 Total Depth (feet): / Ending Water Level (feet): /  
 Water column (feet): / Total Purged (gallons): /  
 Screen Length (feet): / Duplicate Sample: YES  NO   
 Sample Method:  Micro Purge  Low Flow  
 Horiba Model S/N: R855494H

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
1001	Grab	—	8.76	6.28	3.2	3.16	23.32	-44

Purge Sampling Rates: Collect samples from the deep table, clear water with a sump can

Well condition: OK

Additional Info/Comments: overcast, cool

Name: B. Salinas Signature: Bert Salinas

# GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Gym Well ID: DW-1 Date: 9-19-17

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: Area is clear.

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: Casing is corroded.

Well Riser: Material: PVC  
Condition of Riser: Good:  Damaged:   
Condition of Riser Cap: Good:  Damaged:   
Measurement 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: Ben Polaris GW Manager 9-19-17  
Signed Title Date



## GROUNDWATER MONITORING PROGRAM WELL DATA SHEET

Site Name: <u>Sundine Cyn.</u>	Project No.: <u>307,1047</u>
Well I.D.: <u>DW-2</u>	Sampling Date: <u>9-19-17</u>
Collected By: <u>BS</u>	Purge start Time: <u>0827</u>
Casing Diameter (inches): <u>4</u>	Purge Stop time: <u>0857</u>
Starting Water Level: <u>24.86</u>	Sampling (Well Recovery) Time: <u>0910</u>
Total Depth (feet): <u>71.00</u>	Ending Water Level (feet): <u>27.79</u>
Water column (feet): <u>46.14</u>	Total Purged (gallons): <u>3 3/4</u>
Screen Length (feet): <u>—</u>	Duplicate Sample: YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
Sample Method: <u>Micro Purge</u> Low Flow	
Horiba Model S/N: <u>R8J0494H</u>	

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
0833	3/4	26.18	7.55	3.64	1.4	3.21	19.57	-1
0837	1 1/4	26.50	7.56	3.63	1.2	1.81	19.56	5
0841	1 3/4	26.87	7.55	3.63	1.1	1.56	19.57	6
0845	2 1/4	26.99	7.61	3.71	1.0	1.61	19.55	32
0849	2 7/4	27.38	7.18	3.68	0.6	1.54	19.58	15
0853	3 1/4	27.64	7.22	3.68	0.4	1.49	19.58	16
0857	3 3/4	27.88	7.25	3.69	0.4	1.46	19.58	15

Purge Sampling Rates: PSP 45, R: 35/D: 17. Clear water  
with no color  
QCB taken here.  
 Well condition: OK - Needs weed abatement.  
\*Re calibrate Horiba @ 2 1/4 gal.

Additional Info/Comments:

Name: Bart Salinas      Signature: Bart Salinas

# GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sundance Well ID: DW-2 Date: 9-19-17

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: Megrol  
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: (PS) PVC  
Condition of Riser: Good: ✓ Damaged:         
Condition of Riser Cap: Good: ✓ Damaged:         
Measurement 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: Bert Salas GW Manager 9-19-17  
Signed Title Date

## GROUNDWATER MONITORING PROGRAM WELL DATA SHEET

Site Name: Sunshine Cyn Project No.: SO17-1047  
 Well I.D.: MW-1 Sampling Date: 9-21-17  
 Collected By: AS Purge start Time: 0912  
 Casing Diameter (inches): 4 Purge Stop time: 0930  
 Starting Water Level: 15.59 Sampling (Well Recovery) Time: 0935  
 Total Depth (feet): 29.60 Ending Water Level (feet): 15.74  
 Water column (feet): 14.01 Total Purged (gallons): 2.04  
 Screen Length (feet): → Duplicate Sample: YES  NO   
 Sample Method:  Micro Purge  Low Flow  
 Horiba Model S/N: U-52/WG6P8CR5

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
0916	0.50	15.74	6.60	6.29	66.0	4.01	21.54	-99
0920	1.00	"	6.58	6.34	59.3	3.34	21.55	-114
0922	1.25	"	6.58	6.35	51.1	2.42	21.59	-117
0925	1.50	"	6.57	6.35	49.6	2.05	21.61	-118
0927	1.75	"	6.57	6.35	49.4	2.00	21.59	-119
0930	2.00	"	6.57	6.35	49.1	1.96	21.60	-119

Purge Sampling Rates: 20 PSI R:30 A:11  
Water has slight yellowish tint w/ some odor.

Well condition: OK

Additional Info/Comments: Cloudy, Cool A.M.

Name: A. Stew Signature: [Signature]

# GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Soushine Cyn Well ID: MW-1 Date: 9.21.17

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: N/A Good:  Inadequate:   
Presence of depressions or standing water around well: Yes:  No:   
Remarks: No concrete pad observed.

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:   
Measurement 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: OC Signed Field Tech Title 9.21.17 Date

## GROUNDWATER MONITORING PROGRAM WELL DATA SHEET

Site Name: <u>Sunshine Cyn</u>	Project No.: <u>SD17.1047</u>
Well I.D.: <u>MW-2A</u>	Sampling Date: <u>9.20.17</u>
Collected By: <u>AS</u>	Purge start Time: <u>0906</u>
Casing Diameter (inches): <u>4</u>	Purge Stop time: <u>0942</u>
Starting Water Level: <u>33.54</u>	Sampling (Well Recovery) Time: <u>0952</u>
Total Depth (feet): <u>41.30</u>	Ending Water Level (feet): <u>35.02</u>
Water column (feet): <u>7.76</u>	Total Purged (gallons): <u>1.51</u>
Screen Length (feet): <u>—</u>	Duplicate Sample: YES <input type="radio"/> NO <input checked="" type="radio"/>
Sample Method: <u>Micro Purge</u> <input checked="" type="radio"/> Low Flow <input type="radio"/>	
Horiba Model S/N: <u>U-52/W66P8C251</u>	

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
0913	0.25	33.85	6.74	4.53	∅	2.87	21.84	-64
0918	0.50	34.06	6.93	4.54	∅	2.09	22.00	-75
0924	0.75	34.30	6.96	4.54	∅	1.82	22.10	-76
0930	1.00	34.56	6.98	4.54	∅	1.78	22.14	-76
0936	1.25	34.79	6.98	4.53	∅	1.72	22.22	-76
0942	1.50	35.02	6.98	4.53	∅	1.68	22.21	-76

Purge Sampling Rates: 25 PSI ; R: 25 / D: 6  
 Water is visually clear w/ no odor - took some time to fill sample bottles due to low yield  
 Well condition: O.K. - Requires hiking sampling equipment + bottles down slope to access  
 Additional Info/Comments: Some clouds, mild A.M. \* Pump Inlet: 39 ft.

Name: A. Shaw Signature: AC. Shaw

# GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Cyn Well ID: MW-2A Date: 9.20.17

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: Well is mid-slope - Requires hiking down slope to access.

Concrete Pad:  
Integrity: N/A Good: \_\_\_\_\_ Inadequate: \_\_\_\_\_  
Presence of depressions or standing water around well: Yes: \_\_\_\_\_ No:   
Remarks: Concrete pad not visible.

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: \_\_\_\_\_  
Measurement reference point: Yes:  No: \_\_\_\_\_  
Remarks: \_\_\_\_\_

Dedicated Pump: Type: Bladder  
Condition: Good:  Damaged: \_\_\_\_\_ Missing: \_\_\_\_\_  
Pumping Rate (gpm): N/A Current (Hz): N/A  
Remarks: low yield

Field Certification: [Signature] Signed \_\_\_\_\_ Title Field Tech Date 9.20.17

## GROUNDWATER MONITORING PROGRAM WELL DATA SHEET

Site Name:	<u>Sunshine Cyn</u>	Project No.:	<u>2017.1047</u>
Well I.D.:	<u>MW-2B</u>	Sampling Date:	<u>9.20.17</u>
Collected By:	<u>AS</u>	Purge start Time:	<u>1053</u>
Casing Diameter (inches):	<u>4</u>	Purge Stop time:	<u>1117</u>
Starting Water Level:	<u>18.36</u>	Sampling (Well Recovery) Time:	<u>1127</u>
Total Depth (feet):	<u>71.10</u>	Ending Water Level (feet):	<u>21.50</u>
Water column (feet):	<u>52.74</u>	Total Purged (gallons):	<u>2.25 +</u>
Screen Length (feet):	<u>—</u>	Duplicate Sample:	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
Sample Method:	<u>Micro Purge</u> 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
1059	0.50	19.50	7.20	4.50	∅	2.92	22.96	-138
1104	1.00	19.91	7.16	4.51	∅	1.69	22.32	-116
1109	1.50	20.72	7.15	4.50	∅	1.43	22.20	-111
1112	1.75	20.97	7.15	4.51	∅	1.31	22.22	-109
1114	2.00	21.26	7.15	4.52	∅	1.28	22.16	-109
1117	2.25	21.50	7.15	4.50	∅	1.26	22.13	-109

Purge Sampling Rates: 40 PSI ; R: 35 / D: 13  
Water is visually clear w/ strong odor.

Well condition: O.K. - Requires hiking equipment + bottles down slope to well.

Additional Info/Comments: Partly cloudy, mild \* Pump Tubet: 68 ft.

Name: A. Shah      Signature: [Signature]

# GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Cyn Well ID: MW-2B Date: 9.20.17

**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: Well is mid-slope - Requires hiking equipment + bottles down-slope to access

**Concrete Pad:**  
 Integrity: N/A Good: \_\_\_\_\_ Inadequate: \_\_\_\_\_  
 Presence of depressions or standing water around well: Yes: \_\_\_\_\_ No:   
 Remarks: Concrete pad not visible.

**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: \_\_\_\_\_  
 Measurement 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] Signed \_\_\_\_\_ Title Field Tech Date 9.20.17



## GROUNDWATER MONITORING PROGRAM WELL DATA SHEET

Site Name:	<u>Sunshine Cyn</u>	Project No.:	<u>S017.1047</u>
Well I.D.:	<u>MW-5</u>	Sampling Date:	<u>9.20.17</u>
Collected By:	<u>AS</u>	Purge start Time:	<u>1315</u>
Casing Diameter (inches):	<u>2</u>	Purge Stop time:	<u>1332</u>
Starting Water Level:	<u>19.16</u>	Sampling (Well Recovery) Time:	<u>1342</u>
Total Depth (feet):	<u>26.20</u>	Ending Water Level (feet):	<u>19.36</u>
Water column (feet):	<u>7.04</u>	Total Purged (gallons):	<u>2.04</u>
Screen Length (feet):	<u>—</u>	Duplicate Sample:	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
Sample Method:	<u>Micro Purge</u> Low Flow		
Horiba Model S/N:	<u>U-52/WACPRRS</u>		

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
1319	0.50	19.36	6.53	5.86	14.5	2.63	22.62	-55
1323	1.00	"	6.53	5.92	28.1	1.53	21.97	-69
1325	1.25	"	6.53	5.95	13.8	1.32	21.89	-70
1328	1.50	"	6.53	5.92	10.8	1.29	21.81	-76
1330	1.75	"	6.53	5.93	10.7	1.21	21.86	-71
1332	2.00	"	6.56	5.93	9.9	1.20	21.81	-71

Purge Sampling Rates: 20 PSI ; R: 30 / D: 10

Well condition: OK. - Water has yellowish tint w/ no odor.

Additional Info/Comments: Mostly Sand, Worm

Name: A. Shaw      Signature: AS

# GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Cyn Well ID: MW-5 Date: 9.20.17

**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 is buried / not visible

**Concrete Pad:**

Integrity: N/A Good: \_\_\_\_\_ Inadequate: \_\_\_\_\_  
 Presence of depressions or standing water around well: Yes: \_\_\_\_\_ No:   
 Remarks: Pad not visible

**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: \_\_\_\_\_  
 Measurement reference point: Yes:  No: \_\_\_\_\_  
 Remarks: \_\_\_\_\_

**Dedicated Pump:**

Type: Bladders  
 Condition: Good:  Damaged: \_\_\_\_\_ Missing: \_\_\_\_\_  
 Pumping Rate (gpm): N/A Current (Hz): N/A  
 Remarks: \_\_\_\_\_

Field Certification:

ac-sh  
 Signed

Field Tech  
 Title

9.20.17  
 Date

## GROUNDWATER MONITORING PROGRAM WELL DATA SHEET

Site Name: Sunshine Cyn Project No.: SD17.1047  
 Well I.D.: MW-6 Sampling Date: 9-19-17  
 Collected By: AS Purge start Time: 0927  
 Casing Diameter (inches): 2 Purge Stop time: 1005  
 Starting Water Level: 16.64 Sampling (Well Recovery) Time: 1015  
 Total Depth (feet): 23.50 Ending Water Level (feet): 17.43  
 Water column (feet): 6.86 Total Purged (gallons): 1.54  
 Screen Length (feet): — Duplicate Sample: YES  NO   
 Sample Method: Micro Purge Low Flow  
 Horiba Model S/N: U-52 | WG6P8GR5 |

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
0935	0.25	17.11	6.95	5.36	1.2	1.80	22.83	-213
0941	0.50	17.21	6.95	5.32	1.3	1.20	22.90	-239
0947	0.75	17.26	6.93	5.32	7.0	1.14	23.09	-248
0953	1.00	17.32	6.93	5.32	6.9	1.12	23.10	-252
0959	1.25	17.36	6.93	5.33	7.3	1.11	23.11	-253
1005	1.50	17.43	6.93	5.32	7.4	1.10	23.11	-254

Purge Sampling Rates: 20 PSI R: 30 / D: 5  
 Water is mostly clear w/ strong odor - becoming blackish color as purge progresses.  
 Well condition: OK - Hiked equipment down slope & over to well.

Additional Info/Comments: Overcast, Mild A.M.

Name: A. Shaw Signature: AC. Shaw

# GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Cyn Well ID: MW-6 Date: 9.19.17

**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: Requires hiking/climbing sampling equipment + bottles down slope and over to well

**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: \_\_\_\_\_  
 Measurement reference point: Yes:  No: \_\_\_\_\_  
 Remarks: \_\_\_\_\_

**Dedicated Pump:**

Type: Bladder

Condition: Good:  Damaged: \_\_\_\_\_ Missing: \_\_\_\_\_  
 Pumping Rate (gpm): N/A Current (Hz): N/A  
 Remarks: low yield

Field Certification:

ACM Signed \_\_\_\_\_ Title Field Tech Date 9.19.17

## GROUNDWATER MONITORING PROGRAM WELL DATA SHEET

**Site Name:** Sunshine Cyn **Project No.:** SO17.1047  
**Well I.D.:** MW-9 **Sampling Date:** 9.19.17  
**Collected By:** AS **Purge start Time:** 1312  
**Casing Diameter (inches):** 4 **Purge Stop time:** 1340  
**Starting Water Level:** 11.85 **Sampling (Well Recovery) Time:** 1345  
**Total Depth (feet):** 26.70 **Ending Water Level (feet):** 11.89  
**Water column (feet):** 14.85 **Total Purged (gallons):** 2.0+  
**Screen Length (feet):** — **Duplicate Sample:** YES  NO   
**Sample Method:** Micro Purge Low Flow  
**Horiba Model S/N:** U-52/CX66-P2GR51

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
1322	0.50	11.89	6.46	7.16	1.1	1.78	24.13	-97
1328	1.00	"	6.46	7.17	1.4	1.69	24.12	-99
1331	1.25	"	6.46	7.19	0.7	1.59	24.08	-101
1334	1.50	"	6.46	7.18	0.6	1.58	24.07	-101
1337	1.75	"	6.46	7.18	0.6	1.54	24.08	-102
1340	2.00	"	6.46	7.18	0.9	1.53	24.09	-102

**Purge Sampling Rates:** 25 PSI ; R:20 / D:5  
Water has yellowish tint w/ no odor

**Well condition:** OK

**Additional Info/Comments:** Overcast, Cool, Breezy

**Name:** A. Shaw **Signature:** AS  
WSL =           
MW-8 13.30

# GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Cyn Well ID: MW-9 Date: 9.19.17

## 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 equipment + bottles over to well.

## Concrete Pad:

Integrity: Good:  Inadequate: \_\_\_\_\_  
Presence of depressions or standing water around well: Yes: \_\_\_\_\_ No:

Remarks:

## Protective Outer Casing:

Material: Metal (Flush Mount)

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: \_\_\_\_\_  
Measurement 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:

ACM  
Signed

Field Tech  
Title

9.19.17  
Date



# GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Cyn Well ID: MLW-13R Date: 9.21.17

## 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: Carried sampling equipment + bottles across entrance road to well

## 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 monument is heavily corroded.

## Well Riser:

Material: PVC

Condition of Riser: Good: ✓ Damaged:         
Condition of Riser Cap: Good: ✓ Damaged:         
Measurement 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:

OCM  
Signed

Field Tech  
Title

9.21.17  
Date





# GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Cyn Well ID: MW-14 Date: 9.19.17

**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: Requires hiking/carry sampling equipment and batteries down slope to well.

**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:         
 Measurement 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: OCM Signed Field Tech Title 9.19.17 Date



# GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Cpu Well ID: DW-3 Date: 9-20-17

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:   
Measurement 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: Bert Julius GW Manager 9-20-17  
Signed Title Date

## GROUNDWATER MONITORING PROGRAM WELL DATA SHEET

Site Name: <u>Sunshine Cyn</u>	Project No.: <u>S017-1047</u>
Well I.D.: <u>DW-4</u>	Sampling Date: <u>9-20-17</u>
Collected By: <u>AS</u>	Purge start Time: <u>1212</u>
Casing Diameter (inches): <u>4</u>	Purge Stop time: <u>1240</u>
Starting Water Level: <u>31.55</u>	Sampling (Well Recovery) Time: <u>1250</u>
Total Depth (feet): <u>134.80</u>	Ending Water Level (feet): <u>35.36</u>
Water column (feet): <u>103.25</u>	Total Purged (gallons): <u>2.5+</u>
Screen Length (feet): <u>—</u>	Duplicate Sample: YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
Sample Method: <u>Micro Purge</u> Low Flow	
Horiba Model S/N: <u>U-52 (WGP2GR5)</u>	

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
1218	0.50	32.68	7.54	4.84	∅	2.66	22.75	-269
1223	1.00	33.26	7.25	4.87	1.3	1.42	22.00	-234
1229	1.50	33.82	7.25	4.89	1.4	1.37	21.97	-233
1232	1.75	34.19	7.25	4.90	0.4	1.33	21.90	-231
1235	2.00	34.60	7.25	4.91	0.1	1.29	21.84	-231
1237	2.25	34.98	7.24	4.90	0.1	1.25	21.79	-230
1240	2.50	35.36	7.24	4.88	0.2	1.21	21.80	-230

Purge Sampling Rates: 75 PSI ; R:30 / A:16  
Water has blackish color w/ slight odor

Well condition: OK. - Requires hiking sampling equipment + bottles down slope to well.

Additional Info/Comments: Partly Cloudy, Mild, Breezy \* Pump Depth: 132 ft.

Name: A. Shaw Signature: ac. sh

# GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Cym Well ID: DW-4 Date: 9.20.17

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: Requires hiking equipment + bottles down slope to access - Well is mid-slope

Concrete Pad:

Integrity: N/A Good: \_\_\_\_\_ Inadequate: \_\_\_\_\_

Presence of depressions or standing water around well: Yes: \_\_\_\_\_ No:

Remarks: Concrete pad not visible

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: \_\_\_\_\_

Measurement 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: ACM Signed \_\_\_\_\_ Title Field Tech Date 9.20.17

## GROUNDWATER MONITORING PROGRAM WELL DATA SHEET

Site Name: Sunshine Cm. Project No.: 2017-1047  
 Well I.D.: DW 5 Sampling Date: 9-21-17  
 Collected By: BS Purge start Time: 0823  
 Casing Diameter (inches): 4 Purge Stop time: 0850  
 Starting Water Level: 14.53 Sampling (Well Recovery) Time: 0905  
 Total Depth (feet): 101.00 Ending Water Level (feet): 17.93  
 Water column (feet): 86.47 Total Purged (gallons): 2 1/2  
 Screen Length (feet): \_\_\_\_\_ Duplicate Sample: YES  NO   
 Sample Method:  Micro Purge  Low Flow  
 Horiba Model S/N: R8554944

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
0830	1/2	14.97	8.95	2.26	1.4	5.71	20.81	40
0833	3/4	14.64	8.96	2.24	0.1	2.82	20.86	11
0836	1	14.92	8.78	2.24	2.6	1.76	20.78	-8
0840	1 1/2	16.52	8.85	2.24	2.9	1.37	20.74	-12
0843	1 3/4	17.02	8.76	2.24	2.5	1.34	20.73	-18
0846	2	17.48	8.75	2.24	2.2	1.29	20.73	-16
0850	2 1/2	17.94	8.74	2.24	1.8	1.24	20.71	-17

Purge Sampling Rates: PSP 65, R:30/D:20  
Water has a strong odor, water has a yellow tint in color

Well condition: OK

Additional Info/Comments: QCBS taken here.  
Overcast, cool, pouring

Name: B. Salinas Signature: B. Salinas

# GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: <u>Sunshine Gas</u> Well ID: <u>DW-5</u>		Date: <u>9-21-17</u>	
Access:			
Accessibility:	Good: <input checked="" type="checkbox"/>	Fair: <input type="checkbox"/>	Poor: <input type="checkbox"/>
Vicinity of well clear of weeds and/or debris:	Yes: <input type="checkbox"/>	No: <input checked="" type="checkbox"/>	
Presence of depressions or standing water around well:	Yes: <input type="checkbox"/>	No: <input checked="" type="checkbox"/>	
Remarks:	<u>same as last time. Needs cleaning of debris.</u>		
Concrete Pad:			
Integrity:	Good: <input type="checkbox"/>	Inadequate: <input type="checkbox"/>	
Presence of depressions or standing water around well:	Yes: <input type="checkbox"/>	No: <input checked="" type="checkbox"/>	
Remarks:	<u>no concrete pad visible</u>		
Protective Outer Casing: Material: <u>Megrol</u>			
Condition of Protective Casing:	Good: <input checked="" type="checkbox"/>	Damaged: <input type="checkbox"/>	
Condition of Locking Cap:	Good: <input checked="" type="checkbox"/>	Damaged: <input type="checkbox"/>	
Condition of Lock:	Good: <input checked="" type="checkbox"/>	Damaged: <input type="checkbox"/>	
Condition of Weepholes:	Good: <input checked="" type="checkbox"/>	Damaged: <input type="checkbox"/>	
Remarks:			
Well Riser: Material: <u>PVC</u>			
Condition of Riser:	Good: <input checked="" type="checkbox"/>	Damaged: <input type="checkbox"/>	
Condition of Riser Cap:	Good: <input checked="" type="checkbox"/>	Damaged: <input type="checkbox"/>	
Measurement reference point:	Yes: <input checked="" type="checkbox"/>	No: <input type="checkbox"/>	
Remarks:			
Dedicated Pump: Type: <u>Bladder</u>			
Condition:	Good: <input checked="" type="checkbox"/>	Damaged: <input type="checkbox"/>	Missing: <input type="checkbox"/>
Pumping Rate (gpm):	<u>N/A</u>	Current (Hz):	<u>N/A</u>
Remarks:			

Field Certification: \_\_\_\_\_  
 Signed \_\_\_\_\_ Title \_\_\_\_\_ Date \_\_\_\_\_



## GROUNDWATER MONITORING PROGRAM WELL DATA SHEET

Site Name:	<u>Sunshine Cyn</u>	Project No.:	<u>SD17-1047</u>
Well I.D.:	<u>P2-2</u>	Sampling Date:	<u>9.19.17</u>
Collected By:	<u>AS</u>	Purge start Time:	<u>1144</u>
Casing Diameter (inches):	<u>2</u>	Purge Stop time:	<u>1215</u>
Starting Water Level:	<u>122.42</u>	Sampling (Well Recovery) Time:	<u>1225</u>
Total Depth (feet):	<u>160.90</u>	Ending Water Level (feet):	<u>128.52</u>
Water column (feet):	<u>—</u>	Total Purged (gallons):	<u>2.0+</u>
Screen Length (feet):	<u>—</u>	Duplicate Sample:	YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
Sample Method:	<u>Micro Purge</u> Low Flow		
Horiba Model S/N:	<u>U-52/WG6P2CR5</u>		

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
1152	0.50	124.66	8.54	8.02	0.4	2.30	25.28	-145
1200	1.00	126.03	8.61	8.02	0.1	1.46	25.08	-125
1204	1.25	126.70	8.62	8.02	0.0	1.23	25.03	-118
1208	1.50	127.28	8.62	8.02	0.0	1.15	25.01	-116
1212	1.75	127.89	8.62	8.03	0.0	1.11	24.97	-115
1215	2.00	128.52	8.62	8.02	0.0	1.10	25.00	-114

Purge Sampling Rates: 80 PSI R:30 / D:22  
Water is mostly clear w/ no odor.

Well condition: O.K - Had to carry equipment across concrete channel

Additional Info/Comments: Overcast, Cool

Name: A. Shaw      Signature: [Signature]

# GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Cyn Well ID: PZ-2 Date: 9.19.17

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: Carried sampling equipment + bottles across concrete channel.

Concrete Pad:

Integrity: Good: N/A Inadequate: N/A

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: \_\_\_\_\_

Measurement 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: ACM Signed \_\_\_\_\_ Title Field Tech Date 9.19.17

## GROUNDWATER MONITORING PROGRAM WELL DATA SHEET

Site Name: <u>Sunshine Cyn.</u>	Project No.: <u>5017.1047</u>
Well I.D.: <u>PZ-4</u>	Sampling Date: <u>9-20-17</u>
Collected By: <u>BJS</u>	Purge start Time: <u>0829</u>
Casing Diameter (inches): <u>2</u>	Purge Stop time: <u>0900</u>
Starting Water Level: <u>111.61</u>	Sampling (Well Recovery) Time: <u>0915</u>
Total Depth (feet): <u>125.15</u>	Ending Water Level (feet): <u>114.62</u>
Water column (feet): <u>13.54</u>	Total Purged (gallons): <u>3 3/4</u>
Screen Length (feet): <u>—</u>	Duplicate Sample: YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
Sample Method: <u>Micro Purge</u> <u>Low Flow</u>	
Horiba Model S/N: <u>R8554944</u>	

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
0841	1 1/4	112.94	5.28	2.21	11.5	3.11	23.51	170
0844	2	113.51	7.28	2.08	5.4	1.46	23.08	96
0848	2 1/2	114.23	7.47	2.06	3.1	1.35	23.45	82
0852	2 3/4	114.44	7.66	2.03	2.3	1.28	23.48	77
0856	3 1/4	114.73	7.68	2.02	2.3	1.27	23.51	72
0900	3 3/4	114.98	7.69	2.02	2.1	1.24	23.54	72

Purge Sampling Rates: RSD 50, R: 40, D: 15  
Water is bit cloudy with no color

Well condition: OK  
QCAB taken here

Additional Info/Comments: Clay, cool  
12 CAT, filled

Name: B. Salinas      Signature: B. Salinas

# GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility:	<u>Sunshine Gym</u>	Well ID:	<u>PZ-4</u>	Date:	<u>9-20-17</u>
Access:	Accessibility: Good: <input checked="" type="checkbox"/> Fair: <input type="checkbox"/> Poor: <input type="checkbox"/>				
	Vicinity of well clear of weeds and/or debris: Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/>				
	Presence of depressions or standing water around well: Yes: <input type="checkbox"/> No: <input checked="" type="checkbox"/>				
Remarks:					
Concrete Pad:	Integrity: Good: <input checked="" type="checkbox"/> Inadequate: <input type="checkbox"/>				
	Presence of depressions or standing water around well: Yes: <input type="checkbox"/> No: <input type="checkbox"/>				
Remarks:					
Protective Outer Casing:	Material: <u>Flashed metal</u>				
	Condition of Protective Casing: Good: <input checked="" type="checkbox"/> Damaged: <input type="checkbox"/>				
	Condition of Locking Cap: Good: <u>N/A</u> Damaged: <input type="checkbox"/>				
	Condition of Lock: Good: <input checked="" type="checkbox"/> Damaged: <input type="checkbox"/>				
	Condition of Weepholes: Good: <input checked="" type="checkbox"/> Damaged: <input type="checkbox"/>				
Remarks:					
Well Riser:	Material: <u>PVC</u>				
	Condition of Riser: Good: <input checked="" type="checkbox"/> Damaged: <input type="checkbox"/>				
	Condition of Riser Cap: Good: <input checked="" type="checkbox"/> Damaged: <input type="checkbox"/>				
	Measurement reference point: Yes: <input checked="" type="checkbox"/> No: <input type="checkbox"/>				
Remarks:					
Dedicated Pump:	Type: <u>Bladder</u>				
	Condition: Good: <input checked="" type="checkbox"/> Damaged: <input type="checkbox"/> Missing: <input type="checkbox"/>				
	Pumping Rate (gpm): <u>N/A</u> Current (Hz): <u>N/A</u>				
Remarks:					

Field Certification:

Bert Salinas  
Signed Title

9-20-17  
Date

**GROUNDWATER MONITORING PROGRAM  
WELL DATA SHEET**

Site Name.: Sunshine  
 Well I.D.: LY-6  
 Collected By: BS  
 Casing Diameter (inches): \_\_\_\_\_  
 Starting Water Level: \_\_\_\_\_  
 Total Depth (feet): \_\_\_\_\_  
 Water column (feet): \_\_\_\_\_  
 Screen Length (feet): \_\_\_\_\_  
 Purge Volume (gallons): \_\_\_\_\_  
 Horiba Model S/N: \_\_\_\_\_

Project No.: SO17.6047  
 Sampling Date: 9-20-17  
 Purge start Time: \_\_\_\_\_  
 Purge Stop time: \_\_\_\_\_  
 Sampling Time: \_\_\_\_\_  
 Ending Water Level (feet): \_\_\_\_\_  
 Total Purged (gallons): \_\_\_\_\_  
 PID/FID Reading: \_\_\_\_\_  
 Duplicate Sample: \_\_\_\_\_  
 YES NO

GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O mg/L	TEMPERATURE °C	ORP mV
<b>DRY</b>							

Purge Sampling Rates: lysimeter is dry, no samples collected.

Well condition: The discharge HDPE pipe is kinked and the electrical wire is frayed.

Additional Info/Comments: cloudy, cool



## FIELD CALIBRATION DOCUMENTATION FORM

LOCATION (Site/Facility Name) Sunshine Cym. PROJECT NAME / NUMBER SA17.12017

Instrument Make/Model #		RS5549H				
Date/Time	pH	Electrical Conductivity ( $\mu$ Mhos/cm) (4.49 mg/Kg)	Turbidity (NTU)	DO (mg/L or %)	Guidance Remarks	Comments
9-26-17 0715	3.46	4.54	0.7	13.12		
Pre. Cal						
Calibration	4.00	4.49	—	8.64		cal. TO PH-A
Calibration Successful? (Y/N)	Yes		—	—	enter YES or NO	
Satisfies Protocol?	Yes		—	—	Did calibration meet criteria in the sampling protocol? (Y or N)	
Calibration by	Bert Allen					Signature or initials
Physical Condition of Unit		Good				

## FIELD CALIBRATION DOCUMENTATION FORM

LOCATION (Site/Facility Name) Sunshine Cyn PROJECT NAME / NUMBER SD17.1047

Instrument Make/Model # <u>Hanna U-52</u>		<u>SUNSHINE CYN</u>					
Date/Time	pH	Electrical Conductivity ( $\mu$ Mhos/cm)	Turbidity (NTU)	DO (mg/L or %)	Guidance Remarks	Comments	
<u>9.19.17</u> <u>0658</u>						<u>Manual Cal</u>	
Pre. Cal	<u>2.19</u>	<u>4.51</u>	<u>D.D</u>	<u>11.57</u>		<u>Calib. w/ 7.0 pH Buffer:</u> <u>Pre. Cal = 8.79</u>	
Calibration	<u>4.00</u>	<u>4.49</u>	<u>D.D</u>	<u>8.71</u>		<u>Cal. = 6.98</u>	
Calibration Successful? (Y/N)	<u>Y</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	enter YES or NO		
Satisfies Protocol?	<u>Y</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	Did calibration meet criteria in the sampling protocol? (Y or N)		
Calibration by	<u>AS</u>				Signature or initials	<u>OC. JN</u>	
Physical Condition of Unit		<u>_____</u> <u>→ Good</u>					



## FIELD CALIBRATION DOCUMENTATION FORM

LOCATION (Site/Facility Name) Sunshine Cy PROJECT NAME / NUMBER SD17.1047

Instrument Make/Model # <u>Hanna U-S2</u>						
Date/Time	pH	Electrical Conductivity ( $\mu$ Mhos/cm)	Turbidity (NTU)	DO (mg/L or %)	Guidance Remarks	Comments
<u>9.20.17</u> <u>0649</u>						
Pre. Cal	<u>7.18</u>	<u>4.47</u>	<u>0.1</u>	<u>8.37</u>		<u>Calib. w/ 7.0 pH Buffer - ;</u> <u>Pre cal - 8.84</u>
Calibration	<u>4.00</u>	<u>4.50</u>	<u>0.0</u>	<u>9.23</u>		<u>Cal - 7.00</u>
Calibration Successful? (Y/N)	<u>Y</u>	<u>Y</u>	<u>Y</u>	<u>Y</u>	enter YES or NO	
Satisfies Protocol?	<u>Y</u>	<u>Y</u>	<u>Y</u>	<u>Y</u>	Did calibration meet criteria in the sampling protocol? (Y or N)	
Calibration by	<u>AS</u>				Signature or initials	<u>OC. AS</u>
Physical Condition of Unit		<u>Good</u>				

## FIELD CALIBRATION DOCUMENTATION FORM

LOCATION (Site/Facility Name) Sandstone Crui. PROJECT NAME / NUMBER S017.1057

Instrument Make/Model #		PROJECT NAME / NUMBER				
Date/Time	pH	Electrical Conductivity (µMhos/cm) (4.49 mg/Kg)	Turbidity (NTU)	DO (mg/L or %)	Guidance Remarks	Comments
7-18-17 0903						
Pre. Cal	3.14	3.69	0.11	10.44		
Calibration	3.99	4.48	0	9.06		Cal. to PH-7 also, pre. 7.82 (cal. 7.01 TWO POINT Cal.
Calibration Successful? (Y/N)	Yes				enter YES or NO	
Satisfies Protocol?	Yes				Did calibration meet criteria in the sampling protocol? (Y or N)	
Calibration by	Bry / [Signature]					Signature or initials
Physical Condition of Unit		Good				

## FIELD CALIBRATION DOCUMENTATION FORM

LOCATION (Site/Facility Name) Sunshine Cgy PROJECT NAME / NUMBER \_\_\_\_\_

Instrument Make/Model # <u>Haniba U-52</u> <u>S/N C66P88RS</u>		PROJECT NAME / NUMBER				
Date/Time	pH	Electrical Conductivity (µMhos/cm)	Turbidity (NTU)	DO (mg/L or %)	Guidance Remarks	Comments
<u>9.18.17</u> <u>0930</u>						
Pre. Cal	<u>2.07</u>	<u>4.51</u>	<u>Ø</u>	<u>11.02</u>		<u>* 2pt Cal w/ 7.0 Buffers.</u>
Calibration	<u>4.00</u>	<u>4.49</u>	<u>Ø</u>	<u>9.71</u>		<u>Re: 8.79 Cal.: 7.00</u> <u>O.K.</u>
Calibration Successful? (Y/N)	<u>Y</u>	<u>—</u>	<u>—</u>	<u>—</u>	enter YES or NO	
Satisfies Protocol?	<u>Y</u>	<u>—</u>	<u>—</u>	<u>—</u>	Did calibration meet criteria in the sampling protocol? (Y or N)	
Calibration by	<u>AS</u>				Signature or initials	<u>OC.SS</u>
Physical Condition of Unit		<u>—</u> <u>→ Good</u>				

## FIELD CALIBRATION DOCUMENTATION FORM

LOCATION (Site/Facility Name) Sunshine Spa PROJECT NAME / NUMBER S07.1047

Instrument Make/Model #		PROJECT NAME / NUMBER				
Date/Time	pH	Electrical Conductivity (µMhos/cm) (4.49 mg/Kg)	Turbidity (NTU)	DO (mg/L or %)	Guidance Remarks	Comments
9-19-17 0645			(0)			
Pre. Cal	3.43	4.52	0.6	10.17		
Calibration	4.00	4.49	0	9.48		Cal. to PH=7. Two Point Cal.
Calibration Successful? (Y/N)	Yes				enter YES or NO	
Satisfies Protocol?	Yes				Did calibration meet criteria in the sampling protocol? (Y or N)	
Calibration by	<i>Bob Adams</i>				Signature or initials	
Physical Condition of Unit		Good				

## FIELD CALIBRATION DOCUMENTATION FORM

LOCATION (Site/Facility Name) Sunshine Cyl PROJECT NAME / NUMBER S017-1047

Instrument Make/Model # <u>Hanna U-52</u> <u>S/N WCCP88R5</u>		Guidance Remarks		Comments	
Date/Time	pH	Electrical Conductivity ( $\mu$ Mhos/cm)	Turbidity (NTU)	DO (mg/L or %)	
<u>9.21.17</u> <u>0700</u>	<u>7.89</u>	<u>4.52</u>	<u>0</u>	<u>9.32</u>	<u>Calib. w/ 7.0 pH Buffers:</u> <u>Pre Cal = 8.82</u>
Pre. Cal	<u>4.00</u>	<u>4.49</u>	<u>0</u>	<u>7.98</u>	<u>Cal ~ 7.00 O.K.</u>
Calibration	<u>Y</u>	<u>Y</u>	<u>Y</u>	<u>Y</u>	enter YES or NO
Calibration Successful? (Y/N)	<u>Y</u>	<u>Y</u>	<u>Y</u>	<u>Y</u>	Did calibration meet criteria in the sampling protocol? (Y or N)
Satisfies Protocol?	<u>AS</u>				Signature or initials
Calibration by					<u>AC, M</u>
Physical Condition of Unit		<u>→ Good</u>			

**TestAmerica Irvine**  
 17451 Arden Ave  
 Suite 100  
 Irvine, CA 92614  
 Phone: 949.261.1022 Fax:

**Chain of Custody Record**

212102

**TestAmerica**  
 THE LEADER IN ENVIRONMENTAL TESTING  
 TestAmerica Laboratories, Inc.  
 TAL-8210 (07/13)

Regulatory Program:  DW  NPDES  RCRA  Other:

**Client Contact**  
 Company Name: Teal Associates Associates  
 Address: 11175 Alton Road, Suite 100  
 City/State/Zip: Van Nuys, CA 91411  
 Phone: 818-708-1111  
 Fax: 818-708-1111  
 Project Name: Public Services  
 Site: Smoking Gym  
 P O #

**Project Manager:** John C. Johnson **Site Contact:** John C. Johnson  
**Tel/Fax:**                      **Lab Contact:**                       
**Date:** 10/17/13 **Carrier:** TestAmerica  
**COC No.:**                      **of** 1 **COCs**

**Analysis Turnaround Time**  
 CALENDAR DAYS  WORKING DAYS  
 TAT if different from Below \_\_\_\_\_  
 2 weeks  1 week  2 days  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)	Sample Specific Notes:
MW-13R-A	10/17/13	1005	G-Grab	Water	1	X	X	Water
MW-13R-B	1005				1	X	X	
MW-14-A	1000				1	X	X	
MW-14-B	1000				1	X	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  Unknown  
 Return to Client  Disposal by Lab  Archive for \_\_\_\_\_ Months

**Special Instructions/QC Requirements & Comments:**

**Custody Seals Intact:**  Yes  No  
**Custody Seal No.:** \_\_\_\_\_  
**Relinquished by:**                      **Company:** Teal Associates  
**Relinquished by:**                      **Company:** Teal Associates  
**Relinquished by:**                      **Company:** Teal Associates

**Received by:**                      **Company:** Teal Associates  
**Received by:**                      **Company:** Teal Associates  
**Received in Laboratory by:**                      **Company:** Teal Associates

**Cooler Temp. (°C):** Obs'd: \_\_\_\_\_ Cor'd: \_\_\_\_\_  
**Therm ID No.:** \_\_\_\_\_  
**Date/Time:** 10/17/13 08:35

## GROUNDWATER MONITORING PROGRAM WELL DATA SHEET

*Retest*

Site Name: Simstall Cyn  
 Well I.D.: MW-14A and MW-14-B  
 Collected By: mc  
 Casing Diameter (inches): 4  
 Starting Water Level: 14.77  
 Total Depth (feet): 28.10  
 Water column (feet): 13.33  
 Screen Length (feet):           
 Sample Method:  Micro Purge  Low Flow  
 Horiba Model S/N: 4-52/25412B00

Project No: 5017-1047  
 Sampling Date: 10-17-17  
 Purge start Time: 9:38  
 Purge Stop time: 9:54  
 Sampling (Well Recovery) Time: 10:00  
 Ending Water Level (feet): 15.25  
 Total Purged (gallons): 2.04  
 Duplicate Sample: YES  NO

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D O mg/L	TEMPERATURE °C	ORP mV
9:46	1.0	15.16	6.76	5.59	2.7	4.42	21.45	29
9:48	1.25	15.21	6.77	5.40	1.8	6.28	21.43	35
9:50	1.50	15.23	6.77	5.43	0.6	4.60	21.43	33
9:52	1.75	15.24	6.77	5.42	1.1	4.55	21.48	32
9:54	2.0	15.25	6.76	5.41	0.8	4.53	21.50	32

Purge Sampling Rates: 20 psi refill 20 discharge 10  
water is clear with no odor

Well condition: OK rocks on sorpender top  
carried bottles & equipment down hill to well  
 Additional Info/Comments: clear, hot, slight breeze

Name: Mike Campbell Signature: Mike Campbell

C-2

GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: <u>Sunshine Cyn</u>	Well ID: <u>MW-164</u>	Date: <u>10-17-17</u>
Access:		
Accessibility: Good: _____ Fair: <u>✓</u> Poor: _____		
Vicinity of well clear of weeds and/or debris: Yes: _____ No: <u>✓</u>		
Presence of depressions or standing water around well: Yes: _____ No: _____		
Remarks: <u>Equipment and bottles carried down a slope to the well</u>		
Concrete Pad:		
Integrity: Good: <u>✓</u> Inadequate: _____		
Presence of depressions or standing water around well: Yes: _____ No: _____		
Remarks:		
Protective Outer Casing: Material: <u>metal</u>		
Condition of Protective Casing: Good: <u>✓</u> Damaged: _____		
Condition of Locking Cap: Good: <u>✓</u> Damaged: _____		
Condition of Lock: Good: <u>✓</u> Damaged: _____		
Condition of Weepholes: Good: <u>✓</u> Damaged: _____		
Remarks:		
Well Riser: Material: <u>PVC</u>		
Condition of Riser: Good: <u>✓</u> Damaged: _____		
Condition of Riser Cap: Good: <u>✓</u> Damaged: _____		
Measurement reference point: Yes: <u>✓</u> No: _____		
Remarks:		
Dedicated Pump: Type: <u>Bladder</u>		
Condition: Good: <u>X</u> Damaged: _____ Missing: _____		
Pumping Rate (gpm): <u>NA</u> Current (Hz): <u>NA</u>		
Remarks:		

Field Certification: Meredith Campbell Signed Field Senior Tech Title 10-17-17 Date



\* Retest

## GROUNDWATER MONITORING PROGRAM WELL DATA SHEET

Site Name: Sunshine Cyn Project No.: SD17.1047  
 Well I.D.: MW-13R Sampling Date: 10.17.17  
 Collected By: AS Purge start Time: 0934  
 Casing Diameter (inches): 4 Purge Stop time: 1000  
 Starting Water Level: 18.06 Sampling (Well Recovery) Time: 1005  
 Total Depth (feet): 27.80 Ending Water Level (feet): 18.58  
 Water column (feet): \_\_\_\_\_ Total Purged (gallons): 1.5+  
 Screen Length (feet): \_\_\_\_\_ Duplicate Sample: YES  NO   
 Sample Method: Micro Purge Low Flow \* Retest  
 Horiba Model S/N: V-52 (WGLP28GR5) \* Sample MW-13R-A & MW-13R-B

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
0943	0.50	18.32	7.68	2.99	Ø	5.08	23.98	-343
0947	0.75	18.40	7.68	3.01	Ø	4.75	23.88	-344
0951	1.00	18.47	7.68	3.01	Ø	4.54	23.85	-352
0955	1.25	18.52	7.68	3.01	Ø	4.50	23.86	-349
1000	1.50	18.58	7.68	3.01	Ø	4.48	23.89	-348

Purge Sampling Rates: 30 PSI R: 20 / D: 5

Well condition: OK. - Water is usually clear w/ strong odor.

Additional Info/Comments: Sunny. Warm Pump Depth: 26.4 ft.

\* Retests Samples MW-13R-A & MW-13R-B Collected

Name: A. Shaw Signature: [Signature]

# GROUNDWATER MONITORING WELL INSPECTION REPORT

*Retest*

Facility: Sunshine Cym Well ID: MW-13R Date: 10.17.17

**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: Carried sampling equipment + bottles across entrance road to well.

**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 is heavily corroded.

**Well Riser:**

Material: PVC

Condition of Riser: Good:  Damaged:   
 Condition of Riser Cap: Good:  Damaged:   
 Measurement reference point: Yes:  No:

Remarks:

**Dedicated Pump:**

Type: Bladder

Condition: Good:  Damaged:  Missing:   
 Pumping Rate (gpm): N/A Current (Hz): N/A

Remarks:

Retest : MW-13R-A and MW-13R-B collected.

Field Certification:

OCJ  
Signed

Field Tech.  
Title

10.17.17  
Date

## FIELD CALIBRATION DOCUMENTATION FORM

LOCATION (Site/Facility Name) Sunshine Cyn PROJECT NAME / NUMBER Sc 17-1047

Instrument Make/Model # <u>LI-52/w54/wBOP</u>						
Date/Time	pH	Electrical Conductivity ( $\mu$ Mhos/cm)	Turbidity (NTU)	DO (mg/L or %)	Guidance Remarks	Comments
<u>10-17-15</u> <u>8:43</u>						
Pre. Cal	<u>3.91</u>	<u>4.52</u>	<u>0.0</u>	<u>8.42</u>		
Calibration	<u>4.00</u>	<u>4.49</u>	<u>0.1</u>	<u>9.60</u>		
Calibration Successful? (Y/N)	<u>yes</u>				enter YES or NO	
Satisfies Protocol?	<u>yes</u>				Did calibration meet criteria in the sampling protocol? (Y or N)	
Calibration by	<u>[Signature]</u>				Signature or initials	<u>[Signature]</u>
Physical Condition of Unit		<u>Good</u>				

Regulatory Program:  DW  NPDES  RCRA  Other:

Company Name: <i>Geo. Geos. Associates</i> Address: <i>11115 W. Berkeley Ct. Sub 204</i> City/State/Zip: <i>Sunnyvale CA 94122</i> Phone: <i>958-451-1136</i> Fax: <i>958-451-1087</i> Project Name: <i>Republic</i> Site: <i>Sunshine Canyon</i> P O #		Client Contact Project Manager: <i>Kyle Welch</i> Tel/Fax: <i>858-451-1136</i>		Lab Contact: <i>Test America</i> Date: <i>10/17/13</i> Carrier: <i>Test America</i> COC No: <i>1</i> of <i>1</i> COCs	
Analysis Turnaround Time <input type="checkbox"/> CALENDAR DAYS <input type="checkbox"/> WORKING DAYS TAT if different from Below <input type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day		Filtered Sample (Y/N) Perform MS/MSD (Y/N)		For Lab Use Only: Walk-in Client: Lab Sampling: Job / SDG No.:	
Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Sample Specific Notes:
<i>10/17/13</i>	<i>10:30</i>	<i>G</i>	<i>Leach</i>	<i>17</i>	<i>EPA 8151 (Leach II)</i>
<i>11/20/13</i>	<i>11:30</i>	<i>G</i>	<i>Leach II</i>	<i>18</i>	<i>EPA 8151 (Leach II)</i>
<i>11/21/13</i>	<i>-</i>	<i>G</i>	<i>Leach II</i>	<i>4</i>	<i>EPA 8147N</i>
<i>11/21/13</i>	<i>-</i>	<i>G</i>	<i>Leach II</i>	<i>4</i>	<i>EPA 8147N</i>

**Preservation Used:** 1 = Ice, 2 = HCl, 3 = H2SO4, 4 = HNO3, 5 = NaOH, 6 = Other  
 Possible Hazard Identification: 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  Unknown

**Special Instructions/QC Requirements & Comments:**  
 Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)  
 Return to Client  Disposal by Lab  Archive for \_\_\_\_\_ Months

Cooler Temp. (°C): Obs'd: \_\_\_\_\_ Cor'd: \_\_\_\_\_ Therm ID No.: \_\_\_\_\_  
 Received by: *[Signature]* Company: *Test America* Date/Time: *10/17/13 13:35*  
 Relinquished by: *[Signature]* Company: *Geo. Geos. Associates* Date/Time: \_\_\_\_\_  
 Relinquished by: \_\_\_\_\_ Company: \_\_\_\_\_ Date/Time: \_\_\_\_\_

## GROUNDWATER MONITORING PROGRAM LEACHATE DATA SHEET

Site: Sunshine Cyn

Project No.: 3017-1047

Station I.D.: CA-L

Sampling Date: 10-17-17

Collected By: AS, MC

Sampling Time: 1030

Horiba Model S/N: U52 (WCCP8CR5)

Duplicate Sample: YES  NO

COLOR	ODOR	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
yellowish	Strong	7.32	14.2	26.4	6.13	32.59	-239

Leachate sampling station conditions: Collected sample from sample port at filters.

Additional Info/Comments: Sunny, Warm

(17) Bottles

A. Shaw / ac-sh

## GROUNDWATER MONITORING PROGRAM LEACHATE DATA SHEET

Site: Sunshine Cyn

Project No.: 5017.1047

Station I.D.: LR-2R

Sampling Date: 10.17.17

Collected By: AS.MC

Sampling Time: 11:30

Horiba Model S/N: V-52 (VIAHP8CRS)

Duplicate Sample: YES  NO

COLOR	ODOR	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
yellowish	Strong	7.48	10.7	47.1	21.78	32.26	-206

Leachate sampling station conditions: Collected sample w/ new 3" disposable pail - Had to hike down slope to well.

Additional Info/Comments: Sunny, Warm, Breezy

(18) Bottles

A. Shaw / ac-M



## FIELD CALIBRATION DOCUMENTATION FORM

LOCATION (Site/Facility Name) Sunshine Cyn PROJECT NAME / NUMBER SOA7-1D47

Instrument Make/Model # <u>Hanbe v-52</u>					
Date/Time	pH	Electrical Conductivity ( $\mu$ Mhos/cm)	Turbidity (NTU)	DO (mg/L or %)	Comments
<u>10.17.17</u> <u>0839</u>					
Pre. Cal	<u>3.99</u>	<u>4.51</u>	<u>∅</u>	<u>9.80</u>	
Calibration	<u>4.00</u>	<u>4.49</u>	<u>∅</u>	<u>9.95</u>	
Calibration Successful? (Y/N)	<u>Y</u>				enter YES or NO
Satisfies Protocol?	<u>Y</u>				Did calibration meet criteria in the sampling protocol? (Y or N)
Calibration by	<u>AS</u>				Signature or initials
Physical Condition of Unit		<u>→ Good</u>			

*AS*



**TestAmerica Time**  
 17461 Beriss Ave  
 Suite 100  
 Irvine, CA 92614  
 Phone: 949.251.1022 Fax:

180968

**Chain of Custody Record**

**TestAmerica**

THE LEADER IN ENVIRONMENTAL TESTING  
 TestAmerica Laboratories, Inc.  
 TAL-8210 (0713)

Regulatory Program:  DW  NPDES  RCRA  Other:

Project Manager: Kathy Costa Tel/Fax: 855-451-1136 <input type="checkbox"/> CALENDAR DAYS <input type="checkbox"/> WORKING DAYS TAT if different from Below <input type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day		Site Contact: Kathy Costa Lab Contact: Kathy Costa Perform MS / MSD (Y / N) Filtered Sample (Y / N)	Date: 12-6-17 Carrier: TJA Sampler: JJA For Lab Use Only: Walk-in Client: Lab Sampling: Job / SDG No.: Sample Specific Notes:	COC No: 1 of 1 COCS									
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	Site Contact: Kathy Costa	Lab Contact: Kathy Costa	Date: 12-6-17	Carrier: TJA	Sampler: JJA	COCS
Extraction Trench	12/6/17	1000	G	MW	13	X	X	Kathy Costa	Kathy Costa	12/6/17	TJA	JJA	
PZ-4		1209		GW	13	X	X	Kathy Costa	Kathy Costa	12/6/17	TJA	JJA	
MW-5		1165			13	X	X	Kathy Costa	Kathy Costa	12/6/17	TJA	JJA	
PZ-2		0830			13	X	X	Kathy Costa	Kathy Costa	12/6/17	TJA	JJA	
MW-2A		1100			13	X	X	Kathy Costa	Kathy Costa	12/6/17	TJA	JJA	
MW-2B		1725			13	X	X	Kathy Costa	Kathy Costa	12/6/17	TJA	JJA	
DW-4		1340			13	X	X	Kathy Costa	Kathy Costa	12/6/17	TJA	JJA	
OC AB					51	X	X	Kathy Costa	Kathy Costa	12/6/17	TJA	JJA	
OC TB					51	X	X	Kathy Costa	Kathy Costa	12/6/17	TJA	JJA	

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4= HNO3; 5= NaOH; 6= Other  
 Possible Hazard Identification: Please List any 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  
 Return to Client  Disposal by Lab  Archive for \_\_\_\_\_ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Relinquished by: [Signature] Relinquished by: [Signature] Relinquished by: [Signature]	Company: Geo-Logic Company: Geo-Logic Company:	Date/Time: 12/6/17 Date/Time: 12/6/17 Date/Time:	Cooler Temp. (°C): Obs'd: _____ Cor'd: _____ Therm ID No.: _____
---	--	--	--

**TestAmerica Irvine**  
 17461 Berian Ave  
 Suite 100  
 Irvine, CA 92614  
 Phone: 949.261.1022 Fax:

**Chain of Custody Record**

180965

**TestAmerica**  
 THE LEADER IN ENVIRONMENTAL TESTING  
 TestAmerica Laboratories, Inc.  
 TAL-8210 (0713)

Regulatory Program:  DW  NPDES  RCRA  Other:

Project Manager: <u>Geo-Logic</u> Tel/Fax: <u>558-451-1136</u>		Site Contact: <u>TRAWING</u> Lab Contact: <u>TRAWING</u>		Date: <u>12-5-07</u> of <u>1</u> COCs																	
Company Name: <u>Geo-Logic Assoc.</u> Address: <u>1115 W. PLYMOUTH ST.</u> City/State/Zip: <u>CA 92727</u> Phone: <u>558-451-1136</u> Fax: <u>558-451-1087</u> Project Name: <u>LABORATORY SERVICES</u> Site: <u>AMPHIBIOUS SW. LANDFILL</u> P O #: <u>44007851</u>		Analysis Turnaround Time <input type="checkbox"/> CALENDAR DAYS <input type="checkbox"/> WORKING DAYS TAT if different from Below <input type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day		For Lab Use Only: Walk-in Client: <u> </u> Lab Sampling: <u> </u> Job / SDG No.: <u> </u>																	
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS/MSD (Y/N)	EPA 8260B-UC	Top Alkalinity	And Bicarv. (310.1)	Ammonia as N (350)	CAD (110.4)	Nitrate-N (311.1)	NOB-TOTAL: BCO	TDS (160.1)	Fluoride - (310.2)	Sulfate - (316.2)	9M-4500-CO2C	Carbam Dioxide	8270 1,4-Dioxin	Sample Specific Notes:
DW-1	12-5-07	0712	G	RAW	13	Y	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
DW-2	12-5-07	1026	G	RAW	13	Y	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
DW-3	12-5-07	1250	G	RAW	13	Y	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
MW-9	12-5-07	1210	G	RAW	13	Y	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
MU-13R	12-5-07	1330	G	RAW	13	Y	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
MU-6	12-5-07	0755	G	RAW	13	Y	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
MU-14	12-5-07	0755	G	RAW	13	Y	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Duplicate	12-5-07		G	RAW	13	Y	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
GC#B	12-5-07		G	RAW	13	Y	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
QC#B	12-5-07		G	RAW	13	Y	X	X	X	X	X	X	X	X	X	X	X	X	X	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.

Special Instructions/QC Requirements & Comments:

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)  
 Return to Client  Disposal by Lab  Archive for \_\_\_\_\_ Months

Custody Seal No.: \_\_\_\_\_  
 Company: Geo-Logic  
 Date/Time: 12/5/07 1330

Relinquished by:    
 Date/Time:  

Relinquished by:    
 Date/Time:



# Geo-Logic

ASSOCIATES

Geologists, Hydrogeologists, and Engineers

## GROUNDWATER MONITORING PROGRAM WATER LEVEL SURVEY RECORD SHEET

Site: Sunshine Cyn. C/P

Project No.: SOIT-1047

Date: Dec. 4, 2017

Field Personnel: B. Salinas, A. Shaw

page 1 of 2

WELL I.D.	CONSTRUCTED TOTAL DEPTH (TD)	ACTUAL TOTAL DEPTH (TD)	DEPTH TO WATER (DTW)	COMMENTS
MW-1			15.35	
MW-2A			34.01	
MW-2B			18.75	
MW-5			19.16	
MW-6			16.85	
MW-8			14.32	
MW-9			13.44	
MW-13R			17.95	
MW-14			14.74	
DW-1			TOC	
DW-2			25.90	
DW-3			151.74	
DW-4			32.32	
DW-5			14.82	
CM-SR			215.90	
CM-9R3			14.34	
CM-10R			50.76	
CM-11R			19.66	
PZ-1			92.92	
PZ-2			122.54	

REMARKS:

Name: B. Salinas Signature: Bert Salinas



## GROUNDWATER MONITORING PROGRAM LEACHATE DATA SHEET

Site: Sunshine Gen,

Project No.: 5017-1047

Station I.D.: Extraction  
Trench

Sampling Date: 12-6-17

Collected By: BS

Sampling Time: 1000

Horiba Model S/N: RFS5494H

Duplicate Sample: YES  NO

COLOR	ODOR	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
clear	yes	5.80	4.36	0.1	3.66	30.91	77

Leachate sampling station conditions: Samples taken @ Pilot site  
to the filters.

Additional Info/Comments: Sunny, windy

[Signature]

# Geo-Logic

ASSOCIATES

Geologists, Hydrogeologists, and Engineers

## GROUNDWATER MONITORING PROGRAM SURFACE WATER DATA SHEET

Site Name:

Sunshine Cyn.

Project No.:

S017.1047

Station I.D.:

combined  
Subdrains

Sampling Date:

12-4-17

Collected By:

RSP

Sampling Time:

1138

Horiba Model S/N:

R8J5494H

Duplicate Sample:

YES

NO

COLOR	ODOR	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
<u>clear</u>	<u>yes</u>	<u>6.57</u>	<u>2.80</u>	<u>9.6</u>	<u>3.40</u>	<u>17.26</u>	<u>189</u>

Surface water conditions (including stream flow rate, stream depth):

Samples collected &  
Inlet side to the filter.

Neutralizer sprayer is running near samp. location.

Additional Info/Comments:

very windy & dusty

QC/QS taken.

Name:

B. Salinas

Signature:

B. Salinas

# Geo-Logic

ASSOCIATES

Geologists, Hydrogeologists, and Engineers

## GROUNDWATER MONITORING PROGRAM SURFACE WATER DATA SHEET

Site Name:

Sundrise Gen.

Project No.:

5077.1047

Station I.D.:

subdrain (N)

Sampling Date:

12-4-17

Collected By:

ES

Sampling Time:

1055

Horiba Model S/N:

RJSS4M4

Duplicate Sample:

YES

NO

COLOR	ODOR	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
<u>Yellowish</u>	<u>yes</u>	<u>5.95</u>	<u>3.42</u>	<u>0.3</u>	<u>2.60</u>	<u>20.80</u>	<u>94</u>

Surface water conditions (including stream flow rate, stream depth):

Samples collected @  
Inlet side to GAC tanks.

Neutralizer mister is spraying near location.

Additional Info/Comments:

clear, very windy & dusty conditions

Name:

B. Salinas

Signature:

B. Salinas



## GROUNDWATER MONITORING PROGRAM WELL DATA SHEET

Site Name: Sunshine Cyn Project No.: 2017-1047  
 Well I.D.: MW-1 Sampling Date: 12.7.17  
 Collected By: AS Purge start Time: 0747  
 Casing Diameter (inches): 4 Purge Stop time: 0805  
 Starting Water Level: 15.31 Sampling (Well Recovery) Time: 0810  
 Total Depth (feet): 29.60 Ending Water Level (feet): 15.44  
 Water column (feet): 14.29 Total Purged (gallons): 2.0+  
 Screen Length (feet): — Duplicate Sample: YES  NO   
 Sample Method: Micro Purge Low Flow  
 Horiba Model S/N: U52/WGAP8CRS

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
0751	0.50	15.44	6.68	4.66	27.5	4.07	20.84	-82
0755	1.00	"	6.53	4.63	9.1	3.22	21.54	-89
0757	1.25	"	6.56	4.63	2.4	2.82	21.60	-88
0800	1.50	"	6.56	4.63	2.9	2.72	21.62	-90
0802	1.75	"	6.56	4.64	2.7	2.71	21.60	-88
0805	2.00	"	6.56	4.64	3.2	2.68	21.61	-90

Purge Sampling Rates: 20 PSI R:30/D:11  
Water has slight yellowish tint w/ some odor.

Well condition O.K.

Additional Info/Comments: Sunny, Cool Am. Very High Winds

Name: A. Shaw Signature: AS

# GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Cg 4 Well ID: MW-1 Date: 12.7.17

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: N/A Good:  Inadequate:

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

Remarks: Not visible (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:

Measurement 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: OCM Signed Field Tech Title 12/7/17 Date

## GROUNDWATER MONITORING PROGRAM WELL DATA SHEET

Site Name: <u>Sunshine Cyn</u>	Project No.: <u>2017-1047</u>
Well I.D.: <u>MW-2A</u>	Sampling Date: <u>12.6.17</u>
Collected By: <u>AS</u>	Purge start Time: <u>1020</u>
Casing Diameter (inches): <u>4</u>	Purge Stop time: <u>1049</u>
Starting Water Level: <u>34.02</u>	Sampling (Well Recovery) Time: <u>1100</u>
Total Depth (feet): <u>41.30</u>	Ending Water Level (feet): <u>35.32</u>
Water column (feet): <u>7.28</u>	Total Purged (gallons): <u>1.5+</u>
Screen Length (feet): <u>—</u>	Duplicate Sample: YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
Sample Method: <u>Micro Purge</u> <input checked="" type="checkbox"/> Low Flow <input type="checkbox"/>	
Horiba Model S/N: <u>U-521166726P51</u>	

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
1027	0.25	34.45	6.99	3.29	0.0	3.76	22.47	-30
1031	0.50	34.50	7.00	3.28	0.0	3.50	22.43	-30
1035	0.75	34.71	7.20	3.28	0.0	3.18	22.40	-30
1039	1.00	34.89	7.31	3.28	0.0	3.07	22.38	-30
1043	1.25	35.09	7.30	3.28	0.0	3.02	22.38	-30
1049	1.50	35.32	7.29	3.28	0.0	2.99	22.37	-30

Purge Sampling Rates: 25 PSL R:20/D:6  
 Water is clear w/ no odor - took time to fill bottles due to low yield.  
 Well condition: O.K. - Requires hiking sampling equipment + bottles down slope to access.  
 Additional Info/Comments: Sunny, High Winds  
\* Pump depth: 39 ft.

Name: A. Shaw Signature: AC-S

# GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Cyn Well ID: MW-2A Date: 12.6.17

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: Well is mid-slope - Requires hiking down slope to access.

Concrete Pad:  
Integrity: N/A Good: \_\_\_\_\_ Inadequate: \_\_\_\_\_  
Presence of depressions or standing water around well: Yes: \_\_\_\_\_ No: \_\_\_\_\_  
Remarks: Concrete pad not visible.

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: \_\_\_\_\_  
Measurement 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: C. E. M. Field Tech 12.6.17  
Signed Title Date

## GROUNDWATER MONITORING PROGRAM WELL DATA SHEET

Site Name: Sunshine Cgn Project No.: S017-1047  
 Well I.D.: MW-2B Sampling Date: 12.6.17  
 Collected By: AS Purge start Time: 1155  
 Casing Diameter (inches): 4 Purge Stop time: 1220  
 Starting Water Level: 18.73 Sampling (Well Recovery) Time: 1225  
 Total Depth (feet): 71.10 Ending Water Level (feet): 22.43  
 Water column (feet): 52.37 Total Purged (gallons): 2.25 +  
 Screen Length (feet): — Duplicate Sample: YES  NO   
 Sample Method:  Micro Purge  Low Flow  
 Horiba Model S/N: U-5210GGP2G2S

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
1201	0.50	19.83	7.04	3.29	0.0	3.61	22.60	-143
1207	1.00	20.46	7.44	3.30	0.0	2.64	22.44	-131
1210	1.50	21.05	7.52	3.30	0.0	2.51	22.39	-129
1213	1.75	21.49	7.65	3.29	0.0	2.45	22.36	-127
1216	2.00	21.99	7.65	3.30	0.0	2.44	22.35	-127
1220	2.25	22.43	7.65	3.29	0.0	2.38	22.34	-127

Purge Sampling Rates: 40 PSI R: 35 / A: 13  
Water is clear w/ strong odor -

Well condition: OK - Requires hiking equipment + bottles down slope to well.

Additional Info/Comments: Sunny, very high winds \* Pump Inlet: 68 ft.

Name: A. Shaw Signature: ACM

# GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Cyn Well ID: MW-2B Date: 12-6-17

**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: Well is mid-slope - Requires hiking equipment + Bottles down slope to access.

**Concrete Pad:**

Integrity: N/A Good: \_\_\_\_\_ Inadequate: \_\_\_\_\_  
 Presence of depressions or standing water around well: Yes: \_\_\_\_\_ No:

Remarks: Concrete pad not visible.

**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: \_\_\_\_\_  
 Measurement 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:

ACM Signed Field Tech Title 12.6.17 Date



# GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sensitive Gas Well ID: MW-5 Date: 12-6-17

## 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: concrete apron is not visible.

## 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:   
Measurement 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:

Benjamin  
Signed Title

12-6-17  
Date



## GROUNDWATER MONITORING PROGRAM WELL DATA SHEET

Site Name: Sunshine Cyn Project No.: S017-1047  
 Well I.D.: MW-6 Sampling Date: 12.5.17  
 Collected By: AS Purge start Time: 0901  
 Casing Diameter (inches): 2 Purge Stop time: 0939  
 Starting Water Level: 16.81 Sampling (Well Recovery) Time: 0945  
 Total Depth (feet): 23.50 Ending Water Level (feet): 17.42  
 Water column (feet): 6.69 Total Purged (gallons): 1.5+  
 Screen Length (feet): — Duplicate Sample: YES  NO   
 Sample Method:  Micro Purge  Low Flow  
 Horiba Model S/N: U-52/WG6P8GR5

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
0909	0.25	17.13	7.05	4.29	3.1	3.79	15.51	-215
0915	0.50	17.20	7.16	4.27	0.5	3.21	16.09	-248
0921	0.75	17.25	7.20	4.26	0.0	3.09	16.39	-255
0927	1.00	17.31	7.22	4.24	0.0	3.00	16.50	-258
0933	1.25	17.35	7.23	4.23	0.0	2.97	16.53	-262
0939	1.50	17.42	7.20	4.22	0.0	2.92	16.59	-264

Purge Sampling Rates: 20 PSI R: 30 / A: 5  
 Water is mostly clear w/ strong odor - becoming blackish color as purge progresses.  
 Well condition: O.K. - Hiked equipment down slope & over to well.

Additional Info/Comments: Sunny, Cool A.W., very high winds

Name: A. Shaw Signature: AC

# GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Cyn Well ID: MW-6 Date: 12.5.17

**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: Requires hike/carry equipment + bottles down slope and over to well.

**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:   
 Measurement reference point: Yes:  No:   
 Remarks:

**Dedicated Pump:** Type: Bladder  
 Condition: Good:  Damaged:  Missing:   
 Pumping Rate (gpm): N/A Current (Hz): N/A  
 Remarks: low-yield

Field Certification: ACM Signed Field Tech Title 12.5.17 Date

## GROUNDWATER MONITORING PROGRAM WELL DATA SHEET

Site Name: Sunshine Cyn Project No.: SD17-1047  
 Well I.D.: MW-9 Sampling Date: 12.5.17  
 Collected By: AS Purge start Time: 1136  
 Casing Diameter (inches): 4 Purge Stop time: 1204  
 Starting Water Level: 13.47 Sampling (Well Recovery) Time: 1210  
 Total Depth (feet): 26.70 Ending Water Level (feet): 13.49  
 Water column (feet): 13.23 Total Purged (gallons): 2.04  
 Screen Length (feet): — Duplicate Sample: YES  NO   
 Sample Method: Micro Purge Low Flow  
 Horiba Model S/N: U-52/W66P80RS

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
1146	0.50	13.49	6.21	5.87	2.1	1.54	22.83	-83
1152	1.00	"	6.50	5.85	1.5	1.43	22.81	-86
1155	1.25	"	6.54	5.83	3.6	1.37	22.91	-89
1158	1.50	"	6.49	5.83	1.3	1.35	22.91	-90
1201	1.75	"	6.49	5.83	1.2	1.33	22.92	-90
1204	2.00	"	6.49	5.83	1.0	1.30	22.93	-90

Purge Sampling Rates: 25 PSI R:20/D:5  
Water has yellow tint w/ no odor.

Well condition: O.K.

Additional Info/Comments: Sunny, Very High Winds

Name: A. Shaw Signature: AS  
 WL = MW-8 14.32

# GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility:	<u>Sunshine Cgn</u>	Well ID:	<u>MW-9</u>	Date:	<u>12.5.17</u>
Access:					
Accessibility:	Good: <input type="checkbox"/>	Fair: <input checked="" type="checkbox"/>	Poor: <input type="checkbox"/>		
Vicinity of well clear of weeds and/or debris:	Yes: <input type="checkbox"/>		No: <input type="checkbox"/>		
Presence of depressions or standing water around well:	Yes: <input type="checkbox"/>		No: <input type="checkbox"/>		
Remarks:	<u>Had to carry equipment + bottles over to well.</u>				
Concrete Pad:					
Integrity:	Good: <input checked="" type="checkbox"/>	Inadequate: <input type="checkbox"/>			
Presence of depressions or standing water around well:	Yes: <input type="checkbox"/>		No: <input checked="" type="checkbox"/>		
Remarks:					
Protective Outer Casing: Material: <u>Metal / Flush Mount</u>					
Condition of Protective Casing:	Good: <input checked="" type="checkbox"/>	Damaged: <input type="checkbox"/>			
Condition of Locking Cap:	Good: <input checked="" type="checkbox"/>	Damaged: <input type="checkbox"/>			
Condition of Lock:	Good: <input checked="" type="checkbox"/>	Damaged: <input type="checkbox"/>			
Condition of Weepholes:	Good: <input checked="" type="checkbox"/>	Damaged: <input type="checkbox"/>			
Remarks:					
Well Riser: Material: <u>PVC</u>					
Condition of Riser:	Good: <input checked="" type="checkbox"/>	Damaged: <input type="checkbox"/>			
Condition of Riser Cap:	Good: <input checked="" type="checkbox"/>	Damaged: <input type="checkbox"/>			
Measurement reference point:	Yes: <input checked="" type="checkbox"/>	No: <input type="checkbox"/>			
Remarks:					
Dedicated Pump: Type: <u>Bladder</u>					
Condition:	Good: <input checked="" type="checkbox"/>	Damaged: <input type="checkbox"/>	Missing: <input type="checkbox"/>		
Pumping Rate (gpm):	<u>N/A</u>	Current (Hz):	<u>N/A</u>		
Remarks:					

Field Certification: OCM Signed Field Tech Title 12.5.17 Date

## GROUNDWATER MONITORING PROGRAM WELL DATA SHEET

Site Name: Sunshine Cyn Project No.: S017-1047  
 Well I.D.: MW-13R Sampling Date: 12-5-17  
 Collected By: AS Purge start Time: 1255  
 Casing Diameter (inches): 4 Purge Stop time: 1320  
 Starting Water Level: 17.92 Sampling (Well Recovery) Time: 1330  
 Total Depth (feet): 27.80 Ending Water Level (feet): 18.40  
 Water column (feet): 9.88 Total Purged (gallons): 1.5+  
 Screen Length (feet): — Duplicate Sample: YES  NO   
 Sample Method:  Micro Purge  Low Flow  
 Horiba Model S/N: U-52 (WGA08GRS)

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
1304	0.50	18.17	6.99	3.16	∅	1.43	22.74	-344
1308	0.75	18.21	7.20	3.14	∅	1.37	22.85	-346
1312	1.00	18.29	7.45	3.12	∅	1.30	22.96	-349
1316	1.25	18.34	7.48	3.11	∅	1.28	22.99	-349
1320	1.50	18.40	7.48	3.11	∅	1.27	23.01	-349

Purge Sampling Rates: 30 PSI ; R: 20 / S: 5

Well condition: O.K.

Additional Info/Comments: Sunny, very high winds - Landfill shut-down.  
\* pump depth: 26.4 ft.

Name: A. Shaw Signature: [Signature]

# GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Cyn Well ID: MW-13R Date: 12.5.17

**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: Well located at corner of entrance. Site closed due to high winds so was able to park truck next to well.

**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: Movement is heavily corroded.

**Well Riser:**

Material: PVC

Condition of Riser: Good:  Damaged:   
 Condition of Riser Cap: Good:  Damaged:   
 Measurement 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:

AC  
Signed

Field Tech  
Title

12.5.17  
Date

## GROUNDWATER MONITORING PROGRAM WELL DATA SHEET

Site Name: Sunshine Cyn Project No.: SD17-1047  
 Well I.D.: MW-14 Sampling Date: 12.5.17  
 Collected By: AS Purge start Time: 0730  
 Casing Diameter (inches): 4 Purge Stop time: 0748  
 Starting Water Level: 14.79 Sampling (Well Recovery) Time: 0755  
 Total Depth (feet): 28.10 Ending Water Level (feet): 15.45  
 Water column (feet): 13.31 Total Purged (gallons): AS 2.25 +  
 Screen Length (feet): - Duplicate Sample: YES  NO   
 Sample Method: Micro Purge Low Flow  
 Horiba Model S/N: U-52/WGAP20RS

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
0738	1.00	15.22	6.58	5.29	43.2	1.29	21.66	24
0740	1.25	15.30	6.55	5.25	28.5	1.26	21.91	23
0742	1.50	15.35	6.54	5.22	20.4	1.22	21.95	23
0744	1.75	15.41	6.52	5.22	4.2	1.16	21.98	22
0746	2.00	15.43	6.50	5.21	4.0	1.15	21.96	22
0748	2.25	15.45	6.51	5.20	3.6	1.12	21.97	21

Purge Sampling Rates: 20 PSI R: 20 / D: 10  
Clear water w/ no odor.

Well condition: O.K. - Hiked / Carry equipment down slope to well.

Additional Info/Comments: Sunny Cool Sun, very high winds

Name: A. Shaw Signature: [Signature]

# GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Cymru Well ID: MW-14 Date: 12.5.17

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: Requires hiking / carry sampling equipment and bottles down slope to well.

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: \_\_\_\_\_

Measurement 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: ACM Signed Field Tech Title 12.5.17 Date



## GROUNDWATER MONITORING PROGRAM WELL DATA SHEET

Site Name: Sunshine Cyn Project No.: 3017.1047  
 Well I.D.: CM-9R3 Sampling Date: 12.4.17  
 Collected By: AS Purge start Time: 1052  
 Casing Diameter (inches): 4 Purge Stop time: 1110  
 Starting Water Level: 14.34 Sampling (Well Recovery) Time: 1115  
 Total Depth (feet): 29.00 Ending Water Level (feet): 15.83  
 Water column (feet): 14.66 Total Purged (gallons): 2.0+  
 Screen Length (feet): — Duplicate Sample: YES  NO   
 Sample Method: Micro Purge Low Flow  
 Horiba Model S/N: U-52/WGAP8CR51

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
1057	0.50	14.92	5.21	5.04	52.8	2.81	18.55	40
1101	1.00	15.20	5.11	5.08	29.5	2.13	18.55	47
1104	1.25	15.32	5.07	4.98	20.7	1.83	18.59	56
1106	1.50	15.51	5.05	4.97	11.9	1.76	18.60	60
1108	1.75	15.70	5.03	4.96	12.0	1.68	18.61	65
1110	2.00	15.83	5.01	4.95	11.7	1.67	18.61	69

Purge Sampling Rates: 25 PSI ; R=20 / A=10

Well condition: O.K. - Slightly cloudy water w/ no odor.

Additional Info/Comments: Sunny, very high winds \* Pump Depth: 27.4 ft.

Name: A. Shaw Signature: AC

# GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Cyn Well ID: CM-9R3 Date: 12.4.17

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:  Not Visible

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

Remarks: No pad observed - Sediments around well from past erosion out of Canyon

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: locking cap/ring cracked and can be lifted off w/out unlocking.

Well Riser: Material: PVC

Condition of Riser: Good:  Damaged:

Condition of Riser Cap: Good:  Damaged:

Measurement 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: ACM Signed Field Tech Title 12.4.17 Date

## GROUNDWATER MONITORING PROGRAM WELL DATA SHEET

**Site Name:** Sunshine Cyn **Project No.:** SO17-1047  
**Well I.D.:** CM-10R **Sampling Date:** 12.4.17  
**Collected By:** AS **Purge start Time:** 0929  
**Casing Diameter (inches):** 4 **Purge Stop time:** 0950  
**Starting Water Level:** 50.76 **Sampling (Well Recovery) Time:** 0955  
**Total Depth (feet):** 110.90 **Ending Water Level (feet):** 51.12  
**Water column (feet):** 60.14 **Total Purged (gallons):** 2.5 +  
**Screen Length (feet):** — **Duplicate Sample:** YES  NO   
**Sample Method:** Micro Purge  Low Flow   
**Horiba Model S/N:** U-52 (WCCP8025)

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
0937	1.00	51.12	6.17	3.05	∅	6.13	20.83	-238
0941	1.50	"	6.73	3.07	∅	5.85	21.01	-243
0943	1.75	"	6.73	3.08	∅	5.71	21.08	-246
0946	2.00	"	6.72	3.09	∅	5.67	21.46	-250
0948	2.25	"	6.72	3.07	∅	5.64	21.45	-251
0950	2.50	"	6.72	3.06	∅	5.63	21.48	-253

**Purge Sampling Rates:** SD PSI ; R:40 / D:15

**Well condition:** OK - Visually clear water w/ strong odor.

**Additional Info/Comments:** Sunny, Very High Winds \* Pump Depth: 100 ft.

**Name:** A. Shaw **Signature:** 

# GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Cym Well ID: CU-10R Date: 12.4.17

## 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:   
Measurement 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:

AC. M  
Signed

Field Tech  
Title

12.4.17  
Date

## GROUNDWATER MONITORING PROGRAM WELL DATA SHEET

Site Name: <u>Sunshine Cyn</u>	Project No.: <u>SD17-1047</u>
Well I.D.: <u>CM-UR</u>	Sampling Date: <u>12.4.17</u>
Collected By: <u>AS</u>	Purge start Time: <u>1222</u>
Casing Diameter (inches): <u>4</u>	Purge Stop time: <u>1240</u>
Starting Water Level: <u>19.66</u>	Sampling (Well Recovery) Time: <u>1255</u>
Total Depth (feet): <u>31.00</u>	Ending Water Level (feet): <u>20.49</u>
Water column (feet): <u>11.34</u>	Total Purged (gallons): <u>1.5+</u>
Screen Length (feet): <u>—</u>	Duplicate Sample: YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
Sample Method: <u>Micro Purge</u> <input checked="" type="checkbox"/> Low Flow <input type="checkbox"/>	
Horiba Model S/N: <u>U-52/WX6P8CRS1</u>	

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
1229	0.25	19.90	4.70	4.81	Ø	2.44	17.32	267
1233	0.50	20.02	4.61	4.79	Ø	1.97	17.37	280
1228	0.75	20.13	4.53	4.78	Ø	1.67	17.39	298
1232	1.00	20.26	4.53	4.78	Ø	1.67	17.38	299
1236	1.25	20.38	4.52	4.78	Ø	1.67	17.37	300
1240	1.50	20.49	4.52	4.78	Ø	1.66	17.38	301

Purge Sampling Rates: 30 PSI ; R: 25 / A: 5

Well condition: O.K. Clear water w/ no odor.

Additional Info/Comments: Sunny. Santa Ana Winds \* Pump Depth: 29.8 ft.

Name: A. Shaw Signature: AC. Shaw

# GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Cyn Well ID: CM-11R Date: 12.4.17

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:       

Measurement reference point: Yes: ✓ No:       

Remarks:

Dedicated Pump: Type: Bladder

Condition: Good: ✓ Damaged:        Missing:       

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

Remarks: low-yield

\* Pump Depth: 29.8 ft.

Field Certification: AOA Signed Field Tech Title 12.4.17 Date

## GROUNDWATER MONITORING PROGRAM WELL DATA SHEET

Site Name: Sunshine Cm. Project No.: 3017,1017  
 Well I.D.: DW-1 Sampling Date: 12-5-17  
 Collected By: RS Purge start Time: /  
 Casing Diameter (inches): 4 Purge Stop time: /  
 Starting Water Level: 102 Sampling (Well Recovery) Time: 0912  
 Total Depth (feet): / Ending Water Level (feet): /  
 Water column (feet): / Total Purged (gallons): /  
 Screen Length (feet): / Duplicate Sample: YES  NO   
 Sample Method:  Micro Purge  Low Flow  
 Horiba Model S/N: R8J5494H

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
—	0.25	—	8.36	4.72	6	4.87	15.87	62

Purge Sampling Rates: Samples collected @ discharge tube, clear water with a strong odor

Well condition: OK

Additional Info/Comments: RS takes here, very windy & dusty.

Name: Bert Salinas Signature: Bert Salinas

# GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Emulsion Co. Well ID: DW-1 Date: 12-5-17

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: outer casing is corroded,

Well Riser: Material: PVC  
Condition of Riser: Good:  Damaged:   
Condition of Riser Cap: Good:  Damaged:   
Measurement 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: Bob Jones GW Manager 12-5-17  
Signed Title Date





# GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Gym Well ID: DW-2 Date: 12-5-17

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:

Measurement 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: But Alvin GW Manager 12-5-17  
Signed Title Date

## GROUNDWATER MONITORING PROGRAM WELL DATA SHEET

Site Name: <u>Sunshine Cyn,</u>	Project No.: <u>5017.1047</u>
Well I.D.: <u>DW-3</u>	Sampling Date: <u>12-5-17</u>
Collected By: <u>PS</u>	Purge start Time: <u>1218</u>
Casing Diameter (inches): <u>4</u>	Purge Stop time: <u>1241</u>
Starting Water Level: <u>154.28</u>	Sampling (Well Recovery) Time: <u>1250</u>
Total Depth (feet): <u>256.60</u>	Ending Water Level (feet): <u>156.98</u>
Water column (feet): <u>101.82</u>	Total Purged (gallons): <u>3</u>
Screen Length (feet): <u>—</u>	Duplicate Sample: YES <input type="checkbox"/> NO <input checked="" type="checkbox"/>
Sample Method: <u>Micro Purge</u> Low Flow	
Horiba Model S/N: <u>R8J5494H</u>	

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
1225	1	155.21	6.87	2.23	5	2.67	20.88	93
1229	1 1/2	155.80	6.84	2.23	5	2.10	20.89	90
1233	2	156.29	6.83	2.23	5	1.82	20.87	90
1236	2 1/2	156.78	6.82	2.23	5	1.76	20.89	88
1241	3	157.11	6.81	2.22	5	1.72	20.90	87

Purge Sampling Rates: PSI SET @ 100 | R:35 | D:20

Well condition: OK

Additional Info/Comments: 15 cans filled. Very windy, dusty & smoke due to nearby fires

Name: B. Salinas Signature: B. Salinas

# GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Gnl. Well ID: DW-3 Date: 12-5-17

## 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:   
Measurement 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:

Bert Palmer  
Signed Title

12-5-17  
Date

## GROUNDWATER MONITORING PROGRAM WELL DATA SHEET

**Site Name:** Sunshine @gn **Project No.:** S017-1047  
**Well I.D.:** DW-4 **Sampling Date:** 12.6.17  
**Collected By:** AS **Purge start Time:** 1310  
**Casing Diameter (inches):** 4 **Purge Stop time:** 1335  
**Starting Water Level:** 32.29 **Sampling (Well Recovery) Time:** 1340  
**Total Depth (feet):** 134.80 **Ending Water Level (feet):** 35.73  
**Water column (feet):** 102.51 **Total Purged (gallons):** 2.5+  
**Screen Length (feet):** — **Duplicate Sample:** YES  NO   
**Sample Method:** Micro Purge  Low Flow   
**Horiba Model S/N:** G-52 (W-67865)

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
1316	0.50	33.00	7.55	3.53	0.0	5.82	22.66	-238
1321	1.00	33.67	7.42	3.55	0.0	2.76	21.94	-204
1324	1.50	34.27	7.42	3.57	0.0	2.51	21.74	-199
1327	1.75	34.59	7.42	3.56	0.0	2.17	21.72	-195
1330	2.00	35.04	7.41	3.56	0.0	2.15	21.68	-194
1333	2.25	35.35	7.42	3.57	0.0	2.09	21.67	-194
1335	2.50	35.73	7.42	3.55	0.0	2.07	21.67	-194

**Purge Sampling Rates:** 75 PSI R:30/A:16  
Water is blackish color w/ slight odor.

**Well condition:** O.K. - Requires hiking sampling equipment + bottles downslope to well.

**Additional Info/Comments:** Sunny, Very High Winds

**Name:** A. Shaw **Signature:** [Signature]

# GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Cyn Well ID: DW-4 Date: 12.6.17

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: Requires hiking equipment + Bottles down slope to access. Well is mid-slope

Concrete Pad:

Integrity: N/A Good: \_\_\_\_\_ Inadequate: \_\_\_\_\_

Presence of depressions or standing water around well: Yes: \_\_\_\_\_ No:

Remarks: Concrete pad not visible.

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: \_\_\_\_\_

Measurement 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 12.6.17

Signed Title Date

## GROUNDWATER MONITORING PROGRAM WELL DATA SHEET

Site Name: Sunshine Cyn Project No.: S017-1047  
 Well I.D.: DW-5 Sampling Date: 12.7.17  
 Collected By: AS Purge start Time: 0848  
 Casing Diameter (inches): 4 Purge Stop time: 0915  
 Starting Water Level: 14.88 Sampling (Well Recovery) Time: 0920  
 Total Depth (feet): 101.00 Ending Water Level (feet): 18.00  
 Water column (feet): 86.12 Total Purged (gallons): 2.25 +  
 Screen Length (feet): — Duplicate Sample: YES  NO   
 Sample Method: Micro Purge Low Flow  
 Horiba Model S/N: V-52/WGAP8GRS

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
0854	0.50	16.08	6.54	1.68	14.8	2.78	20.43	-90
0900	1.00	16.67	6.50	1.65	35.7	2.20	20.50	-117
0906	1.50	17.24	6.44	1.65	6.7	1.91	20.47	-134
0909	1.75	17.50	6.45	1.64	1.8	1.81	20.54	-139
0912	2.00	17.77	6.46	1.64	1.2	1.79	20.55	-140
0915	2.25	18.00	6.45	1.64	2.2	1.77	20.56	-142

Purge Sampling Rates: 65 PSL R:30 / D:20  
Water has slight yellow tint w/ slight odor.

Well condition: O.K.  
OCAB taken here (F38)  
 Additional Info/Comments: Sunny, Cool A.M. - Very high winds

Name: A. Shaw Signature: AS

# GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: <u>Sunshine Cyn</u>	Well ID: <u>DW-5</u>	Date: <u>12.7.17</u>
Access:		
Accessibility: Good: <input checked="" type="checkbox"/>	Fair: <input type="checkbox"/>	Poor: <input type="checkbox"/>
Vicinity of well clear of weeds and/or debris: Yes: <input checked="" type="checkbox"/>	No: <input type="checkbox"/>	
Presence of depressions or standing water around well: Yes: <input type="checkbox"/>	No: <input checked="" type="checkbox"/>	
Remarks:		
Concrete Pad:		
Integrity: <u>N/A</u>	Good: <input type="checkbox"/>	Inadequate: <input type="checkbox"/>
Presence of depressions or standing water around well: Yes: <input type="checkbox"/>	No: <input checked="" type="checkbox"/>	
Remarks: <u>Concrete pad not visible - Broken concrete rubble around well monument</u>		
Protective Outer Casing: Material: <u>Metal</u>		
Condition of Protective Casing: Good: <input checked="" type="checkbox"/>	Damaged: <input type="checkbox"/>	
Condition of Locking Cap: Good: <input checked="" type="checkbox"/>	Damaged: <input type="checkbox"/>	
Condition of Lock: Good: <input checked="" type="checkbox"/>	Damaged: <input type="checkbox"/>	
Condition of Weepholes: Good: <input checked="" type="checkbox"/>	Damaged: <input type="checkbox"/>	
Remarks:		
Well Riser: Material: <u>PVC</u>		
Condition of Riser: Good: <input checked="" type="checkbox"/>	Damaged: <input type="checkbox"/>	
Condition of Riser Cap: Good: <input checked="" type="checkbox"/>	Damaged: <input type="checkbox"/>	
Measurement reference point: Yes: <input checked="" type="checkbox"/>	No: <input type="checkbox"/>	
Remarks:		
Dedicated Pump: Type: <u>Bladder</u>		
Condition: Good: <input checked="" type="checkbox"/>	Damaged: <input type="checkbox"/>	Missing: <input type="checkbox"/>
Pumping Rate (gpm): <u>N/A</u>	Current (Hz): <u>N/A</u>	
Remarks:		

Field Certification: ACF Signed Field Tech Title 12/7/17 Date



## GROUNDWATER MONITORING PROGRAM WELL DATA SHEET

Site Name: Sunshine Cyn Project No.: SD17-1047  
 Well I.D.: P2-2 Sampling Date: 12.5.17  
 Collected By: AS Purge start Time: 0750  
 Casing Diameter (inches): 2 Purge Stop time: 0822  
 Starting Water Level: 122.54 Sampling (Well Recovery) Time: 0830  
 Total Depth (feet): 160.90 Ending Water Level (feet): 128.12  
 Water column (feet): \_\_\_\_\_ Total Purged (gallons): 2.07  
 Screen Length (feet): \_\_\_\_\_ Duplicate Sample: YES  NO

Sample Method: Micro Purge Low Flow  
 Horiba Model S/N: U-52/WGGP8CR5

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
0758	0.50	124.78	7.53	5.85	64.4	4.40	23.92	-157
0806	1.00	125.73	7.58	5.84	0.0	3.20	24.09	-141
0810	1.25	126.30	7.58	5.83	0.0	2.60	24.20	-134
0814	1.50	126.92	7.58	5.84	0.0	2.56	24.20	-135
0818	1.75	127.49	7.57	5.85	0.0	2.54	24.22	-134
0822	2.00	128.12	7.58	5.83	0.0	2.51	24.21	-134

Purge Sampling Rates: 80 PSI R:30/A:22

Well condition: OK - Had to carry equipment across concrete channel

Additional Info/Comments: Sunny Cool. Very high Winds

Name: A. Shaw Signature: [Signature]

# GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Cyn Well ID: PZ-2 Date: 12.6.17

## 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: Carried sampling equipment + bottles across concrete channel.

## Concrete Pad:

Integrity: N/A 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:   
Measurement 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:

OC  
Signed

Field Tech  
Title

12.6.17  
Date

## GROUNDWATER MONITORING PROGRAM WELL DATA SHEET

Site Name: Sunshine Gen. Project No.: 2017-1047  
 Well I.D.: PZ-4 Sampling Date: 12-6-17  
 Collected By: BS Purge start Time: 1228  
 Casing Diameter (inches): 2 Purge Stop time: (BS) 1258 1300  
 Starting Water Level: 111.86 Sampling (Well Recovery) Time: 1309  
 Total Depth (feet): 129.15 Ending Water Level (feet): 113.98  
 Water column (feet): 13.29 Total Purged (gallons): (BS) 3.754  
 Screen Length (feet): — Duplicate Sample: YES  NO   
 Sample Method: Micro Purge Low Flow  
 Horiba Model S/N: R855494H

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
1234	1	112.48	6.72	1.53	278	4.70	23.43	115
1238	1 1/2	112.80	6.63	1.54	155	1.91	23.34	97
1242	2	112.99	6.62	1.57	56.3	1.33	23.35	97
1245	2 1/4	113.14	6.62	1.58	53.6	1.27	23.34	97
1248	2 3/4	113.36	6.65	1.59	42.6	1.15	23.30	99
1252	3 1/4	113.74	6.65	1.59	33.7	1.13	23.34	99
1255	3 1/2	113.96	6.65	1.60	20.4	1.06	23.29	99
1258	3 3/4	114.22	6.66	1.60	19.8	1.04	23.24	99
1300	4	114.53	6.66	1.60	19.4	1.03	23.30	100

Purge Sampling Rates: BS 80, 12:40 10:15

water looks cloudy

Well condition: OK

Additional Info/Comments: very windy, dusty

Name: B. Salinas

Signature: B. Salinas

# GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Well ID: PZ-4 Date: 12-6-17

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: Flash metal lid

Condition of Protective Casing: Good:  Damaged:

Condition of Locking Cap: Good: N/A Damaged:

Condition of Lock: Good: N/A Damaged:

Condition of Weepholes: Good: N/A Damaged:

Remarks:

Well Riser: Material: PVC

Condition of Riser: Good:  Damaged:

Condition of Riser Cap: Good:  Damaged:

Measurement reference point: Yes:  No:

Remarks:

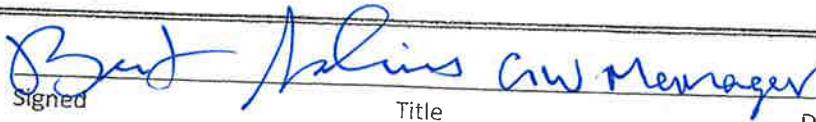
Dedicated Pump: Type: Bladder

Condition: Good:  Damaged:  Missing:

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

Remarks:

Field Certification:

  
 Signed \_\_\_\_\_ Title CW Manager Date 12-6-17

## GROUNDWATER MONITORING PROGRAM WELL DATA SHEET

Site Name: Sunshine Cyn, Project No.: SD17.1047  
 Well I.D.: LY-6 Sampling Date: 12-7-17  
 Collected By: PJS Purge start Time: \_\_\_\_\_  
 Casing Diameter (inches): \_\_\_\_\_ Purge Stop time: \_\_\_\_\_  
 Starting Water Level: \_\_\_\_\_ Sampling (Well Recovery) Time: \_\_\_\_\_  
 Total Depth (feet): \_\_\_\_\_ Ending Water Level (feet): \_\_\_\_\_  
 Water column (feet): \_\_\_\_\_ Total Purged (gallons): \_\_\_\_\_  
 Screen Length (feet): \_\_\_\_\_ Duplicate Sample: YES NO  
 Sample Method: Micro Purge Low Flow  
 Horiba Model S/N: \_\_\_\_\_

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
<div style="font-size: 4em; opacity: 0.5;">D.R.U.</div>								

Purge Sampling Rates: The lysimeter is dry, no samples collected

Well condition: OK

Additional Info/Comments: Sunny, Mild winds

Name: P. Salinas Signature: P. Salinas

## GROUNDWATER MONITORING PROGRAM WELL DATA SHEET

**Site Name:** Sunshine Cyn. **Project No.:** 5017.1047  
**Well I.D.:** CX-7 **Sampling Date:** 12-4-17  
**Collected By:** BS **Purge start Time:** \_\_\_\_\_  
**Casing Diameter (inches):** \_\_\_\_\_ **Purge Stop time:** \_\_\_\_\_  
**Starting Water Level:** \_\_\_\_\_ **Sampling (Well Recovery) Time:** \_\_\_\_\_  
**Total Depth (feet):** \_\_\_\_\_ **Ending Water Level (feet):** \_\_\_\_\_  
**Water column (feet):** \_\_\_\_\_ **Total Purged (gallons):** \_\_\_\_\_  
**Screen Length (feet):** \_\_\_\_\_ **Duplicate Sample:** YES NO  
**Sample Method:**  Micro Purge  Low Flow  
**Horiba Model S/N:** \_\_\_\_\_

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV

*Bad Pump*

**Purge Sampling Rates:** The pump has not been repaired, not able to sample. checked with the Republic staff.

**Well condition:** \_\_\_\_\_

**Additional Info/Comments:** Clear, very, very windy & dusty.

**Name:** B. Salinas **Signature:** B. Salinas

## FIELD CALIBRATION DOCUMENTATION FORM

LOCATION (Site/Facility Name) SAN JUAN CYS PROJECT NAME / NUMBER SO17-1047

Instrument Make/Model #						
Date/Time	pH (4.01)	Electrical Conductivity (µMhos/cm) (4.49 mg/Kg)	Turbidity (NTU)	DO (mg/L or %)	Guidance Remarks	Comments
12/4/17 8738	4.78	4.51	0.8	(8.59)		
Pre. Cal				13.36		
Calibration	4.01	4.49	5	9.68		
Calibration Successful? (Y/N)	Yes			→	enter YES or NO	
Satisfies Protocol?	Yes			→	Did calibration meet criteria in the sampling protocol? (Y or N)	
Calibration by	Pent Jones					Signature or initials
Physical Condition of Unit		Good				

## FIELD CALIBRATION DOCUMENTATION FORM

LOCATION (Site/Facility Name) Sunshine Spa PROJECT NAME / NUMBER S017.1047

Instrument Make/Model #		R8JS494H					
Date/Time	pH	Electrical Conductivity (µMhos/cm)	Turbidity (NTU)	DO (mg/L or %)	Guidance Remarks	Comments	
12-5-17 0718	(4.01)	(4.49 mg/Kg)	(0)	(8.59)			
Pre. Cal	3.94	4.58	0.4	11.34			
Calibration	4.01	4.49	0	9.62			
Calibration Successful? (Y/N)	Yes				enter YES or NO		
Satisfies Protocol?	Yes				Did calibration meet criteria in the sampling protocol? (Y or N)		
Calibration by	Robert Johnson						
Physical Condition of Unit		Good					



## FIELD CALIBRATION DOCUMENTATION FORM

LOCATION (Site/Facility Name) Sunshine Cym PROJECT NAME / NUMBER SOIT-1047

Instrument Make/Model # <u>R855UQUA</u>						
Date/Time	pH	Electrical Conductivity (µMhos/cm)	Turbidity (NTU)	DO (mg/L or %)	Guidance Remarks	Comments
<u>12/6/17</u> <u>0652</u>	(4.01)	(4.49 mg/Kg)	(0)	(8.59)		
Pre. Cal	<u>4.27</u>	<u>4.53</u>	<u>6</u>	<u>13.12</u>		
Calibration	<u>4.01</u>	<u>4.49</u>	<u>6</u>	<u>9.62</u>		
Calibration Successful? (Y/N)	<u>yes</u>	enter YES or NO				
Satisfies Protocol?	<u>yes</u>	Did calibration meet criteria in the sampling protocol? (Y or N)				
Calibration by	<u>Rent Adams</u>	Signature or initials				
Physical Condition of Unit		<u>Good</u>				

## FIELD CALIBRATION DOCUMENTATION FORM

LOCATION (Site/Facility Name) Sunshine Cgn PROJECT NAME / NUMBER 2017-10-17

Instrument Make/Model # <u>Horiba U-SZ</u>					
Date/Time	pH	Electrical Conductivity (µMhos/cm)	Turbidity (NTU)	DO (mg/L or %)	Comments
<u>12.6.17</u> <u>0700</u>					
Pre. Cal	<u>3.99</u>	<u>4.47</u>	<u>2.1</u>	<u>5.68</u>	
Calibration	<u>4.00</u>	<u>4.49</u>	<u>0.0</u>	<u>12.16</u>	
Calibration Successful? (Y/N)	<u>Y</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	enter YES or NO
Satisfies Protocol?	<u>Y</u>	<u>_____</u>	<u>_____</u>	<u>_____</u>	Did calibration meet criteria in the sampling protocol? (Y or N)
Calibration by	<u>AS</u>				Signature or initials <u>AS</u>
Physical Condition of Unit		<u>_____</u> → <u>O.K.</u>			

## FIELD CALIBRATION DOCUMENTATION FORM

LOCATION (Site/Facility Name) Sunshine Cgm PROJECT NAME / NUMBER SD17-1047

Instrument Make/Model # <u>Hanna U-S2</u> <u>SN CG688CR5</u>					
Date/Time <u>12-5-17</u> <u>0848</u>	pH	Electrical Conductivity (µMhos/cm)	Turbidity (NTU)	DO (mg/L or %)	Comments
Pre. Cal	<u>3.91</u>	<u>4.44</u>	<u>0.0</u>	<u>12.26</u>	
Calibration	<u>4.00</u>	<u>4.49</u>	<u>0.0</u>	<u>11.41</u>	
Calibration Successful? (Y/N)	<u>Y</u>	<u>✓</u>			enter YES or NO
Satisfies Protocol?	<u>Y</u>	<u>✓</u>			Did calibration meet criteria in the sampling protocol? (Y or N)
Calibration by	<u>AS</u>				Signature or initials <u>ac. AS</u>
Physical Condition of Unit		<u>→ Good</u>			

## FIELD CALIBRATION DOCUMENTATION FORM

LOCATION (Site/Facility Name) Sunshine Cyn PROJECT NAME / NUMBER \_\_\_\_\_

Instrument Make/Model # <u>Horiba v.52</u> <u>SLP W66P8ERS</u>					
Date/Time	pH	Electrical Conductivity (µMhos/cm)	Turbidity (NTU)	DO (mg/L or %)	Comments
12.4.17 0843	4.92	4.49	0.3	12.10	
Pre. Cal					
Calibration	4.00	4.49	0.0	10.78	
Calibration Successful? (Y/N)	Y				enter YES or NO
Satisfies Protocol?	Y				Did calibration meet criteria in the sampling protocol? (Y or N)
Calibration by	AS				Signature or initials <i>AS</i>
Physical Condition of Unit		→ Good			

## FIELD CALIBRATION DOCUMENTATION FORM

LOCATION (Site/Facility Name) Sunshine Cyn PROJECT NAME / NUMBER SP17-10-17

Instrument Make/Model # <u>Hanna U-52</u> <u>SN W668683</u>					
Date/Time	pH	Electrical Conductivity (µMhos/cm)	Turbidity (NTU)	DO (mg/L or %)	Comments
<u>12.7-17</u> <u>0700</u>					
Pre. Cal	<u>3.96</u>	<u>4.48</u>	<u>0.2</u>	<u>12.22</u>	
Calibration	<u>4.00</u>	<u>4.49</u>	<u>0.0</u>	<u>10.90</u>	
Calibration Successful? (Y/N)	<u>Y</u>	<u>—</u>	<u>—</u>	<u>—</u>	enter YES or NO
Satisfies Protocol?	<u>Y</u>	<u>—</u>	<u>—</u>	<u>—</u>	Did calibration meet criteria in the sampling protocol? (Y or N)
Calibration by	<u>AS</u>				Signature or initials <u>AS</u>
Physical Condition of Unit		<u>→ Good</u>			

## LABORATORY ANALYTICAL DATA REPORTS

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Irvine

17461 Derian Ave

Suite 100

Irvine, CA 92614-5817

Tel: (949)261-1022

TestAmerica Job ID: 440-190715-1

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:

8/31/2017 3:45:08 PM

Rossina Tomova, Project Manager I

(949)261-1022

[rossina.tomova@testamericainc.com](mailto:rossina.tomova@testamericainc.com)

### LINKS

Review your project  
results through

**TotalAccess**

Have a Question?



Visit us at:

[www.testamericainc.com](http://www.testamericainc.com)

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

1

2

3

4

5

6

7

8

9

10

11

12

13



# Table of Contents

Cover Page . . . . .	1
Table of Contents . . . . .	2
Sample Summary . . . . .	3
Case Narrative . . . . .	4
Client Sample Results . . . . .	5
Method Summary . . . . .	7
Lab Chronicle . . . . .	8
QC Sample Results . . . . .	10
QC Association Summary . . . . .	12
Definitions/Glossary . . . . .	13
Certification Summary . . . . .	14
Chain of Custody . . . . .	15
Receipt Checklists . . . . .	16



# Sample Summary

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

TestAmerica Job ID: 440-190715-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-190715-1	MW-5-A	Water	08/22/17 10:30	08/22/17 17:50
440-190715-2	MW-5-B	Water	08/22/17 10:30	08/22/17 17:50
440-190715-3	MW-6-A	Water	08/22/17 09:40	08/22/17 17:50
440-190715-4	MW-6-B	Water	08/22/17 09:40	08/22/17 17:50
440-190715-5	DW-1-A	Water	08/22/17 07:45	08/22/17 17:50
440-190715-6	DW-1-B	Water	08/22/17 07:45	08/22/17 17:50
440-190715-7	DW-2-A	Water	08/22/17 09:10	08/22/17 17:50
440-190715-8	DW-2-B	Water	08/22/17 09:10	08/22/17 17:50
440-190715-9	DW-3-A	Water	08/22/17 10:00	08/22/17 17:50
440-190715-10	DW-3-B	Water	08/22/17 10:00	08/22/17 17:50
440-190715-11	PZ-2-A	Water	08/22/17 10:50	08/22/17 17:50
440-190715-12	PZ-2-B	Water	08/22/17 10:50	08/22/17 17:50

# Case Narrative

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

TestAmerica Job ID: 440-190715-1

---

**Job ID: 440-190715-1**

---

**Laboratory: TestAmerica Irvine**

## Narrative

---

**Job Narrative**  
**440-190715-1**

## Comments

No additional comments.

## Receipt

The samples were received on 8/22/2017 5:50 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.6° C.

## General Chemistry

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

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

# Client Sample Results

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

TestAmerica Job ID: 440-190715-1

## Client Sample ID: MW-5-A

Date Collected: 08/22/17 10:30

Date Received: 08/22/17 17:50

## Lab Sample ID: 440-190715-1

Matrix: Water

### General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	600		4.0	4.0	mg/L			08/23/17 07:44	1

## Client Sample ID: MW-5-B

Date Collected: 08/22/17 10:30

Date Received: 08/22/17 17:50

## Lab Sample ID: 440-190715-2

Matrix: Water

### General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	600		4.0	4.0	mg/L			08/23/17 08:13	1

## Client Sample ID: MW-6-A

Date Collected: 08/22/17 09:40

Date Received: 08/22/17 17:50

## Lab Sample ID: 440-190715-3

Matrix: Water

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	3300		50	25	mg/L			08/29/17 08:22	1

## Client Sample ID: MW-6-B

Date Collected: 08/22/17 09:40

Date Received: 08/22/17 17:50

## Lab Sample ID: 440-190715-4

Matrix: Water

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	3300		50	25	mg/L			08/29/17 08:22	1

## Client Sample ID: DW-1-A

Date Collected: 08/22/17 07:45

Date Received: 08/22/17 17:50

## Lab Sample ID: 440-190715-5

Matrix: Water

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		20	10	mg/L			08/24/17 16:14	1

## Client Sample ID: DW-1-B

Date Collected: 08/22/17 07:45

Date Received: 08/22/17 17:50

## Lab Sample ID: 440-190715-6

Matrix: Water

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		20	10	mg/L			08/24/17 16:14	1

## Client Sample ID: DW-2-A

Date Collected: 08/22/17 09:10

Date Received: 08/22/17 17:50

## Lab Sample ID: 440-190715-7

Matrix: Water

### General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	350		4.0	4.0	mg/L			08/23/17 08:22	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-190715-1

## Client Sample ID: DW-2-B

Date Collected: 08/22/17 09:10

Date Received: 08/22/17 17:50

## Lab Sample ID: 440-190715-8

Matrix: Water

### General Chemistry

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	350		4.0	4.0	mg/L			08/23/17 08:32	1

## Client Sample ID: DW-3-A

Date Collected: 08/22/17 10:00

Date Received: 08/22/17 17:50

## Lab Sample ID: 440-190715-9

Matrix: Water

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		20	10	mg/L			08/24/17 16:15	1

## Client Sample ID: DW-3-B

Date Collected: 08/22/17 10:00

Date Received: 08/22/17 17:50

## Lab Sample ID: 440-190715-10

Matrix: Water

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		20	10	mg/L			08/24/17 16:15	1

## Client Sample ID: PZ-2-A

Date Collected: 08/22/17 10:50

Date Received: 08/22/17 17:50

## Lab Sample ID: 440-190715-11

Matrix: Water

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	17	J	20	10	mg/L			08/24/17 16:15	1

## Client Sample ID: PZ-2-B

Date Collected: 08/22/17 10:50

Date Received: 08/22/17 17:50

## Lab Sample ID: 440-190715-12

Matrix: Water

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		20	10	mg/L			08/24/17 16:15	1

# Method Summary

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

TestAmerica Job ID: 440-190715-1

Method	Method Description	Protocol	Laboratory
410.4	COD	MCAWW	TAL IRV
SM 2320B	Alkalinity	SM	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 = TestAmerica Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022



# Lab Chronicle

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

TestAmerica Job ID: 440-190715-1

**Client Sample ID: MW-5-A**  
**Date Collected: 08/22/17 10:30**  
**Date Received: 08/22/17 17:50**

**Lab Sample ID: 440-190715-1**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2320B		1			425216	08/23/17 07:44	YZ	TAL IRV

**Client Sample ID: MW-5-B**  
**Date Collected: 08/22/17 10:30**  
**Date Received: 08/22/17 17:50**

**Lab Sample ID: 440-190715-2**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2320B		1			425216	08/23/17 08:13	YZ	TAL IRV

**Client Sample ID: MW-6-A**  
**Date Collected: 08/22/17 09:40**  
**Date Received: 08/22/17 17:50**

**Lab Sample ID: 440-190715-3**  
**Matrix: Water**

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	426101	08/29/17 08:22	XL	TAL IRV

**Client Sample ID: MW-6-B**  
**Date Collected: 08/22/17 09:40**  
**Date Received: 08/22/17 17:50**

**Lab Sample ID: 440-190715-4**  
**Matrix: Water**

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	426101	08/29/17 08:22	XL	TAL IRV

**Client Sample ID: DW-1-A**  
**Date Collected: 08/22/17 07:45**  
**Date Received: 08/22/17 17:50**

**Lab Sample ID: 440-190715-5**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	425353	08/24/17 16:14	KYP	TAL IRV

**Client Sample ID: DW-1-B**  
**Date Collected: 08/22/17 07:45**  
**Date Received: 08/22/17 17:50**

**Lab Sample ID: 440-190715-6**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	425353	08/24/17 16:14	KYP	TAL IRV

TestAmerica Irvine

# Lab Chronicle

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

TestAmerica Job ID: 440-190715-1

**Client Sample ID: DW-2-A**

**Date Collected: 08/22/17 09:10**

**Date Received: 08/22/17 17:50**

**Lab Sample ID: 440-190715-7**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2320B		1			425216	08/23/17 08:22	YZ	TAL IRV

**Client Sample ID: DW-2-B**

**Date Collected: 08/22/17 09:10**

**Date Received: 08/22/17 17:50**

**Lab Sample ID: 440-190715-8**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2320B		1			425216	08/23/17 08:32	YZ	TAL IRV

**Client Sample ID: DW-3-A**

**Date Collected: 08/22/17 10:00**

**Date Received: 08/22/17 17:50**

**Lab Sample ID: 440-190715-9**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	425353	08/24/17 16:15	KYP	TAL IRV

**Client Sample ID: DW-3-B**

**Date Collected: 08/22/17 10:00**

**Date Received: 08/22/17 17:50**

**Lab Sample ID: 440-190715-10**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	425353	08/24/17 16:15	KYP	TAL IRV

**Client Sample ID: PZ-2-A**

**Date Collected: 08/22/17 10:50**

**Date Received: 08/22/17 17:50**

**Lab Sample ID: 440-190715-11**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	425353	08/24/17 16:15	KYP	TAL IRV

**Client Sample ID: PZ-2-B**

**Date Collected: 08/22/17 10:50**

**Date Received: 08/22/17 17:50**

**Lab Sample ID: 440-190715-12**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	425353	08/24/17 16:15	KYP	TAL IRV

**Laboratory References:**

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

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-190715-1

## Method: 410.4 - COD

**Lab Sample ID: MB 440-425353/3**  
**Matrix: Water**  
**Analysis Batch: 425353**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		20	10	mg/L			08/24/17 16:13	1

**Lab Sample ID: LCS 440-425353/4**  
**Matrix: Water**  
**Analysis Batch: 425353**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chemical Oxygen Demand	200	206		mg/L		103	90 - 110

**Lab Sample ID: 440-190715-12 MS**  
**Matrix: Water**  
**Analysis Batch: 425353**

**Client Sample ID: PZ-2-B**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chemical Oxygen Demand	ND		200	203		mg/L		101	70 - 120

**Lab Sample ID: 440-190715-12 MSD**  
**Matrix: Water**  
**Analysis Batch: 425353**

**Client Sample ID: PZ-2-B**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chemical Oxygen Demand	ND		200	199		mg/L		99	70 - 120	2	15

## Method: SM 2320B - Alkalinity

**Lab Sample ID: MB 440-425216/3**  
**Matrix: Water**  
**Analysis Batch: 425216**

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

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	ND		4.0	4.0	mg/L			08/23/17 06:39	1

**Lab Sample ID: LCS 440-425216/2**  
**Matrix: Water**  
**Analysis Batch: 425216**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity as CaCO3	33.8	31.1		mg/L		92	80 - 120

**Lab Sample ID: 440-190654-H-10 DU**  
**Matrix: Water**  
**Analysis Batch: 425216**

**Client Sample ID: Duplicate**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Alkalinity as CaCO3	160		157		mg/L		0.6	20

TestAmerica Irvine



# QC Sample Results

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

TestAmerica Job ID: 440-190715-1

## Method: SM 2320B - Alkalinity (Continued)

**Lab Sample ID: 440-190732-H-1 DU**  
**Matrix: Water**  
**Analysis Batch: 425216**

**Client Sample ID: Duplicate**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Alkalinity as CaCO3	140		145		mg/L		1	20

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

**Lab Sample ID: MB 440-426101/1**  
**Matrix: Water**  
**Analysis Batch: 426101**

**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			08/29/17 08:22	1

**Lab Sample ID: LCS 440-426101/2**  
**Matrix: Water**  
**Analysis Batch: 426101**

**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	968		mg/L		97	90 - 110

**Lab Sample ID: 440-190715-4 DU**  
**Matrix: Water**  
**Analysis Batch: 426101**

**Client Sample ID: MW-6-B**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	3300		3310		mg/L		0.2	5

# QC Association Summary

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

TestAmerica Job ID: 440-190715-1

## General Chemistry

### Analysis Batch: 425216

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-190715-1	MW-5-A	Total/NA	Water	SM 2320B	
440-190715-2	MW-5-B	Total/NA	Water	SM 2320B	
440-190715-7	DW-2-A	Total/NA	Water	SM 2320B	
440-190715-8	DW-2-B	Total/NA	Water	SM 2320B	
MB 440-425216/3	Method Blank	Total/NA	Water	SM 2320B	
LCS 440-425216/2	Lab Control Sample	Total/NA	Water	SM 2320B	
440-190654-H-10 DU	Duplicate	Total/NA	Water	SM 2320B	
440-190732-H-1 DU	Duplicate	Total/NA	Water	SM 2320B	

### Analysis Batch: 425353

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-190715-5	DW-1-A	Total/NA	Water	410.4	
440-190715-6	DW-1-B	Total/NA	Water	410.4	
440-190715-9	DW-3-A	Total/NA	Water	410.4	
440-190715-10	DW-3-B	Total/NA	Water	410.4	
440-190715-11	PZ-2-A	Total/NA	Water	410.4	
440-190715-12	PZ-2-B	Total/NA	Water	410.4	
MB 440-425353/3	Method Blank	Total/NA	Water	410.4	
LCS 440-425353/4	Lab Control Sample	Total/NA	Water	410.4	
440-190715-12 MS	PZ-2-B	Total/NA	Water	410.4	
440-190715-12 MSD	PZ-2-B	Total/NA	Water	410.4	

### Analysis Batch: 426101

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-190715-3	MW-6-A	Total/NA	Water	SM 2540C	
440-190715-4	MW-6-B	Total/NA	Water	SM 2540C	
MB 440-426101/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 440-426101/2	Lab Control Sample	Total/NA	Water	SM 2540C	
440-190715-4 DU	MW-6-B	Total/NA	Water	SM 2540C	

# Definitions/Glossary

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

TestAmerica Job ID: 440-190715-1

## Qualifiers

### General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

## 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
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)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
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)

# Accreditation/Certification Summary

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

TestAmerica Job ID: 440-190715-1

## Laboratory: TestAmerica Irvine

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	State Program	10	CA01531	06-30-18
Arizona	State Program	9	AZ0671	10-14-17
California	LA Cty Sanitation Districts	9	10256	06-30-18
California	State Program	9	CA ELAP 2706	06-30-18
Guam	State Program	9	Cert. No. 17-003R	01-23-18
Hawaii	State Program	9	N/A	01-29-18
Kansas	NELAP Secondary AB	7	E-10420	07-31-17 *
New Mexico	State Program	6	N/A	01-29-18 *
Northern Mariana Islands	State Program	9	MP0002	01-29-17 *
Oregon	NELAP	10	4028	01-29-18
USDA	Federal		P330-15-00184	07-08-18
Washington	State Program	10	C900	09-03-17 *

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

TestAmerica Irvine

**TestAmerica Irvine**  
 17461 Derian Ave  
 Suite 100  
 Irvine, CA 92614  
 Phone: 949.261.1022 Fax:

**Chain of Custody Record**

141855

**TestAmerica**  
 THE LEADER IN ENVIRONMENTAL TESTING  
 TestAmerica Laboratories, Inc.  
 TAL-9210 (0713)

Regulatory Program:  DW  NPDES  RCRA  Other: \_\_\_\_\_

Client Contact  
 Company Name: Geologic Associates  
 Address: 1415 W. Broadway St.  
 City/State/Zip: San Diego 92127  
 Phone: 619-451-1137  
 Fax: 619-451-1089  
 Project Name: Republic Services  
 Site: Sunshine Cyn Landfill  
 P O # \_\_\_\_\_

Project Manager: Kyle Welton  
 Site Contact: Pat Costello Date: 8.22.17  
 Lab Contact: Rossing Carrier: TA

Tel/Fax: \_\_\_\_\_

Analysis Turnaround Time  
 CALENDAR DAYS  WORKING DAYS  
 TAT if different from Below \_\_\_\_\_  
 2 weeks  
 1 week  
 2 days  
 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)	Sample Specific Notes:
MW-S-A	8/22/17	1030	G	2W	1	Y	Y	
MW-S-B		1030	G		1	Y	Y	
MW-b-A		0940			1	Y	Y	
MW-b-B		0940			1	Y	Y	
DW-1-A		0745			1	Y	Y	
DW-1-B		0745			1	Y	Y	
DW-2-A		0910			1	Y	Y	
DW-2-B		0910			1	Y	Y	
DW-3-A		1000			1	Y	Y	
DW-3-B		1000			1	Y	Y	
PZ-2-A		1050			1	Y	Y	
PZ-2-B		1050			1	Y	Y	

Preservation Used: 1=Ice, 2=HCl, 3=H2SO4, 4=HNO3, 5=NapH, 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  Return to Client  Disposal by Lab  Archive for \_\_\_\_\_ Months

Special Instructions/QC Requirements & Comments:  
 Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

Custody Seal No.: \_\_\_\_\_  
 Company: GWA  
 Date/Time: 8-22-17 1205  
 Received by: [Signature]

Company: TA  
 Date/Time: 8/22/17 1300  
 Received by: [Signature]

Company: TA  
 Date/Time: 8/22/17 1750  
 Received by: [Signature]

Therm ID No.: \_\_\_\_\_  
 Cooler Temp. (°C): Obs'd: \_\_\_\_\_  
 Date/Time: 8/22/17 1300  
 Date/Time: 8/22/17 1750

1-8/16 116-54



# Login Sample Receipt Checklist

Client: Geo-Logic Associates

Job Number: 440-190715-1

**Login Number: 190715**

**List Source: TestAmerica Irvine**

**List Number: 1**

**Creator: Soderblom, Tim**

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	



# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Irvine

17461 Derian Ave

Suite 100

Irvine, CA 92614-5817

Tel: (949)261-1022

TestAmerica Job ID: 440-192408-1

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:

9/28/2017 3:50:56 PM

Rossina Tomova, Project Manager I

(949)261-1022

[rossina.tomova@testamericainc.com](mailto:rossina.tomova@testamericainc.com)

### LINKS

Review your project  
results through

**TotalAccess**

Have a Question?



Visit us at:

[www.testamericainc.com](http://www.testamericainc.com)

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

1

2

3

4

5

6

7

8

9

10

11

12

13



# Table of Contents

Cover Page . . . . .	1
Table of Contents . . . . .	2
Sample Summary . . . . .	3
Case Narrative . . . . .	4
Client Sample Results . . . . .	5
Method Summary . . . . .	22
Lab Chronicle . . . . .	23
QC Sample Results . . . . .	26
QC Association Summary . . . . .	44
Definitions/Glossary . . . . .	48
Certification Summary . . . . .	49
Chain of Custody . . . . .	50
Receipt Checklists . . . . .	51



# Sample Summary

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

TestAmerica Job ID: 440-192408-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-192408-1	Subdrain (N)	Water	09/18/17 13:05	09/18/17 17:30
440-192408-2	Combined Subdrains	Water	09/18/17 13:45	09/18/17 17:30
440-192408-3	CM-9R3	Water	09/18/17 12:15	09/18/17 17:30
440-192408-4	CM-10R	Water	09/18/17 11:25	09/18/17 17:30
440-192408-5	CM-11R	Water	09/18/17 13:45	09/18/17 17:30
440-192408-6	Dup.	Water	09/18/17 00:01	09/18/17 17:30
440-192408-7	QCAB	Water	09/18/17 00:01	09/18/17 17:30
440-192408-8	QCTB	Water	09/18/17 00:01	09/18/17 17:30



# Case Narrative

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

TestAmerica Job ID: 440-192408-1

**Job ID: 440-192408-1**

**Laboratory: TestAmerica Irvine**

## Narrative

### Job Narrative 440-192408-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 9/18/2017 5:30 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 4.1° C and 4.5° C.

#### GC/MS VOA

Method(s) 8260B: The continuing calibration verification (CCV) associated with batch 440-431277 recovered above the upper control limit for Methacrylonitrile. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: Subdrain (N) (440-192408-1), Combined Subdrains (440-192408-2), CM-9R3 (440-192408-3), CM-10R (440-192408-4), CM-11R (440-192408-5), Dup. (440-192408-6) and (CCV 440-431277/3).

Method(s) 8260B: The matrix spike and matrix spike duplicate (MS/MSD) recoveries for analytical batch 440-431277 were outside control limits. Sample matrix interference is suspected.

Method(s) 8260B: The following volatiles sample was diluted due to foaming at the time of purging during the original sample analysis: Subdrain (N) (440-192408-1). Elevated reporting limits (RLs) are provided.

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

#### GC/MS Semi VOA

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

#### HPLC/IC

Method(s) 300.0: Due to the high concentration of Chloride, the matrix spike / matrix spike duplicate (MS/MSD) for analytical batch 440-430368 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

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

#### Metals

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.

#### Organic Prep

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

#### VOA Prep

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

# Client Sample Results

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

TestAmerica Job ID: 440-192408-1

**Client Sample ID: Subdrain (N)**

**Lab Sample ID: 440-192408-1**

**Date Collected: 09/18/17 13:05**

**Matrix: Water**

**Date Received: 09/18/17 17:30**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		2.0	0.80	ug/L			09/26/17 15:18	2
1,1,1,2-Tetrachloroethane	ND		1.0	0.50	ug/L			09/26/17 15:18	2
Acrolein	ND		50	2.5	ug/L			09/23/17 02:49	1
Acrylonitrile	ND		50	1.0	ug/L			09/23/17 02:49	1
1,1,1-Trichloroethane	ND		1.0	0.50	ug/L			09/26/17 15:18	2
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			09/26/17 15:18	2
1,1,2-Trichloroethane	ND		1.0	0.50	ug/L			09/26/17 15:18	2
1,1-Dichloroethane	ND		1.0	0.50	ug/L			09/26/17 15:18	2
1,1-Dichloroethene	ND		1.0	0.50	ug/L			09/26/17 15:18	2
1,1-Dichloropropene	ND		1.0	0.50	ug/L			09/26/17 15:18	2
1,2,4-Trichlorobenzene	ND		2.0	0.80	ug/L			09/26/17 15:18	2
1,2-Dibromo-3-Chloropropane	ND		2.0	1.0	ug/L			09/26/17 15:18	2
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			09/26/17 15:18	2
1,2-Dichloroethane	ND		1.0	0.50	ug/L			09/26/17 15:18	2
1,2-Dichloropropane	ND		1.0	0.50	ug/L			09/26/17 15:18	2
1,3-Dichlorobenzene	ND		1.0	0.50	ug/L			09/26/17 15:18	2
1,3-Dichloropropane	ND		1.0	0.50	ug/L			09/26/17 15:18	2
1,4-Dichlorobenzene	ND		1.0	0.50	ug/L			09/26/17 15:18	2
2,2-Dichloropropane	ND		2.0	0.80	ug/L			09/26/17 15:18	2
2-Chloro-1,3-butadiene	ND		2.0	1.0	ug/L			09/26/17 15:18	2
2-Hexanone	ND		10	5.0	ug/L			09/26/17 15:18	2
Acetone	ND		40	20	ug/L			09/26/17 15:18	2
Acetonitrile	ND		40	20	ug/L			09/26/17 15:18	2
Acrolein	ND		10	5.0	ug/L			09/26/17 15:18	2
Acrylonitrile	ND		4.0	2.0	ug/L			09/26/17 15:18	2
Benzene	ND		1.0	0.50	ug/L			09/26/17 15:18	2
Allyl chloride	ND		2.0	1.0	ug/L			09/26/17 15:18	2
Bromoform	ND		2.0	0.80	ug/L			09/26/17 15:18	2
Bromomethane	ND		1.0	0.50	ug/L			09/26/17 15:18	2
Carbon disulfide	ND		2.0	1.0	ug/L			09/26/17 15:18	2
Carbon tetrachloride	ND		1.0	0.50	ug/L			09/26/17 15:18	2
Chlorobenzene	ND		1.0	0.50	ug/L			09/26/17 15:18	2
Bromochloromethane	ND		1.0	0.50	ug/L			09/26/17 15:18	2
Chloroethane	ND		2.0	0.80	ug/L			09/26/17 15:18	2
Chloroform	ND		1.0	0.50	ug/L			09/26/17 15:18	2
Chloromethane	ND		1.0	0.50	ug/L			09/26/17 15:18	2
cis-1,2-Dichloroethene	ND		1.0	0.50	ug/L			09/26/17 15:18	2
cis-1,3-Dichloropropene	ND		1.0	0.50	ug/L			09/26/17 15:18	2
Dibromochloromethane	ND		1.0	0.50	ug/L			09/26/17 15:18	2
Dibromomethane	ND		1.0	0.50	ug/L			09/26/17 15:18	2
Bromodichloromethane	ND		1.0	0.50	ug/L			09/26/17 15:18	2
Dichlorodifluoromethane	ND		2.0	0.80	ug/L			09/26/17 15:18	2
Ethyl methacrylate	ND		4.0	2.0	ug/L			09/26/17 15:18	2
Ethylbenzene	ND		1.0	0.50	ug/L			09/26/17 15:18	2
Iodomethane	ND		4.0	2.0	ug/L			09/26/17 15:18	2
Isobutyl alcohol	ND		50	25	ug/L			09/26/17 15:18	2
m,p-Xylene	ND		2.0	1.0	ug/L			09/26/17 15:18	2
Methylacrylonitrile	ND		20	5.0	ug/L			09/26/17 15:18	2
Methyl methacrylate	ND		4.0	2.0	ug/L			09/26/17 15:18	2

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-192408-1

**Client Sample ID: Subdrain (N)**

**Lab Sample ID: 440-192408-1**

**Date Collected: 09/18/17 13:05**

**Matrix: Water**

**Date Received: 09/18/17 17:30**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	ND		4.0	1.8	ug/L			09/26/17 15:18	2
Methyl tert-butyl ether	ND		1.0	0.50	ug/L			09/26/17 15:18	2
Naphthalene	ND		2.0	0.80	ug/L			09/26/17 15:18	2
o-Xylene	ND		1.0	0.50	ug/L			09/26/17 15:18	2
Propionitrile	ND		40	20	ug/L			09/26/17 15:18	2
Styrene	ND		1.0	0.50	ug/L			09/26/17 15:18	2
<b>t-Butanol</b>	<b>24</b>	<b>ID</b>	20	10	ug/L			09/26/17 15:18	2
Tetrachloroethene	ND		1.0	0.50	ug/L			09/26/17 15:18	2
Tetrahydrofuran	ND		20	10	ug/L			09/26/17 15:18	2
Toluene	ND		1.0	0.50	ug/L			09/26/17 15:18	2
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			09/26/17 15:18	2
trans-1,3-Dichloropropene	ND		1.0	0.50	ug/L			09/26/17 15:18	2
trans-1,4-Dichloro-2-butene	ND		10	5.0	ug/L			09/26/17 15:18	2
Trichloroethene	ND		1.0	0.50	ug/L			09/26/17 15:18	2
Trichlorofluoromethane	ND		1.0	0.50	ug/L			09/26/17 15:18	2
Vinyl acetate	ND		8.0	4.0	ug/L			09/26/17 15:18	2
Vinyl chloride	ND		1.0	0.50	ug/L			09/26/17 15:18	2
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			09/26/17 15:18	2
2-Butanone (MEK)	ND		10	5.0	ug/L			09/26/17 15:18	2
4-Methyl-2-pentanone (MIBK)	ND		10	5.0	ug/L			09/26/17 15:18	2

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	21	T J	ug/L		5.97			09/26/17 15:18	2

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	105		80 - 128		09/23/17 02:49	1
4-Bromofluorobenzene (Surr)	94		80 - 120		09/23/17 02:49	1
Toluene-d8 (Surr)	107		80 - 128		09/26/17 15:18	2
4-Bromofluorobenzene (Surr)	100		80 - 120		09/26/17 15:18	2
Dibromofluoromethane (Surr)	115		76 - 132		09/23/17 02:49	1
Dibromofluoromethane (Surr)	116		76 - 132		09/26/17 15:18	2

## Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>1,4-Dioxane</b>	<b>12</b>		0.97	0.24	ug/L		09/20/17 07:28	09/23/17 13:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	49		30 - 120	09/20/17 07:28	09/23/17 13:06	1

## Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>140</b>		5.0	2.5	mg/L			09/21/17 03:01	10

## Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Potassium</b>	<b>7.9</b>		0.50	0.25	mg/L		09/21/17 09:22	09/21/17 15:49	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chemical Oxygen Demand</b>	<b>60</b>		20	10	mg/L			09/25/17 16:14	1
<b>Total Dissolved Solids</b>	<b>2500</b>		20	10	mg/L			09/22/17 08:05	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-192408-1

## Client Sample ID: Subdrain (N)

Date Collected: 09/18/17 13:05

Date Received: 09/18/17 17:30

## Lab Sample ID: 440-192408-1

Matrix: Water

### General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	3.9		2.5	0.50	mg/L		09/19/17 03:30	09/19/17 05:59	1
Total Organic Carbon	29		1.0	0.50	mg/L			09/20/17 11:07	10
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	350		4.0	4.0	mg/L			09/19/17 07:29	1

## Client Sample ID: Combined Subdrains

Date Collected: 09/18/17 13:45

Date Received: 09/18/17 17:30

## Lab Sample ID: 440-192408-2

Matrix: Water

### Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			09/26/17 15:46	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			09/26/17 15:46	1
Acrolein	ND		50	2.5	ug/L			09/23/17 03:19	1
Acrylonitrile	ND		50	1.0	ug/L			09/23/17 03:19	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			09/26/17 15:46	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			09/26/17 15:46	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			09/26/17 15:46	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			09/26/17 15:46	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			09/26/17 15:46	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			09/26/17 15:46	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			09/26/17 15:46	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			09/26/17 15:46	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			09/26/17 15:46	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			09/26/17 15:46	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			09/26/17 15:46	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			09/26/17 15:46	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			09/26/17 15:46	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			09/26/17 15:46	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			09/26/17 15:46	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			09/26/17 15:46	1
2-Hexanone	ND		5.0	2.5	ug/L			09/26/17 15:46	1
Acetone	ND		20	10	ug/L			09/26/17 15:46	1
Acetonitrile	ND		20	10	ug/L			09/26/17 15:46	1
Acrolein	ND		5.0	2.5	ug/L			09/26/17 15:46	1
Acrylonitrile	ND		2.0	1.0	ug/L			09/26/17 15:46	1
Benzene	ND		0.50	0.25	ug/L			09/26/17 15:46	1
Allyl chloride	ND		1.0	0.50	ug/L			09/26/17 15:46	1
Bromoform	ND		1.0	0.40	ug/L			09/26/17 15:46	1
Bromomethane	ND		0.50	0.25	ug/L			09/26/17 15:46	1
Carbon disulfide	ND		1.0	0.50	ug/L			09/26/17 15:46	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			09/26/17 15:46	1
Chlorobenzene	ND		0.50	0.25	ug/L			09/26/17 15:46	1
Bromochloromethane	ND		0.50	0.25	ug/L			09/26/17 15:46	1
Chloroethane	ND		1.0	0.40	ug/L			09/26/17 15:46	1
Chloroform	ND		0.50	0.25	ug/L			09/26/17 15:46	1
Chloromethane	ND		0.50	0.25	ug/L			09/26/17 15:46	1
cis-1,2-Dichloroethene	0.48	J	0.50	0.25	ug/L			09/26/17 15:46	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/26/17 15:46	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-192408-1

## Client Sample ID: Combined Subdrains

## Lab Sample ID: 440-192408-2

Date Collected: 09/18/17 13:45

Matrix: Water

Date Received: 09/18/17 17:30

### Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibromochloromethane	ND		0.50	0.25	ug/L			09/26/17 15:46	1
Dibromomethane	ND		0.50	0.25	ug/L			09/26/17 15:46	1
Bromodichloromethane	ND		0.50	0.25	ug/L			09/26/17 15:46	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			09/26/17 15:46	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			09/26/17 15:46	1
Ethylbenzene	ND		0.50	0.25	ug/L			09/26/17 15:46	1
Iodomethane	ND		2.0	1.0	ug/L			09/26/17 15:46	1
Isobutyl alcohol	ND		25	13	ug/L			09/26/17 15:46	1
m,p-Xylene	ND		1.0	0.50	ug/L			09/26/17 15:46	1
Methylacrylonitrile	ND		10	2.5	ug/L			09/26/17 15:46	1
Methyl methacrylate	ND		2.0	1.0	ug/L			09/26/17 15:46	1
Methylene Chloride	ND		2.0	0.88	ug/L			09/26/17 15:46	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			09/26/17 15:46	1
Naphthalene	ND		1.0	0.40	ug/L			09/26/17 15:46	1
o-Xylene	ND		0.50	0.25	ug/L			09/26/17 15:46	1
Propionitrile	ND		20	10	ug/L			09/26/17 15:46	1
Styrene	ND		0.50	0.25	ug/L			09/26/17 15:46	1
t-Butanol	ND		10	5.0	ug/L			09/26/17 15:46	1
Tetrachloroethene	ND		0.50	0.25	ug/L			09/26/17 15:46	1
Tetrahydrofuran	ND		10	5.0	ug/L			09/26/17 15:46	1
Toluene	ND		0.50	0.25	ug/L			09/26/17 15:46	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			09/26/17 15:46	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/26/17 15:46	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			09/26/17 15:46	1
Trichloroethene	ND		0.50	0.25	ug/L			09/26/17 15:46	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			09/26/17 15:46	1
Vinyl acetate	ND		4.0	2.0	ug/L			09/26/17 15:46	1
Vinyl chloride	ND		0.50	0.25	ug/L			09/26/17 15:46	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			09/26/17 15:46	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			09/26/17 15:46	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			09/26/17 15:46	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	11	TJ	ug/L		5.97			09/26/17 15:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	108		80 - 128		09/23/17 03:19	1
4-Bromofluorobenzene (Surr)	99		80 - 120		09/23/17 03:19	1
Toluene-d8 (Surr)	104		80 - 128		09/26/17 15:46	1
4-Bromofluorobenzene (Surr)	101		80 - 120		09/26/17 15:46	1
Dibromofluoromethane (Surr)	116		76 - 132		09/23/17 03:19	1
Dibromofluoromethane (Surr)	120		76 - 132		09/26/17 15:46	1

### Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.9		0.99	0.25	ug/L		09/20/17 07:28	09/23/17 13:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	60		30 - 120	09/20/17 07:28	09/23/17 13:28	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-192408-1

## Client Sample ID: Combined Subdrains

## Lab Sample ID: 440-192408-2

Date Collected: 09/18/17 13:45

Matrix: Water

Date Received: 09/18/17 17:30

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	54		5.0	2.5	mg/L			09/21/17 03:24	10

### Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	6.6		0.50	0.25	mg/L		09/21/17 09:22	09/21/17 15:47	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	28		20	10	mg/L			09/25/17 16:14	1
Total Dissolved Solids	2300		20	10	mg/L			09/22/17 08:05	1
Ammonia (as N)	0.75		0.50	0.10	mg/L		09/19/17 03:30	09/19/17 05:59	1
Total Organic Carbon	6.1		0.10	0.050	mg/L			09/20/17 12:45	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	230		4.0	4.0	mg/L			09/19/17 07:13	1

## Client Sample ID: CM-9R3

## Lab Sample ID: 440-192408-3

Date Collected: 09/18/17 12:15

Matrix: Water

Date Received: 09/18/17 17:30

### Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			09/26/17 16:14	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			09/26/17 16:14	1
Acrolein	ND		50	2.5	ug/L			09/23/17 03:49	1
Acrylonitrile	ND		50	1.0	ug/L			09/23/17 03:49	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			09/26/17 16:14	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			09/26/17 16:14	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			09/26/17 16:14	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			09/26/17 16:14	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			09/26/17 16:14	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			09/26/17 16:14	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			09/26/17 16:14	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			09/26/17 16:14	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			09/26/17 16:14	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			09/26/17 16:14	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			09/26/17 16:14	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			09/26/17 16:14	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			09/26/17 16:14	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			09/26/17 16:14	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			09/26/17 16:14	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			09/26/17 16:14	1
2-Hexanone	ND		5.0	2.5	ug/L			09/26/17 16:14	1
Acetone	ND		20	10	ug/L			09/26/17 16:14	1
Acetonitrile	ND		20	10	ug/L			09/26/17 16:14	1
Acrolein	ND		5.0	2.5	ug/L			09/26/17 16:14	1
Acrylonitrile	ND		2.0	1.0	ug/L			09/26/17 16:14	1
Benzene	ND		0.50	0.25	ug/L			09/26/17 16:14	1
Allyl chloride	ND		1.0	0.50	ug/L			09/26/17 16:14	1
Bromoform	ND		1.0	0.40	ug/L			09/26/17 16:14	1
Bromomethane	ND		0.50	0.25	ug/L			09/26/17 16:14	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-192408-1

**Client Sample ID: CM-9R3**

**Lab Sample ID: 440-192408-3**

**Date Collected: 09/18/17 12:15**

**Matrix: Water**

**Date Received: 09/18/17 17:30**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		1.0	0.50	ug/L			09/26/17 16:14	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			09/26/17 16:14	1
Chlorobenzene	ND		0.50	0.25	ug/L			09/26/17 16:14	1
Bromochloromethane	ND		0.50	0.25	ug/L			09/26/17 16:14	1
Chloroethane	ND		1.0	0.40	ug/L			09/26/17 16:14	1
Chloroform	ND		0.50	0.25	ug/L			09/26/17 16:14	1
Chloromethane	ND		0.50	0.25	ug/L			09/26/17 16:14	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			09/26/17 16:14	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/26/17 16:14	1
Dibromochloromethane	ND		0.50	0.25	ug/L			09/26/17 16:14	1
Dibromomethane	ND		0.50	0.25	ug/L			09/26/17 16:14	1
Bromodichloromethane	ND		0.50	0.25	ug/L			09/26/17 16:14	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			09/26/17 16:14	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			09/26/17 16:14	1
Ethylbenzene	ND		0.50	0.25	ug/L			09/26/17 16:14	1
Iodomethane	ND		2.0	1.0	ug/L			09/26/17 16:14	1
Isobutyl alcohol	ND		25	13	ug/L			09/26/17 16:14	1
m,p-Xylene	ND		1.0	0.50	ug/L			09/26/17 16:14	1
Methylacrylonitrile	ND		10	2.5	ug/L			09/26/17 16:14	1
Methyl methacrylate	ND		2.0	1.0	ug/L			09/26/17 16:14	1
Methylene Chloride	ND		2.0	0.88	ug/L			09/26/17 16:14	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			09/26/17 16:14	1
Naphthalene	ND		1.0	0.40	ug/L			09/26/17 16:14	1
o-Xylene	ND		0.50	0.25	ug/L			09/26/17 16:14	1
Propionitrile	ND		20	10	ug/L			09/26/17 16:14	1
Styrene	ND		0.50	0.25	ug/L			09/26/17 16:14	1
t-Butanol	ND		10	5.0	ug/L			09/26/17 16:14	1
Tetrachloroethene	ND		0.50	0.25	ug/L			09/26/17 16:14	1
Tetrahydrofuran	ND		10	5.0	ug/L			09/26/17 16:14	1
Toluene	ND		0.50	0.25	ug/L			09/26/17 16:14	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			09/26/17 16:14	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/26/17 16:14	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			09/26/17 16:14	1
Trichloroethene	ND		0.50	0.25	ug/L			09/26/17 16:14	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			09/26/17 16:14	1
Vinyl acetate	ND		4.0	2.0	ug/L			09/26/17 16:14	1
Vinyl chloride	ND		0.50	0.25	ug/L			09/26/17 16:14	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			09/26/17 16:14	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			09/26/17 16:14	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			09/26/17 16:14	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	11	T J	ug/L		5.97			09/26/17 16:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	108		80 - 128		09/23/17 03:49	1
4-Bromofluorobenzene (Surr)	97		80 - 120		09/23/17 03:49	1
Toluene-d8 (Surr)	103		80 - 128		09/26/17 16:14	1
4-Bromofluorobenzene (Surr)	100		80 - 120		09/26/17 16:14	1
Dibromofluoromethane (Surr)	115		76 - 132		09/23/17 03:49	1

TestAmerica Irvine



# Client Sample Results

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

TestAmerica Job ID: 440-192408-1

**Client Sample ID: CM-9R3**

**Date Collected: 09/18/17 12:15**

**Date Received: 09/18/17 17:30**

**Lab Sample ID: 440-192408-3**

**Matrix: Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	119		76 - 132		09/26/17 16:14	1

**Method: 8270C - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.99	0.25	ug/L		09/20/17 07:28	09/23/17 13:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	58		30 - 120	09/20/17 07:28	09/23/17 13:50	1

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	15		5.0	2.5	mg/L			09/21/17 03:48	10

**Method: 6010B - Metals (ICP) - Total Recoverable**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	14		0.50	0.25	mg/L		09/21/17 09:22	09/21/17 15:45	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	20		20	10	mg/L			09/25/17 16:14	1
Total Dissolved Solids	5100		50	25	mg/L			09/22/17 08:05	1
Ammonia (as N)	2.8		0.50	0.10	mg/L		09/19/17 03:30	09/19/17 05:59	1
Total Organic Carbon	6.8		0.10	0.050	mg/L			09/20/17 13:00	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	24		4.0	4.0	mg/L			09/19/17 05:57	1

**Client Sample ID: CM-10R**

**Date Collected: 09/18/17 11:25**

**Date Received: 09/18/17 17:30**

**Lab Sample ID: 440-192408-4**

**Matrix: Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			09/26/17 16:42	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			09/26/17 16:42	1
Acrolein	ND		50	2.5	ug/L			09/23/17 04:18	1
Acrylonitrile	ND		50	1.0	ug/L			09/23/17 04:18	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			09/26/17 16:42	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			09/26/17 16:42	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			09/26/17 16:42	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			09/26/17 16:42	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			09/26/17 16:42	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			09/26/17 16:42	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			09/26/17 16:42	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			09/26/17 16:42	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			09/26/17 16:42	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			09/26/17 16:42	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			09/26/17 16:42	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			09/26/17 16:42	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			09/26/17 16:42	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			09/26/17 16:42	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-192408-1

**Client Sample ID: CM-10R**

**Lab Sample ID: 440-192408-4**

**Date Collected: 09/18/17 11:25**

**Matrix: Water**

**Date Received: 09/18/17 17:30**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,2-Dichloropropane	ND		1.0	0.40	ug/L			09/26/17 16:42	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			09/26/17 16:42	1
2-Hexanone	ND		5.0	2.5	ug/L			09/26/17 16:42	1
Acetone	ND		20	10	ug/L			09/26/17 16:42	1
Acetonitrile	ND		20	10	ug/L			09/26/17 16:42	1
Acrolein	ND		5.0	2.5	ug/L			09/26/17 16:42	1
Acrylonitrile	ND		2.0	1.0	ug/L			09/26/17 16:42	1
Benzene	ND		0.50	0.25	ug/L			09/26/17 16:42	1
Allyl chloride	ND		1.0	0.50	ug/L			09/26/17 16:42	1
Bromoform	ND		1.0	0.40	ug/L			09/26/17 16:42	1
Bromomethane	ND		0.50	0.25	ug/L			09/26/17 16:42	1
Carbon disulfide	ND		1.0	0.50	ug/L			09/26/17 16:42	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			09/26/17 16:42	1
Chlorobenzene	ND		0.50	0.25	ug/L			09/26/17 16:42	1
Bromochloromethane	ND		0.50	0.25	ug/L			09/26/17 16:42	1
Chloroethane	ND		1.0	0.40	ug/L			09/26/17 16:42	1
Chloroform	ND		0.50	0.25	ug/L			09/26/17 16:42	1
Chloromethane	ND		0.50	0.25	ug/L			09/26/17 16:42	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			09/26/17 16:42	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/26/17 16:42	1
Dibromochloromethane	ND		0.50	0.25	ug/L			09/26/17 16:42	1
Dibromomethane	ND		0.50	0.25	ug/L			09/26/17 16:42	1
Bromodichloromethane	ND		0.50	0.25	ug/L			09/26/17 16:42	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			09/26/17 16:42	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			09/26/17 16:42	1
Ethylbenzene	ND		0.50	0.25	ug/L			09/26/17 16:42	1
Iodomethane	ND		2.0	1.0	ug/L			09/26/17 16:42	1
Isobutyl alcohol	ND		25	13	ug/L			09/26/17 16:42	1
m,p-Xylene	ND		1.0	0.50	ug/L			09/26/17 16:42	1
Methylacrylonitrile	ND		10	2.5	ug/L			09/26/17 16:42	1
Methyl methacrylate	ND		2.0	1.0	ug/L			09/26/17 16:42	1
Methylene Chloride	ND		2.0	0.88	ug/L			09/26/17 16:42	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			09/26/17 16:42	1
Naphthalene	ND		1.0	0.40	ug/L			09/26/17 16:42	1
o-Xylene	ND		0.50	0.25	ug/L			09/26/17 16:42	1
Propionitrile	ND		20	10	ug/L			09/26/17 16:42	1
Styrene	ND		0.50	0.25	ug/L			09/26/17 16:42	1
t-Butanol	ND		10	5.0	ug/L			09/26/17 16:42	1
Tetrachloroethene	ND		0.50	0.25	ug/L			09/26/17 16:42	1
Tetrahydrofuran	ND		10	5.0	ug/L			09/26/17 16:42	1
Toluene	ND		0.50	0.25	ug/L			09/26/17 16:42	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			09/26/17 16:42	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/26/17 16:42	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			09/26/17 16:42	1
Trichloroethene	ND		0.50	0.25	ug/L			09/26/17 16:42	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			09/26/17 16:42	1
Vinyl acetate	ND		4.0	2.0	ug/L			09/26/17 16:42	1
Vinyl chloride	ND		0.50	0.25	ug/L			09/26/17 16:42	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			09/26/17 16:42	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-192408-1

**Client Sample ID: CM-10R**

**Lab Sample ID: 440-192408-4**

Date Collected: 09/18/17 11:25

Matrix: Water

Date Received: 09/18/17 17:30

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Butanone (MEK)	ND		5.0	2.5	ug/L			09/26/17 16:42	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			09/26/17 16:42	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	57	T J	ug/L		1.87			09/26/17 16:42	1
Unknown	4.9	T J	ug/L		2.37			09/26/17 16:42	1
Unknown	3.3	T J	ug/L		4.39			09/26/17 16:42	1
Unknown	11	T J	ug/L		5.97			09/26/17 16:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	107		80 - 128		09/23/17 04:18	1
4-Bromofluorobenzene (Surr)	99		80 - 120		09/23/17 04:18	1
Toluene-d8 (Surr)	106		80 - 128		09/26/17 16:42	1
4-Bromofluorobenzene (Surr)	100		80 - 120		09/26/17 16:42	1
Dibromofluoromethane (Surr)	114		76 - 132		09/23/17 04:18	1
Dibromofluoromethane (Surr)	120		76 - 132		09/26/17 16:42	1

**Method: 8270C - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.97	0.24	ug/L		09/20/17 07:28	09/23/17 14:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	54		30 - 120	09/20/17 07:28	09/23/17 14:12	1

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	9.6		0.50	0.25	mg/L			09/21/17 20:37	1

**Method: 6010B - Metals (ICP) - Total Recoverable**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	11		0.50	0.25	mg/L		09/21/17 09:22	09/21/17 15:43	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	22		20	10	mg/L			09/25/17 16:15	1
Total Dissolved Solids	2500		20	10	mg/L			09/22/17 08:05	1
Ammonia (as N)	10		2.5	0.50	mg/L		09/19/17 03:30	09/19/17 05:59	1
Total Organic Carbon	4.3		0.10	0.050	mg/L			09/20/17 13:13	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	470		4.0	4.0	mg/L			09/19/17 06:13	1

**Client Sample ID: CM-11R**

**Lab Sample ID: 440-192408-5**

Date Collected: 09/18/17 13:45

Matrix: Water

Date Received: 09/18/17 17:30

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			09/26/17 17:10	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			09/26/17 17:10	1
Acrolein	ND		50	2.5	ug/L			09/23/17 04:47	1
Acrylonitrile	ND		50	1.0	ug/L			09/23/17 04:47	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-192408-1

**Client Sample ID: CM-11R**

**Lab Sample ID: 440-192408-5**

**Date Collected: 09/18/17 13:45**

**Matrix: Water**

**Date Received: 09/18/17 17:30**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			09/26/17 17:10	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			09/26/17 17:10	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			09/26/17 17:10	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			09/26/17 17:10	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			09/26/17 17:10	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			09/26/17 17:10	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			09/26/17 17:10	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			09/26/17 17:10	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			09/26/17 17:10	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			09/26/17 17:10	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			09/26/17 17:10	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			09/26/17 17:10	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			09/26/17 17:10	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			09/26/17 17:10	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			09/26/17 17:10	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			09/26/17 17:10	1
2-Hexanone	ND		5.0	2.5	ug/L			09/26/17 17:10	1
Acetone	ND		20	10	ug/L			09/26/17 17:10	1
Acetonitrile	ND		20	10	ug/L			09/26/17 17:10	1
Acrolein	ND		5.0	2.5	ug/L			09/26/17 17:10	1
Acrylonitrile	ND		2.0	1.0	ug/L			09/26/17 17:10	1
Benzene	ND		0.50	0.25	ug/L			09/26/17 17:10	1
Allyl chloride	ND		1.0	0.50	ug/L			09/26/17 17:10	1
Bromoform	ND		1.0	0.40	ug/L			09/26/17 17:10	1
Bromomethane	ND		0.50	0.25	ug/L			09/26/17 17:10	1
Carbon disulfide	ND		1.0	0.50	ug/L			09/26/17 17:10	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			09/26/17 17:10	1
Chlorobenzene	ND		0.50	0.25	ug/L			09/26/17 17:10	1
Bromochloromethane	ND		0.50	0.25	ug/L			09/26/17 17:10	1
Chloroethane	ND		1.0	0.40	ug/L			09/26/17 17:10	1
Chloroform	ND		0.50	0.25	ug/L			09/26/17 17:10	1
Chloromethane	ND		0.50	0.25	ug/L			09/26/17 17:10	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			09/26/17 17:10	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/26/17 17:10	1
Dibromochloromethane	ND		0.50	0.25	ug/L			09/26/17 17:10	1
Dibromomethane	ND		0.50	0.25	ug/L			09/26/17 17:10	1
Bromodichloromethane	ND		0.50	0.25	ug/L			09/26/17 17:10	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			09/26/17 17:10	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			09/26/17 17:10	1
Ethylbenzene	ND		0.50	0.25	ug/L			09/26/17 17:10	1
Iodomethane	ND		2.0	1.0	ug/L			09/26/17 17:10	1
Isobutyl alcohol	ND		25	13	ug/L			09/26/17 17:10	1
m,p-Xylene	ND		1.0	0.50	ug/L			09/26/17 17:10	1
Methylacrylonitrile	ND		10	2.5	ug/L			09/26/17 17:10	1
Methyl methacrylate	ND		2.0	1.0	ug/L			09/26/17 17:10	1
Methylene Chloride	ND		2.0	0.88	ug/L			09/26/17 17:10	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			09/26/17 17:10	1
Naphthalene	ND		1.0	0.40	ug/L			09/26/17 17:10	1
o-Xylene	ND		0.50	0.25	ug/L			09/26/17 17:10	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-192408-1

**Client Sample ID: CM-11R**

**Lab Sample ID: 440-192408-5**

**Date Collected: 09/18/17 13:45**

**Matrix: Water**

**Date Received: 09/18/17 17:30**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Propionitrile	ND		20	10	ug/L			09/26/17 17:10	1
Styrene	ND		0.50	0.25	ug/L			09/26/17 17:10	1
t-Butanol	ND		10	5.0	ug/L			09/26/17 17:10	1
Tetrachloroethene	ND		0.50	0.25	ug/L			09/26/17 17:10	1
Tetrahydrofuran	ND		10	5.0	ug/L			09/26/17 17:10	1
Toluene	ND		0.50	0.25	ug/L			09/26/17 17:10	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			09/26/17 17:10	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/26/17 17:10	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			09/26/17 17:10	1
Trichloroethene	ND		0.50	0.25	ug/L			09/26/17 17:10	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			09/26/17 17:10	1
Vinyl acetate	ND		4.0	2.0	ug/L			09/26/17 17:10	1
Vinyl chloride	ND		0.50	0.25	ug/L			09/26/17 17:10	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			09/26/17 17:10	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			09/26/17 17:10	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			09/26/17 17:10	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	11	T J	ug/L		5.97			09/26/17 17:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	106		80 - 128		09/23/17 04:47	1
4-Bromofluorobenzene (Surr)	95		80 - 120		09/23/17 04:47	1
Toluene-d8 (Surr)	104		80 - 128		09/26/17 17:10	1
4-Bromofluorobenzene (Surr)	99		80 - 120		09/26/17 17:10	1
Dibromofluoromethane (Surr)	115		76 - 132		09/23/17 04:47	1
Dibromofluoromethane (Surr)	121		76 - 132		09/26/17 17:10	1

## Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.97	0.24	ug/L		09/20/17 07:28	09/23/17 14:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	56		30 - 120		09/20/17 07:28	1

## Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	13		5.0	2.5	mg/L			09/21/17 04:34	10

## Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	12		0.50	0.25	mg/L		09/21/17 09:21	09/21/17 15:41	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	15	J	20	10	mg/L			09/25/17 16:15	1
Total Dissolved Solids	4300		50	25	mg/L			09/22/17 08:05	1
Ammonia (as N)	1.0		0.50	0.10	mg/L		09/19/17 03:30	09/19/17 05:59	1
Total Organic Carbon	5.0		0.10	0.050	mg/L			09/20/17 13:26	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	ND		4.0	4.0	mg/L			09/19/17 06:20	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-192408-1

**Client Sample ID: Dup.**  
**Date Collected: 09/18/17 00:01**  
**Date Received: 09/18/17 17:30**

**Lab Sample ID: 440-192408-6**  
**Matrix: Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			09/26/17 17:38	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			09/26/17 17:38	1
Acrolein	ND		50	2.5	ug/L			09/23/17 05:16	1
Acrylonitrile	ND		50	1.0	ug/L			09/23/17 05:16	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			09/26/17 17:38	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			09/26/17 17:38	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			09/26/17 17:38	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			09/26/17 17:38	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			09/26/17 17:38	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			09/26/17 17:38	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			09/26/17 17:38	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			09/26/17 17:38	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			09/26/17 17:38	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			09/26/17 17:38	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			09/26/17 17:38	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			09/26/17 17:38	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			09/26/17 17:38	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			09/26/17 17:38	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			09/26/17 17:38	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			09/26/17 17:38	1
2-Hexanone	ND		5.0	2.5	ug/L			09/26/17 17:38	1
Acetone	ND		20	10	ug/L			09/26/17 17:38	1
Acetonitrile	ND		20	10	ug/L			09/26/17 17:38	1
Acrolein	ND		5.0	2.5	ug/L			09/26/17 17:38	1
Acrylonitrile	ND		2.0	1.0	ug/L			09/26/17 17:38	1
Benzene	ND		0.50	0.25	ug/L			09/26/17 17:38	1
Allyl chloride	ND		1.0	0.50	ug/L			09/26/17 17:38	1
Bromoform	ND		1.0	0.40	ug/L			09/26/17 17:38	1
Bromomethane	ND		0.50	0.25	ug/L			09/26/17 17:38	1
Carbon disulfide	ND		1.0	0.50	ug/L			09/26/17 17:38	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			09/26/17 17:38	1
Chlorobenzene	ND		0.50	0.25	ug/L			09/26/17 17:38	1
Bromochloromethane	ND		0.50	0.25	ug/L			09/26/17 17:38	1
Chloroethane	ND		1.0	0.40	ug/L			09/26/17 17:38	1
Chloroform	ND		0.50	0.25	ug/L			09/26/17 17:38	1
Chloromethane	ND		0.50	0.25	ug/L			09/26/17 17:38	1
<b>cis-1,2-Dichloroethene</b>	<b>0.51</b>		0.50	0.25	ug/L			09/26/17 17:38	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/26/17 17:38	1
Dibromochloromethane	ND		0.50	0.25	ug/L			09/26/17 17:38	1
Dibromomethane	ND		0.50	0.25	ug/L			09/26/17 17:38	1
Bromodichloromethane	ND		0.50	0.25	ug/L			09/26/17 17:38	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			09/26/17 17:38	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			09/26/17 17:38	1
Ethylbenzene	ND		0.50	0.25	ug/L			09/26/17 17:38	1
Iodomethane	ND		2.0	1.0	ug/L			09/26/17 17:38	1
Isobutyl alcohol	ND		25	13	ug/L			09/26/17 17:38	1
m,p-Xylene	ND		1.0	0.50	ug/L			09/26/17 17:38	1
Methylacrylonitrile	ND		10	2.5	ug/L			09/26/17 17:38	1
Methyl methacrylate	ND		2.0	1.0	ug/L			09/26/17 17:38	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-192408-1

**Client Sample ID: Dup.**  
**Date Collected: 09/18/17 00:01**  
**Date Received: 09/18/17 17:30**

**Lab Sample ID: 440-192408-6**  
**Matrix: Water**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	ND		2.0	0.88	ug/L			09/26/17 17:38	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			09/26/17 17:38	1
Naphthalene	ND		1.0	0.40	ug/L			09/26/17 17:38	1
o-Xylene	ND		0.50	0.25	ug/L			09/26/17 17:38	1
Propionitrile	ND		20	10	ug/L			09/26/17 17:38	1
Styrene	ND		0.50	0.25	ug/L			09/26/17 17:38	1
t-Butanol	ND		10	5.0	ug/L			09/26/17 17:38	1
Tetrachloroethene	ND		0.50	0.25	ug/L			09/26/17 17:38	1
Tetrahydrofuran	ND		10	5.0	ug/L			09/26/17 17:38	1
Toluene	ND		0.50	0.25	ug/L			09/26/17 17:38	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			09/26/17 17:38	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/26/17 17:38	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			09/26/17 17:38	1
Trichloroethene	ND		0.50	0.25	ug/L			09/26/17 17:38	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			09/26/17 17:38	1
Vinyl acetate	ND		4.0	2.0	ug/L			09/26/17 17:38	1
Vinyl chloride	ND		0.50	0.25	ug/L			09/26/17 17:38	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			09/26/17 17:38	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			09/26/17 17:38	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			09/26/17 17:38	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	3.1	T J	ug/L		4.39			09/26/17 17:38	1
Unknown	11	T J	ug/L		5.97			09/26/17 17:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	107		80 - 128		09/23/17 05:16	1
4-Bromofluorobenzene (Surr)	96		80 - 120		09/23/17 05:16	1
Toluene-d8 (Surr)	105		80 - 128		09/26/17 17:38	1
4-Bromofluorobenzene (Surr)	100		80 - 120		09/26/17 17:38	1
Dibromofluoromethane (Surr)	116		76 - 132		09/23/17 05:16	1
Dibromofluoromethane (Surr)	121		76 - 132		09/26/17 17:38	1

## Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	2.7		0.99	0.25	ug/L		09/20/17 07:28	09/23/17 14:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	53		30 - 120	09/20/17 07:28	09/23/17 14:57	1

## Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	53		5.0	2.5	mg/L			09/21/17 04:58	10

## Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	6.2		0.50	0.25	mg/L		09/21/17 09:21	09/21/17 15:23	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	17	J	20	10	mg/L			09/25/17 16:15	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-192408-1

**Client Sample ID: Dup.**  
**Date Collected: 09/18/17 00:01**  
**Date Received: 09/18/17 17:30**

**Lab Sample ID: 440-192408-6**  
**Matrix: Water**

## General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	2400		20	10	mg/L			09/22/17 08:05	1
Ammonia (as N)	0.77		0.50	0.10	mg/L		09/19/17 03:30	09/19/17 05:59	1
Total Organic Carbon	6.2		0.10	0.050	mg/L			09/20/17 13:41	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	250		4.0	4.0	mg/L			09/19/17 06:29	1

**Client Sample ID: QCAB**  
**Date Collected: 09/18/17 00:01**  
**Date Received: 09/18/17 17:30**

**Lab Sample ID: 440-192408-7**  
**Matrix: Water**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			09/27/17 03:08	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			09/27/17 03:08	1
Acrolein	ND		50	2.5	ug/L			09/23/17 05:46	1
Acrylonitrile	ND		50	1.0	ug/L			09/23/17 05:46	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			09/27/17 03:08	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			09/27/17 03:08	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			09/27/17 03:08	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			09/27/17 03:08	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			09/27/17 03:08	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			09/27/17 03:08	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			09/27/17 03:08	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			09/27/17 03:08	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			09/27/17 03:08	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			09/27/17 03:08	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			09/27/17 03:08	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			09/27/17 03:08	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			09/27/17 03:08	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			09/27/17 03:08	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			09/27/17 03:08	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			09/27/17 03:08	1
2-Hexanone	ND		5.0	2.5	ug/L			09/27/17 03:08	1
Acetone	ND		20	10	ug/L			09/27/17 03:08	1
Acetonitrile	ND		20	10	ug/L			09/27/17 03:08	1
Acrolein	ND		5.0	2.5	ug/L			09/27/17 03:08	1
Acrylonitrile	ND		2.0	1.0	ug/L			09/27/17 03:08	1
Benzene	ND		0.50	0.25	ug/L			09/27/17 03:08	1
Allyl chloride	ND		1.0	0.50	ug/L			09/27/17 03:08	1
Bromoform	ND		1.0	0.40	ug/L			09/27/17 03:08	1
Bromomethane	ND		0.50	0.25	ug/L			09/27/17 03:08	1
Carbon disulfide	ND		1.0	0.50	ug/L			09/27/17 03:08	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			09/27/17 03:08	1
Chlorobenzene	ND		0.50	0.25	ug/L			09/27/17 03:08	1
Bromochloromethane	ND		0.50	0.25	ug/L			09/27/17 03:08	1
Chloroethane	ND		1.0	0.40	ug/L			09/27/17 03:08	1
Chloroform	ND		0.50	0.25	ug/L			09/27/17 03:08	1
Chloromethane	ND		0.50	0.25	ug/L			09/27/17 03:08	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			09/27/17 03:08	1

TestAmerica Irvine



# Client Sample Results

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

TestAmerica Job ID: 440-192408-1

**Client Sample ID: QCAB**

**Lab Sample ID: 440-192408-7**

**Date Collected: 09/18/17 00:01**

**Matrix: Water**

**Date Received: 09/18/17 17:30**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/27/17 03:08	1
Dibromochloromethane	ND		0.50	0.25	ug/L			09/27/17 03:08	1
Dibromomethane	ND		0.50	0.25	ug/L			09/27/17 03:08	1
Bromodichloromethane	ND		0.50	0.25	ug/L			09/27/17 03:08	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			09/27/17 03:08	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			09/27/17 03:08	1
Ethylbenzene	ND		0.50	0.25	ug/L			09/27/17 03:08	1
Iodomethane	ND		2.0	1.0	ug/L			09/27/17 03:08	1
Isobutyl alcohol	ND		25	13	ug/L			09/27/17 03:08	1
m,p-Xylene	ND		1.0	0.50	ug/L			09/27/17 03:08	1
Methylacrylonitrile	ND		10	2.5	ug/L			09/27/17 03:08	1
Methyl methacrylate	ND		2.0	1.0	ug/L			09/27/17 03:08	1
Methylene Chloride	ND		2.0	0.88	ug/L			09/27/17 03:08	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			09/27/17 03:08	1
Naphthalene	ND		1.0	0.40	ug/L			09/27/17 03:08	1
o-Xylene	ND		0.50	0.25	ug/L			09/27/17 03:08	1
Propionitrile	ND		20	10	ug/L			09/27/17 03:08	1
Styrene	ND		0.50	0.25	ug/L			09/27/17 03:08	1
t-Butanol	ND		10	5.0	ug/L			09/27/17 03:08	1
Tetrachloroethene	ND		0.50	0.25	ug/L			09/27/17 03:08	1
Tetrahydrofuran	ND		10	5.0	ug/L			09/27/17 03:08	1
Toluene	ND		0.50	0.25	ug/L			09/27/17 03:08	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			09/27/17 03:08	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/27/17 03:08	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			09/27/17 03:08	1
Trichloroethene	ND		0.50	0.25	ug/L			09/27/17 03:08	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			09/27/17 03:08	1
Vinyl acetate	ND		4.0	2.0	ug/L			09/27/17 03:08	1
Vinyl chloride	ND		0.50	0.25	ug/L			09/27/17 03:08	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			09/27/17 03:08	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			09/27/17 03:08	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			09/27/17 03:08	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	11	TJ	ug/L		5.97			09/27/17 03:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	109		80 - 128		09/23/17 05:46	1
4-Bromofluorobenzene (Surr)	97		80 - 120		09/23/17 05:46	1
Toluene-d8 (Surr)	106		80 - 128		09/27/17 03:08	1
4-Bromofluorobenzene (Surr)	100		80 - 120		09/27/17 03:08	1
Dibromofluoromethane (Surr)	113		76 - 132		09/23/17 05:46	1
Dibromofluoromethane (Surr)	119		76 - 132		09/27/17 03:08	1

# Client Sample Results

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

TestAmerica Job ID: 440-192408-1

**Client Sample ID: QCTB**  
**Date Collected: 09/18/17 00:01**  
**Date Received: 09/18/17 17:30**

**Lab Sample ID: 440-192408-8**  
**Matrix: Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			09/27/17 03:36	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			09/27/17 03:36	1
Acrolein	ND		50	2.5	ug/L			09/23/17 06:16	1
Acrylonitrile	ND		50	1.0	ug/L			09/23/17 06:16	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			09/27/17 03:36	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			09/27/17 03:36	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			09/27/17 03:36	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			09/27/17 03:36	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			09/27/17 03:36	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			09/27/17 03:36	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			09/27/17 03:36	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			09/27/17 03:36	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			09/27/17 03:36	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			09/27/17 03:36	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			09/27/17 03:36	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			09/27/17 03:36	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			09/27/17 03:36	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			09/27/17 03:36	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			09/27/17 03:36	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			09/27/17 03:36	1
2-Hexanone	ND		5.0	2.5	ug/L			09/27/17 03:36	1
Acetone	ND		20	10	ug/L			09/27/17 03:36	1
Acetonitrile	ND		20	10	ug/L			09/27/17 03:36	1
Acrolein	ND		5.0	2.5	ug/L			09/27/17 03:36	1
Acrylonitrile	ND		2.0	1.0	ug/L			09/27/17 03:36	1
Benzene	ND		0.50	0.25	ug/L			09/27/17 03:36	1
Allyl chloride	ND		1.0	0.50	ug/L			09/27/17 03:36	1
Bromoform	ND		1.0	0.40	ug/L			09/27/17 03:36	1
Bromomethane	ND		0.50	0.25	ug/L			09/27/17 03:36	1
Carbon disulfide	ND		1.0	0.50	ug/L			09/27/17 03:36	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			09/27/17 03:36	1
Chlorobenzene	ND		0.50	0.25	ug/L			09/27/17 03:36	1
Bromochloromethane	ND		0.50	0.25	ug/L			09/27/17 03:36	1
Chloroethane	ND		1.0	0.40	ug/L			09/27/17 03:36	1
Chloroform	ND		0.50	0.25	ug/L			09/27/17 03:36	1
Chloromethane	ND		0.50	0.25	ug/L			09/27/17 03:36	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			09/27/17 03:36	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/27/17 03:36	1
Dibromochloromethane	ND		0.50	0.25	ug/L			09/27/17 03:36	1
Dibromomethane	ND		0.50	0.25	ug/L			09/27/17 03:36	1
Bromodichloromethane	ND		0.50	0.25	ug/L			09/27/17 03:36	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			09/27/17 03:36	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			09/27/17 03:36	1
Ethylbenzene	ND		0.50	0.25	ug/L			09/27/17 03:36	1
Iodomethane	ND		2.0	1.0	ug/L			09/27/17 03:36	1
Isobutyl alcohol	ND		25	13	ug/L			09/27/17 03:36	1
m,p-Xylene	ND		1.0	0.50	ug/L			09/27/17 03:36	1
Methylacrylonitrile	ND		10	2.5	ug/L			09/27/17 03:36	1
Methyl methacrylate	ND		2.0	1.0	ug/L			09/27/17 03:36	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-192408-1

**Client Sample ID: QCTB**  
**Date Collected: 09/18/17 00:01**  
**Date Received: 09/18/17 17:30**

**Lab Sample ID: 440-192408-8**  
**Matrix: Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	ND		2.0	0.88	ug/L			09/27/17 03:36	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			09/27/17 03:36	1
Naphthalene	ND		1.0	0.40	ug/L			09/27/17 03:36	1
o-Xylene	ND		0.50	0.25	ug/L			09/27/17 03:36	1
Propionitrile	ND		20	10	ug/L			09/27/17 03:36	1
Styrene	ND		0.50	0.25	ug/L			09/27/17 03:36	1
t-Butanol	ND		10	5.0	ug/L			09/27/17 03:36	1
Tetrachloroethene	ND		0.50	0.25	ug/L			09/27/17 03:36	1
Tetrahydrofuran	ND		10	5.0	ug/L			09/27/17 03:36	1
Toluene	ND		0.50	0.25	ug/L			09/27/17 03:36	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			09/27/17 03:36	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/27/17 03:36	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			09/27/17 03:36	1
Trichloroethene	ND		0.50	0.25	ug/L			09/27/17 03:36	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			09/27/17 03:36	1
Vinyl acetate	ND		4.0	2.0	ug/L			09/27/17 03:36	1
Vinyl chloride	ND		0.50	0.25	ug/L			09/27/17 03:36	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			09/27/17 03:36	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			09/27/17 03:36	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			09/27/17 03:36	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	11	T J	ug/L		5.97			09/27/17 03:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	108		80 - 128		09/23/17 06:16	1
4-Bromofluorobenzene (Surr)	97		80 - 120		09/23/17 06:16	1
Toluene-d8 (Surr)	104		80 - 128		09/27/17 03:36	1
4-Bromofluorobenzene (Surr)	98		80 - 120		09/27/17 03:36	1
Dibromofluoromethane (Surr)	110		76 - 132		09/23/17 06:16	1
Dibromofluoromethane (Surr)	118		76 - 132		09/27/17 03:36	1

# Method Summary

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

TestAmerica Job ID: 440-192408-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL IRV
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL IRV
300.0	Anions, Ion Chromatography	MCAWW	TAL IRV
6010B	Metals (ICP)	SW846	TAL IRV
410.4	COD	MCAWW	TAL IRV
SM 2320B	Alkalinity	SM	TAL IRV
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL IRV
SM 4500 NH3 D	Ammonia	SM	TAL IRV
SM 5310C	TOC	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",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

#### Laboratory References:

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

# Lab Chronicle

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

TestAmerica Job ID: 440-192408-1

## Client Sample ID: Subdrain (N)

Date Collected: 09/18/17 13:05

Date Received: 09/18/17 17:30

## Lab Sample ID: 440-192408-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		2	10 mL	10 mL	431277	09/26/17 15:18	MM1	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	430808	09/23/17 02:49	WC	TAL IRV
Total/NA	Prep	3520C			1035 mL	1.0 mL	430037	09/20/17 07:28	JS1	TAL IRV
Total/NA	Analysis	8270C		1			430457	09/23/17 13:06	HN	TAL IRV
Total/NA	Analysis	300.0		10			430059	09/21/17 03:01	NTN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	430360	09/21/17 09:22	Q1N	TAL IRV
Total Recoverable	Analysis	6010B		1			430498	09/21/17 15:49	B1H	TAL IRV
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	431195	09/25/17 16:14	KYP	TAL IRV
Total/NA	Analysis	SM 2320B		1			429751	09/19/17 07:29	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	430606	09/22/17 08:05	XL	TAL IRV
Total/NA	Prep	SM 4500 NH3 B			10 mL	50 mL	429714	09/19/17 03:30	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			429725	09/19/17 05:59	YZ	TAL IRV
Total/NA	Analysis	SM 5310C		10	100 mL	100 mL	430290	09/20/17 11:07	YZ	TAL IRV

## Client Sample ID: Combined Subdrains

Date Collected: 09/18/17 13:45

Date Received: 09/18/17 17:30

## Lab Sample ID: 440-192408-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	431277	09/26/17 15:46	MM1	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	430808	09/23/17 03:19	WC	TAL IRV
Total/NA	Prep	3520C			1015 mL	1.0 mL	430037	09/20/17 07:28	JS1	TAL IRV
Total/NA	Analysis	8270C		1			430457	09/23/17 13:28	HN	TAL IRV
Total/NA	Analysis	300.0		10			430059	09/21/17 03:24	NTN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	430360	09/21/17 09:22	Q1N	TAL IRV
Total Recoverable	Analysis	6010B		1			430498	09/21/17 15:47	B1H	TAL IRV
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	431195	09/25/17 16:14	KYP	TAL IRV
Total/NA	Analysis	SM 2320B		1			429751	09/19/17 07:13	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	430606	09/22/17 08:05	XL	TAL IRV
Total/NA	Prep	SM 4500 NH3 B			50 mL	50 mL	429714	09/19/17 03:30	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			429725	09/19/17 05:59	YZ	TAL IRV
Total/NA	Analysis	SM 5310C		1	100 mL	100 mL	430290	09/20/17 12:45	YZ	TAL IRV

## Client Sample ID: CM-9R3

Date Collected: 09/18/17 12:15

Date Received: 09/18/17 17:30

## Lab Sample ID: 440-192408-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	431277	09/26/17 16:14	MM1	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	430808	09/23/17 03:49	WC	TAL IRV
Total/NA	Prep	3520C			1015 mL	1.0 mL	430037	09/20/17 07:28	JS1	TAL IRV

TestAmerica Irvine

# Lab Chronicle

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

TestAmerica Job ID: 440-192408-1

**Client Sample ID: CM-9R3**

**Lab Sample ID: 440-192408-3**

**Date Collected: 09/18/17 12:15**

**Matrix: Water**

**Date Received: 09/18/17 17:30**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8270C		1			430457	09/23/17 13:50	HN	TAL IRV
Total/NA	Analysis	300.0		10			430059	09/21/17 03:48	NTN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	430360	09/21/17 09:22	Q1N	TAL IRV
Total Recoverable	Analysis	6010B		1			430498	09/21/17 15:45	B1H	TAL IRV
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	431195	09/25/17 16:14	KYP	TAL IRV
Total/NA	Analysis	SM 2320B		1			429751	09/19/17 05:57	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	20 mL	100 mL	430606	09/22/17 08:05	XL	TAL IRV
Total/NA	Prep	SM 4500 NH3 B			50 mL	50 mL	429714	09/19/17 03:30	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			429725	09/19/17 05:59	YZ	TAL IRV
Total/NA	Analysis	SM 5310C		1	100 mL	100 mL	430290	09/20/17 13:00	YZ	TAL IRV

**Client Sample ID: CM-10R**

**Lab Sample ID: 440-192408-4**

**Date Collected: 09/18/17 11:25**

**Matrix: Water**

**Date Received: 09/18/17 17:30**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	431277	09/26/17 16:42	MM1	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	430808	09/23/17 04:18	WC	TAL IRV
Total/NA	Prep	3520C			1035 mL	1.0 mL	430037	09/20/17 07:28	JS1	TAL IRV
Total/NA	Analysis	8270C		1			430457	09/23/17 14:12	HN	TAL IRV
Total/NA	Analysis	300.0		1			430368	09/21/17 20:37	NTN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	430360	09/21/17 09:22	Q1N	TAL IRV
Total Recoverable	Analysis	6010B		1			430498	09/21/17 15:43	B1H	TAL IRV
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	431195	09/25/17 16:15	KYP	TAL IRV
Total/NA	Analysis	SM 2320B		1			429751	09/19/17 06:13	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	430606	09/22/17 08:05	XL	TAL IRV
Total/NA	Prep	SM 4500 NH3 B			10 mL	50 mL	429714	09/19/17 03:30	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			429725	09/19/17 05:59	YZ	TAL IRV
Total/NA	Analysis	SM 5310C		1	100 mL	100 mL	430290	09/20/17 13:13	YZ	TAL IRV

**Client Sample ID: CM-11R**

**Lab Sample ID: 440-192408-5**

**Date Collected: 09/18/17 13:45**

**Matrix: Water**

**Date Received: 09/18/17 17:30**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	431277	09/26/17 17:10	MM1	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	430808	09/23/17 04:47	WC	TAL IRV
Total/NA	Prep	3520C			1035 mL	1.0 mL	430037	09/20/17 07:28	JS1	TAL IRV
Total/NA	Analysis	8270C		1			430457	09/23/17 14:34	HN	TAL IRV
Total/NA	Analysis	300.0		10			430059	09/21/17 04:34	NTN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	430360	09/21/17 09:21	Q1N	TAL IRV
Total Recoverable	Analysis	6010B		1			430498	09/21/17 15:41	B1H	TAL IRV

TestAmerica Irvine

# Lab Chronicle

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

TestAmerica Job ID: 440-192408-1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	431195	09/25/17 16:15	KYP	TAL IRV
Total/NA	Analysis	SM 2320B		1			429751	09/19/17 06:20	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	20 mL	100 mL	430606	09/22/17 08:05	XL	TAL IRV
Total/NA	Prep	SM 4500 NH3 B			50 mL	50 mL	429714	09/19/17 03:30	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			429725	09/19/17 05:59	YZ	TAL IRV
Total/NA	Analysis	SM 5310C		1	100 mL	100 mL	430290	09/20/17 13:26	YZ	TAL IRV

**Client Sample ID: Dup.**

**Date Collected: 09/18/17 00:01**

**Date Received: 09/18/17 17:30**

**Lab Sample ID: 440-192408-6**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	431277	09/26/17 17:38	MM1	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	430808	09/23/17 05:16	WC	TAL IRV
Total/NA	Prep	3520C			1015 mL	1.0 mL	430037	09/20/17 07:28	JS1	TAL IRV
Total/NA	Analysis	8270C		1			430457	09/23/17 14:57	HN	TAL IRV
Total/NA	Analysis	300.0		10			430059	09/21/17 04:58	NTN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	430360	09/21/17 09:21	Q1N	TAL IRV
Total Recoverable	Analysis	6010B		1			430498	09/21/17 15:23	B1H	TAL IRV
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	431195	09/25/17 16:15	KYP	TAL IRV
Total/NA	Analysis	SM 2320B		1			429751	09/19/17 06:29	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	430606	09/22/17 08:05	XL	TAL IRV
Total/NA	Prep	SM 4500 NH3 B			50 mL	50 mL	429714	09/19/17 03:30	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			429725	09/19/17 05:59	YZ	TAL IRV
Total/NA	Analysis	SM 5310C		1	100 mL	100 mL	430290	09/20/17 13:41	YZ	TAL IRV

**Client Sample ID: QCAB**

**Date Collected: 09/18/17 00:01**

**Date Received: 09/18/17 17:30**

**Lab Sample ID: 440-192408-7**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	431502	09/27/17 03:08	K1S	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	430808	09/23/17 05:46	WC	TAL IRV

**Client Sample ID: QCTB**

**Date Collected: 09/18/17 00:01**

**Date Received: 09/18/17 17:30**

**Lab Sample ID: 440-192408-8**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	431502	09/27/17 03:36	K1S	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	430808	09/23/17 06:16	WC	TAL IRV

**Laboratory References:**

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

# QC Sample Results

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

TestAmerica Job ID: 440-192408-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 440-430808/3**

**Matrix: Water**

**Analysis Batch: 430808**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acrolein	ND		50	2.5	ug/L			09/22/17 20:24	1
Acrylonitrile	ND		50	1.0	ug/L			09/22/17 20:24	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	104		80 - 128		09/22/17 20:24	1
4-Bromofluorobenzene (Surr)	99		80 - 120		09/22/17 20:24	1
Dibromofluoromethane (Surr)	114		76 - 132		09/22/17 20:24	1

**Lab Sample ID: LCS 440-430808/4**

**Matrix: Water**

**Analysis Batch: 430808**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acrolein	25.0	23.0	J	ug/L		92	10 - 145
Acrylonitrile	250	211		ug/L		84	48 - 140

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	104		80 - 128
4-Bromofluorobenzene (Surr)	95		80 - 120
Dibromofluoromethane (Surr)	111		76 - 132

**Lab Sample ID: 440-192498-D-1 MS**

**Matrix: Water**

**Analysis Batch: 430808**

**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
Acrolein	ND		25.0	26.7	J	ug/L		107	10 - 147
Acrylonitrile	ND		250	240		ug/L		96	38 - 144

Surrogate	MS %Recovery	MS Qualifier	Limits
Toluene-d8 (Surr)	96		80 - 128
4-Bromofluorobenzene (Surr)	92		80 - 120
Dibromofluoromethane (Surr)	111		76 - 132

**Lab Sample ID: 440-192498-D-1 MSD**

**Matrix: Water**

**Analysis Batch: 430808**

**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
Acrolein	ND		25.0	23.9	J	ug/L		96	10 - 147	11	40
Acrylonitrile	ND		250	230		ug/L		92	38 - 144	4	40

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Toluene-d8 (Surr)	102		80 - 128
4-Bromofluorobenzene (Surr)	94		80 - 120
Dibromofluoromethane (Surr)	111		76 - 132

TestAmerica Irvine



# QC Sample Results

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

TestAmerica Job ID: 440-192408-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 440-431277/4**  
**Matrix: Water**  
**Analysis Batch: 431277**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			09/26/17 08:18	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			09/26/17 08:18	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			09/26/17 08:18	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			09/26/17 08:18	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			09/26/17 08:18	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			09/26/17 08:18	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			09/26/17 08:18	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			09/26/17 08:18	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			09/26/17 08:18	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			09/26/17 08:18	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			09/26/17 08:18	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			09/26/17 08:18	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			09/26/17 08:18	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			09/26/17 08:18	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			09/26/17 08:18	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			09/26/17 08:18	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			09/26/17 08:18	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			09/26/17 08:18	1
2-Hexanone	ND		5.0	2.5	ug/L			09/26/17 08:18	1
Acetone	ND		20	10	ug/L			09/26/17 08:18	1
Acetonitrile	ND		20	10	ug/L			09/26/17 08:18	1
Acrolein	ND		5.0	2.5	ug/L			09/26/17 08:18	1
Acrylonitrile	ND		2.0	1.0	ug/L			09/26/17 08:18	1
Benzene	ND		0.50	0.25	ug/L			09/26/17 08:18	1
Allyl chloride	ND		1.0	0.50	ug/L			09/26/17 08:18	1
Bromoform	ND		1.0	0.40	ug/L			09/26/17 08:18	1
Bromomethane	ND		0.50	0.25	ug/L			09/26/17 08:18	1
Carbon disulfide	ND		1.0	0.50	ug/L			09/26/17 08:18	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			09/26/17 08:18	1
Chlorobenzene	ND		0.50	0.25	ug/L			09/26/17 08:18	1
Bromochloromethane	ND		0.50	0.25	ug/L			09/26/17 08:18	1
Chloroethane	ND		1.0	0.40	ug/L			09/26/17 08:18	1
Chloroform	ND		0.50	0.25	ug/L			09/26/17 08:18	1
Chloromethane	ND		0.50	0.25	ug/L			09/26/17 08:18	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			09/26/17 08:18	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/26/17 08:18	1
Dibromochloromethane	ND		0.50	0.25	ug/L			09/26/17 08:18	1
Dibromomethane	ND		0.50	0.25	ug/L			09/26/17 08:18	1
Bromodichloromethane	ND		0.50	0.25	ug/L			09/26/17 08:18	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			09/26/17 08:18	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			09/26/17 08:18	1
Ethylbenzene	ND		0.50	0.25	ug/L			09/26/17 08:18	1
Iodomethane	ND		2.0	1.0	ug/L			09/26/17 08:18	1
Isobutyl alcohol	ND		25	13	ug/L			09/26/17 08:18	1
m,p-Xylene	ND		1.0	0.50	ug/L			09/26/17 08:18	1
Methylacrylonitrile	ND		10	2.5	ug/L			09/26/17 08:18	1
Methyl methacrylate	ND		2.0	1.0	ug/L			09/26/17 08:18	1
Methylene Chloride	ND		2.0	0.88	ug/L			09/26/17 08:18	1

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-192408-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 440-431277/4**  
**Matrix: Water**  
**Analysis Batch: 431277**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			09/26/17 08:18	1
Naphthalene	ND		1.0	0.40	ug/L			09/26/17 08:18	1
o-Xylene	ND		0.50	0.25	ug/L			09/26/17 08:18	1
Propionitrile	ND		20	10	ug/L			09/26/17 08:18	1
Styrene	ND		0.50	0.25	ug/L			09/26/17 08:18	1
t-Butanol	ND		10	5.0	ug/L			09/26/17 08:18	1
Tetrachloroethene	ND		0.50	0.25	ug/L			09/26/17 08:18	1
Tetrahydrofuran	ND		10	5.0	ug/L			09/26/17 08:18	1
Toluene	ND		0.50	0.25	ug/L			09/26/17 08:18	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			09/26/17 08:18	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/26/17 08:18	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			09/26/17 08:18	1
Trichloroethene	ND		0.50	0.25	ug/L			09/26/17 08:18	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			09/26/17 08:18	1
Vinyl acetate	ND		4.0	2.0	ug/L			09/26/17 08:18	1
Vinyl chloride	ND		0.50	0.25	ug/L			09/26/17 08:18	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			09/26/17 08:18	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			09/26/17 08:18	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			09/26/17 08:18	1

Tentatively Identified Compound	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L					09/26/17 08:18	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	108		80 - 128		09/26/17 08:18	1
4-Bromofluorobenzene (Surr)	100		80 - 120		09/26/17 08:18	1
Dibromofluoromethane (Surr)	116		76 - 132		09/26/17 08:18	1

**Lab Sample ID: LCS 440-431277/5**  
**Matrix: Water**  
**Analysis Batch: 431277**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,3-Trichloropropane	25.0	26.1		ug/L		104	63 - 130
1,1,1,2-Tetrachloroethane	25.0	29.4		ug/L		118	60 - 141
1,1,1-Trichloroethane	25.0	27.4		ug/L		110	70 - 130
1,1,2,2-Tetrachloroethane	25.0	25.2		ug/L		101	63 - 130
1,1,2-Trichloroethane	25.0	28.0		ug/L		112	70 - 130
1,1-Dichloroethane	25.0	26.1		ug/L		104	64 - 130
1,1-Dichloroethene	25.0	23.1		ug/L		93	70 - 130
1,1-Dichloropropene	25.0	25.5		ug/L		102	70 - 130
1,2,4-Trichlorobenzene	25.0	28.3		ug/L		113	60 - 140
1,2-Dibromo-3-Chloropropane	25.0	27.7		ug/L		111	52 - 140
1,2-Dichlorobenzene	25.0	25.6		ug/L		102	70 - 130
1,2-Dichloroethane	25.0	26.8		ug/L		107	57 - 138
1,2-Dichloropropane	25.0	25.7		ug/L		103	67 - 130
1,3-Dichlorobenzene	25.0	25.1		ug/L		101	70 - 130

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-192408-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 440-431277/5**

**Matrix: Water**

**Analysis Batch: 431277**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3-Dichloropropane	25.0	26.6		ug/L		106	70 - 130
1,4-Dichlorobenzene	25.0	25.3		ug/L		101	70 - 130
2,2-Dichloropropane	25.0	28.8		ug/L		115	68 - 141
2-Hexanone	25.0	31.2		ug/L		125	10 - 150
Acetone	25.0	30.9		ug/L		123	10 - 150
Acrolein	25.0	34.0		ug/L		136	10 - 145
Acrylonitrile	250	290		ug/L		116	48 - 140
Benzene	25.0	26.0		ug/L		104	68 - 130
Bromoform	25.0	32.5		ug/L		130	60 - 148
Bromomethane	25.0	23.9		ug/L		96	64 - 139
Carbon disulfide	25.0	24.5		ug/L		98	52 - 136
Carbon tetrachloride	25.0	29.0		ug/L		116	60 - 150
Chlorobenzene	25.0	25.5		ug/L		102	70 - 130
Bromochloromethane	25.0	26.0		ug/L		104	70 - 130
Chloroethane	25.0	22.8		ug/L		91	64 - 135
Chloroform	25.0	26.2		ug/L		105	70 - 130
Chloromethane	25.0	24.1		ug/L		96	47 - 140
cis-1,2-Dichloroethene	25.0	26.3		ug/L		105	70 - 133
cis-1,3-Dichloropropene	25.0	28.1		ug/L		113	70 - 133
Dibromochloromethane	25.0	31.0		ug/L		124	69 - 145
Dibromomethane	25.0	26.0		ug/L		104	70 - 130
Bromodichloromethane	25.0	28.4		ug/L		114	70 - 132
Dichlorodifluoromethane	25.0	22.8		ug/L		91	29 - 150
Ethylbenzene	25.0	25.3		ug/L		101	70 - 130
m,p-Xylene	25.0	25.2		ug/L		101	70 - 130
Methylene Chloride	25.0	23.2		ug/L		93	52 - 130
Methyl tert-butyl ether	25.0	26.7		ug/L		107	63 - 131
Naphthalene	25.0	28.5		ug/L		114	60 - 140
o-Xylene	25.0	26.4		ug/L		106	70 - 130
Styrene	25.0	25.7		ug/L		103	70 - 134
t-Butanol	250	266		ug/L		106	70 - 130
Tetrachloroethene	25.0	26.2		ug/L		105	70 - 130
Toluene	25.0	27.0		ug/L		108	70 - 130
trans-1,2-Dichloroethene	25.0	24.4		ug/L		97	70 - 130
trans-1,3-Dichloropropene	25.0	27.8		ug/L		111	70 - 132
Trichloroethene	25.0	25.3		ug/L		101	70 - 130
Trichlorofluoromethane	25.0	27.1		ug/L		108	60 - 150
Vinyl acetate	25.0	29.5		ug/L		118	48 - 140
Vinyl chloride	25.0	22.1		ug/L		89	59 - 133
1,2-Dibromoethane (EDB)	25.0	26.4		ug/L		106	70 - 130
2-Butanone (MEK)	25.0	23.2		ug/L		93	44 - 150
4-Methyl-2-pentanone (MIBK)	25.0	31.7		ug/L		127	59 - 149

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Toluene-d8 (Surr)	107		80 - 128
4-Bromofluorobenzene (Surr)	101		80 - 120
Dibromofluoromethane (Surr)	106		76 - 132

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-192408-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 440-192498-A-2 MS**  
**Matrix: Water**  
**Analysis Batch: 431277**

**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
1,2,3-Trichloropropane	ND		25.0	24.0		ug/L		96	60 - 130
1,1,1,2-Tetrachloroethane	ND		25.0	28.8		ug/L		115	60 - 149
1,1,1-Trichloroethane	ND		25.0	27.4		ug/L		109	70 - 130
1,1,2,2-Tetrachloroethane	ND		25.0	24.1		ug/L		96	63 - 130
1,1,2-Trichloroethane	ND		25.0	26.7		ug/L		107	70 - 130
1,1-Dichloroethane	ND		25.0	25.7		ug/L		103	65 - 130
1,1-Dichloroethene	ND		25.0	25.6		ug/L		102	70 - 130
1,1-Dichloropropene	ND		25.0	26.8		ug/L		107	64 - 130
1,2,4-Trichlorobenzene	ND		25.0	31.5		ug/L		126	60 - 140
1,2-Dibromo-3-Chloropropane	ND		25.0	26.7		ug/L		107	48 - 140
1,2-Dichlorobenzene	ND		25.0	26.2		ug/L		105	70 - 130
1,2-Dichloroethane	ND		25.0	27.6		ug/L		110	56 - 146
1,2-Dichloropropane	ND		25.0	26.4		ug/L		106	69 - 130
1,3-Dichlorobenzene	ND		25.0	25.2		ug/L		101	70 - 130
1,3-Dichloropropane	ND		25.0	25.2		ug/L		101	70 - 130
1,4-Dichlorobenzene	ND		25.0	25.1		ug/L		101	70 - 130
2,2-Dichloropropane	ND		25.0	29.1		ug/L		117	69 - 138
2-Hexanone	ND		25.0	28.3		ug/L		113	10 - 150
Acetone	ND	F1	25.0	38.8	F1	ug/L		155	10 - 150
Acrolein	ND		25.0	34.9		ug/L		140	10 - 147
Acrylonitrile	ND		25.0	26.9		ug/L		108	38 - 144
Benzene	ND		25.0	26.6		ug/L		106	66 - 130
Bromoform	ND		25.0	31.0		ug/L		124	59 - 150
Bromomethane	ND		25.0	24.9		ug/L		100	62 - 131
Carbon disulfide	ND		25.0	24.9		ug/L		100	49 - 140
Carbon tetrachloride	ND		25.0	29.1		ug/L		116	60 - 150
Chlorobenzene	ND		25.0	25.0		ug/L		100	70 - 130
Bromochloromethane	ND		25.0	27.4		ug/L		110	70 - 130
Chloroethane	ND		25.0	23.1		ug/L		92	68 - 130
Chloroform	ND		25.0	26.1		ug/L		105	70 - 130
Chloromethane	ND		25.0	25.3		ug/L		101	39 - 144
cis-1,2-Dichloroethene	ND		25.0	26.4		ug/L		106	70 - 130
cis-1,3-Dichloropropene	ND		25.0	28.5		ug/L		114	70 - 133
Dibromochloromethane	ND		25.0	30.4		ug/L		121	70 - 148
Dibromomethane	ND		25.0	26.3		ug/L		105	70 - 130
Bromodichloromethane	ND		25.0	29.4		ug/L		118	70 - 138
Dichlorodifluoromethane	ND		25.0	24.5		ug/L		98	25 - 142
Ethylbenzene	ND		25.0	24.8		ug/L		99	70 - 130
m,p-Xylene	ND		25.0	24.7		ug/L		99	70 - 133
Methylene Chloride	ND		25.0	23.6		ug/L		94	52 - 130
Methyl tert-butyl ether	ND		25.0	27.7		ug/L		111	70 - 130
Naphthalene	ND		25.0	28.7		ug/L		115	60 - 140
o-Xylene	ND		25.0	25.4		ug/L		102	70 - 133
Styrene	ND		25.0	25.1		ug/L		101	29 - 150
t-Butanol	ND		25.0	24.9		ug/L		100	70 - 130
Tetrachloroethene	ND		25.0	26.0		ug/L		104	70 - 137
Toluene	ND		25.0	25.8		ug/L		103	70 - 130
trans-1,2-Dichloroethene	ND		25.0	25.4		ug/L		102	70 - 130

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-192408-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 440-192498-A-2 MS**  
**Matrix: Water**  
**Analysis Batch: 431277**

**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
trans-1,3-Dichloropropene	ND		25.0	28.4		ug/L		114	70 - 138
Trichloroethene	ND		25.0	25.0		ug/L		100	70 - 130
Trichlorofluoromethane	ND		25.0	27.4		ug/L		109	60 - 150
Vinyl acetate	ND		25.0	31.4		ug/L		126	23 - 150
Vinyl chloride	ND		25.0	22.2		ug/L		89	50 - 137
1,2-Dibromoethane (EDB)	ND		25.0	25.7		ug/L		103	70 - 131
2-Butanone (MEK)	ND		25.0	25.8		ug/L		103	48 - 140
4-Methyl-2-pentanone (MIBK)	ND		25.0	28.6		ug/L		114	52 - 150

Surrogate	MS %Recovery	MS Qualifier	MS Limits
Toluene-d8 (Surr)	102		80 - 128
4-Bromofluorobenzene (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	107		76 - 132

**Lab Sample ID: 440-192498-A-2 MSD**  
**Matrix: Water**  
**Analysis Batch: 431277**

**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
1,2,3-Trichloropropane	ND		25.0	22.2		ug/L		89	60 - 130	8	30
1,1,1,2-Tetrachloroethane	ND		25.0	26.4		ug/L		106	60 - 149	9	20
1,1,1-Trichloroethane	ND		25.0	24.3		ug/L		97	70 - 130	12	20
1,1,2,2-Tetrachloroethane	ND		25.0	22.0		ug/L		88	63 - 130	9	30
1,1,2-Trichloroethane	ND		25.0	24.4		ug/L		97	70 - 130	9	25
1,1-Dichloroethane	ND		25.0	23.7		ug/L		95	65 - 130	8	20
1,1-Dichloroethene	ND		25.0	22.6		ug/L		90	70 - 130	12	20
1,1-Dichloropropene	ND		25.0	24.0		ug/L		96	64 - 130	11	20
1,2,4-Trichlorobenzene	ND		25.0	27.9		ug/L		112	60 - 140	12	20
1,2-Dibromo-3-Chloropropane	ND		25.0	23.2		ug/L		93	48 - 140	14	30
1,2-Dichlorobenzene	ND		25.0	23.6		ug/L		94	70 - 130	10	20
1,2-Dichloroethane	ND		25.0	24.8		ug/L		99	56 - 146	11	20
1,2-Dichloropropane	ND		25.0	23.6		ug/L		95	69 - 130	11	20
1,3-Dichlorobenzene	ND		25.0	22.7		ug/L		91	70 - 130	11	20
1,3-Dichloropropane	ND		25.0	23.4		ug/L		94	70 - 130	8	25
1,4-Dichlorobenzene	ND		25.0	23.3		ug/L		93	70 - 130	8	20
2,2-Dichloropropane	ND		25.0	26.8		ug/L		107	69 - 138	8	25
2-Hexanone	ND		25.0	24.0		ug/L		96	10 - 150	16	35
Acetone	ND	F1	25.0	32.1		ug/L		128	10 - 150	19	35
Acrolein	ND		25.0	31.0		ug/L		124	10 - 147	12	40
Acrylonitrile	ND		25.0	24.2		ug/L		97	38 - 144	11	40
Benzene	ND		25.0	24.0		ug/L		96	66 - 130	10	20
Bromoform	ND		25.0	28.0		ug/L		112	59 - 150	10	25
Bromomethane	ND		25.0	22.5		ug/L		90	62 - 131	10	25
Carbon disulfide	ND		25.0	21.9		ug/L		87	49 - 140	13	20
Carbon tetrachloride	ND		25.0	25.5		ug/L		102	60 - 150	13	25
Chlorobenzene	ND		25.0	22.9		ug/L		91	70 - 130	9	20
Bromochloromethane	ND		25.0	24.0		ug/L		96	70 - 130	13	25
Chloroethane	ND		25.0	20.6		ug/L		82	68 - 130	11	25

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-192408-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 440-192498-A-2 MSD**  
**Matrix: Water**  
**Analysis Batch: 431277**

**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
Chloroform	ND		25.0	23.4		ug/L		94	70 - 130	11	20
Chloromethane	ND		25.0	22.4		ug/L		90	39 - 144	12	25
cis-1,2-Dichloroethene	ND		25.0	23.8		ug/L		95	70 - 130	10	20
cis-1,3-Dichloropropene	ND		25.0	26.0		ug/L		104	70 - 133	9	20
Dibromochloromethane	ND		25.0	27.2		ug/L		109	70 - 148	11	25
Dibromomethane	ND		25.0	23.4		ug/L		93	70 - 130	12	25
Bromodichloromethane	ND		25.0	26.4		ug/L		106	70 - 138	11	20
Dichlorodifluoromethane	ND		25.0	20.5		ug/L		82	25 - 142	18	30
Ethylbenzene	ND		25.0	22.6		ug/L		91	70 - 130	9	20
m,p-Xylene	ND		25.0	22.2		ug/L		89	70 - 133	10	25
Methylene Chloride	ND		25.0	20.6		ug/L		82	52 - 130	14	20
Methyl tert-butyl ether	ND		25.0	25.5		ug/L		102	70 - 130	8	25
Naphthalene	ND		25.0	25.9		ug/L		103	60 - 140	10	30
o-Xylene	ND		25.0	22.8		ug/L		91	70 - 133	11	20
Styrene	ND		25.0	22.7		ug/L		91	29 - 150	10	35
t-Butanol	ND		250	231		ug/L		92	70 - 130	8	25
Tetrachloroethene	ND		25.0	23.3		ug/L		93	70 - 137	11	20
Toluene	ND		25.0	23.5		ug/L		94	70 - 130	9	20
trans-1,2-Dichloroethene	ND		25.0	22.8		ug/L		91	70 - 130	11	20
trans-1,3-Dichloropropene	ND		25.0	25.8		ug/L		103	70 - 138	9	25
Trichloroethene	ND		25.0	22.5		ug/L		90	70 - 130	11	20
Trichlorofluoromethane	ND		25.0	24.0		ug/L		96	60 - 150	13	25
Vinyl acetate	ND		25.0	28.4		ug/L		113	23 - 150	10	30
Vinyl chloride	ND		25.0	19.6		ug/L		78	50 - 137	13	30
1,2-Dibromoethane (EDB)	ND		25.0	23.3		ug/L		93	70 - 131	10	25
2-Butanone (MEK)	ND		25.0	26.0		ug/L		104	48 - 140	1	40
4-Methyl-2-pentanone (MIBK)	ND		25.0	26.3		ug/L		105	52 - 150	8	35

Surrogate	MSD %Recovery	MSD Qualifier	MSD Limits
Toluene-d8 (Surr)	103		80 - 128
4-Bromofluorobenzene (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	109		76 - 132

**Lab Sample ID: MB 440-431502/4**  
**Matrix: Water**  
**Analysis Batch: 431502**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			09/26/17 20:08	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			09/26/17 20:08	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			09/26/17 20:08	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			09/26/17 20:08	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			09/26/17 20:08	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			09/26/17 20:08	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			09/26/17 20:08	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			09/26/17 20:08	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			09/26/17 20:08	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			09/26/17 20:08	1

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-192408-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 440-431502/4**  
**Matrix: Water**  
**Analysis Batch: 431502**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			09/26/17 20:08	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			09/26/17 20:08	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			09/26/17 20:08	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			09/26/17 20:08	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			09/26/17 20:08	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			09/26/17 20:08	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			09/26/17 20:08	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			09/26/17 20:08	1
2-Hexanone	ND		5.0	2.5	ug/L			09/26/17 20:08	1
Acetone	ND		20	10	ug/L			09/26/17 20:08	1
Acetonitrile	ND		20	10	ug/L			09/26/17 20:08	1
Acrolein	ND		5.0	2.5	ug/L			09/26/17 20:08	1
Acrylonitrile	ND		2.0	1.0	ug/L			09/26/17 20:08	1
Benzene	ND		0.50	0.25	ug/L			09/26/17 20:08	1
Allyl chloride	ND		1.0	0.50	ug/L			09/26/17 20:08	1
Bromoform	ND		1.0	0.40	ug/L			09/26/17 20:08	1
Bromomethane	ND		0.50	0.25	ug/L			09/26/17 20:08	1
Carbon disulfide	ND		1.0	0.50	ug/L			09/26/17 20:08	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			09/26/17 20:08	1
Chlorobenzene	ND		0.50	0.25	ug/L			09/26/17 20:08	1
Bromochloromethane	ND		0.50	0.25	ug/L			09/26/17 20:08	1
Chloroethane	ND		1.0	0.40	ug/L			09/26/17 20:08	1
Chloroform	ND		0.50	0.25	ug/L			09/26/17 20:08	1
Chloromethane	ND		0.50	0.25	ug/L			09/26/17 20:08	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			09/26/17 20:08	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/26/17 20:08	1
Dibromochloromethane	ND		0.50	0.25	ug/L			09/26/17 20:08	1
Dibromomethane	ND		0.50	0.25	ug/L			09/26/17 20:08	1
Bromodichloromethane	ND		0.50	0.25	ug/L			09/26/17 20:08	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			09/26/17 20:08	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			09/26/17 20:08	1
Ethylbenzene	ND		0.50	0.25	ug/L			09/26/17 20:08	1
Iodomethane	ND		2.0	1.0	ug/L			09/26/17 20:08	1
Isobutyl alcohol	ND		25	13	ug/L			09/26/17 20:08	1
m,p-Xylene	ND		1.0	0.50	ug/L			09/26/17 20:08	1
Methylacrylonitrile	ND		10	2.5	ug/L			09/26/17 20:08	1
Methyl methacrylate	ND		2.0	1.0	ug/L			09/26/17 20:08	1
Methylene Chloride	ND		2.0	0.88	ug/L			09/26/17 20:08	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			09/26/17 20:08	1
Naphthalene	ND		1.0	0.40	ug/L			09/26/17 20:08	1
o-Xylene	ND		0.50	0.25	ug/L			09/26/17 20:08	1
Propionitrile	ND		20	10	ug/L			09/26/17 20:08	1
Styrene	ND		0.50	0.25	ug/L			09/26/17 20:08	1
t-Butanol	ND		10	5.0	ug/L			09/26/17 20:08	1
Tetrachloroethene	ND		0.50	0.25	ug/L			09/26/17 20:08	1
Tetrahydrofuran	ND		10	5.0	ug/L			09/26/17 20:08	1
Toluene	ND		0.50	0.25	ug/L			09/26/17 20:08	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			09/26/17 20:08	1

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-192408-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 440-431502/4**  
**Matrix: Water**  
**Analysis Batch: 431502**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/26/17 20:08	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			09/26/17 20:08	1
Trichloroethene	ND		0.50	0.25	ug/L			09/26/17 20:08	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			09/26/17 20:08	1
Vinyl acetate	ND		4.0	2.0	ug/L			09/26/17 20:08	1
Vinyl chloride	ND		0.50	0.25	ug/L			09/26/17 20:08	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			09/26/17 20:08	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			09/26/17 20:08	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			09/26/17 20:08	1

Tentatively Identified Compound	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L					09/26/17 20:08	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	107		80 - 128		09/26/17 20:08	1
4-Bromofluorobenzene (Surr)	100		80 - 120		09/26/17 20:08	1
Dibromofluoromethane (Surr)	116		76 - 132		09/26/17 20:08	1

**Lab Sample ID: LCS 440-431502/5**  
**Matrix: Water**  
**Analysis Batch: 431502**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,3-Trichloropropane	25.0	22.9		ug/L		92	63 - 130
1,1,1,2-Tetrachloroethane	25.0	29.6		ug/L		119	60 - 141
1,1,1-Trichloroethane	25.0	27.4		ug/L		110	70 - 130
1,1,2,2-Tetrachloroethane	25.0	23.1		ug/L		92	63 - 130
1,1,2-Trichloroethane	25.0	27.3		ug/L		109	70 - 130
1,1-Dichloroethane	25.0	26.4		ug/L		105	64 - 130
1,1-Dichloroethene	25.0	23.3		ug/L		93	70 - 130
1,1-Dichloropropene	25.0	25.2		ug/L		101	70 - 130
1,2,4-Trichlorobenzene	25.0	29.1		ug/L		116	60 - 140
1,2-Dibromo-3-Chloropropane	25.0	23.9		ug/L		95	52 - 140
1,2-Dichlorobenzene	25.0	25.6		ug/L		103	70 - 130
1,2-Dichloroethane	25.0	26.1		ug/L		104	57 - 138
1,2-Dichloropropane	25.0	25.5		ug/L		102	67 - 130
1,3-Dichlorobenzene	25.0	25.1		ug/L		101	70 - 130
1,3-Dichloropropane	25.0	25.3		ug/L		101	70 - 130
1,4-Dichlorobenzene	25.0	25.5		ug/L		102	70 - 130
2,2-Dichloropropane	25.0	29.0		ug/L		116	68 - 141
2-Hexanone	25.0	26.8		ug/L		107	10 - 150
Acetone	25.0	23.9		ug/L		96	10 - 150
Acrolein	25.0	27.2		ug/L		109	10 - 145
Acrylonitrile	25.0	25.6		ug/L		102	48 - 140
Benzene	25.0	26.2		ug/L		105	68 - 130
Bromoform	25.0	30.0		ug/L		120	60 - 148
Bromomethane	25.0	25.2		ug/L		101	64 - 139

TestAmerica Irvine



# QC Sample Results

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

TestAmerica Job ID: 440-192408-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 440-431502/5**  
**Matrix: Water**  
**Analysis Batch: 431502**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon disulfide	25.0	24.0		ug/L		96	52 - 136
Carbon tetrachloride	25.0	29.1		ug/L		116	60 - 150
Chlorobenzene	25.0	25.7		ug/L		103	70 - 130
Bromochloromethane	25.0	25.8		ug/L		103	70 - 130
Chloroethane	25.0	23.0		ug/L		92	64 - 135
Chloroform	25.0	26.2		ug/L		105	70 - 130
Chloromethane	25.0	23.9		ug/L		95	47 - 140
cis-1,2-Dichloroethene	25.0	26.5		ug/L		106	70 - 133
cis-1,3-Dichloropropene	25.0	28.4		ug/L		114	70 - 133
Dibromochloromethane	25.0	30.1		ug/L		120	69 - 145
Dibromomethane	25.0	25.2		ug/L		101	70 - 130
Bromodichloromethane	25.0	27.8		ug/L		111	70 - 132
Dichlorodifluoromethane	25.0	22.8		ug/L		91	29 - 150
Ethylbenzene	25.0	25.5		ug/L		102	70 - 130
m,p-Xylene	25.0	25.7		ug/L		103	70 - 130
Methylene Chloride	25.0	22.7		ug/L		91	52 - 130
Methyl tert-butyl ether	25.0	26.1		ug/L		104	63 - 131
Naphthalene	25.0	26.9		ug/L		108	60 - 140
o-Xylene	25.0	26.5		ug/L		106	70 - 130
Styrene	25.0	25.9		ug/L		104	70 - 134
t-Butanol	250	269		ug/L		108	70 - 130
Tetrachloroethene	25.0	27.1		ug/L		108	70 - 130
Toluene	25.0	27.2		ug/L		109	70 - 130
trans-1,2-Dichloroethene	25.0	24.9		ug/L		99	70 - 130
trans-1,3-Dichloropropene	25.0	27.6		ug/L		110	70 - 132
Trichloroethene	25.0	25.5		ug/L		102	70 - 130
Trichlorofluoromethane	25.0	26.8		ug/L		107	60 - 150
Vinyl acetate	25.0	26.8		ug/L		107	48 - 140
Vinyl chloride	25.0	22.8		ug/L		91	59 - 133
1,2-Dibromoethane (EDB)	25.0	25.6		ug/L		103	70 - 130
2-Butanone (MEK)	25.0	20.4		ug/L		81	44 - 150
4-Methyl-2-pentanone (MIBK)	25.0	28.1		ug/L		112	59 - 149

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	108		80 - 128
4-Bromofluorobenzene (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	107		76 - 132

**Lab Sample ID: 440-192297-C-2 MS**  
**Matrix: Water**  
**Analysis Batch: 431502**

**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
1,2,3-Trichloropropane	ND		25.0	23.7		ug/L		95	60 - 130
1,1,1,2-Tetrachloroethane	ND		25.0	30.2		ug/L		121	60 - 149
1,1,1-Trichloroethane	ND		25.0	28.7		ug/L		115	70 - 130
1,1,1,2-Tetrachloroethane	ND		25.0	23.4		ug/L		94	63 - 130
1,1,2-Trichloroethane	ND		25.0	27.2		ug/L		109	70 - 130

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-192408-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-192297-C-2 MS

Matrix: Water

Analysis Batch: 431502

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
1,1-Dichloroethane	23		25.0	48.7		ug/L		101	65 - 130
1,1-Dichloroethene	140		25.0	156	4	ug/L		60	70 - 130
1,1-Dichloropropene	ND		25.0	27.2		ug/L		109	64 - 130
1,2,4-Trichlorobenzene	ND		25.0	30.7		ug/L		123	60 - 140
1,2-Dibromo-3-Chloropropane	ND		25.0	23.4		ug/L		94	48 - 140
1,2-Dichlorobenzene	ND		25.0	26.6		ug/L		106	70 - 130
1,2-Dichloroethane	ND		25.0	27.1		ug/L		109	56 - 146
1,2-Dichloropropane	ND		25.0	27.2		ug/L		109	69 - 130
1,3-Dichlorobenzene	ND		25.0	25.9		ug/L		104	70 - 130
1,3-Dichloropropane	ND		25.0	25.6		ug/L		102	70 - 130
1,4-Dichlorobenzene	ND		25.0	26.1		ug/L		104	70 - 130
2,2-Dichloropropane	ND		25.0	30.7		ug/L		123	69 - 138
2-Hexanone	ND		25.0	25.7		ug/L		103	10 - 150
Acetone	ND		25.0	27.2		ug/L		109	10 - 150
Acrolein	ND		25.0	27.9		ug/L		112	10 - 147
Acrylonitrile	ND		250	258		ug/L		103	38 - 144
Benzene	ND		25.0	27.5		ug/L		110	66 - 130
Bromoform	ND		25.0	30.3		ug/L		121	59 - 150
Bromomethane	ND		25.0	25.9		ug/L		104	62 - 131
Carbon disulfide	ND		25.0	25.7		ug/L		103	49 - 140
Carbon tetrachloride	ND		25.0	30.8		ug/L		123	60 - 150
Chlorobenzene	ND		25.0	26.4		ug/L		105	70 - 130
Bromochloromethane	ND		25.0	26.7		ug/L		107	70 - 130
Chloroethane	ND		25.0	24.0		ug/L		96	68 - 130
Chloroform	0.43	J	25.0	27.6		ug/L		109	70 - 130
Chloromethane	ND		25.0	25.3		ug/L		101	39 - 144
cis-1,2-Dichloroethene	5.1		25.0	32.7		ug/L		110	70 - 130
cis-1,3-Dichloropropene	ND		25.0	28.8		ug/L		115	70 - 133
Dibromochloromethane	ND		25.0	30.4		ug/L		122	70 - 148
Dibromomethane	ND		25.0	26.1		ug/L		104	70 - 130
Bromodichloromethane	ND		25.0	29.8		ug/L		119	70 - 138
Dichlorodifluoromethane	ND		25.0	23.9		ug/L		96	25 - 142
Ethylbenzene	ND		25.0	26.2		ug/L		105	70 - 130
m,p-Xylene	ND		25.0	26.5		ug/L		106	70 - 133
Methylene Chloride	ND		25.0	23.7		ug/L		95	52 - 130
Methyl tert-butyl ether	0.87		25.0	28.7		ug/L		111	70 - 130
Naphthalene	ND		25.0	26.7		ug/L		107	60 - 140
o-Xylene	ND		25.0	26.8		ug/L		107	70 - 133
Styrene	ND		25.0	25.8		ug/L		103	29 - 150
t-Butanol	ND		250	277		ug/L		111	70 - 130
Tetrachloroethene	25		25.0	51.8		ug/L		106	70 - 137
Toluene	ND		25.0	27.6		ug/L		111	70 - 130
trans-1,2-Dichloroethene	ND		25.0	26.2		ug/L		105	70 - 130
trans-1,3-Dichloropropene	ND		25.0	28.5		ug/L		114	70 - 138
Trichloroethene	13		25.0	39.2		ug/L		103	70 - 130
Trichlorofluoromethane	1.4		25.0	30.0		ug/L		114	60 - 150
Vinyl acetate	ND		25.0	29.4		ug/L		117	23 - 150
Vinyl chloride	ND		25.0	23.5		ug/L		94	50 - 137

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-192408-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 440-192297-C-2 MS**

**Matrix: Water**

**Analysis Batch: 431502**

**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	
1,2-Dibromoethane (EDB)	ND		25.0	26.1		ug/L		104	70 - 131	
2-Butanone (MEK)	ND		25.0	21.6		ug/L		86	48 - 140	
4-Methyl-2-pentanone (MIBK)	ND		25.0	27.4		ug/L		110	52 - 150	
<b>Surrogate</b>	<b>MS %Recovery</b>	<b>MS Qualifier</b>	<b>Limits</b>							
Toluene-d8 (Surr)	103		80 - 128							
4-Bromofluorobenzene (Surr)	99		80 - 120							
Dibromofluoromethane (Surr)	107		76 - 132							

**Lab Sample ID: 440-192297-C-2 MSD**

**Matrix: Water**

**Analysis Batch: 431502**

**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
1,2,3-Trichloropropane	ND		25.0	24.5		ug/L		98	60 - 130	3	30
1,1,1,2-Tetrachloroethane	ND		25.0	30.3		ug/L		121	60 - 149	0	20
1,1,1-Trichloroethane	ND		25.0	27.9		ug/L		112	70 - 130	3	20
1,1,2,2-Tetrachloroethane	ND		25.0	23.9		ug/L		95	63 - 130	2	30
1,1,2-Trichloroethane	ND		25.0	28.0		ug/L		112	70 - 130	3	25
1,1-Dichloroethane	23		25.0	48.4		ug/L		100	65 - 130	1	20
1,1-Dichloroethene	140		25.0	152	4	ug/L		43	70 - 130	3	20
1,1-Dichloropropene	ND		25.0	26.9		ug/L		107	64 - 130	1	20
1,2,4-Trichlorobenzene	ND		25.0	31.0		ug/L		124	60 - 140	1	20
1,2-Dibromo-3-Chloropropane	ND		25.0	24.8		ug/L		99	48 - 140	6	30
1,2-Dichlorobenzene	ND		25.0	26.8		ug/L		107	70 - 130	1	20
1,2-Dichloroethane	ND		25.0	27.3		ug/L		109	56 - 146	0	20
1,2-Dichloropropane	ND		25.0	26.8		ug/L		107	69 - 130	2	20
1,3-Dichlorobenzene	ND		25.0	26.2		ug/L		105	70 - 130	1	20
1,3-Dichloropropane	ND		25.0	26.6		ug/L		106	70 - 130	4	25
1,4-Dichlorobenzene	ND		25.0	26.4		ug/L		106	70 - 130	1	20
2,2-Dichloropropane	ND		25.0	29.6		ug/L		118	69 - 138	4	25
2-Hexanone	ND		25.0	26.0		ug/L		104	10 - 150	1	35
Acetone	ND		25.0	27.4		ug/L		109	10 - 150	1	35
Acrolein	ND		25.0	28.8		ug/L		115	10 - 147	3	40
Acrylonitrile	ND		25.0	26.0		ug/L		104	38 - 144	1	40
Benzene	ND		25.0	27.2		ug/L		109	66 - 130	1	20
Bromoform	ND		25.0	30.9		ug/L		124	59 - 150	2	25
Bromomethane	ND		25.0	26.0		ug/L		104	62 - 131	1	25
Carbon disulfide	ND		25.0	25.0		ug/L		100	49 - 140	3	20
Carbon tetrachloride	ND		25.0	30.0		ug/L		120	60 - 150	3	25
Chlorobenzene	ND		25.0	26.4		ug/L		106	70 - 130	0	20
Bromochloromethane	ND		25.0	27.4		ug/L		110	70 - 130	3	25
Chloroethane	ND		25.0	24.1		ug/L		96	68 - 130	1	25
Chloroform	0.43	J	25.0	27.9		ug/L		110	70 - 130	1	20
Chloromethane	ND		25.0	25.2		ug/L		101	39 - 144	0	25
cis-1,2-Dichloroethene	5.1		25.0	33.0		ug/L		112	70 - 130	1	20
cis-1,3-Dichloropropene	ND		25.0	29.1		ug/L		117	70 - 133	1	20
Dibromochloromethane	ND		25.0	30.9		ug/L		124	70 - 148	1	25

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-192408-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 440-192297-C-2 MSD**  
**Matrix: Water**  
**Analysis Batch: 431502**

**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
Dibromomethane	ND		25.0	26.1		ug/L		104	70 - 130	0	25
Bromodichloromethane	ND		25.0	29.8		ug/L		119	70 - 138	0	20
Dichlorodifluoromethane	ND		25.0	23.1		ug/L		92	25 - 142	3	30
Ethylbenzene	ND		25.0	26.0		ug/L		104	70 - 130	1	20
m,p-Xylene	ND		25.0	26.2		ug/L		105	70 - 133	1	25
Methylene Chloride	ND		25.0	24.0		ug/L		96	52 - 130	1	20
Methyl tert-butyl ether	0.87		25.0	29.5		ug/L		115	70 - 130	3	25
Naphthalene	ND		25.0	27.8		ug/L		111	60 - 140	4	30
o-Xylene	ND		25.0	26.7		ug/L		107	70 - 133	0	20
Styrene	ND		25.0	25.5		ug/L		102	29 - 150	1	35
t-Butanol	ND		250	278		ug/L		111	70 - 130	0	25
Tetrachloroethene	25		25.0	51.0		ug/L		103	70 - 137	2	20
Toluene	ND		25.0	27.5		ug/L		110	70 - 130	1	20
trans-1,2-Dichloroethene	ND		25.0	27.3		ug/L		109	70 - 130	4	20
trans-1,3-Dichloropropene	ND		25.0	28.4		ug/L		114	70 - 138	0	25
Trichloroethene	13		25.0	38.3		ug/L		100	70 - 130	2	20
Trichlorofluoromethane	1.4		25.0	29.3		ug/L		112	60 - 150	2	25
Vinyl acetate	ND		25.0	30.3		ug/L		121	23 - 150	3	30
Vinyl chloride	ND		25.0	23.1		ug/L		92	50 - 137	2	30
1,2-Dibromoethane (EDB)	ND		25.0	26.6		ug/L		107	70 - 131	2	25
2-Butanone (MEK)	ND		25.0	21.4		ug/L		86	48 - 140	1	40
4-Methyl-2-pentanone (MIBK)	ND		25.0	28.5		ug/L		114	52 - 150	4	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Toluene-d8 (Surr)	105		80 - 128
4-Bromofluorobenzene (Surr)	102		80 - 120
Dibromofluoromethane (Surr)	109		76 - 132

## Method: 8270C - Semivolatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 440-430037/1-A**  
**Matrix: Water**  
**Analysis Batch: 430457**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 430037**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.99	0.25	ug/L		09/20/17 07:28	09/23/17 10:30	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	58		30 - 120	09/20/17 07:28	09/23/17 10:30	1

**Lab Sample ID: LCS 440-430037/2-A**  
**Matrix: Water**  
**Analysis Batch: 430457**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 430037**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dioxane	1.97	1.20		ug/L		61	35 - 120

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-192408-1

## Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 440-430037/2-A**  
**Matrix: Water**  
**Analysis Batch: 430457**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 430037**

	LCS	LCS	
Surrogate	%Recovery	Qualifier	Limits
1,4-Dioxane-d8 (Surr)	60		30 - 120

**Lab Sample ID: 440-192514-E-1-A MS**  
**Matrix: Water**  
**Analysis Batch: 430457**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 430037**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	Limits
	Result	Qualifier	Added	Result	Qualifier				
1,4-Dioxane	ND		1.90	1.15		ug/L		60	35 - 120
Surrogate	MS	MS							
1,4-Dioxane-d8 (Surr)	%Recovery	Qualifier	Limits						
	52		30 - 120						

**Lab Sample ID: 440-192514-E-1-B MSD**  
**Matrix: Water**  
**Analysis Batch: 430457**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 430037**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	Limits	RPD	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier							
1,4-Dioxane	ND		1.91	1.19		ug/L		62	35 - 120	3		25
Surrogate	MSD	MSD										
1,4-Dioxane-d8 (Surr)	%Recovery	Qualifier	Limits									
	54		30 - 120									

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 440-430059/7**  
**Matrix: Water**  
**Analysis Batch: 430059**

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

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Chloride	ND		0.50	0.25	mg/L			09/20/17 12:28	1

**Lab Sample ID: LCS 440-430059/8**  
**Matrix: Water**  
**Analysis Batch: 430059**

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

Analyte	Spike	LCS	LCS	Unit	D	%Rec	Limits
Chloride	5.00	4.64		mg/L		93	90 - 110

**Lab Sample ID: 440-192498-H-1 MS**  
**Matrix: Water**  
**Analysis Batch: 430059**

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

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	Limits
	Result	Qualifier	Added	Result	Qualifier				
Chloride	52	J	1000	915		mg/L		86	80 - 120

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-192408-1

## Method: 300.0 - Anions, Ion Chromatography (Continued)

**Lab Sample ID: 440-192498-H-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 430059**

**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	52	J	1000	907		mg/L		85	80 - 120	1	20

**Lab Sample ID: MB 440-430368/7**  
**Matrix: Water**  
**Analysis Batch: 430368**

**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			09/21/17 15:21	1

**Lab Sample ID: LCS 440-430368/6**  
**Matrix: Water**  
**Analysis Batch: 430368**

**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	4.80		mg/L		96	90 - 110

## Method: 6010B - Metals (ICP)

**Lab Sample ID: MB 440-430360/1-A**  
**Matrix: Water**  
**Analysis Batch: 430498**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 430360**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	ND		0.50	0.25	mg/L		09/21/17 09:21	09/21/17 15:19	1

**Lab Sample ID: LCS 440-430360/2-A**  
**Matrix: Water**  
**Analysis Batch: 430498**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 430360**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Potassium	10.0	9.61		mg/L		96	80 - 120

**Lab Sample ID: 440-192408-6 MS**  
**Matrix: Water**  
**Analysis Batch: 430498**

**Client Sample ID: Dup.**  
**Prep Type: Total Recoverable**  
**Prep Batch: 430360**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Potassium	6.2		10.0	15.6		mg/L		94	75 - 125

**Lab Sample ID: 440-192408-6 MSD**  
**Matrix: Water**  
**Analysis Batch: 430498**

**Client Sample ID: Dup.**  
**Prep Type: Total Recoverable**  
**Prep Batch: 430360**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Potassium	6.2		10.0	15.7		mg/L		95	75 - 125	1	20

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-192408-1

## Method: 410.4 - COD

**Lab Sample ID: MB 440-431195/3**  
**Matrix: Water**  
**Analysis Batch: 431195**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		20	10	mg/L			09/25/17 16:13	1

**Lab Sample ID: LCS 440-431195/4**  
**Matrix: Water**  
**Analysis Batch: 431195**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chemical Oxygen Demand	200	197		mg/L		98	90 - 110

**Lab Sample ID: 440-192720-I-2 MS**  
**Matrix: Water**  
**Analysis Batch: 431195**

**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
Chemical Oxygen Demand	ND		200	188		mg/L		94	70 - 120

**Lab Sample ID: 440-192720-I-2 MSD**  
**Matrix: Water**  
**Analysis Batch: 431195**

**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
Chemical Oxygen Demand	ND		200	191		mg/L		96	70 - 120	2	15

## Method: SM 2320B - Alkalinity

**Lab Sample ID: MB 440-429751/3**  
**Matrix: Water**  
**Analysis Batch: 429751**

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

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	ND		4.0	4.0	mg/L			09/19/17 04:37	1

**Lab Sample ID: LCS 440-429751/2**  
**Matrix: Water**  
**Analysis Batch: 429751**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity as CaCO3	33.8	28.6		mg/L		85	80 - 120

**Lab Sample ID: 440-192408-3 DU**  
**Matrix: Water**  
**Analysis Batch: 429751**

**Client Sample ID: CM-9R3**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Alkalinity as CaCO3	24		23.4		mg/L		0.7	20

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-192408-1

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

**Lab Sample ID: MB 440-430606/1**  
**Matrix: Water**  
**Analysis Batch: 430606**

**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			09/22/17 08:05	1

**Lab Sample ID: LCS 440-430606/2**  
**Matrix: Water**  
**Analysis Batch: 430606**

**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	1030		mg/L		103	90 - 110

**Lab Sample ID: 720-82024-A-4 DU**  
**Matrix: Water**  
**Analysis Batch: 430606**

**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	540		546		mg/L		0.9	5

## Method: SM 4500 NH3 D - Ammonia

**Lab Sample ID: MB 440-429714/2-A**  
**Matrix: Water**  
**Analysis Batch: 429725**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 429714**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	ND		0.50	0.10	mg/L		09/19/17 03:30	09/19/17 05:59	1

**Lab Sample ID: LCS 440-429714/1-A**  
**Matrix: Water**  
**Analysis Batch: 429725**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 429714**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	2.50	2.39		mg/L		96	85 - 115

**Lab Sample ID: 440-192409-A-2-B MS**  
**Matrix: Water**  
**Analysis Batch: 429725**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 429714**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	ND		2.50	2.58		mg/L		103	75 - 125

**Lab Sample ID: 440-192409-A-2-C MSD**  
**Matrix: Water**  
**Analysis Batch: 429725**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 429714**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ammonia (as N)	ND		2.50	2.48		mg/L		99	75 - 125	4	15

TestAmerica Irvine



# QC Sample Results

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

TestAmerica Job ID: 440-192408-1

## Method: SM 4500 NH3 D - Ammonia (Continued)

**Lab Sample ID: 440-192398-D-2-B DU**  
**Matrix: Water**  
**Analysis Batch: 429725**

**Client Sample ID: Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 429714**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Ammonia (as N)	71		73.4		mg/L		4	15

## Method: SM 5310C - TOC

**Lab Sample ID: MB 440-430290/8**  
**Matrix: Water**  
**Analysis Batch: 430290**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		0.10	0.050	mg/L			09/20/17 09:24	1

**Lab Sample ID: LCS 440-430290/7**  
**Matrix: Water**  
**Analysis Batch: 430290**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	10.0	9.98		mg/L		100	90 - 110

**Lab Sample ID: MRL 440-430290/4**  
**Matrix: Water**  
**Analysis Batch: 430290**

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	0.100	0.0831	J	mg/L		83	50 - 150

**Lab Sample ID: 440-192514-G-1 MS**  
**Matrix: Water**  
**Analysis Batch: 430290**

**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
Total Organic Carbon	1.0		10.0	10.8		mg/L		98	80 - 120

**Lab Sample ID: 440-192514-H-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 430290**

**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	Limit
Total Organic Carbon	1.0		10.0	10.8		mg/L		98	80 - 120	0	20

# QC Association Summary

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

TestAmerica Job ID: 440-192408-1

## GC/MS VOA

### Analysis Batch: 430808

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192408-1	Subdrain (N)	Total/NA	Water	8260B	
440-192408-2	Combined Subdrains	Total/NA	Water	8260B	
440-192408-3	CM-9R3	Total/NA	Water	8260B	
440-192408-4	CM-10R	Total/NA	Water	8260B	
440-192408-5	CM-11R	Total/NA	Water	8260B	
440-192408-6	Dup.	Total/NA	Water	8260B	
440-192408-7	QCAB	Total/NA	Water	8260B	
440-192408-8	QCTB	Total/NA	Water	8260B	
MB 440-430808/3	Method Blank	Total/NA	Water	8260B	
LCS 440-430808/4	Lab Control Sample	Total/NA	Water	8260B	
440-192498-D-1 MS	Matrix Spike	Total/NA	Water	8260B	
440-192498-D-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

### Analysis Batch: 431277

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192408-1	Subdrain (N)	Total/NA	Water	8260B	
440-192408-2	Combined Subdrains	Total/NA	Water	8260B	
440-192408-3	CM-9R3	Total/NA	Water	8260B	
440-192408-4	CM-10R	Total/NA	Water	8260B	
440-192408-5	CM-11R	Total/NA	Water	8260B	
440-192408-6	Dup.	Total/NA	Water	8260B	
MB 440-431277/4	Method Blank	Total/NA	Water	8260B	
LCS 440-431277/5	Lab Control Sample	Total/NA	Water	8260B	
440-192498-A-2 MS	Matrix Spike	Total/NA	Water	8260B	
440-192498-A-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

### Analysis Batch: 431502

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192408-7	QCAB	Total/NA	Water	8260B	
440-192408-8	QCTB	Total/NA	Water	8260B	
MB 440-431502/4	Method Blank	Total/NA	Water	8260B	
LCS 440-431502/5	Lab Control Sample	Total/NA	Water	8260B	
440-192297-C-2 MS	Matrix Spike	Total/NA	Water	8260B	
440-192297-C-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

## GC/MS Semi VOA

### Prep Batch: 430037

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192408-1	Subdrain (N)	Total/NA	Water	3520C	
440-192408-2	Combined Subdrains	Total/NA	Water	3520C	
440-192408-3	CM-9R3	Total/NA	Water	3520C	
440-192408-4	CM-10R	Total/NA	Water	3520C	
440-192408-5	CM-11R	Total/NA	Water	3520C	
440-192408-6	Dup.	Total/NA	Water	3520C	
MB 440-430037/1-A	Method Blank	Total/NA	Water	3520C	
LCS 440-430037/2-A	Lab Control Sample	Total/NA	Water	3520C	
440-192514-E-1-A MS	Matrix Spike	Total/NA	Water	3520C	
440-192514-E-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	3520C	

TestAmerica Irvine

# QC Association Summary

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

TestAmerica Job ID: 440-192408-1

## GC/MS Semi VOA (Continued)

### Analysis Batch: 430457

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192408-1	Subdrain (N)	Total/NA	Water	8270C	430037
440-192408-2	Combined Subdrains	Total/NA	Water	8270C	430037
440-192408-3	CM-9R3	Total/NA	Water	8270C	430037
440-192408-4	CM-10R	Total/NA	Water	8270C	430037
440-192408-5	CM-11R	Total/NA	Water	8270C	430037
440-192408-6	Dup.	Total/NA	Water	8270C	430037
MB 440-430037/1-A	Method Blank	Total/NA	Water	8270C	430037
LCS 440-430037/2-A	Lab Control Sample	Total/NA	Water	8270C	430037
440-192514-E-1-A MS	Matrix Spike	Total/NA	Water	8270C	430037
440-192514-E-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	8270C	430037

## HPLC/IC

### Analysis Batch: 430059

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192408-1	Subdrain (N)	Total/NA	Water	300.0	
440-192408-2	Combined Subdrains	Total/NA	Water	300.0	
440-192408-3	CM-9R3	Total/NA	Water	300.0	
440-192408-5	CM-11R	Total/NA	Water	300.0	
440-192408-6	Dup.	Total/NA	Water	300.0	
MB 440-430059/7	Method Blank	Total/NA	Water	300.0	
LCS 440-430059/8	Lab Control Sample	Total/NA	Water	300.0	
440-192498-H-1 MS	Matrix Spike	Total/NA	Water	300.0	
440-192498-H-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

### Analysis Batch: 430368

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192408-4	CM-10R	Total/NA	Water	300.0	
MB 440-430368/7	Method Blank	Total/NA	Water	300.0	
LCS 440-430368/6	Lab Control Sample	Total/NA	Water	300.0	

## Metals

### Prep Batch: 430360

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192408-1	Subdrain (N)	Total Recoverable	Water	3005A	
440-192408-2	Combined Subdrains	Total Recoverable	Water	3005A	
440-192408-3	CM-9R3	Total Recoverable	Water	3005A	
440-192408-4	CM-10R	Total Recoverable	Water	3005A	
440-192408-5	CM-11R	Total Recoverable	Water	3005A	
440-192408-6	Dup.	Total Recoverable	Water	3005A	
MB 440-430360/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 440-430360/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
440-192408-6 MS	Dup.	Total Recoverable	Water	3005A	
440-192408-6 MSD	Dup.	Total Recoverable	Water	3005A	

### Analysis Batch: 430498

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192408-1	Subdrain (N)	Total Recoverable	Water	6010B	430360
440-192408-2	Combined Subdrains	Total Recoverable	Water	6010B	430360

TestAmerica Irvine

# QC Association Summary

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

TestAmerica Job ID: 440-192408-1

## Metals (Continued)

### Analysis Batch: 430498 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192408-3	CM-9R3	Total Recoverable	Water	6010B	430360
440-192408-4	CM-10R	Total Recoverable	Water	6010B	430360
440-192408-5	CM-11R	Total Recoverable	Water	6010B	430360
440-192408-6	Dup.	Total Recoverable	Water	6010B	430360
MB 440-430360/1-A	Method Blank	Total Recoverable	Water	6010B	430360
LCS 440-430360/2-A	Lab Control Sample	Total Recoverable	Water	6010B	430360
440-192408-6 MS	Dup.	Total Recoverable	Water	6010B	430360
440-192408-6 MSD	Dup.	Total Recoverable	Water	6010B	430360

## General Chemistry

### Prep Batch: 429714

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192408-1	Subdrain (N)	Total/NA	Water	SM 4500 NH3 B	
440-192408-2	Combined Subdrains	Total/NA	Water	SM 4500 NH3 B	
440-192408-3	CM-9R3	Total/NA	Water	SM 4500 NH3 B	
440-192408-4	CM-10R	Total/NA	Water	SM 4500 NH3 B	
440-192408-5	CM-11R	Total/NA	Water	SM 4500 NH3 B	
440-192408-6	Dup.	Total/NA	Water	SM 4500 NH3 B	
MB 440-429714/2-A	Method Blank	Total/NA	Water	SM 4500 NH3 B	
LCS 440-429714/1-A	Lab Control Sample	Total/NA	Water	SM 4500 NH3 B	
440-192409-A-2-B MS	Matrix Spike	Total/NA	Water	SM 4500 NH3 B	
440-192409-A-2-C MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 NH3 B	
440-192398-D-2-B DU	Duplicate	Total/NA	Water	SM 4500 NH3 B	

### Analysis Batch: 429725

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192408-1	Subdrain (N)	Total/NA	Water	SM 4500 NH3 D	429714
440-192408-2	Combined Subdrains	Total/NA	Water	SM 4500 NH3 D	429714
440-192408-3	CM-9R3	Total/NA	Water	SM 4500 NH3 D	429714
440-192408-4	CM-10R	Total/NA	Water	SM 4500 NH3 D	429714
440-192408-5	CM-11R	Total/NA	Water	SM 4500 NH3 D	429714
440-192408-6	Dup.	Total/NA	Water	SM 4500 NH3 D	429714
MB 440-429714/2-A	Method Blank	Total/NA	Water	SM 4500 NH3 D	429714
LCS 440-429714/1-A	Lab Control Sample	Total/NA	Water	SM 4500 NH3 D	429714
440-192409-A-2-B MS	Matrix Spike	Total/NA	Water	SM 4500 NH3 D	429714
440-192409-A-2-C MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 NH3 D	429714
440-192398-D-2-B DU	Duplicate	Total/NA	Water	SM 4500 NH3 D	429714

### Analysis Batch: 429751

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192408-1	Subdrain (N)	Total/NA	Water	SM 2320B	
440-192408-2	Combined Subdrains	Total/NA	Water	SM 2320B	
440-192408-3	CM-9R3	Total/NA	Water	SM 2320B	
440-192408-4	CM-10R	Total/NA	Water	SM 2320B	
440-192408-5	CM-11R	Total/NA	Water	SM 2320B	
440-192408-6	Dup.	Total/NA	Water	SM 2320B	
MB 440-429751/3	Method Blank	Total/NA	Water	SM 2320B	
LCS 440-429751/2	Lab Control Sample	Total/NA	Water	SM 2320B	
440-192408-3 DU	CM-9R3	Total/NA	Water	SM 2320B	

TestAmerica Irvine

# QC Association Summary

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

TestAmerica Job ID: 440-192408-1

## General Chemistry (Continued)

### Analysis Batch: 430290

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192408-1	Subdrain (N)	Total/NA	Water	SM 5310C	
440-192408-2	Combined Subdrains	Total/NA	Water	SM 5310C	
440-192408-3	CM-9R3	Total/NA	Water	SM 5310C	
440-192408-4	CM-10R	Total/NA	Water	SM 5310C	
440-192408-5	CM-11R	Total/NA	Water	SM 5310C	
440-192408-6	Dup.	Total/NA	Water	SM 5310C	
MB 440-430290/8	Method Blank	Total/NA	Water	SM 5310C	
LCS 440-430290/7	Lab Control Sample	Total/NA	Water	SM 5310C	
MRL 440-430290/4	Lab Control Sample	Total/NA	Water	SM 5310C	
440-192514-G-1 MS	Matrix Spike	Total/NA	Water	SM 5310C	
440-192514-H-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 5310C	

### Analysis Batch: 430606

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192408-1	Subdrain (N)	Total/NA	Water	SM 2540C	
440-192408-2	Combined Subdrains	Total/NA	Water	SM 2540C	
440-192408-3	CM-9R3	Total/NA	Water	SM 2540C	
440-192408-4	CM-10R	Total/NA	Water	SM 2540C	
440-192408-5	CM-11R	Total/NA	Water	SM 2540C	
440-192408-6	Dup.	Total/NA	Water	SM 2540C	
MB 440-430606/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 440-430606/2	Lab Control Sample	Total/NA	Water	SM 2540C	
720-82024-A-4 DU	Duplicate	Total/NA	Water	SM 2540C	

### Analysis Batch: 431195

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192408-1	Subdrain (N)	Total/NA	Water	410.4	
440-192408-2	Combined Subdrains	Total/NA	Water	410.4	
440-192408-3	CM-9R3	Total/NA	Water	410.4	
440-192408-4	CM-10R	Total/NA	Water	410.4	
440-192408-5	CM-11R	Total/NA	Water	410.4	
440-192408-6	Dup.	Total/NA	Water	410.4	
MB 440-431195/3	Method Blank	Total/NA	Water	410.4	
LCS 440-431195/4	Lab Control Sample	Total/NA	Water	410.4	
440-192720-I-2 MS	Matrix Spike	Total/NA	Water	410.4	
440-192720-I-2 MSD	Matrix Spike Duplicate	Total/NA	Water	410.4	

# Definitions/Glossary

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

TestAmerica Job ID: 440-192408-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
ID	Analyte identified by RT & presence of single mass ion
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F1	MS and/or MSD Recovery is outside acceptance limits.

### GC/MS VOA TICs

Qualifier	Qualifier Description
J	Indicates an Estimated Value for TICs
T	Result is a tentatively identified compound (TIC) and an estimated value.

### General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

## 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
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)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
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)

# Accreditation/Certification Summary

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

TestAmerica Job ID: 440-192408-1

## Laboratory: TestAmerica Irvine

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	State Program	10	CA01531	06-30-18
Arizona	State Program	9	AZ0671	10-14-17 *
California	LA Cty Sanitation Districts	9	10256	06-30-18
California	State Program	9	CA ELAP 2706	06-30-18
Guam	State Program	9	Cert. No. 17-003R	01-23-18
Hawaii	State Program	9	N/A	01-29-18
Kansas	NELAP Secondary AB	7	E-10420	07-31-17 *
Nevada	State Program	9	CA015312018-1	07-31-18
New Mexico	State Program	6	N/A	01-29-18 *
Northern Mariana Islands	State Program	9	MP0002	01-29-17 *
Oregon	NELAP	10	4028	01-29-18
USDA	Federal		P330-15-00184	07-08-18
Washington	State Program	10	C900	09-03-18

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

TestAmerica Irvine

Regulatory Program:  DW  NPDES  RCRA  Other: \_\_\_\_\_

**Client Contact**  
 Company Name: Geo-Logic Assoc.  
 Address: 1415 W. Bernardo Ct.  
 City/State/Zip: S.D. CA. 92727  
 Phone: 858-451-1126  
 Fax: 858-451-1087  
 Project Name: Republic Services  
 Site: Sunshine Can. Yr  
 P.O.# 44007851

**Project Manager:** Kyle Melchior  
**Tel/Fax:** 858-451-1126  
 Analysis Turnaround Time:  CALENDAR DAYS  WORKING DAYS  
 TAT if different from Below: \_\_\_\_\_  
 2 weeks  
 1 week  
 2 days  
 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)		Sample Specific Notes:
						Y	N	Y	N	
Subchain G11	9/18/17	1305	G	WW	12			X	X	EA8 816C8-11CS
Combined Subdrains		1345	G	WW	12			X	X	EA8 816C8-11CS
CM-9R3		1215	G	WW	12			X	X	EA8 816C8-11CS
CM-10R		1125	G	WW	12			X	X	EA8 816C8-11CS
CM-11R		1345	G	WW	12			X	X	EA8 816C8-11CS
Duff								X	X	EA8 816C8-11CS
GCAB								X	X	EA8 816C8-11CS
GCAB								X	X	EA8 816C8-11CS

**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

Return to Client  Disposal by Lab  Archive for: \_\_\_\_\_ Months

**Special Instructions/QC Requirements & Comments:**

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

**Received by:** [Signature] Date/Time: 9/18/17 14:40  
 Company: TAI

**Received by:** [Signature] Date/Time: 9/18/17 17:30  
 Company: TAI

**Received in Laboratory by:** [Signature] Date/Time: 9/18/17 17:30  
 Company: TAI

Handwritten notes: T-08 24.70 / 4.50 / 1.10C IR SC6





## Login Sample Receipt Checklist

Client: Geo-Logic Associates

Job Number: 440-192408-1

**Login Number: 192408**

**List Number: 1**

**Creator: Soderblom, Tim**

**List Source: TestAmerica Irvine**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> 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 <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Irvine

17461 Derian Ave

Suite 100

Irvine, CA 92614-5817

Tel: (949)261-1022

TestAmerica Job ID: 440-192498-1

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:

9/29/2017 1:17:34 PM

Rossina Tomova, Project Manager I

(949)261-1022

[rossina.tomova@testamericainc.com](mailto:rossina.tomova@testamericainc.com)

### LINKS

Review your project  
results through

**TotalAccess**

Have a Question?



Visit us at:

[www.testamericainc.com](http://www.testamericainc.com)

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

1

2

3

4

5

6

7

8

9

10

11

12

13



# Table of Contents

Cover Page . . . . .	1
Table of Contents . . . . .	2
Sample Summary . . . . .	3
Case Narrative . . . . .	4
Client Sample Results . . . . .	5
Method Summary . . . . .	24
Lab Chronicle . . . . .	25
QC Sample Results . . . . .	29
QC Association Summary . . . . .	42
Definitions/Glossary . . . . .	47
Certification Summary . . . . .	48
Chain of Custody . . . . .	49
Receipt Checklists . . . . .	50

# Sample Summary

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

TestAmerica Job ID: 440-192498-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-192498-1	DW-1	Water	09/19/17 10:58	09/19/17 18:45
440-192498-2	DW-2	Water	09/19/17 09:10	09/19/17 18:45
440-192498-3	Extraction Trench	Water	09/19/17 13:20	09/19/17 18:45
440-192498-4	MW-6	Water	09/19/17 10:15	09/19/17 18:45
440-192498-5	MW-9	Water	09/19/17 13:45	09/19/17 18:45
440-192498-6	MW-14	Water	09/19/17 07:55	09/19/17 18:45
440-192498-7	PZ-2	Water	09/19/17 12:25	09/19/17 18:45
440-192498-8	QCAB	Water	09/19/17 00:01	09/19/17 18:45
440-192498-9	QCTB	Water	09/19/17 00:01	09/19/17 18:45

# Case Narrative

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

TestAmerica Job ID: 440-192498-1

**Job ID: 440-192498-1**

**Laboratory: TestAmerica Irvine**

## Narrative

### Job Narrative 440-192498-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 9/19/2017 6:45 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 1.2° C and 1.7° C.

#### GC/MS VOA

Method(s) 8260B: The continuing calibration verification (CCV) associated with batch 440-431277 recovered above the upper control limit for Methacrylonitrile. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: DW-1 (440-192498-1), DW-2 (440-192498-2), Extraction Trench (440-192498-3), MW-6 (440-192498-4), MW-9 (440-192498-5), MW-14 (440-192498-6), PZ-2 (440-192498-7), QCAB (440-192498-8), QCTB (440-192498-9) and (CCV 440-431277/3).

Method(s) 8260B: The matrix spike and matrix spike duplicate (MS/MSD) recoveries for analytical batch 440-431277 were outside control limits. Sample matrix interference is suspected.

Method(s) 8260B: The following volatiles samples were diluted due to foaming at the time of purging during the original sample analysis: Extraction Trench (440-192498-3) and MW-9 (440-192498-5). Elevated reporting limits (RLs) are provided.

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

#### GC/MS Semi VOA

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

#### HPLC/IC

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

#### Metals

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.

#### Organic Prep

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

#### VOA Prep

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

# Client Sample Results

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

TestAmerica Job ID: 440-192498-1

**Client Sample ID: DW-1**  
**Date Collected: 09/19/17 10:58**  
**Date Received: 09/19/17 18:45**

**Lab Sample ID: 440-192498-1**  
**Matrix: Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			09/26/17 11:07	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			09/26/17 11:07	1
Acrolein	ND		50	2.5	ug/L			09/22/17 21:24	1
Acrylonitrile	ND		50	1.0	ug/L			09/22/17 21:24	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			09/26/17 11:07	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			09/26/17 11:07	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			09/26/17 11:07	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			09/26/17 11:07	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			09/26/17 11:07	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			09/26/17 11:07	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			09/26/17 11:07	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			09/26/17 11:07	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			09/26/17 11:07	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			09/26/17 11:07	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			09/26/17 11:07	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			09/26/17 11:07	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			09/26/17 11:07	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			09/26/17 11:07	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			09/26/17 11:07	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			09/26/17 11:07	1
2-Hexanone	ND		5.0	2.5	ug/L			09/26/17 11:07	1
Acetone	ND		20	10	ug/L			09/26/17 11:07	1
Acetonitrile	ND		20	10	ug/L			09/26/17 11:07	1
Acrolein	ND		5.0	2.5	ug/L			09/26/17 11:07	1
Acrylonitrile	ND		2.0	1.0	ug/L			09/26/17 11:07	1
Benzene	ND		0.50	0.25	ug/L			09/26/17 11:07	1
Allyl chloride	ND		1.0	0.50	ug/L			09/26/17 11:07	1
Bromoform	ND		1.0	0.40	ug/L			09/26/17 11:07	1
Bromomethane	ND		0.50	0.25	ug/L			09/26/17 11:07	1
Carbon disulfide	ND		1.0	0.50	ug/L			09/26/17 11:07	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			09/26/17 11:07	1
Chlorobenzene	ND		0.50	0.25	ug/L			09/26/17 11:07	1
Bromochloromethane	ND		0.50	0.25	ug/L			09/26/17 11:07	1
Chloroethane	ND		1.0	0.40	ug/L			09/26/17 11:07	1
Chloroform	ND		0.50	0.25	ug/L			09/26/17 11:07	1
Chloromethane	ND		0.50	0.25	ug/L			09/26/17 11:07	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			09/26/17 11:07	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/26/17 11:07	1
Dibromochloromethane	ND		0.50	0.25	ug/L			09/26/17 11:07	1
Dibromomethane	ND		0.50	0.25	ug/L			09/26/17 11:07	1
Bromodichloromethane	ND		0.50	0.25	ug/L			09/26/17 11:07	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			09/26/17 11:07	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			09/26/17 11:07	1
Ethylbenzene	ND		0.50	0.25	ug/L			09/26/17 11:07	1
Iodomethane	ND		2.0	1.0	ug/L			09/26/17 11:07	1
Isobutyl alcohol	ND		25	13	ug/L			09/26/17 11:07	1
m,p-Xylene	ND		1.0	0.50	ug/L			09/26/17 11:07	1
Methylacrylonitrile	ND		10	2.5	ug/L			09/26/17 11:07	1
Methyl methacrylate	ND		2.0	1.0	ug/L			09/26/17 11:07	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-192498-1

**Client Sample ID: DW-1**  
**Date Collected: 09/19/17 10:58**  
**Date Received: 09/19/17 18:45**

**Lab Sample ID: 440-192498-1**  
**Matrix: Water**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	ND		2.0	0.88	ug/L			09/26/17 11:07	1
<b>Methyl tert-butyl ether</b>	<b>0.30</b>	<b>J</b>	0.50	0.25	ug/L			09/26/17 11:07	1
Naphthalene	ND		1.0	0.40	ug/L			09/26/17 11:07	1
o-Xylene	ND		0.50	0.25	ug/L			09/26/17 11:07	1
Propionitrile	ND		20	10	ug/L			09/26/17 11:07	1
Styrene	ND		0.50	0.25	ug/L			09/26/17 11:07	1
t-Butanol	ND		10	5.0	ug/L			09/26/17 11:07	1
Tetrachloroethene	ND		0.50	0.25	ug/L			09/26/17 11:07	1
Tetrahydrofuran	ND		10	5.0	ug/L			09/26/17 11:07	1
Toluene	ND		0.50	0.25	ug/L			09/26/17 11:07	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			09/26/17 11:07	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/26/17 11:07	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			09/26/17 11:07	1
Trichloroethene	ND		0.50	0.25	ug/L			09/26/17 11:07	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			09/26/17 11:07	1
Vinyl acetate	ND		4.0	2.0	ug/L			09/26/17 11:07	1
Vinyl chloride	ND		0.50	0.25	ug/L			09/26/17 11:07	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			09/26/17 11:07	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			09/26/17 11:07	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			09/26/17 11:07	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	9.9	T J	ug/L		5.97			09/26/17 11:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	106		80 - 128		09/22/17 21:24	1
4-Bromofluorobenzene (Surr)	96		80 - 120		09/22/17 21:24	1
Toluene-d8 (Surr)	106		80 - 128		09/26/17 11:07	1
4-Bromofluorobenzene (Surr)	102		80 - 120		09/26/17 11:07	1
Dibromofluoromethane (Surr)	115		76 - 132		09/22/17 21:24	1
Dibromofluoromethane (Surr)	108		76 - 132		09/26/17 11:07	1

## Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.94	0.24	ug/L		09/24/17 10:31	09/27/17 17:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	45		30 - 120	09/24/17 10:31	09/27/17 17:34	1

## Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>13</b>		5.0	2.5	mg/L			09/21/17 08:05	10

## Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Potassium</b>	<b>2.3</b>		0.50	0.25	mg/L		09/26/17 14:30	09/27/17 13:37	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chemical Oxygen Demand</b>	<b>20</b>		20	10	mg/L			09/27/17 13:33	1
<b>Total Dissolved Solids</b>	<b>3200</b>		50	25	mg/L			09/25/17 13:35	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-192498-1

**Client Sample ID: DW-1**  
**Date Collected: 09/19/17 10:58**  
**Date Received: 09/19/17 18:45**

**Lab Sample ID: 440-192498-1**  
**Matrix: Water**

### General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	1.8		0.50	0.10	mg/L		09/22/17 04:30	09/22/17 07:00	1
Total Organic Carbon	3.1		0.10	0.050	mg/L			09/20/17 14:20	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	420		4.0	4.0	mg/L			09/20/17 09:54	1

**Client Sample ID: DW-2**  
**Date Collected: 09/19/17 09:10**  
**Date Received: 09/19/17 18:45**

**Lab Sample ID: 440-192498-2**  
**Matrix: Water**

### Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			09/26/17 09:15	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			09/26/17 09:15	1
Acrolein	ND		50	2.5	ug/L			09/22/17 22:53	1
Acrylonitrile	ND		50	1.0	ug/L			09/22/17 22:53	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			09/26/17 09:15	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			09/26/17 09:15	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			09/26/17 09:15	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			09/26/17 09:15	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			09/26/17 09:15	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			09/26/17 09:15	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			09/26/17 09:15	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			09/26/17 09:15	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			09/26/17 09:15	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			09/26/17 09:15	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			09/26/17 09:15	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			09/26/17 09:15	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			09/26/17 09:15	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			09/26/17 09:15	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			09/26/17 09:15	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			09/26/17 09:15	1
2-Hexanone	ND		5.0	2.5	ug/L			09/26/17 09:15	1
Acetone	ND	F1	20	10	ug/L			09/26/17 09:15	1
Acetonitrile	ND		20	10	ug/L			09/26/17 09:15	1
Acrolein	ND		5.0	2.5	ug/L			09/26/17 09:15	1
Acrylonitrile	ND		2.0	1.0	ug/L			09/26/17 09:15	1
Benzene	ND		0.50	0.25	ug/L			09/26/17 09:15	1
Allyl chloride	ND		1.0	0.50	ug/L			09/26/17 09:15	1
Bromoform	ND		1.0	0.40	ug/L			09/26/17 09:15	1
Bromomethane	ND		0.50	0.25	ug/L			09/26/17 09:15	1
Carbon disulfide	ND		1.0	0.50	ug/L			09/26/17 09:15	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			09/26/17 09:15	1
Chlorobenzene	ND		0.50	0.25	ug/L			09/26/17 09:15	1
Bromochloromethane	ND		0.50	0.25	ug/L			09/26/17 09:15	1
Chloroethane	ND		1.0	0.40	ug/L			09/26/17 09:15	1
Chloroform	ND		0.50	0.25	ug/L			09/26/17 09:15	1
Chloromethane	ND		0.50	0.25	ug/L			09/26/17 09:15	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			09/26/17 09:15	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/26/17 09:15	1

TestAmerica Irvine



# Client Sample Results

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

TestAmerica Job ID: 440-192498-1

**Client Sample ID: DW-2**  
**Date Collected: 09/19/17 09:10**  
**Date Received: 09/19/17 18:45**

**Lab Sample ID: 440-192498-2**  
**Matrix: Water**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibromochloromethane	ND		0.50	0.25	ug/L			09/26/17 09:15	1
Dibromomethane	ND		0.50	0.25	ug/L			09/26/17 09:15	1
Bromodichloromethane	ND		0.50	0.25	ug/L			09/26/17 09:15	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			09/26/17 09:15	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			09/26/17 09:15	1
Ethylbenzene	ND		0.50	0.25	ug/L			09/26/17 09:15	1
Iodomethane	ND		2.0	1.0	ug/L			09/26/17 09:15	1
Isobutyl alcohol	ND	F1	25	13	ug/L			09/26/17 09:15	1
m,p-Xylene	ND		1.0	0.50	ug/L			09/26/17 09:15	1
Methylacrylonitrile	ND	F1	10	2.5	ug/L			09/26/17 09:15	1
Methyl methacrylate	ND		2.0	1.0	ug/L			09/26/17 09:15	1
Methylene Chloride	ND		2.0	0.88	ug/L			09/26/17 09:15	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			09/26/17 09:15	1
Naphthalene	ND		1.0	0.40	ug/L			09/26/17 09:15	1
o-Xylene	ND		0.50	0.25	ug/L			09/26/17 09:15	1
Propionitrile	ND		20	10	ug/L			09/26/17 09:15	1
Styrene	ND		0.50	0.25	ug/L			09/26/17 09:15	1
t-Butanol	ND		10	5.0	ug/L			09/26/17 09:15	1
Tetrachloroethene	ND		0.50	0.25	ug/L			09/26/17 09:15	1
Tetrahydrofuran	ND	F1	10	5.0	ug/L			09/26/17 09:15	1
Toluene	ND		0.50	0.25	ug/L			09/26/17 09:15	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			09/26/17 09:15	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/26/17 09:15	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			09/26/17 09:15	1
Trichloroethene	ND		0.50	0.25	ug/L			09/26/17 09:15	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			09/26/17 09:15	1
Vinyl acetate	ND		4.0	2.0	ug/L			09/26/17 09:15	1
Vinyl chloride	ND		0.50	0.25	ug/L			09/26/17 09:15	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			09/26/17 09:15	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			09/26/17 09:15	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			09/26/17 09:15	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L					09/26/17 09:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	106		80 - 128		09/22/17 22:53	1
4-Bromofluorobenzene (Surr)	94		80 - 120		09/22/17 22:53	1
Toluene-d8 (Surr)	107		80 - 128		09/26/17 09:15	1
4-Bromofluorobenzene (Surr)	98		80 - 120		09/26/17 09:15	1
Dibromofluoromethane (Surr)	111		76 - 132		09/22/17 22:53	1
Dibromofluoromethane (Surr)	110		76 - 132		09/26/17 09:15	1

## Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.95	0.24	ug/L		09/24/17 10:31	09/27/17 17:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	48		30 - 120	09/24/17 10:31	09/27/17 17:57	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-192498-1

**Client Sample ID: DW-2**  
**Date Collected: 09/19/17 09:10**  
**Date Received: 09/19/17 18:45**

**Lab Sample ID: 440-192498-2**  
**Matrix: Water**

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	10		5.0	2.5	mg/L			09/21/17 08:28	10

**Method: 6010B - Metals (ICP) - Total Recoverable**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	3.8		0.50	0.25	mg/L		09/26/17 14:30	09/27/17 13:39	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	14	J	20	10	mg/L			09/27/17 13:33	1
Total Dissolved Solids	1800		20	10	mg/L			09/25/17 13:35	1
Ammonia (as N)	2.8		0.50	0.10	mg/L		09/22/17 04:30	09/22/17 07:00	1
Total Organic Carbon	1.5		0.10	0.050	mg/L			09/20/17 14:31	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	290		4.0	4.0	mg/L			09/20/17 10:13	1

**Client Sample ID: Extraction Trench**

**Date Collected: 09/19/17 13:20**  
**Date Received: 09/19/17 18:45**

**Lab Sample ID: 440-192498-3**  
**Matrix: Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		2.0	0.80	ug/L			09/26/17 11:35	2
1,1,1,2-Tetrachloroethane	ND		1.0	0.50	ug/L			09/26/17 11:35	2
Acrolein	ND		50	2.5	ug/L			09/22/17 23:23	1
Acrylonitrile	ND		50	1.0	ug/L			09/22/17 23:23	1
1,1,1-Trichloroethane	ND		1.0	0.50	ug/L			09/26/17 11:35	2
1,1,2,2-Tetrachloroethane	ND		1.0	0.50	ug/L			09/26/17 11:35	2
1,1,2-Trichloroethane	ND		1.0	0.50	ug/L			09/26/17 11:35	2
1,1-Dichloroethane	ND		1.0	0.50	ug/L			09/26/17 11:35	2
1,1-Dichloroethene	ND		1.0	0.50	ug/L			09/26/17 11:35	2
1,1-Dichloropropene	ND		1.0	0.50	ug/L			09/26/17 11:35	2
1,2,4-Trichlorobenzene	ND		2.0	0.80	ug/L			09/26/17 11:35	2
1,2-Dibromo-3-Chloropropane	ND		2.0	1.0	ug/L			09/26/17 11:35	2
1,2-Dichlorobenzene	ND		1.0	0.50	ug/L			09/26/17 11:35	2
1,2-Dichloroethane	ND		1.0	0.50	ug/L			09/26/17 11:35	2
1,2-Dichloropropane	ND		1.0	0.50	ug/L			09/26/17 11:35	2
1,3-Dichlorobenzene	ND		1.0	0.50	ug/L			09/26/17 11:35	2
1,3-Dichloropropane	ND		1.0	0.50	ug/L			09/26/17 11:35	2
<b>1,4-Dichlorobenzene</b>	<b>2.8</b>		1.0	0.50	ug/L			09/26/17 11:35	2
2,2-Dichloropropane	ND		2.0	0.80	ug/L			09/26/17 11:35	2
2-Chloro-1,3-butadiene	ND		2.0	1.0	ug/L			09/26/17 11:35	2
2-Hexanone	ND		10	5.0	ug/L			09/26/17 11:35	2
Acetone	ND		40	20	ug/L			09/26/17 11:35	2
Acetonitrile	ND		40	20	ug/L			09/26/17 11:35	2
Acrolein	ND		10	5.0	ug/L			09/26/17 11:35	2
Acrylonitrile	ND		4.0	2.0	ug/L			09/26/17 11:35	2
Benzene	ND		1.0	0.50	ug/L			09/26/17 11:35	2
Allyl chloride	ND		2.0	1.0	ug/L			09/26/17 11:35	2
Bromoform	ND		2.0	0.80	ug/L			09/26/17 11:35	2
Bromomethane	ND		1.0	0.50	ug/L			09/26/17 11:35	2

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-192498-1

**Client Sample ID: Extraction Trench**

**Lab Sample ID: 440-192498-3**

Date Collected: 09/19/17 13:20

Matrix: Water

Date Received: 09/19/17 18:45

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		2.0	1.0	ug/L			09/26/17 11:35	2
Carbon tetrachloride	ND		1.0	0.50	ug/L			09/26/17 11:35	2
Chlorobenzene	ND		1.0	0.50	ug/L			09/26/17 11:35	2
Bromochloromethane	ND		1.0	0.50	ug/L			09/26/17 11:35	2
Chloroethane	ND		2.0	0.80	ug/L			09/26/17 11:35	2
Chloroform	ND		1.0	0.50	ug/L			09/26/17 11:35	2
Chloromethane	ND		1.0	0.50	ug/L			09/26/17 11:35	2
<b>cis-1,2-Dichloroethene</b>	<b>1.7</b>		1.0	0.50	ug/L			09/26/17 11:35	2
cis-1,3-Dichloropropene	ND		1.0	0.50	ug/L			09/26/17 11:35	2
Dibromochloromethane	ND		1.0	0.50	ug/L			09/26/17 11:35	2
Dibromomethane	ND		1.0	0.50	ug/L			09/26/17 11:35	2
Bromodichloromethane	ND		1.0	0.50	ug/L			09/26/17 11:35	2
Dichlorodifluoromethane	ND		2.0	0.80	ug/L			09/26/17 11:35	2
Ethyl methacrylate	ND		4.0	2.0	ug/L			09/26/17 11:35	2
Ethylbenzene	ND		1.0	0.50	ug/L			09/26/17 11:35	2
Iodomethane	ND		4.0	2.0	ug/L			09/26/17 11:35	2
Isobutyl alcohol	ND		50	25	ug/L			09/26/17 11:35	2
m,p-Xylene	ND		2.0	1.0	ug/L			09/26/17 11:35	2
Methylacrylonitrile	ND		20	5.0	ug/L			09/26/17 11:35	2
Methyl methacrylate	ND		4.0	2.0	ug/L			09/26/17 11:35	2
Methylene Chloride	ND		4.0	1.8	ug/L			09/26/17 11:35	2
<b>Methyl tert-butyl ether</b>	<b>1.6</b>		1.0	0.50	ug/L			09/26/17 11:35	2
Naphthalene	ND		2.0	0.80	ug/L			09/26/17 11:35	2
o-Xylene	ND		1.0	0.50	ug/L			09/26/17 11:35	2
Propionitrile	ND		40	20	ug/L			09/26/17 11:35	2
Styrene	ND		1.0	0.50	ug/L			09/26/17 11:35	2
<b>t-Butanol</b>	<b>30</b>		20	10	ug/L			09/26/17 11:35	2
Tetrachloroethene	ND		1.0	0.50	ug/L			09/26/17 11:35	2
Tetrahydrofuran	ND		20	10	ug/L			09/26/17 11:35	2
Toluene	ND		1.0	0.50	ug/L			09/26/17 11:35	2
trans-1,2-Dichloroethene	ND		1.0	0.50	ug/L			09/26/17 11:35	2
trans-1,3-Dichloropropene	ND		1.0	0.50	ug/L			09/26/17 11:35	2
trans-1,4-Dichloro-2-butene	ND		10	5.0	ug/L			09/26/17 11:35	2
Trichloroethene	ND		1.0	0.50	ug/L			09/26/17 11:35	2
Trichlorofluoromethane	ND		1.0	0.50	ug/L			09/26/17 11:35	2
Vinyl acetate	ND		8.0	4.0	ug/L			09/26/17 11:35	2
Vinyl chloride	ND		1.0	0.50	ug/L			09/26/17 11:35	2
1,2-Dibromoethane (EDB)	ND		1.0	0.50	ug/L			09/26/17 11:35	2
2-Butanone (MEK)	ND		10	5.0	ug/L			09/26/17 11:35	2
4-Methyl-2-pentanone (MIBK)	ND		10	5.0	ug/L			09/26/17 11:35	2

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	6.6	T J	ug/L		4.39			09/26/17 11:35	2
Unknown	20	T J	ug/L		5.97			09/26/17 11:35	2

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	105		80 - 128		09/22/17 23:23	1
4-Bromofluorobenzene (Surr)	96		80 - 120		09/22/17 23:23	1
Toluene-d8 (Surr)	107		80 - 128		09/26/17 11:35	2
4-Bromofluorobenzene (Surr)	101		80 - 120		09/26/17 11:35	2

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-192498-1

## Client Sample ID: Extraction Trench

Lab Sample ID: 440-192498-3

Date Collected: 09/19/17 13:20

Matrix: Water

Date Received: 09/19/17 18:45

### Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	116		76 - 132		09/22/17 23:23	1
Dibromofluoromethane (Surr)	113		76 - 132		09/26/17 11:35	2

### Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	13		0.94	0.24	ug/L		09/24/17 10:31	09/27/17 18:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	51		30 - 120	09/24/17 10:31	09/27/17 18:19	1

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	140		5.0	2.5	mg/L			09/21/17 08:52	10

### Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	21		0.50	0.25	mg/L		09/26/17 14:30	09/27/17 13:41	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	110		20	10	mg/L			09/27/17 13:33	1
Total Dissolved Solids	3400		50	25	mg/L			09/25/17 13:35	1
Ammonia (as N)	6.5		2.5	0.50	mg/L		09/22/17 04:30	09/22/17 07:00	1
Total Organic Carbon	40		0.50	0.25	mg/L			09/23/17 12:01	5
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	610		4.0	4.0	mg/L			09/20/17 10:24	1

## Client Sample ID: MW-6

Lab Sample ID: 440-192498-4

Date Collected: 09/19/17 10:15

Matrix: Water

Date Received: 09/19/17 18:45

### Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			09/26/17 12:03	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			09/26/17 12:03	1
Acrolein	ND		50	2.5	ug/L			09/22/17 23:52	1
Acrylonitrile	ND		50	1.0	ug/L			09/22/17 23:52	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			09/26/17 12:03	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			09/26/17 12:03	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			09/26/17 12:03	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			09/26/17 12:03	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			09/26/17 12:03	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			09/26/17 12:03	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			09/26/17 12:03	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			09/26/17 12:03	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			09/26/17 12:03	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			09/26/17 12:03	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			09/26/17 12:03	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			09/26/17 12:03	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			09/26/17 12:03	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-192498-1

**Client Sample ID: MW-6**

**Lab Sample ID: 440-192498-4**

**Date Collected: 09/19/17 10:15**

**Matrix: Water**

**Date Received: 09/19/17 18:45**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			09/26/17 12:03	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			09/26/17 12:03	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			09/26/17 12:03	1
2-Hexanone	ND		5.0	2.5	ug/L			09/26/17 12:03	1
Acetone	ND		20	10	ug/L			09/26/17 12:03	1
Acetonitrile	ND		20	10	ug/L			09/26/17 12:03	1
Acrolein	ND		5.0	2.5	ug/L			09/26/17 12:03	1
Acrylonitrile	ND		2.0	1.0	ug/L			09/26/17 12:03	1
Benzene	ND		0.50	0.25	ug/L			09/26/17 12:03	1
Allyl chloride	ND		1.0	0.50	ug/L			09/26/17 12:03	1
Bromoform	ND		1.0	0.40	ug/L			09/26/17 12:03	1
Bromomethane	ND		0.50	0.25	ug/L			09/26/17 12:03	1
Carbon disulfide	ND		1.0	0.50	ug/L			09/26/17 12:03	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			09/26/17 12:03	1
Chlorobenzene	ND		0.50	0.25	ug/L			09/26/17 12:03	1
Bromochloromethane	ND		0.50	0.25	ug/L			09/26/17 12:03	1
Chloroethane	ND		1.0	0.40	ug/L			09/26/17 12:03	1
Chloroform	ND		0.50	0.25	ug/L			09/26/17 12:03	1
Chloromethane	ND		0.50	0.25	ug/L			09/26/17 12:03	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			09/26/17 12:03	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/26/17 12:03	1
Dibromochloromethane	ND		0.50	0.25	ug/L			09/26/17 12:03	1
Dibromomethane	ND		0.50	0.25	ug/L			09/26/17 12:03	1
Bromodichloromethane	ND		0.50	0.25	ug/L			09/26/17 12:03	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			09/26/17 12:03	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			09/26/17 12:03	1
Ethylbenzene	ND		0.50	0.25	ug/L			09/26/17 12:03	1
Iodomethane	ND		2.0	1.0	ug/L			09/26/17 12:03	1
Isobutyl alcohol	ND		25	13	ug/L			09/26/17 12:03	1
m,p-Xylene	ND		1.0	0.50	ug/L			09/26/17 12:03	1
Methylacrylonitrile	ND		10	2.5	ug/L			09/26/17 12:03	1
Methyl methacrylate	ND		2.0	1.0	ug/L			09/26/17 12:03	1
Methylene Chloride	ND		2.0	0.88	ug/L			09/26/17 12:03	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			09/26/17 12:03	1
Naphthalene	ND		1.0	0.40	ug/L			09/26/17 12:03	1
o-Xylene	ND		0.50	0.25	ug/L			09/26/17 12:03	1
Propionitrile	ND		20	10	ug/L			09/26/17 12:03	1
Styrene	ND		0.50	0.25	ug/L			09/26/17 12:03	1
t-Butanol	ND		10	5.0	ug/L			09/26/17 12:03	1
Tetrachloroethene	ND		0.50	0.25	ug/L			09/26/17 12:03	1
Tetrahydrofuran	ND		10	5.0	ug/L			09/26/17 12:03	1
Toluene	ND		0.50	0.25	ug/L			09/26/17 12:03	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			09/26/17 12:03	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/26/17 12:03	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			09/26/17 12:03	1
Trichloroethene	ND		0.50	0.25	ug/L			09/26/17 12:03	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			09/26/17 12:03	1
Vinyl acetate	ND		4.0	2.0	ug/L			09/26/17 12:03	1
Vinyl chloride	ND		0.50	0.25	ug/L			09/26/17 12:03	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-192498-1

**Client Sample ID: MW-6**  
**Date Collected: 09/19/17 10:15**  
**Date Received: 09/19/17 18:45**

**Lab Sample ID: 440-192498-4**  
**Matrix: Water**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			09/26/17 12:03	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			09/26/17 12:03	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			09/26/17 12:03	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	5.5	T J	ug/L		2.45			09/26/17 12:03	1
Unknown	10	T J	ug/L		5.97			09/26/17 12:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	105		80 - 128		09/22/17 23:52	1
4-Bromofluorobenzene (Surr)	95		80 - 120		09/22/17 23:52	1
Toluene-d8 (Surr)	107		80 - 128		09/26/17 12:03	1
4-Bromofluorobenzene (Surr)	99		80 - 120		09/26/17 12:03	1
Dibromofluoromethane (Surr)	114		76 - 132		09/22/17 23:52	1
Dibromofluoromethane (Surr)	112		76 - 132		09/26/17 12:03	1

## Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.94	0.23	ug/L		09/24/17 10:31	09/27/17 18:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	50		30 - 120	09/24/17 10:31	09/27/17 18:42	1

## Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	32		5.0	2.5	mg/L			09/21/17 09:15	10

## Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	5.2		0.50	0.25	mg/L		09/26/17 14:30	09/27/17 13:43	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	44		20	10	mg/L			09/27/17 13:33	1
Total Dissolved Solids	3100		20	10	mg/L			09/25/17 13:35	1
Ammonia (as N)	0.81		0.50	0.10	mg/L		09/27/17 03:30	09/27/17 05:00	1
Total Organic Carbon	5.7		0.10	0.050	mg/L			09/20/17 15:02	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	450		4.0	4.0	mg/L			09/20/17 10:35	1

**Client Sample ID: MW-9**  
**Date Collected: 09/19/17 13:45**  
**Date Received: 09/19/17 18:45**

**Lab Sample ID: 440-192498-5**  
**Matrix: Water**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		5.0	2.0	ug/L			09/26/17 12:31	5
1,1,1,2-Tetrachloroethane	ND		2.5	1.3	ug/L			09/26/17 12:31	5
Acrolein	ND		50	2.5	ug/L			09/23/17 00:21	1
Acrylonitrile	ND		50	1.0	ug/L			09/23/17 00:21	1
1,1,1-Trichloroethane	ND		2.5	1.3	ug/L			09/26/17 12:31	5

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-192498-1

**Client Sample ID: MW-9**

**Lab Sample ID: 440-192498-5**

**Date Collected: 09/19/17 13:45**

**Matrix: Water**

**Date Received: 09/19/17 18:45**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2,2-Tetrachloroethane	ND		2.5	1.3	ug/L			09/26/17 12:31	5
1,1,2-Trichloroethane	ND		2.5	1.3	ug/L			09/26/17 12:31	5
1,1-Dichloroethane	ND		2.5	1.3	ug/L			09/26/17 12:31	5
1,1-Dichloroethene	ND		2.5	1.3	ug/L			09/26/17 12:31	5
1,1-Dichloropropene	ND		2.5	1.3	ug/L			09/26/17 12:31	5
1,2,4-Trichlorobenzene	ND		5.0	2.0	ug/L			09/26/17 12:31	5
1,2-Dibromo-3-Chloropropane	ND		5.0	2.5	ug/L			09/26/17 12:31	5
1,2-Dichlorobenzene	ND		2.5	1.3	ug/L			09/26/17 12:31	5
1,2-Dichloroethane	ND		2.5	1.3	ug/L			09/26/17 12:31	5
1,2-Dichloropropane	ND		2.5	1.3	ug/L			09/26/17 12:31	5
1,3-Dichlorobenzene	ND		2.5	1.3	ug/L			09/26/17 12:31	5
1,3-Dichloropropane	ND		2.5	1.3	ug/L			09/26/17 12:31	5
1,4-Dichlorobenzene	ND		2.5	1.3	ug/L			09/26/17 12:31	5
2,2-Dichloropropane	ND		5.0	2.0	ug/L			09/26/17 12:31	5
2-Chloro-1,3-butadiene	ND		5.0	2.5	ug/L			09/26/17 12:31	5
2-Hexanone	ND		25	13	ug/L			09/26/17 12:31	5
Acetone	ND		100	50	ug/L			09/26/17 12:31	5
Acetonitrile	ND		100	50	ug/L			09/26/17 12:31	5
Acrolein	ND		25	13	ug/L			09/26/17 12:31	5
Acrylonitrile	ND		10	5.0	ug/L			09/26/17 12:31	5
Benzene	ND		2.5	1.3	ug/L			09/26/17 12:31	5
Allyl chloride	ND		5.0	2.5	ug/L			09/26/17 12:31	5
Bromoform	ND		5.0	2.0	ug/L			09/26/17 12:31	5
Bromomethane	ND		2.5	1.3	ug/L			09/26/17 12:31	5
Carbon disulfide	ND		5.0	2.5	ug/L			09/26/17 12:31	5
Carbon tetrachloride	ND		2.5	1.3	ug/L			09/26/17 12:31	5
Chlorobenzene	ND		2.5	1.3	ug/L			09/26/17 12:31	5
Bromochloromethane	ND		2.5	1.3	ug/L			09/26/17 12:31	5
Chloroethane	ND		5.0	2.0	ug/L			09/26/17 12:31	5
Chloroform	ND		2.5	1.3	ug/L			09/26/17 12:31	5
Chloromethane	ND		2.5	1.3	ug/L			09/26/17 12:31	5
cis-1,2-Dichloroethene	ND		2.5	1.3	ug/L			09/26/17 12:31	5
cis-1,3-Dichloropropene	ND		2.5	1.3	ug/L			09/26/17 12:31	5
Dibromochloromethane	ND		2.5	1.3	ug/L			09/26/17 12:31	5
Dibromomethane	ND		2.5	1.3	ug/L			09/26/17 12:31	5
Bromodichloromethane	ND		2.5	1.3	ug/L			09/26/17 12:31	5
Dichlorodifluoromethane	ND		5.0	2.0	ug/L			09/26/17 12:31	5
Ethyl methacrylate	ND		10	5.0	ug/L			09/26/17 12:31	5
Ethylbenzene	ND		2.5	1.3	ug/L			09/26/17 12:31	5
Iodomethane	ND		10	5.0	ug/L			09/26/17 12:31	5
Isobutyl alcohol	ND		130	63	ug/L			09/26/17 12:31	5
m,p-Xylene	ND		5.0	2.5	ug/L			09/26/17 12:31	5
Methylacrylonitrile	ND		50	13	ug/L			09/26/17 12:31	5
Methyl methacrylate	ND		10	5.0	ug/L			09/26/17 12:31	5
Methylene Chloride	ND		10	4.4	ug/L			09/26/17 12:31	5
Methyl tert-butyl ether	ND		2.5	1.3	ug/L			09/26/17 12:31	5
Naphthalene	ND		5.0	2.0	ug/L			09/26/17 12:31	5
o-Xylene	ND		2.5	1.3	ug/L			09/26/17 12:31	5
Propionitrile	ND		100	50	ug/L			09/26/17 12:31	5

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-192498-1

**Client Sample ID: MW-9**  
**Date Collected: 09/19/17 13:45**  
**Date Received: 09/19/17 18:45**

**Lab Sample ID: 440-192498-5**  
**Matrix: Water**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	ND		2.5	1.3	ug/L			09/26/17 12:31	5
<b>t-Butanol</b>	<b>70</b>		50	25	ug/L			09/26/17 12:31	5
Tetrachloroethene	ND		2.5	1.3	ug/L			09/26/17 12:31	5
Tetrahydrofuran	ND		50	25	ug/L			09/26/17 12:31	5
Toluene	ND		2.5	1.3	ug/L			09/26/17 12:31	5
trans-1,2-Dichloroethene	ND		2.5	1.3	ug/L			09/26/17 12:31	5
trans-1,3-Dichloropropene	ND		2.5	1.3	ug/L			09/26/17 12:31	5
trans-1,4-Dichloro-2-butene	ND		25	13	ug/L			09/26/17 12:31	5
Trichloroethene	ND		2.5	1.3	ug/L			09/26/17 12:31	5
Trichlorofluoromethane	ND		2.5	1.3	ug/L			09/26/17 12:31	5
Vinyl acetate	ND		20	10	ug/L			09/26/17 12:31	5
Vinyl chloride	ND		2.5	1.3	ug/L			09/26/17 12:31	5
1,2-Dibromoethane (EDB)	ND		2.5	1.3	ug/L			09/26/17 12:31	5
2-Butanone (MEK)	ND		25	13	ug/L			09/26/17 12:31	5
4-Methyl-2-pentanone (MIBK)	ND		25	13	ug/L			09/26/17 12:31	5

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	49	T J	ug/L		5.97			09/26/17 12:31	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	105		80 - 128		09/23/17 00:21	1
4-Bromofluorobenzene (Surr)	94		80 - 120		09/23/17 00:21	1
Toluene-d8 (Surr)	106		80 - 128		09/26/17 12:31	5
4-Bromofluorobenzene (Surr)	100		80 - 120		09/26/17 12:31	5
Dibromofluoromethane (Surr)	113		76 - 132		09/23/17 00:21	1
Dibromofluoromethane (Surr)	111		76 - 132		09/26/17 12:31	5

## Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>1,4-Dioxane</b>	<b>28</b>		0.98	0.24	ug/L		09/24/17 10:31	09/27/17 19:04	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	45		30 - 120	09/24/17 10:31	09/27/17 19:04	1

## Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>460</b>		100	50	mg/L			09/20/17 23:30	200

## Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Potassium</b>	<b>31</b>		0.50	0.25	mg/L		09/26/17 14:30	09/27/17 13:23	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chemical Oxygen Demand</b>	<b>280</b>		20	10	mg/L			09/27/17 13:33	1
<b>Total Dissolved Solids</b>	<b>3900</b>		50	25	mg/L			09/25/17 13:35	1
<b>Ammonia (as N)</b>	<b>10</b>		2.5	0.50	mg/L		09/22/17 04:30	09/22/17 07:00	1
<b>Total Organic Carbon</b>	<b>96</b>		1.0	0.50	mg/L			09/20/17 15:47	10

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Alkalinity as CaCO3</b>	<b>740</b>		4.0	4.0	mg/L			09/20/17 10:48	1

TestAmerica Irvine



# Client Sample Results

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

TestAmerica Job ID: 440-192498-1

**Client Sample ID: MW-14**

**Lab Sample ID: 440-192498-6**

**Date Collected: 09/19/17 07:55**

**Matrix: Water**

**Date Received: 09/19/17 18:45**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			09/26/17 12:59	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			09/26/17 12:59	1
Acrolein	ND		50	2.5	ug/L			09/23/17 00:50	1
Acrylonitrile	ND		50	1.0	ug/L			09/23/17 00:50	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			09/26/17 12:59	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			09/26/17 12:59	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			09/26/17 12:59	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			09/26/17 12:59	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			09/26/17 12:59	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			09/26/17 12:59	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			09/26/17 12:59	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			09/26/17 12:59	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			09/26/17 12:59	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			09/26/17 12:59	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			09/26/17 12:59	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			09/26/17 12:59	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			09/26/17 12:59	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			09/26/17 12:59	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			09/26/17 12:59	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			09/26/17 12:59	1
2-Hexanone	ND		5.0	2.5	ug/L			09/26/17 12:59	1
Acetone	ND		20	10	ug/L			09/26/17 12:59	1
Acetonitrile	ND		20	10	ug/L			09/26/17 12:59	1
Acrolein	ND		5.0	2.5	ug/L			09/26/17 12:59	1
Acrylonitrile	ND		2.0	1.0	ug/L			09/26/17 12:59	1
Benzene	ND		0.50	0.25	ug/L			09/26/17 12:59	1
Allyl chloride	ND		1.0	0.50	ug/L			09/26/17 12:59	1
Bromoform	ND		1.0	0.40	ug/L			09/26/17 12:59	1
Bromomethane	ND		0.50	0.25	ug/L			09/26/17 12:59	1
Carbon disulfide	ND		1.0	0.50	ug/L			09/26/17 12:59	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			09/26/17 12:59	1
Chlorobenzene	ND		0.50	0.25	ug/L			09/26/17 12:59	1
Bromochloromethane	ND		0.50	0.25	ug/L			09/26/17 12:59	1
Chloroethane	ND		1.0	0.40	ug/L			09/26/17 12:59	1
Chloroform	ND		0.50	0.25	ug/L			09/26/17 12:59	1
Chloromethane	ND		0.50	0.25	ug/L			09/26/17 12:59	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			09/26/17 12:59	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/26/17 12:59	1
Dibromochloromethane	ND		0.50	0.25	ug/L			09/26/17 12:59	1
Dibromomethane	ND		0.50	0.25	ug/L			09/26/17 12:59	1
Bromodichloromethane	ND		0.50	0.25	ug/L			09/26/17 12:59	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			09/26/17 12:59	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			09/26/17 12:59	1
Ethylbenzene	ND		0.50	0.25	ug/L			09/26/17 12:59	1
Iodomethane	ND		2.0	1.0	ug/L			09/26/17 12:59	1
Isobutyl alcohol	ND		25	13	ug/L			09/26/17 12:59	1
m,p-Xylene	ND		1.0	0.50	ug/L			09/26/17 12:59	1
Methylacrylonitrile	ND		10	2.5	ug/L			09/26/17 12:59	1
Methyl methacrylate	ND		2.0	1.0	ug/L			09/26/17 12:59	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-192498-1

**Client Sample ID: MW-14**

**Date Collected: 09/19/17 07:55**

**Date Received: 09/19/17 18:45**

**Lab Sample ID: 440-192498-6**

**Matrix: Water**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	ND		2.0	0.88	ug/L			09/26/17 12:59	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			09/26/17 12:59	1
Naphthalene	ND		1.0	0.40	ug/L			09/26/17 12:59	1
o-Xylene	ND		0.50	0.25	ug/L			09/26/17 12:59	1
Propionitrile	ND		20	10	ug/L			09/26/17 12:59	1
Styrene	ND		0.50	0.25	ug/L			09/26/17 12:59	1
t-Butanol	ND		10	5.0	ug/L			09/26/17 12:59	1
Tetrachloroethene	ND		0.50	0.25	ug/L			09/26/17 12:59	1
Tetrahydrofuran	ND		10	5.0	ug/L			09/26/17 12:59	1
Toluene	ND		0.50	0.25	ug/L			09/26/17 12:59	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			09/26/17 12:59	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/26/17 12:59	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			09/26/17 12:59	1
Trichloroethene	ND		0.50	0.25	ug/L			09/26/17 12:59	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			09/26/17 12:59	1
Vinyl acetate	ND		4.0	2.0	ug/L			09/26/17 12:59	1
Vinyl chloride	ND		0.50	0.25	ug/L			09/26/17 12:59	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			09/26/17 12:59	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			09/26/17 12:59	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			09/26/17 12:59	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	10	T J	ug/L		5.97			09/26/17 12:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	105		80 - 128		09/23/17 00:50	1
4-Bromofluorobenzene (Surr)	97		80 - 120		09/23/17 00:50	1
Toluene-d8 (Surr)	105		80 - 128		09/26/17 12:59	1
4-Bromofluorobenzene (Surr)	101		80 - 120		09/26/17 12:59	1
Dibromofluoromethane (Surr)	115		76 - 132		09/23/17 00:50	1
Dibromofluoromethane (Surr)	113		76 - 132		09/26/17 12:59	1

## Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.94	0.24	ug/L		09/24/17 10:31	09/27/17 19:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	58		30 - 120	09/24/17 10:31	09/27/17 19:26	1

## Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	79		5.0	2.5	mg/L			09/21/17 10:02	10

## Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	10		0.50	0.25	mg/L		09/26/17 14:30	09/27/17 13:46	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	38		20	10	mg/L			09/27/17 13:34	1
Total Dissolved Solids	5300		100	50	mg/L			09/25/17 13:35	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-192498-1

**Client Sample ID: MW-14**

**Date Collected: 09/19/17 07:55**

**Date Received: 09/19/17 18:45**

**Lab Sample ID: 440-192498-6**

**Matrix: Water**

## General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	0.80		0.50	0.10	mg/L		09/22/17 04:30	09/22/17 07:00	1
Total Organic Carbon	9.6		0.10	0.050	mg/L			09/20/17 15:19	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	540		4.0	4.0	mg/L			09/20/17 10:59	1

**Client Sample ID: PZ-2**

**Date Collected: 09/19/17 12:25**

**Date Received: 09/19/17 18:45**

**Lab Sample ID: 440-192498-7**

**Matrix: Water**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			09/26/17 13:54	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			09/26/17 13:54	1
Acrolein	ND		50	2.5	ug/L			09/23/17 01:20	1
Acrylonitrile	ND		50	1.0	ug/L			09/23/17 01:20	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			09/26/17 13:54	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			09/26/17 13:54	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			09/26/17 13:54	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			09/26/17 13:54	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			09/26/17 13:54	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			09/26/17 13:54	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			09/26/17 13:54	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			09/26/17 13:54	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			09/26/17 13:54	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			09/26/17 13:54	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			09/26/17 13:54	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			09/26/17 13:54	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			09/26/17 13:54	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			09/26/17 13:54	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			09/26/17 13:54	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			09/26/17 13:54	1
2-Hexanone	ND		5.0	2.5	ug/L			09/26/17 13:54	1
Acetone	ND		20	10	ug/L			09/26/17 13:54	1
Acetonitrile	ND		20	10	ug/L			09/26/17 13:54	1
Acrolein	ND		5.0	2.5	ug/L			09/26/17 13:54	1
Acrylonitrile	ND		2.0	1.0	ug/L			09/26/17 13:54	1
Benzene	ND		0.50	0.25	ug/L			09/26/17 13:54	1
Allyl chloride	ND		1.0	0.50	ug/L			09/26/17 13:54	1
Bromoform	ND		1.0	0.40	ug/L			09/26/17 13:54	1
Bromomethane	ND		0.50	0.25	ug/L			09/26/17 13:54	1
Carbon disulfide	ND		1.0	0.50	ug/L			09/26/17 13:54	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			09/26/17 13:54	1
Chlorobenzene	ND		0.50	0.25	ug/L			09/26/17 13:54	1
Bromochloromethane	ND		0.50	0.25	ug/L			09/26/17 13:54	1
Chloroethane	ND		1.0	0.40	ug/L			09/26/17 13:54	1
Chloroform	ND		0.50	0.25	ug/L			09/26/17 13:54	1
Chloromethane	ND		0.50	0.25	ug/L			09/26/17 13:54	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			09/26/17 13:54	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/26/17 13:54	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-192498-1

**Client Sample ID: PZ-2**

**Lab Sample ID: 440-192498-7**

**Date Collected: 09/19/17 12:25**

**Matrix: Water**

**Date Received: 09/19/17 18:45**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibromochloromethane	ND		0.50	0.25	ug/L			09/26/17 13:54	1
Dibromomethane	ND		0.50	0.25	ug/L			09/26/17 13:54	1
Bromodichloromethane	ND		0.50	0.25	ug/L			09/26/17 13:54	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			09/26/17 13:54	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			09/26/17 13:54	1
Ethylbenzene	ND		0.50	0.25	ug/L			09/26/17 13:54	1
Iodomethane	ND		2.0	1.0	ug/L			09/26/17 13:54	1
Isobutyl alcohol	ND		25	13	ug/L			09/26/17 13:54	1
m,p-Xylene	ND		1.0	0.50	ug/L			09/26/17 13:54	1
Methylacrylonitrile	ND		10	2.5	ug/L			09/26/17 13:54	1
Methyl methacrylate	ND		2.0	1.0	ug/L			09/26/17 13:54	1
Methylene Chloride	ND		2.0	0.88	ug/L			09/26/17 13:54	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			09/26/17 13:54	1
Naphthalene	ND		1.0	0.40	ug/L			09/26/17 13:54	1
o-Xylene	ND		0.50	0.25	ug/L			09/26/17 13:54	1
Propionitrile	ND		20	10	ug/L			09/26/17 13:54	1
Styrene	ND		0.50	0.25	ug/L			09/26/17 13:54	1
t-Butanol	ND		10	5.0	ug/L			09/26/17 13:54	1
Tetrachloroethene	ND		0.50	0.25	ug/L			09/26/17 13:54	1
Tetrahydrofuran	ND		10	5.0	ug/L			09/26/17 13:54	1
Toluene	ND		0.50	0.25	ug/L			09/26/17 13:54	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			09/26/17 13:54	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/26/17 13:54	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			09/26/17 13:54	1
Trichloroethene	ND		0.50	0.25	ug/L			09/26/17 13:54	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			09/26/17 13:54	1
Vinyl acetate	ND		4.0	2.0	ug/L			09/26/17 13:54	1
Vinyl chloride	ND		0.50	0.25	ug/L			09/26/17 13:54	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			09/26/17 13:54	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			09/26/17 13:54	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			09/26/17 13:54	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	11	TJ	ug/L		5.97			09/26/17 13:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	107		80 - 128		09/23/17 01:20	1
4-Bromofluorobenzene (Surr)	94		80 - 120		09/23/17 01:20	1
Toluene-d8 (Surr)	106		80 - 128		09/26/17 13:54	1
4-Bromofluorobenzene (Surr)	101		80 - 120		09/26/17 13:54	1
Dibromofluoromethane (Surr)	111		76 - 132		09/23/17 01:20	1
Dibromofluoromethane (Surr)	118		76 - 132		09/26/17 13:54	1

## Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.95	0.24	ug/L		09/24/17 10:31	09/27/17 19:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	57		30 - 120	09/24/17 10:31	09/27/17 19:48	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-192498-1

## Client Sample ID: PZ-2

Date Collected: 09/19/17 12:25

Date Received: 09/19/17 18:45

## Lab Sample ID: 440-192498-7

Matrix: Water

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	11		5.0	2.5	mg/L			09/21/17 10:25	10

### Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	4.1		0.50	0.25	mg/L		09/26/17 14:30	09/27/17 13:48	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		20	10	mg/L			09/27/17 13:34	1
Total Dissolved Solids	4000		100	50	mg/L			09/25/17 13:35	1
Ammonia (as N)	3.0		0.50	0.10	mg/L		09/22/17 04:30	09/22/17 07:00	1
Total Organic Carbon	2.5		0.10	0.050	mg/L			09/20/17 15:31	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	290		4.0	4.0	mg/L			09/20/17 11:07	1

## Client Sample ID: QCAB

Date Collected: 09/19/17 00:01

Date Received: 09/19/17 18:45

## Lab Sample ID: 440-192498-8

Matrix: Water

### Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			09/26/17 14:22	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			09/26/17 14:22	1
Acrolein	ND		50	2.5	ug/L			09/23/17 01:50	1
Acrylonitrile	ND		50	1.0	ug/L			09/23/17 01:50	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			09/26/17 14:22	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			09/26/17 14:22	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			09/26/17 14:22	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			09/26/17 14:22	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			09/26/17 14:22	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			09/26/17 14:22	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			09/26/17 14:22	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			09/26/17 14:22	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			09/26/17 14:22	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			09/26/17 14:22	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			09/26/17 14:22	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			09/26/17 14:22	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			09/26/17 14:22	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			09/26/17 14:22	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			09/26/17 14:22	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			09/26/17 14:22	1
2-Hexanone	ND		5.0	2.5	ug/L			09/26/17 14:22	1
Acetone	ND		20	10	ug/L			09/26/17 14:22	1
Acetonitrile	ND		20	10	ug/L			09/26/17 14:22	1
Acrolein	ND		5.0	2.5	ug/L			09/26/17 14:22	1
Acrylonitrile	ND		2.0	1.0	ug/L			09/26/17 14:22	1
Benzene	ND		0.50	0.25	ug/L			09/26/17 14:22	1
Allyl chloride	ND		1.0	0.50	ug/L			09/26/17 14:22	1
Bromoform	ND		1.0	0.40	ug/L			09/26/17 14:22	1
Bromomethane	ND		0.50	0.25	ug/L			09/26/17 14:22	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-192498-1

**Client Sample ID: QCAB**

**Lab Sample ID: 440-192498-8**

**Date Collected: 09/19/17 00:01**

**Matrix: Water**

**Date Received: 09/19/17 18:45**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		1.0	0.50	ug/L			09/26/17 14:22	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			09/26/17 14:22	1
Chlorobenzene	ND		0.50	0.25	ug/L			09/26/17 14:22	1
Bromochloromethane	ND		0.50	0.25	ug/L			09/26/17 14:22	1
Chloroethane	ND		1.0	0.40	ug/L			09/26/17 14:22	1
Chloroform	ND		0.50	0.25	ug/L			09/26/17 14:22	1
Chloromethane	ND		0.50	0.25	ug/L			09/26/17 14:22	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			09/26/17 14:22	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/26/17 14:22	1
Dibromochloromethane	ND		0.50	0.25	ug/L			09/26/17 14:22	1
Dibromomethane	ND		0.50	0.25	ug/L			09/26/17 14:22	1
Bromodichloromethane	ND		0.50	0.25	ug/L			09/26/17 14:22	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			09/26/17 14:22	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			09/26/17 14:22	1
Ethylbenzene	ND		0.50	0.25	ug/L			09/26/17 14:22	1
Iodomethane	ND		2.0	1.0	ug/L			09/26/17 14:22	1
Isobutyl alcohol	ND		25	13	ug/L			09/26/17 14:22	1
m,p-Xylene	ND		1.0	0.50	ug/L			09/26/17 14:22	1
Methylacrylonitrile	ND		10	2.5	ug/L			09/26/17 14:22	1
Methyl methacrylate	ND		2.0	1.0	ug/L			09/26/17 14:22	1
Methylene Chloride	ND		2.0	0.88	ug/L			09/26/17 14:22	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			09/26/17 14:22	1
Naphthalene	ND		1.0	0.40	ug/L			09/26/17 14:22	1
o-Xylene	ND		0.50	0.25	ug/L			09/26/17 14:22	1
Propionitrile	ND		20	10	ug/L			09/26/17 14:22	1
Styrene	ND		0.50	0.25	ug/L			09/26/17 14:22	1
t-Butanol	ND		10	5.0	ug/L			09/26/17 14:22	1
Tetrachloroethene	ND		0.50	0.25	ug/L			09/26/17 14:22	1
Tetrahydrofuran	ND		10	5.0	ug/L			09/26/17 14:22	1
Toluene	ND		0.50	0.25	ug/L			09/26/17 14:22	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			09/26/17 14:22	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/26/17 14:22	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			09/26/17 14:22	1
Trichloroethene	ND		0.50	0.25	ug/L			09/26/17 14:22	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			09/26/17 14:22	1
Vinyl acetate	ND		4.0	2.0	ug/L			09/26/17 14:22	1
Vinyl chloride	ND		0.50	0.25	ug/L			09/26/17 14:22	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			09/26/17 14:22	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			09/26/17 14:22	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			09/26/17 14:22	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	11	T J	ug/L		5.97			09/26/17 14:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	110		80 - 128		09/23/17 01:50	1
4-Bromofluorobenzene (Surr)	95		80 - 120		09/23/17 01:50	1
Toluene-d8 (Surr)	107		80 - 128		09/26/17 14:22	1
4-Bromofluorobenzene (Surr)	98		80 - 120		09/26/17 14:22	1
Dibromofluoromethane (Surr)	112		76 - 132		09/23/17 01:50	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-192498-1

**Client Sample ID: QCAB**

**Date Collected: 09/19/17 00:01**

**Date Received: 09/19/17 18:45**

**Lab Sample ID: 440-192498-8**

**Matrix: Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	117		76 - 132		09/26/17 14:22	1

**Client Sample ID: QCTB**

**Date Collected: 09/19/17 00:01**

**Date Received: 09/19/17 18:45**

**Lab Sample ID: 440-192498-9**

**Matrix: Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			09/26/17 14:50	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			09/26/17 14:50	1
Acrolein	ND		50	2.5	ug/L			09/23/17 02:19	1
Acrylonitrile	ND		50	1.0	ug/L			09/23/17 02:19	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			09/26/17 14:50	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			09/26/17 14:50	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			09/26/17 14:50	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			09/26/17 14:50	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			09/26/17 14:50	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			09/26/17 14:50	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			09/26/17 14:50	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			09/26/17 14:50	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			09/26/17 14:50	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			09/26/17 14:50	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			09/26/17 14:50	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			09/26/17 14:50	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			09/26/17 14:50	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			09/26/17 14:50	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			09/26/17 14:50	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			09/26/17 14:50	1
2-Hexanone	ND		5.0	2.5	ug/L			09/26/17 14:50	1
Acetone	ND		20	10	ug/L			09/26/17 14:50	1
Acetonitrile	ND		20	10	ug/L			09/26/17 14:50	1
Acrolein	ND		5.0	2.5	ug/L			09/26/17 14:50	1
Acrylonitrile	ND		2.0	1.0	ug/L			09/26/17 14:50	1
Benzene	ND		0.50	0.25	ug/L			09/26/17 14:50	1
Allyl chloride	ND		1.0	0.50	ug/L			09/26/17 14:50	1
Bromoform	ND		1.0	0.40	ug/L			09/26/17 14:50	1
Bromomethane	ND		0.50	0.25	ug/L			09/26/17 14:50	1
Carbon disulfide	ND		1.0	0.50	ug/L			09/26/17 14:50	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			09/26/17 14:50	1
Chlorobenzene	ND		0.50	0.25	ug/L			09/26/17 14:50	1
Bromochloromethane	ND		0.50	0.25	ug/L			09/26/17 14:50	1
Chloroethane	ND		1.0	0.40	ug/L			09/26/17 14:50	1
Chloroform	ND		0.50	0.25	ug/L			09/26/17 14:50	1
Chloromethane	ND		0.50	0.25	ug/L			09/26/17 14:50	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			09/26/17 14:50	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/26/17 14:50	1
Dibromochloromethane	ND		0.50	0.25	ug/L			09/26/17 14:50	1
Dibromomethane	ND		0.50	0.25	ug/L			09/26/17 14:50	1
Bromodichloromethane	ND		0.50	0.25	ug/L			09/26/17 14:50	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-192498-1

**Client Sample ID: QCTB**  
**Date Collected: 09/19/17 00:01**  
**Date Received: 09/19/17 18:45**

**Lab Sample ID: 440-192498-9**  
**Matrix: Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			09/26/17 14:50	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			09/26/17 14:50	1
Ethylbenzene	ND		0.50	0.25	ug/L			09/26/17 14:50	1
Iodomethane	ND		2.0	1.0	ug/L			09/26/17 14:50	1
Isobutyl alcohol	ND		25	13	ug/L			09/26/17 14:50	1
m,p-Xylene	ND		1.0	0.50	ug/L			09/26/17 14:50	1
Methylacrylonitrile	ND		10	2.5	ug/L			09/26/17 14:50	1
Methyl methacrylate	ND		2.0	1.0	ug/L			09/26/17 14:50	1
Methylene Chloride	ND		2.0	0.88	ug/L			09/26/17 14:50	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			09/26/17 14:50	1
Naphthalene	ND		1.0	0.40	ug/L			09/26/17 14:50	1
o-Xylene	ND		0.50	0.25	ug/L			09/26/17 14:50	1
Propionitrile	ND		20	10	ug/L			09/26/17 14:50	1
Styrene	ND		0.50	0.25	ug/L			09/26/17 14:50	1
t-Butanol	ND		10	5.0	ug/L			09/26/17 14:50	1
Tetrachloroethene	ND		0.50	0.25	ug/L			09/26/17 14:50	1
Tetrahydrofuran	ND		10	5.0	ug/L			09/26/17 14:50	1
Toluene	ND		0.50	0.25	ug/L			09/26/17 14:50	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			09/26/17 14:50	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/26/17 14:50	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			09/26/17 14:50	1
Trichloroethene	ND		0.50	0.25	ug/L			09/26/17 14:50	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			09/26/17 14:50	1
Vinyl acetate	ND		4.0	2.0	ug/L			09/26/17 14:50	1
Vinyl chloride	ND		0.50	0.25	ug/L			09/26/17 14:50	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			09/26/17 14:50	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			09/26/17 14:50	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			09/26/17 14:50	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	11	T J	ug/L		5.97			09/26/17 14:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	107		80 - 128		09/23/17 02:19	1
4-Bromofluorobenzene (Surr)	98		80 - 120		09/23/17 02:19	1
Toluene-d8 (Surr)	104		80 - 128		09/26/17 14:50	1
4-Bromofluorobenzene (Surr)	101		80 - 120		09/26/17 14:50	1
Dibromofluoromethane (Surr)	112		76 - 132		09/23/17 02:19	1
Dibromofluoromethane (Surr)	120		76 - 132		09/26/17 14:50	1



# Method Summary

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

TestAmerica Job ID: 440-192498-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL IRV
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL IRV
300.0	Anions, Ion Chromatography	MCAWW	TAL IRV
6010B	Metals (ICP)	SW846	TAL IRV
410.4	COD	MCAWW	TAL IRV
SM 2320B	Alkalinity	SM	TAL IRV
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL IRV
SM 4500 NH3 D	Ammonia	SM	TAL IRV
SM 5310C	TOC	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",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

#### Laboratory References:

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

# Lab Chronicle

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

TestAmerica Job ID: 440-192498-1

**Client Sample ID: DW-1**  
**Date Collected: 09/19/17 10:58**  
**Date Received: 09/19/17 18:45**

**Lab Sample ID: 440-192498-1**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	431277	09/26/17 11:07	MM1	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	430808	09/22/17 21:24	WC	TAL IRV
Total/NA	Prep	3520C			1060 mL	1.0 mL	430983	09/24/17 10:31	JS1	TAL IRV
Total/NA	Analysis	8270C		1			431427	09/27/17 17:34	AI	TAL IRV
Total/NA	Analysis	300.0		200	5 mL	1.0 mL	430059	09/21/17 01:04	NTN	TAL IRV
Total/NA	Analysis	300.0		10			430059	09/21/17 08:05	NTN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	431409	09/26/17 14:30	JL	TAL IRV
Total Recoverable	Analysis	6010B		1			431702	09/27/17 13:37	B1H	TAL IRV
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	431689	09/27/17 13:33	KYP	TAL IRV
Total/NA	Analysis	SM 2320B		1			430142	09/20/17 09:54	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	20 mL	100 mL	430607	09/25/17 13:35	XL	TAL IRV
Total/NA	Prep	SM 4500 NH3 B			50 mL	50 mL	430599	09/22/17 04:30	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			430608	09/22/17 07:00	YZ	TAL IRV
Total/NA	Analysis	SM 5310C		1	100 mL	100 mL	430290	09/20/17 14:20	YZ	TAL IRV

**Client Sample ID: DW-2**  
**Date Collected: 09/19/17 09:10**  
**Date Received: 09/19/17 18:45**

**Lab Sample ID: 440-192498-2**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	431277	09/26/17 09:15	MM1	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	430808	09/22/17 22:53	WC	TAL IRV
Total/NA	Prep	3520C			1050 mL	1.0 mL	430983	09/24/17 10:31	JS1	TAL IRV
Total/NA	Analysis	8270C		1			431427	09/27/17 17:57	AI	TAL IRV
Total/NA	Analysis	300.0		10	5 mL	1.0 mL	430059	09/21/17 08:28	NTN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	431409	09/26/17 14:30	JL	TAL IRV
Total Recoverable	Analysis	6010B		1			431702	09/27/17 13:39	B1H	TAL IRV
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	431689	09/27/17 13:33	KYP	TAL IRV
Total/NA	Analysis	SM 2320B		1			430142	09/20/17 10:13	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	430607	09/25/17 13:35	XL	TAL IRV
Total/NA	Prep	SM 4500 NH3 B			50 mL	50 mL	430599	09/22/17 04:30	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			430608	09/22/17 07:00	YZ	TAL IRV
Total/NA	Analysis	SM 5310C		1	100 mL	100 mL	430290	09/20/17 14:31	YZ	TAL IRV

**Client Sample ID: Extraction Trench**  
**Date Collected: 09/19/17 13:20**  
**Date Received: 09/19/17 18:45**

**Lab Sample ID: 440-192498-3**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		2	10 mL	10 mL	431277	09/26/17 11:35	MM1	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	430808	09/22/17 23:23	WC	TAL IRV

TestAmerica Irvine

# Lab Chronicle

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

TestAmerica Job ID: 440-192498-1

## Client Sample ID: Extraction Trench

Lab Sample ID: 440-192498-3

Date Collected: 09/19/17 13:20

Matrix: Water

Date Received: 09/19/17 18:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			1060 mL	1.0 mL	430983	09/24/17 10:31	JS1	TAL IRV
Total/NA	Analysis	8270C		1			431427	09/27/17 18:19	AI	TAL IRV
Total/NA	Analysis	300.0		10	5 mL	1.0 mL	430059	09/21/17 08:52	NTN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	431409	09/26/17 14:30	JL	TAL IRV
Total Recoverable	Analysis	6010B		1			431702	09/27/17 13:41	B1H	TAL IRV
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	431689	09/27/17 13:33	KYP	TAL IRV
Total/NA	Analysis	SM 2320B		1			430142	09/20/17 10:24	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	20 mL	100 mL	430607	09/25/17 13:35	XL	TAL IRV
Total/NA	Prep	SM 4500 NH3 B			10 mL	50 mL	430599	09/22/17 04:30	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			430608	09/22/17 07:00	YZ	TAL IRV
Total/NA	Analysis	SM 5310C		5	100 mL	100 mL	430942	09/23/17 12:01	YZ	TAL IRV

## Client Sample ID: MW-6

Lab Sample ID: 440-192498-4

Date Collected: 09/19/17 10:15

Matrix: Water

Date Received: 09/19/17 18:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	431277	09/26/17 12:03	MM1	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	430808	09/22/17 23:52	WC	TAL IRV
Total/NA	Prep	3520C			1065 mL	1.0 mL	430983	09/24/17 10:31	JS1	TAL IRV
Total/NA	Analysis	8270C		1			431427	09/27/17 18:42	AI	TAL IRV
Total/NA	Analysis	300.0		10	5 mL	1.0 mL	430059	09/21/17 09:15	NTN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	431409	09/26/17 14:30	JL	TAL IRV
Total Recoverable	Analysis	6010B		1			431702	09/27/17 13:43	B1H	TAL IRV
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	431689	09/27/17 13:33	KYP	TAL IRV
Total/NA	Analysis	SM 2320B		1			430142	09/20/17 10:35	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	430607	09/25/17 13:35	XL	TAL IRV
Total/NA	Prep	SM 4500 NH3 B			50 mL	50 mL	431544	09/27/17 03:30	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			431551	09/27/17 05:00	YZ	TAL IRV
Total/NA	Analysis	SM 5310C		1	100 mL	100 mL	430290	09/20/17 15:02	YZ	TAL IRV

## Client Sample ID: MW-9

Lab Sample ID: 440-192498-5

Date Collected: 09/19/17 13:45

Matrix: Water

Date Received: 09/19/17 18:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		5	10 mL	10 mL	431277	09/26/17 12:31	MM1	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	430808	09/23/17 00:21	WC	TAL IRV
Total/NA	Prep	3520C			1025 mL	1.0 mL	430983	09/24/17 10:31	JS1	TAL IRV
Total/NA	Analysis	8270C		1			431427	09/27/17 19:04	AI	TAL IRV
Total/NA	Analysis	300.0		200			430059	09/20/17 23:30	NTN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	431409	09/26/17 14:30	JL	TAL IRV

TestAmerica Irvine

# Lab Chronicle

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

TestAmerica Job ID: 440-192498-1

**Client Sample ID: MW-9**

**Lab Sample ID: 440-192498-5**

**Date Collected: 09/19/17 13:45**

**Matrix: Water**

**Date Received: 09/19/17 18:45**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Analysis	6010B		1			431702	09/27/17 13:23	B1H	TAL IRV
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	431689	09/27/17 13:33	KYP	TAL IRV
Total/NA	Analysis	SM 2320B		1			430142	09/20/17 10:48	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	20 mL	100 mL	430607	09/25/17 13:35	XL	TAL IRV
Total/NA	Prep	SM 4500 NH3 B			10 mL	50 mL	430599	09/22/17 04:30	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			430608	09/22/17 07:00	YZ	TAL IRV
Total/NA	Analysis	SM 5310C		10	100 mL	100 mL	430290	09/20/17 15:47	YZ	TAL IRV

**Client Sample ID: MW-14**

**Lab Sample ID: 440-192498-6**

**Date Collected: 09/19/17 07:55**

**Matrix: Water**

**Date Received: 09/19/17 18:45**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	431277	09/26/17 12:59	MM1	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	430808	09/23/17 00:50	WC	TAL IRV
Total/NA	Prep	3520C			1060 mL	1.0 mL	430983	09/24/17 10:31	JS1	TAL IRV
Total/NA	Analysis	8270C		1			431427	09/27/17 19:26	AI	TAL IRV
Total/NA	Analysis	300.0		10	5 mL	1.0 mL	430059	09/21/17 10:02	NTN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	431409	09/26/17 14:30	JL	TAL IRV
Total Recoverable	Analysis	6010B		1			431702	09/27/17 13:46	B1H	TAL IRV
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	431689	09/27/17 13:34	KYP	TAL IRV
Total/NA	Analysis	SM 2320B		1			430142	09/20/17 10:59	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	430607	09/25/17 13:35	XL	TAL IRV
Total/NA	Prep	SM 4500 NH3 B			50 mL	50 mL	430599	09/22/17 04:30	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			430608	09/22/17 07:00	YZ	TAL IRV
Total/NA	Analysis	SM 5310C		1	100 mL	100 mL	430290	09/20/17 15:19	YZ	TAL IRV

**Client Sample ID: PZ-2**

**Lab Sample ID: 440-192498-7**

**Date Collected: 09/19/17 12:25**

**Matrix: Water**

**Date Received: 09/19/17 18:45**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	431277	09/26/17 13:54	MM1	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	430808	09/23/17 01:20	WC	TAL IRV
Total/NA	Prep	3520C			1050 mL	1.0 mL	430983	09/24/17 10:31	JS1	TAL IRV
Total/NA	Analysis	8270C		1			431427	09/27/17 19:48	AI	TAL IRV
Total/NA	Analysis	300.0		10	5 mL	1.0 mL	430059	09/21/17 10:25	NTN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	431409	09/26/17 14:30	JL	TAL IRV
Total Recoverable	Analysis	6010B		1			431702	09/27/17 13:48	B1H	TAL IRV
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	431689	09/27/17 13:34	KYP	TAL IRV
Total/NA	Analysis	SM 2320B		1			430142	09/20/17 11:07	YZ	TAL IRV

TestAmerica Irvine

# Lab Chronicle

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

TestAmerica Job ID: 440-192498-1

**Client Sample ID: PZ-2**

**Lab Sample ID: 440-192498-7**

**Date Collected: 09/19/17 12:25**

**Matrix: Water**

**Date Received: 09/19/17 18:45**

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	10 mL	100 mL	430607	09/25/17 13:35	XL	TAL IRV
Total/NA	Prep	SM 4500 NH3 B			50 mL	50 mL	430599	09/22/17 04:30	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			430608	09/22/17 07:00	YZ	TAL IRV
Total/NA	Analysis	SM 5310C		1	100 mL	100 mL	430290	09/20/17 15:31	YZ	TAL IRV

**Client Sample ID: QCAB**

**Lab Sample ID: 440-192498-8**

**Date Collected: 09/19/17 00:01**

**Matrix: Water**

**Date Received: 09/19/17 18:45**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	431277	09/26/17 14:22	MM1	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	430808	09/23/17 01:50	WC	TAL IRV

**Client Sample ID: QCTB**

**Lab Sample ID: 440-192498-9**

**Date Collected: 09/19/17 00:01**

**Matrix: Water**

**Date Received: 09/19/17 18:45**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	431277	09/26/17 14:50	MM1	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	430808	09/23/17 02:19	WC	TAL IRV

**Laboratory References:**

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

# QC Sample Results

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

TestAmerica Job ID: 440-192498-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 440-430808/3**  
**Matrix: Water**  
**Analysis Batch: 430808**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acrolein	ND		50	2.5	ug/L			09/22/17 20:24	1
Acrylonitrile	ND		50	1.0	ug/L			09/22/17 20:24	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	104		80 - 128		09/22/17 20:24	1
4-Bromofluorobenzene (Surr)	99		80 - 120		09/22/17 20:24	1
Dibromofluoromethane (Surr)	114		76 - 132		09/22/17 20:24	1

**Lab Sample ID: LCS 440-430808/4**  
**Matrix: Water**  
**Analysis Batch: 430808**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acrolein	25.0	23.0	J	ug/L		92	10 - 145
Acrylonitrile	250	211		ug/L		84	48 - 140

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	104		80 - 128
4-Bromofluorobenzene (Surr)	95		80 - 120
Dibromofluoromethane (Surr)	111		76 - 132

**Lab Sample ID: 440-192498-1 MS**  
**Matrix: Water**  
**Analysis Batch: 430808**

**Client Sample ID: DW-1**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acrolein	ND		25.0	26.7	J	ug/L		107	10 - 147
Acrylonitrile	ND		250	240		ug/L		96	38 - 144

Surrogate	MS %Recovery	MS Qualifier	Limits
Toluene-d8 (Surr)	96		80 - 128
4-Bromofluorobenzene (Surr)	92		80 - 120
Dibromofluoromethane (Surr)	111		76 - 132

**Lab Sample ID: 440-192498-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 430808**

**Client Sample ID: DW-1**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acrolein	ND		25.0	23.9	J	ug/L		96	10 - 147	11	40
Acrylonitrile	ND		250	230		ug/L		92	38 - 144	4	40

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Toluene-d8 (Surr)	102		80 - 128
4-Bromofluorobenzene (Surr)	94		80 - 120
Dibromofluoromethane (Surr)	111		76 - 132

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-192498-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 440-431277/4**

**Matrix: Water**

**Analysis Batch: 431277**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			09/26/17 08:18	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			09/26/17 08:18	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			09/26/17 08:18	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			09/26/17 08:18	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			09/26/17 08:18	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			09/26/17 08:18	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			09/26/17 08:18	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			09/26/17 08:18	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			09/26/17 08:18	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			09/26/17 08:18	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			09/26/17 08:18	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			09/26/17 08:18	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			09/26/17 08:18	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			09/26/17 08:18	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			09/26/17 08:18	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			09/26/17 08:18	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			09/26/17 08:18	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			09/26/17 08:18	1
2-Hexanone	ND		5.0	2.5	ug/L			09/26/17 08:18	1
Acetone	ND		20	10	ug/L			09/26/17 08:18	1
Acetonitrile	ND		20	10	ug/L			09/26/17 08:18	1
Acrolein	ND		5.0	2.5	ug/L			09/26/17 08:18	1
Acrylonitrile	ND		2.0	1.0	ug/L			09/26/17 08:18	1
Benzene	ND		0.50	0.25	ug/L			09/26/17 08:18	1
Allyl chloride	ND		1.0	0.50	ug/L			09/26/17 08:18	1
Bromoform	ND		1.0	0.40	ug/L			09/26/17 08:18	1
Bromomethane	ND		0.50	0.25	ug/L			09/26/17 08:18	1
Carbon disulfide	ND		1.0	0.50	ug/L			09/26/17 08:18	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			09/26/17 08:18	1
Chlorobenzene	ND		0.50	0.25	ug/L			09/26/17 08:18	1
Bromochloromethane	ND		0.50	0.25	ug/L			09/26/17 08:18	1
Chloroethane	ND		1.0	0.40	ug/L			09/26/17 08:18	1
Chloroform	ND		0.50	0.25	ug/L			09/26/17 08:18	1
Chloromethane	ND		0.50	0.25	ug/L			09/26/17 08:18	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			09/26/17 08:18	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/26/17 08:18	1
Dibromochloromethane	ND		0.50	0.25	ug/L			09/26/17 08:18	1
Dibromomethane	ND		0.50	0.25	ug/L			09/26/17 08:18	1
Bromodichloromethane	ND		0.50	0.25	ug/L			09/26/17 08:18	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			09/26/17 08:18	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			09/26/17 08:18	1
Ethylbenzene	ND		0.50	0.25	ug/L			09/26/17 08:18	1
Iodomethane	ND		2.0	1.0	ug/L			09/26/17 08:18	1
Isobutyl alcohol	ND		25	13	ug/L			09/26/17 08:18	1
m,p-Xylene	ND		1.0	0.50	ug/L			09/26/17 08:18	1
Methylacrylonitrile	ND		10	2.5	ug/L			09/26/17 08:18	1
Methyl methacrylate	ND		2.0	1.0	ug/L			09/26/17 08:18	1
Methylene Chloride	ND		2.0	0.88	ug/L			09/26/17 08:18	1

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-192498-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 440-431277/4**  
**Matrix: Water**  
**Analysis Batch: 431277**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			09/26/17 08:18	1
Naphthalene	ND		1.0	0.40	ug/L			09/26/17 08:18	1
o-Xylene	ND		0.50	0.25	ug/L			09/26/17 08:18	1
Propionitrile	ND		20	10	ug/L			09/26/17 08:18	1
Styrene	ND		0.50	0.25	ug/L			09/26/17 08:18	1
t-Butanol	ND		10	5.0	ug/L			09/26/17 08:18	1
Tetrachloroethene	ND		0.50	0.25	ug/L			09/26/17 08:18	1
Tetrahydrofuran	ND		10	5.0	ug/L			09/26/17 08:18	1
Toluene	ND		0.50	0.25	ug/L			09/26/17 08:18	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			09/26/17 08:18	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/26/17 08:18	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			09/26/17 08:18	1
Trichloroethene	ND		0.50	0.25	ug/L			09/26/17 08:18	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			09/26/17 08:18	1
Vinyl acetate	ND		4.0	2.0	ug/L			09/26/17 08:18	1
Vinyl chloride	ND		0.50	0.25	ug/L			09/26/17 08:18	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			09/26/17 08:18	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			09/26/17 08:18	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			09/26/17 08:18	1

Tentatively Identified Compound	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L					09/26/17 08:18	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	108		80 - 128		09/26/17 08:18	1
4-Bromofluorobenzene (Surr)	100		80 - 120		09/26/17 08:18	1
Dibromofluoromethane (Surr)	116		76 - 132		09/26/17 08:18	1

**Lab Sample ID: LCS 440-431277/5**  
**Matrix: Water**  
**Analysis Batch: 431277**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,3-Trichloropropane	25.0	26.1		ug/L		104	63 - 130
1,1,1,2-Tetrachloroethane	25.0	29.4		ug/L		118	60 - 141
1,1,1-Trichloroethane	25.0	27.4		ug/L		110	70 - 130
1,1,2,2-Tetrachloroethane	25.0	25.2		ug/L		101	63 - 130
1,1,2-Trichloroethane	25.0	28.0		ug/L		112	70 - 130
1,1-Dichloroethane	25.0	26.1		ug/L		104	64 - 130
1,1-Dichloroethene	25.0	23.1		ug/L		93	70 - 130
1,1-Dichloropropene	25.0	25.5		ug/L		102	70 - 130
1,2,4-Trichlorobenzene	25.0	28.3		ug/L		113	60 - 140
1,2-Dibromo-3-Chloropropane	25.0	27.7		ug/L		111	52 - 140
1,2-Dichlorobenzene	25.0	25.6		ug/L		102	70 - 130
1,2-Dichloroethane	25.0	26.8		ug/L		107	57 - 138
1,2-Dichloropropane	25.0	25.7		ug/L		103	67 - 130
1,3-Dichlorobenzene	25.0	25.1		ug/L		101	70 - 130

TestAmerica Irvine



# QC Sample Results

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

TestAmerica Job ID: 440-192498-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 440-431277/5**

**Matrix: Water**

**Analysis Batch: 431277**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3-Dichloropropane	25.0	26.6		ug/L		106	70 - 130
1,4-Dichlorobenzene	25.0	25.3		ug/L		101	70 - 130
2,2-Dichloropropane	25.0	28.8		ug/L		115	68 - 141
2-Hexanone	25.0	31.2		ug/L		125	10 - 150
Acetone	25.0	30.9		ug/L		123	10 - 150
Acrolein	25.0	34.0		ug/L		136	10 - 145
Acrylonitrile	250	290		ug/L		116	48 - 140
Benzene	25.0	26.0		ug/L		104	68 - 130
Bromoform	25.0	32.5		ug/L		130	60 - 148
Bromomethane	25.0	23.9		ug/L		96	64 - 139
Carbon disulfide	25.0	24.5		ug/L		98	52 - 136
Carbon tetrachloride	25.0	29.0		ug/L		116	60 - 150
Chlorobenzene	25.0	25.5		ug/L		102	70 - 130
Bromochloromethane	25.0	26.0		ug/L		104	70 - 130
Chloroethane	25.0	22.8		ug/L		91	64 - 135
Chloroform	25.0	26.2		ug/L		105	70 - 130
Chloromethane	25.0	24.1		ug/L		96	47 - 140
cis-1,2-Dichloroethene	25.0	26.3		ug/L		105	70 - 133
cis-1,3-Dichloropropene	25.0	28.1		ug/L		113	70 - 133
Dibromochloromethane	25.0	31.0		ug/L		124	69 - 145
Dibromomethane	25.0	26.0		ug/L		104	70 - 130
Bromodichloromethane	25.0	28.4		ug/L		114	70 - 132
Dichlorodifluoromethane	25.0	22.8		ug/L		91	29 - 150
Ethylbenzene	25.0	25.3		ug/L		101	70 - 130
m,p-Xylene	25.0	25.2		ug/L		101	70 - 130
Methylene Chloride	25.0	23.2		ug/L		93	52 - 130
Methyl tert-butyl ether	25.0	26.7		ug/L		107	63 - 131
Naphthalene	25.0	28.5		ug/L		114	60 - 140
o-Xylene	25.0	26.4		ug/L		106	70 - 130
Styrene	25.0	25.7		ug/L		103	70 - 134
t-Butanol	250	266		ug/L		106	70 - 130
Tetrachloroethene	25.0	26.2		ug/L		105	70 - 130
Toluene	25.0	27.0		ug/L		108	70 - 130
trans-1,2-Dichloroethene	25.0	24.4		ug/L		97	70 - 130
trans-1,3-Dichloropropene	25.0	27.8		ug/L		111	70 - 132
Trichloroethene	25.0	25.3		ug/L		101	70 - 130
Trichlorofluoromethane	25.0	27.1		ug/L		108	60 - 150
Vinyl acetate	25.0	29.5		ug/L		118	48 - 140
Vinyl chloride	25.0	22.1		ug/L		89	59 - 133
1,2-Dibromoethane (EDB)	25.0	26.4		ug/L		106	70 - 130
2-Butanone (MEK)	25.0	23.2		ug/L		93	44 - 150
4-Methyl-2-pentanone (MIBK)	25.0	31.7		ug/L		127	59 - 149

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Toluene-d8 (Surr)	107		80 - 128
4-Bromofluorobenzene (Surr)	101		80 - 120
Dibromofluoromethane (Surr)	106		76 - 132

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-192498-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 440-192498-2 MS**

**Matrix: Water**

**Analysis Batch: 431277**

**Client Sample ID: DW-2**

**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,3-Trichloropropane	ND		25.0	24.0		ug/L		96	60 - 130
1,1,1,2-Tetrachloroethane	ND		25.0	28.8		ug/L		115	60 - 149
1,1,1-Trichloroethane	ND		25.0	27.4		ug/L		109	70 - 130
1,1,2,2-Tetrachloroethane	ND		25.0	24.1		ug/L		96	63 - 130
1,1,2-Trichloroethane	ND		25.0	26.7		ug/L		107	70 - 130
1,1-Dichloroethane	ND		25.0	25.7		ug/L		103	65 - 130
1,1-Dichloroethene	ND		25.0	25.6		ug/L		102	70 - 130
1,1-Dichloropropene	ND		25.0	26.8		ug/L		107	64 - 130
1,2,4-Trichlorobenzene	ND		25.0	31.5		ug/L		126	60 - 140
1,2-Dibromo-3-Chloropropane	ND		25.0	26.7		ug/L		107	48 - 140
1,2-Dichlorobenzene	ND		25.0	26.2		ug/L		105	70 - 130
1,2-Dichloroethane	ND		25.0	27.6		ug/L		110	56 - 146
1,2-Dichloropropane	ND		25.0	26.4		ug/L		106	69 - 130
1,3-Dichlorobenzene	ND		25.0	25.2		ug/L		101	70 - 130
1,3-Dichloropropane	ND		25.0	25.2		ug/L		101	70 - 130
1,4-Dichlorobenzene	ND		25.0	25.1		ug/L		101	70 - 130
2,2-Dichloropropane	ND		25.0	29.1		ug/L		117	69 - 138
2-Hexanone	ND		25.0	28.3		ug/L		113	10 - 150
Acetone	ND	F1	25.0	38.8	F1	ug/L		155	10 - 150
Acrolein	ND		25.0	34.9		ug/L		140	10 - 147
Acrylonitrile	ND		25.0	26.9		ug/L		108	38 - 144
Benzene	ND		25.0	26.6		ug/L		106	66 - 130
Bromoform	ND		25.0	31.0		ug/L		124	59 - 150
Bromomethane	ND		25.0	24.9		ug/L		100	62 - 131
Carbon disulfide	ND		25.0	24.9		ug/L		100	49 - 140
Carbon tetrachloride	ND		25.0	29.1		ug/L		116	60 - 150
Chlorobenzene	ND		25.0	25.0		ug/L		100	70 - 130
Bromochloromethane	ND		25.0	27.4		ug/L		110	70 - 130
Chloroethane	ND		25.0	23.1		ug/L		92	68 - 130
Chloroform	ND		25.0	26.1		ug/L		105	70 - 130
Chloromethane	ND		25.0	25.3		ug/L		101	39 - 144
cis-1,2-Dichloroethene	ND		25.0	26.4		ug/L		106	70 - 130
cis-1,3-Dichloropropene	ND		25.0	28.5		ug/L		114	70 - 133
Dibromochloromethane	ND		25.0	30.4		ug/L		121	70 - 148
Dibromomethane	ND		25.0	26.3		ug/L		105	70 - 130
Bromodichloromethane	ND		25.0	29.4		ug/L		118	70 - 138
Dichlorodifluoromethane	ND		25.0	24.5		ug/L		98	25 - 142
Ethylbenzene	ND		25.0	24.8		ug/L		99	70 - 130
m,p-Xylene	ND		25.0	24.7		ug/L		99	70 - 133
Methylene Chloride	ND		25.0	23.6		ug/L		94	52 - 130
Methyl tert-butyl ether	ND		25.0	27.7		ug/L		111	70 - 130
Naphthalene	ND		25.0	28.7		ug/L		115	60 - 140
o-Xylene	ND		25.0	25.4		ug/L		102	70 - 133
Styrene	ND		25.0	25.1		ug/L		101	29 - 150
t-Butanol	ND		25.0	24.9		ug/L		100	70 - 130
Tetrachloroethene	ND		25.0	26.0		ug/L		104	70 - 137
Toluene	ND		25.0	25.8		ug/L		103	70 - 130
trans-1,2-Dichloroethene	ND		25.0	25.4		ug/L		102	70 - 130

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-192498-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 440-192498-2 MS**

**Matrix: Water**

**Analysis Batch: 431277**

**Client Sample ID: DW-2**

**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
trans-1,3-Dichloropropene	ND		25.0	28.4		ug/L		114	70 - 138
Trichloroethene	ND		25.0	25.0		ug/L		100	70 - 130
Trichlorofluoromethane	ND		25.0	27.4		ug/L		109	60 - 150
Vinyl acetate	ND		25.0	31.4		ug/L		126	23 - 150
Vinyl chloride	ND		25.0	22.2		ug/L		89	50 - 137
1,2-Dibromoethane (EDB)	ND		25.0	25.7		ug/L		103	70 - 131
2-Butanone (MEK)	ND		25.0	25.8		ug/L		103	48 - 140
4-Methyl-2-pentanone (MIBK)	ND		25.0	28.6		ug/L		114	52 - 150

Surrogate	MS %Recovery	MS Qualifier	MS Limits
Toluene-d8 (Surr)	102		80 - 128
4-Bromofluorobenzene (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	107		76 - 132

**Lab Sample ID: 440-192498-2 MSD**

**Matrix: Water**

**Analysis Batch: 431277**

**Client Sample ID: DW-2**

**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,3-Trichloropropane	ND		25.0	22.2		ug/L		89	60 - 130	8	30
1,1,1,2-Tetrachloroethane	ND		25.0	26.4		ug/L		106	60 - 149	9	20
1,1,1-Trichloroethane	ND		25.0	24.3		ug/L		97	70 - 130	12	20
1,1,2,2-Tetrachloroethane	ND		25.0	22.0		ug/L		88	63 - 130	9	30
1,1,2-Trichloroethane	ND		25.0	24.4		ug/L		97	70 - 130	9	25
1,1-Dichloroethane	ND		25.0	23.7		ug/L		95	65 - 130	8	20
1,1-Dichloroethene	ND		25.0	22.6		ug/L		90	70 - 130	12	20
1,1-Dichloropropene	ND		25.0	24.0		ug/L		96	64 - 130	11	20
1,2,4-Trichlorobenzene	ND		25.0	27.9		ug/L		112	60 - 140	12	20
1,2-Dibromo-3-Chloropropane	ND		25.0	23.2		ug/L		93	48 - 140	14	30
1,2-Dichlorobenzene	ND		25.0	23.6		ug/L		94	70 - 130	10	20
1,2-Dichloroethane	ND		25.0	24.8		ug/L		99	56 - 146	11	20
1,2-Dichloropropane	ND		25.0	23.6		ug/L		95	69 - 130	11	20
1,3-Dichlorobenzene	ND		25.0	22.7		ug/L		91	70 - 130	11	20
1,3-Dichloropropane	ND		25.0	23.4		ug/L		94	70 - 130	8	25
1,4-Dichlorobenzene	ND		25.0	23.3		ug/L		93	70 - 130	8	20
2,2-Dichloropropane	ND		25.0	26.8		ug/L		107	69 - 138	8	25
2-Hexanone	ND		25.0	24.0		ug/L		96	10 - 150	16	35
Acetone	ND	F1	25.0	32.1		ug/L		128	10 - 150	19	35
Acrolein	ND		25.0	31.0		ug/L		124	10 - 147	12	40
Acrylonitrile	ND		25.0	24.2		ug/L		97	38 - 144	11	40
Benzene	ND		25.0	24.0		ug/L		96	66 - 130	10	20
Bromoform	ND		25.0	28.0		ug/L		112	59 - 150	10	25
Bromomethane	ND		25.0	22.5		ug/L		90	62 - 131	10	25
Carbon disulfide	ND		25.0	21.9		ug/L		87	49 - 140	13	20
Carbon tetrachloride	ND		25.0	25.5		ug/L		102	60 - 150	13	25
Chlorobenzene	ND		25.0	22.9		ug/L		91	70 - 130	9	20
Bromochloromethane	ND		25.0	24.0		ug/L		96	70 - 130	13	25
Chloroethane	ND		25.0	20.6		ug/L		82	68 - 130	11	25

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-192498-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 440-192498-2 MSD**  
**Matrix: Water**  
**Analysis Batch: 431277**

**Client Sample ID: DW-2**  
**Prep Type: Total/NA**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Chloroform	ND		25.0	23.4		ug/L		94	70 - 130	11	20
Chloromethane	ND		25.0	22.4		ug/L		90	39 - 144	12	25
cis-1,2-Dichloroethene	ND		25.0	23.8		ug/L		95	70 - 130	10	20
cis-1,3-Dichloropropene	ND		25.0	26.0		ug/L		104	70 - 133	9	20
Dibromochloromethane	ND		25.0	27.2		ug/L		109	70 - 148	11	25
Dibromomethane	ND		25.0	23.4		ug/L		93	70 - 130	12	25
Bromodichloromethane	ND		25.0	26.4		ug/L		106	70 - 138	11	20
Dichlorodifluoromethane	ND		25.0	20.5		ug/L		82	25 - 142	18	30
Ethylbenzene	ND		25.0	22.6		ug/L		91	70 - 130	9	20
m,p-Xylene	ND		25.0	22.2		ug/L		89	70 - 133	10	25
Methylene Chloride	ND		25.0	20.6		ug/L		82	52 - 130	14	20
Methyl tert-butyl ether	ND		25.0	25.5		ug/L		102	70 - 130	8	25
Naphthalene	ND		25.0	25.9		ug/L		103	60 - 140	10	30
o-Xylene	ND		25.0	22.8		ug/L		91	70 - 133	11	20
Styrene	ND		25.0	22.7		ug/L		91	29 - 150	10	35
t-Butanol	ND		250	231		ug/L		92	70 - 130	8	25
Tetrachloroethene	ND		25.0	23.3		ug/L		93	70 - 137	11	20
Toluene	ND		25.0	23.5		ug/L		94	70 - 130	9	20
trans-1,2-Dichloroethene	ND		25.0	22.8		ug/L		91	70 - 130	11	20
trans-1,3-Dichloropropene	ND		25.0	25.8		ug/L		103	70 - 138	9	25
Trichloroethene	ND		25.0	22.5		ug/L		90	70 - 130	11	20
Trichlorofluoromethane	ND		25.0	24.0		ug/L		96	60 - 150	13	25
Vinyl acetate	ND		25.0	28.4		ug/L		113	23 - 150	10	30
Vinyl chloride	ND		25.0	19.6		ug/L		78	50 - 137	13	30
1,2-Dibromoethane (EDB)	ND		25.0	23.3		ug/L		93	70 - 131	10	25
2-Butanone (MEK)	ND		25.0	26.0		ug/L		104	48 - 140	1	40
4-Methyl-2-pentanone (MIBK)	ND		25.0	26.3		ug/L		105	52 - 150	8	35
		<b>MSD</b>	<b>MSD</b>								
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>							
<i>Toluene-d8 (Surr)</i>		103		80 - 128							
<i>4-Bromofluorobenzene (Surr)</i>		100		80 - 120							
<i>Dibromofluoromethane (Surr)</i>		109		76 - 132							

## Method: 8270C - Semivolatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 440-430983/1-A**  
**Matrix: Water**  
**Analysis Batch: 431427**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 430983**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,4-Dioxane	ND		0.96	0.24	ug/L		09/24/17 10:31	09/27/17 15:43	1
		<b>MB</b>							
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
<i>1,4-Dioxane-d8 (Surr)</i>		56		30 - 120			09/24/17 10:31	09/27/17 15:43	1

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-192498-1

## Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 440-430983/3-A**  
**Matrix: Water**  
**Analysis Batch: 431427**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 430983**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,4-Dioxane	1.90	1.03		ug/L		54	35 - 120
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
1,4-Dioxane-d8 (Surr)	53		30 - 120				

**Lab Sample ID: 440-192842-D-3-A MS**  
**Matrix: Water**  
**Analysis Batch: 431427**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 430983**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
1,4-Dioxane	ND		1.90	0.989		ug/L		52	35 - 120
Surrogate	MS %Recovery	MS Qualifier	Limits						
1,4-Dioxane-d8 (Surr)	54		30 - 120						

**Lab Sample ID: 440-192842-D-3-B MSD**  
**Matrix: Water**  
**Analysis Batch: 431427**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 430983**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,4-Dioxane	ND		1.90	0.859	J	ug/L		45	35 - 120	14	25
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
1,4-Dioxane-d8 (Surr)	44		30 - 120								

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 440-430059/7**  
**Matrix: Water**  
**Analysis Batch: 430059**

**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			09/20/17 12:28	1

**Lab Sample ID: LCS 440-430059/8**  
**Matrix: Water**  
**Analysis Batch: 430059**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Chloride	5.00	4.64		mg/L		93	90 - 110

**Lab Sample ID: 440-192498-1 MS**  
**Matrix: Water**  
**Analysis Batch: 430059**

**Client Sample ID: DW-1**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Chloride	52	J	1000	915		mg/L		86	80 - 120

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-192498-1

## Method: 300.0 - Anions, Ion Chromatography (Continued)

**Lab Sample ID: 440-192498-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 430059**

**Client Sample ID: DW-1**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	52	J	1000	907		mg/L		85	80 - 120	1	20

## Method: 6010B - Metals (ICP)

**Lab Sample ID: MB 440-431409/1-A**  
**Matrix: Water**  
**Analysis Batch: 431702**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 431409**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	ND		0.50	0.25	mg/L		09/26/17 14:30	09/27/17 13:18	1

**Lab Sample ID: LCS 440-431409/2-A**  
**Matrix: Water**  
**Analysis Batch: 431702**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 431409**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Potassium	10.0	9.84		mg/L		98	80 - 120

**Lab Sample ID: 440-192498-5 MS**  
**Matrix: Water**  
**Analysis Batch: 431702**

**Client Sample ID: MW-9**  
**Prep Type: Total Recoverable**  
**Prep Batch: 431409**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Potassium	31		10.0	40.9		mg/L		100	75 - 125

**Lab Sample ID: 440-192498-5 MSD**  
**Matrix: Water**  
**Analysis Batch: 431702**

**Client Sample ID: MW-9**  
**Prep Type: Total Recoverable**  
**Prep Batch: 431409**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Potassium	31		10.0	42.1		mg/L		112	75 - 125	3	20

## Method: 410.4 - COD

**Lab Sample ID: MB 440-431689/3**  
**Matrix: Water**  
**Analysis Batch: 431689**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		20	10	mg/L			09/27/17 13:33	1

**Lab Sample ID: LCS 440-431689/4**  
**Matrix: Water**  
**Analysis Batch: 431689**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chemical Oxygen Demand	200	205		mg/L		103	90 - 110

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-192498-1

## Method: 410.4 - COD (Continued)

**Lab Sample ID: 440-192498-1 MS**  
**Matrix: Water**  
**Analysis Batch: 431689**

**Client Sample ID: DW-1**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chemical Oxygen Demand	20		200	198		mg/L		89	70 - 120

**Lab Sample ID: 440-192498-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 431689**

**Client Sample ID: DW-1**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chemical Oxygen Demand	20		200	202		mg/L		91	70 - 120	2	15

## Method: SM 2320B - Alkalinity

**Lab Sample ID: MB 440-430142/3**  
**Matrix: Water**  
**Analysis Batch: 430142**

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

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	ND		4.0	4.0	mg/L			09/20/17 09:45	1

**Lab Sample ID: LCS 440-430142/2**  
**Matrix: Water**  
**Analysis Batch: 430142**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity as CaCO3	33.8	28.3		mg/L		84	80 - 120

**Lab Sample ID: 440-192498-1 DU**  
**Matrix: Water**  
**Analysis Batch: 430142**

**Client Sample ID: DW-1**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Alkalinity as CaCO3	420		428		mg/L		2	20

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

**Lab Sample ID: MB 440-430607/1**  
**Matrix: Water**  
**Analysis Batch: 430607**

**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			09/25/17 08:10	1

**Lab Sample ID: LCS 440-430607/2**  
**Matrix: Water**  
**Analysis Batch: 430607**

**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	954		mg/L		95	90 - 110

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-192498-1

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

**Lab Sample ID: 440-192498-3 DU**  
**Matrix: Water**  
**Analysis Batch: 430607**

**Client Sample ID: Extraction Trench**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	3400		3420		mg/L		0.3	5

## Method: SM 4500 NH3 D - Ammonia

**Lab Sample ID: MB 440-430599/2-A**  
**Matrix: Water**  
**Analysis Batch: 430608**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 430599**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	ND		0.50	0.10	mg/L		09/22/17 04:30	09/22/17 07:00	1

**Lab Sample ID: LCS 440-430599/1-A**  
**Matrix: Water**  
**Analysis Batch: 430608**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 430599**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Ammonia (as N)	2.50	2.32		mg/L		93	85 - 115

**Lab Sample ID: 440-192542-E-1-B MS**  
**Matrix: Water**  
**Analysis Batch: 430608**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 430599**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Ammonia (as N)	0.97		2.50	3.26		mg/L		92	75 - 125

**Lab Sample ID: 440-192542-E-1-C MSD**  
**Matrix: Water**  
**Analysis Batch: 430608**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 430599**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Ammonia (as N)	0.97		2.50	3.39		mg/L		97	75 - 125	4	15

**Lab Sample ID: 440-192666-D-2-B DU**  
**Matrix: Water**  
**Analysis Batch: 430608**

**Client Sample ID: Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 430599**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Ammonia (as N)	68		68.0		mg/L		0	15

**Lab Sample ID: MB 440-431544/2-A**  
**Matrix: Water**  
**Analysis Batch: 431551**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 431544**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	ND		0.50	0.10	mg/L		09/27/17 03:30	09/27/17 05:00	1

TestAmerica Irvine



# QC Sample Results

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

TestAmerica Job ID: 440-192498-1

## Method: SM 4500 NH3 D - Ammonia (Continued)

**Lab Sample ID: LCS 440-431544/1-A**  
**Matrix: Water**  
**Analysis Batch: 431551**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 431544**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	2.50	2.28		mg/L		91	85 - 115

**Lab Sample ID: 440-192873-A-3-B MS**  
**Matrix: Water**  
**Analysis Batch: 431551**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 431544**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	ND		2.50	2.46		mg/L		99	75 - 125

**Lab Sample ID: 440-192873-A-3-C MSD**  
**Matrix: Water**  
**Analysis Batch: 431551**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 431544**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Ammonia (as N)	ND		2.50	2.46		mg/L		99	75 - 125	0	15

**Lab Sample ID: 440-192871-D-2-C DU**  
**Matrix: Water**  
**Analysis Batch: 431551**

**Client Sample ID: Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 431544**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Ammonia (as N)	64		66.6		mg/L		4	15

## Method: SM 5310C - TOC

**Lab Sample ID: MB 440-430290/8**  
**Matrix: Water**  
**Analysis Batch: 430290**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		0.10	0.050	mg/L			09/20/17 09:24	1

**Lab Sample ID: LCS 440-430290/7**  
**Matrix: Water**  
**Analysis Batch: 430290**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	10.0	9.98		mg/L		100	90 - 110

**Lab Sample ID: MRL 440-430290/4**  
**Matrix: Water**  
**Analysis Batch: 430290**

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	0.100	0.0831	J	mg/L		83	50 - 150

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-192498-1

## Method: SM 5310C - TOC (Continued)

**Lab Sample ID: 440-192514-G-1 MS**

**Matrix: Water**  
**Analysis Batch: 430290**

**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
Total Organic Carbon	1.0		10.0	10.8		mg/L		98	80 - 120

**Lab Sample ID: 440-192514-H-1 MSD**

**Matrix: Water**  
**Analysis Batch: 430290**

**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
Total Organic Carbon	1.0		10.0	10.8		mg/L		98	80 - 120	0	20

**Lab Sample ID: MB 440-430942/8**

**Matrix: Water**  
**Analysis Batch: 430942**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		0.10	0.050	mg/L			09/23/17 11:47	1

**Lab Sample ID: LCS 440-430942/7**

**Matrix: Water**  
**Analysis Batch: 430942**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	10.0	10.1		mg/L		101	90 - 110

**Lab Sample ID: MRL 440-430942/4**

**Matrix: Water**  
**Analysis Batch: 430942**

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	0.100	0.145		mg/L		145	50 - 150

**Lab Sample ID: 440-192622-J-2 MS**

**Matrix: Water**  
**Analysis Batch: 430942**

**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
Total Organic Carbon	7.1		10.0	16.8		mg/L		96	80 - 120

**Lab Sample ID: 440-192622-J-2 MSD**

**Matrix: Water**  
**Analysis Batch: 430942**

**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
Total Organic Carbon	7.1		10.0	17.0		mg/L		99	80 - 120	2	20

TestAmerica Irvine

# QC Association Summary

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

TestAmerica Job ID: 440-192498-1

## GC/MS VOA

### Analysis Batch: 430808

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192498-1	DW-1	Total/NA	Water	8260B	
440-192498-2	DW-2	Total/NA	Water	8260B	
440-192498-3	Extraction Trench	Total/NA	Water	8260B	
440-192498-4	MW-6	Total/NA	Water	8260B	
440-192498-5	MW-9	Total/NA	Water	8260B	
440-192498-6	MW-14	Total/NA	Water	8260B	
440-192498-7	PZ-2	Total/NA	Water	8260B	
440-192498-8	QCAB	Total/NA	Water	8260B	
440-192498-9	QCTB	Total/NA	Water	8260B	
MB 440-430808/3	Method Blank	Total/NA	Water	8260B	
LCS 440-430808/4	Lab Control Sample	Total/NA	Water	8260B	
440-192498-1 MS	DW-1	Total/NA	Water	8260B	
440-192498-1 MSD	DW-1	Total/NA	Water	8260B	

### Analysis Batch: 431277

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192498-1	DW-1	Total/NA	Water	8260B	
440-192498-2	DW-2	Total/NA	Water	8260B	
440-192498-3	Extraction Trench	Total/NA	Water	8260B	
440-192498-4	MW-6	Total/NA	Water	8260B	
440-192498-5	MW-9	Total/NA	Water	8260B	
440-192498-6	MW-14	Total/NA	Water	8260B	
440-192498-7	PZ-2	Total/NA	Water	8260B	
440-192498-8	QCAB	Total/NA	Water	8260B	
440-192498-9	QCTB	Total/NA	Water	8260B	
MB 440-431277/4	Method Blank	Total/NA	Water	8260B	
LCS 440-431277/5	Lab Control Sample	Total/NA	Water	8260B	
440-192498-2 MS	DW-2	Total/NA	Water	8260B	
440-192498-2 MSD	DW-2	Total/NA	Water	8260B	

## GC/MS Semi VOA

### Prep Batch: 430983

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192498-1	DW-1	Total/NA	Water	3520C	
440-192498-2	DW-2	Total/NA	Water	3520C	
440-192498-3	Extraction Trench	Total/NA	Water	3520C	
440-192498-4	MW-6	Total/NA	Water	3520C	
440-192498-5	MW-9	Total/NA	Water	3520C	
440-192498-6	MW-14	Total/NA	Water	3520C	
440-192498-7	PZ-2	Total/NA	Water	3520C	
MB 440-430983/1-A	Method Blank	Total/NA	Water	3520C	
LCS 440-430983/3-A	Lab Control Sample	Total/NA	Water	3520C	
440-192842-D-3-A MS	Matrix Spike	Total/NA	Water	3520C	
440-192842-D-3-B MSD	Matrix Spike Duplicate	Total/NA	Water	3520C	

### Analysis Batch: 431427

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192498-1	DW-1	Total/NA	Water	8270C	430983
440-192498-2	DW-2	Total/NA	Water	8270C	430983

TestAmerica Irvine

# QC Association Summary

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

TestAmerica Job ID: 440-192498-1

## GC/MS Semi VOA (Continued)

### Analysis Batch: 431427 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192498-3	Extraction Trench	Total/NA	Water	8270C	430983
440-192498-4	MW-6	Total/NA	Water	8270C	430983
440-192498-5	MW-9	Total/NA	Water	8270C	430983
440-192498-6	MW-14	Total/NA	Water	8270C	430983
440-192498-7	PZ-2	Total/NA	Water	8270C	430983
MB 440-430983/1-A	Method Blank	Total/NA	Water	8270C	430983
LCS 440-430983/3-A	Lab Control Sample	Total/NA	Water	8270C	430983
440-192842-D-3-A MS	Matrix Spike	Total/NA	Water	8270C	430983
440-192842-D-3-B MSD	Matrix Spike Duplicate	Total/NA	Water	8270C	430983

## HPLC/IC

### Analysis Batch: 430059

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192498-1	DW-1	Total/NA	Water	300.0	
440-192498-1	DW-1	Total/NA	Water	300.0	
440-192498-2	DW-2	Total/NA	Water	300.0	
440-192498-3	Extraction Trench	Total/NA	Water	300.0	
440-192498-4	MW-6	Total/NA	Water	300.0	
440-192498-5	MW-9	Total/NA	Water	300.0	
440-192498-6	MW-14	Total/NA	Water	300.0	
440-192498-7	PZ-2	Total/NA	Water	300.0	
MB 440-430059/7	Method Blank	Total/NA	Water	300.0	
LCS 440-430059/8	Lab Control Sample	Total/NA	Water	300.0	
440-192498-1 MS	DW-1	Total/NA	Water	300.0	
440-192498-1 MSD	DW-1	Total/NA	Water	300.0	

## Metals

### Prep Batch: 431409

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192498-1	DW-1	Total Recoverable	Water	3005A	
440-192498-2	DW-2	Total Recoverable	Water	3005A	
440-192498-3	Extraction Trench	Total Recoverable	Water	3005A	
440-192498-4	MW-6	Total Recoverable	Water	3005A	
440-192498-5	MW-9	Total Recoverable	Water	3005A	
440-192498-6	MW-14	Total Recoverable	Water	3005A	
440-192498-7	PZ-2	Total Recoverable	Water	3005A	
MB 440-431409/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 440-431409/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
440-192498-5 MS	MW-9	Total Recoverable	Water	3005A	
440-192498-5 MSD	MW-9	Total Recoverable	Water	3005A	

### Analysis Batch: 431702

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192498-1	DW-1	Total Recoverable	Water	6010B	431409
440-192498-2	DW-2	Total Recoverable	Water	6010B	431409
440-192498-3	Extraction Trench	Total Recoverable	Water	6010B	431409
440-192498-4	MW-6	Total Recoverable	Water	6010B	431409
440-192498-5	MW-9	Total Recoverable	Water	6010B	431409

TestAmerica Irvine

# QC Association Summary

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

TestAmerica Job ID: 440-192498-1

## Metals (Continued)

### Analysis Batch: 431702 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192498-6	MW-14	Total Recoverable	Water	6010B	431409
440-192498-7	PZ-2	Total Recoverable	Water	6010B	431409
MB 440-431409/1-A	Method Blank	Total Recoverable	Water	6010B	431409
LCS 440-431409/2-A	Lab Control Sample	Total Recoverable	Water	6010B	431409
440-192498-5 MS	MW-9	Total Recoverable	Water	6010B	431409
440-192498-5 MSD	MW-9	Total Recoverable	Water	6010B	431409

## General Chemistry

### Analysis Batch: 430142

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192498-1	DW-1	Total/NA	Water	SM 2320B	
440-192498-2	DW-2	Total/NA	Water	SM 2320B	
440-192498-3	Extraction Trench	Total/NA	Water	SM 2320B	
440-192498-4	MW-6	Total/NA	Water	SM 2320B	
440-192498-5	MW-9	Total/NA	Water	SM 2320B	
440-192498-6	MW-14	Total/NA	Water	SM 2320B	
440-192498-7	PZ-2	Total/NA	Water	SM 2320B	
MB 440-430142/3	Method Blank	Total/NA	Water	SM 2320B	
LCS 440-430142/2	Lab Control Sample	Total/NA	Water	SM 2320B	
440-192498-1 DU	DW-1	Total/NA	Water	SM 2320B	

### Analysis Batch: 430290

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192498-1	DW-1	Total/NA	Water	SM 5310C	
440-192498-2	DW-2	Total/NA	Water	SM 5310C	
440-192498-4	MW-6	Total/NA	Water	SM 5310C	
440-192498-5	MW-9	Total/NA	Water	SM 5310C	
440-192498-6	MW-14	Total/NA	Water	SM 5310C	
440-192498-7	PZ-2	Total/NA	Water	SM 5310C	
MB 440-430290/8	Method Blank	Total/NA	Water	SM 5310C	
LCS 440-430290/7	Lab Control Sample	Total/NA	Water	SM 5310C	
MRL 440-430290/4	Lab Control Sample	Total/NA	Water	SM 5310C	
440-192514-G-1 MS	Matrix Spike	Total/NA	Water	SM 5310C	
440-192514-H-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 5310C	

### Prep Batch: 430599

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192498-1	DW-1	Total/NA	Water	SM 4500 NH3 B	
440-192498-2	DW-2	Total/NA	Water	SM 4500 NH3 B	
440-192498-3	Extraction Trench	Total/NA	Water	SM 4500 NH3 B	
440-192498-5	MW-9	Total/NA	Water	SM 4500 NH3 B	
440-192498-6	MW-14	Total/NA	Water	SM 4500 NH3 B	
440-192498-7	PZ-2	Total/NA	Water	SM 4500 NH3 B	
MB 440-430599/2-A	Method Blank	Total/NA	Water	SM 4500 NH3 B	
LCS 440-430599/1-A	Lab Control Sample	Total/NA	Water	SM 4500 NH3 B	
440-192542-E-1-B MS	Matrix Spike	Total/NA	Water	SM 4500 NH3 B	
440-192542-E-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 NH3 B	
440-192666-D-2-B DU	Duplicate	Total/NA	Water	SM 4500 NH3 B	

TestAmerica Irvine

# QC Association Summary

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

TestAmerica Job ID: 440-192498-1

## General Chemistry (Continued)

### Analysis Batch: 430607

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192498-1	DW-1	Total/NA	Water	SM 2540C	
440-192498-2	DW-2	Total/NA	Water	SM 2540C	
440-192498-3	Extraction Trench	Total/NA	Water	SM 2540C	
440-192498-4	MW-6	Total/NA	Water	SM 2540C	
440-192498-5	MW-9	Total/NA	Water	SM 2540C	
440-192498-6	MW-14	Total/NA	Water	SM 2540C	
440-192498-7	PZ-2	Total/NA	Water	SM 2540C	
MB 440-430607/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 440-430607/2	Lab Control Sample	Total/NA	Water	SM 2540C	
440-192498-3 DU	Extraction Trench	Total/NA	Water	SM 2540C	

### Analysis Batch: 430608

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192498-1	DW-1	Total/NA	Water	SM 4500 NH3 D	430599
440-192498-2	DW-2	Total/NA	Water	SM 4500 NH3 D	430599
440-192498-3	Extraction Trench	Total/NA	Water	SM 4500 NH3 D	430599
440-192498-5	MW-9	Total/NA	Water	SM 4500 NH3 D	430599
440-192498-6	MW-14	Total/NA	Water	SM 4500 NH3 D	430599
440-192498-7	PZ-2	Total/NA	Water	SM 4500 NH3 D	430599
MB 440-430599/2-A	Method Blank	Total/NA	Water	SM 4500 NH3 D	430599
LCS 440-430599/1-A	Lab Control Sample	Total/NA	Water	SM 4500 NH3 D	430599
440-192542-E-1-B MS	Matrix Spike	Total/NA	Water	SM 4500 NH3 D	430599
440-192542-E-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 NH3 D	430599
440-192666-D-2-B DU	Duplicate	Total/NA	Water	SM 4500 NH3 D	430599

### Analysis Batch: 430942

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192498-3	Extraction Trench	Total/NA	Water	SM 5310C	
MB 440-430942/8	Method Blank	Total/NA	Water	SM 5310C	
LCS 440-430942/7	Lab Control Sample	Total/NA	Water	SM 5310C	
MRL 440-430942/4	Lab Control Sample	Total/NA	Water	SM 5310C	
440-192622-J-2 MS	Matrix Spike	Total/NA	Water	SM 5310C	
440-192622-J-2 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 5310C	

### Prep Batch: 431544

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192498-4	MW-6	Total/NA	Water	SM 4500 NH3 B	
MB 440-431544/2-A	Method Blank	Total/NA	Water	SM 4500 NH3 B	
LCS 440-431544/1-A	Lab Control Sample	Total/NA	Water	SM 4500 NH3 B	
440-192873-A-3-B MS	Matrix Spike	Total/NA	Water	SM 4500 NH3 B	
440-192873-A-3-C MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 NH3 B	
440-192871-D-2-C DU	Duplicate	Total/NA	Water	SM 4500 NH3 B	

### Analysis Batch: 431551

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192498-4	MW-6	Total/NA	Water	SM 4500 NH3 D	431544
MB 440-431544/2-A	Method Blank	Total/NA	Water	SM 4500 NH3 D	431544
LCS 440-431544/1-A	Lab Control Sample	Total/NA	Water	SM 4500 NH3 D	431544
440-192873-A-3-B MS	Matrix Spike	Total/NA	Water	SM 4500 NH3 D	431544
440-192873-A-3-C MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 NH3 D	431544
440-192871-D-2-C DU	Duplicate	Total/NA	Water	SM 4500 NH3 D	431544

TestAmerica Irvine

# QC Association Summary

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

TestAmerica Job ID: 440-192498-1

## Analysis Batch: 431689

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192498-1	DW-1	Total/NA	Water	410.4	
440-192498-2	DW-2	Total/NA	Water	410.4	
440-192498-3	Extraction Trench	Total/NA	Water	410.4	
440-192498-4	MW-6	Total/NA	Water	410.4	
440-192498-5	MW-9	Total/NA	Water	410.4	
440-192498-6	MW-14	Total/NA	Water	410.4	
440-192498-7	PZ-2	Total/NA	Water	410.4	
MB 440-431689/3	Method Blank	Total/NA	Water	410.4	
LCS 440-431689/4	Lab Control Sample	Total/NA	Water	410.4	
440-192498-1 MS	DW-1	Total/NA	Water	410.4	
440-192498-1 MSD	DW-1	Total/NA	Water	410.4	

# Definitions/Glossary

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

TestAmerica Job ID: 440-192498-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F1	MS and/or MSD Recovery is outside acceptance limits.

### GC/MS VOA TICs

Qualifier	Qualifier Description
J	Indicates an Estimated Value for TICs
T	Result is a tentatively identified compound (TIC) and an estimated value.

### GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

## 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
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)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
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)



# Accreditation/Certification Summary

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

TestAmerica Job ID: 440-192498-1

## Laboratory: TestAmerica Irvine

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	State Program	10	CA01531	06-30-18
Arizona	State Program	9	AZ0671	10-14-17 *
California	LA Cty Sanitation Districts	9	10256	06-30-18
California	State Program	9	CA ELAP 2706	06-30-18
Guam	State Program	9	Cert. No. 17-003R	01-23-18
Hawaii	State Program	9	N/A	01-29-18
Kansas	NELAP Secondary AB	7	E-10420	07-31-18
Nevada	State Program	9	CA015312018-1	07-31-18
New Mexico	State Program	6	N/A	01-29-18 *
Northern Mariana Islands	State Program	9	MP0002	01-29-17 *
Oregon	NELAP	10	4028	01-29-18
USDA	Federal		P330-15-00184	07-08-18
Washington	State Program	10	C900	09-03-18

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

TestAmerica Irvine

**TestAmerica Irvine**  
 17461 Derian Ave  
 Suite 100  
 Irvine, CA 92614  
 Phone: 949.261.1022 Fax:

**Chain of Custody Record**

025768

**TestAmerica**  
 THE LEADER IN ENVIRONMENTAL TESTING  
 TestAmerica Laboratories, Inc.  
 TAL-8210 (07/13)

Regulatory Program:  DW  NPDES  RCRA  Other:

Project Manager: Kyle Welchows Site Contact: R. Dickason Date: 9-19-17  
 Lab Contact: R. Tomova Carrier: T/A  
 Company Name: GALT Republic  
 Address: 11415 W. Bernardo Ct.  
 City/State/Zip: S.D., CA, 92127  
 Phone: 858-451-1136  
 Fax: 858-451-1087  
 Project Name: Republic Services  
 Site: Sunshine Cym. LP  
 P O #: 44001851

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Perform MS/MSD (Y/N)										Sample Specific Notes:						
						EPA 8260B-VOCs	Total Alkalinity	Ammonia as N	C.A.D. (410.5)	Chloride (320.0)	Fluoride (610.0)	T.D.S. (160.1)	T.O.C. (415.1)	EPA 8270 14-Dioxane								
DW-1	01/17	1058	G	GW	12	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
DW-2	0910		G	GW	12	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Extraction Trench	1320		G	WW	12	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
MW-6	1015		G	GW	12	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
MW-9	1345		G	GW	12	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
MW-14	0755		G	↓	12	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
PZ-2	1025		G	↓	12	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
QCARS	—	—	↓	LAS	4	X																
QCARS	—	—	↓	PS	4	X																

Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4= HNO3; 5= NaOH; 6= Other  
 Possible Hazard Identification: 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  
 Return to Client  Disposal by Lab  Archive for \_\_\_\_\_ Months

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)  
 440-192498 Chain of Custody

Custody Seal Intact:  Yes  No  
 Relinquished by: [Signature]  
 Relinquished by: [Signature]  
 Relinquished by: [Signature]  
 Date/Time: 9/19/17 13:56  
 Date/Time: 9/19/17 13:56  
 Date/Time: 9/19/17 13:56  
 Company: GEA-logic  
 Company: T/A  
 Company: T/A  
 Received by: [Signature]  
 Received in Laboratory by: [Signature]  
 Date/Time: 9/19/17 13:56  
 Date/Time: 9/19/17 13:56  
 Date/Time: 9/19/17 13:56  
 Therm ID No.:  
 191714112 29167 112-564



## Login Sample Receipt Checklist

Client: Geo-Logic Associates

Job Number: 440-192498-1

**Login Number: 192498**

**List Number: 1**

**Creator: Soderblom, Tim**

**List Source: TestAmerica Irvine**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> 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 <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Irvine

17461 Derian Ave

Suite 100

Irvine, CA 92614-5817

Tel: (949)261-1022

TestAmerica Job ID: 440-192591-1

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:

9/29/2017 3:20:06 PM

Rossina Tomova, Project Manager I

(949)261-1022

[rossina.tomova@testamericainc.com](mailto:rossina.tomova@testamericainc.com)

### LINKS

Review your project  
results through

**TotalAccess**

Have a Question?



Visit us at:

[www.testamericainc.com](http://www.testamericainc.com)

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

1

2

3

4

5

6

7

8

9

10

11

12

13



# Table of Contents

Cover Page . . . . .	1
Table of Contents . . . . .	2
Sample Summary . . . . .	3
Case Narrative . . . . .	4
Client Sample Results . . . . .	5
Method Summary . . . . .	22
Lab Chronicle . . . . .	23
QC Sample Results . . . . .	26
QC Association Summary . . . . .	47
Definitions/Glossary . . . . .	52
Certification Summary . . . . .	53
Chain of Custody . . . . .	54
Receipt Checklists . . . . .	55

# Sample Summary

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

TestAmerica Job ID: 440-192591-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-192591-1	PZ-4	Water	09/20/17 09:15	09/20/17 16:45
440-192591-2	DW-3	Water	09/20/17 11:54	09/20/17 16:45
440-192591-3	DW-4	Water	09/20/17 12:50	09/20/17 16:45
440-192591-4	MW-2A	Water	09/20/17 09:52	09/20/17 16:45
440-192591-5	MW-2B	Water	09/20/17 11:27	09/20/17 16:45
440-192591-6	MW-5	Water	09/20/17 13:42	09/20/17 16:45
440-192591-7	QCAB	Water	09/20/17 00:01	09/20/17 16:45
440-192591-8	QCTB	Water	09/20/17 00:01	09/20/17 16:45



# Case Narrative

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

TestAmerica Job ID: 440-192591-1

**Job ID: 440-192591-1**

**Laboratory: TestAmerica Irvine**

## Narrative

### Job Narrative 440-192591-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 9/20/2017 4:45 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 1.8° C, 2.1° C and 2.5° C.

#### Receipt Exceptions

The following sample was listed on the Chain of Custody (COC); however, no sample was received: MW-2B (440-192591-5). Didn't received Poly 500 ml unpreserved for the tests requested on COC . Split from Amber 1 l unpreserved.

The following sample was submitted for analysis; however, it was not listed on the Chain-of-Custody (COC): MW-2B (440-192591-5). Received one extra container poly 500 ml with Nitric acid.

#### GC/MS VOA

Method(s) 8260B: The matrix spike and matrix spike duplicate (MS/MSD) recoveries for the following sample associated with analytical batch 440-431555 were outside control limits for 2-Butanone. The associated laboratory control sample (LCS) recovery met acceptance criteria.

Method(s) 8260B: The continuing calibration verification (CCV) associated with batch 440-431991 recovered above the upper control limit for Methacrylonitrile. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: QCTB (440-192591-8) and (CCV 440-431991/3).

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

#### GC/MS Semi VOA

Method(s) 8270C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 440-431370 and analytical batch 440-431427. The laboratory control sample (LCS) was performed in duplicate to provide precision data for this batch.

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

#### HPLC/IC

Method(s) 300.0: Due to the high concentration of Chloride, the matrix spike / matrix spike duplicate (MS/MSD) for analytical batch 440-430064 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

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

#### Metals

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.

#### Organic Prep

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

#### VOA Prep

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

# Client Sample Results

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

TestAmerica Job ID: 440-192591-1

**Client Sample ID: PZ-4**  
**Date Collected: 09/20/17 09:15**  
**Date Received: 09/20/17 16:45**

**Lab Sample ID: 440-192591-1**  
**Matrix: Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			09/27/17 14:41	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			09/27/17 14:41	1
Acrolein	ND		50	2.5	ug/L			09/24/17 13:28	1
Acrylonitrile	ND		50	1.0	ug/L			09/24/17 13:28	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			09/27/17 14:41	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			09/27/17 14:41	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			09/27/17 14:41	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			09/27/17 14:41	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			09/27/17 14:41	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			09/27/17 14:41	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			09/27/17 14:41	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			09/27/17 14:41	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			09/27/17 14:41	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			09/27/17 14:41	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			09/27/17 14:41	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			09/27/17 14:41	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			09/27/17 14:41	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			09/27/17 14:41	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			09/27/17 14:41	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			09/27/17 14:41	1
2-Hexanone	ND		5.0	2.5	ug/L			09/27/17 14:41	1
Acetone	ND		20	10	ug/L			09/27/17 14:41	1
Acetonitrile	ND		20	10	ug/L			09/27/17 14:41	1
Acrolein	ND		5.0	2.5	ug/L			09/27/17 14:41	1
Acrylonitrile	ND		2.0	1.0	ug/L			09/27/17 14:41	1
Benzene	ND		0.50	0.25	ug/L			09/27/17 14:41	1
Allyl chloride	ND		1.0	0.50	ug/L			09/27/17 14:41	1
Bromoform	ND		1.0	0.40	ug/L			09/27/17 14:41	1
Bromomethane	ND		0.50	0.25	ug/L			09/27/17 14:41	1
Carbon disulfide	ND		1.0	0.50	ug/L			09/27/17 14:41	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			09/27/17 14:41	1
Chlorobenzene	ND		0.50	0.25	ug/L			09/27/17 14:41	1
Bromochloromethane	ND		0.50	0.25	ug/L			09/27/17 14:41	1
Chloroethane	ND		1.0	0.40	ug/L			09/27/17 14:41	1
Chloroform	ND		0.50	0.25	ug/L			09/27/17 14:41	1
Chloromethane	ND		0.50	0.25	ug/L			09/27/17 14:41	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			09/27/17 14:41	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/27/17 14:41	1
Dibromochloromethane	ND		0.50	0.25	ug/L			09/27/17 14:41	1
Dibromomethane	ND		0.50	0.25	ug/L			09/27/17 14:41	1
Bromodichloromethane	ND		0.50	0.25	ug/L			09/27/17 14:41	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			09/27/17 14:41	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			09/27/17 14:41	1
Ethylbenzene	ND		0.50	0.25	ug/L			09/27/17 14:41	1
Iodomethane	ND		2.0	1.0	ug/L			09/27/17 14:41	1
Isobutyl alcohol	ND		25	13	ug/L			09/27/17 14:41	1
m,p-Xylene	ND		1.0	0.50	ug/L			09/27/17 14:41	1
Methylacrylonitrile	ND		10	2.5	ug/L			09/27/17 14:41	1
Methyl methacrylate	ND		2.0	1.0	ug/L			09/27/17 14:41	1

TestAmerica Irvine



# Client Sample Results

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

TestAmerica Job ID: 440-192591-1

**Client Sample ID: PZ-4**

**Lab Sample ID: 440-192591-1**

**Date Collected: 09/20/17 09:15**

**Matrix: Water**

**Date Received: 09/20/17 16:45**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	ND		2.0	0.88	ug/L			09/27/17 14:41	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			09/27/17 14:41	1
Naphthalene	ND		1.0	0.40	ug/L			09/27/17 14:41	1
o-Xylene	ND		0.50	0.25	ug/L			09/27/17 14:41	1
Propionitrile	ND		20	10	ug/L			09/27/17 14:41	1
Styrene	ND		0.50	0.25	ug/L			09/27/17 14:41	1
t-Butanol	ND		10	5.0	ug/L			09/27/17 14:41	1
Tetrachloroethene	ND		0.50	0.25	ug/L			09/27/17 14:41	1
Tetrahydrofuran	ND		10	5.0	ug/L			09/27/17 14:41	1
Toluene	ND		0.50	0.25	ug/L			09/27/17 14:41	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			09/27/17 14:41	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/27/17 14:41	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			09/27/17 14:41	1
Trichloroethene	ND		0.50	0.25	ug/L			09/27/17 14:41	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			09/27/17 14:41	1
Vinyl acetate	ND		4.0	2.0	ug/L			09/27/17 14:41	1
Vinyl chloride	ND		0.50	0.25	ug/L			09/27/17 14:41	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			09/27/17 14:41	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			09/27/17 14:41	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			09/27/17 14:41	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	10	T J	ug/L		5.97			09/27/17 14:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	105		80 - 128		09/24/17 13:28	1
4-Bromofluorobenzene (Surr)	101		80 - 120		09/24/17 13:28	1
Toluene-d8 (Surr)	102		80 - 128		09/27/17 14:41	1
4-Bromofluorobenzene (Surr)	98		80 - 120		09/27/17 14:41	1
Dibromofluoromethane (Surr)	97		76 - 132		09/24/17 13:28	1
Dibromofluoromethane (Surr)	112		76 - 132		09/27/17 14:41	1

## Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		1.0	0.25	ug/L		09/26/17 12:21	09/27/17 21:41	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	53		30 - 120	09/26/17 12:21	09/27/17 21:41	1

## Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	7.9		0.50	0.25	mg/L			09/22/17 14:30	1

## Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	4.5		0.50	0.25	mg/L		09/27/17 10:22	09/27/17 21:40	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		20	10	mg/L			09/27/17 13:34	1
Total Dissolved Solids	1200		10	5.0	mg/L			09/26/17 08:52	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-192591-1

## Client Sample ID: PZ-4

Date Collected: 09/20/17 09:15

Date Received: 09/20/17 16:45

## Lab Sample ID: 440-192591-1

Matrix: Water

### General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	2.0		0.50	0.10	mg/L		09/22/17 05:30	09/22/17 09:00	1
Total Organic Carbon	1.2		0.10	0.050	mg/L			09/24/17 09:41	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	260		4.0	4.0	mg/L			09/21/17 06:22	1

## Client Sample ID: DW-3

Date Collected: 09/20/17 11:54

Date Received: 09/20/17 16:45

## Lab Sample ID: 440-192591-2

Matrix: Water

### Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			09/27/17 15:09	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			09/27/17 15:09	1
Acrolein	ND		50	2.5	ug/L			09/24/17 14:56	1
Acrylonitrile	ND		50	1.0	ug/L			09/24/17 14:56	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			09/27/17 15:09	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			09/27/17 15:09	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			09/27/17 15:09	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			09/27/17 15:09	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			09/27/17 15:09	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			09/27/17 15:09	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			09/27/17 15:09	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			09/27/17 15:09	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			09/27/17 15:09	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			09/27/17 15:09	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			09/27/17 15:09	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			09/27/17 15:09	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			09/27/17 15:09	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			09/27/17 15:09	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			09/27/17 15:09	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			09/27/17 15:09	1
2-Hexanone	ND		5.0	2.5	ug/L			09/27/17 15:09	1
Acetone	ND		20	10	ug/L			09/27/17 15:09	1
Acetonitrile	ND		20	10	ug/L			09/27/17 15:09	1
Acrolein	ND		5.0	2.5	ug/L			09/27/17 15:09	1
Acrylonitrile	ND		2.0	1.0	ug/L			09/27/17 15:09	1
Benzene	ND		0.50	0.25	ug/L			09/27/17 15:09	1
Allyl chloride	ND		1.0	0.50	ug/L			09/27/17 15:09	1
Bromoform	ND		1.0	0.40	ug/L			09/27/17 15:09	1
Bromomethane	ND		0.50	0.25	ug/L			09/27/17 15:09	1
Carbon disulfide	ND		1.0	0.50	ug/L			09/27/17 15:09	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			09/27/17 15:09	1
Chlorobenzene	ND		0.50	0.25	ug/L			09/27/17 15:09	1
Bromochloromethane	ND		0.50	0.25	ug/L			09/27/17 15:09	1
Chloroethane	ND		1.0	0.40	ug/L			09/27/17 15:09	1
Chloroform	ND		0.50	0.25	ug/L			09/27/17 15:09	1
Chloromethane	ND		0.50	0.25	ug/L			09/27/17 15:09	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			09/27/17 15:09	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/27/17 15:09	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-192591-1

**Client Sample ID: DW-3**  
**Date Collected: 09/20/17 11:54**  
**Date Received: 09/20/17 16:45**

**Lab Sample ID: 440-192591-2**  
**Matrix: Water**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibromochloromethane	ND		0.50	0.25	ug/L			09/27/17 15:09	1
Dibromomethane	ND		0.50	0.25	ug/L			09/27/17 15:09	1
Bromodichloromethane	ND		0.50	0.25	ug/L			09/27/17 15:09	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			09/27/17 15:09	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			09/27/17 15:09	1
Ethylbenzene	ND		0.50	0.25	ug/L			09/27/17 15:09	1
Iodomethane	ND		2.0	1.0	ug/L			09/27/17 15:09	1
Isobutyl alcohol	ND		25	13	ug/L			09/27/17 15:09	1
m,p-Xylene	ND		1.0	0.50	ug/L			09/27/17 15:09	1
Methylacrylonitrile	ND		10	2.5	ug/L			09/27/17 15:09	1
Methyl methacrylate	ND		2.0	1.0	ug/L			09/27/17 15:09	1
Methylene Chloride	ND		2.0	0.88	ug/L			09/27/17 15:09	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			09/27/17 15:09	1
Naphthalene	ND		1.0	0.40	ug/L			09/27/17 15:09	1
o-Xylene	ND		0.50	0.25	ug/L			09/27/17 15:09	1
Propionitrile	ND		20	10	ug/L			09/27/17 15:09	1
Styrene	ND		0.50	0.25	ug/L			09/27/17 15:09	1
t-Butanol	ND		10	5.0	ug/L			09/27/17 15:09	1
Tetrachloroethene	ND		0.50	0.25	ug/L			09/27/17 15:09	1
Tetrahydrofuran	ND		10	5.0	ug/L			09/27/17 15:09	1
Toluene	ND		0.50	0.25	ug/L			09/27/17 15:09	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			09/27/17 15:09	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/27/17 15:09	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			09/27/17 15:09	1
Trichloroethene	ND		0.50	0.25	ug/L			09/27/17 15:09	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			09/27/17 15:09	1
Vinyl acetate	ND		4.0	2.0	ug/L			09/27/17 15:09	1
Vinyl chloride	ND		0.50	0.25	ug/L			09/27/17 15:09	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			09/27/17 15:09	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			09/27/17 15:09	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			09/27/17 15:09	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	10	TJ	ug/L		5.97			09/27/17 15:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	106		80 - 128		09/24/17 14:56	1
4-Bromofluorobenzene (Surr)	98		80 - 120		09/24/17 14:56	1
Toluene-d8 (Surr)	102		80 - 128		09/27/17 15:09	1
4-Bromofluorobenzene (Surr)	100		80 - 120		09/27/17 15:09	1
Dibromofluoromethane (Surr)	99		76 - 132		09/24/17 14:56	1
Dibromofluoromethane (Surr)	113		76 - 132		09/27/17 15:09	1

## Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		1.0	0.25	ug/L		09/26/17 12:21	09/27/17 22:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	60		30 - 120	09/26/17 12:21	09/27/17 22:03	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-192591-1

**Client Sample ID: DW-3**  
**Date Collected: 09/20/17 11:54**  
**Date Received: 09/20/17 16:45**

**Lab Sample ID: 440-192591-2**  
**Matrix: Water**

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	14		1.0	0.50	mg/L			09/22/17 14:54	2

**Method: 6010B - Metals (ICP) - Total Recoverable**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	8.5		0.50	0.25	mg/L		09/27/17 10:22	09/27/17 21:42	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		20	10	mg/L			09/27/17 13:34	1
Total Dissolved Solids	2000		20	10	mg/L			09/26/17 08:52	1
Ammonia (as N)	0.59		0.50	0.10	mg/L		09/22/17 05:30	09/22/17 09:00	1
Total Organic Carbon	0.45		0.10	0.050	mg/L			09/24/17 10:17	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	130		4.0	4.0	mg/L			09/21/17 06:38	1

**Client Sample ID: DW-4**  
**Date Collected: 09/20/17 12:50**  
**Date Received: 09/20/17 16:45**

**Lab Sample ID: 440-192591-3**  
**Matrix: Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			09/27/17 15:37	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			09/27/17 15:37	1
Acrolein	ND		50	2.5	ug/L			09/24/17 15:25	1
Acrylonitrile	ND		50	1.0	ug/L			09/24/17 15:25	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			09/27/17 15:37	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			09/27/17 15:37	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			09/27/17 15:37	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			09/27/17 15:37	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			09/27/17 15:37	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			09/27/17 15:37	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			09/27/17 15:37	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			09/27/17 15:37	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			09/27/17 15:37	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			09/27/17 15:37	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			09/27/17 15:37	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			09/27/17 15:37	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			09/27/17 15:37	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			09/27/17 15:37	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			09/27/17 15:37	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			09/27/17 15:37	1
2-Hexanone	ND		5.0	2.5	ug/L			09/27/17 15:37	1
Acetone	ND		20	10	ug/L			09/27/17 15:37	1
Acetonitrile	ND		20	10	ug/L			09/27/17 15:37	1
Acrolein	ND		5.0	2.5	ug/L			09/27/17 15:37	1
Acrylonitrile	ND		2.0	1.0	ug/L			09/27/17 15:37	1
Benzene	ND		0.50	0.25	ug/L			09/27/17 15:37	1
Allyl chloride	ND		1.0	0.50	ug/L			09/27/17 15:37	1
Bromoform	ND		1.0	0.40	ug/L			09/27/17 15:37	1
Bromomethane	ND		0.50	0.25	ug/L			09/27/17 15:37	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-192591-1

**Client Sample ID: DW-4**  
**Date Collected: 09/20/17 12:50**  
**Date Received: 09/20/17 16:45**

**Lab Sample ID: 440-192591-3**  
**Matrix: Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		1.0	0.50	ug/L			09/27/17 15:37	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			09/27/17 15:37	1
Chlorobenzene	ND		0.50	0.25	ug/L			09/27/17 15:37	1
Bromochloromethane	ND		0.50	0.25	ug/L			09/27/17 15:37	1
Chloroethane	ND		1.0	0.40	ug/L			09/27/17 15:37	1
Chloroform	ND		0.50	0.25	ug/L			09/27/17 15:37	1
Chloromethane	ND		0.50	0.25	ug/L			09/27/17 15:37	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			09/27/17 15:37	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/27/17 15:37	1
Dibromochloromethane	ND		0.50	0.25	ug/L			09/27/17 15:37	1
Dibromomethane	ND		0.50	0.25	ug/L			09/27/17 15:37	1
Bromodichloromethane	ND		0.50	0.25	ug/L			09/27/17 15:37	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			09/27/17 15:37	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			09/27/17 15:37	1
Ethylbenzene	ND		0.50	0.25	ug/L			09/27/17 15:37	1
Iodomethane	ND		2.0	1.0	ug/L			09/27/17 15:37	1
Isobutyl alcohol	ND		25	13	ug/L			09/27/17 15:37	1
m,p-Xylene	ND		1.0	0.50	ug/L			09/27/17 15:37	1
Methylacrylonitrile	ND		10	2.5	ug/L			09/27/17 15:37	1
Methyl methacrylate	ND		2.0	1.0	ug/L			09/27/17 15:37	1
Methylene Chloride	ND		2.0	0.88	ug/L			09/27/17 15:37	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			09/27/17 15:37	1
Naphthalene	ND		1.0	0.40	ug/L			09/27/17 15:37	1
o-Xylene	ND		0.50	0.25	ug/L			09/27/17 15:37	1
Propionitrile	ND		20	10	ug/L			09/27/17 15:37	1
Styrene	ND		0.50	0.25	ug/L			09/27/17 15:37	1
t-Butanol	ND		10	5.0	ug/L			09/27/17 15:37	1
Tetrachloroethene	ND		0.50	0.25	ug/L			09/27/17 15:37	1
Tetrahydrofuran	ND		10	5.0	ug/L			09/27/17 15:37	1
Toluene	ND		0.50	0.25	ug/L			09/27/17 15:37	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			09/27/17 15:37	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/27/17 15:37	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			09/27/17 15:37	1
Trichloroethene	ND		0.50	0.25	ug/L			09/27/17 15:37	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			09/27/17 15:37	1
Vinyl acetate	ND		4.0	2.0	ug/L			09/27/17 15:37	1
Vinyl chloride	ND		0.50	0.25	ug/L			09/27/17 15:37	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			09/27/17 15:37	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			09/27/17 15:37	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			09/27/17 15:37	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	9.8	T J	ug/L		5.97			09/27/17 15:37	1
Unknown	3.7	T J	ug/L		12.23			09/27/17 15:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	105		80 - 128		09/24/17 15:25	1
4-Bromofluorobenzene (Surr)	100		80 - 120		09/24/17 15:25	1
Toluene-d8 (Surr)	105		80 - 128		09/27/17 15:37	1
4-Bromofluorobenzene (Surr)	98		80 - 120		09/27/17 15:37	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-192591-1

**Client Sample ID: DW-4**  
**Date Collected: 09/20/17 12:50**  
**Date Received: 09/20/17 16:45**

**Lab Sample ID: 440-192591-3**  
**Matrix: Water**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	97		76 - 132		09/24/17 15:25	1
Dibromofluoromethane (Surr)	110		76 - 132		09/27/17 15:37	1

## Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.99	0.25	ug/L		09/26/17 12:21	09/27/17 22:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	51		30 - 120	09/26/17 12:21	09/27/17 22:26	1

## Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	13		1.0	0.50	mg/L			09/22/17 15:17	2

## Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	4.4		0.50	0.25	mg/L		09/27/17 10:22	09/27/17 21:44	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		20	10	mg/L			09/27/17 13:34	1
Total Dissolved Solids	2900		20	10	mg/L			09/26/17 08:52	1
Ammonia (as N)	3.9		0.50	0.10	mg/L		09/22/17 05:30	09/22/17 09:00	1
Total Organic Carbon	1.8		0.10	0.050	mg/L			09/24/17 10:29	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	270		4.0	4.0	mg/L			09/21/17 06:47	1

**Client Sample ID: MW-2A**  
**Date Collected: 09/20/17 09:52**  
**Date Received: 09/20/17 16:45**

**Lab Sample ID: 440-192591-4**  
**Matrix: Water**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			09/27/17 16:05	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			09/27/17 16:05	1
Acrolein	ND		50	2.5	ug/L			09/24/17 15:54	1
Acrylonitrile	ND		50	1.0	ug/L			09/24/17 15:54	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			09/27/17 16:05	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			09/27/17 16:05	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			09/27/17 16:05	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			09/27/17 16:05	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			09/27/17 16:05	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			09/27/17 16:05	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			09/27/17 16:05	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			09/27/17 16:05	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			09/27/17 16:05	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			09/27/17 16:05	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			09/27/17 16:05	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			09/27/17 16:05	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			09/27/17 16:05	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-192591-1

**Client Sample ID: MW-2A**  
**Date Collected: 09/20/17 09:52**  
**Date Received: 09/20/17 16:45**

**Lab Sample ID: 440-192591-4**  
**Matrix: Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			09/27/17 16:05	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			09/27/17 16:05	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			09/27/17 16:05	1
2-Hexanone	ND		5.0	2.5	ug/L			09/27/17 16:05	1
Acetone	ND		20	10	ug/L			09/27/17 16:05	1
Acetonitrile	ND		20	10	ug/L			09/27/17 16:05	1
Acrolein	ND		5.0	2.5	ug/L			09/27/17 16:05	1
Acrylonitrile	ND		2.0	1.0	ug/L			09/27/17 16:05	1
Benzene	ND		0.50	0.25	ug/L			09/27/17 16:05	1
Allyl chloride	ND		1.0	0.50	ug/L			09/27/17 16:05	1
Bromoform	ND		1.0	0.40	ug/L			09/27/17 16:05	1
Bromomethane	ND		0.50	0.25	ug/L			09/27/17 16:05	1
Carbon disulfide	ND		1.0	0.50	ug/L			09/27/17 16:05	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			09/27/17 16:05	1
Chlorobenzene	ND		0.50	0.25	ug/L			09/27/17 16:05	1
Bromochloromethane	ND		0.50	0.25	ug/L			09/27/17 16:05	1
Chloroethane	ND		1.0	0.40	ug/L			09/27/17 16:05	1
Chloroform	ND		0.50	0.25	ug/L			09/27/17 16:05	1
Chloromethane	ND		0.50	0.25	ug/L			09/27/17 16:05	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			09/27/17 16:05	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/27/17 16:05	1
Dibromochloromethane	ND		0.50	0.25	ug/L			09/27/17 16:05	1
Dibromomethane	ND		0.50	0.25	ug/L			09/27/17 16:05	1
Bromodichloromethane	ND		0.50	0.25	ug/L			09/27/17 16:05	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			09/27/17 16:05	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			09/27/17 16:05	1
Ethylbenzene	ND		0.50	0.25	ug/L			09/27/17 16:05	1
Iodomethane	ND		2.0	1.0	ug/L			09/27/17 16:05	1
Isobutyl alcohol	ND		25	13	ug/L			09/27/17 16:05	1
m,p-Xylene	ND		1.0	0.50	ug/L			09/27/17 16:05	1
Methylacrylonitrile	ND		10	2.5	ug/L			09/27/17 16:05	1
Methyl methacrylate	ND		2.0	1.0	ug/L			09/27/17 16:05	1
Methylene Chloride	ND		2.0	0.88	ug/L			09/27/17 16:05	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			09/27/17 16:05	1
Naphthalene	ND		1.0	0.40	ug/L			09/27/17 16:05	1
o-Xylene	ND		0.50	0.25	ug/L			09/27/17 16:05	1
Propionitrile	ND		20	10	ug/L			09/27/17 16:05	1
Styrene	ND		0.50	0.25	ug/L			09/27/17 16:05	1
t-Butanol	ND		10	5.0	ug/L			09/27/17 16:05	1
Tetrachloroethene	ND		0.50	0.25	ug/L			09/27/17 16:05	1
Tetrahydrofuran	ND		10	5.0	ug/L			09/27/17 16:05	1
Toluene	ND		0.50	0.25	ug/L			09/27/17 16:05	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			09/27/17 16:05	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/27/17 16:05	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			09/27/17 16:05	1
Trichloroethene	ND		0.50	0.25	ug/L			09/27/17 16:05	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			09/27/17 16:05	1
Vinyl acetate	ND		4.0	2.0	ug/L			09/27/17 16:05	1
Vinyl chloride	ND		0.50	0.25	ug/L			09/27/17 16:05	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-192591-1

**Client Sample ID: MW-2A**

**Date Collected: 09/20/17 09:52**

**Date Received: 09/20/17 16:45**

**Lab Sample ID: 440-192591-4**

**Matrix: Water**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			09/27/17 16:05	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			09/27/17 16:05	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			09/27/17 16:05	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	10	T J	ug/L		5.97			09/27/17 16:05	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	107		80 - 128		09/24/17 15:54	1
4-Bromofluorobenzene (Surr)	100		80 - 120		09/24/17 15:54	1
Toluene-d8 (Surr)	103		80 - 128		09/27/17 16:05	1
4-Bromofluorobenzene (Surr)	101		80 - 120		09/27/17 16:05	1
Dibromofluoromethane (Surr)	100		76 - 132		09/24/17 15:54	1
Dibromofluoromethane (Surr)	110		76 - 132		09/27/17 16:05	1

## Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		1.1	0.26	ug/L		09/26/17 12:21	09/27/17 22:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	31		30 - 120	09/26/17 12:21	09/27/17 22:49	1

## Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	15		1.0	0.50	mg/L			09/22/17 15:40	2

## Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	5.1		0.50	0.25	mg/L		09/27/17 10:22	09/27/17 21:46	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		20	10	mg/L			09/27/17 13:34	1
Total Dissolved Solids	2700		20	10	mg/L			09/26/17 08:52	1
Ammonia (as N)	2.8		0.50	0.10	mg/L		09/22/17 05:30	09/22/17 09:00	1
Total Organic Carbon	2.6		0.10	0.050	mg/L			09/24/17 10:42	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	270		4.0	4.0	mg/L			09/21/17 06:55	1

**Client Sample ID: MW-2B**

**Date Collected: 09/20/17 11:27**

**Date Received: 09/20/17 16:45**

**Lab Sample ID: 440-192591-5**

**Matrix: Water**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			09/27/17 16:33	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			09/27/17 16:33	1
Acrolein	ND		50	2.5	ug/L			09/24/17 16:24	1
Acrylonitrile	ND		50	1.0	ug/L			09/24/17 16:24	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			09/27/17 16:33	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			09/27/17 16:33	1

TestAmerica Irvine



# Client Sample Results

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

TestAmerica Job ID: 440-192591-1

**Client Sample ID: MW-2B**

**Lab Sample ID: 440-192591-5**

**Date Collected: 09/20/17 11:27**

**Matrix: Water**

**Date Received: 09/20/17 16:45**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			09/27/17 16:33	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			09/27/17 16:33	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			09/27/17 16:33	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			09/27/17 16:33	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			09/27/17 16:33	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			09/27/17 16:33	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			09/27/17 16:33	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			09/27/17 16:33	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			09/27/17 16:33	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			09/27/17 16:33	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			09/27/17 16:33	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			09/27/17 16:33	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			09/27/17 16:33	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			09/27/17 16:33	1
2-Hexanone	ND		5.0	2.5	ug/L			09/27/17 16:33	1
Acetone	ND		20	10	ug/L			09/27/17 16:33	1
Acetonitrile	ND		20	10	ug/L			09/27/17 16:33	1
Acrolein	ND		5.0	2.5	ug/L			09/27/17 16:33	1
Acrylonitrile	ND		2.0	1.0	ug/L			09/27/17 16:33	1
Benzene	ND		0.50	0.25	ug/L			09/27/17 16:33	1
Allyl chloride	ND		1.0	0.50	ug/L			09/27/17 16:33	1
Bromoform	ND		1.0	0.40	ug/L			09/27/17 16:33	1
Bromomethane	ND		0.50	0.25	ug/L			09/27/17 16:33	1
Carbon disulfide	ND		1.0	0.50	ug/L			09/27/17 16:33	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			09/27/17 16:33	1
Chlorobenzene	ND		0.50	0.25	ug/L			09/27/17 16:33	1
Bromochloromethane	ND		0.50	0.25	ug/L			09/27/17 16:33	1
Chloroethane	ND		1.0	0.40	ug/L			09/27/17 16:33	1
Chloroform	ND		0.50	0.25	ug/L			09/27/17 16:33	1
Chloromethane	ND		0.50	0.25	ug/L			09/27/17 16:33	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			09/27/17 16:33	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/27/17 16:33	1
Dibromochloromethane	ND		0.50	0.25	ug/L			09/27/17 16:33	1
Dibromomethane	ND		0.50	0.25	ug/L			09/27/17 16:33	1
Bromodichloromethane	ND		0.50	0.25	ug/L			09/27/17 16:33	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			09/27/17 16:33	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			09/27/17 16:33	1
Ethylbenzene	ND		0.50	0.25	ug/L			09/27/17 16:33	1
Iodomethane	ND		2.0	1.0	ug/L			09/27/17 16:33	1
Isobutyl alcohol	ND		25	13	ug/L			09/27/17 16:33	1
m,p-Xylene	ND		1.0	0.50	ug/L			09/27/17 16:33	1
Methylacrylonitrile	ND		10	2.5	ug/L			09/27/17 16:33	1
Methyl methacrylate	ND		2.0	1.0	ug/L			09/27/17 16:33	1
Methylene Chloride	ND		2.0	0.88	ug/L			09/27/17 16:33	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			09/27/17 16:33	1
Naphthalene	ND		1.0	0.40	ug/L			09/27/17 16:33	1
o-Xylene	ND		0.50	0.25	ug/L			09/27/17 16:33	1
Propionitrile	ND		20	10	ug/L			09/27/17 16:33	1
Styrene	ND		0.50	0.25	ug/L			09/27/17 16:33	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-192591-1

**Client Sample ID: MW-2B**

**Lab Sample ID: 440-192591-5**

**Date Collected: 09/20/17 11:27**

**Matrix: Water**

**Date Received: 09/20/17 16:45**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
t-Butanol	ND		10	5.0	ug/L			09/27/17 16:33	1
Tetrachloroethene	ND		0.50	0.25	ug/L			09/27/17 16:33	1
Tetrahydrofuran	ND		10	5.0	ug/L			09/27/17 16:33	1
Toluene	ND		0.50	0.25	ug/L			09/27/17 16:33	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			09/27/17 16:33	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/27/17 16:33	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			09/27/17 16:33	1
Trichloroethene	ND		0.50	0.25	ug/L			09/27/17 16:33	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			09/27/17 16:33	1
Vinyl acetate	ND		4.0	2.0	ug/L			09/27/17 16:33	1
Vinyl chloride	ND		0.50	0.25	ug/L			09/27/17 16:33	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			09/27/17 16:33	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			09/27/17 16:33	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			09/27/17 16:33	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	11	T J	ug/L		5.97			09/27/17 16:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	104		80 - 128		09/24/17 16:24	1
4-Bromofluorobenzene (Surr)	98		80 - 120		09/24/17 16:24	1
Toluene-d8 (Surr)	103		80 - 128		09/27/17 16:33	1
4-Bromofluorobenzene (Surr)	98		80 - 120		09/27/17 16:33	1
Dibromofluoromethane (Surr)	97		76 - 132		09/24/17 16:24	1
Dibromofluoromethane (Surr)	115		76 - 132		09/27/17 16:33	1

## Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.99	0.25	ug/L		09/26/17 12:21	09/27/17 23:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	53		30 - 120	09/26/17 12:21	09/27/17 23:11	1

## Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	12		1.0	0.50	mg/L			09/22/17 17:46	2

## Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	4.3		0.50	0.25	mg/L		09/27/17 10:22	09/27/17 21:48	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		20	10	mg/L			09/27/17 13:34	1
Total Dissolved Solids	2700		20	10	mg/L			09/26/17 08:52	1
Ammonia (as N)	3.4		0.50	0.10	mg/L		09/22/17 05:30	09/22/17 09:00	1
Total Organic Carbon	1.8		0.10	0.050	mg/L			09/24/17 10:54	1

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	260		4.0	4.0	mg/L			09/21/17 09:14	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-192591-1

**Client Sample ID: MW-5**  
**Date Collected: 09/20/17 13:42**  
**Date Received: 09/20/17 16:45**

**Lab Sample ID: 440-192591-6**  
**Matrix: Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			09/27/17 17:01	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			09/27/17 17:01	1
Acrolein	ND		50	2.5	ug/L			09/24/17 16:53	1
Acrylonitrile	ND		50	1.0	ug/L			09/24/17 16:53	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			09/27/17 17:01	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			09/27/17 17:01	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			09/27/17 17:01	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			09/27/17 17:01	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			09/27/17 17:01	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			09/27/17 17:01	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			09/27/17 17:01	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			09/27/17 17:01	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			09/27/17 17:01	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			09/27/17 17:01	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			09/27/17 17:01	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			09/27/17 17:01	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			09/27/17 17:01	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			09/27/17 17:01	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			09/27/17 17:01	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			09/27/17 17:01	1
2-Hexanone	ND		5.0	2.5	ug/L			09/27/17 17:01	1
<b>Acetone</b>	<b>11</b>	<b>J</b>	20	10	ug/L			09/27/17 17:01	1
Acetonitrile	ND		20	10	ug/L			09/27/17 17:01	1
Acrolein	ND		5.0	2.5	ug/L			09/27/17 17:01	1
Acrylonitrile	ND		2.0	1.0	ug/L			09/27/17 17:01	1
Benzene	ND		0.50	0.25	ug/L			09/27/17 17:01	1
Allyl chloride	ND		1.0	0.50	ug/L			09/27/17 17:01	1
Bromoform	ND		1.0	0.40	ug/L			09/27/17 17:01	1
Bromomethane	ND		0.50	0.25	ug/L			09/27/17 17:01	1
Carbon disulfide	ND		1.0	0.50	ug/L			09/27/17 17:01	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			09/27/17 17:01	1
Chlorobenzene	ND		0.50	0.25	ug/L			09/27/17 17:01	1
Bromochloromethane	ND		0.50	0.25	ug/L			09/27/17 17:01	1
Chloroethane	ND		1.0	0.40	ug/L			09/27/17 17:01	1
Chloroform	ND		0.50	0.25	ug/L			09/27/17 17:01	1
Chloromethane	ND		0.50	0.25	ug/L			09/27/17 17:01	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			09/27/17 17:01	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/27/17 17:01	1
Dibromochloromethane	ND		0.50	0.25	ug/L			09/27/17 17:01	1
Dibromomethane	ND		0.50	0.25	ug/L			09/27/17 17:01	1
Bromodichloromethane	ND		0.50	0.25	ug/L			09/27/17 17:01	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			09/27/17 17:01	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			09/27/17 17:01	1
Ethylbenzene	ND		0.50	0.25	ug/L			09/27/17 17:01	1
Iodomethane	ND		2.0	1.0	ug/L			09/27/17 17:01	1
Isobutyl alcohol	ND		25	13	ug/L			09/27/17 17:01	1
m,p-Xylene	ND		1.0	0.50	ug/L			09/27/17 17:01	1
Methylacrylonitrile	ND		10	2.5	ug/L			09/27/17 17:01	1
Methyl methacrylate	ND		2.0	1.0	ug/L			09/27/17 17:01	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-192591-1

**Client Sample ID: MW-5**  
**Date Collected: 09/20/17 13:42**  
**Date Received: 09/20/17 16:45**

**Lab Sample ID: 440-192591-6**  
**Matrix: Water**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	ND		2.0	0.88	ug/L			09/27/17 17:01	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			09/27/17 17:01	1
Naphthalene	ND		1.0	0.40	ug/L			09/27/17 17:01	1
o-Xylene	ND		0.50	0.25	ug/L			09/27/17 17:01	1
Propionitrile	ND		20	10	ug/L			09/27/17 17:01	1
Styrene	ND		0.50	0.25	ug/L			09/27/17 17:01	1
t-Butanol	ND		10	5.0	ug/L			09/27/17 17:01	1
Tetrachloroethene	ND		0.50	0.25	ug/L			09/27/17 17:01	1
Tetrahydrofuran	ND		10	5.0	ug/L			09/27/17 17:01	1
Toluene	ND		0.50	0.25	ug/L			09/27/17 17:01	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			09/27/17 17:01	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/27/17 17:01	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			09/27/17 17:01	1
Trichloroethene	ND		0.50	0.25	ug/L			09/27/17 17:01	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			09/27/17 17:01	1
Vinyl acetate	ND		4.0	2.0	ug/L			09/27/17 17:01	1
Vinyl chloride	ND		0.50	0.25	ug/L			09/27/17 17:01	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			09/27/17 17:01	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			09/27/17 17:01	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			09/27/17 17:01	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	4.5	T J	ug/L		4.39			09/27/17 17:01	1
Unknown	10	T J	ug/L		5.97			09/27/17 17:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	107		80 - 128		09/24/17 16:53	1
4-Bromofluorobenzene (Surr)	99		80 - 120		09/24/17 16:53	1
Toluene-d8 (Surr)	106		80 - 128		09/27/17 17:01	1
4-Bromofluorobenzene (Surr)	99		80 - 120		09/27/17 17:01	1
Dibromofluoromethane (Surr)	100		76 - 132		09/24/17 16:53	1
Dibromofluoromethane (Surr)	114		76 - 132		09/27/17 17:01	1

## Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	12		1.0	0.25	ug/L		09/26/17 12:21	09/27/17 23:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	45		30 - 120	09/26/17 12:21	09/27/17 23:33	1

## Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	260		100	50	mg/L			09/21/17 03:21	200

## Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	28		0.50	0.25	mg/L		09/27/17 10:22	09/27/17 21:50	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	86		20	10	mg/L			09/28/17 16:44	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-192591-1

## Client Sample ID: MW-5

Date Collected: 09/20/17 13:42

Date Received: 09/20/17 16:45

## Lab Sample ID: 440-192591-6

Matrix: Water

### General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	3800		50	25	mg/L			09/26/17 08:52	1
Ammonia (as N)	5.6		2.5	0.50	mg/L		09/22/17 04:30	09/22/17 07:00	1
Total Organic Carbon	35		0.50	0.25	mg/L			09/24/17 14:15	5
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	510		4.0	4.0	mg/L			09/21/17 07:06	1

## Client Sample ID: QCAB

Date Collected: 09/20/17 00:01

Date Received: 09/20/17 16:45

## Lab Sample ID: 440-192591-7

Matrix: Water

### Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			09/27/17 17:28	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			09/27/17 17:28	1
Acrolein	ND		50	2.5	ug/L			09/24/17 17:22	1
Acrylonitrile	ND		50	1.0	ug/L			09/24/17 17:22	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			09/27/17 17:28	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			09/27/17 17:28	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			09/27/17 17:28	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			09/27/17 17:28	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			09/27/17 17:28	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			09/27/17 17:28	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			09/27/17 17:28	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			09/27/17 17:28	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			09/27/17 17:28	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			09/27/17 17:28	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			09/27/17 17:28	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			09/27/17 17:28	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			09/27/17 17:28	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			09/27/17 17:28	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			09/27/17 17:28	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			09/27/17 17:28	1
2-Hexanone	ND		5.0	2.5	ug/L			09/27/17 17:28	1
Acetone	ND		20	10	ug/L			09/27/17 17:28	1
Acetonitrile	ND		20	10	ug/L			09/27/17 17:28	1
Acrolein	ND		5.0	2.5	ug/L			09/27/17 17:28	1
Acrylonitrile	ND		2.0	1.0	ug/L			09/27/17 17:28	1
Benzene	ND		0.50	0.25	ug/L			09/27/17 17:28	1
Allyl chloride	ND		1.0	0.50	ug/L			09/27/17 17:28	1
Bromoform	ND		1.0	0.40	ug/L			09/27/17 17:28	1
Bromomethane	ND		0.50	0.25	ug/L			09/27/17 17:28	1
Carbon disulfide	ND		1.0	0.50	ug/L			09/27/17 17:28	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			09/27/17 17:28	1
Chlorobenzene	ND		0.50	0.25	ug/L			09/27/17 17:28	1
Bromochloromethane	ND		0.50	0.25	ug/L			09/27/17 17:28	1
Chloroethane	ND		1.0	0.40	ug/L			09/27/17 17:28	1
Chloroform	ND		0.50	0.25	ug/L			09/27/17 17:28	1
Chloromethane	ND		0.50	0.25	ug/L			09/27/17 17:28	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			09/27/17 17:28	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-192591-1

**Client Sample ID: QCAB**

**Lab Sample ID: 440-192591-7**

**Date Collected: 09/20/17 00:01**

**Matrix: Water**

**Date Received: 09/20/17 16:45**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/27/17 17:28	1
Dibromochloromethane	ND		0.50	0.25	ug/L			09/27/17 17:28	1
Dibromomethane	ND		0.50	0.25	ug/L			09/27/17 17:28	1
Bromodichloromethane	ND		0.50	0.25	ug/L			09/27/17 17:28	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			09/27/17 17:28	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			09/27/17 17:28	1
Ethylbenzene	ND		0.50	0.25	ug/L			09/27/17 17:28	1
Iodomethane	ND		2.0	1.0	ug/L			09/27/17 17:28	1
Isobutyl alcohol	ND		25	13	ug/L			09/27/17 17:28	1
m,p-Xylene	ND		1.0	0.50	ug/L			09/27/17 17:28	1
Methylacrylonitrile	ND		10	2.5	ug/L			09/27/17 17:28	1
Methyl methacrylate	ND		2.0	1.0	ug/L			09/27/17 17:28	1
Methylene Chloride	ND		2.0	0.88	ug/L			09/27/17 17:28	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			09/27/17 17:28	1
Naphthalene	ND		1.0	0.40	ug/L			09/27/17 17:28	1
o-Xylene	ND		0.50	0.25	ug/L			09/27/17 17:28	1
Propionitrile	ND		20	10	ug/L			09/27/17 17:28	1
Styrene	ND		0.50	0.25	ug/L			09/27/17 17:28	1
t-Butanol	ND		10	5.0	ug/L			09/27/17 17:28	1
Tetrachloroethene	ND		0.50	0.25	ug/L			09/27/17 17:28	1
Tetrahydrofuran	ND		10	5.0	ug/L			09/27/17 17:28	1
Toluene	ND		0.50	0.25	ug/L			09/27/17 17:28	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			09/27/17 17:28	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/27/17 17:28	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			09/27/17 17:28	1
Trichloroethene	ND		0.50	0.25	ug/L			09/27/17 17:28	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			09/27/17 17:28	1
Vinyl acetate	ND		4.0	2.0	ug/L			09/27/17 17:28	1
Vinyl chloride	ND		0.50	0.25	ug/L			09/27/17 17:28	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			09/27/17 17:28	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			09/27/17 17:28	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			09/27/17 17:28	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	11	TJ	ug/L		5.97			09/27/17 17:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	104		80 - 128		09/24/17 17:22	1
4-Bromofluorobenzene (Surr)	100		80 - 120		09/24/17 17:22	1
Toluene-d8 (Surr)	102		80 - 128		09/27/17 17:28	1
4-Bromofluorobenzene (Surr)	101		80 - 120		09/27/17 17:28	1
Dibromofluoromethane (Surr)	99		76 - 132		09/24/17 17:22	1
Dibromofluoromethane (Surr)	118		76 - 132		09/27/17 17:28	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-192591-1

**Client Sample ID: QCTB**  
**Date Collected: 09/20/17 00:01**  
**Date Received: 09/20/17 16:45**

**Lab Sample ID: 440-192591-8**  
**Matrix: Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			09/28/17 23:53	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			09/28/17 23:53	1
Acrolein	ND		50	2.5	ug/L			09/24/17 17:51	1
Acrylonitrile	ND		50	1.0	ug/L			09/24/17 17:51	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			09/28/17 23:53	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			09/28/17 23:53	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			09/28/17 23:53	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			09/28/17 23:53	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			09/28/17 23:53	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			09/28/17 23:53	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			09/28/17 23:53	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			09/28/17 23:53	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			09/28/17 23:53	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			09/28/17 23:53	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			09/28/17 23:53	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			09/28/17 23:53	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			09/28/17 23:53	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			09/28/17 23:53	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			09/28/17 23:53	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			09/28/17 23:53	1
2-Hexanone	ND		5.0	2.5	ug/L			09/28/17 23:53	1
Acetone	ND		20	10	ug/L			09/28/17 23:53	1
Acetonitrile	ND		20	10	ug/L			09/28/17 23:53	1
Acrolein	ND		5.0	2.5	ug/L			09/28/17 23:53	1
Acrylonitrile	ND		2.0	1.0	ug/L			09/28/17 23:53	1
Benzene	ND		0.50	0.25	ug/L			09/28/17 23:53	1
Allyl chloride	ND		1.0	0.50	ug/L			09/28/17 23:53	1
Bromoform	ND		1.0	0.40	ug/L			09/28/17 23:53	1
Bromomethane	ND		0.50	0.25	ug/L			09/28/17 23:53	1
Carbon disulfide	ND		1.0	0.50	ug/L			09/28/17 23:53	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			09/28/17 23:53	1
Chlorobenzene	ND		0.50	0.25	ug/L			09/28/17 23:53	1
Bromochloromethane	ND		0.50	0.25	ug/L			09/28/17 23:53	1
Chloroethane	ND		1.0	0.40	ug/L			09/28/17 23:53	1
Chloroform	ND		0.50	0.25	ug/L			09/28/17 23:53	1
Chloromethane	ND		0.50	0.25	ug/L			09/28/17 23:53	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			09/28/17 23:53	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/28/17 23:53	1
Dibromochloromethane	ND		0.50	0.25	ug/L			09/28/17 23:53	1
Dibromomethane	ND		0.50	0.25	ug/L			09/28/17 23:53	1
Bromodichloromethane	ND		0.50	0.25	ug/L			09/28/17 23:53	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			09/28/17 23:53	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			09/28/17 23:53	1
Ethylbenzene	ND		0.50	0.25	ug/L			09/28/17 23:53	1
Iodomethane	ND		2.0	1.0	ug/L			09/28/17 23:53	1
Isobutyl alcohol	ND		25	13	ug/L			09/28/17 23:53	1
m,p-Xylene	ND		1.0	0.50	ug/L			09/28/17 23:53	1
Methylacrylonitrile	ND		10	2.5	ug/L			09/28/17 23:53	1
Methyl methacrylate	ND		2.0	1.0	ug/L			09/28/17 23:53	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-192591-1

**Client Sample ID: QCTB**  
**Date Collected: 09/20/17 00:01**  
**Date Received: 09/20/17 16:45**

**Lab Sample ID: 440-192591-8**  
**Matrix: Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	ND		2.0	0.88	ug/L			09/28/17 23:53	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			09/28/17 23:53	1
Naphthalene	ND		1.0	0.40	ug/L			09/28/17 23:53	1
o-Xylene	ND		0.50	0.25	ug/L			09/28/17 23:53	1
Propionitrile	ND		20	10	ug/L			09/28/17 23:53	1
Styrene	ND		0.50	0.25	ug/L			09/28/17 23:53	1
t-Butanol	ND		10	5.0	ug/L			09/28/17 23:53	1
Tetrachloroethene	ND		0.50	0.25	ug/L			09/28/17 23:53	1
Tetrahydrofuran	ND		10	5.0	ug/L			09/28/17 23:53	1
Toluene	ND		0.50	0.25	ug/L			09/28/17 23:53	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			09/28/17 23:53	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/28/17 23:53	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			09/28/17 23:53	1
Trichloroethene	ND		0.50	0.25	ug/L			09/28/17 23:53	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			09/28/17 23:53	1
Vinyl acetate	ND		4.0	2.0	ug/L			09/28/17 23:53	1
Vinyl chloride	ND		0.50	0.25	ug/L			09/28/17 23:53	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			09/28/17 23:53	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			09/28/17 23:53	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			09/28/17 23:53	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	11	T J	ug/L		5.97			09/28/17 23:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	107		80 - 128		09/24/17 17:51	1
4-Bromofluorobenzene (Surr)	100		80 - 120		09/24/17 17:51	1
Toluene-d8 (Surr)	102		80 - 128		09/28/17 23:53	1
4-Bromofluorobenzene (Surr)	98		80 - 120		09/28/17 23:53	1
Dibromofluoromethane (Surr)	96		76 - 132		09/24/17 17:51	1
Dibromofluoromethane (Surr)	120		76 - 132		09/28/17 23:53	1



# Method Summary

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

TestAmerica Job ID: 440-192591-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL IRV
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL IRV
300.0	Anions, Ion Chromatography	MCAWW	TAL IRV
6010B	Metals (ICP)	SW846	TAL IRV
410.4	COD	MCAWW	TAL IRV
SM 2320B	Alkalinity	SM	TAL IRV
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL IRV
SM 4500 NH3 D	Ammonia	SM	TAL IRV
SM 5310C	TOC	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",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

#### Laboratory References:

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

# Lab Chronicle

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

TestAmerica Job ID: 440-192591-1

## Client Sample ID: PZ-4

Date Collected: 09/20/17 09:15

Date Received: 09/20/17 16:45

## Lab Sample ID: 440-192591-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	430980	09/24/17 13:28	K1S	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	431555	09/27/17 14:41	WC	TAL IRV
Total/NA	Prep	3520C			1000 mL	1.0 mL	431370	09/26/17 12:21	JJM	TAL IRV
Total/NA	Analysis	8270C		1			431427	09/27/17 21:41	AI	TAL IRV
Total/NA	Analysis	300.0		1			430638	09/22/17 14:30	NTN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	431623	09/27/17 10:22	Q1N	TAL IRV
Total Recoverable	Analysis	6010B		1			431839	09/27/17 21:40	EN	TAL IRV
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	431689	09/27/17 13:34	KYP	TAL IRV
Total/NA	Analysis	SM 2320B		1			430409	09/21/17 06:22	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	431301	09/26/17 08:52	XL	TAL IRV
Total/NA	Prep	SM 4500 NH3 B			50 mL	50 mL	430601	09/22/17 05:30	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			430628	09/22/17 09:00	YZ	TAL IRV
Total/NA	Analysis	SM 5310C		1	100 mL	100 mL	430999	09/24/17 09:41	YZ	TAL IRV

## Client Sample ID: DW-3

Date Collected: 09/20/17 11:54

Date Received: 09/20/17 16:45

## Lab Sample ID: 440-192591-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	430980	09/24/17 14:56	K1S	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	431555	09/27/17 15:09	WC	TAL IRV
Total/NA	Prep	3520C			1005 mL	1.0 mL	431370	09/26/17 12:21	JJM	TAL IRV
Total/NA	Analysis	8270C		1			431427	09/27/17 22:03	AI	TAL IRV
Total/NA	Analysis	300.0		2			430638	09/22/17 14:54	NTN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	431623	09/27/17 10:22	Q1N	TAL IRV
Total Recoverable	Analysis	6010B		1			431839	09/27/17 21:42	EN	TAL IRV
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	431689	09/27/17 13:34	KYP	TAL IRV
Total/NA	Analysis	SM 2320B		1			430409	09/21/17 06:38	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	431301	09/26/17 08:52	XL	TAL IRV
Total/NA	Prep	SM 4500 NH3 B			50 mL	50 mL	430601	09/22/17 05:30	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			430628	09/22/17 09:00	YZ	TAL IRV
Total/NA	Analysis	SM 5310C		1	100 mL	100 mL	430999	09/24/17 10:17	YZ	TAL IRV

## Client Sample ID: DW-4

Date Collected: 09/20/17 12:50

Date Received: 09/20/17 16:45

## Lab Sample ID: 440-192591-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	430980	09/24/17 15:25	K1S	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	431555	09/27/17 15:37	WC	TAL IRV
Total/NA	Prep	3520C			1015 mL	1.0 mL	431370	09/26/17 12:21	JJM	TAL IRV

TestAmerica Irvine

# Lab Chronicle

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

TestAmerica Job ID: 440-192591-1

**Client Sample ID: DW-4**

**Lab Sample ID: 440-192591-3**

**Date Collected: 09/20/17 12:50**

**Matrix: Water**

**Date Received: 09/20/17 16:45**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8270C		1			431427	09/27/17 22:26	AI	TAL IRV
Total/NA	Analysis	300.0		2			430638	09/22/17 15:17	NTN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	431623	09/27/17 10:22	Q1N	TAL IRV
Total Recoverable	Analysis	6010B		1			431839	09/27/17 21:44	EN	TAL IRV
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	431689	09/27/17 13:34	KYP	TAL IRV
Total/NA	Analysis	SM 2320B		1			430409	09/21/17 06:47	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	431301	09/26/17 08:52	XL	TAL IRV
Total/NA	Prep	SM 4500 NH3 B			50 mL	50 mL	430601	09/22/17 05:30	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			430628	09/22/17 09:00	YZ	TAL IRV
Total/NA	Analysis	SM 5310C		1	100 mL	100 mL	430999	09/24/17 10:29	YZ	TAL IRV

**Client Sample ID: MW-2A**

**Lab Sample ID: 440-192591-4**

**Date Collected: 09/20/17 09:52**

**Matrix: Water**

**Date Received: 09/20/17 16:45**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	430980	09/24/17 15:54	K1S	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	431555	09/27/17 16:05	WC	TAL IRV
Total/NA	Prep	3520C			945 mL	1.0 mL	431370	09/26/17 12:21	JJM	TAL IRV
Total/NA	Analysis	8270C		1			431427	09/27/17 22:49	AI	TAL IRV
Total/NA	Analysis	300.0		2			430638	09/22/17 15:40	NTN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	431623	09/27/17 10:22	Q1N	TAL IRV
Total Recoverable	Analysis	6010B		1			431839	09/27/17 21:46	EN	TAL IRV
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	431689	09/27/17 13:34	KYP	TAL IRV
Total/NA	Analysis	SM 2320B		1			430409	09/21/17 06:55	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	431301	09/26/17 08:52	XL	TAL IRV
Total/NA	Prep	SM 4500 NH3 B			50 mL	50 mL	430601	09/22/17 05:30	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			430628	09/22/17 09:00	YZ	TAL IRV
Total/NA	Analysis	SM 5310C		1	100 mL	100 mL	430999	09/24/17 10:42	YZ	TAL IRV

**Client Sample ID: MW-2B**

**Lab Sample ID: 440-192591-5**

**Date Collected: 09/20/17 11:27**

**Matrix: Water**

**Date Received: 09/20/17 16:45**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	430980	09/24/17 16:24	K1S	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	431555	09/27/17 16:33	WC	TAL IRV
Total/NA	Prep	3520C			1015 mL	1.0 mL	431370	09/26/17 12:21	JJM	TAL IRV
Total/NA	Analysis	8270C		1			431427	09/27/17 23:11	AI	TAL IRV
Total/NA	Analysis	300.0		2			430638	09/22/17 17:46	NTN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	431623	09/27/17 10:22	Q1N	TAL IRV
Total Recoverable	Analysis	6010B		1			431839	09/27/17 21:48	EN	TAL IRV

TestAmerica Irvine

# Lab Chronicle

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

TestAmerica Job ID: 440-192591-1

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	431689	09/27/17 13:34	KYP	TAL IRV
Total/NA	Analysis	SM 2320B		1			430409	09/21/17 09:14	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	431301	09/26/17 08:52	XL	TAL IRV
Total/NA	Prep	SM 4500 NH3 B			50 mL	50 mL	430601	09/22/17 05:30	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			430628	09/22/17 09:00	YZ	TAL IRV
Total/NA	Analysis	SM 5310C		1	100 mL	100 mL	430999	09/24/17 10:54	YZ	TAL IRV

## Client Sample ID: MW-5

Date Collected: 09/20/17 13:42

Date Received: 09/20/17 16:45

## Lab Sample ID: 440-192591-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	430980	09/24/17 16:53	K1S	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	431555	09/27/17 17:01	WC	TAL IRV
Total/NA	Prep	3520C			995 mL	1.0 mL	431370	09/26/17 12:21	JJM	TAL IRV
Total/NA	Analysis	8270C		1			431427	09/27/17 23:33	AI	TAL IRV
Total/NA	Analysis	300.0		200			430064	09/21/17 03:21	NTN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	431623	09/27/17 10:22	Q1N	TAL IRV
Total Recoverable	Analysis	6010B		1			431839	09/27/17 21:50	EN	TAL IRV
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	431988	09/28/17 16:44	KYP	TAL IRV
Total/NA	Analysis	SM 2320B		1			430409	09/21/17 07:06	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	20 mL	100 mL	431301	09/26/17 08:52	XL	TAL IRV
Total/NA	Prep	SM 4500 NH3 B			10 mL	50 mL	430599	09/22/17 04:30	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			430608	09/22/17 07:00	YZ	TAL IRV
Total/NA	Analysis	SM 5310C		5	100 mL	100 mL	430999	09/24/17 14:15	YZ	TAL IRV

## Client Sample ID: QCAB

Date Collected: 09/20/17 00:01

Date Received: 09/20/17 16:45

## Lab Sample ID: 440-192591-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	430980	09/24/17 17:22	K1S	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	431555	09/27/17 17:28	WC	TAL IRV

## Client Sample ID: QCTB

Date Collected: 09/20/17 00:01

Date Received: 09/20/17 16:45

## Lab Sample ID: 440-192591-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	430980	09/24/17 17:51	K1S	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	431991	09/28/17 23:53	JB	TAL IRV

### Laboratory References:

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

# QC Sample Results

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

TestAmerica Job ID: 440-192591-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 440-430980/4**  
**Matrix: Water**  
**Analysis Batch: 430980**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acrolein	ND		50	2.5	ug/L			09/24/17 12:00	1
Acrylonitrile	ND		50	1.0	ug/L			09/24/17 12:00	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	105		80 - 128		09/24/17 12:00	1
4-Bromofluorobenzene (Surr)	98		80 - 120		09/24/17 12:00	1
Dibromofluoromethane (Surr)	95		76 - 132		09/24/17 12:00	1

**Lab Sample ID: LCS 440-430980/5**  
**Matrix: Water**  
**Analysis Batch: 430980**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acrolein	25.0	29.3	J	ug/L		117	10 - 145
Acrylonitrile	250	274		ug/L		110	48 - 140

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	101		80 - 128
4-Bromofluorobenzene (Surr)	102		80 - 120
Dibromofluoromethane (Surr)	94		76 - 132

**Lab Sample ID: 440-192591-1 MS**  
**Matrix: Water**  
**Analysis Batch: 430980**

**Client Sample ID: PZ-4**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acrolein	ND		25.0	28.2	J	ug/L		113	10 - 147
Acrylonitrile	ND		250	295		ug/L		118	38 - 144

Surrogate	MS %Recovery	MS Qualifier	Limits
Toluene-d8 (Surr)	101		80 - 128
4-Bromofluorobenzene (Surr)	102		80 - 120
Dibromofluoromethane (Surr)	98		76 - 132

**Lab Sample ID: 440-192591-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 430980**

**Client Sample ID: PZ-4**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acrolein	ND		25.0	34.6	J	ug/L		138	10 - 147	20	40
Acrylonitrile	ND		250	301		ug/L		121	38 - 144	2	40

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Toluene-d8 (Surr)	103		80 - 128
4-Bromofluorobenzene (Surr)	102		80 - 120
Dibromofluoromethane (Surr)	96		76 - 132

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-192591-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 440-431555/4**  
**Matrix: Water**  
**Analysis Batch: 431555**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			09/27/17 07:42	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			09/27/17 07:42	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			09/27/17 07:42	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			09/27/17 07:42	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			09/27/17 07:42	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			09/27/17 07:42	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			09/27/17 07:42	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			09/27/17 07:42	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			09/27/17 07:42	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			09/27/17 07:42	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			09/27/17 07:42	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			09/27/17 07:42	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			09/27/17 07:42	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			09/27/17 07:42	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			09/27/17 07:42	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			09/27/17 07:42	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			09/27/17 07:42	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			09/27/17 07:42	1
2-Hexanone	ND		5.0	2.5	ug/L			09/27/17 07:42	1
Acetone	ND		20	10	ug/L			09/27/17 07:42	1
Acetonitrile	ND		20	10	ug/L			09/27/17 07:42	1
Acrolein	ND		5.0	2.5	ug/L			09/27/17 07:42	1
Acrylonitrile	ND		2.0	1.0	ug/L			09/27/17 07:42	1
Benzene	ND		0.50	0.25	ug/L			09/27/17 07:42	1
Allyl chloride	ND		1.0	0.50	ug/L			09/27/17 07:42	1
Bromoform	ND		1.0	0.40	ug/L			09/27/17 07:42	1
Bromomethane	ND		0.50	0.25	ug/L			09/27/17 07:42	1
Carbon disulfide	ND		1.0	0.50	ug/L			09/27/17 07:42	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			09/27/17 07:42	1
Chlorobenzene	ND		0.50	0.25	ug/L			09/27/17 07:42	1
Bromochloromethane	ND		0.50	0.25	ug/L			09/27/17 07:42	1
Chloroethane	ND		1.0	0.40	ug/L			09/27/17 07:42	1
Chloroform	ND		0.50	0.25	ug/L			09/27/17 07:42	1
Chloromethane	ND		0.50	0.25	ug/L			09/27/17 07:42	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			09/27/17 07:42	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/27/17 07:42	1
Dibromochloromethane	ND		0.50	0.25	ug/L			09/27/17 07:42	1
Dibromomethane	ND		0.50	0.25	ug/L			09/27/17 07:42	1
Bromodichloromethane	ND		0.50	0.25	ug/L			09/27/17 07:42	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			09/27/17 07:42	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			09/27/17 07:42	1
Ethylbenzene	ND		0.50	0.25	ug/L			09/27/17 07:42	1
Iodomethane	ND		2.0	1.0	ug/L			09/27/17 07:42	1
Isobutyl alcohol	ND		25	13	ug/L			09/27/17 07:42	1
m,p-Xylene	ND		1.0	0.50	ug/L			09/27/17 07:42	1
Methylacrylonitrile	ND		10	2.5	ug/L			09/27/17 07:42	1
Methyl methacrylate	ND		2.0	1.0	ug/L			09/27/17 07:42	1
Methylene Chloride	ND		2.0	0.88	ug/L			09/27/17 07:42	1

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-192591-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 440-431555/4**  
**Matrix: Water**  
**Analysis Batch: 431555**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			09/27/17 07:42	1
Naphthalene	ND		1.0	0.40	ug/L			09/27/17 07:42	1
o-Xylene	ND		0.50	0.25	ug/L			09/27/17 07:42	1
Propionitrile	ND		20	10	ug/L			09/27/17 07:42	1
Styrene	ND		0.50	0.25	ug/L			09/27/17 07:42	1
t-Butanol	ND		10	5.0	ug/L			09/27/17 07:42	1
Tetrachloroethene	ND		0.50	0.25	ug/L			09/27/17 07:42	1
Tetrahydrofuran	ND		10	5.0	ug/L			09/27/17 07:42	1
Toluene	ND		0.50	0.25	ug/L			09/27/17 07:42	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			09/27/17 07:42	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/27/17 07:42	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			09/27/17 07:42	1
Trichloroethene	ND		0.50	0.25	ug/L			09/27/17 07:42	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			09/27/17 07:42	1
Vinyl acetate	ND		4.0	2.0	ug/L			09/27/17 07:42	1
Vinyl chloride	ND		0.50	0.25	ug/L			09/27/17 07:42	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			09/27/17 07:42	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			09/27/17 07:42	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			09/27/17 07:42	1

Tentatively Identified Compound	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L					09/27/17 07:42	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	108		80 - 128		09/27/17 07:42	1
4-Bromofluorobenzene (Surr)	98		80 - 120		09/27/17 07:42	1
Dibromofluoromethane (Surr)	111		76 - 132		09/27/17 07:42	1

**Lab Sample ID: LCS 440-431555/6**  
**Matrix: Water**  
**Analysis Batch: 431555**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,3-Trichloropropane	25.0	25.9		ug/L		104	63 - 130
1,1,1,2-Tetrachloroethane	25.0	29.0		ug/L		116	60 - 141
1,1,1-Trichloroethane	25.0	27.2		ug/L		109	70 - 130
1,1,2,2-Tetrachloroethane	25.0	25.3		ug/L		101	63 - 130
1,1,2-Trichloroethane	25.0	27.8		ug/L		111	70 - 130
1,1-Dichloroethane	25.0	25.1		ug/L		100	64 - 130
1,1-Dichloroethene	25.0	23.7		ug/L		95	70 - 130
1,1-Dichloropropene	25.0	25.4		ug/L		102	70 - 130
1,2,4-Trichlorobenzene	25.0	27.5		ug/L		110	60 - 140
1,2-Dibromo-3-Chloropropane	25.0	27.4		ug/L		109	52 - 140
1,2-Dichlorobenzene	25.0	25.2		ug/L		101	70 - 130
1,2-Dichloroethane	25.0	25.8		ug/L		103	57 - 138
1,2-Dichloropropane	25.0	24.6		ug/L		98	67 - 130
1,3-Dichlorobenzene	25.0	24.7		ug/L		99	70 - 130

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-192591-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 440-431555/6**  
**Matrix: Water**  
**Analysis Batch: 431555**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3-Dichloropropane	25.0	26.4		ug/L		106	70 - 130
1,4-Dichlorobenzene	25.0	25.3		ug/L		101	70 - 130
2,2-Dichloropropane	25.0	28.8		ug/L		115	68 - 141
2-Hexanone	25.0	30.7		ug/L		123	10 - 150
Acetone	25.0	29.9		ug/L		120	10 - 150
Acrolein	25.0	31.5		ug/L		126	10 - 145
Acrylonitrile	250	297		ug/L		119	48 - 140
Benzene	25.0	25.6		ug/L		102	68 - 130
Bromoform	25.0	31.3		ug/L		125	60 - 148
Bromomethane	25.0	24.8		ug/L		99	64 - 139
Carbon disulfide	25.0	24.5		ug/L		98	52 - 136
Carbon tetrachloride	25.0	28.9		ug/L		115	60 - 150
Chlorobenzene	25.0	25.3		ug/L		101	70 - 130
Bromochloromethane	25.0	25.7		ug/L		103	70 - 130
Chloroethane	25.0	22.9		ug/L		92	64 - 135
Chloroform	25.0	25.3		ug/L		101	70 - 130
Chloromethane	25.0	24.7		ug/L		99	47 - 140
cis-1,2-Dichloroethene	25.0	25.8		ug/L		103	70 - 133
cis-1,3-Dichloropropene	25.0	27.3		ug/L		109	70 - 133
Dibromochloromethane	25.0	30.0		ug/L		120	69 - 145
Dibromomethane	25.0	24.9		ug/L		100	70 - 130
Bromodichloromethane	25.0	27.3		ug/L		109	70 - 132
Dichlorodifluoromethane	25.0	25.1		ug/L		101	29 - 150
Ethylbenzene	25.0	25.4		ug/L		102	70 - 130
m,p-Xylene	25.0	25.7		ug/L		103	70 - 130
Methylene Chloride	25.0	22.5		ug/L		90	52 - 130
Methyl tert-butyl ether	25.0	25.3		ug/L		101	63 - 131
Naphthalene	25.0	28.3		ug/L		113	60 - 140
o-Xylene	25.0	26.6		ug/L		106	70 - 130
Styrene	25.0	25.2		ug/L		101	70 - 134
t-Butanol	250	269		ug/L		108	70 - 130
Tetrachloroethene	25.0	26.8		ug/L		107	70 - 130
Toluene	25.0	27.0		ug/L		108	70 - 130
trans-1,2-Dichloroethene	25.0	24.8		ug/L		99	70 - 130
trans-1,3-Dichloropropene	25.0	27.4		ug/L		110	70 - 132
Trichloroethene	25.0	24.7		ug/L		99	70 - 130
Trichlorofluoromethane	25.0	27.9		ug/L		111	60 - 150
Vinyl acetate	25.0	28.9		ug/L		115	48 - 140
Vinyl chloride	25.0	23.2		ug/L		93	59 - 133
1,2-Dibromoethane (EDB)	25.0	26.4		ug/L		105	70 - 130
2-Butanone (MEK)	25.0	23.6		ug/L		94	44 - 150
4-Methyl-2-pentanone (MIBK)	25.0	31.3		ug/L		125	59 - 149

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Toluene-d8 (Surr)	107		80 - 128
4-Bromofluorobenzene (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	105		76 - 132

TestAmerica Irvine



# QC Sample Results

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

TestAmerica Job ID: 440-192591-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 440-192113-A-3 MS**

**Matrix: Water**

**Analysis Batch: 431555**

**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
1,2,3-Trichloropropane	ND		25.0	28.0		ug/L		112	60 - 130
1,1,1,2-Tetrachloroethane	ND		25.0	30.6		ug/L		122	60 - 149
1,1,1-Trichloroethane	ND		25.0	28.1		ug/L		112	70 - 130
1,1,2,2-Tetrachloroethane	ND		25.0	23.7		ug/L		95	63 - 130
1,1,2-Trichloroethane	ND		25.0	30.1		ug/L		120	70 - 130
1,1-Dichloroethane	ND		25.0	26.3		ug/L		105	65 - 130
1,1-Dichloroethene	ND		25.0	23.4		ug/L		94	70 - 130
1,1-Dichloropropene	ND		25.0	25.5		ug/L		102	64 - 130
1,2,4-Trichlorobenzene	ND		25.0	32.0		ug/L		128	60 - 140
1,2-Dibromo-3-Chloropropane	ND		25.0	24.9		ug/L		100	48 - 140
1,2-Dichlorobenzene	ND		25.0	26.9		ug/L		108	70 - 130
1,2-Dichloroethane	ND		25.0	28.3		ug/L		113	56 - 146
1,2-Dichloropropane	ND		25.0	27.0		ug/L		108	69 - 130
1,3-Dichlorobenzene	ND		25.0	25.6		ug/L		102	70 - 130
1,3-Dichloropropane	ND		25.0	25.2		ug/L		101	70 - 130
1,4-Dichlorobenzene	ND		25.0	26.2		ug/L		105	70 - 130
2,2-Dichloropropane	ND		25.0	28.2		ug/L		113	69 - 138
2-Hexanone	ND		25.0	18.8		ug/L		75	10 - 150
Acetone	21		25.0	42.5		ug/L		85	10 - 150
Acrolein	ND		25.0	30.7		ug/L		123	10 - 147
Acrylonitrile	ND		250	277		ug/L		111	38 - 144
Benzene	ND		25.0	27.2		ug/L		109	66 - 130
Bromoform	ND		25.0	31.7		ug/L		127	59 - 150
Bromomethane	ND		25.0	24.9		ug/L		100	62 - 131
Carbon disulfide	ND		25.0	24.6		ug/L		99	49 - 140
Carbon tetrachloride	ND		25.0	29.6		ug/L		118	60 - 150
Chlorobenzene	ND		25.0	25.9		ug/L		104	70 - 130
Bromochloromethane	ND		25.0	27.9		ug/L		112	70 - 130
Chloroethane	ND		25.0	22.8		ug/L		91	68 - 130
Chloroform	ND		25.0	27.4		ug/L		109	70 - 130
Chloromethane	ND		25.0	23.5		ug/L		94	39 - 144
cis-1,2-Dichloroethene	ND		25.0	27.1		ug/L		108	70 - 130
cis-1,3-Dichloropropene	ND		25.0	27.7		ug/L		111	70 - 133
Dibromochloromethane	ND		25.0	29.7		ug/L		119	70 - 148
Dibromomethane	ND		25.0	26.7		ug/L		107	70 - 130
Bromodichloromethane	ND		25.0	29.7		ug/L		119	70 - 138
Dichlorodifluoromethane	ND		25.0	22.0		ug/L		88	25 - 142
Ethylbenzene	0.47	J	25.0	26.4		ug/L		104	70 - 130
m,p-Xylene	ND		25.0	25.8		ug/L		103	70 - 133
Methylene Chloride	ND		25.0	24.5		ug/L		98	52 - 130
Methyl tert-butyl ether	2.3		25.0	32.6		ug/L		121	70 - 130
Naphthalene	0.40	J	25.0	29.6		ug/L		117	60 - 140
o-Xylene	ND		25.0	26.2		ug/L		105	70 - 133
Styrene	ND		25.0	25.5		ug/L		102	29 - 150
t-Butanol	1700		250	1760	4	ug/L		19	70 - 130
Tetrachloroethene	ND		25.0	25.5		ug/L		102	70 - 137
Toluene	ND		25.0	25.1		ug/L		100	70 - 130
trans-1,2-Dichloroethene	ND		25.0	24.7		ug/L		99	70 - 130

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-192591-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 440-192113-A-3 MS**

**Matrix: Water**

**Analysis Batch: 431555**

**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
trans-1,3-Dichloropropene	ND		25.0	28.4		ug/L		114	70 - 138
Trichloroethene	ND		25.0	25.7		ug/L		103	70 - 130
Trichlorofluoromethane	ND		25.0	27.2		ug/L		109	60 - 150
Vinyl acetate	ND		25.0	29.7		ug/L		119	23 - 150
Vinyl chloride	ND		25.0	21.6		ug/L		86	50 - 137
1,2-Dibromoethane (EDB)	ND		25.0	25.7		ug/L		103	70 - 131
2-Butanone (MEK)	ND	F1	25.0	60.3	F1	ug/L		241	48 - 140
4-Methyl-2-pentanone (MIBK)	ND		25.0	33.3		ug/L		133	52 - 150

Surrogate	MS %Recovery	MS Qualifier	MS Limits
Toluene-d8 (Surr)	96		80 - 128
4-Bromofluorobenzene (Surr)	98		80 - 120
Dibromofluoromethane (Surr)	107		76 - 132

**Lab Sample ID: 440-192113-A-3 MSD**

**Matrix: Water**

**Analysis Batch: 431555**

**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
1,2,3-Trichloropropane	ND		25.0	27.4		ug/L		110	60 - 130	2	30
1,1,1,2-Tetrachloroethane	ND		25.0	27.7		ug/L		111	60 - 149	10	20
1,1,1-Trichloroethane	ND		25.0	26.0		ug/L		104	70 - 130	8	20
1,1,2,2-Tetrachloroethane	ND		25.0	22.9		ug/L		91	63 - 130	4	30
1,1,2-Trichloroethane	ND		25.0	27.6		ug/L		110	70 - 130	9	25
1,1-Dichloroethane	ND		25.0	23.7		ug/L		95	65 - 130	11	20
1,1-Dichloroethene	ND		25.0	21.4		ug/L		86	70 - 130	9	20
1,1-Dichloropropene	ND		25.0	23.9		ug/L		96	64 - 130	6	20
1,2,4-Trichlorobenzene	ND		25.0	29.6		ug/L		118	60 - 140	8	20
1,2-Dibromo-3-Chloropropane	ND		25.0	24.5		ug/L		98	48 - 140	2	30
1,2-Dichlorobenzene	ND		25.0	25.1		ug/L		100	70 - 130	7	20
1,2-Dichloroethane	ND		25.0	25.2		ug/L		101	56 - 146	12	20
1,2-Dichloropropane	ND		25.0	24.5		ug/L		98	69 - 130	10	20
1,3-Dichlorobenzene	ND		25.0	23.6		ug/L		94	70 - 130	8	20
1,3-Dichloropropane	ND		25.0	23.4		ug/L		94	70 - 130	8	25
1,4-Dichlorobenzene	ND		25.0	23.8		ug/L		95	70 - 130	10	20
2,2-Dichloropropane	ND		25.0	25.4		ug/L		102	69 - 138	10	25
2-Hexanone	ND		25.0	18.6		ug/L		74	10 - 150	1	35
Acetone	21		25.0	40.0		ug/L		75	10 - 150	6	35
Acrolein	ND		25.0	30.8		ug/L		123	10 - 147	0	40
Acrylonitrile	ND		25.0	265		ug/L		106	38 - 144	4	40
Benzene	ND		25.0	24.7		ug/L		99	66 - 130	9	20
Bromoform	ND		25.0	30.4		ug/L		122	59 - 150	4	25
Bromomethane	ND		25.0	22.2		ug/L		89	62 - 131	11	25
Carbon disulfide	ND		25.0	22.3		ug/L		89	49 - 140	10	20
Carbon tetrachloride	ND		25.0	27.0		ug/L		108	60 - 150	9	25
Chlorobenzene	ND		25.0	24.5		ug/L		98	70 - 130	6	20
Bromochloromethane	ND		25.0	25.5		ug/L		102	70 - 130	9	25
Chloroethane	ND		25.0	20.7		ug/L		83	68 - 130	10	25

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-192591-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 440-192113-A-3 MSD**  
**Matrix: Water**  
**Analysis Batch: 431555**

**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
Chloroform	ND		25.0	24.6		ug/L		98	70 - 130	11	20
Chloromethane	ND		25.0	20.7		ug/L		83	39 - 144	13	25
cis-1,2-Dichloroethene	ND		25.0	24.8		ug/L		99	70 - 130	9	20
cis-1,3-Dichloropropene	ND		25.0	26.4		ug/L		105	70 - 133	5	20
Dibromochloromethane	ND		25.0	27.5		ug/L		110	70 - 148	8	25
Dibromomethane	ND		25.0	24.6		ug/L		98	70 - 130	8	25
Bromodichloromethane	ND		25.0	26.3		ug/L		105	70 - 138	12	20
Dichlorodifluoromethane	ND		25.0	19.7		ug/L		79	25 - 142	11	30
Ethylbenzene	0.47	J	25.0	24.7		ug/L		97	70 - 130	7	20
m,p-Xylene	ND		25.0	24.2		ug/L		97	70 - 133	7	25
Methylene Chloride	ND		25.0	21.8		ug/L		87	52 - 130	12	20
Methyl tert-butyl ether	2.3		25.0	30.8		ug/L		114	70 - 130	5	25
Naphthalene	0.40	J	25.0	28.2		ug/L		111	60 - 140	5	30
o-Xylene	ND		25.0	24.5		ug/L		98	70 - 133	7	20
Styrene	ND		25.0	22.9		ug/L		92	29 - 150	11	35
t-Butanol	1700		250	1400	4	ug/L		-124	70 - 130	23	25
Tetrachloroethene	ND		25.0	24.8		ug/L		99	70 - 137	3	20
Toluene	ND		25.0	23.5		ug/L		94	70 - 130	7	20
trans-1,2-Dichloroethene	ND		25.0	23.5		ug/L		94	70 - 130	5	20
trans-1,3-Dichloropropene	ND		25.0	26.9		ug/L		107	70 - 138	6	25
Trichloroethene	ND		25.0	24.0		ug/L		96	70 - 130	7	20
Trichlorofluoromethane	ND		25.0	24.5		ug/L		98	60 - 150	11	25
Vinyl acetate	ND		25.0	27.4		ug/L		110	23 - 150	8	30
Vinyl chloride	ND		25.0	19.4		ug/L		78	50 - 137	10	30
1,2-Dibromoethane (EDB)	ND		25.0	24.5		ug/L		98	70 - 131	5	25
2-Butanone (MEK)	ND	F1	25.0	52.9	F1	ug/L		211	48 - 140	13	40
4-Methyl-2-pentanone (MIBK)	ND		25.0	32.5		ug/L		130	52 - 150	2	35

Surrogate	MSD %Recovery	MSD Qualifier	MSD Limits
Toluene-d8 (Surr)	99		80 - 128
4-Bromofluorobenzene (Surr)	101		80 - 120
Dibromofluoromethane (Surr)	107		76 - 132

**Lab Sample ID: MB 440-431991/4**  
**Matrix: Water**  
**Analysis Batch: 431991**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			09/28/17 18:46	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			09/28/17 18:46	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			09/28/17 18:46	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			09/28/17 18:46	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			09/28/17 18:46	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			09/28/17 18:46	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			09/28/17 18:46	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			09/28/17 18:46	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			09/28/17 18:46	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			09/28/17 18:46	1

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-192591-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 440-431991/4**  
**Matrix: Water**  
**Analysis Batch: 431991**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			09/28/17 18:46	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			09/28/17 18:46	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			09/28/17 18:46	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			09/28/17 18:46	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			09/28/17 18:46	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			09/28/17 18:46	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			09/28/17 18:46	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			09/28/17 18:46	1
2-Hexanone	ND		5.0	2.5	ug/L			09/28/17 18:46	1
Acetone	ND		20	10	ug/L			09/28/17 18:46	1
Acetonitrile	ND		20	10	ug/L			09/28/17 18:46	1
Acrolein	ND		5.0	2.5	ug/L			09/28/17 18:46	1
Acrylonitrile	ND		2.0	1.0	ug/L			09/28/17 18:46	1
Benzene	ND		0.50	0.25	ug/L			09/28/17 18:46	1
Allyl chloride	ND		1.0	0.50	ug/L			09/28/17 18:46	1
Bromoform	ND		1.0	0.40	ug/L			09/28/17 18:46	1
Bromomethane	ND		0.50	0.25	ug/L			09/28/17 18:46	1
Carbon disulfide	ND		1.0	0.50	ug/L			09/28/17 18:46	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			09/28/17 18:46	1
Chlorobenzene	ND		0.50	0.25	ug/L			09/28/17 18:46	1
Bromochloromethane	ND		0.50	0.25	ug/L			09/28/17 18:46	1
Chloroethane	ND		1.0	0.40	ug/L			09/28/17 18:46	1
Chloroform	ND		0.50	0.25	ug/L			09/28/17 18:46	1
Chloromethane	ND		0.50	0.25	ug/L			09/28/17 18:46	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			09/28/17 18:46	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/28/17 18:46	1
Dibromochloromethane	ND		0.50	0.25	ug/L			09/28/17 18:46	1
Dibromomethane	ND		0.50	0.25	ug/L			09/28/17 18:46	1
Bromodichloromethane	ND		0.50	0.25	ug/L			09/28/17 18:46	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			09/28/17 18:46	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			09/28/17 18:46	1
Ethylbenzene	ND		0.50	0.25	ug/L			09/28/17 18:46	1
Iodomethane	ND		2.0	1.0	ug/L			09/28/17 18:46	1
Isobutyl alcohol	ND		25	13	ug/L			09/28/17 18:46	1
m,p-Xylene	ND		1.0	0.50	ug/L			09/28/17 18:46	1
Methylacrylonitrile	ND		10	2.5	ug/L			09/28/17 18:46	1
Methyl methacrylate	ND		2.0	1.0	ug/L			09/28/17 18:46	1
Methylene Chloride	ND		2.0	0.88	ug/L			09/28/17 18:46	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			09/28/17 18:46	1
Naphthalene	ND		1.0	0.40	ug/L			09/28/17 18:46	1
o-Xylene	ND		0.50	0.25	ug/L			09/28/17 18:46	1
Propionitrile	ND		20	10	ug/L			09/28/17 18:46	1
Styrene	ND		0.50	0.25	ug/L			09/28/17 18:46	1
t-Butanol	ND		10	5.0	ug/L			09/28/17 18:46	1
Tetrachloroethene	ND		0.50	0.25	ug/L			09/28/17 18:46	1
Tetrahydrofuran	ND		10	5.0	ug/L			09/28/17 18:46	1
Toluene	ND		0.50	0.25	ug/L			09/28/17 18:46	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			09/28/17 18:46	1

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-192591-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 440-431991/4**  
**Matrix: Water**  
**Analysis Batch: 431991**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/28/17 18:46	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			09/28/17 18:46	1
Trichloroethene	ND		0.50	0.25	ug/L			09/28/17 18:46	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			09/28/17 18:46	1
Vinyl acetate	ND		4.0	2.0	ug/L			09/28/17 18:46	1
Vinyl chloride	ND		0.50	0.25	ug/L			09/28/17 18:46	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			09/28/17 18:46	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			09/28/17 18:46	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			09/28/17 18:46	1

Tentatively Identified Compound	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L					09/28/17 18:46	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	108		80 - 128		09/28/17 18:46	1
4-Bromofluorobenzene (Surr)	98		80 - 120		09/28/17 18:46	1
Dibromofluoromethane (Surr)	116		76 - 132		09/28/17 18:46	1

**Lab Sample ID: LCS 440-431991/5**  
**Matrix: Water**  
**Analysis Batch: 431991**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,3-Trichloropropane	25.0	29.1		ug/L		116	63 - 130
1,1,1,2-Tetrachloroethane	25.0	30.4		ug/L		121	60 - 141
1,1,1-Trichloroethane	25.0	27.6		ug/L		110	70 - 130
1,1,2,2-Tetrachloroethane	25.0	27.1		ug/L		108	63 - 130
1,1,2-Trichloroethane	25.0	28.5		ug/L		114	70 - 130
1,1-Dichloroethane	25.0	25.8		ug/L		103	64 - 130
1,1-Dichloroethene	25.0	24.0		ug/L		96	70 - 130
1,1-Dichloropropene	25.0	25.7		ug/L		103	70 - 130
1,2,4-Trichlorobenzene	25.0	28.7		ug/L		115	60 - 140
1,2-Dibromo-3-Chloropropane	25.0	31.7		ug/L		127	52 - 140
1,2-Dichlorobenzene	25.0	26.2		ug/L		105	70 - 130
1,2-Dichloroethane	25.0	26.4		ug/L		105	57 - 138
1,2-Dichloropropane	25.0	25.1		ug/L		100	67 - 130
1,3-Dichlorobenzene	25.0	26.0		ug/L		104	70 - 130
1,3-Dichloropropane	25.0	27.0		ug/L		108	70 - 130
1,4-Dichlorobenzene	25.0	25.9		ug/L		104	70 - 130
2,2-Dichloropropane	25.0	29.9		ug/L		120	68 - 141
2-Hexanone	25.0	35.4		ug/L		142	10 - 150
Acetone	25.0	34.2		ug/L		137	10 - 150
Acrolein	25.0	30.2		ug/L		121	10 - 145
Acrylonitrile	25.0	33.4		ug/L		134	48 - 140
Benzene	25.0	25.9		ug/L		104	68 - 130
Bromoform	25.0	33.0		ug/L		132	60 - 148
Bromomethane	25.0	24.8		ug/L		99	64 - 139

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-192591-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 440-431991/5**

**Matrix: Water**

**Analysis Batch: 431991**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Carbon disulfide	25.0	25.1		ug/L		100	52 - 136
Carbon tetrachloride	25.0	29.8		ug/L		119	60 - 150
Chlorobenzene	25.0	25.5		ug/L		102	70 - 130
Bromochloromethane	25.0	26.0		ug/L		104	70 - 130
Chloroethane	25.0	22.5		ug/L		90	64 - 135
Chloroform	25.0	25.9		ug/L		104	70 - 130
Chloromethane	25.0	23.2		ug/L		93	47 - 140
cis-1,2-Dichloroethene	25.0	25.7		ug/L		103	70 - 133
cis-1,3-Dichloropropene	25.0	28.2		ug/L		113	70 - 133
Dibromochloromethane	25.0	31.3		ug/L		125	69 - 145
Dibromomethane	25.0	26.0		ug/L		104	70 - 130
Bromodichloromethane	25.0	27.4		ug/L		109	70 - 132
Dichlorodifluoromethane	25.0	22.3		ug/L		89	29 - 150
Ethylbenzene	25.0	25.7		ug/L		103	70 - 130
m,p-Xylene	25.0	25.9		ug/L		103	70 - 130
Methylene Chloride	25.0	22.9		ug/L		92	52 - 130
Methyl tert-butyl ether	25.0	26.2		ug/L		105	63 - 131
Naphthalene	25.0	30.4		ug/L		122	60 - 140
o-Xylene	25.0	26.7		ug/L		107	70 - 130
Styrene	25.0	25.1		ug/L		100	70 - 134
t-Butanol	250	268		ug/L		107	70 - 130
Tetrachloroethene	25.0	28.4		ug/L		114	70 - 130
Toluene	25.0	27.6		ug/L		110	70 - 130
trans-1,2-Dichloroethene	25.0	25.5		ug/L		102	70 - 130
trans-1,3-Dichloropropene	25.0	28.1		ug/L		112	70 - 132
Trichloroethene	25.0	25.6		ug/L		102	70 - 130
Trichlorofluoromethane	25.0	28.3		ug/L		113	60 - 150
Vinyl acetate	25.0	29.4		ug/L		118	48 - 140
Vinyl chloride	25.0	22.5		ug/L		90	59 - 133
1,2-Dibromoethane (EDB)	25.0	28.0		ug/L		112	70 - 130
2-Butanone (MEK)	25.0	26.4		ug/L		106	44 - 150
4-Methyl-2-pentanone (MIBK)	25.0	35.6		ug/L		142	59 - 149

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	108		80 - 128
4-Bromofluorobenzene (Surr)	102		80 - 120
Dibromofluoromethane (Surr)	106		76 - 132

**Lab Sample ID: LCSD 440-431991/6**

**Matrix: Water**

**Analysis Batch: 431991**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,3-Trichloropropane	25.0	28.5		ug/L		114	63 - 130	2	20
1,1,1,2-Tetrachloroethane	25.0	29.5		ug/L		118	60 - 141	3	20
1,1,1-Trichloroethane	25.0	27.3		ug/L		109	70 - 130	1	20
1,1,1,2-Tetrachloroethane	25.0	26.0		ug/L		104	63 - 130	4	25
1,1,2-Trichloroethane	25.0	27.4		ug/L		110	70 - 130	4	20

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-192591-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 440-431991/6  
Matrix: Water  
Analysis Batch: 431991

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1-Dichloroethane	25.0	24.9		ug/L		99	64 - 130	4	20
1,1-Dichloroethene	25.0	24.2		ug/L		97	70 - 130	1	20
1,1-Dichloropropene	25.0	25.4		ug/L		101	70 - 130	1	20
1,2,4-Trichlorobenzene	25.0	28.5		ug/L		114	60 - 140	1	20
1,2-Dibromo-3-Chloropropane	25.0	30.4		ug/L		122	52 - 140	4	30
1,2-Dichlorobenzene	25.0	25.9		ug/L		104	70 - 130	1	20
1,2-Dichloroethane	25.0	25.3		ug/L		101	57 - 138	4	20
1,2-Dichloropropane	25.0	24.6		ug/L		98	67 - 130	2	20
1,3-Dichlorobenzene	25.0	25.7		ug/L		103	70 - 130	1	20
1,3-Dichloropropane	25.0	26.1		ug/L		104	70 - 130	3	20
1,4-Dichlorobenzene	25.0	25.6		ug/L		103	70 - 130	1	20
2,2-Dichloropropane	25.0	29.4		ug/L		118	68 - 141	2	25
2-Hexanone	25.0	31.3		ug/L		125	10 - 150	12	30
Acetone	25.0	31.4		ug/L		126	10 - 150	9	30
Acrolein	25.0	31.1		ug/L		124	10 - 145	3	30
Acrylonitrile	250	313		ug/L		125	48 - 140	7	30
Benzene	25.0	25.7		ug/L		103	68 - 130	1	20
Bromoform	25.0	32.0		ug/L		128	60 - 148	3	25
Bromomethane	25.0	24.4		ug/L		97	64 - 139	2	20
Carbon disulfide	25.0	24.2		ug/L		97	52 - 136	3	20
Carbon tetrachloride	25.0	29.3		ug/L		117	60 - 150	2	25
Chlorobenzene	25.0	25.4		ug/L		102	70 - 130	1	20
Bromochloromethane	25.0	25.4		ug/L		102	70 - 130	2	20
Chloroethane	25.0	22.9		ug/L		92	64 - 135	2	20
Chloroform	25.0	25.5		ug/L		102	70 - 130	2	20
Chloromethane	25.0	22.9		ug/L		92	47 - 140	1	25
cis-1,2-Dichloroethene	25.0	25.8		ug/L		103	70 - 133	0	20
cis-1,3-Dichloropropene	25.0	27.5		ug/L		110	70 - 133	3	25
Dibromochloromethane	25.0	30.1		ug/L		121	69 - 145	4	20
Dibromomethane	25.0	24.8		ug/L		99	70 - 130	5	20
Bromodichloromethane	25.0	27.3		ug/L		109	70 - 132	0	20
Dichlorodifluoromethane	25.0	22.0		ug/L		88	29 - 150	1	30
Ethylbenzene	25.0	25.3		ug/L		101	70 - 130	2	20
m,p-Xylene	25.0	25.2		ug/L		101	70 - 130	2	20
Methylene Chloride	25.0	22.8		ug/L		91	52 - 130	0	20
Methyl tert-butyl ether	25.0	26.0		ug/L		104	63 - 131	1	25
Naphthalene	25.0	29.5		ug/L		118	60 - 140	3	25
o-Xylene	25.0	26.0		ug/L		104	70 - 130	2	20
Styrene	25.0	24.9		ug/L		100	70 - 134	1	20
t-Butanol	250	266		ug/L		106	70 - 130	1	20
Tetrachloroethene	25.0	27.5		ug/L		110	70 - 130	3	20
Toluene	25.0	26.9		ug/L		108	70 - 130	3	20
trans-1,2-Dichloroethene	25.0	25.7		ug/L		103	70 - 130	1	20
trans-1,3-Dichloropropene	25.0	28.1		ug/L		112	70 - 132	0	20
Trichloroethene	25.0	25.5		ug/L		102	70 - 130	0	20
Trichlorofluoromethane	25.0	28.1		ug/L		112	60 - 150	1	20
Vinyl acetate	25.0	30.2		ug/L		121	48 - 140	3	20
Vinyl chloride	25.0	22.5		ug/L		90	59 - 133	0	30

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-192591-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 440-431991/6**

**Matrix: Water**

**Analysis Batch: 431991**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2-Dibromoethane (EDB)	25.0	27.1		ug/L		109	70 - 130	3	20
2-Butanone (MEK)	25.0	25.2		ug/L		101	44 - 150	5	35
4-Methyl-2-pentanone (MIBK)	25.0	31.7		ug/L		127	59 - 149	11	30

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
Toluene-d8 (Surr)	108		80 - 128
4-Bromofluorobenzene (Surr)	102		80 - 120
Dibromofluoromethane (Surr)	107		76 - 132

**Lab Sample ID: 440-192791-B-1 MS**

**Matrix: Water**

**Analysis Batch: 431991**

**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
1,2,3-Trichloropropane	ND		25.0	26.8		ug/L		107	60 - 130
1,1,1,2-Tetrachloroethane	ND		25.0	30.3		ug/L		121	60 - 149
1,1,1-Trichloroethane	ND		25.0	26.9		ug/L		108	70 - 130
1,1,2,2-Tetrachloroethane	ND		25.0	25.8		ug/L		103	63 - 130
1,1,2-Trichloroethane	ND		25.0	29.3		ug/L		117	70 - 130
1,1-Dichloroethane	0.40	J	25.0	25.9		ug/L		102	65 - 130
1,1-Dichloroethene	0.50		25.0	23.6		ug/L		92	70 - 130
1,1-Dichloropropene	ND		25.0	25.0		ug/L		100	64 - 130
1,2,4-Trichlorobenzene	ND		25.0	29.4		ug/L		117	60 - 140
1,2-Dibromo-3-Chloropropane	ND		25.0	27.0		ug/L		108	48 - 140
1,2-Dichlorobenzene	ND		25.0	26.4		ug/L		105	70 - 130
1,2-Dichloroethane	ND		25.0	27.9		ug/L		112	56 - 146
1,2-Dichloropropane	ND		25.0	26.4		ug/L		106	69 - 130
1,3-Dichlorobenzene	ND		25.0	25.6		ug/L		102	70 - 130
1,3-Dichloropropane	ND		25.0	26.9		ug/L		107	70 - 130
1,4-Dichlorobenzene	ND		25.0	25.8		ug/L		103	70 - 130
2,2-Dichloropropane	ND		25.0	28.7		ug/L		115	69 - 138
2-Hexanone	ND		25.0	30.8		ug/L		123	10 - 150
Acetone	ND		25.0	32.7		ug/L		131	10 - 150
Acrolein	ND		25.0	21.9		ug/L		88	10 - 147
Acrylonitrile	ND		25.0	297		ug/L		119	38 - 144
Benzene	ND		25.0	26.4		ug/L		106	66 - 130
Bromoform	ND		25.0	32.6		ug/L		131	59 - 150
Bromomethane	ND		25.0	24.9		ug/L		100	62 - 131
Carbon disulfide	0.73	J	25.0	24.4		ug/L		95	49 - 140
Carbon tetrachloride	ND		25.0	28.7		ug/L		115	60 - 150
Chlorobenzene	ND		25.0	25.9		ug/L		104	70 - 130
Bromochloromethane	ND		25.0	28.1		ug/L		112	70 - 130
Chloroethane	ND		25.0	22.4		ug/L		90	68 - 130
Chloroform	0.90		25.0	27.6		ug/L		107	70 - 130
Chloromethane	ND		25.0	23.2		ug/L		93	39 - 144
cis-1,2-Dichloroethene	1.4		25.0	28.6		ug/L		109	70 - 130
cis-1,3-Dichloropropene	ND		25.0	29.1		ug/L		116	70 - 133
Dibromochloromethane	ND		25.0	32.3		ug/L		129	70 - 148

TestAmerica Irvine



# QC Sample Results

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

TestAmerica Job ID: 440-192591-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 440-192791-B-1 MS**

**Matrix: Water**

**Analysis Batch: 431991**

**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
Dibromomethane	ND		25.0	27.0		ug/L		108	70 - 130
Bromodichloromethane	ND		25.0	29.8		ug/L		119	70 - 138
Dichlorodifluoromethane	ND		25.0	20.4		ug/L		82	25 - 142
Ethylbenzene	ND		25.0	25.2		ug/L		101	70 - 130
m,p-Xylene	ND		25.0	25.4		ug/L		101	70 - 133
Methylene Chloride	ND		25.0	25.5		ug/L		102	52 - 130
Methyl tert-butyl ether	ND		25.0	28.6		ug/L		114	70 - 130
Naphthalene	ND		25.0	29.3		ug/L		117	60 - 140
o-Xylene	ND		25.0	26.2		ug/L		105	70 - 133
Styrene	ND		25.0	20.8		ug/L		83	29 - 150
t-Butanol	ND		250	272		ug/L		109	70 - 130
Tetrachloroethene	0.44	J	25.0	26.9		ug/L		106	70 - 137
Toluene	ND		25.0	26.8		ug/L		107	70 - 130
trans-1,2-Dichloroethene	ND		25.0	25.5		ug/L		102	70 - 130
trans-1,3-Dichloropropene	ND		25.0	29.3		ug/L		117	70 - 138
Trichloroethene	9.0		25.0	33.7		ug/L		99	70 - 130
Trichlorofluoromethane	ND		25.0	26.6		ug/L		107	60 - 150
Vinyl acetate	ND		25.0	30.4		ug/L		122	23 - 150
Vinyl chloride	ND		25.0	21.1		ug/L		84	50 - 137
1,2-Dibromoethane (EDB)	ND		25.0	28.5		ug/L		114	70 - 131
2-Butanone (MEK)	ND		25.0	24.5		ug/L		98	48 - 140
4-Methyl-2-pentanone (MIBK)	ND		25.0	31.3		ug/L		125	52 - 150

Surrogate	MS %Recovery	MS Qualifier	MS Limits
Toluene-d8 (Surr)	105		80 - 128
4-Bromofluorobenzene (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	110		76 - 132

**Lab Sample ID: 440-192791-B-1 MSD**

**Matrix: Water**

**Analysis Batch: 431991**

**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
1,2,3-Trichloropropane	ND		25.0	25.9		ug/L		104	60 - 130	4	30
1,1,1,2-Tetrachloroethane	ND		25.0	30.7		ug/L		123	60 - 149	1	20
1,1,1-Trichloroethane	ND		25.0	26.9		ug/L		107	70 - 130	0	20
1,1,2,2-Tetrachloroethane	ND		25.0	25.6		ug/L		102	63 - 130	1	30
1,1,2-Trichloroethane	ND		25.0	28.7		ug/L		115	70 - 130	2	25
1,1-Dichloroethane	0.40	J	25.0	26.6		ug/L		105	65 - 130	3	20
1,1-Dichloroethene	0.50		25.0	23.5		ug/L		92	70 - 130	0	20
1,1-Dichloropropene	ND		25.0	25.0		ug/L		100	64 - 130	0	20
1,2,4-Trichlorobenzene	ND		25.0	30.9		ug/L		123	60 - 140	5	20
1,2-Dibromo-3-Chloropropane	ND		25.0	27.1		ug/L		108	48 - 140	0	30
1,2-Dichlorobenzene	ND		25.0	26.8		ug/L		107	70 - 130	2	20
1,2-Dichloroethane	ND		25.0	27.6		ug/L		110	56 - 146	1	20
1,2-Dichloropropane	ND		25.0	26.7		ug/L		107	69 - 130	1	20
1,3-Dichlorobenzene	ND		25.0	25.9		ug/L		104	70 - 130	1	20
1,3-Dichloropropane	ND		25.0	26.7		ug/L		107	70 - 130	1	25

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-192591-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 440-192791-B-1 MSD**

**Matrix: Water**

**Analysis Batch: 431991**

**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
1,4-Dichlorobenzene	ND		25.0	26.5		ug/L		106	70 - 130	3	20
2,2-Dichloropropane	ND		25.0	29.2		ug/L		117	69 - 138	2	25
2-Hexanone	ND		25.0	29.5		ug/L		118	10 - 150	4	35
Acetone	ND		25.0	30.9		ug/L		123	10 - 150	6	35
Acrolein	ND		25.0	18.3		ug/L		73	10 - 147	18	40
Acrylonitrile	ND		25.0	282		ug/L		113	38 - 144	5	40
Benzene	ND		25.0	26.5		ug/L		106	66 - 130	0	20
Bromoform	ND		25.0	32.3		ug/L		129	59 - 150	1	25
Bromomethane	ND		25.0	25.0		ug/L		100	62 - 131	1	25
Carbon disulfide	0.73	J	25.0	23.7		ug/L		92	49 - 140	3	20
Carbon tetrachloride	ND		25.0	28.3		ug/L		113	60 - 150	1	25
Chlorobenzene	ND		25.0	25.9		ug/L		104	70 - 130	0	20
Bromochloromethane	ND		25.0	27.3		ug/L		109	70 - 130	3	25
Chloroethane	ND		25.0	22.5		ug/L		90	68 - 130	0	25
Chloroform	0.90		25.0	27.8		ug/L		107	70 - 130	1	20
Chloromethane	ND		25.0	23.1		ug/L		93	39 - 144	0	25
cis-1,2-Dichloroethene	1.4		25.0	28.5		ug/L		108	70 - 130	0	20
cis-1,3-Dichloropropene	ND		25.0	29.2		ug/L		117	70 - 133	0	20
Dibromochloromethane	ND		25.0	31.3		ug/L		125	70 - 148	3	25
Dibromomethane	ND		25.0	26.3		ug/L		105	70 - 130	3	25
Bromodichloromethane	ND		25.0	29.8		ug/L		119	70 - 138	0	20
Dichlorodifluoromethane	ND		25.0	20.8		ug/L		83	25 - 142	2	30
Ethylbenzene	ND		25.0	25.0		ug/L		100	70 - 130	1	20
m,p-Xylene	ND		25.0	25.2		ug/L		101	70 - 133	1	25
Methylene Chloride	ND		25.0	23.8		ug/L		95	52 - 130	7	20
Methyl tert-butyl ether	ND		25.0	28.7		ug/L		115	70 - 130	0	25
Naphthalene	ND		25.0	29.3		ug/L		117	60 - 140	0	30
o-Xylene	ND		25.0	25.9		ug/L		104	70 - 133	1	20
Styrene	ND		25.0	17.3		ug/L		69	29 - 150	18	35
t-Butanol	ND		25.0	270		ug/L		108	70 - 130	1	25
Tetrachloroethene	0.44	J	25.0	26.9		ug/L		106	70 - 137	0	20
Toluene	ND		25.0	26.8		ug/L		107	70 - 130	0	20
trans-1,2-Dichloroethene	ND		25.0	25.3		ug/L		101	70 - 130	1	20
trans-1,3-Dichloropropene	ND		25.0	28.4		ug/L		113	70 - 138	3	25
Trichloroethene	9.0		25.0	34.0		ug/L		100	70 - 130	1	20
Trichlorofluoromethane	ND		25.0	26.8		ug/L		107	60 - 150	1	25
Vinyl acetate	ND		25.0	27.2		ug/L		109	23 - 150	11	30
Vinyl chloride	ND		25.0	21.7		ug/L		87	50 - 137	3	30
1,2-Dibromoethane (EDB)	ND		25.0	27.0		ug/L		108	70 - 131	5	25
2-Butanone (MEK)	ND		25.0	23.2		ug/L		93	48 - 140	5	40
4-Methyl-2-pentanone (MIBK)	ND		25.0	30.0		ug/L		120	52 - 150	4	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Toluene-d8 (Surr)	105		80 - 128
4-Bromofluorobenzene (Surr)	103		80 - 120
Dibromofluoromethane (Surr)	109		76 - 132

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-192591-1

## Method: 8270C - Semivolatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 440-431370/1-A**  
**Matrix: Water**  
**Analysis Batch: 431427**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 431370**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		1.0	0.25	ug/L		09/26/17 12:21	09/27/17 20:33	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	48		30 - 120				09/26/17 12:21	09/27/17 20:33	1

**Lab Sample ID: LCS 440-431370/2-A**  
**Matrix: Water**  
**Analysis Batch: 431427**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 431370**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits		
1,4-Dioxane	1.95	1.09		ug/L		56	35 - 120		
Surrogate	LCS %Recovery	LCS Qualifier	Limits						
1,4-Dioxane-d8 (Surr)	59		30 - 120						

**Lab Sample ID: LCSD 440-431370/3-A**  
**Matrix: Water**  
**Analysis Batch: 431427**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 431370**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,4-Dioxane	1.95	0.938	J	ug/L		48	35 - 120	15	35
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
1,4-Dioxane-d8 (Surr)	47		30 - 120						

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 440-430064/7**  
**Matrix: Water**  
**Analysis Batch: 430064**

**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			09/20/17 12:19	1

**Lab Sample ID: LCS 440-430064/6**  
**Matrix: Water**  
**Analysis Batch: 430064**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits		
Chloride	5.00	4.67		mg/L		93	90 - 110		

**Lab Sample ID: MB 440-430638/7**  
**Matrix: Water**  
**Analysis Batch: 430638**

**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			09/22/17 12:47	1

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-192591-1

## Method: 300.0 - Anions, Ion Chromatography (Continued)

**Lab Sample ID: LCS 440-430638/6**  
**Matrix: Water**  
**Analysis Batch: 430638**

**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	4.56		mg/L		91	90 - 110

**Lab Sample ID: 440-192655-H-3 MS**  
**Matrix: Water**  
**Analysis Batch: 430638**

**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	17		25.0	41.1		mg/L		97	80 - 120

**Lab Sample ID: 440-192655-H-3 MSD**  
**Matrix: Water**  
**Analysis Batch: 430638**

**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	17		25.0	41.0		mg/L		97	80 - 120	0	20

## Method: 6010B - Metals (ICP)

**Lab Sample ID: MB 440-431623/1-A**  
**Matrix: Water**  
**Analysis Batch: 431839**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 431623**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	ND		0.50	0.25	mg/L		09/27/17 10:22	09/27/17 21:15	1

**Lab Sample ID: LCS 440-431623/2-A**  
**Matrix: Water**  
**Analysis Batch: 431839**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 431623**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Potassium	10.0	9.70		mg/L		97	80 - 120

**Lab Sample ID: 440-192518-O-1-B MS**  
**Matrix: Water**  
**Analysis Batch: 431839**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total Recoverable**  
**Prep Batch: 431623**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Potassium	43		10.0	53.9	4	mg/L		110	75 - 125

**Lab Sample ID: 440-192518-O-1-C MSD**  
**Matrix: Water**  
**Analysis Batch: 431839**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total Recoverable**  
**Prep Batch: 431623**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Potassium	43		10.0	53.2	4	mg/L		103	75 - 125	1	20

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-192591-1

## Method: 410.4 - COD

**Lab Sample ID: MB 440-431689/3**  
**Matrix: Water**  
**Analysis Batch: 431689**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		20	10	mg/L			09/27/17 13:33	1

**Lab Sample ID: LCS 440-431689/4**  
**Matrix: Water**  
**Analysis Batch: 431689**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chemical Oxygen Demand	200	205		mg/L		103	90 - 110

**Lab Sample ID: 440-192498-I-1 MS**  
**Matrix: Water**  
**Analysis Batch: 431689**

**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
Chemical Oxygen Demand	20		200	198		mg/L		89	70 - 120

**Lab Sample ID: 440-192498-I-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 431689**

**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
Chemical Oxygen Demand	20		200	202		mg/L		91	70 - 120	2	15

**Lab Sample ID: MB 440-431988/3**  
**Matrix: Water**  
**Analysis Batch: 431988**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		20	10	mg/L			09/28/17 16:43	1

**Lab Sample ID: LCS 440-431988/4**  
**Matrix: Water**  
**Analysis Batch: 431988**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chemical Oxygen Demand	200	199		mg/L		100	90 - 110

**Lab Sample ID: 440-193005-A-1 MS**  
**Matrix: Water**  
**Analysis Batch: 431988**

**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
Chemical Oxygen Demand	100		200	283		mg/L		91	70 - 120

**Lab Sample ID: 440-193005-A-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 431988**

**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
Chemical Oxygen Demand	100		200	293		mg/L		96	70 - 120	3	15

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-192591-1

Lab Sample ID: 440-193005-A-1 DU  
Matrix: Water  
Analysis Batch: 431988

Client Sample ID: Duplicate  
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chemical Oxygen Demand	100		95.0		mg/L		6	15

## Method: SM 2320B - Alkalinity

Lab Sample ID: MB 440-430409/3  
Matrix: Water  
Analysis Batch: 430409

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

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	ND		4.0	4.0	mg/L			09/21/17 05:00	1

Lab Sample ID: MB 440-430409/30  
Matrix: Water  
Analysis Batch: 430409

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

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	ND		4.0	4.0	mg/L			09/21/17 08:50	1

Lab Sample ID: LCS 440-430409/2  
Matrix: Water  
Analysis Batch: 430409

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity as CaCO3	33.8	27.5		mg/L		81	80 - 120

Lab Sample ID: LCS 440-430409/29  
Matrix: Water  
Analysis Batch: 430409

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Alkalinity as CaCO3	33.8	27.8		mg/L		82	80 - 120

Lab Sample ID: 440-192591-1 DU  
Matrix: Water  
Analysis Batch: 430409

Client Sample ID: PZ-4  
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Alkalinity as CaCO3	260		274		mg/L		7	20

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

Lab Sample ID: MB 440-431301/1  
Matrix: Water  
Analysis Batch: 431301

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			09/26/17 08:52	1

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-192591-1

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

**Lab Sample ID: LCS 440-431301/2**  
**Matrix: Water**  
**Analysis Batch: 431301**

**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	994		mg/L		99	90 - 110

**Lab Sample ID: 440-192591-6 DU**  
**Matrix: Water**  
**Analysis Batch: 431301**

**Client Sample ID: MW-5**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	3800		3730		mg/L		3	5

## Method: SM 4500 NH3 D - Ammonia

**Lab Sample ID: MB 440-430599/2-A**  
**Matrix: Water**  
**Analysis Batch: 430608**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 430599**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	ND		0.50	0.10	mg/L		09/22/17 04:30	09/22/17 07:00	1

**Lab Sample ID: LCS 440-430599/1-A**  
**Matrix: Water**  
**Analysis Batch: 430608**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 430599**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	2.50	2.32		mg/L		93	85 - 115

**Lab Sample ID: 440-192542-E-1-B MS**  
**Matrix: Water**  
**Analysis Batch: 430608**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 430599**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	0.97		2.50	3.26		mg/L		92	75 - 125

**Lab Sample ID: 440-192542-E-1-C MSD**  
**Matrix: Water**  
**Analysis Batch: 430608**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 430599**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ammonia (as N)	0.97		2.50	3.39		mg/L		97	75 - 125	4	15

**Lab Sample ID: 440-192666-D-2-B DU**  
**Matrix: Water**  
**Analysis Batch: 430608**

**Client Sample ID: Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 430599**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Ammonia (as N)	68		68.0		mg/L		0	15

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-192591-1

## Method: SM 4500 NH3 D - Ammonia (Continued)

**Lab Sample ID: MB 440-430601/2-A**  
**Matrix: Water**  
**Analysis Batch: 430628**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 430601**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	ND		0.50	0.10	mg/L		09/22/17 05:30	09/22/17 09:00	1

**Lab Sample ID: LCS 440-430601/1-A**  
**Matrix: Water**  
**Analysis Batch: 430628**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 430601**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Ammonia (as N)	2.50	2.32		mg/L		93	85 - 115

**Lab Sample ID: 440-192591-1 MS**  
**Matrix: Water**  
**Analysis Batch: 430628**

**Client Sample ID: PZ-4**  
**Prep Type: Total/NA**  
**Prep Batch: 430601**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Ammonia (as N)	2.0		2.50	4.26		mg/L		91	75 - 125

**Lab Sample ID: 440-192591-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 430628**

**Client Sample ID: PZ-4**  
**Prep Type: Total/NA**  
**Prep Batch: 430601**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Ammonia (as N)	2.0		2.50	4.10		mg/L		84	75 - 125	4	15

## Method: SM 5310C - TOC

**Lab Sample ID: MB 440-430999/6**  
**Matrix: Water**  
**Analysis Batch: 430999**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		0.10	0.050	mg/L			09/24/17 08:06	1

**Lab Sample ID: LCS 440-430999/5**  
**Matrix: Water**  
**Analysis Batch: 430999**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Total Organic Carbon	10.0	10.1		mg/L		101	90 - 110

**Lab Sample ID: MRL 440-430999/4**  
**Matrix: Water**  
**Analysis Batch: 430999**

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	Limits
Total Organic Carbon	0.100	0.104		mg/L		104	50 - 150

TestAmerica Irvine



# QC Sample Results

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

TestAmerica Job ID: 440-192591-1

## Method: SM 5310C - TOC (Continued)

Lab Sample ID: 550-90079-A-1 MS

Matrix: Water

Analysis Batch: 430999

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
Total Organic Carbon	3.3		10.0	13.2		mg/L		99	80 - 120

Lab Sample ID: 550-90079-A-1 MSD

Matrix: Water

Analysis Batch: 430999

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
Total Organic Carbon	3.3		10.0	13.3		mg/L		100	80 - 120	0	20

# QC Association Summary

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

TestAmerica Job ID: 440-192591-1

## GC/MS VOA

### Analysis Batch: 430980

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192591-1	PZ-4	Total/NA	Water	8260B	
440-192591-2	DW-3	Total/NA	Water	8260B	
440-192591-3	DW-4	Total/NA	Water	8260B	
440-192591-4	MW-2A	Total/NA	Water	8260B	
440-192591-5	MW-2B	Total/NA	Water	8260B	
440-192591-6	MW-5	Total/NA	Water	8260B	
440-192591-7	QCAB	Total/NA	Water	8260B	
440-192591-8	QCTB	Total/NA	Water	8260B	
MB 440-430980/4	Method Blank	Total/NA	Water	8260B	
LCS 440-430980/5	Lab Control Sample	Total/NA	Water	8260B	
440-192591-1 MS	PZ-4	Total/NA	Water	8260B	
440-192591-1 MSD	PZ-4	Total/NA	Water	8260B	

### Analysis Batch: 431555

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192591-1	PZ-4	Total/NA	Water	8260B	
440-192591-2	DW-3	Total/NA	Water	8260B	
440-192591-3	DW-4	Total/NA	Water	8260B	
440-192591-4	MW-2A	Total/NA	Water	8260B	
440-192591-5	MW-2B	Total/NA	Water	8260B	
440-192591-6	MW-5	Total/NA	Water	8260B	
440-192591-7	QCAB	Total/NA	Water	8260B	
MB 440-431555/4	Method Blank	Total/NA	Water	8260B	
LCS 440-431555/6	Lab Control Sample	Total/NA	Water	8260B	
440-192113-A-3 MS	Matrix Spike	Total/NA	Water	8260B	
440-192113-A-3 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

### Analysis Batch: 431991

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192591-8	QCTB	Total/NA	Water	8260B	
MB 440-431991/4	Method Blank	Total/NA	Water	8260B	
LCS 440-431991/5	Lab Control Sample	Total/NA	Water	8260B	
LCSD 440-431991/6	Lab Control Sample Dup	Total/NA	Water	8260B	
440-192791-B-1 MS	Matrix Spike	Total/NA	Water	8260B	
440-192791-B-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

## GC/MS Semi VOA

### Prep Batch: 431370

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192591-1	PZ-4	Total/NA	Water	3520C	
440-192591-2	DW-3	Total/NA	Water	3520C	
440-192591-3	DW-4	Total/NA	Water	3520C	
440-192591-4	MW-2A	Total/NA	Water	3520C	
440-192591-5	MW-2B	Total/NA	Water	3520C	
440-192591-6	MW-5	Total/NA	Water	3520C	
MB 440-431370/1-A	Method Blank	Total/NA	Water	3520C	
LCS 440-431370/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 440-431370/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	

TestAmerica Irvine

# QC Association Summary

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

TestAmerica Job ID: 440-192591-1

## GC/MS Semi VOA (Continued)

### Analysis Batch: 431427

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192591-1	PZ-4	Total/NA	Water	8270C	431370
440-192591-2	DW-3	Total/NA	Water	8270C	431370
440-192591-3	DW-4	Total/NA	Water	8270C	431370
440-192591-4	MW-2A	Total/NA	Water	8270C	431370
440-192591-5	MW-2B	Total/NA	Water	8270C	431370
440-192591-6	MW-5	Total/NA	Water	8270C	431370
MB 440-431370/1-A	Method Blank	Total/NA	Water	8270C	431370
LCS 440-431370/2-A	Lab Control Sample	Total/NA	Water	8270C	431370
LCS 440-431370/3-A	Lab Control Sample Dup	Total/NA	Water	8270C	431370

## HPLC/IC

### Analysis Batch: 430064

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192591-6	MW-5	Total/NA	Water	300.0	
MB 440-430064/7	Method Blank	Total/NA	Water	300.0	
LCS 440-430064/6	Lab Control Sample	Total/NA	Water	300.0	

### Analysis Batch: 430638

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192591-1	PZ-4	Total/NA	Water	300.0	
440-192591-2	DW-3	Total/NA	Water	300.0	
440-192591-3	DW-4	Total/NA	Water	300.0	
440-192591-4	MW-2A	Total/NA	Water	300.0	
440-192591-5	MW-2B	Total/NA	Water	300.0	
MB 440-430638/7	Method Blank	Total/NA	Water	300.0	
LCS 440-430638/6	Lab Control Sample	Total/NA	Water	300.0	
440-192655-H-3 MS	Matrix Spike	Total/NA	Water	300.0	
440-192655-H-3 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

## Metals

### Prep Batch: 431623

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192591-1	PZ-4	Total Recoverable	Water	3005A	
440-192591-2	DW-3	Total Recoverable	Water	3005A	
440-192591-3	DW-4	Total Recoverable	Water	3005A	
440-192591-4	MW-2A	Total Recoverable	Water	3005A	
440-192591-5	MW-2B	Total Recoverable	Water	3005A	
440-192591-6	MW-5	Total Recoverable	Water	3005A	
MB 440-431623/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 440-431623/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
440-192518-O-1-B MS	Matrix Spike	Total Recoverable	Water	3005A	
440-192518-O-1-C MSD	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

### Analysis Batch: 431839

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192591-1	PZ-4	Total Recoverable	Water	6010B	431623
440-192591-2	DW-3	Total Recoverable	Water	6010B	431623
440-192591-3	DW-4	Total Recoverable	Water	6010B	431623

TestAmerica Irvine

# QC Association Summary

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

TestAmerica Job ID: 440-192591-1

## Metals (Continued)

### Analysis Batch: 431839 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192591-4	MW-2A	Total Recoverable	Water	6010B	431623
440-192591-5	MW-2B	Total Recoverable	Water	6010B	431623
440-192591-6	MW-5	Total Recoverable	Water	6010B	431623
MB 440-431623/1-A	Method Blank	Total Recoverable	Water	6010B	431623
LCS 440-431623/2-A	Lab Control Sample	Total Recoverable	Water	6010B	431623
440-192518-O-1-B MS	Matrix Spike	Total Recoverable	Water	6010B	431623
440-192518-O-1-C MSD	Matrix Spike Duplicate	Total Recoverable	Water	6010B	431623

## General Chemistry

### Analysis Batch: 430409

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192591-1	PZ-4	Total/NA	Water	SM 2320B	
440-192591-2	DW-3	Total/NA	Water	SM 2320B	
440-192591-3	DW-4	Total/NA	Water	SM 2320B	
440-192591-4	MW-2A	Total/NA	Water	SM 2320B	
440-192591-5	MW-2B	Total/NA	Water	SM 2320B	
440-192591-6	MW-5	Total/NA	Water	SM 2320B	
MB 440-430409/3	Method Blank	Total/NA	Water	SM 2320B	
MB 440-430409/30	Method Blank	Total/NA	Water	SM 2320B	
LCS 440-430409/2	Lab Control Sample	Total/NA	Water	SM 2320B	
LCS 440-430409/29	Lab Control Sample	Total/NA	Water	SM 2320B	
440-192591-1 DU	PZ-4	Total/NA	Water	SM 2320B	

### Prep Batch: 430599

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192591-6	MW-5	Total/NA	Water	SM 4500 NH3 B	
MB 440-430599/2-A	Method Blank	Total/NA	Water	SM 4500 NH3 B	
LCS 440-430599/1-A	Lab Control Sample	Total/NA	Water	SM 4500 NH3 B	
440-192542-E-1-B MS	Matrix Spike	Total/NA	Water	SM 4500 NH3 B	
440-192542-E-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 NH3 B	
440-192666-D-2-B DU	Duplicate	Total/NA	Water	SM 4500 NH3 B	

### Prep Batch: 430601

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192591-1	PZ-4	Total/NA	Water	SM 4500 NH3 B	
440-192591-2	DW-3	Total/NA	Water	SM 4500 NH3 B	
440-192591-3	DW-4	Total/NA	Water	SM 4500 NH3 B	
440-192591-4	MW-2A	Total/NA	Water	SM 4500 NH3 B	
440-192591-5	MW-2B	Total/NA	Water	SM 4500 NH3 B	
MB 440-430601/2-A	Method Blank	Total/NA	Water	SM 4500 NH3 B	
LCS 440-430601/1-A	Lab Control Sample	Total/NA	Water	SM 4500 NH3 B	
440-192591-1 MS	PZ-4	Total/NA	Water	SM 4500 NH3 B	
440-192591-1 MSD	PZ-4	Total/NA	Water	SM 4500 NH3 B	

### Analysis Batch: 430608

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192591-6	MW-5	Total/NA	Water	SM 4500 NH3 D	430599
MB 440-430599/2-A	Method Blank	Total/NA	Water	SM 4500 NH3 D	430599
LCS 440-430599/1-A	Lab Control Sample	Total/NA	Water	SM 4500 NH3 D	430599

TestAmerica Irvine

# QC Association Summary

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

TestAmerica Job ID: 440-192591-1

## General Chemistry (Continued)

### Analysis Batch: 430608 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192542-E-1-B MS	Matrix Spike	Total/NA	Water	SM 4500 NH3 D	430599
440-192542-E-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 NH3 D	430599
440-192666-D-2-B DU	Duplicate	Total/NA	Water	SM 4500 NH3 D	430599

### Analysis Batch: 430628

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192591-1	PZ-4	Total/NA	Water	SM 4500 NH3 D	430601
440-192591-2	DW-3	Total/NA	Water	SM 4500 NH3 D	430601
440-192591-3	DW-4	Total/NA	Water	SM 4500 NH3 D	430601
440-192591-4	MW-2A	Total/NA	Water	SM 4500 NH3 D	430601
440-192591-5	MW-2B	Total/NA	Water	SM 4500 NH3 D	430601
MB 440-430601/2-A	Method Blank	Total/NA	Water	SM 4500 NH3 D	430601
LCS 440-430601/1-A	Lab Control Sample	Total/NA	Water	SM 4500 NH3 D	430601
440-192591-1 MS	PZ-4	Total/NA	Water	SM 4500 NH3 D	430601
440-192591-1 MSD	PZ-4	Total/NA	Water	SM 4500 NH3 D	430601

### Analysis Batch: 430999

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192591-1	PZ-4	Total/NA	Water	SM 5310C	
440-192591-2	DW-3	Total/NA	Water	SM 5310C	
440-192591-3	DW-4	Total/NA	Water	SM 5310C	
440-192591-4	MW-2A	Total/NA	Water	SM 5310C	
440-192591-5	MW-2B	Total/NA	Water	SM 5310C	
440-192591-6	MW-5	Total/NA	Water	SM 5310C	
MB 440-430999/6	Method Blank	Total/NA	Water	SM 5310C	
LCS 440-430999/5	Lab Control Sample	Total/NA	Water	SM 5310C	
MRL 440-430999/4	Lab Control Sample	Total/NA	Water	SM 5310C	
550-90079-A-1 MS	Matrix Spike	Total/NA	Water	SM 5310C	
550-90079-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 5310C	

### Analysis Batch: 431301

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192591-1	PZ-4	Total/NA	Water	SM 2540C	
440-192591-2	DW-3	Total/NA	Water	SM 2540C	
440-192591-3	DW-4	Total/NA	Water	SM 2540C	
440-192591-4	MW-2A	Total/NA	Water	SM 2540C	
440-192591-5	MW-2B	Total/NA	Water	SM 2540C	
440-192591-6	MW-5	Total/NA	Water	SM 2540C	
MB 440-431301/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 440-431301/2	Lab Control Sample	Total/NA	Water	SM 2540C	
440-192591-6 DU	MW-5	Total/NA	Water	SM 2540C	

### Analysis Batch: 431689

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192591-1	PZ-4	Total/NA	Water	410.4	
440-192591-2	DW-3	Total/NA	Water	410.4	
440-192591-3	DW-4	Total/NA	Water	410.4	
440-192591-4	MW-2A	Total/NA	Water	410.4	
440-192591-5	MW-2B	Total/NA	Water	410.4	
MB 440-431689/3	Method Blank	Total/NA	Water	410.4	
LCS 440-431689/4	Lab Control Sample	Total/NA	Water	410.4	

TestAmerica Irvine

# QC Association Summary

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

TestAmerica Job ID: 440-192591-1

## General Chemistry (Continued)

### Analysis Batch: 431689 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192498-I-1 MS	Matrix Spike	Total/NA	Water	410.4	
440-192498-I-1 MSD	Matrix Spike Duplicate	Total/NA	Water	410.4	

### Analysis Batch: 431988

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192591-6	MW-5	Total/NA	Water	410.4	
MB 440-431988/3	Method Blank	Total/NA	Water	410.4	
LCS 440-431988/4	Lab Control Sample	Total/NA	Water	410.4	
440-193005-A-1 MS	Matrix Spike	Total/NA	Water	410.4	
440-193005-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	410.4	
440-193005-A-1 DU	Duplicate	Total/NA	Water	410.4	

# Definitions/Glossary

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

TestAmerica Job ID: 440-192591-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### GC/MS VOA TICs

Qualifier	Qualifier Description
J	Indicates an Estimated Value for TICs
T	Result is a tentatively identified compound (TIC) and an estimated value.

### GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

## Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
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)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
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)

# Accreditation/Certification Summary

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

TestAmerica Job ID: 440-192591-1

## Laboratory: TestAmerica Irvine

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	State Program	10	CA01531	06-30-18
Arizona	State Program	9	AZ0671	10-14-17 *
California	LA Cty Sanitation Districts	9	10256	06-30-18
California	State Program	9	CA ELAP 2706	06-30-18
Guam	State Program	9	Cert. No. 17-003R	01-23-18
Hawaii	State Program	9	N/A	01-29-18
Kansas	NELAP Secondary AB	7	E-10420	07-31-18
Nevada	State Program	9	CA015312018-1	07-31-18
New Mexico	State Program	6	N/A	01-29-18 *
Northern Mariana Islands	State Program	9	MP0002	01-29-17 *
Oregon	NELAP	10	4028	01-29-18
USDA	Federal		P330-15-00184	07-08-18
Washington	State Program	10	C900	09-03-18

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

TestAmerica Irvine



**TestAmerica Irvine**  
 17461 Berian Ave  
 Suite 100  
 Irvine, CA 92614  
 Phone: 949.261.1022 Fax: 949.261.1027

**Chain of Custody Record**

144508

**TestAmerica**  
 THE LEADER IN ENVIRONMENTAL TESTING  
 TestAmerica Laboratories, Inc.  
 TAL-9210 (0713)

9/20/17  
 L13

Client Contact: **807.1047** Regulatory Program:  DW  NPDES  RCRA  Other:

Project Manager: **Kyo Welckans** Site Contact: **P. Dickason** Date: **9-20-17** COC No.: **1** of **1** COCs  
 Tel/Fax: **858-451-1136** Lab Contact: **R. Toynava** Carrier: **TIA**

Company Name: **GILA Republic** Analysis Turnaround Time:  CALENDAR DAYS  WORKING DAYS  
 Address: **11415 W. Bennington St** TAT if different from Below:  2 weeks  1 week  2 days  1 day  
 City/State/Zip: **S.D., CA, 92127**  
 Phone: **858-451-1136**  
 Fax: **858-451-1087**  
 Project Name: **Republic Services**  
 Site: **Sunshine Can Landfill**  
 P O #: **44007851**

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS/MSD (Y/N)	EPA 8260B-VOCs	Ammonia as (N)	C.D. (10.4)	Chloride (30.0)	Potassium (10.0)	T.D.S. (160.1)	T.O.C. (415.1)	EPA 8230 In-	Dioxane	Sample Specific Notes:
PZ-4	9/20/17	0915	G	GW	12	X	X	X	X	X	X	X	X	X	X	X	
DW-3		1154			12	X	X	X	X	X	X	X	X	X	X	X	
DW-4		1250			12	X	X	X	X	X	X	X	X	X	X	X	
MW-2A		0952			12	X	X	X	X	X	X	X	X	X	X	X	
MW-2B		1127			12	X	X	X	X	X	X	X	X	X	X	X	
MW-5		1342			12	X	X	X	X	X	X	X	X	X	X	X	
QCAB				LAB	4	X											
QCTB				"	4	X											

Barcode: 440-192591 Chain of Custody

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

Possible Hazard Identification: Please List any 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

Special Instructions/QC Requirements & Comments:

Return to Client  Disposal by Lab  Archive for \_\_\_\_\_ Months

Custody Seal No.: \_\_\_\_\_ Yes  No

Relinquished by: **Robert Johnson** Date/Time: **9-20-17 13:56**  
 Relinquished by: **Great-logic** Date/Time: **9/20/17 16:45**  
 Relinquished by: **TRZ** Date/Time: **9/20/17 16:45**

Received by: **TRZ** Date/Time: **9/20/17 13:56**  
 Received by: **TRZ** Date/Time: **9/20/17 13:56**  
 Received in Laboratory: **TRZ** Date/Time: **9/20/17 16:45**

Company: **TRZ** Cooler Temp. (C): Obs'd: \_\_\_\_\_

Company: **TRZ** Date/Time: **9/20/17 13:56**

Company: **TRZ** Date/Time: **9/20/17 16:45**

Company: **TRZ** Date/Time: **9/20/17 16:45**

Page 54 of 55

## Login Sample Receipt Checklist

Client: Geo-Logic Associates

Job Number: 440-192591-1

**Login Number: 192591**

**List Number: 1**

**Creator: Avila, Stephanie 1**

**List Source: TestAmerica Irvine**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> 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 <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Irvine

17461 Derian Ave

Suite 100

Irvine, CA 92614-5817

Tel: (949)261-1022

TestAmerica Job ID: 440-192655-1

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:

10/3/2017 11:28:50 AM

Rossina Tomova, Project Manager I

(949)261-1022

[rossina.tomova@testamericainc.com](mailto:rossina.tomova@testamericainc.com)

### LINKS

Review your project  
results through

Total Access

Have a Question?



Visit us at:

[www.testamericainc.com](http://www.testamericainc.com)

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

1

2

3

4

5

6

7

8

9

10

11

12

13



# Table of Contents

Cover Page . . . . .	1
Table of Contents . . . . .	2
Sample Summary . . . . .	3
Case Narrative . . . . .	4
Client Sample Results . . . . .	5
Method Summary . . . . .	16
Lab Chronicle . . . . .	17
QC Sample Results . . . . .	19
QC Association Summary . . . . .	31
Definitions/Glossary . . . . .	34
Certification Summary . . . . .	35
Chain of Custody . . . . .	36
Receipt Checklists . . . . .	37

# Sample Summary

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

TestAmerica Job ID: 440-192655-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-192655-1	MW-1	Water	09/21/17 09:35	09/21/17 16:15
440-192655-2	MW-13R	Water	09/21/17 08:30	09/21/17 16:15
440-192655-3	DW-5	Water	09/21/17 09:05	09/21/17 16:15
440-192655-4	QCAB	Water	09/21/17 00:01	09/21/17 16:15
440-192655-5	QCTB	Water	09/21/17 00:01	09/21/17 16:15

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

# Case Narrative

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

TestAmerica Job ID: 440-192655-1

**Job ID: 440-192655-1**

**Laboratory: TestAmerica Irvine**

## Narrative

### Job Narrative 440-192655-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 9/21/2017 4:15 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.1° C.

#### GC/MS VOA

Method(s) 8260B: The following volatile sample was received and analyzed with significant headspace in the sample container(s): DW-5 (440-192655-3). Significant headspace is defined as a bubble greater than 6 mm in diameter.

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

#### GC/MS Semi VOA

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

#### HPLC/IC

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

#### Metals

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

#### General Chemistry

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

#### Organic Prep

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

#### VOA Prep

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

# Client Sample Results

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

TestAmerica Job ID: 440-192655-1

**Client Sample ID: MW-1**  
**Date Collected: 09/21/17 09:35**  
**Date Received: 09/21/17 16:15**

**Lab Sample ID: 440-192655-1**  
**Matrix: Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			09/29/17 23:59	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			09/29/17 23:59	1
Acrolein	ND		50	2.5	ug/L			09/27/17 02:22	1
Acrylonitrile	ND		50	1.0	ug/L			09/27/17 02:22	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			09/29/17 23:59	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			09/29/17 23:59	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			09/29/17 23:59	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			09/29/17 23:59	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			09/29/17 23:59	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			09/29/17 23:59	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			09/29/17 23:59	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			09/29/17 23:59	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			09/29/17 23:59	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			09/29/17 23:59	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			09/29/17 23:59	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			09/29/17 23:59	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			09/29/17 23:59	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			09/29/17 23:59	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			09/29/17 23:59	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			09/29/17 23:59	1
2-Hexanone	ND		5.0	2.5	ug/L			09/29/17 23:59	1
Acetone	ND		20	10	ug/L			09/29/17 23:59	1
Acetonitrile	ND		20	10	ug/L			09/29/17 23:59	1
Acrolein	ND		5.0	2.5	ug/L			09/29/17 23:59	1
Acrylonitrile	ND		2.0	1.0	ug/L			09/29/17 23:59	1
Benzene	ND		0.50	0.25	ug/L			09/29/17 23:59	1
Allyl chloride	ND		1.0	0.50	ug/L			09/29/17 23:59	1
Bromoform	ND		1.0	0.40	ug/L			09/29/17 23:59	1
Bromomethane	ND		0.50	0.25	ug/L			09/29/17 23:59	1
Carbon disulfide	ND		1.0	0.50	ug/L			09/29/17 23:59	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			09/29/17 23:59	1
Chlorobenzene	ND		0.50	0.25	ug/L			09/29/17 23:59	1
Bromochloromethane	ND		0.50	0.25	ug/L			09/29/17 23:59	1
Chloroethane	ND		1.0	0.40	ug/L			09/29/17 23:59	1
Chloroform	ND		0.50	0.25	ug/L			09/29/17 23:59	1
Chloromethane	ND		0.50	0.25	ug/L			09/29/17 23:59	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			09/29/17 23:59	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/29/17 23:59	1
Dibromochloromethane	ND		0.50	0.25	ug/L			09/29/17 23:59	1
Dibromomethane	ND		0.50	0.25	ug/L			09/29/17 23:59	1
Bromodichloromethane	ND		0.50	0.25	ug/L			09/29/17 23:59	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			09/29/17 23:59	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			09/29/17 23:59	1
Ethylbenzene	ND		0.50	0.25	ug/L			09/29/17 23:59	1
Iodomethane	ND		2.0	1.0	ug/L			09/29/17 23:59	1
Isobutyl alcohol	ND		25	13	ug/L			09/29/17 23:59	1
m,p-Xylene	ND		1.0	0.50	ug/L			09/29/17 23:59	1
Methylacrylonitrile	ND		10	2.5	ug/L			09/29/17 23:59	1
Methyl methacrylate	ND		2.0	1.0	ug/L			09/29/17 23:59	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-192655-1

**Client Sample ID: MW-1**

**Lab Sample ID: 440-192655-1**

**Date Collected: 09/21/17 09:35**

**Matrix: Water**

**Date Received: 09/21/17 16:15**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	ND		2.0	0.88	ug/L			09/29/17 23:59	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			09/29/17 23:59	1
Naphthalene	ND		1.0	0.40	ug/L			09/29/17 23:59	1
o-Xylene	ND		0.50	0.25	ug/L			09/29/17 23:59	1
Propionitrile	ND		20	10	ug/L			09/29/17 23:59	1
Styrene	ND		0.50	0.25	ug/L			09/29/17 23:59	1
<b>t-Butanol</b>	<b>20</b>		10	5.0	ug/L			09/29/17 23:59	1
Tetrachloroethene	ND		0.50	0.25	ug/L			09/29/17 23:59	1
Tetrahydrofuran	ND		10	5.0	ug/L			09/29/17 23:59	1
Toluene	ND		0.50	0.25	ug/L			09/29/17 23:59	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			09/29/17 23:59	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/29/17 23:59	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			09/29/17 23:59	1
Trichloroethene	ND		0.50	0.25	ug/L			09/29/17 23:59	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			09/29/17 23:59	1
Vinyl acetate	ND		4.0	2.0	ug/L			09/29/17 23:59	1
Vinyl chloride	ND		0.50	0.25	ug/L			09/29/17 23:59	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			09/29/17 23:59	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			09/29/17 23:59	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			09/29/17 23:59	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	4.6	T J	ug/L		4.39			09/29/17 23:59	1
Unknown	10	T J	ug/L		5.97			09/29/17 23:59	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	106		80 - 128		09/27/17 02:22	1
4-Bromofluorobenzene (Surr)	97		80 - 120		09/27/17 02:22	1
Toluene-d8 (Surr)	105		80 - 128		09/29/17 23:59	1
4-Bromofluorobenzene (Surr)	99		80 - 120		09/29/17 23:59	1
Dibromofluoromethane (Surr)	119		76 - 132		09/27/17 02:22	1
Dibromofluoromethane (Surr)	115		76 - 132		09/29/17 23:59	1

## Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>1,4-Dioxane</b>	<b>16</b>		0.99	0.25	ug/L		09/23/17 08:52	09/27/17 01:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	44		30 - 120	09/23/17 08:52	09/27/17 01:49	1

## Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chloride</b>	<b>260</b>		100	50	mg/L			09/22/17 03:38	200

## Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Potassium</b>	<b>32</b>		0.50	0.25	mg/L		09/27/17 21:40	09/29/17 09:07	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chemical Oxygen Demand</b>	<b>120</b>		20	10	mg/L			10/02/17 15:44	1

TestAmerica Irvine



# Client Sample Results

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

TestAmerica Job ID: 440-192655-1

## Client Sample ID: MW-1

Date Collected: 09/21/17 09:35

Date Received: 09/21/17 16:15

## Lab Sample ID: 440-192655-1

Matrix: Water

### General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	3800		50	25	mg/L			09/27/17 08:17	1
Ammonia (as N)	2.8		0.50	0.10	mg/L		09/22/17 05:30	09/22/17 09:00	1
Total Organic Carbon	48		0.50	0.25	mg/L			09/24/17 11:54	5
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	550		4.0	4.0	mg/L			09/22/17 06:44	1

## Client Sample ID: MW-13R

Date Collected: 09/21/17 08:30

Date Received: 09/21/17 16:15

## Lab Sample ID: 440-192655-2

Matrix: Water

### Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			09/30/17 00:27	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			09/30/17 00:27	1
Acrolein	ND		50	2.5	ug/L			09/27/17 02:52	1
Acrylonitrile	ND		50	1.0	ug/L			09/27/17 02:52	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			09/30/17 00:27	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			09/30/17 00:27	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			09/30/17 00:27	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			09/30/17 00:27	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			09/30/17 00:27	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			09/30/17 00:27	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			09/30/17 00:27	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			09/30/17 00:27	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			09/30/17 00:27	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			09/30/17 00:27	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			09/30/17 00:27	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			09/30/17 00:27	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			09/30/17 00:27	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			09/30/17 00:27	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			09/30/17 00:27	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			09/30/17 00:27	1
2-Hexanone	ND		5.0	2.5	ug/L			09/30/17 00:27	1
Acetone	ND		20	10	ug/L			09/30/17 00:27	1
Acetonitrile	ND		20	10	ug/L			09/30/17 00:27	1
Acrolein	ND		5.0	2.5	ug/L			09/30/17 00:27	1
Acrylonitrile	ND		2.0	1.0	ug/L			09/30/17 00:27	1
Benzene	ND		0.50	0.25	ug/L			09/30/17 00:27	1
Allyl chloride	ND		1.0	0.50	ug/L			09/30/17 00:27	1
Bromoform	ND		1.0	0.40	ug/L			09/30/17 00:27	1
Bromomethane	ND		0.50	0.25	ug/L			09/30/17 00:27	1
Carbon disulfide	ND		1.0	0.50	ug/L			09/30/17 00:27	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			09/30/17 00:27	1
Chlorobenzene	ND		0.50	0.25	ug/L			09/30/17 00:27	1
Bromochloromethane	ND		0.50	0.25	ug/L			09/30/17 00:27	1
Chloroethane	ND		1.0	0.40	ug/L			09/30/17 00:27	1
Chloroform	ND		0.50	0.25	ug/L			09/30/17 00:27	1
Chloromethane	ND		0.50	0.25	ug/L			09/30/17 00:27	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			09/30/17 00:27	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-192655-1

**Client Sample ID: MW-13R**

**Lab Sample ID: 440-192655-2**

**Date Collected: 09/21/17 08:30**

**Matrix: Water**

**Date Received: 09/21/17 16:15**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/30/17 00:27	1
Dibromochloromethane	ND		0.50	0.25	ug/L			09/30/17 00:27	1
Dibromomethane	ND		0.50	0.25	ug/L			09/30/17 00:27	1
Bromodichloromethane	ND		0.50	0.25	ug/L			09/30/17 00:27	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			09/30/17 00:27	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			09/30/17 00:27	1
Ethylbenzene	ND		0.50	0.25	ug/L			09/30/17 00:27	1
Iodomethane	ND		2.0	1.0	ug/L			09/30/17 00:27	1
Isobutyl alcohol	ND		25	13	ug/L			09/30/17 00:27	1
m,p-Xylene	ND		1.0	0.50	ug/L			09/30/17 00:27	1
Methylacrylonitrile	ND		10	2.5	ug/L			09/30/17 00:27	1
Methyl methacrylate	ND		2.0	1.0	ug/L			09/30/17 00:27	1
Methylene Chloride	ND		2.0	0.88	ug/L			09/30/17 00:27	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			09/30/17 00:27	1
Naphthalene	ND		1.0	0.40	ug/L			09/30/17 00:27	1
o-Xylene	ND		0.50	0.25	ug/L			09/30/17 00:27	1
Propionitrile	ND		20	10	ug/L			09/30/17 00:27	1
Styrene	ND		0.50	0.25	ug/L			09/30/17 00:27	1
t-Butanol	ND		10	5.0	ug/L			09/30/17 00:27	1
Tetrachloroethene	ND		0.50	0.25	ug/L			09/30/17 00:27	1
Tetrahydrofuran	ND		10	5.0	ug/L			09/30/17 00:27	1
Toluene	ND		0.50	0.25	ug/L			09/30/17 00:27	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			09/30/17 00:27	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/30/17 00:27	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			09/30/17 00:27	1
Trichloroethene	ND		0.50	0.25	ug/L			09/30/17 00:27	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			09/30/17 00:27	1
Vinyl acetate	ND		4.0	2.0	ug/L			09/30/17 00:27	1
Vinyl chloride	ND		0.50	0.25	ug/L			09/30/17 00:27	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			09/30/17 00:27	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			09/30/17 00:27	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			09/30/17 00:27	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	700	TJ	ug/L		1.86			09/30/17 00:27	1
Unknown	5.8	TJ	ug/L		2.37			09/30/17 00:27	1
Unknown	11	TJ	ug/L		5.97			09/30/17 00:27	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	108		80 - 128		09/27/17 02:52	1
4-Bromofluorobenzene (Surr)	100		80 - 120		09/27/17 02:52	1
Toluene-d8 (Surr)	107		80 - 128		09/30/17 00:27	1
4-Bromofluorobenzene (Surr)	102		80 - 120		09/30/17 00:27	1
Dibromofluoromethane (Surr)	112		76 - 132		09/27/17 02:52	1
Dibromofluoromethane (Surr)	119		76 - 132		09/30/17 00:27	1

## Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	7.0		0.97	0.24	ug/L		09/23/17 08:52	09/27/17 02:11	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-192655-1

**Client Sample ID: MW-13R**

**Date Collected: 09/21/17 08:30**

**Date Received: 09/21/17 16:15**

**Lab Sample ID: 440-192655-2**

**Matrix: Water**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	51		30 - 120	09/23/17 08:52	09/27/17 02:11	1

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	140		50	25	mg/L			09/22/17 04:02	100

**Method: 6010B - Metals (ICP) - Total Recoverable**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	31		0.50	0.25	mg/L		09/27/17 21:40	09/29/17 09:09	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	270		20	10	mg/L			10/02/17 15:44	1
Total Dissolved Solids	2100		20	10	mg/L			09/27/17 08:17	1
Ammonia (as N)	5.8		2.5	0.50	mg/L		09/22/17 05:30	09/22/17 09:00	1
Total Organic Carbon	25		0.50	0.25	mg/L			09/24/17 11:24	5
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	590		4.0	4.0	mg/L			09/22/17 06:56	1

**Client Sample ID: DW-5**

**Date Collected: 09/21/17 09:05**

**Date Received: 09/21/17 16:15**

**Lab Sample ID: 440-192655-3**

**Matrix: Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			09/30/17 00:55	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			09/30/17 00:55	1
Acrolein	ND		50	2.5	ug/L			09/27/17 03:22	1
Acrylonitrile	ND		50	1.0	ug/L			09/27/17 03:22	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			09/30/17 00:55	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			09/30/17 00:55	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			09/30/17 00:55	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			09/30/17 00:55	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			09/30/17 00:55	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			09/30/17 00:55	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			09/30/17 00:55	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			09/30/17 00:55	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			09/30/17 00:55	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			09/30/17 00:55	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			09/30/17 00:55	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			09/30/17 00:55	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			09/30/17 00:55	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			09/30/17 00:55	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			09/30/17 00:55	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			09/30/17 00:55	1
2-Hexanone	ND		5.0	2.5	ug/L			09/30/17 00:55	1
Acetone	ND		20	10	ug/L			09/30/17 00:55	1
Acetonitrile	ND		20	10	ug/L			09/30/17 00:55	1
Acrolein	ND		5.0	2.5	ug/L			09/30/17 00:55	1
Acrylonitrile	ND		2.0	1.0	ug/L			09/30/17 00:55	1
Benzene	ND		0.50	0.25	ug/L			09/30/17 00:55	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-192655-1

**Client Sample ID: DW-5**  
**Date Collected: 09/21/17 09:05**  
**Date Received: 09/21/17 16:15**

**Lab Sample ID: 440-192655-3**  
**Matrix: Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Allyl chloride	ND		1.0	0.50	ug/L			09/30/17 00:55	1
Bromoform	ND		1.0	0.40	ug/L			09/30/17 00:55	1
Bromomethane	ND		0.50	0.25	ug/L			09/30/17 00:55	1
Carbon disulfide	ND		1.0	0.50	ug/L			09/30/17 00:55	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			09/30/17 00:55	1
Chlorobenzene	ND		0.50	0.25	ug/L			09/30/17 00:55	1
Bromochloromethane	ND		0.50	0.25	ug/L			09/30/17 00:55	1
Chloroethane	ND		1.0	0.40	ug/L			09/30/17 00:55	1
Chloroform	ND		0.50	0.25	ug/L			09/30/17 00:55	1
Chloromethane	ND		0.50	0.25	ug/L			09/30/17 00:55	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			09/30/17 00:55	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/30/17 00:55	1
Dibromochloromethane	ND		0.50	0.25	ug/L			09/30/17 00:55	1
Dibromomethane	ND		0.50	0.25	ug/L			09/30/17 00:55	1
Bromodichloromethane	ND		0.50	0.25	ug/L			09/30/17 00:55	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			09/30/17 00:55	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			09/30/17 00:55	1
Ethylbenzene	ND		0.50	0.25	ug/L			09/30/17 00:55	1
Iodomethane	ND		2.0	1.0	ug/L			09/30/17 00:55	1
Isobutyl alcohol	ND		25	13	ug/L			09/30/17 00:55	1
m,p-Xylene	ND		1.0	0.50	ug/L			09/30/17 00:55	1
Methylacrylonitrile	ND		10	2.5	ug/L			09/30/17 00:55	1
Methyl methacrylate	ND		2.0	1.0	ug/L			09/30/17 00:55	1
Methylene Chloride	ND		2.0	0.88	ug/L			09/30/17 00:55	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			09/30/17 00:55	1
Naphthalene	ND		1.0	0.40	ug/L			09/30/17 00:55	1
o-Xylene	ND		0.50	0.25	ug/L			09/30/17 00:55	1
Propionitrile	ND		20	10	ug/L			09/30/17 00:55	1
Styrene	ND		0.50	0.25	ug/L			09/30/17 00:55	1
t-Butanol	ND		10	5.0	ug/L			09/30/17 00:55	1
Tetrachloroethene	ND		0.50	0.25	ug/L			09/30/17 00:55	1
Tetrahydrofuran	ND		10	5.0	ug/L			09/30/17 00:55	1
Toluene	ND		0.50	0.25	ug/L			09/30/17 00:55	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			09/30/17 00:55	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/30/17 00:55	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			09/30/17 00:55	1
Trichloroethene	ND		0.50	0.25	ug/L			09/30/17 00:55	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			09/30/17 00:55	1
Vinyl acetate	ND		4.0	2.0	ug/L			09/30/17 00:55	1
Vinyl chloride	ND		0.50	0.25	ug/L			09/30/17 00:55	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			09/30/17 00:55	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			09/30/17 00:55	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			09/30/17 00:55	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	16	T J	ug/L		2.36			09/30/17 00:55	1
Butane, 2,3-dimethyl-	25	T J N	ug/L		4.40	79-29-8		09/30/17 00:55	1
Unknown	11	T J	ug/L		5.97			09/30/17 00:55	1
1H-Indene, 2,3-dihydro-1,6-dimethyl-	12	T J N	ug/L		14.88	17059-48-2		09/30/17 00:55	1
Benzene, 1,2,4,5-tetramethyl-	35	T J N	ug/L		15.18	95-93-2		09/30/17 00:55	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-192655-1

**Client Sample ID: DW-5**  
**Date Collected: 09/21/17 09:05**  
**Date Received: 09/21/17 16:15**

**Lab Sample ID: 440-192655-3**  
**Matrix: Water**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Benzene, pentamethyl-	16	T J N	ug/L		16.14	700-12-9		09/30/17 00:55	1
1H-Indene, 2,3-dihydro-1,1,5-trimethyl-	10	T J N	ug/L		16.31	40650-41-7		09/30/17 00:55	1
Benzene, 1-ethyl-2,4,5-trimethyl-	13	T J N	ug/L		16.57	17851-27-3		09/30/17 00:55	1
1H-Indene, 2,3-dihydro-4,7-dimethyl-	17	T J N	ug/L		16.89	6682-71-9		09/30/17 00:55	1
Unknown	13	T J	ug/L		17.10			09/30/17 00:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	108		80 - 128		09/27/17 03:22	1
4-Bromofluorobenzene (Surr)	99		80 - 120		09/27/17 03:22	1
Toluene-d8 (Surr)	106		80 - 128		09/30/17 00:55	1
4-Bromofluorobenzene (Surr)	100		80 - 120		09/30/17 00:55	1
Dibromofluoromethane (Surr)	112		76 - 132		09/27/17 03:22	1
Dibromofluoromethane (Surr)	119		76 - 132		09/30/17 00:55	1

## Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.97	0.24	ug/L		09/23/17 08:52	09/27/17 02:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	59		30 - 120	09/23/17 08:52	09/27/17 02:33	1

## Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	17		2.5	1.3	mg/L			09/22/17 16:04	5

## Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	1.4		0.50	0.25	mg/L		09/27/17 21:40	09/29/17 09:12	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	16	J	20	10	mg/L			10/02/17 15:44	1
Total Dissolved Solids	1100		10	5.0	mg/L			09/27/17 08:17	1
Ammonia (as N)	0.33	J	0.50	0.10	mg/L		09/22/17 05:30	09/22/17 09:00	1
Total Organic Carbon	6.5		0.10	0.050	mg/L			09/24/17 11:38	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	730		4.0	4.0	mg/L			09/22/17 07:08	1

**Client Sample ID: QCAB**  
**Date Collected: 09/21/17 00:01**  
**Date Received: 09/21/17 16:15**

**Lab Sample ID: 440-192655-4**  
**Matrix: Water**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			09/30/17 01:23	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			09/30/17 01:23	1
Acrolein	ND		50	2.5	ug/L			09/27/17 03:52	1
Acrylonitrile	ND		50	1.0	ug/L			09/27/17 03:52	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			09/30/17 01:23	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			09/30/17 01:23	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-192655-1

**Client Sample ID: QCAB**  
**Date Collected: 09/21/17 00:01**  
**Date Received: 09/21/17 16:15**

**Lab Sample ID: 440-192655-4**  
**Matrix: Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			09/30/17 01:23	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			09/30/17 01:23	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			09/30/17 01:23	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			09/30/17 01:23	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			09/30/17 01:23	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			09/30/17 01:23	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			09/30/17 01:23	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			09/30/17 01:23	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			09/30/17 01:23	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			09/30/17 01:23	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			09/30/17 01:23	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			09/30/17 01:23	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			09/30/17 01:23	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			09/30/17 01:23	1
2-Hexanone	ND		5.0	2.5	ug/L			09/30/17 01:23	1
Acetone	ND		20	10	ug/L			09/30/17 01:23	1
Acetonitrile	ND		20	10	ug/L			09/30/17 01:23	1
Acrolein	ND		5.0	2.5	ug/L			09/30/17 01:23	1
Acrylonitrile	ND		2.0	1.0	ug/L			09/30/17 01:23	1
Benzene	ND		0.50	0.25	ug/L			09/30/17 01:23	1
Allyl chloride	ND		1.0	0.50	ug/L			09/30/17 01:23	1
Bromoform	ND		1.0	0.40	ug/L			09/30/17 01:23	1
Bromomethane	ND		0.50	0.25	ug/L			09/30/17 01:23	1
Carbon disulfide	ND		1.0	0.50	ug/L			09/30/17 01:23	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			09/30/17 01:23	1
Chlorobenzene	ND		0.50	0.25	ug/L			09/30/17 01:23	1
Bromochloromethane	ND		0.50	0.25	ug/L			09/30/17 01:23	1
Chloroethane	ND		1.0	0.40	ug/L			09/30/17 01:23	1
Chloroform	ND		0.50	0.25	ug/L			09/30/17 01:23	1
Chloromethane	ND		0.50	0.25	ug/L			09/30/17 01:23	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			09/30/17 01:23	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/30/17 01:23	1
Dibromochloromethane	ND		0.50	0.25	ug/L			09/30/17 01:23	1
Dibromomethane	ND		0.50	0.25	ug/L			09/30/17 01:23	1
Bromodichloromethane	ND		0.50	0.25	ug/L			09/30/17 01:23	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			09/30/17 01:23	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			09/30/17 01:23	1
Ethylbenzene	ND		0.50	0.25	ug/L			09/30/17 01:23	1
Iodomethane	ND		2.0	1.0	ug/L			09/30/17 01:23	1
Isobutyl alcohol	ND		25	13	ug/L			09/30/17 01:23	1
m,p-Xylene	ND		1.0	0.50	ug/L			09/30/17 01:23	1
Methylacrylonitrile	ND		10	2.5	ug/L			09/30/17 01:23	1
Methyl methacrylate	ND		2.0	1.0	ug/L			09/30/17 01:23	1
Methylene Chloride	ND		2.0	0.88	ug/L			09/30/17 01:23	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			09/30/17 01:23	1
Naphthalene	ND		1.0	0.40	ug/L			09/30/17 01:23	1
o-Xylene	ND		0.50	0.25	ug/L			09/30/17 01:23	1
Propionitrile	ND		20	10	ug/L			09/30/17 01:23	1
Styrene	ND		0.50	0.25	ug/L			09/30/17 01:23	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-192655-1

**Client Sample ID: QCAB**

**Lab Sample ID: 440-192655-4**

**Date Collected: 09/21/17 00:01**

**Matrix: Water**

**Date Received: 09/21/17 16:15**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
t-Butanol	ND		10	5.0	ug/L			09/30/17 01:23	1
Tetrachloroethene	ND		0.50	0.25	ug/L			09/30/17 01:23	1
Tetrahydrofuran	ND		10	5.0	ug/L			09/30/17 01:23	1
Toluene	ND		0.50	0.25	ug/L			09/30/17 01:23	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			09/30/17 01:23	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/30/17 01:23	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			09/30/17 01:23	1
Trichloroethene	ND		0.50	0.25	ug/L			09/30/17 01:23	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			09/30/17 01:23	1
Vinyl acetate	ND		4.0	2.0	ug/L			09/30/17 01:23	1
Vinyl chloride	ND		0.50	0.25	ug/L			09/30/17 01:23	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			09/30/17 01:23	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			09/30/17 01:23	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			09/30/17 01:23	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	11	T J	ug/L		5.97			09/30/17 01:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	112		80 - 128		09/27/17 03:52	1
4-Bromofluorobenzene (Surr)	99		80 - 120		09/27/17 03:52	1
Toluene-d8 (Surr)	105		80 - 128		09/30/17 01:23	1
4-Bromofluorobenzene (Surr)	102		80 - 120		09/30/17 01:23	1
Dibromofluoromethane (Surr)	109		76 - 132		09/27/17 03:52	1
Dibromofluoromethane (Surr)	117		76 - 132		09/30/17 01:23	1

**Client Sample ID: QCTB**

**Lab Sample ID: 440-192655-5**

**Date Collected: 09/21/17 00:01**

**Matrix: Water**

**Date Received: 09/21/17 16:15**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			09/30/17 01:51	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			09/30/17 01:51	1
Acrolein	ND		50	2.5	ug/L			09/27/17 04:21	1
Acrylonitrile	ND		50	1.0	ug/L			09/27/17 04:21	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			09/30/17 01:51	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			09/30/17 01:51	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			09/30/17 01:51	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			09/30/17 01:51	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			09/30/17 01:51	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			09/30/17 01:51	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			09/30/17 01:51	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			09/30/17 01:51	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			09/30/17 01:51	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			09/30/17 01:51	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			09/30/17 01:51	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			09/30/17 01:51	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			09/30/17 01:51	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			09/30/17 01:51	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-192655-1

**Client Sample ID: QCTB**  
**Date Collected: 09/21/17 00:01**  
**Date Received: 09/21/17 16:15**

**Lab Sample ID: 440-192655-5**  
**Matrix: Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,2-Dichloropropane	ND		1.0	0.40	ug/L			09/30/17 01:51	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			09/30/17 01:51	1
2-Hexanone	ND		5.0	2.5	ug/L			09/30/17 01:51	1
Acetone	ND		20	10	ug/L			09/30/17 01:51	1
Acetonitrile	ND		20	10	ug/L			09/30/17 01:51	1
Acrolein	ND		5.0	2.5	ug/L			09/30/17 01:51	1
Acrylonitrile	ND		2.0	1.0	ug/L			09/30/17 01:51	1
Benzene	ND		0.50	0.25	ug/L			09/30/17 01:51	1
Allyl chloride	ND		1.0	0.50	ug/L			09/30/17 01:51	1
Bromoform	ND		1.0	0.40	ug/L			09/30/17 01:51	1
Bromomethane	ND		0.50	0.25	ug/L			09/30/17 01:51	1
Carbon disulfide	ND		1.0	0.50	ug/L			09/30/17 01:51	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			09/30/17 01:51	1
Chlorobenzene	ND		0.50	0.25	ug/L			09/30/17 01:51	1
Bromochloromethane	ND		0.50	0.25	ug/L			09/30/17 01:51	1
Chloroethane	ND		1.0	0.40	ug/L			09/30/17 01:51	1
Chloroform	ND		0.50	0.25	ug/L			09/30/17 01:51	1
Chloromethane	ND		0.50	0.25	ug/L			09/30/17 01:51	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			09/30/17 01:51	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/30/17 01:51	1
Dibromochloromethane	ND		0.50	0.25	ug/L			09/30/17 01:51	1
Dibromomethane	ND		0.50	0.25	ug/L			09/30/17 01:51	1
Bromodichloromethane	ND		0.50	0.25	ug/L			09/30/17 01:51	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			09/30/17 01:51	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			09/30/17 01:51	1
Ethylbenzene	ND		0.50	0.25	ug/L			09/30/17 01:51	1
Iodomethane	ND		2.0	1.0	ug/L			09/30/17 01:51	1
Isobutyl alcohol	ND		25	13	ug/L			09/30/17 01:51	1
m,p-Xylene	ND		1.0	0.50	ug/L			09/30/17 01:51	1
Methylacrylonitrile	ND		10	2.5	ug/L			09/30/17 01:51	1
Methyl methacrylate	ND		2.0	1.0	ug/L			09/30/17 01:51	1
Methylene Chloride	ND		2.0	0.88	ug/L			09/30/17 01:51	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			09/30/17 01:51	1
Naphthalene	ND		1.0	0.40	ug/L			09/30/17 01:51	1
o-Xylene	ND		0.50	0.25	ug/L			09/30/17 01:51	1
Propionitrile	ND		20	10	ug/L			09/30/17 01:51	1
Styrene	ND		0.50	0.25	ug/L			09/30/17 01:51	1
t-Butanol	ND		10	5.0	ug/L			09/30/17 01:51	1
Tetrachloroethene	ND		0.50	0.25	ug/L			09/30/17 01:51	1
Tetrahydrofuran	ND		10	5.0	ug/L			09/30/17 01:51	1
Toluene	ND		0.50	0.25	ug/L			09/30/17 01:51	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			09/30/17 01:51	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/30/17 01:51	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			09/30/17 01:51	1
Trichloroethene	ND		0.50	0.25	ug/L			09/30/17 01:51	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			09/30/17 01:51	1
Vinyl acetate	ND		4.0	2.0	ug/L			09/30/17 01:51	1
Vinyl chloride	ND		0.50	0.25	ug/L			09/30/17 01:51	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			09/30/17 01:51	1

TestAmerica Irvine



# Client Sample Results

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

TestAmerica Job ID: 440-192655-1

**Client Sample ID: QCTB**  
**Date Collected: 09/21/17 00:01**  
**Date Received: 09/21/17 16:15**

**Lab Sample ID: 440-192655-5**  
**Matrix: Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Butanone (MEK)	ND		5.0	2.5	ug/L			09/30/17 01:51	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			09/30/17 01:51	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	11	TJ	ug/L		5.97			09/30/17 01:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	108		80 - 128		09/27/17 04:21	1
4-Bromofluorobenzene (Surr)	99		80 - 120		09/27/17 04:21	1
Toluene-d8 (Surr)	106		80 - 128		09/30/17 01:51	1
4-Bromofluorobenzene (Surr)	102		80 - 120		09/30/17 01:51	1
Dibromofluoromethane (Surr)	111		76 - 132		09/27/17 04:21	1
Dibromofluoromethane (Surr)	118		76 - 132		09/30/17 01:51	1

# Method Summary

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

TestAmerica Job ID: 440-192655-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL IRV
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL IRV
300.0	Anions, Ion Chromatography	MCAWW	TAL IRV
6010B	Metals (ICP)	SW846	TAL IRV
410.4	COD	MCAWW	TAL IRV
SM 2320B	Alkalinity	SM	TAL IRV
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL IRV
SM 4500 NH3 D	Ammonia	SM	TAL IRV
SM 5310C	TOC	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",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

#### Laboratory References:

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

# Lab Chronicle

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

TestAmerica Job ID: 440-192655-1

**Client Sample ID: MW-1**  
**Date Collected: 09/21/17 09:35**  
**Date Received: 09/21/17 16:15**

**Lab Sample ID: 440-192655-1**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	432206	09/29/17 23:59	JB	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	431484	09/27/17 02:22	K1S	TAL IRV
Total/NA	Prep	3520C			1010 mL	1.0 mL	430867	09/23/17 08:52	JS1	TAL IRV
Total/NA	Analysis	8270C		1			431400	09/27/17 01:49	TL	TAL IRV
Total/NA	Analysis	300.0		200			430368	09/22/17 03:38	NTN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	431787	09/27/17 21:40	JL	TAL IRV
Total Recoverable	Analysis	6010B		1			432109	09/29/17 09:07	EN	TAL IRV
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	432544	10/02/17 15:44	KYP	TAL IRV
Total/NA	Analysis	SM 2320B		1			430645	09/22/17 06:44	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	20 mL	100 mL	431584	09/27/17 08:17	XL	TAL IRV
Total/NA	Prep	SM 4500 NH3 B			50 mL	50 mL	430601	09/22/17 05:30	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			430628	09/22/17 09:00	YZ	TAL IRV
Total/NA	Analysis	SM 5310C		5	100 mL	100 mL	430999	09/24/17 11:54	YZ	TAL IRV

**Client Sample ID: MW-13R**  
**Date Collected: 09/21/17 08:30**  
**Date Received: 09/21/17 16:15**

**Lab Sample ID: 440-192655-2**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	432206	09/30/17 00:27	JB	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	431484	09/27/17 02:52	K1S	TAL IRV
Total/NA	Prep	3520C			1035 mL	1.0 mL	430867	09/23/17 08:52	JS1	TAL IRV
Total/NA	Analysis	8270C		1			431400	09/27/17 02:11	TL	TAL IRV
Total/NA	Analysis	300.0		100			430368	09/22/17 04:02	NTN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	431787	09/27/17 21:40	JL	TAL IRV
Total Recoverable	Analysis	6010B		1			432109	09/29/17 09:09	EN	TAL IRV
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	432544	10/02/17 15:44	KYP	TAL IRV
Total/NA	Analysis	SM 2320B		1			430645	09/22/17 06:56	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	431584	09/27/17 08:17	XL	TAL IRV
Total/NA	Prep	SM 4500 NH3 B			10 mL	50 mL	430601	09/22/17 05:30	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			430628	09/22/17 09:00	YZ	TAL IRV
Total/NA	Analysis	SM 5310C		5	100 mL	100 mL	430999	09/24/17 11:24	YZ	TAL IRV

**Client Sample ID: DW-5**  
**Date Collected: 09/21/17 09:05**  
**Date Received: 09/21/17 16:15**

**Lab Sample ID: 440-192655-3**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	432206	09/30/17 00:55	JB	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	431484	09/27/17 03:22	K1S	TAL IRV
Total/NA	Prep	3520C			1030 mL	1.0 mL	430867	09/23/17 08:52	JS1	TAL IRV

TestAmerica Irvine

# Lab Chronicle

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

TestAmerica Job ID: 440-192655-1

**Client Sample ID: DW-5**

**Date Collected: 09/21/17 09:05**

**Date Received: 09/21/17 16:15**

**Lab Sample ID: 440-192655-3**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8270C		1			431400	09/27/17 02:33	TL	TAL IRV
Total/NA	Analysis	300.0		5			430638	09/22/17 16:04	NTN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	431787	09/27/17 21:40	JL	TAL IRV
Total Recoverable	Analysis	6010B		1			432109	09/29/17 09:12	EN	TAL IRV
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	432544	10/02/17 15:44	KYP	TAL IRV
Total/NA	Analysis	SM 2320B		1			430645	09/22/17 07:08	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	431584	09/27/17 08:17	XL	TAL IRV
Total/NA	Prep	SM 4500 NH3 B			50 mL	50 mL	430601	09/22/17 05:30	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			430628	09/22/17 09:00	YZ	TAL IRV
Total/NA	Analysis	SM 5310C		1	100 mL	100 mL	430999	09/24/17 11:38	YZ	TAL IRV

**Client Sample ID: QCAB**

**Date Collected: 09/21/17 00:01**

**Date Received: 09/21/17 16:15**

**Lab Sample ID: 440-192655-4**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	432206	09/30/17 01:23	JB	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	431484	09/27/17 03:52	K1S	TAL IRV

**Client Sample ID: QCTB**

**Date Collected: 09/21/17 00:01**

**Date Received: 09/21/17 16:15**

**Lab Sample ID: 440-192655-5**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	432206	09/30/17 01:51	JB	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	431484	09/27/17 04:21	K1S	TAL IRV

**Laboratory References:**

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

# QC Sample Results

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

TestAmerica Job ID: 440-192655-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 440-431484/4**

**Matrix: Water**

**Analysis Batch: 431484**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acrolein	ND		50	2.5	ug/L			09/26/17 20:26	1
Acrylonitrile	ND		50	1.0	ug/L			09/26/17 20:26	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	108		80 - 128		09/26/17 20:26	1
4-Bromofluorobenzene (Surr)	100		80 - 120		09/26/17 20:26	1
Dibromofluoromethane (Surr)	110		76 - 132		09/26/17 20:26	1

**Lab Sample ID: LCS 440-431484/5**

**Matrix: Water**

**Analysis Batch: 431484**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acrolein	25.0	25.1	J	ug/L		100	10 - 145
Acrylonitrile	250	208		ug/L		83	48 - 140

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	104		80 - 128
4-Bromofluorobenzene (Surr)	98		80 - 120
Dibromofluoromethane (Surr)	113		76 - 132

**Lab Sample ID: 440-192892-A-2 MS**

**Matrix: Water**

**Analysis Batch: 431484**

**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
Acrolein	ND		25.0	19.4	J	ug/L		78	10 - 147
Acrylonitrile	ND		250	241		ug/L		96	38 - 144

Surrogate	MS %Recovery	MS Qualifier	Limits
Toluene-d8 (Surr)	101		80 - 128
4-Bromofluorobenzene (Surr)	96		80 - 120
Dibromofluoromethane (Surr)	108		76 - 132

**Lab Sample ID: 440-192892-A-2 MSD**

**Matrix: Water**

**Analysis Batch: 431484**

**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
Acrolein	ND		25.0	22.9	J	ug/L		92	10 - 147	17	40
Acrylonitrile	ND		250	260		ug/L		104	38 - 144	7	40

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Toluene-d8 (Surr)	103		80 - 128
4-Bromofluorobenzene (Surr)	95		80 - 120
Dibromofluoromethane (Surr)	112		76 - 132

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-192655-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 440-432206/4**  
**Matrix: Water**  
**Analysis Batch: 432206**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			09/29/17 20:44	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			09/29/17 20:44	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			09/29/17 20:44	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			09/29/17 20:44	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			09/29/17 20:44	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			09/29/17 20:44	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			09/29/17 20:44	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			09/29/17 20:44	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			09/29/17 20:44	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			09/29/17 20:44	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			09/29/17 20:44	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			09/29/17 20:44	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			09/29/17 20:44	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			09/29/17 20:44	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			09/29/17 20:44	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			09/29/17 20:44	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			09/29/17 20:44	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			09/29/17 20:44	1
2-Hexanone	ND		5.0	2.5	ug/L			09/29/17 20:44	1
Acetone	ND		20	10	ug/L			09/29/17 20:44	1
Acetonitrile	ND		20	10	ug/L			09/29/17 20:44	1
Acrolein	ND		5.0	2.5	ug/L			09/29/17 20:44	1
Acrylonitrile	ND		2.0	1.0	ug/L			09/29/17 20:44	1
Benzene	ND		0.50	0.25	ug/L			09/29/17 20:44	1
Allyl chloride	ND		1.0	0.50	ug/L			09/29/17 20:44	1
Bromoform	ND		1.0	0.40	ug/L			09/29/17 20:44	1
Bromomethane	ND		0.50	0.25	ug/L			09/29/17 20:44	1
Carbon disulfide	ND		1.0	0.50	ug/L			09/29/17 20:44	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			09/29/17 20:44	1
Chlorobenzene	ND		0.50	0.25	ug/L			09/29/17 20:44	1
Bromochloromethane	ND		0.50	0.25	ug/L			09/29/17 20:44	1
Chloroethane	ND		1.0	0.40	ug/L			09/29/17 20:44	1
Chloroform	ND		0.50	0.25	ug/L			09/29/17 20:44	1
Chloromethane	ND		0.50	0.25	ug/L			09/29/17 20:44	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			09/29/17 20:44	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/29/17 20:44	1
Dibromochloromethane	ND		0.50	0.25	ug/L			09/29/17 20:44	1
Dibromomethane	ND		0.50	0.25	ug/L			09/29/17 20:44	1
Bromodichloromethane	ND		0.50	0.25	ug/L			09/29/17 20:44	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			09/29/17 20:44	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			09/29/17 20:44	1
Ethylbenzene	ND		0.50	0.25	ug/L			09/29/17 20:44	1
Iodomethane	ND		2.0	1.0	ug/L			09/29/17 20:44	1
Isobutyl alcohol	ND		25	13	ug/L			09/29/17 20:44	1
m,p-Xylene	ND		1.0	0.50	ug/L			09/29/17 20:44	1
Methylacrylonitrile	ND		10	2.5	ug/L			09/29/17 20:44	1
Methyl methacrylate	ND		2.0	1.0	ug/L			09/29/17 20:44	1
Methylene Chloride	ND		2.0	0.88	ug/L			09/29/17 20:44	1

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-192655-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 440-432206/4**  
**Matrix: Water**  
**Analysis Batch: 432206**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			09/29/17 20:44	1
Naphthalene	ND		1.0	0.40	ug/L			09/29/17 20:44	1
o-Xylene	ND		0.50	0.25	ug/L			09/29/17 20:44	1
Propionitrile	ND		20	10	ug/L			09/29/17 20:44	1
Styrene	ND		0.50	0.25	ug/L			09/29/17 20:44	1
t-Butanol	ND		10	5.0	ug/L			09/29/17 20:44	1
Tetrachloroethene	ND		0.50	0.25	ug/L			09/29/17 20:44	1
Tetrahydrofuran	ND		10	5.0	ug/L			09/29/17 20:44	1
Toluene	ND		0.50	0.25	ug/L			09/29/17 20:44	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			09/29/17 20:44	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			09/29/17 20:44	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			09/29/17 20:44	1
Trichloroethene	ND		0.50	0.25	ug/L			09/29/17 20:44	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			09/29/17 20:44	1
Vinyl acetate	ND		4.0	2.0	ug/L			09/29/17 20:44	1
Vinyl chloride	ND		0.50	0.25	ug/L			09/29/17 20:44	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			09/29/17 20:44	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			09/29/17 20:44	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			09/29/17 20:44	1

Tentatively Identified Compound	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L					09/29/17 20:44	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	109		80 - 128		09/29/17 20:44	1
4-Bromofluorobenzene (Surr)	101		80 - 120		09/29/17 20:44	1
Dibromofluoromethane (Surr)	115		76 - 132		09/29/17 20:44	1

**Lab Sample ID: LCS 440-432206/27**  
**Matrix: Water**  
**Analysis Batch: 432206**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,3-Trichloropropane	25.0	25.0		ug/L		100	63 - 130
1,1,1,2-Tetrachloroethane	25.0	28.7		ug/L		115	60 - 141
1,1,1-Trichloroethane	25.0	26.3		ug/L		105	70 - 130
1,1,2,2-Tetrachloroethane	25.0	23.1		ug/L		92	63 - 130
1,1,2-Trichloroethane	25.0	26.5		ug/L		106	70 - 130
1,1-Dichloroethane	25.0	25.3		ug/L		101	64 - 130
1,1-Dichloroethene	25.0	23.4		ug/L		94	70 - 130
1,1-Dichloropropene	25.0	24.6		ug/L		98	70 - 130
1,2,4-Trichlorobenzene	25.0	28.5		ug/L		114	60 - 140
1,2-Dibromo-3-Chloropropane	25.0	24.7		ug/L		99	52 - 140
1,2-Dichlorobenzene	25.0	25.1		ug/L		100	70 - 130
1,2-Dichloroethane	25.0	25.8		ug/L		103	57 - 138
1,2-Dichloropropane	25.0	24.5		ug/L		98	67 - 130
1,3-Dichlorobenzene	25.0	24.7		ug/L		99	70 - 130

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-192655-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 440-432206/27

Matrix: Water

Analysis Batch: 432206

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3-Dichloropropane	25.0	25.1		ug/L		100	70 - 130
1,4-Dichlorobenzene	25.0	25.0		ug/L		100	70 - 130
2,2-Dichloropropane	25.0	29.6		ug/L		119	68 - 141
2-Hexanone	25.0	26.5		ug/L		106	10 - 150
Acetone	25.0	26.0		ug/L		104	10 - 150
Acetonitrile	25.0	25.4		ug/L		102	49 - 142
Acrolein	25.0	26.9		ug/L		108	10 - 145
Benzene	25.0	25.5		ug/L		102	68 - 130
Bromoform	25.0	29.9		ug/L		120	60 - 148
Bromomethane	25.0	25.7		ug/L		103	64 - 139
Carbon disulfide	25.0	24.0		ug/L		96	52 - 136
Carbon tetrachloride	25.0	27.9		ug/L		111	60 - 150
Chlorobenzene	25.0	24.9		ug/L		100	70 - 130
Bromochloromethane	25.0	25.4		ug/L		102	70 - 130
Chloroethane	25.0	22.6		ug/L		90	64 - 135
Chloroform	25.0	25.8		ug/L		103	70 - 130
Chloromethane	25.0	25.5		ug/L		102	47 - 140
cis-1,2-Dichloroethene	25.0	25.8		ug/L		103	70 - 133
cis-1,3-Dichloropropene	25.0	27.2		ug/L		109	70 - 133
Dibromochloromethane	25.0	30.0		ug/L		120	69 - 145
Dibromomethane	25.0	24.5		ug/L		98	70 - 130
Bromodichloromethane	25.0	27.5		ug/L		110	70 - 132
Dichlorodifluoromethane	25.0	26.9		ug/L		108	29 - 150
Ethylbenzene	25.0	24.3		ug/L		97	70 - 130
m,p-Xylene	25.0	24.6		ug/L		98	70 - 130
Methylene Chloride	25.0	22.9		ug/L		92	52 - 130
Methyl tert-butyl ether	25.0	27.0		ug/L		108	63 - 131
Naphthalene	25.0	27.1		ug/L		108	60 - 140
o-Xylene	25.0	24.7		ug/L		99	70 - 130
Styrene	25.0	24.6		ug/L		98	70 - 134
t-Butanol	25.0	26.0		ug/L		104	70 - 130
Tetrachloroethene	25.0	26.5		ug/L		106	70 - 130
Toluene	25.0	25.8		ug/L		103	70 - 130
trans-1,2-Dichloroethene	25.0	24.9		ug/L		100	70 - 130
trans-1,3-Dichloropropene	25.0	27.8		ug/L		111	70 - 132
Trichloroethene	25.0	24.7		ug/L		99	70 - 130
Trichlorofluoromethane	25.0	27.0		ug/L		108	60 - 150
Vinyl acetate	25.0	29.1		ug/L		116	48 - 140
Vinyl chloride	25.0	23.1		ug/L		92	59 - 133
1,2-Dibromoethane (EDB)	25.0	25.5		ug/L		102	70 - 130
2-Butanone (MEK)	25.0	21.4		ug/L		86	44 - 150
4-Methyl-2-pentanone (MIBK)	25.0	26.9		ug/L		107	59 - 149

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Toluene-d8 (Surr)	107		80 - 128
4-Bromofluorobenzene (Surr)	102		80 - 120
Dibromofluoromethane (Surr)	111		76 - 132

TestAmerica Irvine



# QC Sample Results

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

TestAmerica Job ID: 440-192655-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 440-192686-C-1 MS**

**Matrix: Water**

**Analysis Batch: 432206**

**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
1,2,3-Trichloropropane	ND		25.0	24.6		ug/L		98	60 - 130
1,1,1,2-Tetrachloroethane	ND		25.0	29.3		ug/L		117	60 - 149
1,1,1-Trichloroethane	ND		25.0	26.5		ug/L		106	70 - 130
1,1,2,2-Tetrachloroethane	ND		25.0	23.0		ug/L		92	63 - 130
1,1,2-Trichloroethane	ND		25.0	27.4		ug/L		110	70 - 130
1,1-Dichloroethane	ND		25.0	25.7		ug/L		103	65 - 130
1,1-Dichloroethene	ND		25.0	21.4		ug/L		86	70 - 130
1,1-Dichloropropene	ND		25.0	24.1		ug/L		97	64 - 130
1,2,4-Trichlorobenzene	ND		25.0	28.7		ug/L		115	60 - 140
1,2-Dibromo-3-Chloropropane	ND		25.0	23.7		ug/L		95	48 - 140
1,2-Dichlorobenzene	ND		25.0	24.9		ug/L		100	70 - 130
1,2-Dichloroethane	ND		25.0	26.3		ug/L		105	56 - 146
1,2-Dichloropropane	ND		25.0	25.5		ug/L		102	69 - 130
1,3-Dichlorobenzene	ND		25.0	25.0		ug/L		100	70 - 130
1,3-Dichloropropane	ND		25.0	25.3		ug/L		101	70 - 130
1,4-Dichlorobenzene	ND		25.0	25.1		ug/L		100	70 - 130
2,2-Dichloropropane	ND		25.0	29.5		ug/L		118	69 - 138
2-Hexanone	ND		25.0	25.7		ug/L		103	10 - 150
Acetone	ND		25.0	25.3		ug/L		101	10 - 150
Acetonitrile	ND		250	256		ug/L		102	37 - 140
Acrolein	ND		25.0	25.3		ug/L		101	10 - 147
Benzene	ND		25.0	25.6		ug/L		103	66 - 130
Bromoform	ND		25.0	30.1		ug/L		121	59 - 150
Bromomethane	ND		25.0	22.5		ug/L		90	62 - 131
Carbon disulfide	ND		25.0	21.3		ug/L		85	49 - 140
Carbon tetrachloride	ND		25.0	28.1		ug/L		112	60 - 150
Chlorobenzene	ND		25.0	25.3		ug/L		101	70 - 130
Bromochloromethane	ND		25.0	26.1		ug/L		104	70 - 130
Chloroethane	ND		25.0	20.2		ug/L		81	68 - 130
Chloroform	ND		25.0	26.0		ug/L		104	70 - 130
Chloromethane	ND		25.0	18.7		ug/L		75	39 - 144
cis-1,2-Dichloroethene	ND		25.0	25.7		ug/L		103	70 - 130
cis-1,3-Dichloropropene	ND		25.0	27.2		ug/L		109	70 - 133
Dibromochloromethane	ND		25.0	29.9		ug/L		120	70 - 148
Dibromomethane	ND		25.0	24.8		ug/L		99	70 - 130
Bromodichloromethane	ND		25.0	28.1		ug/L		113	70 - 138
Dichlorodifluoromethane	ND		25.0	14.1		ug/L		57	25 - 142
Ethylbenzene	ND		25.0	24.5		ug/L		98	70 - 130
m,p-Xylene	ND		25.0	24.1		ug/L		97	70 - 133
Methylene Chloride	ND		25.0	22.3		ug/L		89	52 - 130
Methyl tert-butyl ether	ND		25.0	25.8		ug/L		103	70 - 130
Naphthalene	ND		25.0	25.4		ug/L		102	60 - 140
o-Xylene	ND		25.0	25.3		ug/L		101	70 - 133
Styrene	ND		25.0	20.8		ug/L		83	29 - 150
t-Butanol	ND		250	261		ug/L		104	70 - 130
Tetrachloroethene	ND		25.0	26.0		ug/L		104	70 - 137
Toluene	ND		25.0	25.8		ug/L		103	70 - 130
trans-1,2-Dichloroethene	ND		25.0	23.8		ug/L		95	70 - 130

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-192655-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 440-192686-C-1 MS**  
**Matrix: Water**  
**Analysis Batch: 432206**

**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
trans-1,3-Dichloropropene	ND		25.0	27.6		ug/L		110	70 - 138
Trichloroethene	2.2		25.0	27.5		ug/L		101	70 - 130
Trichlorofluoromethane	ND		25.0	25.1		ug/L		100	60 - 150
Vinyl acetate	ND		25.0	28.5		ug/L		114	23 - 150
Vinyl chloride	ND		25.0	18.9		ug/L		76	50 - 137
1,2-Dibromoethane (EDB)	ND		25.0	25.5		ug/L		102	70 - 131
2-Butanone (MEK)	ND		25.0	21.5		ug/L		86	48 - 140
4-Methyl-2-pentanone (MIBK)	ND		25.0	26.5		ug/L		106	52 - 150

Surrogate	MS %Recovery	MS Qualifier	MS Limits
Toluene-d8 (Surr)	106		80 - 128
4-Bromofluorobenzene (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	112		76 - 132

**Lab Sample ID: 440-192686-C-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 432206**

**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
1,2,3-Trichloropropane	ND		25.0	25.7		ug/L		103	60 - 130	4	30
1,1,1,2-Tetrachloroethane	ND		25.0	28.5		ug/L		114	60 - 149	3	20
1,1,1-Trichloroethane	ND		25.0	26.1		ug/L		104	70 - 130	2	20
1,1,2,2-Tetrachloroethane	ND		25.0	25.0		ug/L		100	63 - 130	8	30
1,1,2-Trichloroethane	ND		25.0	26.9		ug/L		108	70 - 130	2	25
1,1-Dichloroethane	ND		25.0	25.0		ug/L		100	65 - 130	3	20
1,1-Dichloroethene	ND		25.0	21.6		ug/L		86	70 - 130	1	20
1,1-Dichloropropene	ND		25.0	23.9		ug/L		96	64 - 130	1	20
1,2,4-Trichlorobenzene	ND		25.0	28.4		ug/L		114	60 - 140	1	20
1,2-Dibromo-3-Chloropropane	ND		25.0	27.5		ug/L		110	48 - 140	15	30
1,2-Dichlorobenzene	ND		25.0	25.5		ug/L		102	70 - 130	2	20
1,2-Dichloroethane	ND		25.0	26.1		ug/L		104	56 - 146	1	20
1,2-Dichloropropane	ND		25.0	24.8		ug/L		99	69 - 130	3	20
1,3-Dichlorobenzene	ND		25.0	25.1		ug/L		100	70 - 130	0	20
1,3-Dichloropropane	ND		25.0	25.6		ug/L		103	70 - 130	1	25
1,4-Dichlorobenzene	ND		25.0	25.2		ug/L		101	70 - 130	0	20
2,2-Dichloropropane	ND		25.0	29.5		ug/L		118	69 - 138	0	25
2-Hexanone	ND		25.0	30.1		ug/L		120	10 - 150	16	35
Acetone	ND		25.0	29.1		ug/L		116	10 - 150	14	35
Acetonitrile	ND		25.0	28.5		ug/L		114	37 - 140	11	40
Acrolein	ND		25.0	28.4		ug/L		113	10 - 147	11	40
Benzene	ND		25.0	24.8		ug/L		99	66 - 130	3	20
Bromoform	ND		25.0	31.1		ug/L		125	59 - 150	3	25
Bromomethane	ND		25.0	22.0		ug/L		88	62 - 131	2	25
Carbon disulfide	ND		25.0	21.2		ug/L		85	49 - 140	0	20
Carbon tetrachloride	ND		25.0	28.2		ug/L		113	60 - 150	0	25
Chlorobenzene	ND		25.0	25.0		ug/L		100	70 - 130	1	20
Bromochloromethane	ND		25.0	25.4		ug/L		102	70 - 130	3	25
Chloroethane	ND		25.0	20.3		ug/L		81	68 - 130	0	25

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-192655-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 440-192686-C-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 432206**

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

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier				Limits		
Chloroform	ND		25.0	25.4		ug/L		102	70 - 130	2	20
Chloromethane	ND		25.0	18.6		ug/L		75	39 - 144	0	25
cis-1,2-Dichloroethene	ND		25.0	25.7		ug/L		103	70 - 130	0	20
cis-1,3-Dichloropropene	ND		25.0	27.3		ug/L		109	70 - 133	0	20
Dibromochloromethane	ND		25.0	30.0		ug/L		120	70 - 148	0	25
Dibromomethane	ND		25.0	24.8		ug/L		99	70 - 130	0	25
Bromodichloromethane	ND		25.0	26.3		ug/L		105	70 - 138	7	20
Dichlorodifluoromethane	ND		25.0	14.0		ug/L		56	25 - 142	1	30
Ethylbenzene	ND		25.0	24.0		ug/L		96	70 - 130	2	20
m,p-Xylene	ND		25.0	23.5		ug/L		94	70 - 133	3	25
Methylene Chloride	ND		25.0	22.1		ug/L		88	52 - 130	1	20
Methyl tert-butyl ether	ND		25.0	26.6		ug/L		107	70 - 130	3	25
Naphthalene	ND		25.0	26.8		ug/L		107	60 - 140	5	30
o-Xylene	ND		25.0	24.7		ug/L		99	70 - 133	2	20
Styrene	ND		25.0	18.6		ug/L		75	29 - 150	11	35
t-Butanol	ND		250	261		ug/L		105	70 - 130	0	25
Tetrachloroethene	ND		25.0	25.8		ug/L		103	70 - 137	1	20
Toluene	ND		25.0	25.3		ug/L		101	70 - 130	2	20
trans-1,2-Dichloroethene	ND		25.0	24.0		ug/L		96	70 - 130	1	20
trans-1,3-Dichloropropene	ND		25.0	27.5		ug/L		110	70 - 138	0	25
Trichloroethene	2.2		25.0	26.4		ug/L		97	70 - 130	4	20
Trichlorofluoromethane	ND		25.0	24.5		ug/L		98	60 - 150	2	25
Vinyl acetate	ND		25.0	29.4		ug/L		117	23 - 150	3	30
Vinyl chloride	ND		25.0	18.2		ug/L		73	50 - 137	4	30
1,2-Dibromoethane (EDB)	ND		25.0	26.3		ug/L		105	70 - 131	3	25
2-Butanone (MEK)	ND		25.0	22.9		ug/L		92	48 - 140	7	40
4-Methyl-2-pentanone (MIBK)	ND		25.0	29.9		ug/L		120	52 - 150	12	35
		<b>MSD</b>	<b>MSD</b>								
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>							
<i>Toluene-d8 (Surr)</i>		106		80 - 128							
<i>4-Bromofluorobenzene (Surr)</i>		102		80 - 120							
<i>Dibromofluoromethane (Surr)</i>		110		76 - 132							

## Method: 8270C - Semivolatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 440-430867/1-A**  
**Matrix: Water**  
**Analysis Batch: 431400**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 430867**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,4-Dioxane	ND		0.97	0.24	ug/L		09/23/17 08:52	09/26/17 21:45	1
		<b>MB</b>							
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
<i>1,4-Dioxane-d8 (Surr)</i>		53		30 - 120			09/23/17 08:52	09/26/17 21:45	1

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-192655-1

## Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 440-430867/3-A**  
**Matrix: Water**  
**Analysis Batch: 431400**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 430867**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,4-Dioxane	1.93	0.918	J	ug/L		48	35 - 120
<b>Surrogate</b>		<b>LCS %Recovery</b>	<b>LCS Qualifier</b>				<b>Limits</b>
1,4-Dioxane-d8 (Surr)		49					30 - 120

**Lab Sample ID: 440-192767-F-2-A MS**  
**Matrix: Water**  
**Analysis Batch: 431400**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 430867**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
1,4-Dioxane	ND		1.90	1.15		ug/L		60	35 - 120
<b>Surrogate</b>		<b>MS %Recovery</b>		<b>MS Qualifier</b>					<b>Limits</b>
1,4-Dioxane-d8 (Surr)		55							30 - 120

**Lab Sample ID: 440-192767-F-2-B MSD**  
**Matrix: Water**  
**Analysis Batch: 431400**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 430867**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,4-Dioxane	ND		1.91	1.22		ug/L		64	35 - 120	6	25
<b>Surrogate</b>		<b>MSD %Recovery</b>		<b>MSD Qualifier</b>					<b>Limits</b>		
1,4-Dioxane-d8 (Surr)		60							30 - 120		

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 440-430368/7**  
**Matrix: Water**  
**Analysis Batch: 430368**

**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			09/21/17 15:21	1

**Lab Sample ID: LCS 440-430368/6**  
**Matrix: Water**  
**Analysis Batch: 430368**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Chloride	5.00	4.80		mg/L		96	90 - 110

**Lab Sample ID: 440-192651-A-1 MS**  
**Matrix: Water**  
**Analysis Batch: 430368**

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Chloride	29		10.0	39.9		mg/L		107	80 - 120

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-192655-1

## Method: 300.0 - Anions, Ion Chromatography (Continued)

**Lab Sample ID: 440-192651-A-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 430368**

**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	29		10.0	39.1		mg/L		99	80 - 120	2	20

**Lab Sample ID: MB 440-430638/7**  
**Matrix: Water**  
**Analysis Batch: 430638**

**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			09/22/17 12:47	1

**Lab Sample ID: LCS 440-430638/6**  
**Matrix: Water**  
**Analysis Batch: 430638**

**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	4.56		mg/L		91	90 - 110

**Lab Sample ID: 440-192655-3 MS**  
**Matrix: Water**  
**Analysis Batch: 430638**

**Client Sample ID: DW-5**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	17		25.0	41.1		mg/L		97	80 - 120

**Lab Sample ID: 440-192655-3 MSD**  
**Matrix: Water**  
**Analysis Batch: 430638**

**Client Sample ID: DW-5**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	17		25.0	41.0		mg/L		97	80 - 120	0	20

## Method: 6010B - Metals (ICP)

**Lab Sample ID: MB 440-431787/1-A**  
**Matrix: Water**  
**Analysis Batch: 432109**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 431787**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	ND		0.50	0.25	mg/L		09/27/17 21:40	09/29/17 08:37	1

**Lab Sample ID: LCS 440-431787/2-A**  
**Matrix: Water**  
**Analysis Batch: 432109**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 431787**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Potassium	10.0	10.4		mg/L		104	80 - 120

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-192655-1

## Method: 6010B - Metals (ICP) (Continued)

**Lab Sample ID: 440-192619-P-1-B MS**  
**Matrix: Water**  
**Analysis Batch: 432109**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total Recoverable**  
**Prep Batch: 431787**  
**%Rec.**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Potassium	50		10.0	60.4	4	mg/L		102	75 - 125

**Lab Sample ID: 440-192619-P-1-C MSD**  
**Matrix: Water**  
**Analysis Batch: 432109**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total Recoverable**  
**Prep Batch: 431787**  
**%Rec.**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Potassium	50		10.0	61.6	4	mg/L		113	75 - 125	2	20

## Method: 410.4 - COD

**Lab Sample ID: MB 440-432544/3**  
**Matrix: Water**  
**Analysis Batch: 432544**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		20	10	mg/L			10/02/17 15:43	1

**Lab Sample ID: LCS 440-432544/4**  
**Matrix: Water**  
**Analysis Batch: 432544**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Chemical Oxygen Demand	200	198		mg/L		99	90 - 110

**Lab Sample ID: 440-192992-A-8 MS**  
**Matrix: Water**  
**Analysis Batch: 432544**

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Chemical Oxygen Demand	40		200	215		mg/L		88	70 - 120

**Lab Sample ID: 440-192992-A-8 MSD**  
**Matrix: Water**  
**Analysis Batch: 432544**

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Chemical Oxygen Demand	40		200	226		mg/L		93	70 - 120	5	15

## Method: SM 2320B - Alkalinity

**Lab Sample ID: MB 440-430645/3**  
**Matrix: Water**  
**Analysis Batch: 430645**

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

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	ND		4.0	4.0	mg/L			09/22/17 04:49	1

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-192655-1

## Method: SM 2320B - Alkalinity (Continued)

**Lab Sample ID: LCS 440-430645/2**  
**Matrix: Water**  
**Analysis Batch: 430645**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity as CaCO3	33.8	28.6		mg/L		85	80 - 120

**Lab Sample ID: 440-192669-C-2 DU**  
**Matrix: Water**  
**Analysis Batch: 430645**

**Client Sample ID: Duplicate**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Alkalinity as CaCO3	31		31.2		mg/L		0.5	20

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

**Lab Sample ID: MB 440-431584/1**  
**Matrix: Water**  
**Analysis Batch: 431584**

**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			09/27/17 08:17	1

**Lab Sample ID: LCS 440-431584/2**  
**Matrix: Water**  
**Analysis Batch: 431584**

**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	968		mg/L		97	90 - 110

**Lab Sample ID: 440-192711-Q-1 DU**  
**Matrix: Water**  
**Analysis Batch: 431584**

**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	8000		7980		mg/L		0.4	5

## Method: SM 4500 NH3 D - Ammonia

**Lab Sample ID: MB 440-430601/2-A**  
**Matrix: Water**  
**Analysis Batch: 430628**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 430601**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	ND		0.50	0.10	mg/L		09/22/17 05:30	09/22/17 09:00	1

**Lab Sample ID: LCS 440-430601/1-A**  
**Matrix: Water**  
**Analysis Batch: 430628**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 430601**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	2.50	2.32		mg/L		93	85 - 115

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-192655-1

## Method: SM 4500 NH3 D - Ammonia (Continued)

**Lab Sample ID: 440-192591-I-1-B MS**

**Matrix: Water**  
**Analysis Batch: 430628**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 430601**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	2.0		2.50	4.26		mg/L		91	75 - 125

**Lab Sample ID: 440-192591-I-1-C MSD**

**Matrix: Water**  
**Analysis Batch: 430628**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 430601**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ammonia (as N)	2.0		2.50	4.10		mg/L		84	75 - 125	4	15

## Method: SM 5310C - TOC

**Lab Sample ID: MB 440-430999/6**

**Matrix: Water**  
**Analysis Batch: 430999**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		0.10	0.050	mg/L			09/24/17 08:06	1

**Lab Sample ID: LCS 440-430999/5**

**Matrix: Water**  
**Analysis Batch: 430999**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	10.0	10.1		mg/L		101	90 - 110

**Lab Sample ID: MRL 440-430999/4**

**Matrix: Water**  
**Analysis Batch: 430999**

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	0.100	0.104		mg/L		104	50 - 150

**Lab Sample ID: 550-90079-A-1 MS**

**Matrix: Water**  
**Analysis Batch: 430999**

**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
Total Organic Carbon	3.3		10.0	13.2		mg/L		99	80 - 120

**Lab Sample ID: 550-90079-A-1 MSD**

**Matrix: Water**  
**Analysis Batch: 430999**

**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
Total Organic Carbon	3.3		10.0	13.3		mg/L		100	80 - 120	0	20

TestAmerica Irvine



# QC Association Summary

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

TestAmerica Job ID: 440-192655-1

## GC/MS VOA

### Analysis Batch: 431484

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192655-1	MW-1	Total/NA	Water	8260B	
440-192655-2	MW-13R	Total/NA	Water	8260B	
440-192655-3	DW-5	Total/NA	Water	8260B	
440-192655-4	QCAB	Total/NA	Water	8260B	
440-192655-5	QCTB	Total/NA	Water	8260B	
MB 440-431484/4	Method Blank	Total/NA	Water	8260B	
LCS 440-431484/5	Lab Control Sample	Total/NA	Water	8260B	
440-192892-A-2 MS	Matrix Spike	Total/NA	Water	8260B	
440-192892-A-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

### Analysis Batch: 432206

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192655-1	MW-1	Total/NA	Water	8260B	
440-192655-2	MW-13R	Total/NA	Water	8260B	
440-192655-3	DW-5	Total/NA	Water	8260B	
440-192655-4	QCAB	Total/NA	Water	8260B	
440-192655-5	QCTB	Total/NA	Water	8260B	
MB 440-432206/4	Method Blank	Total/NA	Water	8260B	
LCS 440-432206/27	Lab Control Sample	Total/NA	Water	8260B	
440-192686-C-1 MS	Matrix Spike	Total/NA	Water	8260B	
440-192686-C-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

## GC/MS Semi VOA

### Prep Batch: 430867

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192655-1	MW-1	Total/NA	Water	3520C	
440-192655-2	MW-13R	Total/NA	Water	3520C	
440-192655-3	DW-5	Total/NA	Water	3520C	
MB 440-430867/1-A	Method Blank	Total/NA	Water	3520C	
LCS 440-430867/3-A	Lab Control Sample	Total/NA	Water	3520C	
440-192767-F-2-A MS	Matrix Spike	Total/NA	Water	3520C	
440-192767-F-2-B MSD	Matrix Spike Duplicate	Total/NA	Water	3520C	

### Analysis Batch: 431400

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192655-1	MW-1	Total/NA	Water	8270C	430867
440-192655-2	MW-13R	Total/NA	Water	8270C	430867
440-192655-3	DW-5	Total/NA	Water	8270C	430867
MB 440-430867/1-A	Method Blank	Total/NA	Water	8270C	430867
LCS 440-430867/3-A	Lab Control Sample	Total/NA	Water	8270C	430867
440-192767-F-2-A MS	Matrix Spike	Total/NA	Water	8270C	430867
440-192767-F-2-B MSD	Matrix Spike Duplicate	Total/NA	Water	8270C	430867

## HPLC/IC

### Analysis Batch: 430368

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192655-1	MW-1	Total/NA	Water	300.0	
440-192655-2	MW-13R	Total/NA	Water	300.0	

TestAmerica Irvine

# QC Association Summary

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

TestAmerica Job ID: 440-192655-1

## HPLC/IC (Continued)

### Analysis Batch: 430368 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 440-430368/7	Method Blank	Total/NA	Water	300.0	
LCS 440-430368/6	Lab Control Sample	Total/NA	Water	300.0	
440-192651-A-1 MS	Matrix Spike	Total/NA	Water	300.0	
440-192651-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

### Analysis Batch: 430638

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192655-3	DW-5	Total/NA	Water	300.0	
MB 440-430638/7	Method Blank	Total/NA	Water	300.0	
LCS 440-430638/6	Lab Control Sample	Total/NA	Water	300.0	
440-192655-3 MS	DW-5	Total/NA	Water	300.0	
440-192655-3 MSD	DW-5	Total/NA	Water	300.0	

## Metals

### Prep Batch: 431787

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192655-1	MW-1	Total Recoverable	Water	3005A	
440-192655-2	MW-13R	Total Recoverable	Water	3005A	
440-192655-3	DW-5	Total Recoverable	Water	3005A	
MB 440-431787/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 440-431787/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
440-192619-P-1-B MS	Matrix Spike	Total Recoverable	Water	3005A	
440-192619-P-1-C MSD	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

### Analysis Batch: 432109

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192655-1	MW-1	Total Recoverable	Water	6010B	431787
440-192655-2	MW-13R	Total Recoverable	Water	6010B	431787
440-192655-3	DW-5	Total Recoverable	Water	6010B	431787
MB 440-431787/1-A	Method Blank	Total Recoverable	Water	6010B	431787
LCS 440-431787/2-A	Lab Control Sample	Total Recoverable	Water	6010B	431787
440-192619-P-1-B MS	Matrix Spike	Total Recoverable	Water	6010B	431787
440-192619-P-1-C MSD	Matrix Spike Duplicate	Total Recoverable	Water	6010B	431787

## General Chemistry

### Prep Batch: 430601

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192655-1	MW-1	Total/NA	Water	SM 4500 NH3 B	
440-192655-2	MW-13R	Total/NA	Water	SM 4500 NH3 B	
440-192655-3	DW-5	Total/NA	Water	SM 4500 NH3 B	
MB 440-430601/2-A	Method Blank	Total/NA	Water	SM 4500 NH3 B	
LCS 440-430601/1-A	Lab Control Sample	Total/NA	Water	SM 4500 NH3 B	
440-192591-I-1-B MS	Matrix Spike	Total/NA	Water	SM 4500 NH3 B	
440-192591-I-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 NH3 B	

### Analysis Batch: 430628

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192655-1	MW-1	Total/NA	Water	SM 4500 NH3 D	430601

TestAmerica Irvine

# QC Association Summary

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

TestAmerica Job ID: 440-192655-1

## General Chemistry (Continued)

### Analysis Batch: 430628 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192655-2	MW-13R	Total/NA	Water	SM 4500 NH3 D	430601
440-192655-3	DW-5	Total/NA	Water	SM 4500 NH3 D	430601
MB 440-430601/2-A	Method Blank	Total/NA	Water	SM 4500 NH3 D	430601
LCS 440-430601/1-A	Lab Control Sample	Total/NA	Water	SM 4500 NH3 D	430601
440-192591-I-1-B MS	Matrix Spike	Total/NA	Water	SM 4500 NH3 D	430601
440-192591-I-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 NH3 D	430601

### Analysis Batch: 430645

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192655-1	MW-1	Total/NA	Water	SM 2320B	
440-192655-2	MW-13R	Total/NA	Water	SM 2320B	
440-192655-3	DW-5	Total/NA	Water	SM 2320B	
MB 440-430645/3	Method Blank	Total/NA	Water	SM 2320B	
LCS 440-430645/2	Lab Control Sample	Total/NA	Water	SM 2320B	
440-192669-C-2 DU	Duplicate	Total/NA	Water	SM 2320B	

### Analysis Batch: 430999

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192655-1	MW-1	Total/NA	Water	SM 5310C	
440-192655-2	MW-13R	Total/NA	Water	SM 5310C	
440-192655-3	DW-5	Total/NA	Water	SM 5310C	
MB 440-430999/6	Method Blank	Total/NA	Water	SM 5310C	
LCS 440-430999/5	Lab Control Sample	Total/NA	Water	SM 5310C	
MRL 440-430999/4	Lab Control Sample	Total/NA	Water	SM 5310C	
550-90079-A-1 MS	Matrix Spike	Total/NA	Water	SM 5310C	
550-90079-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 5310C	

### Analysis Batch: 431584

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192655-1	MW-1	Total/NA	Water	SM 2540C	
440-192655-2	MW-13R	Total/NA	Water	SM 2540C	
440-192655-3	DW-5	Total/NA	Water	SM 2540C	
MB 440-431584/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 440-431584/2	Lab Control Sample	Total/NA	Water	SM 2540C	
440-192711-Q-1 DU	Duplicate	Total/NA	Water	SM 2540C	

### Analysis Batch: 432544

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-192655-1	MW-1	Total/NA	Water	410.4	
440-192655-2	MW-13R	Total/NA	Water	410.4	
440-192655-3	DW-5	Total/NA	Water	410.4	
MB 440-432544/3	Method Blank	Total/NA	Water	410.4	
LCS 440-432544/4	Lab Control Sample	Total/NA	Water	410.4	
440-192992-A-8 MS	Matrix Spike	Total/NA	Water	410.4	
440-192992-A-8 MSD	Matrix Spike Duplicate	Total/NA	Water	410.4	

# Definitions/Glossary

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

TestAmerica Job ID: 440-192655-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### GC/MS VOA TICs

Qualifier	Qualifier Description
J	Indicates an Estimated Value for TICs
T	Result is a tentatively identified compound (TIC) and an estimated value.
N	Presumptive evidence of material.

### GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

### General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
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)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
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)

# Accreditation/Certification Summary

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

TestAmerica Job ID: 440-192655-1

## Laboratory: TestAmerica Irvine

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	State Program	10	CA01531	06-30-18
Arizona	State Program	9	AZ0671	10-14-17 *
California	LA Cty Sanitation Districts	9	10256	06-30-18
California	State Program	9	CA ELAP 2706	06-30-18
Guam	State Program	9	Cert. No. 17-003R	01-23-18
Hawaii	State Program	9	N/A	01-29-18
Kansas	NELAP Secondary AB	7	E-10420	07-31-18
Nevada	State Program	9	CA015312018-1	07-31-18
New Mexico	State Program	6	N/A	01-29-18 *
Northern Mariana Islands	State Program	9	MP0002	01-29-17 *
Oregon	NELAP	10	4028	01-29-18
USDA	Federal		P330-15-00184	07-08-18
Washington	State Program	10	C900	09-03-18

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

TestAmerica Irvine

**TestAmerica Irvine**  
 17461 Merian Ave  
 Suite 100  
 Irvine, CA 92614  
 Phone: 949.261.1022 Fax:

**Chain of Custody Record**

144507

**TestAmerica**  
 THE LEADER IN ENVIRONMENTAL TESTING  
 TestAmerica Laboratories, Inc.  
 TAL-8210 (0713)

**Regulatory Program:**  DW  NPDES  RCRA  Other:

**Project Manager:** Kyle Welchowsky **Site Contact:** P. Dickason **Date:** 9/21/17  
**Tel/Fax:** 858-451-1136 **Lab Contact:** R. Tomine **Carrier:** TIA

**Company Name:** GALA Republic  
**Address:** 11415 S.W. Bembridge Ct.  
**City/State/Zip:** S.D. CA 92727  
**Phone:** 858-451-1136  
**Fax:** 858-451-1087  
**Project Name:** Republic Services  
**Site:** Sunshine Spr. Landfill  
**P.O.#:** 44007851

**COC No.:** 1 of 1 COCs  
**Sampler:** P.S. AS  
**For Lab Use Only:**  
**Walk-in Client:**  
**Lab Sampling:**  
**Job / SDG No.:**

**Analysis Turnaround Time**  
 CALENDAR DAYS  WORKING DAYS  
 TAT if different from Below \_\_\_\_\_  
 2 weeks  
 1 week  
 2 days  
 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)	Alkalinity	Ammonia (ppm)	C.D. (ppm)	C.I. (ppm)	T.D.S. (ppm)	EPA 8270 14	Dioxane	Sample Specific Notes
MW-1	9/21/17	0835	G	GW	12	X	X	X	X	X	X	X	X	X	
MW-13R		0830			12	X	X	X	X	X	X	X	X	X	
DW-5		0905		LAB DIS.	12	X	X	X	X	X	X	X	X	X	
QC A/B				"	4	X	X	X	X	X	X	X	X	X	
QC T/B				"	1	X	X	X	X	X	X	X	X	X	

440-192655 Chain of Custody

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

**Special Instructions/QC Requirements & Comments:**

**Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)**  
 Return to Client  Disposal by Lab  Archive for \_\_\_\_\_ Months

**Custody Seals Intact:**  Yes  No

**Relinquished by:** [Signature]  
**Relinquished by:** Neo-logic  
**Relinquished by:** [Signature]  
**Relinquished by:** [Signature]

**Company:** Neo-logic  
**Company:** Neo-logic  
**Company:** Neo-logic

**Date/Time:** 9/21/17 11:10  
**Date/Time:** 9/21/17 16:15  
**Date/Time:** 9/21/17 16:15

**Therm ID No.:** \_\_\_\_\_  
**Cooler Temp (°C):** Obs'd: \_\_\_\_\_ Corrd: \_\_\_\_\_  
**Received by:** [Signature]  
**Received by:** [Signature]  
**Received in Laboratory by:** [Signature]

**Company:** \_\_\_\_\_  
**Company:** \_\_\_\_\_  
**Company:** \_\_\_\_\_

Tap 1.3/1.1c 12566



## Login Sample Receipt Checklist

Client: Geo-Logic Associates

Job Number: 440-192655-1

**Login Number: 192655**

**List Number: 1**

**Creator: Soderblom, Tim**

**List Source: TestAmerica Irvine**

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	

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Irvine

17461 Derian Ave

Suite 100

Irvine, CA 92614-5817

Tel: (949)261-1022

TestAmerica Job ID: 440-194457-1

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:

10/27/2017 2:37:47 PM

Rossina Tomova, Project Manager I

(949)261-1022

[rossina.tomova@testamericainc.com](mailto:rossina.tomova@testamericainc.com)

### LINKS

Review your project  
results through

**TotalAccess**

Have a Question?



Visit us at:

[www.testamericainc.com](http://www.testamericainc.com)

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

1

2

3

4

5

6

7

8

9

10

11

12

13





# 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 . . . . .	10
Definitions/Glossary . . . . .	11
Certification Summary . . . . .	12
Chain of Custody . . . . .	13
Receipt Checklists . . . . .	14

# Sample Summary

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

TestAmerica Job ID: 440-194457-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-194457-1	MW-13R-A	Water	10/17/17 10:05	10/17/17 18:20
440-194457-2	MW-13R-B	Water	10/17/17 10:05	10/17/17 18:20
440-194457-3	MW-14-A	Water	10/17/17 10:00	10/17/17 18:20
440-194457-4	MW-14-B	Water	10/17/17 10:00	10/17/17 18:20

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

# Case Narrative

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

TestAmerica Job ID: 440-194457-1

---

**Job ID: 440-194457-1**

---

**Laboratory: TestAmerica Irvine**

---

## Narrative

**Job Narrative**  
**440-194457-1**

### Comments

No additional comments.

### Receipt

The samples were received on 10/17/2017 6:20 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.6° C.

### Metals

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

### General Chemistry

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

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

# Client Sample Results

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

TestAmerica Job ID: 440-194457-1

**Client Sample ID: MW-13R-A**

**Lab Sample ID: 440-194457-1**

Date Collected: 10/17/17 10:05

Matrix: Water

Date Received: 10/17/17 18:20

**Method: 6010B - Metals (ICP) - Total Recoverable**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	29		0.50	0.25	mg/L		10/18/17 15:52	10/19/17 13:29	1

**Client Sample ID: MW-13R-B**

**Lab Sample ID: 440-194457-2**

Date Collected: 10/17/17 10:05

Matrix: Water

Date Received: 10/17/17 18:20

**Method: 6010B - Metals (ICP) - Total Recoverable**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	30		0.50	0.25	mg/L		10/18/17 15:52	10/19/17 13:31	1

**Client Sample ID: MW-14-A**

**Lab Sample ID: 440-194457-3**

Date Collected: 10/17/17 10:00

Matrix: Water

Date Received: 10/17/17 18:20

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	0.29		0.20	0.10	mg/L			10/18/17 14:21	1

**Client Sample ID: MW-14-B**

**Lab Sample ID: 440-194457-4**

Date Collected: 10/17/17 10:00

Matrix: Water

Date Received: 10/17/17 18:20

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	0.29		0.20	0.10	mg/L			10/18/17 14:37	1

# Method Summary

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

TestAmerica Job ID: 440-194457-1

Method	Method Description	Protocol	Laboratory
6010B	Metals (ICP)	SW846	TAL IRV
350.1	Nitrogen, Ammonia	MCAWW	TAL IRV

**Protocol References:**

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

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

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



# Lab Chronicle

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

TestAmerica Job ID: 440-194457-1

## Client Sample ID: MW-13R-A

Date Collected: 10/17/17 10:05

Date Received: 10/17/17 18:20

## Lab Sample ID: 440-194457-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			25 mL	25 mL	436027	10/18/17 15:52	JL	TAL IRV
Total Recoverable	Analysis	6010B		1			436259	10/19/17 13:29	K1E	TAL IRV

## Client Sample ID: MW-13R-B

Date Collected: 10/17/17 10:05

Date Received: 10/17/17 18:20

## Lab Sample ID: 440-194457-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			25 mL	25 mL	436027	10/18/17 15:52	JL	TAL IRV
Total Recoverable	Analysis	6010B		1			436259	10/19/17 13:31	K1E	TAL IRV

## Client Sample ID: MW-14-A

Date Collected: 10/17/17 10:00

Date Received: 10/17/17 18:20

## Lab Sample ID: 440-194457-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	350.1		1	0.8 mL	8.0 mL	436029	10/18/17 14:21	AN	TAL IRV

## Client Sample ID: MW-14-B

Date Collected: 10/17/17 10:00

Date Received: 10/17/17 18:20

## Lab Sample ID: 440-194457-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	350.1		1	0.8 mL	8.0 mL	436029	10/18/17 14:37	AN	TAL IRV

**Laboratory References:**

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

# QC Sample Results

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

TestAmerica Job ID: 440-194457-1

## Method: 6010B - Metals (ICP)

Lab Sample ID: MB 440-436027/1-A  
 Matrix: Water  
 Analysis Batch: 436259

Client Sample ID: Method Blank  
 Prep Type: Total Recoverable  
 Prep Batch: 436027

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	ND		0.50	0.25	mg/L		10/18/17 15:52	10/19/17 13:01	1

Lab Sample ID: LCS 440-436027/2-A  
 Matrix: Water  
 Analysis Batch: 436259

Client Sample ID: Lab Control Sample  
 Prep Type: Total Recoverable  
 Prep Batch: 436027

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Potassium	10.0	10.2		mg/L		102	80 - 120

Lab Sample ID: 440-194399-H-1-B MS  
 Matrix: Water  
 Analysis Batch: 436259

Client Sample ID: Matrix Spike  
 Prep Type: Total Recoverable  
 Prep Batch: 436027

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Potassium	25		10.0	36.9		mg/L		121	75 - 125

Lab Sample ID: 440-194399-H-1-C MSD  
 Matrix: Water  
 Analysis Batch: 436259

Client Sample ID: Matrix Spike Duplicate  
 Prep Type: Total Recoverable  
 Prep Batch: 436027

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Potassium	25		10.0	36.9		mg/L		122	75 - 125	0	20

## Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 440-436029/10  
 Matrix: Water  
 Analysis Batch: 436029

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	ND		0.20	0.10	mg/L			10/18/17 13:50	1

Lab Sample ID: LCS 440-436029/11  
 Matrix: Water  
 Analysis Batch: 436029

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	5.00	5.10		mg/L		102	90 - 110

Lab Sample ID: MRL 440-436029/9  
 Matrix: Water  
 Analysis Batch: 436029

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	0.200	0.196	J	mg/L		98	10 - 200

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-194457-1

## Method: 350.1 - Nitrogen, Ammonia (Continued)

**Lab Sample ID: 440-194457-3 MS**  
**Matrix: Water**  
**Analysis Batch: 436029**

**Client Sample ID: MW-14-A**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	0.29		5.00	5.56		mg/L		106	90 - 110

**Lab Sample ID: 440-194457-3 MSD**  
**Matrix: Water**  
**Analysis Batch: 436029**

**Client Sample ID: MW-14-A**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ammonia (as N)	0.29		5.00	5.38		mg/L		102	90 - 110	3	15





# QC Association Summary

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

TestAmerica Job ID: 440-194457-1

## Metals

### Prep Batch: 436027

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-194457-1	MW-13R-A	Total Recoverable	Water	3005A	
440-194457-2	MW-13R-B	Total Recoverable	Water	3005A	
MB 440-436027/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 440-436027/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
440-194399-H-1-B MS	Matrix Spike	Total Recoverable	Water	3005A	
440-194399-H-1-C MSD	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

### Analysis Batch: 436259

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-194457-1	MW-13R-A	Total Recoverable	Water	6010B	436027
440-194457-2	MW-13R-B	Total Recoverable	Water	6010B	436027
MB 440-436027/1-A	Method Blank	Total Recoverable	Water	6010B	436027
LCS 440-436027/2-A	Lab Control Sample	Total Recoverable	Water	6010B	436027
440-194399-H-1-B MS	Matrix Spike	Total Recoverable	Water	6010B	436027
440-194399-H-1-C MSD	Matrix Spike Duplicate	Total Recoverable	Water	6010B	436027

## General Chemistry

### Analysis Batch: 436029

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-194457-3	MW-14-A	Total/NA	Water	350.1	
440-194457-4	MW-14-B	Total/NA	Water	350.1	
MB 440-436029/10	Method Blank	Total/NA	Water	350.1	
LCS 440-436029/11	Lab Control Sample	Total/NA	Water	350.1	
MRL 440-436029/9	Lab Control Sample	Total/NA	Water	350.1	
440-194457-3 MS	MW-14-A	Total/NA	Water	350.1	
440-194457-3 MSD	MW-14-A	Total/NA	Water	350.1	

# Definitions/Glossary

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

TestAmerica Job ID: 440-194457-1

## Qualifiers

### General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

## 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
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)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
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)

# Accreditation/Certification Summary

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

TestAmerica Job ID: 440-194457-1

## Laboratory: TestAmerica Irvine

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	State Program	10	CA01531	06-30-18
Arizona	State Program	9	AZ0671	10-14-18
California	LA Cty Sanitation Districts	9	10256	06-30-18
California	State Program	9	CA ELAP 2706	06-30-18
Guam	State Program	9	Cert. No. 17-003R	01-23-18
Hawaii	State Program	9	N/A	01-29-18
Kansas	NELAP Secondary AB	7	E-10420	07-31-18
Nevada	State Program	9	CA015312018-1	07-31-18
New Mexico	State Program	6	N/A	01-29-18 *
Northern Mariana Islands	State Program	9	MP0002	01-29-17 *
Oregon	NELAP	10	4028	01-29-18
USDA	Federal		P330-15-00184	07-08-18
Washington	State Program	10	C900	09-03-18

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

TestAmerica Irvine

**TestAmerica Irvine**  
 17461 Merian Ave  
 Suite 100

Irvine, CA 92614  
 Phone: 949.261.1072 Fax:

**Chain of Custody Record 212102**

**TestAmerica**

THE LEADER IN ENVIRONMENTAL TESTING  
 TestAmerica Laboratories, Inc.  
 TAL-8210 (0719)

Regulatory Program:  DW  NPDES  RCRA  Other:

Client Contact: **Geologic Associates**  
 Company Name: **Geologic Associates**  
 Address: **1145 W. Bernardo Ct.**  
 City/State/Zip: **San Diego CA 92127**  
 Phone: **358-451-1136**  
 Fax: **358-451-1087**  
 Project Name: **Republic Services**  
 Site: **Sunshine Cyn**  
 P O #

Project Manager: **Mike Glehan**  
 Site Contact: **Costa**  
 Date: **10/17/17**  
 Lab Contact: **Rossina**  
 Carrier: **TestAmerica**  
 CQC No. **1** of **1** CQCs  
 Sampler: **AS, MC**

Analysis Turnaround Time  
 CALENDAR DAYS  WORKING DAYS  
 TAT if different from Below  
 2 weeks  
 1 week  
 2 days  
 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)	Walk-in Client Lab Sampling	Job / SDG No.:	Sample Specific Notes:
MW-13R-A	10/17/17	1205	G	GLW	1	X	X	EPA 6010B -		Restest
MW-13R-B	10/17/17	1205	G	GLW	1	X	X	EPA 350.2 -		
MW-14-A	10/17/17	1000	G	GLW	1	X	X	EPA 350.2 -		
MW-14-B	10/17/17	1000	G	GLW	1	X	X	EPA 350.2 -		



Preservation Used: 1= Ice, 2= HCI; 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

Special Instructions/QC Requirements & Comments:

Cooler Temp. (°C): Obs'd: \_\_\_\_\_ Corrd: \_\_\_\_\_ Therm ID No.: \_\_\_\_\_  
 Custody Seal No.: \_\_\_\_\_  
 Relinquished by: **AS, MC** Company: **Geologic Assoc.** Date/Time: **10/17/17 1535**  
 Relinquished by: **AS** Company: **IA** Date/Time: **10/17/17**  
 Relinquished by: **AS** Company: **IA** Date/Time: **10/17/17 1820**

3.0/3.6 12-64



## Login Sample Receipt Checklist

Client: Geo-Logic Associates

Job Number: 440-194457-1

**Login Number: 194457**

**List Number: 1**

**Creator: Avila, Stephanie 1**

**List Source: TestAmerica Irvine**

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	



# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Irvine

17461 Derian Ave

Suite 100

Irvine, CA 92614-5817

Tel: (949)261-1022

TestAmerica Job ID: 440-194479-1

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:

10/31/2017 5:19:11 PM

Rossina Tomova, Project Manager I

(949)261-1022

[rossina.tomova@testamericainc.com](mailto:rossina.tomova@testamericainc.com)

### LINKS

Review your project  
results through

**TotalAccess**

Have a Question?



Visit us at:

[www.testamericainc.com](http://www.testamericainc.com)

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

1

2

3

4

5

6

7

8

9

10

11

12

13



# Table of Contents

Cover Page . . . . .	1
Table of Contents . . . . .	2
Sample Summary . . . . .	3
Case Narrative . . . . .	4
Client Sample Results . . . . .	7
Method Summary . . . . .	24
Lab Chronicle . . . . .	25
QC Sample Results . . . . .	27
QC Association Summary . . . . .	49
Definitions/Glossary . . . . .	53
Certification Summary . . . . .	54
Chain of Custody . . . . .	56
Receipt Checklists . . . . .	57

# Sample Summary

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

TestAmerica Job ID: 440-194479-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-194479-1	CA-L	Water	10/17/17 10:30	10/17/17 18:20
440-194479-2	LR-2R	Water	10/17/17 11:30	10/17/17 18:20
440-194479-3	QCAB	Water	10/17/17 00:01	10/17/17 18:20
440-194479-4	QCTB	Water	10/17/17 00:01	10/17/17 18:20

1

2

3

4

5

6

7

8

9

10

11

12

13



# Case Narrative

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

TestAmerica Job ID: 440-194479-1

**Job ID: 440-194479-1**

**Laboratory: TestAmerica Irvine**

## Narrative

### Job Narrative 440-194479-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 10/17/2017 6:20 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 3.7° C and 3.8° C.

#### GC/MS VOA

Method(s) 8260B: The laboratory control sample (LCS) for analytical batch 440-438220 recovered outside control limits for the following analytes: Vinyl acetate. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

Method(s) 8260B: The continuing calibration verification (CCV) associated with batch 440-438220 recovered above the upper control limit for Acetone and Vinyl acetate. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method(s) 8260B: The sample was collected in properly preserved vials for analysis of volatile organic compounds (VOCs). However, when verified by the laboratory, the pH was greater than 2 and the following samples was analyzed after 7 days from sampling: CA-L (440-194479-1) and LR-2R (440-194479-2).

Method(s) 8260B: The sample was collected in properly preserved vials for analysis of volatile organic compounds (VOCs). However, when verified by the laboratory, the pH was 7 and the following samples was analyzed after 7 days from sampling: CA-L (440-194479-1) and LR-2R (440-194479-2) - retest for 2-Chloro-1,3-butadiene Methylacrylonitrile Methyl methacrylate only.

Method(s) 8260B: The sample was collected in properly preserved vials for analysis of volatile organic compounds (VOCs). However, when verified by the laboratory, the pH was 7 and the following sample was analyzed after 7 days from sampling: CA-L (440-194479-1).

Method(s) 8260B: The following volatile sample was received and analyzed with significant headspace in the sample vial: CA-L (440-194479-1). Significant headspace is defined as a bubble greater than 6 mm in diameter.

Method(s) 8260B: The following volatile sample was received and analyzed with significant headspace in the sample Container: LR-2R (440-194479-2). Significant headspace is defined as a bubble greater than 6 mm in diameter.

Method(s) 8260B: The following sample was collected in properly preserved vials for analysis of volatile organic compounds (VOCs). However, the pH of 7 was outside the required criteria when verified by the laboratory, and corrective action was not possible: LR-2R (440-194479-2).

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

#### GC/MS Semi VOA

Method(s) 8270C: Surrogate recovery for the following samples was outside control limits: CA-L (440-194479-1) and LR-2R (440-194479-2). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method(s) 8270C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 440-436207 and analytical batch 440-436545. The laboratory control sample (LCS) was performed in duplicate to provide precision data for this batch.

Method(s) 8270C: The following samples required a dilution due to the nature of the sample matrix: CA-L (440-194479-1) and LR-2R (440-194479-2). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

Method(s) 8270C LL: The source sample for the matrix spike (MS) and matrix spike duplicate (MSD) for preparation batch 440-436439

# Case Narrative

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

TestAmerica Job ID: 440-194479-1

## Job ID: 440-194479-1 (Continued)

### Laboratory: TestAmerica Irvine (Continued)

was diluted due to an abundance of non-target analytes. Because of this dilution, the surrogate spike and matrix spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information; therefore, the MS/MSD was not reported.

Method(s) 8270C LL: The percent recoveries in the laboratory control sample (LCS) of preparation batch 440-436439 and analytical batch 440-437510 failed below lower acceptance limits for the following analytes: 2,4-dinitrophenol; 4,6-dinitro-2-methylphenol; and benzidine. Per method 8270C, these analytes are classified as poor performers and exhibit erratic recoveries under routine conditions of the preparation and analytical procedures. The following affected samples could not be reextracted within hold times and are reported with possible low bias for these analytes: 440-194396-1, 440-194479-1, and 440-194479-2.

Method(s) 8270C LL: The following samples was diluted due to the abundance of non-target analytes: CA-L (440-194479-1) and LR-2R (440-194479-2). Elevated reporting limits (RLs) are provided.

Method(s) 8270C LL: The following sample required a dilution due to the nature of the sample matrix: CA-L (440-194479-1). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

Method(s) 8270C LL: Surrogate recovery for the following sample was outside control limits: LR-2R (440-194479-2). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

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

### GC Semi VOA

Method(s) 8141A: Triphenylphosphate surrogate recovery for the following samples was outside control limits: CA-L (440-194479-1) and LR-2R (440-194479-2). Evidence of matrix interferences is not obvious. Other surrogate passed.

Method(s) 8141A: The continuing calibration verification (CCV) associated with batch 226568 recovered above the upper control limit for EPN and Stirophos. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method(s) 8151A: The surrogate recovery for the blank associated with batch 226585 was outside the upper control limits.

Method(s) 8082: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 440-435880 and analytical batch 440-435624. The laboratory control sample (LCS) was performed in duplicate to provide precision data for this batch.(LCS 440-435880/4-A)

Method(s) 8082: The following sample required a copper clean-up to reduce matrix interferences caused by sulfur: CA-L (440-194479-1).

Method(s) 8081A: Surrogate recovery for the following sample was outside control limits: LR-2R (440-194479-2). Evidence of matrix interference is present; therefore, re-extraction and re-analysis was not performed.

Method(s) 8081A: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with preparation batch 440-435880 and analytical batch 440-436196. The laboratory control sample (LCS) was performed in duplicate to provide precision data for this batch.

Method(s) 8081A: The continuing calibration verification (CCV) associated with batch 440-436436 recovered above the upper control limit for beta-BHC. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: CA-L (440-194479-1) and (CCVIS 440-436436/14).

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

### General Chemistry

Method(s) SM 4500 CN E: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 680-499799 and analytical batch 680-499898 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

# Case Narrative

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

TestAmerica Job ID: 440-194479-1

---

## Job ID: 440-194479-1 (Continued)

---

### Laboratory: TestAmerica Irvine (Continued)

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

#### Organic Prep

Method(s) 3510C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 180-226538.

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

#### VOA Prep

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

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

# Client Sample Results

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

TestAmerica Job ID: 440-194479-1

**Client Sample ID: CA-L**  
**Date Collected: 10/17/17 10:30**  
**Date Received: 10/17/17 18:20**

**Lab Sample ID: 440-194479-1**  
**Matrix: Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			10/30/17 12:12	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			10/30/17 12:12	1
Acrolein	ND		50	2.5	ug/L			10/19/17 10:15	1
Acrylonitrile	ND		50	1.0	ug/L			10/19/17 10:15	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			10/30/17 12:12	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			10/30/17 12:12	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			10/30/17 12:12	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			10/30/17 12:12	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			10/30/17 12:12	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			10/30/17 12:12	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			10/30/17 12:12	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			10/30/17 12:12	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			10/30/17 12:12	1
<b>1,2-Dichloroethane</b>	<b>0.65</b>		0.50	0.25	ug/L			10/30/17 12:12	1
<b>1,2-Dichloropropane</b>	<b>0.32</b>	<b>J</b>	0.50	0.25	ug/L			10/30/17 12:12	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			10/30/17 12:12	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			10/30/17 12:12	1
<b>1,4-Dichlorobenzene</b>	<b>8.2</b>		0.50	0.25	ug/L			10/30/17 12:12	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			10/30/17 12:12	1
2-Hexanone	ND		5.0	2.5	ug/L			10/30/17 12:12	1
<b>Acetone</b>	<b>24</b>		20	10	ug/L			10/31/17 05:58	1
Acetonitrile	ND		20	10	ug/L			10/30/17 12:12	1
Acrolein	ND		5.0	2.5	ug/L			10/30/17 12:12	1
<b>Acrylonitrile</b>	<b>5.6</b>		2.0	1.0	ug/L			10/30/17 12:12	1
<b>Benzene</b>	<b>4.8</b>		0.50	0.25	ug/L			10/30/17 12:12	1
Allyl chloride	ND		1.0	0.50	ug/L			10/30/17 12:12	1
Bromoform	ND		1.0	0.40	ug/L			10/30/17 12:12	1
Bromomethane	ND		0.50	0.25	ug/L			10/30/17 12:12	1
<b>Carbon disulfide</b>	<b>1.6</b>		1.0	0.50	ug/L			10/30/17 12:12	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			10/30/17 12:12	1
<b>Chlorobenzene</b>	<b>0.43</b>	<b>J</b>	0.50	0.25	ug/L			10/30/17 12:12	1
Bromochloromethane	ND		0.50	0.25	ug/L			10/30/17 12:12	1
Chloroethane	ND		1.0	0.40	ug/L			10/30/17 12:12	1
Chloroform	ND		0.50	0.25	ug/L			10/30/17 12:12	1
Chloromethane	ND		0.50	0.25	ug/L			10/30/17 12:12	1
<b>cis-1,2-Dichloroethene</b>	<b>2.0</b>		0.50	0.25	ug/L			10/30/17 12:12	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			10/30/17 12:12	1
Dibromochloromethane	ND		0.50	0.25	ug/L			10/30/17 12:12	1
Dibromomethane	ND		0.50	0.25	ug/L			10/30/17 12:12	1
Bromodichloromethane	ND		0.50	0.25	ug/L			10/30/17 12:12	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			10/30/17 12:12	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			10/30/17 12:12	1
Ethylbenzene	ND		0.50	0.25	ug/L			10/30/17 12:12	1
Iodomethane	ND		2.0	1.0	ug/L			10/30/17 12:12	1
Isobutyl alcohol	ND		25	13	ug/L			10/30/17 12:12	1
m,p-Xylene	ND		1.0	0.50	ug/L			10/30/17 12:12	1
Methylene Chloride	ND		2.0	0.88	ug/L			10/30/17 12:12	1
<b>Methyl tert-butyl ether</b>	<b>0.81</b>		0.50	0.25	ug/L			10/30/17 12:12	1
Naphthalene	ND		1.0	0.40	ug/L			10/30/17 12:12	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-194479-1

**Client Sample ID: CA-L**  
**Date Collected: 10/17/17 10:30**  
**Date Received: 10/17/17 18:20**

**Lab Sample ID: 440-194479-1**  
**Matrix: Water**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.50	0.25	ug/L			10/30/17 12:12	1
Propionitrile	ND		20	10	ug/L			10/30/17 12:12	1
Styrene	ND		0.50	0.25	ug/L			10/30/17 12:12	1
<b>t-Butanol</b>	<b>1400</b>		10	5.0	ug/L			10/30/17 12:12	1
Tetrachloroethene	ND		0.50	0.25	ug/L			10/30/17 12:12	1
<b>Tetrahydrofuran</b>	<b>13</b>		10	5.0	ug/L			10/30/17 12:12	1
<b>Toluene</b>	<b>0.44 J</b>		0.50	0.25	ug/L			10/30/17 12:12	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			10/30/17 12:12	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			10/30/17 12:12	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			10/30/17 12:12	1
<b>Trichloroethene</b>	<b>0.37 J</b>		0.50	0.25	ug/L			10/30/17 12:12	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			10/30/17 12:12	1
Vinyl acetate	ND *		4.0	2.0	ug/L			10/30/17 12:12	1
Vinyl chloride	ND		0.50	0.25	ug/L			10/30/17 12:12	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			10/30/17 12:12	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			10/30/17 12:12	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			10/30/17 12:12	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Silanol, trimethyl-	240	T J N	ug/L		4.34	1066-40-6		10/30/17 12:12	1
Unknown	5.1	T J	ug/L		6.05			10/30/17 12:12	1
Unknown	12	T J	ug/L		15.74			10/30/17 12:12	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	110		80 - 128		10/19/17 10:15	1
4-Bromofluorobenzene (Surr)	106		80 - 120		10/19/17 10:15	1
Toluene-d8 (Surr)	106		80 - 128		10/30/17 12:12	1
Toluene-d8 (Surr)	107		80 - 128		10/31/17 05:58	1
4-Bromofluorobenzene (Surr)	98		80 - 120		10/30/17 12:12	1
4-Bromofluorobenzene (Surr)	95		80 - 120		10/31/17 05:58	1
Dibromofluoromethane (Surr)	88		76 - 132		10/19/17 10:15	1
Dibromofluoromethane (Surr)	96		76 - 132		10/30/17 12:12	1
Dibromofluoromethane (Surr)	105		76 - 132		10/31/17 05:58	1

## Method: 8260B - Volatile Organic Compounds (GC/MS) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			10/30/17 12:24	1
Methylacrylonitrile	ND		10	2.5	ug/L			10/30/17 12:24	1
Methyl methacrylate	ND		2.0	1.0	ug/L			10/30/17 12:24	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	101		80 - 128		10/30/17 12:24	1
4-Bromofluorobenzene (Surr)	99		80 - 120		10/30/17 12:24	1
Dibromofluoromethane (Surr)	106		76 - 132		10/30/17 12:24	1

## Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		10	5.1	ug/L		10/20/17 10:20	10/27/17 16:03	10
1,2-Dichlorobenzene	ND		5.1	2.0	ug/L		10/20/17 10:20	10/27/17 16:03	10
1,2-Diphenylhydrazine(as Azobenzene)	ND		10	5.1	ug/L		10/20/17 10:20	10/27/17 16:03	10

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-194479-1

**Client Sample ID: CA-L**  
**Date Collected: 10/17/17 10:30**  
**Date Received: 10/17/17 18:20**

**Lab Sample ID: 440-194479-1**  
**Matrix: Water**

**Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichlorobenzene	ND		5.1	2.0	ug/L		10/20/17 10:20	10/27/17 16:03	10
<b>1,4-Dichlorobenzene</b>	<b>5.1</b>		5.1	2.0	ug/L		10/20/17 10:20	10/27/17 16:03	10
2,4,5-Trichlorophenol	ND		20	10	ug/L		10/20/17 10:20	10/27/17 16:03	10
2,4,6-Trichlorophenol	ND		10	5.1	ug/L		10/20/17 10:20	10/27/17 16:03	10
2,4-Dichlorophenol	ND		20	10	ug/L		10/20/17 10:20	10/27/17 16:03	10
2,4-Dimethylphenol	ND		20	10	ug/L		10/20/17 10:20	10/27/17 16:03	10
2,4-Dinitrophenol	ND	*	51	20	ug/L		10/20/17 10:20	10/27/17 16:03	10
2,4-Dinitrotoluene	ND		51	20	ug/L		10/20/17 10:20	10/27/17 16:03	10
2,6-Dinitrotoluene	ND		51	20	ug/L		10/20/17 10:20	10/27/17 16:03	10
2-Chloronaphthalene	ND		5.1	2.0	ug/L		10/20/17 10:20	10/27/17 16:03	10
2-Chlorophenol	ND		10	5.1	ug/L		10/20/17 10:20	10/27/17 16:03	10
2-Methylnaphthalene	ND		10	5.1	ug/L		10/20/17 10:20	10/27/17 16:03	10
2-Methylphenol	ND		20	10	ug/L		10/20/17 10:20	10/27/17 16:03	10
2-Nitroaniline	ND		51	20	ug/L		10/20/17 10:20	10/27/17 16:03	10
2-Nitrophenol	ND		20	10	ug/L		10/20/17 10:20	10/27/17 16:03	10
3,3'-Dichlorobenzidine	ND		51	20	ug/L		10/20/17 10:20	10/27/17 16:03	10
3-Methylphenol + 4-Methylphenol	ND		51	20	ug/L		10/20/17 10:20	10/27/17 16:03	10
3-Nitroaniline	ND		51	20	ug/L		10/20/17 10:20	10/27/17 16:03	10
4,6-Dinitro-2-methylphenol	ND	*	51	20	ug/L		10/20/17 10:20	10/27/17 16:03	10
4-Bromophenyl phenyl ether	ND		10	5.1	ug/L		10/20/17 10:20	10/27/17 16:03	10
4-Chloro-3-methylphenol	ND		20	2.0	ug/L		10/20/17 10:20	10/27/17 16:03	10
4-Chloroaniline	ND		20	10	ug/L		10/20/17 10:20	10/27/17 16:03	10
4-Chlorophenyl phenyl ether	ND		5.1	2.0	ug/L		10/20/17 10:20	10/27/17 16:03	10
4-Nitroaniline	ND		51	20	ug/L		10/20/17 10:20	10/27/17 16:03	10
4-Nitrophenol	ND		51	20	ug/L		10/20/17 10:20	10/27/17 16:03	10
Acenaphthene	ND		5.1	2.0	ug/L		10/20/17 10:20	10/27/17 16:03	10
Acenaphthylene	ND		5.1	2.0	ug/L		10/20/17 10:20	10/27/17 16:03	10
Aniline	ND		100	20	ug/L		10/20/17 10:20	10/27/17 16:03	10
Anthracene	ND		5.1	2.0	ug/L		10/20/17 10:20	10/27/17 16:03	10
Benzidine	ND	*	100	51	ug/L		10/20/17 10:20	10/27/17 16:03	10
Benzo[a]anthracene	ND		51	20	ug/L		10/20/17 10:20	10/27/17 16:03	10
Benzo[a]pyrene	ND		20	5.1	ug/L		10/20/17 10:20	10/27/17 16:03	10
Benzo[b]fluoranthene	ND		20	10	ug/L		10/20/17 10:20	10/27/17 16:03	10
Benzo[g,h,i]perylene	ND		51	20	ug/L		10/20/17 10:20	10/27/17 16:03	10
Benzo[k]fluoranthene	ND		5.1	2.5	ug/L		10/20/17 10:20	10/27/17 16:03	10
Benzoic acid	ND		51	20	ug/L		10/20/17 10:20	10/27/17 16:03	10
Benzyl alcohol	ND		51	20	ug/L		10/20/17 10:20	10/27/17 16:03	10
bis (2-chloroisopropyl) ether	ND		5.1	2.0	ug/L		10/20/17 10:20	10/27/17 16:03	10
Bis(2-chloroethoxy)methane	ND		5.1	2.0	ug/L		10/20/17 10:20	10/27/17 16:03	10
Bis(2-chloroethyl)ether	ND		5.1	2.0	ug/L		10/20/17 10:20	10/27/17 16:03	10
Bis(2-ethylhexyl) phthalate	ND		51	20	ug/L		10/20/17 10:20	10/27/17 16:03	10
Butyl benzyl phthalate	ND		51	20	ug/L		10/20/17 10:20	10/27/17 16:03	10
Chrysene	ND		5.1	2.0	ug/L		10/20/17 10:20	10/27/17 16:03	10
Dibenz(a,h)anthracene	ND		5.1	2.5	ug/L		10/20/17 10:20	10/27/17 16:03	10
Dibenzofuran	ND		5.1	2.0	ug/L		10/20/17 10:20	10/27/17 16:03	10
Diethyl phthalate	ND		10	5.1	ug/L		10/20/17 10:20	10/27/17 16:03	10
Dimethyl phthalate	ND		5.1	2.5	ug/L		10/20/17 10:20	10/27/17 16:03	10
Di-n-butyl phthalate	ND		20	10	ug/L		10/20/17 10:20	10/27/17 16:03	10
Di-n-octyl phthalate	ND		51	20	ug/L		10/20/17 10:20	10/27/17 16:03	10

# Client Sample Results

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

TestAmerica Job ID: 440-194479-1

**Client Sample ID: CA-L**  
**Date Collected: 10/17/17 10:30**  
**Date Received: 10/17/17 18:20**

**Lab Sample ID: 440-194479-1**  
**Matrix: Water**

## Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	ND		5.1	2.0	ug/L		10/20/17 10:20	10/27/17 16:03	10
Fluorene	ND		5.1	2.0	ug/L		10/20/17 10:20	10/27/17 16:03	10
Hexachlorobenzene	ND		10	5.1	ug/L		10/20/17 10:20	10/27/17 16:03	10
Hexachlorobutadiene	ND		20	5.1	ug/L		10/20/17 10:20	10/27/17 16:03	10
Hexachlorocyclopentadiene	ND		51	20	ug/L		10/20/17 10:20	10/27/17 16:03	10
Hexachloroethane	ND		30	5.1	ug/L		10/20/17 10:20	10/27/17 16:03	10
Indeno[1,2,3-cd]pyrene	ND		20	10	ug/L		10/20/17 10:20	10/27/17 16:03	10
Isophorone	ND		10	5.1	ug/L		10/20/17 10:20	10/27/17 16:03	10
Naphthalene	ND		10	5.1	ug/L		10/20/17 10:20	10/27/17 16:03	10
Nitrobenzene	ND		10	5.1	ug/L		10/20/17 10:20	10/27/17 16:03	10
N-Nitrosodimethylamine	ND		20	10	ug/L		10/20/17 10:20	10/27/17 16:03	10
N-Nitrosodi-n-propylamine	ND		20	10	ug/L		10/20/17 10:20	10/27/17 16:03	10
N-Nitrosodiphenylamine	ND		10	5.1	ug/L		10/20/17 10:20	10/27/17 16:03	10
Pentachlorophenol	ND		20	10	ug/L		10/20/17 10:20	10/27/17 16:03	10
Phenanthrene	ND		5.1	2.0	ug/L		10/20/17 10:20	10/27/17 16:03	10
Phenol	ND		10	5.1	ug/L		10/20/17 10:20	10/27/17 16:03	10
Pyrene	ND		5.1	2.0	ug/L		10/20/17 10:20	10/27/17 16:03	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	90		40 - 120	10/20/17 10:20	10/27/17 16:03	10
2-Fluorobiphenyl	76		50 - 120	10/20/17 10:20	10/27/17 16:03	10
2-Fluorophenol (Surr)	53		30 - 120	10/20/17 10:20	10/27/17 16:03	10
Nitrobenzene-d5 (Surr)	0	X	45 - 120	10/20/17 10:20	10/27/17 16:03	10
Phenol-d6 (Surr)	112		35 - 120	10/20/17 10:20	10/27/17 16:03	10
Terphenyl-d14 (Surr)	66		37 - 144	10/20/17 10:20	10/27/17 16:03	10

## Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4,5-Tetrachlorobenzene	ND		19	4.8	ug/L		10/19/17 09:59	10/24/17 03:44	2
<b>1,4-Dioxane</b>	<b>130</b>		20	5.0	ug/L		10/19/17 10:46	10/26/17 06:51	20
1,4-Naphthoquinone	ND		19	7.7	ug/L		10/19/17 09:59	10/24/17 03:44	2
1,4-phenylenediamine	ND		120	48	ug/L		10/19/17 09:59	10/24/17 03:44	2
1-Naphthylamine	ND		29	11	ug/L		10/19/17 09:59	10/24/17 03:44	2
2,3,4,6-Tetrachlorophenol	ND		29	8.7	ug/L		10/19/17 09:59	10/24/17 03:44	2
2,6-Dichlorophenol	ND		29	12	ug/L		10/19/17 09:59	10/24/17 03:44	2
2-Acetylaminofluorene	ND		19	5.8	ug/L		10/19/17 09:59	10/24/17 03:44	2
2-Naphthylamine	ND		19	7.7	ug/L		10/19/17 09:59	10/24/17 03:44	2
3,3'-Dimethylbenzidine	ND		48	19	ug/L		10/19/17 09:59	10/24/17 03:44	2
3-Methylcholanthrene	ND		19	4.8	ug/L		10/19/17 09:59	10/24/17 03:44	2
4-Aminobiphenyl	ND		29	9.7	ug/L		10/19/17 09:59	10/24/17 03:44	2
5-Nitro-o-toluidine	ND		19	5.8	ug/L		10/19/17 09:59	10/24/17 03:44	2
7,12-Dimethylbenz(a)anthracene	ND		19	7.7	ug/L		10/19/17 09:59	10/24/17 03:44	2
Acetophenone	ND		29	7.7	ug/L		10/19/17 09:59	10/24/17 03:44	2
alpha,alpha-Dimethyl phenethylamine	ND		230	77	ug/L		10/19/17 09:59	10/24/17 03:44	2
Diallate	ND		29	12	ug/L		10/19/17 09:59	10/24/17 03:44	2
Dimethyl aminoazobenzene	ND		19	7.7	ug/L		10/19/17 09:59	10/24/17 03:44	2
Diphenylamine	ND		19	5.8	ug/L		10/19/17 09:59	10/24/17 03:44	2
Ethyl 4,4'-Dichlorobenzilate	ND		19	4.8	ug/L		10/19/17 09:59	10/24/17 03:44	2
Ethyl methanesulfonate	ND		19	7.7	ug/L		10/19/17 09:59	10/24/17 03:44	2
Isodrin	ND		19	6.8	ug/L		10/19/17 09:59	10/24/17 03:44	2

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-194479-1

**Client Sample ID: CA-L**  
**Date Collected: 10/17/17 10:30**  
**Date Received: 10/17/17 18:20**

**Lab Sample ID: 440-194479-1**  
**Matrix: Water**

## Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isosafrole	ND		29	12	ug/L		10/19/17 09:59	10/24/17 03:44	2
Kepone	ND		190	68	ug/L		10/19/17 09:59	10/24/17 03:44	2
Methapyrilene	ND		39	9.7	ug/L		10/19/17 09:59	10/24/17 03:44	2
Methyl methanesulfonate	ND		29	9.7	ug/L		10/19/17 09:59	10/24/17 03:44	2
N-Nitrosodiethylamine	ND		19	5.8	ug/L		10/19/17 09:59	10/24/17 03:44	2
N-Nitrosodi-n-butylamine	ND		19	8.7	ug/L		10/19/17 09:59	10/24/17 03:44	2
<b>N-Nitrosomethylethylamine</b>	<b>5.3</b>	<b>J</b>	19	4.8	ug/L		10/19/17 09:59	10/24/17 03:44	2
N-Nitrosopiperidine	ND		19	7.7	ug/L		10/19/17 09:59	10/24/17 03:44	2
N-Nitrosopyrrolidine	ND		19	7.7	ug/L		10/19/17 09:59	10/24/17 03:44	2
o,o',o"-Triethylphosphorothioate	ND		29	8.7	ug/L		10/19/17 09:59	10/24/17 03:44	2
o-Toluidine	ND		19	4.8	ug/L		10/19/17 09:59	10/24/17 03:44	2
Pentachlorobenzene	ND		19	5.8	ug/L		10/19/17 09:59	10/24/17 03:44	2
Pentachloronitrobenzene	ND		19	4.8	ug/L		10/19/17 09:59	10/24/17 03:44	2
Phenacetin	ND		19	6.8	ug/L		10/19/17 09:59	10/24/17 03:44	2
Phorate	ND		19	9.7	ug/L		10/19/17 09:59	10/24/17 03:44	2
Pronamide	ND		29	9.7	ug/L		10/19/17 09:59	10/24/17 03:44	2
Safrole, Total	ND		19	7.7	ug/L		10/19/17 09:59	10/24/17 03:44	2

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	0	X	30 - 120	10/19/17 10:46	10/26/17 06:51	20
2,4,6-Tribromophenol (Surr)	82		40 - 120	10/19/17 09:59	10/24/17 03:44	2
2-Fluorobiphenyl	60		50 - 120	10/19/17 09:59	10/24/17 03:44	2
2-Fluorophenol (Surr)	70		30 - 120	10/19/17 09:59	10/24/17 03:44	2
Nitrobenzene-d5 (Surr)	74		45 - 120	10/19/17 09:59	10/24/17 03:44	2
Phenol-d6 (Surr)	83		35 - 120	10/19/17 09:59	10/24/17 03:44	2
Terphenyl-d14 (Surr)	79		10 - 150	10/19/17 09:59	10/24/17 03:44	2

## Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.48	0.097	ug/L		10/18/17 06:42	10/20/17 16:58	5
4,4'-DDE	ND		0.48	0.097	ug/L		10/18/17 06:42	10/20/17 16:58	5
4,4'-DDT	ND		0.48	0.097	ug/L		10/18/17 06:42	10/20/17 16:58	5
Aldrin	ND		0.48	0.097	ug/L		10/18/17 06:42	10/20/17 16:58	5
alpha-BHC	ND		0.48	0.097	ug/L		10/18/17 06:42	10/20/17 16:58	5
beta-BHC	ND		0.48	0.14	ug/L		10/18/17 06:42	10/20/17 16:58	5
Chlordane (technical)	ND		4.8	0.97	ug/L		10/18/17 06:42	10/20/17 16:58	5
delta-BHC	ND		0.97	0.097	ug/L		10/18/17 06:42	10/20/17 16:58	5
Dieldrin	ND		0.48	0.097	ug/L		10/18/17 06:42	10/20/17 16:58	5
Endosulfan I	ND		0.48	0.097	ug/L		10/18/17 06:42	10/20/17 16:58	5
Endosulfan II	ND		0.48	0.097	ug/L		10/18/17 06:42	10/20/17 16:58	5
Endosulfan sulfate	ND		0.97	0.097	ug/L		10/18/17 06:42	10/20/17 16:58	5
Endrin	ND		0.48	0.097	ug/L		10/18/17 06:42	10/20/17 16:58	5
Endrin aldehyde	ND		0.48	0.097	ug/L		10/18/17 06:42	10/20/17 16:58	5
Endrin ketone	ND		0.48	0.19	ug/L		10/18/17 06:42	10/20/17 16:58	5
gamma-BHC (Lindane)	ND		0.48	0.097	ug/L		10/18/17 06:42	10/20/17 16:58	5
Heptachlor	ND		0.48	0.14	ug/L		10/18/17 06:42	10/20/17 16:58	5
Heptachlor epoxide	ND		0.48	0.14	ug/L		10/18/17 06:42	10/20/17 16:58	5
Methoxychlor	ND		0.48	0.097	ug/L		10/18/17 06:42	10/20/17 16:58	5
Toxaphene	ND		24	2.4	ug/L		10/18/17 06:42	10/20/17 16:58	5

TestAmerica Irvine



# Client Sample Results

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

TestAmerica Job ID: 440-194479-1

**Client Sample ID: CA-L**  
**Date Collected: 10/17/17 10:30**  
**Date Received: 10/17/17 18:20**

**Lab Sample ID: 440-194479-1**  
**Matrix: Water**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	44		10 - 123	10/18/17 06:42	10/20/17 16:58	5
DCB Decachlorobiphenyl (Surr)	45		18 - 134	10/18/17 06:42	10/20/17 16:58	5

### Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor 1016	ND		0.97	0.24	ug/L		10/18/17 06:42	10/19/17 17:09	1
Aroclor 1221	ND		0.97	0.24	ug/L		10/18/17 06:42	10/19/17 17:09	1
Aroclor 1232	ND		0.97	0.24	ug/L		10/18/17 06:42	10/19/17 17:09	1
Aroclor 1242	ND		0.97	0.24	ug/L		10/18/17 06:42	10/19/17 17:09	1
Aroclor 1248	ND		0.97	0.24	ug/L		10/18/17 06:42	10/19/17 17:09	1
Aroclor 1254	ND		0.97	0.24	ug/L		10/18/17 06:42	10/19/17 17:09	1
Aroclor 1260	ND		0.97	0.24	ug/L		10/18/17 06:42	10/19/17 17:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	59		29 - 115	10/18/17 06:42	10/19/17 17:09	1

### Method: 8141A - Organophosphorous Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Azinphos-methyl	ND		0.95	0.10	ug/L		10/20/17 14:35	10/22/17 12:16	1
Bolstar	ND		0.95	0.13	ug/L		10/20/17 14:35	10/22/17 12:16	1
Chlorpyrifos	ND		0.95	0.089	ug/L		10/20/17 14:35	10/22/17 12:16	1
Coumaphos	ND		0.95	0.13	ug/L		10/20/17 14:35	10/22/17 12:16	1
Demeton, Total	ND		1.9	0.15	ug/L		10/20/17 14:35	10/22/17 12:16	1
Diazinon	ND		0.95	0.071	ug/L		10/20/17 14:35	10/22/17 12:16	1
Dichlorvos	ND		0.95	0.11	ug/L		10/20/17 14:35	10/22/17 12:16	1
Dimethoate	ND		0.95	0.10	ug/L		10/20/17 14:35	10/22/17 12:16	1
Disulfoton	ND		0.95	0.089	ug/L		10/20/17 14:35	10/22/17 12:16	1
EPN	ND		0.95	0.11	ug/L		10/20/17 14:35	10/22/17 12:16	1
Famphur	ND		0.95	0.098	ug/L		10/20/17 14:35	10/22/17 12:16	1
Fensulfothion	ND		0.95	0.11	ug/L		10/20/17 14:35	10/22/17 12:16	1
Fenthion	ND		0.95	0.20	ug/L		10/20/17 14:35	10/22/17 12:16	1
Malathion	ND		0.95	0.054	ug/L		10/20/17 14:35	10/22/17 12:16	1
Methyl parathion	ND		0.95	0.088	ug/L		10/20/17 14:35	10/22/17 12:16	1
Mevinphos	ND		0.95	0.15	ug/L		10/20/17 14:35	10/22/17 12:16	1
O,O,O-Triethyl phosphorothioate	ND		0.95	0.068	ug/L		10/20/17 14:35	10/22/17 12:16	1
Parathion	ND		0.95	0.11	ug/L		10/20/17 14:35	10/22/17 12:16	1
Phorate	ND		0.95	0.080	ug/L		10/20/17 14:35	10/22/17 12:16	1
Ronnel	ND		0.95	0.065	ug/L		10/20/17 14:35	10/22/17 12:16	1
Stirophos	ND		0.95	0.16	ug/L		10/20/17 14:35	10/22/17 12:16	1
Sulfotepp	ND		0.95	0.062	ug/L		10/20/17 14:35	10/22/17 12:16	1
Tokuthion	ND		0.95	0.097	ug/L		10/20/17 14:35	10/22/17 12:16	1
Trichloronate	ND		0.95	0.082	ug/L		10/20/17 14:35	10/22/17 12:16	1
Mocap	ND		0.95	0.062	ug/L		10/20/17 14:35	10/22/17 12:16	1
Thionazin	ND		0.95	0.071	ug/L		10/20/17 14:35	10/22/17 12:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Triphenylphosphate	70	X	72 - 142	10/20/17 14:35	10/22/17 12:16	1
Tributyl phosphate	58		34 - 143	10/20/17 14:35	10/22/17 12:16	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-194479-1

**Client Sample ID: CA-L**  
**Date Collected: 10/17/17 10:30**  
**Date Received: 10/17/17 18:20**

**Lab Sample ID: 440-194479-1**  
**Matrix: Water**

**Method: 8151A - Herbicides (GC)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.95	0.20	ug/L		10/22/17 13:22	10/25/17 14:46	20
2,4-D	ND		3.8	0.71	ug/L		10/22/17 13:22	10/25/17 14:46	20
2,4-DB	ND		3.8	0.85	ug/L		10/22/17 13:22	10/25/17 14:46	20
Dalapon	ND		4.8	3.5	ug/L		10/22/17 13:22	10/25/17 14:46	20
Dicamba	ND		1.9	0.65	ug/L		10/22/17 13:22	10/25/17 14:46	20
Dichlorprop	ND		3.8	0.95	ug/L		10/22/17 13:22	10/25/17 14:46	20
Dinoseb	ND		0.86	0.54	ug/L		10/22/17 13:22	10/25/17 14:46	20
MCPA	ND		380	130	ug/L		10/22/17 13:22	10/25/17 14:46	20
MCPP	ND		380	280	ug/L		10/22/17 13:22	10/25/17 14:46	20
Pentachlorophenol	ND		0.48	0.22	ug/L		10/22/17 13:22	10/25/17 14:46	20
Silvex (2,4,5-TP)	ND		0.95	0.24	ug/L		10/22/17 13:22	10/25/17 14:46	20
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
2,4-Dichlorophenylacetic acid	53		20 - 100				10/22/17 13:22	10/25/17 14:46	20

**Client Sample ID: LR-2R**  
**Date Collected: 10/17/17 11:30**  
**Date Received: 10/17/17 18:20**

**Lab Sample ID: 440-194479-2**  
**Matrix: Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			10/30/17 12:40	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			10/30/17 12:40	1
Acrolein	ND		50	2.5	ug/L			10/19/17 10:44	1
Acrylonitrile	ND		50	1.0	ug/L			10/19/17 10:44	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			10/30/17 12:40	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			10/30/17 12:40	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			10/30/17 12:40	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			10/30/17 12:40	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			10/30/17 12:40	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			10/30/17 12:40	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			10/30/17 12:40	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			10/30/17 12:40	1
<b>1,2-Dichlorobenzene</b>	<b>6.2</b>		0.50	0.25	ug/L			10/30/17 12:40	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			10/30/17 12:40	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			10/30/17 12:40	1
<b>1,3-Dichlorobenzene</b>	<b>0.33 J</b>		0.50	0.25	ug/L			10/30/17 12:40	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			10/30/17 12:40	1
<b>1,4-Dichlorobenzene</b>	<b>9.9</b>		0.50	0.25	ug/L			10/30/17 12:40	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			10/30/17 12:40	1
2-Hexanone	ND		5.0	2.5	ug/L			10/30/17 12:40	1
Acetonitrile	ND		20	10	ug/L			10/30/17 12:40	1
Acrolein	ND		5.0	2.5	ug/L			10/30/17 12:40	1
Acrylonitrile	ND		2.0	1.0	ug/L			10/30/17 12:40	1
<b>Benzene</b>	<b>3.9</b>		0.50	0.25	ug/L			10/30/17 12:40	1
Allyl chloride	ND		1.0	0.50	ug/L			10/30/17 12:40	1
Bromoform	ND		1.0	0.40	ug/L			10/30/17 12:40	1
Bromomethane	ND		0.50	0.25	ug/L			10/30/17 12:40	1
Carbon disulfide	ND		1.0	0.50	ug/L			10/30/17 12:40	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			10/30/17 12:40	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-194479-1

**Client Sample ID: LR-2R**

**Lab Sample ID: 440-194479-2**

**Date Collected: 10/17/17 11:30**

**Matrix: Water**

**Date Received: 10/17/17 18:20**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chlorobenzene</b>	<b>24</b>		0.50	0.25	ug/L			10/30/17 12:40	1
Bromochloromethane	ND		0.50	0.25	ug/L			10/30/17 12:40	1
Chloroethane	ND		1.0	0.40	ug/L			10/30/17 12:40	1
Chloroform	ND		0.50	0.25	ug/L			10/30/17 12:40	1
Chloromethane	ND		0.50	0.25	ug/L			10/30/17 12:40	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			10/30/17 12:40	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			10/30/17 12:40	1
Dibromochloromethane	ND		0.50	0.25	ug/L			10/30/17 12:40	1
Dibromomethane	ND		0.50	0.25	ug/L			10/30/17 12:40	1
Bromodichloromethane	ND		0.50	0.25	ug/L			10/30/17 12:40	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			10/30/17 12:40	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			10/30/17 12:40	1
<b>Ethylbenzene</b>	<b>1.4</b>		0.50	0.25	ug/L			10/30/17 12:40	1
Iodomethane	ND		2.0	1.0	ug/L			10/30/17 12:40	1
Isobutyl alcohol	ND		25	13	ug/L			10/30/17 12:40	1
<b>m,p-Xylene</b>	<b>0.70 J</b>		1.0	0.50	ug/L			10/30/17 12:40	1
Methylene Chloride	ND		2.0	0.88	ug/L			10/30/17 12:40	1
<b>Methyl tert-butyl ether</b>	<b>0.58</b>		0.50	0.25	ug/L			10/30/17 12:40	1
<b>Naphthalene</b>	<b>17</b>		1.0	0.40	ug/L			10/30/17 12:40	1
<b>o-Xylene</b>	<b>1.0</b>		0.50	0.25	ug/L			10/30/17 12:40	1
Propionitrile	ND		20	10	ug/L			10/30/17 12:40	1
Styrene	ND		0.50	0.25	ug/L			10/30/17 12:40	1
<b>t-Butanol</b>	<b>530</b>		10	5.0	ug/L			10/30/17 12:40	1
Tetrachloroethene	ND		0.50	0.25	ug/L			10/30/17 12:40	1
<b>Tetrahydrofuran</b>	<b>200</b>		10	5.0	ug/L			10/30/17 12:40	1
<b>Toluene</b>	<b>0.82</b>		0.50	0.25	ug/L			10/30/17 12:40	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			10/30/17 12:40	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			10/30/17 12:40	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			10/30/17 12:40	1
Trichloroethene	ND		0.50	0.25	ug/L			10/30/17 12:40	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			10/30/17 12:40	1
Vinyl acetate	ND *		4.0	2.0	ug/L			10/30/17 12:40	1
Vinyl chloride	ND		0.50	0.25	ug/L			10/30/17 12:40	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			10/30/17 12:40	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			10/30/17 12:40	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			10/30/17 12:40	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	8.0	T J	ug/L		2.50			10/30/17 12:40	1
Silanol, trimethyl-	67	T J N	ug/L		4.34	1066-40-6		10/30/17 12:40	1
Unknown	7.1	T J	ug/L		5.70			10/30/17 12:40	1
Unknown	15	T J	ug/L		5.76			10/30/17 12:40	1
Unknown	22	T J	ug/L		8.33			10/30/17 12:40	1
Unknown	8.8	T J	ug/L		11.33			10/30/17 12:40	1
Unknown	7.6	T J	ug/L		12.54			10/30/17 12:40	1
Unknown	16	T J	ug/L		13.03			10/30/17 12:40	1
Camphor	7.0	T J N	ug/L		13.27	76-22-2		10/30/17 12:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	109		80 - 128		10/19/17 10:44	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-194479-1

**Client Sample ID: LR-2R**

**Date Collected: 10/17/17 11:30**

**Date Received: 10/17/17 18:20**

**Lab Sample ID: 440-194479-2**

**Matrix: Water**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102		80 - 120		10/19/17 10:44	1
Toluene-d8 (Surr)	106		80 - 128		10/30/17 12:40	1
4-Bromofluorobenzene (Surr)	99		80 - 120		10/30/17 12:40	1
Dibromofluoromethane (Surr)	91		76 - 132		10/19/17 10:44	1
Dibromofluoromethane (Surr)	95		76 - 132		10/30/17 12:40	1

## Method: 8260B - Volatile Organic Compounds (GC/MS) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			10/30/17 12:54	1
<b>Acetone</b>	<b>27</b>		20	10	ug/L			10/31/17 09:18	1
Methylacrylonitrile	ND		10	2.5	ug/L			10/30/17 12:54	1
Methyl methacrylate	ND		2.0	1.0	ug/L			10/30/17 12:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99		80 - 128		10/30/17 12:54	1
Toluene-d8 (Surr)	104		80 - 128		10/31/17 09:18	1
4-Bromofluorobenzene (Surr)	94		80 - 120		10/30/17 12:54	1
4-Bromofluorobenzene (Surr)	95		80 - 120		10/31/17 09:18	1
Dibromofluoromethane (Surr)	106		76 - 132		10/30/17 12:54	1
Dibromofluoromethane (Surr)	104		76 - 132		10/31/17 09:18	1

## Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		5.0	2.5	ug/L		10/20/17 10:20	10/27/17 16:27	5
<b>1,2-Dichlorobenzene</b>	<b>4.2</b>		2.5	1.0	ug/L		10/20/17 10:20	10/27/17 16:27	5
1,2-Diphenylhydrazine(as Azobenzene)	ND		5.0	2.5	ug/L		10/20/17 10:20	10/27/17 16:27	5
1,3-Dichlorobenzene	ND		2.5	1.0	ug/L		10/20/17 10:20	10/27/17 16:27	5
<b>1,4-Dichlorobenzene</b>	<b>6.9</b>		2.5	1.0	ug/L		10/20/17 10:20	10/27/17 16:27	5
2,4,5-Trichlorophenol	ND		10	5.0	ug/L		10/20/17 10:20	10/27/17 16:27	5
2,4,6-Trichlorophenol	ND		5.0	2.5	ug/L		10/20/17 10:20	10/27/17 16:27	5
2,4-Dichlorophenol	ND		10	5.0	ug/L		10/20/17 10:20	10/27/17 16:27	5
2,4-Dimethylphenol	ND		10	5.0	ug/L		10/20/17 10:20	10/27/17 16:27	5
2,4-Dinitrophenol	ND *		25	10	ug/L		10/20/17 10:20	10/27/17 16:27	5
2,4-Dinitrotoluene	ND		25	10	ug/L		10/20/17 10:20	10/27/17 16:27	5
2,6-Dinitrotoluene	ND		25	10	ug/L		10/20/17 10:20	10/27/17 16:27	5
2-Chloronaphthalene	ND		2.5	1.0	ug/L		10/20/17 10:20	10/27/17 16:27	5
2-Chlorophenol	ND		5.0	2.5	ug/L		10/20/17 10:20	10/27/17 16:27	5
2-Methylnaphthalene	ND		5.0	2.5	ug/L		10/20/17 10:20	10/27/17 16:27	5
2-Methylphenol	ND		10	5.0	ug/L		10/20/17 10:20	10/27/17 16:27	5
2-Nitroaniline	ND		25	10	ug/L		10/20/17 10:20	10/27/17 16:27	5
2-Nitrophenol	ND		10	5.0	ug/L		10/20/17 10:20	10/27/17 16:27	5
3,3'-Dichlorobenzidine	ND		25	10	ug/L		10/20/17 10:20	10/27/17 16:27	5
3-Methylphenol + 4-Methylphenol	ND		25	10	ug/L		10/20/17 10:20	10/27/17 16:27	5
3-Nitroaniline	ND		25	10	ug/L		10/20/17 10:20	10/27/17 16:27	5
4,6-Dinitro-2-methylphenol	ND *		25	10	ug/L		10/20/17 10:20	10/27/17 16:27	5
4-Bromophenyl phenyl ether	ND		5.0	2.5	ug/L		10/20/17 10:20	10/27/17 16:27	5
4-Chloro-3-methylphenol	ND		10	1.0	ug/L		10/20/17 10:20	10/27/17 16:27	5
4-Chloroaniline	ND		10	5.0	ug/L		10/20/17 10:20	10/27/17 16:27	5
4-Chlorophenyl phenyl ether	ND		2.5	1.0	ug/L		10/20/17 10:20	10/27/17 16:27	5

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-194479-1

**Client Sample ID: LR-2R**

**Lab Sample ID: 440-194479-2**

**Date Collected: 10/17/17 11:30**

**Matrix: Water**

**Date Received: 10/17/17 18:20**

**Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Nitroaniline	ND		25	10	ug/L		10/20/17 10:20	10/27/17 16:27	5
4-Nitrophenol	ND		25	10	ug/L		10/20/17 10:20	10/27/17 16:27	5
Acenaphthene	ND		2.5	1.0	ug/L		10/20/17 10:20	10/27/17 16:27	5
Acenaphthylene	ND		2.5	1.0	ug/L		10/20/17 10:20	10/27/17 16:27	5
Aniline	ND		50	10	ug/L		10/20/17 10:20	10/27/17 16:27	5
Anthracene	ND		2.5	1.0	ug/L		10/20/17 10:20	10/27/17 16:27	5
Benzidine	ND	*	50	25	ug/L		10/20/17 10:20	10/27/17 16:27	5
Benzo[a]anthracene	ND		25	10	ug/L		10/20/17 10:20	10/27/17 16:27	5
Benzo[a]pyrene	ND		10	2.5	ug/L		10/20/17 10:20	10/27/17 16:27	5
Benzo[b]fluoranthene	ND		10	5.0	ug/L		10/20/17 10:20	10/27/17 16:27	5
Benzo[g,h,i]perylene	ND		25	10	ug/L		10/20/17 10:20	10/27/17 16:27	5
Benzo[k]fluoranthene	ND		2.5	1.3	ug/L		10/20/17 10:20	10/27/17 16:27	5
Benzoic acid	ND		25	10	ug/L		10/20/17 10:20	10/27/17 16:27	5
Benzyl alcohol	ND		25	10	ug/L		10/20/17 10:20	10/27/17 16:27	5
bis (2-chloroisopropyl) ether	ND		2.5	1.0	ug/L		10/20/17 10:20	10/27/17 16:27	5
Bis(2-chloroethoxy)methane	ND		2.5	1.0	ug/L		10/20/17 10:20	10/27/17 16:27	5
Bis(2-chloroethyl)ether	ND		2.5	1.0	ug/L		10/20/17 10:20	10/27/17 16:27	5
Bis(2-ethylhexyl) phthalate	ND		25	10	ug/L		10/20/17 10:20	10/27/17 16:27	5
Butyl benzyl phthalate	ND		25	10	ug/L		10/20/17 10:20	10/27/17 16:27	5
Chrysene	ND		2.5	1.0	ug/L		10/20/17 10:20	10/27/17 16:27	5
Dibenz(a,h)anthracene	ND		2.5	1.3	ug/L		10/20/17 10:20	10/27/17 16:27	5
Dibenzofuran	ND		2.5	1.0	ug/L		10/20/17 10:20	10/27/17 16:27	5
Diethyl phthalate	ND		5.0	2.5	ug/L		10/20/17 10:20	10/27/17 16:27	5
Dimethyl phthalate	ND		2.5	1.3	ug/L		10/20/17 10:20	10/27/17 16:27	5
Di-n-butyl phthalate	ND		10	5.0	ug/L		10/20/17 10:20	10/27/17 16:27	5
Di-n-octyl phthalate	ND		25	10	ug/L		10/20/17 10:20	10/27/17 16:27	5
Fluoranthene	ND		2.5	1.0	ug/L		10/20/17 10:20	10/27/17 16:27	5
Fluorene	ND		2.5	1.0	ug/L		10/20/17 10:20	10/27/17 16:27	5
Hexachlorobenzene	ND		5.0	2.5	ug/L		10/20/17 10:20	10/27/17 16:27	5
Hexachlorobutadiene	ND		10	2.5	ug/L		10/20/17 10:20	10/27/17 16:27	5
Hexachlorocyclopentadiene	ND		25	10	ug/L		10/20/17 10:20	10/27/17 16:27	5
Hexachloroethane	ND		15	2.5	ug/L		10/20/17 10:20	10/27/17 16:27	5
Indeno[1,2,3-cd]pyrene	ND		10	5.0	ug/L		10/20/17 10:20	10/27/17 16:27	5
Isophorone	ND		5.0	2.5	ug/L		10/20/17 10:20	10/27/17 16:27	5
<b>Naphthalene</b>	<b>10</b>		5.0	2.5	ug/L		10/20/17 10:20	10/27/17 16:27	5
Nitrobenzene	ND		5.0	2.5	ug/L		10/20/17 10:20	10/27/17 16:27	5
N-Nitrosodimethylamine	ND		10	5.0	ug/L		10/20/17 10:20	10/27/17 16:27	5
N-Nitrosodi-n-propylamine	ND		10	5.0	ug/L		10/20/17 10:20	10/27/17 16:27	5
N-Nitrosodiphenylamine	ND		5.0	2.5	ug/L		10/20/17 10:20	10/27/17 16:27	5
Pentachlorophenol	ND		10	5.0	ug/L		10/20/17 10:20	10/27/17 16:27	5
Phenanthrene	ND		2.5	1.0	ug/L		10/20/17 10:20	10/27/17 16:27	5
Phenol	ND		5.0	2.5	ug/L		10/20/17 10:20	10/27/17 16:27	5
Pyrene	ND		2.5	1.0	ug/L		10/20/17 10:20	10/27/17 16:27	5

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	89		40 - 120	10/20/17 10:20	10/27/17 16:27	5
2-Fluorobiphenyl	77		50 - 120	10/20/17 10:20	10/27/17 16:27	5
2-Fluorophenol (Surr)	51		30 - 120	10/20/17 10:20	10/27/17 16:27	5
Nitrobenzene-d5 (Surr)	75		45 - 120	10/20/17 10:20	10/27/17 16:27	5
Phenol-d6 (Surr)	26	X	35 - 120	10/20/17 10:20	10/27/17 16:27	5

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-194479-1

**Client Sample ID: LR-2R**

**Date Collected: 10/17/17 11:30**

**Date Received: 10/17/17 18:20**

**Lab Sample ID: 440-194479-2**

**Matrix: Water**

**Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14 (Surr)	84		37 - 144	10/20/17 10:20	10/27/17 16:27	5

**Method: 8270C - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4,5-Tetrachlorobenzene	ND		21	5.2	ug/L		10/19/17 09:59	10/24/17 04:07	2
<b>1,4-Dioxane</b>	<b>150</b>		21	5.2	ug/L		10/19/17 10:46	10/26/17 07:13	20
1,4-Naphthoquinone	ND		21	8.3	ug/L		10/19/17 09:59	10/24/17 04:07	2
1,4-phenylenediamine	ND		120	52	ug/L		10/19/17 09:59	10/24/17 04:07	2
1-Naphthylamine	ND		31	11	ug/L		10/19/17 09:59	10/24/17 04:07	2
2,3,4,6-Tetrachlorophenol	ND		31	9.3	ug/L		10/19/17 09:59	10/24/17 04:07	2
2,6-Dichlorophenol	ND		31	12	ug/L		10/19/17 09:59	10/24/17 04:07	2
2-Acetylaminofluorene	ND		21	6.2	ug/L		10/19/17 09:59	10/24/17 04:07	2
2-Naphthylamine	ND		21	8.3	ug/L		10/19/17 09:59	10/24/17 04:07	2
3,3'-Dimethylbenzidine	ND		52	21	ug/L		10/19/17 09:59	10/24/17 04:07	2
3-Methylcholanthrene	ND		21	5.2	ug/L		10/19/17 09:59	10/24/17 04:07	2
4-Aminobiphenyl	ND		31	10	ug/L		10/19/17 09:59	10/24/17 04:07	2
5-Nitro-o-toluidine	ND		21	6.2	ug/L		10/19/17 09:59	10/24/17 04:07	2
7,12-Dimethylbenz(a)anthracene	ND		21	8.3	ug/L		10/19/17 09:59	10/24/17 04:07	2
Acetophenone	ND		31	8.3	ug/L		10/19/17 09:59	10/24/17 04:07	2
alpha,alpha-Dimethyl phenethylamine	ND		250	83	ug/L		10/19/17 09:59	10/24/17 04:07	2
Diallate	ND		31	12	ug/L		10/19/17 09:59	10/24/17 04:07	2
Dimethyl aminoazobenzene	ND		21	8.3	ug/L		10/19/17 09:59	10/24/17 04:07	2
Diphenylamine	ND		21	6.2	ug/L		10/19/17 09:59	10/24/17 04:07	2
Ethyl 4,4'-Dichlorobenzilate	ND		21	5.2	ug/L		10/19/17 09:59	10/24/17 04:07	2
Ethyl methanesulfonate	ND		21	8.3	ug/L		10/19/17 09:59	10/24/17 04:07	2
Isodrin	ND		21	7.3	ug/L		10/19/17 09:59	10/24/17 04:07	2
Isosafrole	ND		31	12	ug/L		10/19/17 09:59	10/24/17 04:07	2
Kepone	ND		210	73	ug/L		10/19/17 09:59	10/24/17 04:07	2
Methapyrilene	ND		41	10	ug/L		10/19/17 09:59	10/24/17 04:07	2
Methyl methanesulfonate	ND		31	10	ug/L		10/19/17 09:59	10/24/17 04:07	2
N-Nitrosodiethylamine	ND		21	6.2	ug/L		10/19/17 09:59	10/24/17 04:07	2
N-Nitrosodi-n-butylamine	ND		21	9.3	ug/L		10/19/17 09:59	10/24/17 04:07	2
N-Nitrosomethylethylamine	ND		21	5.2	ug/L		10/19/17 09:59	10/24/17 04:07	2
N-Nitrosopiperidine	ND		21	8.3	ug/L		10/19/17 09:59	10/24/17 04:07	2
N-Nitrosopyrrolidine	ND		21	8.3	ug/L		10/19/17 09:59	10/24/17 04:07	2
o,o',o"-Triethylphosphorothioate	ND		31	9.3	ug/L		10/19/17 09:59	10/24/17 04:07	2
o-Toluidine	ND		21	5.2	ug/L		10/19/17 09:59	10/24/17 04:07	2
Pentachlorobenzene	ND		21	6.2	ug/L		10/19/17 09:59	10/24/17 04:07	2
Pentachloronitrobenzene	ND		21	5.2	ug/L		10/19/17 09:59	10/24/17 04:07	2
Phenacetin	ND		21	7.3	ug/L		10/19/17 09:59	10/24/17 04:07	2
Phorate	ND		21	10	ug/L		10/19/17 09:59	10/24/17 04:07	2
Pronamide	ND		31	10	ug/L		10/19/17 09:59	10/24/17 04:07	2
Safrole, Total	ND		21	8.3	ug/L		10/19/17 09:59	10/24/17 04:07	2

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	0	X	30 - 120	10/19/17 10:46	10/26/17 07:13	20
2,4,6-Tribromophenol (Surr)	66		40 - 120	10/19/17 09:59	10/24/17 04:07	2
2-Fluorobiphenyl	56		50 - 120	10/19/17 09:59	10/24/17 04:07	2
2-Fluorophenol (Surr)	57		30 - 120	10/19/17 09:59	10/24/17 04:07	2

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-194479-1

**Client Sample ID: LR-2R**

**Lab Sample ID: 440-194479-2**

**Date Collected: 10/17/17 11:30**

**Matrix: Water**

**Date Received: 10/17/17 18:20**

## Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Nitrobenzene-d5 (Surr)	61		45 - 120	10/19/17 09:59	10/24/17 04:07	2
Phenol-d6 (Surr)	61		35 - 120	10/19/17 09:59	10/24/17 04:07	2
Terphenyl-d14 (Surr)	48		10 - 150	10/19/17 09:59	10/24/17 04:07	2

## Method: 8081A - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.10	0.020	ug/L		10/18/17 06:42	10/19/17 19:15	1
4,4'-DDE	ND		0.10	0.020	ug/L		10/18/17 06:42	10/19/17 19:15	1
4,4'-DDT	ND		0.10	0.020	ug/L		10/18/17 06:42	10/19/17 19:15	1
Aldrin	ND		0.10	0.020	ug/L		10/18/17 06:42	10/19/17 19:15	1
alpha-BHC	ND		0.10	0.020	ug/L		10/18/17 06:42	10/19/17 19:15	1
beta-BHC	ND		0.10	0.030	ug/L		10/18/17 06:42	10/19/17 19:15	1
Chlordane (technical)	ND		1.0	0.20	ug/L		10/18/17 06:42	10/19/17 19:15	1
delta-BHC	ND		0.20	0.020	ug/L		10/18/17 06:42	10/19/17 19:15	1
Dieldrin	ND		0.10	0.020	ug/L		10/18/17 06:42	10/19/17 19:15	1
Endosulfan I	ND		0.10	0.020	ug/L		10/18/17 06:42	10/19/17 19:15	1
Endosulfan II	ND		0.10	0.020	ug/L		10/18/17 06:42	10/19/17 19:15	1
Endosulfan sulfate	ND		0.20	0.020	ug/L		10/18/17 06:42	10/19/17 19:15	1
Endrin	ND		0.10	0.020	ug/L		10/18/17 06:42	10/19/17 19:15	1
Endrin aldehyde	ND		0.10	0.020	ug/L		10/18/17 06:42	10/19/17 19:15	1
Endrin ketone	ND		0.10	0.040	ug/L		10/18/17 06:42	10/19/17 19:15	1
gamma-BHC (Lindane)	ND		0.10	0.020	ug/L		10/18/17 06:42	10/19/17 19:15	1
Heptachlor	ND		0.10	0.030	ug/L		10/18/17 06:42	10/19/17 19:15	1
Heptachlor epoxide	ND		0.10	0.030	ug/L		10/18/17 06:42	10/19/17 19:15	1
Methoxychlor	ND		0.10	0.020	ug/L		10/18/17 06:42	10/19/17 19:15	1
Toxaphene	ND		5.0	0.50	ug/L		10/18/17 06:42	10/19/17 19:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	65		10 - 123	10/18/17 06:42	10/19/17 19:15	1
DCB Decachlorobiphenyl (Surr)	11	X	18 - 134	10/18/17 06:42	10/19/17 19:15	1

## Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor 1016	ND		1.0	0.25	ug/L		10/18/17 06:42	10/18/17 14:28	1
Aroclor 1221	ND		1.0	0.25	ug/L		10/18/17 06:42	10/18/17 14:28	1
Aroclor 1232	ND		1.0	0.25	ug/L		10/18/17 06:42	10/18/17 14:28	1
Aroclor 1242	ND		1.0	0.25	ug/L		10/18/17 06:42	10/18/17 14:28	1
Aroclor 1248	ND		1.0	0.25	ug/L		10/18/17 06:42	10/18/17 14:28	1
Aroclor 1254	ND		1.0	0.25	ug/L		10/18/17 06:42	10/18/17 14:28	1
Aroclor 1260	ND		1.0	0.25	ug/L		10/18/17 06:42	10/18/17 14:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	56		29 - 115	10/18/17 06:42	10/18/17 14:28	1

## Method: 8141A - Organophosphorous Pesticides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Azinphos-methyl	ND		0.95	0.10	ug/L		10/20/17 14:35	10/22/17 12:49	1
Bolstar	ND		0.95	0.13	ug/L		10/20/17 14:35	10/22/17 12:49	1
Chlorpyrifos	ND		0.95	0.089	ug/L		10/20/17 14:35	10/22/17 12:49	1
Coumaphos	ND		0.95	0.13	ug/L		10/20/17 14:35	10/22/17 12:49	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-194479-1

**Client Sample ID: LR-2R**

**Lab Sample ID: 440-194479-2**

**Date Collected: 10/17/17 11:30**

**Matrix: Water**

**Date Received: 10/17/17 18:20**

## Method: 8141A - Organophosphorous Pesticides (GC) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Demeton, Total	ND		1.9	0.15	ug/L		10/20/17 14:35	10/22/17 12:49	1
Diazinon	ND		0.95	0.071	ug/L		10/20/17 14:35	10/22/17 12:49	1
Dichlorvos	ND		0.95	0.11	ug/L		10/20/17 14:35	10/22/17 12:49	1
Dimethoate	ND		0.95	0.10	ug/L		10/20/17 14:35	10/22/17 12:49	1
Disulfoton	ND		0.95	0.089	ug/L		10/20/17 14:35	10/22/17 12:49	1
EPN	ND		0.95	0.11	ug/L		10/20/17 14:35	10/22/17 12:49	1
Famphur	ND		0.95	0.098	ug/L		10/20/17 14:35	10/22/17 12:49	1
Fensulfothion	ND		0.95	0.11	ug/L		10/20/17 14:35	10/22/17 12:49	1
Fenthion	ND		0.95	0.20	ug/L		10/20/17 14:35	10/22/17 12:49	1
Malathion	ND		0.95	0.054	ug/L		10/20/17 14:35	10/22/17 12:49	1
Methyl parathion	ND		0.95	0.088	ug/L		10/20/17 14:35	10/22/17 12:49	1
Mevinphos	ND		0.95	0.15	ug/L		10/20/17 14:35	10/22/17 12:49	1
O,O,O-Triethyl phosphorothioate	ND		0.95	0.068	ug/L		10/20/17 14:35	10/22/17 12:49	1
Parathion	ND		0.95	0.11	ug/L		10/20/17 14:35	10/22/17 12:49	1
Phorate	ND		0.95	0.080	ug/L		10/20/17 14:35	10/22/17 12:49	1
Ronnel	ND		0.95	0.065	ug/L		10/20/17 14:35	10/22/17 12:49	1
Stirophos	ND		0.95	0.16	ug/L		10/20/17 14:35	10/22/17 12:49	1
Sulfotepp	ND		0.95	0.062	ug/L		10/20/17 14:35	10/22/17 12:49	1
Tokuthion	ND		0.95	0.097	ug/L		10/20/17 14:35	10/22/17 12:49	1
Trichloronate	ND		0.95	0.082	ug/L		10/20/17 14:35	10/22/17 12:49	1
Mocap	ND		0.95	0.062	ug/L		10/20/17 14:35	10/22/17 12:49	1
Thionazin	ND		0.95	0.071	ug/L		10/20/17 14:35	10/22/17 12:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Triphenylphosphate	64	X	72 - 142	10/20/17 14:35	10/22/17 12:49	1
Tributyl phosphate	68		34 - 143	10/20/17 14:35	10/22/17 12:49	1

## Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		0.95	0.20	ug/L		10/22/17 13:22	10/25/17 15:59	20
2,4-D	ND		3.8	0.71	ug/L		10/22/17 13:22	10/25/17 15:59	20
2,4-DB	ND		3.8	0.85	ug/L		10/22/17 13:22	10/25/17 15:59	20
Dalapon	ND		4.8	3.5	ug/L		10/22/17 13:22	10/25/17 15:59	20
Dicamba	ND		1.9	0.65	ug/L		10/22/17 13:22	10/25/17 15:59	20
Dichlorprop	ND		3.8	0.95	ug/L		10/22/17 13:22	10/25/17 15:59	20
Dinoseb	ND		0.86	0.54	ug/L		10/22/17 13:22	10/25/17 15:59	20
MCPA	ND		380	130	ug/L		10/22/17 13:22	10/25/17 15:59	20
MCPP	ND		380	280	ug/L		10/22/17 13:22	10/25/17 15:59	20
Pentachlorophenol	ND		0.48	0.22	ug/L		10/22/17 13:22	10/25/17 15:59	20
Silvex (2,4,5-TP)	ND		0.95	0.24	ug/L		10/22/17 13:22	10/25/17 15:59	20

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	43		20 - 100	10/22/17 13:22	10/25/17 15:59	20

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.014		0.010	0.0025	mg/L		10/25/17 05:31	10/25/17 11:52	1

TestAmerica Irvine



# Client Sample Results

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

TestAmerica Job ID: 440-194479-1

**Client Sample ID: QCAB**

**Lab Sample ID: 440-194479-3**

**Date Collected: 10/17/17 00:01**

**Matrix: Water**

**Date Received: 10/17/17 18:20**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			10/30/17 13:08	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			10/30/17 13:08	1
Acrolein	ND		50	2.5	ug/L			10/19/17 11:14	1
Acrylonitrile	ND		50	1.0	ug/L			10/19/17 11:14	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			10/30/17 13:08	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			10/30/17 13:08	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			10/30/17 13:08	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			10/30/17 13:08	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			10/30/17 13:08	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			10/30/17 13:08	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			10/30/17 13:08	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			10/30/17 13:08	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			10/30/17 13:08	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			10/30/17 13:08	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			10/30/17 13:08	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			10/30/17 13:08	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			10/30/17 13:08	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			10/30/17 13:08	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			10/30/17 13:08	1
2-Hexanone	ND		5.0	2.5	ug/L			10/30/17 13:08	1
Acetone	ND		20	10	ug/L			10/30/17 13:08	1
Acetonitrile	ND		20	10	ug/L			10/30/17 13:08	1
Acrolein	ND		5.0	2.5	ug/L			10/30/17 13:08	1
Acrylonitrile	ND		2.0	1.0	ug/L			10/30/17 13:08	1
Benzene	ND		0.50	0.25	ug/L			10/30/17 13:08	1
Allyl chloride	ND		1.0	0.50	ug/L			10/30/17 13:08	1
Bromoform	ND		1.0	0.40	ug/L			10/30/17 13:08	1
Bromomethane	ND		0.50	0.25	ug/L			10/30/17 13:08	1
Carbon disulfide	ND		1.0	0.50	ug/L			10/30/17 13:08	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			10/30/17 13:08	1
Chlorobenzene	ND		0.50	0.25	ug/L			10/30/17 13:08	1
Bromochloromethane	ND		0.50	0.25	ug/L			10/30/17 13:08	1
Chloroethane	ND		1.0	0.40	ug/L			10/30/17 13:08	1
Chloroform	ND		0.50	0.25	ug/L			10/30/17 13:08	1
Chloromethane	ND		0.50	0.25	ug/L			10/30/17 13:08	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			10/30/17 13:08	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			10/30/17 13:08	1
Dibromochloromethane	ND		0.50	0.25	ug/L			10/30/17 13:08	1
Dibromomethane	ND		0.50	0.25	ug/L			10/30/17 13:08	1
Bromodichloromethane	ND		0.50	0.25	ug/L			10/30/17 13:08	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			10/30/17 13:08	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			10/30/17 13:08	1
Ethylbenzene	ND		0.50	0.25	ug/L			10/30/17 13:08	1
Iodomethane	ND		2.0	1.0	ug/L			10/30/17 13:08	1
Isobutyl alcohol	ND		25	13	ug/L			10/30/17 13:08	1
m,p-Xylene	ND		1.0	0.50	ug/L			10/30/17 13:08	1
Methylene Chloride	ND		2.0	0.88	ug/L			10/30/17 13:08	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			10/30/17 13:08	1
Naphthalene	ND		1.0	0.40	ug/L			10/30/17 13:08	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-194479-1

**Client Sample ID: QCAB**

**Lab Sample ID: 440-194479-3**

Date Collected: 10/17/17 00:01

Matrix: Water

Date Received: 10/17/17 18:20

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.50	0.25	ug/L			10/30/17 13:08	1
Propionitrile	ND		20	10	ug/L			10/30/17 13:08	1
Styrene	ND		0.50	0.25	ug/L			10/30/17 13:08	1
t-Butanol	ND		10	5.0	ug/L			10/30/17 13:08	1
Tetrachloroethene	ND		0.50	0.25	ug/L			10/30/17 13:08	1
Tetrahydrofuran	ND		10	5.0	ug/L			10/30/17 13:08	1
Toluene	ND		0.50	0.25	ug/L			10/30/17 13:08	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			10/30/17 13:08	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			10/30/17 13:08	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			10/30/17 13:08	1
Trichloroethene	ND		0.50	0.25	ug/L			10/30/17 13:08	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			10/30/17 13:08	1
Vinyl acetate	ND *		4.0	2.0	ug/L			10/30/17 13:08	1
Vinyl chloride	ND		0.50	0.25	ug/L			10/30/17 13:08	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			10/30/17 13:08	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			10/30/17 13:08	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			10/30/17 13:08	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	5.7	T J	ug/L		3.21			10/30/17 13:08	1
Unknown	14	T J	ug/L		5.76			10/30/17 13:08	1
Unknown	4.8	T J	ug/L		15.41			10/30/17 13:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	110		80 - 128		10/19/17 11:14	1
4-Bromofluorobenzene (Surr)	102		80 - 120		10/19/17 11:14	1
Toluene-d8 (Surr)	102		80 - 128		10/30/17 13:08	1
4-Bromofluorobenzene (Surr)	97		80 - 120		10/30/17 13:08	1
Dibromofluoromethane (Surr)	91		76 - 132		10/19/17 11:14	1
Dibromofluoromethane (Surr)	91		76 - 132		10/30/17 13:08	1

**Method: 8260B - Volatile Organic Compounds (GC/MS) - RA**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			10/30/17 13:23	1
Methylacrylonitrile	ND		10	2.5	ug/L			10/30/17 13:23	1
Methyl methacrylate	ND		2.0	1.0	ug/L			10/30/17 13:23	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	101		80 - 128		10/30/17 13:23	1
4-Bromofluorobenzene (Surr)	103		80 - 120		10/30/17 13:23	1
Dibromofluoromethane (Surr)	110		76 - 132		10/30/17 13:23	1

**Client Sample ID: QCTB**

**Lab Sample ID: 440-194479-4**

Date Collected: 10/17/17 00:01

Matrix: Water

Date Received: 10/17/17 18:20

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			10/30/17 13:36	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			10/30/17 13:36	1
Acrolein	ND		50	2.5	ug/L			10/19/17 11:43	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-194479-1

**Client Sample ID: QCTB**  
**Date Collected: 10/17/17 00:01**  
**Date Received: 10/17/17 18:20**

**Lab Sample ID: 440-194479-4**  
**Matrix: Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acrylonitrile	ND		50	1.0	ug/L			10/19/17 11:43	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			10/30/17 13:36	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			10/30/17 13:36	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			10/30/17 13:36	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			10/30/17 13:36	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			10/30/17 13:36	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			10/30/17 13:36	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			10/30/17 13:36	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			10/30/17 13:36	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			10/30/17 13:36	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			10/30/17 13:36	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			10/30/17 13:36	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			10/30/17 13:36	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			10/30/17 13:36	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			10/30/17 13:36	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			10/30/17 13:36	1
2-Hexanone	ND		5.0	2.5	ug/L			10/30/17 13:36	1
Acetone	ND		20	10	ug/L			10/30/17 13:36	1
Acetonitrile	ND		20	10	ug/L			10/30/17 13:36	1
Acrolein	ND		5.0	2.5	ug/L			10/30/17 13:36	1
Acrylonitrile	ND		2.0	1.0	ug/L			10/30/17 13:36	1
Benzene	ND		0.50	0.25	ug/L			10/30/17 13:36	1
Allyl chloride	ND		1.0	0.50	ug/L			10/30/17 13:36	1
Bromoform	ND		1.0	0.40	ug/L			10/30/17 13:36	1
Bromomethane	ND		0.50	0.25	ug/L			10/30/17 13:36	1
Carbon disulfide	ND		1.0	0.50	ug/L			10/30/17 13:36	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			10/30/17 13:36	1
Chlorobenzene	ND		0.50	0.25	ug/L			10/30/17 13:36	1
Bromochloromethane	ND		0.50	0.25	ug/L			10/30/17 13:36	1
Chloroethane	ND		1.0	0.40	ug/L			10/30/17 13:36	1
Chloroform	ND		0.50	0.25	ug/L			10/30/17 13:36	1
Chloromethane	ND		0.50	0.25	ug/L			10/30/17 13:36	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			10/30/17 13:36	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			10/30/17 13:36	1
Dibromochloromethane	ND		0.50	0.25	ug/L			10/30/17 13:36	1
Dibromomethane	ND		0.50	0.25	ug/L			10/30/17 13:36	1
Bromodichloromethane	ND		0.50	0.25	ug/L			10/30/17 13:36	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			10/30/17 13:36	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			10/30/17 13:36	1
Ethylbenzene	ND		0.50	0.25	ug/L			10/30/17 13:36	1
Iodomethane	ND		2.0	1.0	ug/L			10/30/17 13:36	1
Isobutyl alcohol	ND		25	13	ug/L			10/30/17 13:36	1
m,p-Xylene	ND		1.0	0.50	ug/L			10/30/17 13:36	1
Methylene Chloride	ND		2.0	0.88	ug/L			10/30/17 13:36	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			10/30/17 13:36	1
Naphthalene	ND		1.0	0.40	ug/L			10/30/17 13:36	1
o-Xylene	ND		0.50	0.25	ug/L			10/30/17 13:36	1
Propionitrile	ND		20	10	ug/L			10/30/17 13:36	1
Styrene	ND		0.50	0.25	ug/L			10/30/17 13:36	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-194479-1

**Client Sample ID: QCTB**  
**Date Collected: 10/17/17 00:01**  
**Date Received: 10/17/17 18:20**

**Lab Sample ID: 440-194479-4**  
**Matrix: Water**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
t-Butanol	ND		10	5.0	ug/L			10/30/17 13:36	1
Tetrachloroethene	ND		0.50	0.25	ug/L			10/30/17 13:36	1
Tetrahydrofuran	ND		10	5.0	ug/L			10/30/17 13:36	1
Toluene	ND		0.50	0.25	ug/L			10/30/17 13:36	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			10/30/17 13:36	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			10/30/17 13:36	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			10/30/17 13:36	1
Trichloroethene	ND		0.50	0.25	ug/L			10/30/17 13:36	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			10/30/17 13:36	1
Vinyl acetate	ND *		4.0	2.0	ug/L			10/30/17 13:36	1
Vinyl chloride	ND		0.50	0.25	ug/L			10/30/17 13:36	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			10/30/17 13:36	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			10/30/17 13:36	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			10/30/17 13:36	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	14	T J	ug/L		5.76			10/30/17 13:36	1
Unknown	4.2	T J	ug/L		15.64			10/30/17 13:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	109		80 - 128		10/19/17 11:43	1
4-Bromofluorobenzene (Surr)	102		80 - 120		10/19/17 11:43	1
Toluene-d8 (Surr)	104		80 - 128		10/30/17 13:36	1
4-Bromofluorobenzene (Surr)	99		80 - 120		10/30/17 13:36	1
Dibromofluoromethane (Surr)	93		76 - 132		10/19/17 11:43	1
Dibromofluoromethane (Surr)	96		76 - 132		10/30/17 13:36	1

## Method: 8260B - Volatile Organic Compounds (GC/MS) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			10/30/17 13:53	1
Methylacrylonitrile	ND		10	2.5	ug/L			10/30/17 13:53	1
Methyl methacrylate	ND		2.0	1.0	ug/L			10/30/17 13:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	103		80 - 128		10/30/17 13:53	1
4-Bromofluorobenzene (Surr)	104		80 - 120		10/30/17 13:53	1
Dibromofluoromethane (Surr)	108		76 - 132		10/30/17 13:53	1

# Method Summary

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

TestAmerica Job ID: 440-194479-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL IRV
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL IRV
8270C LL	Semivolatile Organic Compounds by GCMS - Low Levels	SW846	TAL IRV
8081A	Organochlorine Pesticides (GC)	SW846	TAL IRV
8082	Polychlorinated Biphenyls (PCBs) by Gas Chromatography	SW846	TAL IRV
8141A	Organophosphorous Pesticides (GC)	SW846	TAL PIT
8151A	Herbicides (GC)	SW846	TAL PIT
4500 CN E-2011	Cyanide, Total: Colorimetric Method	SM	TAL SAV

#### Protocol References:

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

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

#### Laboratory References:

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

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

# Lab Chronicle

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

TestAmerica Job ID: 440-194479-1

**Client Sample ID: CA-L**  
**Date Collected: 10/17/17 10:30**  
**Date Received: 10/17/17 18:20**

**Lab Sample ID: 440-194479-1**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	436116	10/19/17 10:15	RM	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	438370	10/31/17 05:58	K1S	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	438220	10/30/17 12:12	RM	TAL IRV
Total/NA	Analysis	8260B	RA	1	10 mL	10 mL	438205	10/30/17 12:24	RM	TAL IRV
Total/NA	Prep	3520C			995 mL	1.0 mL	436207	10/19/17 10:46	JJM	TAL IRV
Total/NA	Analysis	8270C		20			437421	10/26/17 06:51	AI	TAL IRV
Total/NA	Prep	3520C			1035 mL	2.0 mL	436201	10/19/17 09:59	JS1	TAL IRV
Total/NA	Analysis	8270C		2			436972	10/24/17 03:44	DF	TAL IRV
Total/NA	Prep	3520C			990 mL	2.0 mL	436439	10/20/17 10:20	JJM	TAL IRV
Total/NA	Analysis	8270C LL		10			437867	10/27/17 16:03	DF	TAL IRV
Total/NA	Prep	3510C			1035 mL	2 mL	435880	10/18/17 06:42	L2A	TAL IRV
Total/NA	Analysis	8081A		5			436436	10/20/17 16:58	KS	TAL IRV
Total/NA	Prep	3510C			1035 mL	2 mL	435880	10/18/17 06:42	L2A	TAL IRV
Total/NA	Analysis	8082		1			436159	10/19/17 17:09	JM	TAL IRV
Total/NA	Prep	3510C			1050 mL	5.0 mL	226538	10/20/17 14:35	MAL	TAL PIT
Total/NA	Analysis	8141A		1			226568	10/22/17 12:16	JMO	TAL PIT
Total/NA	Prep	8151A			1050 mL	10 mL	226585	10/22/17 13:22	MAL	TAL PIT
Total/NA	Analysis	8151A		20			226897	10/25/17 14:46	JMO	TAL PIT

**Client Sample ID: LR-2R**  
**Date Collected: 10/17/17 11:30**  
**Date Received: 10/17/17 18:20**

**Lab Sample ID: 440-194479-2**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	436116	10/19/17 10:44	RM	TAL IRV
Total/NA	Analysis	8260B	RA	1	10 mL	10 mL	438458	10/31/17 09:18	TCN	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	438220	10/30/17 12:40	RM	TAL IRV
Total/NA	Analysis	8260B	RA	1	10 mL	10 mL	438205	10/30/17 12:54	RM	TAL IRV
Total/NA	Prep	3520C			955 mL	1.0 mL	436207	10/19/17 10:46	JJM	TAL IRV
Total/NA	Analysis	8270C		20			437421	10/26/17 07:13	AI	TAL IRV
Total/NA	Prep	3520C			965 mL	2.0 mL	436201	10/19/17 09:59	JS1	TAL IRV
Total/NA	Analysis	8270C		2			436972	10/24/17 04:07	DF	TAL IRV
Total/NA	Prep	3520C			1000 mL	2.0 mL	436439	10/20/17 10:20	JJM	TAL IRV
Total/NA	Analysis	8270C LL		5			437867	10/27/17 16:27	DF	TAL IRV
Total/NA	Prep	3510C			1005 mL	2 mL	435880	10/18/17 06:42	L2A	TAL IRV
Total/NA	Analysis	8081A		1			436196	10/19/17 19:15	KS	TAL IRV
Total/NA	Prep	3510C			1005 mL	2 mL	435880	10/18/17 06:42	L2A	TAL IRV
Total/NA	Analysis	8082		1			435624	10/18/17 14:28	JM	TAL IRV
Total/NA	Prep	3510C			1050 mL	5.0 mL	226538	10/20/17 14:35	MAL	TAL PIT
Total/NA	Analysis	8141A		1			226568	10/22/17 12:49	JMO	TAL PIT
Total/NA	Prep	8151A			1050 mL	10 mL	226585	10/22/17 13:22	MAL	TAL PIT
Total/NA	Analysis	8151A		20			226897	10/25/17 15:59	JMO	TAL PIT

TestAmerica Irvine

# Lab Chronicle

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

TestAmerica Job ID: 440-194479-1

**Client Sample ID: LR-2R**

**Lab Sample ID: 440-194479-2**

**Date Collected: 10/17/17 11:30**

**Matrix: Water**

**Date Received: 10/17/17 18:20**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Distill/CN			50 mL	50 mL	499799	10/25/17 05:31	DAM	TAL SAV
Total/NA	Analysis	4500 CN E-2011		1			499898	10/25/17 11:52	DAM	TAL SAV

**Client Sample ID: QCAB**

**Lab Sample ID: 440-194479-3**

**Date Collected: 10/17/17 00:01**

**Matrix: Water**

**Date Received: 10/17/17 18:20**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	436116	10/19/17 11:14	RM	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	438220	10/30/17 13:08	RM	TAL IRV
Total/NA	Analysis	8260B	RA	1	10 mL	10 mL	438205	10/30/17 13:23	RM	TAL IRV

**Client Sample ID: QCTB**

**Lab Sample ID: 440-194479-4**

**Date Collected: 10/17/17 00:01**

**Matrix: Water**

**Date Received: 10/17/17 18:20**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	436116	10/19/17 11:43	RM	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	438220	10/30/17 13:36	RM	TAL IRV
Total/NA	Analysis	8260B	RA	1	10 mL	10 mL	438205	10/30/17 13:53	RM	TAL IRV

**Laboratory References:**

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

TAL PIT = TestAmerica Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

TAL SAV = TestAmerica Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

# QC Sample Results

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

TestAmerica Job ID: 440-194479-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 440-436116/3**

**Matrix: Water**

**Analysis Batch: 436116**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acrolein	ND		50	2.5	ug/L			10/19/17 07:28	1
Acrylonitrile	ND		50	1.0	ug/L			10/19/17 07:28	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	109		80 - 128		10/19/17 07:28	1
4-Bromofluorobenzene (Surr)	100		80 - 120		10/19/17 07:28	1
Dibromofluoromethane (Surr)	91		76 - 132		10/19/17 07:28	1

**Lab Sample ID: LCS 440-436116/4**

**Matrix: Water**

**Analysis Batch: 436116**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acrolein	25.0	30.6	J	ug/L		122	10 - 145
Acrylonitrile	250	240		ug/L		96	48 - 140

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	106		80 - 128
4-Bromofluorobenzene (Surr)	104		80 - 120
Dibromofluoromethane (Surr)	91		76 - 132

**Lab Sample ID: 440-194336-B-1 MS**

**Matrix: Water**

**Analysis Batch: 436116**

**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
Acrolein	ND		125	131	J	ug/L		105	10 - 147
Acrylonitrile	ND		1250	1060		ug/L		85	38 - 144

Surrogate	MS %Recovery	MS Qualifier	Limits
Toluene-d8 (Surr)	109		80 - 128
4-Bromofluorobenzene (Surr)	104		80 - 120
Dibromofluoromethane (Surr)	88		76 - 132

**Lab Sample ID: 440-194336-B-1 MSD**

**Matrix: Water**

**Analysis Batch: 436116**

**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
Acrolein	ND		125	174	J	ug/L		139	10 - 147	28	40
Acrylonitrile	ND		1250	1130		ug/L		90	38 - 144	7	40

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Toluene-d8 (Surr)	107		80 - 128
4-Bromofluorobenzene (Surr)	101		80 - 120
Dibromofluoromethane (Surr)	92		76 - 132

TestAmerica Irvine



# QC Sample Results

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

TestAmerica Job ID: 440-194479-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 440-438205/4**  
**Matrix: Water**  
**Analysis Batch: 438205**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			10/30/17 09:28	1
Methylacrylonitrile	ND		10	2.5	ug/L			10/30/17 09:28	1
Methyl methacrylate	ND		2.0	1.0	ug/L			10/30/17 09:28	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	104		80 - 128		10/30/17 09:28	1
4-Bromofluorobenzene (Surr)	102		80 - 120		10/30/17 09:28	1
Dibromofluoromethane (Surr)	108		76 - 132		10/30/17 09:28	1

**Lab Sample ID: MB 440-438220/4**  
**Matrix: Water**  
**Analysis Batch: 438220**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			10/30/17 08:52	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			10/30/17 08:52	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			10/30/17 08:52	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			10/30/17 08:52	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			10/30/17 08:52	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			10/30/17 08:52	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			10/30/17 08:52	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			10/30/17 08:52	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			10/30/17 08:52	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			10/30/17 08:52	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			10/30/17 08:52	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			10/30/17 08:52	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			10/30/17 08:52	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			10/30/17 08:52	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			10/30/17 08:52	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			10/30/17 08:52	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			10/30/17 08:52	1
2-Hexanone	ND		5.0	2.5	ug/L			10/30/17 08:52	1
Acetone	ND		20	10	ug/L			10/30/17 08:52	1
Acetonitrile	ND		20	10	ug/L			10/30/17 08:52	1
Acrolein	ND		5.0	2.5	ug/L			10/30/17 08:52	1
Acrylonitrile	ND		2.0	1.0	ug/L			10/30/17 08:52	1
Benzene	ND		0.50	0.25	ug/L			10/30/17 08:52	1
Allyl chloride	ND		1.0	0.50	ug/L			10/30/17 08:52	1
Bromoform	ND		1.0	0.40	ug/L			10/30/17 08:52	1
Bromomethane	ND		0.50	0.25	ug/L			10/30/17 08:52	1
Carbon disulfide	ND		1.0	0.50	ug/L			10/30/17 08:52	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			10/30/17 08:52	1
Chlorobenzene	ND		0.50	0.25	ug/L			10/30/17 08:52	1
Bromochloromethane	ND		0.50	0.25	ug/L			10/30/17 08:52	1
Chloroethane	ND		1.0	0.40	ug/L			10/30/17 08:52	1
Chloroform	ND		0.50	0.25	ug/L			10/30/17 08:52	1
Chloromethane	ND		0.50	0.25	ug/L			10/30/17 08:52	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			10/30/17 08:52	1

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-194479-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 440-438220/4**  
**Matrix: Water**  
**Analysis Batch: 438220**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			10/30/17 08:52	1
Dibromochloromethane	ND		0.50	0.25	ug/L			10/30/17 08:52	1
Dibromomethane	ND		0.50	0.25	ug/L			10/30/17 08:52	1
Bromodichloromethane	ND		0.50	0.25	ug/L			10/30/17 08:52	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			10/30/17 08:52	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			10/30/17 08:52	1
Ethylbenzene	ND		0.50	0.25	ug/L			10/30/17 08:52	1
Iodomethane	ND		2.0	1.0	ug/L			10/30/17 08:52	1
Isobutyl alcohol	ND		25	13	ug/L			10/30/17 08:52	1
m,p-Xylene	ND		1.0	0.50	ug/L			10/30/17 08:52	1
Methylene Chloride	ND		2.0	0.88	ug/L			10/30/17 08:52	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			10/30/17 08:52	1
Naphthalene	ND		1.0	0.40	ug/L			10/30/17 08:52	1
o-Xylene	ND		0.50	0.25	ug/L			10/30/17 08:52	1
Propionitrile	ND		20	10	ug/L			10/30/17 08:52	1
Styrene	ND		0.50	0.25	ug/L			10/30/17 08:52	1
t-Butanol	ND		10	5.0	ug/L			10/30/17 08:52	1
Tetrachloroethene	ND		0.50	0.25	ug/L			10/30/17 08:52	1
Tetrahydrofuran	ND		10	5.0	ug/L			10/30/17 08:52	1
Toluene	ND		0.50	0.25	ug/L			10/30/17 08:52	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			10/30/17 08:52	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			10/30/17 08:52	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			10/30/17 08:52	1
Trichloroethene	ND		0.50	0.25	ug/L			10/30/17 08:52	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			10/30/17 08:52	1
Vinyl acetate	ND		4.0	2.0	ug/L			10/30/17 08:52	1
Vinyl chloride	ND		0.50	0.25	ug/L			10/30/17 08:52	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			10/30/17 08:52	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			10/30/17 08:52	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			10/30/17 08:52	1

<i>Tentatively Identified Compound</i>	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
<i>Tentatively Identified Compound</i>	None		ug/L					10/30/17 08:52	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>Toluene-d8 (Surr)</i>	106		80 - 128		10/30/17 08:52	1
<i>4-Bromofluorobenzene (Surr)</i>	97		80 - 120		10/30/17 08:52	1
<i>Dibromofluoromethane (Surr)</i>	94		76 - 132		10/30/17 08:52	1

**Lab Sample ID: LCS 440-438220/5**  
**Matrix: Water**  
**Analysis Batch: 438220**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,3-Trichloropropane	25.0	26.7		ug/L		107	63 - 130
1,1,1,2-Tetrachloroethane	25.0	26.2		ug/L		105	60 - 141
1,1,1-Trichloroethane	25.0	24.6		ug/L		98	70 - 130

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-194479-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 440-438220/5**

**Matrix: Water**

**Analysis Batch: 438220**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,2,2-Tetrachloroethane	25.0	26.8		ug/L		107	63 - 130
1,1,2-Trichloroethane	25.0	26.8		ug/L		107	70 - 130
1,1-Dichloroethane	25.0	25.4		ug/L		102	64 - 130
1,1-Dichloroethene	25.0	25.7		ug/L		103	70 - 130
1,1-Dichloropropene	25.0	28.6		ug/L		114	70 - 130
1,2,4-Trichlorobenzene	25.0	27.7		ug/L		111	60 - 140
1,2-Dibromo-3-Chloropropane	25.0	27.3		ug/L		109	52 - 140
1,2-Dichlorobenzene	25.0	25.6		ug/L		102	70 - 130
1,2-Dichloroethane	25.0	24.0		ug/L		96	57 - 138
1,2-Dichloropropane	25.0	26.9		ug/L		108	67 - 130
1,3-Dichlorobenzene	25.0	25.6		ug/L		102	70 - 130
1,3-Dichloropropane	25.0	25.7		ug/L		103	70 - 130
1,4-Dichlorobenzene	25.0	25.4		ug/L		101	70 - 130
2,2-Dichloropropane	25.0	26.2		ug/L		105	68 - 141
2-Hexanone	25.0	29.6		ug/L		119	10 - 150
Acetone	25.0	31.7		ug/L		127	10 - 150
Acetonitrile	250	280		ug/L		112	49 - 142
Acrolein	25.0	31.2		ug/L		125	10 - 145
Benzene	25.0	25.7		ug/L		103	68 - 130
Bromoform	25.0	26.8		ug/L		107	60 - 148
Bromomethane	25.0	22.8		ug/L		91	64 - 139
Carbon disulfide	25.0	27.9		ug/L		112	52 - 136
Carbon tetrachloride	25.0	25.2		ug/L		101	60 - 150
Chlorobenzene	25.0	24.6		ug/L		98	70 - 130
Bromochloromethane	25.0	26.6		ug/L		106	70 - 130
Chloroethane	25.0	24.1		ug/L		96	64 - 135
Chloroform	25.0	24.4		ug/L		98	70 - 130
Chloromethane	25.0	23.9		ug/L		96	47 - 140
cis-1,2-Dichloroethene	25.0	25.9		ug/L		104	70 - 133
cis-1,3-Dichloropropene	25.0	25.4		ug/L		101	70 - 133
Dibromochloromethane	25.0	24.7		ug/L		99	69 - 145
Dibromomethane	25.0	24.5		ug/L		98	70 - 130
Bromodichloromethane	25.0	24.4		ug/L		98	70 - 132
Dichlorodifluoromethane	25.0	21.6		ug/L		86	29 - 150
Ethylbenzene	25.0	25.8		ug/L		103	70 - 130
m,p-Xylene	25.0	27.2		ug/L		109	70 - 130
Methylene Chloride	25.0	24.4		ug/L		98	52 - 130
Methyl tert-butyl ether	25.0	24.4		ug/L		98	63 - 131
Naphthalene	25.0	27.6		ug/L		111	60 - 140
o-Xylene	25.0	25.7		ug/L		103	70 - 130
Styrene	25.0	26.7		ug/L		107	70 - 134
t-Butanol	250	284		ug/L		113	70 - 130
Tetrachloroethene	25.0	27.5		ug/L		110	70 - 130
Toluene	25.0	26.1		ug/L		104	70 - 130
trans-1,2-Dichloroethene	25.0	29.0		ug/L		116	70 - 130
trans-1,3-Dichloropropene	25.0	25.7		ug/L		103	70 - 132
Trichloroethene	25.0	26.4		ug/L		106	70 - 130
Trichlorofluoromethane	25.0	24.2		ug/L		97	60 - 150

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-194479-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 440-438220/5**  
**Matrix: Water**  
**Analysis Batch: 438220**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Vinyl acetate	25.0	36.4	*	ug/L		145	48 - 140
Vinyl chloride	25.0	22.8		ug/L		91	59 - 133
1,2-Dibromoethane (EDB)	25.0	27.8		ug/L		111	70 - 130
2-Butanone (MEK)	25.0	30.1		ug/L		120	44 - 150
4-Methyl-2-pentanone (MIBK)	25.0	32.9		ug/L		132	59 - 149

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	96		80 - 128
4-Bromofluorobenzene (Surr)	97		80 - 120
Dibromofluoromethane (Surr)	92		76 - 132

**Lab Sample ID: 440-194396-A-1 MS**  
**Matrix: Water**  
**Analysis Batch: 438220**

**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
1,2,3-Trichloropropane	ND		25.0	25.3		ug/L		101	60 - 130
1,1,1,2-Tetrachloroethane	ND		25.0	26.4		ug/L		106	60 - 149
1,1,1-Trichloroethane	ND		25.0	26.5		ug/L		106	70 - 130
1,1,2,2-Tetrachloroethane	ND		25.0	27.7		ug/L		111	63 - 130
1,1,2-Trichloroethane	ND		25.0	29.1		ug/L		116	70 - 130
1,1-Dichloroethane	ND		25.0	27.5		ug/L		110	65 - 130
1,1-Dichloroethene	ND		25.0	27.6		ug/L		110	70 - 130
1,1-Dichloropropene	ND	F1	25.0	30.8		ug/L		123	64 - 130
1,2,4-Trichlorobenzene	ND		25.0	30.0		ug/L		120	60 - 140
1,2-Dibromo-3-Chloropropane	ND		25.0	26.4		ug/L		106	48 - 140
1,2-Dichlorobenzene	ND		25.0	27.2		ug/L		109	70 - 130
1,2-Dichloroethane	ND		25.0	25.0		ug/L		100	56 - 146
1,2-Dichloropropane	ND		25.0	26.4		ug/L		106	69 - 130
1,3-Dichlorobenzene	ND		25.0	27.0		ug/L		108	70 - 130
1,3-Dichloropropane	ND		25.0	26.4		ug/L		105	70 - 130
1,4-Dichlorobenzene	ND		25.0	27.2		ug/L		109	70 - 130
2,2-Dichloropropane	ND		25.0	28.4		ug/L		113	69 - 138
2-Hexanone	ND		25.0	29.0		ug/L		116	10 - 150
Acetone	ND		25.0	32.3		ug/L		129	10 - 150
Acetonitrile	ND		25.0	269		ug/L		108	37 - 140
Acrolein	ND		25.0	30.0		ug/L		120	10 - 147
Benzene	ND		25.0	27.5		ug/L		110	66 - 130
Bromoform	ND		25.0	26.8		ug/L		107	59 - 150
Bromomethane	ND		25.0	23.9		ug/L		96	62 - 131
Carbon disulfide	ND		25.0	29.9		ug/L		120	49 - 140
Carbon tetrachloride	ND		25.0	26.2		ug/L		105	60 - 150
Chlorobenzene	ND		25.0	26.2		ug/L		105	70 - 130
Bromochloromethane	ND		25.0	26.1		ug/L		104	70 - 130
Chloroethane	ND		25.0	25.2		ug/L		101	68 - 130
Chloroform	ND		25.0	26.4		ug/L		105	70 - 130
Chloromethane	ND		25.0	25.6		ug/L		102	39 - 144
cis-1,2-Dichloroethene	ND		25.0	26.8		ug/L		107	70 - 130

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-194479-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 440-194396-A-1 MS**  
**Matrix: Water**  
**Analysis Batch: 438220**

**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
cis-1,3-Dichloropropene	ND		25.0	27.0		ug/L		108	70 - 133
Dibromochloromethane	ND		25.0	26.3		ug/L		105	70 - 148
Dibromomethane	ND		25.0	25.7		ug/L		103	70 - 130
Bromodichloromethane	ND		25.0	26.2		ug/L		105	70 - 138
Dichlorodifluoromethane	ND		25.0	24.0		ug/L		96	25 - 142
Ethylbenzene	ND		25.0	28.0		ug/L		112	70 - 130
m,p-Xylene	ND		25.0	28.9		ug/L		116	70 - 133
Methylene Chloride	ND		25.0	25.7		ug/L		103	52 - 130
Methyl tert-butyl ether	0.60		25.0	26.9		ug/L		105	70 - 130
Naphthalene	ND		25.0	29.1		ug/L		116	60 - 140
o-Xylene	ND		25.0	26.9		ug/L		108	70 - 133
Styrene	ND		25.0	28.8		ug/L		115	29 - 150
t-Butanol	ND		250	292		ug/L		117	70 - 130
Tetrachloroethene	ND		25.0	30.0		ug/L		120	70 - 137
Toluene	ND		25.0	28.3		ug/L		113	70 - 130
trans-1,2-Dichloroethene	ND		25.0	31.8		ug/L		127	70 - 130
trans-1,3-Dichloropropene	ND		25.0	27.2		ug/L		109	70 - 138
Trichloroethene	ND		25.0	27.3		ug/L		109	70 - 130
Trichlorofluoromethane	ND		25.0	26.4		ug/L		105	60 - 150
Vinyl acetate	ND	F1 *	25.0	38.1	F1	ug/L		152	23 - 150
Vinyl chloride	ND		25.0	24.5		ug/L		98	50 - 137
1,2-Dibromoethane (EDB)	ND		25.0	27.9		ug/L		112	70 - 131
2-Butanone (MEK)	ND		25.0	29.9		ug/L		120	48 - 140
4-Methyl-2-pentanone (MIBK)	ND		25.0	33.3		ug/L		133	52 - 150

Surrogate	MS %Recovery	MS Qualifier	MS Limits
Toluene-d8 (Surr)	101		80 - 128
4-Bromofluorobenzene (Surr)	97		80 - 120
Dibromofluoromethane (Surr)	94		76 - 132

**Lab Sample ID: 440-194396-A-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 438220**

**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
1,2,3-Trichloropropane	ND		25.0	30.1		ug/L		120	60 - 130	17	30
1,1,1,2-Tetrachloroethane	ND		25.0	27.6		ug/L		110	60 - 149	4	20
1,1,1-Trichloroethane	ND		25.0	26.8		ug/L		107	70 - 130	1	20
1,1,2,2-Tetrachloroethane	ND		25.0	29.0		ug/L		116	63 - 130	5	30
1,1,2-Trichloroethane	ND		25.0	29.8		ug/L		119	70 - 130	2	25
1,1-Dichloroethane	ND		25.0	28.0		ug/L		112	65 - 130	2	20
1,1-Dichloroethene	ND		25.0	27.3		ug/L		109	70 - 130	1	20
1,1-Dichloropropene	ND	F1	25.0	32.7	F1	ug/L		131	64 - 130	6	20
1,2,4-Trichlorobenzene	ND		25.0	30.2		ug/L		121	60 - 140	1	20
1,2-Dibromo-3-Chloropropane	ND		25.0	27.9		ug/L		111	48 - 140	5	30
1,2-Dichlorobenzene	ND		25.0	28.8		ug/L		115	70 - 130	6	20
1,2-Dichloroethane	ND		25.0	26.2		ug/L		105	56 - 146	5	20
1,2-Dichloropropane	ND		25.0	28.4		ug/L		114	69 - 130	7	20

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-194479-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 440-194396-A-1 MSD**

**Matrix: Water**

**Analysis Batch: 438220**

**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
1,3-Dichlorobenzene	ND		25.0	28.3		ug/L		113	70 - 130	5	20
1,3-Dichloropropane	ND		25.0	27.3		ug/L		109	70 - 130	4	25
1,4-Dichlorobenzene	ND		25.0	27.9		ug/L		112	70 - 130	2	20
2,2-Dichloropropane	ND		25.0	28.3		ug/L		113	69 - 138	0	25
2-Hexanone	ND		25.0	32.9		ug/L		131	10 - 150	13	35
Acetone	ND		25.0	36.1		ug/L		144	10 - 150	11	35
Acetonitrile	ND		25.0	289		ug/L		116	37 - 140	7	40
Acrolein	ND		25.0	29.4		ug/L		118	10 - 147	2	40
Benzene	ND		25.0	27.6		ug/L		110	66 - 130	1	20
Bromoform	ND		25.0	29.0		ug/L		116	59 - 150	8	25
Bromomethane	ND		25.0	25.2		ug/L		101	62 - 131	5	25
Carbon disulfide	ND		25.0	30.3		ug/L		121	49 - 140	1	20
Carbon tetrachloride	ND		25.0	26.8		ug/L		107	60 - 150	2	25
Chlorobenzene	ND		25.0	27.4		ug/L		110	70 - 130	4	20
Bromochloromethane	ND		25.0	28.0		ug/L		112	70 - 130	7	25
Chloroethane	ND		25.0	27.1		ug/L		108	68 - 130	7	25
Chloroform	ND		25.0	26.8		ug/L		107	70 - 130	1	20
Chloromethane	ND		25.0	26.1		ug/L		105	39 - 144	2	25
cis-1,2-Dichloroethene	ND		25.0	27.6		ug/L		110	70 - 130	3	20
cis-1,3-Dichloropropene	ND		25.0	28.0		ug/L		112	70 - 133	4	20
Dibromochloromethane	ND		25.0	27.5		ug/L		110	70 - 148	5	25
Dibromomethane	ND		25.0	26.7		ug/L		107	70 - 130	4	25
Bromodichloromethane	ND		25.0	26.2		ug/L		105	70 - 138	0	20
Dichlorodifluoromethane	ND		25.0	25.3		ug/L		101	25 - 142	5	30
Ethylbenzene	ND		25.0	28.3		ug/L		113	70 - 130	1	20
m,p-Xylene	ND		25.0	29.6		ug/L		118	70 - 133	2	25
Methylene Chloride	ND		25.0	26.5		ug/L		106	52 - 130	3	20
Methyl tert-butyl ether	0.60		25.0	28.0		ug/L		110	70 - 130	4	25
Naphthalene	ND		25.0	30.7		ug/L		123	60 - 140	5	30
o-Xylene	ND		25.0	27.4		ug/L		109	70 - 133	2	20
Styrene	ND		25.0	28.9		ug/L		116	29 - 150	0	35
t-Butanol	ND		25.0	298		ug/L		119	70 - 130	2	25
Tetrachloroethene	ND		25.0	30.1		ug/L		120	70 - 137	0	20
Toluene	ND		25.0	28.6		ug/L		114	70 - 130	1	20
trans-1,2-Dichloroethene	ND		25.0	31.6		ug/L		126	70 - 130	1	20
trans-1,3-Dichloropropene	ND		25.0	27.8		ug/L		111	70 - 138	2	25
Trichloroethene	ND		25.0	26.9		ug/L		108	70 - 130	2	20
Trichlorofluoromethane	ND		25.0	26.6		ug/L		106	60 - 150	1	25
Vinyl acetate	ND	F1 *	25.0	39.2	F1	ug/L		157	23 - 150	3	30
Vinyl chloride	ND		25.0	25.0		ug/L		100	50 - 137	2	30
1,2-Dibromoethane (EDB)	ND		25.0	29.7		ug/L		119	70 - 131	6	25
2-Butanone (MEK)	ND		25.0	29.5		ug/L		118	48 - 140	1	40
4-Methyl-2-pentanone (MIBK)	ND		25.0	34.5		ug/L		138	52 - 150	4	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Toluene-d8 (Surr)	99		80 - 128
4-Bromofluorobenzene (Surr)	97		80 - 120
Dibromofluoromethane (Surr)	90		76 - 132

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-194479-1

**Lab Sample ID: MB 440-438370/3**  
**Matrix: Water**  
**Analysis Batch: 438370**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	10	ug/L			10/30/17 19:00	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	105		80 - 128					10/30/17 19:00	1
4-Bromofluorobenzene (Surr)	97		80 - 120					10/30/17 19:00	1
Dibromofluoromethane (Surr)	104		76 - 132					10/30/17 19:00	1

**Lab Sample ID: LCS 440-438370/4**  
**Matrix: Water**  
**Analysis Batch: 438370**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	25.0	18.0	J	ug/L		72	10 - 150
Surrogate	%Recovery	LCS Qualifier	Limits				
Toluene-d8 (Surr)	99		80 - 128				
4-Bromofluorobenzene (Surr)	94		80 - 120				
Dibromofluoromethane (Surr)	100		76 - 132				

**Lab Sample ID: 440-195009-A-8 MS**  
**Matrix: Water**  
**Analysis Batch: 438370**

**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
Acetone	ND		25.0	17.5	J	ug/L		70	10 - 150
Surrogate	%Recovery	MS Qualifier	Limits						
Toluene-d8 (Surr)	100		80 - 128						
4-Bromofluorobenzene (Surr)	92		80 - 120						
Dibromofluoromethane (Surr)	101		76 - 132						

**Lab Sample ID: 440-195009-A-8 MSD**  
**Matrix: Water**  
**Analysis Batch: 438370**

**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
Acetone	ND		25.0	19.7	J	ug/L		79	10 - 150	12	35
Surrogate	%Recovery	MSD Qualifier	Limits								
Toluene-d8 (Surr)	101		80 - 128								
4-Bromofluorobenzene (Surr)	96		80 - 120								
Dibromofluoromethane (Surr)	100		76 - 132								

**Lab Sample ID: MB 440-438458/3**  
**Matrix: Water**  
**Analysis Batch: 438458**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	10	ug/L			10/31/17 08:18	1

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-194479-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 440-438458/3**  
**Matrix: Water**  
**Analysis Batch: 438458**

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

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Toluene-d8 (Surr)	106		80 - 128		10/31/17 08:18	1
4-Bromofluorobenzene (Surr)	95		80 - 120		10/31/17 08:18	1
Dibromofluoromethane (Surr)	103		76 - 132		10/31/17 08:18	1

**Lab Sample ID: LCS 440-438458/4**  
**Matrix: Water**  
**Analysis Batch: 438458**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Toluene-d8 (Surr)	102		80 - 128
4-Bromofluorobenzene (Surr)	95		80 - 120
Dibromofluoromethane (Surr)	102		76 - 132

**Lab Sample ID: 440-195013-B-1 MS**  
**Matrix: Water**  
**Analysis Batch: 438458**

**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

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
Toluene-d8 (Surr)	106		80 - 128
4-Bromofluorobenzene (Surr)	93		80 - 120
Dibromofluoromethane (Surr)	98		76 - 132

**Lab Sample ID: 440-195013-B-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 438458**

**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

Surrogate	MSD MSD		Limits
	%Recovery	Qualifier	
Toluene-d8 (Surr)	106		80 - 128
4-Bromofluorobenzene (Surr)	95		80 - 120
Dibromofluoromethane (Surr)	98		76 - 132



# QC Sample Results

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

TestAmerica Job ID: 440-194479-1

## Method: 8270C - Semivolatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 440-436201/1-A**

**Matrix: Water**

**Analysis Batch: 436972**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 436201**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4,5-Tetrachlorobenzene	ND		10	2.6	ug/L		10/19/17 09:59	10/23/17 21:38	1
1,4-Naphthoquinone	ND		10	4.2	ug/L		10/19/17 09:59	10/23/17 21:38	1
1,4-phenylenediamine	ND		63	26	ug/L		10/19/17 09:59	10/23/17 21:38	1
1-Naphthylamine	ND		16	5.8	ug/L		10/19/17 09:59	10/23/17 21:38	1
2,3,4,6-Tetrachlorophenol	ND		16	4.7	ug/L		10/19/17 09:59	10/23/17 21:38	1
2,6-Dichlorophenol	ND		16	6.3	ug/L		10/19/17 09:59	10/23/17 21:38	1
2-Acetylaminofluorene	ND		10	3.1	ug/L		10/19/17 09:59	10/23/17 21:38	1
2-Naphthylamine	ND		10	4.2	ug/L		10/19/17 09:59	10/23/17 21:38	1
3,3'-Dimethylbenzidine	ND		26	10	ug/L		10/19/17 09:59	10/23/17 21:38	1
3-Methylcholanthrene	ND		10	2.6	ug/L		10/19/17 09:59	10/23/17 21:38	1
4-Aminobiphenyl	ND		16	5.2	ug/L		10/19/17 09:59	10/23/17 21:38	1
5-Nitro-o-toluidine	ND		10	3.1	ug/L		10/19/17 09:59	10/23/17 21:38	1
7,12-Dimethylbenz(a)anthracene	ND		10	4.2	ug/L		10/19/17 09:59	10/23/17 21:38	1
Acetophenone	ND		16	4.2	ug/L		10/19/17 09:59	10/23/17 21:38	1
alpha,alpha-Dimethyl phenethylamine	ND		130	42	ug/L		10/19/17 09:59	10/23/17 21:38	1
Diallate	ND		16	6.3	ug/L		10/19/17 09:59	10/23/17 21:38	1
Dimethyl aminoazobenzene	ND		10	4.2	ug/L		10/19/17 09:59	10/23/17 21:38	1
Diphenylamine	ND		10	3.1	ug/L		10/19/17 09:59	10/23/17 21:38	1
Ethyl 4,4'-Dichlorobenzilate	ND		10	2.6	ug/L		10/19/17 09:59	10/23/17 21:38	1
Ethyl methanesulfonate	ND		10	4.2	ug/L		10/19/17 09:59	10/23/17 21:38	1
Isodrin	ND		10	3.7	ug/L		10/19/17 09:59	10/23/17 21:38	1
Isosafrole	ND		16	6.3	ug/L		10/19/17 09:59	10/23/17 21:38	1
Kepone	ND		100	37	ug/L		10/19/17 09:59	10/23/17 21:38	1
Methapyrilene	ND		21	5.2	ug/L		10/19/17 09:59	10/23/17 21:38	1
Methyl methanesulfonate	ND		16	5.2	ug/L		10/19/17 09:59	10/23/17 21:38	1
N-Nitrosodiethylamine	ND		10	3.1	ug/L		10/19/17 09:59	10/23/17 21:38	1
N-Nitrosodi-n-butylamine	ND		10	4.7	ug/L		10/19/17 09:59	10/23/17 21:38	1
N-Nitrosomethylethylamine	ND		10	2.6	ug/L		10/19/17 09:59	10/23/17 21:38	1
N-Nitrosopiperidine	ND		10	4.2	ug/L		10/19/17 09:59	10/23/17 21:38	1
N-Nitrosopyrrolidine	ND		10	4.2	ug/L		10/19/17 09:59	10/23/17 21:38	1
o,o',o"-Triethylphosphorothioate	ND		16	4.7	ug/L		10/19/17 09:59	10/23/17 21:38	1
o-Toluidine	ND		10	2.6	ug/L		10/19/17 09:59	10/23/17 21:38	1
Pentachlorobenzene	ND		10	3.1	ug/L		10/19/17 09:59	10/23/17 21:38	1
Pentachloronitrobenzene	ND		10	2.6	ug/L		10/19/17 09:59	10/23/17 21:38	1
Phenacetin	ND		10	3.7	ug/L		10/19/17 09:59	10/23/17 21:38	1
Phorate	ND		10	5.2	ug/L		10/19/17 09:59	10/23/17 21:38	1
Pronamide	ND		16	5.2	ug/L		10/19/17 09:59	10/23/17 21:38	1
Safrole, Total	ND		10	4.2	ug/L		10/19/17 09:59	10/23/17 21:38	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	70		40 - 120	10/19/17 09:59	10/23/17 21:38	1
2-Fluorobiphenyl	66		50 - 120	10/19/17 09:59	10/23/17 21:38	1
2-Fluorophenol (Surr)	66		30 - 120	10/19/17 09:59	10/23/17 21:38	1
Nitrobenzene-d5 (Surr)	70		45 - 120	10/19/17 09:59	10/23/17 21:38	1
Phenol-d6 (Surr)	68		35 - 120	10/19/17 09:59	10/23/17 21:38	1
Terphenyl-d14 (Surr)	69		10 - 150	10/19/17 09:59	10/23/17 21:38	1

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-194479-1

## Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 440-436207/1-A**  
**Matrix: Water**  
**Analysis Batch: 436545**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 436207**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		1.0	0.25	ug/L		10/19/17 10:46	10/21/17 02:01	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	70		30 - 120				10/19/17 10:46	10/21/17 02:01	1

**Lab Sample ID: LCS 440-436207/3-A**  
**Matrix: Water**  
**Analysis Batch: 436545**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 436207**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits		
1,4-Dioxane	2.02	1.41		ug/L		70	35 - 120		
Surrogate	%Recovery	LCS Qualifier	Limits						
1,4-Dioxane-d8 (Surr)	75		30 - 120						

**Lab Sample ID: LCSD 440-436207/4-A**  
**Matrix: Water**  
**Analysis Batch: 436545**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 436207**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,4-Dioxane	2.00	1.40		ug/L		70	35 - 120	1	35
Surrogate	%Recovery	LCSD Qualifier	Limits						
1,4-Dioxane-d8 (Surr)	69		30 - 120						

## Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels

**Lab Sample ID: MB 440-436439/1-A**  
**Matrix: Water**  
**Analysis Batch: 437510**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 436439**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		1.1	0.54	ug/L		10/20/17 10:20	10/26/17 00:07	1
1,2-Dichlorobenzene	ND		0.54	0.22	ug/L		10/20/17 10:20	10/26/17 00:07	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		1.1	0.54	ug/L		10/20/17 10:20	10/26/17 00:07	1
1,3-Dichlorobenzene	ND		0.54	0.22	ug/L		10/20/17 10:20	10/26/17 00:07	1
1,4-Dichlorobenzene	ND		0.54	0.22	ug/L		10/20/17 10:20	10/26/17 00:07	1
2,4,5-Trichlorophenol	ND		2.2	1.1	ug/L		10/20/17 10:20	10/26/17 00:07	1
2,4,6-Trichlorophenol	ND		1.1	0.54	ug/L		10/20/17 10:20	10/26/17 00:07	1
2,4-Dichlorophenol	ND		2.2	1.1	ug/L		10/20/17 10:20	10/26/17 00:07	1
2,4-Dimethylphenol	ND		2.2	1.1	ug/L		10/20/17 10:20	10/26/17 00:07	1
2,4-Dinitrophenol	ND		5.4	2.2	ug/L		10/20/17 10:20	10/26/17 00:07	1
2,4-Dinitrotoluene	ND		5.4	2.2	ug/L		10/20/17 10:20	10/26/17 00:07	1
2,6-Dinitrotoluene	ND		5.4	2.2	ug/L		10/20/17 10:20	10/26/17 00:07	1
2-Chloronaphthalene	ND		0.54	0.22	ug/L		10/20/17 10:20	10/26/17 00:07	1
2-Chlorophenol	ND		1.1	0.54	ug/L		10/20/17 10:20	10/26/17 00:07	1

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-194479-1

## Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

**Lab Sample ID: MB 440-436439/1-A**  
**Matrix: Water**  
**Analysis Batch: 437510**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 436439**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Methylnaphthalene	ND		1.1	0.54	ug/L		10/20/17 10:20	10/26/17 00:07	1
2-Methylphenol	ND		2.2	1.1	ug/L		10/20/17 10:20	10/26/17 00:07	1
2-Nitroaniline	ND		5.4	2.2	ug/L		10/20/17 10:20	10/26/17 00:07	1
2-Nitrophenol	ND		2.2	1.1	ug/L		10/20/17 10:20	10/26/17 00:07	1
3,3'-Dichlorobenzidine	ND		5.4	2.2	ug/L		10/20/17 10:20	10/26/17 00:07	1
3-Methylphenol + 4-Methylphenol	ND		5.4	2.2	ug/L		10/20/17 10:20	10/26/17 00:07	1
3-Nitroaniline	ND		5.4	2.2	ug/L		10/20/17 10:20	10/26/17 00:07	1
4,6-Dinitro-2-methylphenol	ND		5.4	2.2	ug/L		10/20/17 10:20	10/26/17 00:07	1
4-Bromophenyl phenyl ether	ND		1.1	0.54	ug/L		10/20/17 10:20	10/26/17 00:07	1
4-Chloro-3-methylphenol	ND		2.2	0.22	ug/L		10/20/17 10:20	10/26/17 00:07	1
4-Chloroaniline	ND		2.2	1.1	ug/L		10/20/17 10:20	10/26/17 00:07	1
4-Chlorophenyl phenyl ether	ND		0.54	0.22	ug/L		10/20/17 10:20	10/26/17 00:07	1
4-Nitroaniline	ND		5.4	2.2	ug/L		10/20/17 10:20	10/26/17 00:07	1
4-Nitrophenol	ND		5.4	2.2	ug/L		10/20/17 10:20	10/26/17 00:07	1
Acenaphthene	ND		0.54	0.22	ug/L		10/20/17 10:20	10/26/17 00:07	1
Acenaphthylene	ND		0.54	0.22	ug/L		10/20/17 10:20	10/26/17 00:07	1
Aniline	ND		11	2.2	ug/L		10/20/17 10:20	10/26/17 00:07	1
Anthracene	ND		0.54	0.22	ug/L		10/20/17 10:20	10/26/17 00:07	1
Benzidine	ND		11	5.4	ug/L		10/20/17 10:20	10/26/17 00:07	1
Benzo[a]anthracene	ND		5.4	2.2	ug/L		10/20/17 10:20	10/26/17 00:07	1
Benzo[a]pyrene	ND		2.2	0.54	ug/L		10/20/17 10:20	10/26/17 00:07	1
Benzo[b]fluoranthene	ND		2.2	1.1	ug/L		10/20/17 10:20	10/26/17 00:07	1
Benzo[g,h,i]perylene	ND		5.4	2.2	ug/L		10/20/17 10:20	10/26/17 00:07	1
Benzo[k]fluoranthene	ND		0.54	0.27	ug/L		10/20/17 10:20	10/26/17 00:07	1
Benzoic acid	ND		5.4	2.2	ug/L		10/20/17 10:20	10/26/17 00:07	1
Benzyl alcohol	ND		5.4	2.2	ug/L		10/20/17 10:20	10/26/17 00:07	1
bis (2-chloroisopropyl) ether	ND		0.54	0.22	ug/L		10/20/17 10:20	10/26/17 00:07	1
Bis(2-chloroethoxy)methane	ND		0.54	0.22	ug/L		10/20/17 10:20	10/26/17 00:07	1
Bis(2-chloroethyl)ether	ND		0.54	0.22	ug/L		10/20/17 10:20	10/26/17 00:07	1
Bis(2-ethylhexyl) phthalate	ND		5.4	2.2	ug/L		10/20/17 10:20	10/26/17 00:07	1
Butyl benzyl phthalate	ND		5.4	2.2	ug/L		10/20/17 10:20	10/26/17 00:07	1
Chrysene	ND		0.54	0.22	ug/L		10/20/17 10:20	10/26/17 00:07	1
Dibenz(a,h)anthracene	ND		0.54	0.27	ug/L		10/20/17 10:20	10/26/17 00:07	1
Dibenzofuran	ND		0.54	0.22	ug/L		10/20/17 10:20	10/26/17 00:07	1
Diethyl phthalate	ND		1.1	0.54	ug/L		10/20/17 10:20	10/26/17 00:07	1
Dimethyl phthalate	ND		0.54	0.27	ug/L		10/20/17 10:20	10/26/17 00:07	1
Di-n-butyl phthalate	ND		2.2	1.1	ug/L		10/20/17 10:20	10/26/17 00:07	1
Di-n-octyl phthalate	ND		5.4	2.2	ug/L		10/20/17 10:20	10/26/17 00:07	1
Fluoranthene	ND		0.54	0.22	ug/L		10/20/17 10:20	10/26/17 00:07	1
Fluorene	ND		0.54	0.22	ug/L		10/20/17 10:20	10/26/17 00:07	1
Hexachlorobenzene	ND		1.1	0.54	ug/L		10/20/17 10:20	10/26/17 00:07	1
Hexachlorobutadiene	ND		2.2	0.54	ug/L		10/20/17 10:20	10/26/17 00:07	1
Hexachlorocyclopentadiene	ND		5.4	2.2	ug/L		10/20/17 10:20	10/26/17 00:07	1
Hexachloroethane	ND		3.2	0.54	ug/L		10/20/17 10:20	10/26/17 00:07	1
Indeno[1,2,3-cd]pyrene	ND		2.2	1.1	ug/L		10/20/17 10:20	10/26/17 00:07	1
Isophorone	ND		1.1	0.54	ug/L		10/20/17 10:20	10/26/17 00:07	1
Naphthalene	ND		1.1	0.54	ug/L		10/20/17 10:20	10/26/17 00:07	1
Nitrobenzene	ND		1.1	0.54	ug/L		10/20/17 10:20	10/26/17 00:07	1

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-194479-1

## Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

**Lab Sample ID: MB 440-436439/1-A**  
**Matrix: Water**  
**Analysis Batch: 437510**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 436439**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodimethylamine	ND		2.2	1.1	ug/L		10/20/17 10:20	10/26/17 00:07	1
N-Nitrosodi-n-propylamine	ND		2.2	1.1	ug/L		10/20/17 10:20	10/26/17 00:07	1
N-Nitrosodiphenylamine	ND		1.1	0.54	ug/L		10/20/17 10:20	10/26/17 00:07	1
Pentachlorophenol	ND		2.2	1.1	ug/L		10/20/17 10:20	10/26/17 00:07	1
Phenanthrene	ND		0.54	0.22	ug/L		10/20/17 10:20	10/26/17 00:07	1
Phenol	ND		1.1	0.54	ug/L		10/20/17 10:20	10/26/17 00:07	1
Pyrene	ND		0.54	0.22	ug/L		10/20/17 10:20	10/26/17 00:07	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4,6-Tribromophenol (Surr)	59		40 - 120	10/20/17 10:20	10/26/17 00:07	1
2-Fluorobiphenyl	66		50 - 120	10/20/17 10:20	10/26/17 00:07	1
2-Fluorophenol (Surr)	72		30 - 120	10/20/17 10:20	10/26/17 00:07	1
Nitrobenzene-d5 (Surr)	70		45 - 120	10/20/17 10:20	10/26/17 00:07	1
Phenol-d6 (Surr)	65		35 - 120	10/20/17 10:20	10/26/17 00:07	1
Terphenyl-d14 (Surr)	81		37 - 144	10/20/17 10:20	10/26/17 00:07	1

**Lab Sample ID: LCS 440-436439/2-A**  
**Matrix: Water**  
**Analysis Batch: 437510**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 436439**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,2,4-Trichlorobenzene	10.4	5.59		ug/L		54	44 - 88
1,2-Dichlorobenzene	10.4	5.62		ug/L		54	43 - 87
1,2-Diphenylhydrazine(as Azobenzene)	10.5	7.57		ug/L		72	50 - 115
1,3-Dichlorobenzene	10.4	5.39		ug/L		52	41 - 83
1,4-Dichlorobenzene	10.4	5.36		ug/L		52	41 - 84
2,4,5-Trichlorophenol	10.4	7.30		ug/L		70	49 - 112
2,4,6-Trichlorophenol	10.4	6.96		ug/L		67	50 - 108
2,4-Dichlorophenol	10.4	6.81		ug/L		66	44 - 109
2,4-Dimethylphenol	10.4	6.69		ug/L		65	38 - 110
2,4-Dinitrophenol	20.7	7.64	*	ug/L		37	42 - 109
2,4-Dinitrotoluene	10.4	7.16		ug/L		69	56 - 114
2,6-Dinitrotoluene	10.4	7.16		ug/L		69	57 - 112
2-Chloronaphthalene	10.4	7.21		ug/L		70	46 - 103
2-Chlorophenol	10.4	6.71		ug/L		65	42 - 101
2-Methylnaphthalene	10.4	6.82		ug/L		66	49 - 100
2-Methylphenol	10.4	7.18		ug/L		69	31 - 120
2-Nitroaniline	10.4	7.34		ug/L		71	51 - 114
2-Nitrophenol	10.4	6.42		ug/L		62	44 - 104
3,3'-Dichlorobenzidine	10.4	4.77	J	ug/L		46	10 - 106
3-Methylphenol + 4-Methylphenol	10.4	7.05		ug/L		68	40 - 117
3-Nitroaniline	10.4	8.36		ug/L		81	32 - 124
4,6-Dinitro-2-methylphenol	20.7	8.48	*	ug/L		41	50 - 112
4-Bromophenyl phenyl ether	10.4	7.04		ug/L		68	54 - 110
4-Chloro-3-methylphenol	10.4	7.27		ug/L		70	53 - 115
4-Chloroaniline	10.4	7.77		ug/L		75	18 - 127
4-Chlorophenyl phenyl ether	10.4	7.07		ug/L		68	54 - 111

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-194479-1

## Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

**Lab Sample ID: LCS 440-436439/2-A**  
**Matrix: Water**  
**Analysis Batch: 437510**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 436439**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4-Nitroaniline	10.4	7.28		ug/L		70	39 - 123
4-Nitrophenol	20.7	12.1		ug/L		58	50 - 114
Acenaphthene	10.4	7.06		ug/L		68	55 - 105
Acenaphthylene	10.4	7.16		ug/L		69	52 - 111
Aniline	10.4	7.92	J	ug/L		76	30 - 115
Anthracene	10.4	7.33		ug/L		71	59 - 118
Benzidine	10.4	ND	*	ug/L		0	5 - 65
Benzo[a]anthracene	10.4	7.49		ug/L		72	59 - 116
Benzo[a]pyrene	10.4	7.26		ug/L		70	57 - 107
Benzo[b]fluoranthene	10.4	8.21		ug/L		79	60 - 112
Benzo[g,h,i]perylene	10.4	7.07		ug/L		68	26 - 150
Benzo[k]fluoranthene	10.4	7.45		ug/L		72	60 - 112
Benzoic acid	10.4	2.62	J	ug/L		25	21 - 142
Benzyl alcohol	10.4	7.15		ug/L		69	44 - 115
bis (2-chloroisopropyl) ether	10.4	7.51		ug/L		73	50 - 102
Bis(2-chloroethoxy)methane	10.4	7.57		ug/L		73	46 - 120
Bis(2-chloroethyl)ether	10.4	7.04		ug/L		68	50 - 101
Bis(2-ethylhexyl) phthalate	10.4	8.23		ug/L		79	52 - 121
Butyl benzyl phthalate	10.4	8.42		ug/L		81	57 - 123
Chrysene	10.4	7.36		ug/L		71	63 - 109
Dibenz(a,h)anthracene	10.4	6.67		ug/L		64	37 - 136
Dibenzofuran	10.4	7.24		ug/L		70	53 - 107
Diethyl phthalate	10.4	7.69		ug/L		74	58 - 118
Dimethyl phthalate	10.4	7.66		ug/L		74	55 - 115
Di-n-butyl phthalate	10.4	8.01		ug/L		77	59 - 129
Di-n-octyl phthalate	10.4	8.34		ug/L		80	47 - 127
Fluoranthene	10.4	7.64		ug/L		74	60 - 124
Fluorene	10.4	7.36		ug/L		71	54 - 113
Hexachlorobenzene	10.4	6.62		ug/L		64	53 - 105
Hexachlorobutadiene	10.4	4.53		ug/L		44	37 - 78
Hexachlorocyclopentadiene	10.4	ND		ug/L		14	10 - 73
Hexachloroethane	10.4	4.94		ug/L		48	37 - 78
Indeno[1,2,3-cd]pyrene	10.4	6.98		ug/L		67	30 - 150
Isophorone	10.4	7.60		ug/L		73	47 - 131
Naphthalene	10.4	6.48		ug/L		63	32 - 117
Nitrobenzene	10.4	6.73		ug/L		65	51 - 104
N-Nitrosodimethylamine	10.4	7.07		ug/L		68	46 - 104
N-Nitrosodi-n-propylamine	10.4	6.93		ug/L		67	52 - 114
N-Nitrosodiphenylamine	10.4	6.57		ug/L		63	49 - 113
Pentachlorophenol	20.7	12.3		ug/L		59	54 - 116
Phenanthrene	10.4	7.68		ug/L		74	58 - 116
Phenol	10.4	6.77		ug/L		65	28 - 118
Pyrene	10.4	7.59		ug/L		73	62 - 123

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4,6-Tribromophenol (Surr)	65		40 - 120
2-Fluorobiphenyl	70		50 - 120
2-Fluorophenol (Surr)	64		30 - 120

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-194479-1

## Method: 8270C LL - Semivolatile Organic Compounds by GCMS - Low Levels (Continued)

**Lab Sample ID: LCS 440-436439/2-A**  
**Matrix: Water**  
**Analysis Batch: 437510**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 436439**

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Nitrobenzene-d5 (Surr)	70		45 - 120
Phenol-d6 (Surr)	66		35 - 120
Terphenyl-d14 (Surr)	75		37 - 144

## Method: 8081A - Organochlorine Pesticides (GC)

**Lab Sample ID: MB 440-435880/1-A**  
**Matrix: Water**  
**Analysis Batch: 436196**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 435880**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4,4'-DDD	ND		0.10	0.020	ug/L		10/18/17 06:42	10/19/17 16:17	1
4,4'-DDE	ND		0.10	0.020	ug/L		10/18/17 06:42	10/19/17 16:17	1
4,4'-DDT	ND		0.10	0.020	ug/L		10/18/17 06:42	10/19/17 16:17	1
Aldrin	ND		0.10	0.020	ug/L		10/18/17 06:42	10/19/17 16:17	1
alpha-BHC	ND		0.10	0.020	ug/L		10/18/17 06:42	10/19/17 16:17	1
beta-BHC	ND		0.10	0.030	ug/L		10/18/17 06:42	10/19/17 16:17	1
Chlordane (technical)	ND		1.0	0.20	ug/L		10/18/17 06:42	10/19/17 16:17	1
delta-BHC	ND		0.20	0.020	ug/L		10/18/17 06:42	10/19/17 16:17	1
Dieldrin	ND		0.10	0.020	ug/L		10/18/17 06:42	10/19/17 16:17	1
Endosulfan I	ND		0.10	0.020	ug/L		10/18/17 06:42	10/19/17 16:17	1
Endosulfan II	ND		0.10	0.020	ug/L		10/18/17 06:42	10/19/17 16:17	1
Endosulfan sulfate	ND		0.20	0.020	ug/L		10/18/17 06:42	10/19/17 16:17	1
Endrin	ND		0.10	0.020	ug/L		10/18/17 06:42	10/19/17 16:17	1
Endrin aldehyde	ND		0.10	0.020	ug/L		10/18/17 06:42	10/19/17 16:17	1
Endrin ketone	ND		0.10	0.040	ug/L		10/18/17 06:42	10/19/17 16:17	1
gamma-BHC (Lindane)	ND		0.10	0.020	ug/L		10/18/17 06:42	10/19/17 16:17	1
Heptachlor	ND		0.10	0.030	ug/L		10/18/17 06:42	10/19/17 16:17	1
Heptachlor epoxide	ND		0.10	0.030	ug/L		10/18/17 06:42	10/19/17 16:17	1
Methoxychlor	ND		0.10	0.020	ug/L		10/18/17 06:42	10/19/17 16:17	1
Toxaphene	ND		5.0	0.50	ug/L		10/18/17 06:42	10/19/17 16:17	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Tetrachloro-m-xylene	68		10 - 123	10/18/17 06:42	10/19/17 16:17	1
DCB Decachlorobiphenyl (Surr)	58		18 - 134	10/18/17 06:42	10/19/17 16:17	1

**Lab Sample ID: LCS 440-435880/2-A**  
**Matrix: Water**  
**Analysis Batch: 436196**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 435880**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDD	0.200	0.158		ug/L		79	28 - 150
4,4'-DDE	0.200	0.140		ug/L		70	29 - 137
4,4'-DDT	0.200	0.137		ug/L		69	27 - 140
Aldrin	0.200	0.116		ug/L		58	25 - 115
alpha-BHC	0.200	0.131		ug/L		66	34 - 115
beta-BHC	0.200	0.152		ug/L		76	32 - 121

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-194479-1

## Method: 8081A - Organochlorine Pesticides (GC) (Continued)

**Lab Sample ID: LCS 440-435880/2-A**  
**Matrix: Water**  
**Analysis Batch: 436196**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 435880**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
delta-BHC	0.200	0.154	J	ug/L		77	38 - 121
Dieldrin	0.200	0.139		ug/L		69	39 - 117
Endosulfan I	0.200	0.137		ug/L		68	37 - 115
Endosulfan II	0.200	0.134		ug/L		67	33 - 120
Endosulfan sulfate	0.200	0.145	J	ug/L		73	34 - 126
Endrin	0.200	0.148		ug/L		74	43 - 121
Endrin aldehyde	0.200	0.137		ug/L		69	34 - 120
Endrin ketone	0.200	0.131		ug/L		65	10 - 150
gamma-BHC (Lindane)	0.200	0.136		ug/L		68	23 - 134
Heptachlor	0.200	0.139		ug/L		70	37 - 115
Heptachlor epoxide	0.200	0.135		ug/L		67	27 - 135
Methoxychlor	0.200	0.137		ug/L		68	23 - 150

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Tetrachloro-m-xylene	64		10 - 123
DCB Decachlorobiphenyl (Surr)	58		18 - 134

**Lab Sample ID: LCSD 440-435880/3-A**  
**Matrix: Water**  
**Analysis Batch: 436196**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 435880**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
4,4'-DDD	0.200	0.158		ug/L		79	28 - 150	0	34
4,4'-DDE	0.200	0.141		ug/L		70	29 - 137	1	35
4,4'-DDT	0.200	0.141		ug/L		70	27 - 140	2	35
Aldrin	0.200	0.121		ug/L		60	25 - 115	4	35
alpha-BHC	0.200	0.132		ug/L		66	34 - 115	1	35
beta-BHC	0.200	0.151		ug/L		75	32 - 121	1	35
delta-BHC	0.200	0.154	J	ug/L		77	38 - 121	0	35
Dieldrin	0.200	0.140		ug/L		70	39 - 117	1	35
Endosulfan I	0.200	0.138		ug/L		69	37 - 115	1	35
Endosulfan II	0.200	0.135		ug/L		68	33 - 120	1	35
Endosulfan sulfate	0.200	0.145	J	ug/L		72	34 - 126	0	35
Endrin	0.200	0.148		ug/L		74	43 - 121	0	35
Endrin aldehyde	0.200	0.136		ug/L		68	34 - 120	1	35
Endrin ketone	0.200	0.132		ug/L		66	10 - 150	1	35
gamma-BHC (Lindane)	0.200	0.138		ug/L		69	23 - 134	1	35
Heptachlor	0.200	0.142		ug/L		71	37 - 115	2	35
Heptachlor epoxide	0.200	0.137		ug/L		68	27 - 135	1	35
Methoxychlor	0.200	0.149		ug/L		75	23 - 150	9	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Tetrachloro-m-xylene	59		10 - 123
DCB Decachlorobiphenyl (Surr)	44		18 - 134

# QC Sample Results

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

TestAmerica Job ID: 440-194479-1

## Method: 8082 - Polychlorinated Biphenyls (PCBs) by Gas Chromatography

**Lab Sample ID: MB 440-435880/1-A**  
**Matrix: Water**  
**Analysis Batch: 435624**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 435880**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aroclor 1016	ND		1.0	0.25	ug/L		10/18/17 06:42	10/18/17 13:04	1
Aroclor 1221	ND		1.0	0.25	ug/L		10/18/17 06:42	10/18/17 13:04	1
Aroclor 1232	ND		1.0	0.25	ug/L		10/18/17 06:42	10/18/17 13:04	1
Aroclor 1242	ND		1.0	0.25	ug/L		10/18/17 06:42	10/18/17 13:04	1
Aroclor 1248	ND		1.0	0.25	ug/L		10/18/17 06:42	10/18/17 13:04	1
Aroclor 1254	ND		1.0	0.25	ug/L		10/18/17 06:42	10/18/17 13:04	1
Aroclor 1260	ND		1.0	0.25	ug/L		10/18/17 06:42	10/18/17 13:04	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
DCB Decachlorobiphenyl (Surr)	74		29 - 115	10/18/17 06:42	10/18/17 13:04	1

**Lab Sample ID: LCS 440-435880/4-A**  
**Matrix: Water**  
**Analysis Batch: 435624**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 435880**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Aroclor 1016	4.00	2.81		ug/L		70	39 - 145
Aroclor 1260	4.00	3.26		ug/L		81	37 - 137

Surrogate	LCS %Recovery	LCS Qualifier	Limits
DCB Decachlorobiphenyl (Surr)	62		29 - 115

**Lab Sample ID: LCSD 440-435880/5-A**  
**Matrix: Water**  
**Analysis Batch: 435624**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 435880**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit
Aroclor 1016	4.00	2.83		ug/L		71	39 - 145	1	30
Aroclor 1260	4.00	3.30		ug/L		82	37 - 137	1	25

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
DCB Decachlorobiphenyl (Surr)	62		29 - 115

## Method: 8141A - Organophosphorous Pesticides (GC)

**Lab Sample ID: MB 180-226538/1-A**  
**Matrix: Water**  
**Analysis Batch: 226568**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 226538**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Azinphos-methyl	ND		1.0	0.11	ug/L		10/20/17 14:35	10/22/17 10:04	1
Bolstar	ND		1.0	0.14	ug/L		10/20/17 14:35	10/22/17 10:04	1
Chlorpyrifos	ND		1.0	0.093	ug/L		10/20/17 14:35	10/22/17 10:04	1
Coumaphos	ND		1.0	0.13	ug/L		10/20/17 14:35	10/22/17 10:04	1
Demeton, Total	ND		2.0	0.16	ug/L		10/20/17 14:35	10/22/17 10:04	1
Diazinon	ND		1.0	0.075	ug/L		10/20/17 14:35	10/22/17 10:04	1
Dichlorvos	ND		1.0	0.11	ug/L		10/20/17 14:35	10/22/17 10:04	1

TestAmerica Irvine



# QC Sample Results

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

TestAmerica Job ID: 440-194479-1

## Method: 8141A - Organophosphorous Pesticides (GC) (Continued)

**Lab Sample ID: MB 180-226538/1-A**  
**Matrix: Water**  
**Analysis Batch: 226568**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 226538**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dimethoate	ND		1.0	0.11	ug/L		10/20/17 14:35	10/22/17 10:04	1
Disulfoton	ND		1.0	0.093	ug/L		10/20/17 14:35	10/22/17 10:04	1
EPN	ND		1.0	0.12	ug/L		10/20/17 14:35	10/22/17 10:04	1
Famphur	ND		1.0	0.10	ug/L		10/20/17 14:35	10/22/17 10:04	1
Fensulfothion	ND		1.0	0.11	ug/L		10/20/17 14:35	10/22/17 10:04	1
Fenthion	ND		1.0	0.21	ug/L		10/20/17 14:35	10/22/17 10:04	1
Malathion	ND		1.0	0.057	ug/L		10/20/17 14:35	10/22/17 10:04	1
Methyl parathion	ND		1.0	0.092	ug/L		10/20/17 14:35	10/22/17 10:04	1
Mevinphos	ND		1.0	0.15	ug/L		10/20/17 14:35	10/22/17 10:04	1
O,O,O-Triethyl phosphorothioate	ND		1.0	0.071	ug/L		10/20/17 14:35	10/22/17 10:04	1
Parathion	ND		1.0	0.11	ug/L		10/20/17 14:35	10/22/17 10:04	1
Phorate	ND		1.0	0.084	ug/L		10/20/17 14:35	10/22/17 10:04	1
Ronnel	ND		1.0	0.068	ug/L		10/20/17 14:35	10/22/17 10:04	1
Stirophos	ND		1.0	0.16	ug/L		10/20/17 14:35	10/22/17 10:04	1
Sulfotepp	ND		1.0	0.065	ug/L		10/20/17 14:35	10/22/17 10:04	1
Tokuthion	ND		1.0	0.10	ug/L		10/20/17 14:35	10/22/17 10:04	1
Trichloronate	ND		1.0	0.086	ug/L		10/20/17 14:35	10/22/17 10:04	1
Mocap	ND		1.0	0.066	ug/L		10/20/17 14:35	10/22/17 10:04	1
Thionazin	ND		1.0	0.075	ug/L		10/20/17 14:35	10/22/17 10:04	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Triphenylphosphate	82		72 - 142	10/20/17 14:35	10/22/17 10:04	1
Tributyl phosphate	67		34 - 143	10/20/17 14:35	10/22/17 10:04	1

**Lab Sample ID: LCS 180-226538/2-A**  
**Matrix: Water**  
**Analysis Batch: 226568**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 226538**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Azinphos-methyl	10.0	9.71		ug/L		97	58 - 150
Bolstar	10.0	8.05		ug/L		80	76 - 125
Chlorpyrifos	10.0	8.24		ug/L		82	75 - 129
Coumaphos	10.0	8.75		ug/L		88	67 - 136
Demeton, Total	10.0	8.65		ug/L		87	70 - 133
Diazinon	10.0	8.64		ug/L		86	77 - 129
Dichlorvos	10.0	7.17		ug/L		72	68 - 146
Dimethoate	10.0	9.05		ug/L		90	60 - 150
Disulfoton	10.0	8.56		ug/L		86	73 - 128
EPN	10.0	10.6		ug/L		106	71 - 141
Famphur	10.0	8.38		ug/L		84	73 - 125
Fensulfothion	10.0	8.65		ug/L		87	61 - 144
Fenthion	10.0	8.27		ug/L		83	73 - 128
Malathion	10.0	8.39		ug/L		84	81 - 131
Methyl parathion	10.0	9.11		ug/L		91	62 - 139
Mevinphos	10.0	8.84		ug/L		88	67 - 138
O,O,O-Triethyl phosphorothioate	10.0	8.37		ug/L		84	65 - 150
Parathion	10.0	8.87		ug/L		89	75 - 134
Phorate	10.0	8.45		ug/L		84	72 - 126

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-194479-1

## Method: 8141A - Organophosphorous Pesticides (GC) (Continued)

**Lab Sample ID: LCS 180-226538/2-A**  
**Matrix: Water**  
**Analysis Batch: 226568**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 226538**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ronnel	10.0	8.60		ug/L		86	75 - 132
Stirophos	10.0	10.5		ug/L		105	69 - 138
Sulfotepp	10.0	8.29		ug/L		83	81 - 125
Tokuthion	10.0	8.21		ug/L		82	77 - 126
Trichloronate	10.0	8.01		ug/L		80	81 - 127
Mocap	10.0	8.36		ug/L		84	75 - 131
Thionazin	10.0	8.00		ug/L		80	61 - 146

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Triphenylphosphate	91		72 - 142
Tributyl phosphate	80		34 - 143

**Lab Sample ID: LCSD 180-226538/3-A**  
**Matrix: Water**  
**Analysis Batch: 226568**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 226538**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Azinphos-methyl	10.0	9.64		ug/L		96	58 - 150	1	15
Bolstar	10.0	8.07		ug/L		81	76 - 125	0	15
Chlorpyrifos	10.0	8.32		ug/L		83	75 - 129	1	15
Coumaphos	10.0	8.63		ug/L		86	67 - 136	1	15
Demeton, Total	10.0	8.74		ug/L		87	70 - 133	1	15
Diazinon	10.0	8.69		ug/L		87	77 - 129	1	15
Dichlorvos	10.0	7.35		ug/L		73	68 - 146	3	15
Dimethoate	10.0	9.04		ug/L		90	60 - 150	0	15
Disulfoton	10.0	8.64		ug/L		86	73 - 128	1	15
EPN	10.0	10.4		ug/L		104	71 - 141	2	15
Famphur	10.0	8.47		ug/L		85	73 - 125	1	15
Fensulfothion	10.0	8.58		ug/L		86	61 - 144	1	15
Fenthion	10.0	8.32		ug/L		83	73 - 128	1	15
Malathion	10.0	8.43		ug/L		84	81 - 131	0	15
Methyl parathion	10.0	9.10		ug/L		91	62 - 139	0	15
Mevinphos	10.0	8.92		ug/L		89	67 - 138	1	15
O,O,O-Triethyl phosphorothioate	10.0	8.46		ug/L		85	65 - 150	1	15
Parathion	10.0	8.84		ug/L		88	75 - 134	0	15
Phorate	10.0	8.50		ug/L		85	72 - 126	1	15
Ronnel	10.0	8.63		ug/L		86	75 - 132	0	15
Stirophos	10.0	10.5		ug/L		105	69 - 138	1	15
Sulfotepp	10.0	8.45		ug/L		84	81 - 125	2	15
Tokuthion	10.0	8.23		ug/L		82	77 - 126	0	15
Trichloronate	10.0	8.13		ug/L		81	81 - 127	1	15
Mocap	10.0	8.49		ug/L		85	75 - 131	2	15
Thionazin	10.0	8.09		ug/L		81	61 - 146	1	15

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Triphenylphosphate	86		72 - 142
Tributyl phosphate	76		34 - 143

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-194479-1

## Method: 8151A - Herbicides (GC)

**Lab Sample ID: MB 180-226585/1-A**  
**Matrix: Water**  
**Analysis Batch: 226897**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 226585**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4,5-T	ND		1.0	0.21	ug/L		10/22/17 13:22	10/25/17 11:33	20
2,4-D	ND		4.0	0.74	ug/L		10/22/17 13:22	10/25/17 11:33	20
2,4-DB	ND		4.0	0.89	ug/L		10/22/17 13:22	10/25/17 11:33	20
Dalapon	ND		5.0	3.7	ug/L		10/22/17 13:22	10/25/17 11:33	20
Dicamba	ND		2.0	0.68	ug/L		10/22/17 13:22	10/25/17 11:33	20
Dichlorprop	ND		4.0	0.99	ug/L		10/22/17 13:22	10/25/17 11:33	20
Dinoseb	ND		0.90	0.57	ug/L		10/22/17 13:22	10/25/17 11:33	20
MCPA	ND		400	140	ug/L		10/22/17 13:22	10/25/17 11:33	20
MCPP	ND		400	290	ug/L		10/22/17 13:22	10/25/17 11:33	20
Pentachlorophenol	ND		0.50	0.23	ug/L		10/22/17 13:22	10/25/17 11:33	20
Silvex (2,4,5-TP)	ND		1.0	0.25	ug/L		10/22/17 13:22	10/25/17 11:33	20

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2,4-Dichlorophenylacetic acid	124	X	20 - 100	10/22/17 13:22	10/25/17 11:33	20

**Lab Sample ID: LCS 180-226585/2-A**  
**Matrix: Water**  
**Analysis Batch: 226897**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 226585**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
2,4,5-T	5.00	3.66		ug/L		73	22 - 135
2,4-D	20.0	14.5		ug/L		72	22 - 125
2,4-DB	20.0	14.2		ug/L		71	22 - 141
Dalapon	20.0	8.68		ug/L		43	10 - 100
Dicamba	10.0	6.44		ug/L		64	16 - 121
Dichlorprop	20.0	15.3		ug/L		77	29 - 125
Dinoseb	20.0	20.0		ug/L		100	23 - 150
MCPA	2000	1360		ug/L		68	14 - 118
MCPP	2000	1590		ug/L		79	26 - 131
Pentachlorophenol	5.00	4.69		ug/L		94	34 - 150
Silvex (2,4,5-TP)	5.00	4.04		ug/L		81	35 - 137

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2,4-Dichlorophenylacetic acid	81		20 - 100

**Lab Sample ID: 180-71278-F-2-A MS**  
**Matrix: Water**  
**Analysis Batch: 226897**

**Client Sample ID: Matrix Spike**  
**Prep Type: Dissolved**  
**Prep Batch: 226585**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
2,4,5-T	ND		4.81	3.02		ug/L		63	22 - 135
2,4-D	ND		19.2	13.4		ug/L		70	22 - 125
2,4-DB	ND		19.2	12.3		ug/L		64	22 - 141
Dalapon	ND	F1	19.2	5.91		ug/L		31	10 - 100
Dicamba	ND		9.62	6.90		ug/L		72	16 - 121
Dichlorprop	ND		19.2	12.3		ug/L		64	29 - 125
Dinoseb	ND		19.2	13.9		ug/L		72	23 - 150

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-194479-1

## Method: 8151A - Herbicides (GC) (Continued)

**Lab Sample ID: 180-71278-F-2-A MS**  
**Matrix: Water**  
**Analysis Batch: 226897**

**Client Sample ID: Matrix Spike**  
**Prep Type: Dissolved**  
**Prep Batch: 226585**

Analyte	Sample	Sample	Spike	MS		Unit	D	%Rec	%Rec.	Limits
	Result	Qualifier		Result	Qualifier					
MCPA	ND		1920	1170		ug/L		61	14 - 118	
MCPP	ND		1920	1270		ug/L		66	26 - 131	
Pentachlorophenol	ND		4.81	3.67		ug/L		76	34 - 150	
Silvex (2,4,5-TP)	ND		4.81	3.07		ug/L		64	35 - 137	
<b>Surrogate</b>	<b>MS MS</b>									
	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>							
2,4-Dichlorophenylacetic acid	70		20 - 100							

**Lab Sample ID: 180-71278-F-2-B MSD**  
**Matrix: Water**  
**Analysis Batch: 226897**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Dissolved**  
**Prep Batch: 226585**

Analyte	Sample	Sample	Spike	MSD		Unit	D	%Rec	%Rec.	Limits	RPD	RPD	Limit
	Result	Qualifier		Result	Qualifier								
2,4,5-T	ND		4.81	3.60		ug/L		75	22 - 135	18	35		
2,4-D	ND		19.2	15.7		ug/L		82	22 - 125	16	35		
2,4-DB	ND		19.2	14.2		ug/L		74	22 - 141	14	35		
Dalapon	ND	F1	19.2	6.66		ug/L		35	10 - 100	12	35		
Dicamba	ND		9.62	8.26		ug/L		86	16 - 121	18	35		
Dichlorprop	ND		19.2	15.3		ug/L		80	29 - 125	22	35		
Dinoseb	ND		19.2	16.2		ug/L		84	23 - 150	15	35		
MCPA	ND		1920	1390		ug/L		72	14 - 118	17	35		
MCPP	ND		1920	1570		ug/L		82	26 - 131	21	35		
Pentachlorophenol	ND		4.81	4.29		ug/L		89	34 - 150	15	35		
Silvex (2,4,5-TP)	ND		4.81	3.76		ug/L		78	35 - 137	20	35		
<b>Surrogate</b>	<b>MSD MSD</b>												
	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>										
2,4-Dichlorophenylacetic acid	85		20 - 100										

## Method: 4500 CN E-2011 - Cyanide, Total: Colorimetric Method

**Lab Sample ID: MB 680-499799/1-A**  
**Matrix: Water**  
**Analysis Batch: 499898**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 499799**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Cyanide, Total	ND		0.010	0.0025	mg/L		10/25/17 05:31	10/25/17 11:43	1

**Lab Sample ID: LCS 680-499799/2-A**  
**Matrix: Water**  
**Analysis Batch: 499898**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 499799**

Analyte	Spike	LCS		Unit	D	%Rec	%Rec.	Limits
		Result	Qualifier					
Cyanide, Total	0.0500	0.0540		mg/L		108	90 - 110	

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-194479-1

## Method: 4500 CN E-2011 - Cyanide, Total: Colorimetric Method (Continued)

**Lab Sample ID: 680-144491-B-1-B MS**  
**Matrix: Water**  
**Analysis Batch: 499898**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 499799**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Cyanide, Total	ND	F1	0.0500	0.0567	F1	mg/L		113	90 - 110

**Lab Sample ID: 680-144491-B-1-C MSD**  
**Matrix: Water**  
**Analysis Batch: 499898**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 499799**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Cyanide, Total	ND	F1	0.0500	0.0558	F1	mg/L		112	90 - 110	2	20

**Lab Sample ID: 680-144566-B-3-B DU**  
**Matrix: Water**  
**Analysis Batch: 499898**

**Client Sample ID: Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 499799**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Cyanide, Total	ND		ND		mg/L		NC	20

# QC Association Summary

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

TestAmerica Job ID: 440-194479-1

## GC/MS VOA

### Analysis Batch: 436116

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-194479-1	CA-L	Total/NA	Water	8260B	
440-194479-2	LR-2R	Total/NA	Water	8260B	
440-194479-3	QCAB	Total/NA	Water	8260B	
440-194479-4	QCTB	Total/NA	Water	8260B	
MB 440-436116/3	Method Blank	Total/NA	Water	8260B	
LCS 440-436116/4	Lab Control Sample	Total/NA	Water	8260B	
440-194336-B-1 MS	Matrix Spike	Total/NA	Water	8260B	
440-194336-B-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

### Analysis Batch: 438205

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-194479-1 - RA	CA-L	Total/NA	Water	8260B	
440-194479-2 - RA	LR-2R	Total/NA	Water	8260B	
440-194479-3 - RA	QCAB	Total/NA	Water	8260B	
440-194479-4 - RA	QCTB	Total/NA	Water	8260B	
MB 440-438205/4	Method Blank	Total/NA	Water	8260B	

### Analysis Batch: 438220

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-194479-1	CA-L	Total/NA	Water	8260B	
440-194479-2	LR-2R	Total/NA	Water	8260B	
440-194479-3	QCAB	Total/NA	Water	8260B	
440-194479-4	QCTB	Total/NA	Water	8260B	
MB 440-438220/4	Method Blank	Total/NA	Water	8260B	
LCS 440-438220/5	Lab Control Sample	Total/NA	Water	8260B	
440-194396-A-1 MS	Matrix Spike	Total/NA	Water	8260B	
440-194396-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

### Analysis Batch: 438370

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-194479-1	CA-L	Total/NA	Water	8260B	
MB 440-438370/3	Method Blank	Total/NA	Water	8260B	
LCS 440-438370/4	Lab Control Sample	Total/NA	Water	8260B	
440-195009-A-8 MS	Matrix Spike	Total/NA	Water	8260B	
440-195009-A-8 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

### Analysis Batch: 438458

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-194479-2 - RA	LR-2R	Total/NA	Water	8260B	
MB 440-438458/3	Method Blank	Total/NA	Water	8260B	
LCS 440-438458/4	Lab Control Sample	Total/NA	Water	8260B	
440-195013-B-1 MS	Matrix Spike	Total/NA	Water	8260B	
440-195013-B-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

## GC/MS Semi VOA

### Prep Batch: 436201

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-194479-1	CA-L	Total/NA	Water	3520C	
440-194479-2	LR-2R	Total/NA	Water	3520C	

TestAmerica Irvine

# QC Association Summary

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

TestAmerica Job ID: 440-194479-1

## GC/MS Semi VOA (Continued)

### Prep Batch: 436201 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 440-436201/1-A	Method Blank	Total/NA	Water	3520C	

### Prep Batch: 436207

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-194479-1	CA-L	Total/NA	Water	3520C	
440-194479-2	LR-2R	Total/NA	Water	3520C	
MB 440-436207/1-A	Method Blank	Total/NA	Water	3520C	
LCS 440-436207/3-A	Lab Control Sample	Total/NA	Water	3520C	
LCS 440-436207/4-A	Lab Control Sample Dup	Total/NA	Water	3520C	

### Prep Batch: 436439

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-194479-1	CA-L	Total/NA	Water	3520C	
440-194479-2	LR-2R	Total/NA	Water	3520C	
MB 440-436439/1-A	Method Blank	Total/NA	Water	3520C	
LCS 440-436439/2-A	Lab Control Sample	Total/NA	Water	3520C	

### Analysis Batch: 436545

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 440-436207/1-A	Method Blank	Total/NA	Water	8270C	436207
LCS 440-436207/3-A	Lab Control Sample	Total/NA	Water	8270C	436207
LCS 440-436207/4-A	Lab Control Sample Dup	Total/NA	Water	8270C	436207

### Analysis Batch: 436972

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-194479-1	CA-L	Total/NA	Water	8270C	436201
440-194479-2	LR-2R	Total/NA	Water	8270C	436201
MB 440-436201/1-A	Method Blank	Total/NA	Water	8270C	436201

### Analysis Batch: 437421

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-194479-1	CA-L	Total/NA	Water	8270C	436207
440-194479-2	LR-2R	Total/NA	Water	8270C	436207

### Analysis Batch: 437510

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 440-436439/1-A	Method Blank	Total/NA	Water	8270C LL	436439
LCS 440-436439/2-A	Lab Control Sample	Total/NA	Water	8270C LL	436439

### Analysis Batch: 437867

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-194479-1	CA-L	Total/NA	Water	8270C LL	436439
440-194479-2	LR-2R	Total/NA	Water	8270C LL	436439

## GC Semi VOA

### Prep Batch: 226538

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-194479-1	CA-L	Total/NA	Water	3510C	
440-194479-2	LR-2R	Total/NA	Water	3510C	

TestAmerica Irvine

# QC Association Summary

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

TestAmerica Job ID: 440-194479-1

## GC Semi VOA (Continued)

### Prep Batch: 226538 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 180-226538/1-A	Method Blank	Total/NA	Water	3510C	
LCS 180-226538/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 180-226538/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	

### Analysis Batch: 226568

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-194479-1	CA-L	Total/NA	Water	8141A	226538
440-194479-2	LR-2R	Total/NA	Water	8141A	226538
MB 180-226538/1-A	Method Blank	Total/NA	Water	8141A	226538
LCS 180-226538/2-A	Lab Control Sample	Total/NA	Water	8141A	226538
LCSD 180-226538/3-A	Lab Control Sample Dup	Total/NA	Water	8141A	226538

### Prep Batch: 226585

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-194479-1	CA-L	Total/NA	Water	8151A	
440-194479-2	LR-2R	Total/NA	Water	8151A	
MB 180-226585/1-A	Method Blank	Total/NA	Water	8151A	
LCS 180-226585/2-A	Lab Control Sample	Total/NA	Water	8151A	
180-71278-F-2-A MS	Matrix Spike	Dissolved	Water	8151A	
180-71278-F-2-B MSD	Matrix Spike Duplicate	Dissolved	Water	8151A	

### Analysis Batch: 226897

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-194479-1	CA-L	Total/NA	Water	8151A	226585
440-194479-2	LR-2R	Total/NA	Water	8151A	226585
MB 180-226585/1-A	Method Blank	Total/NA	Water	8151A	226585
LCS 180-226585/2-A	Lab Control Sample	Total/NA	Water	8151A	226585
180-71278-F-2-A MS	Matrix Spike	Dissolved	Water	8151A	226585
180-71278-F-2-B MSD	Matrix Spike Duplicate	Dissolved	Water	8151A	226585

### Analysis Batch: 435624

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-194479-2	LR-2R	Total/NA	Water	8082	435880
MB 440-435880/1-A	Method Blank	Total/NA	Water	8082	435880
LCS 440-435880/4-A	Lab Control Sample	Total/NA	Water	8082	435880
LCSD 440-435880/5-A	Lab Control Sample Dup	Total/NA	Water	8082	435880

### Prep Batch: 435880

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-194479-1	CA-L	Total/NA	Water	3510C	
440-194479-2	LR-2R	Total/NA	Water	3510C	
MB 440-435880/1-A	Method Blank	Total/NA	Water	3510C	
LCS 440-435880/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCS 440-435880/4-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 440-435880/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
LCSD 440-435880/5-A	Lab Control Sample Dup	Total/NA	Water	3510C	

### Analysis Batch: 436159

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-194479-1	CA-L	Total/NA	Water	8082	435880

TestAmerica Irvine



# QC Association Summary

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

TestAmerica Job ID: 440-194479-1

## GC Semi VOA (Continued)

### Analysis Batch: 436196

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-194479-2	LR-2R	Total/NA	Water	8081A	435880
MB 440-435880/1-A	Method Blank	Total/NA	Water	8081A	435880
LCS 440-435880/2-A	Lab Control Sample	Total/NA	Water	8081A	435880
LCS 440-435880/3-A	Lab Control Sample Dup	Total/NA	Water	8081A	435880

### Analysis Batch: 436436

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-194479-1	CA-L	Total/NA	Water	8081A	435880

## General Chemistry

### Prep Batch: 499799

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-194479-2	LR-2R	Total/NA	Water	Distill/CN	
MB 680-499799/1-A	Method Blank	Total/NA	Water	Distill/CN	
LCS 680-499799/2-A	Lab Control Sample	Total/NA	Water	Distill/CN	
680-144491-B-1-B MS	Matrix Spike	Total/NA	Water	Distill/CN	
680-144491-B-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	Distill/CN	
680-144566-B-3-B DU	Duplicate	Total/NA	Water	Distill/CN	

### Analysis Batch: 499898

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-194479-2	LR-2R	Total/NA	Water	4500 CN E-2011	499799
MB 680-499799/1-A	Method Blank	Total/NA	Water	4500 CN E-2011	499799
LCS 680-499799/2-A	Lab Control Sample	Total/NA	Water	4500 CN E-2011	499799
680-144491-B-1-B MS	Matrix Spike	Total/NA	Water	4500 CN E-2011	499799
680-144491-B-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	4500 CN E-2011	499799
680-144566-B-3-B DU	Duplicate	Total/NA	Water	4500 CN E-2011	499799

# Definitions/Glossary

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

TestAmerica Job ID: 440-194479-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F1	MS and/or MSD Recovery is outside acceptance limits.
*	LCS or LCSD is outside acceptance limits.

### GC/MS VOA TICs

Qualifier	Qualifier Description
J	Indicates an Estimated Value for TICs
N	Presumptive evidence of material.
T	Result is a tentatively identified compound (TIC) and an estimated value.

### GC/MS Semi VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Surrogate is outside control limits
*	LCS or LCSD is outside acceptance limits.

### GC Semi VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

## General Chemistry

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
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)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
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)

# Accreditation/Certification Summary

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

TestAmerica Job ID: 440-194479-1

## Laboratory: TestAmerica Irvine

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	State Program	10	CA01531	06-30-18
Arizona	State Program	9	AZ0671	10-14-18
California	LA Cty Sanitation Districts	9	10256	06-30-18
California	State Program	9	CA ELAP 2706	06-30-18
Guam	State Program	9	Cert. No. 17-003R	01-23-18
Hawaii	State Program	9	N/A	01-29-18
Kansas	NELAP Secondary AB	7	E-10420	07-31-18
Nevada	State Program	9	CA015312018-1	07-31-18
New Mexico	State Program	6	N/A	01-29-18 *
Northern Mariana Islands	State Program	9	MP0002	01-29-17 *
Oregon	NELAP	10	4028	01-29-18
USDA	Federal		P330-15-00184	07-08-18
Washington	State Program	10	C900	09-03-18

## Laboratory: TestAmerica Pittsburgh

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

Authority	Program	EPA Region	Identification Number	Expiration Date
A2LA	A2LA		PA00164	07-31-18
Arkansas DEQ	State Program	6	88-0690	06-27-18
California	State Program	9	2891	03-31-18
Connecticut	State Program	1	PH-0688	09-30-18
Florida	NELAP	4	E871008	06-30-18
Illinois	NELAP	5	200005	06-30-18
Kansas	NELAP	7	E-10350	01-31-18
Louisiana	NELAP	6	04041	06-30-18
Nevada	State Program	9	PA00164	07-31-18
New Hampshire	NELAP	1	2030	04-04-18
New Jersey	NELAP	2	PA005	06-30-18
New York	NELAP	2	11182	03-31-18
North Carolina (WW/SW)	State Program	4	434	12-31-17
Pennsylvania	NELAP	3	02-00416	04-30-18
South Carolina	State Program	4	89014	04-30-18
Texas	NELAP	6	T104704528-15-2	03-31-18
US Fish & Wildlife	Federal		LE94312A-1	07-31-18
USDA	Federal		P330-16-00211	06-26-19
Utah	NELAP	8	PA001462015-4	05-31-18
Virginia	NELAP	3	460189	09-14-18
West Virginia DEP	State Program	3	142	01-31-18
Wisconsin	State Program	5	998027800	08-31-18

## Laboratory: TestAmerica Savannah

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

Authority	Program	EPA Region	Identification Number	Expiration Date
	AFCEE		SAVLAB	
Alabama	State Program	4	41450	06-30-18
Alaska	State Program	10		06-30-18
Alaska (UST)	State Program	10	UST-104	11-05-17 *
Arizona	State Program	9	AZ808	12-14-17 *
Arkansas DEQ	State Program	6	88-0692	02-01-18

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

# Accreditation/Certification Summary

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

TestAmerica Job ID: 440-194479-1

## Laboratory: TestAmerica Savannah (Continued)

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

Authority	Program	EPA Region	Identification Number	Expiration Date
California	State Program	9	2939	06-30-18
Colorado	State Program	8	N/A	12-31-17
Connecticut	State Program	1	PH-0161	03-31-19
Florida	NELAP	4	E87052	06-30-18
GA Dept. of Agriculture	State Program	4	N/A	06-12-18
Georgia	State Program	4	803	06-30-18
Guam	State Program	9	15-005r	04-16-18
Hawaii	State Program	9	N/A	06-30-18
Illinois	NELAP	5	200022	11-30-17 *
Indiana	State Program	5	N/A	06-30-18
Iowa	State Program	7	353	06-30-19
Kentucky (DW)	State Program	4	90084	12-31-17
Kentucky (UST)	State Program	4	18	06-30-18
Kentucky (WW)	State Program	4	90084	12-31-17
L-A-B	DoD ELAP		L2463	09-22-19
L-A-B	ISO/IEC 17025		L2463.01	09-22-19
Louisiana	NELAP	6	30690	06-30-18
Louisiana (DW)	NELAP	6	LA160019	12-31-17
Maine	State Program	1	GA00006	09-24-18
Maryland	State Program	3	250	12-31-17
Massachusetts	State Program	1	M-GA006	06-30-18
Michigan	State Program	5	9925	06-30-17 *
Mississippi	State Program	4	N/A	06-30-18
Nebraska	State Program	7	TestAmerica-Savannah	06-30-18
New Jersey	NELAP	2	GA769	06-30-18
New Mexico	State Program	6	N/A	06-30-18
New York	NELAP	2	10842	03-31-18
North Carolina (DW)	State Program	4	13701	07-31-18
North Carolina (WW/SW)	State Program	4	269	12-31-17
Oklahoma	State Program	6	9984	08-31-18
Pennsylvania	NELAP	3	68-00474	06-30-18
Puerto Rico	State Program	2	GA00006	12-31-17
South Carolina	State Program	4	98001	06-30-17 *
Tennessee	State Program	4	TN02961	06-30-18
Texas	NELAP	6	T104704185-16-9	11-30-17 *
Texas	State Program	6	T104704185	06-30-18
US Fish & Wildlife	Federal		LE058448-0	07-31-18
USDA	Federal		SAV 3-04	06-14-20 *
Virginia	NELAP	3	460161	06-14-18
Washington	State Program	10	C805	06-10-18
West Virginia (DW)	State Program	3	9950C	12-31-17
West Virginia DEP	State Program	3	094	06-30-18
Wisconsin	State Program	5	999819810	08-31-18
Wyoming	State Program	8	8TMS-L	06-30-16 *

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



## Login Sample Receipt Checklist

Client: Geo-Logic Associates

Job Number: 440-194479-1

**Login Number: 194479**

**List Source: TestAmerica Irvine**

**List Number: 1**

**Creator: Garcia, Veronica G**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> 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 <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



## Login Sample Receipt Checklist

Client: Geo-Logic Associates

Job Number: 440-194479-1

**Login Number: 194479**

**List Number: 2**

**Creator: Watson, Debbie**

**List Source: TestAmerica Pittsburgh**

**List Creation: 10/19/17 03:29 PM**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
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.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



## Login Sample Receipt Checklist

Client: Geo-Logic Associates

Job Number: 440-194479-1

**Login Number: 194479**

**List Number: 3**

**Creator: Watson, Debbie**

**List Source: TestAmerica Pittsburgh**

**List Creation: 10/19/17 03:30 PM**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
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.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	





# Login Sample Receipt Checklist

Client: Geo-Logic Associates

Job Number: 440-194479-1

**Login Number: 194479**

**List Number: 4**

**Creator: Anderson, Jordan K**

**List Source: TestAmerica Savannah**

**List Creation: 10/20/17 12:09 PM**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
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?	N/A	
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 <math><6\text{mm}</math> (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Irvine

17461 Derian Ave

Suite 100

Irvine, CA 92614-5817

Tel: (949)261-1022

TestAmerica Job ID: 440-197698-1

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:

12/13/2017 2:58:40 PM

Rossina Tomova, Project Manager I

(949)261-1022

[rossina.tomova@testamericainc.com](mailto:rossina.tomova@testamericainc.com)

### LINKS

Review your project  
results through

**TotalAccess**

Have a Question?



Visit us at:

[www.testamericainc.com](http://www.testamericainc.com)

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

1

2

3

4

5

6

7

8

9

10

11

12

13



# Table of Contents

Cover Page . . . . .	1
Table of Contents . . . . .	2
Sample Summary . . . . .	3
Case Narrative . . . . .	4
Client Sample Results . . . . .	6
Method Summary . . . . .	22
Lab Chronicle . . . . .	23
QC Sample Results . . . . .	26
QC Association Summary . . . . .	40
Definitions/Glossary . . . . .	44
Certification Summary . . . . .	45
Chain of Custody . . . . .	46
Receipt Checklists . . . . .	47

# Sample Summary

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

TestAmerica Job ID: 440-197698-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-197698-1	Subdrain (N)	Water	12/04/17 10:55	12/04/17 13:59
440-197698-2	Combined Subdrains	Water	12/04/17 11:38	12/04/17 13:59
440-197698-3	CM-9R3	Water	12/04/17 11:15	12/04/17 13:59
440-197698-4	CM-10R	Water	12/04/17 09:55	12/04/17 13:59
440-197698-5	CM-11R	Water	12/04/17 12:55	12/04/17 13:59
440-197698-6	QCTB	Water	12/04/17 00:01	12/04/17 13:59
440-197698-7	QCAB	Water	12/04/17 00:01	12/04/17 13:59



# Case Narrative

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

TestAmerica Job ID: 440-197698-1

**Job ID: 440-197698-1**

**Laboratory: TestAmerica Irvine**

## Narrative

### Job Narrative 440-197698-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 12/4/2017 3:40 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 0.9° C and 2.9° C.

#### GC/MS VOA

Method(s) 8260B: The matrix spike and matrix spike duplicate (MS/MSD) recoveries for analytical batch 440-444974 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method(s) 8260B: The continuing calibration verification (CCV) associated with batch 440-445110 recovered above the upper control limit for Methylacrylonitrile. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: Subdrain (N) (440-197698-1), Combined Subdrains (440-197698-2), CM-9R3 (440-197698-3), CM-10R (440-197698-4), CM-11R (440-197698-5), QCTB (440-197698-6), QCAB (440-197698-7) and (CCV 440-445110/3).

Method(s) 8260B: The continuing calibration verification (CCV) associated with batch 440-445110 recovered above the upper control limit for Acetonitrile. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: Subdrain (N) (440-197698-1), Combined Subdrains (440-197698-2), CM-9R3 (440-197698-3), CM-10R (440-197698-4), CM-11R (440-197698-5), QCTB (440-197698-6), QCAB (440-197698-7) and (CCVIS 440-445110/2).

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

#### GC/MS Semi VOA

Method(s) 8270C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 440-445055 and analytical batch 440-445322. The laboratory control sample (LCS) was performed in duplicate to provide precision data for this batch.

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

#### HPLC/IC

Method(s) 300.0: Due to the high concentration of Chloride and/or Sulfate, the matrix spike / matrix spike duplicate (MS/MSD) for analytical batch 440-445017 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

Method(s) 300.0: The following samples were diluted for Bromide and/or Fluoride due to the nature of the sample matrix: Subdrain (N) (440-197698-1), Combined Subdrains (440-197698-2), CM-9R3 (440-197698-3), CM-10R (440-197698-4) and CM-11R (440-197698-5). Elevated reporting limits (RLs) are provided.

Method(s) 300.0: The following samples were diluted for Nitrate as N due to the nature of the sample matrix: Subdrain (N) (440-197698-1), CM-9R3 (440-197698-3), CM-10R (440-197698-4) and CM-11R (440-197698-5). Elevated reporting limits (RLs) are provided.

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

#### Metals

Method(s) 6010B: The matrix spike / matrix spike duplicate and post digestion spike (MS/MSD/PDS) recoveries of Boron for preparation batch 440-445028 and analytical batch 440-445254 were outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

# Case Narrative

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

TestAmerica Job ID: 440-197698-1

---

## Job ID: 440-197698-1 (Continued)

---

### Laboratory: TestAmerica Irvine (Continued)

#### General Chemistry

Method(s) SM 5310C: The initial calibration blank (ICB) for analytical batch 440-445423 contained Total Organic Carbon (TOC) above the reporting limit (RL). All reported samples associated with this ICB contained this analyte at a concentration greater than 10X the value found in the ICB; The Method Blank (MB) and all continuing calibration blanks (CCB) were below the reporting limit (RL). therefore, re-analysis of samples was not performed.

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

#### Organic Prep

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

#### VOA Prep

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

# Client Sample Results

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

TestAmerica Job ID: 440-197698-1

**Client Sample ID: Subdrain (N)**

**Lab Sample ID: 440-197698-1**

Date Collected: 12/04/17 10:55

Matrix: Water

Date Received: 12/04/17 13:59

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			12/05/17 20:45	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/05/17 20:45	1
Acrolein	ND		50	2.5	ug/L			12/05/17 11:34	1
Acrylonitrile	ND		50	1.0	ug/L			12/05/17 11:34	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			12/05/17 20:45	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/05/17 20:45	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			12/05/17 20:45	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			12/05/17 20:45	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			12/05/17 20:45	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			12/05/17 20:45	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			12/05/17 20:45	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			12/05/17 20:45	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			12/05/17 20:45	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			12/05/17 20:45	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			12/05/17 20:45	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			12/05/17 20:45	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			12/05/17 20:45	1
<b>1,4-Dichlorobenzene</b>	<b>2.3</b>		0.50	0.25	ug/L			12/05/17 20:45	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			12/05/17 20:45	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			12/05/17 20:45	1
2-Hexanone	ND	F1	5.0	2.5	ug/L			12/05/17 20:45	1
Acetone	ND	F1	20	10	ug/L			12/05/17 20:45	1
Acetonitrile	ND	F1	20	10	ug/L			12/05/17 20:45	1
Acrolein	ND		5.0	2.5	ug/L			12/05/17 20:45	1
Acrylonitrile	ND	F1	2.0	1.0	ug/L			12/05/17 20:45	1
Benzene	ND		0.50	0.25	ug/L			12/05/17 20:45	1
Allyl chloride	ND		1.0	0.50	ug/L			12/05/17 20:45	1
Bromoform	ND		1.0	0.40	ug/L			12/05/17 20:45	1
Bromomethane	ND		0.50	0.25	ug/L			12/05/17 20:45	1
Carbon disulfide	ND		1.0	0.50	ug/L			12/05/17 20:45	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			12/05/17 20:45	1
Chlorobenzene	ND		0.50	0.25	ug/L			12/05/17 20:45	1
Bromochloromethane	ND		0.50	0.25	ug/L			12/05/17 20:45	1
Chloroethane	ND		1.0	0.40	ug/L			12/05/17 20:45	1
Chloroform	ND		0.50	0.25	ug/L			12/05/17 20:45	1
Chloromethane	ND		0.50	0.25	ug/L			12/05/17 20:45	1
<b>cis-1,2-Dichloroethene</b>	<b>0.55</b>		0.50	0.25	ug/L			12/05/17 20:45	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/05/17 20:45	1
Dibromochloromethane	ND		0.50	0.25	ug/L			12/05/17 20:45	1
Dibromomethane	ND		0.50	0.25	ug/L			12/05/17 20:45	1
Bromodichloromethane	ND		0.50	0.25	ug/L			12/05/17 20:45	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			12/05/17 20:45	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			12/05/17 20:45	1
Ethylbenzene	ND		0.50	0.25	ug/L			12/05/17 20:45	1
Iodomethane	ND		2.0	1.0	ug/L			12/05/17 20:45	1
Isobutyl alcohol	ND		25	13	ug/L			12/05/17 20:45	1
m,p-Xylene	ND		1.0	0.50	ug/L			12/05/17 20:45	1
Methylacrylonitrile	ND		10	2.5	ug/L			12/05/17 20:45	1
Methyl methacrylate	ND		2.0	1.0	ug/L			12/05/17 20:45	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-197698-1

**Client Sample ID: Subdrain (N)**

**Lab Sample ID: 440-197698-1**

Date Collected: 12/04/17 10:55

Matrix: Water

Date Received: 12/04/17 13:59

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	ND		2.0	0.88	ug/L			12/05/17 20:45	1
<b>Methyl tert-butyl ether</b>	<b>0.77</b>		0.50	0.25	ug/L			12/05/17 20:45	1
Naphthalene	ND		1.0	0.40	ug/L			12/05/17 20:45	1
o-Xylene	ND		0.50	0.25	ug/L			12/05/17 20:45	1
Propionitrile	ND	F1	20	10	ug/L			12/05/17 20:45	1
Styrene	ND		0.50	0.25	ug/L			12/05/17 20:45	1
<b>t-Butanol</b>	<b>14</b>		10	5.0	ug/L			12/05/17 20:45	1
Tetrachloroethene	ND		0.50	0.25	ug/L			12/05/17 20:45	1
Tetrahydrofuran	ND	F1	10	5.0	ug/L			12/05/17 20:45	1
Toluene	ND		0.50	0.25	ug/L			12/05/17 20:45	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/05/17 20:45	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/05/17 20:45	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			12/05/17 20:45	1
Trichloroethene	ND		0.50	0.25	ug/L			12/05/17 20:45	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			12/05/17 20:45	1
Vinyl acetate	ND		4.0	2.0	ug/L			12/05/17 20:45	1
Vinyl chloride	ND		0.50	0.25	ug/L			12/05/17 20:45	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			12/05/17 20:45	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			12/05/17 20:45	1
4-Methyl-2-pentanone (MIBK)	ND	F1	5.0	2.5	ug/L			12/05/17 20:45	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	5.8	TJ	ug/L		4.34			12/05/17 20:45	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	102		80 - 128		12/05/17 11:34	1
4-Bromofluorobenzene (Surr)	96		80 - 120		12/05/17 11:34	1
Toluene-d8 (Surr)	109		80 - 128		12/05/17 20:45	1
4-Bromofluorobenzene (Surr)	96		80 - 120		12/05/17 20:45	1
Dibromofluoromethane (Surr)	101		76 - 132		12/05/17 11:34	1
Dibromofluoromethane (Surr)	95		76 - 132		12/05/17 20:45	1

**Method: 8270C - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>1,4-Dioxane</b>	<b>8.6</b>		1.0	0.26	ug/L		12/05/17 12:31	12/06/17 19:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	56		30 - 120	12/05/17 12:31	12/06/17 19:46	1

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Bromide</b>	<b>1.7</b>	<b>J</b>	2.5	1.3	mg/L			12/05/17 17:46	5
Nitrate as N	ND		0.55	0.28	mg/L			12/05/17 17:46	5
<b>Chloride</b>	<b>110</b>		100	50	mg/L			12/05/17 18:01	200
<b>Fluoride</b>	<b>1.5</b>	<b>J</b>	2.5	1.3	mg/L			12/05/17 17:46	5
<b>Sulfate</b>	<b>1400</b>		100	50	mg/L			12/05/17 18:01	200

**Method: 6010B - Metals (ICP) - Total Recoverable**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Boron</b>	<b>0.62</b>		0.050	0.025	mg/L		12/05/17 10:14	12/05/17 19:25	1
<b>Calcium</b>	<b>270</b>		0.10	0.050	mg/L		12/05/17 10:14	12/05/17 19:25	1

TestAmerica Irvine



# Client Sample Results

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

TestAmerica Job ID: 440-197698-1

## Client Sample ID: Subdrain (N)

Lab Sample ID: 440-197698-1

Date Collected: 12/04/17 10:55

Matrix: Water

Date Received: 12/04/17 13:59

### Method: 6010B - Metals (ICP) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	13		0.10	0.050	mg/L		12/05/17 10:14	12/05/17 19:25	1
Magnesium	170		0.020	0.010	mg/L		12/05/17 10:14	12/05/17 19:25	1
Manganese	3.9		0.020	0.015	mg/L		12/05/17 10:14	12/05/17 19:25	1
Potassium	9.8		0.50	0.25	mg/L		12/05/17 10:14	12/05/17 19:25	1
Sodium	230		0.50	0.26	mg/L		12/05/17 10:14	12/05/17 19:25	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	4.1		0.20	0.10	mg/L			12/06/17 14:43	1
Chemical Oxygen Demand	56		20	10	mg/L			12/07/17 14:42	1
Total Dissolved Solids	2700		20	10	mg/L			12/05/17 09:53	1
Total Sulfide	ND		0.050	0.027	mg/L			12/05/17 15:16	1
Total Organic Carbon	24		0.50	0.25	mg/L			12/05/17 08:57	5

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	540		4.0	4.0	mg/L			12/05/17 06:04	1
Bicarbonate Alkalinity as CaCO3	540		4.0	4.0	mg/L			12/05/17 06:04	1
Carbon Dioxide, Free	180		2.0	2.0	mg/L			12/12/17 12:30	1

## Client Sample ID: Combined Subdrains

Lab Sample ID: 440-197698-2

Date Collected: 12/04/17 11:38

Matrix: Water

Date Received: 12/04/17 13:59

### Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			12/05/17 22:07	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/05/17 22:07	1
Acrolein	ND		50	2.5	ug/L			12/05/17 11:59	1
Acrylonitrile	ND		50	1.0	ug/L			12/05/17 11:59	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			12/05/17 22:07	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/05/17 22:07	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			12/05/17 22:07	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			12/05/17 22:07	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			12/05/17 22:07	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			12/05/17 22:07	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			12/05/17 22:07	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			12/05/17 22:07	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			12/05/17 22:07	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			12/05/17 22:07	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			12/05/17 22:07	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			12/05/17 22:07	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			12/05/17 22:07	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			12/05/17 22:07	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			12/05/17 22:07	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			12/05/17 22:07	1
2-Hexanone	ND		5.0	2.5	ug/L			12/05/17 22:07	1
Acetone	ND		20	10	ug/L			12/05/17 22:07	1
Acetonitrile	ND		20	10	ug/L			12/05/17 22:07	1
Acrolein	ND		5.0	2.5	ug/L			12/05/17 22:07	1
Acrylonitrile	ND		2.0	1.0	ug/L			12/05/17 22:07	1
Benzene	ND		0.50	0.25	ug/L			12/05/17 22:07	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-197698-1

**Client Sample ID: Combined Subdrains**

**Lab Sample ID: 440-197698-2**

Date Collected: 12/04/17 11:38

Matrix: Water

Date Received: 12/04/17 13:59

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Allyl chloride	ND		1.0	0.50	ug/L			12/05/17 22:07	1
Bromoform	ND		1.0	0.40	ug/L			12/05/17 22:07	1
Bromomethane	ND		0.50	0.25	ug/L			12/05/17 22:07	1
Carbon disulfide	ND		1.0	0.50	ug/L			12/05/17 22:07	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			12/05/17 22:07	1
Chlorobenzene	ND		0.50	0.25	ug/L			12/05/17 22:07	1
Bromochloromethane	ND		0.50	0.25	ug/L			12/05/17 22:07	1
Chloroethane	ND		1.0	0.40	ug/L			12/05/17 22:07	1
Chloroform	ND		0.50	0.25	ug/L			12/05/17 22:07	1
Chloromethane	ND		0.50	0.25	ug/L			12/05/17 22:07	1
<b>cis-1,2-Dichloroethene</b>	<b>0.51</b>		0.50	0.25	ug/L			12/05/17 22:07	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/05/17 22:07	1
Dibromochloromethane	ND		0.50	0.25	ug/L			12/05/17 22:07	1
Dibromomethane	ND		0.50	0.25	ug/L			12/05/17 22:07	1
Bromodichloromethane	ND		0.50	0.25	ug/L			12/05/17 22:07	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			12/05/17 22:07	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			12/05/17 22:07	1
Ethylbenzene	ND		0.50	0.25	ug/L			12/05/17 22:07	1
Iodomethane	ND		2.0	1.0	ug/L			12/05/17 22:07	1
Isobutyl alcohol	ND		25	13	ug/L			12/05/17 22:07	1
m,p-Xylene	ND		1.0	0.50	ug/L			12/05/17 22:07	1
Methylacrylonitrile	ND		10	2.5	ug/L			12/05/17 22:07	1
Methyl methacrylate	ND		2.0	1.0	ug/L			12/05/17 22:07	1
Methylene Chloride	ND		2.0	0.88	ug/L			12/05/17 22:07	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			12/05/17 22:07	1
Naphthalene	ND		1.0	0.40	ug/L			12/05/17 22:07	1
o-Xylene	ND		0.50	0.25	ug/L			12/05/17 22:07	1
Propionitrile	ND		20	10	ug/L			12/05/17 22:07	1
Styrene	ND		0.50	0.25	ug/L			12/05/17 22:07	1
t-Butanol	ND		10	5.0	ug/L			12/05/17 22:07	1
Tetrachloroethene	ND		0.50	0.25	ug/L			12/05/17 22:07	1
Tetrahydrofuran	ND		10	5.0	ug/L			12/05/17 22:07	1
Toluene	ND		0.50	0.25	ug/L			12/05/17 22:07	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/05/17 22:07	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/05/17 22:07	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			12/05/17 22:07	1
Trichloroethene	ND		0.50	0.25	ug/L			12/05/17 22:07	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			12/05/17 22:07	1
Vinyl acetate	ND		4.0	2.0	ug/L			12/05/17 22:07	1
Vinyl chloride	ND		0.50	0.25	ug/L			12/05/17 22:07	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			12/05/17 22:07	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			12/05/17 22:07	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			12/05/17 22:07	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	8.9	TJ	ug/L		5.94			12/05/17 22:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	102		80 - 128		12/05/17 11:59	1
4-Bromofluorobenzene (Surr)	97		80 - 120		12/05/17 11:59	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-197698-1

## Client Sample ID: Combined Subdrains

Lab Sample ID: 440-197698-2

Date Collected: 12/04/17 11:38

Matrix: Water

Date Received: 12/04/17 13:59

### Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	112		80 - 128		12/05/17 22:07	1
4-Bromofluorobenzene (Surr)	99		80 - 120		12/05/17 22:07	1
Dibromofluoromethane (Surr)	99		76 - 132		12/05/17 11:59	1
Dibromofluoromethane (Surr)	94		76 - 132		12/05/17 22:07	1

### Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	4.1		1.0	0.26	ug/L		12/05/17 12:31	12/06/17 20:07	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	71		30 - 120	12/05/17 12:31	12/06/17 20:07	1

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	0.77	J	1.0	0.50	mg/L			12/05/17 18:51	2
Nitrate as N	2.5		0.22	0.11	mg/L			12/05/17 18:51	2
Chloride	61		5.0	2.5	mg/L			12/06/17 02:16	10
Fluoride	1.1		1.0	0.50	mg/L			12/05/17 18:51	2
Sulfate	1300		50	25	mg/L			12/05/17 19:06	100

### Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.24		0.050	0.025	mg/L		12/05/17 10:14	12/05/17 19:31	1
Calcium	270		0.10	0.050	mg/L		12/05/17 10:14	12/05/17 19:31	1
Iron	0.66		0.10	0.050	mg/L		12/05/17 10:14	12/05/17 19:31	1
Magnesium	200		0.020	0.010	mg/L		12/05/17 10:14	12/05/17 19:31	1
Manganese	0.86		0.020	0.015	mg/L		12/05/17 10:14	12/05/17 19:31	1
Potassium	6.9		0.50	0.25	mg/L		12/05/17 10:14	12/05/17 19:31	1
Sodium	110		0.50	0.26	mg/L		12/05/17 10:14	12/05/17 19:31	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	0.97		0.20	0.10	mg/L			12/06/17 14:49	1
Chemical Oxygen Demand	ND		20	10	mg/L			12/07/17 14:43	1
Total Dissolved Solids	2300		20	10	mg/L			12/05/17 09:53	1
Total Sulfide	ND		0.050	0.027	mg/L			12/05/17 15:16	1
Total Organic Carbon	5.9		0.10	0.050	mg/L			12/05/17 06:53	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	300		4.0	4.0	mg/L			12/05/17 06:13	1
Bicarbonate Alkalinity as CaCO3	300		4.0	4.0	mg/L			12/05/17 06:13	1
Carbon Dioxide, Free	42		2.0	2.0	mg/L			12/12/17 12:30	1

## Client Sample ID: CM-9R3

Lab Sample ID: 440-197698-3

Date Collected: 12/04/17 11:15

Matrix: Water

Date Received: 12/04/17 13:59

### Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			12/05/17 22:34	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/05/17 22:34	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-197698-1

**Client Sample ID: CM-9R3**

**Lab Sample ID: 440-197698-3**

Date Collected: 12/04/17 11:15

Matrix: Water

Date Received: 12/04/17 13:59

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acrolein	ND		50	2.5	ug/L			12/05/17 12:25	1
Acrylonitrile	ND		50	1.0	ug/L			12/05/17 12:25	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			12/05/17 22:34	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/05/17 22:34	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			12/05/17 22:34	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			12/05/17 22:34	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			12/05/17 22:34	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			12/05/17 22:34	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			12/05/17 22:34	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			12/05/17 22:34	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			12/05/17 22:34	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			12/05/17 22:34	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			12/05/17 22:34	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			12/05/17 22:34	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			12/05/17 22:34	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			12/05/17 22:34	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			12/05/17 22:34	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			12/05/17 22:34	1
2-Hexanone	ND		5.0	2.5	ug/L			12/05/17 22:34	1
Acetone	ND		20	10	ug/L			12/05/17 22:34	1
Acetonitrile	ND		20	10	ug/L			12/05/17 22:34	1
Acrolein	ND		5.0	2.5	ug/L			12/05/17 22:34	1
Acrylonitrile	ND		2.0	1.0	ug/L			12/05/17 22:34	1
Benzene	ND		0.50	0.25	ug/L			12/05/17 22:34	1
Allyl chloride	ND		1.0	0.50	ug/L			12/05/17 22:34	1
Bromoform	ND		1.0	0.40	ug/L			12/05/17 22:34	1
Bromomethane	ND		0.50	0.25	ug/L			12/05/17 22:34	1
Carbon disulfide	ND		1.0	0.50	ug/L			12/05/17 22:34	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			12/05/17 22:34	1
Chlorobenzene	ND		0.50	0.25	ug/L			12/05/17 22:34	1
Bromochloromethane	ND		0.50	0.25	ug/L			12/05/17 22:34	1
Chloroethane	ND		1.0	0.40	ug/L			12/05/17 22:34	1
Chloroform	ND		0.50	0.25	ug/L			12/05/17 22:34	1
Chloromethane	ND		0.50	0.25	ug/L			12/05/17 22:34	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/05/17 22:34	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/05/17 22:34	1
Dibromochloromethane	ND		0.50	0.25	ug/L			12/05/17 22:34	1
Dibromomethane	ND		0.50	0.25	ug/L			12/05/17 22:34	1
Bromodichloromethane	ND		0.50	0.25	ug/L			12/05/17 22:34	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			12/05/17 22:34	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			12/05/17 22:34	1
Ethylbenzene	ND		0.50	0.25	ug/L			12/05/17 22:34	1
Iodomethane	ND		2.0	1.0	ug/L			12/05/17 22:34	1
Isobutyl alcohol	ND		25	13	ug/L			12/05/17 22:34	1
m,p-Xylene	ND		1.0	0.50	ug/L			12/05/17 22:34	1
Methylacrylonitrile	ND		10	2.5	ug/L			12/05/17 22:34	1
Methyl methacrylate	ND		2.0	1.0	ug/L			12/05/17 22:34	1
Methylene Chloride	ND		2.0	0.88	ug/L			12/05/17 22:34	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			12/05/17 22:34	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-197698-1

**Client Sample ID: CM-9R3**

**Lab Sample ID: 440-197698-3**

**Date Collected: 12/04/17 11:15**

**Matrix: Water**

**Date Received: 12/04/17 13:59**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		1.0	0.40	ug/L			12/05/17 22:34	1
o-Xylene	ND		0.50	0.25	ug/L			12/05/17 22:34	1
Propionitrile	ND		20	10	ug/L			12/05/17 22:34	1
Styrene	ND		0.50	0.25	ug/L			12/05/17 22:34	1
t-Butanol	ND		10	5.0	ug/L			12/05/17 22:34	1
Tetrachloroethene	ND		0.50	0.25	ug/L			12/05/17 22:34	1
Tetrahydrofuran	ND		10	5.0	ug/L			12/05/17 22:34	1
Toluene	ND		0.50	0.25	ug/L			12/05/17 22:34	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/05/17 22:34	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/05/17 22:34	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			12/05/17 22:34	1
Trichloroethene	ND		0.50	0.25	ug/L			12/05/17 22:34	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			12/05/17 22:34	1
Vinyl acetate	ND		4.0	2.0	ug/L			12/05/17 22:34	1
Vinyl chloride	ND		0.50	0.25	ug/L			12/05/17 22:34	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			12/05/17 22:34	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			12/05/17 22:34	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			12/05/17 22:34	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	9.3	T J	ug/L		5.94			12/05/17 22:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	102		80 - 128		12/05/17 12:25	1
4-Bromofluorobenzene (Surr)	95		80 - 120		12/05/17 12:25	1
Toluene-d8 (Surr)	110		80 - 128		12/05/17 22:34	1
4-Bromofluorobenzene (Surr)	100		80 - 120		12/05/17 22:34	1
Dibromofluoromethane (Surr)	101		76 - 132		12/05/17 12:25	1
Dibromofluoromethane (Surr)	96		76 - 132		12/05/17 22:34	1

**Method: 8270C - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		1.1	0.26	ug/L		12/05/17 12:31	12/06/17 20:29	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	67		30 - 120	12/05/17 12:31	12/06/17 20:29	1

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		5.0	2.5	mg/L			12/05/17 19:21	10
Nitrate as N	ND		1.1	0.55	mg/L			12/05/17 19:21	10
Chloride	16		5.0	2.5	mg/L			12/05/17 19:21	10
Fluoride	4.6	J	5.0	2.5	mg/L			12/05/17 19:21	10
Sulfate	3200		100	50	mg/L			12/05/17 19:36	200

**Method: 6010B - Metals (ICP) - Total Recoverable**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.8		0.050	0.025	mg/L		12/05/17 10:14	12/05/17 19:33	1
Calcium	390		0.10	0.050	mg/L		12/05/17 10:14	12/05/17 19:33	1
Iron	24		0.10	0.050	mg/L		12/05/17 10:14	12/05/17 19:33	1
Magnesium	320		0.020	0.010	mg/L		12/05/17 10:14	12/05/17 19:33	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-197698-1

**Client Sample ID: CM-9R3**

**Lab Sample ID: 440-197698-3**

Date Collected: 12/04/17 11:15

Matrix: Water

Date Received: 12/04/17 13:59

**Method: 6010B - Metals (ICP) - Total Recoverable (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	6.8		0.020	0.015	mg/L		12/05/17 10:14	12/05/17 19:33	1
Potassium	16		0.50	0.25	mg/L		12/05/17 10:14	12/05/17 19:33	1
Sodium	360		0.50	0.26	mg/L		12/05/17 10:14	12/05/17 19:33	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	3.4		0.20	0.10	mg/L			12/06/17 14:54	1
Chemical Oxygen Demand	ND		20	10	mg/L			12/07/17 14:43	1
Total Dissolved Solids	4900		50	25	mg/L			12/05/17 09:53	1
Total Sulfide	ND		0.050	0.027	mg/L			12/05/17 15:17	1
Total Organic Carbon	6.1		0.10	0.050	mg/L			12/05/17 07:08	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	37		4.0	4.0	mg/L			12/05/17 06:22	1
Bicarbonate Alkalinity as CaCO3	37		4.0	4.0	mg/L			12/05/17 06:22	1
Carbon Dioxide, Free	140		2.0	2.0	mg/L			12/12/17 12:30	1

**Client Sample ID: CM-10R**

**Lab Sample ID: 440-197698-4**

Date Collected: 12/04/17 09:55

Matrix: Water

Date Received: 12/04/17 13:59

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			12/05/17 23:02	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/05/17 23:02	1
Acrolein	ND	F1	50	2.5	ug/L			12/05/17 09:27	1
Acrylonitrile	ND		50	1.0	ug/L			12/05/17 09:27	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			12/05/17 23:02	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/05/17 23:02	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			12/05/17 23:02	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			12/05/17 23:02	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			12/05/17 23:02	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			12/05/17 23:02	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			12/05/17 23:02	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			12/05/17 23:02	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			12/05/17 23:02	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			12/05/17 23:02	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			12/05/17 23:02	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			12/05/17 23:02	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			12/05/17 23:02	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			12/05/17 23:02	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			12/05/17 23:02	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			12/05/17 23:02	1
2-Hexanone	ND		5.0	2.5	ug/L			12/05/17 23:02	1
Acetone	ND		20	10	ug/L			12/05/17 23:02	1
Acetonitrile	ND		20	10	ug/L			12/05/17 23:02	1
Acrolein	ND		5.0	2.5	ug/L			12/05/17 23:02	1
Acrylonitrile	ND		2.0	1.0	ug/L			12/05/17 23:02	1
Benzene	ND		0.50	0.25	ug/L			12/05/17 23:02	1
Allyl chloride	ND		1.0	0.50	ug/L			12/05/17 23:02	1
Bromoform	ND		1.0	0.40	ug/L			12/05/17 23:02	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-197698-1

**Client Sample ID: CM-10R**

**Lab Sample ID: 440-197698-4**

Date Collected: 12/04/17 09:55

Matrix: Water

Date Received: 12/04/17 13:59

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromomethane	ND		0.50	0.25	ug/L			12/05/17 23:02	1
Carbon disulfide	ND		1.0	0.50	ug/L			12/05/17 23:02	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			12/05/17 23:02	1
Chlorobenzene	ND		0.50	0.25	ug/L			12/05/17 23:02	1
Bromochloromethane	ND		0.50	0.25	ug/L			12/05/17 23:02	1
Chloroethane	ND		1.0	0.40	ug/L			12/05/17 23:02	1
Chloroform	ND		0.50	0.25	ug/L			12/05/17 23:02	1
Chloromethane	ND		0.50	0.25	ug/L			12/05/17 23:02	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/05/17 23:02	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/05/17 23:02	1
Dibromochloromethane	ND		0.50	0.25	ug/L			12/05/17 23:02	1
Dibromomethane	ND		0.50	0.25	ug/L			12/05/17 23:02	1
Bromodichloromethane	ND		0.50	0.25	ug/L			12/05/17 23:02	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			12/05/17 23:02	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			12/05/17 23:02	1
Ethylbenzene	ND		0.50	0.25	ug/L			12/05/17 23:02	1
Iodomethane	ND		2.0	1.0	ug/L			12/05/17 23:02	1
Isobutyl alcohol	ND		25	13	ug/L			12/05/17 23:02	1
m,p-Xylene	ND		1.0	0.50	ug/L			12/05/17 23:02	1
Methylacrylonitrile	ND		10	2.5	ug/L			12/05/17 23:02	1
Methyl methacrylate	ND		2.0	1.0	ug/L			12/05/17 23:02	1
Methylene Chloride	ND		2.0	0.88	ug/L			12/05/17 23:02	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			12/05/17 23:02	1
Naphthalene	ND		1.0	0.40	ug/L			12/05/17 23:02	1
o-Xylene	ND		0.50	0.25	ug/L			12/05/17 23:02	1
Propionitrile	ND		20	10	ug/L			12/05/17 23:02	1
Styrene	ND		0.50	0.25	ug/L			12/05/17 23:02	1
t-Butanol	ND		10	5.0	ug/L			12/05/17 23:02	1
Tetrachloroethene	ND		0.50	0.25	ug/L			12/05/17 23:02	1
Tetrahydrofuran	ND		10	5.0	ug/L			12/05/17 23:02	1
Toluene	ND		0.50	0.25	ug/L			12/05/17 23:02	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/05/17 23:02	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/05/17 23:02	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			12/05/17 23:02	1
Trichloroethene	ND		0.50	0.25	ug/L			12/05/17 23:02	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			12/05/17 23:02	1
Vinyl acetate	ND		4.0	2.0	ug/L			12/05/17 23:02	1
Vinyl chloride	ND		0.50	0.25	ug/L			12/05/17 23:02	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			12/05/17 23:02	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			12/05/17 23:02	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			12/05/17 23:02	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	9.2	T J	ug/L		5.94			12/05/17 23:02	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	102		80 - 128		12/05/17 09:27	1
4-Bromofluorobenzene (Surr)	96		80 - 120		12/05/17 09:27	1
Toluene-d8 (Surr)	110		80 - 128		12/05/17 23:02	1
4-Bromofluorobenzene (Surr)	98		80 - 120		12/05/17 23:02	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-197698-1

**Client Sample ID: CM-10R**

**Lab Sample ID: 440-197698-4**

Date Collected: 12/04/17 09:55

Matrix: Water

Date Received: 12/04/17 13:59

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	98		76 - 132		12/05/17 09:27	1
Dibromofluoromethane (Surr)	97		76 - 132		12/05/17 23:02	1

**Method: 8270C - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		1.1	0.28	ug/L		12/05/17 12:31	12/06/17 20:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	57		30 - 120	12/05/17 12:31	12/06/17 20:51	1

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		2.5	1.3	mg/L			12/05/17 17:16	5
Nitrate as N	ND		0.55	0.28	mg/L			12/05/17 17:16	5
Chloride	10		2.5	1.3	mg/L			12/05/17 17:16	5
Fluoride	1.6 J		2.5	1.3	mg/L			12/05/17 17:16	5
Sulfate	1300		50	25	mg/L			12/05/17 17:31	100

**Method: 6010B - Metals (ICP) - Total Recoverable**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.84		0.050	0.025	mg/L		12/05/17 10:14	12/05/17 19:36	1
Calcium	240		0.10	0.050	mg/L		12/05/17 10:14	12/05/17 19:36	1
Iron	ND		0.10	0.050	mg/L		12/05/17 10:14	12/05/17 19:36	1
Magnesium	260		0.020	0.010	mg/L		12/05/17 10:14	12/05/17 19:36	1
Manganese	0.28		0.020	0.015	mg/L		12/05/17 10:14	12/05/17 19:36	1
Potassium	13		0.50	0.25	mg/L		12/05/17 10:14	12/05/17 19:36	1
Sodium	170		0.50	0.26	mg/L		12/05/17 10:14	12/05/17 19:36	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	13		2.0	1.0	mg/L			12/06/17 15:32	10
Chemical Oxygen Demand	ND		20	10	mg/L			12/07/17 14:43	1
Total Dissolved Solids	2500		20	10	mg/L			12/05/17 09:53	1
Total Sulfide	5.7		0.50	0.27	mg/L			12/05/17 15:17	10
Total Organic Carbon	4.1		0.10	0.050	mg/L			12/05/17 08:31	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	590		4.0	4.0	mg/L			12/05/17 06:40	1
Bicarbonate Alkalinity as CaCO3	590		4.0	4.0	mg/L			12/05/17 06:40	1
Carbon Dioxide, Free	67		2.0	2.0	mg/L			12/12/17 12:30	1

**Client Sample ID: CM-11R**

**Lab Sample ID: 440-197698-5**

Date Collected: 12/04/17 12:55

Matrix: Water

Date Received: 12/04/17 13:59

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			12/05/17 23:30	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/05/17 23:30	1
Acrolein	ND		50	2.5	ug/L			12/05/17 12:50	1
Acrylonitrile	ND		50	1.0	ug/L			12/05/17 12:50	1

TestAmerica Irvine



# Client Sample Results

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

TestAmerica Job ID: 440-197698-1

**Client Sample ID: CM-11R**

**Lab Sample ID: 440-197698-5**

Date Collected: 12/04/17 12:55

Matrix: Water

Date Received: 12/04/17 13:59

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			12/05/17 23:30	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/05/17 23:30	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			12/05/17 23:30	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			12/05/17 23:30	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			12/05/17 23:30	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			12/05/17 23:30	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			12/05/17 23:30	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			12/05/17 23:30	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			12/05/17 23:30	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			12/05/17 23:30	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			12/05/17 23:30	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			12/05/17 23:30	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			12/05/17 23:30	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			12/05/17 23:30	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			12/05/17 23:30	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			12/05/17 23:30	1
2-Hexanone	ND		5.0	2.5	ug/L			12/05/17 23:30	1
Acetone	ND		20	10	ug/L			12/05/17 23:30	1
Acetonitrile	ND		20	10	ug/L			12/05/17 23:30	1
Acrolein	ND		5.0	2.5	ug/L			12/05/17 23:30	1
Acrylonitrile	ND		2.0	1.0	ug/L			12/05/17 23:30	1
Benzene	ND		0.50	0.25	ug/L			12/05/17 23:30	1
Allyl chloride	ND		1.0	0.50	ug/L			12/05/17 23:30	1
Bromoform	ND		1.0	0.40	ug/L			12/05/17 23:30	1
Bromomethane	ND		0.50	0.25	ug/L			12/05/17 23:30	1
Carbon disulfide	ND		1.0	0.50	ug/L			12/05/17 23:30	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			12/05/17 23:30	1
Chlorobenzene	ND		0.50	0.25	ug/L			12/05/17 23:30	1
Bromochloromethane	ND		0.50	0.25	ug/L			12/05/17 23:30	1
Chloroethane	ND		1.0	0.40	ug/L			12/05/17 23:30	1
Chloroform	ND		0.50	0.25	ug/L			12/05/17 23:30	1
Chloromethane	ND		0.50	0.25	ug/L			12/05/17 23:30	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/05/17 23:30	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/05/17 23:30	1
Dibromochloromethane	ND		0.50	0.25	ug/L			12/05/17 23:30	1
Dibromomethane	ND		0.50	0.25	ug/L			12/05/17 23:30	1
Bromodichloromethane	ND		0.50	0.25	ug/L			12/05/17 23:30	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			12/05/17 23:30	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			12/05/17 23:30	1
Ethylbenzene	ND		0.50	0.25	ug/L			12/05/17 23:30	1
Iodomethane	ND		2.0	1.0	ug/L			12/05/17 23:30	1
Isobutyl alcohol	ND		25	13	ug/L			12/05/17 23:30	1
m,p-Xylene	ND		1.0	0.50	ug/L			12/05/17 23:30	1
Methylacrylonitrile	ND		10	2.5	ug/L			12/05/17 23:30	1
Methyl methacrylate	ND		2.0	1.0	ug/L			12/05/17 23:30	1
Methylene Chloride	ND		2.0	0.88	ug/L			12/05/17 23:30	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			12/05/17 23:30	1
Naphthalene	ND		1.0	0.40	ug/L			12/05/17 23:30	1
o-Xylene	ND		0.50	0.25	ug/L			12/05/17 23:30	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-197698-1

**Client Sample ID: CM-11R**

**Lab Sample ID: 440-197698-5**

Date Collected: 12/04/17 12:55

Matrix: Water

Date Received: 12/04/17 13:59

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Propionitrile	ND		20	10	ug/L			12/05/17 23:30	1
Styrene	ND		0.50	0.25	ug/L			12/05/17 23:30	1
t-Butanol	ND		10	5.0	ug/L			12/05/17 23:30	1
Tetrachloroethene	ND		0.50	0.25	ug/L			12/05/17 23:30	1
Tetrahydrofuran	ND		10	5.0	ug/L			12/05/17 23:30	1
Toluene	ND		0.50	0.25	ug/L			12/05/17 23:30	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/05/17 23:30	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/05/17 23:30	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			12/05/17 23:30	1
Trichloroethene	ND		0.50	0.25	ug/L			12/05/17 23:30	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			12/05/17 23:30	1
Vinyl acetate	ND		4.0	2.0	ug/L			12/05/17 23:30	1
Vinyl chloride	ND		0.50	0.25	ug/L			12/05/17 23:30	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			12/05/17 23:30	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			12/05/17 23:30	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			12/05/17 23:30	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	8.9	T J	ug/L		5.94			12/05/17 23:30	1
Decanal	4.1	T J N	ug/L		15.99	112-31-2		12/05/17 23:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	102		80 - 128		12/05/17 12:50	1
4-Bromofluorobenzene (Surr)	96		80 - 120		12/05/17 12:50	1
Toluene-d8 (Surr)	110		80 - 128		12/05/17 23:30	1
4-Bromofluorobenzene (Surr)	97		80 - 120		12/05/17 23:30	1
Dibromofluoromethane (Surr)	103		76 - 132		12/05/17 12:50	1
Dibromofluoromethane (Surr)	95		76 - 132		12/05/17 23:30	1

**Method: 8270C - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		1.1	0.28	ug/L		12/05/17 12:31	12/06/17 21:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	58		30 - 120	12/05/17 12:31	12/06/17 21:13	1

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		5.0	2.5	mg/L			12/05/17 19:51	10
Nitrate as N	ND		1.1	0.55	mg/L			12/05/17 19:51	10
<b>Chloride</b>	<b>13</b>		5.0	2.5	mg/L			12/05/17 19:51	10
Fluoride	ND		5.0	2.5	mg/L			12/05/17 19:51	10
<b>Sulfate</b>	<b>2900</b>		100	50	mg/L			12/05/17 20:06	200

**Method: 6010B - Metals (ICP) - Total Recoverable**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Boron</b>	<b>1.4</b>		0.050	0.025	mg/L		12/05/17 10:14	12/05/17 19:38	1
<b>Calcium</b>	<b>310</b>		0.10	0.050	mg/L		12/05/17 10:14	12/05/17 19:38	1
<b>Iron</b>	<b>0.34</b>		0.10	0.050	mg/L		12/05/17 10:14	12/05/17 19:38	1
<b>Magnesium</b>	<b>200</b>		0.020	0.010	mg/L		12/05/17 10:14	12/05/17 19:38	1
<b>Manganese</b>	<b>5.9</b>		0.020	0.015	mg/L		12/05/17 10:14	12/05/17 19:38	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-197698-1

**Client Sample ID: CM-11R**

**Lab Sample ID: 440-197698-5**

Date Collected: 12/04/17 12:55

Matrix: Water

Date Received: 12/04/17 13:59

**Method: 6010B - Metals (ICP) - Total Recoverable (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	13		0.50	0.25	mg/L		12/05/17 10:14	12/05/17 19:38	1
Sodium	520		0.50	0.26	mg/L		12/05/17 10:14	12/05/17 19:38	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	1.7		0.20	0.10	mg/L			12/06/17 15:05	1
Chemical Oxygen Demand	ND		20	10	mg/L			12/07/17 14:43	1
Total Dissolved Solids	4300		50	25	mg/L			12/05/17 09:53	1
Total Sulfide	ND		0.55	0.30	mg/L			12/05/17 15:17	11
Total Organic Carbon	4.7		0.10	0.050	mg/L			12/05/17 08:44	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	7.5		4.0	4.0	mg/L			12/05/17 06:46	1
Bicarbonate Alkalinity as CaCO3	7.5		4.0	4.0	mg/L			12/05/17 06:46	1
Carbon Dioxide, Free	62		2.0	2.0	mg/L			12/12/17 12:30	1

**Client Sample ID: QCTB**

**Lab Sample ID: 440-197698-6**

Date Collected: 12/04/17 00:01

Matrix: Water

Date Received: 12/04/17 13:59

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			12/05/17 23:57	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/05/17 23:57	1
Acrolein	ND		50	2.5	ug/L			12/05/17 13:41	1
Acrylonitrile	ND		50	1.0	ug/L			12/05/17 13:41	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			12/05/17 23:57	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/05/17 23:57	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			12/05/17 23:57	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			12/05/17 23:57	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			12/05/17 23:57	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			12/05/17 23:57	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			12/05/17 23:57	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			12/05/17 23:57	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			12/05/17 23:57	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			12/05/17 23:57	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			12/05/17 23:57	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			12/05/17 23:57	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			12/05/17 23:57	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			12/05/17 23:57	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			12/05/17 23:57	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			12/05/17 23:57	1
2-Hexanone	ND		5.0	2.5	ug/L			12/05/17 23:57	1
Acetone	ND		20	10	ug/L			12/05/17 23:57	1
Acetonitrile	ND		20	10	ug/L			12/05/17 23:57	1
Acrolein	ND		5.0	2.5	ug/L			12/05/17 23:57	1
Acrylonitrile	ND		2.0	1.0	ug/L			12/05/17 23:57	1
Benzene	ND		0.50	0.25	ug/L			12/05/17 23:57	1
Allyl chloride	ND		1.0	0.50	ug/L			12/05/17 23:57	1
Bromoform	ND		1.0	0.40	ug/L			12/05/17 23:57	1
Bromomethane	ND		0.50	0.25	ug/L			12/05/17 23:57	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-197698-1

**Client Sample ID: QCTB**

**Lab Sample ID: 440-197698-6**

Date Collected: 12/04/17 00:01

Matrix: Water

Date Received: 12/04/17 13:59

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon disulfide	ND		1.0	0.50	ug/L			12/05/17 23:57	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			12/05/17 23:57	1
Chlorobenzene	ND		0.50	0.25	ug/L			12/05/17 23:57	1
Bromochloromethane	ND		0.50	0.25	ug/L			12/05/17 23:57	1
Chloroethane	ND		1.0	0.40	ug/L			12/05/17 23:57	1
Chloroform	ND		0.50	0.25	ug/L			12/05/17 23:57	1
Chloromethane	ND		0.50	0.25	ug/L			12/05/17 23:57	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/05/17 23:57	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/05/17 23:57	1
Dibromochloromethane	ND		0.50	0.25	ug/L			12/05/17 23:57	1
Dibromomethane	ND		0.50	0.25	ug/L			12/05/17 23:57	1
Bromodichloromethane	ND		0.50	0.25	ug/L			12/05/17 23:57	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			12/05/17 23:57	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			12/05/17 23:57	1
Ethylbenzene	ND		0.50	0.25	ug/L			12/05/17 23:57	1
Iodomethane	ND		2.0	1.0	ug/L			12/05/17 23:57	1
Isobutyl alcohol	ND		25	13	ug/L			12/05/17 23:57	1
m,p-Xylene	ND		1.0	0.50	ug/L			12/05/17 23:57	1
Methylacrylonitrile	ND		10	2.5	ug/L			12/05/17 23:57	1
Methyl methacrylate	ND		2.0	1.0	ug/L			12/05/17 23:57	1
Methylene Chloride	ND		2.0	0.88	ug/L			12/05/17 23:57	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			12/05/17 23:57	1
Naphthalene	ND		1.0	0.40	ug/L			12/05/17 23:57	1
o-Xylene	ND		0.50	0.25	ug/L			12/05/17 23:57	1
Propionitrile	ND		20	10	ug/L			12/05/17 23:57	1
Styrene	ND		0.50	0.25	ug/L			12/05/17 23:57	1
t-Butanol	ND		10	5.0	ug/L			12/05/17 23:57	1
Tetrachloroethene	ND		0.50	0.25	ug/L			12/05/17 23:57	1
Tetrahydrofuran	ND		10	5.0	ug/L			12/05/17 23:57	1
Toluene	ND		0.50	0.25	ug/L			12/05/17 23:57	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/05/17 23:57	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/05/17 23:57	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			12/05/17 23:57	1
Trichloroethene	ND		0.50	0.25	ug/L			12/05/17 23:57	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			12/05/17 23:57	1
Vinyl acetate	ND		4.0	2.0	ug/L			12/05/17 23:57	1
Vinyl chloride	ND		0.50	0.25	ug/L			12/05/17 23:57	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			12/05/17 23:57	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			12/05/17 23:57	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			12/05/17 23:57	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	8.9	T J	ug/L		5.94			12/05/17 23:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	103		80 - 128		12/05/17 13:41	1
4-Bromofluorobenzene (Surr)	95		80 - 120		12/05/17 13:41	1
Toluene-d8 (Surr)	110		80 - 128		12/05/17 23:57	1
4-Bromofluorobenzene (Surr)	101		80 - 120		12/05/17 23:57	1
Dibromofluoromethane (Surr)	99		76 - 132		12/05/17 13:41	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-197698-1

**Client Sample ID: QCTB**

**Date Collected: 12/04/17 00:01**

**Date Received: 12/04/17 13:59**

**Lab Sample ID: 440-197698-6**

**Matrix: Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	96		76 - 132		12/05/17 23:57	1

**Client Sample ID: QCAB**

**Date Collected: 12/04/17 00:01**

**Date Received: 12/04/17 13:59**

**Lab Sample ID: 440-197698-7**

**Matrix: Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			12/06/17 00:25	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/06/17 00:25	1
Acrolein	ND		50	2.5	ug/L			12/05/17 14:06	1
Acrylonitrile	ND		50	1.0	ug/L			12/05/17 14:06	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			12/06/17 00:25	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/06/17 00:25	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			12/06/17 00:25	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			12/06/17 00:25	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			12/06/17 00:25	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			12/06/17 00:25	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			12/06/17 00:25	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			12/06/17 00:25	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			12/06/17 00:25	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			12/06/17 00:25	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			12/06/17 00:25	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			12/06/17 00:25	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			12/06/17 00:25	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			12/06/17 00:25	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			12/06/17 00:25	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			12/06/17 00:25	1
2-Hexanone	ND		5.0	2.5	ug/L			12/06/17 00:25	1
Acetone	ND		20	10	ug/L			12/06/17 00:25	1
Acetonitrile	ND		20	10	ug/L			12/06/17 00:25	1
Acrolein	ND		5.0	2.5	ug/L			12/06/17 00:25	1
Acrylonitrile	ND		2.0	1.0	ug/L			12/06/17 00:25	1
Benzene	ND		0.50	0.25	ug/L			12/06/17 00:25	1
Allyl chloride	ND		1.0	0.50	ug/L			12/06/17 00:25	1
Bromoform	ND		1.0	0.40	ug/L			12/06/17 00:25	1
Bromomethane	ND		0.50	0.25	ug/L			12/06/17 00:25	1
Carbon disulfide	ND		1.0	0.50	ug/L			12/06/17 00:25	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			12/06/17 00:25	1
Chlorobenzene	ND		0.50	0.25	ug/L			12/06/17 00:25	1
Bromochloromethane	ND		0.50	0.25	ug/L			12/06/17 00:25	1
Chloroethane	ND		1.0	0.40	ug/L			12/06/17 00:25	1
Chloroform	ND		0.50	0.25	ug/L			12/06/17 00:25	1
Chloromethane	ND		0.50	0.25	ug/L			12/06/17 00:25	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/06/17 00:25	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/06/17 00:25	1
Dibromochloromethane	ND		0.50	0.25	ug/L			12/06/17 00:25	1
Dibromomethane	ND		0.50	0.25	ug/L			12/06/17 00:25	1
Bromodichloromethane	ND		0.50	0.25	ug/L			12/06/17 00:25	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-197698-1

**Client Sample ID: QCAB**

**Lab Sample ID: 440-197698-7**

Date Collected: 12/04/17 00:01

Matrix: Water

Date Received: 12/04/17 13:59

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			12/06/17 00:25	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			12/06/17 00:25	1
Ethylbenzene	ND		0.50	0.25	ug/L			12/06/17 00:25	1
Iodomethane	ND		2.0	1.0	ug/L			12/06/17 00:25	1
Isobutyl alcohol	ND		25	13	ug/L			12/06/17 00:25	1
m,p-Xylene	ND		1.0	0.50	ug/L			12/06/17 00:25	1
Methylacrylonitrile	ND		10	2.5	ug/L			12/06/17 00:25	1
Methyl methacrylate	ND		2.0	1.0	ug/L			12/06/17 00:25	1
Methylene Chloride	ND		2.0	0.88	ug/L			12/06/17 00:25	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			12/06/17 00:25	1
Naphthalene	ND		1.0	0.40	ug/L			12/06/17 00:25	1
o-Xylene	ND		0.50	0.25	ug/L			12/06/17 00:25	1
Propionitrile	ND		20	10	ug/L			12/06/17 00:25	1
Styrene	ND		0.50	0.25	ug/L			12/06/17 00:25	1
t-Butanol	ND		10	5.0	ug/L			12/06/17 00:25	1
Tetrachloroethene	ND		0.50	0.25	ug/L			12/06/17 00:25	1
Tetrahydrofuran	ND		10	5.0	ug/L			12/06/17 00:25	1
Toluene	ND		0.50	0.25	ug/L			12/06/17 00:25	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/06/17 00:25	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/06/17 00:25	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			12/06/17 00:25	1
Trichloroethene	ND		0.50	0.25	ug/L			12/06/17 00:25	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			12/06/17 00:25	1
Vinyl acetate	ND		4.0	2.0	ug/L			12/06/17 00:25	1
Vinyl chloride	ND		0.50	0.25	ug/L			12/06/17 00:25	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			12/06/17 00:25	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			12/06/17 00:25	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			12/06/17 00:25	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	8.9	T J	ug/L		5.94			12/06/17 00:25	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	101		80 - 128		12/05/17 14:06	1
4-Bromofluorobenzene (Surr)	94		80 - 120		12/05/17 14:06	1
Toluene-d8 (Surr)	109		80 - 128		12/06/17 00:25	1
4-Bromofluorobenzene (Surr)	98		80 - 120		12/06/17 00:25	1
Dibromofluoromethane (Surr)	100		76 - 132		12/05/17 14:06	1
Dibromofluoromethane (Surr)	96		76 - 132		12/06/17 00:25	1

# Method Summary

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

TestAmerica Job ID: 440-197698-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL IRV
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL IRV
300.0	Anions, Ion Chromatography	MCAWW	TAL IRV
6010B	Metals (ICP)	SW846	TAL IRV
350.1	Nitrogen, Ammonia	MCAWW	TAL IRV
410.4	COD	MCAWW	TAL IRV
SM 2320B	Alkalinity	SM	TAL IRV
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL IRV
SM 4500 CO2 C	Free Carbon Dioxide	SM	TAL IRV
SM 4500 S2 D	Sulfide, Total	SM	TAL IRV
SM 5310C	TOC	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",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

**Laboratory References:**

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

# Lab Chronicle

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

TestAmerica Job ID: 440-197698-1

## Client Sample ID: Subdrain (N)

Date Collected: 12/04/17 10:55

Date Received: 12/04/17 13:59

## Lab Sample ID: 440-197698-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	444974	12/05/17 11:34	RM	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	445110	12/05/17 20:45	OH1	TAL IRV
Total/NA	Prep	3520C			970 mL	1.0 mL	445055	12/05/17 12:31	JJM	TAL IRV
Total/NA	Analysis	8270C		1			445322	12/06/17 19:46	TL	TAL IRV
Total/NA	Analysis	300.0		5	5 mL	1.0 mL	445016	12/05/17 17:46	NTN	TAL IRV
Total/NA	Analysis	300.0		5	5 mL	1.0 mL	445017	12/05/17 17:46	NTN	TAL IRV
Total/NA	Analysis	300.0		200			445017	12/05/17 18:01	NTN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	445028	12/05/17 10:14	Q1N	TAL IRV
Total Recoverable	Analysis	6010B		1			445212	12/05/17 19:25	VS	TAL IRV
Total/NA	Analysis	350.1		1	0.8 mL	8.0 mL	445370	12/06/17 14:43	AN	TAL IRV
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	445563	12/07/17 14:42	KYP	TAL IRV
Total/NA	Analysis	SM 2320B		1			444990	12/05/17 06:04	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	445022	12/05/17 09:53	XL	TAL IRV
Total/NA	Analysis	SM 4500 CO2 C		1	25 mL	25 mL	446298	12/12/17 12:30	XL	TAL IRV
Total/NA	Analysis	SM 4500 S2 D		1	7.5 mL	7.5 mL	445094	12/05/17 15:16	KMY	TAL IRV
Total/NA	Analysis	SM 5310C		5	100 mL	100 mL	445423	12/05/17 08:57	YZ	TAL IRV

## Client Sample ID: Combined Subdrains

Date Collected: 12/04/17 11:38

Date Received: 12/04/17 13:59

## Lab Sample ID: 440-197698-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	444974	12/05/17 11:59	RM	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	445110	12/05/17 22:07	OH1	TAL IRV
Total/NA	Prep	3520C			970 mL	1.0 mL	445055	12/05/17 12:31	JJM	TAL IRV
Total/NA	Analysis	8270C		1			445322	12/06/17 20:07	TL	TAL IRV
Total/NA	Analysis	300.0		2	5 mL	1.0 mL	445016	12/05/17 18:51	NTN	TAL IRV
Total/NA	Analysis	300.0		2	5 mL	1.0 mL	445017	12/05/17 18:51	NTN	TAL IRV
Total/NA	Analysis	300.0		100			445017	12/05/17 19:06	NTN	TAL IRV
Total/NA	Analysis	300.0		10	5 mL	1.0 mL	445017	12/06/17 02:16	NTN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	445028	12/05/17 10:14	Q1N	TAL IRV
Total Recoverable	Analysis	6010B		1			445212	12/05/17 19:31	VS	TAL IRV
Total/NA	Analysis	350.1		1	0.8 mL	8.0 mL	445370	12/06/17 14:49	AN	TAL IRV
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	445563	12/07/17 14:43	KYP	TAL IRV
Total/NA	Analysis	SM 2320B		1			444990	12/05/17 06:13	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	445022	12/05/17 09:53	XL	TAL IRV
Total/NA	Analysis	SM 4500 CO2 C		1	25 mL	25 mL	446298	12/12/17 12:30	XL	TAL IRV
Total/NA	Analysis	SM 4500 S2 D		1	7.5 mL	7.5 mL	445094	12/05/17 15:16	KMY	TAL IRV
Total/NA	Analysis	SM 5310C		1	100 mL	100 mL	445423	12/05/17 06:53	YZ	TAL IRV

TestAmerica Irvine



# Lab Chronicle

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

TestAmerica Job ID: 440-197698-1

**Client Sample ID: CM-9R3**

**Lab Sample ID: 440-197698-3**

Date Collected: 12/04/17 11:15

Matrix: Water

Date Received: 12/04/17 13:59

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	444974	12/05/17 12:25	RM	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	445110	12/05/17 22:34	OH1	TAL IRV
Total/NA	Prep	3520C			950 mL	1.0 mL	445055	12/05/17 12:31	JJM	TAL IRV
Total/NA	Analysis	8270C		1			445322	12/06/17 20:29	TL	TAL IRV
Total/NA	Analysis	300.0		10	5 mL	1.0 mL	445016	12/05/17 19:21	NTN	TAL IRV
Total/NA	Analysis	300.0		10	5 mL	1.0 mL	445017	12/05/17 19:21	NTN	TAL IRV
Total/NA	Analysis	300.0		200			445017	12/05/17 19:36	NTN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	445028	12/05/17 10:14	Q1N	TAL IRV
Total Recoverable	Analysis	6010B		1			445212	12/05/17 19:33	VS	TAL IRV
Total/NA	Analysis	350.1		1	0.8 mL	8.0 mL	445370	12/06/17 14:54	AN	TAL IRV
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	445563	12/07/17 14:43	KYP	TAL IRV
Total/NA	Analysis	SM 2320B		1			444990	12/05/17 06:22	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	20 mL	100 mL	445022	12/05/17 09:53	XL	TAL IRV
Total/NA	Analysis	SM 4500 CO2 C		1	25 mL	25 mL	446298	12/12/17 12:30	XL	TAL IRV
Total/NA	Analysis	SM 4500 S2 D		1	7.5 mL	7.5 mL	445094	12/05/17 15:17	KMY	TAL IRV
Total/NA	Analysis	SM 5310C		1	100 mL	100 mL	445423	12/05/17 07:08	YZ	TAL IRV

**Client Sample ID: CM-10R**

**Lab Sample ID: 440-197698-4**

Date Collected: 12/04/17 09:55

Matrix: Water

Date Received: 12/04/17 13:59

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	444974	12/05/17 09:27	RM	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	445110	12/05/17 23:02	OH1	TAL IRV
Total/NA	Prep	3520C			905 mL	1.0 mL	445055	12/05/17 12:31	JJM	TAL IRV
Total/NA	Analysis	8270C		1			445322	12/06/17 20:51	TL	TAL IRV
Total/NA	Analysis	300.0		5	5 mL	1.0 mL	445016	12/05/17 17:16	NTN	TAL IRV
Total/NA	Analysis	300.0		5	5 mL	1.0 mL	445017	12/05/17 17:16	NTN	TAL IRV
Total/NA	Analysis	300.0		100			445017	12/05/17 17:31	NTN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	445028	12/05/17 10:14	Q1N	TAL IRV
Total Recoverable	Analysis	6010B		1			445212	12/05/17 19:36	VS	TAL IRV
Total/NA	Analysis	350.1		10	0.8 mL	8.0 mL	445370	12/06/17 15:32	AN	TAL IRV
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	445563	12/07/17 14:43	KYP	TAL IRV
Total/NA	Analysis	SM 2320B		1			444990	12/05/17 06:40	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	445022	12/05/17 09:53	XL	TAL IRV
Total/NA	Analysis	SM 4500 CO2 C		1	25 mL	25 mL	446298	12/12/17 12:30	XL	TAL IRV
Total/NA	Analysis	SM 4500 S2 D		10	7.5 mL	7.5 mL	445094	12/05/17 15:17	KMY	TAL IRV
Total/NA	Analysis	SM 5310C		1	100 mL	100 mL	445423	12/05/17 08:31	YZ	TAL IRV

# Lab Chronicle

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

TestAmerica Job ID: 440-197698-1

## Client Sample ID: CM-11R

Date Collected: 12/04/17 12:55

Date Received: 12/04/17 13:59

## Lab Sample ID: 440-197698-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	444974	12/05/17 12:50	RM	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	445110	12/05/17 23:30	OH1	TAL IRV
Total/NA	Prep	3520C			905 mL	1.0 mL	445055	12/05/17 12:31	JJM	TAL IRV
Total/NA	Analysis	8270C		1			445322	12/06/17 21:13	TL	TAL IRV
Total/NA	Analysis	300.0		10	5 mL	1.0 mL	445016	12/05/17 19:51	NTN	TAL IRV
Total/NA	Analysis	300.0		10	5 mL	1.0 mL	445017	12/05/17 19:51	NTN	TAL IRV
Total/NA	Analysis	300.0		200			445017	12/05/17 20:06	NTN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	445028	12/05/17 10:14	Q1N	TAL IRV
Total Recoverable	Analysis	6010B		1			445212	12/05/17 19:38	VS	TAL IRV
Total/NA	Analysis	350.1		1	0.8 mL	8.0 mL	445370	12/06/17 15:05	AN	TAL IRV
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	445563	12/07/17 14:43	KYP	TAL IRV
Total/NA	Analysis	SM 2320B		1			444990	12/05/17 06:46	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	20 mL	100 mL	445022	12/05/17 09:53	XL	TAL IRV
Total/NA	Analysis	SM 4500 CO2 C		1	25 mL	25 mL	446298	12/12/17 12:30	XL	TAL IRV
Total/NA	Analysis	SM 4500 S2 D		11	7.5 mL	7.5 mL	445094	12/05/17 15:17	KMY	TAL IRV
Total/NA	Analysis	SM 5310C		1	100 mL	100 mL	445423	12/05/17 08:44	YZ	TAL IRV

## Client Sample ID: QCTB

Date Collected: 12/04/17 00:01

Date Received: 12/04/17 13:59

## Lab Sample ID: 440-197698-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	444974	12/05/17 13:41	RM	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	445110	12/05/17 23:57	OH1	TAL IRV

## Client Sample ID: QCAB

Date Collected: 12/04/17 00:01

Date Received: 12/04/17 13:59

## Lab Sample ID: 440-197698-7

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	444974	12/05/17 14:06	RM	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	445110	12/06/17 00:25	OH1	TAL IRV

**Laboratory References:**

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

# QC Sample Results

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

TestAmerica Job ID: 440-197698-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 440-444974/4**

**Matrix: Water**

**Analysis Batch: 444974**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Acrolein	ND		50	2.5	ug/L			12/05/17 08:10	1
Acrylonitrile	ND		50	1.0	ug/L			12/05/17 08:10	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac	
Toluene-d8 (Surr)	103		80 - 128				12/05/17 08:10	1	
4-Bromofluorobenzene (Surr)	93		80 - 120				12/05/17 08:10	1	
Dibromofluoromethane (Surr)	98		76 - 132				12/05/17 08:10	1	

**Lab Sample ID: LCS 440-444974/26**

**Matrix: Water**

**Analysis Batch: 444974**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS LCS		Unit	D	%Rec	%Rec. Limits
		Result	Qualifier				
Acrolein	25.0	26.3	J	ug/L		105	10 - 145
Acrylonitrile	250	253		ug/L		101	48 - 140
Surrogate	%Recovery	Qualifier	Limits				
Toluene-d8 (Surr)	101		80 - 128				
4-Bromofluorobenzene (Surr)	94		80 - 120				
Dibromofluoromethane (Surr)	99		76 - 132				

**Lab Sample ID: 440-197698-4 MS**

**Matrix: Water**

**Analysis Batch: 444974**

**Client Sample ID: CM-10R**

**Prep Type: Total/NA**

Analyte	Sample Sample		Spike Added	MS MS		Unit	D	%Rec	%Rec. Limits
	Result	Qualifier		Result	Qualifier				
Acrolein	ND	F1	25.0	ND	F1	ug/L		0	10 - 147
Acrylonitrile	ND		250	268		ug/L		107	38 - 144
Surrogate	%Recovery	Qualifier	Limits						
Toluene-d8 (Surr)	101		80 - 128						
4-Bromofluorobenzene (Surr)	96		80 - 120						
Dibromofluoromethane (Surr)	96		76 - 132						

**Lab Sample ID: 440-197698-4 MSD**

**Matrix: Water**

**Analysis Batch: 444974**

**Client Sample ID: CM-10R**

**Prep Type: Total/NA**

Analyte	Sample Sample		Spike Added	MSD MSD		Unit	D	%Rec	%Rec. Limits	RPD	Limit
	Result	Qualifier		Result	Qualifier						
Acrolein	ND	F1	25.0	ND	F1	ug/L		0	10 - 147	NC	40
Acrylonitrile	ND		250	250		ug/L		100	38 - 144	7	40
Surrogate	%Recovery	Qualifier	Limits								
Toluene-d8 (Surr)	103		80 - 128								
4-Bromofluorobenzene (Surr)	96		80 - 120								
Dibromofluoromethane (Surr)	99		76 - 132								

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-197698-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 440-445110/4**

**Matrix: Water**

**Analysis Batch: 445110**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			12/05/17 19:49	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/05/17 19:49	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			12/05/17 19:49	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/05/17 19:49	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			12/05/17 19:49	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			12/05/17 19:49	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			12/05/17 19:49	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			12/05/17 19:49	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			12/05/17 19:49	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			12/05/17 19:49	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			12/05/17 19:49	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			12/05/17 19:49	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			12/05/17 19:49	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			12/05/17 19:49	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			12/05/17 19:49	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			12/05/17 19:49	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			12/05/17 19:49	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			12/05/17 19:49	1
2-Hexanone	ND		5.0	2.5	ug/L			12/05/17 19:49	1
Acetone	ND		20	10	ug/L			12/05/17 19:49	1
Acetonitrile	ND		20	10	ug/L			12/05/17 19:49	1
Acrolein	ND		5.0	2.5	ug/L			12/05/17 19:49	1
Acrylonitrile	ND		2.0	1.0	ug/L			12/05/17 19:49	1
Benzene	ND		0.50	0.25	ug/L			12/05/17 19:49	1
Allyl chloride	ND		1.0	0.50	ug/L			12/05/17 19:49	1
Bromoform	ND		1.0	0.40	ug/L			12/05/17 19:49	1
Bromomethane	ND		0.50	0.25	ug/L			12/05/17 19:49	1
Carbon disulfide	ND		1.0	0.50	ug/L			12/05/17 19:49	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			12/05/17 19:49	1
Chlorobenzene	ND		0.50	0.25	ug/L			12/05/17 19:49	1
Bromochloromethane	ND		0.50	0.25	ug/L			12/05/17 19:49	1
Chloroethane	ND		1.0	0.40	ug/L			12/05/17 19:49	1
Chloroform	ND		0.50	0.25	ug/L			12/05/17 19:49	1
Chloromethane	ND		0.50	0.25	ug/L			12/05/17 19:49	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/05/17 19:49	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/05/17 19:49	1
Dibromochloromethane	ND		0.50	0.25	ug/L			12/05/17 19:49	1
Dibromomethane	ND		0.50	0.25	ug/L			12/05/17 19:49	1
Bromodichloromethane	ND		0.50	0.25	ug/L			12/05/17 19:49	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			12/05/17 19:49	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			12/05/17 19:49	1
Ethylbenzene	ND		0.50	0.25	ug/L			12/05/17 19:49	1
Iodomethane	ND		2.0	1.0	ug/L			12/05/17 19:49	1
Isobutyl alcohol	ND		25	13	ug/L			12/05/17 19:49	1
m,p-Xylene	ND		1.0	0.50	ug/L			12/05/17 19:49	1
Methylacrylonitrile	ND		10	2.5	ug/L			12/05/17 19:49	1
Methyl methacrylate	ND		2.0	1.0	ug/L			12/05/17 19:49	1
Methylene Chloride	ND		2.0	0.88	ug/L			12/05/17 19:49	1

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-197698-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 440-445110/4**

**Matrix: Water**

**Analysis Batch: 445110**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			12/05/17 19:49	1
Naphthalene	ND		1.0	0.40	ug/L			12/05/17 19:49	1
o-Xylene	ND		0.50	0.25	ug/L			12/05/17 19:49	1
Propionitrile	ND		20	10	ug/L			12/05/17 19:49	1
Styrene	ND		0.50	0.25	ug/L			12/05/17 19:49	1
t-Butanol	ND		10	5.0	ug/L			12/05/17 19:49	1
Tetrachloroethene	ND		0.50	0.25	ug/L			12/05/17 19:49	1
Tetrahydrofuran	ND		10	5.0	ug/L			12/05/17 19:49	1
Toluene	ND		0.50	0.25	ug/L			12/05/17 19:49	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/05/17 19:49	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/05/17 19:49	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			12/05/17 19:49	1
Trichloroethene	ND		0.50	0.25	ug/L			12/05/17 19:49	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			12/05/17 19:49	1
Vinyl acetate	ND		4.0	2.0	ug/L			12/05/17 19:49	1
Vinyl chloride	ND		0.50	0.25	ug/L			12/05/17 19:49	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			12/05/17 19:49	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			12/05/17 19:49	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			12/05/17 19:49	1

Tentatively Identified Compound	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Ethanol	113	J	ug/L		2.58	64-17-5		12/05/17 19:49	1
Tentatively Identified Compound	None		ug/L					12/05/17 19:49	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	110		80 - 128		12/05/17 19:49	1
4-Bromofluorobenzene (Surr)	98		80 - 120		12/05/17 19:49	1
Dibromofluoromethane (Surr)	96		76 - 132		12/05/17 19:49	1

**Lab Sample ID: LCS 440-445110/5**

**Matrix: Water**

**Analysis Batch: 445110**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1,2,3-Trichloropropane	25.0	28.5		ug/L		114	63 - 130
1,1,1,2-Tetrachloroethane	25.0	27.1		ug/L		108	60 - 141
1,1,1-Trichloroethane	25.0	25.5		ug/L		102	70 - 130
1,1,2,2-Tetrachloroethane	25.0	28.9		ug/L		116	63 - 130
1,1,2-Trichloroethane	25.0	27.6		ug/L		110	70 - 130
1,1-Dichloroethane	25.0	26.5		ug/L		106	64 - 130
1,1-Dichloroethene	25.0	25.5		ug/L		102	70 - 130
1,1-Dichloropropene	25.0	27.8		ug/L		111	70 - 130
1,2,4-Trichlorobenzene	25.0	24.7		ug/L		99	60 - 140
1,2-Dibromo-3-Chloropropane	25.0	30.1		ug/L		121	52 - 140
1,2-Dichlorobenzene	25.0	24.9		ug/L		99	70 - 130
1,2-Dichloroethane	25.0	25.5		ug/L		102	57 - 138
1,2-Dichloropropane	25.0	27.1		ug/L		108	67 - 130

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-197698-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 440-445110/5**

**Matrix: Water**

**Analysis Batch: 445110**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3-Dichlorobenzene	25.0	24.9		ug/L		100	70 - 130
1,3-Dichloropropane	25.0	27.1		ug/L		108	70 - 130
1,4-Dichlorobenzene	25.0	24.6		ug/L		98	70 - 130
2,2-Dichloropropane	25.0	25.3		ug/L		101	68 - 141
2-Hexanone	25.0	34.4		ug/L		137	10 - 150
Acetone	25.0	32.6		ug/L		131	10 - 150
Acrolein	25.0	27.1		ug/L		108	10 - 145
Acrylonitrile	250	335		ug/L		134	48 - 140
Benzene	25.0	26.0		ug/L		104	68 - 130
Bromoform	25.0	28.0		ug/L		112	60 - 148
Bromomethane	25.0	23.1		ug/L		92	64 - 139
Carbon disulfide	25.0	27.2		ug/L		109	52 - 136
Carbon tetrachloride	25.0	26.7		ug/L		107	60 - 150
Chlorobenzene	25.0	24.4		ug/L		98	70 - 130
Bromochloromethane	25.0	25.1		ug/L		100	70 - 130
Chloroethane	25.0	24.6		ug/L		98	64 - 135
Chloroform	25.0	25.2		ug/L		101	70 - 130
Chloromethane	25.0	24.7		ug/L		99	47 - 140
cis-1,2-Dichloroethene	25.0	25.8		ug/L		103	70 - 133
cis-1,3-Dichloropropene	25.0	27.5		ug/L		110	70 - 133
Dibromochloromethane	25.0	27.1		ug/L		109	69 - 145
Dibromomethane	25.0	25.8		ug/L		103	70 - 130
Bromodichloromethane	25.0	26.7		ug/L		107	70 - 132
Dichlorodifluoromethane	25.0	22.6		ug/L		90	29 - 150
Ethylbenzene	25.0	25.7		ug/L		103	70 - 130
m,p-Xylene	25.0	26.1		ug/L		104	70 - 130
Methylene Chloride	25.0	24.5		ug/L		98	52 - 130
Methyl tert-butyl ether	25.0	25.1		ug/L		100	63 - 131
Naphthalene	25.0	27.6		ug/L		110	60 - 140
o-Xylene	25.0	26.6		ug/L		107	70 - 130
Styrene	25.0	26.8		ug/L		107	70 - 134
t-Butanol	250	267		ug/L		107	70 - 130
Tetrachloroethene	25.0	25.5		ug/L		102	70 - 130
Toluene	25.0	25.7		ug/L		103	70 - 130
trans-1,2-Dichloroethene	25.0	27.1		ug/L		108	70 - 130
trans-1,3-Dichloropropene	25.0	27.9		ug/L		111	70 - 132
Trichloroethene	25.0	26.1		ug/L		104	70 - 130
Trichlorofluoromethane	25.0	25.2		ug/L		101	60 - 150
Vinyl acetate	25.0	32.8		ug/L		131	48 - 140
Vinyl chloride	25.0	26.2		ug/L		105	59 - 133
1,2-Dibromoethane (EDB)	25.0	27.6		ug/L		110	70 - 130
2-Butanone (MEK)	25.0	27.2		ug/L		109	44 - 150
4-Methyl-2-pentanone (MIBK)	25.0	34.5		ug/L		138	59 - 149

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Toluene-d8 (Surr)	108		80 - 128
4-Bromofluorobenzene (Surr)	98		80 - 120
Dibromofluoromethane (Surr)	94		76 - 132

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-197698-1

**Lab Sample ID: 440-197698-1 MS**

**Matrix: Water**

**Analysis Batch: 445110**

**Client Sample ID: Subdrain (N)**

**Prep Type: Total/NA**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec.	%Rec. Limits
	Result	Qualifier	Added	Result	Qualifier			%Rec	
1,2,3-Trichloropropane	ND		25.0	32.4		ug/L		129	60 - 130
1,1,1,2-Tetrachloroethane	ND		25.0	28.2		ug/L		113	60 - 149
1,1,1-Trichloroethane	ND		25.0	26.9		ug/L		108	70 - 130
1,1,2,2-Tetrachloroethane	ND		25.0	31.4		ug/L		126	63 - 130
1,1,2-Trichloroethane	ND		25.0	29.4		ug/L		118	70 - 130
1,1-Dichloroethane	ND		25.0	27.9		ug/L		112	65 - 130
1,1-Dichloroethene	ND		25.0	26.6		ug/L		106	70 - 130
1,1-Dichloropropene	ND		25.0	29.0		ug/L		116	64 - 130
1,2,4-Trichlorobenzene	ND		25.0	26.8		ug/L		107	60 - 140
1,2-Dibromo-3-Chloropropane	ND		25.0	34.6		ug/L		138	48 - 140
1,2-Dichlorobenzene	ND		25.0	26.4		ug/L		106	70 - 130
1,2-Dichloroethane	ND		25.0	27.2		ug/L		109	56 - 146
1,2-Dichloropropane	ND		25.0	28.2		ug/L		113	69 - 130
1,3-Dichlorobenzene	ND		25.0	25.7		ug/L		103	70 - 130
1,3-Dichloropropane	ND		25.0	28.6		ug/L		114	70 - 130
1,4-Dichlorobenzene	2.3		25.0	27.6		ug/L		101	70 - 130
2,2-Dichloropropane	ND		25.0	27.1		ug/L		109	69 - 138
2-Hexanone	ND	F1	25.0	40.3	F1	ug/L		161	10 - 150
Acetone	ND	F1	25.0	37.9	F1	ug/L		151	10 - 150
Acrolein	ND		25.0	33.1		ug/L		132	10 - 147
Acrylonitrile	ND	F1	250	388	F1	ug/L		155	38 - 144
Benzene	ND		25.0	27.3		ug/L		109	66 - 130
Bromoform	ND		25.0	29.1		ug/L		117	59 - 150
Bromomethane	ND		25.0	24.3		ug/L		97	62 - 131
Carbon disulfide	ND		25.0	28.5		ug/L		114	49 - 140
Carbon tetrachloride	ND		25.0	27.9		ug/L		112	60 - 150
Chlorobenzene	ND		25.0	25.4		ug/L		102	70 - 130
Bromochloromethane	ND		25.0	27.0		ug/L		108	70 - 130
Chloroethane	ND		25.0	26.6		ug/L		106	68 - 130
Chloroform	ND		25.0	26.3		ug/L		105	70 - 130
Chloromethane	ND		25.0	26.1		ug/L		105	39 - 144
cis-1,2-Dichloroethene	0.55		25.0	27.6		ug/L		108	70 - 130
cis-1,3-Dichloropropene	ND		25.0	28.6		ug/L		114	70 - 133
Dibromochloromethane	ND		25.0	28.9		ug/L		116	70 - 148
Dibromomethane	ND		25.0	27.7		ug/L		111	70 - 130
Bromodichloromethane	ND		25.0	28.0		ug/L		112	70 - 138
Dichlorodifluoromethane	ND		25.0	23.6		ug/L		94	25 - 142
Ethylbenzene	ND		25.0	26.7		ug/L		107	70 - 130
m,p-Xylene	ND		25.0	26.9		ug/L		108	70 - 133
Methylene Chloride	ND		25.0	25.6		ug/L		102	52 - 130
Methyl tert-butyl ether	0.77		25.0	28.6		ug/L		112	70 - 130
Naphthalene	ND		25.0	30.5		ug/L		122	60 - 140
o-Xylene	ND		25.0	27.5		ug/L		110	70 - 133
Styrene	ND		25.0	27.6		ug/L		110	29 - 150
t-Butanol	14		250	291		ug/L		111	70 - 130
Tetrachloroethene	ND		25.0	25.8		ug/L		103	70 - 137
Toluene	ND		25.0	26.1		ug/L		104	70 - 130
trans-1,2-Dichloroethene	ND		25.0	28.3		ug/L		113	70 - 130
trans-1,3-Dichloropropene	ND		25.0	29.2		ug/L		117	70 - 138
Trichloroethene	ND		25.0	27.0		ug/L		108	70 - 130

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-197698-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 440-197698-1 MS**

**Client Sample ID: Subdrain (N)**

**Matrix: Water**

**Prep Type: Total/NA**

**Analysis Batch: 445110**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec. Limits
	Result	Qualifier	Added	Result	Qualifier				
Trichlorofluoromethane	ND		25.0	26.5		ug/L		106	60 - 150
Vinyl acetate	ND		25.0	37.1		ug/L		149	23 - 150
Vinyl chloride	ND		25.0	27.3		ug/L		109	50 - 137
1,2-Dibromoethane (EDB)	ND		25.0	29.3		ug/L		117	70 - 131
2-Butanone (MEK)	ND		25.0	31.1		ug/L		124	48 - 140
4-Methyl-2-pentanone (MIBK)	ND	F1	25.0	39.0	F1	ug/L		156	52 - 150

Surrogate	MS %Recovery	MS Qualifier	Limits
Toluene-d8 (Surr)	106		80 - 128
4-Bromofluorobenzene (Surr)	97		80 - 120
Dibromofluoromethane (Surr)	95		76 - 132

**Lab Sample ID: 440-197698-1 MSD**

**Client Sample ID: Subdrain (N)**

**Matrix: Water**

**Prep Type: Total/NA**

**Analysis Batch: 445110**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec. Limits	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier					RPD	Limit
1,2,3-Trichloropropane	ND		25.0	31.2		ug/L		125	60 - 130	4	30
1,1,1,2-Tetrachloroethane	ND		25.0	27.8		ug/L		111	60 - 149	2	20
1,1,1-Trichloroethane	ND		25.0	26.2		ug/L		105	70 - 130	3	20
1,1,2,2-Tetrachloroethane	ND		25.0	30.4		ug/L		122	63 - 130	3	30
1,1,2-Trichloroethane	ND		25.0	29.2		ug/L		117	70 - 130	1	25
1,1-Dichloroethane	ND		25.0	27.4		ug/L		110	65 - 130	2	20
1,1-Dichloroethene	ND		25.0	26.4		ug/L		106	70 - 130	1	20
1,1-Dichloropropene	ND		25.0	28.9		ug/L		116	64 - 130	0	20
1,2,4-Trichlorobenzene	ND		25.0	27.0		ug/L		108	60 - 140	1	20
1,2-Dibromo-3-Chloropropane	ND		25.0	34.1		ug/L		136	48 - 140	1	30
1,2-Dichlorobenzene	ND		25.0	26.3		ug/L		105	70 - 130	1	20
1,2-Dichloroethane	ND		25.0	26.4		ug/L		106	56 - 146	3	20
1,2-Dichloropropane	ND		25.0	27.8		ug/L		111	69 - 130	1	20
1,3-Dichlorobenzene	ND		25.0	25.6		ug/L		103	70 - 130	0	20
1,3-Dichloropropane	ND		25.0	27.8		ug/L		111	70 - 130	3	25
1,4-Dichlorobenzene	2.3		25.0	27.6		ug/L		102	70 - 130	0	20
2,2-Dichloropropane	ND		25.0	26.2		ug/L		105	69 - 138	3	25
2-Hexanone	ND	F1	25.0	37.2		ug/L		149	10 - 150	8	35
Acetone	ND	F1	25.0	36.7		ug/L		147	10 - 150	3	35
Acrolein	ND		25.0	31.2		ug/L		125	10 - 147	6	40
Acrylonitrile	ND	F1	250	375	F1	ug/L		150	38 - 144	3	40
Benzene	ND		25.0	26.2		ug/L		105	66 - 130	4	20
Bromoform	ND		25.0	28.7		ug/L		115	59 - 150	2	25
Bromomethane	ND		25.0	23.2		ug/L		93	62 - 131	5	25
Carbon disulfide	ND		25.0	27.7		ug/L		111	49 - 140	3	20
Carbon tetrachloride	ND		25.0	27.2		ug/L		109	60 - 150	3	25
Chlorobenzene	ND		25.0	25.2		ug/L		101	70 - 130	1	20
Bromochloromethane	ND		25.0	25.6		ug/L		103	70 - 130	5	25
Chloroethane	ND		25.0	24.9		ug/L		99	68 - 130	7	25
Chloroform	ND		25.0	25.7		ug/L		103	70 - 130	2	20
Chloromethane	ND		25.0	25.0		ug/L		100	39 - 144	4	25

TestAmerica Irvine



# QC Sample Results

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

TestAmerica Job ID: 440-197698-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-197698-1 MSD

Client Sample ID: Subdrain (N)

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 445110

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
cis-1,2-Dichloroethene	0.55		25.0	26.6		ug/L		104	70 - 130	4	20
cis-1,3-Dichloropropene	ND		25.0	28.3		ug/L		113	70 - 133	1	20
Dibromochloromethane	ND		25.0	27.9		ug/L		112	70 - 148	3	25
Dibromomethane	ND		25.0	26.8		ug/L		107	70 - 130	3	25
Bromodichloromethane	ND		25.0	27.5		ug/L		110	70 - 138	2	20
Dichlorodifluoromethane	ND		25.0	22.9		ug/L		92	25 - 142	3	30
Ethylbenzene	ND		25.0	26.2		ug/L		105	70 - 130	2	20
m,p-Xylene	ND		25.0	26.7		ug/L		107	70 - 133	1	25
Methylene Chloride	ND		25.0	24.9		ug/L		99	52 - 130	3	20
Methyl tert-butyl ether	0.77		25.0	27.7		ug/L		108	70 - 130	3	25
Naphthalene	ND		25.0	30.3		ug/L		121	60 - 140	0	30
o-Xylene	ND		25.0	27.0		ug/L		108	70 - 133	2	20
Styrene	ND		25.0	27.2		ug/L		109	29 - 150	2	35
t-Butanol	14		250	293		ug/L		111	70 - 130	1	25
Tetrachloroethene	ND		25.0	26.0		ug/L		104	70 - 137	1	20
Toluene	ND		25.0	25.9		ug/L		104	70 - 130	1	20
trans-1,2-Dichloroethene	ND		25.0	27.5		ug/L		110	70 - 130	3	20
trans-1,3-Dichloropropene	ND		25.0	28.6		ug/L		115	70 - 138	2	25
Trichloroethene	ND		25.0	26.6		ug/L		107	70 - 130	1	20
Trichlorofluoromethane	ND		25.0	25.6		ug/L		103	60 - 150	3	25
Vinyl acetate	ND		25.0	35.7		ug/L		143	23 - 150	4	30
Vinyl chloride	ND		25.0	26.6		ug/L		106	50 - 137	3	30
1,2-Dibromoethane (EDB)	ND		25.0	28.7		ug/L		115	70 - 131	2	25
2-Butanone (MEK)	ND		25.0	30.2		ug/L		121	48 - 140	3	40
4-Methyl-2-pentanone (MIBK)	ND	F1	25.0	38.4	F1	ug/L		154	52 - 150	2	35

Surrogate	MSD	MSD	Limits
	%Recovery	Qualifier	
Toluene-d8 (Surr)	106		80 - 128
4-Bromofluorobenzene (Surr)	99		80 - 120
Dibromofluoromethane (Surr)	94		76 - 132

## Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 440-445055/1-A

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 445322

Prep Batch: 445055

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,4-Dioxane	ND		1.0	0.25	ug/L		12/05/17 12:31	12/06/17 18:41	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,4-Dioxane-d8 (Surr)	74		30 - 120	12/05/17 12:31	12/06/17 18:41	1

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-197698-1

## Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 440-445055/2-A

Matrix: Water

Analysis Batch: 445322

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 445055

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dioxane	2.05	1.44		ug/L		70	35 - 120
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
1,4-Dioxane-d8 (Surr)	69		30 - 120				

Lab Sample ID: LCSD 440-445055/3-A

Matrix: Water

Analysis Batch: 445322

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 445055

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dioxane	2.06	1.45		ug/L		70	35 - 120	1	35
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
1,4-Dioxane-d8 (Surr)	68		30 - 120						

## Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 440-445016/7

Matrix: Water

Analysis Batch: 445016

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.11	0.055	mg/L			12/05/17 13:50	1

Lab Sample ID: LCS 440-445016/6

Matrix: Water

Analysis Batch: 445016

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	1.13	1.10		mg/L		98	90 - 110

Lab Sample ID: 440-197728-G-2 MS

Matrix: Water

Analysis Batch: 445016

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
Nitrate as N	ND		5.65	6.07		mg/L		107	80 - 120

Lab Sample ID: 440-197728-G-2 MSD

Matrix: Water

Analysis Batch: 445016

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
Nitrate as N	ND		5.65	6.01		mg/L		106	80 - 120	1	20

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-197698-1

## Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 440-445017/7

Matrix: Water

Analysis Batch: 445017

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		0.50	0.25	mg/L			12/05/17 13:50	1
Chloride	ND		0.50	0.25	mg/L			12/05/17 13:50	1
Fluoride	ND		0.50	0.25	mg/L			12/05/17 13:50	1
Sulfate	ND		0.50	0.25	mg/L			12/05/17 13:50	1

Lab Sample ID: LCS 440-445017/6

Matrix: Water

Analysis Batch: 445017

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromide	5.00	4.79		mg/L		96	90 - 110
Chloride	5.00	4.87		mg/L		97	90 - 110
Fluoride	5.00	5.06		mg/L		101	90 - 110
Sulfate	5.00	4.87		mg/L		97	90 - 110

Lab Sample ID: 440-197728-G-2 MS

Matrix: Water

Analysis Batch: 445017

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
Bromide	ND		25.0	23.3		mg/L		93	80 - 120
Fluoride	2.0	J	25.0	25.7		mg/L		95	80 - 120

Lab Sample ID: 440-197728-G-2 MSD

Matrix: Water

Analysis Batch: 445017

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
Bromide	ND		25.0	23.2		mg/L		93	80 - 120	0	20
Fluoride	2.0	J	25.0	25.6		mg/L		94	80 - 120	0	20

## Method: 6010B - Metals (ICP)

Lab Sample ID: MB 440-445028/1-A

Matrix: Water

Analysis Batch: 445212

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 445028

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.050	0.025	mg/L		12/05/17 10:14	12/05/17 19:06	1
Calcium	ND		0.10	0.050	mg/L		12/05/17 10:14	12/05/17 19:06	1
Iron	ND		0.10	0.050	mg/L		12/05/17 10:14	12/05/17 19:06	1
Magnesium	ND		0.020	0.010	mg/L		12/05/17 10:14	12/05/17 19:06	1
Manganese	ND		0.020	0.015	mg/L		12/05/17 10:14	12/05/17 19:06	1
Potassium	ND		0.50	0.25	mg/L		12/05/17 10:14	12/05/17 19:06	1
Sodium	ND		0.50	0.26	mg/L		12/05/17 10:14	12/05/17 19:06	1

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-197698-1

## Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: LCS 440-445028/2-A

Matrix: Water

Analysis Batch: 445212

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 445028

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1.00	0.958		mg/L		96	80 - 120
Calcium	5.00	4.97		mg/L		99	80 - 120
Iron	1.00	1.02		mg/L		102	80 - 120
Magnesium	5.00	5.31		mg/L		106	80 - 120
Manganese	1.00	1.01		mg/L		101	80 - 120
Potassium	10.0	10.0		mg/L		100	80 - 120
Sodium	10.0	10.2		mg/L		102	80 - 120

Lab Sample ID: 440-197653-G-16-B MS ^5

Matrix: Water

Analysis Batch: 445254

Client Sample ID: Matrix Spike

Prep Type: Total Recoverable

Prep Batch: 445028

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	2.5	F1	1.00	3.23		mg/L		76	75 - 125
Calcium	1200		5.00	1030	4	mg/L		-2590	75 - 125
Iron	40		1.00	40.0	4	mg/L		-44	75 - 125
Magnesium	890		5.00	793	4	mg/L		-1990	75 - 125
Manganese	1.3		1.00	2.16		mg/L		83	75 - 125
Potassium	120		10.0	125	4	mg/L		40	75 - 125
Sodium	530		10.0	472	4	mg/L		-551	75 - 125

Lab Sample ID: 440-197653-G-16-C MSD ^5

Matrix: Water

Analysis Batch: 445254

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total Recoverable

Prep Batch: 445028

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Boron	2.5	F1	1.00	3.73	F1	mg/L		126	75 - 125	14	20
Calcium	1200		5.00	1170	4	mg/L		160	75 - 125	13	20
Iron	40		1.00	44.6	4	mg/L		407	75 - 125	11	20
Magnesium	890		5.00	914	4	mg/L		430	75 - 125	14	20
Manganese	1.3		1.00	2.48		mg/L		115	75 - 125	14	20
Potassium	120		10.0	142	4	mg/L		212	75 - 125	13	20
Sodium	530		10.0	538	4	mg/L		105	75 - 125	13	20

## Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 440-445370/10

Matrix: Water

Analysis Batch: 445370

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	ND		0.20	0.10	mg/L			12/06/17 13:16	1

Lab Sample ID: LCS 440-445370/11

Matrix: Water

Analysis Batch: 445370

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	5.00	5.01		mg/L		100	90 - 110

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-197698-1

**Lab Sample ID: MRL 440-445370/9**  
**Matrix: Water**  
**Analysis Batch: 445370**

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	0.200	0.132	J	mg/L		66	50 - 150

**Lab Sample ID: 440-197791-D-2 MS**  
**Matrix: Water**  
**Analysis Batch: 445370**

**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
Ammonia (as N)	0.38		5.00	5.41		mg/L		101	90 - 110

**Lab Sample ID: 440-197791-D-2 MSD**  
**Matrix: Water**  
**Analysis Batch: 445370**

**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
Ammonia (as N)	0.38		5.00	5.65		mg/L		105	90 - 110	4	15

## Method: 410.4 - COD

**Lab Sample ID: MB 440-445563/3**  
**Matrix: Water**  
**Analysis Batch: 445563**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		20	10	mg/L			12/07/17 14:41	1

**Lab Sample ID: LCS 440-445563/4**  
**Matrix: Water**  
**Analysis Batch: 445563**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chemical Oxygen Demand	200	197		mg/L		98	90 - 110

**Lab Sample ID: 440-197842-B-1 MS**  
**Matrix: Water**  
**Analysis Batch: 445563**

**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
Chemical Oxygen Demand	81		200	274		mg/L		97	70 - 120

**Lab Sample ID: 440-197842-B-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 445563**

**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
Chemical Oxygen Demand	81		200	275		mg/L		97	70 - 120	0	15

**Lab Sample ID: 440-197842-B-1 DU**  
**Matrix: Water**  
**Analysis Batch: 445563**

**Client Sample ID: Duplicate**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Chemical Oxygen Demand	81		79.8		mg/L		2	15

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-197698-1

## Method: SM 2320B - Alkalinity

**Lab Sample ID: MB 440-444990/3**  
**Matrix: Water**  
**Analysis Batch: 444990**

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

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	ND		4.0	4.0	mg/L			12/05/17 04:56	1
Bicarbonate Alkalinity as CaCO3	ND		4.0	4.0	mg/L			12/05/17 04:56	1

**Lab Sample ID: LCS 440-444990/2**  
**Matrix: Water**  
**Analysis Batch: 444990**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity as CaCO3	50.8	49.7		mg/L		98	80 - 120

**Lab Sample ID: 440-197698-3 DU**  
**Matrix: Water**  
**Analysis Batch: 444990**

**Client Sample ID: CM-9R3**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Alkalinity as CaCO3	37		38.5		mg/L		5	20
Bicarbonate Alkalinity as CaCO3	37		38.5		mg/L		5	20

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

**Lab Sample ID: MB 440-445022/1**  
**Matrix: Water**  
**Analysis Batch: 445022**

**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			12/05/17 09:53	1

**Lab Sample ID: LCS 440-445022/2**  
**Matrix: Water**  
**Analysis Batch: 445022**

**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	998		mg/L		100	90 - 110

**Lab Sample ID: 440-197698-1 DU**  
**Matrix: Water**  
**Analysis Batch: 445022**

**Client Sample ID: Subdrain (N)**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	2700		2730		mg/L		0.4	5

## Method: SM 4500 CO2 C - Free Carbon Dioxide

**Lab Sample ID: MB 440-446298/1**  
**Matrix: Water**  
**Analysis Batch: 446298**

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

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon Dioxide, Free	ND		2.0	2.0	mg/L			12/12/17 12:30	1

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-197698-1

**Lab Sample ID: 440-197698-1 DU**  
**Matrix: Water**  
**Analysis Batch: 446298**

**Client Sample ID: Subdrain (N)**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Carbon Dioxide, Free	180		174		mg/L		1	20

## Method: SM 4500 S2 D - Sulfide, Total

**Lab Sample ID: MB 440-445094/3**  
**Matrix: Water**  
**Analysis Batch: 445094**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Sulfide	ND		0.050	0.027	mg/L			12/05/17 15:16	1

**Lab Sample ID: LCS 440-445094/4**  
**Matrix: Water**  
**Analysis Batch: 445094**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Sulfide	0.440	0.400		mg/L		91	80 - 120

**Lab Sample ID: LCSD 440-445094/5**  
**Matrix: Water**  
**Analysis Batch: 445094**

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Total Sulfide	0.440	0.409		mg/L		93	80 - 120	2	20

**Lab Sample ID: 440-197698-1 MS**  
**Matrix: Water**  
**Analysis Batch: 445094**

**Client Sample ID: Subdrain (N)**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Sulfide	ND		0.440	0.437		mg/L		99	70 - 130

**Lab Sample ID: 440-197698-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 445094**

**Client Sample ID: Subdrain (N)**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Total Sulfide	ND		0.440	0.420		mg/L		95	70 - 130	4	30

## Method: SM 5310C - TOC

**Lab Sample ID: MB 440-445423/6**  
**Matrix: Water**  
**Analysis Batch: 445423**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		0.10	0.050	mg/L			12/05/17 06:21	1

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-197698-1

## Method: SM 5310C - TOC (Continued)

**Lab Sample ID: LCS 440-445423/5**

**Matrix: Water**

**Analysis Batch: 445423**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	10.0	9.47		mg/L		95	90 - 110

**Lab Sample ID: MRL 440-445423/4**

**Matrix: Water**

**Analysis Batch: 445423**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	0.100	0.0608	J	mg/L		61	50 - 150

**Lab Sample ID: 440-197698-2 MS**

**Matrix: Water**

**Analysis Batch: 445423**

**Client Sample ID: Combined Subdrains**

**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	5.9		10.0	15.2		mg/L		93	80 - 120

**Lab Sample ID: 440-197698-2 MSD**

**Matrix: Water**

**Analysis Batch: 445423**

**Client Sample ID: Combined Subdrains**

**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon	5.9		10.0	15.4		mg/L		95	80 - 120	1	20



# QC Association Summary

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

TestAmerica Job ID: 440-197698-1

## GC/MS VOA

### Analysis Batch: 444974

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197698-1	Subdrain (N)	Total/NA	Water	8260B	
440-197698-2	Combined Subdrains	Total/NA	Water	8260B	
440-197698-3	CM-9R3	Total/NA	Water	8260B	
440-197698-4	CM-10R	Total/NA	Water	8260B	
440-197698-5	CM-11R	Total/NA	Water	8260B	
440-197698-6	QCTB	Total/NA	Water	8260B	
440-197698-7	QCAB	Total/NA	Water	8260B	
MB 440-444974/4	Method Blank	Total/NA	Water	8260B	
LCS 440-444974/26	Lab Control Sample	Total/NA	Water	8260B	
440-197698-4 MS	CM-10R	Total/NA	Water	8260B	
440-197698-4 MSD	CM-10R	Total/NA	Water	8260B	

### Analysis Batch: 445110

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197698-1	Subdrain (N)	Total/NA	Water	8260B	
440-197698-2	Combined Subdrains	Total/NA	Water	8260B	
440-197698-3	CM-9R3	Total/NA	Water	8260B	
440-197698-4	CM-10R	Total/NA	Water	8260B	
440-197698-5	CM-11R	Total/NA	Water	8260B	
440-197698-6	QCTB	Total/NA	Water	8260B	
440-197698-7	QCAB	Total/NA	Water	8260B	
MB 440-445110/4	Method Blank	Total/NA	Water	8260B	
LCS 440-445110/5	Lab Control Sample	Total/NA	Water	8260B	
440-197698-1 MS	Subdrain (N)	Total/NA	Water	8260B	
440-197698-1 MSD	Subdrain (N)	Total/NA	Water	8260B	

## GC/MS Semi VOA

### Prep Batch: 445055

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197698-1	Subdrain (N)	Total/NA	Water	3520C	
440-197698-2	Combined Subdrains	Total/NA	Water	3520C	
440-197698-3	CM-9R3	Total/NA	Water	3520C	
440-197698-4	CM-10R	Total/NA	Water	3520C	
440-197698-5	CM-11R	Total/NA	Water	3520C	
MB 440-445055/1-A	Method Blank	Total/NA	Water	3520C	
LCS 440-445055/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 440-445055/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	

### Analysis Batch: 445322

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197698-1	Subdrain (N)	Total/NA	Water	8270C	445055
440-197698-2	Combined Subdrains	Total/NA	Water	8270C	445055
440-197698-3	CM-9R3	Total/NA	Water	8270C	445055
440-197698-4	CM-10R	Total/NA	Water	8270C	445055
440-197698-5	CM-11R	Total/NA	Water	8270C	445055
MB 440-445055/1-A	Method Blank	Total/NA	Water	8270C	445055
LCS 440-445055/2-A	Lab Control Sample	Total/NA	Water	8270C	445055
LCSD 440-445055/3-A	Lab Control Sample Dup	Total/NA	Water	8270C	445055

TestAmerica Irvine

# QC Association Summary

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

TestAmerica Job ID: 440-197698-1

## HPLC/IC

### Analysis Batch: 445016

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197698-1	Subdrain (N)	Total/NA	Water	300.0	
440-197698-2	Combined Subdrains	Total/NA	Water	300.0	
440-197698-3	CM-9R3	Total/NA	Water	300.0	
440-197698-4	CM-10R	Total/NA	Water	300.0	
440-197698-5	CM-11R	Total/NA	Water	300.0	
MB 440-445016/7	Method Blank	Total/NA	Water	300.0	
LCS 440-445016/6	Lab Control Sample	Total/NA	Water	300.0	
440-197728-G-2 MS	Matrix Spike	Total/NA	Water	300.0	
440-197728-G-2 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

### Analysis Batch: 445017

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197698-1	Subdrain (N)	Total/NA	Water	300.0	
440-197698-1	Subdrain (N)	Total/NA	Water	300.0	
440-197698-2	Combined Subdrains	Total/NA	Water	300.0	
440-197698-2	Combined Subdrains	Total/NA	Water	300.0	
440-197698-2	Combined Subdrains	Total/NA	Water	300.0	
440-197698-3	CM-9R3	Total/NA	Water	300.0	
440-197698-3	CM-9R3	Total/NA	Water	300.0	
440-197698-4	CM-10R	Total/NA	Water	300.0	
440-197698-4	CM-10R	Total/NA	Water	300.0	
440-197698-5	CM-11R	Total/NA	Water	300.0	
440-197698-5	CM-11R	Total/NA	Water	300.0	
MB 440-445017/7	Method Blank	Total/NA	Water	300.0	
LCS 440-445017/6	Lab Control Sample	Total/NA	Water	300.0	
440-197728-G-2 MS	Matrix Spike	Total/NA	Water	300.0	
440-197728-G-2 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

## Metals

### Prep Batch: 445028

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197698-1	Subdrain (N)	Total Recoverable	Water	3005A	
440-197698-2	Combined Subdrains	Total Recoverable	Water	3005A	
440-197698-3	CM-9R3	Total Recoverable	Water	3005A	
440-197698-4	CM-10R	Total Recoverable	Water	3005A	
440-197698-5	CM-11R	Total Recoverable	Water	3005A	
MB 440-445028/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 440-445028/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
440-197653-G-16-B MS ^5	Matrix Spike	Total Recoverable	Water	3005A	
440-197653-G-16-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

### Analysis Batch: 445212

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197698-1	Subdrain (N)	Total Recoverable	Water	6010B	445028
440-197698-2	Combined Subdrains	Total Recoverable	Water	6010B	445028
440-197698-3	CM-9R3	Total Recoverable	Water	6010B	445028
440-197698-4	CM-10R	Total Recoverable	Water	6010B	445028
440-197698-5	CM-11R	Total Recoverable	Water	6010B	445028
MB 440-445028/1-A	Method Blank	Total Recoverable	Water	6010B	445028

TestAmerica Irvine

# QC Association Summary

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

TestAmerica Job ID: 440-197698-1

## Metals (Continued)

### Analysis Batch: 445212 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 440-445028/2-A	Lab Control Sample	Total Recoverable	Water	6010B	445028

### Analysis Batch: 445254

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197653-G-16-B MS ^5	Matrix Spike	Total Recoverable	Water	6010B	445028
440-197653-G-16-C MSD ^5	Matrix Spike Duplicate	Total Recoverable	Water	6010B	445028

## General Chemistry

### Analysis Batch: 444990

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197698-1	Subdrain (N)	Total/NA	Water	SM 2320B	
440-197698-2	Combined Subdrains	Total/NA	Water	SM 2320B	
440-197698-3	CM-9R3	Total/NA	Water	SM 2320B	
440-197698-4	CM-10R	Total/NA	Water	SM 2320B	
440-197698-5	CM-11R	Total/NA	Water	SM 2320B	
MB 440-444990/3	Method Blank	Total/NA	Water	SM 2320B	
LCS 440-444990/2	Lab Control Sample	Total/NA	Water	SM 2320B	
440-197698-3 DU	CM-9R3	Total/NA	Water	SM 2320B	

### Analysis Batch: 445022

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197698-1	Subdrain (N)	Total/NA	Water	SM 2540C	
440-197698-2	Combined Subdrains	Total/NA	Water	SM 2540C	
440-197698-3	CM-9R3	Total/NA	Water	SM 2540C	
440-197698-4	CM-10R	Total/NA	Water	SM 2540C	
440-197698-5	CM-11R	Total/NA	Water	SM 2540C	
MB 440-445022/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 440-445022/2	Lab Control Sample	Total/NA	Water	SM 2540C	
440-197698-1 DU	Subdrain (N)	Total/NA	Water	SM 2540C	

### Analysis Batch: 445094

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197698-1	Subdrain (N)	Total/NA	Water	SM 4500 S2 D	
440-197698-2	Combined Subdrains	Total/NA	Water	SM 4500 S2 D	
440-197698-3	CM-9R3	Total/NA	Water	SM 4500 S2 D	
440-197698-4	CM-10R	Total/NA	Water	SM 4500 S2 D	
440-197698-5	CM-11R	Total/NA	Water	SM 4500 S2 D	
MB 440-445094/3	Method Blank	Total/NA	Water	SM 4500 S2 D	
LCS 440-445094/4	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
LCSD 440-445094/5	Lab Control Sample Dup	Total/NA	Water	SM 4500 S2 D	
440-197698-1 MS	Subdrain (N)	Total/NA	Water	SM 4500 S2 D	
440-197698-1 MSD	Subdrain (N)	Total/NA	Water	SM 4500 S2 D	

### Analysis Batch: 445370

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197698-1	Subdrain (N)	Total/NA	Water	350.1	
440-197698-2	Combined Subdrains	Total/NA	Water	350.1	
440-197698-3	CM-9R3	Total/NA	Water	350.1	
440-197698-4	CM-10R	Total/NA	Water	350.1	

TestAmerica Irvine

# QC Association Summary

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

TestAmerica Job ID: 440-197698-1

## General Chemistry (Continued)

### Analysis Batch: 445370 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197698-5	CM-11R	Total/NA	Water	350.1	
MB 440-445370/10	Method Blank	Total/NA	Water	350.1	
LCS 440-445370/11	Lab Control Sample	Total/NA	Water	350.1	
MRL 440-445370/9	Lab Control Sample	Total/NA	Water	350.1	
440-197791-D-2 MS	Matrix Spike	Total/NA	Water	350.1	
440-197791-D-2 MSD	Matrix Spike Duplicate	Total/NA	Water	350.1	

### Analysis Batch: 445423

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197698-1	Subdrain (N)	Total/NA	Water	SM 5310C	
440-197698-2	Combined Subdrains	Total/NA	Water	SM 5310C	
440-197698-3	CM-9R3	Total/NA	Water	SM 5310C	
440-197698-4	CM-10R	Total/NA	Water	SM 5310C	
440-197698-5	CM-11R	Total/NA	Water	SM 5310C	
MB 440-445423/6	Method Blank	Total/NA	Water	SM 5310C	
LCS 440-445423/5	Lab Control Sample	Total/NA	Water	SM 5310C	
MRL 440-445423/4	Lab Control Sample	Total/NA	Water	SM 5310C	
440-197698-2 MS	Combined Subdrains	Total/NA	Water	SM 5310C	
440-197698-2 MSD	Combined Subdrains	Total/NA	Water	SM 5310C	

### Analysis Batch: 445563

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197698-1	Subdrain (N)	Total/NA	Water	410.4	
440-197698-2	Combined Subdrains	Total/NA	Water	410.4	
440-197698-3	CM-9R3	Total/NA	Water	410.4	
440-197698-4	CM-10R	Total/NA	Water	410.4	
440-197698-5	CM-11R	Total/NA	Water	410.4	
MB 440-445563/3	Method Blank	Total/NA	Water	410.4	
LCS 440-445563/4	Lab Control Sample	Total/NA	Water	410.4	
440-197842-B-1 MS	Matrix Spike	Total/NA	Water	410.4	
440-197842-B-1 MSD	Matrix Spike Duplicate	Total/NA	Water	410.4	
440-197842-B-1 DU	Duplicate	Total/NA	Water	410.4	

### Analysis Batch: 446298

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197698-1	Subdrain (N)	Total/NA	Water	SM 4500 CO2 C	
440-197698-2	Combined Subdrains	Total/NA	Water	SM 4500 CO2 C	
440-197698-3	CM-9R3	Total/NA	Water	SM 4500 CO2 C	
440-197698-4	CM-10R	Total/NA	Water	SM 4500 CO2 C	
440-197698-5	CM-11R	Total/NA	Water	SM 4500 CO2 C	
MB 440-446298/1	Method Blank	Total/NA	Water	SM 4500 CO2 C	
440-197698-1 DU	Subdrain (N)	Total/NA	Water	SM 4500 CO2 C	

# Definitions/Glossary

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

TestAmerica Job ID: 440-197698-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### GC/MS VOA TICs

Qualifier	Qualifier Description
J	Indicates an Estimated Value for TICs
T	Result is a tentatively identified compound (TIC) and an estimated value.
N	Presumptive evidence of material.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### HPLC/IC

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
F1	MS and/or MSD Recovery is outside acceptance limits.

### General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
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)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
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)

# Accreditation/Certification Summary

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

TestAmerica Job ID: 440-197698-1

## Laboratory: TestAmerica Irvine

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	State Program	10	CA01531	06-30-18
Arizona	State Program	9	AZ0671	10-14-18
California	LA Cty Sanitation Districts	9	10256	06-30-18
California	State Program	9	CA ELAP 2706	06-30-18
Guam	State Program	9	Cert. No. 17-003R	01-23-18
Hawaii	State Program	9	N/A	01-29-18
Kansas	NELAP	7	E-10420	07-31-18
Nevada	State Program	9	CA015312018-1	07-31-18
New Mexico	State Program	6	N/A	01-29-18 *
Northern Mariana Islands	State Program	9	MP0002	01-29-17 *
Oregon	NELAP	10	4028	01-29-18
USDA	Federal		P330-15-00184	07-08-18
Washington	State Program	10	C900	09-03-18

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

TestAmerica Irvine

**TestAmerica Irvine**  
 17461 Berian Ave  
 Suite 100  
 Irvine, CA 92614  
 Phone: 949.261.1022 Fax:

**Chain of Custody Record**

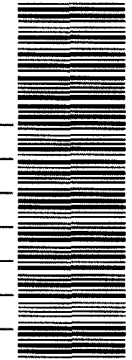
180966

**TestAmerica**  
 THE LEADER IN ENVIRONMENTAL TESTING  
 TestAmerica Laboratories, Inc.  
 TAL-8210 (0713)

Regulatory Program:  DW  NPDES  RCRA  Other:

Project Manager: **Kyle Welchans** Site Contact: **Ray Costa** Date: **12-4-17**  
 Tell/Fax: **858-451-1136** Lab Contact: **Ray Costa** Carrier: **T A** of COCs  
 Analysis Turnaround Time:  CALENDAR DAYS  WORKING DAYS  
 TAT if different from Below: \_\_\_\_\_  
 2 weeks  1 week  2 days  1 day  
 Company Name: **Geo-Logic Assoc.**  
 Address: **1415 W. Bernardo Ct.**  
 City/State/Zip: **S.D., CA. 92127**  
 Phone: **858-451-1136**  
 Fax: **858-451-1087**  
 Project Name: **REPUBLIC SERVICES**  
 Site: **Sunshine Civi. Landfill**  
 P O #: **44007851**

Sample Identification	Sample Date	Sample Time	Sample Type (C-Comp, G-Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS MSD (Y/N)	EPA 8260B-VOCs	Met Alkalinity	and Bicarb. Gid.	Ammonia as N (35)	COD (H10.4)	Chloride, Bromide	Trifluoromethane	Biob Total: B.G.	TDS (G10.1)	Fluoride (G10.2)	Sulfide (376.2)	SM-4500-CO2C	Carbon Dioxide	8260 L14-Dioxane	Sample Specific Notes:
Subdrain (N)	12/4/17	1055 G	G	WW	13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Combined Subdrains		1138		WW	13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
CM-9R3		1115		GW	13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
CM-10R		0955		GW	13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
CM-11R		1255		GW	13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
QC AB				UP	4	X																
QC AB				"	4	X																



440-197698 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  
 Return to Client  Disposal by Lab  Archive for \_\_\_\_\_ Months

Special Instructions/QC Requirements & Comments:  
 Custody Seal No.: \_\_\_\_\_  
 Relinquished by: **Ray Costa** Yes  No   
 Relinquished by: **Willie Rios**  
 Relinquished by: \_\_\_\_\_  
 Received by: **Neo-1051R** Date/Time: **12-4-17 1350**  
 Received by: **THAI** Date/Time: **12/4/17 1540**  
 Received in Laboratory by: **THAI** Date/Time: **12/04/17 1540**  
 Cooler Temp. (°C): Obs'd: \_\_\_\_\_ Corrd: \_\_\_\_\_  
 Company: **THAI**  
 Company: **THAI**  
 Company: **THAI**  
 Therm ID No.: \_\_\_\_\_  
 Date/Time: **12/4/17 1350**  
 Date/Time: **12/04/17 1540**

2.3/2.9; 0.3/0.9 #66



## Login Sample Receipt Checklist

Client: Geo-Logic Associates

Job Number: 440-197698-1

**Login Number: 197698**

**List Number: 1**

**Creator: Soderblom, Tim**

**List Source: TestAmerica Irvine**

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	





# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Irvine

17461 Derian Ave

Suite 100

Irvine, CA 92614-5817

Tel: (949)261-1022

TestAmerica Job ID: 440-197764-1

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:

12/15/2017 10:46:05 AM

Rossina Tomova, Project Manager I

(949)261-1022

[rossina.tomova@testamericainc.com](mailto:rossina.tomova@testamericainc.com)

### LINKS

Review your project  
results through

**TotalAccess**

Have a Question?



Visit us at:

[www.testamericainc.com](http://www.testamericainc.com)

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

1

2

3

4

5

6

7

8

9

10

11

12

13



# Table of Contents

Cover Page . . . . .	1
Table of Contents . . . . .	2
Sample Summary . . . . .	3
Case Narrative . . . . .	4
Client Sample Results . . . . .	6
Method Summary . . . . .	32
Lab Chronicle . . . . .	33
QC Sample Results . . . . .	38
QC Association Summary . . . . .	63
Definitions/Glossary . . . . .	70
Certification Summary . . . . .	72
Chain of Custody . . . . .	73
Receipt Checklists . . . . .	74

# Sample Summary

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

TestAmerica Job ID: 440-197764-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-197764-1	DW-1	Water	12/05/17 09:12	12/05/17 17:00
440-197764-2	DW-2	Water	12/05/17 10:26	12/05/17 17:00
440-197764-3	DW-3	Water	12/05/17 12:50	12/05/17 17:00
440-197764-4	MW-9	Water	12/05/17 12:10	12/05/17 17:00
440-197764-5	MW-13R	Water	12/05/17 13:30	12/05/17 17:00
440-197764-6	MW-6	Water	12/05/17 09:45	12/05/17 17:00
440-197764-7	MW-14	Water	12/05/17 07:55	12/05/17 17:00
440-197764-8	Duplicate	Water	12/05/17 00:01	12/05/17 17:00
440-197764-9	QCAB	Water	12/05/17 00:01	12/05/17 17:00
440-197764-10	QCTB	Water	12/05/17 00:01	12/05/17 17:00



# Case Narrative

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

TestAmerica Job ID: 440-197764-1

**Job ID: 440-197764-1**

**Laboratory: TestAmerica Irvine**

## Narrative

### Job Narrative 440-197764-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 12/5/2017 5:00 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 1.0° C, 1.6° C and 1.8° C.

#### GC/MS VOA

Method(s) 8260B: The continuing calibration verification (CCV) associated with batch 440-445442 recovered above the upper control limit for Acrolein. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: DW-1 (440-197764-1), DW-2 (440-197764-2), DW-3 (440-197764-3), MW-9 (440-197764-4), MW-13R (440-197764-5), MW-6 (440-197764-6), MW-14 (440-197764-7), Duplicate (440-197764-8), QCAB (440-197764-9) and (CCVIS 440-445442/2).

Method(s) 8260B: The continuing calibration verification (CCV) associated with batch 440-445596 recovered above the upper control limit for 1,2,3-Trichloropropane, 2-Hexanone, Propionitrile, Acetone, Acetonitrile and Tetrahydrofuran. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: QCTB (440-197764-10) and (CCVIS 440-445596/2).

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

#### GC/MS Semi VOA

Method(s) 8270C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 440-445222 and analytical batch 440-445710. The laboratory control sample (LCS) was performed in duplicate to provide precision data for this batch.

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

#### HPLC/IC

Method(s) 300.0: Due to the high concentration of Chloride and/or Sulfate, the matrix spike / matrix spike duplicate (MS/MSD) for analytical batch 440-445017 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

Method(s) 300.0: The following samples were diluted for Bromide and/or Fluoride due to the nature of the sample matrix: DW-1 (440-197764-1), DW-2 (440-197764-2), MW-9 (440-197764-4), MW-13R (440-197764-5), MW-6 (440-197764-6), MW-14 (440-197764-7) and Duplicate (440-197764-8). Elevated reporting limits (RLs) are provided.

Method(s) 300.0: The following samples were diluted for Nitrate as N due to the nature of the sample matrix: DW-1 (440-197764-1), DW-2 (440-197764-2), MW-9 (440-197764-4), MW-13R (440-197764-5), MW-6 (440-197764-6), MW-14 (440-197764-7) and Duplicate (440-197764-8). Elevated reporting limits (RLs) are provided.

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

#### Metals

Method(s) 6010B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 440-445489 and analytical batch 440-445800 were outside control limits for Boron, Potassium and Manganese. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

#### General Chemistry

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

# Case Narrative

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

TestAmerica Job ID: 440-197764-1

---

## Job ID: 440-197764-1 (Continued)

---

### Laboratory: TestAmerica Irvine (Continued)

#### Organic Prep

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

#### VOA Prep

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

1

2

3

4

5

6

7

8

9

10

11

12

13

# Client Sample Results

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

TestAmerica Job ID: 440-197764-1

**Client Sample ID: DW-1**  
**Date Collected: 12/05/17 09:12**  
**Date Received: 12/05/17 17:00**

**Lab Sample ID: 440-197764-1**  
**Matrix: Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			12/07/17 14:15	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/07/17 14:15	1
Acrolein	ND		50	2.5	ug/L			12/06/17 09:28	1
Acrylonitrile	ND	F1	50	1.0	ug/L			12/06/17 09:28	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			12/07/17 14:15	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/07/17 14:15	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			12/07/17 14:15	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			12/07/17 14:15	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			12/07/17 14:15	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			12/07/17 14:15	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			12/07/17 14:15	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			12/07/17 14:15	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			12/07/17 14:15	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			12/07/17 14:15	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			12/07/17 14:15	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			12/07/17 14:15	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			12/07/17 14:15	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			12/07/17 14:15	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			12/07/17 14:15	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			12/07/17 14:15	1
2-Hexanone	ND		5.0	2.5	ug/L			12/07/17 14:15	1
Acetone	ND		20	10	ug/L			12/07/17 14:15	1
Acetonitrile	ND		20	10	ug/L			12/07/17 14:15	1
Acrolein	ND		5.0	2.5	ug/L			12/07/17 14:15	1
Acrylonitrile	ND		2.0	1.0	ug/L			12/07/17 14:15	1
Benzene	ND		0.50	0.25	ug/L			12/07/17 14:15	1
Allyl chloride	ND		1.0	0.50	ug/L			12/07/17 14:15	1
Bromoform	ND		1.0	0.40	ug/L			12/07/17 14:15	1
Bromomethane	ND		0.50	0.25	ug/L			12/07/17 14:15	1
Carbon disulfide	ND		1.0	0.50	ug/L			12/07/17 14:15	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			12/07/17 14:15	1
Chlorobenzene	ND		0.50	0.25	ug/L			12/07/17 14:15	1
Bromochloromethane	ND		0.50	0.25	ug/L			12/07/17 14:15	1
Chloroethane	ND		1.0	0.40	ug/L			12/07/17 14:15	1
Chloroform	ND		0.50	0.25	ug/L			12/07/17 14:15	1
Chloromethane	ND		0.50	0.25	ug/L			12/07/17 14:15	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/07/17 14:15	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/07/17 14:15	1
Dibromochloromethane	ND		0.50	0.25	ug/L			12/07/17 14:15	1
Dibromomethane	ND		0.50	0.25	ug/L			12/07/17 14:15	1
Bromodichloromethane	ND		0.50	0.25	ug/L			12/07/17 14:15	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			12/07/17 14:15	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			12/07/17 14:15	1
Ethylbenzene	ND		0.50	0.25	ug/L			12/07/17 14:15	1
Iodomethane	ND		2.0	1.0	ug/L			12/07/17 14:15	1
Isobutyl alcohol	ND		25	13	ug/L			12/07/17 14:15	1
m,p-Xylene	ND		1.0	0.50	ug/L			12/07/17 14:15	1
Methylacrylonitrile	ND		10	2.5	ug/L			12/07/17 14:15	1
Methyl methacrylate	ND		2.0	1.0	ug/L			12/07/17 14:15	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-197764-1

**Client Sample ID: DW-1**  
**Date Collected: 12/05/17 09:12**  
**Date Received: 12/05/17 17:00**

**Lab Sample ID: 440-197764-1**  
**Matrix: Water**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	ND		2.0	0.88	ug/L			12/07/17 14:15	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			12/07/17 14:15	1
Naphthalene	ND		1.0	0.40	ug/L			12/07/17 14:15	1
o-Xylene	ND		0.50	0.25	ug/L			12/07/17 14:15	1
Propionitrile	ND		20	10	ug/L			12/07/17 14:15	1
Styrene	ND		0.50	0.25	ug/L			12/07/17 14:15	1
t-Butanol	ND		10	5.0	ug/L			12/07/17 14:15	1
Tetrachloroethene	ND		0.50	0.25	ug/L			12/07/17 14:15	1
Tetrahydrofuran	ND		10	5.0	ug/L			12/07/17 14:15	1
Toluene	ND		0.50	0.25	ug/L			12/07/17 14:15	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/07/17 14:15	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/07/17 14:15	1
Trichloroethene	ND		0.50	0.25	ug/L			12/07/17 14:15	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			12/07/17 14:15	1
Vinyl acetate	ND		4.0	2.0	ug/L			12/07/17 14:15	1
Vinyl chloride	ND		0.50	0.25	ug/L			12/07/17 14:15	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			12/07/17 14:15	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			12/07/17 14:15	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			12/07/17 14:15	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	11	T J	ug/L		6.08			12/07/17 14:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	110		80 - 128		12/06/17 09:28	1
4-Bromofluorobenzene (Surr)	95		80 - 120		12/06/17 09:28	1
Toluene-d8 (Surr)	105		80 - 128		12/07/17 14:15	1
4-Bromofluorobenzene (Surr)	110		80 - 120		12/07/17 14:15	1
Dibromofluoromethane (Surr)	92		76 - 132		12/06/17 09:28	1
Dibromofluoromethane (Surr)	106		76 - 132		12/07/17 14:15	1

## Method: 8260B - Volatile Organic Compounds (GC/MS) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			12/08/17 12:54	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	9.4	T J	ug/L		7.26			12/08/17 12:54	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	102		80 - 128		12/08/17 12:54	1
4-Bromofluorobenzene (Surr)	95		80 - 120		12/08/17 12:54	1
Dibromofluoromethane (Surr)	102		76 - 132		12/08/17 12:54	1

## Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.97	0.24	ug/L		12/06/17 07:50	12/08/17 14:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	66		30 - 120		12/06/17 07:50	12/08/17 14:16

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-197764-1

**Client Sample ID: DW-1**  
**Date Collected: 12/05/17 09:12**  
**Date Received: 12/05/17 17:00**

**Lab Sample ID: 440-197764-1**  
**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		2.5	1.3	mg/L			12/05/17 20:21	5
Nitrate as N	ND		0.55	0.28	mg/L			12/05/17 20:21	5
<b>Chloride</b>	<b>14</b>		2.5	1.3	mg/L			12/05/17 20:21	5
<b>Fluoride</b>	<b>2.2 J</b>		2.5	1.3	mg/L			12/05/17 20:21	5
<b>Sulfate</b>	<b>1800</b>		100	50	mg/L			12/05/17 20:37	200

### Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Boron</b>	<b>2.1</b>		0.050	0.025	mg/L		12/06/17 11:28	12/06/17 20:26	1
<b>Calcium</b>	<b>2.9</b>		0.10	0.050	mg/L		12/06/17 11:28	12/06/17 20:26	1
Iron	ND		0.10	0.050	mg/L		12/06/17 11:28	12/06/17 20:26	1
<b>Magnesium</b>	<b>1.7 B</b>		0.020	0.010	mg/L		12/06/17 11:28	12/06/17 20:26	1
Manganese	ND		0.020	0.015	mg/L		12/06/17 11:28	12/06/17 20:26	1
<b>Potassium</b>	<b>2.3</b>		0.50	0.25	mg/L		12/06/17 11:28	12/06/17 20:26	1
<b>Sodium</b>	<b>980</b>		0.50	0.26	mg/L		12/06/17 11:28	12/06/17 20:26	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		20	10	mg/L			12/12/17 17:05	1
<b>Total Dissolved Solids</b>	<b>3100</b>		50	25	mg/L			12/07/17 16:08	1
<b>Ammonia (as N)</b>	<b>2.2</b>		0.50	0.10	mg/L		12/11/17 03:30	12/11/17 04:30	1
<b>Total Sulfide</b>	<b>1.5</b>		0.10	0.054	mg/L			12/06/17 17:42	2
<b>Total Organic Carbon</b>	<b>3.0</b>		0.10	0.050	mg/L			12/07/17 09:12	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Alkalinity as CaCO3</b>	<b>530</b>		4.0	4.0	mg/L			12/07/17 06:59	1
<b>Bicarbonate Alkalinity as CaCO3</b>	<b>430</b>		4.0	4.0	mg/L			12/07/17 06:59	1
Carbon Dioxide, Free	ND		2.0	2.0	mg/L			12/12/17 12:30	1

**Client Sample ID: DW-2**  
**Date Collected: 12/05/17 10:26**  
**Date Received: 12/05/17 17:00**

**Lab Sample ID: 440-197764-2**  
**Matrix: Water**

### Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			12/07/17 14:43	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/07/17 14:43	1
Acrolein	ND		50	2.5	ug/L			12/06/17 10:51	1
Acrylonitrile	ND		50	1.0	ug/L			12/06/17 10:51	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			12/07/17 14:43	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/07/17 14:43	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			12/07/17 14:43	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			12/07/17 14:43	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			12/07/17 14:43	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			12/07/17 14:43	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			12/07/17 14:43	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			12/07/17 14:43	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			12/07/17 14:43	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			12/07/17 14:43	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			12/07/17 14:43	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			12/07/17 14:43	1

TestAmerica Irvine



# Client Sample Results

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

TestAmerica Job ID: 440-197764-1

**Client Sample ID: DW-2**  
**Date Collected: 12/05/17 10:26**  
**Date Received: 12/05/17 17:00**

**Lab Sample ID: 440-197764-2**  
**Matrix: Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichloropropane	ND		0.50	0.25	ug/L			12/07/17 14:43	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			12/07/17 14:43	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			12/07/17 14:43	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			12/07/17 14:43	1
2-Hexanone	ND		5.0	2.5	ug/L			12/07/17 14:43	1
Acetone	ND		20	10	ug/L			12/07/17 14:43	1
Acetonitrile	ND		20	10	ug/L			12/07/17 14:43	1
Acrolein	ND		5.0	2.5	ug/L			12/07/17 14:43	1
Acrylonitrile	ND		2.0	1.0	ug/L			12/07/17 14:43	1
Benzene	ND		0.50	0.25	ug/L			12/07/17 14:43	1
Allyl chloride	ND		1.0	0.50	ug/L			12/07/17 14:43	1
Bromoform	ND		1.0	0.40	ug/L			12/07/17 14:43	1
Bromomethane	ND		0.50	0.25	ug/L			12/07/17 14:43	1
Carbon disulfide	ND		1.0	0.50	ug/L			12/07/17 14:43	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			12/07/17 14:43	1
Chlorobenzene	ND		0.50	0.25	ug/L			12/07/17 14:43	1
Bromochloromethane	ND		0.50	0.25	ug/L			12/07/17 14:43	1
Chloroethane	ND		1.0	0.40	ug/L			12/07/17 14:43	1
Chloroform	ND		0.50	0.25	ug/L			12/07/17 14:43	1
Chloromethane	ND		0.50	0.25	ug/L			12/07/17 14:43	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/07/17 14:43	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/07/17 14:43	1
Dibromochloromethane	ND		0.50	0.25	ug/L			12/07/17 14:43	1
Dibromomethane	ND		0.50	0.25	ug/L			12/07/17 14:43	1
Bromodichloromethane	ND		0.50	0.25	ug/L			12/07/17 14:43	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			12/07/17 14:43	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			12/07/17 14:43	1
Ethylbenzene	ND		0.50	0.25	ug/L			12/07/17 14:43	1
Iodomethane	ND		2.0	1.0	ug/L			12/07/17 14:43	1
Isobutyl alcohol	ND		25	13	ug/L			12/07/17 14:43	1
m,p-Xylene	ND		1.0	0.50	ug/L			12/07/17 14:43	1
Methylacrylonitrile	ND		10	2.5	ug/L			12/07/17 14:43	1
Methyl methacrylate	ND		2.0	1.0	ug/L			12/07/17 14:43	1
Methylene Chloride	ND		2.0	0.88	ug/L			12/07/17 14:43	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			12/07/17 14:43	1
Naphthalene	ND		1.0	0.40	ug/L			12/07/17 14:43	1
o-Xylene	ND		0.50	0.25	ug/L			12/07/17 14:43	1
Propionitrile	ND		20	10	ug/L			12/07/17 14:43	1
Styrene	ND		0.50	0.25	ug/L			12/07/17 14:43	1
t-Butanol	ND		10	5.0	ug/L			12/07/17 14:43	1
Tetrachloroethene	ND		0.50	0.25	ug/L			12/07/17 14:43	1
Tetrahydrofuran	ND		10	5.0	ug/L			12/07/17 14:43	1
Toluene	ND		0.50	0.25	ug/L			12/07/17 14:43	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/07/17 14:43	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/07/17 14:43	1
Trichloroethene	ND		0.50	0.25	ug/L			12/07/17 14:43	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			12/07/17 14:43	1
Vinyl acetate	ND		4.0	2.0	ug/L			12/07/17 14:43	1
Vinyl chloride	ND		0.50	0.25	ug/L			12/07/17 14:43	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-197764-1

**Client Sample ID: DW-2**  
**Date Collected: 12/05/17 10:26**  
**Date Received: 12/05/17 17:00**

**Lab Sample ID: 440-197764-2**  
**Matrix: Water**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			12/07/17 14:43	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			12/07/17 14:43	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			12/07/17 14:43	1
<i>Tentatively Identified Compound</i>	<i>Est. Result</i>	<i>Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>RT</i>	<i>CAS No.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Unknown	3.1	T J	ug/L		3.51			12/07/17 14:43	1
Unknown	2.8	T J	ug/L		4.66			12/07/17 14:43	1
Unknown	11	T J	ug/L		6.08			12/07/17 14:43	1
<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Toluene-d8 (Surr)	103		80 - 128					12/06/17 10:51	1
4-Bromofluorobenzene (Surr)	91		80 - 120					12/06/17 10:51	1
Toluene-d8 (Surr)	103		80 - 128					12/07/17 14:43	1
4-Bromofluorobenzene (Surr)	111		80 - 120					12/07/17 14:43	1
Dibromofluoromethane (Surr)	116		76 - 132					12/06/17 10:51	1
Dibromofluoromethane (Surr)	107		76 - 132					12/07/17 14:43	1

## Method: 8260B - Volatile Organic Compounds (GC/MS) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			12/08/17 13:20	1
<i>Tentatively Identified Compound</i>	<i>Est. Result</i>	<i>Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>RT</i>	<i>CAS No.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Unknown	9.3	T J	ug/L		7.26			12/08/17 13:20	1
<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Toluene-d8 (Surr)	100		80 - 128					12/08/17 13:20	1
4-Bromofluorobenzene (Surr)	93		80 - 120					12/08/17 13:20	1
Dibromofluoromethane (Surr)	101		76 - 132					12/08/17 13:20	1

## Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		1.0	0.25	ug/L		12/06/17 07:50	12/08/17 14:38	1
<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
1,4-Dioxane-d8 (Surr)	67		30 - 120				12/06/17 07:50	12/08/17 14:38	1

## Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		1.0	0.50	mg/L			12/05/17 20:52	2
Nitrate as N	ND		0.22	0.11	mg/L			12/05/17 20:52	2
Chloride	11		1.0	0.50	mg/L			12/05/17 20:52	2
Fluoride	0.58	J	1.0	0.50	mg/L			12/05/17 20:52	2
Sulfate	980		50	25	mg/L			12/05/17 21:07	100

## Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.62		0.050	0.025	mg/L		12/06/17 11:28	12/06/17 20:35	1
Calcium	81		0.10	0.050	mg/L		12/06/17 11:28	12/06/17 20:35	1
Iron	0.82	B	0.10	0.050	mg/L		12/06/17 11:28	12/06/17 20:35	1
Magnesium	55	B	0.020	0.010	mg/L		12/06/17 11:28	12/06/17 20:35	1
Manganese	0.11		0.020	0.015	mg/L		12/06/17 11:28	12/06/17 20:35	1
Potassium	4.3		0.50	0.25	mg/L		12/06/17 11:28	12/06/17 20:35	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-197764-1

**Client Sample ID: DW-2**  
**Date Collected: 12/05/17 10:26**  
**Date Received: 12/05/17 17:00**

**Lab Sample ID: 440-197764-2**  
**Matrix: Water**

**Method: 6010B - Metals (ICP) - Total Recoverable (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	420		0.50	0.26	mg/L		12/06/17 11:28	12/06/17 20:35	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		20	10	mg/L			12/12/17 17:05	1
Total Dissolved Solids	1900		20	10	mg/L			12/07/17 16:08	1
Ammonia (as N)	3.0		0.50	0.10	mg/L		12/08/17 07:45	12/08/17 09:00	1
Total Sulfide	ND		0.15	0.081	mg/L			12/06/17 17:42	3
Total Organic Carbon	1.5		0.10	0.050	mg/L			12/07/17 09:24	1
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	370		4.0	4.0	mg/L			12/07/17 07:09	1
Bicarbonate Alkalinity as CaCO3	370		4.0	4.0	mg/L			12/07/17 07:09	1
Carbon Dioxide, Free	11		2.0	2.0	mg/L			12/12/17 12:30	1

**Client Sample ID: DW-3**  
**Date Collected: 12/05/17 12:50**  
**Date Received: 12/05/17 17:00**

**Lab Sample ID: 440-197764-3**  
**Matrix: Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			12/07/17 15:11	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/07/17 15:11	1
Acrolein	ND		50	2.5	ug/L			12/06/17 12:20	1
Acrylonitrile	ND		50	1.0	ug/L			12/06/17 12:20	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			12/07/17 15:11	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/07/17 15:11	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			12/07/17 15:11	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			12/07/17 15:11	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			12/07/17 15:11	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			12/07/17 15:11	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			12/07/17 15:11	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			12/07/17 15:11	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			12/07/17 15:11	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			12/07/17 15:11	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			12/07/17 15:11	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			12/07/17 15:11	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			12/07/17 15:11	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			12/07/17 15:11	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			12/07/17 15:11	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			12/07/17 15:11	1
2-Hexanone	ND		5.0	2.5	ug/L			12/07/17 15:11	1
Acetone	ND		20	10	ug/L			12/07/17 15:11	1
Acetonitrile	ND		20	10	ug/L			12/07/17 15:11	1
Acrolein	ND		5.0	2.5	ug/L			12/07/17 15:11	1
Acrylonitrile	ND		2.0	1.0	ug/L			12/07/17 15:11	1
Benzene	ND		0.50	0.25	ug/L			12/07/17 15:11	1
Allyl chloride	ND		1.0	0.50	ug/L			12/07/17 15:11	1
Bromoform	ND		1.0	0.40	ug/L			12/07/17 15:11	1
Bromomethane	ND		0.50	0.25	ug/L			12/07/17 15:11	1
Carbon disulfide	ND		1.0	0.50	ug/L			12/07/17 15:11	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-197764-1

**Client Sample ID: DW-3**  
**Date Collected: 12/05/17 12:50**  
**Date Received: 12/05/17 17:00**

**Lab Sample ID: 440-197764-3**  
**Matrix: Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		0.50	0.25	ug/L			12/07/17 15:11	1
Chlorobenzene	ND		0.50	0.25	ug/L			12/07/17 15:11	1
Bromochloromethane	ND		0.50	0.25	ug/L			12/07/17 15:11	1
Chloroethane	ND		1.0	0.40	ug/L			12/07/17 15:11	1
Chloroform	ND		0.50	0.25	ug/L			12/07/17 15:11	1
Chloromethane	ND		0.50	0.25	ug/L			12/07/17 15:11	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/07/17 15:11	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/07/17 15:11	1
Dibromochloromethane	ND		0.50	0.25	ug/L			12/07/17 15:11	1
Dibromomethane	ND		0.50	0.25	ug/L			12/07/17 15:11	1
Bromodichloromethane	ND		0.50	0.25	ug/L			12/07/17 15:11	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			12/07/17 15:11	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			12/07/17 15:11	1
Ethylbenzene	ND		0.50	0.25	ug/L			12/07/17 15:11	1
Iodomethane	ND		2.0	1.0	ug/L			12/07/17 15:11	1
Isobutyl alcohol	ND		25	13	ug/L			12/07/17 15:11	1
m,p-Xylene	ND		1.0	0.50	ug/L			12/07/17 15:11	1
Methylacrylonitrile	ND		10	2.5	ug/L			12/07/17 15:11	1
Methyl methacrylate	ND		2.0	1.0	ug/L			12/07/17 15:11	1
Methylene Chloride	ND		2.0	0.88	ug/L			12/07/17 15:11	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			12/07/17 15:11	1
Naphthalene	ND		1.0	0.40	ug/L			12/07/17 15:11	1
o-Xylene	ND		0.50	0.25	ug/L			12/07/17 15:11	1
Propionitrile	ND		20	10	ug/L			12/07/17 15:11	1
Styrene	ND		0.50	0.25	ug/L			12/07/17 15:11	1
t-Butanol	ND		10	5.0	ug/L			12/07/17 15:11	1
Tetrachloroethene	ND		0.50	0.25	ug/L			12/07/17 15:11	1
Tetrahydrofuran	ND		10	5.0	ug/L			12/07/17 15:11	1
Toluene	ND		0.50	0.25	ug/L			12/07/17 15:11	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/07/17 15:11	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/07/17 15:11	1
Trichloroethene	ND		0.50	0.25	ug/L			12/07/17 15:11	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			12/07/17 15:11	1
Vinyl acetate	ND		4.0	2.0	ug/L			12/07/17 15:11	1
Vinyl chloride	ND		0.50	0.25	ug/L			12/07/17 15:11	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			12/07/17 15:11	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			12/07/17 15:11	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			12/07/17 15:11	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	150	T J	ug/L		1.94			12/07/17 15:11	1
Unknown	11	T J	ug/L		6.07			12/07/17 15:11	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	102		80 - 128		12/06/17 12:20	1
4-Bromofluorobenzene (Surr)	93		80 - 120		12/06/17 12:20	1
Toluene-d8 (Surr)	104		80 - 128		12/07/17 15:11	1
4-Bromofluorobenzene (Surr)	112		80 - 120		12/07/17 15:11	1
Dibromofluoromethane (Surr)	113		76 - 132		12/06/17 12:20	1
Dibromofluoromethane (Surr)	107		76 - 132		12/07/17 15:11	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-197764-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			12/08/17 13:45	1
Tentatively Identified Compound	Est. Result	Qualifier	Unit	RT	CAS No.		Prepared	Analyzed	Dil Fac
Unknown	9.3	T J	ug/L	7.26				12/08/17 13:45	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	101		80 - 128					12/08/17 13:45	1
4-Bromofluorobenzene (Surr)	94		80 - 120					12/08/17 13:45	1
Dibromofluoromethane (Surr)	102		76 - 132					12/08/17 13:45	1

## Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		1.0	0.25	ug/L		12/06/17 07:50	12/08/17 15:00	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	69		30 - 120				12/06/17 07:50	12/08/17 15:00	1

## Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		0.50	0.25	mg/L			12/05/17 22:00	1
Nitrate as N	ND		0.11	0.055	mg/L			12/05/17 22:00	1
Chloride	16		0.50	0.25	mg/L			12/05/17 22:00	1
Fluoride	0.40	J	0.50	0.25	mg/L			12/05/17 22:00	1
Sulfate	1200		25	13	mg/L			12/05/17 22:15	50

## Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.052		0.050	0.025	mg/L		12/06/17 11:28	12/06/17 20:37	1
Calcium	300		0.10	0.050	mg/L		12/06/17 11:28	12/06/17 20:37	1
Iron	0.66	B	0.10	0.050	mg/L		12/06/17 11:28	12/06/17 20:37	1
Magnesium	110	B	0.020	0.010	mg/L		12/06/17 11:28	12/06/17 20:37	1
Manganese	0.079		0.020	0.015	mg/L		12/06/17 11:28	12/06/17 20:37	1
Potassium	9.0		0.50	0.25	mg/L		12/06/17 11:28	12/06/17 20:37	1
Sodium	63		0.50	0.26	mg/L		12/06/17 11:28	12/06/17 20:37	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		20	10	mg/L			12/12/17 17:05	1
Total Dissolved Solids	1800		20	10	mg/L			12/07/17 16:08	1
Ammonia (as N)	0.83		0.50	0.10	mg/L		12/11/17 03:30	12/11/17 04:30	1
Total Sulfide	ND		0.050	0.027	mg/L			12/06/17 17:42	1
Total Organic Carbon	0.38		0.10	0.050	mg/L			12/07/17 10:40	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	160		4.0	4.0	mg/L			12/07/17 07:17	1
Bicarbonate Alkalinity as CaCO3	160		4.0	4.0	mg/L			12/07/17 07:17	1
Carbon Dioxide, Free	14		2.0	2.0	mg/L			12/12/17 12:30	1

Client Sample ID: MW-9

Date Collected: 12/05/17 12:10

Date Received: 12/05/17 17:00

Lab Sample ID: 440-197764-4

Matrix: Water

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			12/07/17 15:38	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/07/17 15:38	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-197764-1

**Client Sample ID: MW-9**

**Lab Sample ID: 440-197764-4**

**Date Collected: 12/05/17 12:10**

**Matrix: Water**

**Date Received: 12/05/17 17:00**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acrolein	ND		50	2.5	ug/L			12/06/17 12:50	1
Acrylonitrile	ND		50	1.0	ug/L			12/06/17 12:50	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			12/07/17 15:38	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/07/17 15:38	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			12/07/17 15:38	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			12/07/17 15:38	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			12/07/17 15:38	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			12/07/17 15:38	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			12/07/17 15:38	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			12/07/17 15:38	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			12/07/17 15:38	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			12/07/17 15:38	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			12/07/17 15:38	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			12/07/17 15:38	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			12/07/17 15:38	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			12/07/17 15:38	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			12/07/17 15:38	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			12/07/17 15:38	1
2-Hexanone	ND		5.0	2.5	ug/L			12/07/17 15:38	1
Acetone	ND		20	10	ug/L			12/07/17 15:38	1
Acetonitrile	ND		20	10	ug/L			12/07/17 15:38	1
Acrolein	ND		5.0	2.5	ug/L			12/07/17 15:38	1
Acrylonitrile	ND		2.0	1.0	ug/L			12/07/17 15:38	1
Benzene	ND		0.50	0.25	ug/L			12/07/17 15:38	1
Allyl chloride	ND		1.0	0.50	ug/L			12/07/17 15:38	1
Bromoform	ND		1.0	0.40	ug/L			12/07/17 15:38	1
Bromomethane	ND		0.50	0.25	ug/L			12/07/17 15:38	1
Carbon disulfide	ND		1.0	0.50	ug/L			12/07/17 15:38	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			12/07/17 15:38	1
Chlorobenzene	ND		0.50	0.25	ug/L			12/07/17 15:38	1
Bromochloromethane	ND		0.50	0.25	ug/L			12/07/17 15:38	1
Chloroethane	ND		1.0	0.40	ug/L			12/07/17 15:38	1
Chloroform	ND		0.50	0.25	ug/L			12/07/17 15:38	1
Chloromethane	ND		0.50	0.25	ug/L			12/07/17 15:38	1
<b>cis-1,2-Dichloroethene</b>	<b>0.79</b>		0.50	0.25	ug/L			12/07/17 15:38	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/07/17 15:38	1
Dibromochloromethane	ND		0.50	0.25	ug/L			12/07/17 15:38	1
Dibromomethane	ND		0.50	0.25	ug/L			12/07/17 15:38	1
Bromodichloromethane	ND		0.50	0.25	ug/L			12/07/17 15:38	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			12/07/17 15:38	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			12/07/17 15:38	1
Ethylbenzene	ND		0.50	0.25	ug/L			12/07/17 15:38	1
Iodomethane	ND		2.0	1.0	ug/L			12/07/17 15:38	1
Isobutyl alcohol	ND		25	13	ug/L			12/07/17 15:38	1
m,p-Xylene	ND		1.0	0.50	ug/L			12/07/17 15:38	1
Methylacrylonitrile	ND		10	2.5	ug/L			12/07/17 15:38	1
Methyl methacrylate	ND		2.0	1.0	ug/L			12/07/17 15:38	1
Methylene Chloride	ND		2.0	0.88	ug/L			12/07/17 15:38	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			12/07/17 15:38	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-197764-1

**Client Sample ID: MW-9**  
**Date Collected: 12/05/17 12:10**  
**Date Received: 12/05/17 17:00**

**Lab Sample ID: 440-197764-4**  
**Matrix: Water**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		1.0	0.40	ug/L			12/07/17 15:38	1
o-Xylene	ND		0.50	0.25	ug/L			12/07/17 15:38	1
Propionitrile	ND		20	10	ug/L			12/07/17 15:38	1
Styrene	ND		0.50	0.25	ug/L			12/07/17 15:38	1
<b>t-Butanol</b>	<b>110</b>		10	5.0	ug/L			12/07/17 15:38	1
Tetrachloroethene	ND		0.50	0.25	ug/L			12/07/17 15:38	1
<b>Tetrahydrofuran</b>	<b>21</b>		10	5.0	ug/L			12/07/17 15:38	1
Toluene	ND		0.50	0.25	ug/L			12/07/17 15:38	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/07/17 15:38	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/07/17 15:38	1
Trichloroethene	ND		0.50	0.25	ug/L			12/07/17 15:38	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			12/07/17 15:38	1
Vinyl acetate	ND		4.0	2.0	ug/L			12/07/17 15:38	1
Vinyl chloride	ND		0.50	0.25	ug/L			12/07/17 15:38	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			12/07/17 15:38	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			12/07/17 15:38	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			12/07/17 15:38	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	13	T J	ug/L		4.66			12/07/17 15:38	1
Unknown	11	T J	ug/L		6.08			12/07/17 15:38	1
Unknown	4.4	T J	ug/L		8.63			12/07/17 15:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	103		80 - 128		12/06/17 12:50	1
4-Bromofluorobenzene (Surr)	92		80 - 120		12/06/17 12:50	1
Toluene-d8 (Surr)	105		80 - 128		12/07/17 15:38	1
4-Bromofluorobenzene (Surr)	110		80 - 120		12/07/17 15:38	1
Dibromofluoromethane (Surr)	119		76 - 132		12/06/17 12:50	1
Dibromofluoromethane (Surr)	109		76 - 132		12/07/17 15:38	1

## Method: 8260B - Volatile Organic Compounds (GC/MS) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			12/08/17 14:10	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	9.3	T J	ug/L		5.76			12/08/17 14:10	1
Unknown	9.0	T J	ug/L		7.26			12/08/17 14:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	102		80 - 128		12/08/17 14:10	1
4-Bromofluorobenzene (Surr)	92		80 - 120		12/08/17 14:10	1
Dibromofluoromethane (Surr)	100		76 - 132		12/08/17 14:10	1

## Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>1,4-Dioxane</b>	<b>47</b>		1.0	0.26	ug/L		12/06/17 07:50	12/08/17 15:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	56		30 - 120	12/06/17 07:50	12/08/17 15:22	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-197764-1

**Client Sample ID: MW-9**  
**Date Collected: 12/05/17 12:10**  
**Date Received: 12/05/17 17:00**

**Lab Sample ID: 440-197764-4**  
**Matrix: Water**

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Bromide</b>	<b>10</b>		5.0	2.5	mg/L			12/05/17 22:30	10
Nitrate as N	ND		1.1	0.55	mg/L			12/05/17 22:30	10
<b>Chloride</b>	<b>680</b>		100	50	mg/L			12/05/17 22:45	200
Fluoride	ND		5.0	2.5	mg/L			12/05/17 22:30	10
<b>Sulfate</b>	<b>1100</b>		100	50	mg/L			12/05/17 22:45	200

### Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Boron</b>	<b>2.7</b>	<b>F1</b>	0.050	0.025	mg/L		12/07/17 10:19	12/08/17 14:08	1
<b>Calcium</b>	<b>440</b>		0.10	0.050	mg/L		12/07/17 10:19	12/08/17 14:08	1
<b>Iron</b>	<b>70</b>		0.10	0.050	mg/L		12/07/17 10:19	12/08/17 14:08	1
<b>Magnesium</b>	<b>230</b>	<b>B</b>	0.020	0.010	mg/L		12/07/17 10:19	12/08/17 14:08	1
<b>Manganese</b>	<b>3.7</b>	<b>F1</b>	0.020	0.015	mg/L		12/07/17 10:19	12/08/17 14:08	1
<b>Potassium</b>	<b>34</b>	<b>F1</b>	0.50	0.25	mg/L		12/07/17 10:19	12/08/17 14:08	1
<b>Sodium</b>	<b>470</b>		0.50	0.26	mg/L		12/07/17 10:19	12/08/17 14:08	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Chemical Oxygen Demand</b>	<b>360</b>		20	10	mg/L			12/12/17 17:05	1
<b>Total Dissolved Solids</b>	<b>4100</b>		100	50	mg/L			12/12/17 07:59	1
<b>Ammonia (as N)</b>	<b>9.6</b>		2.5	0.50	mg/L		12/11/17 03:30	12/11/17 04:30	1
Total Sulfide	ND		0.050	0.027	mg/L			12/06/17 17:42	1
<b>Total Organic Carbon</b>	<b>140</b>		1.0	0.50	mg/L			12/07/17 10:56	10
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Alkalinity as CaCO3</b>	<b>1200</b>		4.0	4.0	mg/L			12/07/17 07:37	1
<b>Bicarbonate Alkalinity as CaCO3</b>	<b>1200</b>		4.0	4.0	mg/L			12/07/17 07:37	1
<b>Carbon Dioxide, Free</b>	<b>200</b>		2.0	2.0	mg/L			12/12/17 12:30	1

**Client Sample ID: MW-13R**  
**Date Collected: 12/05/17 13:30**  
**Date Received: 12/05/17 17:00**

**Lab Sample ID: 440-197764-5**  
**Matrix: Water**

### Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			12/07/17 16:06	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/07/17 16:06	1
Acrolein	ND		50	2.5	ug/L			12/06/17 13:19	1
Acrylonitrile	ND		50	1.0	ug/L			12/06/17 13:19	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			12/07/17 16:06	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/07/17 16:06	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			12/07/17 16:06	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			12/07/17 16:06	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			12/07/17 16:06	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			12/07/17 16:06	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			12/07/17 16:06	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			12/07/17 16:06	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			12/07/17 16:06	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			12/07/17 16:06	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			12/07/17 16:06	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			12/07/17 16:06	1

TestAmerica Irvine



# Client Sample Results

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

TestAmerica Job ID: 440-197764-1

**Client Sample ID: MW-13R**

**Lab Sample ID: 440-197764-5**

**Date Collected: 12/05/17 13:30**

**Matrix: Water**

**Date Received: 12/05/17 17:00**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichloropropane	ND		0.50	0.25	ug/L			12/07/17 16:06	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			12/07/17 16:06	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			12/07/17 16:06	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			12/07/17 16:06	1
2-Hexanone	ND		5.0	2.5	ug/L			12/07/17 16:06	1
Acetone	ND		20	10	ug/L			12/07/17 16:06	1
Acetonitrile	ND		20	10	ug/L			12/07/17 16:06	1
Acrolein	ND		5.0	2.5	ug/L			12/07/17 16:06	1
Acrylonitrile	ND		2.0	1.0	ug/L			12/07/17 16:06	1
Benzene	ND		0.50	0.25	ug/L			12/07/17 16:06	1
Allyl chloride	ND		1.0	0.50	ug/L			12/07/17 16:06	1
Bromoform	ND		1.0	0.40	ug/L			12/07/17 16:06	1
Bromomethane	ND		0.50	0.25	ug/L			12/07/17 16:06	1
Carbon disulfide	ND		1.0	0.50	ug/L			12/07/17 16:06	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			12/07/17 16:06	1
Chlorobenzene	ND		0.50	0.25	ug/L			12/07/17 16:06	1
Bromochloromethane	ND		0.50	0.25	ug/L			12/07/17 16:06	1
Chloroethane	ND		1.0	0.40	ug/L			12/07/17 16:06	1
Chloroform	ND		0.50	0.25	ug/L			12/07/17 16:06	1
Chloromethane	ND		0.50	0.25	ug/L			12/07/17 16:06	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/07/17 16:06	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/07/17 16:06	1
Dibromochloromethane	ND		0.50	0.25	ug/L			12/07/17 16:06	1
Dibromomethane	ND		0.50	0.25	ug/L			12/07/17 16:06	1
Bromodichloromethane	ND		0.50	0.25	ug/L			12/07/17 16:06	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			12/07/17 16:06	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			12/07/17 16:06	1
Ethylbenzene	ND		0.50	0.25	ug/L			12/07/17 16:06	1
Iodomethane	ND		2.0	1.0	ug/L			12/07/17 16:06	1
Isobutyl alcohol	ND		25	13	ug/L			12/07/17 16:06	1
m,p-Xylene	ND		1.0	0.50	ug/L			12/07/17 16:06	1
Methylacrylonitrile	ND		10	2.5	ug/L			12/07/17 16:06	1
Methyl methacrylate	ND		2.0	1.0	ug/L			12/07/17 16:06	1
Methylene Chloride	ND		2.0	0.88	ug/L			12/07/17 16:06	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			12/07/17 16:06	1
Naphthalene	ND		1.0	0.40	ug/L			12/07/17 16:06	1
o-Xylene	ND		0.50	0.25	ug/L			12/07/17 16:06	1
Propionitrile	ND		20	10	ug/L			12/07/17 16:06	1
Styrene	ND		0.50	0.25	ug/L			12/07/17 16:06	1
<b>t-Butanol</b>	<b>5.9</b>	<b>J ID</b>	10	5.0	ug/L			12/07/17 16:06	1
Tetrachloroethene	ND		0.50	0.25	ug/L			12/07/17 16:06	1
Tetrahydrofuran	ND		10	5.0	ug/L			12/07/17 16:06	1
Toluene	ND		0.50	0.25	ug/L			12/07/17 16:06	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/07/17 16:06	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/07/17 16:06	1
Trichloroethene	ND		0.50	0.25	ug/L			12/07/17 16:06	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			12/07/17 16:06	1
Vinyl acetate	ND		4.0	2.0	ug/L			12/07/17 16:06	1
Vinyl chloride	ND		0.50	0.25	ug/L			12/07/17 16:06	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-197764-1

**Client Sample ID: MW-13R**

**Lab Sample ID: 440-197764-5**

**Date Collected: 12/05/17 13:30**

**Matrix: Water**

**Date Received: 12/05/17 17:00**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			12/07/17 16:06	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			12/07/17 16:06	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			12/07/17 16:06	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	180	T J	ug/L		2.07			12/07/17 16:06	1
Unknown	14	T J	ug/L		2.64			12/07/17 16:06	1
Silanol, trimethyl-	4.7	T J N	ug/L		4.66	1066-40-6		12/07/17 16:06	1
Unknown	11	T J	ug/L		6.07			12/07/17 16:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	103		80 - 128		12/06/17 13:19	1
4-Bromofluorobenzene (Surr)	93		80 - 120		12/06/17 13:19	1
Toluene-d8 (Surr)	105		80 - 128		12/07/17 16:06	1
4-Bromofluorobenzene (Surr)	110		80 - 120		12/07/17 16:06	1
Dibromofluoromethane (Surr)	112		76 - 132		12/06/17 13:19	1
Dibromofluoromethane (Surr)	110		76 - 132		12/07/17 16:06	1

## Method: 8260B - Volatile Organic Compounds (GC/MS) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			12/08/17 14:36	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	9.0	T J	ug/L		2.56			12/08/17 14:36	1
Unknown	66	T J	ug/L		2.63			12/08/17 14:36	1
Unknown	16	T J	ug/L		2.83			12/08/17 14:36	1
Unknown	3.3	T J	ug/L		3.50			12/08/17 14:36	1
Unknown	9.4	T J	ug/L		7.26			12/08/17 14:36	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	102		80 - 128		12/08/17 14:36	1
4-Bromofluorobenzene (Surr)	95		80 - 120		12/08/17 14:36	1
Dibromofluoromethane (Surr)	101		76 - 132		12/08/17 14:36	1

## Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>1,4-Dioxane</b>	<b>7.3</b>		0.98	0.25	ug/L		12/06/17 07:50	12/08/17 15:44	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	61		30 - 120	12/06/17 07:50	12/08/17 15:44	1

## Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Bromide</b>	<b>2.4</b>		1.0	0.50	mg/L			12/05/17 23:00	2
Nitrate as N	ND		0.22	0.11	mg/L			12/05/17 23:00	2
<b>Chloride</b>	<b>190</b>		50	25	mg/L			12/05/17 23:15	100
Fluoride	ND		1.0	0.50	mg/L			12/05/17 23:00	2
<b>Sulfate</b>	<b>650</b>		50	25	mg/L			12/05/17 23:15	100

## Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Boron</b>	<b>0.86</b>		0.050	0.025	mg/L		12/06/17 11:28	12/06/17 20:39	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-197764-1

**Client Sample ID: MW-13R**

**Lab Sample ID: 440-197764-5**

Date Collected: 12/05/17 13:30

Matrix: Water

Date Received: 12/05/17 17:00

**Method: 6010B - Metals (ICP) - Total Recoverable (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	170		0.10	0.050	mg/L		12/06/17 11:28	12/06/17 20:39	1
Iron	ND		0.10	0.050	mg/L		12/06/17 11:28	12/06/17 20:39	1
Magnesium	160	B	0.020	0.010	mg/L		12/06/17 11:28	12/06/17 20:39	1
Manganese	ND		0.020	0.015	mg/L		12/06/17 11:28	12/06/17 20:39	1
Potassium	30		0.50	0.25	mg/L		12/06/17 11:28	12/06/17 20:39	1
Sodium	210		0.50	0.26	mg/L		12/06/17 11:28	12/06/17 20:39	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	270		20	10	mg/L			12/12/17 17:05	1
Total Dissolved Solids	2100		20	10	mg/L			12/07/17 16:08	1
Ammonia (as N)	7.6		2.5	0.50	mg/L		12/11/17 03:30	12/11/17 04:30	1
Total Sulfide	120		10	5.4	mg/L			12/06/17 17:42	200
Total Organic Carbon	25		0.50	0.25	mg/L			12/07/17 11:11	5

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	740		4.0	4.0	mg/L			12/07/17 07:55	1
Bicarbonate Alkalinity as CaCO3	740		4.0	4.0	mg/L			12/07/17 07:55	1
Carbon Dioxide, Free	55		2.0	2.0	mg/L			12/12/17 12:30	1

**Client Sample ID: MW-6**

**Lab Sample ID: 440-197764-6**

Date Collected: 12/05/17 09:45

Matrix: Water

Date Received: 12/05/17 17:00

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			12/07/17 16:35	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/07/17 16:35	1
Acrolein	ND		50	2.5	ug/L			12/06/17 13:49	1
Acrylonitrile	ND		50	1.0	ug/L			12/06/17 13:49	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			12/07/17 16:35	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/07/17 16:35	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			12/07/17 16:35	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			12/07/17 16:35	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			12/07/17 16:35	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			12/07/17 16:35	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			12/07/17 16:35	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			12/07/17 16:35	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			12/07/17 16:35	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			12/07/17 16:35	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			12/07/17 16:35	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			12/07/17 16:35	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			12/07/17 16:35	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			12/07/17 16:35	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			12/07/17 16:35	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			12/07/17 16:35	1
2-Hexanone	ND		5.0	2.5	ug/L			12/07/17 16:35	1
Acetone	ND		20	10	ug/L			12/07/17 16:35	1
Acetonitrile	ND		20	10	ug/L			12/07/17 16:35	1
Acrolein	ND		5.0	2.5	ug/L			12/07/17 16:35	1
Acrylonitrile	ND		2.0	1.0	ug/L			12/07/17 16:35	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-197764-1

**Client Sample ID: MW-6**  
**Date Collected: 12/05/17 09:45**  
**Date Received: 12/05/17 17:00**

**Lab Sample ID: 440-197764-6**  
**Matrix: Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50	0.25	ug/L			12/07/17 16:35	1
Allyl chloride	ND		1.0	0.50	ug/L			12/07/17 16:35	1
Bromoform	ND		1.0	0.40	ug/L			12/07/17 16:35	1
Bromomethane	ND		0.50	0.25	ug/L			12/07/17 16:35	1
Carbon disulfide	ND		1.0	0.50	ug/L			12/07/17 16:35	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			12/07/17 16:35	1
Chlorobenzene	ND		0.50	0.25	ug/L			12/07/17 16:35	1
Bromochloromethane	ND		0.50	0.25	ug/L			12/07/17 16:35	1
Chloroethane	ND		1.0	0.40	ug/L			12/07/17 16:35	1
Chloroform	ND		0.50	0.25	ug/L			12/07/17 16:35	1
Chloromethane	ND		0.50	0.25	ug/L			12/07/17 16:35	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/07/17 16:35	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/07/17 16:35	1
Dibromochloromethane	ND		0.50	0.25	ug/L			12/07/17 16:35	1
Dibromomethane	ND		0.50	0.25	ug/L			12/07/17 16:35	1
Bromodichloromethane	ND		0.50	0.25	ug/L			12/07/17 16:35	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			12/07/17 16:35	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			12/07/17 16:35	1
Ethylbenzene	ND		0.50	0.25	ug/L			12/07/17 16:35	1
Iodomethane	ND		2.0	1.0	ug/L			12/07/17 16:35	1
Isobutyl alcohol	ND		25	13	ug/L			12/07/17 16:35	1
m,p-Xylene	ND		1.0	0.50	ug/L			12/07/17 16:35	1
Methylacrylonitrile	ND		10	2.5	ug/L			12/07/17 16:35	1
Methyl methacrylate	ND		2.0	1.0	ug/L			12/07/17 16:35	1
Methylene Chloride	ND		2.0	0.88	ug/L			12/07/17 16:35	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			12/07/17 16:35	1
Naphthalene	ND		1.0	0.40	ug/L			12/07/17 16:35	1
o-Xylene	ND		0.50	0.25	ug/L			12/07/17 16:35	1
Propionitrile	ND		20	10	ug/L			12/07/17 16:35	1
Styrene	ND		0.50	0.25	ug/L			12/07/17 16:35	1
t-Butanol	ND		10	5.0	ug/L			12/07/17 16:35	1
Tetrachloroethene	ND		0.50	0.25	ug/L			12/07/17 16:35	1
Tetrahydrofuran	ND		10	5.0	ug/L			12/07/17 16:35	1
Toluene	ND		0.50	0.25	ug/L			12/07/17 16:35	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/07/17 16:35	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/07/17 16:35	1
Trichloroethene	ND		0.50	0.25	ug/L			12/07/17 16:35	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			12/07/17 16:35	1
Vinyl acetate	ND		4.0	2.0	ug/L			12/07/17 16:35	1
Vinyl chloride	ND		0.50	0.25	ug/L			12/07/17 16:35	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			12/07/17 16:35	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			12/07/17 16:35	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			12/07/17 16:35	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	44	T J	ug/L		2.07			12/07/17 16:35	1
Silanol, trimethyl-	3.9	T J N	ug/L		4.66	1066-40-6		12/07/17 16:35	1
Unknown	11	T J	ug/L		6.07			12/07/17 16:35	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-197764-1

**Client Sample ID: MW-6**  
**Date Collected: 12/05/17 09:45**  
**Date Received: 12/05/17 17:00**

**Lab Sample ID: 440-197764-6**  
**Matrix: Water**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	105		80 - 128		12/06/17 13:49	1
4-Bromofluorobenzene (Surr)	92		80 - 120		12/06/17 13:49	1
Toluene-d8 (Surr)	106		80 - 128		12/07/17 16:35	1
4-Bromofluorobenzene (Surr)	110		80 - 120		12/07/17 16:35	1
Dibromofluoromethane (Surr)	111		76 - 132		12/06/17 13:49	1
Dibromofluoromethane (Surr)	108		76 - 132		12/07/17 16:35	1

## Method: 8260B - Volatile Organic Compounds (GC/MS) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			12/08/17 15:01	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	3.9	T J	ug/L		2.65			12/08/17 15:01	1
Unknown	8.3	T J	ug/L		2.72			12/08/17 15:01	1
Unknown	9.6	T J	ug/L		7.26			12/08/17 15:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	103		80 - 128		12/08/17 15:01	1
4-Bromofluorobenzene (Surr)	95		80 - 120		12/08/17 15:01	1
Dibromofluoromethane (Surr)	102		76 - 132		12/08/17 15:01	1

## Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		1.1	0.26	ug/L		12/06/17 07:50	12/08/17 16:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	59		30 - 120		12/06/17 07:50	12/08/17 16:06

## Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	0.88	J	1.0	0.50	mg/L			12/05/17 23:31	2
Nitrate as N	ND		0.22	0.11	mg/L			12/05/17 23:31	2
Chloride	38		1.0	0.50	mg/L			12/05/17 23:31	2
Fluoride	1.1		1.0	0.50	mg/L			12/05/17 23:31	2
Sulfate	1800		50	25	mg/L			12/06/17 00:16	100

## Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.80		0.050	0.025	mg/L		12/06/17 11:28	12/06/17 20:41	1
Calcium	330		0.10	0.050	mg/L		12/06/17 11:28	12/06/17 20:41	1
Iron	0.78	B	0.10	0.050	mg/L		12/06/17 11:28	12/06/17 20:41	1
Magnesium	190	B	0.020	0.010	mg/L		12/06/17 11:28	12/06/17 20:41	1
Manganese	0.85		0.020	0.015	mg/L		12/06/17 11:28	12/06/17 20:41	1
Potassium	5.8		0.50	0.25	mg/L		12/06/17 11:28	12/06/17 20:41	1
Sodium	320		0.50	0.26	mg/L		12/06/17 11:28	12/06/17 20:41	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		20	10	mg/L			12/12/17 17:05	1
Total Dissolved Solids	3000		20	10	mg/L			12/07/17 16:08	1
Ammonia (as N)	1.0		0.50	0.10	mg/L		12/08/17 07:45	12/08/17 09:00	1
Total Sulfide	7.6		1.0	0.54	mg/L			12/06/17 17:42	20

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-197764-1

## Client Sample ID: MW-6

Date Collected: 12/05/17 09:45

Date Received: 12/05/17 17:00

## Lab Sample ID: 440-197764-6

Matrix: Water

### General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	5.2		0.50	0.25	mg/L			12/07/17 11:23	5
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	450		4.0	4.0	mg/L			12/07/17 08:05	1
Bicarbonate Alkalinity as CaCO3	450		4.0	4.0	mg/L			12/07/17 08:05	1
Carbon Dioxide, Free	39		2.0	2.0	mg/L			12/12/17 12:30	1

## Client Sample ID: MW-14

Date Collected: 12/05/17 07:55

Date Received: 12/05/17 17:00

## Lab Sample ID: 440-197764-7

Matrix: Water

### Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			12/07/17 17:03	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/07/17 17:03	1
Acrolein	ND		50	2.5	ug/L			12/06/17 14:19	1
Acrylonitrile	ND		50	1.0	ug/L			12/06/17 14:19	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			12/07/17 17:03	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/07/17 17:03	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			12/07/17 17:03	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			12/07/17 17:03	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			12/07/17 17:03	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			12/07/17 17:03	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			12/07/17 17:03	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			12/07/17 17:03	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			12/07/17 17:03	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			12/07/17 17:03	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			12/07/17 17:03	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			12/07/17 17:03	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			12/07/17 17:03	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			12/07/17 17:03	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			12/07/17 17:03	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			12/07/17 17:03	1
2-Hexanone	ND		5.0	2.5	ug/L			12/07/17 17:03	1
Acetone	ND		20	10	ug/L			12/07/17 17:03	1
Acetonitrile	ND		20	10	ug/L			12/07/17 17:03	1
Acrolein	ND		5.0	2.5	ug/L			12/07/17 17:03	1
Acrylonitrile	ND		2.0	1.0	ug/L			12/07/17 17:03	1
Benzene	ND		0.50	0.25	ug/L			12/07/17 17:03	1
Allyl chloride	ND		1.0	0.50	ug/L			12/07/17 17:03	1
Bromoform	ND		1.0	0.40	ug/L			12/07/17 17:03	1
Bromomethane	ND		0.50	0.25	ug/L			12/07/17 17:03	1
Carbon disulfide	ND		1.0	0.50	ug/L			12/07/17 17:03	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			12/07/17 17:03	1
Chlorobenzene	ND		0.50	0.25	ug/L			12/07/17 17:03	1
Bromochloromethane	ND		0.50	0.25	ug/L			12/07/17 17:03	1
Chloroethane	ND		1.0	0.40	ug/L			12/07/17 17:03	1
Chloroform	ND		0.50	0.25	ug/L			12/07/17 17:03	1
Chloromethane	ND		0.50	0.25	ug/L			12/07/17 17:03	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/07/17 17:03	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-197764-1

**Client Sample ID: MW-14**

**Date Collected: 12/05/17 07:55**

**Date Received: 12/05/17 17:00**

**Lab Sample ID: 440-197764-7**

**Matrix: Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/07/17 17:03	1
Dibromochloromethane	ND		0.50	0.25	ug/L			12/07/17 17:03	1
Dibromomethane	ND		0.50	0.25	ug/L			12/07/17 17:03	1
Bromodichloromethane	ND		0.50	0.25	ug/L			12/07/17 17:03	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			12/07/17 17:03	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			12/07/17 17:03	1
Ethylbenzene	ND		0.50	0.25	ug/L			12/07/17 17:03	1
Iodomethane	ND		2.0	1.0	ug/L			12/07/17 17:03	1
Isobutyl alcohol	ND		25	13	ug/L			12/07/17 17:03	1
m,p-Xylene	ND		1.0	0.50	ug/L			12/07/17 17:03	1
Methylacrylonitrile	ND		10	2.5	ug/L			12/07/17 17:03	1
Methyl methacrylate	ND		2.0	1.0	ug/L			12/07/17 17:03	1
Methylene Chloride	ND		2.0	0.88	ug/L			12/07/17 17:03	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			12/07/17 17:03	1
Naphthalene	ND		1.0	0.40	ug/L			12/07/17 17:03	1
o-Xylene	ND		0.50	0.25	ug/L			12/07/17 17:03	1
Propionitrile	ND		20	10	ug/L			12/07/17 17:03	1
Styrene	ND		0.50	0.25	ug/L			12/07/17 17:03	1
t-Butanol	ND		10	5.0	ug/L			12/07/17 17:03	1
Tetrachloroethene	ND		0.50	0.25	ug/L			12/07/17 17:03	1
Tetrahydrofuran	ND		10	5.0	ug/L			12/07/17 17:03	1
Toluene	ND		0.50	0.25	ug/L			12/07/17 17:03	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/07/17 17:03	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/07/17 17:03	1
Trichloroethene	ND		0.50	0.25	ug/L			12/07/17 17:03	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			12/07/17 17:03	1
Vinyl acetate	ND		4.0	2.0	ug/L			12/07/17 17:03	1
Vinyl chloride	ND		0.50	0.25	ug/L			12/07/17 17:03	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			12/07/17 17:03	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			12/07/17 17:03	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			12/07/17 17:03	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	11	TJ	ug/L		6.08			12/07/17 17:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	105		80 - 128		12/06/17 14:19	1
4-Bromofluorobenzene (Surr)	96		80 - 120		12/06/17 14:19	1
Toluene-d8 (Surr)	104		80 - 128		12/07/17 17:03	1
4-Bromofluorobenzene (Surr)	113		80 - 120		12/07/17 17:03	1
Dibromofluoromethane (Surr)	112		76 - 132		12/06/17 14:19	1
Dibromofluoromethane (Surr)	109		76 - 132		12/07/17 17:03	1

**Method: 8260B - Volatile Organic Compounds (GC/MS) - RA**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			12/08/17 15:27	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	9.4	TJ	ug/L		7.26			12/08/17 15:27	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-197764-1

**Client Sample ID: MW-14**

**Date Collected: 12/05/17 07:55**

**Date Received: 12/05/17 17:00**

**Lab Sample ID: 440-197764-7**

**Matrix: Water**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	102		80 - 128		12/08/17 15:27	1
4-Bromofluorobenzene (Surr)	96		80 - 120		12/08/17 15:27	1
Dibromofluoromethane (Surr)	103		76 - 132		12/08/17 15:27	1

**Method: 8270C - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.98	0.25	ug/L		12/06/17 07:50	12/08/17 16:28	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	53		30 - 120	12/06/17 07:50	12/08/17 16:28	1

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	2.1	J	2.5	1.3	mg/L			12/06/17 01:01	5
Nitrate as N	ND		0.55	0.28	mg/L			12/06/17 01:01	5
Chloride	77		2.5	1.3	mg/L			12/06/17 01:01	5
Fluoride	2.3	J	2.5	1.3	mg/L			12/06/17 01:01	5
Sulfate	2800		100	50	mg/L			12/06/17 01:16	200

**Method: 6010B - Metals (ICP) - Total Recoverable**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.61		0.050	0.025	mg/L		12/06/17 11:28	12/06/17 20:43	1
Calcium	490		0.10	0.050	mg/L		12/06/17 11:28	12/06/17 20:43	1
Iron	0.46	B	0.10	0.050	mg/L		12/06/17 11:28	12/06/17 20:43	1
Magnesium	260	B	0.020	0.010	mg/L		12/06/17 11:28	12/06/17 20:43	1
Manganese	4.8		0.020	0.015	mg/L		12/06/17 11:28	12/06/17 20:43	1
Potassium	9.3		0.50	0.25	mg/L		12/06/17 11:28	12/06/17 20:43	1
Sodium	430		0.50	0.26	mg/L		12/06/17 11:28	12/06/17 20:43	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		20	10	mg/L			12/12/17 17:05	1
Total Dissolved Solids	4400		50	25	mg/L			12/12/17 07:59	1
Ammonia (as N)	0.21	J	0.50	0.10	mg/L		12/08/17 07:45	12/08/17 09:00	1
Total Sulfide	ND		0.050	0.027	mg/L			12/06/17 17:42	1
Total Organic Carbon	7.8		0.10	0.050	mg/L			12/07/17 11:39	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	520		4.0	4.0	mg/L			12/07/17 08:17	1
Bicarbonate Alkalinity as CaCO3	520		4.0	4.0	mg/L			12/07/17 08:17	1
Carbon Dioxide, Free	51		2.0	2.0	mg/L			12/12/17 12:30	1

**Client Sample ID: Duplicate**

**Date Collected: 12/05/17 00:01**

**Date Received: 12/05/17 17:00**

**Lab Sample ID: 440-197764-8**

**Matrix: Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			12/07/17 17:30	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/07/17 17:30	1
Acrolein	ND		50	2.5	ug/L			12/06/17 14:49	1
Acrylonitrile	ND		50	1.0	ug/L			12/06/17 14:49	1

TestAmerica Irvine



# Client Sample Results

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

TestAmerica Job ID: 440-197764-1

**Client Sample ID: Duplicate**

**Lab Sample ID: 440-197764-8**

**Date Collected: 12/05/17 00:01**

**Matrix: Water**

**Date Received: 12/05/17 17:00**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			12/07/17 17:30	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/07/17 17:30	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			12/07/17 17:30	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			12/07/17 17:30	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			12/07/17 17:30	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			12/07/17 17:30	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			12/07/17 17:30	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			12/07/17 17:30	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			12/07/17 17:30	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			12/07/17 17:30	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			12/07/17 17:30	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			12/07/17 17:30	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			12/07/17 17:30	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			12/07/17 17:30	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			12/07/17 17:30	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			12/07/17 17:30	1
2-Hexanone	ND		5.0	2.5	ug/L			12/07/17 17:30	1
Acetone	ND		20	10	ug/L			12/07/17 17:30	1
Acetonitrile	ND		20	10	ug/L			12/07/17 17:30	1
Acrolein	ND		5.0	2.5	ug/L			12/07/17 17:30	1
Acrylonitrile	ND		2.0	1.0	ug/L			12/07/17 17:30	1
Benzene	ND		0.50	0.25	ug/L			12/07/17 17:30	1
Allyl chloride	ND		1.0	0.50	ug/L			12/07/17 17:30	1
Bromoform	ND		1.0	0.40	ug/L			12/07/17 17:30	1
Bromomethane	ND		0.50	0.25	ug/L			12/07/17 17:30	1
Carbon disulfide	ND		1.0	0.50	ug/L			12/07/17 17:30	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			12/07/17 17:30	1
Chlorobenzene	ND		0.50	0.25	ug/L			12/07/17 17:30	1
Bromochloromethane	ND		0.50	0.25	ug/L			12/07/17 17:30	1
Chloroethane	ND		1.0	0.40	ug/L			12/07/17 17:30	1
Chloroform	ND		0.50	0.25	ug/L			12/07/17 17:30	1
Chloromethane	ND		0.50	0.25	ug/L			12/07/17 17:30	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/07/17 17:30	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/07/17 17:30	1
Dibromochloromethane	ND		0.50	0.25	ug/L			12/07/17 17:30	1
Dibromomethane	ND		0.50	0.25	ug/L			12/07/17 17:30	1
Bromodichloromethane	ND		0.50	0.25	ug/L			12/07/17 17:30	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			12/07/17 17:30	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			12/07/17 17:30	1
Ethylbenzene	ND		0.50	0.25	ug/L			12/07/17 17:30	1
Iodomethane	ND		2.0	1.0	ug/L			12/07/17 17:30	1
Isobutyl alcohol	ND		25	13	ug/L			12/07/17 17:30	1
m,p-Xylene	ND		1.0	0.50	ug/L			12/07/17 17:30	1
Methylacrylonitrile	ND		10	2.5	ug/L			12/07/17 17:30	1
Methyl methacrylate	ND		2.0	1.0	ug/L			12/07/17 17:30	1
Methylene Chloride	ND		2.0	0.88	ug/L			12/07/17 17:30	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			12/07/17 17:30	1
Naphthalene	ND		1.0	0.40	ug/L			12/07/17 17:30	1
o-Xylene	ND		0.50	0.25	ug/L			12/07/17 17:30	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-197764-1

**Client Sample ID: Duplicate**

**Lab Sample ID: 440-197764-8**

**Date Collected: 12/05/17 00:01**

**Matrix: Water**

**Date Received: 12/05/17 17:00**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Propionitrile	ND		20	10	ug/L			12/07/17 17:30	1
Styrene	ND		0.50	0.25	ug/L			12/07/17 17:30	1
t-Butanol	ND		10	5.0	ug/L			12/07/17 17:30	1
Tetrachloroethene	ND		0.50	0.25	ug/L			12/07/17 17:30	1
Tetrahydrofuran	ND		10	5.0	ug/L			12/07/17 17:30	1
Toluene	ND		0.50	0.25	ug/L			12/07/17 17:30	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/07/17 17:30	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/07/17 17:30	1
Trichloroethene	ND		0.50	0.25	ug/L			12/07/17 17:30	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			12/07/17 17:30	1
Vinyl acetate	ND		4.0	2.0	ug/L			12/07/17 17:30	1
Vinyl chloride	ND		0.50	0.25	ug/L			12/07/17 17:30	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			12/07/17 17:30	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			12/07/17 17:30	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			12/07/17 17:30	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	3.0	T J	ug/L		4.66			12/07/17 17:30	1
Unknown	11	T J	ug/L		6.08			12/07/17 17:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	101		80 - 128		12/06/17 14:49	1
4-Bromofluorobenzene (Surr)	94		80 - 120		12/06/17 14:49	1
Toluene-d8 (Surr)	103		80 - 128		12/07/17 17:30	1
4-Bromofluorobenzene (Surr)	111		80 - 120		12/07/17 17:30	1
Dibromofluoromethane (Surr)	114		76 - 132		12/06/17 14:49	1
Dibromofluoromethane (Surr)	109		76 - 132		12/07/17 17:30	1

## Method: 8260B - Volatile Organic Compounds (GC/MS) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			12/08/17 15:52	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	2.6	T J	ug/L		5.75			12/08/17 15:52	1
Unknown	9.6	T J	ug/L		7.26			12/08/17 15:52	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	105		80 - 128		12/08/17 15:52	1
4-Bromofluorobenzene (Surr)	96		80 - 120		12/08/17 15:52	1
Dibromofluoromethane (Surr)	103		76 - 132		12/08/17 15:52	1

## Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.99	0.25	ug/L		12/06/17 07:50	12/08/17 16:49	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	60		30 - 120	12/06/17 07:50	12/08/17 16:49	1

## Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		1.0	0.50	mg/L			12/06/17 01:31	2

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-197764-1

**Client Sample ID: Duplicate**

**Lab Sample ID: 440-197764-8**

Date Collected: 12/05/17 00:01

Matrix: Water

Date Received: 12/05/17 17:00

**Method: 300.0 - Anions, Ion Chromatography (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.22	0.11	mg/L			12/06/17 01:31	2
Chloride	11		1.0	0.50	mg/L			12/06/17 01:31	2
Fluoride	0.64	J	1.0	0.50	mg/L			12/06/17 01:31	2
Sulfate	1000		50	25	mg/L			12/06/17 01:46	100

**Method: 6010B - Metals (ICP) - Total Recoverable**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.64		0.050	0.025	mg/L		12/06/17 11:28	12/06/17 20:45	1
Calcium	83		0.10	0.050	mg/L		12/06/17 11:28	12/06/17 20:45	1
Iron	0.85	B	0.10	0.050	mg/L		12/06/17 11:28	12/06/17 20:45	1
Magnesium	57	B	0.020	0.010	mg/L		12/06/17 11:28	12/06/17 20:45	1
Manganese	0.12		0.020	0.015	mg/L		12/06/17 11:28	12/06/17 20:45	1
Potassium	4.4		0.50	0.25	mg/L		12/06/17 11:28	12/06/17 20:45	1
Sodium	430		0.50	0.26	mg/L		12/06/17 11:28	12/06/17 20:45	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		20	10	mg/L			12/12/17 17:05	1
Total Dissolved Solids	1900		20	10	mg/L			12/07/17 16:08	1
Ammonia (as N)	3.0		0.50	0.10	mg/L		12/08/17 07:45	12/08/17 09:00	1
Total Sulfide	ND		0.050	0.027	mg/L			12/06/17 17:42	1
Total Organic Carbon	1.5		0.10	0.050	mg/L			12/07/17 11:51	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	370		4.0	4.0	mg/L			12/07/17 08:27	1
Bicarbonate Alkalinity as CaCO3	370		4.0	4.0	mg/L			12/07/17 08:27	1
Carbon Dioxide, Free	14		2.0	2.0	mg/L			12/12/17 12:30	1

**Client Sample ID: QCAB**

**Lab Sample ID: 440-197764-9**

Date Collected: 12/05/17 00:01

Matrix: Water

Date Received: 12/05/17 17:00

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			12/07/17 17:58	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/07/17 17:58	1
Acrolein	ND		50	2.5	ug/L			12/06/17 15:18	1
Acrylonitrile	ND		50	1.0	ug/L			12/06/17 15:18	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			12/07/17 17:58	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/07/17 17:58	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			12/07/17 17:58	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			12/07/17 17:58	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			12/07/17 17:58	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			12/07/17 17:58	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			12/07/17 17:58	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			12/07/17 17:58	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			12/07/17 17:58	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			12/07/17 17:58	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			12/07/17 17:58	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			12/07/17 17:58	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			12/07/17 17:58	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-197764-1

**Client Sample ID: QCAB**

**Lab Sample ID: 440-197764-9**

**Date Collected: 12/05/17 00:01**

**Matrix: Water**

**Date Received: 12/05/17 17:00**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			12/07/17 17:58	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			12/07/17 17:58	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			12/07/17 17:58	1
2-Hexanone	ND		5.0	2.5	ug/L			12/07/17 17:58	1
Acetone	ND		20	10	ug/L			12/07/17 17:58	1
Acetonitrile	ND		20	10	ug/L			12/07/17 17:58	1
Acrolein	ND		5.0	2.5	ug/L			12/07/17 17:58	1
Acrylonitrile	ND		2.0	1.0	ug/L			12/07/17 17:58	1
Benzene	ND		0.50	0.25	ug/L			12/07/17 17:58	1
Allyl chloride	ND		1.0	0.50	ug/L			12/07/17 17:58	1
Bromoform	ND		1.0	0.40	ug/L			12/07/17 17:58	1
Bromomethane	ND		0.50	0.25	ug/L			12/07/17 17:58	1
Carbon disulfide	ND		1.0	0.50	ug/L			12/07/17 17:58	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			12/07/17 17:58	1
Chlorobenzene	ND		0.50	0.25	ug/L			12/07/17 17:58	1
Bromochloromethane	ND		0.50	0.25	ug/L			12/07/17 17:58	1
Chloroethane	ND		1.0	0.40	ug/L			12/07/17 17:58	1
Chloroform	ND		0.50	0.25	ug/L			12/07/17 17:58	1
Chloromethane	ND		0.50	0.25	ug/L			12/07/17 17:58	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/07/17 17:58	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/07/17 17:58	1
Dibromochloromethane	ND		0.50	0.25	ug/L			12/07/17 17:58	1
Dibromomethane	ND		0.50	0.25	ug/L			12/07/17 17:58	1
Bromodichloromethane	ND		0.50	0.25	ug/L			12/07/17 17:58	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			12/07/17 17:58	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			12/07/17 17:58	1
Ethylbenzene	ND		0.50	0.25	ug/L			12/07/17 17:58	1
Iodomethane	ND		2.0	1.0	ug/L			12/07/17 17:58	1
Isobutyl alcohol	ND		25	13	ug/L			12/07/17 17:58	1
m,p-Xylene	ND		1.0	0.50	ug/L			12/07/17 17:58	1
Methylacrylonitrile	ND		10	2.5	ug/L			12/07/17 17:58	1
Methyl methacrylate	ND		2.0	1.0	ug/L			12/07/17 17:58	1
Methylene Chloride	ND		2.0	0.88	ug/L			12/07/17 17:58	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			12/07/17 17:58	1
Naphthalene	ND		1.0	0.40	ug/L			12/07/17 17:58	1
o-Xylene	ND		0.50	0.25	ug/L			12/07/17 17:58	1
Propionitrile	ND		20	10	ug/L			12/07/17 17:58	1
Styrene	ND		0.50	0.25	ug/L			12/07/17 17:58	1
t-Butanol	ND		10	5.0	ug/L			12/07/17 17:58	1
Tetrachloroethene	ND		0.50	0.25	ug/L			12/07/17 17:58	1
Tetrahydrofuran	ND		10	5.0	ug/L			12/07/17 17:58	1
Toluene	ND		0.50	0.25	ug/L			12/07/17 17:58	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/07/17 17:58	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/07/17 17:58	1
Trichloroethene	ND		0.50	0.25	ug/L			12/07/17 17:58	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			12/07/17 17:58	1
Vinyl acetate	ND		4.0	2.0	ug/L			12/07/17 17:58	1
Vinyl chloride	ND		0.50	0.25	ug/L			12/07/17 17:58	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			12/07/17 17:58	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-197764-1

**Client Sample ID: QCAB**

**Lab Sample ID: 440-197764-9**

**Date Collected: 12/05/17 00:01**

**Matrix: Water**

**Date Received: 12/05/17 17:00**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Butanone (MEK)	ND		5.0	2.5	ug/L			12/07/17 17:58	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			12/07/17 17:58	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	22	T J	ug/L		1.94			12/07/17 17:58	1
Unknown	2.5	T J	ug/L		3.51			12/07/17 17:58	1
Unknown	12	T J	ug/L		6.08			12/07/17 17:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	105		80 - 128		12/06/17 15:18	1
4-Bromofluorobenzene (Surr)	92		80 - 120		12/06/17 15:18	1
Toluene-d8 (Surr)	103		80 - 128		12/07/17 17:58	1
4-Bromofluorobenzene (Surr)	113		80 - 120		12/07/17 17:58	1
Dibromofluoromethane (Surr)	110		76 - 132		12/06/17 15:18	1
Dibromofluoromethane (Surr)	110		76 - 132		12/07/17 17:58	1

**Method: 8260B - Volatile Organic Compounds (GC/MS) - RA**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			12/08/17 16:18	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	9.4	T J	ug/L		7.26			12/08/17 16:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	103		80 - 128		12/08/17 16:18	1
4-Bromofluorobenzene (Surr)	96		80 - 120		12/08/17 16:18	1
Dibromofluoromethane (Surr)	102		76 - 132		12/08/17 16:18	1

**Client Sample ID: QCTB**

**Lab Sample ID: 440-197764-10**

**Date Collected: 12/05/17 00:01**

**Matrix: Water**

**Date Received: 12/05/17 17:00**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			12/08/17 03:24	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/08/17 03:24	1
Acrolein	ND		50	2.5	ug/L			12/06/17 15:47	1
Acrylonitrile	ND		50	1.0	ug/L			12/06/17 15:47	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			12/08/17 03:24	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/08/17 03:24	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			12/08/17 03:24	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			12/08/17 03:24	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			12/08/17 03:24	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			12/08/17 03:24	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			12/08/17 03:24	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			12/08/17 03:24	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			12/08/17 03:24	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			12/08/17 03:24	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			12/08/17 03:24	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			12/08/17 03:24	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			12/08/17 03:24	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-197764-1

**Client Sample ID: QCTB**  
**Date Collected: 12/05/17 00:01**  
**Date Received: 12/05/17 17:00**

**Lab Sample ID: 440-197764-10**  
**Matrix: Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			12/08/17 03:24	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			12/08/17 03:24	1
2-Hexanone	ND		5.0	2.5	ug/L			12/08/17 03:24	1
Acetone	ND		20	10	ug/L			12/08/17 03:24	1
Acetonitrile	ND		20	10	ug/L			12/08/17 03:24	1
Acrolein	ND		5.0	2.5	ug/L			12/08/17 03:24	1
Acrylonitrile	ND		2.0	1.0	ug/L			12/08/17 03:24	1
Benzene	ND		0.50	0.25	ug/L			12/08/17 03:24	1
Allyl chloride	ND		1.0	0.50	ug/L			12/08/17 03:24	1
Bromoform	ND		1.0	0.40	ug/L			12/08/17 03:24	1
Bromomethane	ND		0.50	0.25	ug/L			12/08/17 03:24	1
Carbon disulfide	ND		1.0	0.50	ug/L			12/08/17 03:24	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			12/08/17 03:24	1
Chlorobenzene	ND		0.50	0.25	ug/L			12/08/17 03:24	1
Bromochloromethane	ND		0.50	0.25	ug/L			12/08/17 03:24	1
Chloroethane	ND		1.0	0.40	ug/L			12/08/17 03:24	1
Chloroform	ND		0.50	0.25	ug/L			12/08/17 03:24	1
Chloromethane	ND		0.50	0.25	ug/L			12/08/17 03:24	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/08/17 03:24	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/08/17 03:24	1
Dibromochloromethane	ND		0.50	0.25	ug/L			12/08/17 03:24	1
Dibromomethane	ND		0.50	0.25	ug/L			12/08/17 03:24	1
Bromodichloromethane	ND		0.50	0.25	ug/L			12/08/17 03:24	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			12/08/17 03:24	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			12/08/17 03:24	1
Ethylbenzene	ND		0.50	0.25	ug/L			12/08/17 03:24	1
Iodomethane	ND		2.0	1.0	ug/L			12/08/17 03:24	1
Isobutyl alcohol	ND		25	13	ug/L			12/08/17 03:24	1
m,p-Xylene	ND		1.0	0.50	ug/L			12/08/17 03:24	1
Methylene Chloride	ND		2.0	0.88	ug/L			12/08/17 03:24	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			12/08/17 03:24	1
Naphthalene	ND		1.0	0.40	ug/L			12/08/17 03:24	1
o-Xylene	ND		0.50	0.25	ug/L			12/08/17 03:24	1
Propionitrile	ND		20	10	ug/L			12/08/17 03:24	1
Styrene	ND		0.50	0.25	ug/L			12/08/17 03:24	1
t-Butanol	ND		10	5.0	ug/L			12/08/17 03:24	1
Tetrachloroethene	ND		0.50	0.25	ug/L			12/08/17 03:24	1
Tetrahydrofuran	ND		10	5.0	ug/L			12/08/17 03:24	1
Toluene	ND		0.50	0.25	ug/L			12/08/17 03:24	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/08/17 03:24	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/08/17 03:24	1
Trichloroethene	ND		0.50	0.25	ug/L			12/08/17 03:24	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			12/08/17 03:24	1
Vinyl acetate	ND		4.0	2.0	ug/L			12/08/17 03:24	1
Vinyl chloride	ND		0.50	0.25	ug/L			12/08/17 03:24	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			12/08/17 03:24	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			12/08/17 03:24	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			12/08/17 03:24	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-197764-1

**Client Sample ID: QCTB**  
**Date Collected: 12/05/17 00:01**  
**Date Received: 12/05/17 17:00**

**Lab Sample ID: 440-197764-10**  
**Matrix: Water**

<i>Tentatively Identified Compound</i>	<i>Est. Result</i>	<i>Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>RT</i>	<i>CAS No.</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Unknown	17	TJ	ug/L		1.93			12/08/17 03:24	1
Unknown	12	TJ	ug/L		6.08			12/08/17 03:24	1
<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Toluene-d8 (Surr)	105		80 - 128					12/06/17 15:47	1
4-Bromofluorobenzene (Surr)	93		80 - 120					12/06/17 15:47	1
Toluene-d8 (Surr)	103		80 - 128					12/08/17 03:24	1
4-Bromofluorobenzene (Surr)	115		80 - 120					12/08/17 03:24	1
Dibromofluoromethane (Surr)	113		76 - 132					12/06/17 15:47	1
Dibromofluoromethane (Surr)	113		76 - 132					12/08/17 03:24	1

**Method: 8260B - Volatile Organic Compounds (GC/MS) - RA**

<i>Analyte</i>	<i>Result</i>	<i>Qualifier</i>	<i>RL</i>	<i>MDL</i>	<i>Unit</i>	<i>D</i>	<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			12/08/17 12:08	1
Methylacrylonitrile	ND		10	2.5	ug/L			12/08/17 12:08	1
Methyl methacrylate	ND		2.0	1.0	ug/L			12/08/17 12:08	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			12/08/17 12:08	1
<i>Surrogate</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>				<i>Prepared</i>	<i>Analyzed</i>	<i>Dil Fac</i>
Toluene-d8 (Surr)	109		80 - 128					12/08/17 12:08	1
4-Bromofluorobenzene (Surr)	97		80 - 120					12/08/17 12:08	1
Dibromofluoromethane (Surr)	95		76 - 132					12/08/17 12:08	1

# Method Summary

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

TestAmerica Job ID: 440-197764-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL IRV
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL IRV
300.0	Anions, Ion Chromatography	MCAWW	TAL IRV
6010B	Metals (ICP)	SW846	TAL IRV
410.4	COD	MCAWW	TAL IRV
SM 2320B	Alkalinity	SM	TAL IRV
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL IRV
SM 4500 CO2 C	Free Carbon Dioxide	SM	TAL IRV
SM 4500 NH3 D	Ammonia	SM	TAL IRV
SM 4500 S2 D	Sulfide, Total	SM	TAL IRV
SM 5310C	TOC	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",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

#### Laboratory References:

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



# Lab Chronicle

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

TestAmerica Job ID: 440-197764-1

**Client Sample ID: DW-1**  
**Date Collected: 12/05/17 09:12**  
**Date Received: 12/05/17 17:00**

**Lab Sample ID: 440-197764-1**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	445442	12/07/17 14:15	RM	TAL IRV
Total/NA	Analysis	8260B	RA	1	10 mL	10 mL	445660	12/08/17 12:54	RM	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	445200	12/06/17 09:28	RM	TAL IRV
Total/NA	Prep	3520C			1030 mL	1.0 mL	445222	12/06/17 07:50	JS1	TAL IRV
Total/NA	Analysis	8270C		1			445710	12/08/17 14:16	AI	TAL IRV
Total/NA	Analysis	300.0		5	5 mL	1.0 mL	445016	12/05/17 20:21	NTN	TAL IRV
Total/NA	Analysis	300.0		5	5 mL	1.0 mL	445017	12/05/17 20:21	NTN	TAL IRV
Total/NA	Analysis	300.0		200			445017	12/05/17 20:37	NTN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	445273	12/06/17 11:28	Q1N	TAL IRV
Total Recoverable	Analysis	6010B		1			445458	12/06/17 20:26	VS	TAL IRV
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	446330	12/12/17 17:05	KYP	TAL IRV
Total/NA	Analysis	SM 2320B		1			445505	12/07/17 06:59	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	20 mL	100 mL	445500	12/07/17 16:08	XL	TAL IRV
Total/NA	Analysis	SM 4500 CO2 C		1	25 mL	25 mL	446298	12/12/17 12:30	XL	TAL IRV
Total/NA	Prep	SM 4500 NH3 B			50 mL	50 mL	445958	12/11/17 03:30	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			445959	12/11/17 04:30	YZ	TAL IRV
Total/NA	Analysis	SM 4500 S2 D		2	7.5 mL	7.5 mL	445369	12/06/17 17:42	KMY	TAL IRV
Total/NA	Analysis	SM 5310C		1	100 mL	100 mL	445633	12/07/17 09:12	YZ	TAL IRV

**Client Sample ID: DW-2**  
**Date Collected: 12/05/17 10:26**  
**Date Received: 12/05/17 17:00**

**Lab Sample ID: 440-197764-2**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	445442	12/07/17 14:43	RM	TAL IRV
Total/NA	Analysis	8260B	RA	1	10 mL	10 mL	445660	12/08/17 13:20	RM	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	445211	12/06/17 10:51	RM	TAL IRV
Total/NA	Prep	3520C			985 mL	1.0 mL	445222	12/06/17 07:50	JS1	TAL IRV
Total/NA	Analysis	8270C		1			445710	12/08/17 14:38	AI	TAL IRV
Total/NA	Analysis	300.0		2	5 mL	1.0 mL	445016	12/05/17 20:52	NTN	TAL IRV
Total/NA	Analysis	300.0		2	5 mL	1.0 mL	445017	12/05/17 20:52	NTN	TAL IRV
Total/NA	Analysis	300.0		100			445017	12/05/17 21:07	NTN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	445273	12/06/17 11:28	Q1N	TAL IRV
Total Recoverable	Analysis	6010B		1			445458	12/06/17 20:35	VS	TAL IRV
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	446330	12/12/17 17:05	KYP	TAL IRV
Total/NA	Analysis	SM 2320B		1			445505	12/07/17 07:09	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	445500	12/07/17 16:08	XL	TAL IRV
Total/NA	Analysis	SM 4500 CO2 C		1	25 mL	25 mL	446298	12/12/17 12:30	XL	TAL IRV
Total/NA	Prep	SM 4500 NH3 B			50 mL	50 mL	445664	12/08/17 07:45	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			445672	12/08/17 09:00	YZ	TAL IRV
Total/NA	Analysis	SM 4500 S2 D		3	7.5 mL	7.5 mL	445369	12/06/17 17:42	KMY	TAL IRV

TestAmerica Irvine

# Lab Chronicle

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

TestAmerica Job ID: 440-197764-1

**Client Sample ID: DW-2**

**Lab Sample ID: 440-197764-2**

**Date Collected: 12/05/17 10:26**

**Matrix: Water**

**Date Received: 12/05/17 17:00**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 5310C		1	100 mL	100 mL	445633	12/07/17 09:24	YZ	TAL IRV

**Client Sample ID: DW-3**

**Lab Sample ID: 440-197764-3**

**Date Collected: 12/05/17 12:50**

**Matrix: Water**

**Date Received: 12/05/17 17:00**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	445442	12/07/17 15:11	RM	TAL IRV
Total/NA	Analysis	8260B	RA	1	10 mL	10 mL	445660	12/08/17 13:45	RM	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	445211	12/06/17 12:20	RM	TAL IRV
Total/NA	Prep	3520C			1005 mL	1.0 mL	445222	12/06/17 07:50	JS1	TAL IRV
Total/NA	Analysis	8270C		1			445710	12/08/17 15:00	AI	TAL IRV
Total/NA	Analysis	300.0		1			445016	12/05/17 22:00	NTN	TAL IRV
Total/NA	Analysis	300.0		1			445017	12/05/17 22:00	NTN	TAL IRV
Total/NA	Analysis	300.0		50			445017	12/05/17 22:15	NTN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	445273	12/06/17 11:28	Q1N	TAL IRV
Total Recoverable	Analysis	6010B		1			445458	12/06/17 20:37	VS	TAL IRV
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	446330	12/12/17 17:05	KYP	TAL IRV
Total/NA	Analysis	SM 2320B		1			445505	12/07/17 07:17	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	445500	12/07/17 16:08	XL	TAL IRV
Total/NA	Analysis	SM 4500 CO2 C		1	25 mL	25 mL	446298	12/12/17 12:30	XL	TAL IRV
Total/NA	Prep	SM 4500 NH3 B			50 mL	50 mL	445958	12/11/17 03:30	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			445959	12/11/17 04:30	YZ	TAL IRV
Total/NA	Analysis	SM 4500 S2 D		1	7.5 mL	7.5 mL	445369	12/06/17 17:42	KMY	TAL IRV
Total/NA	Analysis	SM 5310C		1	100 mL	100 mL	445633	12/07/17 10:40	YZ	TAL IRV

**Client Sample ID: MW-9**

**Lab Sample ID: 440-197764-4**

**Date Collected: 12/05/17 12:10**

**Matrix: Water**

**Date Received: 12/05/17 17:00**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	445442	12/07/17 15:38	RM	TAL IRV
Total/NA	Analysis	8260B	RA	1	10 mL	10 mL	445660	12/08/17 14:10	RM	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	445211	12/06/17 12:50	RM	TAL IRV
Total/NA	Prep	3520C			970 mL	1.0 mL	445222	12/06/17 07:50	JS1	TAL IRV
Total/NA	Analysis	8270C		1			445710	12/08/17 15:22	AI	TAL IRV
Total/NA	Analysis	300.0		10			445016	12/05/17 22:30	NTN	TAL IRV
Total/NA	Analysis	300.0		10			445017	12/05/17 22:30	NTN	TAL IRV
Total/NA	Analysis	300.0		200			445017	12/05/17 22:45	NTN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	445489	12/07/17 10:19	Q1N	TAL IRV
Total Recoverable	Analysis	6010B		1			445800	12/08/17 14:08	K1E	TAL IRV

TestAmerica Irvine

# Lab Chronicle

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

TestAmerica Job ID: 440-197764-1

**Client Sample ID: MW-9**

**Lab Sample ID: 440-197764-4**

**Date Collected: 12/05/17 12:10**

**Matrix: Water**

**Date Received: 12/05/17 17:00**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	446330	12/12/17 17:05	KYP	TAL IRV
Total/NA	Analysis	SM 2320B		1			445505	12/07/17 07:37	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	446195	12/12/17 07:59	XL	TAL IRV
Total/NA	Analysis	SM 4500 CO2 C		1	25 mL	25 mL	446298	12/12/17 12:30	XL	TAL IRV
Total/NA	Prep	SM 4500 NH3 B			10 mL	50 mL	445958	12/11/17 03:30	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			445959	12/11/17 04:30	YZ	TAL IRV
Total/NA	Analysis	SM 4500 S2 D		1	7.5 mL	7.5 mL	445369	12/06/17 17:42	KMY	TAL IRV
Total/NA	Analysis	SM 5310C		10	100 mL	100 mL	445633	12/07/17 10:56	YZ	TAL IRV

**Client Sample ID: MW-13R**

**Lab Sample ID: 440-197764-5**

**Date Collected: 12/05/17 13:30**

**Matrix: Water**

**Date Received: 12/05/17 17:00**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	445442	12/07/17 16:06	RM	TAL IRV
Total/NA	Analysis	8260B	RA	1	10 mL	10 mL	445660	12/08/17 14:36	RM	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	445211	12/06/17 13:19	RM	TAL IRV
Total/NA	Prep	3520C			1020 mL	1.0 mL	445222	12/06/17 07:50	JS1	TAL IRV
Total/NA	Analysis	8270C		1			445710	12/08/17 15:44	AI	TAL IRV
Total/NA	Analysis	300.0		2			445016	12/05/17 23:00	NTN	TAL IRV
Total/NA	Analysis	300.0		2			445017	12/05/17 23:00	NTN	TAL IRV
Total/NA	Analysis	300.0		100			445017	12/05/17 23:15	NTN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	445273	12/06/17 11:28	Q1N	TAL IRV
Total Recoverable	Analysis	6010B		1			445458	12/06/17 20:39	VS	TAL IRV
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	446330	12/12/17 17:05	KYP	TAL IRV
Total/NA	Analysis	SM 2320B		1			445505	12/07/17 07:55	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	445500	12/07/17 16:08	XL	TAL IRV
Total/NA	Analysis	SM 4500 CO2 C		1	25 mL	25 mL	446298	12/12/17 12:30	XL	TAL IRV
Total/NA	Prep	SM 4500 NH3 B			10 mL	50 mL	445958	12/11/17 03:30	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			445959	12/11/17 04:30	YZ	TAL IRV
Total/NA	Analysis	SM 4500 S2 D		200	7.5 mL	7.5 mL	445369	12/06/17 17:42	KMY	TAL IRV
Total/NA	Analysis	SM 5310C		5	100 mL	100 mL	445633	12/07/17 11:11	YZ	TAL IRV

**Client Sample ID: MW-6**

**Lab Sample ID: 440-197764-6**

**Date Collected: 12/05/17 09:45**

**Matrix: Water**

**Date Received: 12/05/17 17:00**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	445442	12/07/17 16:35	RM	TAL IRV
Total/NA	Analysis	8260B	RA	1	10 mL	10 mL	445660	12/08/17 15:01	RM	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	445211	12/06/17 13:49	RM	TAL IRV

TestAmerica Irvine

# Lab Chronicle

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

TestAmerica Job ID: 440-197764-1

**Client Sample ID: MW-6**  
**Date Collected: 12/05/17 09:45**  
**Date Received: 12/05/17 17:00**

**Lab Sample ID: 440-197764-6**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			945 mL	1.0 mL	445222	12/06/17 07:50	JS1	TAL IRV
Total/NA	Analysis	8270C		1			445710	12/08/17 16:06	AI	TAL IRV
Total/NA	Analysis	300.0		2			445016	12/05/17 23:31	NTN	TAL IRV
Total/NA	Analysis	300.0		2			445017	12/05/17 23:31	NTN	TAL IRV
Total/NA	Analysis	300.0		100			445017	12/06/17 00:16	NTN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	445273	12/06/17 11:28	Q1N	TAL IRV
Total Recoverable	Analysis	6010B		1			445458	12/06/17 20:41	VS	TAL IRV
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	446330	12/12/17 17:05	KYP	TAL IRV
Total/NA	Analysis	SM 2320B		1			445505	12/07/17 08:05	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	445500	12/07/17 16:08	XL	TAL IRV
Total/NA	Analysis	SM 4500 CO2 C		1	25 mL	25 mL	446298	12/12/17 12:30	XL	TAL IRV
Total/NA	Prep	SM 4500 NH3 B			50 mL	50 mL	445664	12/08/17 07:45	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			445672	12/08/17 09:00	YZ	TAL IRV
Total/NA	Analysis	SM 4500 S2 D		20	7.5 mL	7.5 mL	445369	12/06/17 17:42	KMY	TAL IRV
Total/NA	Analysis	SM 5310C		5	100 mL	100 mL	445633	12/07/17 11:23	YZ	TAL IRV

**Client Sample ID: MW-14**  
**Date Collected: 12/05/17 07:55**  
**Date Received: 12/05/17 17:00**

**Lab Sample ID: 440-197764-7**  
**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	445442	12/07/17 17:03	RM	TAL IRV
Total/NA	Analysis	8260B	RA	1	10 mL	10 mL	445660	12/08/17 15:27	RM	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	445211	12/06/17 14:19	RM	TAL IRV
Total/NA	Prep	3520C			1020 mL	1.0 mL	445222	12/06/17 07:50	JS1	TAL IRV
Total/NA	Analysis	8270C		1			445710	12/08/17 16:28	AI	TAL IRV
Total/NA	Analysis	300.0		5	5 mL	1.0 mL	445016	12/06/17 01:01	NTN	TAL IRV
Total/NA	Analysis	300.0		5	5 mL	1.0 mL	445017	12/06/17 01:01	NTN	TAL IRV
Total/NA	Analysis	300.0		200			445017	12/06/17 01:16	NTN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	445273	12/06/17 11:28	Q1N	TAL IRV
Total Recoverable	Analysis	6010B		1			445458	12/06/17 20:43	VS	TAL IRV
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	446330	12/12/17 17:05	KYP	TAL IRV
Total/NA	Analysis	SM 2320B		1			445505	12/07/17 08:17	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	20 mL	100 mL	446195	12/12/17 07:59	XL	TAL IRV
Total/NA	Analysis	SM 4500 CO2 C		1	25 mL	25 mL	446298	12/12/17 12:30	XL	TAL IRV
Total/NA	Prep	SM 4500 NH3 B			50 mL	50 mL	445664	12/08/17 07:45	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			445672	12/08/17 09:00	YZ	TAL IRV
Total/NA	Analysis	SM 4500 S2 D		1	7.5 mL	7.5 mL	445369	12/06/17 17:42	KMY	TAL IRV
Total/NA	Analysis	SM 5310C		1	100 mL	100 mL	445633	12/07/17 11:39	YZ	TAL IRV

TestAmerica Irvine

# Lab Chronicle

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

TestAmerica Job ID: 440-197764-1

## Client Sample ID: Duplicate

Date Collected: 12/05/17 00:01

Date Received: 12/05/17 17:00

## Lab Sample ID: 440-197764-8

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	445442	12/07/17 17:30	RM	TAL IRV
Total/NA	Analysis	8260B	RA	1	10 mL	10 mL	445660	12/08/17 15:52	RM	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	445211	12/06/17 14:49	RM	TAL IRV
Total/NA	Prep	3520C			1010 mL	1.0 mL	445222	12/06/17 07:50	JS1	TAL IRV
Total/NA	Analysis	8270C		1			445710	12/08/17 16:49	AI	TAL IRV
Total/NA	Analysis	300.0		2			445016	12/06/17 01:31	NTN	TAL IRV
Total/NA	Analysis	300.0		2			445017	12/06/17 01:31	NTN	TAL IRV
Total/NA	Analysis	300.0		100			445017	12/06/17 01:46	NTN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	445273	12/06/17 11:28	Q1N	TAL IRV
Total Recoverable	Analysis	6010B		1			445458	12/06/17 20:45	VS	TAL IRV
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	446330	12/12/17 17:05	KYP	TAL IRV
Total/NA	Analysis	SM 2320B		1			445505	12/07/17 08:27	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	445500	12/07/17 16:08	XL	TAL IRV
Total/NA	Analysis	SM 4500 CO2 C		1	25 mL	25 mL	446298	12/12/17 12:30	XL	TAL IRV
Total/NA	Prep	SM 4500 NH3 B			50 mL	50 mL	445664	12/08/17 07:45	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			445672	12/08/17 09:00	YZ	TAL IRV
Total/NA	Analysis	SM 4500 S2 D		1	7.5 mL	7.5 mL	445369	12/06/17 17:42	KMY	TAL IRV
Total/NA	Analysis	SM 5310C		1	100 mL	100 mL	445633	12/07/17 11:51	YZ	TAL IRV

## Client Sample ID: QCAB

Date Collected: 12/05/17 00:01

Date Received: 12/05/17 17:00

## Lab Sample ID: 440-197764-9

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	445442	12/07/17 17:58	RM	TAL IRV
Total/NA	Analysis	8260B	RA	1	10 mL	10 mL	445660	12/08/17 16:18	RM	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	445211	12/06/17 15:18	RM	TAL IRV

## Client Sample ID: QCTB

Date Collected: 12/05/17 00:01

Date Received: 12/05/17 17:00

## Lab Sample ID: 440-197764-10

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	445596	12/08/17 03:24	OH1	TAL IRV
Total/NA	Analysis	8260B	RA	1	10 mL	10 mL	445658	12/08/17 12:08	RM	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	445211	12/06/17 15:47	RM	TAL IRV

### Laboratory References:

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

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-197764-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 440-445200/4**

**Matrix: Water**

**Analysis Batch: 445200**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acrolein	ND		50	2.5	ug/L			12/06/17 08:08	1
Acrylonitrile	ND		50	1.0	ug/L			12/06/17 08:08	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	110		80 - 128		12/06/17 08:08	1
4-Bromofluorobenzene (Surr)	99		80 - 120		12/06/17 08:08	1
Dibromofluoromethane (Surr)	93		76 - 132		12/06/17 08:08	1

**Lab Sample ID: LCS 440-445200/5**

**Matrix: Water**

**Analysis Batch: 445200**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acrolein	25.0	24.5	J	ug/L		98	10 - 145
Acrylonitrile	250	321		ug/L		128	48 - 140

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	107		80 - 128
4-Bromofluorobenzene (Surr)	96		80 - 120
Dibromofluoromethane (Surr)	93		76 - 132

**Lab Sample ID: 440-197764-1 MS**

**Matrix: Water**

**Analysis Batch: 445200**

**Client Sample ID: DW-1**

**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acrolein	ND		25.0	26.5	J	ug/L		106	10 - 147
Acrylonitrile	ND	F1	250	365	F1	ug/L		146	38 - 144

Surrogate	MS %Recovery	MS Qualifier	Limits
Toluene-d8 (Surr)	107		80 - 128
4-Bromofluorobenzene (Surr)	98		80 - 120
Dibromofluoromethane (Surr)	92		76 - 132

**Lab Sample ID: 440-197764-1 MSD**

**Matrix: Water**

**Analysis Batch: 445200**

**Client Sample ID: DW-1**

**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acrolein	ND		25.0	23.0	J	ug/L		92	10 - 147	14	40
Acrylonitrile	ND	F1	250	326		ug/L		130	38 - 144	11	40

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Toluene-d8 (Surr)	106		80 - 128
4-Bromofluorobenzene (Surr)	99		80 - 120
Dibromofluoromethane (Surr)	95		76 - 132

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-197764-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 440-445211/3**  
**Matrix: Water**  
**Analysis Batch: 445211**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acrolein	ND		50	2.5	ug/L			12/06/17 08:06	1
Acrylonitrile	ND		50	1.0	ug/L			12/06/17 08:06	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	102		80 - 128		12/06/17 08:06	1
4-Bromofluorobenzene (Surr)	93		80 - 120		12/06/17 08:06	1
Dibromofluoromethane (Surr)	114		76 - 132		12/06/17 08:06	1

**Lab Sample ID: LCS 440-445211/7**  
**Matrix: Water**  
**Analysis Batch: 445211**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acrolein	25.0	22.0	J	ug/L		88	10 - 145
Acrylonitrile	250	288		ug/L		115	48 - 140

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	97		80 - 128
4-Bromofluorobenzene (Surr)	91		80 - 120
Dibromofluoromethane (Surr)	114		76 - 132

**Lab Sample ID: 440-197764-2 MS**  
**Matrix: Water**  
**Analysis Batch: 445211**

**Client Sample ID: DW-2**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acrolein	ND		25.0	19.8	J	ug/L		79	10 - 147
Acrylonitrile	ND		250	281		ug/L		112	38 - 144

Surrogate	MS %Recovery	MS Qualifier	Limits
Toluene-d8 (Surr)	100		80 - 128
4-Bromofluorobenzene (Surr)	92		80 - 120
Dibromofluoromethane (Surr)	116		76 - 132

**Lab Sample ID: 440-197764-2 MSD**  
**Matrix: Water**  
**Analysis Batch: 445211**

**Client Sample ID: DW-2**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acrolein	ND		25.0	20.7	J	ug/L		83	10 - 147	4	40
Acrylonitrile	ND		250	260		ug/L		104	38 - 144	8	40

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Toluene-d8 (Surr)	102		80 - 128
4-Bromofluorobenzene (Surr)	91		80 - 120
Dibromofluoromethane (Surr)	113		76 - 132

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-197764-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 440-445442/4**  
**Matrix: Water**  
**Analysis Batch: 445442**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			12/07/17 08:41	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/07/17 08:41	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			12/07/17 08:41	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/07/17 08:41	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			12/07/17 08:41	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			12/07/17 08:41	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			12/07/17 08:41	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			12/07/17 08:41	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			12/07/17 08:41	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			12/07/17 08:41	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			12/07/17 08:41	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			12/07/17 08:41	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			12/07/17 08:41	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			12/07/17 08:41	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			12/07/17 08:41	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			12/07/17 08:41	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			12/07/17 08:41	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			12/07/17 08:41	1
2-Hexanone	ND		5.0	2.5	ug/L			12/07/17 08:41	1
Acetone	ND		20	10	ug/L			12/07/17 08:41	1
Acetonitrile	ND		20	10	ug/L			12/07/17 08:41	1
Acrolein	ND		5.0	2.5	ug/L			12/07/17 08:41	1
Acrylonitrile	ND		2.0	1.0	ug/L			12/07/17 08:41	1
Benzene	ND		0.50	0.25	ug/L			12/07/17 08:41	1
Allyl chloride	ND		1.0	0.50	ug/L			12/07/17 08:41	1
Bromoform	ND		1.0	0.40	ug/L			12/07/17 08:41	1
Bromomethane	ND		0.50	0.25	ug/L			12/07/17 08:41	1
Carbon disulfide	ND		1.0	0.50	ug/L			12/07/17 08:41	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			12/07/17 08:41	1
Chlorobenzene	ND		0.50	0.25	ug/L			12/07/17 08:41	1
Bromochloromethane	ND		0.50	0.25	ug/L			12/07/17 08:41	1
Chloroethane	ND		1.0	0.40	ug/L			12/07/17 08:41	1
Chloroform	ND		0.50	0.25	ug/L			12/07/17 08:41	1
Chloromethane	ND		0.50	0.25	ug/L			12/07/17 08:41	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/07/17 08:41	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/07/17 08:41	1
Dibromochloromethane	ND		0.50	0.25	ug/L			12/07/17 08:41	1
Dibromomethane	ND		0.50	0.25	ug/L			12/07/17 08:41	1
Bromodichloromethane	ND		0.50	0.25	ug/L			12/07/17 08:41	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			12/07/17 08:41	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			12/07/17 08:41	1
Ethylbenzene	ND		0.50	0.25	ug/L			12/07/17 08:41	1
Iodomethane	ND		2.0	1.0	ug/L			12/07/17 08:41	1
Isobutyl alcohol	ND		25	13	ug/L			12/07/17 08:41	1
m,p-Xylene	ND		1.0	0.50	ug/L			12/07/17 08:41	1
Methylacrylonitrile	ND		10	2.5	ug/L			12/07/17 08:41	1
Methyl methacrylate	ND		2.0	1.0	ug/L			12/07/17 08:41	1
Methylene Chloride	ND		2.0	0.88	ug/L			12/07/17 08:41	1

TestAmerica Irvine



# QC Sample Results

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

TestAmerica Job ID: 440-197764-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 440-445442/4**  
**Matrix: Water**  
**Analysis Batch: 445442**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			12/07/17 08:41	1
Naphthalene	ND		1.0	0.40	ug/L			12/07/17 08:41	1
o-Xylene	ND		0.50	0.25	ug/L			12/07/17 08:41	1
Propionitrile	ND		20	10	ug/L			12/07/17 08:41	1
Styrene	ND		0.50	0.25	ug/L			12/07/17 08:41	1
t-Butanol	ND		10	5.0	ug/L			12/07/17 08:41	1
Tetrachloroethene	ND		0.50	0.25	ug/L			12/07/17 08:41	1
Tetrahydrofuran	ND		10	5.0	ug/L			12/07/17 08:41	1
Toluene	ND		0.50	0.25	ug/L			12/07/17 08:41	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/07/17 08:41	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/07/17 08:41	1
Trichloroethene	ND		0.50	0.25	ug/L			12/07/17 08:41	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			12/07/17 08:41	1
Vinyl acetate	ND		4.0	2.0	ug/L			12/07/17 08:41	1
Vinyl chloride	ND		0.50	0.25	ug/L			12/07/17 08:41	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			12/07/17 08:41	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			12/07/17 08:41	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			12/07/17 08:41	1

Tentatively Identified Compound	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L					12/07/17 08:41	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	106		80 - 128		12/07/17 08:41	1
4-Bromofluorobenzene (Surr)	109		80 - 120		12/07/17 08:41	1
Dibromofluoromethane (Surr)	105		76 - 132		12/07/17 08:41	1

**Lab Sample ID: LCS 440-445442/5**  
**Matrix: Water**  
**Analysis Batch: 445442**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,3-Trichloropropane	25.0	28.9		ug/L		116	63 - 130
1,1,1,2-Tetrachloroethane	25.0	28.3		ug/L		113	60 - 141
1,1,1-Trichloroethane	25.0	27.9		ug/L		112	70 - 130
1,1,2,2-Tetrachloroethane	25.0	27.5		ug/L		110	63 - 130
1,1,2-Trichloroethane	25.0	27.4		ug/L		110	70 - 130
1,1-Dichloroethane	25.0	27.1		ug/L		109	64 - 130
1,1-Dichloroethene	25.0	26.5		ug/L		106	70 - 130
1,1-Dichloropropene	25.0	27.5		ug/L		110	70 - 130
1,2,4-Trichlorobenzene	25.0	22.2		ug/L		89	60 - 140
1,2-Dibromo-3-Chloropropane	25.0	23.3		ug/L		93	52 - 140
1,2-Dichlorobenzene	25.0	25.3		ug/L		101	70 - 130
1,2-Dichloroethane	25.0	28.4		ug/L		114	57 - 138
1,2-Dichloropropane	25.0	27.4		ug/L		110	67 - 130
1,3-Dichlorobenzene	25.0	25.2		ug/L		101	70 - 130
1,3-Dichloropropane	25.0	26.4		ug/L		106	70 - 130

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-197764-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 440-445442/5

Matrix: Water

Analysis Batch: 445442

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dichlorobenzene	25.0	24.9		ug/L		100	70 - 130
2,2-Dichloropropane	25.0	28.2		ug/L		113	68 - 141
2-Hexanone	25.0	29.0		ug/L		116	10 - 150
Acetone	25.0	27.6		ug/L		110	10 - 150
Acrolein	25.0	27.6		ug/L		110	10 - 145
Acrylonitrile	25.0	291		ug/L		117	48 - 140
Benzene	25.0	26.1		ug/L		105	68 - 130
Bromoform	25.0	22.0		ug/L		88	60 - 148
Bromomethane	25.0	29.4		ug/L		118	64 - 139
Carbon disulfide	25.0	25.5		ug/L		102	52 - 136
Carbon tetrachloride	25.0	28.5		ug/L		114	60 - 150
Chlorobenzene	25.0	25.1		ug/L		100	70 - 130
Bromochloromethane	25.0	26.7		ug/L		107	70 - 130
Chloroethane	25.0	27.6		ug/L		111	64 - 135
Chloroform	25.0	27.2		ug/L		109	70 - 130
Chloromethane	25.0	31.1		ug/L		124	47 - 140
cis-1,2-Dichloroethene	25.0	27.1		ug/L		108	70 - 133
cis-1,3-Dichloropropene	25.0	25.2		ug/L		101	70 - 133
Dibromochloromethane	25.0	25.8		ug/L		103	69 - 145
Dibromomethane	25.0	29.6		ug/L		118	70 - 130
Bromodichloromethane	25.0	28.5		ug/L		114	70 - 132
Dichlorodifluoromethane	25.0	31.5		ug/L		126	29 - 150
Ethylbenzene	25.0	25.1		ug/L		101	70 - 130
m,p-Xylene	25.0	25.8		ug/L		103	70 - 130
Methylene Chloride	25.0	25.6		ug/L		102	52 - 130
Methyl tert-butyl ether	25.0	29.3		ug/L		117	63 - 131
Naphthalene	25.0	22.3		ug/L		89	60 - 140
o-Xylene	25.0	24.9		ug/L		100	70 - 130
Styrene	25.0	25.9		ug/L		104	70 - 134
t-Butanol	25.0	280		ug/L		112	70 - 130
Tetrachloroethene	25.0	25.1		ug/L		101	70 - 130
Toluene	25.0	24.0		ug/L		96	70 - 130
trans-1,2-Dichloroethene	25.0	27.7		ug/L		111	70 - 130
trans-1,3-Dichloropropene	25.0	26.3		ug/L		105	70 - 132
Trichloroethene	25.0	27.4		ug/L		110	70 - 130
Trichlorofluoromethane	25.0	28.0		ug/L		112	60 - 150
Vinyl acetate	25.0	32.8		ug/L		131	48 - 140
Vinyl chloride	25.0	29.0		ug/L		116	59 - 133
1,2-Dibromoethane (EDB)	25.0	27.3		ug/L		109	70 - 130
2-Butanone (MEK)	25.0	28.9		ug/L		116	44 - 150
4-Methyl-2-pentanone (MIBK)	25.0	29.8		ug/L		119	59 - 149

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	101		80 - 128
4-Bromofluorobenzene (Surr)	109		80 - 120
Dibromofluoromethane (Surr)	109		76 - 132

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-197764-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-197881-A-2 MS  
Matrix: Water  
Analysis Batch: 445442

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
1,2,3-Trichloropropane	ND		5000	6140		ug/L		123	60 - 130
1,1,1,2-Tetrachloroethane	ND		5000	5920		ug/L		118	60 - 149
1,1,1-Trichloroethane	ND		5000	5670		ug/L		113	70 - 130
1,1,2,2-Tetrachloroethane	ND		5000	5790		ug/L		116	63 - 130
1,1,2-Trichloroethane	ND		5000	5580		ug/L		112	70 - 130
1,1-Dichloroethane	ND		5000	5410		ug/L		108	65 - 130
1,1-Dichloroethene	ND		5000	5400		ug/L		108	70 - 130
1,1-Dichloropropene	ND		5000	5700		ug/L		114	64 - 130
1,2,4-Trichlorobenzene	ND		5000	4560		ug/L		91	60 - 140
1,2-Dibromo-3-Chloropropane	ND		5000	5070		ug/L		101	48 - 140
1,2-Dichlorobenzene	ND		5000	5210		ug/L		104	70 - 130
1,2-Dichloroethane	ND		5000	5680		ug/L		114	56 - 146
1,2-Dichloropropane	ND		5000	5520		ug/L		110	69 - 130
1,3-Dichlorobenzene	ND		5000	5220		ug/L		104	70 - 130
1,3-Dichloropropane	ND		5000	5440		ug/L		109	70 - 130
1,4-Dichlorobenzene	ND		5000	5060		ug/L		101	70 - 130
2,2-Dichloropropane	ND		5000	5720		ug/L		114	69 - 138
2-Hexanone	ND		5000	6090		ug/L		122	10 - 150
Acetone	ND		5000	5890		ug/L		118	10 - 150
Acrolein	ND		5000	5980		ug/L		120	10 - 147
Acrylonitrile	ND		50000	61300		ug/L		123	38 - 144
Benzene	ND		5000	5360		ug/L		107	66 - 130
Bromoform	ND		5000	4980		ug/L		100	59 - 150
Bromomethane	ND		5000	6060		ug/L		121	62 - 131
Carbon disulfide	ND		5000	5250		ug/L		105	49 - 140
Carbon tetrachloride	ND		5000	5860		ug/L		117	60 - 150
Chlorobenzene	6000		5000	10800		ug/L		96	70 - 130
Bromochloromethane	ND		5000	5470		ug/L		109	70 - 130
Chloroethane	ND		5000	5690		ug/L		114	68 - 130
Chloroform	500		5000	6100		ug/L		112	70 - 130
Chloromethane	ND		5000	6120		ug/L		122	39 - 144
cis-1,2-Dichloroethene	ND		5000	5460		ug/L		109	70 - 130
cis-1,3-Dichloropropene	ND		5000	5380		ug/L		108	70 - 133
Dibromochloromethane	ND		5000	5510		ug/L		110	70 - 148
Dibromomethane	ND		5000	5940		ug/L		119	70 - 130
Bromodichloromethane	ND		5000	5670		ug/L		113	70 - 138
Dichlorodifluoromethane	ND		5000	6350		ug/L		127	25 - 142
Ethylbenzene	ND		5000	5200		ug/L		104	70 - 130
m,p-Xylene	ND		5000	5410		ug/L		108	70 - 133
Methylene Chloride	ND		5000	5160		ug/L		103	52 - 130
Methyl tert-butyl ether	ND		5000	5690		ug/L		114	70 - 130
Naphthalene	ND		5000	4640		ug/L		93	60 - 140
o-Xylene	ND		5000	5120		ug/L		102	70 - 133
Styrene	ND		5000	5300		ug/L		106	29 - 150
t-Butanol	ND		50000	56600		ug/L		113	70 - 130
Tetrachloroethene	55	J	5000	5290		ug/L		105	70 - 137
Toluene	ND		5000	4940		ug/L		99	70 - 130
trans-1,2-Dichloroethene	ND		5000	5720		ug/L		114	70 - 130

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-197764-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 440-197881-A-2 MS**

**Matrix: Water**

**Analysis Batch: 445442**

**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
trans-1,3-Dichloropropene	ND		5000	5350		ug/L		107	70 - 138
Trichloroethene	ND		5000	5470		ug/L		109	70 - 130
Trichlorofluoromethane	ND		5000	5770		ug/L		115	60 - 150
Vinyl acetate	ND		5000	6560		ug/L		131	23 - 150
Vinyl chloride	ND		5000	6050		ug/L		121	50 - 137
1,2-Dibromoethane (EDB)	ND		5000	5640		ug/L		113	70 - 131
2-Butanone (MEK)	ND		5000	5650		ug/L		113	48 - 140
4-Methyl-2-pentanone (MIBK)	ND		5000	6340		ug/L		127	52 - 150

Surrogate	MS %Recovery	MS Qualifier	MS Limits
Toluene-d8 (Surr)	101		80 - 128
4-Bromofluorobenzene (Surr)	110		80 - 120
Dibromofluoromethane (Surr)	107		76 - 132

**Lab Sample ID: 440-197881-A-2 MSD**

**Matrix: Water**

**Analysis Batch: 445442**

**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
1,2,3-Trichloropropane	ND		5000	6140		ug/L		123	60 - 130	0	30
1,1,1,2-Tetrachloroethane	ND		5000	6100		ug/L		122	60 - 149	3	20
1,1,1-Trichloroethane	ND		5000	5880		ug/L		118	70 - 130	4	20
1,1,2,2-Tetrachloroethane	ND		5000	5730		ug/L		115	63 - 130	1	30
1,1,2-Trichloroethane	ND		5000	5590		ug/L		112	70 - 130	0	25
1,1-Dichloroethane	ND		5000	5630		ug/L		113	65 - 130	4	20
1,1-Dichloroethene	ND		5000	5520		ug/L		110	70 - 130	2	20
1,1-Dichloropropene	ND		5000	6010		ug/L		120	64 - 130	5	20
1,2,4-Trichlorobenzene	ND		5000	4770		ug/L		95	60 - 140	4	20
1,2-Dibromo-3-Chloropropane	ND		5000	4950		ug/L		99	48 - 140	2	30
1,2-Dichlorobenzene	ND		5000	5440		ug/L		109	70 - 130	4	20
1,2-Dichloroethane	ND		5000	5800		ug/L		116	56 - 146	2	20
1,2-Dichloropropane	ND		5000	5680		ug/L		114	69 - 130	3	20
1,3-Dichlorobenzene	ND		5000	5450		ug/L		109	70 - 130	4	20
1,3-Dichloropropane	ND		5000	5450		ug/L		109	70 - 130	0	25
1,4-Dichlorobenzene	ND		5000	5300		ug/L		106	70 - 130	5	20
2,2-Dichloropropane	ND		5000	6070		ug/L		121	69 - 138	6	25
2-Hexanone	ND		5000	5760		ug/L		115	10 - 150	5	35
Acetone	ND		5000	5270		ug/L		105	10 - 150	11	35
Acrolein	ND		5000	5610		ug/L		112	10 - 147	6	40
Acrylonitrile	ND		50000	58600		ug/L		117	38 - 144	4	40
Benzene	ND		5000	5550		ug/L		111	66 - 130	3	20
Bromoform	ND		5000	4890		ug/L		98	59 - 150	2	25
Bromomethane	ND		5000	6250		ug/L		125	62 - 131	3	25
Carbon disulfide	ND		5000	5430		ug/L		109	49 - 140	3	20
Carbon tetrachloride	ND		5000	6090		ug/L		122	60 - 150	4	25
Chlorobenzene	6000		5000	11400		ug/L		109	70 - 130	6	20
Bromochloromethane	ND		5000	5620		ug/L		112	70 - 130	3	25
Chloroethane	ND		5000	5860		ug/L		117	68 - 130	3	25

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-197764-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 440-197881-A-2 MSD**  
**Matrix: Water**  
**Analysis Batch: 445442**

**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
Chloroform	500		5000	6270		ug/L		115	70 - 130	3	20
Chloromethane	ND		5000	6410		ug/L		128	39 - 144	5	25
cis-1,2-Dichloroethene	ND		5000	5640		ug/L		113	70 - 130	3	20
cis-1,3-Dichloropropene	ND		5000	5510		ug/L		110	70 - 133	2	20
Dibromochloromethane	ND		5000	5640		ug/L		113	70 - 148	2	25
Dibromomethane	ND		5000	5950		ug/L		119	70 - 130	0	25
Bromodichloromethane	ND		5000	5940		ug/L		119	70 - 138	5	20
Dichlorodifluoromethane	ND		5000	6790		ug/L		136	25 - 142	7	30
Ethylbenzene	ND		5000	5420		ug/L		108	70 - 130	4	20
m,p-Xylene	ND		5000	5640		ug/L		113	70 - 133	4	25
Methylene Chloride	ND		5000	5160		ug/L		103	52 - 130	0	20
Methyl tert-butyl ether	ND		5000	5740		ug/L		115	70 - 130	1	25
Naphthalene	ND		5000	4710		ug/L		94	60 - 140	2	30
o-Xylene	ND		5000	5250		ug/L		105	70 - 133	2	20
Styrene	ND		5000	5460		ug/L		109	29 - 150	3	35
t-Butanol	ND		50000	60000		ug/L		120	70 - 130	6	25
Tetrachloroethene	55	J	5000	5680		ug/L		113	70 - 137	7	20
Toluene	ND		5000	5150		ug/L		103	70 - 130	4	20
trans-1,2-Dichloroethene	ND		5000	5890		ug/L		118	70 - 130	3	20
trans-1,3-Dichloropropene	ND		5000	5520		ug/L		110	70 - 138	3	25
Trichloroethene	ND		5000	5740		ug/L		115	70 - 130	5	20
Trichlorofluoromethane	ND		5000	6040		ug/L		121	60 - 150	5	25
Vinyl acetate	ND		5000	6490		ug/L		130	23 - 150	1	30
Vinyl chloride	ND		5000	6470		ug/L		129	50 - 137	7	30
1,2-Dibromoethane (EDB)	ND		5000	5740		ug/L		115	70 - 131	2	25
2-Butanone (MEK)	ND		5000	5470		ug/L		109	48 - 140	3	40
4-Methyl-2-pentanone (MIBK)	ND		5000	5950		ug/L		119	52 - 150	6	35
			<b>MSD</b>	<b>MSD</b>							
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>								
<i>Toluene-d8 (Surr)</i>	103		80 - 128								
<i>4-Bromofluorobenzene (Surr)</i>	111		80 - 120								
<i>Dibromofluoromethane (Surr)</i>	106		76 - 132								

**Lab Sample ID: MB 440-445596/4**  
**Matrix: Water**  
**Analysis Batch: 445596**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			12/07/17 19:30	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/07/17 19:30	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			12/07/17 19:30	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/07/17 19:30	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			12/07/17 19:30	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			12/07/17 19:30	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			12/07/17 19:30	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			12/07/17 19:30	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			12/07/17 19:30	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			12/07/17 19:30	1

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-197764-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 440-445596/4**  
**Matrix: Water**  
**Analysis Batch: 445596**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			12/07/17 19:30	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			12/07/17 19:30	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			12/07/17 19:30	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			12/07/17 19:30	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			12/07/17 19:30	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			12/07/17 19:30	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			12/07/17 19:30	1
2-Hexanone	ND		5.0	2.5	ug/L			12/07/17 19:30	1
Acetone	ND		20	10	ug/L			12/07/17 19:30	1
Acetonitrile	ND		20	10	ug/L			12/07/17 19:30	1
Acrolein	ND		5.0	2.5	ug/L			12/07/17 19:30	1
Acrylonitrile	ND		2.0	1.0	ug/L			12/07/17 19:30	1
Benzene	ND		0.50	0.25	ug/L			12/07/17 19:30	1
Allyl chloride	ND		1.0	0.50	ug/L			12/07/17 19:30	1
Bromoform	ND		1.0	0.40	ug/L			12/07/17 19:30	1
Bromomethane	ND		0.50	0.25	ug/L			12/07/17 19:30	1
Carbon disulfide	ND		1.0	0.50	ug/L			12/07/17 19:30	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			12/07/17 19:30	1
Chlorobenzene	ND		0.50	0.25	ug/L			12/07/17 19:30	1
Bromochloromethane	ND		0.50	0.25	ug/L			12/07/17 19:30	1
Chloroethane	ND		1.0	0.40	ug/L			12/07/17 19:30	1
Chloroform	ND		0.50	0.25	ug/L			12/07/17 19:30	1
Chloromethane	ND		0.50	0.25	ug/L			12/07/17 19:30	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/07/17 19:30	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/07/17 19:30	1
Dibromochloromethane	ND		0.50	0.25	ug/L			12/07/17 19:30	1
Dibromomethane	ND		0.50	0.25	ug/L			12/07/17 19:30	1
Bromodichloromethane	ND		0.50	0.25	ug/L			12/07/17 19:30	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			12/07/17 19:30	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			12/07/17 19:30	1
Ethylbenzene	ND		0.50	0.25	ug/L			12/07/17 19:30	1
Iodomethane	ND		2.0	1.0	ug/L			12/07/17 19:30	1
Isobutyl alcohol	ND		25	13	ug/L			12/07/17 19:30	1
m,p-Xylene	ND		1.0	0.50	ug/L			12/07/17 19:30	1
Methylene Chloride	ND		2.0	0.88	ug/L			12/07/17 19:30	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			12/07/17 19:30	1
Naphthalene	ND		1.0	0.40	ug/L			12/07/17 19:30	1
o-Xylene	ND		0.50	0.25	ug/L			12/07/17 19:30	1
Propionitrile	ND		20	10	ug/L			12/07/17 19:30	1
Styrene	ND		0.50	0.25	ug/L			12/07/17 19:30	1
t-Butanol	ND		10	5.0	ug/L			12/07/17 19:30	1
Tetrachloroethene	ND		0.50	0.25	ug/L			12/07/17 19:30	1
Tetrahydrofuran	ND		10	5.0	ug/L			12/07/17 19:30	1
Toluene	ND		0.50	0.25	ug/L			12/07/17 19:30	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/07/17 19:30	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/07/17 19:30	1
Trichloroethene	ND		0.50	0.25	ug/L			12/07/17 19:30	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			12/07/17 19:30	1

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-197764-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 440-445596/4**  
**Matrix: Water**  
**Analysis Batch: 445596**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl acetate	ND		4.0	2.0	ug/L			12/07/17 19:30	1
Vinyl chloride	ND		0.50	0.25	ug/L			12/07/17 19:30	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			12/07/17 19:30	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			12/07/17 19:30	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			12/07/17 19:30	1

Tentatively Identified Compound	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L					12/07/17 19:30	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	104		80 - 128		12/07/17 19:30	1
4-Bromofluorobenzene (Surr)	110		80 - 120		12/07/17 19:30	1
Dibromofluoromethane (Surr)	108		76 - 132		12/07/17 19:30	1

**Lab Sample ID: LCS 440-445596/5**  
**Matrix: Water**  
**Analysis Batch: 445596**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,3-Trichloropropane	25.0	30.7		ug/L		123	63 - 130
1,1,1,2-Tetrachloroethane	25.0	28.7		ug/L		115	60 - 141
1,1,1-Trichloroethane	25.0	28.0		ug/L		112	70 - 130
1,1,2,2-Tetrachloroethane	25.0	28.8		ug/L		115	63 - 130
1,1,2-Trichloroethane	25.0	26.7		ug/L		107	70 - 130
1,1-Dichloroethane	25.0	26.7		ug/L		107	64 - 130
1,1-Dichloroethene	25.0	25.3		ug/L		101	70 - 130
1,1-Dichloropropene	25.0	27.9		ug/L		112	70 - 130
1,2,4-Trichlorobenzene	25.0	22.3		ug/L		89	60 - 140
1,2-Dibromo-3-Chloropropane	25.0	26.4		ug/L		105	52 - 140
1,2-Dichlorobenzene	25.0	25.3		ug/L		101	70 - 130
1,2-Dichloroethane	25.0	29.1		ug/L		117	57 - 138
1,2-Dichloropropane	25.0	27.0		ug/L		108	67 - 130
1,3-Dichlorobenzene	25.0	25.6		ug/L		102	70 - 130
1,3-Dichloropropane	25.0	26.3		ug/L		105	70 - 130
1,4-Dichlorobenzene	25.0	25.0		ug/L		100	70 - 130
2,2-Dichloropropane	25.0	27.3		ug/L		109	68 - 141
2-Hexanone	25.0	31.6		ug/L		126	10 - 150
Acetone	25.0	30.3		ug/L		121	10 - 150
Acrolein	25.0	25.8		ug/L		103	10 - 145
Acrylonitrile	25.0	30.3		ug/L		121	48 - 140
Benzene	25.0	25.5		ug/L		102	68 - 130
Bromoform	25.0	22.9		ug/L		92	60 - 148
Bromomethane	25.0	28.5		ug/L		114	64 - 139
Carbon disulfide	25.0	25.6		ug/L		103	52 - 136
Carbon tetrachloride	25.0	28.8		ug/L		115	60 - 150
Chlorobenzene	25.0	24.9		ug/L		99	70 - 130
Bromochloromethane	25.0	26.8		ug/L		107	70 - 130

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-197764-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 440-445596/5**  
**Matrix: Water**  
**Analysis Batch: 445596**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloroethane	25.0	26.9		ug/L		108	64 - 135
Chloroform	25.0	27.2		ug/L		109	70 - 130
Chloromethane	25.0	29.9		ug/L		119	47 - 140
cis-1,2-Dichloroethene	25.0	26.6		ug/L		106	70 - 133
cis-1,3-Dichloropropene	25.0	25.2		ug/L		101	70 - 133
Dibromochloromethane	25.0	27.0		ug/L		108	69 - 145
Dibromomethane	25.0	29.8		ug/L		119	70 - 130
Bromodichloromethane	25.0	28.9		ug/L		116	70 - 132
Dichlorodifluoromethane	25.0	32.4		ug/L		130	29 - 150
Ethylbenzene	25.0	25.0		ug/L		100	70 - 130
m,p-Xylene	25.0	25.2		ug/L		101	70 - 130
Methylene Chloride	25.0	25.0		ug/L		100	52 - 130
Methyl tert-butyl ether	25.0	28.7		ug/L		115	63 - 131
Naphthalene	25.0	22.7		ug/L		91	60 - 140
o-Xylene	25.0	24.5		ug/L		98	70 - 130
Styrene	25.0	25.2		ug/L		101	70 - 134
t-Butanol	250	288		ug/L		115	70 - 130
Tetrachloroethene	25.0	25.0		ug/L		100	70 - 130
Toluene	25.0	23.6		ug/L		94	70 - 130
trans-1,2-Dichloroethene	25.0	27.9		ug/L		111	70 - 130
trans-1,3-Dichloropropene	25.0	25.9		ug/L		104	70 - 132
Trichloroethene	25.0	26.6		ug/L		106	70 - 130
Trichlorofluoromethane	25.0	28.5		ug/L		114	60 - 150
Vinyl acetate	25.0	33.1		ug/L		132	48 - 140
Vinyl chloride	25.0	28.8		ug/L		115	59 - 133
1,2-Dibromoethane (EDB)	25.0	27.6		ug/L		110	70 - 130
2-Butanone (MEK)	25.0	28.9		ug/L		115	44 - 150
4-Methyl-2-pentanone (MIBK)	25.0	31.7		ug/L		127	59 - 149

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	99		80 - 128
4-Bromofluorobenzene (Surr)	112		80 - 120
Dibromofluoromethane (Surr)	108		76 - 132

**Lab Sample ID: 440-197806-A-1 MS**  
**Matrix: Water**  
**Analysis Batch: 445596**

**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
1,2,3-Trichloropropane	ND		25.0	31.2		ug/L		125	60 - 130
1,1,1,2-Tetrachloroethane	ND		25.0	29.9		ug/L		119	60 - 149
1,1,1-Trichloroethane	ND		25.0	29.9		ug/L		119	70 - 130
1,1,1,2-Tetrachloroethane	ND		25.0	29.3		ug/L		117	63 - 130
1,1,2-Trichloroethane	ND		25.0	28.1		ug/L		113	70 - 130
1,1-Dichloroethane	ND		25.0	28.0		ug/L		112	65 - 130
1,1-Dichloroethene	ND		25.0	27.2		ug/L		109	70 - 130
1,1-Dichloropropene	ND		25.0	29.7		ug/L		119	64 - 130
1,2,4-Trichlorobenzene	ND		25.0	23.1		ug/L		92	60 - 140

TestAmerica Irvine



# QC Sample Results

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

TestAmerica Job ID: 440-197764-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 440-197806-A-1 MS**  
**Matrix: Water**  
**Analysis Batch: 445596**

**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
1,2-Dibromo-3-Chloropropane	ND		25.0	26.7		ug/L		107	48 - 140
1,2-Dichlorobenzene	ND		25.0	26.5		ug/L		106	70 - 130
1,2-Dichloroethane	ND		25.0	29.8		ug/L		119	56 - 146
1,2-Dichloropropane	ND		25.0	28.0		ug/L		112	69 - 130
1,3-Dichlorobenzene	ND		25.0	26.6		ug/L		106	70 - 130
1,3-Dichloropropane	ND		25.0	27.1		ug/L		108	70 - 130
1,4-Dichlorobenzene	ND		25.0	26.1		ug/L		104	70 - 130
2,2-Dichloropropane	ND		25.0	30.0		ug/L		120	69 - 138
2-Hexanone	ND		25.0	31.0		ug/L		124	10 - 150
Acetone	ND		25.0	28.9		ug/L		116	10 - 150
Acrolein	ND		25.0	27.3		ug/L		109	10 - 147
Acrylonitrile	ND		250	301		ug/L		120	38 - 144
Benzene	ND		25.0	26.6		ug/L		106	66 - 130
Bromoform	ND		25.0	24.9		ug/L		99	59 - 150
Bromomethane	ND		25.0	30.5		ug/L		122	62 - 131
Carbon disulfide	ND		25.0	27.0		ug/L		108	49 - 140
Carbon tetrachloride	ND		25.0	30.9		ug/L		124	60 - 150
Chlorobenzene	ND		25.0	25.7		ug/L		103	70 - 130
Bromochloromethane	ND		25.0	28.3		ug/L		113	70 - 130
Chloroethane	ND		25.0	28.1		ug/L		113	68 - 130
Chloroform	ND		25.0	28.5		ug/L		114	70 - 130
Chloromethane	ND		25.0	32.4		ug/L		130	39 - 144
cis-1,2-Dichloroethene	ND		25.0	27.8		ug/L		111	70 - 130
cis-1,3-Dichloropropene	ND		25.0	26.8		ug/L		107	70 - 133
Dibromochloromethane	ND		25.0	28.3		ug/L		113	70 - 148
Dibromomethane	ND		25.0	30.2		ug/L		121	70 - 130
Bromodichloromethane	ND		25.0	29.6		ug/L		118	70 - 138
Dichlorodifluoromethane	ND		25.0	35.0		ug/L		140	25 - 142
Ethylbenzene	ND		25.0	26.3		ug/L		105	70 - 130
m,p-Xylene	ND		25.0	26.6		ug/L		106	70 - 133
Methylene Chloride	ND		25.0	25.8		ug/L		103	52 - 130
Methyl tert-butyl ether	ND		25.0	29.1		ug/L		116	70 - 130
Naphthalene	ND		25.0	23.0		ug/L		92	60 - 140
o-Xylene	ND		25.0	25.5		ug/L		102	70 - 133
Styrene	ND		25.0	25.9		ug/L		104	29 - 150
t-Butanol	ND		250	297		ug/L		119	70 - 130
Tetrachloroethene	ND		25.0	26.8		ug/L		107	70 - 137
Toluene	ND		25.0	24.6		ug/L		98	70 - 130
trans-1,2-Dichloroethene	ND		25.0	28.8		ug/L		115	70 - 130
trans-1,3-Dichloropropene	ND		25.0	27.3		ug/L		109	70 - 138
Trichloroethene	ND		25.0	27.4		ug/L		109	70 - 130
Trichlorofluoromethane	ND		25.0	30.3		ug/L		121	60 - 150
Vinyl acetate	ND		25.0	33.7		ug/L		135	23 - 150
Vinyl chloride	ND		25.0	31.5		ug/L		126	50 - 137
1,2-Dibromoethane (EDB)	ND		25.0	28.2		ug/L		113	70 - 131
2-Butanone (MEK)	ND		25.0	31.8		ug/L		127	48 - 140
4-Methyl-2-pentanone (MIBK)	ND		25.0	31.4		ug/L		126	52 - 150

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-197764-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 440-197806-A-1 MS**  
**Matrix: Water**  
**Analysis Batch: 445596**

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

Surrogate	MS %Recovery	MS Qualifier	Limits
Toluene-d8 (Surr)	101		80 - 128
4-Bromofluorobenzene (Surr)	113		80 - 120
Dibromofluoromethane (Surr)	109		76 - 132

**Lab Sample ID: 440-197806-A-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 445596**

**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
1,2,3-Trichloropropane	ND		25.0	30.6		ug/L		123	60 - 130	2	30
1,1,1,2-Tetrachloroethane	ND		25.0	28.9		ug/L		116	60 - 149	3	20
1,1,1-Trichloroethane	ND		25.0	29.5		ug/L		118	70 - 130	1	20
1,1,2,2-Tetrachloroethane	ND		25.0	28.1		ug/L		112	63 - 130	4	30
1,1,2-Trichloroethane	ND		25.0	27.3		ug/L		109	70 - 130	3	25
1,1-Dichloroethane	ND		25.0	27.6		ug/L		110	65 - 130	2	20
1,1-Dichloroethene	ND		25.0	26.9		ug/L		108	70 - 130	1	20
1,1-Dichloropropene	ND		25.0	30.0		ug/L		120	64 - 130	1	20
1,2,4-Trichlorobenzene	ND		25.0	22.8		ug/L		91	60 - 140	1	20
1,2-Dibromo-3-Chloropropane	ND		25.0	26.1		ug/L		105	48 - 140	2	30
1,2-Dichlorobenzene	ND		25.0	25.6		ug/L		102	70 - 130	3	20
1,2-Dichloroethane	ND		25.0	29.3		ug/L		117	56 - 146	2	20
1,2-Dichloropropane	ND		25.0	26.9		ug/L		107	69 - 130	4	20
1,3-Dichlorobenzene	ND		25.0	25.9		ug/L		104	70 - 130	2	20
1,3-Dichloropropane	ND		25.0	26.5		ug/L		106	70 - 130	2	25
1,4-Dichlorobenzene	ND		25.0	25.1		ug/L		101	70 - 130	4	20
2,2-Dichloropropane	ND		25.0	30.1		ug/L		120	69 - 138	0	25
2-Hexanone	ND		25.0	30.7		ug/L		123	10 - 150	1	35
Acetone	ND		25.0	27.7		ug/L		111	10 - 150	5	35
Acrolein	ND		25.0	25.9		ug/L		103	10 - 147	5	40
Acrylonitrile	ND		250	301		ug/L		120	38 - 144	0	40
Benzene	ND		25.0	26.3		ug/L		105	66 - 130	1	20
Bromoform	ND		25.0	24.4		ug/L		97	59 - 150	2	25
Bromomethane	ND		25.0	29.7		ug/L		119	62 - 131	3	25
Carbon disulfide	ND		25.0	27.0		ug/L		108	49 - 140	0	20
Carbon tetrachloride	ND		25.0	30.8		ug/L		123	60 - 150	0	25
Chlorobenzene	ND		25.0	25.2		ug/L		101	70 - 130	2	20
Bromochloromethane	ND		25.0	27.2		ug/L		109	70 - 130	4	25
Chloroethane	ND		25.0	29.1		ug/L		117	68 - 130	4	25
Chloroform	ND		25.0	28.0		ug/L		112	70 - 130	2	20
Chloromethane	ND		25.0	31.2		ug/L		125	39 - 144	4	25
cis-1,2-Dichloroethene	ND		25.0	27.3		ug/L		109	70 - 130	2	20
cis-1,3-Dichloropropene	ND		25.0	25.9		ug/L		103	70 - 133	4	20
Dibromochloromethane	ND		25.0	27.5		ug/L		110	70 - 148	3	25
Dibromomethane	ND		25.0	29.4		ug/L		118	70 - 130	3	25
Bromodichloromethane	ND		25.0	29.3		ug/L		117	70 - 138	1	20
Dichlorodifluoromethane	ND		25.0	34.8		ug/L		139	25 - 142	1	30
Ethylbenzene	ND		25.0	26.1		ug/L		104	70 - 130	1	20
m,p-Xylene	ND		25.0	26.8		ug/L		107	70 - 133	1	25

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-197764-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 440-197806-A-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 445596**

**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
Methylene Chloride	ND		25.0	24.8		ug/L		99	52 - 130	4	20
Methyl tert-butyl ether	ND		25.0	28.1		ug/L		112	70 - 130	4	25
Naphthalene	ND		25.0	23.1		ug/L		92	60 - 140	0	30
o-Xylene	ND		25.0	24.9		ug/L		99	70 - 133	2	20
Styrene	ND		25.0	25.2		ug/L		101	29 - 150	3	35
t-Butanol	ND		250	290		ug/L		116	70 - 130	2	25
Tetrachloroethene	ND		25.0	27.1		ug/L		108	70 - 137	1	20
Toluene	ND		25.0	24.6		ug/L		98	70 - 130	0	20
trans-1,2-Dichloroethene	ND		25.0	27.9		ug/L		111	70 - 130	3	20
trans-1,3-Dichloropropene	ND		25.0	26.5		ug/L		106	70 - 138	3	25
Trichloroethene	ND		25.0	27.1		ug/L		108	70 - 130	1	20
Trichlorofluoromethane	ND		25.0	30.1		ug/L		120	60 - 150	1	25
Vinyl acetate	ND		25.0	32.8		ug/L		131	23 - 150	3	30
Vinyl chloride	ND		25.0	30.8		ug/L		123	50 - 137	2	30
1,2-Dibromoethane (EDB)	ND		25.0	27.4		ug/L		110	70 - 131	3	25
2-Butanone (MEK)	ND		25.0	31.3		ug/L		125	48 - 140	2	40
4-Methyl-2-pentanone (MIBK)	ND		25.0	31.2		ug/L		125	52 - 150	1	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Toluene-d8 (Surr)	101		80 - 128
4-Bromofluorobenzene (Surr)	110		80 - 120
Dibromofluoromethane (Surr)	109		76 - 132

**Lab Sample ID: MB 440-445658/4**  
**Matrix: Water**  
**Analysis Batch: 445658**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			12/08/17 08:56	1
Methylacrylonitrile	ND		10	2.5	ug/L			12/08/17 08:56	1
Methyl methacrylate	ND		2.0	1.0	ug/L			12/08/17 08:56	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			12/08/17 08:56	1

Tentatively Identified Compound	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L					12/08/17 08:56	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	111		80 - 128		12/08/17 08:56	1
4-Bromofluorobenzene (Surr)	99		80 - 120		12/08/17 08:56	1
Dibromofluoromethane (Surr)	94		76 - 132		12/08/17 08:56	1

**Lab Sample ID: LCS 440-445658/5**  
**Matrix: Water**  
**Analysis Batch: 445658**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
trans-1,4-Dichloro-2-butene	25.0	23.7		ug/L		95	44 - 140

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-197764-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 440-445658/5**  
**Matrix: Water**  
**Analysis Batch: 445658**

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

Surrogate	LCS		Limits
	%Recovery	Qualifier	
Toluene-d8 (Surr)	105		80 - 128
4-Bromofluorobenzene (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	93		76 - 132

**Lab Sample ID: 440-197838-A-1 MS**  
**Matrix: Water**  
**Analysis Batch: 445658**

**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
	trans-1,4-Dichloro-2-butene	ND		25.0	26.8				

Surrogate	MS		Limits
	%Recovery	Qualifier	
Toluene-d8 (Surr)	106		80 - 128
4-Bromofluorobenzene (Surr)	99		80 - 120
Dibromofluoromethane (Surr)	94		76 - 132

**Lab Sample ID: 440-197838-A-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 445658**

**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	Limit
	trans-1,4-Dichloro-2-butene	ND		25.0	25.2						

Surrogate	MSD		Limits
	%Recovery	Qualifier	
Toluene-d8 (Surr)	105		80 - 128
4-Bromofluorobenzene (Surr)	98		80 - 120
Dibromofluoromethane (Surr)	94		76 - 132

**Lab Sample ID: MB 440-445660/4**  
**Matrix: Water**  
**Analysis Batch: 445660**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	trans-1,4-Dichloro-2-butene	ND							

Tentatively Identified Compound	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
	Tentatively Identified Compound	None							

Surrogate	MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Toluene-d8 (Surr)	103		80 - 128		12/08/17 08:40	1
4-Bromofluorobenzene (Surr)	94		80 - 120		12/08/17 08:40	1
Dibromofluoromethane (Surr)	98		76 - 132		12/08/17 08:40	1

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-197764-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 440-445660/5**  
**Matrix: Water**  
**Analysis Batch: 445660**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
trans-1,4-Dichloro-2-butene	25.0	23.7		ug/L		95	44 - 140
<b>Surrogate</b>							
	<b>LCS %Recovery</b>	<b>LCS Qualifier</b>	<b>Limits</b>				
Toluene-d8 (Surr)	99		80 - 128				
4-Bromofluorobenzene (Surr)	93		80 - 120				
Dibromofluoromethane (Surr)	99		76 - 132				

**Lab Sample ID: 440-197953-B-4 MS**  
**Matrix: Water**  
**Analysis Batch: 445660**

**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
trans-1,4-Dichloro-2-butene	ND		25.0	21.8		ug/L		87	10 - 150
<b>Surrogate</b>									
	<b>MS %Recovery</b>	<b>MS Qualifier</b>	<b>Limits</b>						
Toluene-d8 (Surr)	100		80 - 128						
4-Bromofluorobenzene (Surr)	93		80 - 120						
Dibromofluoromethane (Surr)	98		76 - 132						

**Lab Sample ID: 440-197953-B-4 MSD**  
**Matrix: Water**  
**Analysis Batch: 445660**

**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
trans-1,4-Dichloro-2-butene	ND		25.0	23.2		ug/L		93	10 - 150	6	30
<b>Surrogate</b>											
	<b>MSD %Recovery</b>	<b>MSD Qualifier</b>	<b>Limits</b>								
Toluene-d8 (Surr)	101		80 - 128								
4-Bromofluorobenzene (Surr)	93		80 - 120								
Dibromofluoromethane (Surr)	99		76 - 132								

## Method: 8270C - Semivolatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 440-445222/1-A**  
**Matrix: Water**  
**Analysis Batch: 445710**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 445222**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.99	0.25	ug/L		12/06/17 07:50	12/08/17 13:10	1
<b>Surrogate</b>									
	<b>MB %Recovery</b>	<b>MB Qualifier</b>	<b>Limits</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>			
1,4-Dioxane-d8 (Surr)	71		30 - 120	12/06/17 07:50	12/08/17 13:10	1			

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-197764-1

## Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 440-445222/2-A**  
**Matrix: Water**  
**Analysis Batch: 445710**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 445222**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,4-Dioxane	1.97	1.24		ug/L		63	35 - 120
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
1,4-Dioxane-d8 (Surr)	65		30 - 120				

**Lab Sample ID: LCSD 440-445222/3-A**  
**Matrix: Water**  
**Analysis Batch: 445710**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 445222**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,4-Dioxane	1.98	1.06		ug/L		54	35 - 120	15	35
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
1,4-Dioxane-d8 (Surr)	56		30 - 120						

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 440-445016/7**  
**Matrix: Water**  
**Analysis Batch: 445016**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.11	0.055	mg/L			12/05/17 13:50	1

**Lab Sample ID: LCS 440-445016/6**  
**Matrix: Water**  
**Analysis Batch: 445016**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Nitrate as N	1.13	1.10		mg/L		98	90 - 110

**Lab Sample ID: 440-197764-6 MS**  
**Matrix: Water**  
**Analysis Batch: 445016**

**Client Sample ID: MW-6**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Nitrate as N	ND		2.26	2.16		mg/L		96	80 - 120

**Lab Sample ID: 440-197764-6 MSD**  
**Matrix: Water**  
**Analysis Batch: 445016**

**Client Sample ID: MW-6**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Nitrate as N	ND		2.26	2.17		mg/L		96	80 - 120	1	20

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-197764-1

## Method: 300.0 - Anions, Ion Chromatography (Continued)

**Lab Sample ID: MB 440-445017/7**  
**Matrix: Water**  
**Analysis Batch: 445017**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		0.50	0.25	mg/L			12/05/17 13:50	1
Chloride	ND		0.50	0.25	mg/L			12/05/17 13:50	1
Fluoride	ND		0.50	0.25	mg/L			12/05/17 13:50	1
Sulfate	ND		0.50	0.25	mg/L			12/05/17 13:50	1

**Lab Sample ID: LCS 440-445017/6**  
**Matrix: Water**  
**Analysis Batch: 445017**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromide	5.00	4.79		mg/L		96	90 - 110
Chloride	5.00	4.87		mg/L		97	90 - 110
Fluoride	5.00	5.06		mg/L		101	90 - 110
Sulfate	5.00	4.87		mg/L		97	90 - 110

**Lab Sample ID: 440-197764-6 MS**  
**Matrix: Water**  
**Analysis Batch: 445017**

**Client Sample ID: MW-6**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromide	0.88	J	10.0	10.6		mg/L		98	80 - 120
Fluoride	1.1		10.0	10.6		mg/L		95	80 - 120

**Lab Sample ID: 440-197764-6 MSD**  
**Matrix: Water**  
**Analysis Batch: 445017**

**Client Sample ID: MW-6**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bromide	0.88	J	10.0	10.7		mg/L		99	80 - 120	1	20
Fluoride	1.1		10.0	10.8		mg/L		97	80 - 120	2	20

## Method: 6010B - Metals (ICP)

**Lab Sample ID: MB 440-445273/1-A**  
**Matrix: Water**  
**Analysis Batch: 445458**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 445273**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.050	0.025	mg/L		12/06/17 11:27	12/06/17 19:47	1
Calcium	ND		0.10	0.050	mg/L		12/06/17 11:27	12/06/17 19:47	1
Iron	0.0991	J	0.10	0.050	mg/L		12/06/17 11:27	12/06/17 19:47	1
Magnesium	0.0122	J	0.020	0.010	mg/L		12/06/17 11:27	12/06/17 19:47	1
Manganese	ND		0.020	0.015	mg/L		12/06/17 11:27	12/06/17 19:47	1
Potassium	ND		0.50	0.25	mg/L		12/06/17 11:27	12/06/17 19:47	1
Sodium	ND		0.50	0.26	mg/L		12/06/17 11:27	12/06/17 19:47	1

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-197764-1

## Method: 6010B - Metals (ICP) (Continued)

**Lab Sample ID: LCS 440-445273/2-A**  
**Matrix: Water**  
**Analysis Batch: 445458**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 445273**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Boron	1.00	0.980		mg/L		98	80 - 120
Calcium	5.00	5.07		mg/L		101	80 - 120
Iron	1.00	1.05		mg/L		105	80 - 120
Magnesium	5.00	5.09		mg/L		102	80 - 120
Manganese	1.00	1.01		mg/L		101	80 - 120
Potassium	10.0	10.2		mg/L		102	80 - 120
Sodium	10.0	10.0		mg/L		100	80 - 120

**Lab Sample ID: 440-197785-F-4-B MS**  
**Matrix: Water**  
**Analysis Batch: 445458**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total Recoverable**  
**Prep Batch: 445273**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Boron	0.050		1.00	0.973		mg/L		92	75 - 125
Calcium	130		5.00	126	4	mg/L		-18	75 - 125
Iron	ND		1.00	0.934		mg/L		93	75 - 125
Magnesium	38	B	5.00	40.2	4	mg/L		53	75 - 125
Manganese	0.27		1.00	1.15		mg/L		87	75 - 125
Potassium	6.2		10.0	15.3		mg/L		91	75 - 125
Sodium	82		10.0	86.9	4	mg/L		54	75 - 125

**Lab Sample ID: 440-197785-F-4-C MSD**  
**Matrix: Water**  
**Analysis Batch: 445458**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total Recoverable**  
**Prep Batch: 445273**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit
Boron	0.050		1.00	1.06		mg/L		101	75 - 125	9	20
Calcium	130		5.00	140	4	mg/L		254	75 - 125	10	20
Iron	ND		1.00	1.01		mg/L		101	75 - 125	8	20
Magnesium	38	B	5.00	44.8	4	mg/L		146	75 - 125	11	20
Manganese	0.27		1.00	1.25		mg/L		98	75 - 125	9	20
Potassium	6.2		10.0	16.8		mg/L		106	75 - 125	9	20
Sodium	82		10.0	96.8	4	mg/L		152	75 - 125	11	20

**Lab Sample ID: MB 440-445489/1-A**  
**Matrix: Water**  
**Analysis Batch: 445800**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 445489**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.050	0.025	mg/L		12/07/17 10:19	12/08/17 14:03	1
Calcium	ND		0.10	0.050	mg/L		12/07/17 10:19	12/08/17 14:03	1
Iron	ND		0.10	0.050	mg/L		12/07/17 10:19	12/08/17 14:03	1
Magnesium	0.0108	J	0.020	0.010	mg/L		12/07/17 10:19	12/08/17 14:03	1
Manganese	ND		0.020	0.015	mg/L		12/07/17 10:19	12/08/17 14:03	1
Potassium	ND		0.50	0.25	mg/L		12/07/17 10:19	12/08/17 14:03	1
Sodium	ND		0.50	0.26	mg/L		12/07/17 10:19	12/08/17 14:03	1

TestAmerica Irvine



# QC Sample Results

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

TestAmerica Job ID: 440-197764-1

## Method: 6010B - Metals (ICP) (Continued)

**Lab Sample ID: LCS 440-445489/2-A**  
**Matrix: Water**  
**Analysis Batch: 445800**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 445489**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Boron	1.00	1.00		mg/L		100	80 - 120
Calcium	5.00	5.17		mg/L		103	80 - 120
Iron	1.00	1.05		mg/L		105	80 - 120
Magnesium	5.00	5.13		mg/L		103	80 - 120
Manganese	1.00	1.03		mg/L		103	80 - 120
Potassium	10.0	10.2		mg/L		102	80 - 120
Sodium	10.0	10.5		mg/L		105	80 - 120

**Lab Sample ID: 440-197764-4 MS**  
**Matrix: Water**  
**Analysis Batch: 445800**

**Client Sample ID: MW-9**  
**Prep Type: Total Recoverable**  
**Prep Batch: 445489**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Boron	2.7	F1	1.00	3.84		mg/L		112	75 - 125
Calcium	440		5.00	459	4	mg/L		350	75 - 125
Iron	70		1.00	72.7	4	mg/L		293	75 - 125
Magnesium	230	B	5.00	239	4	mg/L		232	75 - 125
Manganese	3.7	F1	1.00	4.82		mg/L		108	75 - 125
Potassium	34	F1	10.0	45.6		mg/L		118	75 - 125
Sodium	470		10.0	493	4	mg/L		204	75 - 125

**Lab Sample ID: 440-197764-4 MSD**  
**Matrix: Water**  
**Analysis Batch: 445800**

**Client Sample ID: MW-9**  
**Prep Type: Total Recoverable**  
**Prep Batch: 445489**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit
Boron	2.7	F1	1.00	4.02	F1	mg/L		130	75 - 125	5	20
Calcium	440		5.00	480	4	mg/L		778	75 - 125	5	20
Iron	70		1.00	76.6	4	mg/L		678	75 - 125	5	20
Magnesium	230	B	5.00	250	4	mg/L		442	75 - 125	4	20
Manganese	3.7	F1	1.00	5.06	F1	mg/L		131	75 - 125	5	20
Potassium	34	F1	10.0	47.5	F1	mg/L		137	75 - 125	4	20
Sodium	470		10.0	517	4	mg/L		449	75 - 125	5	20

## Method: 410.4 - COD

**Lab Sample ID: MB 440-446330/3**  
**Matrix: Water**  
**Analysis Batch: 446330**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		20	10	mg/L			12/12/17 17:04	1

**Lab Sample ID: LCS 440-446330/4**  
**Matrix: Water**  
**Analysis Batch: 446330**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Chemical Oxygen Demand	200	195		mg/L		98	90 - 110

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-197764-1

**Lab Sample ID: 440-197822-A-9 MS**  
**Matrix: Water**  
**Analysis Batch: 446330**

**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
Chemical Oxygen Demand	19	J	200	193		mg/L		87	70 - 120

**Lab Sample ID: 440-197822-A-9 MSD**  
**Matrix: Water**  
**Analysis Batch: 446330**

**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
Chemical Oxygen Demand	19	J	200	188		mg/L		84	70 - 120	3	15

## Method: SM 2320B - Alkalinity

**Lab Sample ID: MB 440-445505/3**  
**Matrix: Water**  
**Analysis Batch: 445505**

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

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	ND		4.0	4.0	mg/L			12/07/17 04:44	1
Bicarbonate Alkalinity as CaCO3	ND		4.0	4.0	mg/L			12/07/17 04:44	1

**Lab Sample ID: LCS 440-445505/2**  
**Matrix: Water**  
**Analysis Batch: 445505**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity as CaCO3	50.8	49.3		mg/L		97	80 - 120

**Lab Sample ID: 440-197792-C-1 DU**  
**Matrix: Water**  
**Analysis Batch: 445505**

**Client Sample ID: Duplicate**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Alkalinity as CaCO3	410		394		mg/L		4	20
Bicarbonate Alkalinity as CaCO3	410		394		mg/L		4	20

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

**Lab Sample ID: MB 440-445500/1**  
**Matrix: Water**  
**Analysis Batch: 445500**

**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			12/07/17 10:38	1

**Lab Sample ID: LCS 440-445500/2**  
**Matrix: Water**  
**Analysis Batch: 445500**

**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	974		mg/L		97	90 - 110

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-197764-1

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

**Lab Sample ID: 440-197764-1 DU**  
**Matrix: Water**  
**Analysis Batch: 445500**

**Client Sample ID: DW-1**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	3100		3140		mg/L		0.2	5

**Lab Sample ID: MB 440-446195/1**  
**Matrix: Water**  
**Analysis Batch: 446195**

**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			12/12/17 07:59	1

**Lab Sample ID: LCS 440-446195/2**  
**Matrix: Water**  
**Analysis Batch: 446195**

**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	978		mg/L		98	90 - 110

**Lab Sample ID: 440-198078-C-31 DU**  
**Matrix: Water**  
**Analysis Batch: 446195**

**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	1400		1340		mg/L		3	5

## Method: SM 4500 CO2 C - Free Carbon Dioxide

**Lab Sample ID: MB 440-446298/1**  
**Matrix: Water**  
**Analysis Batch: 446298**

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

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon Dioxide, Free	ND		2.0	2.0	mg/L			12/12/17 12:30	1

**Lab Sample ID: 440-197764-4 DU**  
**Matrix: Water**  
**Analysis Batch: 446298**

**Client Sample ID: MW-9**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Carbon Dioxide, Free	200		202		mg/L		2	20

## Method: SM 4500 NH3 D - Ammonia

**Lab Sample ID: MB 440-445664/2-A**  
**Matrix: Water**  
**Analysis Batch: 445672**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 445664**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	ND		0.50	0.10	mg/L		12/08/17 07:45	12/08/17 09:00	1

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-197764-1

## Method: SM 4500 NH3 D - Ammonia (Continued)

**Lab Sample ID: LCS 440-445664/1-A**  
**Matrix: Water**  
**Analysis Batch: 445672**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 445664**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Ammonia (as N)	2.50	2.36		mg/L		95	85 - 115

**Lab Sample ID: 440-197764-2 MS**  
**Matrix: Water**  
**Analysis Batch: 445672**

**Client Sample ID: DW-2**  
**Prep Type: Total/NA**  
**Prep Batch: 445664**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Ammonia (as N)	3.0		2.50	5.11		mg/L		85	75 - 125

**Lab Sample ID: 440-197764-2 MSD**  
**Matrix: Water**  
**Analysis Batch: 445672**

**Client Sample ID: DW-2**  
**Prep Type: Total/NA**  
**Prep Batch: 445664**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Ammonia (as N)	3.0		2.50	5.32		mg/L		93	75 - 125	4	15

**Lab Sample ID: MB 440-445958/2-A**  
**Matrix: Water**  
**Analysis Batch: 445959**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 445958**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	ND		0.50	0.10	mg/L		12/11/17 03:30	12/11/17 04:30	1

**Lab Sample ID: LCS 440-445958/1-A**  
**Matrix: Water**  
**Analysis Batch: 445959**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 445958**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Ammonia (as N)	2.50	2.23		mg/L		89	85 - 115

**Lab Sample ID: 440-197764-3 MS**  
**Matrix: Water**  
**Analysis Batch: 445959**

**Client Sample ID: DW-3**  
**Prep Type: Total/NA**  
**Prep Batch: 445958**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Ammonia (as N)	0.83		2.50	3.26		mg/L		97	75 - 125

**Lab Sample ID: 440-197764-3 MSD**  
**Matrix: Water**  
**Analysis Batch: 445959**

**Client Sample ID: DW-3**  
**Prep Type: Total/NA**  
**Prep Batch: 445958**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Ammonia (as N)	0.83		2.50	3.14		mg/L		92	75 - 125	4	15

**Lab Sample ID: 440-197954-D-2-C DU**  
**Matrix: Water**  
**Analysis Batch: 445959**

**Client Sample ID: Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 445958**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Ammonia (as N)	96		99.5		mg/L		4	15

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-197764-1

**Lab Sample ID: 440-198068-B-1-B DU**  
**Matrix: Water**  
**Analysis Batch: 445959**

**Client Sample ID: Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 445958**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Ammonia (as N)	0.89		0.862		mg/L		4	15

## Method: SM 4500 S2 D - Sulfide, Total

**Lab Sample ID: MB 440-445369/3**  
**Matrix: Water**  
**Analysis Batch: 445369**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Sulfide	ND		0.050	0.027	mg/L			12/06/17 17:41	1

**Lab Sample ID: LCS 440-445369/4**  
**Matrix: Water**  
**Analysis Batch: 445369**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Sulfide	0.500	0.428		mg/L		86	80 - 120

**Lab Sample ID: LCSD 440-445369/5**  
**Matrix: Water**  
**Analysis Batch: 445369**

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Total Sulfide	0.500	0.422		mg/L		84	80 - 120	2	20

**Lab Sample ID: 440-197761-G-1 MS**  
**Matrix: Water**  
**Analysis Batch: 445369**

**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
Total Sulfide	ND		0.500	0.514		mg/L		103	70 - 130

**Lab Sample ID: 440-197761-G-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 445369**

**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	Limit
Total Sulfide	ND		0.500	0.505		mg/L		101	70 - 130	2	30

## Method: SM 5310C - TOC

**Lab Sample ID: MB 440-445633/6**  
**Matrix: Water**  
**Analysis Batch: 445633**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		0.10	0.050	mg/L			12/07/17 08:48	1

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-197764-1

## Method: SM 5310C - TOC (Continued)

**Lab Sample ID: LCS 440-445633/5**  
**Matrix: Water**  
**Analysis Batch: 445633**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	10.0	9.89		mg/L		99	90 - 110

**Lab Sample ID: MRL 440-445633/4**  
**Matrix: Water**  
**Analysis Batch: 445633**

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	0.100	0.125		mg/L		125	50 - 150

**Lab Sample ID: 440-197764-2 MS**  
**Matrix: Water**  
**Analysis Batch: 445633**

**Client Sample ID: DW-2**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	1.5		10.0	11.1		mg/L		97	80 - 120

**Lab Sample ID: 440-197764-2 MSD**  
**Matrix: Water**  
**Analysis Batch: 445633**

**Client Sample ID: DW-2**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon	1.5		10.0	11.2		mg/L		97	80 - 120	0	20

# QC Association Summary

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

TestAmerica Job ID: 440-197764-1

## GC/MS VOA

### Analysis Batch: 445200

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197764-1	DW-1	Total/NA	Water	8260B	
MB 440-445200/4	Method Blank	Total/NA	Water	8260B	
LCS 440-445200/5	Lab Control Sample	Total/NA	Water	8260B	
440-197764-1 MS	DW-1	Total/NA	Water	8260B	
440-197764-1 MSD	DW-1	Total/NA	Water	8260B	

### Analysis Batch: 445211

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197764-2	DW-2	Total/NA	Water	8260B	
440-197764-3	DW-3	Total/NA	Water	8260B	
440-197764-4	MW-9	Total/NA	Water	8260B	
440-197764-5	MW-13R	Total/NA	Water	8260B	
440-197764-6	MW-6	Total/NA	Water	8260B	
440-197764-7	MW-14	Total/NA	Water	8260B	
440-197764-8	Duplicate	Total/NA	Water	8260B	
440-197764-9	QCAB	Total/NA	Water	8260B	
440-197764-10	QCTB	Total/NA	Water	8260B	
MB 440-445211/3	Method Blank	Total/NA	Water	8260B	
LCS 440-445211/7	Lab Control Sample	Total/NA	Water	8260B	
440-197764-2 MS	DW-2	Total/NA	Water	8260B	
440-197764-2 MSD	DW-2	Total/NA	Water	8260B	

### Analysis Batch: 445442

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197764-1	DW-1	Total/NA	Water	8260B	
440-197764-2	DW-2	Total/NA	Water	8260B	
440-197764-3	DW-3	Total/NA	Water	8260B	
440-197764-4	MW-9	Total/NA	Water	8260B	
440-197764-5	MW-13R	Total/NA	Water	8260B	
440-197764-6	MW-6	Total/NA	Water	8260B	
440-197764-7	MW-14	Total/NA	Water	8260B	
440-197764-8	Duplicate	Total/NA	Water	8260B	
440-197764-9	QCAB	Total/NA	Water	8260B	
MB 440-445442/4	Method Blank	Total/NA	Water	8260B	
LCS 440-445442/5	Lab Control Sample	Total/NA	Water	8260B	
440-197881-A-2 MS	Matrix Spike	Total/NA	Water	8260B	
440-197881-A-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

### Analysis Batch: 445596

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197764-10	QCTB	Total/NA	Water	8260B	
MB 440-445596/4	Method Blank	Total/NA	Water	8260B	
LCS 440-445596/5	Lab Control Sample	Total/NA	Water	8260B	
440-197806-A-1 MS	Matrix Spike	Total/NA	Water	8260B	
440-197806-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

### Analysis Batch: 445658

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197764-10 - RA	QCTB	Total/NA	Water	8260B	
MB 440-445658/4	Method Blank	Total/NA	Water	8260B	
LCS 440-445658/5	Lab Control Sample	Total/NA	Water	8260B	

TestAmerica Irvine

# QC Association Summary

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

TestAmerica Job ID: 440-197764-1

## GC/MS VOA (Continued)

### Analysis Batch: 445658 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197838-A-1 MS	Matrix Spike	Total/NA	Water	8260B	
440-197838-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

### Analysis Batch: 445660

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197764-1 - RA	DW-1	Total/NA	Water	8260B	
440-197764-2 - RA	DW-2	Total/NA	Water	8260B	
440-197764-3 - RA	DW-3	Total/NA	Water	8260B	
440-197764-4 - RA	MW-9	Total/NA	Water	8260B	
440-197764-5 - RA	MW-13R	Total/NA	Water	8260B	
440-197764-6 - RA	MW-6	Total/NA	Water	8260B	
440-197764-7 - RA	MW-14	Total/NA	Water	8260B	
440-197764-8 - RA	Duplicate	Total/NA	Water	8260B	
440-197764-9 - RA	QCAB	Total/NA	Water	8260B	
MB 440-445660/4	Method Blank	Total/NA	Water	8260B	
LCS 440-445660/5	Lab Control Sample	Total/NA	Water	8260B	
440-197953-B-4 MS	Matrix Spike	Total/NA	Water	8260B	
440-197953-B-4 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

## GC/MS Semi VOA

### Prep Batch: 445222

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197764-1	DW-1	Total/NA	Water	3520C	
440-197764-2	DW-2	Total/NA	Water	3520C	
440-197764-3	DW-3	Total/NA	Water	3520C	
440-197764-4	MW-9	Total/NA	Water	3520C	
440-197764-5	MW-13R	Total/NA	Water	3520C	
440-197764-6	MW-6	Total/NA	Water	3520C	
440-197764-7	MW-14	Total/NA	Water	3520C	
440-197764-8	Duplicate	Total/NA	Water	3520C	
MB 440-445222/1-A	Method Blank	Total/NA	Water	3520C	
LCS 440-445222/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 440-445222/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	

### Analysis Batch: 445710

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197764-1	DW-1	Total/NA	Water	8270C	445222
440-197764-2	DW-2	Total/NA	Water	8270C	445222
440-197764-3	DW-3	Total/NA	Water	8270C	445222
440-197764-4	MW-9	Total/NA	Water	8270C	445222
440-197764-5	MW-13R	Total/NA	Water	8270C	445222
440-197764-6	MW-6	Total/NA	Water	8270C	445222
440-197764-7	MW-14	Total/NA	Water	8270C	445222
440-197764-8	Duplicate	Total/NA	Water	8270C	445222
MB 440-445222/1-A	Method Blank	Total/NA	Water	8270C	445222
LCS 440-445222/2-A	Lab Control Sample	Total/NA	Water	8270C	445222
LCSD 440-445222/3-A	Lab Control Sample Dup	Total/NA	Water	8270C	445222

TestAmerica Irvine



# QC Association Summary

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

TestAmerica Job ID: 440-197764-1

## HPLC/IC

### Analysis Batch: 445016

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197764-1	DW-1	Total/NA	Water	300.0	
440-197764-2	DW-2	Total/NA	Water	300.0	
440-197764-3	DW-3	Total/NA	Water	300.0	
440-197764-4	MW-9	Total/NA	Water	300.0	
440-197764-5	MW-13R	Total/NA	Water	300.0	
440-197764-6	MW-6	Total/NA	Water	300.0	
440-197764-7	MW-14	Total/NA	Water	300.0	
440-197764-8	Duplicate	Total/NA	Water	300.0	
MB 440-445016/7	Method Blank	Total/NA	Water	300.0	
LCS 440-445016/6	Lab Control Sample	Total/NA	Water	300.0	
440-197764-6 MS	MW-6	Total/NA	Water	300.0	
440-197764-6 MSD	MW-6	Total/NA	Water	300.0	

### Analysis Batch: 445017

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197764-1	DW-1	Total/NA	Water	300.0	
440-197764-1	DW-1	Total/NA	Water	300.0	
440-197764-2	DW-2	Total/NA	Water	300.0	
440-197764-2	DW-2	Total/NA	Water	300.0	
440-197764-3	DW-3	Total/NA	Water	300.0	
440-197764-3	DW-3	Total/NA	Water	300.0	
440-197764-4	MW-9	Total/NA	Water	300.0	
440-197764-4	MW-9	Total/NA	Water	300.0	
440-197764-5	MW-13R	Total/NA	Water	300.0	
440-197764-5	MW-13R	Total/NA	Water	300.0	
440-197764-6	MW-6	Total/NA	Water	300.0	
440-197764-6	MW-6	Total/NA	Water	300.0	
440-197764-7	MW-14	Total/NA	Water	300.0	
440-197764-7	MW-14	Total/NA	Water	300.0	
440-197764-8	Duplicate	Total/NA	Water	300.0	
440-197764-8	Duplicate	Total/NA	Water	300.0	
MB 440-445017/7	Method Blank	Total/NA	Water	300.0	
LCS 440-445017/6	Lab Control Sample	Total/NA	Water	300.0	
440-197764-6 MS	MW-6	Total/NA	Water	300.0	
440-197764-6 MSD	MW-6	Total/NA	Water	300.0	

## Metals

### Prep Batch: 445273

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197764-1	DW-1	Total Recoverable	Water	3005A	
440-197764-2	DW-2	Total Recoverable	Water	3005A	
440-197764-3	DW-3	Total Recoverable	Water	3005A	
440-197764-5	MW-13R	Total Recoverable	Water	3005A	
440-197764-6	MW-6	Total Recoverable	Water	3005A	
440-197764-7	MW-14	Total Recoverable	Water	3005A	
440-197764-8	Duplicate	Total Recoverable	Water	3005A	
MB 440-445273/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 440-445273/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
440-197785-F-4-B MS	Matrix Spike	Total Recoverable	Water	3005A	

TestAmerica Irvine

# QC Association Summary

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

TestAmerica Job ID: 440-197764-1

## Metals (Continued)

### Prep Batch: 445273 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197785-F-4-C MSD	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

### Analysis Batch: 445458

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197764-1	DW-1	Total Recoverable	Water	6010B	445273
440-197764-2	DW-2	Total Recoverable	Water	6010B	445273
440-197764-3	DW-3	Total Recoverable	Water	6010B	445273
440-197764-5	MW-13R	Total Recoverable	Water	6010B	445273
440-197764-6	MW-6	Total Recoverable	Water	6010B	445273
440-197764-7	MW-14	Total Recoverable	Water	6010B	445273
440-197764-8	Duplicate	Total Recoverable	Water	6010B	445273
MB 440-445273/1-A	Method Blank	Total Recoverable	Water	6010B	445273
LCS 440-445273/2-A	Lab Control Sample	Total Recoverable	Water	6010B	445273
440-197785-F-4-B MS	Matrix Spike	Total Recoverable	Water	6010B	445273
440-197785-F-4-C MSD	Matrix Spike Duplicate	Total Recoverable	Water	6010B	445273

### Prep Batch: 445489

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197764-4	MW-9	Total Recoverable	Water	3005A	
MB 440-445489/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 440-445489/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
440-197764-4 MS	MW-9	Total Recoverable	Water	3005A	
440-197764-4 MSD	MW-9	Total Recoverable	Water	3005A	

### Analysis Batch: 445800

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197764-4	MW-9	Total Recoverable	Water	6010B	445489
MB 440-445489/1-A	Method Blank	Total Recoverable	Water	6010B	445489
LCS 440-445489/2-A	Lab Control Sample	Total Recoverable	Water	6010B	445489
440-197764-4 MS	MW-9	Total Recoverable	Water	6010B	445489
440-197764-4 MSD	MW-9	Total Recoverable	Water	6010B	445489

## General Chemistry

### Analysis Batch: 445369

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197764-1	DW-1	Total/NA	Water	SM 4500 S2 D	
440-197764-2	DW-2	Total/NA	Water	SM 4500 S2 D	
440-197764-3	DW-3	Total/NA	Water	SM 4500 S2 D	
440-197764-4	MW-9	Total/NA	Water	SM 4500 S2 D	
440-197764-5	MW-13R	Total/NA	Water	SM 4500 S2 D	
440-197764-6	MW-6	Total/NA	Water	SM 4500 S2 D	
440-197764-7	MW-14	Total/NA	Water	SM 4500 S2 D	
440-197764-8	Duplicate	Total/NA	Water	SM 4500 S2 D	
MB 440-445369/3	Method Blank	Total/NA	Water	SM 4500 S2 D	
LCS 440-445369/4	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
LCSD 440-445369/5	Lab Control Sample Dup	Total/NA	Water	SM 4500 S2 D	
440-197761-G-1 MS	Matrix Spike	Total/NA	Water	SM 4500 S2 D	
440-197761-G-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 S2 D	

TestAmerica Irvine

# QC Association Summary

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

TestAmerica Job ID: 440-197764-1

## General Chemistry (Continued)

### Analysis Batch: 445500

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197764-1	DW-1	Total/NA	Water	SM 2540C	
440-197764-2	DW-2	Total/NA	Water	SM 2540C	
440-197764-3	DW-3	Total/NA	Water	SM 2540C	
440-197764-5	MW-13R	Total/NA	Water	SM 2540C	
440-197764-6	MW-6	Total/NA	Water	SM 2540C	
440-197764-8	Duplicate	Total/NA	Water	SM 2540C	
MB 440-445500/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 440-445500/2	Lab Control Sample	Total/NA	Water	SM 2540C	
440-197764-1 DU	DW-1	Total/NA	Water	SM 2540C	

### Analysis Batch: 445505

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197764-1	DW-1	Total/NA	Water	SM 2320B	
440-197764-2	DW-2	Total/NA	Water	SM 2320B	
440-197764-3	DW-3	Total/NA	Water	SM 2320B	
440-197764-4	MW-9	Total/NA	Water	SM 2320B	
440-197764-5	MW-13R	Total/NA	Water	SM 2320B	
440-197764-6	MW-6	Total/NA	Water	SM 2320B	
440-197764-7	MW-14	Total/NA	Water	SM 2320B	
440-197764-8	Duplicate	Total/NA	Water	SM 2320B	
MB 440-445505/3	Method Blank	Total/NA	Water	SM 2320B	
LCS 440-445505/2	Lab Control Sample	Total/NA	Water	SM 2320B	
440-197792-C-1 DU	Duplicate	Total/NA	Water	SM 2320B	

### Analysis Batch: 445633

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197764-1	DW-1	Total/NA	Water	SM 5310C	
440-197764-2	DW-2	Total/NA	Water	SM 5310C	
440-197764-3	DW-3	Total/NA	Water	SM 5310C	
440-197764-4	MW-9	Total/NA	Water	SM 5310C	
440-197764-5	MW-13R	Total/NA	Water	SM 5310C	
440-197764-6	MW-6	Total/NA	Water	SM 5310C	
440-197764-7	MW-14	Total/NA	Water	SM 5310C	
440-197764-8	Duplicate	Total/NA	Water	SM 5310C	
MB 440-445633/6	Method Blank	Total/NA	Water	SM 5310C	
LCS 440-445633/5	Lab Control Sample	Total/NA	Water	SM 5310C	
MRL 440-445633/4	Lab Control Sample	Total/NA	Water	SM 5310C	
440-197764-2 MS	DW-2	Total/NA	Water	SM 5310C	
440-197764-2 MSD	DW-2	Total/NA	Water	SM 5310C	

### Prep Batch: 445664

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197764-2	DW-2	Total/NA	Water	SM 4500 NH3 B	
440-197764-6	MW-6	Total/NA	Water	SM 4500 NH3 B	
440-197764-7	MW-14	Total/NA	Water	SM 4500 NH3 B	
440-197764-8	Duplicate	Total/NA	Water	SM 4500 NH3 B	
MB 440-445664/2-A	Method Blank	Total/NA	Water	SM 4500 NH3 B	
LCS 440-445664/1-A	Lab Control Sample	Total/NA	Water	SM 4500 NH3 B	
440-197764-2 MS	DW-2	Total/NA	Water	SM 4500 NH3 B	
440-197764-2 MSD	DW-2	Total/NA	Water	SM 4500 NH3 B	

TestAmerica Irvine

# QC Association Summary

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

TestAmerica Job ID: 440-197764-1

## General Chemistry (Continued)

### Analysis Batch: 445672

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197764-2	DW-2	Total/NA	Water	SM 4500 NH3 D	445664
440-197764-6	MW-6	Total/NA	Water	SM 4500 NH3 D	445664
440-197764-7	MW-14	Total/NA	Water	SM 4500 NH3 D	445664
440-197764-8	Duplicate	Total/NA	Water	SM 4500 NH3 D	445664
MB 440-445664/2-A	Method Blank	Total/NA	Water	SM 4500 NH3 D	445664
LCS 440-445664/1-A	Lab Control Sample	Total/NA	Water	SM 4500 NH3 D	445664
440-197764-2 MS	DW-2	Total/NA	Water	SM 4500 NH3 D	445664
440-197764-2 MSD	DW-2	Total/NA	Water	SM 4500 NH3 D	445664

### Prep Batch: 445958

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197764-1	DW-1	Total/NA	Water	SM 4500 NH3 B	
440-197764-3	DW-3	Total/NA	Water	SM 4500 NH3 B	
440-197764-4	MW-9	Total/NA	Water	SM 4500 NH3 B	
440-197764-5	MW-13R	Total/NA	Water	SM 4500 NH3 B	
MB 440-445958/2-A	Method Blank	Total/NA	Water	SM 4500 NH3 B	
LCS 440-445958/1-A	Lab Control Sample	Total/NA	Water	SM 4500 NH3 B	
440-197764-3 MS	DW-3	Total/NA	Water	SM 4500 NH3 B	
440-197764-3 MSD	DW-3	Total/NA	Water	SM 4500 NH3 B	
440-197954-D-2-C DU	Duplicate	Total/NA	Water	SM 4500 NH3 B	
440-198068-B-1-B DU	Duplicate	Total/NA	Water	SM 4500 NH3 B	

### Analysis Batch: 445959

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197764-1	DW-1	Total/NA	Water	SM 4500 NH3 D	445958
440-197764-3	DW-3	Total/NA	Water	SM 4500 NH3 D	445958
440-197764-4	MW-9	Total/NA	Water	SM 4500 NH3 D	445958
440-197764-5	MW-13R	Total/NA	Water	SM 4500 NH3 D	445958
MB 440-445958/2-A	Method Blank	Total/NA	Water	SM 4500 NH3 D	445958
LCS 440-445958/1-A	Lab Control Sample	Total/NA	Water	SM 4500 NH3 D	445958
440-197764-3 MS	DW-3	Total/NA	Water	SM 4500 NH3 D	445958
440-197764-3 MSD	DW-3	Total/NA	Water	SM 4500 NH3 D	445958
440-197954-D-2-C DU	Duplicate	Total/NA	Water	SM 4500 NH3 D	445958
440-198068-B-1-B DU	Duplicate	Total/NA	Water	SM 4500 NH3 D	445958

### Analysis Batch: 446195

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197764-4	MW-9	Total/NA	Water	SM 2540C	
440-197764-7	MW-14	Total/NA	Water	SM 2540C	
MB 440-446195/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 440-446195/2	Lab Control Sample	Total/NA	Water	SM 2540C	
440-198078-C-31 DU	Duplicate	Total/NA	Water	SM 2540C	

### Analysis Batch: 446298

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197764-1	DW-1	Total/NA	Water	SM 4500 CO2 C	
440-197764-2	DW-2	Total/NA	Water	SM 4500 CO2 C	
440-197764-3	DW-3	Total/NA	Water	SM 4500 CO2 C	
440-197764-4	MW-9	Total/NA	Water	SM 4500 CO2 C	
440-197764-5	MW-13R	Total/NA	Water	SM 4500 CO2 C	
440-197764-6	MW-6	Total/NA	Water	SM 4500 CO2 C	

TestAmerica Irvine

# QC Association Summary

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

TestAmerica Job ID: 440-197764-1

## General Chemistry (Continued)

### Analysis Batch: 446298 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197764-7	MW-14	Total/NA	Water	SM 4500 CO2 C	
440-197764-8	Duplicate	Total/NA	Water	SM 4500 CO2 C	
MB 440-446298/1	Method Blank	Total/NA	Water	SM 4500 CO2 C	
440-197764-4 DU	MW-9	Total/NA	Water	SM 4500 CO2 C	

### Analysis Batch: 446330

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197764-1	DW-1	Total/NA	Water	410.4	
440-197764-2	DW-2	Total/NA	Water	410.4	
440-197764-3	DW-3	Total/NA	Water	410.4	
440-197764-4	MW-9	Total/NA	Water	410.4	
440-197764-5	MW-13R	Total/NA	Water	410.4	
440-197764-6	MW-6	Total/NA	Water	410.4	
440-197764-7	MW-14	Total/NA	Water	410.4	
440-197764-8	Duplicate	Total/NA	Water	410.4	
MB 440-446330/3	Method Blank	Total/NA	Water	410.4	
LCS 440-446330/4	Lab Control Sample	Total/NA	Water	410.4	
440-197822-A-9 MS	Matrix Spike	Total/NA	Water	410.4	
440-197822-A-9 MSD	Matrix Spike Duplicate	Total/NA	Water	410.4	

# Definitions/Glossary

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

TestAmerica Job ID: 440-197764-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
ID	Analyte identified by RT & presence of single mass ion

### GC/MS VOA TICs

Qualifier	Qualifier Description
J	Indicates an Estimated Value for TICs
T	Result is a tentatively identified compound (TIC) and an estimated value.
N	Presumptive evidence of material.

### HPLC/IC

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
F1	MS and/or MSD Recovery is outside acceptance limits.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
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)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
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)

TestAmerica Irvine

# Definitions/Glossary

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

TestAmerica Job ID: 440-197764-1

---

## Glossary (Continued)

---

Abbreviation	These commonly used abbreviations may or may not be present in this report.
TEQ	Toxicity Equivalent Quotient (Dioxin)

---

1

2

3

4

5

6

7

8

9

10

11

12

13

# Accreditation/Certification Summary

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

TestAmerica Job ID: 440-197764-1

## Laboratory: TestAmerica Irvine

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	State Program	10	CA01531	06-30-18
Arizona	State Program	9	AZ0671	10-14-18
California	LA Cty Sanitation Districts	9	10256	06-30-18
California	State Program	9	CA ELAP 2706	06-30-18
Guam	State Program	9	Cert. No. 17-003R	01-23-18
Hawaii	State Program	9	N/A	01-29-18
Kansas	NELAP	7	E-10420	07-31-18
Nevada	State Program	9	CA015312018-1	07-31-18
New Mexico	State Program	6	N/A	01-29-18 *
Northern Mariana Islands	State Program	9	MP0002	01-29-17 *
Oregon	NELAP	10	4028	01-29-18
USDA	Federal		P330-15-00184	07-08-18
Washington	State Program	10	C900	09-03-18

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

TestAmerica Irvine



**TestAmerica Irvine**  
 17461 Meridian Ave  
 Suite 100  
 Irvine, CA 92614  
 Phone: 949.261.1022 Fax:

**Chain of Custody Record 180965**

**TestAmerica**  
 THE LEADER IN ENVIRONMENTAL TESTING  
 TestAmerica Laboratories, Inc.  
 TAL-8210 (0713)

Regulatory Program:  DW  NPDES  RCRA  Other:

Client Contact  
 Company Name: Geo-Logic Assoc.  
 Address: 1115 S. W. Bernardino St  
 City/State/Zip: S.D. CA 92717  
 Phone: 858-451-1136  
 Fax: 858-451-1087  
 Project Name: Republix Services  
 Site: Swimming Pool Landfill  
 PO#: 158-P0011

Project Manager: Geo Welcoming Site Contact: Ruby Costa Date: 12-5-17  
 Tell/Fax: 858-451-1136 Lab Contact: Geo Tomoya Carrier: TA  
 Analysis Turnaround Time  
 CALENDAR DAYS  WORKING DAYS  
 TAT if different from Below  
 2 weeks  1 week  2 days  1 day

Filtered Sample (Y/N)  Performed MS/MSD (Y/N)  EPA 8260B-VCS  Total Alkalinity  Lead B: Carb. (Bio.)  Ammonia as N (Bio.)  COD (Bio.)  Chloride (Bio.)  Nitrate-N (Bio.)  Carb. (Bio.)  Fe (mg/L)  TDS (Bio.)  Fluoride - (30.2)  Sulfide - (30.2)  CM-4500-CO2C  Carbon Dioxide  BTO 14-Bioxan

COC No: 1 of 1 COCs  
 Sampler: BS, AS  
 For Lab Use Only:  
 Walk-in Client:  
 Lab Sampling:  
 Job / SDG No.:  
 Sample Specific Notes:  
REACTS ARE NOT  
 FAD IN VESSEL

Sample Identification	Sample Date	Sample Time	Sample Type (C-Comp, G-Grab)	Matrix	# of Cont.
DW-1	12-5-17	0912	A	GW	13
DW-2	12-5-17	1026	A	GW	13
DW-3	12-5-17	1250	A	GW	13
MW-9	12-5-17	1210	A	GW	13
MW-13R	12-5-17	1330	A	GW	13
MW-6	12-5-17	0945	A	GW	13
MW-14	12-5-17	0755	A	GW	13
Duplicate				LAB	5
QC#13				REF	5
QC#13				1:1	5

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

Possible Hazard Identification: Please List any 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

Special Instructions/QC Requirements & Comments:

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)  
 Return to Client  Disposal by Lab  Archive for \_\_\_\_\_ Months

440-197764 Chain of Custody

Custody Seal No.: \_\_\_\_\_  
 Relinquished by: [Signature] Yes  No   
 Relinquished by: [Signature] Date/Time: 12/5/17 1350  
 Relinquished by: [Signature] Date/Time: 12/5/17 1700  
 Relinquished by: [Signature] Date/Time: 12/5/17 17:00

Company: Geo-Logic Received by: [Signature] Date/Time: 12/5/17 1350  
 Company: TA Received by: [Signature] Date/Time: 12/5/17 1350  
 Company: Geo-Logic Received in Laboratory by: [Signature] Date/Time: 12/5/17 17:00  
 Company: TA Received in Laboratory by: [Signature] Date/Time: 12/5/17 17:00

1  
2  
3  
4  
5  
6  
7  
8  
9  
10  
11  
12  
13

1.0/1.0/4.0 1.2/1.8 12-16-17

# Login Sample Receipt Checklist

Client: Geo-Logic Associates

Job Number: 440-197764-1

**Login Number: 197764**

**List Source: TestAmerica Irvine**

**List Number: 1**

**Creator: Soderblom, Tim**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> 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 <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Irvine

17461 Derian Ave

Suite 100

Irvine, CA 92614-5817

Tel: (949)261-1022

TestAmerica Job ID: 440-197838-1

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:

12/15/2017 12:04:36 PM

Rossina Tomova, Project Manager I

(949)261-1022

[rossina.tomova@testamericainc.com](mailto:rossina.tomova@testamericainc.com)

### LINKS

Review your project  
results through

**TotalAccess**

Have a Question?



Visit us at:

[www.testamericainc.com](http://www.testamericainc.com)

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

1

2

3

4

5

6

7

8

9

10

11

12

13



# Table of Contents

Cover Page . . . . .	1
Table of Contents . . . . .	2
Sample Summary . . . . .	3
Case Narrative . . . . .	4
Client Sample Results . . . . .	5
Method Summary . . . . .	26
Lab Chronicle . . . . .	27
QC Sample Results . . . . .	32
QC Association Summary . . . . .	48
Definitions/Glossary . . . . .	54
Certification Summary . . . . .	55
Chain of Custody . . . . .	56
Receipt Checklists . . . . .	57

# Sample Summary

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

TestAmerica Job ID: 440-197838-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-197838-1	Extraction Trench	Water	12/06/17 10:00	12/06/17 16:10
440-197838-2	PZ-4	Water	12/06/17 13:09	12/06/17 16:10
440-197838-3	MW-5	Water	12/06/17 11:05	12/06/17 16:10
440-197838-4	PZ-2	Water	12/06/17 08:30	12/06/17 16:10
440-197838-5	MW-2A	Water	12/06/17 11:00	12/06/17 16:10
440-197838-6	MW-2B	Water	12/06/17 12:25	12/06/17 16:10
440-197838-7	DW-4	Water	12/06/17 13:40	12/06/17 16:10
440-197838-8	QCAB	Water	12/06/17 00:01	12/06/17 16:10
440-197838-9	QCTB	Water	12/06/17 00:01	12/06/17 16:10



# Case Narrative

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

TestAmerica Job ID: 440-197838-1

**Job ID: 440-197838-1**

**Laboratory: TestAmerica Irvine**

## Narrative

### Job Narrative 440-197838-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 12/6/2017 4:10 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 0.9° C, 1.4° C and 1.5° C.

#### GC/MS VOA

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

#### GC/MS Semi VOA

Method(s) 8270C: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 440-445466 and analytical batch 440-445905 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

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

#### HPLC/IC

Method(s) 300.0: The following samples was diluted for Fluoride and Bromide due to the nature of the sample matrix: PZ-2 (440-197838-4), MW-2A (440-197838-5), MW-2B (440-197838-6) and DW-4 (440-197838-7). Elevated reporting limits (RLs) are provided.

Method(s) 300.0: Due to the high concentration of Sulfate, the matrix spike / matrix spike duplicate (MS/MSD) for analytical batch 440-445236 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

Method(s) 300.0: The following samples was diluted for Nitrate as N due to the nature of the sample matrix: Extraction Trench (440-197838-1), MW-5 (440-197838-3), PZ-2 (440-197838-4), MW-2A (440-197838-5), MW-2B (440-197838-6) and DW-4 (440-197838-7). Elevated reporting limits (RLs) are provided.

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

#### Metals

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

#### General Chemistry

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

#### Organic Prep

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

#### VOA Prep

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

# Client Sample Results

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

TestAmerica Job ID: 440-197838-1

**Client Sample ID: Extraction Trench**

**Lab Sample ID: 440-197838-1**

**Date Collected: 12/06/17 10:00**

**Matrix: Water**

**Date Received: 12/06/17 16:10**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			12/08/17 09:51	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/08/17 09:51	1
Acrolein	ND		50	2.5	ug/L			12/07/17 12:55	1
Acrylonitrile	ND		50	1.0	ug/L			12/07/17 12:55	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			12/08/17 09:51	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/08/17 09:51	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			12/08/17 09:51	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			12/08/17 09:51	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			12/08/17 09:51	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			12/08/17 09:51	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			12/08/17 09:51	1
1,2-Dibromo-3-Chloropropane	ND	F1	1.0	0.50	ug/L			12/08/17 09:51	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			12/08/17 09:51	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			12/08/17 09:51	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			12/08/17 09:51	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			12/08/17 09:51	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			12/08/17 09:51	1
<b>1,4-Dichlorobenzene</b>	<b>2.5</b>		0.50	0.25	ug/L			12/08/17 09:51	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			12/08/17 09:51	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			12/08/17 09:51	1
2-Hexanone	ND	F1	5.0	2.5	ug/L			12/08/17 09:51	1
Acetone	ND	F1	20	10	ug/L			12/08/17 09:51	1
Acetonitrile	ND	F1	20	10	ug/L			12/08/17 09:51	1
Acrolein	ND		5.0	2.5	ug/L			12/08/17 09:51	1
Acrylonitrile	ND	F1	2.0	1.0	ug/L			12/08/17 09:51	1
Benzene	ND		0.50	0.25	ug/L			12/08/17 09:51	1
Allyl chloride	ND		1.0	0.50	ug/L			12/08/17 09:51	1
Bromoform	ND		1.0	0.40	ug/L			12/08/17 09:51	1
Bromomethane	ND		0.50	0.25	ug/L			12/08/17 09:51	1
Carbon disulfide	ND		1.0	0.50	ug/L			12/08/17 09:51	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			12/08/17 09:51	1
<b>Chlorobenzene</b>	<b>0.29 J</b>		0.50	0.25	ug/L			12/08/17 09:51	1
Bromochloromethane	ND		0.50	0.25	ug/L			12/08/17 09:51	1
Chloroethane	ND		1.0	0.40	ug/L			12/08/17 09:51	1
Chloroform	ND		0.50	0.25	ug/L			12/08/17 09:51	1
Chloromethane	ND		0.50	0.25	ug/L			12/08/17 09:51	1
<b>cis-1,2-Dichloroethene</b>	<b>1.7</b>		0.50	0.25	ug/L			12/08/17 09:51	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/08/17 09:51	1
Dibromochloromethane	ND		0.50	0.25	ug/L			12/08/17 09:51	1
Dibromomethane	ND		0.50	0.25	ug/L			12/08/17 09:51	1
Bromodichloromethane	ND		0.50	0.25	ug/L			12/08/17 09:51	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			12/08/17 09:51	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			12/08/17 09:51	1
Ethylbenzene	ND		0.50	0.25	ug/L			12/08/17 09:51	1
Iodomethane	ND		2.0	1.0	ug/L			12/08/17 09:51	1
Isobutyl alcohol	ND		25	13	ug/L			12/08/17 09:51	1
m,p-Xylene	ND		1.0	0.50	ug/L			12/08/17 09:51	1
Methylacrylonitrile	ND		10	2.5	ug/L			12/08/17 09:51	1
Methyl methacrylate	ND		2.0	1.0	ug/L			12/08/17 09:51	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-197838-1

## Client Sample ID: Extraction Trench

Lab Sample ID: 440-197838-1

Date Collected: 12/06/17 10:00

Matrix: Water

Date Received: 12/06/17 16:10

### Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	ND		2.0	0.88	ug/L			12/08/17 09:51	1
<b>Methyl tert-butyl ether</b>	<b>1.3</b>		0.50	0.25	ug/L			12/08/17 09:51	1
Naphthalene	ND		1.0	0.40	ug/L			12/08/17 09:51	1
o-Xylene	ND		0.50	0.25	ug/L			12/08/17 09:51	1
Propionitrile	ND	F1	20	10	ug/L			12/08/17 09:51	1
Styrene	ND		0.50	0.25	ug/L			12/08/17 09:51	1
<b>t-Butanol</b>	<b>39</b>		10	5.0	ug/L			12/08/17 09:51	1
Tetrachloroethene	ND		0.50	0.25	ug/L			12/08/17 09:51	1
<b>Tetrahydrofuran</b>	<b>12</b>	<b>F1</b>	10	5.0	ug/L			12/08/17 09:51	1
Toluene	ND		0.50	0.25	ug/L			12/08/17 09:51	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/08/17 09:51	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/08/17 09:51	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			12/08/17 09:51	1
Trichloroethene	ND		0.50	0.25	ug/L			12/08/17 09:51	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			12/08/17 09:51	1
Vinyl acetate	ND	F1	4.0	2.0	ug/L			12/08/17 09:51	1
Vinyl chloride	ND		0.50	0.25	ug/L			12/08/17 09:51	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			12/08/17 09:51	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			12/08/17 09:51	1
4-Methyl-2-pentanone (MIBK)	ND	F1	5.0	2.5	ug/L			12/08/17 09:51	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Chlorodifluoromethane	1.5	J	ug/L		1.82	75-45-6		12/08/17 09:51	1
Ethyl ether	1.8	J	ug/L		3.29	60-29-7		12/08/17 09:51	1
Tentatively Identified Compound	None		ug/L					12/08/17 09:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99		80 - 128		12/07/17 12:55	1
4-Bromofluorobenzene (Surr)	95		80 - 120		12/07/17 12:55	1
Toluene-d8 (Surr)	109		80 - 128		12/08/17 09:51	1
4-Bromofluorobenzene (Surr)	98		80 - 120		12/08/17 09:51	1
Dibromofluoromethane (Surr)	103		76 - 132		12/07/17 12:55	1
Dibromofluoromethane (Surr)	94		76 - 132		12/08/17 09:51	1

### Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>1,4-Dioxane</b>	<b>16</b>		1.0	0.26	ug/L		12/07/17 09:01	12/10/17 01:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	52		30 - 120	12/07/17 09:01	12/10/17 01:57	1

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Bromide</b>	<b>2.2</b>		1.0	0.50	mg/L			12/06/17 17:49	2
Nitrate as N	ND		0.22	0.11	mg/L			12/06/17 17:49	2
<b>Chloride</b>	<b>130</b>		50	25	mg/L			12/06/17 18:03	100
<b>Fluoride</b>	<b>1.3</b>		1.0	0.50	mg/L			12/06/17 17:49	2
<b>Sulfate</b>	<b>1700</b>		50	25	mg/L			12/06/17 18:03	100

TestAmerica Irvine



# Client Sample Results

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

TestAmerica Job ID: 440-197838-1

## Client Sample ID: Extraction Trench

Lab Sample ID: 440-197838-1

Date Collected: 12/06/17 10:00

Matrix: Water

Date Received: 12/06/17 16:10

### Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	1.1		0.050	0.025	mg/L		12/10/17 06:47	12/12/17 17:47	1
Calcium	410		0.10	0.050	mg/L		12/10/17 06:47	12/12/17 17:47	1
Iron	51		0.10	0.050	mg/L		12/10/17 06:47	12/12/17 17:47	1
Magnesium	220		0.020	0.010	mg/L		12/10/17 06:47	12/12/17 17:47	1
Manganese	5.3		0.020	0.015	mg/L		12/10/17 06:47	12/12/17 17:47	1
Potassium	20		0.50	0.25	mg/L		12/10/17 06:47	12/12/17 17:47	1
Sodium	310		0.50	0.26	mg/L		12/10/17 06:47	12/12/17 17:47	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	78		20	10	mg/L			12/14/17 08:53	1
Total Dissolved Solids	3600		50	25	mg/L			12/11/17 09:57	1
Ammonia (as N)	8.2		2.5	0.50	mg/L		12/11/17 03:30	12/11/17 04:30	1
Total Sulfide	ND		0.050	0.027	mg/L			12/07/17 18:04	1
Total Organic Carbon	49		0.50	0.25	mg/L			12/12/17 07:41	5
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	810		4.0	4.0	mg/L			12/07/17 09:31	1
Bicarbonate Alkalinity as CaCO3	810		4.0	4.0	mg/L			12/07/17 09:31	1
Carbon Dioxide, Free	160		2.0	2.0	mg/L			12/14/17 15:31	1

## Client Sample ID: PZ-4

Lab Sample ID: 440-197838-2

Date Collected: 12/06/17 13:09

Matrix: Water

Date Received: 12/06/17 16:10

### Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			12/08/17 12:36	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/08/17 12:36	1
Acrolein	ND		50	2.5	ug/L			12/07/17 13:20	1
Acrylonitrile	ND		50	1.0	ug/L			12/07/17 13:20	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			12/08/17 12:36	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/08/17 12:36	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			12/08/17 12:36	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			12/08/17 12:36	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			12/08/17 12:36	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			12/08/17 12:36	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			12/08/17 12:36	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			12/08/17 12:36	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			12/08/17 12:36	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			12/08/17 12:36	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			12/08/17 12:36	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			12/08/17 12:36	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			12/08/17 12:36	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			12/08/17 12:36	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			12/08/17 12:36	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			12/08/17 12:36	1
2-Hexanone	ND		5.0	2.5	ug/L			12/08/17 12:36	1
Acetone	ND		20	10	ug/L			12/08/17 12:36	1
Acetonitrile	ND		20	10	ug/L			12/08/17 12:36	1
Acrolein	ND		5.0	2.5	ug/L			12/08/17 12:36	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-197838-1

**Client Sample ID: PZ-4**

**Lab Sample ID: 440-197838-2**

**Date Collected: 12/06/17 13:09**

**Matrix: Water**

**Date Received: 12/06/17 16:10**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acrylonitrile	ND		2.0	1.0	ug/L			12/08/17 12:36	1
Benzene	ND		0.50	0.25	ug/L			12/08/17 12:36	1
Allyl chloride	ND		1.0	0.50	ug/L			12/08/17 12:36	1
Bromoform	ND		1.0	0.40	ug/L			12/08/17 12:36	1
Bromomethane	ND		0.50	0.25	ug/L			12/08/17 12:36	1
Carbon disulfide	ND		1.0	0.50	ug/L			12/08/17 12:36	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			12/08/17 12:36	1
Chlorobenzene	ND		0.50	0.25	ug/L			12/08/17 12:36	1
Bromochloromethane	ND		0.50	0.25	ug/L			12/08/17 12:36	1
Chloroethane	ND		1.0	0.40	ug/L			12/08/17 12:36	1
Chloroform	ND		0.50	0.25	ug/L			12/08/17 12:36	1
Chloromethane	ND		0.50	0.25	ug/L			12/08/17 12:36	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/08/17 12:36	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/08/17 12:36	1
Dibromochloromethane	ND		0.50	0.25	ug/L			12/08/17 12:36	1
Dibromomethane	ND		0.50	0.25	ug/L			12/08/17 12:36	1
Bromodichloromethane	ND		0.50	0.25	ug/L			12/08/17 12:36	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			12/08/17 12:36	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			12/08/17 12:36	1
Ethylbenzene	ND		0.50	0.25	ug/L			12/08/17 12:36	1
Iodomethane	ND		2.0	1.0	ug/L			12/08/17 12:36	1
Isobutyl alcohol	ND		25	13	ug/L			12/08/17 12:36	1
m,p-Xylene	ND		1.0	0.50	ug/L			12/08/17 12:36	1
Methylacrylonitrile	ND		10	2.5	ug/L			12/08/17 12:36	1
Methyl methacrylate	ND		2.0	1.0	ug/L			12/08/17 12:36	1
Methylene Chloride	ND		2.0	0.88	ug/L			12/08/17 12:36	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			12/08/17 12:36	1
Naphthalene	ND		1.0	0.40	ug/L			12/08/17 12:36	1
o-Xylene	ND		0.50	0.25	ug/L			12/08/17 12:36	1
Propionitrile	ND		20	10	ug/L			12/08/17 12:36	1
Styrene	ND		0.50	0.25	ug/L			12/08/17 12:36	1
t-Butanol	ND		10	5.0	ug/L			12/08/17 12:36	1
Tetrachloroethene	ND		0.50	0.25	ug/L			12/08/17 12:36	1
Tetrahydrofuran	ND		10	5.0	ug/L			12/08/17 12:36	1
Toluene	ND		0.50	0.25	ug/L			12/08/17 12:36	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/08/17 12:36	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/08/17 12:36	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			12/08/17 12:36	1
Trichloroethene	ND		0.50	0.25	ug/L			12/08/17 12:36	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			12/08/17 12:36	1
Vinyl acetate	ND		4.0	2.0	ug/L			12/08/17 12:36	1
Vinyl chloride	ND		0.50	0.25	ug/L			12/08/17 12:36	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			12/08/17 12:36	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			12/08/17 12:36	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			12/08/17 12:36	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	8.7	T J	ug/L		5.94			12/08/17 12:36	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-197838-1

**Client Sample ID: PZ-4**

**Lab Sample ID: 440-197838-2**

Date Collected: 12/06/17 13:09

Matrix: Water

Date Received: 12/06/17 16:10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	102		80 - 128		12/07/17 13:20	1
4-Bromofluorobenzene (Surr)	94		80 - 120		12/07/17 13:20	1
Toluene-d8 (Surr)	106		80 - 128		12/08/17 12:36	1
4-Bromofluorobenzene (Surr)	97		80 - 120		12/08/17 12:36	1
Dibromofluoromethane (Surr)	104		76 - 132		12/07/17 13:20	1
Dibromofluoromethane (Surr)	94		76 - 132		12/08/17 12:36	1

### Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		1.1	0.26	ug/L		12/07/17 09:01	12/10/17 02:19	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	66		30 - 120	12/07/17 09:01	12/10/17 02:19	1

### Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		0.50	0.25	mg/L			12/06/17 18:17	1
Nitrate as N	ND		0.11	0.055	mg/L			12/06/17 18:17	1
Chloride	8.6		0.50	0.25	mg/L			12/06/17 18:17	1
Fluoride	0.98		0.50	0.25	mg/L			12/06/17 18:17	1
Sulfate	540		25	13	mg/L			12/06/17 18:32	50

### Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.16		0.050	0.025	mg/L		12/10/17 06:47	12/12/17 17:45	1
Calcium	110		0.10	0.050	mg/L		12/10/17 06:47	12/12/17 17:45	1
Iron	1.0		0.10	0.050	mg/L		12/10/17 06:47	12/12/17 17:45	1
Magnesium	70		0.020	0.010	mg/L		12/10/17 06:47	12/12/17 17:45	1
Manganese	0.10		0.020	0.015	mg/L		12/10/17 06:47	12/12/17 17:45	1
Potassium	4.0		0.50	0.25	mg/L		12/10/17 06:47	12/12/17 17:45	1
Sodium	95		0.50	0.26	mg/L		12/10/17 06:47	12/12/17 17:45	1

### General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		20	10	mg/L			12/14/17 08:53	1
Total Dissolved Solids	1100		10	5.0	mg/L			12/11/17 09:57	1
Ammonia (as N)	2.4		0.50	0.10	mg/L		12/07/17 03:30	12/07/17 05:00	1
Total Sulfide	ND		0.050	0.027	mg/L			12/07/17 18:05	1
Total Organic Carbon	1.4		0.10	0.050	mg/L			12/07/17 12:19	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	330		4.0	4.0	mg/L			12/07/17 09:40	1
Bicarbonate Alkalinity as CaCO3	330		4.0	4.0	mg/L			12/07/17 09:40	1
Carbon Dioxide, Free	30		2.0	2.0	mg/L			12/14/17 15:31	1

**Client Sample ID: MW-5**

**Lab Sample ID: 440-197838-3**

Date Collected: 12/06/17 11:05

Matrix: Water

Date Received: 12/06/17 16:10

### Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			12/08/17 13:03	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-197838-1

**Client Sample ID: MW-5**  
**Date Collected: 12/06/17 11:05**  
**Date Received: 12/06/17 16:10**

**Lab Sample ID: 440-197838-3**  
**Matrix: Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/08/17 13:03	1
Acrolein	ND		50	2.5	ug/L			12/07/17 13:45	1
Acrylonitrile	ND		50	1.0	ug/L			12/07/17 13:45	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			12/08/17 13:03	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/08/17 13:03	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			12/08/17 13:03	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			12/08/17 13:03	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			12/08/17 13:03	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			12/08/17 13:03	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			12/08/17 13:03	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			12/08/17 13:03	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			12/08/17 13:03	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			12/08/17 13:03	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			12/08/17 13:03	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			12/08/17 13:03	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			12/08/17 13:03	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			12/08/17 13:03	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			12/08/17 13:03	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			12/08/17 13:03	1
2-Hexanone	ND		5.0	2.5	ug/L			12/08/17 13:03	1
Acetone	ND		20	10	ug/L			12/08/17 13:03	1
Acetonitrile	ND		20	10	ug/L			12/08/17 13:03	1
Acrolein	ND		5.0	2.5	ug/L			12/08/17 13:03	1
Acrylonitrile	ND		2.0	1.0	ug/L			12/08/17 13:03	1
Benzene	ND		0.50	0.25	ug/L			12/08/17 13:03	1
Allyl chloride	ND		1.0	0.50	ug/L			12/08/17 13:03	1
Bromoform	ND		1.0	0.40	ug/L			12/08/17 13:03	1
Bromomethane	ND		0.50	0.25	ug/L			12/08/17 13:03	1
Carbon disulfide	ND		1.0	0.50	ug/L			12/08/17 13:03	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			12/08/17 13:03	1
Chlorobenzene	ND		0.50	0.25	ug/L			12/08/17 13:03	1
Bromochloromethane	ND		0.50	0.25	ug/L			12/08/17 13:03	1
Chloroethane	ND		1.0	0.40	ug/L			12/08/17 13:03	1
Chloroform	ND		0.50	0.25	ug/L			12/08/17 13:03	1
Chloromethane	ND		0.50	0.25	ug/L			12/08/17 13:03	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/08/17 13:03	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/08/17 13:03	1
Dibromochloromethane	ND		0.50	0.25	ug/L			12/08/17 13:03	1
Dibromomethane	ND		0.50	0.25	ug/L			12/08/17 13:03	1
Bromodichloromethane	ND		0.50	0.25	ug/L			12/08/17 13:03	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			12/08/17 13:03	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			12/08/17 13:03	1
Ethylbenzene	ND		0.50	0.25	ug/L			12/08/17 13:03	1
Iodomethane	ND		2.0	1.0	ug/L			12/08/17 13:03	1
Isobutyl alcohol	ND		25	13	ug/L			12/08/17 13:03	1
m,p-Xylene	ND		1.0	0.50	ug/L			12/08/17 13:03	1
Methylacrylonitrile	ND		10	2.5	ug/L			12/08/17 13:03	1
Methyl methacrylate	ND		2.0	1.0	ug/L			12/08/17 13:03	1
Methylene Chloride	ND		2.0	0.88	ug/L			12/08/17 13:03	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-197838-1

**Client Sample ID: MW-5**  
**Date Collected: 12/06/17 11:05**  
**Date Received: 12/06/17 16:10**

**Lab Sample ID: 440-197838-3**  
**Matrix: Water**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			12/08/17 13:03	1
Naphthalene	ND		1.0	0.40	ug/L			12/08/17 13:03	1
o-Xylene	ND		0.50	0.25	ug/L			12/08/17 13:03	1
Propionitrile	ND		20	10	ug/L			12/08/17 13:03	1
Styrene	ND		0.50	0.25	ug/L			12/08/17 13:03	1
t-Butanol	ND		10	5.0	ug/L			12/08/17 13:03	1
Tetrachloroethene	ND		0.50	0.25	ug/L			12/08/17 13:03	1
Tetrahydrofuran	ND		10	5.0	ug/L			12/08/17 13:03	1
Toluene	ND		0.50	0.25	ug/L			12/08/17 13:03	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/08/17 13:03	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/08/17 13:03	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			12/08/17 13:03	1
Trichloroethene	ND		0.50	0.25	ug/L			12/08/17 13:03	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			12/08/17 13:03	1
Vinyl acetate	ND		4.0	2.0	ug/L			12/08/17 13:03	1
Vinyl chloride	ND		0.50	0.25	ug/L			12/08/17 13:03	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			12/08/17 13:03	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			12/08/17 13:03	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			12/08/17 13:03	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	3.8	T J	ug/L		4.35			12/08/17 13:03	1
Unknown	8.7	T J	ug/L		5.94			12/08/17 13:03	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	102		80 - 128		12/07/17 13:45	1
4-Bromofluorobenzene (Surr)	93		80 - 120		12/07/17 13:45	1
Toluene-d8 (Surr)	107		80 - 128		12/08/17 13:03	1
4-Bromofluorobenzene (Surr)	99		80 - 120		12/08/17 13:03	1
Dibromofluoromethane (Surr)	101		76 - 132		12/07/17 13:45	1
Dibromofluoromethane (Surr)	95		76 - 132		12/08/17 13:03	1

## Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	15		1.0	0.25	ug/L		12/07/17 09:01	12/11/17 16:33	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	57		30 - 120	12/07/17 09:01	12/11/17 16:33	1

## Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	3.9		1.0	0.50	mg/L			12/06/17 18:46	2
Nitrate as N	ND		0.22	0.11	mg/L			12/06/17 18:46	2
Chloride	270		50	25	mg/L			12/06/17 19:00	100
Fluoride	2.0		1.0	0.50	mg/L			12/06/17 18:46	2
Sulfate	1700		50	25	mg/L			12/06/17 19:00	100

## Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.99		0.050	0.025	mg/L		12/10/17 06:47	12/12/17 17:43	1
Calcium	450		0.10	0.050	mg/L		12/10/17 06:47	12/12/17 17:43	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-197838-1

**Client Sample ID: MW-5**  
**Date Collected: 12/06/17 11:05**  
**Date Received: 12/06/17 16:10**

**Lab Sample ID: 440-197838-3**  
**Matrix: Water**

**Method: 6010B - Metals (ICP) - Total Recoverable (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	21		0.10	0.050	mg/L		12/10/17 06:47	12/12/17 17:43	1
Magnesium	210		0.020	0.010	mg/L		12/10/17 06:47	12/12/17 17:43	1
Manganese	4.8		0.020	0.015	mg/L		12/10/17 06:47	12/12/17 17:43	1
Potassium	29		0.50	0.25	mg/L		12/10/17 06:47	12/12/17 17:43	1
Sodium	270		0.50	0.26	mg/L		12/10/17 06:47	12/12/17 17:43	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	73		20	10	mg/L			12/14/17 08:53	1
Total Dissolved Solids	3600		50	25	mg/L			12/11/17 09:57	1
Ammonia (as N)	9.6		2.5	0.50	mg/L		12/11/17 03:30	12/11/17 04:30	1
Total Sulfide	ND		0.050	0.027	mg/L			12/07/17 18:05	1
Total Organic Carbon	34		0.50	0.25	mg/L			12/12/17 08:14	5

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	680		4.0	4.0	mg/L			12/07/17 09:54	1
Bicarbonate Alkalinity as CaCO3	680		4.0	4.0	mg/L			12/07/17 09:54	1
Carbon Dioxide, Free	86		2.0	2.0	mg/L			12/14/17 15:31	1

**Client Sample ID: PZ-2**  
**Date Collected: 12/06/17 08:30**  
**Date Received: 12/06/17 16:10**

**Lab Sample ID: 440-197838-4**  
**Matrix: Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			12/08/17 13:31	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/08/17 13:31	1
Acrolein	ND		50	2.5	ug/L			12/07/17 14:11	1
Acrylonitrile	ND		50	1.0	ug/L			12/07/17 14:11	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			12/08/17 13:31	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/08/17 13:31	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			12/08/17 13:31	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			12/08/17 13:31	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			12/08/17 13:31	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			12/08/17 13:31	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			12/08/17 13:31	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			12/08/17 13:31	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			12/08/17 13:31	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			12/08/17 13:31	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			12/08/17 13:31	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			12/08/17 13:31	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			12/08/17 13:31	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			12/08/17 13:31	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			12/08/17 13:31	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			12/08/17 13:31	1
2-Hexanone	ND		5.0	2.5	ug/L			12/08/17 13:31	1
Acetone	ND		20	10	ug/L			12/08/17 13:31	1
Acetonitrile	ND		20	10	ug/L			12/08/17 13:31	1
Acrolein	ND		5.0	2.5	ug/L			12/08/17 13:31	1
Acrylonitrile	ND		2.0	1.0	ug/L			12/08/17 13:31	1
Benzene	ND		0.50	0.25	ug/L			12/08/17 13:31	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-197838-1

**Client Sample ID: PZ-2**

**Lab Sample ID: 440-197838-4**

**Date Collected: 12/06/17 08:30**

**Matrix: Water**

**Date Received: 12/06/17 16:10**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Allyl chloride	ND		1.0	0.50	ug/L			12/08/17 13:31	1
Bromoform	ND		1.0	0.40	ug/L			12/08/17 13:31	1
Bromomethane	ND		0.50	0.25	ug/L			12/08/17 13:31	1
Carbon disulfide	ND		1.0	0.50	ug/L			12/08/17 13:31	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			12/08/17 13:31	1
Chlorobenzene	ND		0.50	0.25	ug/L			12/08/17 13:31	1
Bromochloromethane	ND		0.50	0.25	ug/L			12/08/17 13:31	1
Chloroethane	ND		1.0	0.40	ug/L			12/08/17 13:31	1
Chloroform	ND		0.50	0.25	ug/L			12/08/17 13:31	1
Chloromethane	ND		0.50	0.25	ug/L			12/08/17 13:31	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/08/17 13:31	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/08/17 13:31	1
Dibromochloromethane	ND		0.50	0.25	ug/L			12/08/17 13:31	1
Dibromomethane	ND		0.50	0.25	ug/L			12/08/17 13:31	1
Bromodichloromethane	ND		0.50	0.25	ug/L			12/08/17 13:31	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			12/08/17 13:31	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			12/08/17 13:31	1
Ethylbenzene	ND		0.50	0.25	ug/L			12/08/17 13:31	1
Iodomethane	ND		2.0	1.0	ug/L			12/08/17 13:31	1
Isobutyl alcohol	ND		25	13	ug/L			12/08/17 13:31	1
m,p-Xylene	ND		1.0	0.50	ug/L			12/08/17 13:31	1
Methylacrylonitrile	ND		10	2.5	ug/L			12/08/17 13:31	1
Methyl methacrylate	ND		2.0	1.0	ug/L			12/08/17 13:31	1
Methylene Chloride	ND		2.0	0.88	ug/L			12/08/17 13:31	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			12/08/17 13:31	1
Naphthalene	ND		1.0	0.40	ug/L			12/08/17 13:31	1
o-Xylene	ND		0.50	0.25	ug/L			12/08/17 13:31	1
Propionitrile	ND		20	10	ug/L			12/08/17 13:31	1
Styrene	ND		0.50	0.25	ug/L			12/08/17 13:31	1
t-Butanol	ND		10	5.0	ug/L			12/08/17 13:31	1
Tetrachloroethene	ND		0.50	0.25	ug/L			12/08/17 13:31	1
Tetrahydrofuran	ND		10	5.0	ug/L			12/08/17 13:31	1
Toluene	ND		0.50	0.25	ug/L			12/08/17 13:31	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/08/17 13:31	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/08/17 13:31	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			12/08/17 13:31	1
Trichloroethene	ND		0.50	0.25	ug/L			12/08/17 13:31	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			12/08/17 13:31	1
Vinyl acetate	ND		4.0	2.0	ug/L			12/08/17 13:31	1
Vinyl chloride	ND		0.50	0.25	ug/L			12/08/17 13:31	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			12/08/17 13:31	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			12/08/17 13:31	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			12/08/17 13:31	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	8.6	T J	ug/L		5.94			12/08/17 13:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	101		80 - 128		12/07/17 14:11	1
4-Bromofluorobenzene (Surr)	95		80 - 120		12/07/17 14:11	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-197838-1

**Client Sample ID: PZ-2**

**Date Collected: 12/06/17 08:30**

**Date Received: 12/06/17 16:10**

**Lab Sample ID: 440-197838-4**

**Matrix: Water**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	109		80 - 128		12/08/17 13:31	1
4-Bromofluorobenzene (Surr)	96		80 - 120		12/08/17 13:31	1
Dibromofluoromethane (Surr)	100		76 - 132		12/07/17 14:11	1
Dibromofluoromethane (Surr)	95		76 - 132		12/08/17 13:31	1

## Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		1.0	0.25	ug/L		12/07/17 09:01	12/11/17 16:55	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	65		30 - 120	12/07/17 09:01	12/11/17 16:55	1

## Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		5.0	2.5	mg/L			12/06/17 19:15	10
Nitrate as N	ND		1.1	0.55	mg/L			12/06/17 19:15	10
<b>Chloride</b>	<b>11</b>		5.0	2.5	mg/L			12/06/17 19:15	10
Fluoride	ND		5.0	2.5	mg/L			12/06/17 19:15	10
<b>Sulfate</b>	<b>2600</b>		100	50	mg/L			12/06/17 19:29	200

## Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Boron</b>	<b>1.4</b>		0.050	0.025	mg/L		12/10/17 06:47	12/11/17 16:50	1
<b>Calcium</b>	<b>14</b>		0.10	0.050	mg/L		12/10/17 06:47	12/11/17 16:50	1
Iron	ND		0.10	0.050	mg/L		12/10/17 06:47	12/11/17 16:50	1
<b>Magnesium</b>	<b>12</b>		0.020	0.010	mg/L		12/10/17 06:47	12/11/17 16:50	1
<b>Manganese</b>	<b>0.029</b>		0.020	0.015	mg/L		12/10/17 06:47	12/11/17 16:50	1
<b>Potassium</b>	<b>4.7</b>		0.50	0.25	mg/L		12/10/17 06:47	12/11/17 16:50	1
<b>Sodium</b>	<b>1300</b>		1.0	0.52	mg/L		12/10/17 06:47	12/12/17 17:41	2

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		20	10	mg/L			12/14/17 08:53	1
<b>Total Dissolved Solids</b>	<b>4100</b>		100	50	mg/L			12/11/17 09:57	1
<b>Ammonia (as N)</b>	<b>3.4</b>		0.50	0.10	mg/L		12/07/17 03:30	12/07/17 05:00	1
Total Sulfide	ND		0.050	0.027	mg/L			12/07/17 18:05	1
<b>Total Organic Carbon</b>	<b>2.6</b>		0.10	0.050	mg/L			12/07/17 12:48	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Alkalinity as CaCO3</b>	<b>360</b>		4.0	4.0	mg/L			12/07/17 10:03	1
<b>Bicarbonate Alkalinity as CaCO3</b>	<b>330</b>		4.0	4.0	mg/L			12/07/17 10:03	1
Carbon Dioxide, Free	ND		2.0	2.0	mg/L			12/14/17 15:31	1

**Client Sample ID: MW-2A**

**Date Collected: 12/06/17 11:00**

**Date Received: 12/06/17 16:10**

**Lab Sample ID: 440-197838-5**

**Matrix: Water**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			12/08/17 13:58	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/08/17 13:58	1

TestAmerica Irvine



# Client Sample Results

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

TestAmerica Job ID: 440-197838-1

**Client Sample ID: MW-2A**

**Lab Sample ID: 440-197838-5**

**Date Collected: 12/06/17 11:00**

**Matrix: Water**

**Date Received: 12/06/17 16:10**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acrolein	ND		50	2.5	ug/L			12/07/17 14:37	1
Acrylonitrile	ND		50	1.0	ug/L			12/07/17 14:37	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			12/08/17 13:58	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/08/17 13:58	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			12/08/17 13:58	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			12/08/17 13:58	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			12/08/17 13:58	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			12/08/17 13:58	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			12/08/17 13:58	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			12/08/17 13:58	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			12/08/17 13:58	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			12/08/17 13:58	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			12/08/17 13:58	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			12/08/17 13:58	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			12/08/17 13:58	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			12/08/17 13:58	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			12/08/17 13:58	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			12/08/17 13:58	1
2-Hexanone	ND		5.0	2.5	ug/L			12/08/17 13:58	1
Acetone	ND		20	10	ug/L			12/08/17 13:58	1
Acetonitrile	ND		20	10	ug/L			12/08/17 13:58	1
Acrolein	ND		5.0	2.5	ug/L			12/08/17 13:58	1
Acrylonitrile	ND		2.0	1.0	ug/L			12/08/17 13:58	1
Benzene	ND		0.50	0.25	ug/L			12/08/17 13:58	1
Allyl chloride	ND		1.0	0.50	ug/L			12/08/17 13:58	1
Bromoform	ND		1.0	0.40	ug/L			12/08/17 13:58	1
Bromomethane	ND		0.50	0.25	ug/L			12/08/17 13:58	1
Carbon disulfide	ND		1.0	0.50	ug/L			12/08/17 13:58	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			12/08/17 13:58	1
Chlorobenzene	ND		0.50	0.25	ug/L			12/08/17 13:58	1
Bromochloromethane	ND		0.50	0.25	ug/L			12/08/17 13:58	1
Chloroethane	ND		1.0	0.40	ug/L			12/08/17 13:58	1
Chloroform	ND		0.50	0.25	ug/L			12/08/17 13:58	1
Chloromethane	ND		0.50	0.25	ug/L			12/08/17 13:58	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/08/17 13:58	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/08/17 13:58	1
Dibromochloromethane	ND		0.50	0.25	ug/L			12/08/17 13:58	1
Dibromomethane	ND		0.50	0.25	ug/L			12/08/17 13:58	1
Bromodichloromethane	ND		0.50	0.25	ug/L			12/08/17 13:58	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			12/08/17 13:58	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			12/08/17 13:58	1
Ethylbenzene	ND		0.50	0.25	ug/L			12/08/17 13:58	1
Iodomethane	ND		2.0	1.0	ug/L			12/08/17 13:58	1
Isobutyl alcohol	ND		25	13	ug/L			12/08/17 13:58	1
m,p-Xylene	ND		1.0	0.50	ug/L			12/08/17 13:58	1
Methylacrylonitrile	ND		10	2.5	ug/L			12/08/17 13:58	1
Methyl methacrylate	ND		2.0	1.0	ug/L			12/08/17 13:58	1
Methylene Chloride	ND		2.0	0.88	ug/L			12/08/17 13:58	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			12/08/17 13:58	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-197838-1

**Client Sample ID: MW-2A**

**Date Collected: 12/06/17 11:00**

**Date Received: 12/06/17 16:10**

**Lab Sample ID: 440-197838-5**

**Matrix: Water**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		1.0	0.40	ug/L			12/08/17 13:58	1
o-Xylene	ND		0.50	0.25	ug/L			12/08/17 13:58	1
Propionitrile	ND		20	10	ug/L			12/08/17 13:58	1
Styrene	ND		0.50	0.25	ug/L			12/08/17 13:58	1
t-Butanol	ND		10	5.0	ug/L			12/08/17 13:58	1
Tetrachloroethene	ND		0.50	0.25	ug/L			12/08/17 13:58	1
Tetrahydrofuran	ND		10	5.0	ug/L			12/08/17 13:58	1
Toluene	ND		0.50	0.25	ug/L			12/08/17 13:58	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/08/17 13:58	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/08/17 13:58	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			12/08/17 13:58	1
Trichloroethene	ND		0.50	0.25	ug/L			12/08/17 13:58	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			12/08/17 13:58	1
Vinyl acetate	ND		4.0	2.0	ug/L			12/08/17 13:58	1
Vinyl chloride	ND		0.50	0.25	ug/L			12/08/17 13:58	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			12/08/17 13:58	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			12/08/17 13:58	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			12/08/17 13:58	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	8.7	T J	ug/L		5.94			12/08/17 13:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	101		80 - 128		12/07/17 14:37	1
4-Bromofluorobenzene (Surr)	94		80 - 120		12/07/17 14:37	1
Toluene-d8 (Surr)	109		80 - 128		12/08/17 13:58	1
4-Bromofluorobenzene (Surr)	98		80 - 120		12/08/17 13:58	1
Dibromofluoromethane (Surr)	103		76 - 132		12/07/17 14:37	1
Dibromofluoromethane (Surr)	96		76 - 132		12/08/17 13:58	1

## Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		1.1	0.26	ug/L		12/07/17 09:01	12/11/17 17:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	62		30 - 120	12/07/17 09:01	12/11/17 17:46	1

## Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		1.0	0.50	mg/L			12/06/17 19:43	2
Nitrate as N	ND		0.22	0.11	mg/L			12/06/17 19:43	2
<b>Chloride</b>	<b>14</b>		1.0	0.50	mg/L			12/06/17 19:43	2
<b>Fluoride</b>	<b>0.98 J</b>		1.0	0.50	mg/L			12/06/17 19:43	2
<b>Sulfate</b>	<b>1600</b>		50	25	mg/L			12/06/17 19:58	100

## Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Boron</b>	<b>0.49</b>		0.050	0.025	mg/L		12/10/17 06:47	12/12/17 17:38	1
<b>Calcium</b>	<b>180</b>		0.10	0.050	mg/L		12/10/17 06:47	12/12/17 17:38	1
<b>Iron</b>	<b>2.9</b>		0.10	0.050	mg/L		12/10/17 06:47	12/12/17 17:38	1
<b>Magnesium</b>	<b>110</b>		0.020	0.010	mg/L		12/10/17 06:47	12/12/17 17:38	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-197838-1

**Client Sample ID: MW-2A**

**Date Collected: 12/06/17 11:00**

**Date Received: 12/06/17 16:10**

**Lab Sample ID: 440-197838-5**

**Matrix: Water**

**Method: 6010B - Metals (ICP) - Total Recoverable (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	0.45		0.020	0.015	mg/L		12/10/17 06:47	12/12/17 17:38	1
Potassium	4.3		0.50	0.25	mg/L		12/10/17 06:47	12/12/17 17:38	1
Sodium	330		0.50	0.26	mg/L		12/10/17 06:47	12/12/17 17:38	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		20	10	mg/L			12/14/17 08:53	1
Total Dissolved Solids	2500		20	10	mg/L			12/11/17 09:57	1
Ammonia (as N)	3.4		0.50	0.10	mg/L		12/07/17 03:30	12/07/17 05:00	1
Total Sulfide	ND		0.050	0.027	mg/L			12/07/17 18:05	1
Total Organic Carbon	2.4		0.10	0.050	mg/L			12/07/17 13:25	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	330		4.0	4.0	mg/L			12/07/17 10:13	1
Bicarbonate Alkalinity as CaCO3	330		4.0	4.0	mg/L			12/07/17 10:13	1
Carbon Dioxide, Free	49		2.0	2.0	mg/L			12/14/17 15:31	1

**Client Sample ID: MW-2B**

**Date Collected: 12/06/17 12:25**

**Date Received: 12/06/17 16:10**

**Lab Sample ID: 440-197838-6**

**Matrix: Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			12/08/17 14:26	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/08/17 14:26	1
Acrolein	ND		50	2.5	ug/L			12/07/17 15:02	1
Acrylonitrile	ND		50	1.0	ug/L			12/07/17 15:02	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			12/08/17 14:26	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/08/17 14:26	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			12/08/17 14:26	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			12/08/17 14:26	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			12/08/17 14:26	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			12/08/17 14:26	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			12/08/17 14:26	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			12/08/17 14:26	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			12/08/17 14:26	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			12/08/17 14:26	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			12/08/17 14:26	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			12/08/17 14:26	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			12/08/17 14:26	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			12/08/17 14:26	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			12/08/17 14:26	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			12/08/17 14:26	1
2-Hexanone	ND		5.0	2.5	ug/L			12/08/17 14:26	1
Acetone	ND		20	10	ug/L			12/08/17 14:26	1
Acetonitrile	ND		20	10	ug/L			12/08/17 14:26	1
Acrolein	ND		5.0	2.5	ug/L			12/08/17 14:26	1
Acrylonitrile	ND		2.0	1.0	ug/L			12/08/17 14:26	1
Benzene	ND		0.50	0.25	ug/L			12/08/17 14:26	1
Allyl chloride	ND		1.0	0.50	ug/L			12/08/17 14:26	1
Bromoform	ND		1.0	0.40	ug/L			12/08/17 14:26	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-197838-1

**Client Sample ID: MW-2B**

**Lab Sample ID: 440-197838-6**

**Date Collected: 12/06/17 12:25**

**Matrix: Water**

**Date Received: 12/06/17 16:10**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromomethane	ND		0.50	0.25	ug/L			12/08/17 14:26	1
Carbon disulfide	ND		1.0	0.50	ug/L			12/08/17 14:26	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			12/08/17 14:26	1
Chlorobenzene	ND		0.50	0.25	ug/L			12/08/17 14:26	1
Bromochloromethane	ND		0.50	0.25	ug/L			12/08/17 14:26	1
Chloroethane	ND		1.0	0.40	ug/L			12/08/17 14:26	1
Chloroform	ND		0.50	0.25	ug/L			12/08/17 14:26	1
Chloromethane	ND		0.50	0.25	ug/L			12/08/17 14:26	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/08/17 14:26	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/08/17 14:26	1
Dibromochloromethane	ND		0.50	0.25	ug/L			12/08/17 14:26	1
Dibromomethane	ND		0.50	0.25	ug/L			12/08/17 14:26	1
Bromodichloromethane	ND		0.50	0.25	ug/L			12/08/17 14:26	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			12/08/17 14:26	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			12/08/17 14:26	1
Ethylbenzene	ND		0.50	0.25	ug/L			12/08/17 14:26	1
Iodomethane	ND		2.0	1.0	ug/L			12/08/17 14:26	1
Isobutyl alcohol	ND		25	13	ug/L			12/08/17 14:26	1
m,p-Xylene	ND		1.0	0.50	ug/L			12/08/17 14:26	1
Methylacrylonitrile	ND		10	2.5	ug/L			12/08/17 14:26	1
Methyl methacrylate	ND		2.0	1.0	ug/L			12/08/17 14:26	1
Methylene Chloride	ND		2.0	0.88	ug/L			12/08/17 14:26	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			12/08/17 14:26	1
Naphthalene	ND		1.0	0.40	ug/L			12/08/17 14:26	1
o-Xylene	ND		0.50	0.25	ug/L			12/08/17 14:26	1
Propionitrile	ND		20	10	ug/L			12/08/17 14:26	1
Styrene	ND		0.50	0.25	ug/L			12/08/17 14:26	1
t-Butanol	ND		10	5.0	ug/L			12/08/17 14:26	1
Tetrachloroethene	ND		0.50	0.25	ug/L			12/08/17 14:26	1
Tetrahydrofuran	ND		10	5.0	ug/L			12/08/17 14:26	1
Toluene	ND		0.50	0.25	ug/L			12/08/17 14:26	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/08/17 14:26	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/08/17 14:26	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			12/08/17 14:26	1
Trichloroethene	ND		0.50	0.25	ug/L			12/08/17 14:26	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			12/08/17 14:26	1
Vinyl acetate	ND		4.0	2.0	ug/L			12/08/17 14:26	1
Vinyl chloride	ND		0.50	0.25	ug/L			12/08/17 14:26	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			12/08/17 14:26	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			12/08/17 14:26	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			12/08/17 14:26	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	9.0	T J	ug/L		5.94			12/08/17 14:26	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	101		80 - 128		12/07/17 15:02	1
4-Bromofluorobenzene (Surr)	96		80 - 120		12/07/17 15:02	1
Toluene-d8 (Surr)	108		80 - 128		12/08/17 14:26	1
4-Bromofluorobenzene (Surr)	99		80 - 120		12/08/17 14:26	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-197838-1

**Client Sample ID: MW-2B**

**Date Collected: 12/06/17 12:25**

**Date Received: 12/06/17 16:10**

**Lab Sample ID: 440-197838-6**

**Matrix: Water**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	102		76 - 132		12/07/17 15:02	1
Dibromofluoromethane (Surr)	96		76 - 132		12/08/17 14:26	1

## Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		1.0	0.25	ug/L		12/07/17 09:01	12/11/17 18:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	59		30 - 120	12/07/17 09:01	12/11/17 18:08	1

## Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		1.0	0.50	mg/L			12/06/17 21:27	2
Nitrate as N	ND		0.22	0.11	mg/L			12/06/17 21:27	2
Chloride	13		1.0	0.50	mg/L			12/06/17 21:27	2
Fluoride	0.81	J	1.0	0.50	mg/L			12/06/17 21:27	2
Sulfate	1600		50	25	mg/L			12/06/17 22:10	100

## Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.59		0.050	0.025	mg/L		12/10/17 06:47	12/12/17 17:36	1
Calcium	190		0.10	0.050	mg/L		12/10/17 06:47	12/12/17 17:36	1
Iron	2.2		0.10	0.050	mg/L		12/10/17 06:47	12/12/17 17:36	1
Magnesium	120		0.020	0.010	mg/L		12/10/17 06:47	12/12/17 17:36	1
Manganese	0.14		0.020	0.015	mg/L		12/10/17 06:47	12/12/17 17:36	1
Potassium	4.6		0.50	0.25	mg/L		12/10/17 06:47	12/12/17 17:36	1
Sodium	420		0.50	0.26	mg/L		12/10/17 06:47	12/12/17 17:36	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		20	10	mg/L			12/14/17 08:53	1
Total Dissolved Solids	2500		20	10	mg/L			12/11/17 09:57	1
Ammonia (as N)	3.6		0.50	0.10	mg/L		12/07/17 03:30	12/07/17 05:00	1
Total Sulfide	ND		0.050	0.027	mg/L			12/07/17 18:05	1
Total Organic Carbon	1.8		0.10	0.050	mg/L			12/07/17 13:37	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	350		4.0	4.0	mg/L			12/07/17 10:26	1
Bicarbonate Alkalinity as CaCO3	350		4.0	4.0	mg/L			12/07/17 10:26	1
Carbon Dioxide, Free	15		2.0	2.0	mg/L			12/14/17 15:31	1

**Client Sample ID: DW-4**

**Date Collected: 12/06/17 13:40**

**Date Received: 12/06/17 16:10**

**Lab Sample ID: 440-197838-7**

**Matrix: Water**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			12/08/17 14:53	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/08/17 14:53	1
Acrolein	ND		50	2.5	ug/L			12/07/17 15:28	1
Acrylonitrile	ND		50	1.0	ug/L			12/07/17 15:28	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-197838-1

**Client Sample ID: DW-4**

**Lab Sample ID: 440-197838-7**

**Date Collected: 12/06/17 13:40**

**Matrix: Water**

**Date Received: 12/06/17 16:10**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			12/08/17 14:53	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/08/17 14:53	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			12/08/17 14:53	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			12/08/17 14:53	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			12/08/17 14:53	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			12/08/17 14:53	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			12/08/17 14:53	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			12/08/17 14:53	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			12/08/17 14:53	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			12/08/17 14:53	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			12/08/17 14:53	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			12/08/17 14:53	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			12/08/17 14:53	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			12/08/17 14:53	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			12/08/17 14:53	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			12/08/17 14:53	1
2-Hexanone	ND		5.0	2.5	ug/L			12/08/17 14:53	1
Acetone	ND		20	10	ug/L			12/08/17 14:53	1
Acetonitrile	ND		20	10	ug/L			12/08/17 14:53	1
Acrolein	ND		5.0	2.5	ug/L			12/08/17 14:53	1
Acrylonitrile	ND		2.0	1.0	ug/L			12/08/17 14:53	1
Benzene	ND		0.50	0.25	ug/L			12/08/17 14:53	1
Allyl chloride	ND		1.0	0.50	ug/L			12/08/17 14:53	1
Bromoform	ND		1.0	0.40	ug/L			12/08/17 14:53	1
Bromomethane	ND		0.50	0.25	ug/L			12/08/17 14:53	1
Carbon disulfide	ND		1.0	0.50	ug/L			12/08/17 14:53	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			12/08/17 14:53	1
Chlorobenzene	ND		0.50	0.25	ug/L			12/08/17 14:53	1
Bromochloromethane	ND		0.50	0.25	ug/L			12/08/17 14:53	1
Chloroethane	ND		1.0	0.40	ug/L			12/08/17 14:53	1
Chloroform	ND		0.50	0.25	ug/L			12/08/17 14:53	1
Chloromethane	ND		0.50	0.25	ug/L			12/08/17 14:53	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/08/17 14:53	1
cis-1,3-Dichloropropane	ND		0.50	0.25	ug/L			12/08/17 14:53	1
Dibromochloromethane	ND		0.50	0.25	ug/L			12/08/17 14:53	1
Dibromomethane	ND		0.50	0.25	ug/L			12/08/17 14:53	1
Bromodichloromethane	ND		0.50	0.25	ug/L			12/08/17 14:53	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			12/08/17 14:53	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			12/08/17 14:53	1
Ethylbenzene	ND		0.50	0.25	ug/L			12/08/17 14:53	1
Iodomethane	ND		2.0	1.0	ug/L			12/08/17 14:53	1
Isobutyl alcohol	ND		25	13	ug/L			12/08/17 14:53	1
m,p-Xylene	ND		1.0	0.50	ug/L			12/08/17 14:53	1
Methylacrylonitrile	ND		10	2.5	ug/L			12/08/17 14:53	1
Methyl methacrylate	ND		2.0	1.0	ug/L			12/08/17 14:53	1
Methylene Chloride	ND		2.0	0.88	ug/L			12/08/17 14:53	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			12/08/17 14:53	1
Naphthalene	ND		1.0	0.40	ug/L			12/08/17 14:53	1
o-Xylene	ND		0.50	0.25	ug/L			12/08/17 14:53	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-197838-1

**Client Sample ID: DW-4**  
**Date Collected: 12/06/17 13:40**  
**Date Received: 12/06/17 16:10**

**Lab Sample ID: 440-197838-7**  
**Matrix: Water**

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Propionitrile	ND		20	10	ug/L			12/08/17 14:53	1
Styrene	ND		0.50	0.25	ug/L			12/08/17 14:53	1
t-Butanol	ND		10	5.0	ug/L			12/08/17 14:53	1
Tetrachloroethene	ND		0.50	0.25	ug/L			12/08/17 14:53	1
Tetrahydrofuran	ND		10	5.0	ug/L			12/08/17 14:53	1
Toluene	ND		0.50	0.25	ug/L			12/08/17 14:53	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/08/17 14:53	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/08/17 14:53	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			12/08/17 14:53	1
Trichloroethene	ND		0.50	0.25	ug/L			12/08/17 14:53	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			12/08/17 14:53	1
Vinyl acetate	ND		4.0	2.0	ug/L			12/08/17 14:53	1
Vinyl chloride	ND		0.50	0.25	ug/L			12/08/17 14:53	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			12/08/17 14:53	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			12/08/17 14:53	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			12/08/17 14:53	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	9.1	T J	ug/L		5.94			12/08/17 14:53	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	100		80 - 128		12/07/17 15:28	1
4-Bromofluorobenzene (Surr)	95		80 - 120		12/07/17 15:28	1
Toluene-d8 (Surr)	108		80 - 128		12/08/17 14:53	1
4-Bromofluorobenzene (Surr)	98		80 - 120		12/08/17 14:53	1
Dibromofluoromethane (Surr)	103		76 - 132		12/07/17 15:28	1
Dibromofluoromethane (Surr)	96		76 - 132		12/08/17 14:53	1

## Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		1.0	0.25	ug/L		12/07/17 09:01	12/11/17 18:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	62		30 - 120	12/07/17 09:01	12/11/17 18:30	1

## Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		1.0	0.50	mg/L			12/06/17 22:24	2
Nitrate as N	ND		0.22	0.11	mg/L			12/06/17 22:24	2
<b>Chloride</b>	<b>13</b>		1.0	0.50	mg/L			12/06/17 22:24	2
<b>Fluoride</b>	<b>0.50</b>	<b>J</b>	1.0	0.50	mg/L			12/06/17 22:24	2
<b>Sulfate</b>	<b>1800</b>		50	25	mg/L			12/06/17 22:39	100

## Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Boron</b>	<b>0.55</b>		0.050	0.025	mg/L		12/10/17 06:47	12/12/17 17:34	1
<b>Calcium</b>	<b>190</b>		0.10	0.050	mg/L		12/10/17 06:47	12/12/17 17:34	1
<b>Iron</b>	<b>1.8</b>		0.10	0.050	mg/L		12/10/17 06:47	12/12/17 17:34	1
<b>Magnesium</b>	<b>130</b>		0.020	0.010	mg/L		12/10/17 06:47	12/12/17 17:34	1
<b>Manganese</b>	<b>0.12</b>		0.020	0.015	mg/L		12/10/17 06:47	12/12/17 17:34	1
<b>Potassium</b>	<b>4.3</b>		0.50	0.25	mg/L		12/10/17 06:47	12/12/17 17:34	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-197838-1

**Client Sample ID: DW-4**  
**Date Collected: 12/06/17 13:40**  
**Date Received: 12/06/17 16:10**

**Lab Sample ID: 440-197838-7**  
**Matrix: Water**

**Method: 6010B - Metals (ICP) - Total Recoverable (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	410		0.50	0.26	mg/L		12/10/17 06:47	12/12/17 17:34	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		20	10	mg/L			12/14/17 08:53	1
<b>Total Dissolved Solids</b>	<b>2800</b>		20	10	mg/L			12/11/17 09:57	1
<b>Ammonia (as N)</b>	<b>2.6</b>		0.50	0.10	mg/L		12/08/17 07:45	12/08/17 09:00	1
Total Sulfide	ND		0.050	0.027	mg/L			12/07/17 18:05	1
<b>Total Organic Carbon</b>	<b>1.8</b>		0.10	0.050	mg/L			12/07/17 13:49	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Alkalinity as CaCO3</b>	<b>340</b>		4.0	4.0	mg/L			12/07/17 10:44	1
<b>Bicarbonate Alkalinity as CaCO3</b>	<b>340</b>		4.0	4.0	mg/L			12/07/17 10:44	1
<b>Carbon Dioxide, Free</b>	<b>16</b>		2.0	2.0	mg/L			12/14/17 15:31	1

**Client Sample ID: QCAB**  
**Date Collected: 12/06/17 00:01**  
**Date Received: 12/06/17 16:10**

**Lab Sample ID: 440-197838-8**  
**Matrix: Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			12/08/17 15:20	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/08/17 15:20	1
Acrolein	ND		50	2.5	ug/L			12/07/17 15:53	1
Acrylonitrile	ND		50	1.0	ug/L			12/07/17 15:53	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			12/08/17 15:20	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/08/17 15:20	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			12/08/17 15:20	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			12/08/17 15:20	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			12/08/17 15:20	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			12/08/17 15:20	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			12/08/17 15:20	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			12/08/17 15:20	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			12/08/17 15:20	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			12/08/17 15:20	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			12/08/17 15:20	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			12/08/17 15:20	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			12/08/17 15:20	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			12/08/17 15:20	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			12/08/17 15:20	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			12/08/17 15:20	1
2-Hexanone	ND		5.0	2.5	ug/L			12/08/17 15:20	1
Acetone	ND		20	10	ug/L			12/08/17 15:20	1
Acetonitrile	ND		20	10	ug/L			12/08/17 15:20	1
Acrolein	ND		5.0	2.5	ug/L			12/08/17 15:20	1
Acrylonitrile	ND		2.0	1.0	ug/L			12/08/17 15:20	1
Benzene	ND		0.50	0.25	ug/L			12/08/17 15:20	1
Allyl chloride	ND		1.0	0.50	ug/L			12/08/17 15:20	1
Bromoform	ND		1.0	0.40	ug/L			12/08/17 15:20	1
Bromomethane	ND		0.50	0.25	ug/L			12/08/17 15:20	1
Carbon disulfide	ND		1.0	0.50	ug/L			12/08/17 15:20	1

TestAmerica Irvine



# Client Sample Results

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

TestAmerica Job ID: 440-197838-1

**Client Sample ID: QCAB**

**Lab Sample ID: 440-197838-8**

**Date Collected: 12/06/17 00:01**

**Matrix: Water**

**Date Received: 12/06/17 16:10**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		0.50	0.25	ug/L			12/08/17 15:20	1
Chlorobenzene	ND		0.50	0.25	ug/L			12/08/17 15:20	1
Bromochloromethane	ND		0.50	0.25	ug/L			12/08/17 15:20	1
Chloroethane	ND		1.0	0.40	ug/L			12/08/17 15:20	1
Chloroform	ND		0.50	0.25	ug/L			12/08/17 15:20	1
Chloromethane	ND		0.50	0.25	ug/L			12/08/17 15:20	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/08/17 15:20	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/08/17 15:20	1
Dibromochloromethane	ND		0.50	0.25	ug/L			12/08/17 15:20	1
Dibromomethane	ND		0.50	0.25	ug/L			12/08/17 15:20	1
Bromodichloromethane	ND		0.50	0.25	ug/L			12/08/17 15:20	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			12/08/17 15:20	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			12/08/17 15:20	1
Ethylbenzene	ND		0.50	0.25	ug/L			12/08/17 15:20	1
Iodomethane	ND		2.0	1.0	ug/L			12/08/17 15:20	1
Isobutyl alcohol	ND		25	13	ug/L			12/08/17 15:20	1
m,p-Xylene	ND		1.0	0.50	ug/L			12/08/17 15:20	1
Methylacrylonitrile	ND		10	2.5	ug/L			12/08/17 15:20	1
Methyl methacrylate	ND		2.0	1.0	ug/L			12/08/17 15:20	1
Methylene Chloride	ND		2.0	0.88	ug/L			12/08/17 15:20	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			12/08/17 15:20	1
Naphthalene	ND		1.0	0.40	ug/L			12/08/17 15:20	1
o-Xylene	ND		0.50	0.25	ug/L			12/08/17 15:20	1
Propionitrile	ND		20	10	ug/L			12/08/17 15:20	1
Styrene	ND		0.50	0.25	ug/L			12/08/17 15:20	1
t-Butanol	ND		10	5.0	ug/L			12/08/17 15:20	1
Tetrachloroethene	ND		0.50	0.25	ug/L			12/08/17 15:20	1
Tetrahydrofuran	ND		10	5.0	ug/L			12/08/17 15:20	1
Toluene	ND		0.50	0.25	ug/L			12/08/17 15:20	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/08/17 15:20	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/08/17 15:20	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			12/08/17 15:20	1
Trichloroethene	ND		0.50	0.25	ug/L			12/08/17 15:20	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			12/08/17 15:20	1
Vinyl acetate	ND		4.0	2.0	ug/L			12/08/17 15:20	1
Vinyl chloride	ND		0.50	0.25	ug/L			12/08/17 15:20	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			12/08/17 15:20	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			12/08/17 15:20	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			12/08/17 15:20	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	9.1	T J	ug/L		5.94			12/08/17 15:20	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	101		80 - 128		12/07/17 15:53	1
4-Bromofluorobenzene (Surr)	93		80 - 120		12/07/17 15:53	1
Toluene-d8 (Surr)	109		80 - 128		12/08/17 15:20	1
4-Bromofluorobenzene (Surr)	97		80 - 120		12/08/17 15:20	1
Dibromofluoromethane (Surr)	102		76 - 132		12/07/17 15:53	1
Dibromofluoromethane (Surr)	96		76 - 132		12/08/17 15:20	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-197838-1

**Client Sample ID: QCTB**  
**Date Collected: 12/06/17 00:01**  
**Date Received: 12/06/17 16:10**

**Lab Sample ID: 440-197838-9**  
**Matrix: Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			12/08/17 15:48	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/08/17 15:48	1
Acrolein	ND		50	2.5	ug/L			12/07/17 16:19	1
Acrylonitrile	ND		50	1.0	ug/L			12/07/17 16:19	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			12/08/17 15:48	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/08/17 15:48	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			12/08/17 15:48	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			12/08/17 15:48	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			12/08/17 15:48	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			12/08/17 15:48	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			12/08/17 15:48	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			12/08/17 15:48	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			12/08/17 15:48	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			12/08/17 15:48	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			12/08/17 15:48	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			12/08/17 15:48	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			12/08/17 15:48	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			12/08/17 15:48	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			12/08/17 15:48	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			12/08/17 15:48	1
2-Hexanone	ND		5.0	2.5	ug/L			12/08/17 15:48	1
Acetone	ND		20	10	ug/L			12/08/17 15:48	1
Acetonitrile	ND		20	10	ug/L			12/08/17 15:48	1
Acrolein	ND		5.0	2.5	ug/L			12/08/17 15:48	1
Acrylonitrile	ND		2.0	1.0	ug/L			12/08/17 15:48	1
Benzene	ND		0.50	0.25	ug/L			12/08/17 15:48	1
Allyl chloride	ND		1.0	0.50	ug/L			12/08/17 15:48	1
Bromoform	ND		1.0	0.40	ug/L			12/08/17 15:48	1
Bromomethane	ND		0.50	0.25	ug/L			12/08/17 15:48	1
Carbon disulfide	ND		1.0	0.50	ug/L			12/08/17 15:48	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			12/08/17 15:48	1
Chlorobenzene	ND		0.50	0.25	ug/L			12/08/17 15:48	1
Bromochloromethane	ND		0.50	0.25	ug/L			12/08/17 15:48	1
Chloroethane	ND		1.0	0.40	ug/L			12/08/17 15:48	1
Chloroform	ND		0.50	0.25	ug/L			12/08/17 15:48	1
Chloromethane	ND		0.50	0.25	ug/L			12/08/17 15:48	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/08/17 15:48	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/08/17 15:48	1
Dibromochloromethane	ND		0.50	0.25	ug/L			12/08/17 15:48	1
Dibromomethane	ND		0.50	0.25	ug/L			12/08/17 15:48	1
Bromodichloromethane	ND		0.50	0.25	ug/L			12/08/17 15:48	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			12/08/17 15:48	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			12/08/17 15:48	1
Ethylbenzene	ND		0.50	0.25	ug/L			12/08/17 15:48	1
Iodomethane	ND		2.0	1.0	ug/L			12/08/17 15:48	1
Isobutyl alcohol	ND		25	13	ug/L			12/08/17 15:48	1
m,p-Xylene	ND		1.0	0.50	ug/L			12/08/17 15:48	1
Methylacrylonitrile	ND		10	2.5	ug/L			12/08/17 15:48	1
Methyl methacrylate	ND		2.0	1.0	ug/L			12/08/17 15:48	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-197838-1

**Client Sample ID: QCTB**  
**Date Collected: 12/06/17 00:01**  
**Date Received: 12/06/17 16:10**

**Lab Sample ID: 440-197838-9**  
**Matrix: Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	ND		2.0	0.88	ug/L			12/08/17 15:48	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			12/08/17 15:48	1
Naphthalene	ND		1.0	0.40	ug/L			12/08/17 15:48	1
o-Xylene	ND		0.50	0.25	ug/L			12/08/17 15:48	1
Propionitrile	ND		20	10	ug/L			12/08/17 15:48	1
Styrene	ND		0.50	0.25	ug/L			12/08/17 15:48	1
t-Butanol	ND		10	5.0	ug/L			12/08/17 15:48	1
Tetrachloroethene	ND		0.50	0.25	ug/L			12/08/17 15:48	1
Tetrahydrofuran	ND		10	5.0	ug/L			12/08/17 15:48	1
Toluene	ND		0.50	0.25	ug/L			12/08/17 15:48	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/08/17 15:48	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/08/17 15:48	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			12/08/17 15:48	1
Trichloroethene	ND		0.50	0.25	ug/L			12/08/17 15:48	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			12/08/17 15:48	1
Vinyl acetate	ND		4.0	2.0	ug/L			12/08/17 15:48	1
Vinyl chloride	ND		0.50	0.25	ug/L			12/08/17 15:48	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			12/08/17 15:48	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			12/08/17 15:48	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			12/08/17 15:48	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	8.8	T J	ug/L		5.94			12/08/17 15:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	102		80 - 128		12/07/17 16:19	1
4-Bromofluorobenzene (Surr)	94		80 - 120		12/07/17 16:19	1
Toluene-d8 (Surr)	108		80 - 128		12/08/17 15:48	1
4-Bromofluorobenzene (Surr)	101		80 - 120		12/08/17 15:48	1
Dibromofluoromethane (Surr)	101		76 - 132		12/07/17 16:19	1
Dibromofluoromethane (Surr)	98		76 - 132		12/08/17 15:48	1

# Method Summary

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

TestAmerica Job ID: 440-197838-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL IRV
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL IRV
300.0	Anions, Ion Chromatography	MCAWW	TAL IRV
6010B	Metals (ICP)	SW846	TAL IRV
410.4	COD	MCAWW	TAL IRV
SM 2320B	Alkalinity	SM	TAL IRV
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL IRV
SM 4500 CO2 C	Free Carbon Dioxide	SM	TAL IRV
SM 4500 NH3 D	Ammonia	SM	TAL IRV
SM 4500 S2 D	Sulfide, Total	SM	TAL IRV
SM 5310C	TOC	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",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

#### Laboratory References:

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

# Lab Chronicle

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

TestAmerica Job ID: 440-197838-1

**Client Sample ID: Extraction Trench**

**Date Collected: 12/06/17 10:00**

**Date Received: 12/06/17 16:10**

**Lab Sample ID: 440-197838-1**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	445434	12/07/17 12:55	TCN	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	445658	12/08/17 09:51	RM	TAL IRV
Total/NA	Prep	3520C			975 mL	1.0 mL	445466	12/07/17 09:01	JJM	TAL IRV
Total/NA	Analysis	8270C		1			445905	12/10/17 01:57	AI	TAL IRV
Total/NA	Analysis	300.0		2	5 mL	1.0 mL	445235	12/06/17 17:49	NN	TAL IRV
Total/NA	Analysis	300.0		2	5 mL	1.0 mL	445236	12/06/17 17:49	NN	TAL IRV
Total/NA	Analysis	300.0		100			445236	12/06/17 18:03	NN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	445915	12/10/17 06:47	JL	TAL IRV
Total Recoverable	Analysis	6010B		1			446367	12/12/17 17:47	VS	TAL IRV
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	446693	12/14/17 08:53	KYP	TAL IRV
Total/NA	Analysis	SM 2320B		1			445505	12/07/17 09:31	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	20 mL	100 mL	446012	12/11/17 09:57	XL	TAL IRV
Total/NA	Analysis	SM 4500 CO2 C		1	25 mL	25 mL	446817	12/14/17 15:31	KYP	TAL IRV
Total/NA	Prep	SM 4500 NH3 B			10 mL	50 mL	445958	12/11/17 03:30	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			445959	12/11/17 04:30	YZ	TAL IRV
Total/NA	Analysis	SM 4500 S2 D		1	7.5 mL	7.5 mL	445603	12/07/17 18:04	KMY	TAL IRV
Total/NA	Analysis	SM 5310C		5	100 mL	100 mL	446391	12/12/17 07:41	YZ	TAL IRV

**Client Sample ID: PZ-4**

**Date Collected: 12/06/17 13:09**

**Date Received: 12/06/17 16:10**

**Lab Sample ID: 440-197838-2**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	445434	12/07/17 13:20	TCN	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	445658	12/08/17 12:36	RM	TAL IRV
Total/NA	Prep	3520C			950 mL	1.0 mL	445466	12/07/17 09:01	JJM	TAL IRV
Total/NA	Analysis	8270C		1			445905	12/10/17 02:19	AI	TAL IRV
Total/NA	Analysis	300.0		1	5 mL	1.0 mL	445235	12/06/17 18:17	NN	TAL IRV
Total/NA	Analysis	300.0		1	5 mL	1.0 mL	445236	12/06/17 18:17	NN	TAL IRV
Total/NA	Analysis	300.0		50			445236	12/06/17 18:32	NN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	445915	12/10/17 06:47	JL	TAL IRV
Total Recoverable	Analysis	6010B		1			446367	12/12/17 17:45	VS	TAL IRV
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	446693	12/14/17 08:53	KYP	TAL IRV
Total/NA	Analysis	SM 2320B		1			445505	12/07/17 09:40	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	446012	12/11/17 09:57	XL	TAL IRV
Total/NA	Analysis	SM 4500 CO2 C		1	25 mL	25 mL	446817	12/14/17 15:31	KYP	TAL IRV
Total/NA	Prep	SM 4500 NH3 B			50 mL	50 mL	445426	12/07/17 03:30	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			445427	12/07/17 05:00	YZ	TAL IRV
Total/NA	Analysis	SM 4500 S2 D		1	7.5 mL	7.5 mL	445603	12/07/17 18:05	KMY	TAL IRV
Total/NA	Analysis	SM 5310C		1	100 mL	100 mL	445633	12/07/17 12:19	YZ	TAL IRV

TestAmerica Irvine

# Lab Chronicle

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

TestAmerica Job ID: 440-197838-1

**Client Sample ID: MW-5**

**Lab Sample ID: 440-197838-3**

**Date Collected: 12/06/17 11:05**

**Matrix: Water**

**Date Received: 12/06/17 16:10**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	445434	12/07/17 13:45	TCN	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	445658	12/08/17 13:03	RM	TAL IRV
Total/NA	Prep	3520C			985 mL	1.0 mL	445466	12/07/17 09:01	JJM	TAL IRV
Total/NA	Analysis	8270C		1			446081	12/11/17 16:33	AI	TAL IRV
Total/NA	Analysis	300.0		2	5 mL	1.0 mL	445235	12/06/17 18:46	NN	TAL IRV
Total/NA	Analysis	300.0		2	5 mL	1.0 mL	445236	12/06/17 18:46	NN	TAL IRV
Total/NA	Analysis	300.0		100			445236	12/06/17 19:00	NN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	445915	12/10/17 06:47	JL	TAL IRV
Total Recoverable	Analysis	6010B		1			446367	12/12/17 17:43	VS	TAL IRV
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	446693	12/14/17 08:53	KYP	TAL IRV
Total/NA	Analysis	SM 2320B		1			445505	12/07/17 09:54	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	20 mL	100 mL	446012	12/11/17 09:57	XL	TAL IRV
Total/NA	Analysis	SM 4500 CO2 C		1	25 mL	25 mL	446817	12/14/17 15:31	KYP	TAL IRV
Total/NA	Prep	SM 4500 NH3 B			10 mL	50 mL	445958	12/11/17 03:30	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			445959	12/11/17 04:30	YZ	TAL IRV
Total/NA	Analysis	SM 4500 S2 D		1	7.5 mL	7.5 mL	445603	12/07/17 18:05	KMY	TAL IRV
Total/NA	Analysis	SM 5310C		5	100 mL	100 mL	446391	12/12/17 08:14	YZ	TAL IRV

**Client Sample ID: PZ-2**

**Lab Sample ID: 440-197838-4**

**Date Collected: 12/06/17 08:30**

**Matrix: Water**

**Date Received: 12/06/17 16:10**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	445434	12/07/17 14:11	TCN	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	445658	12/08/17 13:31	RM	TAL IRV
Total/NA	Prep	3520C			1005 mL	1.0 mL	445466	12/07/17 09:01	JJM	TAL IRV
Total/NA	Analysis	8270C		1			446081	12/11/17 16:55	AI	TAL IRV
Total/NA	Analysis	300.0		10	5 mL	1.0 mL	445235	12/06/17 19:15	NN	TAL IRV
Total/NA	Analysis	300.0		10	5 mL	1.0 mL	445236	12/06/17 19:15	NN	TAL IRV
Total/NA	Analysis	300.0		200			445236	12/06/17 19:29	NN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	445915	12/10/17 06:47	JL	TAL IRV
Total Recoverable	Analysis	6010B		2			446367	12/12/17 17:41	VS	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	445915	12/10/17 06:47	JL	TAL IRV
Total Recoverable	Analysis	6010B		1			446141	12/11/17 16:50	VS	TAL IRV
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	446693	12/14/17 08:53	KYP	TAL IRV
Total/NA	Analysis	SM 2320B		1			445505	12/07/17 10:03	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	446012	12/11/17 09:57	XL	TAL IRV
Total/NA	Analysis	SM 4500 CO2 C		1	25 mL	25 mL	446817	12/14/17 15:31	KYP	TAL IRV
Total/NA	Prep	SM 4500 NH3 B			50 mL	50 mL	445426	12/07/17 03:30	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			445427	12/07/17 05:00	YZ	TAL IRV
Total/NA	Analysis	SM 4500 S2 D		1	7.5 mL	7.5 mL	445603	12/07/17 18:05	KMY	TAL IRV

TestAmerica Irvine

# Lab Chronicle

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

TestAmerica Job ID: 440-197838-1

**Client Sample ID: PZ-2**

**Lab Sample ID: 440-197838-4**

**Date Collected: 12/06/17 08:30**

**Matrix: Water**

**Date Received: 12/06/17 16:10**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 5310C		1	100 mL	100 mL	445633	12/07/17 12:48	YZ	TAL IRV

**Client Sample ID: MW-2A**

**Lab Sample ID: 440-197838-5**

**Date Collected: 12/06/17 11:00**

**Matrix: Water**

**Date Received: 12/06/17 16:10**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	445434	12/07/17 14:37	TCN	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	445658	12/08/17 13:58	RM	TAL IRV
Total/NA	Prep	3520C			950 mL	1.0 mL	445466	12/07/17 09:01	JJM	TAL IRV
Total/NA	Analysis	8270C		1			446081	12/11/17 17:46	AI	TAL IRV
Total/NA	Analysis	300.0		2	5 mL	1.0 mL	445235	12/06/17 19:43	NN	TAL IRV
Total/NA	Analysis	300.0		2	5 mL	1.0 mL	445236	12/06/17 19:43	NN	TAL IRV
Total/NA	Analysis	300.0		100			445236	12/06/17 19:58	NN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	445915	12/10/17 06:47	JL	TAL IRV
Total Recoverable	Analysis	6010B		1			446367	12/12/17 17:38	VS	TAL IRV
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	446693	12/14/17 08:53	KYP	TAL IRV
Total/NA	Analysis	SM 2320B		1			445505	12/07/17 10:13	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	446012	12/11/17 09:57	XL	TAL IRV
Total/NA	Analysis	SM 4500 CO2 C		1	25 mL	25 mL	446817	12/14/17 15:31	KYP	TAL IRV
Total/NA	Prep	SM 4500 NH3 B			50 mL	50 mL	445426	12/07/17 03:30	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			445427	12/07/17 05:00	YZ	TAL IRV
Total/NA	Analysis	SM 4500 S2 D		1	7.5 mL	7.5 mL	445603	12/07/17 18:05	KMY	TAL IRV
Total/NA	Analysis	SM 5310C		1	100 mL	100 mL	445633	12/07/17 13:25	YZ	TAL IRV

**Client Sample ID: MW-2B**

**Lab Sample ID: 440-197838-6**

**Date Collected: 12/06/17 12:25**

**Matrix: Water**

**Date Received: 12/06/17 16:10**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	445434	12/07/17 15:02	TCN	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	445658	12/08/17 14:26	RM	TAL IRV
Total/NA	Prep	3520C			990 mL	1.0 mL	445466	12/07/17 09:01	JJM	TAL IRV
Total/NA	Analysis	8270C		1			446081	12/11/17 18:08	AI	TAL IRV
Total/NA	Analysis	300.0		2	5 mL	1.0 mL	445235	12/06/17 21:27	NN	TAL IRV
Total/NA	Analysis	300.0		2	5 mL	1.0 mL	445236	12/06/17 21:27	NN	TAL IRV
Total/NA	Analysis	300.0		100			445236	12/06/17 22:10	NN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	445915	12/10/17 06:47	JL	TAL IRV
Total Recoverable	Analysis	6010B		1			446367	12/12/17 17:36	VS	TAL IRV
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	446693	12/14/17 08:53	KYP	TAL IRV
Total/NA	Analysis	SM 2320B		1			445505	12/07/17 10:26	YZ	TAL IRV

TestAmerica Irvine

# Lab Chronicle

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

TestAmerica Job ID: 440-197838-1

**Client Sample ID: MW-2B**

**Lab Sample ID: 440-197838-6**

**Date Collected: 12/06/17 12:25**

**Matrix: Water**

**Date Received: 12/06/17 16:10**

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	50 mL	100 mL	446012	12/11/17 09:57	XL	TAL IRV
Total/NA	Analysis	SM 4500 CO2 C		1	25 mL	25 mL	446817	12/14/17 15:31	KYP	TAL IRV
Total/NA	Prep	SM 4500 NH3 B			50 mL	50 mL	445426	12/07/17 03:30	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			445427	12/07/17 05:00	YZ	TAL IRV
Total/NA	Analysis	SM 4500 S2 D		1	7.5 mL	7.5 mL	445603	12/07/17 18:05	KMY	TAL IRV
Total/NA	Analysis	SM 5310C		1	100 mL	100 mL	445633	12/07/17 13:37	YZ	TAL IRV

**Client Sample ID: DW-4**

**Lab Sample ID: 440-197838-7**

**Date Collected: 12/06/17 13:40**

**Matrix: Water**

**Date Received: 12/06/17 16:10**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	445434	12/07/17 15:28	TCN	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	445658	12/08/17 14:53	RM	TAL IRV
Total/NA	Prep	3520C			1005 mL	1.0 mL	445466	12/07/17 09:01	JJM	TAL IRV
Total/NA	Analysis	8270C		1			446081	12/11/17 18:30	AI	TAL IRV
Total/NA	Analysis	300.0		2	5 mL	1.0 mL	445235	12/06/17 22:24	NN	TAL IRV
Total/NA	Analysis	300.0		2	5 mL	1.0 mL	445236	12/06/17 22:24	NN	TAL IRV
Total/NA	Analysis	300.0		100			445236	12/06/17 22:39	NN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	445915	12/10/17 06:47	JL	TAL IRV
Total Recoverable	Analysis	6010B		1			446367	12/12/17 17:34	VS	TAL IRV
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	446693	12/14/17 08:53	KYP	TAL IRV
Total/NA	Analysis	SM 2320B		1			445505	12/07/17 10:44	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	446012	12/11/17 09:57	XL	TAL IRV
Total/NA	Analysis	SM 4500 CO2 C		1	25 mL	25 mL	446817	12/14/17 15:31	KYP	TAL IRV
Total/NA	Prep	SM 4500 NH3 B			50 mL	50 mL	445664	12/08/17 07:45	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			445672	12/08/17 09:00	YZ	TAL IRV
Total/NA	Analysis	SM 4500 S2 D		1	7.5 mL	7.5 mL	445603	12/07/17 18:05	KMY	TAL IRV
Total/NA	Analysis	SM 5310C		1	100 mL	100 mL	445633	12/07/17 13:49	YZ	TAL IRV

**Client Sample ID: QCAB**

**Lab Sample ID: 440-197838-8**

**Date Collected: 12/06/17 00:01**

**Matrix: Water**

**Date Received: 12/06/17 16:10**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	445434	12/07/17 15:53	TCN	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	445658	12/08/17 15:20	RM	TAL IRV

TestAmerica Irvine



# Lab Chronicle

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

TestAmerica Job ID: 440-197838-1

**Client Sample ID: QCTB**

**Lab Sample ID: 440-197838-9**

**Date Collected: 12/06/17 00:01**

**Matrix: Water**

**Date Received: 12/06/17 16:10**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	445434	12/07/17 16:19	TCN	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	445658	12/08/17 15:48	RM	TAL IRV

**Laboratory References:**

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

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

# QC Sample Results

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

TestAmerica Job ID: 440-197838-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 440-445434/4**  
**Matrix: Water**  
**Analysis Batch: 445434**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acrolein	ND		50	2.5	ug/L			12/07/17 08:39	1
Acrylonitrile	ND		50	1.0	ug/L			12/07/17 08:39	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	103		80 - 128		12/07/17 08:39	1
4-Bromofluorobenzene (Surr)	94		80 - 120		12/07/17 08:39	1
Dibromofluoromethane (Surr)	99		76 - 132		12/07/17 08:39	1

**Lab Sample ID: LCS 440-445434/5**  
**Matrix: Water**  
**Analysis Batch: 445434**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acrolein	25.0	20.0	J	ug/L		80	10 - 145
Acrylonitrile	250	217		ug/L		87	48 - 140

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	99		80 - 128
4-Bromofluorobenzene (Surr)	93		80 - 120
Dibromofluoromethane (Surr)	99		76 - 132

**Lab Sample ID: 440-197520-F-22 MS**  
**Matrix: Water**  
**Analysis Batch: 445434**

**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
Acrolein	ND		25.0	21.6	J	ug/L		86	10 - 147
Acrylonitrile	ND		250	247		ug/L		99	38 - 144

Surrogate	MS %Recovery	MS Qualifier	Limits
Toluene-d8 (Surr)	99		80 - 128
4-Bromofluorobenzene (Surr)	92		80 - 120
Dibromofluoromethane (Surr)	99		76 - 132

**Lab Sample ID: 440-197520-F-22 MSD**  
**Matrix: Water**  
**Analysis Batch: 445434**

**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
Acrolein	ND		25.0	21.9	J	ug/L		88	10 - 147	1	40
Acrylonitrile	ND		250	255		ug/L		102	38 - 144	3	40

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Toluene-d8 (Surr)	99		80 - 128
4-Bromofluorobenzene (Surr)	94		80 - 120
Dibromofluoromethane (Surr)	101		76 - 132

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-197838-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 440-445658/4**  
**Matrix: Water**  
**Analysis Batch: 445658**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			12/08/17 08:56	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/08/17 08:56	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			12/08/17 08:56	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/08/17 08:56	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			12/08/17 08:56	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			12/08/17 08:56	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			12/08/17 08:56	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			12/08/17 08:56	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			12/08/17 08:56	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			12/08/17 08:56	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			12/08/17 08:56	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			12/08/17 08:56	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			12/08/17 08:56	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			12/08/17 08:56	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			12/08/17 08:56	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			12/08/17 08:56	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			12/08/17 08:56	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			12/08/17 08:56	1
2-Hexanone	ND		5.0	2.5	ug/L			12/08/17 08:56	1
Acetone	ND		20	10	ug/L			12/08/17 08:56	1
Acetonitrile	ND		20	10	ug/L			12/08/17 08:56	1
Acrolein	ND		5.0	2.5	ug/L			12/08/17 08:56	1
Acrylonitrile	ND		2.0	1.0	ug/L			12/08/17 08:56	1
Benzene	ND		0.50	0.25	ug/L			12/08/17 08:56	1
Allyl chloride	ND		1.0	0.50	ug/L			12/08/17 08:56	1
Bromoform	ND		1.0	0.40	ug/L			12/08/17 08:56	1
Bromomethane	ND		0.50	0.25	ug/L			12/08/17 08:56	1
Carbon disulfide	ND		1.0	0.50	ug/L			12/08/17 08:56	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			12/08/17 08:56	1
Chlorobenzene	ND		0.50	0.25	ug/L			12/08/17 08:56	1
Bromochloromethane	ND		0.50	0.25	ug/L			12/08/17 08:56	1
Chloroethane	ND		1.0	0.40	ug/L			12/08/17 08:56	1
Chloroform	ND		0.50	0.25	ug/L			12/08/17 08:56	1
Chloromethane	ND		0.50	0.25	ug/L			12/08/17 08:56	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/08/17 08:56	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/08/17 08:56	1
Dibromochloromethane	ND		0.50	0.25	ug/L			12/08/17 08:56	1
Dibromomethane	ND		0.50	0.25	ug/L			12/08/17 08:56	1
Bromodichloromethane	ND		0.50	0.25	ug/L			12/08/17 08:56	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			12/08/17 08:56	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			12/08/17 08:56	1
Ethylbenzene	ND		0.50	0.25	ug/L			12/08/17 08:56	1
Iodomethane	ND		2.0	1.0	ug/L			12/08/17 08:56	1
Isobutyl alcohol	ND		25	13	ug/L			12/08/17 08:56	1
m,p-Xylene	ND		1.0	0.50	ug/L			12/08/17 08:56	1
Methylacrylonitrile	ND		10	2.5	ug/L			12/08/17 08:56	1
Methyl methacrylate	ND		2.0	1.0	ug/L			12/08/17 08:56	1
Methylene Chloride	ND		2.0	0.88	ug/L			12/08/17 08:56	1

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-197838-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 440-445658/4**  
**Matrix: Water**  
**Analysis Batch: 445658**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			12/08/17 08:56	1
Naphthalene	ND		1.0	0.40	ug/L			12/08/17 08:56	1
o-Xylene	ND		0.50	0.25	ug/L			12/08/17 08:56	1
Propionitrile	ND		20	10	ug/L			12/08/17 08:56	1
Styrene	ND		0.50	0.25	ug/L			12/08/17 08:56	1
t-Butanol	ND		10	5.0	ug/L			12/08/17 08:56	1
Tetrachloroethene	ND		0.50	0.25	ug/L			12/08/17 08:56	1
Tetrahydrofuran	ND		10	5.0	ug/L			12/08/17 08:56	1
Toluene	ND		0.50	0.25	ug/L			12/08/17 08:56	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/08/17 08:56	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/08/17 08:56	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			12/08/17 08:56	1
Trichloroethene	ND		0.50	0.25	ug/L			12/08/17 08:56	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			12/08/17 08:56	1
Vinyl acetate	ND		4.0	2.0	ug/L			12/08/17 08:56	1
Vinyl chloride	ND		0.50	0.25	ug/L			12/08/17 08:56	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			12/08/17 08:56	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			12/08/17 08:56	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			12/08/17 08:56	1

Tentatively Identified Compound	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L					12/08/17 08:56	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	111		80 - 128		12/08/17 08:56	1
4-Bromofluorobenzene (Surr)	99		80 - 120		12/08/17 08:56	1
Dibromofluoromethane (Surr)	94		76 - 132		12/08/17 08:56	1

**Lab Sample ID: LCS 440-445658/5**  
**Matrix: Water**  
**Analysis Batch: 445658**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,3-Trichloropropane	25.0	28.8		ug/L		115	63 - 130
1,1,1,2-Tetrachloroethane	25.0	28.0		ug/L		112	60 - 141
1,1,1-Trichloroethane	25.0	25.4		ug/L		102	70 - 130
1,1,2,2-Tetrachloroethane	25.0	28.7		ug/L		115	63 - 130
1,1,2-Trichloroethane	25.0	28.4		ug/L		114	70 - 130
1,1-Dichloroethane	25.0	26.8		ug/L		107	64 - 130
1,1-Dichloroethene	25.0	26.3		ug/L		105	70 - 130
1,1-Dichloropropene	25.0	28.2		ug/L		113	70 - 130
1,2,4-Trichlorobenzene	25.0	26.7		ug/L		107	60 - 140
1,2-Dibromo-3-Chloropropane	25.0	30.2		ug/L		121	52 - 140
1,2-Dichlorobenzene	25.0	26.0		ug/L		104	70 - 130
1,2-Dichloroethane	25.0	25.6		ug/L		102	57 - 138
1,2-Dichloropropane	25.0	27.7		ug/L		111	67 - 130
1,3-Dichlorobenzene	25.0	25.5		ug/L		102	70 - 130

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-197838-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 440-445658/5

Matrix: Water

Analysis Batch: 445658

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3-Dichloropropane	25.0	27.4		ug/L		110	70 - 130
1,4-Dichlorobenzene	25.0	25.6		ug/L		102	70 - 130
2,2-Dichloropropane	25.0	25.9		ug/L		104	68 - 141
2-Hexanone	25.0	33.9		ug/L		136	10 - 150
Acetone	25.0	35.0		ug/L		140	10 - 150
Acrolein	25.0	24.7		ug/L		99	10 - 145
Acrylonitrile	250	326		ug/L		130	48 - 140
Benzene	25.0	26.1		ug/L		104	68 - 130
Bromoform	25.0	26.8		ug/L		107	60 - 148
Bromomethane	25.0	22.9		ug/L		92	64 - 139
Carbon disulfide	25.0	26.7		ug/L		107	52 - 136
Carbon tetrachloride	25.0	25.8		ug/L		103	60 - 150
Chlorobenzene	25.0	25.0		ug/L		100	70 - 130
Bromochloromethane	25.0	26.2		ug/L		105	70 - 130
Chloroethane	25.0	24.9		ug/L		100	64 - 135
Chloroform	25.0	25.2		ug/L		101	70 - 130
Chloromethane	25.0	25.3		ug/L		101	47 - 140
cis-1,2-Dichloroethene	25.0	26.2		ug/L		105	70 - 133
cis-1,3-Dichloropropene	25.0	28.1		ug/L		112	70 - 133
Dibromochloromethane	25.0	27.5		ug/L		110	69 - 145
Dibromomethane	25.0	26.1		ug/L		104	70 - 130
Bromodichloromethane	25.0	27.2		ug/L		109	70 - 132
Dichlorodifluoromethane	25.0	24.7		ug/L		99	29 - 150
Ethylbenzene	25.0	26.0		ug/L		104	70 - 130
m,p-Xylene	25.0	26.9		ug/L		108	70 - 130
Methylene Chloride	25.0	25.0		ug/L		100	52 - 130
Methyl tert-butyl ether	25.0	25.9		ug/L		104	63 - 131
Naphthalene	25.0	28.0		ug/L		112	60 - 140
o-Xylene	25.0	27.2		ug/L		109	70 - 130
Styrene	25.0	27.4		ug/L		110	70 - 134
t-Butanol	250	268		ug/L		107	70 - 130
Tetrachloroethene	25.0	25.6		ug/L		102	70 - 130
Toluene	25.0	25.4		ug/L		102	70 - 130
trans-1,2-Dichloroethene	25.0	27.6		ug/L		110	70 - 130
trans-1,3-Dichloropropene	25.0	28.0		ug/L		112	70 - 132
Trichloroethene	25.0	26.6		ug/L		106	70 - 130
Trichlorofluoromethane	25.0	25.5		ug/L		102	60 - 150
Vinyl acetate	25.0	33.8		ug/L		135	48 - 140
Vinyl chloride	25.0	24.6		ug/L		98	59 - 133
1,2-Dibromoethane (EDB)	25.0	27.6		ug/L		110	70 - 130
2-Butanone (MEK)	25.0	27.6		ug/L		110	44 - 150
4-Methyl-2-pentanone (MIBK)	25.0	34.8		ug/L		139	59 - 149

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Toluene-d8 (Surr)	105		80 - 128
4-Bromofluorobenzene (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	93		76 - 132

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-197838-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 440-197838-1 MS**

**Matrix: Water**

**Analysis Batch: 445658**

**Client Sample ID: Extraction Trench**

**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,3-Trichloropropane	ND		25.0	32.5		ug/L		130	60 - 130
1,1,1,2-Tetrachloroethane	ND		25.0	27.2		ug/L		109	60 - 149
1,1,1-Trichloroethane	ND		25.0	25.4		ug/L		102	70 - 130
1,1,2,2-Tetrachloroethane	ND		25.0	32.0		ug/L		128	63 - 130
1,1,2-Trichloroethane	ND		25.0	29.4		ug/L		118	70 - 130
1,1-Dichloroethane	ND		25.0	27.1		ug/L		108	65 - 130
1,1-Dichloroethene	ND		25.0	26.2		ug/L		105	70 - 130
1,1-Dichloropropene	ND		25.0	28.8		ug/L		115	64 - 130
1,2,4-Trichlorobenzene	ND		25.0	27.9		ug/L		112	60 - 140
1,2-Dibromo-3-Chloropropane	ND	F1	25.0	37.1	F1	ug/L		148	48 - 140
1,2-Dichlorobenzene	ND		25.0	26.2		ug/L		105	70 - 130
1,2-Dichloroethane	ND		25.0	26.5		ug/L		106	56 - 146
1,2-Dichloropropane	ND		25.0	27.4		ug/L		110	69 - 130
1,3-Dichlorobenzene	ND		25.0	25.3		ug/L		101	70 - 130
1,3-Dichloropropane	ND		25.0	28.3		ug/L		113	70 - 130
1,4-Dichlorobenzene	2.5		25.0	27.8		ug/L		101	70 - 130
2,2-Dichloropropane	ND		25.0	26.3		ug/L		105	69 - 138
2-Hexanone	ND	F1	25.0	43.0	F1	ug/L		172	10 - 150
Acetone	ND	F1	25.0	44.4	F1	ug/L		177	10 - 150
Acrolein	ND		25.0	31.7		ug/L		127	10 - 147
Acrylonitrile	ND	F1	250	412	F1	ug/L		165	38 - 144
Benzene	ND		25.0	26.6		ug/L		106	66 - 130
Bromoform	ND		25.0	28.6		ug/L		114	59 - 150
Bromomethane	ND		25.0	22.6		ug/L		91	62 - 131
Carbon disulfide	ND		25.0	27.3		ug/L		109	49 - 140
Carbon tetrachloride	ND		25.0	26.0		ug/L		104	60 - 150
Chlorobenzene	0.29	J	25.0	25.0		ug/L		99	70 - 130
Bromochloromethane	ND		25.0	26.4		ug/L		105	70 - 130
Chloroethane	ND		25.0	24.6		ug/L		98	68 - 130
Chloroform	ND		25.0	25.6		ug/L		102	70 - 130
Chloromethane	ND		25.0	25.3		ug/L		101	39 - 144
cis-1,2-Dichloroethene	1.7		25.0	28.0		ug/L		105	70 - 130
cis-1,3-Dichloropropene	ND		25.0	27.7		ug/L		111	70 - 133
Dibromochloromethane	ND		25.0	27.6		ug/L		110	70 - 148
Dibromomethane	ND		25.0	27.5		ug/L		110	70 - 130
Bromodichloromethane	ND		25.0	26.7		ug/L		107	70 - 138
Dichlorodifluoromethane	ND		25.0	24.2		ug/L		97	25 - 142
Ethylbenzene	ND		25.0	25.8		ug/L		103	70 - 130
m,p-Xylene	ND		25.0	26.8		ug/L		107	70 - 133
Methylene Chloride	ND		25.0	25.3		ug/L		101	52 - 130
Methyl tert-butyl ether	1.3		25.0	28.7		ug/L		110	70 - 130
Naphthalene	ND		25.0	32.0		ug/L		128	60 - 140
o-Xylene	ND		25.0	26.8		ug/L		107	70 - 133
Styrene	ND		25.0	27.0		ug/L		108	29 - 150
t-Butanol	39		250	313		ug/L		110	70 - 130
Tetrachloroethene	ND		25.0	25.8		ug/L		103	70 - 137
Toluene	ND		25.0	25.5		ug/L		102	70 - 130
trans-1,2-Dichloroethene	ND		25.0	28.1		ug/L		112	70 - 130

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-197838-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 440-197838-1 MS**

**Matrix: Water**

**Analysis Batch: 445658**

**Client Sample ID: Extraction Trench**

**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
trans-1,3-Dichloropropene	ND		25.0	28.4		ug/L		114	70 - 138
Trichloroethene	ND		25.0	26.7		ug/L		107	70 - 130
Trichlorofluoromethane	ND		25.0	25.7		ug/L		103	60 - 150
Vinyl acetate	ND	F1	25.0	38.8	F1	ug/L		155	23 - 150
Vinyl chloride	ND		25.0	24.9		ug/L		100	50 - 137
1,2-Dibromoethane (EDB)	ND		25.0	29.5		ug/L		118	70 - 131
2-Butanone (MEK)	ND		25.0	34.4		ug/L		138	48 - 140
4-Methyl-2-pentanone (MIBK)	ND	F1	25.0	40.7	F1	ug/L		163	52 - 150
<b>MS MS</b>									
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>						
Toluene-d8 (Surr)	106		80 - 128						
4-Bromofluorobenzene (Surr)	99		80 - 120						
Dibromofluoromethane (Surr)	94		76 - 132						

**Lab Sample ID: 440-197838-1 MSD**

**Matrix: Water**

**Analysis Batch: 445658**

**Client Sample ID: Extraction Trench**

**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,3-Trichloropropane	ND		25.0	29.7		ug/L		119	60 - 130	9	30
1,1,1,2-Tetrachloroethane	ND		25.0	26.6		ug/L		106	60 - 149	2	20
1,1,1-Trichloroethane	ND		25.0	24.9		ug/L		100	70 - 130	2	20
1,1,2,2-Tetrachloroethane	ND		25.0	29.1		ug/L		117	63 - 130	9	30
1,1,2-Trichloroethane	ND		25.0	28.1		ug/L		112	70 - 130	5	25
1,1-Dichloroethane	ND		25.0	26.5		ug/L		106	65 - 130	2	20
1,1-Dichloroethene	ND		25.0	25.9		ug/L		104	70 - 130	1	20
1,1-Dichloropropene	ND		25.0	28.1		ug/L		113	64 - 130	2	20
1,2,4-Trichlorobenzene	ND		25.0	27.2		ug/L		109	60 - 140	2	20
1,2-Dibromo-3-Chloropropane	ND	F1	25.0	33.0		ug/L		132	48 - 140	12	30
1,2-Dichlorobenzene	ND		25.0	25.4		ug/L		102	70 - 130	3	20
1,2-Dichloroethane	ND		25.0	25.5		ug/L		102	56 - 146	4	20
1,2-Dichloropropane	ND		25.0	27.1		ug/L		108	69 - 130	1	20
1,3-Dichlorobenzene	ND		25.0	24.7		ug/L		99	70 - 130	2	20
1,3-Dichloropropane	ND		25.0	26.9		ug/L		108	70 - 130	5	25
1,4-Dichlorobenzene	2.5		25.0	26.6		ug/L		97	70 - 130	4	20
2,2-Dichloropropane	ND		25.0	25.8		ug/L		103	69 - 138	2	25
2-Hexanone	ND	F1	25.0	38.6	F1	ug/L		154	10 - 150	11	35
Acetone	ND	F1	25.0	39.6	F1	ug/L		159	10 - 150	11	35
Acrolein	ND		25.0	28.2		ug/L		113	10 - 147	12	40
Acrylonitrile	ND	F1	25.0	362	F1	ug/L		145	38 - 144	13	40
Benzene	ND		25.0	25.9		ug/L		103	66 - 130	3	20
Bromoform	ND		25.0	26.7		ug/L		107	59 - 150	7	25
Bromomethane	ND		25.0	22.3		ug/L		89	62 - 131	1	25
Carbon disulfide	ND		25.0	26.9		ug/L		108	49 - 140	1	20
Carbon tetrachloride	ND		25.0	25.7		ug/L		103	60 - 150	1	25
Chlorobenzene	0.29	J	25.0	24.5		ug/L		97	70 - 130	2	20
Bromochloromethane	ND		25.0	25.5		ug/L		102	70 - 130	3	25
Chloroethane	ND		25.0	23.7		ug/L		95	68 - 130	4	25

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-197838-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-197838-1 MSD

Matrix: Water

Analysis Batch: 445658

Client Sample ID: Extraction Trench

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloroform	ND		25.0	25.1		ug/L		100	70 - 130	2	20
Chloromethane	ND		25.0	24.9		ug/L		99	39 - 144	2	25
cis-1,2-Dichloroethene	1.7		25.0	27.6		ug/L		103	70 - 130	2	20
cis-1,3-Dichloropropene	ND		25.0	27.2		ug/L		109	70 - 133	2	20
Dibromochloromethane	ND		25.0	26.8		ug/L		107	70 - 148	3	25
Dibromomethane	ND		25.0	26.4		ug/L		106	70 - 130	4	25
Bromodichloromethane	ND		25.0	26.5		ug/L		106	70 - 138	1	20
Dichlorodifluoromethane	ND		25.0	23.8		ug/L		95	25 - 142	2	30
Ethylbenzene	ND		25.0	25.3		ug/L		101	70 - 130	2	20
m,p-Xylene	ND		25.0	26.4		ug/L		106	70 - 133	2	25
Methylene Chloride	ND		25.0	24.9		ug/L		100	52 - 130	2	20
Methyl tert-butyl ether	1.3		25.0	27.5		ug/L		105	70 - 130	4	25
Naphthalene	ND		25.0	30.0		ug/L		120	60 - 140	6	30
o-Xylene	ND		25.0	26.4		ug/L		106	70 - 133	1	20
Styrene	ND		25.0	26.3		ug/L		105	29 - 150	3	35
t-Butanol	39		250	306		ug/L		107	70 - 130	2	25
Tetrachloroethene	ND		25.0	25.3		ug/L		101	70 - 137	2	20
Toluene	ND		25.0	25.0		ug/L		100	70 - 130	2	20
trans-1,2-Dichloroethene	ND		25.0	27.3		ug/L		109	70 - 130	3	20
trans-1,3-Dichloropropene	ND		25.0	27.6		ug/L		110	70 - 138	3	25
Trichloroethene	ND		25.0	26.4		ug/L		106	70 - 130	1	20
Trichlorofluoromethane	ND		25.0	25.3		ug/L		101	60 - 150	2	25
Vinyl acetate	ND	F1	25.0	36.1		ug/L		144	23 - 150	7	30
Vinyl chloride	ND		25.0	24.9		ug/L		99	50 - 137	0	30
1,2-Dibromoethane (EDB)	ND		25.0	28.1		ug/L		112	70 - 131	5	25
2-Butanone (MEK)	ND		25.0	29.4		ug/L		118	48 - 140	16	40
4-Methyl-2-pentanone (MIBK)	ND	F1	25.0	37.1		ug/L		148	52 - 150	9	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Toluene-d8 (Surr)	105		80 - 128
4-Bromofluorobenzene (Surr)	98		80 - 120
Dibromofluoromethane (Surr)	94		76 - 132

## Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 440-445466/1-A

Matrix: Water

Analysis Batch: 445905

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 445466

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		1.0	0.25	ug/L		12/07/17 09:01	12/09/17 22:41	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	61		30 - 120	12/07/17 09:01	12/09/17 22:41	1

TestAmerica Irvine



# QC Sample Results

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

TestAmerica Job ID: 440-197838-1

## Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 440-445466/3-A**  
**Matrix: Water**  
**Analysis Batch: 445905**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 445466**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
1,4-Dioxane	2.00	1.18		ug/L		59	35 - 120
<b>Surrogate</b>							
		<b>LCS %Recovery</b>	<b>LCS Qualifier</b>				<b>Limits</b>
1,4-Dioxane-d8 (Surr)		59					30 - 120

**Lab Sample ID: 440-197858-A-4-A MS**  
**Matrix: Water**  
**Analysis Batch: 445905**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 445466**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
1,4-Dioxane	1.7	F1	2.03	1.26	F1	ug/L		-22	35 - 120
<b>Surrogate</b>									
		<b>MS %Recovery</b>	<b>MS Qualifier</b>						<b>Limits</b>
1,4-Dioxane-d8 (Surr)		57							30 - 120

**Lab Sample ID: 440-197858-A-4-B MSD**  
**Matrix: Water**  
**Analysis Batch: 445905**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 445466**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
1,4-Dioxane	1.7	F1	2.00	1.38	F1	ug/L		-16	35 - 120	9	25
<b>Surrogate</b>											
		<b>MSD %Recovery</b>	<b>MSD Qualifier</b>						<b>Limits</b>		<b>Limit</b>
1,4-Dioxane-d8 (Surr)		64							30 - 120		

## Method: 300.0 - Anions, Ion Chromatography

**Lab Sample ID: MB 440-445235/7**  
**Matrix: Water**  
**Analysis Batch: 445235**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.11	0.055	mg/L			12/06/17 12:03	1

**Lab Sample ID: LCS 440-445235/6**  
**Matrix: Water**  
**Analysis Batch: 445235**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Nitrate as N	1.13	1.11		mg/L		98	90 - 110

**Lab Sample ID: 440-197838-6 MS**  
**Matrix: Water**  
**Analysis Batch: 445235**

**Client Sample ID: MW-2B**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Nitrate as N	ND		2.26	2.12		mg/L		94	80 - 120

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-197838-1

## Method: 300.0 - Anions, Ion Chromatography (Continued)

**Lab Sample ID: 440-197838-6 MSD**  
**Matrix: Water**  
**Analysis Batch: 445235**

**Client Sample ID: MW-2B**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N	ND		2.26	2.19		mg/L		97	80 - 120	3	20

**Lab Sample ID: MB 440-445236/7**  
**Matrix: Water**  
**Analysis Batch: 445236**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		0.50	0.25	mg/L			12/06/17 12:03	1
Chloride	ND		0.50	0.25	mg/L			12/06/17 12:03	1
Fluoride	ND		0.50	0.25	mg/L			12/06/17 12:03	1
Sulfate	ND		0.50	0.25	mg/L			12/06/17 12:03	1

**Lab Sample ID: LCS 440-445236/6**  
**Matrix: Water**  
**Analysis Batch: 445236**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromide	5.00	4.73		mg/L		95	90 - 110
Chloride	5.00	4.61		mg/L		92	90 - 110
Fluoride	5.00	4.90		mg/L		98	90 - 110
Sulfate	5.00	4.80		mg/L		96	90 - 110

**Lab Sample ID: 440-197838-6 MS**  
**Matrix: Water**  
**Analysis Batch: 445236**

**Client Sample ID: MW-2B**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromide	ND		10.0	9.32		mg/L		93	80 - 120
Chloride	13		10.0	23.4		mg/L		102	80 - 120
Fluoride	0.81	J	10.0	10.3		mg/L		95	80 - 120

**Lab Sample ID: 440-197838-6 MSD**  
**Matrix: Water**  
**Analysis Batch: 445236**

**Client Sample ID: MW-2B**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bromide	ND		10.0	9.52		mg/L		95	80 - 120	2	20
Chloride	13		10.0	23.4		mg/L		102	80 - 120	0	20
Fluoride	0.81	J	10.0	10.6		mg/L		98	80 - 120	3	20

## Method: 6010B - Metals (ICP)

**Lab Sample ID: MB 440-445915/1-A**  
**Matrix: Water**  
**Analysis Batch: 446141**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 445915**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.050	0.025	mg/L		12/10/17 06:47	12/11/17 16:17	1
Calcium	ND		0.10	0.050	mg/L		12/10/17 06:47	12/11/17 16:17	1

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-197838-1

## Method: 6010B - Metals (ICP) (Continued)

**Lab Sample ID: MB 440-445915/1-A**  
**Matrix: Water**  
**Analysis Batch: 446141**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 445915**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.10	0.050	mg/L		12/10/17 06:47	12/11/17 16:17	1
Magnesium	ND		0.020	0.010	mg/L		12/10/17 06:47	12/11/17 16:17	1
Manganese	ND		0.020	0.015	mg/L		12/10/17 06:47	12/11/17 16:17	1
Potassium	ND		0.50	0.25	mg/L		12/10/17 06:47	12/11/17 16:17	1
Sodium	ND		0.50	0.26	mg/L		12/10/17 06:47	12/11/17 16:17	1

**Lab Sample ID: LCS 440-445915/2-A**  
**Matrix: Water**  
**Analysis Batch: 446141**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total Recoverable**  
**Prep Batch: 445915**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Boron	1.00	1.04		mg/L		104	80 - 120
Calcium	5.00	5.35		mg/L		107	80 - 120
Iron	1.00	1.08		mg/L		108	80 - 120
Magnesium	5.00	5.25		mg/L		105	80 - 120
Manganese	1.00	1.07		mg/L		107	80 - 120
Potassium	10.0	10.7		mg/L		107	80 - 120
Sodium	10.0	10.5		mg/L		105	80 - 120

**Lab Sample ID: 440-197975-K-2-B MS**  
**Matrix: Water**  
**Analysis Batch: 446141**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total Recoverable**  
**Prep Batch: 445915**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Boron	2.8		1.00	3.91		mg/L		113	75 - 125
Calcium	5.6		5.00	11.0		mg/L		108	75 - 125
Iron	0.15		1.00	1.17		mg/L		101	75 - 125
Magnesium	0.93		5.00	5.96		mg/L		101	75 - 125
Manganese	0.097		1.00	1.15		mg/L		105	75 - 125
Potassium	1.2		10.0	12.0		mg/L		108	75 - 125
Sodium	440		10.0	454	4	mg/L		153	75 - 125

**Lab Sample ID: 440-197975-K-2-C MSD**  
**Matrix: Water**  
**Analysis Batch: 446141**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total Recoverable**  
**Prep Batch: 445915**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Boron	2.8		1.00	4.02		mg/L		124	75 - 125	3	20
Calcium	5.6		5.00	11.4		mg/L		115	75 - 125	3	20
Iron	0.15		1.00	1.23		mg/L		108	75 - 125	5	20
Magnesium	0.93		5.00	6.30		mg/L		107	75 - 125	6	20
Manganese	0.097		1.00	1.20		mg/L		110	75 - 125	4	20
Potassium	1.2		10.0	12.7		mg/L		115	75 - 125	6	20
Sodium	440		10.0	463	4	mg/L		252	75 - 125	2	20

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-197838-1

## Method: 410.4 - COD

**Lab Sample ID: MB 440-446693/3**  
**Matrix: Water**  
**Analysis Batch: 446693**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		20	10	mg/L			12/14/17 08:52	1

**Lab Sample ID: LCS 440-446693/4**  
**Matrix: Water**  
**Analysis Batch: 446693**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chemical Oxygen Demand	200	197		mg/L		99	90 - 110

**Lab Sample ID: 440-197632-B-1 MS**  
**Matrix: Water**  
**Analysis Batch: 446693**

**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
Chemical Oxygen Demand	18	J	200	227		mg/L		105	70 - 120

**Lab Sample ID: 440-197632-B-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 446693**

**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
Chemical Oxygen Demand	18	J	200	214		mg/L		98	70 - 120	6	15

## Method: SM 2320B - Alkalinity

**Lab Sample ID: MB 440-445505/30**  
**Matrix: Water**  
**Analysis Batch: 445505**

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

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	ND		4.0	4.0	mg/L			12/07/17 08:50	1
Bicarbonate Alkalinity as CaCO3	ND		4.0	4.0	mg/L			12/07/17 08:50	1

**Lab Sample ID: LCS 440-445505/29**  
**Matrix: Water**  
**Analysis Batch: 445505**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity as CaCO3	50.8	50.0		mg/L		98	80 - 120

**Lab Sample ID: 440-197838-6 DU**  
**Matrix: Water**  
**Analysis Batch: 445505**

**Client Sample ID: MW-2B**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Alkalinity as CaCO3	350		335		mg/L		3	20
Bicarbonate Alkalinity as CaCO3	350		335		mg/L		3	20

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-197838-1

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

Lab Sample ID: MB 440-446012/1  
 Matrix: Water  
 Analysis Batch: 446012

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			12/11/17 09:57	1

Lab Sample ID: LCS 440-446012/2  
 Matrix: Water  
 Analysis Batch: 446012

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	966		mg/L		97	90 - 110

Lab Sample ID: 440-197838-2 DU  
 Matrix: Water  
 Analysis Batch: 446012

Client Sample ID: PZ-4  
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	1100		1160		mg/L		1	5

## Method: SM 4500 CO2 C - Free Carbon Dioxide

Lab Sample ID: MB 440-446817/1  
 Matrix: Water  
 Analysis Batch: 446817

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

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon Dioxide, Free	ND		2.0	2.0	mg/L			12/14/17 15:31	1

Lab Sample ID: 440-197838-7 DU  
 Matrix: Water  
 Analysis Batch: 446817

Client Sample ID: DW-4  
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Carbon Dioxide, Free	16		15.8		mg/L		0	20

## Method: SM 4500 NH3 D - Ammonia

Lab Sample ID: MB 440-445426/2-A  
 Matrix: Water  
 Analysis Batch: 445427

Client Sample ID: Method Blank  
 Prep Type: Total/NA  
 Prep Batch: 445426

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	ND		0.50	0.10	mg/L		12/07/17 03:30	12/07/17 05:00	1

Lab Sample ID: LCS 440-445426/1-A  
 Matrix: Water  
 Analysis Batch: 445427

Client Sample ID: Lab Control Sample  
 Prep Type: Total/NA  
 Prep Batch: 445426

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	2.50	2.36		mg/L		94	85 - 115

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-197838-1

## Method: SM 4500 NH3 D - Ammonia (Continued)

**Lab Sample ID: 440-197842-A-1-A MS**

**Matrix: Water**  
**Analysis Batch: 445427**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 445426**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Ammonia (as N)	0.91		2.50	3.50		mg/L		104	75 - 125

**Lab Sample ID: 440-197842-A-1-B MSD**

**Matrix: Water**  
**Analysis Batch: 445427**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 445426**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Ammonia (as N)	0.91		2.50	3.37		mg/L		98	75 - 125	4	15

**Lab Sample ID: 440-197842-B-1-B DU**

**Matrix: Water**  
**Analysis Batch: 445427**

**Client Sample ID: Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 445426**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Ammonia (as N)	0.91		0.876		mg/L		4	15

**Lab Sample ID: MB 440-445664/2-A**

**Matrix: Water**  
**Analysis Batch: 445672**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 445664**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	ND		0.50	0.10	mg/L		12/08/17 07:45	12/08/17 09:00	1

**Lab Sample ID: LCS 440-445664/1-A**

**Matrix: Water**  
**Analysis Batch: 445672**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 445664**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Ammonia (as N)	2.50	2.36		mg/L		95	85 - 115

**Lab Sample ID: 440-197764-I-2-B MS ^2**

**Matrix: Water**  
**Analysis Batch: 445672**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 445664**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Ammonia (as N)	3.0		2.50	5.11		mg/L		85	75 - 125

**Lab Sample ID: 440-197764-I-2-C MSD ^2**

**Matrix: Water**  
**Analysis Batch: 445672**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 445664**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Ammonia (as N)	3.0		2.50	5.32		mg/L		93	75 - 125	4	15

**Lab Sample ID: MB 440-445958/2-A**

**Matrix: Water**  
**Analysis Batch: 445959**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 445958**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	ND		0.50	0.10	mg/L		12/11/17 03:30	12/11/17 04:30	1

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-197838-1

**Lab Sample ID: LCS 440-445958/1-A**  
**Matrix: Water**  
**Analysis Batch: 445959**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 445958**  
 %Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Ammonia (as N)	2.50	2.23		mg/L		89	85 - 115

**Lab Sample ID: 440-197764-I-3-B MS**  
**Matrix: Water**  
**Analysis Batch: 445959**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**  
**Prep Batch: 445958**  
 %Rec.

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Ammonia (as N)	0.83		2.50	3.26		mg/L		97	75 - 125

**Lab Sample ID: 440-197764-I-3-C MSD**  
**Matrix: Water**  
**Analysis Batch: 445959**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 445958**  
 %Rec.

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Ammonia (as N)	0.83		2.50	3.14		mg/L		92	75 - 125	4	15

**Lab Sample ID: 440-198068-B-1-B DU**  
**Matrix: Water**  
**Analysis Batch: 445959**

**Client Sample ID: Duplicate**  
**Prep Type: Total/NA**  
**Prep Batch: 445958**  
 %Rec.

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Ammonia (as N)	0.89		0.862		mg/L		4	15

## Method: SM 4500 S2 D - Sulfide, Total

**Lab Sample ID: MB 440-445603/3**  
**Matrix: Water**  
**Analysis Batch: 445603**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Sulfide	ND		0.050	0.027	mg/L			12/07/17 18:04	1

**Lab Sample ID: LCS 440-445603/4**  
**Matrix: Water**  
**Analysis Batch: 445603**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
 %Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Total Sulfide	0.460	0.457		mg/L		99	80 - 120

**Lab Sample ID: LCSD 440-445603/5**  
**Matrix: Water**  
**Analysis Batch: 445603**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
 %Rec.

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Total Sulfide	0.460	0.459		mg/L		100	80 - 120	1	20

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-197838-1

## Method: SM 4500 S2 D - Sulfide, Total (Continued)

**Lab Sample ID: 440-197842-B-1 MS**  
**Matrix: Water**  
**Analysis Batch: 445603**

**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
Total Sulfide	ND		0.460	0.355		mg/L		77	70 - 130

**Lab Sample ID: 440-197842-B-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 445603**

**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
Total Sulfide	ND		0.460	0.330		mg/L		72	70 - 130	7	30

## Method: SM 5310C - TOC

**Lab Sample ID: MB 440-445633/6**  
**Matrix: Water**  
**Analysis Batch: 445633**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		0.10	0.050	mg/L			12/07/17 08:48	1

**Lab Sample ID: LCS 440-445633/5**  
**Matrix: Water**  
**Analysis Batch: 445633**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	10.0	9.89		mg/L		99	90 - 110

**Lab Sample ID: MRL 440-445633/4**  
**Matrix: Water**  
**Analysis Batch: 445633**

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	0.100	0.125		mg/L		125	50 - 150

**Lab Sample ID: 440-197764-G-2 MS**  
**Matrix: Water**  
**Analysis Batch: 445633**

**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
Total Organic Carbon	1.5		10.0	11.1		mg/L		97	80 - 120

**Lab Sample ID: 440-197764-G-2 MSD**  
**Matrix: Water**  
**Analysis Batch: 445633**

**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
Total Organic Carbon	1.5		10.0	11.2		mg/L		97	80 - 120	0	20

TestAmerica Irvine



# QC Sample Results

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

TestAmerica Job ID: 440-197838-1

## Method: SM 5310C - TOC (Continued)

**Lab Sample ID: MB 440-446391/6**  
**Matrix: Water**  
**Analysis Batch: 446391**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		0.10	0.050	mg/L			12/12/17 06:45	1

**Lab Sample ID: LCS 440-446391/5**  
**Matrix: Water**  
**Analysis Batch: 446391**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	10.0	9.27		mg/L		93	90 - 110

**Lab Sample ID: MRL 440-446391/4**  
**Matrix: Water**  
**Analysis Batch: 446391**

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	0.100	0.0795	J	mg/L		80	50 - 150

**Lab Sample ID: 440-197975-G-1 MS ^10**  
**Matrix: Water**  
**Analysis Batch: 446391**

**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
Total Organic Carbon	48		100	129		mg/L		81	80 - 120

**Lab Sample ID: 440-197975-G-1 MSD ^10**  
**Matrix: Water**  
**Analysis Batch: 446391**

**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
Total Organic Carbon	48		100	128		mg/L		80	80 - 120	1	20

# QC Association Summary

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

TestAmerica Job ID: 440-197838-1

## GC/MS VOA

### Analysis Batch: 445434

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197838-1	Extraction Trench	Total/NA	Water	8260B	
440-197838-2	PZ-4	Total/NA	Water	8260B	
440-197838-3	MW-5	Total/NA	Water	8260B	
440-197838-4	PZ-2	Total/NA	Water	8260B	
440-197838-5	MW-2A	Total/NA	Water	8260B	
440-197838-6	MW-2B	Total/NA	Water	8260B	
440-197838-7	DW-4	Total/NA	Water	8260B	
440-197838-8	QCAB	Total/NA	Water	8260B	
440-197838-9	QCTB	Total/NA	Water	8260B	
MB 440-445434/4	Method Blank	Total/NA	Water	8260B	
LCS 440-445434/5	Lab Control Sample	Total/NA	Water	8260B	
440-197520-F-22 MS	Matrix Spike	Total/NA	Water	8260B	
440-197520-F-22 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

### Analysis Batch: 445658

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197838-1	Extraction Trench	Total/NA	Water	8260B	
440-197838-2	PZ-4	Total/NA	Water	8260B	
440-197838-3	MW-5	Total/NA	Water	8260B	
440-197838-4	PZ-2	Total/NA	Water	8260B	
440-197838-5	MW-2A	Total/NA	Water	8260B	
440-197838-6	MW-2B	Total/NA	Water	8260B	
440-197838-7	DW-4	Total/NA	Water	8260B	
440-197838-8	QCAB	Total/NA	Water	8260B	
440-197838-9	QCTB	Total/NA	Water	8260B	
MB 440-445658/4	Method Blank	Total/NA	Water	8260B	
LCS 440-445658/5	Lab Control Sample	Total/NA	Water	8260B	
440-197838-1 MS	Extraction Trench	Total/NA	Water	8260B	
440-197838-1 MSD	Extraction Trench	Total/NA	Water	8260B	

## GC/MS Semi VOA

### Prep Batch: 445466

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197838-1	Extraction Trench	Total/NA	Water	3520C	
440-197838-2	PZ-4	Total/NA	Water	3520C	
440-197838-3	MW-5	Total/NA	Water	3520C	
440-197838-4	PZ-2	Total/NA	Water	3520C	
440-197838-5	MW-2A	Total/NA	Water	3520C	
440-197838-6	MW-2B	Total/NA	Water	3520C	
440-197838-7	DW-4	Total/NA	Water	3520C	
MB 440-445466/1-A	Method Blank	Total/NA	Water	3520C	
LCS 440-445466/3-A	Lab Control Sample	Total/NA	Water	3520C	
440-197858-A-4-A MS	Matrix Spike	Total/NA	Water	3520C	
440-197858-A-4-B MSD	Matrix Spike Duplicate	Total/NA	Water	3520C	

### Analysis Batch: 445905

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197838-1	Extraction Trench	Total/NA	Water	8270C	445466
440-197838-2	PZ-4	Total/NA	Water	8270C	445466

TestAmerica Irvine

# QC Association Summary

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

TestAmerica Job ID: 440-197838-1

## GC/MS Semi VOA (Continued)

### Analysis Batch: 445905 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 440-445466/1-A	Method Blank	Total/NA	Water	8270C	445466
LCS 440-445466/3-A	Lab Control Sample	Total/NA	Water	8270C	445466
440-197858-A-4-A MS	Matrix Spike	Total/NA	Water	8270C	445466
440-197858-A-4-B MSD	Matrix Spike Duplicate	Total/NA	Water	8270C	445466

### Analysis Batch: 446081

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197838-3	MW-5	Total/NA	Water	8270C	445466
440-197838-4	PZ-2	Total/NA	Water	8270C	445466
440-197838-5	MW-2A	Total/NA	Water	8270C	445466
440-197838-6	MW-2B	Total/NA	Water	8270C	445466
440-197838-7	DW-4	Total/NA	Water	8270C	445466

## HPLC/IC

### Analysis Batch: 445235

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197838-1	Extraction Trench	Total/NA	Water	300.0	
440-197838-2	PZ-4	Total/NA	Water	300.0	
440-197838-3	MW-5	Total/NA	Water	300.0	
440-197838-4	PZ-2	Total/NA	Water	300.0	
440-197838-5	MW-2A	Total/NA	Water	300.0	
440-197838-6	MW-2B	Total/NA	Water	300.0	
440-197838-7	DW-4	Total/NA	Water	300.0	
MB 440-445235/7	Method Blank	Total/NA	Water	300.0	
LCS 440-445235/6	Lab Control Sample	Total/NA	Water	300.0	
440-197838-6 MS	MW-2B	Total/NA	Water	300.0	
440-197838-6 MSD	MW-2B	Total/NA	Water	300.0	

### Analysis Batch: 445236

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197838-1	Extraction Trench	Total/NA	Water	300.0	
440-197838-1	Extraction Trench	Total/NA	Water	300.0	
440-197838-2	PZ-4	Total/NA	Water	300.0	
440-197838-2	PZ-4	Total/NA	Water	300.0	
440-197838-3	MW-5	Total/NA	Water	300.0	
440-197838-3	MW-5	Total/NA	Water	300.0	
440-197838-4	PZ-2	Total/NA	Water	300.0	
440-197838-4	PZ-2	Total/NA	Water	300.0	
440-197838-5	MW-2A	Total/NA	Water	300.0	
440-197838-5	MW-2A	Total/NA	Water	300.0	
440-197838-6	MW-2B	Total/NA	Water	300.0	
440-197838-6	MW-2B	Total/NA	Water	300.0	
440-197838-7	DW-4	Total/NA	Water	300.0	
440-197838-7	DW-4	Total/NA	Water	300.0	
MB 440-445236/7	Method Blank	Total/NA	Water	300.0	
LCS 440-445236/6	Lab Control Sample	Total/NA	Water	300.0	
440-197838-6 MS	MW-2B	Total/NA	Water	300.0	
440-197838-6 MSD	MW-2B	Total/NA	Water	300.0	

TestAmerica Irvine

# QC Association Summary

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

TestAmerica Job ID: 440-197838-1

## Metals

### Prep Batch: 445915

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197838-1	Extraction Trench	Total Recoverable	Water	3005A	
440-197838-2	PZ-4	Total Recoverable	Water	3005A	
440-197838-3	MW-5	Total Recoverable	Water	3005A	
440-197838-4	PZ-2	Total Recoverable	Water	3005A	
440-197838-5	MW-2A	Total Recoverable	Water	3005A	
440-197838-6	MW-2B	Total Recoverable	Water	3005A	
440-197838-7	DW-4	Total Recoverable	Water	3005A	
MB 440-445915/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 440-445915/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
440-197975-K-2-B MS	Matrix Spike	Total Recoverable	Water	3005A	
440-197975-K-2-C MSD	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

### Analysis Batch: 446141

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197838-4	PZ-2	Total Recoverable	Water	6010B	445915
MB 440-445915/1-A	Method Blank	Total Recoverable	Water	6010B	445915
LCS 440-445915/2-A	Lab Control Sample	Total Recoverable	Water	6010B	445915
440-197975-K-2-B MS	Matrix Spike	Total Recoverable	Water	6010B	445915
440-197975-K-2-C MSD	Matrix Spike Duplicate	Total Recoverable	Water	6010B	445915

### Analysis Batch: 446367

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197838-1	Extraction Trench	Total Recoverable	Water	6010B	445915
440-197838-2	PZ-4	Total Recoverable	Water	6010B	445915
440-197838-3	MW-5	Total Recoverable	Water	6010B	445915
440-197838-4	PZ-2	Total Recoverable	Water	6010B	445915
440-197838-5	MW-2A	Total Recoverable	Water	6010B	445915
440-197838-6	MW-2B	Total Recoverable	Water	6010B	445915
440-197838-7	DW-4	Total Recoverable	Water	6010B	445915

## General Chemistry

### Prep Batch: 445426

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197838-2	PZ-4	Total/NA	Water	SM 4500 NH3 B	
440-197838-4	PZ-2	Total/NA	Water	SM 4500 NH3 B	
440-197838-5	MW-2A	Total/NA	Water	SM 4500 NH3 B	
440-197838-6	MW-2B	Total/NA	Water	SM 4500 NH3 B	
MB 440-445426/2-A	Method Blank	Total/NA	Water	SM 4500 NH3 B	
LCS 440-445426/1-A	Lab Control Sample	Total/NA	Water	SM 4500 NH3 B	
440-197842-A-1-A MS	Matrix Spike	Total/NA	Water	SM 4500 NH3 B	
440-197842-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 NH3 B	
440-197842-B-1-B DU	Duplicate	Total/NA	Water	SM 4500 NH3 B	

### Analysis Batch: 445427

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197838-2	PZ-4	Total/NA	Water	SM 4500 NH3 D	445426
440-197838-4	PZ-2	Total/NA	Water	SM 4500 NH3 D	445426
440-197838-5	MW-2A	Total/NA	Water	SM 4500 NH3 D	445426
440-197838-6	MW-2B	Total/NA	Water	SM 4500 NH3 D	445426

TestAmerica Irvine

# QC Association Summary

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

TestAmerica Job ID: 440-197838-1

## General Chemistry (Continued)

### Analysis Batch: 445427 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 440-445426/2-A	Method Blank	Total/NA	Water	SM 4500 NH3 D	445426
LCS 440-445426/1-A	Lab Control Sample	Total/NA	Water	SM 4500 NH3 D	445426
440-197842-A-1-A MS	Matrix Spike	Total/NA	Water	SM 4500 NH3 D	445426
440-197842-A-1-B MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 NH3 D	445426
440-197842-B-1-B DU	Duplicate	Total/NA	Water	SM 4500 NH3 D	445426

### Analysis Batch: 445505

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197838-1	Extraction Trench	Total/NA	Water	SM 2320B	
440-197838-2	PZ-4	Total/NA	Water	SM 2320B	
440-197838-3	MW-5	Total/NA	Water	SM 2320B	
440-197838-4	PZ-2	Total/NA	Water	SM 2320B	
440-197838-5	MW-2A	Total/NA	Water	SM 2320B	
440-197838-6	MW-2B	Total/NA	Water	SM 2320B	
440-197838-7	DW-4	Total/NA	Water	SM 2320B	
MB 440-445505/30	Method Blank	Total/NA	Water	SM 2320B	
LCS 440-445505/29	Lab Control Sample	Total/NA	Water	SM 2320B	
440-197838-6 DU	MW-2B	Total/NA	Water	SM 2320B	

### Analysis Batch: 445603

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197838-1	Extraction Trench	Total/NA	Water	SM 4500 S2 D	
440-197838-2	PZ-4	Total/NA	Water	SM 4500 S2 D	
440-197838-3	MW-5	Total/NA	Water	SM 4500 S2 D	
440-197838-4	PZ-2	Total/NA	Water	SM 4500 S2 D	
440-197838-5	MW-2A	Total/NA	Water	SM 4500 S2 D	
440-197838-6	MW-2B	Total/NA	Water	SM 4500 S2 D	
440-197838-7	DW-4	Total/NA	Water	SM 4500 S2 D	
MB 440-445603/3	Method Blank	Total/NA	Water	SM 4500 S2 D	
LCS 440-445603/4	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
LCSD 440-445603/5	Lab Control Sample Dup	Total/NA	Water	SM 4500 S2 D	
440-197842-B-1 MS	Matrix Spike	Total/NA	Water	SM 4500 S2 D	
440-197842-B-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 S2 D	

### Analysis Batch: 445633

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197838-2	PZ-4	Total/NA	Water	SM 5310C	
440-197838-4	PZ-2	Total/NA	Water	SM 5310C	
440-197838-5	MW-2A	Total/NA	Water	SM 5310C	
440-197838-6	MW-2B	Total/NA	Water	SM 5310C	
440-197838-7	DW-4	Total/NA	Water	SM 5310C	
MB 440-445633/6	Method Blank	Total/NA	Water	SM 5310C	
LCS 440-445633/5	Lab Control Sample	Total/NA	Water	SM 5310C	
MRL 440-445633/4	Lab Control Sample	Total/NA	Water	SM 5310C	
440-197764-G-2 MS	Matrix Spike	Total/NA	Water	SM 5310C	
440-197764-G-2 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 5310C	

### Prep Batch: 445664

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197838-7	DW-4	Total/NA	Water	SM 4500 NH3 B	
MB 440-445664/2-A	Method Blank	Total/NA	Water	SM 4500 NH3 B	

TestAmerica Irvine

# QC Association Summary

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

TestAmerica Job ID: 440-197838-1

## General Chemistry (Continued)

### Prep Batch: 445664 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 440-445664/1-A	Lab Control Sample	Total/NA	Water	SM 4500 NH3 B	
440-197764-I-2-B MS ^2	Matrix Spike	Total/NA	Water	SM 4500 NH3 B	
440-197764-I-2-C MSD ^2	Matrix Spike Duplicate	Total/NA	Water	SM 4500 NH3 B	

### Analysis Batch: 445672

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197838-7	DW-4	Total/NA	Water	SM 4500 NH3 D	445664
MB 440-445664/2-A	Method Blank	Total/NA	Water	SM 4500 NH3 D	445664
LCS 440-445664/1-A	Lab Control Sample	Total/NA	Water	SM 4500 NH3 D	445664
440-197764-I-2-B MS ^2	Matrix Spike	Total/NA	Water	SM 4500 NH3 D	445664
440-197764-I-2-C MSD ^2	Matrix Spike Duplicate	Total/NA	Water	SM 4500 NH3 D	445664

### Prep Batch: 445958

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197838-1	Extraction Trench	Total/NA	Water	SM 4500 NH3 B	
440-197838-3	MW-5	Total/NA	Water	SM 4500 NH3 B	
MB 440-445958/2-A	Method Blank	Total/NA	Water	SM 4500 NH3 B	
LCS 440-445958/1-A	Lab Control Sample	Total/NA	Water	SM 4500 NH3 B	
440-197764-I-3-B MS	Matrix Spike	Total/NA	Water	SM 4500 NH3 B	
440-197764-I-3-C MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 NH3 B	
440-198068-B-1-B DU	Duplicate	Total/NA	Water	SM 4500 NH3 B	

### Analysis Batch: 445959

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197838-1	Extraction Trench	Total/NA	Water	SM 4500 NH3 D	445958
440-197838-3	MW-5	Total/NA	Water	SM 4500 NH3 D	445958
MB 440-445958/2-A	Method Blank	Total/NA	Water	SM 4500 NH3 D	445958
LCS 440-445958/1-A	Lab Control Sample	Total/NA	Water	SM 4500 NH3 D	445958
440-197764-I-3-B MS	Matrix Spike	Total/NA	Water	SM 4500 NH3 D	445958
440-197764-I-3-C MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 NH3 D	445958
440-198068-B-1-B DU	Duplicate	Total/NA	Water	SM 4500 NH3 D	445958

### Analysis Batch: 446012

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197838-1	Extraction Trench	Total/NA	Water	SM 2540C	
440-197838-2	PZ-4	Total/NA	Water	SM 2540C	
440-197838-3	MW-5	Total/NA	Water	SM 2540C	
440-197838-4	PZ-2	Total/NA	Water	SM 2540C	
440-197838-5	MW-2A	Total/NA	Water	SM 2540C	
440-197838-6	MW-2B	Total/NA	Water	SM 2540C	
440-197838-7	DW-4	Total/NA	Water	SM 2540C	
MB 440-446012/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 440-446012/2	Lab Control Sample	Total/NA	Water	SM 2540C	
440-197838-2 DU	PZ-4	Total/NA	Water	SM 2540C	

### Analysis Batch: 446391

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197838-1	Extraction Trench	Total/NA	Water	SM 5310C	
440-197838-3	MW-5	Total/NA	Water	SM 5310C	
MB 440-446391/6	Method Blank	Total/NA	Water	SM 5310C	
LCS 440-446391/5	Lab Control Sample	Total/NA	Water	SM 5310C	

TestAmerica Irvine

# QC Association Summary

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

TestAmerica Job ID: 440-197838-1

## General Chemistry (Continued)

### Analysis Batch: 446391 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MRL 440-446391/4	Lab Control Sample	Total/NA	Water	SM 5310C	
440-197975-G-1 MS ^10	Matrix Spike	Total/NA	Water	SM 5310C	
440-197975-G-1 MSD ^10	Matrix Spike Duplicate	Total/NA	Water	SM 5310C	

### Analysis Batch: 446693

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197838-1	Extraction Trench	Total/NA	Water	410.4	
440-197838-2	PZ-4	Total/NA	Water	410.4	
440-197838-3	MW-5	Total/NA	Water	410.4	
440-197838-4	PZ-2	Total/NA	Water	410.4	
440-197838-5	MW-2A	Total/NA	Water	410.4	
440-197838-6	MW-2B	Total/NA	Water	410.4	
440-197838-7	DW-4	Total/NA	Water	410.4	
MB 440-446693/3	Method Blank	Total/NA	Water	410.4	
LCS 440-446693/4	Lab Control Sample	Total/NA	Water	410.4	
440-197632-B-1 MS	Matrix Spike	Total/NA	Water	410.4	
440-197632-B-1 MSD	Matrix Spike Duplicate	Total/NA	Water	410.4	

### Analysis Batch: 446817

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197838-1	Extraction Trench	Total/NA	Water	SM 4500 CO2 C	
440-197838-2	PZ-4	Total/NA	Water	SM 4500 CO2 C	
440-197838-3	MW-5	Total/NA	Water	SM 4500 CO2 C	
440-197838-4	PZ-2	Total/NA	Water	SM 4500 CO2 C	
440-197838-5	MW-2A	Total/NA	Water	SM 4500 CO2 C	
440-197838-6	MW-2B	Total/NA	Water	SM 4500 CO2 C	
440-197838-7	DW-4	Total/NA	Water	SM 4500 CO2 C	
MB 440-446817/1	Method Blank	Total/NA	Water	SM 4500 CO2 C	
440-197838-7 DU	DW-4	Total/NA	Water	SM 4500 CO2 C	

# Definitions/Glossary

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

TestAmerica Job ID: 440-197838-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F1	MS and/or MSD Recovery is outside acceptance limits.

### GC/MS VOA TICs

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
J	Indicates an Estimated Value for TICs
T	Result is a tentatively identified compound (TIC) and an estimated value.

### GC/MS Semi VOA

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.

### HPLC/IC

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

### General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
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)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
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)

TestAmerica Irvine



# Accreditation/Certification Summary

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

TestAmerica Job ID: 440-197838-1

## Laboratory: TestAmerica Irvine

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	State Program	10	CA01531	06-30-18
Arizona	State Program	9	AZ0671	10-14-18
California	LA Cty Sanitation Districts	9	10256	06-30-18
California	State Program	9	CA ELAP 2706	06-30-18
Guam	State Program	9	Cert. No. 17-003R	01-23-18
Hawaii	State Program	9	N/A	01-29-18
Kansas	NELAP	7	E-10420	07-31-18
Nevada	State Program	9	CA015312018-1	07-31-18
New Mexico	State Program	6	N/A	01-29-18 *
Northern Mariana Islands	State Program	9	MP0002	01-29-17 *
Oregon	NELAP	10	4028	01-29-18
USDA	Federal		P330-15-00184	07-08-18
Washington	State Program	10	C900	09-03-18

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

TestAmerica Irvine

**TestAmerica Irvine**  
 17461 Berian Ave  
 Suite 100  
 Irvine, CA 92614  
 Phone: 949.261.1022 Fax:

**Chain of Custody Record**

180968

**TestAmerica**  
 THE LEADER IN ENVIRONMENTAL TESTING  
 TestAmerica Laboratories, Inc.  
 TAL-8210 (0713)

Regulatory Program:  DW  NPDES  RCRA  Other:

**Client Contact**  
 Company Name: Geo-logic Assoc.  
 Address: 11415 W. Parnavelo Ct.  
 City/State/Zip: S.D., CA. 92712  
 Phone: 858-451-1136  
 Fax: 858-451-1087  
 Project Name: Republic Services  
 Site: Sunshine Cym. Landfill  
 P O #: 41007851

**Project Manager:** Kyle Welton  
 Tel/Fax: 858-451-1136  
 CALENDAR DAYS  WORKING DAYS  
 Analysis Turnaround Time \_\_\_\_\_  
 TAT if different from Below \_\_\_\_\_  
 2 weeks   
 1 week   
 2 days   
 1 day

**Site Contact:** Rafael Costa Date: 12-6-17  
**Lab Contact:** Litagona Carrier: TAI  
 COC No. \_\_\_\_\_ of \_\_\_\_\_ COCS  
 Sampler: AS AS  
 For Lab Use Only:  
 Walk-in Client:  
 Lab Sampling:  
 Job / SDG No.:

**Sample Identification**

Sample ID	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	EPA 8260B-VOCs	8270 (1,4-Dioxane)	Bicarb. (310-D)	Phenolics as MS202	Chloride, Peroxide, Nitrate, Nitrite, B, Ca, K, Mg, Mn, Ni, Pb, Se, Si, Tl, U, V, Zn	TDS - EPA 160.1	TDC-EPA 415.1	Fluoride, Sulfide, Cyanide, Chloride	Carbon Dioxide	
EXTRACTION TRENCH	12/6/17	1000	G	WW	13	X	X	X	X	X	X	X	X	X	X	X	X
PZ-4		1309		GW	13	X	X	X	X	X	X	X	X	X	X	X	X
MW-5		1165			13	X	X	X	X	X	X	X	X	X	X	X	X
PZ-2		0830			13	X	X	X	X	X	X	X	X	X	X	X	X
MW-2A		1100			13	X	X	X	X	X	X	X	X	X	X	X	X
MW-2B		1225			13	X	X	X	X	X	X	X	X	X	X	X	X
DW-4		1240			13	X	X	X	X	X	X	X	X	X	X	X	X
QC A/B					5	X	X	X	X	X	X	X	X	X	X	X	X
QC C/B					5	X	X	X	X	X	X	X	X	X	X	X	X

**Preservation Used:** 1= Ice, 2= HCl; 3= H2SO4; 4= HNO3; 5= NaOH; 6= Other \_\_\_\_\_  
**Possible Hazard Identification:** 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

**Special Instructions/QC Requirements & Comments:**

**Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)**  
 Return to Client  Disposal by Lab  Archive for \_\_\_\_\_ Months  
 440-197838 Chain of Custody

**Custody Seal No.:** \_\_\_\_\_  
 Custody Seal No.: Geo-40512  
 Received by: Michelle Reira Date/Time: 12/6/17 1610  
 Relinquished by: Michelle Reira Date/Time: 12/6/17 1610  
 Received in Laboratory by: Michelle Reira Date/Time: 12/6/17 1610  
 Relinquished by: Michelle Reira Date/Time: 12/6/17 1610

0.3/0.9; 0.9/1.5; 0.8/1.4 #66



# Login Sample Receipt Checklist

Client: Geo-Logic Associates

Job Number: 440-197838-1

**Login Number: 197838**

**List Number: 1**

**Creator: Soderblom, Tim**

**List Source: TestAmerica Irvine**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> 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 <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Irvine

17461 Derian Ave

Suite 100

Irvine, CA 92614-5817

Tel: (949)261-1022

TestAmerica Job ID: 440-197975-1

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:

12/18/2017 11:36:06 AM

Rossina Tomova, Project Manager I

(949)261-1022

[rossina.tomova@testamericainc.com](mailto:rossina.tomova@testamericainc.com)

### LINKS

Review your project  
results through  
**TotalAccess**

Have a Question?

 **Ask  
The  
Expert**

Visit us at:

[www.testamericainc.com](http://www.testamericainc.com)

*The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

1

2

3

4

5

6

7

8

9

10

11

12

13



# Table of Contents

Cover Page . . . . .	1
Table of Contents . . . . .	2
Sample Summary . . . . .	3
Case Narrative . . . . .	4
Client Sample Results . . . . .	5
Method Summary . . . . .	14
Lab Chronicle . . . . .	15
QC Sample Results . . . . .	17
QC Association Summary . . . . .	37
Definitions/Glossary . . . . .	41
Certification Summary . . . . .	42
Chain of Custody . . . . .	43
Receipt Checklists . . . . .	44

# Sample Summary

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

TestAmerica Job ID: 440-197975-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-197975-1	MW-1	Water	12/07/17 08:10	12/07/17 16:45
440-197975-2	DW-5	Water	12/07/17 09:20	12/07/17 16:45
440-197975-3	QCAB	Water	12/07/17 00:01	12/07/17 16:45
440-197975-4	QCTB	Water	12/07/17 00:01	12/07/17 16:45

1

2

3

4

5

6

7

8

9

10

11

12

13

# Case Narrative

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

TestAmerica Job ID: 440-197975-1

**Job ID: 440-197975-1**

**Laboratory: TestAmerica Irvine**

## Narrative

### Job Narrative 440-197975-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 12/7/2017 4:45 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 0.9° C.

#### GC/MS VOA

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

#### GC/MS Semi VOA

Method(s) 8270C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 440-446225 and analytical batch 440-446519. The laboratory control sample (LCS) was performed in duplicate to provide precision data for this batch.

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

#### HPLC/IC

Method(s) 300.0: Due to the high concentration of Chloride, the matrix spike / matrix spike duplicate (MS/MSD) for analytical batch 440-445478 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

Method(s) 300.0: The following sample was diluted for Nitrate as N due to the nature of the sample matrix: MW-1 (440-197975-1). Elevated reporting limits (RLs) are provided.

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

#### Metals

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.

#### Organic Prep

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

#### VOA Prep

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

# Client Sample Results

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

TestAmerica Job ID: 440-197975-1

**Client Sample ID: MW-1**  
**Date Collected: 12/07/17 08:10**  
**Date Received: 12/07/17 16:45**

**Lab Sample ID: 440-197975-1**  
**Matrix: Water**

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			12/08/17 16:15	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/08/17 16:15	1
Acrolein	ND		50	2.5	ug/L			12/08/17 11:38	1
Acrylonitrile	ND		50	1.0	ug/L			12/08/17 11:38	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			12/08/17 16:15	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/08/17 16:15	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			12/08/17 16:15	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			12/08/17 16:15	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			12/08/17 16:15	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			12/08/17 16:15	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			12/08/17 16:15	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			12/08/17 16:15	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			12/08/17 16:15	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			12/08/17 16:15	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			12/08/17 16:15	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			12/08/17 16:15	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			12/08/17 16:15	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			12/08/17 16:15	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			12/08/17 16:15	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			12/08/17 16:15	1
2-Hexanone	ND		5.0	2.5	ug/L			12/08/17 16:15	1
Acetone	ND		20	10	ug/L			12/08/17 16:15	1
Acetonitrile	ND		20	10	ug/L			12/08/17 16:15	1
Acrolein	ND		5.0	2.5	ug/L			12/08/17 16:15	1
Acrylonitrile	ND		2.0	1.0	ug/L			12/08/17 16:15	1
Benzene	ND		0.50	0.25	ug/L			12/08/17 16:15	1
Allyl chloride	ND		1.0	0.50	ug/L			12/08/17 16:15	1
Bromoform	ND		1.0	0.40	ug/L			12/08/17 16:15	1
Bromomethane	ND		0.50	0.25	ug/L			12/08/17 16:15	1
Carbon disulfide	ND		1.0	0.50	ug/L			12/08/17 16:15	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			12/08/17 16:15	1
Chlorobenzene	ND		0.50	0.25	ug/L			12/08/17 16:15	1
Bromochloromethane	ND		0.50	0.25	ug/L			12/08/17 16:15	1
Chloroethane	ND		1.0	0.40	ug/L			12/08/17 16:15	1
Chloroform	ND		0.50	0.25	ug/L			12/08/17 16:15	1
Chloromethane	ND		0.50	0.25	ug/L			12/08/17 16:15	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/08/17 16:15	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/08/17 16:15	1
Dibromochloromethane	ND		0.50	0.25	ug/L			12/08/17 16:15	1
Dibromomethane	ND		0.50	0.25	ug/L			12/08/17 16:15	1
Bromodichloromethane	ND		0.50	0.25	ug/L			12/08/17 16:15	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			12/08/17 16:15	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			12/08/17 16:15	1
Ethylbenzene	ND		0.50	0.25	ug/L			12/08/17 16:15	1
Iodomethane	ND		2.0	1.0	ug/L			12/08/17 16:15	1
Isobutyl alcohol	ND		25	13	ug/L			12/08/17 16:15	1
m,p-Xylene	ND		1.0	0.50	ug/L			12/08/17 16:15	1
Methylacrylonitrile	ND		10	2.5	ug/L			12/08/17 16:15	1
Methyl methacrylate	ND		2.0	1.0	ug/L			12/08/17 16:15	1

TestAmerica Irvine



# Client Sample Results

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

TestAmerica Job ID: 440-197975-1

**Client Sample ID: MW-1**

**Lab Sample ID: 440-197975-1**

Date Collected: 12/07/17 08:10

Matrix: Water

Date Received: 12/07/17 16:45

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	ND		2.0	0.88	ug/L			12/08/17 16:15	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			12/08/17 16:15	1
Naphthalene	ND		1.0	0.40	ug/L			12/08/17 16:15	1
o-Xylene	ND		0.50	0.25	ug/L			12/08/17 16:15	1
Propionitrile	ND		20	10	ug/L			12/08/17 16:15	1
Styrene	ND		0.50	0.25	ug/L			12/08/17 16:15	1
<b>t-Butanol</b>	<b>21</b>		10	5.0	ug/L			12/08/17 16:15	1
Tetrachloroethene	ND		0.50	0.25	ug/L			12/08/17 16:15	1
<b>Tetrahydrofuran</b>	<b>6.7</b>	<b>J</b>	10	5.0	ug/L			12/08/17 16:15	1
Toluene	ND		0.50	0.25	ug/L			12/08/17 16:15	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/08/17 16:15	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/08/17 16:15	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			12/08/17 16:15	1
Trichloroethene	ND		0.50	0.25	ug/L			12/08/17 16:15	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			12/08/17 16:15	1
Vinyl acetate	ND		4.0	2.0	ug/L			12/08/17 16:15	1
Vinyl chloride	ND		0.50	0.25	ug/L			12/08/17 16:15	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			12/08/17 16:15	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			12/08/17 16:15	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			12/08/17 16:15	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	5.6	T J	ug/L		4.34			12/08/17 16:15	1
Unknown	9.0	T J	ug/L		5.94			12/08/17 16:15	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	101		80 - 128		12/08/17 11:38	1
4-Bromofluorobenzene (Surr)	93		80 - 120		12/08/17 11:38	1
Toluene-d8 (Surr)	109		80 - 128		12/08/17 16:15	1
4-Bromofluorobenzene (Surr)	98		80 - 120		12/08/17 16:15	1
Dibromofluoromethane (Surr)	102		76 - 132		12/08/17 11:38	1
Dibromofluoromethane (Surr)	97		76 - 132		12/08/17 16:15	1

**Method: 8270C - Semivolatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>1,4-Dioxane</b>	<b>19</b>		1.0	0.25	ug/L		12/12/17 09:46	12/13/17 15:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	60		30 - 120	12/12/17 09:46	12/13/17 15:51	1

**Method: 300.0 - Anions, Ion Chromatography**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Bromide</b>	<b>4.3</b>		1.0	0.50	mg/L			12/07/17 19:14	2
Nitrate as N	ND		0.22	0.11	mg/L			12/07/17 19:14	2
<b>Chloride</b>	<b>310</b>		50	25	mg/L			12/07/17 19:31	100
<b>Fluoride</b>	<b>1.7</b>		1.0	0.50	mg/L			12/07/17 19:14	2
<b>Sulfate</b>	<b>1700</b>		50	25	mg/L			12/07/17 19:31	100

**Method: 6010B - Metals (ICP) - Total Recoverable**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Boron</b>	<b>1.4</b>		0.050	0.025	mg/L		12/10/17 06:47	12/11/17 16:32	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-197975-1

**Client Sample ID: MW-1**

**Lab Sample ID: 440-197975-1**

Date Collected: 12/07/17 08:10

Matrix: Water

Date Received: 12/07/17 16:45

**Method: 6010B - Metals (ICP) - Total Recoverable (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium	460		0.10	0.050	mg/L		12/10/17 06:47	12/11/17 16:32	1
Iron	60		0.10	0.050	mg/L		12/10/17 06:47	12/11/17 16:32	1
Magnesium	210		0.020	0.010	mg/L		12/10/17 06:47	12/11/17 16:32	1
Manganese	3.5		0.020	0.015	mg/L		12/10/17 06:47	12/11/17 16:32	1
Potassium	30		0.50	0.25	mg/L		12/10/17 06:47	12/11/17 16:32	1
Sodium	350		0.50	0.26	mg/L		12/10/17 06:47	12/11/17 16:32	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	130		20	10	mg/L			12/14/17 15:29	1
Total Dissolved Solids	3700		50	25	mg/L			12/11/17 09:57	1
Ammonia (as N)	3.8		0.50	0.10	mg/L		12/11/17 03:30	12/11/17 04:30	1
Total Sulfide	ND		0.050	0.027	mg/L			12/12/17 15:28	1
Total Organic Carbon	48		0.50	0.25	mg/L			12/12/17 07:58	5

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	700		4.0	4.0	mg/L			12/08/17 10:02	1
Bicarbonate Alkalinity as CaCO3	700		4.0	4.0	mg/L			12/08/17 10:02	1
Carbon Dioxide, Free	95		2.0	2.0	mg/L			12/15/17 13:14	1

**Client Sample ID: DW-5**

**Lab Sample ID: 440-197975-2**

Date Collected: 12/07/17 09:20

Matrix: Water

Date Received: 12/07/17 16:45

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			12/08/17 16:42	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/08/17 16:42	1
Acrolein	ND		50	2.5	ug/L			12/08/17 12:03	1
Acrylonitrile	ND		50	1.0	ug/L			12/08/17 12:03	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			12/08/17 16:42	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/08/17 16:42	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			12/08/17 16:42	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			12/08/17 16:42	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			12/08/17 16:42	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			12/08/17 16:42	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			12/08/17 16:42	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			12/08/17 16:42	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			12/08/17 16:42	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			12/08/17 16:42	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			12/08/17 16:42	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			12/08/17 16:42	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			12/08/17 16:42	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			12/08/17 16:42	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			12/08/17 16:42	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			12/08/17 16:42	1
2-Hexanone	ND		5.0	2.5	ug/L			12/08/17 16:42	1
Acetone	ND		20	10	ug/L			12/08/17 16:42	1
Acetonitrile	ND		20	10	ug/L			12/08/17 16:42	1
Acrolein	ND		5.0	2.5	ug/L			12/08/17 16:42	1
Acrylonitrile	ND		2.0	1.0	ug/L			12/08/17 16:42	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-197975-1

**Client Sample ID: DW-5**

**Lab Sample ID: 440-197975-2**

**Date Collected: 12/07/17 09:20**

**Matrix: Water**

**Date Received: 12/07/17 16:45**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		0.50	0.25	ug/L			12/08/17 16:42	1
<b>Allyl chloride</b>	<b>2.9</b>		1.0	0.50	ug/L			12/08/17 16:42	1
Bromoform	ND		1.0	0.40	ug/L			12/08/17 16:42	1
Bromomethane	ND		0.50	0.25	ug/L			12/08/17 16:42	1
Carbon disulfide	ND		1.0	0.50	ug/L			12/08/17 16:42	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			12/08/17 16:42	1
Chlorobenzene	ND		0.50	0.25	ug/L			12/08/17 16:42	1
Bromochloromethane	ND		0.50	0.25	ug/L			12/08/17 16:42	1
Chloroethane	ND		1.0	0.40	ug/L			12/08/17 16:42	1
Chloroform	ND		0.50	0.25	ug/L			12/08/17 16:42	1
Chloromethane	ND		0.50	0.25	ug/L			12/08/17 16:42	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/08/17 16:42	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/08/17 16:42	1
Dibromochloromethane	ND		0.50	0.25	ug/L			12/08/17 16:42	1
Dibromomethane	ND		0.50	0.25	ug/L			12/08/17 16:42	1
Bromodichloromethane	ND		0.50	0.25	ug/L			12/08/17 16:42	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			12/08/17 16:42	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			12/08/17 16:42	1
Ethylbenzene	ND		0.50	0.25	ug/L			12/08/17 16:42	1
Iodomethane	ND		2.0	1.0	ug/L			12/08/17 16:42	1
Isobutyl alcohol	ND		25	13	ug/L			12/08/17 16:42	1
m,p-Xylene	ND		1.0	0.50	ug/L			12/08/17 16:42	1
Methylacrylonitrile	ND		10	2.5	ug/L			12/08/17 16:42	1
Methyl methacrylate	ND		2.0	1.0	ug/L			12/08/17 16:42	1
Methylene Chloride	ND		2.0	0.88	ug/L			12/08/17 16:42	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			12/08/17 16:42	1
Naphthalene	ND		1.0	0.40	ug/L			12/08/17 16:42	1
o-Xylene	ND		0.50	0.25	ug/L			12/08/17 16:42	1
Propionitrile	ND		20	10	ug/L			12/08/17 16:42	1
Styrene	ND		0.50	0.25	ug/L			12/08/17 16:42	1
t-Butanol	ND		10	5.0	ug/L			12/08/17 16:42	1
Tetrachloroethene	ND		0.50	0.25	ug/L			12/08/17 16:42	1
Tetrahydrofuran	ND		10	5.0	ug/L			12/08/17 16:42	1
Toluene	ND		0.50	0.25	ug/L			12/08/17 16:42	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/08/17 16:42	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/08/17 16:42	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			12/08/17 16:42	1
Trichloroethene	ND		0.50	0.25	ug/L			12/08/17 16:42	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			12/08/17 16:42	1
Vinyl acetate	ND		4.0	2.0	ug/L			12/08/17 16:42	1
Vinyl chloride	ND		0.50	0.25	ug/L			12/08/17 16:42	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			12/08/17 16:42	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			12/08/17 16:42	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			12/08/17 16:42	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
<i>Butane, 2,3-dimethyl-</i>	13	T J N	ug/L		4.36	79-29-8		12/08/17 16:42	1
<i>Unknown</i>	9.0	T J	ug/L		5.94			12/08/17 16:42	1
<i>Benzene, (2-methylpropyl)-</i>	10	T J N	ug/L		13.12	538-93-2		12/08/17 16:42	1
<i>1H-Indene, 2,3-dihydro-1,1-dimethyl-</i>	11	T J N	ug/L		14.86	4912-92-9		12/08/17 16:42	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-197975-1

**Client Sample ID: DW-5**

**Lab Sample ID: 440-197975-2**

Date Collected: 12/07/17 09:20

Matrix: Water

Date Received: 12/07/17 16:45

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Benzene, 1,2,3,4-tetramethyl-	32	T J N	ug/L		15.16	488-23-3		12/08/17 16:42	1
Benzene, pentamethyl-	15	T J N	ug/L		16.13	700-12-9		12/08/17 16:42	1
1H-Indene, 2,3-dihydro-1,1,5-trimethyl- Benzene, pentamethyl-	10	T J N	ug/L		16.30	40650-41-7		12/08/17 16:42	1
1H-Indene, 2,3-dihydro-4,7-dimethyl-	12	T J N	ug/L		16.56	700-12-9		12/08/17 16:42	1
Unknown	15	T J N	ug/L		16.88	6682-71-9		12/08/17 16:42	1
	9.2	T J	ug/L		17.08			12/08/17 16:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	102		80 - 128		12/08/17 12:03	1
4-Bromofluorobenzene (Surr)	96		80 - 120		12/08/17 12:03	1
Toluene-d8 (Surr)	109		80 - 128		12/08/17 16:42	1
4-Bromofluorobenzene (Surr)	98		80 - 120		12/08/17 16:42	1
Dibromofluoromethane (Surr)	101		76 - 132		12/08/17 12:03	1
Dibromofluoromethane (Surr)	97		76 - 132		12/08/17 16:42	1

## Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		1.1	0.27	ug/L		12/12/17 09:46	12/13/17 16:13	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	68		30 - 120	12/12/17 09:46	12/13/17 16:13	1

## Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		0.50	0.25	mg/L			12/07/17 19:49	1
Nitrate as N	ND		0.11	0.055	mg/L			12/07/17 19:49	1
Chloride	21		2.5	1.3	mg/L			12/07/17 22:38	5
Fluoride	3.4		0.50	0.25	mg/L			12/07/17 19:49	1
Sulfate	ND		0.50	0.25	mg/L			12/07/17 19:49	1

## Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2.8		0.050	0.025	mg/L		12/10/17 06:47	12/11/17 16:22	1
Calcium	5.6		0.10	0.050	mg/L		12/10/17 06:47	12/11/17 16:22	1
Iron	0.15		0.10	0.050	mg/L		12/10/17 06:47	12/11/17 16:22	1
Magnesium	0.93		0.020	0.010	mg/L		12/10/17 06:47	12/11/17 16:22	1
Manganese	0.097		0.020	0.015	mg/L		12/10/17 06:47	12/11/17 16:22	1
Potassium	1.2		0.50	0.25	mg/L		12/10/17 06:47	12/11/17 16:22	1
Sodium	440		0.50	0.26	mg/L		12/10/17 06:47	12/11/17 16:22	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		20	10	mg/L			12/14/17 15:29	1
Total Dissolved Solids	1100		10	5.0	mg/L			12/11/17 09:57	1
Ammonia (as N)	0.51		0.50	0.10	mg/L		12/11/17 03:30	12/11/17 04:30	1
Total Sulfide	0.029	J	0.050	0.027	mg/L			12/12/17 15:28	1
Total Organic Carbon	7.9		0.10	0.050	mg/L			12/12/17 10:30	1
Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	930		4.0	4.0	mg/L			12/08/17 10:19	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-197975-1

## Client Sample ID: DW-5

Date Collected: 12/07/17 09:20

Date Received: 12/07/17 16:45

## Lab Sample ID: 440-197975-2

Matrix: Water

### General Chemistry (Continued)

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3	890		4.0	4.0	mg/L			12/08/17 10:19	1
Carbon Dioxide, Free	5.3		2.0	2.0	mg/L			12/15/17 13:14	1

## Client Sample ID: QCAB

Date Collected: 12/07/17 00:01

Date Received: 12/07/17 16:45

## Lab Sample ID: 440-197975-3

Matrix: Water

### Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			12/08/17 17:10	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/08/17 17:10	1
Acrolein	ND		50	2.5	ug/L			12/08/17 12:29	1
Acrylonitrile	ND		50	1.0	ug/L			12/08/17 12:29	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			12/08/17 17:10	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/08/17 17:10	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			12/08/17 17:10	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			12/08/17 17:10	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			12/08/17 17:10	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			12/08/17 17:10	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			12/08/17 17:10	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			12/08/17 17:10	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			12/08/17 17:10	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			12/08/17 17:10	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			12/08/17 17:10	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			12/08/17 17:10	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			12/08/17 17:10	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			12/08/17 17:10	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			12/08/17 17:10	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			12/08/17 17:10	1
2-Hexanone	ND		5.0	2.5	ug/L			12/08/17 17:10	1
Acetone	ND		20	10	ug/L			12/08/17 17:10	1
Acetonitrile	ND		20	10	ug/L			12/08/17 17:10	1
Acrolein	ND		5.0	2.5	ug/L			12/08/17 17:10	1
Acrylonitrile	ND		2.0	1.0	ug/L			12/08/17 17:10	1
Benzene	ND		0.50	0.25	ug/L			12/08/17 17:10	1
Allyl chloride	ND		1.0	0.50	ug/L			12/08/17 17:10	1
Bromoform	ND		1.0	0.40	ug/L			12/08/17 17:10	1
Bromomethane	ND		0.50	0.25	ug/L			12/08/17 17:10	1
Carbon disulfide	ND		1.0	0.50	ug/L			12/08/17 17:10	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			12/08/17 17:10	1
Chlorobenzene	ND		0.50	0.25	ug/L			12/08/17 17:10	1
Bromochloromethane	ND		0.50	0.25	ug/L			12/08/17 17:10	1
Chloroethane	ND		1.0	0.40	ug/L			12/08/17 17:10	1
Chloroform	ND		0.50	0.25	ug/L			12/08/17 17:10	1
Chloromethane	ND		0.50	0.25	ug/L			12/08/17 17:10	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/08/17 17:10	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/08/17 17:10	1
Dibromochloromethane	ND		0.50	0.25	ug/L			12/08/17 17:10	1
Dibromomethane	ND		0.50	0.25	ug/L			12/08/17 17:10	1
Bromodichloromethane	ND		0.50	0.25	ug/L			12/08/17 17:10	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-197975-1

**Client Sample ID: QCAB**

**Lab Sample ID: 440-197975-3**

Date Collected: 12/07/17 00:01

Matrix: Water

Date Received: 12/07/17 16:45

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			12/08/17 17:10	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			12/08/17 17:10	1
Ethylbenzene	ND		0.50	0.25	ug/L			12/08/17 17:10	1
Iodomethane	ND		2.0	1.0	ug/L			12/08/17 17:10	1
Isobutyl alcohol	ND		25	13	ug/L			12/08/17 17:10	1
m,p-Xylene	ND		1.0	0.50	ug/L			12/08/17 17:10	1
Methylacrylonitrile	ND		10	2.5	ug/L			12/08/17 17:10	1
Methyl methacrylate	ND		2.0	1.0	ug/L			12/08/17 17:10	1
Methylene Chloride	ND		2.0	0.88	ug/L			12/08/17 17:10	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			12/08/17 17:10	1
Naphthalene	ND		1.0	0.40	ug/L			12/08/17 17:10	1
o-Xylene	ND		0.50	0.25	ug/L			12/08/17 17:10	1
Propionitrile	ND		20	10	ug/L			12/08/17 17:10	1
Styrene	ND		0.50	0.25	ug/L			12/08/17 17:10	1
t-Butanol	ND		10	5.0	ug/L			12/08/17 17:10	1
Tetrachloroethene	ND		0.50	0.25	ug/L			12/08/17 17:10	1
Tetrahydrofuran	ND		10	5.0	ug/L			12/08/17 17:10	1
Toluene	ND		0.50	0.25	ug/L			12/08/17 17:10	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/08/17 17:10	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/08/17 17:10	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			12/08/17 17:10	1
Trichloroethene	ND		0.50	0.25	ug/L			12/08/17 17:10	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			12/08/17 17:10	1
Vinyl acetate	ND		4.0	2.0	ug/L			12/08/17 17:10	1
Vinyl chloride	ND		0.50	0.25	ug/L			12/08/17 17:10	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			12/08/17 17:10	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			12/08/17 17:10	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			12/08/17 17:10	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	9.0	T J	ug/L		5.94			12/08/17 17:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	101		80 - 128		12/08/17 12:29	1
4-Bromofluorobenzene (Surr)	96		80 - 120		12/08/17 12:29	1
Toluene-d8 (Surr)	108		80 - 128		12/08/17 17:10	1
4-Bromofluorobenzene (Surr)	99		80 - 120		12/08/17 17:10	1
Dibromofluoromethane (Surr)	101		76 - 132		12/08/17 12:29	1
Dibromofluoromethane (Surr)	97		76 - 132		12/08/17 17:10	1

**Client Sample ID: QCTB**

**Lab Sample ID: 440-197975-4**

Date Collected: 12/07/17 00:01

Matrix: Water

Date Received: 12/07/17 16:45

**Method: 8260B - Volatile Organic Compounds (GC/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			12/08/17 21:14	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/08/17 21:14	1
Acrolein	ND		50	2.5	ug/L			12/08/17 09:56	1
Acrylonitrile	ND		50	1.0	ug/L			12/08/17 09:56	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-197975-1

**Client Sample ID: QCTB**

**Lab Sample ID: 440-197975-4**

**Date Collected: 12/07/17 00:01**

**Matrix: Water**

**Date Received: 12/07/17 16:45**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			12/08/17 21:14	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/08/17 21:14	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			12/08/17 21:14	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			12/08/17 21:14	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			12/08/17 21:14	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			12/08/17 21:14	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			12/08/17 21:14	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			12/08/17 21:14	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			12/08/17 21:14	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			12/08/17 21:14	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			12/08/17 21:14	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			12/08/17 21:14	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			12/08/17 21:14	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			12/08/17 21:14	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			12/08/17 21:14	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			12/08/17 21:14	1
2-Hexanone	ND		5.0	2.5	ug/L			12/08/17 21:14	1
Acetone	ND		20	10	ug/L			12/08/17 21:14	1
Acetonitrile	ND		20	10	ug/L			12/08/17 21:14	1
Acrolein	ND		5.0	2.5	ug/L			12/08/17 21:14	1
Acrylonitrile	ND		2.0	1.0	ug/L			12/08/17 21:14	1
Benzene	ND		0.50	0.25	ug/L			12/08/17 21:14	1
Allyl chloride	ND		1.0	0.50	ug/L			12/08/17 21:14	1
Bromoform	ND		1.0	0.40	ug/L			12/08/17 21:14	1
Bromomethane	ND		0.50	0.25	ug/L			12/08/17 21:14	1
Carbon disulfide	ND		1.0	0.50	ug/L			12/08/17 21:14	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			12/08/17 21:14	1
Chlorobenzene	ND		0.50	0.25	ug/L			12/08/17 21:14	1
Bromochloromethane	ND		0.50	0.25	ug/L			12/08/17 21:14	1
Chloroethane	ND		1.0	0.40	ug/L			12/08/17 21:14	1
Chloroform	ND		0.50	0.25	ug/L			12/08/17 21:14	1
Chloromethane	ND		0.50	0.25	ug/L			12/08/17 21:14	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/08/17 21:14	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/08/17 21:14	1
Dibromochloromethane	ND		0.50	0.25	ug/L			12/08/17 21:14	1
Dibromomethane	ND		0.50	0.25	ug/L			12/08/17 21:14	1
Bromodichloromethane	ND		0.50	0.25	ug/L			12/08/17 21:14	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			12/08/17 21:14	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			12/08/17 21:14	1
Ethylbenzene	ND		0.50	0.25	ug/L			12/08/17 21:14	1
Iodomethane	ND		2.0	1.0	ug/L			12/08/17 21:14	1
Isobutyl alcohol	ND		25	13	ug/L			12/08/17 21:14	1
m,p-Xylene	ND		1.0	0.50	ug/L			12/08/17 21:14	1
Methylacrylonitrile	ND		10	2.5	ug/L			12/08/17 21:14	1
Methyl methacrylate	ND		2.0	1.0	ug/L			12/08/17 21:14	1
Methylene Chloride	ND		2.0	0.88	ug/L			12/08/17 21:14	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			12/08/17 21:14	1
Naphthalene	ND		1.0	0.40	ug/L			12/08/17 21:14	1
o-Xylene	ND		0.50	0.25	ug/L			12/08/17 21:14	1

TestAmerica Irvine

# Client Sample Results

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

TestAmerica Job ID: 440-197975-1

**Client Sample ID: QCTB**

**Lab Sample ID: 440-197975-4**

**Date Collected: 12/07/17 00:01**

**Matrix: Water**

**Date Received: 12/07/17 16:45**

**Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Propionitrile	ND		20	10	ug/L			12/08/17 21:14	1
Styrene	ND		0.50	0.25	ug/L			12/08/17 21:14	1
t-Butanol	ND		10	5.0	ug/L			12/08/17 21:14	1
Tetrachloroethene	ND		0.50	0.25	ug/L			12/08/17 21:14	1
Tetrahydrofuran	ND		10	5.0	ug/L			12/08/17 21:14	1
Toluene	ND		0.50	0.25	ug/L			12/08/17 21:14	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/08/17 21:14	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/08/17 21:14	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			12/08/17 21:14	1
Trichloroethene	ND		0.50	0.25	ug/L			12/08/17 21:14	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			12/08/17 21:14	1
Vinyl acetate	ND		4.0	2.0	ug/L			12/08/17 21:14	1
Vinyl chloride	ND		0.50	0.25	ug/L			12/08/17 21:14	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			12/08/17 21:14	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			12/08/17 21:14	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			12/08/17 21:14	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	8.9	TJ	ug/L		5.94			12/08/17 21:14	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	105		80 - 128		12/08/17 09:56	1
4-Bromofluorobenzene (Surr)	92		80 - 120		12/08/17 09:56	1
Toluene-d8 (Surr)	110		80 - 128		12/08/17 21:14	1
4-Bromofluorobenzene (Surr)	99		80 - 120		12/08/17 21:14	1
Dibromofluoromethane (Surr)	99		76 - 132		12/08/17 09:56	1
Dibromofluoromethane (Surr)	95		76 - 132		12/08/17 21:14	1



# Method Summary

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

TestAmerica Job ID: 440-197975-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL IRV
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL IRV
300.0	Anions, Ion Chromatography	MCAWW	TAL IRV
6010B	Metals (ICP)	SW846	TAL IRV
410.4	COD	MCAWW	TAL IRV
SM 2320B	Alkalinity	SM	TAL IRV
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL IRV
SM 4500 CO2 C	Free Carbon Dioxide	SM	TAL IRV
SM 4500 NH3 D	Ammonia	SM	TAL IRV
SM 4500 S2 D	Sulfide, Total	SM	TAL IRV
SM 5310C	TOC	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",

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

#### Laboratory References:

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

# Lab Chronicle

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

TestAmerica Job ID: 440-197975-1

**Client Sample ID: MW-1**

Date Collected: 12/07/17 08:10

Date Received: 12/07/17 16:45

**Lab Sample ID: 440-197975-1**

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	445660	12/08/17 11:38	RM	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	445658	12/08/17 16:15	RM	TAL IRV
Total/NA	Prep	3520C			1005 mL	1 mL	446225	12/12/17 09:46	AP	TAL IRV
Total/NA	Analysis	8270C		1			446519	12/13/17 15:51	HN	TAL IRV
Total/NA	Analysis	300.0		2	5 mL	1.0 mL	445477	12/07/17 19:14	NTN	TAL IRV
Total/NA	Analysis	300.0		2	5 mL	1.0 mL	445478	12/07/17 19:14	NTN	TAL IRV
Total/NA	Analysis	300.0		100			445478	12/07/17 19:31	NTN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	445915	12/10/17 06:47	JL	TAL IRV
Total Recoverable	Analysis	6010B		1			446141	12/11/17 16:32	VS	TAL IRV
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	446816	12/14/17 15:29	KYP	TAL IRV
Total/NA	Analysis	SM 2320B		1			445752	12/08/17 10:02	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	20 mL	100 mL	446012	12/11/17 09:57	XL	TAL IRV
Total/NA	Analysis	SM 4500 CO2 C		1	25 mL	25 mL	447045	12/15/17 13:14	KYP	TAL IRV
Total/NA	Prep	SM 4500 NH3 B			50 mL	50 mL	445958	12/11/17 03:30	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			445959	12/11/17 04:30	YZ	TAL IRV
Total/NA	Analysis	SM 4500 S2 D		1	7.5 mL	7.5 mL	446305	12/12/17 15:28	KMY	TAL IRV
Total/NA	Analysis	SM 5310C		5	100 mL	100 mL	446391	12/12/17 07:58	YZ	TAL IRV

**Client Sample ID: DW-5**

Date Collected: 12/07/17 09:20

Date Received: 12/07/17 16:45

**Lab Sample ID: 440-197975-2**

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	445660	12/08/17 12:03	RM	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	445658	12/08/17 16:42	RM	TAL IRV
Total/NA	Prep	3520C			930 mL	1 mL	446225	12/12/17 09:46	AP	TAL IRV
Total/NA	Analysis	8270C		1			446519	12/13/17 16:13	HN	TAL IRV
Total/NA	Analysis	300.0		1	5 mL	1.0 mL	445477	12/07/17 19:49	NTN	TAL IRV
Total/NA	Analysis	300.0		1	5 mL	1.0 mL	445478	12/07/17 19:49	NTN	TAL IRV
Total/NA	Analysis	300.0		5	5 mL	1.0 mL	445478	12/07/17 22:38	NTN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	445915	12/10/17 06:47	JL	TAL IRV
Total Recoverable	Analysis	6010B		1			446141	12/11/17 16:22	VS	TAL IRV
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	446816	12/14/17 15:29	KYP	TAL IRV
Total/NA	Analysis	SM 2320B		1			445752	12/08/17 10:19	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	446012	12/11/17 09:57	XL	TAL IRV
Total/NA	Analysis	SM 4500 CO2 C		1	25 mL	25 mL	447045	12/15/17 13:14	KYP	TAL IRV
Total/NA	Prep	SM 4500 NH3 B			50 mL	50 mL	445958	12/11/17 03:30	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			445959	12/11/17 04:30	YZ	TAL IRV
Total/NA	Analysis	SM 4500 S2 D		1	7.5 mL	7.5 mL	446305	12/12/17 15:28	KMY	TAL IRV
Total/NA	Analysis	SM 5310C		1	100 mL	100 mL	446391	12/12/17 10:30	YZ	TAL IRV

TestAmerica Irvine

# Lab Chronicle

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

TestAmerica Job ID: 440-197975-1

**Client Sample ID: QCAB**

**Lab Sample ID: 440-197975-3**

Date Collected: 12/07/17 00:01

Matrix: Water

Date Received: 12/07/17 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	445660	12/08/17 12:29	RM	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	445658	12/08/17 17:10	RM	TAL IRV

**Client Sample ID: QCTB**

**Lab Sample ID: 440-197975-4**

Date Collected: 12/07/17 00:01

Matrix: Water

Date Received: 12/07/17 16:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	10 mL	10 mL	445660	12/08/17 09:56	RM	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	445803	12/08/17 21:14	JB	TAL IRV

**Laboratory References:**

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



# QC Sample Results

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

TestAmerica Job ID: 440-197975-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 440-445658/4**

**Matrix: Water**

**Analysis Batch: 445658**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			12/08/17 08:56	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/08/17 08:56	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			12/08/17 08:56	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/08/17 08:56	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			12/08/17 08:56	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			12/08/17 08:56	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			12/08/17 08:56	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			12/08/17 08:56	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			12/08/17 08:56	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			12/08/17 08:56	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			12/08/17 08:56	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			12/08/17 08:56	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			12/08/17 08:56	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			12/08/17 08:56	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			12/08/17 08:56	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			12/08/17 08:56	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			12/08/17 08:56	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			12/08/17 08:56	1
2-Hexanone	ND		5.0	2.5	ug/L			12/08/17 08:56	1
Acetone	ND		20	10	ug/L			12/08/17 08:56	1
Acetonitrile	ND		20	10	ug/L			12/08/17 08:56	1
Acrolein	ND		5.0	2.5	ug/L			12/08/17 08:56	1
Acrylonitrile	ND		2.0	1.0	ug/L			12/08/17 08:56	1
Benzene	ND		0.50	0.25	ug/L			12/08/17 08:56	1
Allyl chloride	ND		1.0	0.50	ug/L			12/08/17 08:56	1
Bromoform	ND		1.0	0.40	ug/L			12/08/17 08:56	1
Bromomethane	ND		0.50	0.25	ug/L			12/08/17 08:56	1
Carbon disulfide	ND		1.0	0.50	ug/L			12/08/17 08:56	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			12/08/17 08:56	1
Chlorobenzene	ND		0.50	0.25	ug/L			12/08/17 08:56	1
Bromochloromethane	ND		0.50	0.25	ug/L			12/08/17 08:56	1
Chloroethane	ND		1.0	0.40	ug/L			12/08/17 08:56	1
Chloroform	ND		0.50	0.25	ug/L			12/08/17 08:56	1
Chloromethane	ND		0.50	0.25	ug/L			12/08/17 08:56	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/08/17 08:56	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/08/17 08:56	1
Dibromochloromethane	ND		0.50	0.25	ug/L			12/08/17 08:56	1
Dibromomethane	ND		0.50	0.25	ug/L			12/08/17 08:56	1
Bromodichloromethane	ND		0.50	0.25	ug/L			12/08/17 08:56	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			12/08/17 08:56	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			12/08/17 08:56	1
Ethylbenzene	ND		0.50	0.25	ug/L			12/08/17 08:56	1
Iodomethane	ND		2.0	1.0	ug/L			12/08/17 08:56	1
Isobutyl alcohol	ND		25	13	ug/L			12/08/17 08:56	1
m,p-Xylene	ND		1.0	0.50	ug/L			12/08/17 08:56	1
Methylacrylonitrile	ND		10	2.5	ug/L			12/08/17 08:56	1
Methyl methacrylate	ND		2.0	1.0	ug/L			12/08/17 08:56	1
Methylene Chloride	ND		2.0	0.88	ug/L			12/08/17 08:56	1

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-197975-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 440-445658/4**

**Matrix: Water**

**Analysis Batch: 445658**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			12/08/17 08:56	1
Naphthalene	ND		1.0	0.40	ug/L			12/08/17 08:56	1
o-Xylene	ND		0.50	0.25	ug/L			12/08/17 08:56	1
Propionitrile	ND		20	10	ug/L			12/08/17 08:56	1
Styrene	ND		0.50	0.25	ug/L			12/08/17 08:56	1
t-Butanol	ND		10	5.0	ug/L			12/08/17 08:56	1
Tetrachloroethene	ND		0.50	0.25	ug/L			12/08/17 08:56	1
Tetrahydrofuran	ND		10	5.0	ug/L			12/08/17 08:56	1
Toluene	ND		0.50	0.25	ug/L			12/08/17 08:56	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/08/17 08:56	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/08/17 08:56	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			12/08/17 08:56	1
Trichloroethene	ND		0.50	0.25	ug/L			12/08/17 08:56	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			12/08/17 08:56	1
Vinyl acetate	ND		4.0	2.0	ug/L			12/08/17 08:56	1
Vinyl chloride	ND		0.50	0.25	ug/L			12/08/17 08:56	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			12/08/17 08:56	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			12/08/17 08:56	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			12/08/17 08:56	1

Tentatively Identified Compound	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L					12/08/17 08:56	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	111		80 - 128		12/08/17 08:56	1
4-Bromofluorobenzene (Surr)	99		80 - 120		12/08/17 08:56	1
Dibromofluoromethane (Surr)	94		76 - 132		12/08/17 08:56	1

**Lab Sample ID: LCS 440-445658/5**

**Matrix: Water**

**Analysis Batch: 445658**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,3-Trichloropropane	25.0	28.8		ug/L		115	63 - 130
1,1,1,2-Tetrachloroethane	25.0	28.0		ug/L		112	60 - 141
1,1,1-Trichloroethane	25.0	25.4		ug/L		102	70 - 130
1,1,2,2-Tetrachloroethane	25.0	28.7		ug/L		115	63 - 130
1,1,2-Trichloroethane	25.0	28.4		ug/L		114	70 - 130
1,1-Dichloroethane	25.0	26.8		ug/L		107	64 - 130
1,1-Dichloroethene	25.0	26.3		ug/L		105	70 - 130
1,1-Dichloropropene	25.0	28.2		ug/L		113	70 - 130
1,2,4-Trichlorobenzene	25.0	26.7		ug/L		107	60 - 140
1,2-Dibromo-3-Chloropropane	25.0	30.2		ug/L		121	52 - 140
1,2-Dichlorobenzene	25.0	26.0		ug/L		104	70 - 130
1,2-Dichloroethane	25.0	25.6		ug/L		102	57 - 138
1,2-Dichloropropane	25.0	27.7		ug/L		111	67 - 130
1,3-Dichlorobenzene	25.0	25.5		ug/L		102	70 - 130

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-197975-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 440-445658/5**

**Matrix: Water**

**Analysis Batch: 445658**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3-Dichloropropane	25.0	27.4		ug/L		110	70 - 130
1,4-Dichlorobenzene	25.0	25.6		ug/L		102	70 - 130
2,2-Dichloropropane	25.0	25.9		ug/L		104	68 - 141
2-Hexanone	25.0	33.9		ug/L		136	10 - 150
Acetone	25.0	35.0		ug/L		140	10 - 150
Acrolein	25.0	24.7		ug/L		99	10 - 145
Acrylonitrile	250	326		ug/L		130	48 - 140
Benzene	25.0	26.1		ug/L		104	68 - 130
Bromoform	25.0	26.8		ug/L		107	60 - 148
Bromomethane	25.0	22.9		ug/L		92	64 - 139
Carbon disulfide	25.0	26.7		ug/L		107	52 - 136
Carbon tetrachloride	25.0	25.8		ug/L		103	60 - 150
Chlorobenzene	25.0	25.0		ug/L		100	70 - 130
Bromochloromethane	25.0	26.2		ug/L		105	70 - 130
Chloroethane	25.0	24.9		ug/L		100	64 - 135
Chloroform	25.0	25.2		ug/L		101	70 - 130
Chloromethane	25.0	25.3		ug/L		101	47 - 140
cis-1,2-Dichloroethene	25.0	26.2		ug/L		105	70 - 133
cis-1,3-Dichloropropene	25.0	28.1		ug/L		112	70 - 133
Dibromochloromethane	25.0	27.5		ug/L		110	69 - 145
Dibromomethane	25.0	26.1		ug/L		104	70 - 130
Bromodichloromethane	25.0	27.2		ug/L		109	70 - 132
Dichlorodifluoromethane	25.0	24.7		ug/L		99	29 - 150
Ethylbenzene	25.0	26.0		ug/L		104	70 - 130
m,p-Xylene	25.0	26.9		ug/L		108	70 - 130
Methylene Chloride	25.0	25.0		ug/L		100	52 - 130
Methyl tert-butyl ether	25.0	25.9		ug/L		104	63 - 131
Naphthalene	25.0	28.0		ug/L		112	60 - 140
o-Xylene	25.0	27.2		ug/L		109	70 - 130
Styrene	25.0	27.4		ug/L		110	70 - 134
t-Butanol	250	268		ug/L		107	70 - 130
Tetrachloroethene	25.0	25.6		ug/L		102	70 - 130
Toluene	25.0	25.4		ug/L		102	70 - 130
trans-1,2-Dichloroethene	25.0	27.6		ug/L		110	70 - 130
trans-1,3-Dichloropropene	25.0	28.0		ug/L		112	70 - 132
Trichloroethene	25.0	26.6		ug/L		106	70 - 130
Trichlorofluoromethane	25.0	25.5		ug/L		102	60 - 150
Vinyl acetate	25.0	33.8		ug/L		135	48 - 140
Vinyl chloride	25.0	24.6		ug/L		98	59 - 133
1,2-Dibromoethane (EDB)	25.0	27.6		ug/L		110	70 - 130
2-Butanone (MEK)	25.0	27.6		ug/L		110	44 - 150
4-Methyl-2-pentanone (MIBK)	25.0	34.8		ug/L		139	59 - 149

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Toluene-d8 (Surr)	105		80 - 128
4-Bromofluorobenzene (Surr)	100		80 - 120
Dibromofluoromethane (Surr)	93		76 - 132

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-197975-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 440-197838-A-1 MS**

**Matrix: Water**

**Analysis Batch: 445658**

**Client Sample ID: Matrix Spike**

**Prep Type: Total/NA**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.
	Result	Qualifier	Added	Result	Qualifier			Limits	
1,2,3-Trichloropropane	ND		25.0	32.5		ug/L		130	60 - 130
1,1,1,2-Tetrachloroethane	ND		25.0	27.2		ug/L		109	60 - 149
1,1,1-Trichloroethane	ND		25.0	25.4		ug/L		102	70 - 130
1,1,2,2-Tetrachloroethane	ND		25.0	32.0		ug/L		128	63 - 130
1,1,2-Trichloroethane	ND		25.0	29.4		ug/L		118	70 - 130
1,1-Dichloroethane	ND		25.0	27.1		ug/L		108	65 - 130
1,1-Dichloroethene	ND		25.0	26.2		ug/L		105	70 - 130
1,1-Dichloropropene	ND		25.0	28.8		ug/L		115	64 - 130
1,2,4-Trichlorobenzene	ND		25.0	27.9		ug/L		112	60 - 140
1,2-Dibromo-3-Chloropropane	ND	F1	25.0	37.1	F1	ug/L		148	48 - 140
1,2-Dichlorobenzene	ND		25.0	26.2		ug/L		105	70 - 130
1,2-Dichloroethane	ND		25.0	26.5		ug/L		106	56 - 146
1,2-Dichloropropane	ND		25.0	27.4		ug/L		110	69 - 130
1,3-Dichlorobenzene	ND		25.0	25.3		ug/L		101	70 - 130
1,3-Dichloropropane	ND		25.0	28.3		ug/L		113	70 - 130
1,4-Dichlorobenzene	2.5		25.0	27.8		ug/L		101	70 - 130
2,2-Dichloropropane	ND		25.0	26.3		ug/L		105	69 - 138
2-Hexanone	ND	F1	25.0	43.0	F1	ug/L		172	10 - 150
Acetone	ND	F1	25.0	44.4	F1	ug/L		177	10 - 150
Acrolein	ND		25.0	31.7		ug/L		127	10 - 147
Acrylonitrile	ND	F1	250	412	F1	ug/L		165	38 - 144
Benzene	ND		25.0	26.6		ug/L		106	66 - 130
Bromoform	ND		25.0	28.6		ug/L		114	59 - 150
Bromomethane	ND		25.0	22.6		ug/L		91	62 - 131
Carbon disulfide	ND		25.0	27.3		ug/L		109	49 - 140
Carbon tetrachloride	ND		25.0	26.0		ug/L		104	60 - 150
Chlorobenzene	0.29	J	25.0	25.0		ug/L		99	70 - 130
Bromochloromethane	ND		25.0	26.4		ug/L		105	70 - 130
Chloroethane	ND		25.0	24.6		ug/L		98	68 - 130
Chloroform	ND		25.0	25.6		ug/L		102	70 - 130
Chloromethane	ND		25.0	25.3		ug/L		101	39 - 144
cis-1,2-Dichloroethene	1.7		25.0	28.0		ug/L		105	70 - 130
cis-1,3-Dichloropropene	ND		25.0	27.7		ug/L		111	70 - 133
Dibromochloromethane	ND		25.0	27.6		ug/L		110	70 - 148
Dibromomethane	ND		25.0	27.5		ug/L		110	70 - 130
Bromodichloromethane	ND		25.0	26.7		ug/L		107	70 - 138
Dichlorodifluoromethane	ND		25.0	24.2		ug/L		97	25 - 142
Ethylbenzene	ND		25.0	25.8		ug/L		103	70 - 130
m,p-Xylene	ND		25.0	26.8		ug/L		107	70 - 133
Methylene Chloride	ND		25.0	25.3		ug/L		101	52 - 130
Methyl tert-butyl ether	1.3		25.0	28.7		ug/L		110	70 - 130
Naphthalene	ND		25.0	32.0		ug/L		128	60 - 140
o-Xylene	ND		25.0	26.8		ug/L		107	70 - 133
Styrene	ND		25.0	27.0		ug/L		108	29 - 150
t-Butanol	39		250	313		ug/L		110	70 - 130
Tetrachloroethene	ND		25.0	25.8		ug/L		103	70 - 137
Toluene	ND		25.0	25.5		ug/L		102	70 - 130
trans-1,2-Dichloroethene	ND		25.0	28.1		ug/L		112	70 - 130

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-197975-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 440-197838-A-1 MS**

**Matrix: Water**

**Analysis Batch: 445658**

**Client Sample ID: Matrix Spike**

**Prep Type: Total/NA**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec. Limits	
	Result	Qualifier	Added	Result	Qualifier					
trans-1,3-Dichloropropene	ND		25.0	28.4		ug/L		114	70 - 138	
Trichloroethene	ND		25.0	26.7		ug/L		107	70 - 130	
Trichlorofluoromethane	ND		25.0	25.7		ug/L		103	60 - 150	
Vinyl acetate	ND	F1	25.0	38.8	F1	ug/L		155	23 - 150	
Vinyl chloride	ND		25.0	24.9		ug/L		100	50 - 137	
1,2-Dibromoethane (EDB)	ND		25.0	29.5		ug/L		118	70 - 131	
2-Butanone (MEK)	ND		25.0	34.4		ug/L		138	48 - 140	
4-Methyl-2-pentanone (MIBK)	ND	F1	25.0	40.7	F1	ug/L		163	52 - 150	
<b>MS MS</b>										
Surrogate	%Recovery	Qualifier	Limits							
Toluene-d8 (Surr)	106		80 - 128							
4-Bromofluorobenzene (Surr)	99		80 - 120							
Dibromofluoromethane (Surr)	94		76 - 132							

**Lab Sample ID: 440-197838-A-1 MSD**

**Matrix: Water**

**Analysis Batch: 445658**

**Client Sample ID: Matrix Spike Duplicate**

**Prep Type: Total/NA**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
	Result	Qualifier	Added	Result	Qualifier						
1,2,3-Trichloropropane	ND		25.0	29.7		ug/L		119	60 - 130	9	30
1,1,1,2-Tetrachloroethane	ND		25.0	26.6		ug/L		106	60 - 149	2	20
1,1,1-Trichloroethane	ND		25.0	24.9		ug/L		100	70 - 130	2	20
1,1,1,2-Tetrachloroethane	ND		25.0	29.1		ug/L		117	63 - 130	9	30
1,1,2-Trichloroethane	ND		25.0	28.1		ug/L		112	70 - 130	5	25
1,1-Dichloroethane	ND		25.0	26.5		ug/L		106	65 - 130	2	20
1,1-Dichloroethene	ND		25.0	25.9		ug/L		104	70 - 130	1	20
1,1-Dichloropropene	ND		25.0	28.1		ug/L		113	64 - 130	2	20
1,2,4-Trichlorobenzene	ND		25.0	27.2		ug/L		109	60 - 140	2	20
1,2-Dibromo-3-Chloropropane	ND	F1	25.0	33.0		ug/L		132	48 - 140	12	30
1,2-Dichlorobenzene	ND		25.0	25.4		ug/L		102	70 - 130	3	20
1,2-Dichloroethane	ND		25.0	25.5		ug/L		102	56 - 146	4	20
1,2-Dichloropropane	ND		25.0	27.1		ug/L		108	69 - 130	1	20
1,3-Dichlorobenzene	ND		25.0	24.7		ug/L		99	70 - 130	2	20
1,3-Dichloropropane	ND		25.0	26.9		ug/L		108	70 - 130	5	25
1,4-Dichlorobenzene	2.5		25.0	26.6		ug/L		97	70 - 130	4	20
2,2-Dichloropropane	ND		25.0	25.8		ug/L		103	69 - 138	2	25
2-Hexanone	ND	F1	25.0	38.6	F1	ug/L		154	10 - 150	11	35
Acetone	ND	F1	25.0	39.6	F1	ug/L		159	10 - 150	11	35
Acrolein	ND		25.0	28.2		ug/L		113	10 - 147	12	40
Acrylonitrile	ND	F1	25.0	362	F1	ug/L		145	38 - 144	13	40
Benzene	ND		25.0	25.9		ug/L		103	66 - 130	3	20
Bromoform	ND		25.0	26.7		ug/L		107	59 - 150	7	25
Bromomethane	ND		25.0	22.3		ug/L		89	62 - 131	1	25
Carbon disulfide	ND		25.0	26.9		ug/L		108	49 - 140	1	20
Carbon tetrachloride	ND		25.0	25.7		ug/L		103	60 - 150	1	25
Chlorobenzene	0.29	J	25.0	24.5		ug/L		97	70 - 130	2	20
Bromochloromethane	ND		25.0	25.5		ug/L		102	70 - 130	3	25
Chloroethane	ND		25.0	23.7		ug/L		95	68 - 130	4	25

TestAmerica Irvine



# QC Sample Results

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

TestAmerica Job ID: 440-197975-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 440-197838-A-1 MSD**

**Matrix: Water**

**Analysis Batch: 445658**

**Client Sample ID: Matrix Spike Duplicate**

**Prep Type: Total/NA**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier				Limits		
Chloroform	ND		25.0	25.1		ug/L		100	70 - 130	2	20
Chloromethane	ND		25.0	24.9		ug/L		99	39 - 144	2	25
cis-1,2-Dichloroethene	1.7		25.0	27.6		ug/L		103	70 - 130	2	20
cis-1,3-Dichloropropene	ND		25.0	27.2		ug/L		109	70 - 133	2	20
Dibromochloromethane	ND		25.0	26.8		ug/L		107	70 - 148	3	25
Dibromomethane	ND		25.0	26.4		ug/L		106	70 - 130	4	25
Bromodichloromethane	ND		25.0	26.5		ug/L		106	70 - 138	1	20
Dichlorodifluoromethane	ND		25.0	23.8		ug/L		95	25 - 142	2	30
Ethylbenzene	ND		25.0	25.3		ug/L		101	70 - 130	2	20
m,p-Xylene	ND		25.0	26.4		ug/L		106	70 - 133	2	25
Methylene Chloride	ND		25.0	24.9		ug/L		100	52 - 130	2	20
Methyl tert-butyl ether	1.3		25.0	27.5		ug/L		105	70 - 130	4	25
Naphthalene	ND		25.0	30.0		ug/L		120	60 - 140	6	30
o-Xylene	ND		25.0	26.4		ug/L		106	70 - 133	1	20
Styrene	ND		25.0	26.3		ug/L		105	29 - 150	3	35
t-Butanol	39		250	306		ug/L		107	70 - 130	2	25
Tetrachloroethene	ND		25.0	25.3		ug/L		101	70 - 137	2	20
Toluene	ND		25.0	25.0		ug/L		100	70 - 130	2	20
trans-1,2-Dichloroethene	ND		25.0	27.3		ug/L		109	70 - 130	3	20
trans-1,3-Dichloropropene	ND		25.0	27.6		ug/L		110	70 - 138	3	25
Trichloroethene	ND		25.0	26.4		ug/L		106	70 - 130	1	20
Trichlorofluoromethane	ND		25.0	25.3		ug/L		101	60 - 150	2	25
Vinyl acetate	ND	F1	25.0	36.1		ug/L		144	23 - 150	7	30
Vinyl chloride	ND		25.0	24.9		ug/L		99	50 - 137	0	30
1,2-Dibromoethane (EDB)	ND		25.0	28.1		ug/L		112	70 - 131	5	25
2-Butanone (MEK)	ND		25.0	29.4		ug/L		118	48 - 140	16	40
4-Methyl-2-pentanone (MIBK)	ND	F1	25.0	37.1		ug/L		148	52 - 150	9	35

Surrogate	MSD	MSD	Limits
	%Recovery	Qualifier	
Toluene-d8 (Surr)	105		80 - 128
4-Bromofluorobenzene (Surr)	98		80 - 120
Dibromofluoromethane (Surr)	94		76 - 132

**Lab Sample ID: MB 440-445660/4**

**Matrix: Water**

**Analysis Batch: 445660**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Acrolein	ND		50	2.5	ug/L			12/08/17 08:40	1
Acrylonitrile	ND		50	1.0	ug/L			12/08/17 08:40	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
Toluene-d8 (Surr)	103		80 - 128		12/08/17 08:40	1
4-Bromofluorobenzene (Surr)	94		80 - 120		12/08/17 08:40	1
Dibromofluoromethane (Surr)	98		76 - 132		12/08/17 08:40	1

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-197975-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 440-445660/5**

**Matrix: Water**

**Analysis Batch: 445660**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Acrolein	25.0	22.6	J	ug/L		90	10 - 145
Acrylonitrile	250	241		ug/L		96	48 - 140

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	99		80 - 128
4-Bromofluorobenzene (Surr)	93		80 - 120
Dibromofluoromethane (Surr)	99		76 - 132

**Lab Sample ID: 440-197953-B-4 MS**

**Matrix: Water**

**Analysis Batch: 445660**

**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
Acrolein	ND		25.0	21.8	J	ug/L		87	10 - 147
Acrylonitrile	ND		250	237		ug/L		95	38 - 144

Surrogate	MS %Recovery	MS Qualifier	Limits
Toluene-d8 (Surr)	100		80 - 128
4-Bromofluorobenzene (Surr)	93		80 - 120
Dibromofluoromethane (Surr)	98		76 - 132

**Lab Sample ID: 440-197953-B-4 MSD**

**Matrix: Water**

**Analysis Batch: 445660**

**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	Limit
Acrolein	ND		25.0	22.1	J	ug/L		88	10 - 147	2	40
Acrylonitrile	ND		250	239		ug/L		96	38 - 144	1	40

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Toluene-d8 (Surr)	101		80 - 128
4-Bromofluorobenzene (Surr)	93		80 - 120
Dibromofluoromethane (Surr)	99		76 - 132

**Lab Sample ID: MB 440-445803/4**

**Matrix: Water**

**Analysis Batch: 445803**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			12/08/17 18:57	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/08/17 18:57	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			12/08/17 18:57	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			12/08/17 18:57	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			12/08/17 18:57	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			12/08/17 18:57	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			12/08/17 18:57	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			12/08/17 18:57	1

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-197975-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 440-445803/4

Matrix: Water

Analysis Batch: 445803

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			12/08/17 18:57	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			12/08/17 18:57	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			12/08/17 18:57	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			12/08/17 18:57	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			12/08/17 18:57	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			12/08/17 18:57	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			12/08/17 18:57	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			12/08/17 18:57	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			12/08/17 18:57	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			12/08/17 18:57	1
2-Hexanone	ND		5.0	2.5	ug/L			12/08/17 18:57	1
Acetone	ND		20	10	ug/L			12/08/17 18:57	1
Acetonitrile	ND		20	10	ug/L			12/08/17 18:57	1
Acrolein	ND		5.0	2.5	ug/L			12/08/17 18:57	1
Acrylonitrile	ND		2.0	1.0	ug/L			12/08/17 18:57	1
Benzene	ND		0.50	0.25	ug/L			12/08/17 18:57	1
Allyl chloride	ND		1.0	0.50	ug/L			12/08/17 18:57	1
Bromoform	ND		1.0	0.40	ug/L			12/08/17 18:57	1
Bromomethane	ND		0.50	0.25	ug/L			12/08/17 18:57	1
Carbon disulfide	ND		1.0	0.50	ug/L			12/08/17 18:57	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			12/08/17 18:57	1
Chlorobenzene	ND		0.50	0.25	ug/L			12/08/17 18:57	1
Bromochloromethane	ND		0.50	0.25	ug/L			12/08/17 18:57	1
Chloroethane	ND		1.0	0.40	ug/L			12/08/17 18:57	1
Chloroform	ND		0.50	0.25	ug/L			12/08/17 18:57	1
Chloromethane	ND		0.50	0.25	ug/L			12/08/17 18:57	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/08/17 18:57	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/08/17 18:57	1
Dibromochloromethane	ND		0.50	0.25	ug/L			12/08/17 18:57	1
Dibromomethane	ND		0.50	0.25	ug/L			12/08/17 18:57	1
Bromodichloromethane	ND		0.50	0.25	ug/L			12/08/17 18:57	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			12/08/17 18:57	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			12/08/17 18:57	1
Ethylbenzene	ND		0.50	0.25	ug/L			12/08/17 18:57	1
Iodomethane	ND		2.0	1.0	ug/L			12/08/17 18:57	1
Isobutyl alcohol	ND		25	13	ug/L			12/08/17 18:57	1
m,p-Xylene	ND		1.0	0.50	ug/L			12/08/17 18:57	1
Methylacrylonitrile	ND		10	2.5	ug/L			12/08/17 18:57	1
Methyl methacrylate	ND		2.0	1.0	ug/L			12/08/17 18:57	1
Methylene Chloride	ND		2.0	0.88	ug/L			12/08/17 18:57	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			12/08/17 18:57	1
Naphthalene	ND		1.0	0.40	ug/L			12/08/17 18:57	1
o-Xylene	ND		0.50	0.25	ug/L			12/08/17 18:57	1
Propionitrile	ND		20	10	ug/L			12/08/17 18:57	1
Styrene	ND		0.50	0.25	ug/L			12/08/17 18:57	1
t-Butanol	ND		10	5.0	ug/L			12/08/17 18:57	1
Tetrachloroethene	ND		0.50	0.25	ug/L			12/08/17 18:57	1
Tetrahydrofuran	ND		10	5.0	ug/L			12/08/17 18:57	1

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-197975-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: MB 440-445803/4**

**Matrix: Water**

**Analysis Batch: 445803**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	ND		0.50	0.25	ug/L			12/08/17 18:57	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			12/08/17 18:57	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			12/08/17 18:57	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			12/08/17 18:57	1
Trichloroethene	ND		0.50	0.25	ug/L			12/08/17 18:57	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			12/08/17 18:57	1
Vinyl acetate	ND		4.0	2.0	ug/L			12/08/17 18:57	1
Vinyl chloride	ND		0.50	0.25	ug/L			12/08/17 18:57	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			12/08/17 18:57	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			12/08/17 18:57	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			12/08/17 18:57	1

Tentatively Identified Compound	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L					12/08/17 18:57	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	109		80 - 128		12/08/17 18:57	1
4-Bromofluorobenzene (Surr)	97		80 - 120		12/08/17 18:57	1
Dibromofluoromethane (Surr)	95		76 - 132		12/08/17 18:57	1

**Lab Sample ID: LCS 440-445803/5**

**Matrix: Water**

**Analysis Batch: 445803**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,3-Trichloropropane	25.0	28.3		ug/L		113	63 - 130
1,1,1,2-Tetrachloroethane	25.0	26.5		ug/L		106	60 - 141
1,1,1-Trichloroethane	25.0	25.5		ug/L		102	70 - 130
1,1,2,2-Tetrachloroethane	25.0	26.9		ug/L		108	63 - 130
1,1,2-Trichloroethane	25.0	27.4		ug/L		110	70 - 130
1,1-Dichloroethane	25.0	26.2		ug/L		105	64 - 130
1,1-Dichloroethene	25.0	26.0		ug/L		104	70 - 130
1,1-Dichloropropene	25.0	28.2		ug/L		113	70 - 130
1,2,4-Trichlorobenzene	25.0	25.4		ug/L		102	60 - 140
1,2-Dibromo-3-Chloropropane	25.0	28.2		ug/L		113	52 - 140
1,2-Dichlorobenzene	25.0	25.1		ug/L		101	70 - 130
1,2-Dichloroethane	25.0	24.4		ug/L		97	57 - 138
1,2-Dichloropropane	25.0	26.6		ug/L		107	67 - 130
1,3-Dichlorobenzene	25.0	24.9		ug/L		99	70 - 130
1,3-Dichloropropane	25.0	26.4		ug/L		106	70 - 130
1,4-Dichlorobenzene	25.0	24.7		ug/L		99	70 - 130
2,2-Dichloropropane	25.0	25.4		ug/L		102	68 - 141
2-Hexanone	25.0	31.4		ug/L		125	10 - 150
Acetone	25.0	35.5		ug/L		142	10 - 150
Acrolein	25.0	22.1		ug/L		88	10 - 145
Acrylonitrile	25.0	32.1		ug/L		128	48 - 140
Benzene	25.0	25.8		ug/L		103	68 - 130

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-197975-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCS 440-445803/5**

**Matrix: Water**

**Analysis Batch: 445803**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromoform	25.0	25.8		ug/L		103	60 - 148
Bromomethane	25.0	22.5		ug/L		90	64 - 139
Carbon disulfide	25.0	26.3		ug/L		105	52 - 136
Carbon tetrachloride	25.0	26.1		ug/L		104	60 - 150
Chlorobenzene	25.0	24.3		ug/L		97	70 - 130
Bromochloromethane	25.0	25.8		ug/L		103	70 - 130
Chloroethane	25.0	23.9		ug/L		96	64 - 135
Chloroform	25.0	25.1		ug/L		100	70 - 130
Chloromethane	25.0	22.8		ug/L		91	47 - 140
cis-1,2-Dichloroethene	25.0	26.4		ug/L		106	70 - 133
cis-1,3-Dichloropropene	25.0	26.7		ug/L		107	70 - 133
Dibromochloromethane	25.0	26.3		ug/L		105	69 - 145
Dibromomethane	25.0	25.5		ug/L		102	70 - 130
Bromodichloromethane	25.0	26.3		ug/L		105	70 - 132
Dichlorodifluoromethane	25.0	23.8		ug/L		95	29 - 150
Ethylbenzene	25.0	25.0		ug/L		100	70 - 130
m,p-Xylene	25.0	26.3		ug/L		105	70 - 130
Methylene Chloride	25.0	25.2		ug/L		101	52 - 130
Methyl tert-butyl ether	25.0	24.6		ug/L		99	63 - 131
Naphthalene	25.0	27.1		ug/L		108	60 - 140
o-Xylene	25.0	26.0		ug/L		104	70 - 130
Styrene	25.0	25.5		ug/L		102	70 - 134
t-Butanol	250	259		ug/L		104	70 - 130
Tetrachloroethene	25.0	25.4		ug/L		102	70 - 130
Toluene	25.0	24.8		ug/L		99	70 - 130
trans-1,2-Dichloroethene	25.0	27.7		ug/L		111	70 - 130
trans-1,3-Dichloropropene	25.0	26.5		ug/L		106	70 - 132
Trichloroethene	25.0	27.1		ug/L		108	70 - 130
Trichlorofluoromethane	25.0	25.5		ug/L		102	60 - 150
Vinyl acetate	25.0	29.5		ug/L		118	48 - 140
Vinyl chloride	25.0	24.1		ug/L		96	59 - 133
1,2-Dibromoethane (EDB)	25.0	27.0		ug/L		108	70 - 130
2-Butanone (MEK)	25.0	27.2		ug/L		109	44 - 150
4-Methyl-2-pentanone (MIBK)	25.0	32.4		ug/L		130	59 - 149

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
Toluene-d8 (Surr)	105		80 - 128
4-Bromofluorobenzene (Surr)	98		80 - 120
Dibromofluoromethane (Surr)	94		76 - 132

**Lab Sample ID: 440-197813-B-1 MS**

**Matrix: Water**

**Analysis Batch: 445803**

**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
1,2,3-Trichloropropane	ND		25.0	27.5		ug/L		110	60 - 130
1,1,1,2-Tetrachloroethane	ND		25.0	26.8		ug/L		107	60 - 149
1,1,1-Trichloroethane	0.39	J	25.0	25.4		ug/L		100	70 - 130

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-197975-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 440-197813-B-1 MS**

**Client Sample ID: Matrix Spike**

**Matrix: Water**

**Prep Type: Total/NA**

**Analysis Batch: 445803**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec. Limits
	Result	Qualifier	Added	Result	Qualifier				
1,1,2,2-Tetrachloroethane	ND		25.0	27.4		ug/L		109	63 - 130
1,1,2-Trichloroethane	ND		25.0	27.6		ug/L		110	70 - 130
1,1-Dichloroethane	120		25.0	134	4	ug/L		74	65 - 130
1,1-Dichloroethene	3.2		25.0	29.1		ug/L		104	70 - 130
1,1-Dichloropropene	ND		25.0	28.0		ug/L		112	64 - 130
1,2,4-Trichlorobenzene	ND		25.0	26.0		ug/L		104	60 - 140
1,2-Dibromo-3-Chloropropane	ND		25.0	27.8		ug/L		111	48 - 140
1,2-Dichlorobenzene	0.77		25.0	25.5		ug/L		99	70 - 130
1,2-Dichloroethane	1.4		25.0	26.0		ug/L		98	56 - 146
1,2-Dichloropropane	12		25.0	39.0		ug/L		108	69 - 130
1,3-Dichlorobenzene	0.31	J	25.0	24.8		ug/L		98	70 - 130
1,3-Dichloropropane	ND		25.0	26.8		ug/L		107	70 - 130
1,4-Dichlorobenzene	ND		25.0	24.6		ug/L		98	70 - 130
2,2-Dichloropropane	ND		25.0	26.1		ug/L		104	69 - 138
2-Hexanone	ND		25.0	31.5		ug/L		126	10 - 150
Acetone	ND		25.0	28.7		ug/L		115	10 - 150
Acrolein	ND		25.0	21.0		ug/L		84	10 - 147
Acrylonitrile	ND		250	314		ug/L		126	38 - 144
Benzene	ND		25.0	26.1		ug/L		105	66 - 130
Bromoform	ND		25.0	26.8		ug/L		107	59 - 150
Bromomethane	ND		25.0	22.5		ug/L		90	62 - 131
Carbon disulfide	ND		25.0	26.7		ug/L		107	49 - 140
Carbon tetrachloride	ND		25.0	25.8		ug/L		103	60 - 150
Chlorobenzene	ND		25.0	24.7		ug/L		99	70 - 130
Bromochloromethane	ND		25.0	26.4		ug/L		105	70 - 130
Chloroethane	0.49	J	25.0	24.0		ug/L		94	68 - 130
Chloroform	ND		25.0	25.2		ug/L		101	70 - 130
Chloromethane	ND		25.0	23.9		ug/L		96	39 - 144
cis-1,2-Dichloroethene	400	E	25.0	412	E 4	ug/L		36	70 - 130
cis-1,3-Dichloropropene	ND		25.0	27.6		ug/L		110	70 - 133
Dibromochloromethane	ND		25.0	27.1		ug/L		108	70 - 148
Dibromomethane	ND		25.0	25.7		ug/L		103	70 - 130
Bromodichloromethane	ND		25.0	26.4		ug/L		106	70 - 138
Dichlorodifluoromethane	ND		25.0	23.6		ug/L		94	25 - 142
Ethylbenzene	ND		25.0	25.1		ug/L		101	70 - 130
m,p-Xylene	ND		25.0	26.3		ug/L		105	70 - 133
Methylene Chloride	ND		25.0	25.1		ug/L		100	52 - 130
Methyl tert-butyl ether	ND		25.0	24.8		ug/L		99	70 - 130
Naphthalene	ND		25.0	27.2		ug/L		109	60 - 140
o-Xylene	ND		25.0	26.3		ug/L		105	70 - 133
Styrene	ND		25.0	26.0		ug/L		104	29 - 150
t-Butanol	ND		250	260		ug/L		104	70 - 130
Tetrachloroethene	ND		25.0	25.5		ug/L		102	70 - 137
Toluene	ND		25.0	25.1		ug/L		100	70 - 130
trans-1,2-Dichloroethene	1.5		25.0	29.2		ug/L		111	70 - 130
trans-1,3-Dichloropropene	ND		25.0	27.5		ug/L		110	70 - 138
Trichloroethene	0.53		25.0	27.3		ug/L		107	70 - 130
Trichlorofluoromethane	ND		25.0	25.1		ug/L		100	60 - 150

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-197975-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: 440-197813-B-1 MS**

**Matrix: Water**

**Analysis Batch: 445803**

**Client Sample ID: Matrix Spike**

**Prep Type: Total/NA**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec. Limits
	Result	Qualifier	Added	Result	Qualifier				
Vinyl acetate	ND		25.0	32.9		ug/L		131	23 - 150
Vinyl chloride	ND		25.0	24.7		ug/L		99	50 - 137
1,2-Dibromoethane (EDB)	ND		25.0	27.4		ug/L		110	70 - 131
2-Butanone (MEK)	ND		25.0	28.6		ug/L		114	48 - 140
4-Methyl-2-pentanone (MIBK)	ND		25.0	32.4		ug/L		129	52 - 150

Surrogate	MS	MS	Limits
	%Recovery	Qualifier	
Toluene-d8 (Surr)	106		80 - 128
4-Bromofluorobenzene (Surr)	98		80 - 120
Dibromofluoromethane (Surr)	95		76 - 132

**Lab Sample ID: 440-197813-B-1 MSD**

**Matrix: Water**

**Analysis Batch: 445803**

**Client Sample ID: Matrix Spike Duplicate**

**Prep Type: Total/NA**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
	Result	Qualifier	Added	Result	Qualifier						
1,2,3-Trichloropropane	ND		25.0	25.9		ug/L		104	60 - 130	6	30
1,1,1,2-Tetrachloroethane	ND		25.0	26.5		ug/L		106	60 - 149	1	20
1,1,1-Trichloroethane	0.39	J	25.0	25.1		ug/L		99	70 - 130	1	20
1,1,2,2-Tetrachloroethane	ND		25.0	26.4		ug/L		105	63 - 130	4	30
1,1,2-Trichloroethane	ND		25.0	26.7		ug/L		107	70 - 130	3	25
1,1-Dichloroethane	120		25.0	125	4	ug/L		38	65 - 130	7	20
1,1-Dichloroethene	3.2		25.0	28.5		ug/L		101	70 - 130	2	20
1,1-Dichloropropene	ND		25.0	27.1		ug/L		108	64 - 130	3	20
1,2,4-Trichlorobenzene	ND		25.0	25.4		ug/L		101	60 - 140	3	20
1,2-Dibromo-3-Chloropropane	ND		25.0	26.6		ug/L		106	48 - 140	5	30
1,2-Dichlorobenzene	0.77		25.0	25.3		ug/L		98	70 - 130	1	20
1,2-Dichloroethane	1.4		25.0	25.8		ug/L		98	56 - 146	1	20
1,2-Dichloropropane	12		25.0	37.8		ug/L		103	69 - 130	3	20
1,3-Dichlorobenzene	0.31	J	25.0	24.5		ug/L		97	70 - 130	1	20
1,3-Dichloropropane	ND		25.0	25.9		ug/L		103	70 - 130	4	25
1,4-Dichlorobenzene	ND		25.0	24.2		ug/L		97	70 - 130	2	20
2,2-Dichloropropane	ND		25.0	25.7		ug/L		103	69 - 138	2	25
2-Hexanone	ND		25.0	28.7		ug/L		115	10 - 150	9	35
Acetone	ND		25.0	26.3		ug/L		105	10 - 150	9	35
Acrolein	ND		25.0	18.8		ug/L		75	10 - 147	11	40
Acrylonitrile	ND		250	297		ug/L		119	38 - 144	6	40
Benzene	ND		25.0	25.7		ug/L		103	66 - 130	2	20
Bromoform	ND		25.0	25.9		ug/L		104	59 - 150	3	25
Bromomethane	ND		25.0	22.4		ug/L		89	62 - 131	1	25
Carbon disulfide	ND		25.0	26.1		ug/L		104	49 - 140	2	20
Carbon tetrachloride	ND		25.0	25.3		ug/L		101	60 - 150	2	25
Chlorobenzene	ND		25.0	24.0		ug/L		96	70 - 130	3	20
Bromochloromethane	ND		25.0	25.8		ug/L		103	70 - 130	2	25
Chloroethane	0.49	J	25.0	24.1		ug/L		94	68 - 130	0	25
Chloroform	ND		25.0	24.9		ug/L		100	70 - 130	1	20
Chloromethane	ND		25.0	23.0		ug/L		92	39 - 144	4	25
cis-1,2-Dichloroethene	400	E	25.0	386	E 4	ug/L		-67	70 - 130	6	20

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-197975-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 440-197813-B-1 MSD

Matrix: Water

Analysis Batch: 445803

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
cis-1,3-Dichloropropene	ND		25.0	27.0		ug/L		108	70 - 133	2	20
Dibromochloromethane	ND		25.0	26.2		ug/L		105	70 - 148	4	25
Dibromomethane	ND		25.0	25.3		ug/L		101	70 - 130	2	25
Bromodichloromethane	ND		25.0	26.1		ug/L		104	70 - 138	1	20
Dichlorodifluoromethane	ND		25.0	23.1		ug/L		92	25 - 142	2	30
Ethylbenzene	ND		25.0	24.4		ug/L		98	70 - 130	3	20
m,p-Xylene	ND		25.0	25.5		ug/L		102	70 - 133	3	25
Methylene Chloride	ND		25.0	24.2		ug/L		97	52 - 130	4	20
Methyl tert-butyl ether	ND		25.0	24.6		ug/L		98	70 - 130	1	25
Naphthalene	ND		25.0	25.6		ug/L		102	60 - 140	6	30
o-Xylene	ND		25.0	26.0		ug/L		104	70 - 133	1	20
Styrene	ND		25.0	25.8		ug/L		103	29 - 150	1	35
t-Butanol	ND		250	253		ug/L		101	70 - 130	3	25
Tetrachloroethene	ND		25.0	24.8		ug/L		99	70 - 137	3	20
Toluene	ND		25.0	24.4		ug/L		97	70 - 130	3	20
trans-1,2-Dichloroethene	1.5		25.0	28.4		ug/L		107	70 - 130	3	20
trans-1,3-Dichloropropene	ND		25.0	26.7		ug/L		107	70 - 138	3	25
Trichloroethene	0.53		25.0	26.8		ug/L		105	70 - 130	2	20
Trichlorofluoromethane	ND		25.0	24.3		ug/L		97	60 - 150	3	25
Vinyl acetate	ND		25.0	31.4		ug/L		125	23 - 150	5	30
Vinyl chloride	ND		25.0	23.7		ug/L		95	50 - 137	4	30
1,2-Dibromoethane (EDB)	ND		25.0	26.5		ug/L		106	70 - 131	3	25
2-Butanone (MEK)	ND		25.0	23.9		ug/L		95	48 - 140	18	40
4-Methyl-2-pentanone (MIBK)	ND		25.0	30.0		ug/L		120	52 - 150	8	35

Surrogate	MSD	MSD	Limits
	%Recovery	Qualifier	
Toluene-d8 (Surr)	104		80 - 128
4-Bromofluorobenzene (Surr)	98		80 - 120
Dibromofluoromethane (Surr)	96		76 - 132

## Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 440-446225/1-A

Matrix: Water

Analysis Batch: 446519

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 446225

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
1,4-Dioxane	ND		1.0	0.25	ug/L		12/12/17 09:26	12/13/17 14:00	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
1,4-Dioxane-d8 (Surr)	75		30 - 120	12/12/17 09:26	12/13/17 14:00	1

TestAmerica Irvine



# QC Sample Results

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

TestAmerica Job ID: 440-197975-1

## Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 440-446225/3-A

Matrix: Water

Analysis Batch: 446519

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 446225

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dioxane	2.00	1.36		ug/L		68	35 - 120
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
1,4-Dioxane-d8 (Surr)	70		30 - 120				

Lab Sample ID: LCSD 440-446225/4-A

Matrix: Water

Analysis Batch: 446519

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 446225

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
1,4-Dioxane	2.00	1.48		ug/L		74	35 - 120	9	35
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
1,4-Dioxane-d8 (Surr)	76		30 - 120						

## Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 440-445477/7

Matrix: Water

Analysis Batch: 445477

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.11	0.055	mg/L			12/07/17 12:27	1

Lab Sample ID: LCS 440-445477/6

Matrix: Water

Analysis Batch: 445477

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	1.13	1.08		mg/L		96	90 - 110

Lab Sample ID: 440-197975-2 MS

Matrix: Water

Analysis Batch: 445477

Client Sample ID: DW-5

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	ND		1.13	1.16		mg/L		103	80 - 120

Lab Sample ID: 440-197975-2 MSD

Matrix: Water

Analysis Batch: 445477

Client Sample ID: DW-5

Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Nitrate as N	ND		1.13	1.16		mg/L		103	80 - 120	0	20

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-197975-1

## Method: 300.0 - Anions, Ion Chromatography (Continued)

**Lab Sample ID: MB 440-445478/7**  
**Matrix: Water**  
**Analysis Batch: 445478**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	ND		0.50	0.25	mg/L			12/07/17 12:27	1
Chloride	ND		0.50	0.25	mg/L			12/07/17 12:27	1
Fluoride	ND		0.50	0.25	mg/L			12/07/17 12:27	1
Sulfate	ND		0.50	0.25	mg/L			12/07/17 12:27	1

**Lab Sample ID: LCS 440-445478/6**  
**Matrix: Water**  
**Analysis Batch: 445478**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromide	5.00	4.70		mg/L		94	90 - 110
Chloride	5.00	4.61		mg/L		92	90 - 110
Fluoride	5.00	4.61		mg/L		92	90 - 110
Sulfate	5.00	4.72		mg/L		94	90 - 110

**Lab Sample ID: 440-197975-2 MS**  
**Matrix: Water**  
**Analysis Batch: 445478**

**Client Sample ID: DW-5**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromide	ND		5.00	5.22		mg/L		104	80 - 120
Fluoride	3.4		5.00	8.33		mg/L		99	80 - 120
Sulfate	ND		5.00	5.01		mg/L		100	80 - 120

**Lab Sample ID: 440-197975-2 MSD**  
**Matrix: Water**  
**Analysis Batch: 445478**

**Client Sample ID: DW-5**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bromide	ND		5.00	5.19		mg/L		104	80 - 120	1	20
Fluoride	3.4		5.00	8.30		mg/L		99	80 - 120	0	20
Sulfate	ND		5.00	4.89		mg/L		98	80 - 120	3	20

## Method: 6010B - Metals (ICP)

**Lab Sample ID: MB 440-445915/1-A**  
**Matrix: Water**  
**Analysis Batch: 446141**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 445915**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.050	0.025	mg/L		12/10/17 06:47	12/11/17 16:17	1
Calcium	ND		0.10	0.050	mg/L		12/10/17 06:47	12/11/17 16:17	1
Iron	ND		0.10	0.050	mg/L		12/10/17 06:47	12/11/17 16:17	1
Magnesium	ND		0.020	0.010	mg/L		12/10/17 06:47	12/11/17 16:17	1
Manganese	ND		0.020	0.015	mg/L		12/10/17 06:47	12/11/17 16:17	1
Potassium	ND		0.50	0.25	mg/L		12/10/17 06:47	12/11/17 16:17	1
Sodium	ND		0.50	0.26	mg/L		12/10/17 06:47	12/11/17 16:17	1

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-197975-1

## Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: LCS 440-445915/2-A

Matrix: Water

Analysis Batch: 446141

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 445915

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1.00	1.04		mg/L		104	80 - 120
Calcium	5.00	5.35		mg/L		107	80 - 120
Iron	1.00	1.08		mg/L		108	80 - 120
Magnesium	5.00	5.25		mg/L		105	80 - 120
Manganese	1.00	1.07		mg/L		107	80 - 120
Potassium	10.0	10.7		mg/L		107	80 - 120
Sodium	10.0	10.5		mg/L		105	80 - 120

Lab Sample ID: 440-197975-2 MS

Matrix: Water

Analysis Batch: 446141

Client Sample ID: DW-5

Prep Type: Total Recoverable

Prep Batch: 445915

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	2.8		1.00	3.91		mg/L		113	75 - 125
Calcium	5.6		5.00	11.0		mg/L		108	75 - 125
Iron	0.15		1.00	1.17		mg/L		101	75 - 125
Magnesium	0.93		5.00	5.96		mg/L		101	75 - 125
Manganese	0.097		1.00	1.15		mg/L		105	75 - 125
Potassium	1.2		10.0	12.0		mg/L		108	75 - 125
Sodium	440		10.0	454	4	mg/L		153	75 - 125

Lab Sample ID: 440-197975-2 MSD

Matrix: Water

Analysis Batch: 446141

Client Sample ID: DW-5

Prep Type: Total Recoverable

Prep Batch: 445915

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Boron	2.8		1.00	4.02		mg/L		124	75 - 125	3	20
Calcium	5.6		5.00	11.4		mg/L		115	75 - 125	3	20
Iron	0.15		1.00	1.23		mg/L		108	75 - 125	5	20
Magnesium	0.93		5.00	6.30		mg/L		107	75 - 125	6	20
Manganese	0.097		1.00	1.20		mg/L		110	75 - 125	4	20
Potassium	1.2		10.0	12.7		mg/L		115	75 - 125	6	20
Sodium	440		10.0	463	4	mg/L		252	75 - 125	2	20

## Method: 410.4 - COD

Lab Sample ID: MB 440-446816/3

Matrix: Water

Analysis Batch: 446816

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		20	10	mg/L			12/14/17 15:29	1

Lab Sample ID: LCS 440-446816/4

Matrix: Water

Analysis Batch: 446816

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chemical Oxygen Demand	200	193		mg/L		97	90 - 110

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-197975-1

**Lab Sample ID: 440-198092-G-3 MS**  
**Matrix: Water**  
**Analysis Batch: 446816**

**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
Chemical Oxygen Demand	ND		200	190		mg/L		95	70 - 120

**Lab Sample ID: 440-198092-G-3 MSD**  
**Matrix: Water**  
**Analysis Batch: 446816**

**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
Chemical Oxygen Demand	ND		200	192		mg/L		96	70 - 120	1	15

## Method: SM 2320B - Alkalinity

**Lab Sample ID: MB 440-445752/3**  
**Matrix: Water**  
**Analysis Batch: 445752**

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

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	ND		4.0	4.0	mg/L			12/08/17 09:32	1
Bicarbonate Alkalinity as CaCO3	ND		4.0	4.0	mg/L			12/08/17 09:32	1

**Lab Sample ID: LCS 440-445752/2**  
**Matrix: Water**  
**Analysis Batch: 445752**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity as CaCO3	50.8	48.9		mg/L		96	80 - 120

**Lab Sample ID: 440-197808-C-6 DU**  
**Matrix: Water**  
**Analysis Batch: 445752**

**Client Sample ID: Duplicate**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Alkalinity as CaCO3	240		242		mg/L		0.3	20
Bicarbonate Alkalinity as CaCO3	240		242		mg/L		0.3	20

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

**Lab Sample ID: MB 440-446012/1**  
**Matrix: Water**  
**Analysis Batch: 446012**

**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			12/11/17 09:57	1

**Lab Sample ID: LCS 440-446012/2**  
**Matrix: Water**  
**Analysis Batch: 446012**

**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	966		mg/L		97	90 - 110

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-197975-1

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

Lab Sample ID: 440-198049-C-4 DU  
 Matrix: Water  
 Analysis Batch: 446012

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	5400		5410		mg/L		0.4	5

## Method: SM 4500 CO2 C - Free Carbon Dioxide

Lab Sample ID: MB 440-447045/1  
 Matrix: Water  
 Analysis Batch: 447045

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

Analyte	MB Result	MB Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon Dioxide, Free	ND		2.0	2.0	mg/L			12/15/17 13:14	1

Lab Sample ID: 440-198509-G-5 DU  
 Matrix: Water  
 Analysis Batch: 447045

Client Sample ID: Duplicate  
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Carbon Dioxide, Free	90		88.0		mg/L		2	20

## Method: SM 4500 NH3 D - Ammonia

Lab Sample ID: MB 440-445958/2-A  
 Matrix: Water  
 Analysis Batch: 445959

Client Sample ID: Method Blank  
 Prep Type: Total/NA  
 Prep Batch: 445958

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	ND		0.50	0.10	mg/L		12/11/17 03:30	12/11/17 04:30	1

Lab Sample ID: LCS 440-445958/1-A  
 Matrix: Water  
 Analysis Batch: 445959

Client Sample ID: Lab Control Sample  
 Prep Type: Total/NA  
 Prep Batch: 445958

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	2.50	2.23		mg/L		89	85 - 115

Lab Sample ID: 440-197764-I-3-B MS  
 Matrix: Water  
 Analysis Batch: 445959

Client Sample ID: Matrix Spike  
 Prep Type: Total/NA  
 Prep Batch: 445958

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	0.83		2.50	3.26		mg/L		97	75 - 125

Lab Sample ID: 440-197764-I-3-C MSD  
 Matrix: Water  
 Analysis Batch: 445959

Client Sample ID: Matrix Spike Duplicate  
 Prep Type: Total/NA  
 Prep Batch: 445958

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ammonia (as N)	0.83		2.50	3.14		mg/L		92	75 - 125	4	15

TestAmerica Irvine

# QC Sample Results

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

TestAmerica Job ID: 440-197975-1

## Method: SM 4500 NH3 D - Ammonia (Continued)

Lab Sample ID: 440-198068-B-1-B DU  
 Matrix: Water  
 Analysis Batch: 445959

Client Sample ID: Duplicate  
 Prep Type: Total/NA  
 Prep Batch: 445958

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Ammonia (as N)	0.89		0.862		mg/L		4	15

## Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MB 440-446305/3  
 Matrix: Water  
 Analysis Batch: 446305

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Sulfide	ND		0.050	0.027	mg/L			12/12/17 15:28	1

Lab Sample ID: LCS 440-446305/4  
 Matrix: Water  
 Analysis Batch: 446305

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Sulfide	0.480	0.393		mg/L		82	80 - 120

Lab Sample ID: LCSD 440-446305/5  
 Matrix: Water  
 Analysis Batch: 446305

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

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Sulfide	0.480	0.431		mg/L		90	80 - 120	9	20

Lab Sample ID: MRL 440-446305/6  
 Matrix: Water  
 Analysis Batch: 446305

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Total Sulfide	0.0480	0.0502		mg/L		105	50 - 150

Lab Sample ID: 440-198232-G-1 MS  
 Matrix: Water  
 Analysis Batch: 446305

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
Total Sulfide	ND		0.480	0.456		mg/L		95	70 - 130

Lab Sample ID: 440-198232-G-1 MSD  
 Matrix: Water  
 Analysis Batch: 446305

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
Total Sulfide	ND		0.480	0.455		mg/L		95	70 - 130	0	30

# QC Sample Results

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

TestAmerica Job ID: 440-197975-1

## Method: SM 4500 S2 D - Sulfide, Total (Continued)

Lab Sample ID: 440-198232-G-1 DU  
Matrix: Water  
Analysis Batch: 446305

Client Sample ID: Duplicate  
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Sulfide	ND		ND		mg/L		NC	30

## Method: SM 5310C - TOC

Lab Sample ID: MB 440-446391/6  
Matrix: Water  
Analysis Batch: 446391

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		0.10	0.050	mg/L			12/12/17 06:45	1

Lab Sample ID: LCS 440-446391/5  
Matrix: Water  
Analysis Batch: 446391

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	10.0	9.27		mg/L		93	90 - 110

Lab Sample ID: MRL 440-446391/4  
Matrix: Water  
Analysis Batch: 446391

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	0.100	0.0795	J	mg/L		80	50 - 150

Lab Sample ID: 440-197975-1 MS  
Matrix: Water  
Analysis Batch: 446391

Client Sample ID: MW-1  
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	48		100	129		mg/L		81	80 - 120

Lab Sample ID: 440-197975-1 MSD  
Matrix: Water  
Analysis Batch: 446391

Client Sample ID: MW-1  
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon	48		100	128		mg/L		80	80 - 120	1	20

# QC Association Summary

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

TestAmerica Job ID: 440-197975-1

## GC/MS VOA

### Analysis Batch: 445658

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197975-1	MW-1	Total/NA	Water	8260B	
440-197975-2	DW-5	Total/NA	Water	8260B	
440-197975-3	QCAB	Total/NA	Water	8260B	
MB 440-445658/4	Method Blank	Total/NA	Water	8260B	
LCS 440-445658/5	Lab Control Sample	Total/NA	Water	8260B	
440-197838-A-1 MS	Matrix Spike	Total/NA	Water	8260B	
440-197838-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

### Analysis Batch: 445660

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197975-1	MW-1	Total/NA	Water	8260B	
440-197975-2	DW-5	Total/NA	Water	8260B	
440-197975-3	QCAB	Total/NA	Water	8260B	
440-197975-4	QCTB	Total/NA	Water	8260B	
MB 440-445660/4	Method Blank	Total/NA	Water	8260B	
LCS 440-445660/5	Lab Control Sample	Total/NA	Water	8260B	
440-197953-B-4 MS	Matrix Spike	Total/NA	Water	8260B	
440-197953-B-4 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

### Analysis Batch: 445803

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197975-4	QCTB	Total/NA	Water	8260B	
MB 440-445803/4	Method Blank	Total/NA	Water	8260B	
LCS 440-445803/5	Lab Control Sample	Total/NA	Water	8260B	
440-197813-B-1 MS	Matrix Spike	Total/NA	Water	8260B	
440-197813-B-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

## GC/MS Semi VOA

### Prep Batch: 446225

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197975-1	MW-1	Total/NA	Water	3520C	
440-197975-2	DW-5	Total/NA	Water	3520C	
MB 440-446225/1-A	Method Blank	Total/NA	Water	3520C	
LCS 440-446225/3-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 440-446225/4-A	Lab Control Sample Dup	Total/NA	Water	3520C	

### Analysis Batch: 446519

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197975-1	MW-1	Total/NA	Water	8270C	446225
440-197975-2	DW-5	Total/NA	Water	8270C	446225
MB 440-446225/1-A	Method Blank	Total/NA	Water	8270C	446225
LCS 440-446225/3-A	Lab Control Sample	Total/NA	Water	8270C	446225
LCSD 440-446225/4-A	Lab Control Sample Dup	Total/NA	Water	8270C	446225

## HPLC/IC

### Analysis Batch: 445477

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197975-1	MW-1	Total/NA	Water	300.0	

TestAmerica Irvine



# QC Association Summary

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

TestAmerica Job ID: 440-197975-1

## HPLC/IC (Continued)

### Analysis Batch: 445477 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197975-2	DW-5	Total/NA	Water	300.0	
MB 440-445477/7	Method Blank	Total/NA	Water	300.0	
LCS 440-445477/6	Lab Control Sample	Total/NA	Water	300.0	
440-197975-2 MS	DW-5	Total/NA	Water	300.0	
440-197975-2 MSD	DW-5	Total/NA	Water	300.0	

### Analysis Batch: 445478

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197975-1	MW-1	Total/NA	Water	300.0	
440-197975-1	MW-1	Total/NA	Water	300.0	
440-197975-2	DW-5	Total/NA	Water	300.0	
440-197975-2	DW-5	Total/NA	Water	300.0	
MB 440-445478/7	Method Blank	Total/NA	Water	300.0	
LCS 440-445478/6	Lab Control Sample	Total/NA	Water	300.0	
440-197975-2 MS	DW-5	Total/NA	Water	300.0	
440-197975-2 MSD	DW-5	Total/NA	Water	300.0	

## Metals

### Prep Batch: 445915

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197975-1	MW-1	Total Recoverable	Water	3005A	
440-197975-2	DW-5	Total Recoverable	Water	3005A	
MB 440-445915/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 440-445915/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
440-197975-2 MS	DW-5	Total Recoverable	Water	3005A	
440-197975-2 MSD	DW-5	Total Recoverable	Water	3005A	

### Analysis Batch: 446141

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197975-1	MW-1	Total Recoverable	Water	6010B	445915
440-197975-2	DW-5	Total Recoverable	Water	6010B	445915
MB 440-445915/1-A	Method Blank	Total Recoverable	Water	6010B	445915
LCS 440-445915/2-A	Lab Control Sample	Total Recoverable	Water	6010B	445915
440-197975-2 MS	DW-5	Total Recoverable	Water	6010B	445915
440-197975-2 MSD	DW-5	Total Recoverable	Water	6010B	445915

## General Chemistry

### Analysis Batch: 445752

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197975-1	MW-1	Total/NA	Water	SM 2320B	
440-197975-2	DW-5	Total/NA	Water	SM 2320B	
MB 440-445752/3	Method Blank	Total/NA	Water	SM 2320B	
LCS 440-445752/2	Lab Control Sample	Total/NA	Water	SM 2320B	
440-197808-C-6 DU	Duplicate	Total/NA	Water	SM 2320B	

### Prep Batch: 445958

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197975-1	MW-1	Total/NA	Water	SM 4500 NH3 B	

TestAmerica Irvine

# QC Association Summary

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

TestAmerica Job ID: 440-197975-1

## General Chemistry (Continued)

### Prep Batch: 445958 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197975-2	DW-5	Total/NA	Water	SM 4500 NH3 B	
MB 440-445958/2-A	Method Blank	Total/NA	Water	SM 4500 NH3 B	
LCS 440-445958/1-A	Lab Control Sample	Total/NA	Water	SM 4500 NH3 B	
440-197764-I-3-B MS	Matrix Spike	Total/NA	Water	SM 4500 NH3 B	
440-197764-I-3-C MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 NH3 B	
440-198068-B-1-B DU	Duplicate	Total/NA	Water	SM 4500 NH3 B	

### Analysis Batch: 445959

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197975-1	MW-1	Total/NA	Water	SM 4500 NH3 D	445958
440-197975-2	DW-5	Total/NA	Water	SM 4500 NH3 D	445958
MB 440-445958/2-A	Method Blank	Total/NA	Water	SM 4500 NH3 D	445958
LCS 440-445958/1-A	Lab Control Sample	Total/NA	Water	SM 4500 NH3 D	445958
440-197764-I-3-B MS	Matrix Spike	Total/NA	Water	SM 4500 NH3 D	445958
440-197764-I-3-C MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 NH3 D	445958
440-198068-B-1-B DU	Duplicate	Total/NA	Water	SM 4500 NH3 D	445958

### Analysis Batch: 446012

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197975-1	MW-1	Total/NA	Water	SM 2540C	
440-197975-2	DW-5	Total/NA	Water	SM 2540C	
MB 440-446012/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 440-446012/2	Lab Control Sample	Total/NA	Water	SM 2540C	
440-198049-C-4 DU	Duplicate	Total/NA	Water	SM 2540C	

### Analysis Batch: 446305

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197975-1	MW-1	Total/NA	Water	SM 4500 S2 D	
440-197975-2	DW-5	Total/NA	Water	SM 4500 S2 D	
MB 440-446305/3	Method Blank	Total/NA	Water	SM 4500 S2 D	
LCS 440-446305/4	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
LCSD 440-446305/5	Lab Control Sample Dup	Total/NA	Water	SM 4500 S2 D	
MRL 440-446305/6	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
440-198232-G-1 MS	Matrix Spike	Total/NA	Water	SM 4500 S2 D	
440-198232-G-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 S2 D	
440-198232-G-1 DU	Duplicate	Total/NA	Water	SM 4500 S2 D	

### Analysis Batch: 446391

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197975-1	MW-1	Total/NA	Water	SM 5310C	
440-197975-2	DW-5	Total/NA	Water	SM 5310C	
MB 440-446391/6	Method Blank	Total/NA	Water	SM 5310C	
LCS 440-446391/5	Lab Control Sample	Total/NA	Water	SM 5310C	
MRL 440-446391/4	Lab Control Sample	Total/NA	Water	SM 5310C	
440-197975-1 MS	MW-1	Total/NA	Water	SM 5310C	
440-197975-1 MSD	MW-1	Total/NA	Water	SM 5310C	

### Analysis Batch: 446816

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197975-1	MW-1	Total/NA	Water	410.4	
440-197975-2	DW-5	Total/NA	Water	410.4	

TestAmerica Irvine

# QC Association Summary

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

TestAmerica Job ID: 440-197975-1

## General Chemistry (Continued)

### Analysis Batch: 446816 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 440-446816/3	Method Blank	Total/NA	Water	410.4	
LCS 440-446816/4	Lab Control Sample	Total/NA	Water	410.4	
440-198092-G-3 MS	Matrix Spike	Total/NA	Water	410.4	
440-198092-G-3 MSD	Matrix Spike Duplicate	Total/NA	Water	410.4	

### Analysis Batch: 447045

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-197975-1	MW-1	Total/NA	Water	SM 4500 CO2 C	
440-197975-2	DW-5	Total/NA	Water	SM 4500 CO2 C	
MB 440-447045/1	Method Blank	Total/NA	Water	SM 4500 CO2 C	
440-198509-G-5 DU	Duplicate	Total/NA	Water	SM 4500 CO2 C	

# Definitions/Glossary

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

TestAmerica Job ID: 440-197975-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
E	Result exceeded calibration range.
F1	MS and/or MSD Recovery is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### GC/MS VOA TICs

Qualifier	Qualifier Description
J	Indicates an Estimated Value for TICs
T	Result is a tentatively identified compound (TIC) and an estimated value.
N	Presumptive evidence of material.

### Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

### General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
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)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
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)

# Accreditation/Certification Summary

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

TestAmerica Job ID: 440-197975-1

## Laboratory: TestAmerica Irvine

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

Authority	Program	EPA Region	Identification Number	Expiration Date
Alaska	State Program	10	CA01531	06-30-18
Arizona	State Program	9	AZ0671	10-14-18
California	LA Cty Sanitation Districts	9	10256	06-30-18
California	State Program	9	CA ELAP 2706	06-30-18
Guam	State Program	9	Cert. No. 17-003R	01-23-18
Hawaii	State Program	9	N/A	01-29-18
Kansas	NELAP	7	E-10420	07-31-18
Nevada	State Program	9	CA015312018-1	07-31-18
New Mexico	State Program	6	N/A	01-29-18 *
Northern Mariana Islands	State Program	9	MP0002	01-29-17 *
Oregon	NELAP	10	4028	01-29-18
USDA	Federal		P330-15-00184	07-08-18
Washington	State Program	10	C900	09-03-18

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

TestAmerica Irvine



## Login Sample Receipt Checklist

Client: Geo-Logic Associates

Job Number: 440-197975-1

**Login Number: 197975**

**List Number: 1**

**Creator: Soderblom, Tim**

**List Source: TestAmerica Irvine**

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	



## **APPENDIX C**


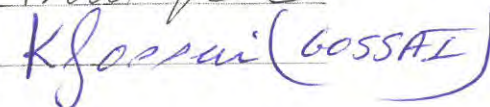
### **MONTHLY VADOSE ZONE GAS MONITORING REPORTS**



NEXT MONTH 8-24-17

SUNSHINE CANYON - COUNTY  
 PERIMETER PROBE MONITORING DATA

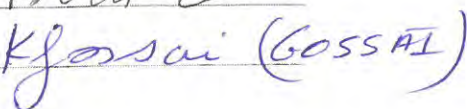
TECHNICIAN: Robert Johns		TEMPERATURE: 89°							
DATE: 7-13-17		WEATHER CONDITIONS: Sunny & Clear							
		INST & SERIAL #: CTEM 5000 / G500530							
PROBE NUMBER	TIME	PPM CH <sub>4</sub>	%VOL CH <sub>4</sub>	PRES (+/-)	% CO <sub>2</sub>	%O <sub>2</sub>	%BAL	PURGE TIME (min)	COMMENTS
202									
A-10								2	Probe removed due to construction
B-25								2	
C-38								3	
203									
A-10	0650		0.0	+0.1	2.8	16.0	79.3	2	
B-25	0652		0.0	+0.1	3.2	17.5	79.3	2	
C-40	0654		0.0	+0.2	1.4	16.4	80.2	3	
206									
A-10	0749		0.0	+0.05	11.3	9.7	78.9	2	
B-25	0751		0.0	+0.05	13.2	8.4	78.5	2	
C-38	0753		0.0	+0.1	16.6	6.7	79.8	3	
207									
A-10	0805		0.0	-0.36	0.3	18.6	81.1	2	
B-25	0807		0.0	+0.26	0.2	19.7	80.1	2	
C-40	0809		0.0	+0.31	0.1	19.7	80.1	3	
208									
A-9.1	0820		0.0	+0.08	2.4	18.4	79.2	2	
B-25	0822		0.0	-0.1	9.6	11.9	78.5	2	
C-40	0824		0.0	-0.13	1.2	18.3	80.5	3	
210									
A-10	0915		0.0	-0.50	0.1	19.6	80.2	2	
B-25	0917		0.0	-0.46	0.1	19.7	80.1	2	
C-39	0919		0.0	-0.04	0.1	19.7	80.1	3	

RES SIGNATURE:   
 LEA SIGNATURE: 

**SUNSHINE CANYON - COUNTY  
 PERIMETER PROBE MONITORING DATA**

TECHNICIAN: Robert Johns		TEMPERATURE: 89°							
DATE: 7-13-17		WEATHER CONDITIONS: Sunny & Clear							
		INST & SERIAL #: GEM 5000 / 950030							
PROBE NUMBER	TIME	PPM CH <sub>4</sub>	%VOL CH <sub>4</sub>	PRES (+/-)	% CO <sub>2</sub>	%O <sub>2</sub>	%BAL	PURGE TIME (min)	COMMENTS
242									
C-42	1000		0.0	+0.9	3.4	15.9	80.7	3	
D-60	1003		0.0	+0.7	3.9	12.1	84.0	4	
E-78	1007		0.0	.0	4.8	11.9	83.3	4	
243									
A-11	0735		0.0	-1.4	5.7	12.8	81.5	2	
B-20	0737		0.0	+1.9	6.7	11.1	82.2	2	
C-33	0739		0.0	+0.4	6.3	11.2	82.5	3	
244									
A-11	0900		0.0	-0.5	12.7	6.3	80.9	2	
B-21	0902		0.0	-1.07	6.2	13.6	80.12	2	
C-36	0904		0.0	-1.1	11.8	9.7	78.5	3	
245									
A-11	0702		0.0	+1.04	16.0	5.0	79.0	2	
B-20	0704		0.0	.0	4.9	16.7	78.4	2	
C-35	0706		0.0	+1.03	11.3	10.8	77.9	3	
D-50	0709		0.0	-1.03	8.2	12.4	79.4	4	
E-64	0713		0.0	+1.01	4.0	15.2	80.8	4	
246									
A-9								2	Probe removed
B-16								2	Probe in construction
205R									
A-11	0830		0.0	+1.13	9.8	11.5	78.7	2	
B-20	0832		0.6	.0	22.1	7.2	70.1	2	
C-33	0834		1.6	+2.7	44.5	0.0	53.5	3	
D-48	0837		2.3	-1.2	45.8	0.0	51.9	4	
E-62	0841		2.1	-4.3	43.4	0.0	54.5	4	


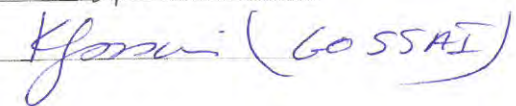
RES SIGNATURE: 

LEA SIGNATURE: 



SUNSHINE CANYON - COUNTY  
 PERIMETER PROBE MONITORING DATA

TECHNICIAN: Robert Johns DATE: 7-13-17					TEMPERATURE: 89.0 WEATHER CONDITIONS: Sunny & Clear INST & SERIAL #: GEM SC001 & 20530				
PROBE NUMBER	TIME	PPM CH <sub>4</sub>	%VOL CH <sub>4</sub>	PRES (+/-)	%CO2	%O2	%BAL	PURGE TIME (min)	COMMENTS
239									
A-11	0925		0.0	-1.02	5.9	19.1	78.9	2	
B-20	0927		0.0	-1.02	0.1	19.9	80.0	2	
C-35	0929		0.0	+1.02	0.1	20.0	79.9	3	
D-50	0932		0.0	+1.04	0.1	20.0	79.9	4	
E-64	0936		0.0	+1.01	0.1	20.0	79.9	4	
240									
A-11	0941		0.0	+1.16	8.2	13.3	78.6	2	
B-20	0943		0.0	.0	0.1	20.0	79.9	2	
C-33	0945		0.0	+1.01	0.1	20.1	79.8	3	
D-49	0948		0.0	+1.02	0.1	20.1	79.8	4	
E-61	0952		0.6	-1.04	0.1	19.9	79.3	4	

RES SIGNATURE:   
 LEA SIGNATURE:  (GOSSAI)



GAS MONITORING EQUIPMENT CALIBRATION

DATE	UNIT	SERIAL #	CAL GAS
7-13-17	TVA 1000B	1030945322	500 ppm CH4
7-13-17	GEN 5000	G500530	15% CH4

SIGNATURE: 

**SUNSHINE CANYON LANDFILL - CITY  
PERIMETER PROBE MONITORING DATA**

TECHNICIAN: Robert Johns				TEMPERATURE: 86°					
DATE: 7-10-17				WEATHER CONDITIONS: Sunny & Cloudy					
				INST & SERIAL #: GEM 5000 / G500530					
PROBE NUMBER	TIME	PPM CH <sub>4</sub>	%VOL CH <sub>4</sub>	PRES (+/-)	%CO <sub>2</sub>	%O <sub>2</sub>	%BAL	PURGE TIME (min)	COMMENTS
213									
A - 13	1139		0.0	+1.31	0.7	18.9	80.4	2	
B - 29	1141		0.0	+1.01	0.0	19.4	80.6	2	
C - 45	1143		0.0	-1.27	0.0	19.5	80.5	3	
D - 61	1146		0.0	-1.02	0.0	19.5	80.5	4	
E - 77	1150		0.0	-4.78	0.0	19.5	80.5	4	
214									
A - 13	1130		0.0	+1.10	6.7	13.3	80.0	2	
B - 30	1132		0.0	-2.68	0.1	19.2	80.7	2	
C - 48	1134		0.0	-2.18	0.0	19.6	80.4	3	
215									
A - 13	1110		0.0	+1.10	6.3	6.4	87.3	2	
B - 30	1112		0.0	+1.06	3.3	14.0	82.6	2	
C - 47	1114		0.0	.0	0.1	19.2	80.8	3	
D - 64	1117		0.0	+1.06	0.2	19.3	80.5	4	
E - 81	1121		0.0	+1.22	4.3	12.6	83.1	4	
216									
A - 14	1055		0.0	+1.02	0.0	19.8	80.2	2	
B - 43	1057		0.0	+1.03	0.0	19.9	80.1	2	
C - 62	1059		0.0	-1.07	0.0	19.9	80.1	3	
D - 86	1102		0.0	-1.01	0.0	19.8	80.1	4	
E - 110	1106		0.0	-1.03	0.0	19.8	80.2	4	
217									
A - 13	1045		0.0	+1.07	5.0	13.1	82.0	2	
B - 30	1047		0.0	+1.10	3.2	16.5	80.2	2	
218R									
A - 11	1010		0.0	+1.40	22.6	6.5	70.9	2	
B - 26.5	1012		0.0	+1.05	17.8	7.7	74.5	2	
C - 47	1014		0.0	-1.13	16.3	14.9	68.8	2	

RES SIGNATURE: 

LEA SIGNATURE: \_\_\_\_\_



Environmental Inc.

SUNSHINE CANYON LANDFILL - CITY PERIMETER PROBE MONITORING DATA

TECHNICIAN: Robert Johns					TEMPERATURE: 89°				
DATE: 7-10-17					WEATHER CONDITIONS: Sunny / cloudy				
					INST & SERIAL #: GEM 5000 / G550530				
PROBE NUMBER	TIME	PPM CH <sub>4</sub>	%VOL CH <sub>4</sub>	PRES (+/-)	%CO <sub>2</sub>	%O <sub>2</sub>	%BAL	PURGE TIME (min)	COMMENTS
219									
A - 13	1028		0.0	+1.07	1.2	18.4	80.4	2	
B - 64	1030		0.0	+1.34	0.1	19.2	80.7	2	
C - 115	1032		0.0	+1.12	0.1	19.1	80.8	3	
D - 166	1035		0.0	+1.08	0.1	19.2	80.7	4	
E - 217	1039		0.0	+1.09	1.3	18.2	80.5	4	
220									
A - 14	0950		0.0	+1.02	0.4	19.3	80.3	2	
B - 40	0952		0.0	+1.01	1.5	17.9	80.6	2	
C - 87	0954		0.0	+1.15	2.4	16.3	81.3	3	
D - 124	0957		0.0	+1.07	1.6	17.7	80.7	4	
E - 158	1001		0.0	+1.04	4.3	15.7	80.0	4	
220B									
A - 14	0935		0.0	+1.01	1.7	17.7	80.6	2	
B - 38	0937		0.0	+1.04	0.1	19.6	80.3	2	
C - 62	0939		0.0	+1.04	2.3	16.1	81.6	3	
D - 86	0942		0.0	+1.19	4.0	14.5	81.6	4	
E - 110	0946		0.0	-1.09	3.3	14.1	82.6	4	
221									
A - 13	0900		0.0	+1.05	0.3	19.6	80.2	2	
B - 56	0902		0.0	+1.05	0.1	19.8	80.1	2	
C - 99	0904		0.0	-1.09	0.4	19.1	80.1	3	
D - 142	0907		0.0	1.0	0.0	19.5	80.2	4	
E - 185	0911		0.0	+1.03	0.0	19.5	80.2	4	
222									
A - 13	0917		0.0	+1.05	0.3	19.3	80.4	2	
B - 54.8	0919		0.0	+1.04	0.0	19.6	80.3	2	
C - 96.5	0921		0.0	+1.05	0.1	19.5	80.4	3	
D - 138.3	0924		0.0	+1.06	0.1	19.6	80.4	4	
E - 180	0928		0.0	+1.01	0.0	19.6	80.3	4	

RES SIGNATURE:

LEA SIGNATURE: \_\_\_\_\_

**SUNSHINE CANYON LANDFILL - CITY  
 PERIMETER PROBE MONITORING DATA**

TECHNICIAN: Robert Johns		TEMPERATURE: 89.0							
DATE: 7-10-17		WEATHER CONDITIONS: Sunny/Cloudy							
		INST & SERIAL #: <del>GREM 5200</del> / <del>GS20130</del>							
PROBE NUMBER	TIME	PPM CH <sub>4</sub>	%VOL CH <sub>4</sub>	PRES (+/-)	%CO <sub>2</sub>	%O <sub>2</sub>	%BAL	PURGE TIME	COMMENTS
223									
A - 13	0840		0.0	-1.02	8.2	7.9	83.9	2	
B - 37.5	0842		0.0	-0.03	8.1	8.8	86.0	2	
C - 62	0844		0.0	.0	3.8	14.2	82.0	3	
D - 86.5	0847		0.0	1.01	1.2	18.4	80.5	4	
E - 111	0851		0.0	1.02	4.1	14.1	81.8	4	
224									
A - 13	0815		0.0	1.01	0.1	19.4	80.6	2	
B - 67.5	0817		0.0	-1.02	0.0	19.4	80.5	2	
C - 122	0819		0.0	1.07	0.0	19.4	80.5	3	
D - 177.5	0822		0.0	-10.12	0.0	19.4	80.6	4	
E - 232	0826		0.0	-7.29	0.0	19.4	80.5	4	
225									
A - 13	0756		0.0	-1.50	0.7	19.0	80.3	2	
B - 72	0758		0.0	-6.34	0.1	19.2	80.8	2	
C - 131	0800		0.0	-10.36	0.0	19.6	80.4	3	
D - 190	0803		0.0	-10.18	0.1	19.6	80.4	4	
E - 244	0807		0.0	-9.07	0.0	19.6	80.4	4	
226									
A - 13	0700		0.0	.0	0.1	19.5	80.4	2	
B - 64	0702		0.0	-10.68	0.1	19.6	80.3	2	
C - 114	0704		0.0	-10.74	0.1	19.6	80.3	3	
D - 164	0707		0.0	-11.05	0.1	19.7	80.3	4	
E - 208	0711		0.0	-11.30	0.1	19.7	80.3	4	
227									
A - 13	0720		0.0	-1.01	0.2	19.6	80.2	2	
B - 48.7	0722		0.0	-1.29	0.2	19.6	80.2	2	
C - 84.4	0724		0.0	-1.42	0.8	19.5	79.8	3	
D - 114	0727		0.0	-1.53	0.5	19.2	80.3	4	
E - 115.7	0731		0.0	-1.25	0.2	19.7	80.1	4	


RES SIGNATURE: 

LEA SIGNATURE: \_\_\_\_\_



**SUNSHINE CANYON LANDFILL - CITY  
PERIMETER PROBE MONITORING DATA**

TECHNICIAN: Robert Johns		TEMPERATURE: 89°							
DATE: 7-10-17		WEATHER CONDITIONS: Sunny / Clouds							
		INST & SERIAL #: GEN 5000 / G500530							
PROBE NUMBER	TIME	PPM CH <sub>4</sub>	%VOL CH <sub>4</sub>	PRES (+/-)	%CO <sub>2</sub>	%O <sub>2</sub>	%BAL	PURGE TIME	COMMENTS
228									
A - 13	0740		0.0	+1.05	0.1	19.8	80.2	2	
B - 63	0742		0.0	-1.0	1.3	17.2	81.4	2	
C - 113	0744		0.0	-1.5	0.1	19.7	80.2	3	
D - 163	0747		0.0	-1.9	0.4	19.7	80.2	4	
E - 213	0751		0.0	-1.30	0.4	19.3	80.3	4	
229									
A - 13	0640		0.0	-7.81	1.2	18.2	80.6	2	
B - 48.7	0642		0.0	-10.41	0.6	18.9	80.5	2	
C - 84.4	0644		0.0	-14.29	0.1	19.8	80.1	3	
D - 114	0647		0.0	-16.64	0.7	19.4	79.9	4	
E - 155.7	0657		0.0	-25.09	0.1	19.1	80.8	4	
230									
A - 16								2	Probe Has Been Removed
B - 33								2	Due to construction
C - 50								3	
231									
A - 13								2	Probe Has Been Removed Due
B - 26								2	to construction
C - 39								3	
D - 51								4	
E - 66								4	
241									
A - 13	1157		0.0	-4.0	0.0	19.5	80.5	2	
B - 28	1159		0.0	-19.37	0.0	19.5	80.5	2	
C - 47	1202		0.0	+1.12	0.1	19.5	80.5	3	
D - 64	1205		0.0	-23.23	0.0	19.5	80.5	4	
E - 85	1209		0.0	-17.36	0.0	19.5	80.4	4	

RES SIGNATURE: 

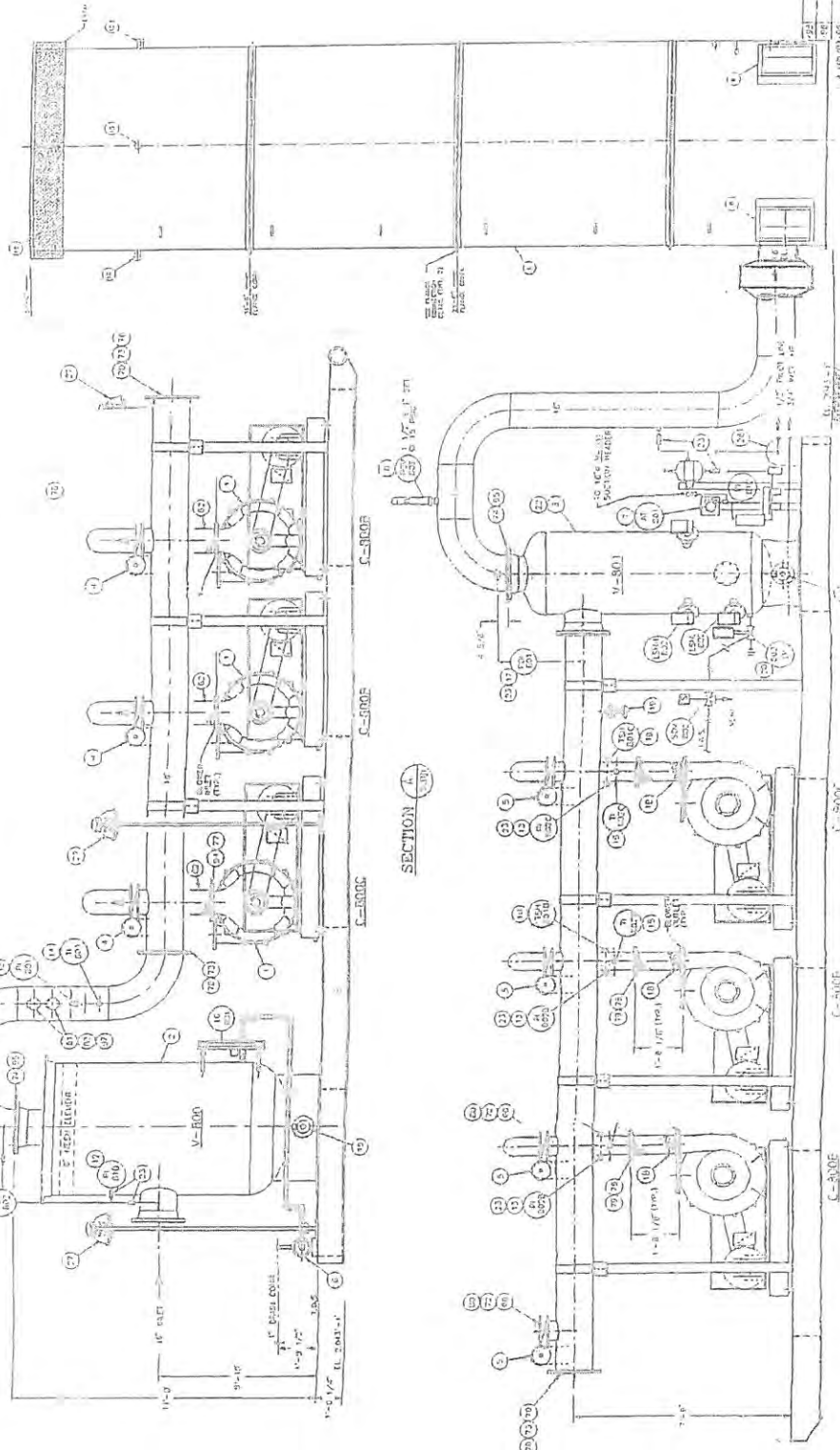
LEA SIGNATURE: \_\_\_\_\_



# EXHIBIT VB

## Flare Component Leak Testing

- NOTES**
1. ALL WELDED JOINTS TO BE WIGBOLT FROM EDGE OF PIPE
  2. ALL BLOWER ASSEMBLIES TO HAVE DRAIN VALVES IN PLACE
  3. ALL BLOWERS TO HAVE 1/2" WEEP HOLES LOCATED AT BOTTOM OF ENGINE END
  4. ALL WELDED JOINTS TO HAVE BRUNT WELDS



<p>APPROVED FOR CONSTRUCTION</p> <p>DESIGNED BY</p> <p>BY</p>	<p>NO. 5047</p> <p>REVISION</p>	<p>DATE</p> <p>BY</p>
<p>APPROVED FOR CONSTRUCTION</p> <p>DESIGNED BY</p> <p>BY</p>	<p>NO. 5047</p> <p>REVISION</p>	<p>DATE</p> <p>BY</p>
<p>FLARE INDUSTRIES</p> <p>FLARE INDUSTRIES</p> <p>FLARE INDUSTRIES</p>		
<p>FLARE #3</p>		

NEXT MONTH 9-19-17

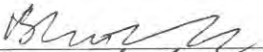
**SUNSHINE CANYON LANDFILL - CITY  
PERIMETER PROBE MONITORING DATA**


TECHNICIAN: Robert Johns		TEMPERATURE: 72°							
DATE: 8-22-17		WEATHER CONDITIONS: Sunny & Clear							
		INST & SERIAL #: GEM 5000 / G500530							
PROBE NUMBER	TIME	PPM CH <sub>4</sub>	%VOL CH <sub>4</sub>	PRES (+/-)	%CO <sub>2</sub>	%O <sub>2</sub>	%BAL	PURGE TIME (min)	COMMENTS
<b>213</b>									
A - 13	1140		0.0	+1.06	2.2	18.4	79.4	2	
B - 29	1142		0.0	+1.08	0.0	19.5	80.5	2	
C - 45	1144		0.0	-1.09	0.0	19.7	80.2	3	
D - 61	1147		0.0	-1.18	0.0	19.7	80.2	4	
E - 77	1151		0.0	-8.15	0.0	19.7	80.2	4	
<b>214</b>									
A - 13	1132		0.0	-1.04	1.3	17.2	81.5	2	
B - 30	1134		0.0	-1.69	0.1	18.8	81.1	2	
C - 48	1136		0.0	-1.33	0.0	19.6	80.3	3	
<b>215</b>									
A - 13	1117		0.0	+1.07	7.0	6.4	86.6	2	
B - 30	1119		0.0	+1.09	0.4	18.9	80.7	2	
C - 47	1121		0.0	+1.08	0.0	19.8	80.2	3	
D - 64	1124		0.0	+1.08	0.2	19.6	80.3	4	
E - 81	1127		0.0	+1.10	5.3	9.3	85.4	4	
<b>216</b>									
A - 14	1100		0.0	+1.07	0.1	20.1	79.9	2	
B - 43	1102		0.0	+1.05	0.1	20.1	79.8	2	
C - 62	1104		0.0	+1.02	0.0	20.2	79.8	3	
D - 86	1107		0.0	+1.09	0.0	20.2	79.8	4	
E - 110	1111		0.0	+1.05	0.0	20.1	79.9	4	
<b>217</b>									
A - 13	1050		0.0	1.0	4.9	14.4	80.7	2	
B - 30	1052		0.0	+1.10	3.3	17.1	79.7	2	
<b>218R</b>									
A - 11	1040		0.0	+1.13	12.8	16.6	70.6	2	
B - 26.5	1042		0.0	+1.22	19.5	8.6	71.9	2	
C - 47	1044		0.0	+1.02	24.5	4.7	70.7	2	

RES SIGNATURE:   
LEA SIGNATURE: 

**SUNSHINE CANYON LANDFILL - CITY  
PERIMETER PROBE MONITORING DATA**

TECHNICIAN: Robert Johns DATE: 8-22-17					TEMPERATURE: 73.0 WEATHER CONDITIONS: Sunny & Clear INST & SERIAL #: GEM 500 / G50030				
PROBE NUMBER	TIME	PPM CH <sub>4</sub>	%VOL CH <sub>4</sub>	PRES (+/-)	%CO <sub>2</sub>	%O <sub>2</sub>	%BAL	PURGE TIME (min)	COMMENTS
<b>219</b>									
A - 13	1020		0.0	+0.04	1.1	19.5	79.4	2	
B - 64	1022		0.0	+0.05	0.1	19.9	80.0	2	
C - 115	1024		0.0	+0.02	0.0	20.0	80.0	3	
D - 166	1027		0.0	+0.05	0.0	20.0	79.8	4	
E - 217	1031		0.0	+0.04	1.9	18.2	79.9	4	
<b>220</b>									
A - 14	0951		0.0	+0.06	0.5	19.3	80.2	2	
B - 40	0953		0.0	+0.03	0.1	19.8	80.1	2	
C - 87	0955		0.0	+0.09	0.1	19.9	80.1	3	
D - 124	0958		0.0	+0.01	0.1	19.9	80.0	4	
E - 158	1002		0.0	+0.02	0.1	19.9	80.0	4	
<b>220B</b>									
A - 14	0930		0.0	+0.06	0.9	18.7	80.4	2	
B - 38	0932		0.0	+0.06	0.0	19.8	80.1	2	
C - 62	0934		0.0	-0.02	4.5	13.2	82.3	3	
D - 86	0937		0.0	-0.02	4.1	14.0	81.9	4	
E - 110	0941		0.0	-0	3.1	16.1	80.8	4	
<b>221</b>									
A - 13	0910		0.0	-0.01	1.2	19.1	79.7	2	
B - 56	0912		0.0	-0.02	0.1	20.0	80.0	2	
C - 99	0914		0.0	-0.08	0.1	20.0	80.0	3	
D - 142	0917		0.0	-0.12	0.0	20.0	79.9	4	
E - 185	0921		0.0	+0.07	0.0	20.0	79.9	4	
<b>222</b>									
A - 13	0924		0.0	-0	0.7	19.3	80.0	2	
B - 54.8	0926		0.0	0	0.1	20.0	80.0	2	
C - 96.5	0928		0.0	+0.10	0.2	19.8	80.0	3	
D - 138.3	0931		0.0	+0.01	0.8	19.8	79.4	4	
E - 180	0935		0.0	+0.02	0.0	19.9	80.0	4	

RES SIGNATURE: 

LEA SIGNATURE: 

**SUNSHINE CANYON LANDFILL - CITY  
PERIMETER PROBE MONITORING DATA**

TECHNICIAN: Robert Wuns		TEMPERATURE: 730							
DATE: 8-22-17		WEATHER CONDITIONS: sunny & clear							
		INST & SERIAL #: GEM 5000/G500530							
PROBE NUMBER	TIME	PPM CH <sub>4</sub>	%VOL CH <sub>4</sub>	PRES (+/-)	%CO <sub>2</sub>	%O <sub>2</sub>	%BAL	PURGE TIME	COMMENTS
223									
A - 13	0840		0.0	-1.02	7.4	19.2	80.4	2	
B - 37.5	0842		0.0	+1.02	5.6	11.7	82.7	2	
C - 62	0844		0.0	+1.14	1.1	18.4	80.5	3	
D - 86.5	0847		0.0	-1.02	0.9	18.9	80.2	4	
E - 111	0851		0.0	-1.04	4.4	13.7	81.9	4	
224									
A - 13	0817		0.0	+1.21	0.8	19.1	80.1	2	
B - 67.5	0819		0.0	-1.03	0.1	19.6	80.3	2	
C - 122	0821		0.0	-1.02	0.0	19.7	80.2	3	
D - 177.5	0824		0.0	-2.25	0.0	19.5	80.2	4	
E - 232	0828		0.0	-2.11	0.0	19.8	80.1	4	
225									
A - 13	0800		0.0	-1.04	1.2	18.4	80.4	2	
B - 72	0802		0.0	-1.79	0.8	18.9	80.2	2	
C - 131	0804		0.0	-2.59	0.6	18.9	80.5	3	
D - 190	0807		0.0	-2.42	0.1	19.4	80.5	4	
E - 244	0811		0.0	-2.22	0.1	19.5	80.4	4	
226									
A - 13	0706		0.0	-1.01	0.1	19.9	80.1	2	
B - 64	0708		0.0	-2.65	0.1	19.8	80.1	2	
C - 114	0710		0.0	-4.35	0.1	19.8	80.1	3	
D - 164	0713		0.0	-4.09	0.1	19.9	80.1	4	
E - 208	0717		0.0	-5.72	0.1	19.9	80.1	4	
227									
A - 13	0725		0.0	-1.05	0.1	19.9	80.1	2	
B - 48.7	0729		0.0	-1.67	0.1	19.8	80.1	2	
C - 84.4	0729		0.0	-2.38	0.5	19.2	80.2	3	
D - 114	0732		0.0	-1.00	0.4	19.4	80.3	4	
E - 115.7	0736		0.0	-1.59	0.2	19.5	80.4	4	


RES SIGNATURE: 

LEA SIGNATURE: 

**SUNSHINE CANYON LANDFILL – CITY  
 PERIMETER PROBE MONITORING DATA**

TECHNICIAN: Robert Johns		TEMPERATURE: 73°							
DATE: 8-22-17		WEATHER CONDITIONS: Sunny & Clear							
		INST & SERIAL #: GEM 5200 / G500530							
PROBE NUMBER	TIME	PPM CH <sub>4</sub>	%VOL CH <sub>4</sub>	PRES (+/-)	%CO <sub>2</sub>	%O <sub>2</sub>	%BAL	PURGE TIME	COMMENTS
228									
A - 13	0740		0.0	-0.4	0.8	18.8	80.4	2	
B - 63	0742		0.0	-1.89	2.7	14.2	83.2	2	
C - 113	0744		0.0	-0.60	0.1	19.3	80.6	3	
D - 163	0747		0.0	-0.67	0.4	18.9	80.7	4	
E - 213	0751		0.0	-1.66	0.1	19.2	80.7	4	
229									
A - 13	0650		0.0	-1.01	2.5	16.1	79.4	2	
B - 48.7	0652		0.0	-1.38	2.5	16.2	81.3	2	
C - 84.4	0654		0.0	-1.64	0.1	19.9	80.0	3	
D - 114	0657		0.0	-1.11	3.1	13.1	83.9	4	
E - 155.7	0701		0.0	-1.13	0.2	19.1	80.7	4	
230									
A - 16								2	Probe Removed
B - 33								2	Due to
C - 50								3	Construction
231									
A - 13								2	Probe Removed
B - 26								2	Due to
C - 39								3	Construction
D - 51								4	
E - 66								4	
241									
A - 13	1200		0.0	-1.80	0.0	19.8	80.2	2	
B - 28	1202		0.0	-5.95	0.0	19.8	80.2	2	
C - 47	1204		0.0	1.11	0.1	19.7	80.2	3	
D - 64	1207		0.0	-8.71	0.0	19.8	80.2	4	
E - 85	1211		0.0	-5.92	0.0	19.8	80.2	4	


RES SIGNATURE: 

LEA SIGNATURE: 



GAS MONITORING EQUIPMENT CALIBRATION

DATE	UNIT	SERIAL #	CAL GAS
8-22-17	GEM 5000	G-520530	15%0 CH4

SIGNATURE: 




NEXT MONTH 9-21-17

SUNSHINE CANYON - COUNTY  
PERIMETER PROBE MONITORING DATA


TECHNICIAN: Robert Johns		TEMPERATURE: 70°							
DATE: 8-24-17		WEATHER CONDITIONS: overcast							
		INST & SERIAL #: GEN 5000 / G500530							
PROBE NUMBER	TIME	PPM CH <sub>4</sub>	%VOL CH <sub>4</sub>	PRES (+/-)	% CO <sub>2</sub>	%O <sub>2</sub>	%BAL	PURGE TIME (min)	COMMENTS
202									Probe Has
A - 10								2	been removed
B - 25								2	Due to
C - 38								3	Con
203									
A - 10	0700		0.0	-0.5	2.6	17.7	79.6	2	
B - 25	0702		0.0	-0.3	2.8	17.1	80.1	2	
C - 40	0704		0.0	-0.3	1.4	18.3	80.3	3	
206									
A - 10	0810		0.0	+0.1	10.0	14.0	75.9	2	
B - 25	0812		0.0	-0.4	14.1	8.5	77.4	2	
C - 38	0814		0.0	-0.3	17.2	8.0	74.8	3	
207									
A - 10	1110		59.1	+3.8	38.1	0.0	2.7	2	
B - 25	1112		0.1	-3.42	0.6	19.5	79.8	2	
C - 40	1144		1.5	-0.4	1.5	19.2	77.7	3	
208									
A - 9.1	0800		0.0	+0.1	2.6	19.0	78.5	2	
B - 25	0802		0.0	-0.4	8.7	12.9	78.4	2	
C - 40	0804		0.0	-1.4	2.4	17.3	80.4	3	
210									
A - 10	0955		0.0	-0.5	0.1	19.9	80.0	2	
B - 25	0957		0.0	-1.22	0.1	19.8	80.1	2	
C - 39	1000		0.0	+1.21	0.1	19.8	80.1	3	

RES SIGNATURE: 

LEA SIGNATURE: 

SUNSHINE CANYON - COUNTY  
 PERIMETER PROBE MONITORING DATA

TECHNICIAN: Robert Johns				TEMPERATURE: 70°					
DATE: 8-24-17				WEATHER CONDITIONS: Overcast					
				INST & SERIAL #: GEM 5000/G500530					
PROBE NUMBER	TIME	PPM CH <sub>4</sub>	%VOL CH <sub>4</sub>	PRES (+/-)	% CO <sub>2</sub>	%O <sub>2</sub>	%BAL	PURGE TIME (min)	COMMENTS
242									
C-42	0920		0.0	-0.01	5.3	15.7	79.0	3	
D-60	0922		0.0	.0	2.4	12.4	85.2	4	
E-78	0924		0.0	+0.07	0.6	18.9	80.5	4	
243									
A-11	0750		0.0	+0.02	10.2	8.0	81.8	2	
B-20	0752		0.0	-0.04	7.3	8.0	84.7	2	
C-33	0754		0.0	-0.09	5.4	11.6	83.0	3	
244									
A-11	0910		0.0	+0.03	10.9	9.2	79.8	2	
B-21	0912		0.0	-0.05	5.1	14.9	80.0	2	
C-36	0914		0.0	-0.01	4.2	16.7	79.1	3	
245									
A-11	0710		0.0	-0.01	17.9	3.9	78.2	2	
B-20	0712		0.0	+0.10	23.5	3.0	73.5	2	
C-35	0715		0.0	+0.19	13.4	9.3	77.3	3	
D-50	0718		0.0	-0.03	9.3	11.6	79.1	4	
E-64	0722		0.0	-0.04	8.5	7.2	84.3	4	
246									
A-9								2	Probe Removal
B-16								2	Due to construction
205R									
A-11	0840		0.0	+0.01	10.0	12.0	78.0	2	
B-20	0842		0.7	+0.10	24.0	5.4	69.9	2	
C-33	0844		0.6	-0.06	17.2	12.6	69.7	3	
D-48	0847		0.8	-0.05	17.8	12.6	68.8	4	
E-62	0851		0.9	-0.02	21.3	9.7	65.1	4	

RES SIGNATURE: 

LEA SIGNATURE: 

SUNSHINE CANYON - COUNTY  
 PERIMETER PROBE MONITORING DATA

TECHNICIAN: Robert Johns DATE: 8-24-17					TEMPERATURE: 70° WEATHER CONDITIONS: Sunny & Clear INST & SERIAL #: GEM 5000 / G500520				
PROBE NUMBER	TIME	PPM CH <sub>1</sub>	%VOL CH <sub>2</sub>	PRES (+/-)	%CO <sub>2</sub>	%O <sub>2</sub>	%BAL	PURGE TIME (min)	COMMENTS
239									
A-11	1030		0.0	+1.04	6.9	14.2	78.9	2	
B-20	1032		0.0	-1.04	0.1	19.6	80.2	2	
C-35	1034		0.0	+1.04	0.1	19.9	80.0	3	
D-50	1037		0.0	-1.03	0.1	19.8	80.0	4	
E-64	1041		0.0	+1.03	0.1	19.9	80.0	4	
240									
A-11	1050		0.0	-1.04	5.9	15.2	78.9	2	
B-20	1052		0.0	-1.07	0.4	19.7	79.9	2	
C-33	1054		0.0	1.0	0.1	20.0	79.9	3	
D-49	1057		0.0	1.0	0.1	20.1	79.8	4	
E-61	1101		0.9	+1.05	0.1	20.0	79.1	4	

RES SIGNATURE:   
 LEA SIGNATURE: 





GAS MONITORING EQUIPMENT CALIBRATION

DATE	UNIT	SERIAL #	CAL GAS
4-24-17	GEM 5000	4500530	15.40 CH <sub>4</sub>
4-24-17	TVA 1000B	103094 <del>823</del>	500ppm CH <sub>4</sub>

SIGNATURE: 

NEXT MONTH \_\_\_\_\_

SUNSHINE CANYON - COUNTY  
 PERIMETER PROBE MONITORING DATA

TECHNICIAN: Robert Johns					TEMPERATURE: 100°				
DATE: 8-30-17					WEATHER CONDITIONS: Sunny & clear				
					INST & SERIAL #: GEM 500 / G500530				
PROBE NUMBER	TIME	PPM CH <sub>4</sub>	%VOL CH <sub>4</sub>	PRES (+/-)	% CO <sub>2</sub>	%O <sub>2</sub>	%BAL	PURGE TIME (min)	COMMENTS
202									
A - 10								2	
B - 25								2	
C - 38								3	
203									
A - 10								2	
B - 25								2	
C - 40								3	
206									
A - 10								2	
B - 25								2	
C - 38								3	
207									1st 10 day Recheck!
A - 10	1014		0.0	-1.21	1.7	19.2	79.1	2	
B - 25	1016		0.0	+1.27	0.3	19.5	80.2	2	
C - 40	1018		0.3	+1.50	0.6	19.5	79.6	3	
208									
A - 9.1								2	
B - 25								2	
C - 40								3	
210									
A - 10								2	
B - 25								2	
C - 39								3	

RES SIGNATURE: 

LEA SIGNATURE: \_\_\_\_\_



GAS MONITORING EQUIPMENT CALIBRATION

DATE	UNIT	SERIAL #	CAL GAS
8-30-17	GEM 5000	4500530	15% City

SIGNATURE: *[Handwritten Signature]*

TABLE 6A

SUNSHINE CANYON CITY LANDFILL  
 PERIMETER PROBE MONITORING  
 JULY – AUGUST – SEPTEMBER – 2017

July 10, 2017	METHANE CONCENTRATION					COMMENTS
PROBE	A	B	C	D	E	
213	0.0	0.0	0.0	0.0	0.0	
214	0.0	0.0	0.0	N/A	N/A	
215	0.0	0.0	0.0	0.0	0.0	
216	0.0	0.0	0.0	0.0	0.0	
217	0.0	0.0	N/A	N/A	N/A	
218R	0.0	0.0	0.0	N/A	N/A	
219	0.0	0.0	0.0	0.0	0.0	
220	0.0	0.0	0.0	0.0	0.0	
220B	0.0	0.0	0.0	0.0	0.0	
221	0.0	0.0	0.0	0.0	0.0	
222	0.0	0.0	0.0	0.0	0.0	
223	0.0	0.0	0.0	0.0	0.0	
224	0.0	0.0	0.0	0.0	0.0	
225	0.0	0.0	0.0	0.0	0.0	
226	0.0	0.0	0.0	0.0	0.0	
227	0.0	0.0	0.0	0.0	0.0	
228	0.0	0.0	0.0	0.0	0.0	
229	0.0	0.0	0.0	0.0	0.0	
230	----	----	----	N/A	N/A	Decommissioned
231	----	----	----	----	----	Decommissioned
241	0.0	0.0	0.0	0.0	0.0	
August 22, 2017	METHANE CONCENTRATION					COMMENTS
PROBE	A	B	C	D	E	
213	0.0	0.0	0.0	0.0	0.0	
214	0.0	0.0	0.0	N/A	N/A	
215	0.0	0.0	0.0	0.0	0.0	
216	0.0	0.0	0.0	0.0	0.0	
217	0.0	0.0	N/A	N/A	N/A	
218R	0.0	0.0	0.0	N/A	N/A	
219	0.0	0.0	0.0	0.0	0.0	
220	0.0	0.0	0.0	0.0	0.0	
220B	0.0	0.0	0.0	0.0	0.0	
221	0.0	0.0	0.0	0.0	0.0	
222	0.0	0.0	0.0	0.0	0.0	
223	0.0	0.0	0.0	0.0	0.0	
224	0.0	0.0	0.0	0.0	0.0	
225	0.0	0.0	0.0	0.0	0.0	
226	0.0	0.0	0.0	0.0	0.0	
227	0.0	0.0	0.0	0.0	0.0	
228	0.0	0.0	0.0	0.0	0.0	
229	0.0	0.0	0.0	0.0	0.0	
230	----	----	----	N/A	N/A	Decommissioned
231	----	----	----	----	----	Decommissioned
241	0.0	0.0	0.0	0.0	0.0	



**TABLE 6A**

**SUNSHINE CANYON CITY LANDFILL  
PERIMETER PROBE MONITORING  
JULY – AUGUST – SEPTEMBER – 2017**

September 19, 2017	METHANE CONCENTRATION					COMMENTS
PROBE	A	B	C	D	E	
213	0.0	0.0	0.0	0.0	0.0	
214	0.0	0.0	0.0	N/A	N/A	
215	0.0	0.0	0.0	0.0	0.0	
216	0.0	0.0	0.0	0.0	0.0	
217	0.0	0.0	N/A	N/A	N/A	
218R	0.0	0.0	0.0	N/A	N/A	
219	0.0	0.0	0.0	0.0	0.0	
220	0.0	0.0	0.0	0.0	0.0	
220B	0.0	0.0	0.0	0.0	0.0	
221	0.0	0.0	0.0	0.0	0.0	
222	0.0	0.0	0.0	0.0	0.0	
223	0.0	0.0	0.0	0.0	0.0	
224	0.0	0.0	0.0	0.0	0.0	
225	0.0	0.0	0.0	0.0	0.0	
226	0.0	0.0	0.0	0.0	0.0	
227	0.0	0.0	0.0	0.0	0.0	
228	0.0	0.0	0.0	0.0	0.0	
229	0.0	0.0	0.0	0.0	0.0	
230	-----	-----	-----	-----	-----	Decommissioned
231	-----	-----	-----	-----	-----	Decommissioned
241	0.0	0.0	0.0	0.0	0.0	

**TABLE 6B**

**SUNSHINE CANYON COUNTY LANDFILL  
PERIMETER PROBE MONITORING  
JULY – AUGUST – SEPTEMBER – 2017**

July 13, 2017	METHANE CONCENTRATION					COMMENTS
PROBE	A	B	C	D	E	
202	----	----	----	----	----	Decommissioned
203	0.0	0.0	0.0	----	----	
205R	0.0	0.6	1.6	2.3	2.1	
206	0.0	0.0	0.0	----	----	
207	0.0	0.0	0.0	----	----	
208	0.0	0.0	0.0	----	----	
210	0.0	0.0	0.0	----	----	
239	0.0	0.0	0.0	0.0	0.0	
240	0.0	0.0	0.0	0.0	0.6	
242	----	----	0.0	0.0	0.0	
243	0.0	0.0	0.0	----	----	
244	0.0	0.0	0.0	----	----	
245	0.0	0.0	0.0	0.0	0.0	
246	----	----	----	----	----	Decommissioned
August 24, 2017	METHANE CONCENTRATION					COMMENTS
PROBE	A	B	C	D	E	
202	----	----	----	----	----	Decommissioned
203	0.0	0.0	0.0	----	----	
205R	0.0	0.7	0.6	0.8	0.9	
206	0.0	0.0	0.0	----	----	
207	59.1	0.1	1.5	----	----	
208	0.0	0.0	0.0	----	----	
210	0.0	0.0	0.0	----	----	
239	0.0	0.0	0.0	0.0	0.0	
240	0.0	0.0	0.0	0.0	0.9	
242	----	----	0.0	0.0	0.0	
243	0.0	0.0	0.0	----	----	
244	0.0	0.0	0.0	----	----	
245	0.0	0.0	0.0	0.0	0.0	
246	----	----	----	----	----	Decommissioned

**Note: Methane gas levels due to naturally occurring hydrocarbons**

**TABLE 6B  
(Continued)**

**SUNSHINE CANYON COUNTY LANDFILL  
PERIMETER PROBE MONITORING  
JULY – AUGUST – SEPTEMBER – 2017**

September 21, 2017	METHANE CONCENTRATION					COMMENTS
PROBE	A	B	C	D	E	
202	----	----	----	----	----	Decommissioned
203	0.0	0.0	0.0	----	----	
205R	0.0	0.7	1.2	1.9	1.3	
206	0.0	0.0	0.0	----	----	
207	0.0	0.0	0.0	----	----	
208	0.0	0.0	0.0	----	----	
210	0.0	0.0	0.0	----	----	
239	0.0	0.0	0.0	0.0	0.0	
240	0.0	0.0	0.0	0.0	0.9	
242	----	----	0.0	0.0	0.0	
243	0.0	0.0	0.0	----	----	
244	0.0	0.1	0.0	----	----	
245	0.0	0.0	0.0	0.0	0.0	
246	----	----	----	----	----	Decommissioned

**Note: Methane gas levels due to naturally occurring hydrocarbons**

**TABLE 6B  
(Continued)**

**SUNSHINE CANYON COUNTY LANDFILL  
10-DAY PERIMETER PROBE RE-MONITORING**

**AUGUST 2017**

<b>METHANE CONCENTRATION</b>					
<b>PROBE</b>	<b>Depth.</b>	<b>Original Inspection/ % By Volume</b>	<b>Remediation Work</b>	<b>10 Day Re-Monitor</b>	<b>Cleared/ % By Volume</b>
<b>207</b>	A-10	8-24-17 59.1	Moisture Condition Soil/ Dirt Compaction	8-30-17	Yes/ 0.0

TABLE 6A

SUNSHINE CANYON CITY LANDFILL  
 PERIMETER PROBE MONITORING  
 OCTOBER – NOVEMBER – DECEMBER – 2017

October 24, 2017	METHANE CONCENTRATION					COMMENTS
PROBE	A	B	C	D	E	
213	0.0	0.0	0.0	0.0	0.0	
214	0.0	0.0	0.0	N/A	N/A	
215	0.0	0.0	0.0	0.0	0.0	
216	0.0	0.0	0.0	0.0	0.0	
217	0.0	0.0	N/A	N/A	N/A	
218R	0.0	0.0	0.0	N/A	N/A	
219	0.0	0.0	0.0	0.0	0.0	
220	0.0	0.0	0.0	0.0	0.0	
220B	0.0	0.0	0.0	0.0	0.0	
221	0.0	0.0	0.0	0.0	0.0	
222	0.0	0.0	0.0	0.0	0.0	
223	0.0	0.0	0.0	0.0	0.0	
224	0.0	0.0	0.0	0.0	0.0	
225	0.0	0.0	0.0	0.0	0.0	
226	0.0	0.0	0.0	0.0	0.0	
227	0.0	0.0	0.0	0.0	0.0	
228	0.0	0.0	0.0	0.0	0.0	
229	0.0	0.0	0.0	0.0	0.0	
230	----	----	----	N/A	N/A	Decommissioned
231	----	----	----	----	----	Decommissioned
241	0.0	0.0	0.0	0.0	0.0	
November 14, 2017	METHANE CONCENTRATION					COMMENTS
PROBE	A	B	C	D	E	
213	0.0	0.0	0.0	0.0	0.0	
214	0.0	0.0	0.0	N/A	N/A	
215	0.0	0.0	0.0	0.0	0.0	
216	0.0	0.0	0.0	0.0	0.0	
217	0.0	0.0	N/A	N/A	N/A	
218R	0.0	0.0	0.0	N/A	N/A	
219	0.0	0.0	0.0	0.0	0.0	
220	0.0	0.0	0.0	0.0	0.0	
220B	0.0	0.0	0.0	0.0	0.0	
221	0.0	0.0	0.0	0.0	0.0	
222	0.0	0.0	0.0	0.0	0.0	
223	0.0	0.0	0.0	0.0	0.0	
224	0.0	0.0	0.0	0.0	0.0	
225	0.0	0.0	0.0	0.0	0.0	
226	0.0	0.0	0.0	0.0	0.0	
227	0.0	0.0	0.0	0.0	0.0	
228	0.0	0.0	0.0	0.0	0.0	
229	0.0	0.0	0.0	0.0	0.0	
230	----	----	----	N/A	N/A	Decommissioned
231	----	----	----	----	----	Decommissioned
241	0.0	0.0	0.0	0.0	0.0	

**TABLE 6A**

**SUNSHINE CANYON CITY LANDFILL  
PERIMETER PROBE MONITORING  
OCTOBER – NOVEMBER – DECEMBER – 2017**

December 21, 2017	METHANE CONCENTRATION					COMMENTS
PROBE	A	B	C	D	E	
213	0.0	0.0	0.0	0.0	0.0	
214	0.0	0.0	0.0	N/A	N/A	
215	0.0	0.0	0.0	0.0	0.0	
216	0.0	0.0	0.0	0.0	0.0	
217	0.0	0.0	N/A	N/A	N/A	
218R	0.0	0.0	0.0	N/A	N/A	
219	0.0	0.0	0.0	0.0	0.0	
220	0.0	0.0	0.0	0.0	0.0	
220B	0.0	0.0	0.0	0.0	0.0	
221	0.0	0.0	0.0	0.0	0.0	
222	0.0	0.0	0.0	0.0	0.0	
223	0.0	0.0	0.0	0.0	0.0	
224	0.0	0.0	0.0	0.0	0.0	
225	0.0	0.0	0.0	0.0	0.0	
226	0.0	0.0	0.0	0.0	0.0	
227	0.0	0.0	0.0	0.0	0.0	
228	0.0	0.0	0.0	0.0	0.0	
229	0.0	0.0	0.0	0.0	0.0	
230	----	----	----	----	----	Decommissioned
231	----	----	----	----	----	Decommissioned
241	0.0	0.0	0.0	0.0	0.0	

**TABLE 6B**

**SUNSHINE CANYON COUNTY LANDFILL  
PERIMETER PROBE MONITORING  
OCTOBER – NOVEMBER – DECEMBER – 2017**

October 31, 2017	METHANE CONCENTRATION					COMMENTS
PROBE	A	B	C	D	E	
202	----	----	----	----	----	Decommissioned
203	0.0	0.0	0.0	----	----	
205R	0.0	0.5	0.6	2.7	0.9	
206	0.0	0.0	0.0	----	----	
207	0.0	0.0	0.0	----	----	
208	0.0	0.0	0.0	----	----	
210	0.1	0.0	0.0	----	----	
239	0.0	0.0	0.0	0.0	0.0	
240	0.0	0.0	0.0	0.0	0.1	
242	----	----	0.0	0.0	0.0	
243	0.0	0.0	0.0	----	----	
244	0.0	0.0	0.0	----	----	
245	0.0	0.0	0.0	0.0	0.0	
246	----	----	----	----	----	Decommissioned
November 16, 2017	METHANE CONCENTRATION					COMMENTS
PROBE	A	B	C	D	E	
202	----	----	----	----	----	Decommissioned
203	0.0	0.0	0.0	----	----	
205R	0.0	0.2	0.6	1.9	0.7	
206	0.0	0.0	0.0	----	----	
207	0.0	0.0	0.0	----	----	
208	0.0	0.0	0.0	----	----	
210	0.0	0.0	0.0	----	----	
239	0.0	0.0	0.0	0.0	0.9	
240	0.0	0.0	0.0	0.0	0.0	
242	----	----	0.0	0.0	0.0	
243	0.0	0.0	0.0	----	----	
244	0.0	0.0	0.0	----	----	
245	0.0	0.0	0.0	0.0	0.0	
246	----	----	----	----	----	Decommissioned

**Note: Methane gas levels due to naturally occurring hydrocarbons**

**TABLE 6B  
(Continued)**

**SUNSHINE CANYON COUNTY LANDFILL  
PERIMETER PROBE MONITORING  
OCTOBER – NOVEMBER – DECEMBER – 2017**

December 14, 2017	METHANE CONCENTRATION					COMMENTS
PROBE	A	B	C	D	E	
202	----	----	----	----	----	Decommissioned
203	0.0	0.0	0.0	----	----	
205R	0.0	0.1	0.9	0.8	0.4	
206	0.0	0.0	0.0	----	----	
207	0.0	0.0	0.0	----	----	
208	0.0	0.0	0.0	----	----	
210	0.0	0.0	0.0	----	----	
239	0.0	0.0	0.0	0.0	0.0	
240	0.0	0.0	0.0	0.0	0.6	
242	----	----	0.0	0.0	0.0	
243	0.0	0.0	0.0	----	----	
244	0.0	0.0	0.0	----	----	
245	0.0	0.0	0.0	0.0	0.0	
246	----	----	----	----	----	Decommissioned

**Note: Methane gas levels due to naturally occurring hydrocarbons**



**SUNSHINE CANYON LANDFILL – CITY  
 PERIMETER PROBE MONITORING DATA**

TECHNICIAN: Robert Johns		TEMPERATURE: 68°							
DATE: 9-19-17		WEATHER CONDITIONS: Overcast							
		INST & SERIAL #: GFEM 5000 / GF500530							
PROBE NUMBER	TIME	PPM CH <sub>4</sub>	%VOL CH <sub>4</sub>	PRES (+/-)	%CO <sub>2</sub>	%O <sub>2</sub>	%BAL	PURGE TIME (min)	COMMENTS
<b>213</b>									
A - 13	1121		0.0	+1.06	0.9	19.4	79.7	2	
B - 29	1123		0.0	+1.02	0.1	20.2	79.7	2	
C - 45	1125		0.0	-1.24	0.1	20.3	79.6	3	
D - 61	1128		0.0	-1.28	0.1	20.3	79.7	4	
E - 77	1132		0.0	-15.33	0.1	20.3	79.7	4	
<b>214</b>									
A - 13	1113		0.0	-1.01	1.3	17.9	80.8	2	
B - 30	1115		0.0	-1.67	0.3	19.5	80.2	2	
C - 48	1117		0.0	-1.67	0.1	20.2	79.7	3	
<b>215</b>									
A - 13	1057		0.0	+1.06	7.5	6.1	86.3	2	
B - 30	1059		0.0	+1.08	5.8	11.0	83.2	2	
C - 47	1101		0.0	+1.10	0.1	19.9	80.0	3	
D - 64	1104		0.0	+1.06	0.6	19.2	80.2	4	
E - 81	1108		0.0	+1.09	5.6	11.6	83.1	4	
<b>216</b>									
A - 14	1040		0.0	+1.05	0.1	19.0	80.9	2	
B - 43	1042		0.0	+1.23	0.1	19.4	80.5	2	
C - 62	1044		0.0	+1.05	0.1	19.6	80.3	3	
D - 86	1047		0.0	+1.08	0.1	19.7	80.2	4	
E - 110	1051		0.0	+1.11	0.1	19.9	80.1	4	
<b>217</b>									
A - 13	1032		0.0	+1.05	4.7	15.5	79.9	2	
B - 30	1034		0.0	+1.04	3.2	17.3	79.4	2	
<b>218R</b>									
A - 11	1024		0.0	+1.05	6.4	17.6	76.0	2	
B - 26.5	1026		0.0	+1.14	14.3	9.9	75.8	2	
C - 47	1028		0.0	+1.10	0.4	18.0	81.5	2	

RES SIGNATURE: Robert Johns

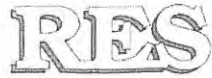
LEA SIGNATURE: \_\_\_\_\_

**SUNSHINE CANYON LANDFILL - CITY  
PERIMETER PROBE MONITORING DATA**

TECHNICIAN: Robert Johns DATE: 9-19-17					TEMPERATURE: 65° WEATHER CONDITIONS: Overcast INST & SERIAL #: GEN 5000 / 6500530				
PROBE NUMBER	TIME	PPM CH <sub>4</sub>	%VOL CH <sub>4</sub>	PRES (+/-)	%CO <sub>2</sub>	%O <sub>2</sub>	%BAL	PURGE TIME (min)	COMMENTS
<b>219</b>									
A - 13	1005		0.0	+1.05	1.0	19.2	79.8	2	
B - 64	1007		0.0	+1.01	0.7	18.8	80.5	2	
C - 115	1009		0.0	+1.09	0.1	20.1	79.8	3	
D - 166	1012		0.0	+1.07	0.1	20.2	79.8	4	
E - 217	1016		0.0	+1.03	1.8	18.0	80.2	4	
<b>220</b>									
A - 14	0945		0.0	+1.08	0.1	19.7	80.2	2	
B - 40	0947		0.0	+1.19	0.1	20.1	79.9	2	
C - 87	0949		0.0	+1.08	0.1	20.1	79.8	3	
D - 124	0952		0.0	+1.04	0.1	20.1	79.8	4	
E - 158	0956		0.0	-1.03	0.1	20.1	79.8	4	
<b>220B</b>									
A - 14	0928		0.0	+1.07	0.3	19.8	79.9	2	
B - 38	0930		0.0	+1.01	0.2	19.9	80.0	2	
C - 62	0932		0.0	+1.09	3.8	14.8	81.4	3	
D - 86	0935		0.0	+1.07	5.0	12.6	82.4	4	
E - 110	0939		0.0	-1.15	3.7	14.1	82.2	4	
<b>221</b>									
A - 13	0855		0.0	+1.01	1.2	19.1	79.7	2	
B - 56	0857		0.0	+1.01	0.6	19.5	79.9	2	
C - 99	0859		0.0	-1.02	0.5	19.7	79.8	3	
D - 142	0902		0.0	+1.05	0.1	20.1	79.9	4	
E - 185	0906		0.0	1.0	0.1	20.1	79.8	4	
<b>222</b>									
A - 13	0911		0.0	+1.04	0.6	19.6	79.8	2	
B - 54.8	0913		0.0	1.0	0.1	20.1	79.8	2	
C - 96.5	0915		0.0	+1.05	0.2	20.0	79.9	3	
D - 138.3	0918		0.0	+1.01	2.6	17.8	79.6	4	
E - 180	0922		0.0	+1.03	0.1	20.1	79.9	4	

RES SIGNATURE: 

LEA SIGNATURE: \_\_\_\_\_



Environmental Inc.

SUNSHINE CANYON LANDFILL – CITY  
PERIMETER PROBE MONITORING DATA

TECHNICIAN: Robert Johns		TEMPERATURE: 68°							
DATE: 9-19-17		WEATHER CONDITIONS: OVERCAST							
		INST & SERIAL #: GEM 5000 / G500530							
PROBE NUMBER	TIME	PPM CH <sub>4</sub>	%VOL CH <sub>4</sub>	PRES (+/-)	%CO <sub>2</sub>	%O <sub>2</sub>	%BAL	PURGE TIME	COMMENTS
223									
A - 13	0836		0.0	1.0	2.3	17.4	80.4	2	
B - 37.5	0838		0.0	-1.01	8.7	5.3	86.0	2	
C - 62	0840		0.0	+1.04	0.9	18.7	80.3	3	
D - 86.5	0843		0.0	+1.03	1.2	18.5	80.3	4	
E - 111	0847		0.0	+1.0	1.3	19.0	79.7	4	
224									
A - 13	0819		0.0	1.0	0.1	20.1	79.9	2	
B - 67.5	0821		0.0	1.0	0.1	20.1	79.9	2	
C - 122	0823		0.0	+1.02	0.1	20.1	79.8	3	
D - 177.5	0826		0.0	-1.40	0.1	20.1	79.8	4	
E - 232	0830		0.0	-1.14	0.1	20.1	79.8	4	
225									
A - 13	0800		0.0	-1.03	1.4	19.1	79.5	2	
B - 72	0802		0.0	-1.46	1.0	19.4	79.6	2	
C - 131	0804		0.0	-2.15	0.7	19.6	79.7	3	
D - 190	0807		0.0	-2.03	0.1	20.2	79.8	4	
E - 244	0811		0.0	-1.64	0.1	20.2	79.8	4	
226									
A - 13	0707		0.0	-1.01	0.1	19.9	80.1	2	
B - 64	0709		0.0	-2.11	0.1	19.9	80.1	2	
C - 114	0711		0.0	-3.47	0.1	19.9	80.1	3	
D - 164	0714		0.0	-3.29	0.1	19.9	80.0	4	
E - 208	0718		0.0	-4.72	0.1	19.9	80.0	4	
227									
A - 13	0725		0.0	+1.01	0.1	20.0	80.0	2	
B - 48.7	0726		0.0	-1.07	0.3	19.7	80.0	2	
C - 84.4	0728		0.0	-1.21	1.2	18.4	80.4	3	
D - 114	0731		0.0	-1.31	0.5	19.5	80.1	4	
E - 115.7	0735		0.0	-1.06	0.3	19.9	79.7	4	

RES SIGNATURE: Robert Johns

LEA SIGNATURE: \_\_\_\_\_

**SUNSHINE CANYON LANDFILL – CITY  
PERIMETER PROBE MONITORING DATA**

TECHNICIAN: Robert Johns		TEMPERATURE: 68°							
DATE: 9-19-17		WEATHER CONDITIONS: overcast							
		INST & SERIAL #: GEN 5000 / G500530							
PROBE NUMBER	TIME	PPM CH <sub>4</sub>	%VOL CH <sub>4</sub>	PRES (+/-)	%CO <sub>2</sub>	%O <sub>2</sub>	%BAL	PURGE TIME	COMMENTS
<b>228</b>									
A - 13	0741		0.0	.0	0.1	20.1	79.8	2	
B - 63	0743		0.0	-1.45	5.9	7.0	87.1	2	
C - 113	0745		0.0	-1.01	0.2	20.0	79.8	3	
D - 163	0748		0.0	-1.16	0.4	19.9	79.7	4	
E - 213	0752		0.0	-2.3	0.5	20.0	79.7	4	
<b>229</b>									
A - 13	0650		0.0	-1.44	2.2	16.7	81.1	2	
B - 48.7	0652		0.0	-2.29	1.7	16.7	82.2	2	
C - 84.4	0654		0.0	-3.07	0.9	18.1	81.0	3	
D - 114	0657		0.0	-11.20	0.1	19.7	80.2	4	
E - 155.7	0701		0.0	-18.62	0.1	19.7	80.2	4	
<b>230</b>									
A - 16								2	Removed Due to Construction
B - 33								2	
C - 50								3	
<b>231</b>									
A - 13								2	Removed Due to Construction
B - 26								2	
C - 39								3	
D - 51								4	
E - 66								4	
<b>241</b>									
A - 13	1140		0.0	-2.17	0.1	20.3	79.6	2	
B - 28	1142		0.0	-6.95	0.1	20.3	79.6	2	
C - 47	1144		0.0	+1.0	0.1	20.3	79.6	3	
D - 64	1147		0.0	-9.91	0.1	20.4	79.6	4	
E - 85	1151		0.0	-10.06	0.1	20.4	79.6	4	

RES SIGNATURE: 

LEA SIGNATURE: \_\_\_\_\_




NEXT MONTH 10-26-17

SUNSHINE CANYON - COUNTY  
PERIMETER PROBE MONITORING DATA

TECHNICIAN: Robert Johns DATE: 9-21-17				TEMPERATURE: 62° WEATHER CONDITIONS: Overcast INST & SERIAL #: GEM 5000 / G500530					
PROBE NUMBER	TIME	PPM CH <sub>4</sub>	%VOL CH <sub>4</sub>	PRES (+/-)	% CO <sub>2</sub>	%O <sub>2</sub>	%BAL	PURGE TIME (min)	COMMENTS
202									Probe has Been removed
A-10								2	
B-25								2	Due to
C-38								3	Construction
203									
A-10	0830		0.0	+0.1	3.7	17.2	79.1	2	
B-25	0833		0.0	-0.1	3.6	16.5	79.9	2	
C-40	0836		0.0	+1.1	2.7	17.8	80.0	3	
206									
A-10	0711		0.0	1.0	10.8	10.7	78.5	2	
B-25	0714		0.0	+0.3	13.7	9.3	77.0	2	
C-38	0717		0.0	+0.1	21.2	5.6	73.2	3	
207									
A-10	0700		0.0	-3.1	0.1	19.7	80.2	2	
B-25	0703		0.0	-3.7	0.1	19.7	80.2	2	
C-40	0706		0.0	-5.46	0.3	19.5	80.2	3	
208									
A-9.1	0722		0.0	+0.1	2.9	17.9	79.2	2	
B-25	0724		0.0	+0.1	10.5	11.8	77.7	2	
C-40	0726		0.0	-1.3	7.7	11.6	80.7	3	
210									
A-10	1006		0.0	-0.8	0.1	20.2	79.7	2	
B-25	1008		0.0	-0.6	0.2	20.2	79.7	2	
C-39	1010		0.0	+1.20	0.1	20.1	79.7	3	

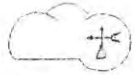
RES SIGNATURE: 

LEA SIGNATURE: 

SUNSHINE CANYON - COUNTY  
 PERIMETER PROBE MONITORING DATA

TECHNICIAN: Robert Johns		TEMPERATURE: 62°							
DATE: 9-21-17		WEATHER CONDITIONS: Overcast							
		INST & SERIAL #: GEM 5000 / G500530							
PROBE NUMBER	TIME	PPM CH <sub>4</sub>	%VOL CH <sub>4</sub>	PRES (+/-)	% CO <sub>2</sub>	%O <sub>2</sub>	%BAL	PURGE TIME (min)	COMMENTS
242									
C-42	1032		0.0	+0.6	6.2	19.0	79.7	3	
D-60	1034		0.0	+1.42	5.7	8.2	86.1	4	
E-78	1037		0.0	+1.18	0.3	19.0	80.6	4	
243									
A-11	0751		0.0	-0.1	6.1	12.7	81.2	2	
B-20	0753		0.0	+1.02	5.2	11.2	83.6	2	
C-33	0755		0.0	-0.3	4.9	11.6	83.4	3	
244									
A-11	1020		0.0	-0.1	17.7	1.9	80.4	2	
B-21	1023		0.1	+1.07	19.5	2.2	78.2	2	
C-36	1025		0.0	+1.09	21.4	3.4	79.2	3	
245									
A-11	0802		0.0	+1.02	18.5	3.8	77.8	2	
B-20	0804		0.0	+1.03	19.8	6.3	73.8	2	
C-35	0806		0.0	+1.04	9.8	12.3	77.9	3	
D-50	0809		0.0	+1.01	10.5	10.2	79.3	4	
E-64	0813		0.0	-0.02	6.7	10.1	83.2	4	
246									
A-9								2	Retained Due to Construction
B-16								2	
205R									
A-11	0732		0.0	.0	9.2	12.8	78.0	2	
B-20	0734		0.7	.0	22.8	6.3	70.2	2	
C-33	0736		1.2	-1.08	32.4	6.6	59.9	3	
D-48	0739		1.9	-1.08	39.8	3.5	54.8	4	
E-62	0743		1.3	-1.19	29.0	6.1	63.7	4	

RES SIGNATURE:   
 LEA SIGNATURE: 



Environmental Inc.

SUNSHINE CANYON - COUNTY  
PERIMETER PROBE MONITORING DATA

TECHNICIAN: Robert Johns					TEMPERATURE: 62°				
DATE: 9-21-17					WEATHER CONDITIONS: Overcast				
					INST & SERIAL #: GEM 5000/GS00530				
PROBE NUMBER	TIME	PPM CH <sub>4</sub>	%VOL CH <sub>4</sub>	PRES (+/-)	%CO2	%O2	%BAL	PURGE TIME (min)	COMMENTS
239									
A-11	0950		0.0	-0.2	8.5	13.9	77.6	2	
B-20	0952		0.0	.0	0.1	20.4	79.5	2	
C-35	0954		0.0	-0.46	0.1	20.4	79.5	3	
D-50	0957		0.0	+0.3	0.1	20.4	79.5	4	
E-64	1001		0.0	-0.3	0.1	20.4	79.5	4	
240									
A-11	0930		0.0	-0.4	5.1	17.0	77.9	2	
B-20	0932		0.0	+0.2	0.6	19.8	79.6	2	
C-33	0934		0.0	+0.3	0.2	20.3	79.6	3	
D-49	0937		0.0	+0.1	0.1	20.3	79.6	4	
E-61	0941		0.9	+0.3	0.1	20.2	78.8	4	

RES SIGNATURE: 

LEA SIGNATURE: 








GAS MONITORING EQUIPMENT CALIBRATION


DATE	UNIT	SERIAL #	CAL GAS
9-21-17	GEA7 5000	G500530	15 % CH <sub>4</sub>
9-21-17	TVA 1000B	103094 5322	500ppm CH <sub>4</sub>


SIGNATURE: 

NEXT MONTH 11-14-17

**SUNSHINE CANYON LANDFILL - CITY  
 PERIMETER PROBE MONITORING DATA**

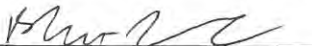
TECHNICIAN: Robert Johns DATE: 10-24-17					TEMPERATURE: 87° WEATHER CONDITIONS: windy INST & SERIAL #: GEM 5005 / 15500530				
PROBE NUMBER	TIME	PPM CH <sub>4</sub>	%VOL CH <sub>4</sub>	PRES (+/-)	%CO <sub>2</sub>	%O <sub>2</sub>	%BAL	PURGE TIME (min)	COMMENTS
<b>213</b>									
A - 13	1225		0.0	-0.4	3.1	16.3	80.6	2	
B - 29	1227		0.0	-0.3	0.1	18.9	81.0	2	
C - 45	1229		0.0	-0.3	0.0	20.1	79.9	3	
D - 61	1232		0.0	-0.48	0.0	20.1	79.8	4	
E - 77	1236		0.0	-13.58	0.0	20.1	79.8	4	
<b>214</b>									
A - 13	1217		0.0	-0.07	1.2	17.8	81.0	2	
B - 30	1219		0.0	-0.62	0.2	19.1	80.7	2	
C - 48	1221		0.0	-1.15	0.0	19.9	80.0	3	
<b>215</b>									
A - 13	1159		0.0	-0.20	5.9	7.7	86.4	2	
B - 30	1201		0.0	+0.02	4.5	11.5	84.0	2	
C - 47	1204		0.0	+0.04	0.1	19.6	80.3	3	
D - 64	1207		0.0	+0.07	0.6	18.8	80.6	4	
E - 81	1211		0.0	+0.03	5.5	8.4	86.1	4	
<b>216</b>									
A - 14	1140		0.0	-0.02	0.1	19.3	80.7	2	
B - 43	1142		0.0	-0.02	0.4	19.2	80.4	2	
C - 62	1144		0.0	-0.02	0.0	19.7	80.2	3	
D - 86	1147		0.0	-0.01	0.0	19.8	80.2	4	
E - 110	1151		0.0	-0.44	0.0	19.7	80.2	4	
<b>217</b>									
A - 13	1130		0.0	+0.20	4.7	14.4	80.9	2	
B - 30	1132		0.0	0	3.2	16.3	80.4	2	
<b>218R</b>									
A - 11	1100		0.0	-0.1	27.9	1.4	70.8	2	
B - 26.5	1102		0.0	-0.08	17.6	8.3	74.1	2	
C - 47	1104		0.0	+0.07	3.7	18.6	77.7	2	

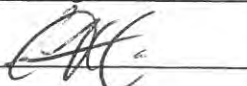
RES SIGNATURE: 

LEA SIGNATURE: 

**SUNSHINE CANYON LANDFILL - CITY  
 PERIMETER PROBE MONITORING DATA**


TECHNICIAN: Robert Johns					TEMPERATURE: 870				
DATE: 10-24-17					WEATHER CONDITIONS: Windy				
					INST & SERIAL #: GEM 5000 / GSWS30				
PROBE NUMBER	TIME	PPM CH <sub>4</sub>	%VOL CH <sub>4</sub>	PRES (+/-)	%CO <sub>2</sub>	%O <sub>2</sub>	%BAL	PURGE TIME (min)	COMMENTS
<b>219</b>									
A - 13	1030		0.0	-1.02	0.2	20.0	79.8	2	
B - 64	1032		0.0	.0	4.2	16.1	79.7	2	
C - 115	1034		0.0	-1.08	0.1	19.2	80.7	3	
D - 166	1037		0.0	-1.02	0.1	20.3	79.6	4	
E - 217	1041		0.0	1.02	3.5	16.3	80.1	4	
<b>220</b>									
A - 14	1000		0.0	-0.28	2.2	16.5	81.4	2	
B - 40	1002		0.0	+1.05	4.1	13.9	81.9	2	
C - 87	1004		0.0	+1.19	8.1	7.1	84.8	3	
D - 124	1007		0.0	+1.36	12.8	2.2	85.0	4	
E - 158	1011		0.0	-1.04	14.0	1.1	84.9	4	
<b>220B</b>									
A - 14	0940		0.0	-1.08	2.4	17.6	80.0	2	
B - 38	0942		0.0	+1.03	0.1	19.9	80.1	2	
C - 62	0944		0.0	-1.05	2.0	17.0	81.0	3	
D - 86	0947		0.0	+1.01	3.7	14.3	82.0	4	
E - 110	0951		0.0	-1.01	1.2	19.0	79.7	4	
<b>221</b>									
A - 13	0920		0.0	-1.03	0.3	19.9	79.8	2	
B - 56	0922		0.0	-1.06	0.0	20.1	79.8	2	
C - 99	0924		0.0	-1.14	0.2	19.8	79.9	3	
D - 142	0927		0.0	-1.02	0.0	20.1	79.8	4	
E - 185	0931		0.0	+1.02	0.0	20.1	79.9	4	
<b>222</b>									
A - 13	0940		0.0	-1.03	1.8	18.1	80.1	2	
B - 54.8	0942		0.0	-1.02	0.1	19.9	80.1	2	
C - 96.5	0944		0.0	-1.05	0.3	19.6	80.1	3	
D - 138.3	0947		0.0	-1.01	0.1	20.0	80.0	4	
E - 180	0951		0.0	-1.07	0.0	20.0	79.9	4	

RES SIGNATURE: 

LEA SIGNATURE: 

**SUNSHINE CANYON LANDFILL - CITY  
 PERIMETER PROBE MONITORING DATA**

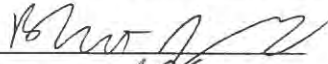
TECHNICIAN: Robert Johns DATE: 10-24-17				TEMPERATURE: 87° WEATHER CONDITIONS: windy INST & SERIAL #: GEM 5000 / 9520530					
PROBE NUMBER	TIME	PPM CH <sub>4</sub>	%VOL CH <sub>4</sub>	PRES (+/-)	%CO <sub>2</sub>	%O <sub>2</sub>	%BAL	PURGE TIME	COMMENTS
<b>223</b>									
A - 13	0858		0.0	-1.06	5.4	9.7	84.9	2	
B - 37.5	0900		0.0	+1.02	0.6	17.7	81.7	2	
C - 62	0902		0.0	-1.06	0.4	18.6	81.0	3	
D - 86.5	0905		0.0	+1.03	0.1	19.2	80.7	4	
E - 111	0909		0.0	+1.15	0.2	19.2	80.6	4	
<b>224</b>									
A - 13	0840		0.0	-1.11	0.0	20.1	79.8	2	
B - 67.5	0842		0.0	-1.03	0.0	20.2	79.8	2	
C - 122	0844		0.0	-1.06	0.0	20.2	79.8	3	
D - 177.5	0847		0.0	-1.05	0.0	20.2	79.8	4	
E - 232	0851		0.0	-1.25	0.0	20.2	79.8	4	
<b>225</b>									
A - 13	0820		0.0	-1.19	0.5	19.3	80.3	2	
B - 72	0822		0.0	-5.54	0.1	19.9	80.0	2	
C - 131	0824		0.0	-9.19	0.1	19.9	80.0	3	
D - 190	0827		0.0	-9.40	0.0	20.0	80.0	4	
E - 244	0831		0.0	-8.56	0.0	20.0	80.0	4	
<b>226</b>									
A - 13	0725		0.0	-1.19	0.1	19.8	80.2	2	
B - 64	0727		0.0	-7.86	0.1	19.7	80.2	2	
C - 114	0729		0.0	-7.49	0.1	19.7	80.2	3	
D - 164	0732		0.0	-7.66	0.1	19.8	80.2	4	
E - 208	0736		0.0	-7.54	0.1	19.8	80.2	4	
<b>227</b>									
A - 13	0741		0.0	-1.07	0.1	20.1	79.9	2	
B - 48.7	0743		0.0	-1.85	0.1	19.8	80.0	2	
C - 84.4	0745		0.0	-1.19	0.1	20.1	79.9	3	
D - 114	0748		0.0	-1.50	0.1	20.1	79.9	4	
E - 115.7	0752		0.0	-1.16	0.1	19.8	80.1	4	


RES SIGNATURE: 

LEA SIGNATURE: 

**SUNSHINE CANYON LANDFILL - CITY  
 PERIMETER PROBE MONITORING DATA**

TECHNICIAN: Robert Johns		TEMPERATURE: 87°							
DATE: 10-24-17		WEATHER CONDITIONS: Windy							
		INST & SERIAL #: GEN 5000/6500530							
PROBE NUMBER	TIME	PPM CH <sub>4</sub>	%VOL CH <sub>4</sub>	PRES (+/-)	%CO <sub>2</sub>	%O <sub>2</sub>	%BAL	PURGE TIME	COMMENTS
<b>228</b>									
A - 13	0800		0.0	-1.01	0.15	19.5	79.9	2	
B - 63	0803		0.0	-1.89	0.1	19.8	80.1	2	
C - 113	0806		0.0	-1.71	0.1	20.0	80.0	3	
D - 163	0809		0.0	-1.12	0.3	19.6	80.1	4	
E - 213	0813		0.0	-1.42	0.3	19.6	80.1	4	
<b>229</b>									
A - 13	0709		0.0	-1.02	1.9	16.0	82.1	2	
B - 48.7	0709		0.0	-8.27	0.1	20.0	79.9	2	
C - 84.4	0711		0.0	-12.56	0.1	19.9	80.1	3	
D - 114	0714		0.0	-13.59	0.1	19.9	80.1	4	
E - 155.7	0718		0.0	-21.71	0.1	19.9	80.1	4	
<b>230</b>									
A - 16								2	Probe Removed
B - 33								2	Due to
C - 50								3	construction
<b>231</b>									
A - 13								2	Probe Removed
B - 26								2	Due to
C - 39								3	construction
D - 51								4	
E - 66								4	
<b>241</b>									
A - 13	1240		0.0	-1.96	0.0	20.2	79.7	2	
B - 28	1242		0.0	-6.61	0.0	20.2	79.7	2	
C - 47	1244		0.0	-1.02	0.0	20.2	79.8	3	
D - 64	1247		0.0	-9.34	0.0	20.2	79.7	4	
E - 85	1251		0.0	-9.59	0.0	20.3	79.7	4	

RES SIGNATURE: 

LEA SIGNATURE: 



**GAS MONITORING EQUIPMENT CALIBRATION**

DATE	UNIT	SERIAL #	CAL GAS
10-24-17	TVA 1000 B	1030945822	500 ppm CH <sub>4</sub>
10-24-17	GEM 5000	G500530	15% CH <sub>4</sub>

SIGNATURE: 

NEXT MONTH 11-16-17

**SUNSHINE CANYON - COUNTY  
 PERIMETER PROBE MONITORING DATA**

TECHNICIAN: <i>Robert Johns</i>				TEMPERATURE: <i>59°</i>					
DATE: <i>10-31-17</i>				WEATHER CONDITIONS: <i>Sunny &amp; Clear</i>					
				INST & SERIAL #: <i>GEM 5000 / G500530</i>					
PROBE NUMBER	TIME	PPM CH <sub>4</sub>	%VOL CH <sub>4</sub>	PRES (+/-)	% CO <sub>2</sub>	%O <sub>2</sub>	%BAL	PURGE TIME (min)	COMMENTS
<b>202</b>									
A-10								2	<i>Removed Due to Construction</i>
B-25								2	
C-38								3	
<b>203</b>									
A-10	<i>1020</i>		<i>0.0</i>	<i>+1.02</i>	<i>3.2</i>	<i>17.8</i>	<i>79.0</i>	2	
B-25	<i>1022</i>		<i>0.0</i>	<i>+1.0</i>	<i>3.3</i>	<i>17.1</i>	<i>79.6</i>	2	
C-40	<i>1024</i>		<i>0.0</i>	<i>+1.19</i>	<i>1.8</i>	<i>18.5</i>	<i>79.8</i>	3	
<b>206</b>									
A-10	<i>0900</i>		<i>0.0</i>	<i>+1.01</i>	<i>11.9</i>	<i>9.4</i>	<i>78.7</i>	2	
B-25	<i>0902</i>		<i>0.0</i>	<i>-1.02</i>	<i>14.0</i>	<i>8.5</i>	<i>77.5</i>	2	
C-38	<i>0904</i>		<i>0.0</i>	<i>-1.01</i>	<i>17.0</i>	<i>8.5</i>	<i>74.5</i>	3	
<b>207</b>									
A-10	<i>0840</i>		<i>0.0</i>	<i>-1.07</i>	<i>0.4</i>	<i>20.0</i>	<i>79.6</i>	2	
B-25	<i>0842</i>		<i>0.0</i>	<i>-1.57</i>	<i>0.4</i>	<i>20.1</i>	<i>79.4</i>	2	
C-40	<i>0844</i>		<i>0.0</i>	<i>+1.20</i>	<i>0.1</i>	<i>20.5</i>	<i>79.4</i>	3	
<b>208</b>									
A-9.1	<i>0832</i>		<i>0.0</i>	<i>-1.19</i>	<i>0.3</i>	<i>20.0</i>	<i>79.7</i>	2	
B-25	<i>0834</i>		<i>0.0</i>	<i>+1.01</i>	<i>7.0</i>	<i>16.2</i>	<i>26.8</i>	2	
C-40	<i>0837</i>		<i>0.0</i>	<i>-1.02</i>	<i>6.2</i>	<i>14.0</i>	<i>79.7</i>	3	
<b>210</b>									
A-10	<i>0740</i>		<i>0.1</i>	<i>-1.23</i>	<i>0.1</i>	<i>20.5</i>	<i>79.3</i>	2	
B-25	<i>0742</i>		<i>0.0</i>	<i>-1.21</i>	<i>0.1</i>	<i>20.5</i>	<i>79.4</i>	2	
C-39	<i>0744</i>		<i>0.0</i>	<i>-1.13</i>	<i>0.2</i>	<i>20.4</i>	<i>79.4</i>	3	


RES SIGNATURE: 

LEA SIGNATURE: 



**SUNSHINE CANYON - COUNTY  
 PERIMETER PROBE MONITORING DATA**

TECHNICIAN: Robert Johns DATE: 10-31-17				TEMPERATURE: 59° WEATHER CONDITIONS: Overcast INST & SERIAL #: GEM 5000 / G500530					
PROBE NUMBER	TIME	PPM CH <sub>4</sub>	%VOL CH <sub>4</sub>	PRES (+/-)	% CO <sub>2</sub>	%O <sub>2</sub>	%BAL	PURGE TIME (min)	COMMENTS
242									
C-42	0750		0.0	-1.03	4.3	14.1	81.6	3	
D-60	0753		0.0	-1.02	6.6	6.7	86.7	4	
E-78	0757		0.0	+1.01	3.2	14.8	82.0	4	
243									
A-11	0930		0.0	+0.03	7.2	9.7	83.1	2	
B-20	0932		0.0	.0	5.5	10.2	84.3	2	
C-33	0934		0.0	1.01	3.5	13.8	82.7	3	
244									
A-11	0820		0.0	-1.15	11.9	9.0	79.1	2	
B-21	0822		0.0	-1.10	7.9	13.1	79.0	2	
C-36	0824		0.0	-1.13	7.4	14.8	77.8	3	
245									
A-11	0955		0.0	.0	7.6	15.1	77.3	2	
B-20	0957		0.0	.0	0.5	19.6	80.0	2	
C-35	0759		0.0	-1.03	6.2	16.4	77.4	3	
D-50	1002		0.0	-1.02	3.5	17.6	78.9	4	
E-64	1006		0.0	-1.10	0.1	20.1	79.7	4	
246									
A-9								2	Removed Due to Construction
B-16								2	
205R									
A-11	0910		0.0	-1.03	9.2	12.6	78.2	2	
B-20	0912		0.5	-1.11	25.0	4.2	70.3	2	
C-33	0914		0.6	-1.41	17.1	12.8	69.5	3	
D-48	0917		2.7	-1.07	45.8	0.1	51.4	4	
E-62	0921		0.9	.0	29.9	2.9	66.3	4	

RES SIGNATURE: 

LEA SIGNATURE: 

**SUNSHINE CANYON - COUNTY  
 PERIMETER PROBE MONITORING DATA**

TECHNICIAN: Robert Johns		TEMPERATURE: 59°							
DATE: 10-31-17		WEATHER CONDITIONS: overcast							
		INST & SERIAL #: GEN 500 / G500530							
PROBE NUMBER	TIME	PPM CH <sub>4</sub>	%VOL CH <sub>4</sub>	PRES (+/-)	%CO2	%O2	%BAL	PURGE TIME (min)	COMMENTS
<b>239</b>									
A-11	0720		0.0	-1.02	11.2	13.5	75.3	2	
B-20	0722		0.0	1.0	0.2	19.8	80.0	2	
C-35	0724		0.0	+1.03	0.1	20.5	79.4	3	
D-50	0727		0.0	+1.01	0.2	20.5	79.4	4	
E-64	0731		0.0	+1.02	0.1	20.5	79.4	4	
<b>240</b>									
A-11	0700		0.0	-1.02	6.5	15.5	77.9	2	
B-20	0702		0.0	-1.02	0.2	20.0	79.8	2	
C-33	0704		0.0	-1.0	0.1	20.1	79.8	3	
D-49	0707		0.0	+1.04	0.1	20.1	79.8	4	
E-61	0711		0.1	1.0	0.1	20.3	79.5	4	


RES SIGNATURE:   
 LEA SIGNATURE: 






**SUNSHINE CANYON LANDFILL – CITY  
 PERIMETER PROBE MONITORING DATA**

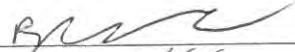
TECHNICIAN: <i>Roberta Johns</i>		TEMPERATURE: <i>78</i>							
DATE: <i>11-14-17</i>		WEATHER CONDITIONS: <i>windy</i>							
		INST & SERIAL #: <i>GEM 5000 / G500530</i>							
PROBE NUMBER	TIME	PPM CH <sub>4</sub>	%VOL CH <sub>4</sub>	PRES (+/-)	%CO <sub>2</sub>	%O <sub>2</sub>	%BAL	PURGE TIME (min)	COMMENTS
<b>213</b>									
A - 13	<i>1248</i>		<i>0.0</i>	<i>+1.2</i>	<i>3.3</i>	<i>15.1</i>	<i>81.6</i>	<i>2</i>	
B - 29	<i>1250</i>		<i>0.0</i>	<i>-1.14</i>	<i>0.0</i>	<i>19.8</i>	<i>80.2</i>	<i>2</i>	
C - 45	<i>1252</i>		<i>0.0</i>	<i>-1.02</i>	<i>0.0</i>	<i>19.8</i>	<i>80.2</i>	<i>3</i>	
D - 61	<i>1255</i>		<i>0.0</i>	<i>-1.86</i>	<i>0.0</i>	<i>19.8</i>	<i>80.1</i>	<i>4</i>	
E - 77	<i>1259</i>		<i>0.0</i>	<i>-17.06</i>	<i>0.0</i>	<i>20.0</i>	<i>80.0</i>	<i>4</i>	
<b>214</b>									
A - 13	<i>1239</i>		<i>0.0</i>	<i>+1.07</i>	<i>2.3</i>	<i>17.0</i>	<i>80.8</i>	<i>2</i>	
B - 30	<i>1241</i>		<i>0.0</i>	<i>-0.44</i>	<i>0.0</i>	<i>19.5</i>	<i>80.5</i>	<i>2</i>	
C - 48	<i>1243</i>		<i>0.0</i>	<i>-1.06</i>	<i>1.9</i>	<i>17.5</i>	<i>80.7</i>	<i>3</i>	
<b>215</b>									
A - 13	<i>1220</i>		<i>0.0</i>	<i>+1.11</i>	<i>6.7</i>	<i>5.7</i>	<i>87.6</i>	<i>2</i>	
B - 30	<i>1222</i>		<i>0.0</i>	<i>+1.37</i>	<i>5.9</i>	<i>10.4</i>	<i>83.7</i>	<i>2</i>	
C - 47	<i>1224</i>		<i>0.0</i>	<i>+1.10</i>	<i>0.1</i>	<i>19.6</i>	<i>80.4</i>	<i>3</i>	
D - 64	<i>1227</i>		<i>0.0</i>	<i>+1.08</i>	<i>0.2</i>	<i>19.3</i>	<i>80.5</i>	<i>4</i>	
E - 81	<i>1231</i>		<i>0.0</i>	<i>+1.10</i>	<i>4.4</i>	<i>11.3</i>	<i>84.2</i>	<i>4</i>	
<b>216</b>									
A - 14	<i>1202</i>		<i>0.0</i>	<i>+1.13</i>	<i>0.9</i>	<i>19.0</i>	<i>80.0</i>	<i>2</i>	
B - 43	<i>1204</i>		<i>0.0</i>	<i>+1.17</i>	<i>0.1</i>	<i>20.0</i>	<i>79.9</i>	<i>2</i>	
C - 62	<i>1206</i>		<i>0.0</i>	<i>+1.20</i>	<i>0.0</i>	<i>20.0</i>	<i>79.9</i>	<i>3</i>	
D - 86	<i>1209</i>		<i>0.0</i>	<i>+1.07</i>	<i>0.1</i>	<i>20.0</i>	<i>80.0</i>	<i>4</i>	
E - 110	<i>1213</i>		<i>0.0</i>	<i>+1.11</i>	<i>0.1</i>	<i>20.0</i>	<i>80.0</i>	<i>4</i>	
<b>217</b>									
A - 13	<i>1155</i>		<i>0.0</i>	<i>+1.03</i>	<i>4.9</i>	<i>15.1</i>	<i>80.0</i>	<i>2</i>	
B - 30	<i>1157</i>		<i>0.0</i>	<i>+1.03</i>	<i>2.6</i>	<i>17.7</i>	<i>79.7</i>	<i>2</i>	
<b>218R</b>									
A - 11	<i>1145</i>		<i>0.0</i>	<i>+1.07</i>	<i>12.5</i>	<i>16.5</i>	<i>71.0</i>	<i>2</i>	
B - 26.5	<i>1147</i>		<i>0.0</i>	<i>+1.07</i>	<i>28.4</i>	<i>3.3</i>	<i>68.3</i>	<i>2</i>	
C - 47	<i>1149</i>		<i>0.0</i>	<i>+1.05</i>	<i>29.5</i>	<i>0.0</i>	<i>70.5</i>	<i>2</i>	


RES SIGNATURE: 

LEA SIGNATURE: 

**SUNSHINE CANYON LANDFILL - CITY  
 PERIMETER PROBE MONITORING DATA**

TECHNICIAN: Robert Johns DATE: 11-14-17					TEMPERATURE: 70° WEATHER CONDITIONS: Windy INST & SERIAL #: GEM 5000 / G500530				
PROBE NUMBER	TIME	PPM CH <sub>4</sub>	%VOL CH <sub>4</sub>	PRES (+/-)	%CO <sub>2</sub>	%O <sub>2</sub>	%BAL	PURGE TIME (min)	COMMENTS
219									
A - 13	1120		0.0	+1.03	4.2	18.1	77.7	2	
B - 64	1122		0.0	+1.01	0.3	19.6	80.1	2	
C - 115	1124		0.0	+1.07	0.4	19.5	80.1	3	
D - 166	1127		0.0	+1.02	0.1	19.8	80.1	4	
E - 217	1131		0.0	+1.03	0.1	19.8	80.1	4	
220									
A - 14	0950		0.0	+1.11	1.9	18.2	79.8	2	
B - 40	0952		0.0	+1.01	0.8	19.3	79.9	2	
C - 87	0954		0.0	+1.02	0.1	20.0	79.9	3	
D - 124	0957		0.0	+1.09	0.1	20.0	79.9	4	
E - 158	1001		0.0	+1.34	0.1	20.0	79.9	4	
220B									
A - 14	1010		0.0	+1.05	0.1	20.0	79.9	2	
B - 38	1012		0.0	+1.13	0.1	20.0	79.9	2	
C - 62	1014		0.0	+1.08	1.5	18.3	80.1	3	
D - 86	1017		0.0	-1.04	3.5	15.1	81.5	4	
E - 110	1021		0.0	-1.02	2.0	16.6	81.4	4	
221									
A - 13	1030		0.0	+1.05	0.1	19.8	80.1	2	
B - 56	1032		0.0	+1.05	0.1	19.8	80.1	2	
C - 99	1034		0.0	+1.13	0.2	19.7	80.1	3	
D - 142	1037		0.0	+1.03	0.1	19.8	80.1	4	
E - 185	1041		0.0	+1.06	0.1	19.8	80.1	4	
222									
A - 13	1050		0.0	+1.04	0.8	19.0	80.2	2	
B - 54.8	1052		0.0	+1.05	0.1	19.7	80.2	2	
C - 96.5	1054		0.0	+1.13	0.2	19.6	80.2	3	
D - 138.3	1057		0.0	+1.02	0.1	19.7	80.2	4	
E - 180	1101		0.0	+1.02	0.1	19.8	80.1	4	

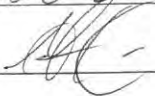
RES SIGNATURE: 

LEA SIGNATURE: 

**SUNSHINE CANYON LANDFILL - CITY  
 PERIMETER PROBE MONITORING DATA**


TECHNICIAN: Robert Johns		TEMPERATURE: 70°							
DATE: 11-19-17		WEATHER CONDITIONS: Windy							
		INST & SERIAL #: GEM 5000 / 4500530							
PROBE NUMBER	TIME	PPM CH <sub>4</sub>	%VOL CH <sub>4</sub>	PRES (+/-)	%CO <sub>2</sub>	%O <sub>2</sub>	%BAL	PURGE TIME	COMMENTS
223									
A - 13	0930		0.0	+1.35	0.2	20.3	79.5	2	
B - 37.5	0932		0.0	+1.05	2.8	15.7	81.5	2	
C - 62	0934		0.0	+1.05	0.6	19.3	80.1	3	
D - 86.5	0937		0.0	+1.03	1.7	17.7	80.6	4	
E - 111	0940		0.0	.0	1.8	17.5	80.8	4	
224									
A - 13	0910		0.0	+1.02	0.1	20.0	79.9	2	
B - 67.5	0912		0.0	+1.06	0.1	20.2	79.8	2	
C - 122	0914		0.0	-1.04	0.1	20.4	79.5	3	
D - 177.5	0917		0.0	-2.44	0.1	20.4	79.5	4	
E - 232	0921		0.0	-2.56	0.1	20.5	79.4	4	
225									
A - 13	0850		0.0	-1.07	0.4	19.3	80.3	2	
B - 72	0852		0.0	-5.42	0.1	19.7	80.2	2	
C - 131	0854		0.0	-9.18	0.1	19.8	80.1	3	
D - 190	0857		0.0	-9.40	0.1	19.8	80.1	4	
E - 244	0901		0.0	-8.71	0.1	19.9	80.1	4	
226									
A - 13	0750		0.0	+1.01	0.1	20.1	79.8	2	
B - 64	0752		0.0	-10.72	0.1	20.1	79.9	2	
C - 114	0754		0.0	-10.31	0.1	20.1	79.8	3	
D - 164	0757		0.0	-10.92	0.1	20.2	79.7	4	
E - 208	0801		0.0	-10.91	0.1	20.2	79.7	4	
227									
A - 13	0810		0.0	+1.02	0.1	20.3	79.6	2	
B - 48.7	0812		0.0	-1.85	0.1	20.3	79.6	2	
C - 84.4	0814		0.0	-1.78	0.1	20.4	79.6	3	
D - 114	0817		0.0	-1.06	0.2	20.3	79.5	4	
E - 115.7	0821		0.0	-1.65	0.1	20.3	79.6	4	

RES SIGNATURE: 

LEA SIGNATURE: 

**SUNSHINE CANYON LANDFILL – CITY  
 PERIMETER PROBE MONITORING DATA**

TECHNICIAN: Robert Johns		TEMPERATURE: 70°							
DATE: 11-14-17		WEATHER CONDITIONS: windy							
		INST & SERIAL #: GEM 5000 / G520530							
PROBE NUMBER	TIME	PPM CH <sub>4</sub>	%VOL CH <sub>4</sub>	PRES (+/-)	%CO <sub>2</sub>	%O <sub>2</sub>	%BAL	PURGE TIME	COMMENTS
228									
A - 13	0830		0.0	1103	0.1	20.4	79.6	2	
B - 63	0832		0.0	-7.82	0.1	20.2	79.7	2	
C - 113	0834		0.0	-7.50	0.1	20.3	79.7	3	
D - 163	0837		0.0	-7.79	0.2	20.1	79.7	4	
E - 213	0841		0.0	-1.11	0.1	20.1	79.8	4	
229									
A - 13	0730		0.0	-7.77	0.1	20.0	79.9	2	
B - 48.7	0732		0.0	-9.31	0.1	19.9	80.0	2	
C - 84.4	0734		0.0	-12.72	0.1	19.9	80.0	3	
D - 114	0737		0.0	-13.91	0.1	19.9	80.0	4	
E - 155.7	0741		0.0	-16.77	0.1	19.9	80.0	4	
230									
A - 16								2	Removed
B - 33								2	Due to
C - 50								3	Construction
231									
A - 13								2	Removed
B - 26								2	Due to
C - 39								3	Construction
D - 51								4	
E - 66								4	
241									
A - 13	1305		0.0	-1.99	0.0	20.0	79.9	2	
B - 28	1307		0.0	-6.58	0.0	20.1	79.9	2	
C - 47	1309		0.0	+1.08	0.0	20.1	79.9	3	
D - 64	1312		0.0	-9.17	0.0	20.2	79.8	4	
E - 85	1316		0.0	-9.76	0.0	20.2	79.8	4	

RES SIGNATURE:   
 LEA SIGNATURE: 





GAS MONITORING EQUIPMENT CALIBRATION

DATE	UNIT	SERIAL #	CAL GAS
11-14-17	GEM 5000	4500530	15% CH <sub>4</sub>

SIGNATURE: 

NEXT MONTH 12-19-17

**SUNSHINE CANYON - COUNTY  
 PERIMETER PROBE MONITORING DATA**

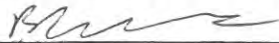
TECHNICIAN: Robert Julius		TEMPERATURE: 70°							
DATE: 11-16-17		WEATHER CONDITIONS: overcast							
		INST & SERIAL #: GEM 5000 / G500530							
PROBE NUMBER	TIME	PPM CH <sub>4</sub>	%VOL CH <sub>4</sub>	PRES (+/-)	% CO <sub>2</sub>	%O <sub>2</sub>	%BAL	PURGE TIME (min)	COMMENTS
<b>202</b>									
A-10								2	Removed Due to Construction
B-25								2	
C-38								3	
<b>203</b>									
A-10	1030		0.0	+1.05	2.9	17.7	79.5	2	
B-25	1032		0.0	+1.03	3.3	16.7	80.0	2	
C-40	1034		0.0	+1.02	1.6	18.3	80.1	3	
<b>206</b>									
A-10	0910		0.0	+1.08	9.5	11.0	79.5	2	
B-25	0912		0.0	+1.03	12.7	10.4	76.9	2	
C-38	0914		0.0	+1.03	17.2	8.1	74.7	3	
<b>207</b>									
A-10	0852		0.0	-1.20	0.6	19.4	79.9	2	
B-25	0854		0.0	-6.19	0.4	19.6	80.0	2	
C-40	0856		0.0	-1.01	0.1	19.9	80.0	3	
<b>208</b>									
A-9.1	0840		0.0	+1.07	0.3	19.6	80.0	2	
B-25	0842		0.0	+1.01	7.3	13.7	79.0	2	
C-40	0846		0.0	-1.03	6.8	12.7	80.5	3	
<b>210</b>									
A-10	0740		0.0	-1.26	0.1	19.9	80.0	2	
B-25	0742		0.0	-1.21	0.1	19.8	80.0	2	
C-39	0744		0.0	-1.01	0.2	19.8	80.1	3	

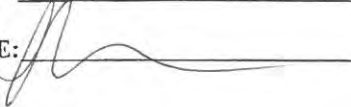
RES SIGNATURE: 

LEA SIGNATURE: 

**SUNSHINE CANYON - COUNTY  
 PERIMETER PROBE MONITORING DATA**


TECHNICIAN: Robert Johns		TEMPERATURE: 70°							PURGE TIME (min)	COMMENTS
DATE: 11-16-17		WEATHER CONDITIONS: OVERCAST								
		INST & SERIAL #: GEM 5000/G500530								
PROBE NUMBER	TIME	PPM CH <sub>4</sub>	%VOL CH <sub>4</sub>	PRES (+/-)	% CO <sub>2</sub>	%O <sub>2</sub>	%BAL			
<b>242</b>										
C-42	0750		0.0	1.0	3.0	15.7	81.3	3		
D-60	0752		0.0	+1.01	2.3	16.2	81.5	4		
E-78	0756		0.0	-1.01	3.7	14.4	81.9	4		
<b>243</b>										
A-11	0940		0.0	+1.03	7.3	9.3	83.4	2		
B-20	0942		0.0	+1.04	5.9	8.0	86.0	2		
C-33	0944		0.0	+1.01	2.7	14.3	83.0	3		
<b>244</b>										
A-11	0830		0.0	-1.02	19.0	0.2	80.8	2		
B-21	0832		0.0	+1.0	12.0	8.9	79.0	2		
C-36	0834		0.0	-1.02	5.6	15.6	78.8	3		
<b>245</b>										
A-11	0950		0.0	+1.02	11.5	8.8	79.7	2		
B-20	0952		0.0	+1.06	6.4	15.4	78.2	2		
C-35	0954		0.0	+1.11	9.4	12.1	78.4	3		
D-50	0957		0.0	+1.07	5.9	14.5	79.6	4		
E-64	1001		0.0	+1.03	0.4	19.6	79.9	4		
<b>246</b>										
A-9								2	Removed	
B-16								2	Due to Construction	
<b>205R</b>										
A-11	0920		0.0	+1.06	5.8	12.6	78.7	2		
B-20	0922		0.2	+1.05	12.8	11.0	76.0	2		
C-33	0924		0.6	+1.03	17.7	12.3	69.4	3		
D-48	0927		1.9	-1.01	35.7	3.0	55.5	4		
E-62	0939		0.7	+1.02	23.9	6.9	68.5	4		

RES SIGNATURE: 

LEA SIGNATURE: 

**SUNSHINE CANYON - COUNTY  
 PERIMETER PROBE MONITORING DATA**

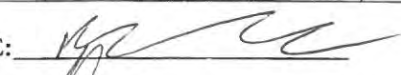
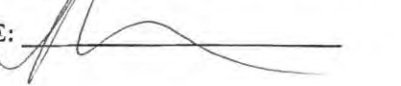
TECHNICIAN: Robert Johns		TEMPERATURE: 70°							
DATE: 11-16-17		WEATHER CONDITIONS: overcast							
		INST & SERIAL #: GEM 5000 / GSW530							
PROBE NUMBER	TIME	PPM CH <sub>4</sub>	%VOL CH <sub>4</sub>	PRES (+/-)	%CO <sub>2</sub>	%O <sub>2</sub>	%BAL	PURGE TIME (min)	COMMENTS
239									
A-11	0720		0.0	+0.1	6.8	19.8	78.4	2	
B-20	0722		0.0	-0.2	0.2	19.8	79.9	2	
C-35	0724		0.0	+0.1	0.2	19.9	79.9	3	
D-50	0727		0.0	-0.1	0.3	19.7	80.0	4	
E-64	0731		0.9	+0.1	0.1	19.7	79.3	4	
240									
A-11	0736		0.0	+0.1	12.9	19.7	75.3	2	
B-20	0738		0.0	-0.1	0.1	19.9	80.0	2	
C-33	0740		0.0	+0.27	0.1	19.9	80.0	3	
D-49	0743		0.0	+0.4	0.2	19.9	80.0	4	
E-61	0747		0.0	-0.1	0.1	19.9	80.0	4	

RES SIGNATURE: 

LEA SIGNATURE: 

**SUNSHINE CANYON – COUNTY  
 PERIMETER PROBE MONITORING DATA**

TECHNICIAN: Robert Johns				TEMPERATURE: 70°					
DATE: 11-16-17				WEATHER CONDITIONS: Overcast					
				INST & SERIAL #: GEM5000 / 4500530					
PROBE NUMBER	TIME	PPM CH <sub>4</sub>	%VOL CH <sub>4</sub>	PRES (+/-)	%CO <sub>2</sub>	%O <sub>2</sub>	%BAL	PURGE TIME	COMMENTS
VADOSE ZONE									
203D	1010		0.0	-1.57	0.1	20.1	79.8	2	
204D	0900		0.0	-1.78	0.5	19.6	79.9	2	
211D	1016		0.0	+1.03	0.1	19.9	80.0	2	
PROBE NUMBER	TIME	PPM CH <sub>4</sub>	%VOL CH <sub>4</sub>						COMMENTS

RES SIGNATURE:   
 LEA SIGNATURE: 

**GAS MONITORING EQUIPMENT CALIBRATION**

DATE	UNIT	SERIAL #	CAL GAS
11-16-17	GEM 5000	G500550	15% CH4

SIGNATURE:  \_\_\_\_\_


**SUNSHINE CANYON BUILDING METER CALIBRATION  
 CONTINUOUS BUILDING MONITORING**

LOCATION	SERIAL NUMBER	DATE	CALIBRATION GAS	NOTES
LTP Trailer	Sierra 2001 0305501	11-16-17	1.0% by vol. CH <sub>4</sub>	
LEA Office	Sierra 2001 011853	11-16-17	1.0% by vol. CH <sub>4</sub>	
Scale House	Sierra 2001 011813	11-16-17	1.0% by vol. CH <sub>4</sub>	
Training Room	Sierra 2001 043130490M	11-16-17	1.0% by vol. CH <sub>4</sub>	
Scale House	Sierra 2001 043130409	11-16-17	1.0% by vol. CH <sub>4</sub>	
Men's Locker Room	Sierra 2001 043130409	11-16-17	1.0% by vol. CH <sub>4</sub>	
DENNIS OFFICE	Sierra 2001 043130409	11-16-17		
MECHANICS OFFICE	Sierra 2001 043130409	11-16-17		
New Office North Hall	Sierra 2001 043130409	11-16-17	1.0% by vol. CH <sub>4</sub>	
New Office South Hall	Sierra 2001 043130409	11-16-17	1.0% by vol. CH <sub>4</sub>	

Technician: 

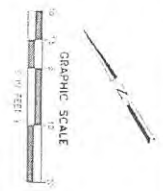
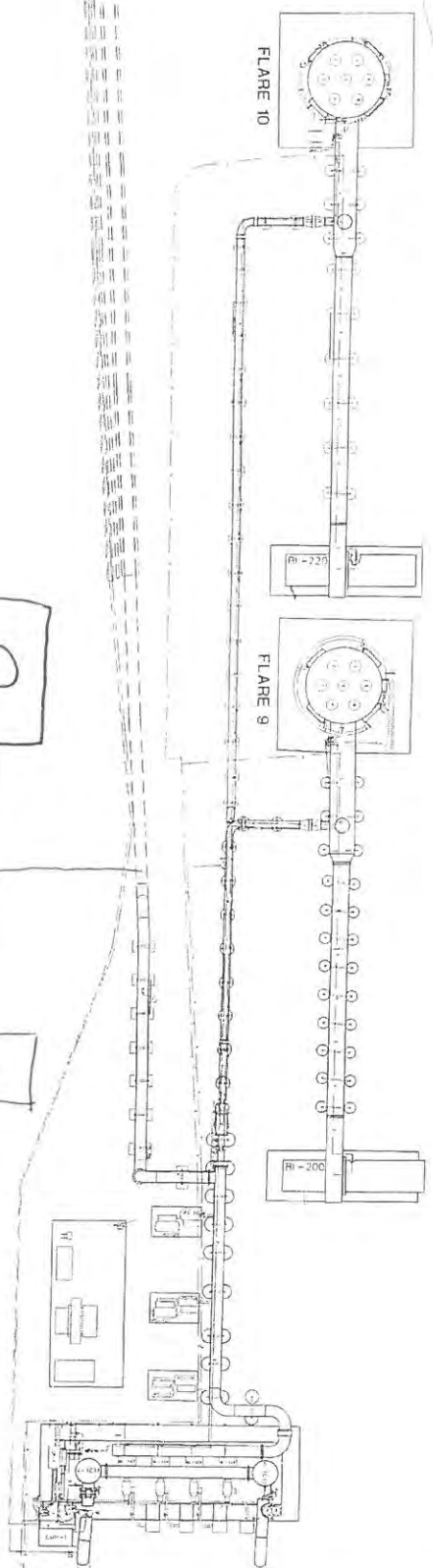
## L.T.F. MONITORING

<b>TECHNICIAN:</b> Robert Johns <b>DATE:</b> 11-10-17 <b>BACKGROUND:</b> 2.73 ppm		<b>TEMPERATURE:</b> 52° <b>WEATHER CONDITIONS:</b> Overcast <b>INST &amp; SERIAL #:</b> TVA-1000B/1030945322		
	TIME	CH4 (ppm)		COMMENTS
GAC #1	0700	2.74		

RES SIGNATURE: 



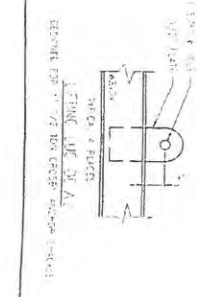
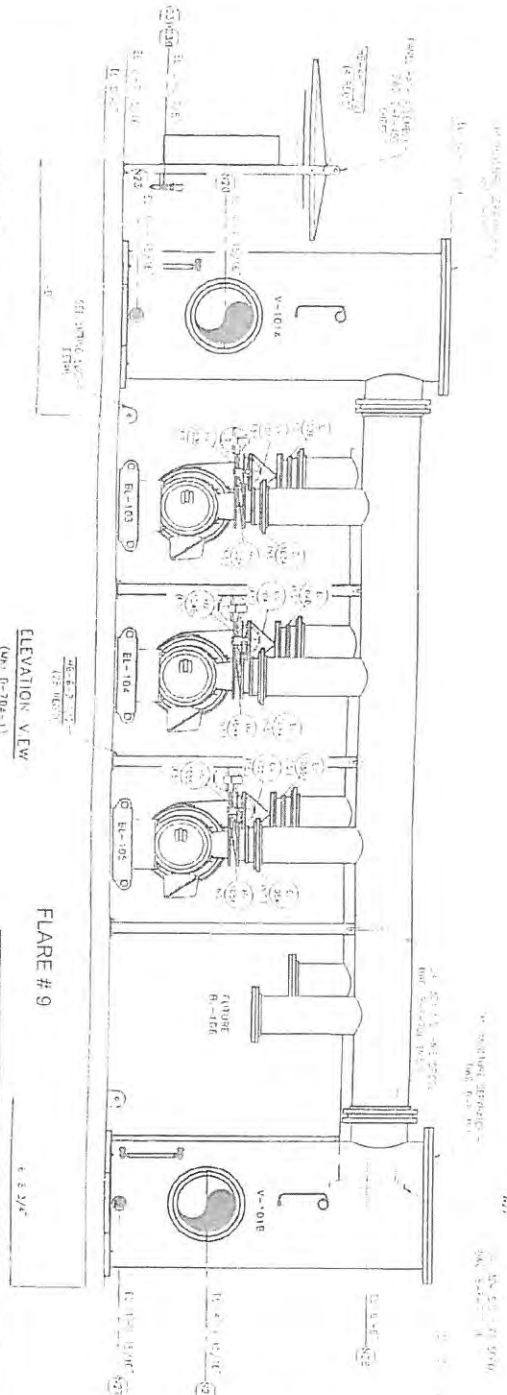
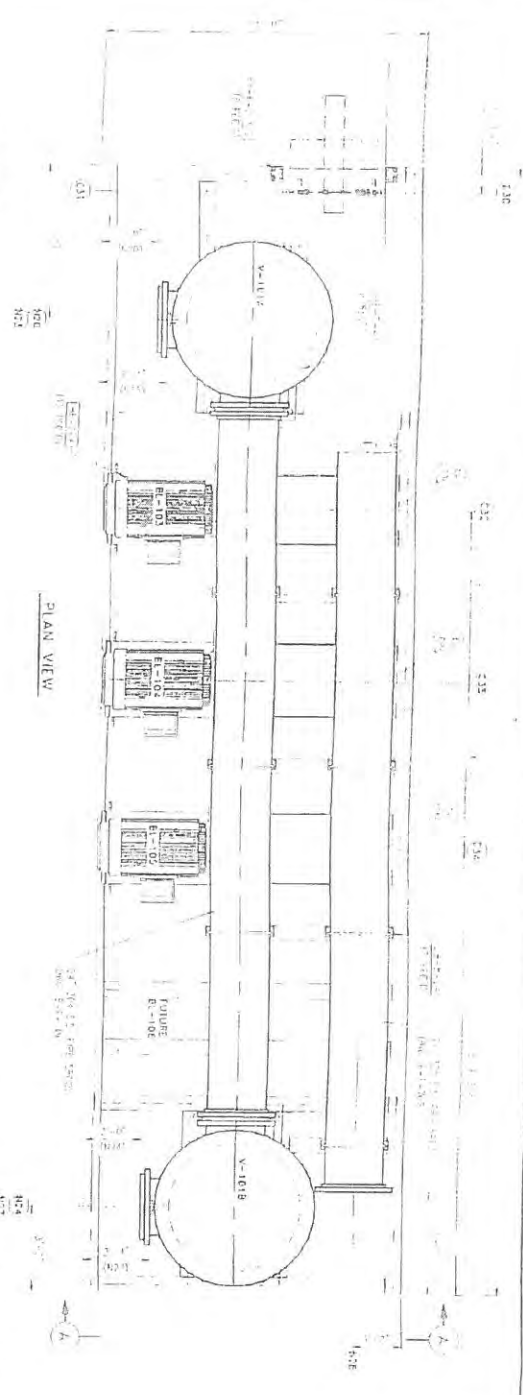
11-10-17 All Clear



DATE: 6/20/15 DESIGNED: 6/20/15 DRAWN: [blank] CHECKED: [blank]	SUNSHINE CANYON LANDFILL SYLMAR, CALIFORNIA			TETRA TECH BAS 1360 Valley View Drive, Diamond Bar, CA 91765 TEL 909 840 7777 FAX 909 840 8017	PROJECT NO.: [blank]
	FLARE 9 AND 10 PLAN				SHEET NO.: [blank]
1 OF 1	SHEET NO.: [blank]	SHEET NO.: [blank]	SHEET NO.: [blank]	SHEET NO.: [blank]	SHEET NO.: [blank]

Copyright © 2015 Republic Services, Inc. All Rights Reserved. This drawing is the property of Republic Services, Inc. and is not to be reproduced without the written consent of Republic Services, Inc.

11-10-17 All Clear

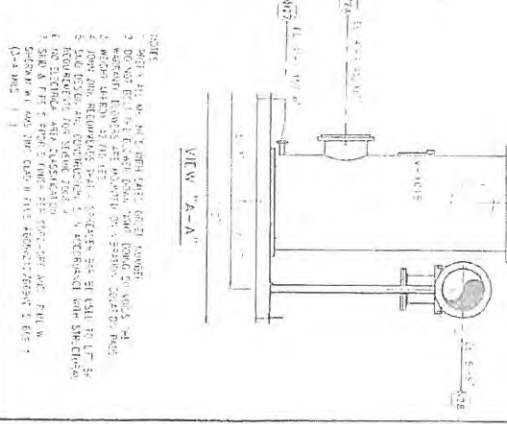


**EXHIBIT VB**  
Flare Component Leak Testing

FLARE # 9

NO.	DESCRIPTION	QTY	UNIT
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			
31			
32			
33			
34			
35			
36			
37			
38			
39			
40			
41			
42			
43			
44			
45			
46			
47			
48			
49			
50			
51			
52			
53			
54			
55			
56			
57			
58			
59			
60			
61			
62			
63			
64			
65			
66			
67			
68			
69			
70			
71			
72			
73			
74			
75			
76			
77			
78			
79			
80			
81			
82			
83			
84			
85			
86			
87			
88			
89			
90			
91			
92			
93			
94			
95			
96			
97			
98			
99			
100			

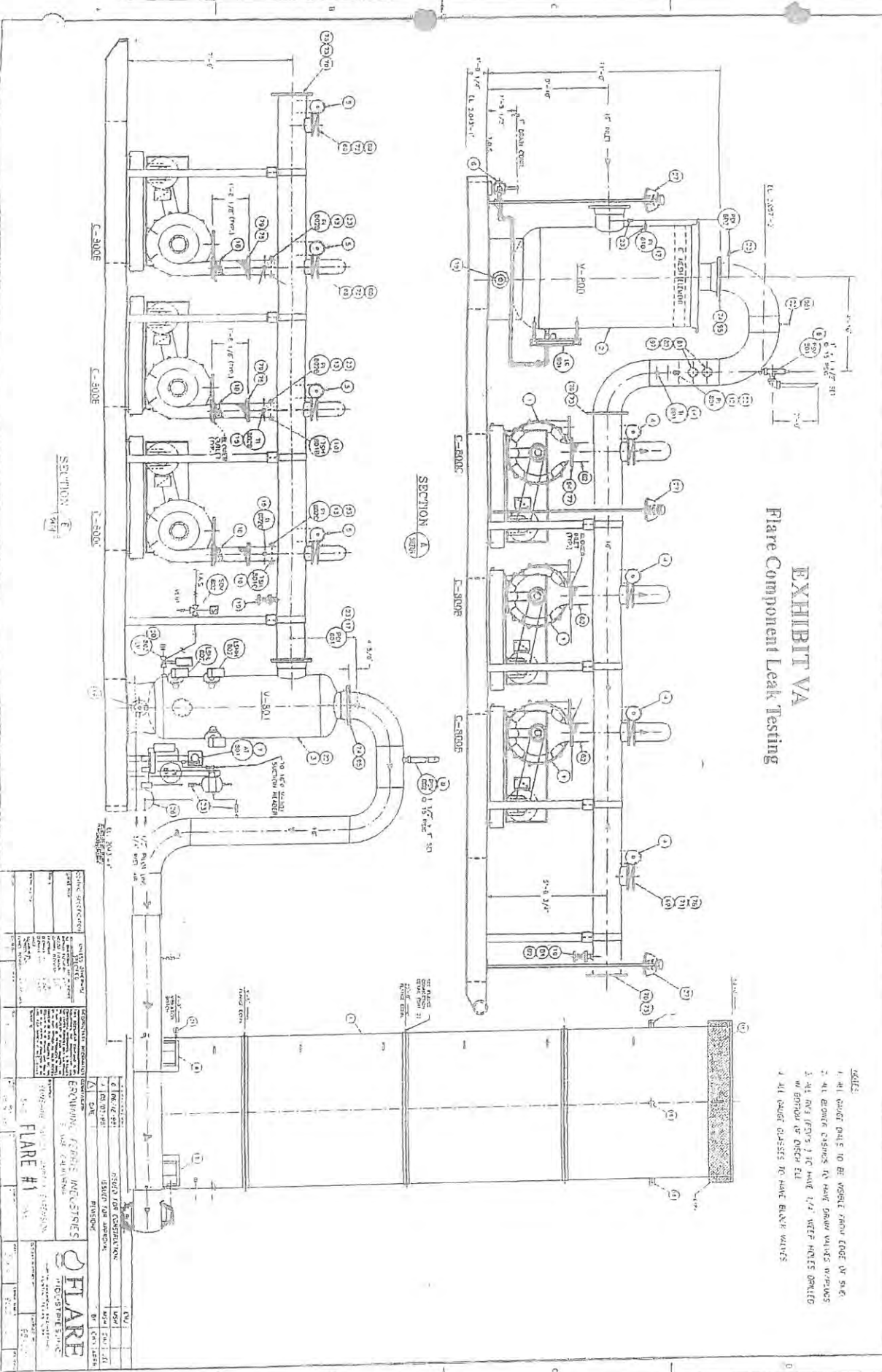
JOHN ZINK COMPANY LLC  
ELDERBERRY ASSURANCE



NOTE:  
1. SEE FLARE #9 FOR COMPLETE LIST OF PARTS.  
2. DO NOT USE FLARE #9 FOR TESTING PURPOSES.  
3. WEAR APPROPRIATE PPE AT ALL TIMES.  
4. DO NOT EXCEED 200 PSI TEST PRESSURE.  
5. DO NOT EXCEED 200 PSI TEST PRESSURE.  
6. DO NOT EXCEED 200 PSI TEST PRESSURE.  
7. DO NOT EXCEED 200 PSI TEST PRESSURE.  
8. DO NOT EXCEED 200 PSI TEST PRESSURE.  
9. DO NOT EXCEED 200 PSI TEST PRESSURE.  
10. DO NOT EXCEED 200 PSI TEST PRESSURE.

11-10-17 A 11. Clear.

EXHIBIT VA  
Flare Component Leak Testing



- NOTE:
1. ALL DRIFT GAUGES TO BE MOUNTED FROM EDGE OF SHEET
  2. ALL BRONZE CASINGS TO HAVE BRASS VALVE WIPERS
  3. ALL RING (P.V.'S) TO HAVE 1/2" WEEP HOLES DRILLED IN BOTTOM OF DRIFT GILL
  4. ALL DRIFT CASINGS TO HAVE BRASS VALVES

CONTRACT DESCRIPTION LEAK TESTING APPARATUS FOR FLARE #1		CONTRACT NO. 100-100-100-100	
DRAWING NO. 100-100-100-100		DATE 11-10-17	
PROJECT NO. 100-100-100-100		SHEET NO. 100-100-100-100	
DRAWING TITLE LEAK TESTING APPARATUS FOR FLARE #1		DRAWING SCALE AS SHOWN	
DRAWING DATE 11-10-17		DRAWING BY J. W. BROWN	
DRAWING CHECKED BY J. W. BROWN		DRAWING APPROVED BY J. W. BROWN	
DRAWING REVISIONS 1. REVISED FOR CONSTRUCTION		DRAWING REVISIONS 1. REVISED FOR CONSTRUCTION	
DRAWING REVISIONS 2. REVISED FOR CONSTRUCTION		DRAWING REVISIONS 2. REVISED FOR CONSTRUCTION	
DRAWING REVISIONS 3. REVISED FOR CONSTRUCTION		DRAWING REVISIONS 3. REVISED FOR CONSTRUCTION	
DRAWING REVISIONS 4. REVISED FOR CONSTRUCTION		DRAWING REVISIONS 4. REVISED FOR CONSTRUCTION	
DRAWING REVISIONS 5. REVISED FOR CONSTRUCTION		DRAWING REVISIONS 5. REVISED FOR CONSTRUCTION	
DRAWING REVISIONS 6. REVISED FOR CONSTRUCTION		DRAWING REVISIONS 6. REVISED FOR CONSTRUCTION	
DRAWING REVISIONS 7. REVISED FOR CONSTRUCTION		DRAWING REVISIONS 7. REVISED FOR CONSTRUCTION	
DRAWING REVISIONS 8. REVISED FOR CONSTRUCTION		DRAWING REVISIONS 8. REVISED FOR CONSTRUCTION	
DRAWING REVISIONS 9. REVISED FOR CONSTRUCTION		DRAWING REVISIONS 9. REVISED FOR CONSTRUCTION	
DRAWING REVISIONS 10. REVISED FOR CONSTRUCTION		DRAWING REVISIONS 10. REVISED FOR CONSTRUCTION	
DRAWING REVISIONS 11. REVISED FOR CONSTRUCTION		DRAWING REVISIONS 11. REVISED FOR CONSTRUCTION	
DRAWING REVISIONS 12. REVISED FOR CONSTRUCTION		DRAWING REVISIONS 12. REVISED FOR CONSTRUCTION	
DRAWING REVISIONS 13. REVISED FOR CONSTRUCTION		DRAWING REVISIONS 13. REVISED FOR CONSTRUCTION	
DRAWING REVISIONS 14. REVISED FOR CONSTRUCTION		DRAWING REVISIONS 14. REVISED FOR CONSTRUCTION	
DRAWING REVISIONS 15. REVISED FOR CONSTRUCTION		DRAWING REVISIONS 15. REVISED FOR CONSTRUCTION	
DRAWING REVISIONS 16. REVISED FOR CONSTRUCTION		DRAWING REVISIONS 16. REVISED FOR CONSTRUCTION	
DRAWING REVISIONS 17. REVISED FOR CONSTRUCTION		DRAWING REVISIONS 17. REVISED FOR CONSTRUCTION	
DRAWING REVISIONS 18. REVISED FOR CONSTRUCTION		DRAWING REVISIONS 18. REVISED FOR CONSTRUCTION	
DRAWING REVISIONS 19. REVISED FOR CONSTRUCTION		DRAWING REVISIONS 19. REVISED FOR CONSTRUCTION	
DRAWING REVISIONS 20. REVISED FOR CONSTRUCTION		DRAWING REVISIONS 20. REVISED FOR CONSTRUCTION	
DRAWING REVISIONS 21. REVISED FOR CONSTRUCTION		DRAWING REVISIONS 21. REVISED FOR CONSTRUCTION	
DRAWING REVISIONS 22. REVISED FOR CONSTRUCTION		DRAWING REVISIONS 22. REVISED FOR CONSTRUCTION	
DRAWING REVISIONS 23. REVISED FOR CONSTRUCTION		DRAWING REVISIONS 23. REVISED FOR CONSTRUCTION	
DRAWING REVISIONS 24. REVISED FOR CONSTRUCTION		DRAWING REVISIONS 24. REVISED FOR CONSTRUCTION	
DRAWING REVISIONS 25. REVISED FOR CONSTRUCTION		DRAWING REVISIONS 25. REVISED FOR CONSTRUCTION	

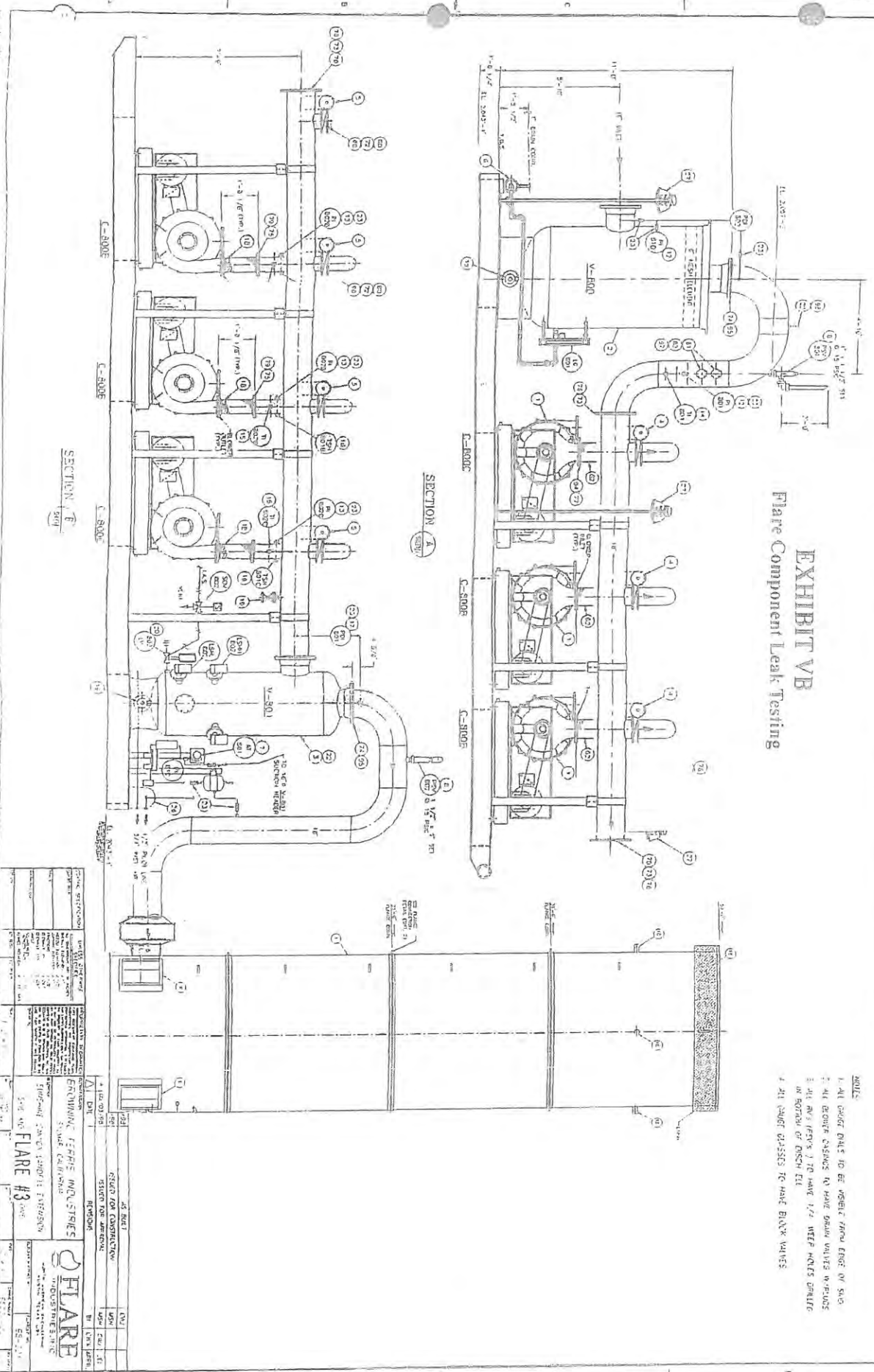
FLARE #1

FLARE INDUSTRIES

11-10-17

Atty Cleary

### EXHIBIT VB Flare Component Leak Testing



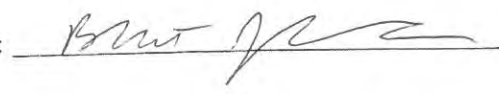
- NOTES
1. ALL CORNER DRILL TO BE OBTAIN FROM END OF S.A.S.
  2. ALL CORNER CASINGS TO HAVE DRILL WAYS W/SPACES
  3. ALL R.V.S. P.F.S.'S TO HAVE 1/2" DEEP HOLES DRILLED ON BOTTOM OF CORNER ELL
  4. ALL CORNER DRILLS TO HAVE DRILL WAYS

CONTRACT NO. 11-10-17 PROJECT NO. 11-10-17 DRAWING NO. 11-10-17 DATE 11-10-17 SCALE AS SHOWN	APPROVED BY DATE 11-10-17	DESIGNED BY DATE 11-10-17	CHECKED BY DATE 11-10-17
CONTRACTOR CHIFFARE ENGINEERING & CONSTRUCTION 1111 1/2 ST. N. SEATTLE, WA 98108 PHONE (206) 461-1111 FAX (206) 461-1112 WWW.CHIFFARE.COM		CLIENT CHIFFARE ENGINEERING & CONSTRUCTION 1111 1/2 ST. N. SEATTLE, WA 98108 PHONE (206) 461-1111 FAX (206) 461-1112 WWW.CHIFFARE.COM	



GAS MONITORING EQUIPMENT CALIBRATION

DATE	UNIT	SERIAL #	CAL GAS
11-10-17	TVA 1000B	1030945322	500 ppm CH4

SIGNATURE: A handwritten signature in dark ink, appearing to be "Robert J. ...", is written over a horizontal line.

**SUNSHINE CANYON LANDFILL - CITY  
 PERIMETER PROBE MONITORING DATA**

TECHNICIAN: <i>Robert Johns</i>		TEMPERATURE: <i>44°</i>							
DATE: <i>12-21-17</i>		WEATHER CONDITIONS: <i>5 mph NW Windy</i>							
		INST & SERIAL #: <i>GEM 5400 / GSC0330</i>							
PROBE NUMBER	TIME	PPM CH <sub>4</sub>	%VOL CH <sub>4</sub>	PRES (+/-)	%CO <sub>2</sub>	%O <sub>2</sub>	%BAL	PURGE TIME (min)	COMMENTS
<b>213</b>									
A - 13	<i>1210</i>		<i>0.0</i>	<i>+1.07</i>	<i>2.6</i>	<i>17.9</i>	<i>79.6</i>	<i>2</i>	
B - 29	<i>1212</i>		<i>0.0</i>	<i>-0.05</i>	<i>0.1</i>	<i>20.8</i>	<i>79.1</i>	<i>2</i>	
C - 45	<i>1214</i>		<i>0.0</i>	<i>-0.29</i>	<i>0.1</i>	<i>20.8</i>	<i>79.1</i>	<i>3</i>	
D - 61	<i>1217</i>		<i>0.0</i>	<i>-0.43</i>	<i>0.1</i>	<i>20.7</i>	<i>79.2</i>	<i>4</i>	
E - 77	<i>1221</i>		<i>0.0</i>	<i>-0.25</i>	<i>0.1</i>	<i>20.7</i>	<i>79.2</i>	<i>4</i>	
<b>214</b>									
A - 13	<i>1200</i>		<i>0.0</i>	<i>+1.21</i>	<i>1.4</i>	<i>18.2</i>	<i>80.3</i>	<i>2</i>	
B - 30	<i>1202</i>		<i>0.0</i>	<i>-0.74</i>	<i>0.1</i>	<i>19.9</i>	<i>80.0</i>	<i>2</i>	
C - 48	<i>1204</i>		<i>0.0</i>	<i>-1.84</i>	<i>0.1</i>	<i>20.6</i>	<i>79.3</i>	<i>3</i>	
<b>215</b>									
A - 13	<i>1142</i>		<i>0.0</i>	<i>+1.04</i>	<i>5.5</i>	<i>8.6</i>	<i>85.9</i>	<i>2</i>	
B - 30	<i>1144</i>		<i>0.0</i>	<i>+1.06</i>	<i>5.7</i>	<i>10.9</i>	<i>83.4</i>	<i>2</i>	
C - 47	<i>1146</i>		<i>0.0</i>	<i>+1.02</i>	<i>0.1</i>	<i>20.3</i>	<i>79.6</i>	<i>3</i>	
D - 64	<i>1149</i>		<i>0.0</i>	<i>-0.06</i>	<i>0.6</i>	<i>19.5</i>	<i>79.9</i>	<i>4</i>	
E - 81	<i>1153</i>		<i>0.0</i>	<i>0</i>	<i>4.5</i>	<i>11.0</i>	<i>84.4</i>	<i>4</i>	
<b>216</b>									
A - 14	<i>1125</i>		<i>0.0</i>	<i>+1.03</i>	<i>0.1</i>	<i>19.2</i>	<i>80.7</i>	<i>2</i>	
B - 43	<i>1127</i>		<i>0.0</i>	<i>+1.23</i>	<i>0.1</i>	<i>19.4</i>	<i>80.5</i>	<i>2</i>	
C - 62	<i>1129</i>		<i>0.0</i>	<i>+1.02</i>	<i>0.1</i>	<i>19.7</i>	<i>80.3</i>	<i>3</i>	
D - 86	<i>1132</i>		<i>0.0</i>	<i>-0.07</i>	<i>0.1</i>	<i>19.9</i>	<i>80.1</i>	<i>4</i>	
E - 110	<i>1136</i>		<i>0.0</i>	<i>+1.01</i>	<i>0.1</i>	<i>20.0</i>	<i>79.9</i>	<i>4</i>	
<b>217</b>									
A - 13	<i>1115</i>		<i>0.0</i>	<i>+1.02</i>	<i>4.6</i>	<i>18.9</i>	<i>76.4</i>	<i>2</i>	
B - 30	<i>1117</i>		<i>0.0</i>	<i>+1.03</i>	<i>2.5</i>	<i>18.8</i>	<i>78.7</i>	<i>2</i>	
<b>218R</b>									
A - 11	<i>1100</i>		<i>0.0</i>	<i>-0.00</i>	<i>26.3</i>	<i>1.7</i>	<i>72.0</i>	<i>2</i>	
B - 26.5	<i>1102</i>		<i>0.0</i>	<i>-0.07</i>	<i>20.1</i>	<i>7.9</i>	<i>72.0</i>	<i>2</i>	
C - 47	<i>1104</i>		<i>0.0</i>	<i>-0.10</i>	<i>3.6</i>	<i>19.1</i>	<i>77.3</i>	<i>2</i>	

RES SIGNATURE: *Robert Johns*

LEA SIGNATURE: \_\_\_\_\_

**SUNSHINE CANYON LANDFILL - CITY  
PERIMETER PROBE MONITORING DATA**

TECHNICIAN: Robert Johns		TEMPERATURE: 44°							
DATE: 12-21-17		WEATHER CONDITIONS: Sunny & wind,							
		INST & SERIAL #: GEM 5000 / G500550							
PROBE NUMBER	TIME	PPM CH <sub>4</sub>	%VOL CH <sub>4</sub>	PRES (+/-)	%CO <sub>2</sub>	%O <sub>2</sub>	%BAL	PURGE TIME (min)	COMMENTS
219									
A - 13	1038		0.0	-1.05	0.1	21.0	78.9	2	
B - 64	1040		0.0	-1.02	0.2	21.0	78.8	2	
C - 115	1042		0.0	-1.07	0.1	20.9	79.0	3	
D - 166	1048		0.0	-1.07	0.1	20.9	79.0	4	
E - 217	1049		0.0	-1.24	0.1	21.0	78.9	4	
220									
A - 14	1017		0.0	+1.01	0.2	20.6	79.2	2	
B - 40	1019		0.0	-1.07	3.4	17.4	79.6	2	
C - 87	1021		0.0	-1.10	0.2	20.6	79.2	3	
D - 124	1024		0.0	-1.11	0.3	20.6	79.1	4	
E - 158	1028		0.0	-1.27	0.3	20.7	79.0	4	
220B									
A - 14	1000		0.0	+1.13	0.1	20.7	79.2	2	
B - 38	1002		0.0	-1.07	0.1	20.8	79.1	2	
C - 62	1004		0.0	-1.01	2.7	17.1	80.2	3	
D - 86	1007		0.0	-1.26	4.0	14.9	81.1	4	
E - 110	1011		0.0	-1.02	1.9	17.0	81.1	4	
221									
A - 13	0920		0.0	-1.06	0.2	20.5	79.2	2	
B - 56	0922		0.0	-1.03	0.1	20.6	79.3	2	
C - 99	0924		0.0	-1.32	0.3	20.7	79.1	3	
D - 142	0927		0.0	-1.07	0.1	21.0	78.9	4	
E - 185	0931		0.0	-1.01	0.1	21.0	78.8	4	
222									
A - 13	0940		0.0	-1.02	2.5	18.7	78.8	2	
B - 54.8	0942		0.0	-1.05	0.1	21.1	78.8	2	
C - 96.5	0944		0.0	-1.02	0.1	21.1	78.8	3	
D - 138.3	0947		0.0	-1.05	0.8	20.4	78.8	4	
E - 180	0951		0.0	-1.05	0.1	21.0	79.0	4	

RES SIGNATURE: Robert Johns

LEA SIGNATURE: \_\_\_\_\_

**SUNSHINE CANYON LANDFILL – CITY  
 PERIMETER PROBE MONITORING DATA**

TECHNICIAN: <i>Rebecca Johns</i>		TEMPERATURE: <i>44°</i>							
DATE: <i>12-21-17</i>		WEATHER CONDITIONS: <i>Sunny &amp; Windy</i>							
		INST & SERIAL #: <i>GEM 5000 / 0820330</i>							
PROBE NUMBER	TIME	PPM CH <sub>4</sub>	%VOL CH <sub>4</sub>	PRES (+/-)	%CO <sub>2</sub>	%O <sub>2</sub>	%BAL	PURGE TIME	COMMENTS
<b>223</b>									
A - 13	<i>0855</i>		<i>0.0</i>	<i>-0.05</i>	<i>0.3</i>	<i>19.3</i>	<i>50.4</i>	<i>2</i>	
B - 37.5	<i>0857</i>		<i>0.0</i>	<i>-0.03</i>	<i>2.5</i>	<i>15.4</i>	<i>82.1</i>	<i>2</i>	
C - 62	<i>0859</i>		<i>0.0</i>	<i>-0.07</i>	<i>0.7</i>	<i>18.5</i>	<i>50.7</i>	<i>3</i>	
D - 86.5	<i>0902</i>		<i>0.0</i>	<i>-0.10</i>	<i>0.2</i>	<i>19.7</i>	<i>50.1</i>	<i>4</i>	
E - 111	<i>0906</i>		<i>0.0</i>	<i>-0.03</i>	<i>2.3</i>	<i>16.1</i>	<i>81.6</i>	<i>4</i>	
<b>224</b>									
A - 13	<i>0829</i>		<i>0.0</i>	<i>-0.06</i>	<i>0.1</i>	<i>20.5</i>	<i>79.4</i>	<i>2</i>	
B - 67.5	<i>0831</i>		<i>0.0</i>	<i>-0.06</i>	<i>0.1</i>	<i>20.4</i>	<i>79.5</i>	<i>2</i>	
C - 122	<i>0833</i>		<i>0.0</i>	<i>-0.16</i>	<i>0.1</i>	<i>20.4</i>	<i>79.6</i>	<i>3</i>	
D - 177.5	<i>0837</i>		<i>0.0</i>	<i>-0.52</i>	<i>0.1</i>	<i>20.3</i>	<i>79.6</i>	<i>4</i>	
E - 232	<i>0841</i>		<i>0.0</i>	<i>-8.25</i>	<i>0.1</i>	<i>20.3</i>	<i>79.6</i>	<i>4</i>	
<b>225</b>									
A - 13	<i>0810</i>		<i>0.0</i>	<i>-0.05</i>	<i>0.3</i>	<i>20.5</i>	<i>79.3</i>	<i>2</i>	
B - 72	<i>0812</i>		<i>0.0</i>	<i>-6.44</i>	<i>0.1</i>	<i>20.7</i>	<i>79.2</i>	<i>2</i>	
C - 131	<i>0814</i>		<i>0.0</i>	<i>-10.89</i>	<i>0.1</i>	<i>20.8</i>	<i>79.1</i>	<i>3</i>	
D - 190	<i>0817</i>		<i>0.0</i>	<i>-11.02</i>	<i>0.1</i>	<i>20.9</i>	<i>79.1</i>	<i>4</i>	
E - 244	<i>0821</i>		<i>0.0</i>	<i>-10.26</i>	<i>0.1</i>	<i>20.9</i>	<i>79.0</i>	<i>4</i>	
<b>226</b>									
A - 13	<i>0716</i>		<i>0.0</i>	<i>-0.11</i>	<i>0.1</i>	<i>21.0</i>	<i>78.9</i>	<i>2</i>	
B - 64	<i>0708</i>		<i>0.0</i>	<i>-12.56</i>	<i>0.1</i>	<i>21.1</i>	<i>78.9</i>	<i>2</i>	
C - 114	<i>0720</i>		<i>0.0</i>	<i>-11.63</i>	<i>0.1</i>	<i>21.3</i>	<i>78.6</i>	<i>3</i>	
D - 164	<i>0723</i>		<i>0.0</i>	<i>-12.38</i>	<i>0.1</i>	<i>21.6</i>	<i>78.3</i>	<i>4</i>	
E - 208	<i>0727</i>		<i>0.0</i>	<i>-12.14</i>	<i>0.1</i>	<i>21.8</i>	<i>78.1</i>	<i>4</i>	
<b>227</b>									
A - 13	<i>0732</i>		<i>0.0</i>	<i>-0.05</i>	<i>1.0</i>	<i>18.3</i>	<i>80.7</i>	<i>2</i>	
B - 48.7	<i>0734</i>		<i>0.0</i>	<i>-0.53</i>	<i>3.6</i>	<i>10.0</i>	<i>86.5</i>	<i>2</i>	
C - 84.4	<i>0736</i>		<i>0.0</i>	<i>-0.40</i>	<i>0.1</i>	<i>15.6</i>	<i>84.3</i>	<i>3</i>	
D - 114	<i>0739</i>		<i>0.0</i>	<i>-0.44</i>	<i>0.9</i>	<i>19.1</i>	<i>80.0</i>	<i>4</i>	
E - 115.7	<i>0744</i>		<i>0.0</i>	<i>-0.29</i>	<i>0.4</i>	<i>20.8</i>	<i>78.8</i>	<i>4</i>	

RES SIGNATURE: 

LEA SIGNATURE: \_\_\_\_\_



**SUNSHINE CANYON LANDFILL – CITY  
 PERIMETER PROBE MONITORING DATA**

TECHNICIAN: Robert Johns		TEMPERATURE: 44°							
DATE: 12-21-17		WEATHER CONDITIONS: Sunny & Windy							
		INST & SERIAL #: GEM 5000/G500530							
PROBE NUMBER	TIME	PPM CH <sub>4</sub>	%VOL CH <sub>4</sub>	PRES (+/-)	%CO <sub>2</sub>	%O <sub>2</sub>	%BAL	PURGE TIME	COMMENTS
<b>228</b>									
A - 13	0750		0.0	-1.02	0.7	20.5	79.9	2	
B - 63	0752		0.0	-1.71	0.3	20.6	79.2	2	
C - 113	0754		0.0	-1.38	0.1	20.7	79.3	3	
D - 163	0757		0.0	-1.38	0.3	20.3	79.3	4	
E - 213	0801		0.0	-1.46	0.3	20.4	79.3	4	
<b>229</b>									
A - 13	0700		0.0	-1.81	0.1	20.1	79.8	2	
B - 48.7	0702		0.0	-11.19	0.1	20.1	79.9	2	
C - 84.4	0704		0.0	-14.72	0.1	20.2	79.8	3	
D - 114	0707		0.0	-16.09	0.1	20.3	79.6	4	
E - 155.7	0711		0.0	-22.14	0.1	20.5	79.5	4	
<b>230</b>									
A - 16								2	Removed
B - 33								2	Due to
C - 50								3	Construction
<b>231</b>									
A - 13								2	Removed
B - 26								2	Due to
C - 39								3	Construction
D - 51								4	
E - 66								4	
<b>241</b>									
A - 13	1229		0.0	-14.74	0.1	20.6	79.4	2	
B - 28	1230		0.0	-7.81	0.1	20.6	79.3	2	
C - 47	1232		0.0	1.0	0.1	20.6	79.3	3	
D - 64	1235		0.0	-9.94	0.1	20.7	79.3	4	
E - 85	1239		0.0	-10.92	0.1	20.7	79.2	4	

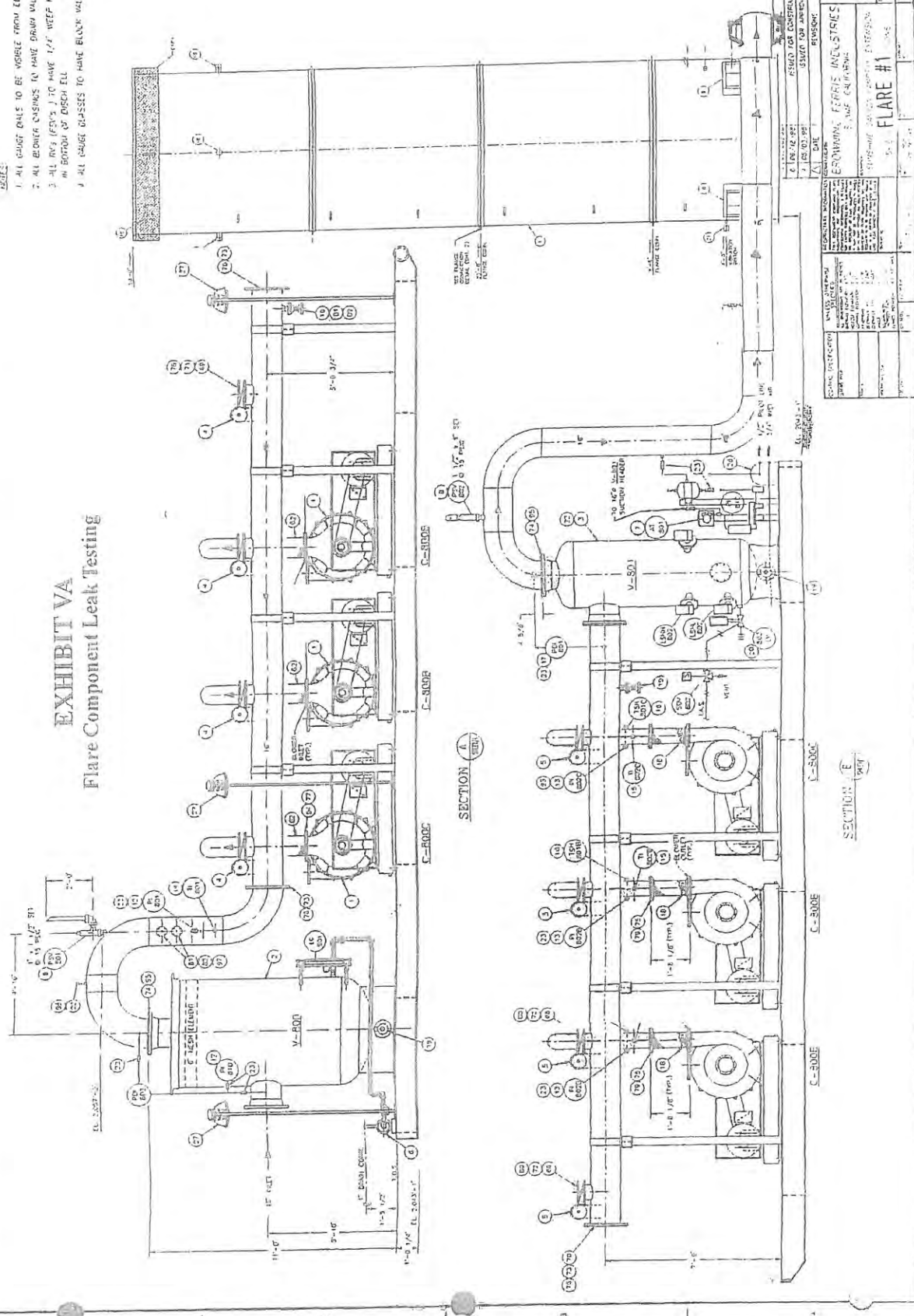
RES SIGNATURE: 

LEA SIGNATURE: \_\_\_\_\_

12-21-17 All Clear

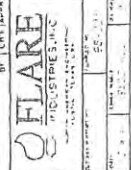
**EXHIBIT VA**  
Flare Component Leak Testing

- NOTES:**
1. ALL GAUGE ORALS TO BE WORKED FROM EDGE OF SH-6.
  2. ALL BLOWER CASINGS TO HAVE DRAIN VALVES W/PLUGS.
  3. ALL RV'S (FV'S) TO HAVE 1/2" WEEP HOLES DRILLED IN BOTTOM OF DISCH ELL.
  4. ALL GAUGE GLASSES TO HAVE BLOCK VALVES.



NO.	REV.	DATE	BY	CHKD.
1	1	12/21/17	ALL CLEAR	

DESIGNED FOR CONSTRUCTION  
ISSUED FOR APPROVAL  
REVISIONS



**FLARE**  
INDUSTRIES, INC.  
EROWANA, TEXAS

PROJECT NO.	FLARE #1
DATE	12/21/17
SCALE	AS SHOWN
DRAWN BY	ALL CLEAR
CHECKED BY	
APPROVED BY	

SECTION A (left)  
SECTION B (middle)  
SECTION C (right)



NEXT MONTH 1-20-18

SUNSHINE CANYON - COUNTY  
 PERIMETER PROBE MONITORING DATA

TECHNICIAN: <i>Robert Johns</i>					TEMPERATURE: <i>68°</i>				
DATE: <i>12-14-17</i>					WEATHER CONDITIONS: <i>windy/sunny</i>				
					INST & SERIAL #: <i>CREM 5000/500530</i>				
PROBE NUMBER	TIME	PPM CH <sub>4</sub>	%VOL CH <sub>4</sub>	PRES (+/-)	% CO <sub>2</sub>	%O <sub>2</sub>	%BAL	PURGE TIME (min)	COMMENTS
202									
A-10								2	<i>Removed Due to Construction</i>
B-25								2	
C-38								3	
203									
A-10	<i>1010</i>		<i>0.0</i>	<i>1.04</i>	<i>2.5</i>	<i>18.1</i>	<i>79.4</i>	2	
B-25	<i>1013</i>		<i>0.0</i>	<i>1.20</i>	<i>3.1</i>	<i>17.0</i>	<i>79.9</i>	2	
C-40	<i>1016</i>		<i>0.0</i>	<i>-0.1</i>	<i>1.4</i>	<i>18.5</i>	<i>80.1</i>	3	
206									
A-10	<i>0850</i>		<i>0.0</i>	<i>1.03</i>	<i>10.4</i>	<i>9.2</i>	<i>80.0</i>	2	
B-25	<i>0852</i>		<i>0.0</i>	<i>1.02</i>	<i>14.7</i>	<i>9.9</i>	<i>75.4</i>	2	
C-38	<i>0854</i>		<i>0.0</i>	<i>1.02</i>	<i>14.1</i>	<i>8.2</i>	<i>77.7</i>	3	
207									
A-10	<i>0900</i>		<i>0.0</i>	<i>-1.03</i>	<i>0.9</i>	<i>19.0</i>	<i>80.0</i>	2	
B-25	<i>0903</i>		<i>0.0</i>	<i>-2.39</i>	<i>0.5</i>	<i>19.7</i>	<i>79.8</i>	2	
C-40	<i>0905</i>		<i>0.0</i>	<i>-0.50</i>	<i>0.1</i>	<i>20.2</i>	<i>79.8</i>	3	
208									
A-9.1	<i>0839</i>		<i>0.0</i>	<i>1.03</i>	<i>0.6</i>	<i>19.8</i>	<i>79.6</i>	2	
B-25	<i>0841</i>		<i>0.0</i>	<i>-1.03</i>	<i>6.7</i>	<i>15.1</i>	<i>78.2</i>	2	
C-40	<i>0843</i>		<i>0.0</i>	<i>-1.01</i>	<i>7.2</i>	<i>12.5</i>	<i>80.3</i>	3	
210									
A-10	<i>0735</i>		<i>0.0</i>	<i>-1.11</i>	<i>0.1</i>	<i>20.5</i>	<i>79.4</i>	2	
B-25	<i>0737</i>		<i>0.0</i>	<i>-1.20</i>	<i>0.1</i>	<i>20.4</i>	<i>79.5</i>	2	
C-39	<i>0739</i>		<i>0.0</i>	<i>-1.27</i>	<i>0.1</i>	<i>20.4</i>	<i>79.5</i>	3	

RES SIGNATURE: *Robert Johns*

LEA SIGNATURE: \_\_\_\_\_

**SUNSHINE CANYON - COUNTY  
 PERIMETER PROBE MONITORING DATA**

TECHNICIAN: Robert Johns		TEMPERATURE: 68°							
DATE: 12-14-17		WEATHER CONDITIONS: windy / sunny							
		INST & SERIAL #: GEM 5000 / G500530							
PROBE NUMBER	TIME	PPM CH <sub>4</sub>	%VOL CH <sub>4</sub>	PRES (+/-)	% CO <sub>2</sub>	%O <sub>2</sub>	%BAL	PURGE TIME (min)	COMMENTS
242									
C-42	0745		0.0	-103	1.8	16.7	81.5	3	
D-60	0747		0.0	-104	1.0	18.6	80.4	4	
E-78	0751		0.0	-105	3.7	12.4	84.0	4	
243									
A-11	0931		0.0	-102	8.8	6.0	85.2	2	
B-20	0933		0.0	+103	6.4	7.0	86.6	2	
C-33	0935		0.0	+103	3.1	12.9	84.0	3	
244									
A-11	0820		0.0	-107	10.3	9.9	79.8	2	
B-21	0822		0.0	-105	13.7	7.4	78.8	2	
C-36	0824		0.0	10	7.5	14.2	78.3	3	
245									
A-11	0940		0.0	+102	8.0	12.1	79.9	2	
B-20	0942		0.0	-102	2.1	19.0	79.0	2	
C-35	0944		0.0	-108	10.1	11.6	78.3	3	
D-50	0947		0.0	-101	8.9	11.3	79.8	4	
E-64	0951		0.0	-113	0.1	20.0	79.9	4	
246									
A-9								2	Removed Due to Construction
B-16								2	
205R									
A-11	0915		0.0	+112	5.8	15.7	78.7	2	
B-20	0917		0.1	-110	19.6	7.0	73.4	2	
C-33	0919		0.9	-137	23.8	9.4	65.9	3	
D-48	0922		0.8	-108	17.1	13.0	69.1	4	
E-62	0926		0.4	-121	18.3	9.2	72.0	4	

RES SIGNATURE: 

LEA SIGNATURE: \_\_\_\_\_

SUNSHINE CANYON - COUNTY  
 PERIMETER PROBE MONITORING DATA

TECHNICIAN: Robert Johns		TEMPERATURE: 68°							
DATE: 12-14-17		WEATHER CONDITIONS: Windy / Clear							
		INST & SERIAL #: GEM 5000 / G500330							
PROBE NUMBER	TIME	PPM CH <sub>4</sub>	%VOL CH <sub>4</sub>	PRES (+/-)	%CO <sub>2</sub>	%O <sub>2</sub>	%BAL	PURGE TIME (min)	COMMENTS
239									
A-11	0716		0.0	-0.1	8.7	19.2	76.1	2	
B-20	0718		0.0	-0.1	0.1	20.5	79.4	2	
C-35	0720		0.0	-0.8	0.1	20.7	79.2	3	
D-50	0723		0.0	-1.01	0.1	20.6	79.3	4	
E-64	0727		0.0	-1.12	0.1	20.7	79.2	4	
240									
A-11	0700		0.0	.0	4.2	17.2	78.6	2	
B-20	0702		0.0	-0.9	0.5	19.6	79.9	2	
C-33	0704		0.0	-0.1	0.1	19.9	79.9	3	
D-49	0707		0.0	-1.14	0.3	19.9	79.8	4	
E-61	0711		0.6	-1.6	0.1	20.3	79.0	4	

RES SIGNATURE: 

LEA SIGNATURE: \_\_\_\_\_

SUNSHINE CANYON - COUNTY  
PERIMETER PROBE MONITORING DATA

TECHNICIAN: Robert Johns		TEMPERATURE: 68°							
DATE: 12-14-17		WEATHER CONDITIONS: windy / sunny							
		INST & SERIAL #: GEM 5000 / 500530							
PROBE NUMBER	TIME	PPM CH <sub>4</sub>	%VOL CH <sub>4</sub>	PRES (+/-)	%CO2	%O2	%BAL	PURGE TIME	COMMENTS
VADOSE ZONE									
203D	0958		0.0	-1.55	0.1	20.1	79.9	2	
204D	0910		0.0	-1.88	0.7	19.6	79.7	2	
211D	1002		0.0	-1.17	0.1	20.0	79.9	2	
PROBE NUMBER	TIME	PPM CH <sub>4</sub>	%VOL CH <sub>4</sub>						COMMENTS

RES SIGNATURE: [Signature]

LEA SIGNATURE: \_\_\_\_\_

GAS MONITORING EQUIPMENT CALIBRATION

DATE	UNIT	SERIAL #	CAL GAS
12-14-17	TVA 1000 B	1030945322	500 ppm CH <sub>4</sub>
12-14-17	GEM 5000	G500530	15% CH <sub>4</sub>

SIGNATURE: Robert [Signature]



## **APPENDIX D**

### **NPDES CERTIFICATION OF COMPLETION**

February 15, 2018

Operating Records  
Sunshine Canyon Landfill  
14747 San Fernando Road  
Sylmar, CA 91342

Please be advised that all standard observations for the landfill were done in accordance with the NPDES monitoring and reporting requirements. Records of observations are kept at the Sunshine Canyon Landfill's Operating Records and are submitted to the RWQCB in the storm water table due annually by July 1<sup>st</sup>.

Sincerely,



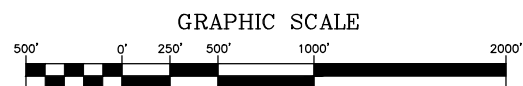
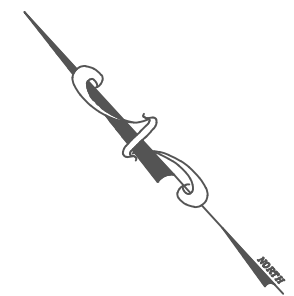
Chris Coyle  
General Manager  
Sunshine Canyon Landfill



**APPENDIX E**

**WASTE PLACEMENT AREAS  
SECOND SEMIANNUAL 2017 MONITORING PERIOD**

C:\Users\cbarrett\Documents\Allied-Republic\Sunshine Canyon LF\Exhibits\Semi-annual Report\DWG SETS\SO17.1289.PR-SCI-2017\2-SIM-ANNUAL REPORT.dwg Feb 15, 2018 - 8:20m By: cbarrett



- LEGEND**
- 1500 — EXISTING 10 FT CONTOUR
  - — — — — PROPERTY BOUNDARY
  - - - - - CITY/COUNTY LIMIT
  - - - - - APPROVED LIMITS OF REFUSE PER 2002 JTD
  - — — — — PERMIT LINER LIMIT

This drawing has not been published but rather has been prepared by Geo-Logic Associates, Inc. for use by the client named in the title block, solely in respect of the construction operation, and maintenance of the facility named in the title block. Geo-Logic Associates, Inc. shall not be liable for the use of this drawing on any other facility or for any other purpose.

FOR REVIEW ONLY  
EXISTING TOPOGRAPHY PREPARED BY COOPER AERIAL SURVEYS DATED MARCH 1, 2017

REV. NO.	DATE	DESCRIPTION	APPROVED BY
REV1	DATE1	DESCRIPTION1	DRAWN1
REV2	DATE2	DESCRIPTION2	DRAWN2
REV3	DATE3	DESCRIPTION3	DRAWN3
REV4	DATE4	DESCRIPTION4	DRAWN4
REV5	DATE5	DESCRIPTION5	DRAWN5
REV6	DATE6	DESCRIPTION6	DRAWN6

DATE OF ISSUE: FEBRUARY 2018  
 DESIGNED BY: C. BARRETT  
 DRAWN BY: C. BARRETT  
 CHECKED BY: R. JOHNSON  
 APPROVED BY: R. JOHNSON



**Geo-Logic ASSOCIATES**  
 2777 E. GUASTI RD.  
 ONTARIO, CA 91761  
 909) 626-2282  
 www.geo-logic.com



SUNSHINE CANYON LANDFILL  
 SYLMAR, CALIFORNIA  
 SEMIANNUAL GROUNDWATER MONITORING REPORT  
 DISPOSAL AREAS - JULY THROUGH DECEMBER 2017

DWG NO. **1**  
 PROJECT NO. SO17.1289.PR

**APPENDIX F**

**WASTE ACCEPTANCE REPORTS**



# Republic Services, Inc.

18500 N. Allied Way, Phoenix, AZ 85054

## SPECIAL WASTE DEPARTMENT DECISION

Waste Profile #  
51231716126

Expiration Date  
1/3/2018

### I. Decision Request:

Initial    Recertification    Change

Disposal Facility: 5123 - Sunshine Canyon Landfill

Generator Name: Amex Farm LLC

Generator Site Address: 2622 S Alameda St

City: Vernon

County:

State: CA

Zip:

Name of Waste: Food Products

Estimated Annual Volume: 360 Pounds

### II. Special Waste Department Decision:   Approved   Rejected

Management Method(s):    Landfill    Solidification    Bioremediation    Transfer Facility

Problematic Special Waste according to Republic?    Yes    No

If yes, which one? \_\_\_\_\_

Approved by Special Waste Review Committee?    Yes    No    Not Applicable

### Precautions, Conditions or Limitations on Approval

This material must be buried immediately upon receipt at the landfill.

Special Waste Analyst Signature: \_\_\_\_\_

Name (Printed): Suzanne Glass

Date: 10/3/2017

### III. Facility Decision:

Approved    Rejected

### Precautions, Conditions or Limitations on Approval

By signing below, the General Manager or Designee agrees that a fully executed Special Waste Service Agreement is on file for this profile and that the special waste file is complete.

General Manager or Designee: \_\_\_\_\_

Name (Printed): Chris Coyle

Date: 10/3/2017



EXPRESS WASTE PROFILE

Requested Disposal Facility: 5123 Sunshine Canyon LF CA

Saveable fill in form. Restricted printing until all required (yellow) fields are completed.

Waste Profile #
5123 17 16126
Sales Rep #. 525 - Stacy Loveland

I. Generator Information

Generator Name: AMEX FARM LLC.			
Generator Site Address: 2622 S. ALAMEDA ST.			
City: VERNON	County: LA COUNTY	State: California	Zip: 90058
State ID/Reg No:	State Approval/Waste Code: (if applicable)		NAICS #.
Generator Mailing Address (if different): 2622 S. ALAMEDA ST.			
City: VERNON	County: VERNON	State: California	Zip: 90058
Generator Contact Name: ANDY TRAN		Email: AMEXFARM@GMAIL.COM	
Phone Number: (323) 521-1816	Ext:	Fax Number: (323) 521-1821	

II. Billing Information

Bill To: AMEX FARM LLC	Contact Name: ANDY TRAN		
Billing Address: 2622 S. ALAMEDA STREET	Email: AMEXFARM@GMAIL.COM		
City: VERNON	State: CA	Zip: 90058	Phone: (323) 521-1816

III. Waste Stream Information

Name of Waste: <small>(Petroleum products-applies only to contaminated media and debris).</small>	<input type="checkbox"/> Diesel Fuel	<input type="checkbox"/> Weathered Wood	<input type="checkbox"/> Friable Asbestos
	<input type="checkbox"/> Home Heating Fuel #1-6	<input type="checkbox"/> RCRA Empty Containers	<input type="checkbox"/> Non Friable Asbestos
	<input type="checkbox"/> Kerosene	<input type="checkbox"/> Treated Medical Waste	<input type="checkbox"/> Cured Asphalt
	<input type="checkbox"/> Aviation Fuel	<input type="checkbox"/> Animal Carcass (non infectious)	<input type="checkbox"/> Tires
	<input type="checkbox"/> Hydraulic Fluid	<input type="checkbox"/> Plant Trash	<input checked="" type="checkbox"/> Food Products <small>(Including Animal Food)</small>
	<input type="checkbox"/> Unleaded Gasoline (UST Corrective Action)	<input type="checkbox"/> Meth Contaminated Debris	
Process Generating Waste: QUARENTINED PRODUCED NOT ACCEPTED FOR CONSUMER USE MUST BE DISPOSED OF PRODUCT: OKINAWA SWEET POTATO			
Method of Shipment: <input type="checkbox"/> BULK <input type="checkbox"/> DRUM <input checked="" type="checkbox"/> BAGGED <input type="checkbox"/> OTHER:			
Estimated Annual Volume: 360 Pounds			
Frequency: <input checked="" type="checkbox"/> ONE TIME <input type="checkbox"/> ONGOING			

IV. Certification

I hereby certify that to the best of my knowledge and belief, the information contained herein is a true and accurate description of the waste material being offered for disposal. I further certify that by utilizing this profile, neither myself nor any other employee of the company will deliver for disposal or attempt to deliver for disposal any waste which is classified as toxic waste, hazardous waste or infectious waste, or any other waste material this facility is prohibited from accepting by law. Our company hereby agrees to fully indemnify this disposal facility against any damages resulting from this certification being inaccurate or untrue. I further certify that the company has not altered the form or content of this profile sheet as provided by Republic Services, Inc.

AN Q. TRAN	AMEX FARM LLC.
Authorized Representative Name/Title (Type or Print)	Company Name
	10/3/2017
Authorized Representative Signature	Date

TIME RECEIVED  
October 3, 2017 2:05:44 PM MST

REMOTE CSID

DURATION PAGES  
133 2

STATUS  
Received



### SPECIAL WASTE SERVICE AGREEMENT NON-HAZARDOUS WASTES

Special Waste Profile Number: 5123 17 16126

**Generator Billing Information**

Name: AMEX FARMS  
(ACCT CASH # 321)  
Address: 2622 S ALAMEDA ST  
City: VERNON  
State: CA Zip: 90058  
Phone: 323.521.1816 Fax: \_\_\_\_\_  
Contact: ANDY TRAN

**Republic Waste Location (Company)**

SUNSHINE CANYON LANDFILL (5123)  
14747 SAN FERNANDO ROAD  
SYLMAR, CA 91342  
818.362.2141

Project: FOOD PRODUCTS County and State of Origin: LOS ANGELES, CA

Additional Information: \_\_\_\_\_

- Special Waste Service.** Subject to the terms and conditions contained herein, the Company and the Generator agree to be legally bound hereby and the Company agrees to accept at its Facility, Acceptable Waste (hereinafter referred to as "Special Waste" or "Waste") delivered by Generator, and which is acceptable to the Company as herein provided.
- Acceptable Waste.** Only those Special Wastes described in Paragraph 3 herein and in any Special Waste Profile(s) which number is identical to the contract number referenced above, and which Profile(s) are hereby incorporated by reference herein, and which Waste is subsequently approved by the Company and is otherwise in accordance with all laws, regulations and permits, shall be acceptable for disposal at the Facility ("Acceptable Waste").



Cannot Exceed Daily Volume of 360 POUNDS Without Prior Approval of Company.

- (B) **Incorporation by Reference.** In addition to Special Waste Profile(s), the following documents are incorporated by reference into this Agreement as if fully set forth herein.
- 1) N/A
  - 2) N/A

4. **Term of Agreement.** This Agreement is effective for 12 months, commencing 10/3/2017 and shall automatically be renewed for a similar term thereafter unless either party shall give written notice (via certified mail) of termination to the other party at least thirty (30) days prior written notice.

THE COMPANY AND THE GENERATOR, IN CONSIDERATION OF THE MUTUAL OBLIGATIONS CONTAINED HEREIN, AGREE THAT THIS IS A LEGALLY BINDING AGREEMENT WHICH IS SUBJECT TO THE TERMS AND CONDITIONS SET FORTH ON THIS PAGE AND ON THE REVERSE SIDE OF THIS DOCUMENT. IN ADDITION, THE GENERATOR IS CERTIFYING THE ATTACHED TERMS AND CONDITIONS HAVE BEEN REVIEWED AND INITIALLED AT THE BOTTOM OF THE PAGE.

**GENERATOR**

Andy Tran  
SIGNATURE (AUTHORIZED REPRESENTATIVE)

ANDY TRAN  
NAME AND TITLE (PLEASE PRINT)

10/3/17  
DATE

**REPUBLIC SERVICES, INC/COMPANY**

Stacy Loveland  
SIGNATURE (AUTHORIZED REPRESENTATIVE)

Stacy Loveland - SW Executive  
NAME AND TITLE (PLEASE PRINT)

10/3/2017  
DATE



## Terms and Conditions of Special Waste Service Agreement

5. **The Agreement.** This agreement of the parties ("Agreement") for the disposal of Special Waste shall consist of this Agreement, those to the Agreement (if any) and any Application, permit and approval that may be applicable to such Waste.
6. **Waste Accepted at Facility.** Generator represents, warrants and covenants that the Waste delivered to Company at its Facility hereunder will be Acceptable Waste and will not contain any unacceptable quantity of hazardous materials or substances, radioactive materials or substances, or toxic waste or substances, as defined by applicable federal, state, local or provincial laws or regulations. Any Waste which does not meet these requirements shall hereinafter be referred to as "Unacceptable Waste". The Generator shall in all matters relating to the collection, transportation and disposal of the Waste hereunder, comply with all applicable federal, state and local laws, regulations, rules and orders regarding the same. The word "Facility" shall mean any landfill, transfer station or other location used to transfer, process or otherwise dispose of such Waste.
7. **Special Waste.** Generator represents, warrants and covenants that the Waste delivered to Company hereunder (i) will not contain any Special Waste that is not specifically described on any Application which is attached hereto or which is subsequently approved by the Company, (ii) will meet the material description as set forth in any Application and otherwise in all significant respects and (iii) will not contain Unacceptable Waste. The parties may incorporate additional Special Waste as part of this Agreement if prior to delivery of such Waste to Company, Generator has provided an Application for such Waste and Company has approved disposal of such Waste within the limitations and conditions contained in Company's written notice of approval of Special Waste Disposal. Title to any and all Waste handled or disposed of by Company shall at all times remain with Generator and Broker (if a Broker is involved).
8. **Rights of Refusal/Rejection.** The Generator shall inspect all Waste at the place(s) of collection and shall remove any and all Unacceptable Waste. Company has the right to refuse, or to reject after acceptance, any load(s) of Waste(s) delivered to its Facility including if the Company believes the Generator has breached (or is breaching) its representations, warranties, covenants or agreements hereunder, or any applicable federal, state or local laws, regulations, rules or orders, even if only a portion of such Waste load is unacceptable. The Company shall have the right to inspect all vehicles and containers of Waste haulers, including the Generator's vehicles, in order to determine whether the Waste is Acceptable Waste or Unacceptable Waste pursuant to this Agreement and all applicable federal, state and local laws, rules and regulations. The Company's exercise, or failure to exercise, its rights hereunder shall not operate to relieve the Generator of its responsibilities or liability under this Agreement. The Generator shall be responsible for, and bear all reasonable expenses and damages incurred by the Company, as a result of the Unacceptable Waste and in the reloading and removal of Unacceptable Waste disposed in the Facility. The Company, may also, in its sole discretion, require the Generator to promptly remove the Unacceptable Waste.
9. **Limited License to Enter.** This Agreement provides Generator with a license to enter the Facility for the limited purpose of, and only to the extent necessary for, off-loading Acceptable Waste at the Facility in the manner directed by Company. Except in an emergency, Generator's personnel shall not leave the immediate vicinity of their vehicle. After off-loading the Waste, Generator's personnel shall promptly leave the Facility. Under no circumstances shall Generator or its personnel engage in any scavenging of Waste or other materials at the Facility. The Company reserves the right to make and enforce reasonable rules and regulations concerning the operation of the Facility, the conduct of the drivers and others on the Facility premises, quantities and sources of Waste, and any other matters necessary or desirable for the safe, legal and efficient operation of the Facility including, but not limited to, speed limits on haul roads imposed by the Company, and the wearing of hard hats and other personal protection equipment by all individuals allowed on the Facility premises. Generator agrees to conform to such rules and regulations as they may be established and amended from time to time. Company may refuse to accept Waste from and shall deny an entrance license to, any of Generator's personnel whom Company believes is under the influence of alcohol or other chemical substances. Generator shall be solely responsible for its employees and subcontractors performing their obligations in a safe manner when at the facility of Company.
10. **Charges and Payment.** Payment shall be made by Generator within sixty (60) days after receipt of invoice from Company. In the event that any amount is overdue, the Company may terminate this Agreement. Generator agrees to pay a finance charge equal to the maximum interest rate permitted by law. Generator shall be liable for all taxes, fees, or other charges imposed upon the disposal of the Waste by federal, state, local or provincial laws and regulations. Company, from time to time, may modify its rates upon sixty (60) days written notice to Generator.
11. **Termination.** Generator's obligations, representations, warranties and covenants regarding the Waste delivered and all indemnities shall survive termination of this Agreement. Should Generator materially default in any of its obligations hereunder, then Company may immediately terminate this Agreement and Generator shall be liable for all costs and damages incurred by the Company.
12. **Driver's Knowledge and Authority.** Generator represents, warrants and covenants that its drivers who deliver Waste to Company's Facility have been advised by Generator of the Company's prohibition on deliveries of hazardous materials or substances, radioactive materials or substances, or toxic waste or substances or any other Unacceptable Waste to the Facility of Company's restrictions on deliveries of Special Waste to the Facility, of the definitions of "Hazardous Waste and Hazardous Substances" as provided by applicable federal, state and local law, rules and regulations and "Special Waste" as provided herein, and of the terms of this license to enter Company's Facility.
13. **Indemnification.** Generator shall indemnify, defend and hold harmless the Company and its subsidiaries, affiliate and parent corporations, as applicable and their respective officers, directors, lenders, employees, subcontractors and agents from and against any and all claims, suits, losses, liabilities, assessments, damages, fines, costs and expenses, including reasonable attorneys fees arising under federal, state or local laws, regulations or ordinances, or relating to the content of the Waste, or arising out of or in connection with any breach of this Agreement or arising out of the negligent collection, transportation and disposal of Waste by Generator or Generator's employees, agents, subcontractors or representatives thereof. Generator shall also be responsible for increased inspection, testing, study and analysis costs made necessary due to reasonable concerns of the Company as to the content of the Waste following discovery of potentially Unacceptable Waste. This indemnification and other obligations stated in this paragraph shall survive the termination of this Agreement.
14. **Insurance.** Generator shall maintain in full force and effect throughout the term of this Agreement the following types of insurance in at least the amounts specified below:

Coverages	Minimum Amounts of Insurance
Worker's Compensation	Statutory
General Liability	\$500,000 combined single limit
Automobile Liability	\$500,000 combined single limit

All insurance will be by insurers authorized to do business in the state in which the Facility is located. Prior to Generator being allowed on Facility premises, Generator shall provide the Company with certificates of insurance or other satisfactory evidence that such insurance has been procured and is in force. Said policies shall not thereafter be canceled, be permitted to expire of lapse, or be changed without thirty (30) days advance written notice to the Company. Generator warrants that it will ensure the above minimum amounts of insurance from any transportation of the Waste to the Facility.

15. **Failure to Perform.** Neither party hereto shall be liable for its failure to perform hereunder due to circumstances not its fault and beyond its reasonable control, including, but not limited to, strikes or other labor disputes, riots, protests, civil disturbances or sabotage, changes in law, fire, floods, compliance with government requests, explosions, accidents, weather, lack of required natural resources, or acts of God affecting either party hereto. In the event of any of the circumstances provided for in the preceding sentence, including, but not limited to, whether any federal, state or local court or governmental authority takes any action which would (i) close or restrict operations at the Facility, (ii) limit the quantity or prohibit the disposal of Waste at the Facility, or (iii) limit the ability of or prohibit Generator from delivering Waste to the Facility, the Company shall have the right, at its option, to reduce, suspend or terminate Generator's access to the Facility immediately, without prior notice and without any additional liabilities between the parties, other than Generator's payment obligation hereunder. Neither Party is required hereunder to settle any labor dispute against its own best judgment.

16. **Other Termination.** The occurrence of any of the following events shall also constitute an event of default by the Generator and shall give the Company the right to immediately terminate this Agreement:

- (A) A petition for reorganization or bankruptcy filed by or against the Generator.
- (B) Failure by Generator to pay any amounts due to Company.
- (C) Any breach by Generator of any of its obligations pursuant to the Agreement.

Generator shall be liable for and shall indemnify, defend and hold harmless Company from any losses, claims expenses or damages incurred by the Company as a result of termination hereunder.

17. **Assignment.** Generator may not assign, transfer or otherwise vest in any other Company, entity or person, in whole or in part, any of its rights or obligations under the Agreement without the prior written consent of the Company, provided, however, that the Company may without any such prior written consent, assign its rights and/or obligations under the Agreement to a subsidiary or affiliate corporation.

18. **Right of Disposal.** This Agreement does not grant any rights to dispose of Waste other than in accordance herewith. The Company reserves the right to immediately terminate access to the Facility by Generator and Generator's personnel in the event of breach or violation by Generator of any of the terms of this Agreement, the Company's operating rules or payment policies or any applicable laws or regulations.

19. **Continuing Compliance.** The Generator has a continuing obligation to inform the Company of any new information, or information not previously provided to the Company by Generator which may affect the acceptability of the Waste by the Company. Further, the Generator shall comply with all Company requests for evidence of Generator's continuing compliance with the terms of the Agreement including but not limited to the following: (i) providing new, updated Waste profiles on the Waste(s) offered for disposal or, (ii) providing appropriate certification that the Waste being offered for disposal is accurately reflected by the appropriate Application or, (iii) re-sample the Waste at Generator's expense if reasonable cause exists as to its acceptability under the terms of this Agreement or, (iv) allow the Company to re-sample the Waste at Generator's expense if reasonable cause exists as to its acceptability under the terms of this Agreement or (v) all of the above.

### 20. Miscellaneous.

- (A) This Agreement shall be governed by the laws of the State in which the Facility is located.
- (B) No waiver of a breach of any of the obligations contained in the Agreement shall be construed to be a waiver of any prior or succeeding breach of the same obligation or of any other obligation of the Agreement.
- (C) No modification, release, discharge or waiver of any provision or obligation hereof shall be of any force, or effect, unless in writing signed by all parties to this Agreement.
- (D) Generator shall treat as confidential and not disclose to others during or subsequent to the terms of this Agreement, except as is necessary to perform this Agreement, or to comply with any applicable law or regulation any information (including any technical information, experience or data) regarding the Company's plans, programs, plants, processes, products, costs, equipment or operations which may come within the knowledge of the Generator or its employees in the performance of this Agreement, without in each instance securing the prior written consent of the other Company.
- (E) If any term, phrase, obligation or provision of this Agreement shall be held to be invalid, illegal or unenforceable in any respect, this Agreement shall remain in effect and be construed without regard to such term, phrase, obligation or provision.
- (F) This Agreement constitutes the entire understanding between the parties, replacing and amending any prior agreements between the parties, and shall be binding upon all parties hereto, their successors, heirs, representatives and assigns. Any provision, term or condition in any acknowledgment, purchase order or other response by Generator which is in addition to or different from the provisions of this Agreement shall be deemed objected to by the Company and shall be of no effect.
- (G) Generator represents, warrants and covenants that it is and, during the term of this Agreement will remain, in compliance with and will perform its obligations pursuant to all applicable laws and regulations and shall indemnify, defend and hold harmless the Company from any breach thereof.
- (H) It is the understanding and agreement of the parties that the Company is an independent contractor and is not an agent, nor an authorized representative of the Generator.

21. **Notice.** All notices herein provided for shall be considered as having been given upon being placed in the mail, certified postage prepaid addressed to the Company or Generator at the address herein set forth in this Agreement or to such other address as may be given to the other party in writing.

22. **Liquidated Damages.** In the event that this Agreement is terminated by the Generator in a manner not in accordance with paragraph 4 hereof, or terminated due to a breach of this Agreement by the Generator, the Generator shall pay, as liquidated damages, and not as a penalty, the greater of an amount equal to six (6) months' service charges or the Generator's most recent monthly charge multiplied by six (6). The Generator shall be given credit for any advance payments made hereunder, however, in computing the amount owed as liquidated damages hereunder. The Generator acknowledges that this liquidated damages clause is reasonable and is applicable to recover damages related to its investment in equipment, development of landfill and hiring of employees undertaken by the Company to service its customers including the Generator. This liquidated damages clause in no way releases the Generator from its obligations and liability for other cost or damages as set forth elsewhere in this Agreement.

GENERATOR: AN Q. TRAN Republic Services, Inc/COMPANY: [Signature]

May 2009



# Republic Services, Inc.

18500 N. Allied Way, Phoenix, AZ 85054

## SPECIAL WASTE DEPARTMENT DECISION

	Waste Profile # 51231713660	Expiration Date 8/22/2018	
I. Decision Request:	<input checked="" type="checkbox"/> Initial <input type="checkbox"/> Recertification <input type="checkbox"/> Change		
Disposal Facility: 5123 - Sunshine Canyon Landfill			
Generator Name: Be-on Produce Inc			
Generator Site Address: 6025 S Triangle Dr			
City: Commerce	County: _____	State: CA	Zip: _____
Name of Waste: Food Products			
Estimated Annual Volume: 450 Pounds			

II. Special Waste Department Decision:     Approved     Rejected

Management Method(s):     Landfill     Solidification     Bioremediation     Transfer Facility

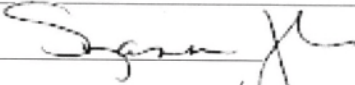
Problematic Special Waste according to Republic?     Yes     No

If yes, which one? \_\_\_\_\_

Approved by Special Waste Review Committee?     Yes     No     Not Applicable

### Precautions, Conditions or Limitations on Approval

This material must be buried immediately upon receipt at the landfill.

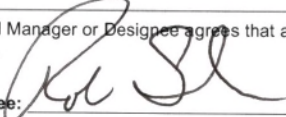
Special Waste Analyst Signature:     Name (Printed): Suzanne Glass  
Date: 8/22/2017

III. Facility Decision:     Approved     Rejected

Precautions, Conditions or Limitations on Approval

\_\_\_\_\_

By signing below, the General Manager or Designee agrees that a fully executed Special Waste Service Agreement is on file for this profile and that the special waste file is complete.

General Manager or Designee:     Name (Printed): Rob Sherman  
Date: 8/22/2017

Requested Disposal Facility: 5123 Sunshine Canyon LF CA

Waste Profile #

5123 17 13660

Sales Rep #. 525 - Stacy Loveland

Required printing unit; all required (yellow) fields are completed.

### I. Generator Information

Generator Name: Be-On Produce Inc.

Generator Site Address: 6025 S. Triangle Dr.

City: Commerce County: Los Angeles State: California Zip: 90040

State ID/Reg No: \_\_\_\_\_ State Approval/Waste Code: \_\_\_\_\_ (if applicable) NAICS #: \_\_\_\_\_

Generator Mailing Address (if different): 6025 S. Triangle Dr.

City: Commerce County: Commerce State: California Zip: 90040

Generator Contact Name: Harry Tran Email: \_\_\_\_\_

Phone Number: (323) 726-8882 Ext: \_\_\_\_\_ Fax Number: (323) 726-8886

### II. Billing Information

Bill To: Be-On Produce Inc. Contact Name: Harry Tran

Billing Address: 6025 S. Triangle Dr. Email: \_\_\_\_\_

City: Commerce State: Ca Zip: 90040 Phone: (323) 726-8882

### III. Waste Stream Information

Name of Waste: <small>(Petroleum products-applies only to contaminated media and debris).</small>	<input type="checkbox"/> Diesel Fuel	<input type="checkbox"/> Weathered Wood	<input type="checkbox"/> Friable Asbestos
	<input type="checkbox"/> Home Heating Fuel #1-6	<input type="checkbox"/> RCRA Empty Containers	<input type="checkbox"/> Non Friable Asbestos
	<input type="checkbox"/> Kerosene	<input type="checkbox"/> Treated Medical Waste	<input type="checkbox"/> Cured Asphalt
	<input type="checkbox"/> Aviation Fuel	<input type="checkbox"/> Animal Carcass (non infectious)	<input type="checkbox"/> Tires
	<input type="checkbox"/> Hydraulic Fluid	<input type="checkbox"/> Plant Trash	<input checked="" type="checkbox"/> Food Products <small>(Including Animal Food)</small>
<input type="checkbox"/> Unleaded Gasoline (UST-Corrective Action)	<input type="checkbox"/> Meth Contaminated Debris		

Process Generating Waste: Purple Yams have small pest/insects inside, so they need to be disposed/buried, Inspector Rogelio said - (213) 377-7872

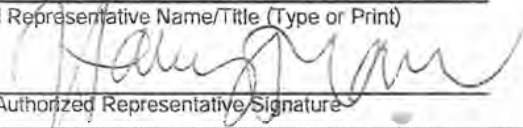
Method of Shipment:  BULK  DRUM  BAGGED  OTHER:

Estimated Annual Volume: 450 Pounds

Frequency:  ONE TIME  ONGOING

### IV. Certification

I hereby certify that to the best of my knowledge and belief, the information contained herein is a true and accurate description of the waste material being offered for disposal. I further certify that by utilizing this profile, neither myself nor any other employee of the company will deliver for disposal or attempt to deliver for disposal any waste which is classified as toxic waste, hazardous waste or infectious waste, or any other waste material this facility is prohibited from accepting by law. Our company hereby agrees to fully indemnify this disposal facility against any damages resulting from this certification being inaccurate or untrue. I further certify that the company has not altered the form or content of this profile sheet as provided by Republic Services, Inc.

<u>Harry Tran / Manager</u> Authorized Representative Name/Title (Type or Print)	<u>Be-On Produce Inc</u> Company Name
 Authorized Representative Signature	<u>08-21-2017</u> Date



# SPECIAL WASTE SERVICE AGREEMENT NON-HAZARDOUS WASTES

Special Waste Profile Number: 5123 17 13660

### Generator Billing Information

Name: BE-ON PRODUCE  
(ACCT CASH # 321)  
Address: 6025 S TRIANGLE DR  
City: COMMERCE  
State: CA Zip: 90040  
Phone: 323.726.8882 Fax: \_\_\_\_\_  
Contact: HARRY TRAN

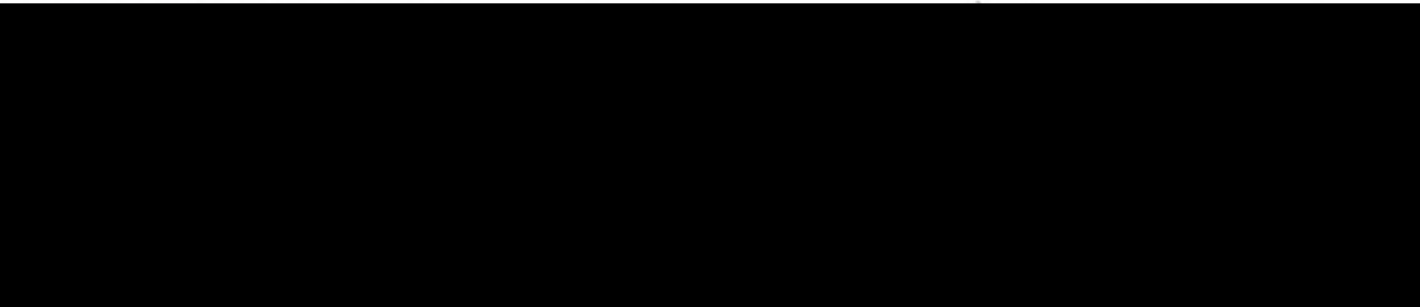
### Republic Waste Location (Company)

SUNSHINE CANYON LANDFILL (5123)  
14747 SAN FERNANDO ROAD  
SYLMAR, CA 91342  
818.362.2141

Project: FOOD PRODUCTS County and State of Origin: LOS ANGELES, CA

Additional Information: \_\_\_\_\_

- Special Waste Service.** Subject to the terms and conditions contained herein, the Company and the Generator agree to be legally bound hereby and the Company agrees to accept at its Facility, Acceptable Waste (hereinafter referred to as "Special Waste" or "Waste") delivered by Generator, and which is acceptable to the Company as herein provided.
- Acceptable Waste.** Only those Special Wastes described in Paragraph 3 herein and in any Special Waste Profile(s) which number is identical to the contract number referenced above, and which Profile(s) are hereby incorporated by reference herein, and which Waste is subsequently approved by the Company and is otherwise in accordance with all laws, regulations and permits, shall be acceptable for disposal at the Facility ("Acceptable Waste").

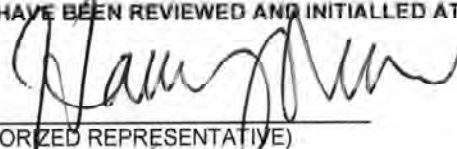


Cannot Exceed Daily Volume of 450 POUNDS Without Prior Approval of Company.

- (B) **Incorporation by Reference.** In addition to Special Waste Profile(s), the following documents are incorporated by reference into this Agreement as if fully set forth herein.
- 1) N/A
  - 2) N/A

4. **Term of Agreement.** This Agreement is effective for 12 months, commencing 8/22/2017 and shall automatically be renewed for a similar term thereafter unless either party shall give written notice (via certified mail) of termination to the other party at least thirty (30) days prior written notice.

THE COMPANY AND THE GENERATOR, IN CONSIDERATION OF THE MUTUAL OBLIGATIONS CONTAINED HEREIN, AGREE THAT THIS IS A LEGALLY BINDING AGREEMENT WHICH IS SUBJECT TO THE TERMS AND CONDITIONS SET FORTH ON THIS PAGE AND ON THE REVERSE SIDE OF THIS DOCUMENT. IN ADDITION, THE GENERATOR IS CERTIFYING THE ATTACHED TERMS AND CONDITIONS HAVE BEEN REVIEWED AND INITIALLED AT THE BOTTOM OF THE PAGE.

GENERATOR  
  
SIGNATURE (AUTHORIZED REPRESENTATIVE)  
HARRY TRAN / Manager  
NAME AND TITLE (PLEASE PRINT)  
8/22/17  
DATE

REPUBLIC SERVICES, INC/COMPANY  
  
SIGNATURE (AUTHORIZED REPRESENTATIVE)  
Stacy Loveland - SW Executive  
NAME AND TITLE (PLEASE PRINT)  
8/22/2017  
DATE

## Terms and Conditions of Special Waste Service Agreement

5. **The Agreement.** This agreement of the parties ("Agreement") for the disposal of Special Waste shall consist of this Agreement, riders to the Agreement (if any) and any Application, permit and approval that may be applicable to such Waste.
6. **Waste Accepted at Facility.** Generator represents, warrants and covenants that the Waste delivered to Company at its Facility hereunder will be Acceptable Waste and will not contain any unacceptable quantity of hazardous materials or substances, radioactive materials or substances, or toxic waste or substances, as defined by applicable federal, state, local or provincial laws or regulations. Any Waste which does not meet these requirements shall hereinafter be referred to as "Unacceptable Waste". The Generator shall in all matters relating to the collection, transportation and disposal of the Waste hereunder, comply with all applicable federal, state and local laws, regulations, rules and orders regarding the same. The word "Facility" shall mean any landfill, transfer station or other location used to transfer, process or otherwise dispose of such Waste.
7. **Special Waste.** Generator represents, warrants and covenants that the Waste delivered to Company hereunder (i) will not contain any Special Waste that is not specifically described on any Application which is attached hereto or which is subsequently approved by the Company, (ii) will meet the material description as set forth in any Application and otherwise in all significant respects and (iii) will not contain Unacceptable Waste. The parties may incorporate additional Special Waste as part of this Agreement if prior to delivery of such Waste to Company, Generator has provided an Application for such Waste and Company has approved disposal of such Waste within the limitations and conditions contained in Company's written notice of approval of Special Waste Disposal. Title to any and all Waste handled or disposed of by Company shall at all times remain with Generator and Broker (if a Broker is involved).
8. **Rights of Refusal/Rejection.** The Generator shall inspect all Waste at the place(s) of collection and shall remove any and all Unacceptable Waste. Company has the right to refuse, or to reject after acceptance, any load(s) of Waste(s) delivered to its Facility including if the Company believes the Generator has breached (or is breaching) its representations, warranties, covenants or agreements hereunder, or any applicable federal, state or local laws, regulations, rules or orders, even if only a portion of such Waste load is unacceptable. The Company shall have the right to inspect all vehicles and containers of Waste haulers, including the Generator's vehicles, in order to determine whether the Waste is Acceptable Waste or Unacceptable Waste pursuant to this Agreement and all applicable federal, state and local laws, rules and regulations. The Company's exercise, or failure to exercise, its rights hereunder shall not operate to relieve the Generator of its responsibilities or liability under this Agreement. The Generator shall be responsible for, and bear all reasonable expenses and damages incurred by the Company, as a result of the Unacceptable Waste and in the reloading and removal of Unacceptable Waste disposed in the Facility. The Company, may also, in its sole discretion, require the Generator to promptly remove the Unacceptable Waste.
9. **Limited License to Enter.** This Agreement provides Generator with a license to enter the Facility for the limited purpose of, and only to the extent necessary for, off-loading Acceptable Waste at the Facility in the manner directed by Company. Except in an emergency, Generator's personnel shall not leave the immediate vicinity of their vehicle. After off-loading the Waste, Generator's personnel shall promptly leave the Facility. Under no circumstances shall Generator or its personnel engage in any scavenging of Waste or other materials at the Facility. The Company reserves the right to make and enforce reasonable rules and regulations concerning the operation of the Facility, the conduct of the drivers and others on the Facility premises, quantities and sources of Waste, and any other matters necessary or desirable for the safe, legal and efficient operation of the Facility including, but not limited to, speed limits on haul roads imposed by the Company, and the wearing of hard hats and other personal protection equipment by all individuals allowed on the Facility premises. Generator agrees to conform to such rules and regulations as they may be established and amended from time to time. Company may refuse to accept Waste from and shall deny an entrance license to, any of Generator's personnel whom Company believes is under the influence of alcohol or other chemical substances. Generator shall be solely responsible for its employees and subcontractors performing their obligations in a safe manner when at the facility of Company.
10. **Charges and Payment.** Payment shall be made by Generator within sixty (60) days after receipt of invoice from Company. In the event that any amount is overdue, the Company may terminate this Agreement. Generator agrees to pay a finance charge equal to the maximum interest rate permitted by law. Generator shall be liable for all taxes, fees, or other charges imposed upon the disposal of the Waste by federal, state, local or provincial laws and regulations. Company, from time to time, may modify its rates upon sixty (60) days written notice to Generator.
11. **Termination.** Generator's obligations, representations, warranties and covenants regarding the Waste delivered and all indemnities shall survive termination of this Agreement. Should Generator materially default in any of its obligations hereunder, then Company may immediately terminate this Agreement and Generator shall be liable for all costs and damages incurred by the Company.
12. **Driver's Knowledge and Authority.** Generator represents, warrants and covenants that its drivers who deliver Waste to Company's Facility have been advised by Generator of the Company's prohibition on deliveries of hazardous materials or substances, radioactive materials or substances, or toxic waste or substances or any other Unacceptable Waste to the Facility of Company's restrictions on deliveries of Special Waste to the Facility, of the definitions of "Hazardous Waste and Hazardous Substances" as provided by applicable federal, state and local law, rules and regulations and "Special Waste" as provided herein, and of the terms of this license to enter Company's Facility.
13. **Indemnification.** Generator shall indemnify, defend and hold harmless the Company and its subsidiaries, affiliates and parent corporations, as applicable, and their respective officers, directors, lenders, employees, subcontractors and agents from and against any and all claims, suits, losses, liabilities, assessments, damages, fines, costs and expenses, including reasonable attorneys fees arising under federal, state or local laws, regulations or ordinances, or relating to the content of the Waste, or arising out of or in connection with any breach of this Agreement or arising out of the negligent collection, transportation and disposal of Waste by Generator or Generator's employees, agents, subcontractors or representatives thereof. Generator shall also be responsible for increased inspection, testing, study and analysis costs made necessary due to reasonable concerns of the Company as to the content of the Waste following discovery of potentially Unacceptable Waste. This indemnification and other obligations stated in this paragraph shall survive the termination of this Agreement.
14. **Insurance.** Generator shall maintain in full force and effect throughout the term of this Agreement the following types of insurance in at least the amounts specified below:

Coverages	Minimum Amounts of Insurance
Worker's Compensation	Statutory
General Liability	\$500,000 combined single limit
Automobile Liability	\$500,000 combined single limit

GENERATOR:



Republic Services, Inc/COMPANY:



May 2009

All insurance will be by insurers authorized to do business in the state in which the Facility is located. Prior to Generator being allowed on Facility premises, Generator shall provide the Company with certificates of insurance or other satisfactory evidence that such insurance has been procured and is in force. Said policies shall not thereafter be canceled, be permitted to expire or lapse, or be changed without thirty (30) days advance written notice to the Company. Generator warrants that it will secure the above minimum amounts of insurance from any transportation of the Waste to the Facility.

15. **Failure to Perform.** Neither party hereto shall be liable for its failure to perform hereunder due to circumstances not its fault and beyond its reasonable control, including, but not limited to, strikes or other labor disputes, riots, protests, civil disturbances or sabotage, changes in law, fires, floods, compliance with government requests, explosions, accidents, weather, lack of required natural resources, or acts of God affecting either party hereto. In the event of any of the circumstances provided for in the preceding sentence, including, but not limited to, whether any federal, state or local court or governmental authority takes any action which would (i) close or restrict operations at the Facility, (ii) limit the quantity or prohibit the disposal of Waste at the Facility, or (iii) limit the ability of or prohibit Generator from delivering Waste to the Facility, the Company shall have the right, at its option, to reduce, suspend or terminate Generator's access to the Facility immediately, without prior notice and without any additional liabilities between the parties, other than Generator's payment obligation hereunder. Neither Party is required hereunder to settle any labor dispute against its own best judgment.

16. **Other Termination.** The occurrence of any of the following events shall also constitute an event of default by the Generator and shall give the Company the right to immediately terminate this Agreement:

- (A) A petition for reorganization or bankruptcy filed by or against the Generator
- (B) Failure by Generator to pay any amounts due to Company.
- (C) Any breach by Generator of any of its obligations pursuant to the Agreement.

Generator shall be liable for and shall indemnify, defend and hold harmless Company from any losses, claims expenses or damages incurred by the Company as a result of termination hereunder.

17. **Assignment.** Generator may not assign, transfer or otherwise vest in any other Company, entity or person, in whole or in part, any of its rights or obligations under the Agreement without the prior written consent of the Company, provided, however, that the Company may without any such prior written consent, assign its rights and/or obligations under the Agreement to a subsidiary or affiliate corporation.

18. **Right of Disposal.** This Agreement does not grant any rights to dispose of Waste other than in accordance herewith. The Company reserves the right to immediately terminate access to the Facility by Generator and Generator's personnel in the event of breach or violation by Generator of any of the terms of this Agreement, the Company's operating rules or payment policies or any applicable laws or regulations.

19. **Continuing Compliance.** The Generator has a continuing obligation to inform the Company of any new information, or information not previously provided to the Company by Generator which may affect the acceptability of the Waste by the Company. Further, the Generator shall comply with all Company requests for evidence of Generator's continuing compliance with the terms of the Agreement including but not limited to the following: (i) providing new, updated Waste profiles on the Waste(s) offered for disposal or, (ii) providing appropriate certification that the Waste being offered for disposal is accurately reflected by the appropriate Application or, (iii) re-sample the Waste at Generator's expense if reasonable cause exists as to its acceptability under the terms of this Agreement or, (iv) allow the Company to re-sample the Waste at Generator's expense if reasonable cause exists as to its acceptability under the terms of this Agreement or (v) all of the above.

### 20. Miscellaneous.

- (A) This Agreement shall be governed by the laws of the State in which the Facility is located.
- (B) No waiver of a breach of any of the obligations contained in the Agreement shall be construed to be a waiver of any prior or succeeding breach of the same obligation or of any other obligation of this Agreement.
- (C) No modification, release, discharge or waiver of any provision or obligation hereof shall be of any force, or effect, unless in writing signed by all parties to this Agreement.
- (D) Generator shall treat as confidential and not disclose to others during or subsequent to the terms of this Agreement, except as is necessary to perform this Agreement, or to comply with any applicable law or regulation any information (including any technical information, experience or data) regarding the Company's plans, programs, plants, processes, products, costs, equipment or operations which may come within the knowledge of the Generator or its employees in the performance of this Agreement, without in each instance securing the prior written consent of the other Company.
- (E) If any term, phrase, obligation or provision of this Agreement shall be held to be invalid, illegal or unenforceable in any respect, this Agreement shall remain in effect and be construed without regard to such term, phrase, obligation or provision.
- (F) This Agreement constitutes the entire understanding between the parties, replacing and amending any prior agreements between the parties, and shall be binding upon all parties hereto, their successors, heirs, representatives and assigns. Any provision, term or condition in any acknowledgement, purchase order or other response by Generator which is in addition to or different from the provisions of this Agreement shall be deemed objected to by the Company and shall be of no effect.
- (G) Generator represents, warrants and covenants that it is and during the term of this Agreement will remain, in compliance with and will perform its obligations pursuant to all applicable laws and regulations and shall indemnify, defend and hold harmless the Company from any breach thereof.
- (H) It is the understanding and agreement of the parties that the Company is an independent contractor, and is not an agent, nor an authorized representative of the Generator.

21. **Notices.** All notices herein provided for shall be considered as having been given upon being placed in the mail, certified postage prepaid addressed to the Company or Generator at the address herein set forth in this Agreement or to such other address as may be given to the other party in writing.

22. **Liquidated Damages.** In the event that this Agreement is terminated by the Generator in a manner not in accordance with paragraph 4 hereof, or terminated due to a breach of this Agreement by the Generator, the Generator shall pay, as liquidated damages, and not as a penalty, the greater of an amount equal to six (6) months' service charges or the Generator's most recent monthly charge multiplied by six (6). The Generator shall be given credit for any advance payments made hereunder, however, in computing the amount owed as liquidated damages hereunder. The Generator acknowledges that this liquidated damages clause is reasonable and is applicable to recover damages related to its investment in equipment, development of landfills and hiring of employees undertaken by the Company to service its customers including the Generator. This liquidated damages clause in no way relieves the Generator from its obligations and liability for other cost or damages as set forth elsewhere in this Agreement.



# Republic Services, Inc.

18500 N. Allied Way, Phoenix, AZ 85054

## SPECIAL WASTE DEPARTMENT DECISION

	Waste Profile # 51231717519	Expiration Date 10/26/2020	
<b>I. Decision Request:</b>	<input checked="" type="checkbox"/> Initial <input type="checkbox"/> Recertification <input type="checkbox"/> Change		
Disposal Facility: 5123 - Sunshine Canyon Landfill			
Generator Name: Best Oriental Produce Inc			
Generator Site Address: 2929 Leonis Bl			
City: Vernon	County:	State: CA	Zip:
Name of Waste: Food Products			
Estimated Annual Volume: 1000 Pounds			

**II. Special Waste Department Decision:**     Approved     Rejected

Management Method(s):     Landfill     Solidification     Bioremediation     Transfer Facility

Problematic Special Waste according to Republic?     Yes     No

If yes, which one? \_\_\_\_\_

Approved by Special Waste Review Committee?     Yes     No     Not Applicable

### Precautions, Conditions or Limitations on Approval

This material must be buried immediately upon receipt at the landfill.

Special Waste Analyst Signature: \_\_\_\_\_

Date: 10/26/2017

Name (Printed): Suzanne Glass

**III. Facility Decision:**

Approved     Rejected

### Precautions, Conditions or Limitations on Approval

By signing below, the General Manager or Designee agrees that a fully executed Special Waste Service Agreement is on file for this profile and that the special waste file is complete.

General Manager or Designee: \_\_\_\_\_

Date: 10/26/2017

Name (Printed): Chris Coyle



Requested Disposal Facility: 5123 Sunshine Canyon LF CA

Saveable fill in form. Restricted printing until all required (yellow) fields are completed.

Waste Profile #
5123 17 17519
Sales Rep #: 525 - Stacy Loveland

**I. Generator Information**

Generator Name: BEST ORIENTAL PRODUCE, INC.			
Generator Site Address: 2929 LEONIS BL.			
City: VERNON	County: LOS ANGELES	State: California	Zip: 90058
State ID/Reg No: n/a	State Approval/Waste Code:		(if applicable) NAICS #.
Generator Mailing Address (if different): 2929 LEONIS BL.			
City: VERNON	County: LOS ANGELES	State: California	Zip: 90058
Generator Contact Name: Bert Kawahara		Email: bert@bestorientalproduce.com	
Phone Number: (323) 923-1660	Ext:	Fax Number: (323) 584-0012	

**II. Billing Information**

Bill To: Best Oriental Produce, Inc.	Contact Name: Bert Kawahara		
Billing Address: 2929 Leonis Bl.	Email: bert@bestorientalproduce.com		
City: Vernon	State: CA	Zip: 90058	Phone: (323) 923-1660

**III. Waste Stream Information**

Name of Waste: <small>(Petroleum products-applies only to contaminated media and debris).</small>	<input type="checkbox"/> Diesel Fuel	<input type="checkbox"/> Weathered Wood	<input type="checkbox"/> Friable Asbestos
	<input type="checkbox"/> Home Heating Fuel #1-6	<input type="checkbox"/> RCRA Empty Containers	<input type="checkbox"/> Non Friable Asbestos
	<input type="checkbox"/> Kerosene	<input type="checkbox"/> Treated Medical Waste	<input type="checkbox"/> Cured Asphalt
	<input type="checkbox"/> Aviation Fuel	<input type="checkbox"/> Animal Carcass (non infectious)	<input type="checkbox"/> Tires
	<input type="checkbox"/> Hydraulic Fluid	<input type="checkbox"/> Plant Trash	<input checked="" type="checkbox"/> Food Products <small>(Including Animal Food)</small>
	<input type="checkbox"/> Unleaded Gasoline (UST Corrective Action)	<input type="checkbox"/> Meth Contaminated Debris	

Process Generating Waste: Sweet potato - infested with Weevil insect

Method of Shipment: <input type="checkbox"/> BULK <input type="checkbox"/> DRUM <input checked="" type="checkbox"/> BAGGED <input type="checkbox"/> OTHER:
Estimated Annual Volume: 1,000 Pounds
Frequency: <input type="checkbox"/> ONE TIME <input checked="" type="checkbox"/> ONGOING

**IV. Certification**

I hereby certify that to the best of my knowledge and belief, the information contained herein is a true and accurate description of the waste material being offered for disposal. I further certify that by utilizing this profile, neither myself nor any other employee of the company will deliver for disposal or attempt to deliver for disposal any waste which is classified as toxic waste, hazardous waste or infectious waste, or any other waste material this facility is prohibited from accepting by law. Our company hereby agrees to fully indemnify this disposal facility against any damages resulting from this certification being inaccurate or untrue. I further certify that the company has not altered the form or content of this profile sheet as provided by Republic Services, Inc.

Bert Kawahara; General Manager	Best Oriental Produce, Inc.
Authorized Representative Name/Title (Type or Print)	Company Name
	10/27/2017
Authorized Representative Signature	Date



# SPECIAL WASTE SERVICE AGREEMENT NON-HAZARDOUS WASTES

Special Waste Profile Number: 5123 17 17519

**Generator Billing Information**

**Republic Waste Location (Company)**

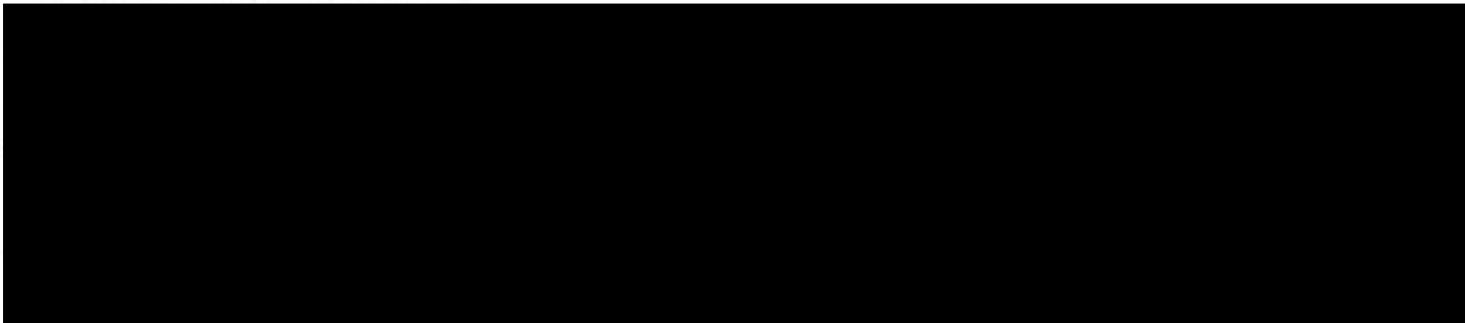
Name: BEST ORIENTAL PRODUCE INC  
(ACCT CASH # 321)  
Address: 2929 LEONIS BLVD  
City: VERNON  
State: CA Zip: 90058  
Phone: 323.923.1660 Fax: \_\_\_\_\_  
Contact: BERT KAWAHARA

SUNSHINE CANYON LANDFILL (5123)  
14747 SAN FERNANDO ROAD  
SYLMAR, CA 91342  
818.362.2141

**Project:** FOOD PRODUCTS **County and State of Origin:** LOS ANGELES, CA

Additional Information: \_\_\_\_\_

1. **Special Waste Service.** Subject to the terms and conditions contained herein, the Company and the Generator agree to be legally bound hereby and the Company agrees to accept at its Facility, Acceptable Waste (hereinafter referred to as "Special Waste" or "Waste") delivered by Generator, and which is acceptable to the Company as herein provided.
2. **Acceptable Waste.** Only those Special Wastes described in Paragraph 3 herein and in any Special Waste Profile(s) which number is identical to the contract number referenced above, and which Profile(s) are hereby incorporated by reference herein, and which Waste is subsequently approved by the Company and is otherwise in accordance with all laws, regulations and permits, shall be acceptable for disposal at the Facility ("Acceptable Waste").



Cannot Exceed Daily Volume of 1,000 POUNDS Without Prior Approval of Company.

- (B) **Incorporation by Reference.** In addition to Special Waste Profile(s), the following documents are incorporated by reference into this Agreement as if fully set forth herein.
- 1) N/A
  - 2) N/A

4. **Term of Agreement.** This Agreement is effective for 36 months, commencing 10/26/2017 and shall automatically be renewed for a similar term thereafter unless either party shall give written notice (via certified mail) of termination to the other party at least thirty (30) days prior written notice.

THE COMPANY AND THE GENERATOR, IN CONSIDERATION OF THE MUTUAL OBLIGATIONS CONTAINED HEREIN, AGREE THAT THIS IS A LEGALLY BINDING AGREEMENT WHICH IS SUBJECT TO THE TERMS AND CONDITIONS SET FORTH ON THIS PAGE AND ON THE REVERSE SIDE OF THIS DOCUMENT. IN ADDITION, THE GENERATOR IS CERTIFYING THE ATTACHED TERMS AND CONDITIONS HAVE BEEN REVIEWED AND INITIALLED AT THE BOTTOM OF THE PAGE.

**GENERATOR**

Bert Kawahara  
SIGNATURE (AUTHORIZED REPRESENTATIVE)

Bert Kawahara, General Manager  
NAME AND TITLE (PLEASE PRINT)

10/26/2017  
DATE

**REPUBLIC SERVICES, INC/COMPANY**

Stacy Loveland  
SIGNATURE (AUTHORIZED REPRESENTATIVE)

Stacy Loveland - SW Executive  
NAME AND TITLE (PLEASE PRINT)

10/26/2017  
DATE



# Terms and Conditions of Special Waste Service Agreement

5. **The Agreement.** This agreement of the parties ("Agreement") for the disposal of Special Waste shall consist of this Agreement, riders to the Agreement (if any) and any Application, permit and approval that may be applicable to such Waste.
6. **Waste Accepted at Facility.** Generator represents, warrants and covenants that the Waste delivered to Company at its Facility hereunder will be Acceptable Waste and will not contain any unacceptable quantity of hazardous materials or substances, radioactive materials or substances, or toxic waste or substances, as defined by applicable federal, state, local or provincial laws or regulations. Any Waste which does not meet these requirements shall hereinafter be referred to as "Unacceptable Waste". The Generator shall in all matters relating to the collection, transportation and disposal of the Waste hereunder, comply with all applicable federal, state and local laws, regulations, rules and orders regarding the same. The word "Facility" shall mean any landfill, transfer station or other location used to transfer, process or otherwise dispose of such Waste.
7. **Special Waste.** Generator represents, warrants and covenants that the Waste delivered to Company hereunder (i) will not contain any Special Waste that is not specifically described on any Application which is attached hereto or which is subsequently approved by the Company, (ii) will meet the material description as set forth in any Application and otherwise in all significant respects and (iii) will not contain Unacceptable Waste. The parties may incorporate additional Special Waste as part of this Agreement if prior to delivery of such Waste to Company, Generator has provided an Application for such Waste and Company has approved disposal of such Waste within the limitations and conditions contained in Company's written notice of approval of Special Waste Disposal. Title to any and all Waste handled or disposed of by Company shall at all times remain with Generator and Broker (if a Broker is involved).
8. **Rights of Refusal/Rejection.** The Generator shall inspect all Waste at the place(s) of collection and shall remove any and all Unacceptable Waste. Company has the right to refuse, or to reject after acceptance, any load(s) of Waste(s) delivered to its Facility including if the Company believes the Generator has breached (or is breaching) its representations, warranties, covenants or agreements hereunder, or any applicable federal, state or local laws, regulations, rules or orders, even if only a portion of such Waste load is unacceptable. The Company shall have the right to inspect all vehicles and containers of Waste haulers, including the Generator's vehicles, in order to determine whether the Waste is Acceptable Waste or Unacceptable Waste pursuant to this Agreement and all applicable federal, state and local laws, rules and regulations. The Company's exercise, or failure to exercise, its rights hereunder shall not operate to relieve the Generator of its responsibilities or liability under this Agreement. The Generator shall be responsible for, and bear all reasonable expenses and damages incurred by the Company, as a result of the Unacceptable Waste and in the reloading and removal of Unacceptable Waste disposed in the Facility. The Company may also, in its sole discretion, require the Generator to promptly remove the Unacceptable Waste.
9. **Limited License to Enter.** This Agreement provides Generator with a license to enter the Facility for the limited purpose of, and only to the extent necessary for, off-loading Acceptable Waste at the Facility in the manner directed by Company. Except in an emergency, Generator's personnel shall not leave the immediate vicinity of their vehicle. After off-loading the Waste, Generator's personnel shall promptly leave the Facility. Under no circumstances shall Generator or its personnel engage in any scavenging of Waste or other materials at the Facility. The Company reserves the right to make and enforce reasonable rules and regulations concerning the operation of the Facility, the conduct of the drivers and others on the Facility premises, quantities and sources of Waste, and any other matters necessary or desirable for the safe, legal and efficient operation of the Facility including, but not limited to, speed limits on haul roads imposed by the Company, and the wearing of hard hats and other personal protection equipment by all individuals allowed on the Facility premises. Generator agrees to conform to such rules and regulations as they may be established and amended from time to time. Company may refuse to accept Waste from and shall deny an entrance license to, any of Generator's personnel whom Company believes is under the influence of alcohol or other chemical substances. Generator shall be solely responsible for its employees and subcontractors performing their obligations in a safe manner when at the facility of Company.
10. **Charges and Payment.** Payment shall be made by Generator within sixty (60) days after receipt of invoice from Company. In the event that any amount is overdue, the Company may terminate this Agreement. Generator agrees to pay a finance charge equal to the maximum interest rate permitted by law. Generator shall be liable for all taxes, fees, or other charges imposed upon the disposal of the Waste by federal, state, local or provincial laws and regulations. Company, from time to time, may modify its rates upon sixty (60) days written notice to Generator.
11. **Termination.** Generator's obligations, representations, warranties and covenants regarding the Waste delivered and all indemnities shall survive termination of this Agreement. Should Generator materially default in any of its obligations hereunder, then Company may immediately terminate this Agreement and Generator shall be liable for all costs and damages incurred by the Company.
12. **Driver's Knowledge and Authority.** Generator represents, warrants and covenants that its drivers who deliver Waste to Company's Facility have been advised by Generator of the Company's prohibition on deliveries of hazardous materials or substances, radioactive materials or substances, or toxic waste or substances or any other Unacceptable Waste to the Facility of Company's restrictions on deliveries of Special Waste to the Facility, of the definitions of "Hazardous Waste and Hazardous Substances" as provided by applicable federal, state and local law, rules and regulations and "Special Waste" as provided herein, and of the terms of this license to enter Company's Facility.
13. **Indemnification.** Generator shall indemnify, defend and hold harmless the Company and its subsidiaries, affiliates and parent corporations, as applicable and their respective officers, directors, lenders, employees, subcontractors and agents from and against any and all claims, suits, losses, liabilities, assessments, damages, fines, costs and expenses, including reasonable attorney's fees arising under federal, state or local laws, regulations or ordinances, or relating to the content of the Waste, or arising out of or in connection with any breach of this Agreement or arising out of the negligent collection, transportation and disposal of Waste by Generator or Generator's employees, agents, subcontractors or representatives thereof. Generator shall also be responsible for increased inspection, testing, study and analysis costs made necessary due to reasonable concerns of the Company as to the content of the Waste following discovery of potentially Unacceptable Waste. This indemnification and other obligations stated in this paragraph shall survive the termination of this Agreement.
14. **Insurance.** Generator shall maintain in full force and effect throughout the term of this Agreement the following types of insurance in at least the amounts specified below:

All insurance will be by insurers authorized to do business in the state in which the Facility is located. Prior to Generator being allowed on Facility premises, Generator shall provide the Company with certificates of insurance or other satisfactory evidence that such insurance has been procured and is in force. Said policies shall not thereafter be canceled, be permitted to expire or lapse, or be changed without thirty (30) days advance written notice to the Company. Generator warrants that it will secure the above minimum amounts of insurance from any transportation of the Waste to the Facility.

15. **Failure to Perform.** Neither party hereto shall be liable for its failure to perform hereunder due to circumstances not its fault and beyond its reasonable control, including, but not limited to, strikes or other labor disputes, riots, protests, civil disturbances or sabotage, changes in law, fires, floods, compliance with government requests, explosions, accidents, weather, lack of required natural resources, or acts of God affecting either party hereto. In the event of any of the circumstances provided for in the preceding sentence, including, but not limited to, whether any federal, state or local court or governmental authority takes any action which would (i) close or restrict operations at the Facility, (ii) limit the quantity or prohibit the disposal of Waste at the Facility, or (iii) limit the ability of or prohibit Generator from delivering Waste to the Facility, the Company shall have the right, at its option, to reduce, suspend or terminate Generator's access to the Facility immediately, without prior notice and without any additional liabilities between the parties, other than Generator's payment obligation hereunder. Neither Party is required hereunder to settle any labor dispute against its own best judgment.
16. **Other Termination.** The occurrence of any of the following events shall also constitute an event of default by the Generator and shall give the Company the right to immediately terminate this Agreement:
  - (A) A petition for reorganization or bankruptcy filed by or against the Generator.
  - (B) Failure by Generator to pay any amounts due to Company.
  - (C) Any breach by Generator of any of its obligations pursuant to the Agreement.

Generator shall be liable for and shall indemnify, defend and hold harmless Company from any losses, claims expenses or damages incurred by the Company as a result of termination hereunder.
17. **Assignment.** Generator may not assign, transfer or otherwise vest in any other Company, entity or person, in whole or in part, any of its rights or obligations under the Agreement without the prior written consent of the Company, provided, however, that the Company may without any such prior written consent, assign its rights and/or obligations under the Agreement to a subsidiary or affiliate corporation.
18. **Right of Disposal.** This Agreement does not grant any rights to dispose of Waste other than in accordance herewith. The Company reserves the right to immediately terminate access to the Facility by Generator and Generator's personnel in the event of breach or violation by Generator of any of the terms of this Agreement, the Company's operating rules or payment policies or any applicable laws or regulations.
19. **Continuing Compliance.** The Generator has a continuing obligation to inform the Company of any new information, or information not previously provided to the Company by Generator which may affect the acceptability of the Waste by the Company. Further, the Generator shall comply with all Company requests for evidence of Generator's continuing compliance with the terms of the Agreement including but not limited to the following: (i) providing new, updated Waste profiles on the Waste(s) offered for disposal or, (ii) providing appropriate certification that the Waste being offered for disposal is accurately reflected by the appropriate Application or, (iii) re-sample the Waste at Generator's expense if reasonable cause exists as to its acceptability under the terms of this Agreement or, (iv) allow the Company to re-sample the Waste at Generator's expense if reasonable cause exists as to its acceptability under the terms of this Agreement or (v) all of the above.
20. **Miscellaneous.**
  - (A) This Agreement shall be governed by the laws of the State in which the Facility is located.
  - (B) No waiver of a breach of any of the obligations contained in the Agreement shall be construed to be a waiver of any prior or succeeding breach of the same obligation or of any other obligation of this Agreement.
  - (C) No modification, release, discharge or waiver of any provision or obligation hereof shall be of any force, or effect, unless in writing signed by all parties to this Agreement.
  - (D) Generator shall treat as confidential and not disclose to others during or subsequent to the terms of this Agreement, except as is necessary to perform this Agreement, or to comply with any applicable law or regulation any information (including any technical information, experience or date) regarding the Company's plans, programs, plants, processes, products, costs, equipment or operations which may come within the knowledge of the Generator or its employees in the performance of this Agreement, without in each instance securing the prior written consent of the other Company.
  - (E) If any term, phrase, obligation or provision of this Agreement shall be held to be invalid, illegal or unenforceable in any respect, this Agreement shall remain in effect and be construed without regard to such term, phrase, obligation or provision.
  - (F) This Agreement constitutes the entire understanding between the parties, replacing and amending any prior agreements between the parties, and shall be binding upon all parties hereto, their successors, heirs, representatives and assigns. Any provision, term or condition in any acknowledgment, purchase order or other response by Generator which is in addition to or different from the provisions of this Agreement shall be deemed objected to by the Company and shall be of no effect.
  - (G) Generator represents, warrants and covenants that it is and, during the term of this Agreement will remain, in compliance with and will perform its obligations pursuant to all applicable laws and regulations and shall indemnify, defend and hold harmless the Company from any breach thereof.
  - (H) It is the understanding and agreement of the parties that the Company is an independent contractor, and is not an agent, nor an authorized representative of the Generator.

21. **Notices.** All notices herein provided for shall be considered as having been given upon being placed in the mail, certified postage prepaid addressed to the Company or Generator at the address herein set forth in this Agreement or to such other address as may be given to the other party in writing.

22. **Liquidated Damages.** In the event that this Agreement is terminated by the Generator in a manner not in accordance with paragraph 4 hereof, or terminated due to a breach of this Agreement by the Generator, the Generator shall pay, as liquidated damages, and not as a penalty, the greater of an amount equal to six (6) months' service charges or the Generator's most recent monthly charge multiplied by six (6). The Generator shall be given credit for any advance payments made hereunder, however, in computing the amount owed as liquidated damages hereunder. The Generator acknowledges that this liquidated damages clause is reasonable and is applicable to recover damages related to its investment in equipment, development of landfills and hiring of employees undertaken by the Company to service its customers including the Generator. This liquidated damages clause in no way relieves the Generator from its obligations and liability for other cost or damages as set forth elsewhere in this Agreement.

Coverages	Minimum Amounts of Insurance
Worker's Compensation	Statutory
General Liability	\$500,000 combined single limit
Automobile Liability	\$500,000 combined single limit

GENERATOR: Ben Kaurshan

Republic Services, Inc/COMPANY: St. [Signature]

May 2009



Republic Services, Inc.

18500 N. Allied Way, Phoenix, AZ 85054

SPECIAL WASTE DEPARTMENT DECISION

	Waste Profile # 51231720743	Expiration Date 12/18/2018	
I. Decision Request:	<input checked="" type="checkbox"/> Initial <input type="checkbox"/> Recertification <input type="checkbox"/> Change		
Disposal Facility: 5123 - Sunshine Canyon Landfill			
Generator Name: Brand Produce			
Generator Site Address: 1601 E Olympic No.110			
City: Los Angeles	County:	State: CA	Zip:
Name of Waste: Food Products			
Estimated Annual Volume: 15,000 Pounds			

II. Special Waste Department Decision:    Approved    Rejected

Management Method(s):    Landfill    Solidification    Bioremediation    Transfer Facility

Problematic Special Waste according to Republic?    Yes    No

If yes, which one? \_\_\_\_\_

Approved by Special Waste Review Committee?    Yes    No    Not Applicable

Precautions, Conditions or Limitations on Approval

This material must be buried immediately upon receipt at the landfill.

Special Waste Analyst Signature:

Name (Printed): Suzanne Glass

Date: 12/18/2017

III. Facility Decision:    Approved    Rejected

Precautions, Conditions or Limitations on Approval

By signing below, the General Manager or Designee agrees that a fully executed Special Waste Service Agreement is on file for this profile and that the special waste file is complete.

General Manager or Designee:

Name (Printed): Chris Cuyler

Date: 12/18/2017



Requested Disposal Facility: 5123 Sunshine Canyon LF CA

Saveable fill in form. Restricted printing until all required (yellow) fields are completed.

Waste Profile #
5123 17 20743
Sales Rep # 525 - Stacy Loveland

**I. Generator Information**

Generator Name: Brand Produce Inc.			
Generator Site Address: 1601 E. Olympic Blvd. Suite #110			
City: Los Angeles	County: Los Angeles	State: California	Zip: 90021
State ID/Reg No:	State Approval/Waste Code:	(if applicable)	NAICS #.
Generator Mailing Address (if different):			
City:	County:	State: -- Select a State --	Zip:
Generator Contact Name: Serjik Gharibian		Email: serjik@brandproduce.com	
Phone Number: 2136882100	Ext:	Fax Number: 213-6882101	

**II. Billing Information**

Bill To: Brand Produce Inc	Contact Name: Serjik Gharibian		
Billing Address: 1601 E. Olympic Blvd. Suite #110	Email: serjik@brandproduce.com		
City: Los Angeles	State: CA	Zip: 90021	Phone: 213-6882100

**III. Waste Stream Information**

Name of Waste: <small>(Petroleum products-applies only to contaminated media and debris).</small>	<input type="checkbox"/> Diesel Fuel	<input type="checkbox"/> Weathered Wood	<input type="checkbox"/> Friable Asbestos
	<input type="checkbox"/> Home Heating Fuel #1-6	<input type="checkbox"/> RCRA Empty Containers	<input type="checkbox"/> Non Friable Asbestos
<input type="checkbox"/> Kerosene	<input type="checkbox"/> Treated Medical Waste	<input type="checkbox"/> Cured Asphalt	
<input type="checkbox"/> Aviation Fuel	<input type="checkbox"/> Animal Carcass (non infectious)	<input type="checkbox"/> Tires	
<input type="checkbox"/> Hydraulic Fluid	<input type="checkbox"/> Plant Trash	<input checked="" type="checkbox"/> Food Products <small>(Including Animal Food)</small>	
<input type="checkbox"/> Unleaded Gasoline (UST Corrective Action)	<input type="checkbox"/> Meth Contaminated Debris		

Process Generating Waste: Satsuma Oranges that were moved out of their quaratined growing area. Need to dispose of

Method of Shipment: <input checked="" type="checkbox"/> BULK <input type="checkbox"/> DRUM <input type="checkbox"/> BAGGED <input type="checkbox"/> OTHER: Palletized cartons
Estimated Annual Volume: 15,000 Pounds
Frequency: <input checked="" type="checkbox"/> ONE TIME <input type="checkbox"/> ONGOING

**IV. Certification**

I hereby certify that to the best of my knowledge and belief, the information contained herein is a true and accurate description of the waste material being offered for disposal. I further certify that by utilizing this profile, neither myself nor any other employee of the company will deliver for disposal or attempt to deliver for disposal any waste which is classified as toxic waste, hazardous waste or infectious waste, or any other waste material this facility is prohibited from accepting by law. Our company hereby agrees to fully indemnify this disposal facility against any damages resulting from this certification being inaccurate or untrue. I further certify that the company has not altered the form or content of this profile sheet as provided by Republic Services, Inc.

Serjik Gharibian/President	Brand Produce Inc
Authorized Representative Name/Title (Type or Print)	Company Name
	Dec 17, 2017
Authorized Representative Signature	Date



# SPECIAL WASTE SERVICE AGREEMENT NON-HAZARDOUS WASTES

Special Waste Profile Number: 5123 17 20743

### Generator Billing Information

Name: BRAND PRODUCE  
(ACCT CASH # 321)  
Address: 1601 E OLYMPIC NO 110  
City: LOS ANGELES  
State: CA Zip: 90021  
Phone: 213.688.2100 Fax: \_\_\_\_\_  
Contact: SERJIK GHARIBIAN

### Republic Waste Location (Company)

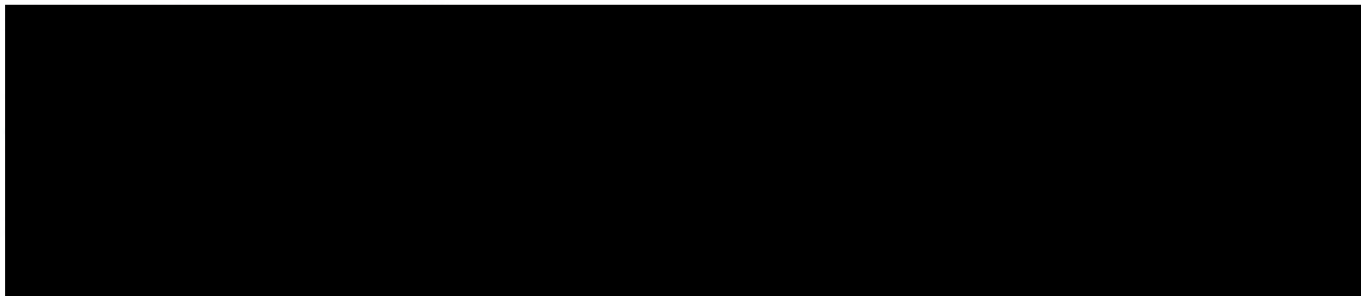
SUNSHINE CANYON LANDFILL (5123)  
14747 SAN FERNANDO ROAD  
SYLMAR, CA 91342  
818.362.2141

Project: FOOD PRODUCTS

County and State  
of Origin: LOS ANGELES, CA

Additional Information: \_\_\_\_\_

- Special Waste Service.** Subject to the terms and conditions contained herein, the Company and the Generator agree to be legally bound hereby and the Company agrees to accept at its Facility, Acceptable Waste (hereinafter referred to as "Special Waste" or "Waste") delivered by Generator, and which is acceptable to the Company as herein provided.
- Acceptable Waste.** Only those Special Wastes described in Paragraph 3 herein and in any Special Waste Profile(s) which number is identical to the contract number referenced above, and which Profile(s) are hereby incorporated by reference herein, and which Waste is subsequently approved by the Company and is otherwise in accordance with all laws, regulations and permits, shall be acceptable for disposal at the Facility ("Acceptable Waste").



Cannot Exceed Daily Volume of 15,000 POUNDS Without Prior Approval of Company.

(B) **Incorporation by Reference.** In addition to Special Waste Profile(s), the following documents are incorporated by reference into this Agreement as if fully set forth herein.

1) N/A

2) N/A

4. **Term of Agreement.** This Agreement is effective for 12 months, commencing 12/18/2017 and shall automatically be renewed for a similar term thereafter unless either party shall give written notice (via certified mail) of termination to the other party at least thirty (30) days prior written notice.

THE COMPANY AND THE GENERATOR, IN CONSIDERATION OF THE MUTUAL OBLIGATIONS CONTAINED HEREIN, AGREE THAT THIS IS A LEGALLY BINDING AGREEMENT WHICH IS SUBJECT TO THE TERMS AND CONDITIONS SET FORTH ON THIS PAGE AND ON THE REVERSE SIDE OF THIS DOCUMENT. IN ADDITION, THE GENERATOR IS CERTIFYING THE ATTACHED TERMS AND CONDITIONS HAVE BEEN REVIEWED AND INITIALED AT THE BOTTOM OF THE PAGE.

GENERATOR

Serjik Gharibian  
SIGNATURE (AUTHORIZED REPRESENTATIVE)

SERJIK GHARIBIAN PRESIDENT  
NAME AND TITLE (PLEASE PRINT)

12/19/17  
DATE

REPUBLIC SERVICES, INC/COMPANY

Stacy Loveland  
SIGNATURE (AUTHORIZED REPRESENTATIVE)

Stacy Loveland - SW Executive  
NAME AND TITLE (PLEASE PRINT)

12/19/2017  
DATE

# Terms and Conditions of Special Waste Service Agreement

5. **The Agreement.** This agreement of the parties ("Agreement") for the disposal of Special Waste shall consist of this Agreement, orders to the Agreement (if any) and any Application, permit and approval that may be applicable to such Waste.
6. **Waste Accepted at Facility.** Generator represents, warrants and covenants that the Waste delivered to Company at its Facility hereunder will be Acceptable Waste and will not contain any unacceptable quantity of hazardous materials or substances, radioactive materials or substances, or toxic waste or substances, as defined by applicable federal, state, local or provincial laws or regulations. Any Waste which does not meet these requirements shall hereinafter be referred to as "Unacceptable Waste". The Generator shall in all matters relating to the collection, transportation and disposal of the Waste hereunder, comply with all applicable federal, state and local laws, regulations, rules and orders regarding the same. The word "Facility" shall mean any landfill, transfer station or other location used to transfer, process or otherwise dispose of such Waste.
7. **Special Waste.** Generator represents, warrants and covenants that the Waste delivered to Company hereunder (i) will not contain any Special Waste that is not specifically described on any Application which is attached hereto or which is subsequently approved by the Company, (ii) will meet the material description as set forth in any Application and otherwise in all significant respects and (iii) will not contain Unacceptable Waste. The parties may incorporate additional Special Waste as part of this Agreement if prior to delivery of such Waste to Company, Generator has provided an Application for such Waste and Company has approved disposal of such Waste within the limitations and conditions contained in Company's written notice of approval of Special Waste Disposal. Title to any and all Waste handled or disposed of by Company shall at all times remain with Generator and Broker (if a Broker is involved).
8. **Rights of Refusal/Rejection.** The Generator shall inspect all Waste at the place(s) of collection and shall remove any and all Unacceptable Waste. Company has the right to refuse, or to reject after acceptance, any load(s) of Waste(s) delivered to its Facility including if the Company believes the Generator has breached (or is breaching) its representations, warranties, covenants or agreements hereunder, or any applicable federal, state or local laws, regulations, rules or orders, even if only a portion of such Waste load is unacceptable. The Company shall have the right to inspect all vehicles and containers of Waste haulers, including the Generator's vehicles, in order to determine whether the Waste is Acceptable Waste or Unacceptable Waste pursuant to this Agreement and all applicable federal, state and local laws, rules and regulations. The Company's exercise, or failure to exercise, its rights hereunder shall not operate to relieve the Generator of its responsibilities or liability under this Agreement. The Generator shall be responsible for, and bear all reasonable expenses and damages incurred by the Company, as a result of the Unacceptable Waste and in the reloading and removal of Unacceptable Waste disposed in the Facility. The Company, may also, in its sole discretion, require the Generator to promptly remove the Unacceptable Waste.
9. **Limited License to Enter.** This Agreement provides Generator with a license to enter the Facility for the limited purpose of, and only to the extent necessary for, off-loading Acceptable Waste at the Facility in the manner directed by Company. Except in an emergency, Generator's personnel shall not leave the immediate vicinity of their vehicle. After off-loading the Waste, Generator's personnel shall promptly leave the Facility. Under no circumstances shall Generator or its personnel engage in any scavenging of Waste or other materials at the Facility. The Company reserves the right to make and enforce reasonable rules and regulations concerning the operation of the Facility, the conduct of the drivers and others on the Facility premises, quantities and sources of Waste, and any other matters necessary or desirable for the safe, legal and efficient operation of the Facility including, but not limited to, speed limits on haul roads imposed by the Company, and the wearing of hard hats and other personal protection equipment by all individuals allowed on the Facility premises. Generator agrees to conform to such rules and regulations as they may be established and amended from time to time. Company may refuse to accept Waste from and shall deny an entrance license to, any of Generator's personnel whom Company believes is under the influence of alcohol or other chemical substances. Generator shall be solely responsible for its employees and subcontractors performing their obligations in a safe manner when at the facility of Company.
10. **Charges and Payment.** Payment shall be made by Generator within sixty (60) days after receipt of invoice from Company. In the event that any amount is overdue, the Company may terminate this Agreement. Generator agrees to pay a finance charge equal to the maximum interest rate permitted by law. Generator shall be liable for all taxes, fees, or other charges imposed upon the disposal of the Waste by federal, state, local or provincial laws and regulations. Company, from time to time, may modify its rates upon sixty (60) days written notice to Generator.
11. **Termination.** Generator's obligations, representations, warranties and covenants regarding the Waste delivered and all indemnities shall survive termination of this Agreement. Should Generator materially default in any of its obligations hereunder, then Company may immediately terminate this Agreement and Generator shall be liable for all costs and damages incurred by the Company.
12. **Driver's Knowledge and Authority.** Generator represents, warrants and covenants that its drivers who deliver Waste to Company's Facility have been advised by Generator of the Company's prohibition on deliveries of hazardous materials or substances, radioactive materials or substances, or toxic waste or substances or any other Unacceptable Waste to the Facility of Company's restrictions on deliveries of Special Waste to the Facility, of the definitions of "Hazardous Waste and Hazardous Substances" as provided by applicable federal, state and local law, rules and regulations and "Special Waste" as provided herein, and of the terms of this license to enter Company's Facility.
13. **Indemnification.** Generator shall indemnify, defend and hold harmless the Company and its subsidiaries, affiliates and parent corporations, as applicable and their respective officers, directors, lenders, employees, subcontractors and agents from and against any and all claims, suits, losses, liabilities, assessments, damages, fines, costs and expenses, including reasonable attorneys fees arising under federal, state or local laws, regulations or ordinances, or relating to the content of the Waste, or arising out of or in connection with any breach of this Agreement or arising out of the negligent collection, transportation and disposal of Waste by Generator or Generator's employees, agents, subcontractors or representatives thereof. Generator shall also be responsible for increased inspection, testing, study and analysis costs made necessary due to reasonable concerns of the Company as to the content of the Waste following discovery of potentially Unacceptable Waste. This indemnification and other obligations stated in this paragraph shall survive the termination of this Agreement.
14. **Insurance.** Generator shall maintain in full force and effect throughout the term of this Agreement the following types of insurance in at least the amounts specified below:

Coverages	Minimum Amounts of Insurance
Worker's Compensation	Statutory
General Liability	\$500,000 combined single limit
Automobile Liability	\$500,000 combined single limit

All insurance will be by insurers authorized to do business in the state in which the Facility is located. Prior to Generator being allowed on Facility premises, Generator shall provide the Company with certificates of insurance or other satisfactory evidence that such insurance has been procured and is in force. Said policies shall not thereafter be canceled, be permitted to expire or lapse, or be changed without thirty (30) days advance written notice to the Company. Generator warrants that it will secure the above minimum amounts of insurance from any transportation of the Waste to the Facility.

15. **Failure to Perform.** Neither party hereto shall be liable for its failure to perform hereunder due to circumstances not its fault and beyond its reasonable control, including, but not limited to, strikes or other labor disputes, riots, protests, civil disturbances or sabotage, changes in law, fires, floods, compliance with government requests, explosions, accidents, weather, lack of required natural resources, or acts of God affecting either party hereto. In the event of any of the circumstances provided for in the preceding sentence, including, but not limited to, whether any federal, state or local court or governmental authority takes any action which would (i) close or restrict operations at the Facility, (ii) limit the quantity or prohibit the disposal of Waste at the Facility, or (iii) limit the ability of or prohibit Generator from delivering Waste to the Facility, the Company shall have the right, at its option, to reduce, suspend or terminate Generator's access to the Facility immediately, without prior notice and without any additional liabilities between the parties, other than Generator's payment obligation hereunder. Neither Party is required hereunder to settle any labor dispute against its own best judgment.
16. **Other Termination.** The occurrence of any of the following events shall also constitute an event of default by the Generator and shall give the Company the right to immediately terminate this Agreement.
  - (A) A petition for reorganization or bankruptcy filed by or against the Generator.
  - (B) Failure by Generator to pay any amounts due to Company.
  - (C) Any breach by Generator of any of its obligations pursuant to the Agreement.

Generator shall be liable for and shall indemnify, defend and hold harmless Company from any losses, claims expenses or damages incurred by the Company as a result of termination hereunder.
17. **Assignment.** Generator may not assign, transfer or otherwise vest in any other Company, entity or person, in whole or in part, any of its rights or obligations under the Agreement without the prior written consent of the Company, provided, however, that the Company may without any such prior written consent, assign its rights and/or obligations under the Agreement to a subsidiary or affiliate corporation.
18. **Right of Disposal.** This Agreement does not grant any rights to dispose of Waste other than in accordance herewith. The Company reserves the right to immediately terminate access to the Facility by Generator and Generator's personnel in the event of breach or violation by Generator of any of the terms of this Agreement, the Company's operating rules or payment policies or any applicable laws or regulations.
19. **Continuing Compliance.** The Generator has a continuing obligation to inform the Company of any new information, or information not previously provided to the Company by Generator which may affect the acceptability of the Waste by the Company. Further, the Generator shall comply with all Company requests for evidence of Generator's continuing compliance with the terms of the Agreement including but not limited to the following: (i) providing new, updated Waste profiles on the Waste(s) offered for disposal or, (ii) providing appropriate certification that the Waste being offered for disposal is accurately reflected by the appropriate Application or, (iii) re-sample the Waste at Generator's expense if reasonable cause exists as to its acceptability under the terms of this Agreement or, (iv) allow the Company to re-sample the Waste at Generator's expense if reasonable cause exists as to its acceptability under the terms of this Agreement or (v) all of the above.
20. **Miscellaneous.**
  - (A) This Agreement shall be governed by the laws of the State in which the Facility is located.
  - (B) No waiver of a breach of any of the obligations contained in the Agreement shall be construed to be a waiver of any prior or succeeding breach of the same obligation or of any other obligation of this Agreement.
  - (C) No modification, release, discharge or waiver of any provision or obligation hereof shall be of any force, or effect, unless in writing signed by all parties to this Agreement.
  - (D) Generator shall treat as confidential and not disclose to others during or subsequent to the terms of this Agreement, except as is necessary to perform this Agreement, or to comply with any applicable law or regulation any information (including any technical information, experience or data) regarding the Company's plans, programs, plants, processes, products, costs, equipment or operations which may come within the knowledge of the Generator or its employees in the performance of this Agreement, without in each instance securing the prior written consent of the other Company.
  - (E) If any term, phrase, obligation or provision of this Agreement shall be held to be invalid, illegal or unenforceable in any respect, this Agreement shall remain in effect and be construed without regard to such term, phrase, obligation or provision.
  - (F) This Agreement constitutes the entire understanding between the parties, replacing and amending any prior agreements between the parties, and shall be binding upon all parties hereto, their successors, heirs, representatives and assigns. Any provision, term or condition in any acknowledgement, purchase order or other response by Generator which is in addition to or different from the provisions of this Agreement shall be deemed objected to by the Company and shall be of no effect.
  - (G) Generator represents, warrants and covenants that it is and, during the term of this Agreement will remain, in compliance with and will perform its obligations pursuant to all applicable laws and regulations and shall indemnify, defend and hold harmless the Company from any breach thereof.
  - (H) It is the understanding and agreement of the parties that the Company is an independent contractor, and is not an agent, nor an authorized representative of the Generator.
21. **Notices.** All notices herein provided for shall be considered as having been given upon being placed in the mail, certified postage prepaid addressed to the Company or Generator at the address herein set forth in this Agreement or to such other address as may be given to the other party in writing.
22. **Liquidated Damages.** In the event that this Agreement is terminated by the Generator in a manner not in accordance with paragraph 4 hereof, or terminated due to a breach of this Agreement by the Generator, the Generator shall pay, as liquidated damages, and not as a penalty, the greater of an amount equal to six (6) months' service charges or the Generator's most recent monthly charge multiplied by six (6). The Generator shall be given credit for any advance payments made hereunder, however, in computing the amount owed as liquidated damages hereunder. The Generator acknowledges that this liquidated damages clause is reasonable and is applicable to recover damages related to its investment in equipment, development of landfills and hiring of employees undertaken by the Company to service its customers including the Generator. This liquidated damages clause in no way relieves the Generator from its obligations and liability for other cost or damages as set forth elsewhere in this Agreement.

GENERATOR: BRAND PRODUCE INC Republic Services, Inc/COMPANY [Signature] May 2009



# Republic Services, Inc.

18500 N. Allied Way, Phoenix, AZ 85054

## SPECIAL WASTE DEPARTMENT DECISION

	Waste Profile # 51231711133	Expiration Date 11/30/2017	
<b>I. Decision Request:</b>	<input checked="" type="checkbox"/> Initial <input type="checkbox"/> Recertification <input type="checkbox"/> Change		
Disposal Facility: 5123 - Sunshine Canyon Landfill			
Generator Name: Bulletproof 360			
Generator Site Address: 3110 Main St, 116			
City: santa Monica	County: _____	State: CA	Zip: _____
Name of Waste: Food Products			
Estimated Annual Volume: 1500 Pounds			

**II. Special Waste Department Decision:**     Approved     Rejected

Management Method(s):     Landfill     Solidification     Bioremediation     Transfer Facility

Problematic Special Waste according to Republic?     Yes     No

If yes, which one? \_\_\_\_\_

Approved by Special Waste Review Committee?     Yes     No     Not Applicable

### Precautions, Conditions or Limitations on Approval

This material must be buried immediately upon receipt at the landfill.

Special Waste Analyst Signature:   
Date: 7/13/2017

Name (Printed): MARK PHILLIPS

**III. Facility Decision:**     Approved     Rejected

### Precautions, Conditions or Limitations on Approval

By signing below, the General Manager or Designee agrees that a fully executed Special Waste Service Agreement is on file for this profile and that the special waste file is complete.

General Manager or Designee:   
Date: 7/13/2017

Name (Printed): Rob Sherman



Requested Disposal Facility: 5123 Sunshine Canyon LF CA

Waste Profile #
5123 17 11133
Sales Rep #. Stacy Loveland - 525

Saveable fill in form. Restricted printing until all required (yellow) fields are completed.

**I. Generator Information**

Generator Name: Bulletproof 360, Cafe			
Generator Site Address: 3110 Main St, #116			
City: Santa Monica	County: Los Angeles	State: California	Zip: 90405
State ID/Reg No: NA	State Approval/Waste Code: NA	(if applicable)	NAICS #: 424490
Generator Mailing Address (if different): 3110 Main St, #116			
City: Santa Monica	County: Santa Monica	State: California	Zip: 90405
Generator Contact Name: Benton Bramwell		Email: ben.bramwell@bulletproof.com	
Phone Number: (603) 762-4688	Ext:	Fax Number: (425) 502-7678	

**II. Billing Information**

Bill To: Bulletproof 360, Inc.	Contact Name: Diana Lee
Billing Address: 1750 112th Ave NE Suite C242	Email: accounting@bulletproof.com
City: Bellevue	State: Washington
Zip: 98004	Phone: (206) 769-4153

**III. Waste Stream Information**

Name of Waste: <small>(Petroleum products-applies only to contaminated media and debris).</small>	<input type="checkbox"/> Diesel Fuel	<input type="checkbox"/> Weathered Wood	<input type="checkbox"/> Friable Asbestos
	<input type="checkbox"/> Home Heating Fuel #1-6	<input type="checkbox"/> RCRA Empty Containers	<input type="checkbox"/> Non Friable Asbestos
	<input type="checkbox"/> Kerosene	<input type="checkbox"/> Treated Medical Waste	<input type="checkbox"/> Cured Asphalt
	<input type="checkbox"/> Aviation Fuel	<input type="checkbox"/> Animal Carcass (non infectious)	<input type="checkbox"/> Tires
	<input type="checkbox"/> Hydraulic Fluid	<input type="checkbox"/> Plant Trash	<input checked="" type="checkbox"/> Food Products <small>(Including Animal Food)</small>
	<input type="checkbox"/> Unleaded Gasoline (UST Corrective Action)	<input type="checkbox"/> Meth Contaminated Debris	

Process Generating Waste: These are food bars that have been recalled due to potential contamination with Listeria and need to be disposed of

Method of Shipment:  BULK  DRUM  BAGGED  OTHER:

Estimated Annual Volume: 1,500 Pounds

Frequency:  ONE TIME  ONGOING

**IV. Certification**

I hereby certify that to the best of my knowledge and belief, the information contained herein is a true and accurate description of the waste material being offered for disposal. I further certify that by utilizing this profile, neither myself nor any other employee of the company will deliver for disposal or attempt to deliver for disposal any waste which is classified as toxic waste, hazardous waste or infectious waste, or any other waste material this facility is prohibited from accepting by law. Our company hereby agrees to fully indemnify this disposal facility against any damages resulting from this certification being inaccurate or untrue. I further certify that the company has not altered the form or content of this profile sheet as provided by Republic Services, Inc.

Benton Bramwell	Bulletproof 360, Inc
Authorized Representative Name/Title (Type or Print)	Company Name
	07/10/2017
Authorized Representative Signature	Date



# SPECIAL WASTE SERVICE AGREEMENT NON-HAZARDOUS WASTES

Special Waste Profile Number: 5123 17 11133

### Generator Billing Information

Name: BULLETPROOF 360  
(ACCT CASH # 321)  
Address: 1750 112<sup>TH</sup> AVE NE SUITE C242  
City: BELLEVUE  
State: WA Zip: 98004  
Phone: 206.769.4153 Fax: \_\_\_\_\_  
Contact: \_\_\_\_\_

### Republic Waste Location (Company)

SUNSHINE CANYON LANDFILL (5123)  
14747 SAN FERNANDO ROAD  
SYLMAR, CA 91342  
818.362.2141

Project: FOOD PRODUCTS County and State of Origin: LOS ANGELES, CA

Additional Information: \_\_\_\_\_

- Special Waste Service.** Subject to the terms and conditions contained herein, the Company and the Generator agree to be legally bound hereby and the Company agrees to accept at its Facility, Acceptable Waste (hereinafter referred to as "Special Waste" or "Waste") delivered by Generator, and which is acceptable to the Company as herein provided.
- Acceptable Waste.** Only those Special Wastes described in Paragraph 3 herein and in any Special Waste Profile(s) which number is identical to the contract number referenced above, and which Profile(s) are hereby incorporated by reference herein, and which Waste is subsequently approved by the Company and is otherwise in accordance with all laws, regulations and permits, shall be acceptable for disposal at the Facility ("Acceptable Waste").

### 3. (A) Rates for Disposal:

<u>Waste</u>	<u>Disposal Method</u>	<u>Disposal Rate:</u>	<u>Fees / Taxes / Misc.</u>	<u>Transportation</u>
FOOD PRODUCTS	LANDFILL	\$57 PER TON WITH A \$330 MINIMUM PER LOAD	TAXES, ERF, & FRF APPLY	N/A
Additional Information:	ENVIRONMENTAL RECOVERY FEE (ERF) \$16.25 PER LOAD   FUEL RECOVERY FEE (FRF) 4-8% CALCULATED ON TONNAGE AT TIME OF DISPOSAL (PER LOAD)   INVOICE AND LATE FEES APPLY			
MATERIAL CODE: XD-SW-FOOD WASTES   PROFILE EXPIRES: 11/30/2017   A completed / signed manifest is required for each profiled approved load received at Sunshine Landfill (Please schedule all loads 24 hours in advance)				

Generator shall also be liable for all taxes, fees, or other charges imposed by federal, state, local or provincial laws and regulations.

Cannot Exceed Daily Volume of 1500 POUNDS Without Prior Approval of Company.

### (B) Incorporation by Reference. In addition to Special Waste Profile(s), the following documents are incorporated by reference into this Agreement as if fully set forth herein.

1) N/A

2) N/A

- Term of Agreement.** This Agreement is effective for 4 months, commencing 7/31/2017 and shall automatically be renewed for a similar term thereafter unless either party shall give written notice (via certified mail) of termination to the other party at least thirty (30) days prior written notice.

THE COMPANY AND THE GENERATOR, IN CONSIDERATION OF THE MUTUAL OBLIGATIONS CONTAINED HEREIN, AGREE THAT THIS IS A LEGALLY BINDING AGREEMENT WHICH IS SUBJECT TO THE TERMS AND CONDITIONS SET FORTH ON THIS PAGE AND ON THE REVERSE SIDE OF THIS DOCUMENT. IN ADDITION, THE GENERATOR IS CERTIFYING THE ATTACHED TERMS AND CONDITIONS HAVE BEEN REVIEWED AND INITIALLED AT THE BOTTOM OF THE PAGE.

### GENERATOR

Benton Bramwell  
SIGNATURE (AUTHORIZED REPRESENTATIVE)

Benton Bramwell  
NAME AND TITLE (PLEASE PRINT)

13-Jul-2017  
DATE

### REPUBLIC SERVICES, INC/COMPANY

Stacy Loveland  
SIGNATURE (AUTHORIZED REPRESENTATIVE)

Stacy Loveland, Special Waste Exec

NAME AND TITLE (PLEASE PRINT)

7-13-17  
DATE



## Terms and Conditions of Special Waste Service Agreement

5. **The Agreement.** This agreement of the parties ("Agreement") for the disposal of Special Waste shall consist of this Agreement, riders to the Agreement (if any) and any Application, permit and approval that may be applicable to such Waste.
6. **Waste Accepted at Facility.** Generator represents, warrants and covenants that the Waste delivered to Company at its Facility hereunder will be Acceptable Waste and will not contain any unacceptable quantity of hazardous materials or substances, radioactive materials or substances, or toxic waste or substances, as defined by applicable federal, state, local or provincial laws or regulations. Any Waste which does not meet these requirements shall hereinafter be referred to as "Unacceptable Waste". The Generator shall in all matters relating to the collection, transportation and disposal of the Waste hereunder, comply with all applicable federal, state and local laws, regulations, rules and orders regarding the same. The word "Facility" shall mean any landfill, transfer station or other location used to transfer, process or otherwise dispose of such Waste.
7. **Special Waste.** Generator represents, warrants and covenants that the Waste delivered to Company hereunder (i) will not contain any Special Waste that is not specifically described on any Application which is attached hereto or which is subsequently approved by the Company, (ii) will meet the material description as set forth in any Application and otherwise in all significant respects and (iii) will not contain Unacceptable Waste. The parties may incorporate additional Special Waste as part of this Agreement if prior to delivery of such Waste to Company, Generator has provided an Application for such Waste and Company has approved disposal of such Waste within the limitations and conditions contained in Company's written notice of approval of Special Waste Disposal. Title to any and all Waste handled or disposed of by Company shall at all times remain with Generator and Broker (if a Broker is involved).
8. **Rights of Refusal/Rejection.** The Generator shall inspect all Waste at the place(s) of collection and shall remove any and all Unacceptable Waste. Company has the right to refuse, or to reject after acceptance, any load(s) of Waste(s) delivered to its Facility including if the Company believes the Generator has breached (or is breaching) its representations, warranties, covenants or agreements hereunder, or any applicable federal, state or local laws, regulations, rules or orders, even if only a portion of such Waste load is unacceptable. The Company shall have the right to inspect all vehicles and containers of Waste haulers, including the Generator's vehicles, in order to determine whether the Waste is Acceptable Waste or Unacceptable Waste pursuant to this Agreement and all applicable federal, state and local laws, rules and regulations. The Company's exercise, or failure to exercise, its rights hereunder shall not operate to relieve the Generator of its responsibilities or liability under this Agreement. The Generator shall be responsible for, and bear all reasonable expenses and damages incurred by the Company, as a result of the Unacceptable Waste and in the reloading and removal of Unacceptable Waste disposed in the Facility. The Company, may also, in its sole discretion, require the Generator to promptly remove the Unacceptable Waste.
9. **Limited License to Enter.** This Agreement provides Generator with a license to enter the Facility for the limited purpose of, and only to the extent necessary for, off-loading Acceptable Waste at the Facility in the manner directed by Company. Except in an emergency, Generator's personnel shall not leave the immediate vicinity of their vehicle. After off-loading the Waste, Generator's personnel shall promptly leave the Facility. Under no circumstances shall Generator or its personnel engage in any scavenging of Waste or other materials at the Facility. The Company reserves the right to make and enforce reasonable rules and regulations concerning the operation of the Facility, the conduct of the drivers and others on the Facility premises, quantities and sources of Waste, and any other matters necessary or desirable for the safe, legal and efficient operation of the Facility including, but not limited to, speed limits on haul roads imposed by the Company, and the wearing of hard hats and other personal protection equipment by all individuals allowed on the Facility premises. Generator agrees to conform to such rules and regulations as they may be established and amended from time to time. Company may refuse to accept Waste from and shall deny an entrance license to, any of Generator's personnel whom Company believes is under the influence of alcohol or other chemical substances. Generator shall be solely responsible for its employees and subcontractors performing their obligations in a safe manner when at the facility of Company.
10. **Charges and Payment.** Payment shall be made by Generator within sixty (60) days after receipt of invoice from Company. In the event that any amount is overdue, the Company may terminate this Agreement. Generator agrees to pay a finance charge equal to the maximum interest rate permitted by law. Generator shall be liable for all taxes, fees, or other charges imposed upon the disposal of the Waste by federal, state, local or provincial laws and regulations. Company, from time to time, may modify its rates upon sixty (60) days written notice to Generator.
11. **Termination.** Generator's obligations, representations, warranties and covenants regarding the Waste delivered and all indemnities shall survive termination of this Agreement. Should Generator materially default in any of its obligations hereunder, then Company may immediately terminate this Agreement and Generator shall be liable for all costs and damages incurred by the Company.
12. **Driver's Knowledge and Authority.** Generator represents, warrants and covenants that its drivers who deliver Waste to Company's Facility have been advised by Generator of the Company's prohibition on deliveries of hazardous materials or substances, radioactive materials or substances, or toxic waste or substances or any other Unacceptable Waste to the Facility of Company's restrictions on deliveries of Special Waste to the Facility, of the definitions of "Hazardous Waste and Hazardous Substances" as provided by applicable federal, state and local law, rules and regulations and "Special Waste" as provided herein, and of the terms of this license to enter Company's Facility.
13. **Indemnification.** Generator shall indemnify, defend and hold harmless the Company and its subsidiaries, affiliates and parent corporations, as applicable and their respective officers, directors, lenders, employees, subcontractors and agents from and against any and all claims, suits, losses, liabilities, assessments, damages, fines, costs and expenses, including reasonable attorneys fees arising under federal, state or local laws, regulations or ordinances, or relating to the content of the Waste, or arising out of or in connection with any breach of this Agreement or arising out of the negligent collection, transportation and disposal of Waste by Generator or Generator's employees, agents, subcontractors or representatives thereof. Generator shall also be responsible for increased inspection, testing, study and analysis costs made necessary due to reasonable concerns of the Company as to the content of the Waste following discovery of potentially Unacceptable Waste. This indemnification and other obligations stated in this paragraph shall survive the termination of this Agreement.
14. **Insurance.** Generator shall maintain in full force and effect throughout the term of this Agreement the following types of insurance in at least the amounts specified below.

Coverages	Minimum Amounts of Insurance
Worker's Compensation	Statutory
General Liability	\$500,000 combined single limit
Automobile Liability	\$500,000 combined single limit

All insurance will be by insurers authorized to do business in the state in which the Facility is located. Prior to Generator being allowed on Facility premises, Generator shall provide the Company with certificates of insurance or other satisfactory evidence that such insurance has been procured and is in force. Said policies shall not thereafter be canceled, be permitted to expire or lapse, or be changed within thirty (30) days advance written notice to the Company. Generator warrants that it will secure the above minimum amounts of insurance from any transportation of the Waste to the Facility.

15. **Failure to Perform.** Neither party hereto shall be liable for its failure to perform hereunder due to circumstances not its fault and beyond its reasonable control, including, but not limited to, strikes or other labor disputes, riots, protests, civil disturbances or sabotage, changes in law, fires, floods, compliance with government requests, explosions, accidents, weather, lack of required natural resources, or acts of God affecting either party hereto. In the event of any of the circumstances provided for in the preceding sentence, including, but not limited to, whether any federal, state or local court or governmental authority takes any action which would (i) close or restrict operations at the Facility, (ii) limit the quantity or prohibit the disposal of Waste at the Facility, or (iii) limit the ability of or prohibit Generator from delivering Waste to the Facility, the Company shall have the right, at its option, to reduce, suspend or terminate Generator's access to the Facility immediately, without prior notice and without any additional liabilities between the parties, other than Generator's payment obligation hereunder. Neither Party is required hereunder to settle any labor dispute against its own best judgment.

16. **Other Termination.** The occurrence of any of the following events shall also constitute an event of default by the Generator and shall give the Company the right to immediately terminate this Agreement:

- (A) A petition for reorganization or bankruptcy filed by or against the Generator.
- (B) Failure by Generator to pay any amounts due to Company.
- (C) Any breach by Generator of any of its obligations pursuant to the Agreement.

Generator shall be liable for and shall indemnify, defend and hold harmless Company from any losses, claims expenses or damages incurred by the Company as a result of termination hereunder.

17. **Assignment.** Generator may not assign, transfer or otherwise vest in any other Company, entity or person, in whole or in part, any of its rights or obligations under the Agreement without the prior written consent of the Company, provided, however, that the Company may without any such prior written consent, assign its rights and/or obligations under the Agreement to a subsidiary or affiliate corporation.

18. **Right of Disposal.** This Agreement does not grant any rights to dispose of Waste other than in accordance herewith. The Company reserves the right to immediately terminate access to the Facility by Generator and Generator's personnel in the event of breach or violation by Generator of any of the terms of this Agreement, the Company's operating rules or payment policies or any applicable laws or regulations.

19. **Continuing Compliance.** The Generator has a continuing obligation to inform the Company of any new information, or information not previously provided to the Company by Generator which may affect the acceptability of the Waste by the Company. Further, the Generator shall comply with all Company requests for evidence of Generator's continuing compliance with the terms of the Agreement including but not limited to the following: (i) providing new, updated Waste profiles on the Waste(s) offered for disposal or, (ii) providing appropriate certification that the Waste being offered for disposal is accurately reflected by the appropriate Application or, (iii) re-sample the Waste at Generator's expense if reasonable cause exists as to its acceptability under the terms of this Agreement or, (iv) allow the Company to re-sample the Waste at Generator's expense if reasonable cause exists as to its acceptability under the terms of this Agreement or (v) all of the above.

### 20. Miscellaneous.

- (A) This Agreement shall be governed by the laws of the State in which the Facility is located.
- (B) No waiver of a breach of any of the obligations contained in the Agreement shall be construed to be a waiver of any prior or succeeding breach of the same obligation or of any other obligation of this Agreement.
- (C) No modification, release, discharge or waiver of any provision or obligation hereof shall be of any force, or effect, unless in writing signed by all parties to this Agreement.
- (D) Generator shall treat as confidential and not disclose to others during or subsequent to the terms of this Agreement, except as is necessary to perform this Agreement, or to comply with any applicable law or regulation any information (including any technical information, experience or data) regarding the Company's plans, programs, plants, processes, products, costs, equipment or operations which may come within the knowledge of the Generator or its employees in the performance of this Agreement, without in each instance securing the prior written consent of the other Company.
- (E) If any term, phrase, obligation or provision of this Agreement shall be held to be invalid, illegal or unenforceable in any respect, this Agreement shall remain in effect and be construed without regard to such term, phrase, obligation or provision.
- (F) This Agreement constitutes the entire understanding between the parties, replacing and amending any prior agreements between the parties, and shall be binding upon all parties hereto, their successors, heirs, representatives and assigns. Any provision, term or condition in any acknowledgment, purchase order or other response by Generator which is in addition to or different from the provisions of this Agreement shall be deemed objected to by the Company and shall be of no effect.
- (G) Generator represents, warrants and covenants that it is and, during the term of this Agreement will remain, in compliance with and will perform its obligations pursuant to all applicable laws and regulations and shall indemnify, defend and hold harmless the Company from any breach thereof.
- (H) It is the understanding and agreement of the parties that the Company is an independent contractor, and is not an agent, nor an authorized representative of the Generator.

21. **Notices.** All notices herein provided for shall be considered as having been given upon being placed in the mail, certified postage prepaid addressed to the Company or Generator at the address herein set forth in this Agreement or to such other address as may be given to the other party in writing.

22. **Liquidated Damages.** In the event that this Agreement is terminated by the Generator in a manner not in accordance with paragraph 4 hereof, or terminated due to a breach of this Agreement by the Generator, the Generator shall pay, as liquidated damages, and not as a penalty, the greater of an amount equal to six (6) months' service charges or the Generator's most recent monthly charge multiplied by six (6). The Generator shall be given credit for any advance payments made hereunder, however, in computing the amount owed as liquidated damages hereunder. The Generator acknowledges that this liquidated damages clause is reasonable and is applicable to recover damages related to its investment in equipment, development of landfills and hiring of employees undertaken by the Company to service its customers including the Generator. This liquidated damages clause in no way relieves the Generator from its obligations and liability for other cost or damages as set forth elsewhere in this Agreement.

GENERATOR: 

Republic Services, Inc/COMPANY: 

May 2009



# Republic Services, Inc.

18500 N. Allied Way, Phoenix, AZ 85054

## SPECIAL WASTE DEPARTMENT DECISION

Waste Profile #  
51231716936

Expiration Date  
10/16/2018

### I. Decision Request:

Initial     Recertification     Change

Disposal Facility: 5123 - Sunshine Canyon Landfill

Generator Name: Bureau of Alcohol Tobacco Firearms and Explosives

Generator Site Address: 17803 S Santa Fe Ave

City: Compton

County:

State: CA

Zip:

Name of Waste: Cigarettes

Estimated Annual Volume: 1 Tons

### II. Special Waste Department Decision:    Approved    Rejected

Management Method(s):     Landfill     Solidification     Bioremediation     Transfer Facility

Problematic Special Waste according to Republic?     Yes     No

If yes, which one? \_\_\_\_\_

Approved by Special Waste Review Committee?     Yes     No     Not Applicable

### Precautions, Conditions or Limitations on Approval

This material must be buried immediately upon receipt at the landfill.

Special Waste Analyst Signature: \_\_\_\_\_

Name (Printed): Suzanne Glass

Date: 10/16/2017

### III. Facility Decision:

Approved     Rejected

### Precautions, Conditions or Limitations on Approval

By signing below, the General Manager or Designee agrees that a fully executed Special Waste Service Agreement is on file for this profile and that the special waste file is complete.

General Manager or Designee: \_\_\_\_\_

Name (Printed): Chris Coyle

Date: 10/16/2017



Requested Disposal Facility: 5123 Sunshine Canyon LF CA

Waste Profile # 5123 17 16936
Sales Rep #: 525 - Stacy Loveland

Saveable fill-in form Restricted printing until all required (yellow) fields are completed

I. Generator Information

Generator Name: Bureau of Alcohol, Tobacco, Firearms and Explosives			
Generator Site Address: 17803 S. Santa Fe Ave.			
City: Compton	County: Los Angeles	State: California	Zip: 90221
State ID/Reg No: N/A	State Approval/Waste Code: N/A (if applicable)		NAICS #: N/A
Generator Mailing Address (if different): <input checked="" type="checkbox"/> 34 Civic Center Plaza, Suite 6121			
City: Santa Ana	County: Orange	State: California	Zip: 92701
Generator Contact Name: Quan Vuong		Email: quan.vuong@atf.gov	
Phone Number: (951) 538-4886	Ext:	Fax Number:	

II. Billing Information

Bill To: ATF	Contact Name: Quan Vuong		
Billing Address: 34 Civic Center Plaza, Suite 6121		Email: quan.vuong@atf.gov	
City: Santa Ana	State: CA	Zip: 92701	Phone: (951) 538-4886

III. Waste Stream Information

Name of Waste: Cigarettes	
Process Generating Waste: Cigarettes were seized by the government for not having the required tax stamps.	
Type of Waste:	<input checked="" type="checkbox"/> INDUSTRIAL PROCESS WASTE <input type="checkbox"/> POLLUTION CONTROL WASTE
Physical State:	<input checked="" type="checkbox"/> SOLID <input type="checkbox"/> SEMI-SOLID <input type="checkbox"/> POWDER <input type="checkbox"/> LIQUID
Method of Shipment:	<input type="checkbox"/> BULK <input type="checkbox"/> DRUM <input type="checkbox"/> BAGGED <input checked="" type="checkbox"/> OTHER: Boxed
Estimated Annual Volume:	1 Tons
Frequency:	<input checked="" type="checkbox"/> ONE TIME <input type="checkbox"/> ONGOING
Disposal Consideration:	<input checked="" type="checkbox"/> LANDFILL <input type="checkbox"/> SOLIDIFICATION <input type="checkbox"/> BIOREMEDIATION

IV. Representative Sample Certification

NO SAMPLE TAKEN

Is the representative sample collected to prepare this profile and laboratory analysis, collected in accordance with U.S. EPA 40 CFR 261.20(c) guidelines or equivalent rules?	<input type="checkbox"/> YES or <input type="checkbox"/> NO
Type of Sample: <input type="checkbox"/> COMPOSITE SAMPLE <input type="checkbox"/> GRAB SAMPLE	
Sample Date:	
Sample ID Numbers:	

Waste Profile #
5123 17 16936

**V. Physical Characteristics of Waste**

Characteristic Components		% by Weight (range)			
1. Cigarettes		95%			
2. Cardboard Boxes		5%			
3.					
4.					
5.					
Color	Odor (describe)	Does Waste Contain Free Liquids?	% Solids	pH:	Flash Point
Brown	Cigarette Odor	<input type="checkbox"/> YES or <input checked="" type="checkbox"/> NO	100%	N/A	N/A °F

**Attach Laboratory Analytical Report (and/or Material Safety Data Sheet) Including Chain of Custody and Required Parameters Provided for this Profile**

Does this waste or generating process contain regulated concentrations of the following Pesticides and/or Herbicides: Chlordane, Endrin, Heptachlor (and its epoxides), Lindane, Methoxychlor, Toxaphene, 2,4-D, or 2,4,5-TP Silvex as defined in 40 CFR 261.33?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Does this waste contain reactive sulfides (greater than 500 ppm) or reactive cyanide (greater than 250 ppm)[reference 40 CFR 261.23(a)(5)]?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Does this waste contain regulated concentrations of Polychlorinated Biphenyls (PCBs) as defined in 40 CFR Part 761?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Does this waste contain concentrations of listed hazardous wastes defined in 40 CFR 261.31, 261.32, 261.33, including RCRA F-Listed Solvents?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Does this waste exhibit a Hazardous Characteristic as defined by Federal and/or State regulations?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Does this waste contain regulated concentrations of 2,3,7,8-Tetrachlorodibenzodioxin (2,3,7,8-TCDD), or any other dioxin as defined in 40 CFR 261.31?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Is this a regulated Radioactive Waste as defined by Federal and/or State regulations?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Is this a regulated Medical or Infectious Waste as defined by Federal and/or State regulations?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Is this waste a reactive or heat generating waste?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Does the waste contain sulfur or sulfur by-products?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Is this waste generated at a Federal Superfund Clean Up Site?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Is this waste from a TSD facility, TSD like facility or consolidator?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No

**VI. Certification**

I hereby certify that to the best of my knowledge and belief, the information contained herein is a true, complete and accurate description of the waste material being offered for disposal and all known or suspected hazards have been disclosed. All Analytical Results/Material Safety Data Sheets submitted are truthful and complete and are representative of the waste.

I further certify that by utilizing this profile, neither myself nor any other employee of the company will deliver for disposal or attempt to deliver for disposal any waste which is classified as toxic waste, hazardous waste or infectious waste, or any other waste material this facility is prohibited from accepting by law. I shall immediately give written notice of any change or condition pertaining to the waste not provided herein. Our company hereby agrees to fully indemnify this disposal facility against any damages resulting from this certification being inaccurate or untrue.

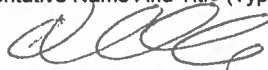
I further certify that the company has not altered the form or content of this profile sheet as provided by Republic Services Inc.

Special Agent Quan Vuong

ATF

Authorized Representative Name And Title (Type or Print)

Company Name



10/16/2017

Authorized Representative Signature

Date



# SPECIAL WASTE SERVICE AGREEMENT NON-HAZARDOUS WASTES

Special Waste Profile Number: 51231716936

### Generator Billing Information

Name: BUREAU OF ALCOHOL & TOBACCO FIREARMS  
AND EXPLOSIVES (ACCOUNT # 321)  
Address: 34 CIVIC CENTER PLAZA SUITE 6121  
City: SANTA ANA  
State: CA Zip: 92701  
Phone: 951.538.4886 Fax: \_\_\_\_\_  
Contact: QUAN VUONG

### Republic Waste Location (Company)

SUNSHINE CANYON LANDFILL (5123)  
14747 SAN FERNANDO ROAD  
SYLMAR, CA 91342  
818.362.2141

Project: TOBACCO PRODUCTS - CIGARETTES County and State of Origin: LOS ANGELES, CA

Additional Information: \_\_\_\_\_

- Special Waste Service.** Subject to the terms and conditions contained herein, the Company and the Generator agree to be legally bound hereby and the Company agrees to accept at its Facility, Acceptable Waste (hereinafter referred to as "Special Waste" or "Waste") delivered by Generator, and which is acceptable to the Company as herein provided.
- Acceptable Waste.** Only those Special Wastes described in Paragraph 3 herein and in any Special Waste Profile(s) which number is identical to the contract number referenced above, and which Profile(s) are hereby incorporated by reference herein, and which Waste is subsequently approved by the Company and is otherwise in accordance with all laws, regulations and permits, shall be acceptable for disposal at the Facility ("Acceptable Waste").




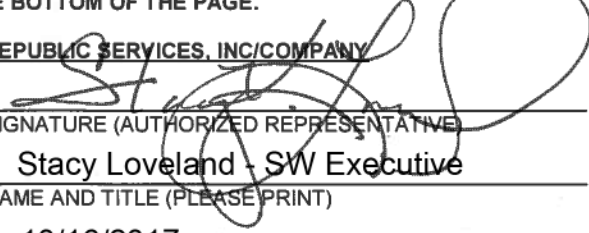
Generator shall also be liable for all taxes, fees, or other charges imposed by federal, state, local or provincial laws and regulations.  
Cannot Exceed Daily Volume of 1 TON Without Prior Approval of Company.

- (B) **Incorporation by Reference.** In addition to Special Waste Profile(s), the following documents are incorporated by reference into this Agreement as if fully set forth herein.
- 1) N/A
  - 2) N/A

- Term of Agreement.** This Agreement is effective for **12** months, commencing **10/16/2017** and shall automatically be renewed for a similar term thereafter unless either party shall give written notice (via certified mail) of termination to the other party at least thirty (30) days prior written notice.

THE COMPANY AND THE GENERATOR, IN CONSIDERATION OF THE MUTUAL OBLIGATIONS CONTAINED HEREIN, AGREE THAT THIS IS A LEGALLY BINDING AGREEMENT WHICH IS SUBJECT TO THE TERMS AND CONDITIONS SET FORTH ON THIS PAGE AND ON THE REVERSE SIDE OF THIS DOCUMENT. IN ADDITION, THE GENERATOR IS CERTIFYING THE ATTACHED TERMS AND CONDITIONS HAVE BEEN REVIEWED AND INITIALLED AT THE BOTTOM OF THE PAGE.

GENERATOR   
SIGNATURE (AUTHORIZED REPRESENTATIVE)  
QUAN VUONG, SPECIAL AGENT  
NAME AND TITLE (PLEASE PRINT)  
10/16/17  
DATE

REPUBLIC SERVICES, INC/COMPANY   
SIGNATURE (AUTHORIZED REPRESENTATIVE)  
Stacy Loveland - SW Executive  
NAME AND TITLE (PLEASE PRINT)  
10/16/2017  
DATE

# Terms and Conditions of Special Waste Service Agreement

5. **The Agreement.** This agreement of the parties ("Agreement") for the disposal of Special Waste shall consist of this Agreement, riders to the Agreement (if any) and any Application, permit and approval that may be applicable to such Waste.
6. **Waste Accepted at Facility.** Generator represents, warrants and covenants that the Waste delivered to Company at its Facility hereunder will be Acceptable Waste and will not contain any unacceptable quantity of hazardous materials or substances, radioactive materials or substances, or toxic waste or substances, as defined by applicable federal, state, local or provincial laws or regulations. Any Waste which does not meet these requirements shall hereinafter be referred to as "Unacceptable Waste". The Generator shall in all matters relating to the collection, transportation and disposal of the Waste hereunder, comply with all applicable federal, state and local laws, regulations, rules and orders regarding the same. The word "Facility" shall mean any landfill, transfer station or other location used to transfer, process or otherwise dispose of such Waste.
7. **Special Waste.** Generator represents, warrants and covenants that the Waste delivered to Company hereunder (i) will not contain any Special Waste that is not specifically described on any Application which is attached hereto or which is subsequently approved by the Company, (ii) will meet the material description as set forth in any Application and otherwise in all significant respects and (iii) will not contain Unacceptable Waste. The parties may incorporate additional Special Waste as part of this Agreement if prior to delivery of such Waste to Company, Generator has provided an Application for such Waste and Company has approved disposal of such Waste within the limitations and conditions contained in Company's written notice of approval of Special Waste Disposal. Title to any and all Waste handled or disposed of by Company shall at all times remain with Generator and Broker (if a Broker is involved).
8. **Rights of Refusal/Rejection.** The Generator shall inspect all Waste at the place(s) of collection and shall remove any and all Unacceptable Waste. Company has the right to refuse, or to reject after acceptance, any load(s) of Waste(s) delivered to its Facility including if the Company believes the Generator has breached (or is breaching) its representations, warranties, covenants or agreements hereunder, or any applicable federal, state or local laws, regulations, rules or orders, even if only a portion of such Waste load is unacceptable. The Company shall have the right to inspect all vehicles and containers of Waste haulers, including the Generator's vehicles, in order to determine whether the Waste is Acceptable Waste or Unacceptable Waste pursuant to this Agreement and all applicable federal, state and local laws, rules and regulations. The Company's exercise, or failure to exercise, its rights hereunder shall not operate to relieve the Generator of its responsibilities or liability under this Agreement. The Generator shall be responsible for, and bear all reasonable expenses and damages incurred by the Company, as a result of the Unacceptable Waste and in the reloading and removal of Unacceptable Waste disposed in the Facility. The Company, may also, in its sole discretion, require the Generator to promptly remove the Unacceptable Waste.
9. **Limited License to Enter.** This Agreement provides Generator with a license to enter the Facility for the limited purpose of, and only to the extent necessary for, off-loading Acceptable Waste at the Facility in the manner directed by Company. Except in an emergency, Generator's personnel shall not leave the immediate vicinity of their vehicle. After off-loading the Waste, Generator's personnel shall promptly leave the Facility. Under no circumstances shall Generator or its personnel engage in any scavenging of Waste or other materials at the Facility. The Company reserves the right to make and enforce reasonable rules and regulations concerning the operation of the Facility, the conduct of the drivers and others on the Facility premises, quantities and sources of Waste, and any other matters necessary or desirable for the safe, legal and efficient operation of the Facility including, but not limited to, speed limits on haul roads imposed by the Company, and the wearing of hard hats and other personal protection equipment by all individuals allowed on the Facility premises. Generator agrees to conform to such rules and regulations as they may be established and amended from time to time. Company may refuse to accept Waste from and shall deny an entrance license to, any of Generator's personnel whom Company believes is under the influence of alcohol or other chemical substances. Generator shall be solely responsible for its employees and subcontractors performing their obligations in a safe manner when at the facility of Company.
10. **Charges and Payment.** Payment shall be made by Generator within sixty (60) days after receipt of invoice from Company. In the event that any amount is overdue, the Company may terminate this Agreement. Generator agrees to pay a finance charge equal to the maximum interest rate permitted by law. Generator shall be liable for all taxes, fees, or other charges imposed upon the disposal of the Waste by federal, state, local or provincial laws and regulations. Company, from time to time, may modify its rates upon sixty (60) days written notice to Generator.
11. **Termination.** Generator's obligations, representations, warranties and covenants regarding the Waste delivered and all indemnities shall survive termination of this Agreement. Should Generator materially default in any of its obligations hereunder, then Company may immediately terminate this Agreement and Generator shall be liable for all costs and damages incurred by the Company.
12. **Driver's Knowledge and Authority.** Generator represents, warrants and covenants that its drivers who deliver Waste to Company's Facility have been advised by Generator of the Company's prohibition on deliveries of hazardous materials or substances, radioactive materials or substances, or toxic waste or substances or any other Unacceptable Waste to the Facility of Company's restrictions on deliveries of Special Waste to the Facility, of the definitions of "Hazardous Waste and Hazardous Substances" as provided by applicable federal, state and local law, rules and regulations and "Special Waste" as provided herein, and of the terms of this license to enter Company's Facility.
13. **Indemnification.** Generator shall indemnify, defend and hold harmless the Company and its subsidiaries, affiliates and parent corporations, as applicable and their respective officers, directors, lenders, employees, subcontractors and agents from and against any and all claims, suits, losses, liabilities, assessments, damages, fines, costs and expenses, including reasonable attorneys fees arising under federal, state or local laws, regulations or ordinances, or relating to the content of the Waste, or arising out of or in connection with any breach of this Agreement or arising out of the negligent collection, transportation and disposal of Waste by Generator or Generator's employees, agents, subcontractors or representatives thereof. Generator shall also be responsible for increased inspection, testing, study and analysis costs made necessary due to reasonable concerns of the Company as to the content of the Waste following discovery of potentially Unacceptable Waste. This indemnification and other obligations stated in this paragraph shall survive the termination of this Agreement.
14. **Insurance.** Generator shall maintain in full force and effect throughout the term of this Agreement the following types of insurance in at least the amounts specified below:

All insurance will be by insurers authorized to do business in the state in which the Facility is located. Prior to Generator being allowed on Facility premises, Generator shall provide the Company with certificates of insurance or other satisfactory evidence that such insurance has been procured and is in force. Said policies shall not thereafter be canceled, be permitted to expire or lapse, or be changed without thirty (30) days advance written notice to the Company. Generator warrants that it will secure the above minimum amounts of insurance from any transportation of the Waste to the Facility.

15. **Failure to Perform.** Neither party hereto shall be liable for its failure to perform hereunder due to circumstances not its fault and beyond its reasonable control, including, but not limited to, strikes or other labor disputes, riots, protests, civil disturbances or sabotage, changes in law, fires, floods, compliance with government requests, explosions, accidents, weather, lack of required natural resources, or acts of God affecting either party hereto. In the event of any of the circumstances provided for in the preceding sentence, including, but not limited to, whether any federal, state or local court or governmental authority takes any action which would (i) close or restrict operations at the Facility, (ii) limit the quantity or prohibit the disposal of Waste at the Facility, or (iii) limit the ability of or prohibit Generator from delivering Waste to the Facility, the Company shall have the right, at its option, to reduce, suspend or terminate Generator's access to the Facility immediately, without prior notice and without any additional liabilities between the parties, other than Generator's payment obligation hereunder. Neither Party is required hereunder to settle any labor dispute against its own best judgment.
16. **Other Termination.** The occurrence of any of the following events shall also constitute an event of default by the Generator and shall give the Company the right to immediately terminate this Agreement.
  - (A) A petition for reorganization or bankruptcy filed by or against the Generator
  - (B) Failure by Generator to pay any amounts due to Company
  - (C) Any breach by Generator of any of its obligations pursuant to the Agreement.

Generator shall be liable for and shall indemnify, defend and hold harmless Company from any losses, claims expenses or damages incurred by the Company as a result of termination hereunder.

17. **Assignment.** Generator may not assign, transfer or otherwise vest in any other Company, entity or person, in whole or in part, any of its rights or obligations under the Agreement without the prior written consent of the Company, provided, however, that the Company may without any such prior written consent, assign its rights and/or obligations under the Agreement to a subsidiary or affiliate corporation.
18. **Right of Disposal.** This Agreement does not grant any rights to dispose of Waste other than in accordance herewith. The Company reserves the right to immediately terminate access to the Facility by Generator and Generator's personnel in the event of breach or violation by Generator of any of the terms of this Agreement, the Company's operating rules or payment policies or any applicable laws or regulations.
19. **Continuing Compliance.** The Generator has a continuing obligation to inform the Company of any new information, or information not previously provided to the Company by Generator which may affect the acceptability of the Waste by the Company. Further, the Generator shall comply with all Company requests for evidence of Generator's continuing compliance with the terms of the Agreement including but not limited to the following: (i) providing new, updated Waste profiles on the Waste(s) offered for disposal or, (ii) providing appropriate certification that the Waste being offered for disposal is accurately reflected by the appropriate Application or, (iii) re-sample the Waste at Generator's expense if reasonable cause exists as to its acceptability under the terms of this Agreement or, (iv) allow the Company to re-sample the Waste at Generator's expense if reasonable cause exists as to its acceptability under the terms of this Agreement or (v) all of the above.
20. **Miscellaneous.**
  - (A) This Agreement shall be governed by the laws of the State in which the Facility is located.
  - (B) No waiver of a breach of any of the obligations contained in the Agreement shall be construed to be a waiver of any prior or succeeding breach of the same obligation or of any other obligation of this Agreement.
  - (C) No modification, release, discharge or waiver of any provision or obligation hereof shall be of any force, or effect, unless in writing signed by all parties to this Agreement.
  - (D) Generator shall treat as confidential and not disclose to others during or subsequent to the terms of this Agreement, except as is necessary to perform this Agreement, or to comply with any applicable law or regulation any information (including any technical information, experience or data) regarding the Company's plans, programs, plants, processes, products, costs, equipment or operations which may come within the knowledge of the Generator or its employees in the performance of this Agreement, without in each instance securing the prior written consent of the other Company.
  - (E) If any term, phrase, obligation or provision of this Agreement shall be held to be invalid, illegal or unenforceable in any respect, this Agreement shall remain in effect and be construed without regard to such term, phrase, obligation or provision.
  - (F) This Agreement constitutes the entire understanding between the parties, replacing and amending any prior agreements between the parties, and shall be binding upon all parties hereto, their successors, heirs, representatives and assigns. Any provision, term or condition in any acknowledgement, purchase order or other response by Generator which is in addition to or different from the provisions of this Agreement shall be deemed objected to by the Company and shall be of no effect.
  - (G) Generator represents, warrants and covenants that it is and, during the term of this Agreement will remain, in compliance with and will perform its obligations pursuant to all applicable laws and regulations and shall indemnify, defend and hold harmless the Company from any breach thereof.
  - (H) It is the understanding and agreement of the parties that the Company is an independent contractor, and is not an agent, nor an authorized representative of the Generator.

21. **Notices.** All notices herein provided for shall be considered as having been given upon being placed in the mail, certified postage prepaid addressed to the Company or Generator at the address herein set forth in this Agreement or to such other address as may be given to the other party in writing.

22. **Liquidated Damages.** In the event that this Agreement is terminated by the Generator in a manner not in accordance with paragraph 4 hereof, or terminated due to a breach of this Agreement by the Generator, the Generator shall pay, as liquidated damages, and not as a penalty, the greater of an amount equal to six (6) months' service charges or the Generator's most recent monthly charge multiplied by six (6). The Generator shall be given credit for any advance payments made hereunder, however, in computing the amount owed as liquidated damages hereunder. The Generator acknowledges that this liquidated damages clause is reasonable and is applicable to recover damages related to its investment in equipment, development of landfills and hiring of employees undertaken by the Company to service its customers including the Generator. This liquidated damages clause in no way relieves the Generator from its obligations and liability for other cost or damages as set forth elsewhere in this Agreement.

Coverages	Minimum Amounts of Insurance
Worker's Compensation	Statutory
General Liability	\$500,000 combined single limit
Automobile Liability	\$500,000 combined single limit

GENERATOR: \_\_\_\_\_

Republic Services, Inc/COMPANY: \_\_\_\_\_

May 2009



# Republic Services, Inc.

18500 N. Allied Way, Phoenix, AZ 85054

## SPECIAL WASTE DEPARTMENT DECISION

Waste Profile #  
51231716582

Expiration Date  
10/10/2018

### I. Decision Request:

Initial     Recertification     Change

Disposal Facility: 5123 - Sunshine Canyon Landfill

Generator Name: Alcohol and Tobacco Tax and Trade Bureau

Generator Site Address: 300 North Los Angeles Street

City: Los Angeles

County: \_\_\_\_\_

State: CA

Zip: \_\_\_\_\_

Name of Waste: Tobacco Products Cigarettes

Estimated Annual Volume: 1600 Pounds

### II. Special Waste Department Decision:    Approved    Rejected

Management Method(s):     Landfill     Solidification     Bioremediation     Transfer Facility

Problematic Special Waste according to Republic?     Yes     No

If yes, which one? \_\_\_\_\_

Approved by Special Waste Review Committee?     Yes     No     Not Applicable

### Precautions, Conditions or Limitations on Approval

This material must be buried immediately upon receipt at the landfill.

Special Waste Analyst Signature: 

Date: 10/11/2017

Name (Printed): KEITH DIAMANTI

### III. Facility Decision:

Approved     Rejected

### Precautions, Conditions or Limitations on Approval

By signing below, the General Manager or Designee agrees that a fully executed Special Waste Service Agreement is on file for this profile and that the special waste file is complete.

General Manager or Designee: 

Date: 10/11/2017

Name (Printed): Chris Coyte

Requested Disposal Facility: 5123 Sunshine Canyon LF CA

Waste Profile #
5123 17 16582
Sales Rep #: 525 - Stacy Loveland

Saveable fill-in form. Restricted printing until all required (yellow) fields are completed.

**I. Generator Information**

Generator Name: Alcohol & Tobacco, Tax and Trade Bureau			
Generator Site Address: 300 North Los Angeles Street			
City: Los Angeles	County: Los Angeles	State: California	Zip: 90012
State ID/Reg No: n/a	State Approval/Waste Code: n/a	(if applicable)	NAICS #: n/a
Generator Mailing Address (if different): <input checked="" type="checkbox"/> 4300 West Cypress Street			
City: Tampa	County: Hillsborough	State: Florida	Zip: 33607
Generator Contact Name: James Cortier		Email: james.cortier@ttb.gov	
Phone Number: (202) 603-3776	Ext: n/a	Fax Number:	

**II. Billing Information**

Bill To: Alcohol & Tobacco, Tax and Trade Bureau	Contact Name: James Cortier
Billing Address: 4300 West Cypress Street	Email: james.cortier@ttb.gov
City: Tampa	State: Florida
Zip: 33607	Phone: (202) 603-3776

**III. Waste Stream Information**

Name of Waste: Tobacco products - cigarettes	
Process Generating Waste: Federal criminally seized contraband cigarettes	
Type of Waste:	<input checked="" type="checkbox"/> INDUSTRIAL PROCESS WASTE <input type="checkbox"/> POLLUTION CONTROL WASTE
Physical State:	<input checked="" type="checkbox"/> SOLID <input type="checkbox"/> SEMI-SOLID <input type="checkbox"/> POWDER <input type="checkbox"/> LIQUID
Method of Shipment:	<input checked="" type="checkbox"/> BULK <input type="checkbox"/> DRUM <input type="checkbox"/> BAGGED <input type="checkbox"/> OTHER:
Estimated Annual Volume:	1,600 Pounds
Frequency:	<input checked="" type="checkbox"/> ONE TIME <input type="checkbox"/> ONGOING
Disposal Consideration:	<input checked="" type="checkbox"/> LANDFILL <input type="checkbox"/> SOLIDIFICATION <input type="checkbox"/> BIOREMEDIATION

**IV. Representative Sample Certification**
 NO SAMPLE TAKEN

Is the representative sample collected to prepare this profile and laboratory analysis, collected in accordance with U.S. EPA 40 CFR 261.20(c) guidelines or equivalent rules?	<input type="checkbox"/> YES or <input type="checkbox"/> NO
Type of Sample:	<input type="checkbox"/> COMPOSITE SAMPLE <input type="checkbox"/> GRAB SAMPLE
Sample Date:	
Sample ID Numbers:	





Waste Profile #
5123 17 16582

**V. Physical Characteristics of Waste**

Characteristic Components	% by Weight (range)
1. packaged cigarettes	90
2. bags and boxes as containers for packaged cigarettes	10
3.	
4.	
5.	

Color	Odor (describe)	Does Waste Contain Free Liquids?	% Solids	pH:	Flash Point
n/a	tobacco	<input type="checkbox"/> YES or <input checked="" type="checkbox"/> NO	100	n/a	n/a °F

**Attach Laboratory Analytical Report (and/or Material Safety Data Sheet) Including Chain of Custody and Required Parameters Provided for this Profile**

Does this waste or generating process contain regulated concentrations of the following Pesticides and/or Herbicides: Chlordane, Endrin, Heptachlor (and its epoxides), Lindane, Methoxychlor, Toxaphene, 2,4-D, or 2,4,5-TP Silvex as defined in 40 CFR 261.33?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Does this waste contain reactive sulfides (greater than 500 ppm) or reactive cyanide (greater than 250 ppm)[reference 40 CFR 261.23(a)(5)]?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Does this waste contain regulated concentrations of Polychlorinated Biphenyls (PCBs) as defined in 40 CFR Part 761?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Does this waste contain concentrations of listed hazardous wastes defined in 40 CFR 261.31, 261.32, 261.33, including RCRA F-Listed Solvents?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Does this waste exhibit a Hazardous Characteristic as defined by Federal and/or State regulations?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Does this waste contain regulated concentrations of 2,3,7,8-Tetrachlorodibenzodioxin (2,3,7,8-TCDD), or any other dioxin as defined in 40 CFR 261.31?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Is this a regulated Radioactive Waste as defined by Federal and/or State regulations?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Is this a regulated Medical or Infectious Waste as defined by Federal and/or State regulations?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Is this waste a reactive or heat generating waste?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Does the waste contain sulfur or sulfur by-products?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Is this waste generated at a Federal Superfund Clean Up Site?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Is this waste from a TSD facility, TSD like facility or consolidator?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No

**VI. Certification**

I hereby certify that to the best of my knowledge and belief the information contained herein is a true, complete and accurate description of the waste material being offered for disposal and all known or suspected hazards have been disclosed. All Analytical Results/Material Safety Data Sheets submitted are truthful and complete and are representative of the waste.

I further certify that by utilizing this profile, neither myself nor any other employee of the company will deliver for disposal or attempt to deliver for disposal any waste which is classified as toxic waste, hazardous waste or infectious waste or any other waste material this facility is prohibited from accepting by law. I shall immediately give written notice of any change or condition pertaining to the waste not provided herein. Our company hereby agrees to fully indemnify this disposal facility against any damages resulting from this certification being inaccurate or untrue.

I further certify that the company has not altered the form or content of this profile sheet as provided by Republic Services Inc.

James Cortier, Special Agent

Alcohol & Tobacco, Tax and Trade Bureau

Authorized Representative Name And Title (Type or Print)

Company Name

*James Cortier*

10/10/2017

Authorized Representative Signature

Date



# SPECIAL WASTE SERVICE AGREEMENT NON-HAZARDOUS WASTES

Special Waste Profile Number 51231716582

**Generator Billing Information**

Name ALCOHOL & TOBACCO TAX AND TRADE BUREAU (ACCOUNT # 321)

Address: 4300 WEST CYPRESS STREET

City TAMPA

State: FL Zip: 33607

Phone: 202.603.3776 Fax \_\_\_\_\_

Contact: JAMES CORTIER

**Republic Waste Location (Company)**

SUNSHINE CANYON LANDFILL (5123)

14747 SAN FERNANDO ROAD

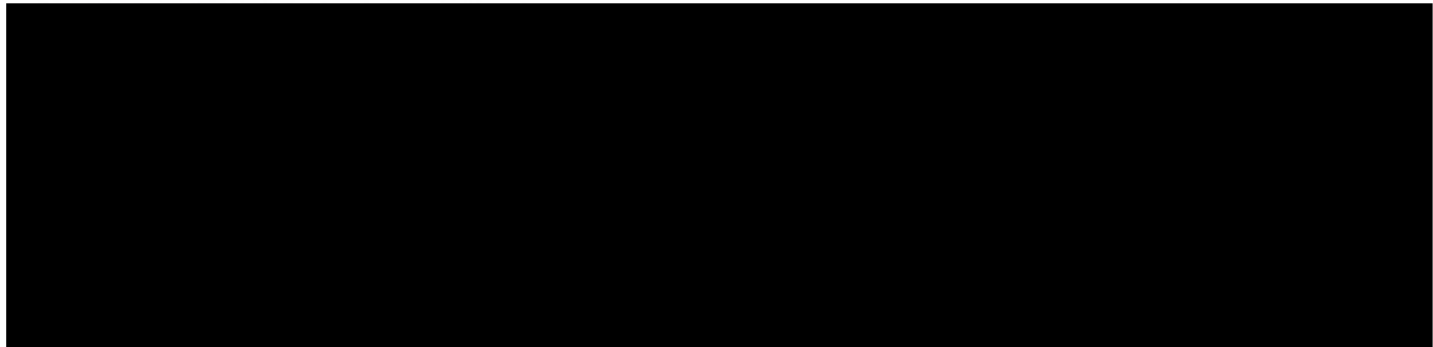
SYLMAR, CA 91342

818.362.2141

Project: TOBACCO PRODUCTS - CIGARETTES County and State of Origin: LOS ANGELES, CA

Additional Information: \_\_\_\_\_

- Special Waste Service.** Subject to the terms and conditions contained herein, the Company and the Generator agree to be legally bound hereby and the Company agrees to accept at its Facility, Acceptable Waste (hereinafter referred to as "Special Waste" or "Waste") delivered by Generator, and which is acceptable to the Company as herein provided.
- Acceptable Waste.** Only those Special Wastes described in Paragraph 3 herein and in any Special Waste Profile(s) which number is identical to the contract number referenced above, and which Profile(s) are hereby incorporated by reference herein, and which Waste is subsequently approved by the Company and is otherwise in accordance with all laws, regulations and permits, shall be acceptable for disposal at the Facility ("Acceptable Waste")



Cannot Exceed Daily Volume of 1,600 POUNDS Without Prior Approval of Company.

(B) **Incorporation by Reference.** In addition to Special Waste Profile(s), the following documents are incorporated by reference into this Agreement as if fully set forth herein.

- 1) N/A
- 2) N/A

4 **Term of Agreement** This Agreement is effective for **12** months, commencing **10/11/2017** and shall automatically be renewed for a similar term thereafter unless either party shall give written notice (via certified mail) of termination to the other party at least thirty (30) days pr or written notice

**THE COMPANY AND THE GENERATOR, IN CONSIDERATION OF THE MUTUAL OBLIGATIONS CONTAINED HEREIN, AGREE THAT THIS IS A LEGALLY BINDING AGREEMENT WHICH IS SUBJECT TO THE TERMS AND CONDITIONS SET FORTH ON THIS PAGE AND ON THE REVERSE SIDE OF THIS DOCUMENT. IN ADDITION, THE GENERATOR IS CERTIFYING THE ATTACHED TERMS AND CONDITIONS HAVE BEEN REVIEWED AND INITIALLED AT THE BOTTOM OF THE PAGE.**

**GENERATOR**

James Cortier  
SIGNATURE (AUTHORIZED REPRESENTATIVE)

JAMES CORTIER, SPECIAL AGENT  
NAME AND TITLE (PLEASE PRINT)

10/11/2017  
DATE

**REPUBLIC SERVICES, INC./COMPANY**

Stacy Loveland  
SIGNATURE (AUTHORIZED REPRESENTATIVE)

Stacy Loveland - SW Executive  
NAME AND TITLE (PLEASE PRINT)

10/11/2017  
DATE

## Terms and Conditions of Special Waste Service Agreement

5. **The Agreement** This agreement of the parties ("Agreement") for the disposal of Special Waste shall consist of this Agreement, notes to the Agreement (if any) and any Application, permit and approval that may be applicable to such Waste.
6. **Waste Accepted at Facility** Generator represents, warrants and covenants that the Waste delivered to Company at its Facility hereunder will be Acceptable Waste and will not contain any unacceptable quantity of hazardous materials or substances, radioactive materials or substances, or toxic waste or substances as defined by applicable federal, state, local or provincial laws or regulations. Any Waste which does not meet these requirements shall hereinafter be referred to as "Unacceptable Waste". The Generator shall in all matters relating to the collection, transportation and disposal of the Waste hereunder, comply with all applicable federal, state and local laws, regulations, rules and orders regarding the same. The word "Facility" shall mean any landfill, transfer station or other location used to transfer, process or otherwise dispose of such Waste.
7. **Special Waste** Generator represents, warrants and covenants that the Waste delivered to Company hereunder (i) will not contain any Special Waste that is not specifically described on any Application which is attached hereto or which is subsequently approved by the Company, (ii) will meet the material description as set forth in any Application and otherwise in all significant respects and (iii) will not contain Unacceptable Waste. The parties may incorporate additional Special Waste as part of this Agreement if prior to delivery of such Waste to Company, Generator has provided an Application for such Waste and Company has approved disposal of such Waste within the limitations and conditions contained in Company's written notice of approval of Special Waste Disposal. Title to any and all Waste handled or disposed of by Company shall at all times remain with Generator and Broker (if a Broker is involved).
8. **Rights of Refusal/Rejection** The Generator shall inspect all Waste at the place(s) of collection and shall remove any and all Unacceptable Waste. Company has the right to refuse, or to reject after acceptance, any load(s) of Waste(s) delivered to its Facility including if the Company believes the Generator has breached (or is breaching) its representations, warranties, covenants or agreements hereunder, or any applicable federal, state or local laws, regulations, rules or orders, even if only a portion of such Waste load is unacceptable. The Company shall have the right to inspect all vehicles and containers of Waste haulers, including the Generator's vehicles, in order to determine whether the Waste is Acceptable Waste or Unacceptable Waste pursuant to this Agreement and all applicable federal, state and local laws, rules and regulations. The Company's exercise, or failure to exercise, its rights hereunder shall not operate to relieve the Generator of its responsibilities or liability under this Agreement. The Generator shall be responsible for, and bear all reasonable expenses and damages incurred by the Company, as a result of the Unacceptable Waste and in the reloading and removal of Unacceptable Waste disposed in the Facility. The Company may also, in its sole discretion, require the Generator to promptly remove the Unacceptable Waste.
9. **Limited License to Enter** This Agreement provides Generator with a license to enter the Facility for the limited purpose of, and only to the extent necessary for, off-loading Acceptable Waste at the Facility in the manner directed by Company. Except in an emergency, Generator's personnel shall not leave the immediate vicinity of their vehicle. After off-loading the Waste, Generator's personnel shall promptly leave the Facility. Under no circumstances shall Generator or its personnel engage in any scavenging of Waste or other materials at the Facility. The Company reserves the right to make and enforce reasonable rules and regulations concerning the operation of the Facility, the conduct of the drivers and others on the Facility premises, quantities and sources of Waste, and any other matters necessary or desirable for the safe, legal and efficient operation of the Facility including, but not limited to, speed limits on haul roads imposed by the Company, and the wearing of hard hats and other personal protection equipment by all individuals allowed on the Facility premises. Generator agrees to conform to such rules and regulations as they may be established and amended from time to time. Company may refuse to accept Waste from and shall deny an entrance license to, any of Generator's personnel whom Company believes is under the influence of alcohol or other chemical substances. Generator shall be solely responsible for its employees and subcontractors performing their obligations in a safe manner when at the facility of Company.
10. **Charges and Payment** Payment shall be made by Generator within sixty (60) days after receipt of invoice from Company. In the event that any amount is overdue, the Company may terminate this Agreement. Generator agrees to pay a finance charge equal to the maximum interest rate permitted by law. Generator shall be liable for all taxes, fees, or other charges imposed upon the disposal of the Waste by federal, state, local or provincial laws and regulations. Company from time to time, may modify its rates upon sixty (60) days written notice to Generator.
11. **Termination** Generator's obligations, representations, warranties and covenants regarding the Waste delivered and all indemnities shall survive termination of this Agreement. Should Generator materially default in any of its obligations hereunder, then Company may immediately terminate this Agreement and Generator shall be liable for all costs and damages incurred by the Company.
12. **Driver's Knowledge and Authority** Generator represents, warrants and covenants that its drivers who deliver Waste to Company's Facility have been advised by Generator of the Company's prohibition on deliveries of hazardous materials or substances, radioactive materials or substances, or toxic waste or substances or any other Unacceptable Waste to the Facility of Company's restrictions on deliveries of Special Waste to the Facility of the definitions of "Hazardous Waste and Hazardous Substances" as provided by applicable federal, state and local law, rules and regulations and "Special Waste" as provided herein, and of the terms of this license to enter Company's Facility.
13. **Indemnification** Generator shall indemnify, defend and hold harmless the Company and its subsidiaries, affiliates and parent corporations, as applicable and their respective officers, directors, lenders, employees, subcontractors and agents from and against any and all claims, suits, losses, liabilities, assessments, damages, fines, costs and expenses, including reasonable attorneys fees arising under federal, state or local laws, regulations or ordinances, or relating to the content of the Waste, or arising out of or in connection with any breach of this Agreement or arising out of the negligent collection, transportation and disposal of Waste by Generator or Generator's employees, agents, subcontractors or representatives thereof. Generator shall also be responsible for increased inspection, testing, study and analysis costs made necessary due to reasonable concerns of the Company as to the content of the Waste following discovery of potentially Unacceptable Waste. This indemnification and other obligations stated in this paragraph shall survive the termination of this Agreement.
14. **Insurance** Generator shall maintain in full force and effect throughout the term of this Agreement the following types of insurance in at least the amounts specified below:

Coverages	Minimum Amounts of Insurance
Workers Compensation	Statutory
General Liability	\$500,000 combined single limit
Automobile Liability	\$500,000 combined single limit

All insurance will be by insurers authorized to do business in the state in which the Facility is located. Prior to Generator being allowed on Facility premises, Generator shall provide the Company with certificates of insurance or other satisfactory evidence that such insurance has been procured and is in force. Said policies shall not thereafter be canceled, be permitted to expire or lapse, or be changed without thirty (30) days advance written notice to the Company. Generator warrants that it will secure the above minimum amounts of insurance from any transportation of the Waste to the Facility.

15. **Failure to Perform** Neither party hereto shall be liable for its failure to perform hereunder due to circumstances not its fault and beyond its reasonable control, including, but not limited to, strikes or other labor disputes, riots, protests, civil disturbances or sabotage, changes in law, fires, floods, compliance with government requests, explosions, accidents, weather, lack of required natural resources, or acts of God affecting either party hereto. In the event of any of the circumstances provided for in the preceding sentence, including, but not limited to, whether any federal, state or local court or governmental authority takes any action which would (i) close or restrict operations at the Facility, (ii) limit the quantity or prohibit the disposal of Waste at the Facility, or (iii) limit the ability of or prohibit Generator from delivering Waste to the Facility, the Company shall have the right, at its option, to reduce, suspend or terminate Generator's access to the Facility immediately without prior notice and without any additional liabilities between the parties other than Generator's payment obligation hereunder. Neither Party is required hereunder to settle any labor dispute against its own best judgment.

16. **Other Termination** The occurrence of any of the following events shall also constitute an event of default by the Generator and shall give the Company the right to immediately terminate this Agreement:

- (A) A petition for reorganization or bankruptcy filed by or against the Generator
- (B) Failure by Generator to pay any amounts due to Company
- (C) Any breach by Generator of any of its obligations pursuant to the Agreement

Generator shall be liable for and shall indemnify, defend and hold harmless Company from any losses, claims, expenses or damages incurred by the Company as a result of termination hereunder.

17. **Assignment** Generator may not assign, transfer or otherwise vest in any other Company, entity or person in whole or in part, any of its rights or obligations under the Agreement without the prior written consent of the Company, provided, however, that the Company may without any such prior written consent, assign its rights and/or obligations under the Agreement to a subsidiary or affiliate corporation.

18. **Right of Disposal** This Agreement does not grant any rights to dispose of Waste other than in accordance herewith. The Company reserves the right to immediately terminate access to the Facility by Generator and Generator's personnel in the event of breach or violation by Generator of any of the terms of this Agreement, the Company's operating rules or payment policies or any applicable laws or regulations.

19. **Continuing Compliance** The Generator has a continuing obligation to inform the Company of any new information or information not previously provided to the Company by Generator which may affect the acceptability of the Waste by the Company. Further, the Generator shall comply with all Company requests for evidence of Generator's continuing compliance with the terms of the Agreement, including but not limited to the following: (i) providing new, updated Waste profiles on the Waste(s) offered for disposal or (ii) providing appropriate certification that the Waste being offered for disposal is accurately reflected by the appropriate Application or (iii) re-sample the Waste at Generator's expense if reasonable cause exists as to its acceptability under the terms of this Agreement or (iv) allow the Company to re-sample the Waste at Generator's expense if reasonable cause exists as to its acceptability under the terms of this Agreement or (v) all of the above.

20. **Miscellaneous**

- (A) This Agreement shall be governed by the laws of the State in which the Facility is located.
- (B) No waiver of a breach of any of the obligations contained in the Agreement shall be construed to be a waiver of any prior or succeeding breach of the same obligation or of any other obligation of this Agreement.
- (C) No modification, release, discharge or waiver of any provision or obligation hereof shall be of any force, or effect, unless in writing signed by all parties to this Agreement.
- (D) Generator shall treat as confidential and not disclose to others during or subsequent to the terms of this Agreement, except as is necessary to perform this Agreement, or to comply with any applicable law or regulation any information (including any technical information, experience or data) regarding the Company's plans, programs, plants, processes, products, costs, equipment or operations which may come within the knowledge of the Generator or its employees in the performance of this Agreement, without in each instance securing the prior written consent of the other Company.
- (E) If any term, phrase, obligation or provision of this Agreement shall be held to be invalid, illegal or unenforceable in any respect, this Agreement shall remain in effect and be construed without regard to such term, phrase, obligation or provision.
- (F) This Agreement constitutes the entire understanding between the parties, replacing and amending any prior agreements between the parties, and shall be binding upon all parties hereto, their successors, heirs, representatives and assigns. Any provision, term or condition in any acknowledgement, purchase order or other response by Generator which is in addition to or different from the provisions of this Agreement shall be deemed objected to by the Company and shall be of no effect.
- (G) Generator represents, warrants and covenants that it is and, during the term of this Agreement will remain in compliance with and will perform its obligations pursuant to all applicable laws and regulations and shall indemnify, defend and hold harmless the Company from any breach thereof.
- (H) It is the understanding and agreement of the parties that the Company is an independent contractor, and is not an agent, nor an authorized representative of the Generator.

21. **Notices** All notices herein provided for shall be considered as having been given upon being placed in the mail, certified postage prepaid addressed to the Company or Generator at the address herein set forth in this Agreement or to such other address as may be given to the other party in writing.

22. **Liquidated Damages** In the event that this Agreement is terminated by the Generator in a manner not in accordance with paragraph 4 hereof, or terminated due to a breach of this Agreement by the Generator, the Generator shall pay, as liquidated damages, and not as a penalty, the greater of an amount equal to six (6) months' service charges or the Generator's most recent monthly charge multiplied by six (6). The Generator shall be given credit for any advance payments made hereunder, however, in computing the amount owed as liquidated damages hereunder. The Generator acknowledges that this liquidated damages clause is reasonable and is applicable to recover damages related to its investment in equipment, development of landfills and hiring of employees undertaken by the Company to service its customers including the Generator. This liquidated damages clause in no way relieves the Generator from its obligations and liability for other cost or damages as set forth elsewhere in this Agreement.

GENERATOR: 

Republic Services, Inc./COMPANY: 



Republic Services, Inc.

18500 N. Allied Way, Phoenix, AZ 85054

SPECIAL WASTE DEPARTMENT DECISION

Waste Profile #
51231711043

Expiration Date
11/30/2017

I. Decision Request:

[X] Initial [ ] Recertification [ ] Change

Disposal Facility: 5123 - Sunshine Canyon Landfill

Generator Name: Chadmar Group

Generator Site Address: 26311 Palos Verdes Dr east

City: Rolling Hills

County:

State: CA

Zip:

Name of Waste: Weathered Wood

Estimated Annual Volume: 30 Tons

II. Special Waste Department Decision:

[X] Approved [ ] Rejected

Management Method(s): [X] Landfill [ ] Solidification [ ] Bioremediation [ ] Transfer Facility

Problematic Special Waste according to Republic? [ ] Yes [X] No

If yes, which one?

Approved by Special Waste Review Committee? [ ] Yes [ ] No [X] Not Applicable

Precautions, Conditions or Limitations on Approval

Disposal of TWW must be in accordance with the California Health and Safety Code (HSC) sections 24143.1.5, 25150.7 and 25150.8.

Special Waste Analyst Signature:

[Handwritten Signature]

Date: 7/12/2017

Name (Printed): MARK PHILLIPS

III. Facility Decision:

[X] Approved [ ] Rejected

Precautions, Conditions or Limitations on Approval

By signing below, the General Manager or Designee agrees that a fully executed Special Waste Service Agreement is on file for this profile and that the special waste file is complete.

General Manager or Designee:

[Handwritten Signature]

Date: 7/12/2017

Name (Printed):

Rob Sherman



**EXPRESS WASTE PROFILE**

Requested Disposal Facility: Sunshine Canyon Landfill

Saveable fill in form. Restricted printing until all required (yellow) fields are completed.

Waste Profile #
5123 17 11043
Sales Rep #. Stacy Loveland - 525

**I. Generator Information**

Generator Name: <u>CHADMAR GROUP</u>			
Generator Site Address: <u>26311 PAWS VERDES DR. EAST</u>			
City: <u>Rolling Hills</u>	County: <u>LA</u>	State: <u>CA</u>	Zip: <u>90274</u>
State ID/Reg No:	State Approval/Waste Code: (if applicable)		NAICS #.
Generator Mailing Address (if different):			
City:	County:	State:	Zip:
Generator Contact Name: <u>TOM DIPPIA</u>		Email: <u>TDIPPIA@CHADMAR.COM</u>	
Phone Number:	Ext:	Fax Number:	

**II. Billing Information**

Bill To: <u>SAN PEDRO Truck &amp; TRACTOR</u>	Contact Name: <u>MARIE PERD</u>
Billing Address: <u>P.O. Box 1015</u>	Email:
City: <u>SAN PEDRO</u>	State: <u>CA</u> Zip: <u>90733</u> Phone: <u>(310) 612-0108</u>

**III. Waste Stream Information**

Name of Waste: <small>(Petroleum products applies only to contaminated media and debris)</small>	<input type="checkbox"/> Diesel Fuel	<input checked="" type="checkbox"/> Weathered Wood	<input type="checkbox"/> Friable Asbestos
	<input type="checkbox"/> Home Heating Fuel #1-6	<input type="checkbox"/> RCRA Empty Containers	<input type="checkbox"/> Non Friable Asbestos
<input type="checkbox"/> Kerosene	<input type="checkbox"/> Treated Medical Waste	<input type="checkbox"/> Cured Asphalt	
<input type="checkbox"/> Aviation Fuel	<input type="checkbox"/> Animal Carcass (non infectious)	<input type="checkbox"/> Tires	
<input type="checkbox"/> Hydraulic Fluid	<input type="checkbox"/> Plant Trash	<input type="checkbox"/> Food Products <small>(Including Animal Food)</small>	
<input type="checkbox"/> Unleaded Gasoline (UST Corrective Action)	<input type="checkbox"/> Meth Contaminated Debris		
Process Generating Waste: <u>POWER POLES</u>			
Method of Shipment: <input type="checkbox"/> BULK <input type="checkbox"/> DRUM <input type="checkbox"/> BAGGED <input checked="" type="checkbox"/> OTHER:			
Estimated Annual Volume: <u>20-30 TONS</u> -- Select Volume Type --			
Frequency: <input type="checkbox"/> ONE TIME <input checked="" type="checkbox"/> ONGOING			

**IV. Certification**

I hereby certify that to the best of my knowledge and belief, the information contained herein is a true and accurate description of the waste material being offered for disposal. I further certify that by utilizing this profile, neither myself nor any other employee of the company will deliver for disposal or attempt to deliver for disposal any waste which is classified as toxic waste, hazardous waste or infectious waste, or any other waste material this facility is prohibited from accepting by law. Our company hereby agrees to fully indemnify this disposal facility against any damages resulting from this certification being inaccurate or untrue. I further certify that the company has not altered the form or content of this profile sheet as provided by Republic Services, Inc.

<u>TOM DIPPIA</u> Authorized Representative Name/Title (Type or Print)	<u>CHADMAR GROUP</u> Company Name
 Authorized Representative Signature	<u>7-11-17</u> Date

TIME RECEIVED July 11, 2017 1:26:06 PM MST	REMOTE CSID 13107324344	DURATION 138	PAGES 2	STATUS Received
Jul 11 17 10:38a	Jerzy Boyz	13107324344		p.1



**THIRD PARTY SIGNATURE AUTHORIZATION  
for Special Waste Disposal**

Date: 7-11-17

This Authorization is only valid for 3 years from the above date.

To Whom It May Concern:

Please be advised that the following company/individual has been appointed to work as our agent for purposes of managing waste materials that we may generate.

Name of Authorized Agent <i>MIKE PERO</i>	Title <i>OWNER</i>
Name of Company <i>SAN PEDRO TRUCK &amp; TRACTOR</i>	Telephone Number <i>310 612-0108</i>

The above broker/individual is authorized to act as our authorized agent for the following purposes:

Per Tom via  
phone  
7/11/17

- Complete and sign Special Waste Profile.
- Complete and sign Special Waste Profile-Recertification.
- Authorize amendments to Special Waste Profile.
- Sign contracts to dispose and/or transport material.
- Sign certifications necessary to comply with landfill requirements.
- Sign manifests to initiate shipment to disposal facilities.

Our authorized agent will notify us prior to any action stated above, and will provide us with copies of any documents bearing our name.

Name of Company <i>CHADMAR GROUP</i>	Mailing Address <i>TDIPRIHA@CHADMAR.COM</i>
Generator Contact (Print Name) <i>TOM DIPRIHA</i>	Title <i>VP</i>
Signature <i>[Signature]</i>	Telephone Number <i>(909) 322-8352</i>



# Republic Services, Inc.

18500 N. Allied Way, Phoenix, AZ 85054

## FAX

### INCOMPLETE FILE TRANSMITTAL

<b>TO:</b> Leanne Smith	<b>LOG NO.:</b> 51231711043
<b>FAX:</b>	<b>File Received:</b> 7/11/2017
<b>From:</b> Special Waste Dept.	<b>Response Date:</b> 7/11/2017
<b>Re:</b> Chadmar Group / Weathered Wood	

SECTION I	SECTION II	SECTION III	SECTION IV	SECTION V	SECTION VI
<input type="checkbox"/> DisposalFacility	<input type="checkbox"/> TransporterName	<input type="checkbox"/> NameOfWaste	<input type="checkbox"/> USEPA	<input type="checkbox"/> CharacteristicComponents	<input checked="" type="checkbox"/> GenAuthSignature
<input type="checkbox"/> GeneratorName	<input type="checkbox"/> TransporterSiteAddress	<input type="checkbox"/> ProcessGeneratingWaste	<input type="checkbox"/> SampleDate	<input type="checkbox"/> FreeLiquids	<input type="checkbox"/> GenCoName
<input type="checkbox"/> GeneratorSiteAddress	<input type="checkbox"/> TransporterCityStateZip	<input type="checkbox"/> TypeOfWaste	<input type="checkbox"/> CompositeGrab	<input type="checkbox"/> YesNo	<input type="checkbox"/> NoStateLetter
<input type="checkbox"/> GeneratorCityStateZip	<input type="checkbox"/> TransporterMailingAddress	<input type="checkbox"/> PhysicalState	<input type="checkbox"/> SampleID	<input type="checkbox"/> pH_Flash	<input type="checkbox"/> Name_Title
<input type="checkbox"/> GeneratorMailingAddress	<input type="checkbox"/> TransporterContactName	<input type="checkbox"/> MethodOfShipment			<input type="checkbox"/> SignatureDate
<input type="checkbox"/> GeneratorContactName	<input type="checkbox"/> TransporterTelFAX	<input type="checkbox"/> EstimatedAnnualVolume			
<input type="checkbox"/> GeneratorTelFAX		<input type="checkbox"/> Frequency			
<input type="checkbox"/> GeneratorStateID		<input type="checkbox"/> DisposalConsideration			
<input type="checkbox"/> WasteCodeTexas					

ANALYTICALS	TCLP TOTAL METALS	TCLP VOLATILES	TCLP SEMI-VOLATILES	PESTICIDES / HERBICIDE	
<input type="checkbox"/> TotalCyanide	<input type="checkbox"/> Arsenic	<input type="checkbox"/> Benzene	<input type="checkbox"/> Cresols	<input type="checkbox"/> Chlordane	<input type="checkbox"/> LabLetterhead
<input type="checkbox"/> ReactiveCyanide	<input type="checkbox"/> Barium	<input type="checkbox"/> CarbonTetrachloride	<input type="checkbox"/> DichlorobenzeneOne	<input type="checkbox"/> Endrin	<input type="checkbox"/> ChainOfCustody
<input type="checkbox"/> TotalSulfide	<input type="checkbox"/> Cadmium	<input type="checkbox"/> Chlorobenzene	<input type="checkbox"/> DinitrotolueneTwo	<input type="checkbox"/> Heptachlor	<input type="checkbox"/> NoLabSignature
<input type="checkbox"/> ReactiveSulfide	<input type="checkbox"/> Chromium	<input type="checkbox"/> Chloroform	<input type="checkbox"/> Hexachlorobenzene	<input type="checkbox"/> HeptachlorEpoxide	<input type="checkbox"/> ReportOneYearOldPlus
<input type="checkbox"/> TotalPCB	<input type="checkbox"/> Copper	<input type="checkbox"/> DichloroethaneOne	<input type="checkbox"/> Nitrobenzene	<input type="checkbox"/> Lindane	<input type="checkbox"/> NoThirdPartyLab
<input type="checkbox"/> TOX_EOX	<input type="checkbox"/> Lead	<input type="checkbox"/> DichloroethyleneTwo	<input type="checkbox"/> Pentachlorophenol	<input type="checkbox"/> Methoxychlor	<input type="checkbox"/> MissingReportPages
<input type="checkbox"/> Phenols	<input type="checkbox"/> Mercury	<input type="checkbox"/> MethylEthylKetone	<input type="checkbox"/> Pyridine	<input type="checkbox"/> Toxaphene	<input type="checkbox"/> MissingMSDSPages
<input type="checkbox"/> FlashPoint	<input type="checkbox"/> Selenium	<input type="checkbox"/> Tetrachloroethylene	<input type="checkbox"/> TrichlorophenolFive	<input type="checkbox"/> TwoFourD	<input type="checkbox"/> TotalSulfates
<input type="checkbox"/> pH	<input type="checkbox"/> Silver	<input type="checkbox"/> Trichlorethylene	<input type="checkbox"/> TrichlorphenolSix	<input type="checkbox"/> TwoFourFiveTP	<input type="checkbox"/> TotalSulfur
<input type="checkbox"/> PaintFilter	<input type="checkbox"/> Zinc	<input type="checkbox"/> VinylChloride			<input type="checkbox"/> WrongProfile
<input type="checkbox"/> TPH					
<input type="checkbox"/> BTEX					<input type="checkbox"/> GeneratorIncomplete

**Notes:**  
 Please have the generator check the appropriate box showing what they have authorized San Pedro Truck and Tractor to do on their behalf.  
 Mark









# Republic Services, Inc.

18500 N. Allied Way, Phoenix, AZ 85054

## SPECIAL WASTE DEPARTMENT DECISION

Waste Profile #  
51231716056

Expiration Date  
10/2/2018

### I. Decision Request:

Initial     Recertification     Change

Disposal Facility: 5123 - Sunshine Canyon Landfill

Generator Name: Christopher Hyldahl

Generator Site Address: 20734 Big Rock Dr

City: Malibu

County: \_\_\_\_\_

State: CA

Zip: \_\_\_\_\_

Name of Waste: Weathered Wood

Estimated Annual Volume: 2 Tons

### II. Special Waste Department Decision:    Approved    Rejected

Management Method(s):     Landfill     Solidification     Bioremediation     Transfer Facility

Problematic Special Waste according to Republic?     Yes     No

If yes, which one? \_\_\_\_\_

Approved by Special Waste Review Committee?     Yes     No     Not Applicable

### Precautions, Conditions or Limitations on Approval

Disposal of Weathered Wood Waste and or Treated Wood Waste must be in accordance with California Health and Safety Code (HSC) Sections 25150.7 and 25150.8 (for TWW) or in accordance with HSC Section 25143.1.5 (for TWW-Utility).

Special Waste Analyst Signature: \_\_\_\_\_

Date: 10/2/2017

Name (Printed): KEITH DIAMANTI

### III. Facility Decision:

Approved     Rejected

### Precautions, Conditions or Limitations on Approval

By signing below, the General Manager or Designee agrees that a fully executed Special Waste Service Agreement is on file for this profile and that the special waste file is complete.

General Manager or Designee: \_\_\_\_\_

Date: 10/2/2017

Name (Printed): Chris Coyle



EXPRESS WASTE PROFILE

Requested Disposal Facility: 5123 Sunshine Canyon LF CA

Waste Profile #

5123 17 16056

Saveable fill in form. Restricted printing until all required (yellow) fields are completed.

Sales Rep #. 525 - Stacy Loveland

I. Generator Information

Generator Name: Christopher Hyldahl
Generator Site Address: 20734 Big Rock Dr.
City: Malibu County: Los Angeles State: California Zip: 90265
State ID/Reg No: State Approval/Waste Code: (if applicable) NAICS #.
Generator Mailing Address (if different):
City: County: State: -- Select a State Zip:
Generator Contact Name: Christopher Hyldahl Email:
Phone Number: 3106060888 Ext: Fax Number:

II. Billing Information

Bill To: Viola Gardens Design Contact Name: Jessica Viola
Billing Address: 4612 Collis Ave. Email: admin@violagardens.com
City: Los Angeles State: CA Zip: 90032 Phone: 415 722 0749

III. Waste Stream Information

Name of Waste:
(Petroleum products-applies only to contaminated media and debris).
Diesel Fuel
Home Heating Fuel #1-6
Kerosene
Aviation Fuel
Hydraulic Fluid
Unleaded Gasoline (UST Corrective Action)
Weathered Wood
RCRA Empty Containers
Treated Medical Waste
Animal Carcass (non infectious)
Plant Trash
Meth Contaminated Debris
Friable Asbestos
Non Friable Asbestos
Cured Asphalt
Tires
Food Products (Including Animal Food)

Process Generating Waste: Removing railroad ties from an old retaining wall

Method of Shipment: [X] BULK [ ] DRUM [ ] BAGGED [ ] OTHER:

Estimated Annual Volume: 2 Tons

Frequency: [X] ONE TIME [ ] ONGOING

IV. Certification

I hereby certify that to the best of my knowledge and belief, the information contained herein is a true and accurate description of the waste material being offered for disposal. I further certify that by utilizing this profile, neither myself nor any other employee of the company will deliver for disposal or attempt to deliver for disposal any waste which is classified as toxic waste, hazardous waste or infectious waste, or any other waste material this facility is prohibited from accepting by law. Our company hereby agrees to fully indemnify this disposal facility against any damages resulting from this certification being inaccurate or untrue. I further certify that the company has not altered the form or content of this profile sheet as provided by Republic Services, Inc.

Christopher Hyldahl
Authorized Representative Name/Title (Type or Print)
Homeowner
Company Name
October 2, 2017
Date
Authorized Representative Signature



**THIRD PARTY SIGNATURE AUTHORIZATION  
for Special Waste Disposal**

Date: September 2, 2017

This Authorization is only valid for 3 years from the above date.

To Whom It May Concern:

Please be advised that the following company/individual has been appointed to work as our agent for purposes of managing waste materials that we may generate.

Name of Authorized Agent Jessica Viola	Title Designer
Name of Company Viola Gardens Design	Telephone Number 415 722 0749

The above broker/individual is authorized to act as our authorized agent for the following purposes:

- Complete and sign Special Waste Profile.
- Complete and sign Special Waste Profile-Recertification.
- Authorize amendments to Special Waste Profile.
- Sign contracts to dispose and/or transport material.
- Sign certifications necessary to comply with landfill requirements.
- Sign manifests to initiate shipment to disposal facilities.

Our authorized agent will notify us prior to any action stated above, and will provide us with copies of any documents bearing our name.

Name of Company Christopher Hyldahl	Mailing Address 20734 Big Rock Drive, Malibu CA 90264
Generator Contact (Print Name) Christopher Hyldahl	Title Homeowner
Signature 	Telephone Number 3106060888



# AGENT SPECIAL WASTE SERVICE AGREEMENT NON-HAZARDOUS WASTES

Special Waste Profile Number: 5123 17 16056

### Agent Billing Information

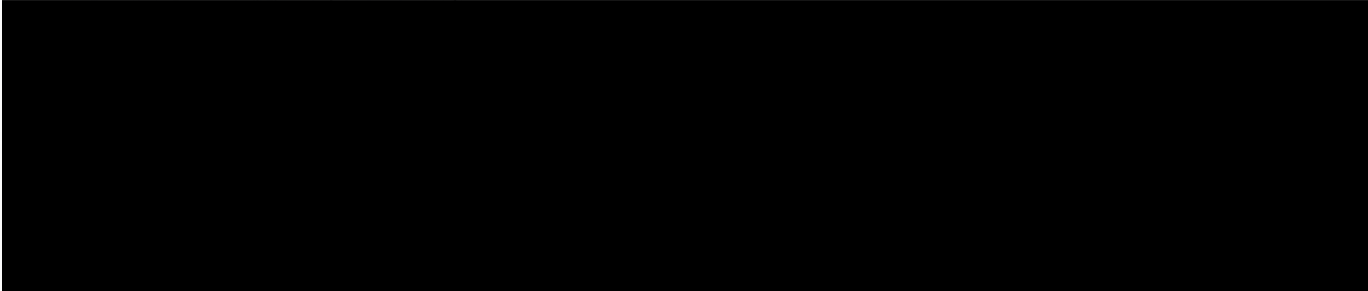
Name: VIOLA GARDENS DESIGN  
(ACCOUNT# CASH 321)  
Address: 4612 COLLIS AVE  
City: LOS ANGELES  
State: CA Zip: 90032  
Phone: 415.722.0749 Fax: \_\_\_\_\_  
Contact: JESSICA VIOLA

### Republic Waste Location (Company)

SUNSHINE CANYON LANDFILL (5123)  
14747 SAN FERNANDO ROAD  
SYLMAR, CA 91342  
818.362.2141

Project: CHRISTOPHER HYLDAHL County and State of Origin: LOS ANGELES, CALIFORNIA  
Generator Address: 20734 BIG ROCK, MALIBU, CA 90265  
Additional Information: CONTACT PHONE: 310.606.0888

- Special Waste Service.** Subject to the terms and conditions contained herein, the Company and the Agent agree to be legally bound hereby and the Company agrees to accept at its Facility, Acceptable Waste (hereinafter referred to as "Special Waste" or "Waste") delivered by Agent, and which is acceptable to the Company as herein provided.
- Acceptable Waste.** Only those Special Wastes described in Paragraph 3 herein and in any Special Waste Profile(s) which number is identical to the contract number referenced above, and which Profile(s) are hereby incorporated by reference herein, and which Waste is subsequently approved by the Company and is otherwise in accordance with all laws, regulations and permits, shall be acceptable for disposal at the Facility ("Acceptable Waste").



Cannot Exceed Daily Volume of 2 TONS Without Prior Approval of Company.

(B) **Incorporation by Reference.** In addition to Special Waste Profile(s), the following documents are incorporated by reference into this Agreement as if fully set forth herein.

- 1) N/A
- 2) N/A

4. **Term of Agreement.** This Agreement is effective for 12 months, commencing 10/2/2017 and shall automatically be renewed for a similar term thereafter unless either party shall give written notice (via certified mail) of termination to the other party at least thirty (30) days prior written notice.

THE COMPANY AND THE AGENT, IN CONSIDERATION OF THE MUTUAL OBLIGATIONS CONTAINED HEREIN, AGREE THAT THIS IS A LEGALLY BINDING AGREEMENT WHICH IS SUBJECT TO THE TERMS AND CONDITIONS SET FORTH ON THIS PAGE AND ON THE REVERSE SIDE OF THIS DOCUMENT. IN ADDITION, THE GENERATOR IS CERTIFYING THE ATTACHED TERMS AND CONDITIONS HAVE BEEN REVIEWED AND INITIALLED AT THE BOTTOM OF THE PAGE.

**AGENT**

Jessica Viola  
SIGNATURE (AUTHORIZED REPRESENTATIVE)

JESSICA VIOLA  
NAME AND TITLE (PLEASE PRINT)

10/3/17  
DATE

**REPUBLIC SERVICES, INC./COMPANY**

Stacy Loveland  
SIGNATURE (AUTHORIZED REPRESENTATIVE)

Stacy Loveland - SW Executive  
NAME AND TITLE (PLEASE PRINT)

10/3/2017  
DATE

## Terms and Conditions of Agent Special Waste Service Agreement

5. **The Agreement.** This agreement of the parties ("Agreement") for the disposal of Special Waste shall consist of this Agreement, riders to the Agreement (if any) and any Application, permit and approval that may be applicable to such Waste.
6. **Waste Accepted at Facility.** Agent represents, warrants and covenants that the Waste delivered to Company at its Facility hereunder will be Acceptable Waste and will not contain any unacceptable quantity of hazardous materials or substances, radioactive materials or substances, or toxic waste or substances, as defined by applicable federal, state, local or provincial laws or regulations. Any Waste which does not meet these requirements shall hereinafter be referred to as "Unacceptable Waste". The Agent shall in all matters relating to the collection, transportation and disposal of the Waste hereunder, comply with all applicable federal, state and local laws, regulations, rules and orders regarding the same. The word "Facility" shall mean any landfill, transfer station or other location used to transfer, process or otherwise dispose of such Waste.
7. **Special Waste.** Agent represents, warrants and covenants that the Waste delivered to Company hereunder (i) will not contain any Special Waste that is not specifically described on any Application which is attached hereto and which is subsequently approved by the Company, (ii) will meet the material description as set forth in any Application and otherwise in all significant respects and (iii) will not contain Unacceptable Waste. The parties may incorporate additional Special Waste as part of this Agreement if prior to delivery of such Waste to Company, Agent has provided an Application for such Waste and Company has approved disposal of such Waste within the limitations and conditions contained in Company's written notice of approval of Special Waste. Title to any and all Waste handled or disposed of by Company shall at all times remain with Generator and Agent.
8. **Rights of Refusal/Rejection.** The Agent shall inspect all Waste at the place(s) of collection and shall remove any and all Unacceptable Waste. Company has the right to refuse, or to reject after acceptance, any load(s) of Waste(s) delivered to its Facility including if the Company believes the Agent has breached (or is breaching) its representations, warranties, covenants or agreements hereunder, or any applicable federal, state or local laws, regulations, rules or orders, even if only a portion of such Waste load is unacceptable. The Company shall have the right to inspect all vehicles of Waste haulers, including the Agent's vehicles, in order to determine whether the Waste is Acceptable Waste or Unacceptable Waste pursuant to this Agreement and all applicable federal, state and local laws, rules and regulations. The Company's exercise, or failure to exercise, its rights hereunder shall not operate to relieve the Agent of its responsibilities or liability under this Agreement. The Agent shall be responsible for, and bear all reasonable expenses and damages incurred by the Company, as a result of the Unacceptable Waste and in the reloading and removal of Unacceptable Waste disposed in the Facility. The Company, may also, in its sole discretion, require the Agent to promptly remove the Unacceptable Waste.
9. **Limited License to Enter.** This Agreement provides Agent with a license to enter the Facility for the limited purpose of, and only to the extent necessary for, off-loading Acceptable Waste at the Facility in the manner directed by Company. Except in an emergency, Agent's personnel shall not leave the immediate vicinity of their vehicle. After off-loading the Waste, Agent's personnel shall promptly leave the Facility. Under no circumstances shall Agent or its personnel engage in any scavenging of Waste or other materials at the Facility. The Company reserves the right to make and enforce reasonable rules and regulations concerning the operation of the Facility, the conduct of the drivers and others on the Facility premises, quantities and sources of Waste, and any other matters necessary or desirable for the safe, legal and efficient operation of the Facility including, but not limited to, speed limits on haul roads imposed by the Company, and the wearing of hard hats and other personal protection equipment by all individuals allowed on the Facility premises. Agent agrees to conform to such rules and regulations as they may be established and amended from time to time. Company may refuse to accept Waste from and shall deny an entrance license to, any of Agent's personnel whom Company believes is under the influence of alcohol or other chemical substances. Agent shall be solely responsible for its employees and subcontractors performing their obligations in a safe manner when at the facility of Company.
10. **Charges and Payment.** Payment shall be made by Agent within sixty (60) days after receipt of invoice from Company. In the event that any amount is overdue, the Company may terminate this Agreement. Agent agrees to pay a finance charge equal to the maximum interest rate permitted by law. Agent shall be liable for all taxes, fees, or other charges imposed upon the disposal of the Waste by federal, state, local or provincial laws and regulations. Company, from time to time, may modify its rates upon sixty (60) days written notice to Agent. Agent hereby agrees that the Company's right to receive payments under this Agreement is unconditional and is not conditioned upon Agent first receiving payment from Generator or any other party.
11. **Termination.** Agent's obligations, representations, warranties and covenants regarding the Waste delivered and all indemnities shall survive termination of this Agreement. Should Agent materially default in any of its obligations hereunder, then Company may immediately terminate this Agreement and Agent shall be liable for all costs and damages incurred by the Company.
12. **Driver's Knowledge and Authority.** Agent represents, warrants and covenants that its drivers who deliver Waste to Company's Facility have been advised by Agent of the Company's prohibition on deliveries of hazardous materials or substances, radioactive materials or substances, or toxic waste or substances or any other Unacceptable Waste to the Facility, of Company's restrictions on deliveries of Special Waste to the Facility of the definitions of "Hazardous Waste and Hazardous Substances" as provided by applicable federal, state and local law, rules and regulations and "Special Waste" as provided herein, and of the terms of this license to enter Company's Facility.
13. **Indemnification.** Agent shall indemnify, defend and hold harmless the Company and its subsidiaries, affiliates and parent corporations, as applicable and their respective officers, directors, lenders, employees, subcontractors and agents from and against any and all claims, suits, losses, liabilities, assessments, damages, fines, costs and expenses, including reasonable attorneys fees arising under federal, state or local laws, regulations or ordinances, or relating to the content of the Waste, or arising out of or in connection with any breach of this Agreement or arising out of the negligent collection, transportation and disposal of Waste by Agent or Agent's employees, agents, subcontractors or representatives thereof. Agent shall also be responsible for increased inspection, testing, study and analysis costs made necessary due to reasonable concerns of the Company as to the content of the Waste following discovery of potentially Unacceptable Waste. This indemnification and other obligations stated in this paragraph shall survive the termination of this Agreement.
14. **Insurance.** Agent shall maintain in full force and effect throughout the term of this Agreement the following types of insurance in at least the amounts specified below:

Coverages	Minimum Amounts of Insurance
Worker's Compensation	Statutory
General Liability	\$500,000 combined single limit
Automobile Liability	\$500,000 combined single limit

All insurance will be by insurers authorized to do business in the state in which the Facility is located. Prior to Agent being allowed on Facility premises, Agent shall provide the Company with certificates of insurance or other satisfactory evidence that such insurance has been procured and is in force. Said policies shall not thereafter be canceled, be permitted to expire, or be changed without thirty (30) days advance written notice to the Company. Agent warrants that it will secure the above minimum amounts of insurance from any transportation of the Waste to the Facility.

15. **Failure to Perform.** Neither party hereto shall be liable for its failure to perform hereunder due to circumstances not its fault and beyond its reasonable control, including, but not limited to, strikes or other labor disputes, riots, protests, civil disturbances or sabotage, changes in law, fires, floods, compliance with government requests, explosions, accidents, weather, lack of required natural resources, or acts of God affecting either party hereto. In the event of any of the circumstances provided for in the preceding sentence, including, but not limited to, whether any federal, state or local court or governmental authority takes any action which would (i) close or restrict operations at the Facility, (ii) limit the quantity or prohibit the disposal of Waste at the Facility, or (iii) limit the ability of or prohibit Agent from delivering Waste to the Facility, the Company shall have the right, at its option, to reduce, suspend or terminate Agent's access to the Facility immediately, without prior notice and without any additional liabilities between the parties, other than Agent's payment obligation hereunder. Neither Party is required hereunder to settle any labor dispute against its own best judgment.

16. **Other Termination.** The occurrence of any of the following events shall also constitute an event of default by the Agent and shall give the Company the right to immediately terminate this Agreement:

- (A) A petition for reorganization or bankruptcy filed by or against the Agent.
- (B) Failure by Agent to pay any amounts due to Company.
- (C) Any breach by Agent of any of its obligations pursuant to the Agreement.

Agent shall be liable for and shall indemnify, defend and hold harmless Company from any losses, claims expenses or damages incurred by the Company as a result of termination hereunder.

17. **Assignment.** Agent may not assign, transfer or otherwise vest in any other Company, entity or person, in whole or in part, any of its rights or obligations under the Agreement without the prior written consent of the Company, provided, however, that the Company may without any such prior written consent, assign its rights and/or obligations under the Agreement to a subsidiary or affiliate corporation.
18. **Right of Disposal.** This Agreement does not grant any rights to dispose of Waste other than in accordance herewith. The Company reserves the right to immediately terminate access to the Facility by Agent and Agent's personnel in the event of breach or violation by Agent of any of the terms of this Agreement, the Company's operating rules or payment policies or any applicable laws or regulations.

19. **Continuing Compliance.** The Agent has a continuing obligation to inform the Company of any new information, or information not previously provided to the Company by Agent and/or Generator which may affect the acceptability of the Waste by the Company. Further, the Agent shall comply with all Company requests for evidence of Agent's continuing compliance with the terms of the Agreement including but not limited to the following: (i) providing new, updated Waste profiles on the Waste(s) offered for disposal or, (ii) providing appropriate certification that the Waste being offered for disposal is accurately reflected by the appropriate Application or, (iii) re-sample the Waste at Agent's expense if reasonable cause exists as to its acceptability under the terms of this Agreement or, (iv) allow the Company to re-sample the Waste at Agent's expense if reasonable cause exists as to its acceptability under the terms of this Agreement or (v) all of the above.

20. **Miscellaneous.**

- (A) This Agreement shall be governed by the laws of the State in which the Facility is located.
- (B) No waiver of a breach of any of the obligations contained in the Agreement shall be construed to be a waiver of any prior or succeeding breach of the same obligation or of any other obligation of this Agreement.
- (C) No modification, release, discharge or waiver of any provision or obligation hereof shall be of any force, or effect, unless in writing signed by all parties to this Agreement.
- (D) Agent shall treat as confidential and not disclose to others during or subsequent to the terms of this Agreement, except as is necessary to perform this Agreement, or to comply with any applicable law or regulation any information (including any technical information, experience or data) regarding the Company's plans, programs, plants, processes, products, costs, equipment or operations which may come within the knowledge of the Agent or its employees in the performance of this Agreement, without in each instance securing the prior written consent of the other Company.
- (E) If any term, phrase, obligation or provision of this Agreement shall be held to be invalid, illegal or unenforceable in any respect, this Agreement shall remain in effect and be construed without regard to such term, phrase, obligation or provision.
- (F) This Agreement constitutes the entire understanding between the parties, replacing and amending any prior agreements between the parties, and shall be binding upon all parties hereto, their successors, heirs, representatives and assigns. Any provision, term or condition in any acknowledgment, purchase order or other response by Agent which is in addition to or different from the provisions of this Agreement shall be deemed objected to by the Company and shall be of no effect.
- (G) Agent represents, warrants and covenants that it is and during the term of this Agreement, will remain, in compliance with and will perform its obligations pursuant to all applicable laws and regulations and shall indemnify, defend and hold harmless the Company from any breach thereof.
- (H) It is the understanding and agreement of the parties that the Company is an independent contractor, and is not an agent, nor an authorized representative of the Agent. It is the further understanding and agreement of the parties that Agent is an authorized representative of Generator.

21. **Notices.** All notices herein provided for shall be considered as having been given upon being placed in the mail, certified postage prepaid addressed to the Company or Agent at the address herein set forth in this Agreement or to such other address as may be given to the other party in writing.

22. **Liquidated Damages.** In the event that this Agreement is terminated by the Agent in a manner not in accordance with paragraph 4 hereof, or terminated due to a breach of this Agreement by the Agent, the Agent shall pay, as liquidated damages, and not as a penalty, the greater of an amount equal to six (6) months' service charges or the Agent's most recent monthly charge multiplied by six (6). The Agent shall be given credit for any advance payments made hereunder, however, in computing the amount owed as liquidated damages hereunder. The Agent acknowledges that this liquidated damages clause is reasonable and is applicable to recover damages related to its investment in equipment, development of landfills and hiring of employees undertaken by the Company to service its customers including the Agent. This liquidated damages clause in no way relieves the Agent from its obligations and liability for other cost or damages as set forth elsewhere in this Agreement.

AGENT: 

Republic Services, INC./COMPANY: 

May 2009



Republic Services, Inc.

18500 N. Allied Way, Phoenix, AZ 85054

SPECIAL WASTE DEPARTMENT DECISION

Waste Profile #
51231711582

Expiration Date
7/18/2018

I. Decision Request:

[X] Initial [ ] Recertification [ ] Change

Disposal Facility: 5123 - Sunshine Canyon Landfill

Generator Name: Department of Transportation Caltrans District 7

Generator Site Address: LA-110 -8.6/14.0 (110 Freeway)

City: Athens

County:

State: CA

Zip:

Name of Waste: Weathered Wood

Estimated Annual Volume: 500 Pounds

II. Special Waste Department Decision: [X] Approved [ ] Rejected

Management Method(s): [X] Landfill [ ] Solidification [ ] Bioremediation [ ] Transfer Facility

Problematic Special Waste according to Republic? [ ] Yes [X] No

If yes, which one?

Approved by Special Waste Review Committee? [ ] Yes [ ] No [X] Not Applicable

Precautions, Conditions or Limitations on Approval

Disposal of Weathered Wood Waste and or Treated Wood Waste must be in accordance with California Health and Safety Code (HSC) Sections 25150.7 and 25150.8 (for TWW) or in accordance with HSC Section 25143.1.5 (for TWW-Utility).

Special Waste Analyst Signature:

[Handwritten Signature]

Date: 7/19/2017

Name (Printed): KEITH DIAMANTI

III. Facility Decision:

[X] Approved [ ] Rejected

Precautions, Conditions or Limitations on Approval

By signing below, the General Manager or Designee agrees that a fully executed Special Waste Service Agreement is on file for this profile and that the special waste file is complete.

General Manager or Designee:

[Handwritten Signature]

Date: 7/19/2017

Name (Printed):

[Handwritten Signature]



Requested Disposal Facility: 5123 Sunshine Canyon LF CA

Saveable fill in form. Restricted printing until all required (yellow) fields are completed.

Waste Profile #
5123 17 11582
Sales Rep # 525 - Stacy Loveland

**I. Generator Information**

Generator Name: Department of Transportation - Caltrans District 7			
Generator Site Address: LA-110-8.6/14.0 (110 Freeway)			
City: Athens	County: Los Angeles	State: California	Zip: 90061
State ID/Reg No:	State Approval/Waste Code:	(if applicable)	NAICS #.
Generator Mailing Address (if different): 13230 Firestone Blvd			
City: Santa Fe Springs	County: Los Angeles	State: California	Zip: 90670
Generator Contact Name: Paul Wang		Email: Paul.Wang@dot.ca.gov	
Phone Number: (562) 345-3144	Ext:	Fax Number:	

**II. Billing Information**

Bill To: Crosstown Electrical & Data, Inc.	Contact Name: Wendy Parker		
Billing Address: 5454 Diaz Street	Email: Wendy@Crosstowndata.com		
City: Irwindale	State: California	Zip: 91706	Phone: (626) 813-6693

**III. Waste Stream Information**

Name of Waste: <small>(Petroleum products-applies only to contaminated media and debris).</small>	<input type="checkbox"/> Diesel Fuel	<input checked="" type="checkbox"/> Weathered Wood	<input type="checkbox"/> Friable Asbestos
	<input type="checkbox"/> Home Heating Fuel #1-6	<input type="checkbox"/> RCRA Empty Containers	<input type="checkbox"/> Non Friable Asbestos
	<input type="checkbox"/> Kerosene	<input type="checkbox"/> Treated Medical Waste	<input type="checkbox"/> Cured Asphalt
	<input type="checkbox"/> Aviation Fuel	<input type="checkbox"/> Animal Carcass (non infectious)	<input type="checkbox"/> Tires
	<input type="checkbox"/> Hydraulic Fluid	<input type="checkbox"/> Plant Trash	<input type="checkbox"/> Food Products <small>(Including Animal Food)</small>
	<input type="checkbox"/> Unleaded Gasoline (UST Corrective Action)	<input type="checkbox"/> Meth Contaminated Debris	

Process Generating Waste: Removal of existing roadway (freeway) signs per project.  
ID No. 0713000412  
Contract No. 07-2938004

Method of Shipment: <input type="checkbox"/> BULK <input type="checkbox"/> DRUM <input type="checkbox"/> BAGGED <input checked="" type="checkbox"/> OTHER: Wrapped in Visqueen Plastic
Estimated Annual Volume: 500 Pounds
Frequency: <input checked="" type="checkbox"/> ONE TIME <input type="checkbox"/> ONGOING

**IV. Certification**

I hereby certify that to the best of my knowledge and belief, the information contained herein is a true and accurate description of the waste material being offered for disposal. I further certify that by utilizing this profile, neither myself nor any other employee of the company will deliver for disposal or attempt to deliver for disposal any waste which is classified as toxic waste, hazardous waste or infectious waste, or any other waste material this facility is prohibited from accepting by law. Our company hereby agrees to fully indemnify this disposal facility against any damages resulting from this certification being inaccurate or untrue. I further certify that the company has not altered the form or content of this profile sheet as provided by Republic Services, Inc.

Paul Wang	Caltrans District 7 (DOT)
Authorized Representative Name/Title (Type or Print)	Company Name
	07/18/17
Authorized Representative Signature	Date





**THIRD PARTY SIGNATURE AUTHORIZATION  
for Special Waste Disposal**

Date: July 18, 2017

This Authorization is only valid for 3 years  
from the above date.

To Whom It May Concern:


Please be advised that the following company/individual has been appointed to work as our agent for purposes of managing waste materials that we may generate.

Name of Authorized Agent <b>Gilbert Rodarte</b>	Title <b>Project Manager</b>
Name of Company <b>Crosstown Electrical &amp; Data, Inc.</b>	Telephone Number <b>(626) 813 - 6693</b>

The above broker/individual is authorized to act as our authorized agent for the following purposes:

- Complete and sign Special Waste Profile.
- Complete and sign Special Waste Profile-Recertification.
- Authorize amendments to Special Waste Profile.
- Sign contracts to dispose and/or transport material.
- Sign certifications necessary to comply with landfill requirements.
- Sign manifests to initiate shipment to disposal facilities.

Our authorized agent will notify us prior to any action stated above, and will provide us with copies of any documents bearing our name.

Name of Company <b>DOT-Caltrans D7</b>	Mailing Address 13230 Firestone Blvd., Santa Fe Springs, CA 90670
Generator Contact (Print Name) <b>Paul Wang</b>	Title <b>Resident Engineer</b>
Signature 	Telephone Number <b>(562) 345 - 3144</b>



# AGENT SPECIAL WASTE SERVICE AGREEMENT NON-HAZARDOUS WASTES

Special Waste Profile Number: 5123 17 11582

### Agent Billing Information

Name: CROSTOWN ELECTRICAL AND DATA INC  
(ACCOUNT# CASH 321)  
Address: 5454 DIAZ STREET  
City: IRWINDALE  
State: CA Zip: 91706  
Phone: 626.813.6693 Fax: \_\_\_\_\_  
Contact: WENDY PARKER

### Republic Waste Location (Company)

SUNSHINE CANYON LANDFILL (5123)  
14747 SAN FERNANDO ROAD  
SYLMAR, CA 91342  
818.362.2141

Project: DEPARTMENT OF TRANSPORTATION CALTRANS DISTRICT 7 County and State of Origin: LOS ANGELES, CALIFORNIA  
Generator Address: LA-110-8.6/14.0 (110 FREEWAY), ATHENS, CA 90061  
Additional Information: CONTACT: PAUL WANG | PHONE: 562.345.3144

- Special Waste Service.** Subject to the terms and conditions contained herein, the Company and the Agent agree to be legally bound hereby and the Company agrees to accept at its Facility, Acceptable Waste (hereinafter referred to as "Special Waste" or "Waste") delivered by Agent, and which is acceptable to the Company as herein provided.
- Acceptable Waste.** Only those Special Wastes described in Paragraph 3 herein and in any Special Waste Profile(s) which number is identical to the contract number referenced above, and which Profile(s) are hereby incorporated by reference herein, and which Waste is subsequently approved by the Company and is otherwise in accordance with all laws, regulations and permits, shall be acceptable for disposal at the Facility ("Acceptable Waste").

3. (A) **Rates for Disposal:**

Waste	Disposal Method	Disposal Rate:	Fees / Taxes / Misc.	Transportation
WEATHERED WOOD	LANDFILL	\$57 PER TON WITH MINIMUM OF \$300 PER LOAD	\$170 HANDLING FEE   TAXES, ERF, & FRF APPLY	N/A
Additional Information:	ENVIRONMENTAL RECOVERY FEE (ERF) \$16.25 PER LOAD   FUEL RECOVERY FEE (FRF) 4-8% CALCULATED ON TONNAGE AT TIME OF DISPOSAL (PER LOAD)   INVOICE AND LATE FEES APPLY			
MATERIAL CODE: VS-SW-TIMBER/TREATED/OLD   PROFILE EXPIRES: 7/18/2018   A completed / signed manifest is required for each profiled approved load received at Sunshine Landfill (Please schedule all loads 24 hours in advance)				

Agent shall also be liable for all taxes, fees, or other charges imposed by federal, state, local or provincial laws and regulations.

Cannot Exceed Daily Volume of 500 POUNDS Without Prior Approval of Company.

(B) **Incorporation by Reference.** In addition to Special Waste Profile(s), the following documents are incorporated by reference into this Agreement as if fully set forth herein.

- 1) N/A
- 2) N/A

4. **Term of Agreement.** This Agreement is effective for **12 months**, commencing 7/19/2017 and shall automatically be renewed for a similar term thereafter unless either party shall give written notice (via certified mail) of termination to the other party at least thirty (30) days prior written notice.

THE COMPANY AND THE AGENT, IN CONSIDERATION OF THE MUTUAL OBLIGATIONS CONTAINED HEREIN, AGREE THAT THIS IS A LEGALLY BINDING AGREEMENT WHICH IS SUBJECT TO THE TERMS AND CONDITIONS SET FORTH ON THIS PAGE AND ON THE REVERSE SIDE OF THIS DOCUMENT. IN ADDITION, THE GENERATOR IS CERTIFYING THE ATTACHED TERMS AND CONDITIONS HAVE BEEN REVIEWED AND INITIALLED AT THE BOTTOM OF THE PAGE.

AGENT

Gilbert Rodarte  
SIGNATURE (AUTHORIZED REPRESENTATIVE)

Gilbert Rodarte Project Manager  
NAME AND TITLE (PLEASE PRINT)

July 19, 2017  
DATE

REPUBLIC SERVICES, INC/COMPANY

Stacy Loveland  
SIGNATURE (AUTHORIZED REPRESENTATIVE)

Stacy Loveland - SW Executive  
NAME AND TITLE (PLEASE PRINT)

7/19/2017  
DATE

# Terms and Conditions of Agent Special Waste Service Agreement

5. **The Agreement.** This agreement of the parties ("Agreement") for the disposal of Special Waste shall consist of this Agreement, riders to the Agreement (if any) and any Application, permit and approval that may be applicable to such Waste.
6. **Waste Accepted at Facility.** Agent represents, warrants and covenants that the Waste delivered to Company at its Facility hereunder will be Acceptable Waste and will not contain any unacceptable quantity of hazardous materials or substances, radioactive materials or substances, or toxic waste or substances, as defined by applicable federal, state, local or provincial laws or regulations. Any Waste which does not meet these requirements shall hereinafter be referred to as "Unacceptable Waste". The Agent shall in all matters relating to the collection, transportation and disposal of the Waste hereunder, comply with all applicable federal, state and local laws, regulations, rules and orders regarding the same. The word "Facility" shall mean any landfill, transfer station or other location used to transfer, process or otherwise dispose of such Waste.
7. **Special Waste.** Agent represents, warrants and covenants that the Waste delivered to Company hereunder (i) will not contain any Special Waste that is not specifically described on any Application which is attached hereto and which is subsequently approved by the Company, (ii) will meet the material description as set forth in any Application and otherwise in all significant respects and (iii) will not contain Unacceptable Waste. The parties may incorporate additional Special Waste as part of this Agreement if prior to delivery of such Waste to Company, Agent has provided an Application for such Waste and Company has approved disposal of such Waste within the limitations and conditions contained in Company's written notice of approval of Special Waste. Title to any and all Waste handled or disposed of by Company shall at all times remain with Generator and Agent.
8. **Rights of Refusal/Rejection.** The Agent shall inspect all Waste at the place(s) of collection and shall remove any and all Unacceptable Waste. Company has the right to refuse, or to reject after acceptance, any load(s) of Waste(s) delivered to its Facility including if the Company believes the Agent has breached (or is breaching) its representations, warranties, covenants or agreements hereunder, or any applicable federal, state or local laws, regulations, rules or orders, even if only a portion of such Waste load is unacceptable. The Company shall have the right to inspect all vehicles of Waste haulers, including the Agent's vehicles, in order to determine whether the Waste is Acceptable Waste or Unacceptable Waste pursuant to this Agreement and all applicable federal, state and local laws, rules and regulations. The Company's exercise, or failure to exercise, its rights hereunder shall not operate to relieve the Agent of its responsibilities or liability under this Agreement. The Agent shall be responsible for, and bear all reasonable expenses and damages incurred by the Company, as a result of the Unacceptable Waste and in the reloading and removal of Unacceptable Waste disposed in the Facility. The Company, may also, in its sole discretion, require the Agent to promptly remove the Unacceptable Waste.
9. **Limited License to Enter.** This Agreement provides Agent with a license to enter the Facility for the limited purpose of, and only to the extent necessary for, off-loading Acceptable Waste at the Facility in the manner directed by Company. Except in an emergency, Agent's personnel shall not leave the immediate vicinity of their vehicle. After off-loading the Waste, Agent's personnel shall promptly leave the Facility. Under no circumstances shall Agent or its personnel engage in any scavenging of Waste or other materials at the Facility. The Company reserves the right to make and enforce reasonable rules and regulations concerning the operation of the Facility, the conduct of the drivers and others on the Facility premises, quantities and sources of Waste, and any other matters necessary or desirable for the safe, legal and efficient operation of the Facility including, but not limited to, speed limits on haul roads imposed by the Company, and the wearing of hard hats and other personal protection equipment by all individuals allowed on the Facility premises. Agent agrees to conform to such rules and regulations as they may be established and amended from time to time. Company may refuse to accept Waste from and shall deny an entrance license to, any of Agent's personnel whom Company believes is under the influence of alcohol or other chemical substances. Agent shall be solely responsible for its employees and subcontractors performing their obligations in a safe manner when at the facility of Company.
10. **Charges and Payment.** Payment shall be made by Agent within sixty (60) days after receipt of invoice from Company. In the event that any amount is overdue, the Company may terminate this Agreement. Agent agrees to pay a finance charge equal to the maximum interest rate permitted by law. Agent shall be liable for all taxes, fees, or other charges imposed upon the disposal of the Waste by federal, state, local or provincial laws and regulations. Company, from time to time, may modify its rates upon sixty (60) days written notice to Agent. Agent hereby agrees that the Company's right to receive payments under this Agreement is unconditional and is not conditioned upon Agent first receiving payment from Generator or any other party.
11. **Termination.** Agent's obligations, representations, warranties and covenants regarding the Waste delivered and all indemnities shall survive termination of this Agreement. Should Agent materially default in any of its obligations hereunder, then Company may immediately terminate this Agreement and Agent shall be liable for all costs and damages incurred by the Company.
12. **Driver's Knowledge and Authority.** Agent represents, warrants and covenants that its drivers who deliver Waste to Company's Facility have been advised by Agent of the Company's prohibition on deliveries of hazardous materials or substances, radioactive materials or substances, or toxic waste or substances or any other Unacceptable Waste to the Facility, of Company's restrictions on deliveries of Special Waste to the Facility of the definitions of "Hazardous Waste and Hazardous Substances" as provided by applicable federal, state and local law, rules and regulations and "Special Waste" as provided herein, and of the terms of this license to enter Company's Facility.
13. **Indemnification.** Agent shall indemnify, defend and hold harmless the Company and its subsidiaries, affiliates and parent corporations, as applicable and their respective officers, directors, lenders, employees, subcontractors and agents from and against any and all claims, suits, losses, liabilities, assessments, damages, fines, costs and expenses, including reasonable attorneys fees arising under federal, state or local laws, regulations or ordinances, or relating to the content of the Waste, or arising out of or in connection with any breach of this Agreement or arising out of the negligent collection, transportation and disposal of Waste by Agent or Agent's employees, agents, subcontractors or representatives thereof. Agent shall also be responsible for increased inspection, testing, study and analysis costs made necessary due to reasonable concerns of the Company as to the content of the Waste following discovery of potentially Unacceptable Waste. This indemnification and other obligations stated in this paragraph shall survive the termination of this Agreement.
14. **Insurance.** Agent shall maintain in full force and effect throughout the term of this Agreement the following types of insurance in at least the amounts specified below:

Coverages	Minimum Amounts of Insurance
Worker's Compensation	Statutory
General Liability	\$500,000 combined single limit
Automobile Liability	\$500,000 combined single limit

All insurance will be by Insurers authorized to do business in the state in which the Facility is located. Prior to Agent being allowed on Facility premises, Agent shall provide the Company with certificates of insurance or other satisfactory evidence that such insurance has been procured and is in force. Said policies shall not thereafter be canceled, be permitted to expire, or be changed without thirty (30) days advance written notice to the Company. Agent warrants that it will secure the above minimum amounts of insurance from any transportation of the Waste to the Facility.

15. **Failure to Perform.** Neither party hereto shall be liable for its failure to perform hereunder due to circumstances not its fault and beyond its reasonable control, including, but not limited to, strikes or other labor disputes, riots, protests, civil disturbances or sabotage, changes in law, fires, floods, compliance with government requests, explosions, accidents, weather, lack of required natural resources, or acts of God affecting either party hereto. In the event of any of the circumstances provided for in the preceding sentence, including, but not limited, to whether any federal, state or local court or governmental authority takes any action which would (i) close or restrict operations at the Facility, (ii) limit the quantity or prohibit the disposal of Waste at the Facility, or (iii) limit the ability of or prohibit Agent from delivering Waste to the Facility, the Company shall have the right, at its option, to reduce, suspend or terminate Agent's access to the Facility immediately, without prior notice and without any additional liabilities between the parties, other than Agent's payment obligation hereunder. Neither Party is required hereunder to settle any labor dispute against its own best judgment.
16. **Other Termination.** The occurrence of any of the following events shall also constitute an event of default by the Agent and shall give the Company the right to immediately terminate this Agreement:
  - (A) A petition for reorganization or bankruptcy filed by or against the Agent.
  - (B) Failure by Agent to pay any amounts due to Company.
  - (C) Any breach by Agent of any of its obligations pursuant to the Agreement.

Agent shall be liable for and shall indemnify, defend and hold harmless Company from any losses, claims expenses or damages incurred by the Company as a result of termination hereunder.

17. **Assignment.** Agent may not assign, transfer or otherwise vest in any other Company, entity or person, in whole or in part, any of its rights or obligations under the Agreement without the prior written consent of the Company, provided, however, that the Company may without any such prior written consent, assign its rights and/or obligations under the Agreement to a subsidiary or affiliate corporation.
18. **Right of Disposal.** This Agreement does not grant any rights to dispose of Waste other than in accordance herewith. The Company reserves the right to immediately terminate access to the Facility by Agent and Agent's personnel in the event of breach or violation by Agent of any of the terms of this Agreement, the Company's operating rules or payment policies or any applicable laws or regulations.
19. **Continuing Compliance.** The Agent has a continuing obligation to inform the Company of any new information, or information not previously provided to the Company by Agent and/or Generator which may affect the acceptability of the Waste by the Company. Further, the Agent shall comply with all Company requests for evidence of Agent's continuing compliance with the terms of the Agreement including but not limited to the following: (i) providing new, updated Waste profiles on the Waste(s) offered for disposal or, (ii) providing appropriate certification that the Waste being offered for disposal is accurately reflected by the appropriate Application or, (iii) re-sample the Waste at Agent's expense if reasonable cause exists as to its acceptability under the terms of this Agreement or, (iv) allow the Company to re-sample the Waste at Agent's expense if reasonable cause exists as to its acceptability under the terms of this Agreement or (v) all of the above.
20. **Miscellaneous.**
  - (A) This Agreement shall be governed by the laws of the State in which the Facility is located.
  - (B) No waiver of a breach of any of the obligations contained in the Agreement shall be construed to be a waiver of any prior or succeeding breach of the same obligation or of any other obligation of this Agreement.
  - (C) No modification, release, discharge or waiver of any provision or obligation hereof shall be of any force, or effect, unless in writing signed by all parties to this Agreement.
  - (D) Agent shall treat as confidential and not disclose to others during or subsequent to the terms of this Agreement, except as is necessary to perform this Agreement, or to comply with any applicable law or regulation any information (including any technical information, experience or data) regarding the Company's plans, programs, plants, processes, products, costs, equipment or operations which may come within the knowledge of the Agent or its employees in the performance of this Agreement, without in each instance securing the prior written consent of the other Company.
  - (E) If any term, phrase, obligation or provision of this Agreement shall be held to be invalid, illegal or unenforceable in any respect, this Agreement shall remain in effect and be construed without regard to such term, phrase, obligation or provision.
  - (F) This Agreement constitutes the entire understanding between the parties, replacing and amending any prior agreements between the parties, and shall be binding upon all parties hereto, their successors, heirs, representatives and assigns. Any provision, term or condition in any acknowledgement, purchase order or other response by Agent which is in addition to or different from the provisions of this Agreement shall be deemed objected to by the Company and shall be of no effect.
  - (G) Agent represents, warrants and covenants that it is and during the term of this Agreement, will remain, in compliance with and will perform its obligations pursuant to all applicable laws and regulations and shall indemnify, defend and hold harmless the Company from any breach thereof.
  - (H) It is the understanding and agreement of the parties that the Company is an independent contractor, and is not an agent, nor an authorized representative of the Agent. It is the further understanding and agreement of the parties that Agent is an authorized representative of Generator.

21. **Notices.** All notices herein provided for shall be considered as having been given upon being placed in the mail, certified postage prepaid addressed to the Company or Agent at the address herein set forth in this Agreement or to such other address as may be given to the other party in writing.

22. **Liquidated Damages.** In the event that this Agreement is terminated by the Agent in a manner not in accordance with paragraph 4 hereof, or terminated due to a breach of this Agreement by the Agent, the Agent shall pay, as liquidated damages, and not as a penalty, the greater of an amount equal to six (6) months' service charges or the Agent's most recent monthly charge multiplied by six (6). The Agent shall be given credit for any advance payments made hereunder, however, in computing the amount owed as liquidated damages hereunder. The Agent acknowledges that this liquidated damages clause is reasonable and is applicable to recover damages related to its investment in equipment, development of landfills and hiring of employees undertaken by the Company to service its customers including the Agent. This liquidated damages clause in no way relieves the Agent from its obligations and liability for other cost or damages as set forth elsewhere in this Agreement.

AGENT:  Republic Services, INC./COMPANY: 

May 2009



# Republic Services, Inc.

18500 N. Allied Way, Phoenix, AZ 85054

## SPECIAL WASTE DEPARTMENT DECISION

Waste Profile #  
51231719417

Expiration Date  
11/27/2018

### I. Decision Request:

Initial     Recertification     Change

Disposal Facility: 5123 - Sunshine Canyon Landfill

Generator Name: Ernesto Lomeli

Generator Site Address: 918 Pine Grove Ave

City: Los Angeles

County: \_\_\_\_\_

State: CA

Zip: \_\_\_\_\_

Name of Waste: Weathered Wood

Estimated Annual Volume: 3 Tons

### II. Special Waste Department Decision:

Approved     Rejected

Management Method(s):     Landfill     Solidification     Bioremediation     Transfer Facility

Problematic Special Waste according to Republic?     Yes     No

If yes, which one? \_\_\_\_\_

Approved by Special Waste Review Committee?     Yes     No     Not Applicable

### Precautions, Conditions or Limitations on Approval

Special Waste Analyst Signature: 

Date: 11/28/2017

Name (Printed): KEITH DIAMANTI

### III. Facility Decision:

Approved     Rejected

### Precautions, Conditions or Limitations on Approval

By signing below, the General Manager or Designee agrees that a fully executed Special Waste Service Agreement is on file for this profile and that the special waste file is complete.

General Manager or Designee: 

Date: 11/28/2017

Name (Printed): Chris Cayle



Requested Disposal Facility: 5123 Sunshine Canyon LF CA

Waste Profile #
5123 17 19417
Sales Rep #. 525 - Stacy Loveland

Saveable fill in form. Restricted printing until all required (yellow) fields are completed.

I. Generator Information

Generator Name: Ernesto Lomeli			
Generator Site Address: 918 Pine Grove Ave			
City: los angeles	County: los angeles	State: California	Zip: 90042
State ID/Reg No:	State Approval/Waste Code:	(if applicable)	NAICS #.
Generator Mailing Address (if different): 918 Pine Grove Ave			
City: los angeles	County: los angeles	State: California	Zip: 90042
Generator Contact Name: Ernesto Lomeli		Email: lomeli.ernesto@gmail.com	
Phone Number: 4159945686	Ext:	Fax Number:	

II. Billing Information

Bill To: ernesto lomeli	Contact Name:		
Billing Address: 918 pine grove ave	Email: lomeli.ernesto@gmail.com		
City: Los Angeles	State: CA	Zip: 90042	Phone: 4150045686

III. Waste Stream Information

Name of Waste: <small>(Petroleum products-applies only to contaminated media and debris).</small>	<input type="checkbox"/> Diesel Fuel	<input checked="" type="checkbox"/> Weathered Wood	<input type="checkbox"/> Friable Asbestos
	<input type="checkbox"/> Home Heating Fuel #1-6	<input type="checkbox"/> RCRA Empty Containers	<input type="checkbox"/> Non Friable Asbestos
<input type="checkbox"/> Kerosene	<input type="checkbox"/> Treated Medical Waste	<input type="checkbox"/> Cured Asphalt	<input type="checkbox"/> Tires
<input type="checkbox"/> Aviation Fuel	<input type="checkbox"/> Animal Carcass (non infectious)	<input type="checkbox"/> Food Products <small>(Including Animal Food)</small>	
<input type="checkbox"/> Hydraulic Fluid	<input type="checkbox"/> Plant Trash		
<input type="checkbox"/> Unleaded Gasoline (UST Corrective Action)	<input type="checkbox"/> Meth Contaminated Debris		
Process Generating Waste: removed old Rail Road Ties			
Method of Shipment: <input checked="" type="checkbox"/> BULK <input type="checkbox"/> DRUM <input type="checkbox"/> BAGGED <input type="checkbox"/> OTHER:			
Estimated Annual Volume: 3 Tons			
Frequency: <input checked="" type="checkbox"/> ONE TIME <input type="checkbox"/> ONGOING			

IV. Certification

I hereby certify that to the best of my knowledge and belief, the information contained herein is a true and accurate description of the waste material being offered for disposal. I further certify that by utilizing this profile, neither myself nor any other employee of the company will deliver for disposal or attempt to deliver for disposal any waste which is classified as toxic waste, hazardous waste or infectious waste, or any other waste material this facility is prohibited from accepting by law. Our company hereby agrees to fully indemnify this disposal facility against any damages resulting from this certification being inaccurate or untrue. I further certify that the company has not altered the form or content of this profile sheet as provided by Republic Services, Inc.

ernesto lomeli - home owner	self
Authorized Representative Name/Title (Type or Print)	Company Name
	11/27/2017
Authorized Representative Signature	Date



# SPECIAL WASTE SERVICE AGREEMENT NON-HAZARDOUS WASTES

Special Waste Profile Number: 5123 17 19417

**Generator Billing Information**

**Republic Waste Location (Company)**

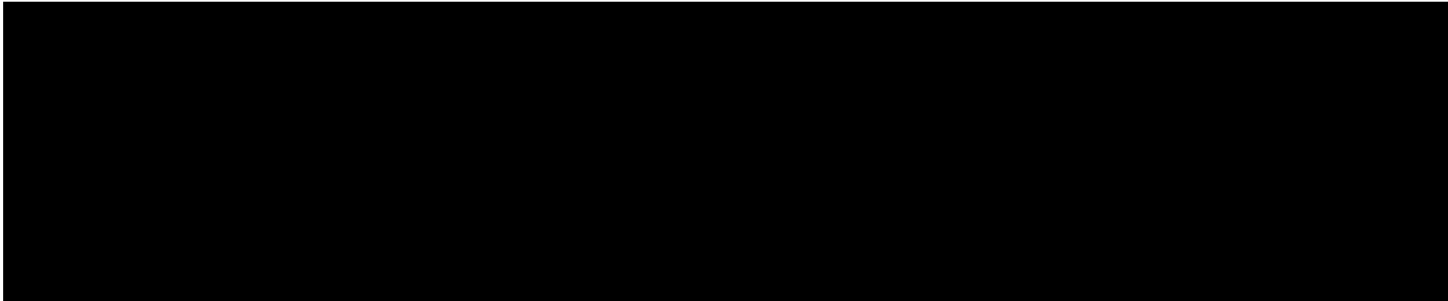
Name: ERNESTO LOMELI  
(ACCT CASH # 321)  
Address: 918 PINE GROVE AVE  
City: LOS ANGELES  
State: CA Zip: 90042  
Phone: 415.994.5686 Fax: \_\_\_\_\_  
Contact: \_\_\_\_\_

SUNSHINE CANYON LANDFILL (5123)  
14747 SAN FERNANDO ROAD  
SYLMAR, CA 91342  
818.362.2141

**Project:** WEATHERED WOOD **County and State of Origin:** LOS ANGELES, CA

Additional Information: \_\_\_\_\_

1. **Special Waste Service.** Subject to the terms and conditions contained herein, the Company and the Generator agree to be legally bound hereby and the Company agrees to accept at its Facility, Acceptable Waste (hereinafter referred to as "Special Waste" or "Waste") delivered by Generator, and which is acceptable to the Company as herein provided.
2. **Acceptable Waste.** Only those Special Wastes described in Paragraph 3 herein and in any Special Waste Profile(s) which number is identical to the contract number referenced above, and which Profile(s) are hereby incorporated by reference herein, and which Waste is subsequently approved by the Company and is otherwise in accordance with all laws, regulations and permits, shall be acceptable for disposal at the Facility ("Acceptable Waste").



Cannot Exceed Daily Volume of 3 TONS Without Prior Approval of Company.

(B) **Incorporation by Reference.** In addition to Special Waste Profile(s), the following documents are incorporated by reference into this Agreement as if fully set forth herein.

1) N/A

2) N/A

4. **Term of Agreement.** This Agreement is effective for 12 months, commencing 11/28/2017 and shall automatically be renewed for a similar term thereafter unless either party shall give written notice (via certified mail) of termination to the other party at least thirty (30) days prior written notice.

**THE COMPANY AND THE GENERATOR, IN CONSIDERATION OF THE MUTUAL OBLIGATIONS CONTAINED HEREIN, AGREE THAT THIS IS A LEGALLY BINDING AGREEMENT WHICH IS SUBJECT TO THE TERMS AND CONDITIONS SET FORTH ON THIS PAGE AND ON THE REVERSE SIDE OF THIS DOCUMENT. IN ADDITION, THE GENERATOR IS CERTIFYING THE ATTACHED TERMS AND CONDITIONS HAVE BEEN REVIEWED AND INITIALLED AT THE BOTTOM OF THE PAGE.**

**GENERATOR**

SIGNATURE (AUTHORIZED REPRESENTATIVE)

Ernesto Lomeli

NAME AND TITLE (PLEASE PRINT)

11/28/2018

DATE

**REPUBLIC SERVICES, INC/COMPANY**

SIGNATURE (AUTHORIZED REPRESENTATIVE)

Stacy Loveland - SW Executive

NAME AND TITLE (PLEASE PRINT)

11/29/2018

DATE

# Terms and Conditions of Special Waste Service Agreement

5. **The Agreement.** This agreement of the parties ("Agreement") for the disposal of Special Waste shall consist of this Agreement, riders to the Agreement (if any) and any Application, permit and approval that may be applicable to such Waste.
6. **Waste Accepted at Facility.** Generator represents, warrants and covenants that the Waste delivered to Company at its Facility hereunder will be Acceptable Waste and will not contain any unacceptable quantity of hazardous materials or substances, radioactive materials or substances, or toxic waste or substances, as defined by applicable federal, state, local or provincial laws or regulations. Any Waste which does not meet these requirements shall hereinafter be referred to as "Unacceptable Waste". The Generator shall in all matters relating to the collection, transportation and disposal of the Waste hereunder, comply with all applicable federal, state and local laws, regulations, rules and orders regarding the same. The word "Facility" shall mean any landfill, transfer station or other location used to transfer, process or otherwise dispose of such Waste.
7. **Special Waste.** Generator represents, warrants and covenants that the Waste delivered to Company hereunder (i) will not contain any Special Waste that is not specifically described on any Application which is attached hereto or which is subsequently approved by the Company, (ii) will meet the material description as set forth in any Application and otherwise in all significant respects and (iii) will not contain Unacceptable Waste. The parties may incorporate additional Special Waste as part of this Agreement if prior to delivery of such Waste to Company, Generator has provided an Application for such Waste and Company has approved disposal of such Waste within the limitations and conditions contained in Company's written notice of approval of Special Waste Disposal. Title to any and all Waste handled or disposed of by Company shall at all times remain with Generator and Broker (if a Broker is involved).
8. **Rights of Refusal/Rejection.** The Generator shall inspect all Waste at the place(s) of collection and shall remove any and all Unacceptable Waste. Company has the right to refuse, or to reject after acceptance, any load(s) of Waste(s) delivered to its Facility including if the Company believes the Generator has breached (or is breaching) its representations, warranties, covenants or agreements hereunder, or any applicable federal, state or local laws, regulations, rules or orders, even if only a portion of such Waste load is unacceptable. The Company shall have the right to inspect all vehicles and containers of Waste haulers, including the Generator's vehicles, in order to determine whether the Waste is Acceptable Waste or Unacceptable Waste pursuant to this Agreement and all applicable federal, state and local laws, rules and regulations. The Company's exercise, or failure to exercise, its rights hereunder shall not operate to relieve the Generator of its responsibilities or liability under this Agreement. The Generator shall be responsible for, and bear all reasonable expenses and damages incurred by the Company, as a result of the Unacceptable Waste and in the reloading and removal of Unacceptable Waste disposed in the Facility. The Company, may also, in its sole discretion, require the Generator to promptly remove the Unacceptable Waste.
9. **Limited License to Enter.** This Agreement provides Generator with a license to enter the Facility for the limited purpose of, and only to the extent necessary for, off-loading Acceptable Waste at the Facility in the manner directed by Company. Except in an emergency, Generator's personnel shall not leave the immediate vicinity of their vehicle. After off-loading the Waste, Generator's personnel shall promptly leave the Facility. Under no circumstances shall Generator or its personnel engage in any scavenging of Waste or other materials at the Facility. The Company reserves the right to make and enforce reasonable rules and regulations concerning the operation of the Facility, the conduct of the drivers and others on the Facility premises, quantities and sources of Waste, and any other matters necessary or desirable for the safe, legal and efficient operation of the Facility including, but not limited to, speed limits on haul roads imposed by the Company, and the wearing of hard hats and other personal protection equipment by all individuals allowed on the Facility premises. Generator agrees to conform to such rules and regulations as they may be established and amended from time to time. Company may refuse to accept Waste from and shall deny an entrance license to, any of Generator's personnel whom Company believes is under the influence of alcohol or other chemical substances. Generator shall be solely responsible for its employees and subcontractors performing their obligations in a safe manner when at the facility of Company.
10. **Charges and Payment.** Payment shall be made by Generator within sixty (60) days after receipt of invoice from Company. In the event that any amount is overdue, the Company may terminate this Agreement. Generator agrees to pay a finance charge equal to the maximum interest rate permitted by law. Generator shall be liable for all taxes, fees, or other charges imposed upon the disposal of the Waste by federal, state, local or provincial laws and regulations. Company, from time to time, may modify its rates upon sixty (60) days written notice to Generator.
11. **Termination.** Generator's obligations, representations, warranties and covenants regarding the Waste delivered and all indemnities shall survive termination of this Agreement. Should Generator materially default in any of its obligations hereunder, then Company may immediately terminate this Agreement and Generator shall be liable for all costs and damages incurred by the Company.
12. **Driver's Knowledge and Authority.** Generator represents, warrants and covenants that its drivers who deliver Waste to Company's Facility have been advised by Generator of the Company's prohibition on deliveries of hazardous materials or substances, radioactive materials or substances, or toxic waste or substances or any other Unacceptable Waste to the Facility of Company's restrictions on deliveries of Special Waste to the Facility, of the definitions of "Hazardous Waste and Hazardous Substances" as provided by applicable federal, state and local law, rules and regulations and "Special Waste" as provided herein, and of the terms of this license to enter Company's Facility.
13. **Indemnification.** Generator shall indemnify, defend and hold harmless the Company and its subsidiaries, affiliates and parent corporations, as applicable and their respective officers, directors, lenders, employees, subcontractors and agents from and against any and all claims, suits, losses, liabilities, assessments, damages, fines, costs and expenses, including reasonable attorneys fees arising under federal, state or local laws, regulations or ordinances, or relating to the content of the Waste, or arising out of or in connection with any breach of this Agreement or arising out of the negligent collection, transportation and disposal of Waste by Generator or Generator's employees, agents, subcontractors or representatives thereof. Generator shall also be responsible for increased inspection, testing, study and analysis costs made necessary due to reasonable concerns of the Company as to the content of the Waste following discovery of potentially Unacceptable Waste. This indemnification and other obligations stated in this paragraph shall survive the termination of this Agreement.
14. **Insurance.** Generator shall maintain in full force and effect throughout the term of this Agreement the following types of insurance in at least the amounts specified below:

<u>Coverages</u>	<u>Minimum Amounts of Insurance</u>
Worker's Compensation	Statutory
General Liability	\$500,000 combined single limit
Automobile Liability	\$500,000 combined single limit

All insurance will be by insurers authorized to do business in the state in which the Facility is located. Prior to Generator being allowed on Facility premises, Generator shall provide the Company with certificates of insurance or other satisfactory evidence that such insurance has been procured and is in force. Said policies shall not thereafter be canceled, be permitted to expire or lapse, or be changed without thirty (30) days advance written notice to the Company. Generator warrants that it will secure the above minimum amounts of insurance from any transportation of the Waste to the Facility.

15. **Failure to Perform.** Neither party hereto shall be liable for its failure to perform hereunder due to circumstances not its fault and beyond its reasonable control, including, but not limited to, strikes or other labor disputes, riots, protests, civil disturbances or sabotage, changes in law, fires, floods, compliance with government requests, explosions, accidents, weather, lack of required natural resources, or acts of God affecting either party hereto. In the event of any of the circumstances provided for in the preceding sentence, including, but not limited to, whether any federal, state or local court or governmental authority takes any action which would (i) close or restrict operations at the Facility, (ii) limit the quantity or prohibit the disposal of Waste at the Facility, or (iii) limit the ability of or prohibit Generator from delivering Waste to the Facility, the Company shall have the right, at its option, to reduce, suspend or terminate Generator's access to the Facility immediately, without prior notice and without any additional liabilities between the parties, other than Generator's payment obligation hereunder. Neither Party is required hereunder to settle any labor dispute against its own best judgment.
16. **Other Termination.** The occurrence of any of the following events shall also constitute an event of default by the Generator and shall give the Company the right to immediately terminate this Agreement:

- (A) A petition for reorganization or bankruptcy filed by or against the Generator.
- (B) Failure by Generator to pay any amounts due to Company.
- (C) Any breach by Generator of any of its obligations pursuant to the Agreement.

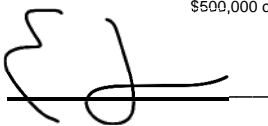
Generator shall be liable for and shall indemnify, defend and hold harmless Company from any losses, claims expenses or damages incurred by the Company as a result of termination hereunder.

17. **Assignment.** Generator may not assign, transfer or otherwise vest in any other Company, entity or person, in whole or in part, any of its rights or obligations under the Agreement without the prior written consent of the Company, provided, however, that the Company may without any such prior written consent, assign its rights and/or obligations under the Agreement to a subsidiary or affiliate corporation.
18. **Right of Disposal.** This Agreement does not grant any rights to dispose of Waste other than in accordance herewith. The Company reserves the right to immediately terminate access to the Facility by Generator and Generator's personnel in the event of breach or violation by Generator of any of the terms of this Agreement, the Company's operating rules or payment policies or any applicable laws or regulations.
19. **Continuing Compliance.** The Generator has a continuing obligation to inform the Company of any new information, or information not previously provided to the Company by Generator which may affect the acceptability of the Waste by the Company. Further, the Generator shall comply with all Company requests for evidence of Generator's continuing compliance with the terms of the Agreement including but not limited to the following: (i) providing new, updated Waste profiles on the Waste(s) offered for disposal or, (ii) providing appropriate certification that the Waste being offered for disposal is accurately reflected by the appropriate Application or, (iii) re-sample the Waste at Generator's expense if reasonable cause exists as to its acceptability under the terms of this Agreement or, (iv) allow the Company to re-sample the Waste at Generator's expense if reasonable cause exists as to its acceptability under the terms of this Agreement or (v) all of the above.
20. **Miscellaneous.**
  - (A) This Agreement shall be governed by the laws of the State in which the Facility is located.
  - (B) No waiver of a breach of any of the obligations contained in the Agreement shall be construed to be a waiver of any prior or succeeding breach of the same obligation or of any other obligation of this Agreement.
  - (C) No modification, release, discharge or waiver of any provision or obligation hereof shall be of any force, or effect, unless in writing signed by all parties to this Agreement.
  - (D) Generator shall treat as confidential and not disclose to others during or subsequent to the terms of this Agreement, except as is necessary to perform this Agreement, or to comply with any applicable law or regulation any information (including any technical information, experience or date) regarding the Company's plans, programs, plants, processes, products, costs, equipment or operations which may come within the knowledge of the Generator or its employees in the performance of this Agreement, without in each instance securing the prior written consent of the other Company.
  - (E) If any term, phrase, obligation or provision of this Agreement shall be held to be invalid, illegal or unenforceable in any respect, this Agreement shall remain in effect and be construed without regard to such term, phrase, obligation or provision.
  - (F) This Agreement constitutes the entire understanding between the parties, replacing and amending any prior agreements between the parties, and shall be binding upon all parties hereto, their successors, heirs, representatives and assigns. Any provision, term or condition in any acknowledgement, purchase order or other response by Generator which is in addition to or different from the provisions of this Agreement shall be deemed objected to by the Company and shall be of no effect.
  - (G) Generator represents, warrants and covenants that it is and, during the term of this Agreement will remain, in compliance with and will perform its obligations pursuant to all applicable laws and regulations and shall indemnify, defend and hold harmless the Company from any breach thereof.
  - (H) It is the understanding and agreement of the parties that the Company is an independent contractor, and is not an agent, nor an authorized representative of the Generator.

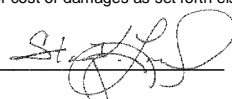
21. **Notices.** All notices herein provided for shall be considered as having been given upon being placed in the mail, certified postage prepaid addressed to the Company or Generator at the address herein set forth in this Agreement or to such other address as may be given to the other party in writing.

22. **Liquidated Damages.** In the event that this Agreement is terminated by the Generator in a manner not in accordance with paragraph 4 hereof, or terminated due to a breach of this Agreement by the Generator, the Generator shall pay, as liquidated damages, and not as a penalty, the greater of an amount equal to six (6) months' service charges or the Generator's most recent monthly charge multiplied by six (6). The Generator shall be given credit for any advance payments made hereunder, however, in computing the amount owed as liquidated damages hereunder. The Generator acknowledges that this liquidated damages clause is reasonable and is applicable to recover damages related to its investment in equipment, development of landfills and hiring of employees undertaken by the Company to service its customers including the Generator. This liquidated damages clause in no way relieves the Generator from its obligations and liability for other cost or damages as set forth elsewhere in this Agreement.

GENERATOR: \_\_\_\_\_



Republic Services, Inc/COMPANY: \_\_\_\_\_



May 2009



# Republic Services, Inc.

18500 N. Allied Way, Phoenix, AZ 85054

## SPECIAL WASTE DEPARTMENT DECISION

	Waste Profile # 51231714396	Expiration Date 11/30/2017	
I. Decision Request:	<input checked="" type="checkbox"/> Initial <input type="checkbox"/> Recertification <input type="checkbox"/> Change		
Disposal Facility: 5123 - Sunshine Canyon Landfill			
Generator Name: FAA			
Generator Site Address: 7048 Vineland Ave			
City: N Hollywood	County:	State: CA	Zip:
Name of Waste: Weathered Wood			
Estimated Annual Volume: 500 Pounds			

II. Special Waste Department Decision:     Approved     Rejected

Management Method(s):     Landfill     Solidification     Bioremediation     Transfer Facility

Problematic Special Waste according to Republic?     Yes     No

If yes, which one? \_\_\_\_\_

Approved by Special Waste Review Committee?     Yes     No     Not Applicable

### Precautions, Conditions or Limitations on Approval

Disposal of Weathered Wood must be in accordance with California Health and Safety Code (HSC) Sections 25150.7 and 25150.8. ▲

Special Waste Analyst Signature: Joseph M. Sorokach  
Date: 9/1/2017

Name (Printed): Joseph Sorokach

III. Facility Decision:     Approved     Rejected

### Precautions, Conditions or Limitations on Approval

By signing below, the General Manager or Designee agrees that a fully executed Special Waste Service Agreement is on file for this profile and that the special waste file is complete.

General Manager or Designee: Rob Sherman  
Date: 9/1/2017

Name (Printed): Rob Sherman





EXPRESS WASTE PROFILE

Requested Disposal Facility: 5123 Sunshine Canyon LF CA

Waste Profile #

5123 17 14396

Saveable fill in form. Restricted printing until all required (yellow) fields are completed.

Sales Rep #. 525 - Stacy Loveland

I. Generator Information

Generator Name: FAA
Generator Site Address: 7048 Vineland Ave
City: N. Hollywood County: Los Angeles State: California Zip: 91606
State ID/Reg No: State Approval/Waste Code: (if applicable) NAICS #.
Generator Mailing Address (if different): 15000 Aviation Blvd.
City: Lawndale County: State: California Zip: 90261
Generator Contact Name: Alex Thibodeaux Email: Alex.Thibodeaux@faa.gov
Phone Number: (310) 970-2329 Ext: Fax Number:

II. Billing Information

Bill To: Airfield Western, LLC Contact Name: Brian Hoops
Billing Address: 66907 Solar Rd Email: brian.hoops@afwestern.com
City: Montrose State: CO Zip: 81403 Phone: (970) 209-4562

III. Waste Stream Information

Name of Waste: (Petroleum products-applies only to contaminated media and debris).
Diesel Fuel [ ] Home Heating Fuel #1-6 [ ] Kerosene [ ] Aviation Fuel [ ] Hydraulic Fluid [ ] Unleaded Gasoline (UST Corrective Action) [ ]
Weathered Wood [x] RCRA Empty Containers [ ] Treated Medical Waste [ ] Animal Carcass (non infectious) [ ] Plant Trash [ ] Meth Contaminated Debris [ ]
Friable Asbestos [ ] Non Friable Asbestos [ ] Cured Asphalt [ ] Tires [ ] Food Products (Including Animal Food) [ ]

Process Generating Waste: Telephone pole removed during construction

Method of Shipment: [x] BULK [ ] DRUM [ ] BAGGED [ ] OTHER:
Estimated Annual Volume: 500 Pounds
Frequency: [x] ONE TIME [ ] ONGOING

IV. Certification

I hereby certify that to the best of my knowledge and belief, the information contained herein is a true and accurate description of the waste material being offered for disposal. I further certify that by utilizing this profile, neither myself nor any other employee of the company will deliver for disposal or attempt to deliver for disposal any waste which is classified as toxic waste, hazardous waste or infectious waste, or any other waste material this facility is prohibited from accepting by law. Our company hereby agrees to fully indemnify this disposal facility against any damages resulting from this certification being inaccurate or untrue. I further certify that the company has not altered the form or content of this profile sheet as provided by Republic Services, Inc.

Brian Hoops
Authorized Representative Name/Title (Type or Print)
Brian Hoops
Authorized Representative Signature
Airfield Western, LLC
Company Name
9/1/17
Date



THIRD PARTY SIGNATURE AUTHORIZATION
for Special Waste Disposal

Date: 9/1/17

This Authorization is only valid for 3 years
from the above date.

To Whom It May Concern:

Please be advised that the following company/individual has been appointed to work as our
agent for purposes of managing waste materials that we may generate.

Table with 2 columns: Name of Authorized Agent, Title, Name of Company, Telephone Number. Handwritten entries: Brian Hoops, Vice President/ Project Mgr, Airfield Western, LLC, 970-209-4562

The above broker/individual is authorized to act as our authorized agent for the following
purposes:

- Complete and sign Special Waste Profile.
Complete and sign Special Waste Profile-Recertification.
Authorize amendments to Special Waste Profile.
Sign contracts to dispose and/or transport material.
Sign certifications necessary to comply with landfill requirements.
Sign manifests to initiate shipment to disposal facilities.

Our authorized agent will notify us prior to any action stated above, and will provide us with
copies of any documents bearing our name.

Table with 2 columns: Name of Company, Mailing Address, Generator Contact (Print Name), Title, Signature, Telephone Number. Handwritten entries: FAA, 15000 Aviation Blvd. Lawndale, CA, Alex Thibodeaux, Civil Engineer, Alex Thibodeaux



# AGENT SPECIAL WASTE SERVICE AGREEMENT NON-HAZARDOUS WASTES

Special Waste Profile Number: 5123 17 14396

**Agent Billing Information**

**Republic Waste Location (Company)**

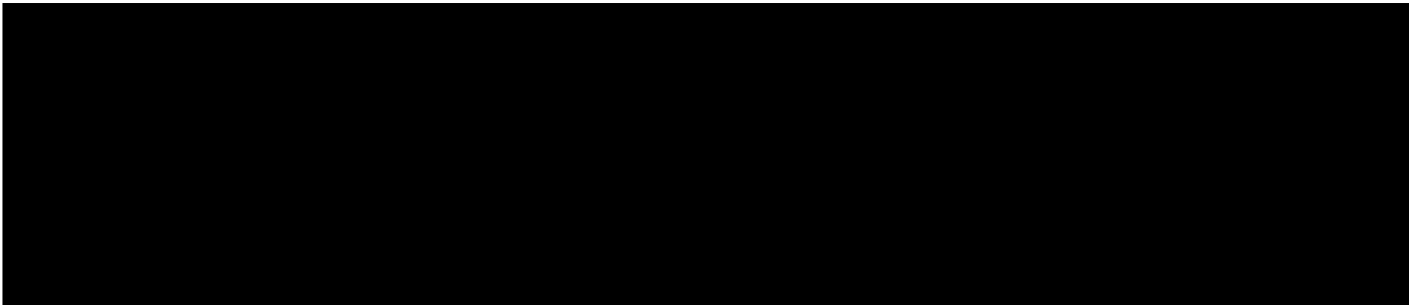
Name: AIRFIELD WESTERN LLC  
(ACCOUNT# CASH 321)  
Address: 66907 SOLAR RD  
City: MONTROSE  
State: CO Zip: 81403  
Phone: 970.209.4562 Fax: \_\_\_\_\_  
Contact: BRIAN HOOPS

SUNSHINE CANYON LANDFILL (5123)  
14747 SAN FERNANDO ROAD  
SYLMAR, CA 91342  
818.362.2141

**County and State  
of Origin:**

Project: FAA LOS ANGELES, CALIFORNIA  
Generator Address: 7048 VINELAND AVE, N. HOLLYWOOD, CA 91606  
Additional Information: CONTACT: ALEX THIBODEAUX | PHONE: 310.970.2329

1. **Special Waste Service.** Subject to the terms and conditions contained herein, the Company and the Agent agree to be legally bound hereby and the Company agrees to accept at its Facility, Acceptable Waste (hereinafter referred to as "Special Waste" or "Waste") delivered by Agent, and which is acceptable to the Company as herein provided.
2. **Acceptable Waste.** Only those Special Wastes described in Paragraph 3 herein and in any Special Waste Profile(s) which number is identical to the contract number referenced above, and which Profile(s) are hereby incorporated by reference herein, and which Waste is subsequently approved by the Company and is otherwise in accordance with all laws, regulations and permits, shall be acceptable for disposal at the Facility ("Acceptable Waste").



Cannot Exceed Daily Volume of 500 POUNDS Without Prior Approval of Company.

(B) **Incorporation by Reference.** In addition to Special Waste Profile(s), the following documents are incorporated by reference into this Agreement as if fully set forth herein.

- 1) N/A
- 2) N/A

4. **Term of Agreement.** This Agreement is effective for 2 months, commencing 9/1/2017 and shall automatically be renewed for a similar term thereafter unless either party shall give written notice (via certified mail) of termination to the other party at least thirty (30) days prior written notice.

**THE COMPANY AND THE AGENT, IN CONSIDERATION OF THE MUTUAL OBLIGATIONS CONTAINED HEREIN, AGREE THAT THIS IS A LEGALLY BINDING AGREEMENT WHICH IS SUBJECT TO THE TERMS AND CONDITIONS SET FORTH ON THIS PAGE AND ON THE REVERSE SIDE OF THIS DOCUMENT. IN ADDITION, THE GENERATOR IS CERTIFYING THE ATTACHED TERMS AND CONDITIONS HAVE BEEN REVIEWED AND INITIALLED AT THE BOTTOM OF THE PAGE.**

**AGENT** Brian Hoops  
SIGNATURE (AUTHORIZED REPRESENTATIVE)  
Brian Hoops Vice-President  
NAME AND TITLE (PLEASE PRINT)  
9/5/17  
DATE

**REPUBLIC SERVICES, INC/COMPANY**  
Stacy Loveland  
SIGNATURE (AUTHORIZED REPRESENTATIVE)  
Stacy Loveland - SW Executive  
NAME AND TITLE (PLEASE PRINT)  
9/5/2017  
DATE

# Terms and Conditions of Agent Special Waste Service Agreement

5. **The Agreement.** This agreement of the parties ("Agreement") for the disposal of Special Waste shall consist of this Agreement, riders to the Agreement (if any) and any Application, permit and approval that may be applicable to such Waste.
6. **Waste Accepted at Facility.** Agent represents, warrants and covenants that the Waste delivered to Company at its Facility hereunder will be Acceptable Waste and will not contain any unacceptable quantity of hazardous materials or substances, radioactive materials or substances, or toxic waste or substances, as defined by applicable federal, state, local or provincial laws or regulations. Any Waste which does not meet these requirements shall hereinafter be referred to as "Unacceptable Waste". The Agent shall in all matters relating to the collection, transportation and disposal of the Waste hereunder, comply with all applicable federal, state and local laws, regulations, rules and orders regarding the same. The word "Facility" shall mean any landfill, transfer station or other location used to transfer, process or otherwise dispose of such Waste.
7. **Special Waste.** Agent represents, warrants and covenants that the Waste delivered to Company hereunder (i) will not contain any Special Waste that is not specifically described on any Application which is attached hereto and which is subsequently approved by the Company, (ii) will meet the material description as set forth in any Application and otherwise in all significant respects and (iii) will not contain Unacceptable Waste. The parties may incorporate additional Special Waste as part of this Agreement if prior to delivery of such Waste to Company, Agent has provided an Application for such Waste and Company has approved disposal of such Waste within the limitations and conditions contained in Company's written notice of approval of Special Waste. Title to any and all Waste handled or disposed of by Company shall at all times remain with Generator and Agent.
8. **Rights of Refusal/Rejection.** The Agent shall inspect all Waste at the place(s) of collection and shall remove any and all Unacceptable Waste. Company has the right to refuse, or to reject after acceptance, any load(s) of Waste(s) delivered to its Facility including if the Company believes the Agent has breached (or is breaching) its representations, warranties, covenants or agreements hereunder, or any applicable federal, state or local laws, regulations, rules or orders, even if only a portion of such Waste load is unacceptable. The Company shall have the right to inspect all vehicles of Waste haulers, including the Agent's vehicles, in order to determine whether the Waste is Acceptable Waste or Unacceptable Waste pursuant to this Agreement and all applicable federal, state and local laws, rules and regulations. The Company's exercise, or failure to exercise, its rights hereunder shall not operate to relieve the Agent of its responsibilities or liability under this Agreement. The Agent shall be responsible for, and bear all reasonable expenses and damages incurred by the Company, as a result of the Unacceptable Waste and in the reloading and removal of Unacceptable Waste disposed in the Facility. The Company, may also, in its sole discretion, require the Agent to promptly remove the Unacceptable Waste.
9. **Limited License to Enter.** This Agreement provides Agent with a license to enter the Facility for the limited purpose of, and only to the extent necessary for, off-loading Acceptable Waste at the Facility in the manner directed by Company. Except in an emergency, Agent's personnel shall not leave the immediate vicinity of their vehicle. After off-loading the Waste, Agent's personnel shall promptly leave the Facility. Under no circumstances shall Agent or its personnel engage in any scavenging of Waste or other materials at the Facility. The Company reserves the right to make and enforce reasonable rules and regulations concerning the operation of the Facility, the conduct of the drivers and others on the Facility premises, quantities and sources of Waste, and any other matters necessary or desirable for the safe, legal and efficient operation of the Facility including, but not limited to, speed limits on haul roads imposed by the Company, and the wearing of hard hats and other personal protection equipment by all individuals allowed on the Facility premises. Agent agrees to conform to such rules and regulations as they may be established and amended from time to time. Company may refuse to accept Waste from and shall deny an entrance license to, any of Agent's personnel whom Company believes is under the influence of alcohol or other chemical substances. Agent shall be solely responsible for its employees and subcontractors performing their obligations in a safe manner when at the facility of Company.
10. **Charges and Payment.** Payment shall be made by Agent within sixty (60) days after receipt of invoice from Company. In the event that any amount is overdue, the Company may terminate this Agreement. Agent agrees to pay a finance charge equal to the maximum interest rate permitted by law. Agent shall be liable for all taxes, fees, or other charges imposed upon the disposal of the Waste by federal, state, local or provincial laws and regulations. Company, from time to time, may modify its rates upon sixty (60) days written notice to Agent. Agent hereby agrees that the Company's right to receive payments under this Agreement is unconditional and is not conditioned upon Agent first receiving payment from Generator or any other party.
11. **Termination.** Agent's obligations, representations, warranties and covenants regarding the Waste delivered and all indemnities shall survive termination of this Agreement. Should Agent materially default in any of its obligations hereunder, then Company may immediately terminate this Agreement and Agent shall be liable for all costs and damages incurred by the Company.
12. **Driver's Knowledge and Authority.** Agent represents, warrants and covenants that its drivers who deliver Waste to Company's Facility have been advised by Agent of the Company's prohibition on deliveries of hazardous materials or substances, radioactive materials or substances, or toxic waste or substances or any other Unacceptable Waste to the Facility, of Company's restrictions on deliveries of Special Waste to the Facility of the definitions of "Hazardous Waste and Hazardous Substances" as provided by applicable federal, state and local law, rules and regulations and "Special Waste" as provided herein, and of the terms of this license to enter Company's Facility.
13. **Indemnification.** Agent shall indemnify, defend and hold harmless the Company and its subsidiaries, affiliates and parent corporations, as applicable and their respective officers, directors, lenders, employees, subcontractors and agents from and against any and all claims, suits, losses, liabilities, assessments, damages, fines, costs and expenses, including reasonable attorneys fees arising under federal, state or local laws, regulations or ordinances, or relating to the content of the Waste, or arising out of or in connection with any breach of this Agreement or arising out of the negligent collection, transportation and disposal of Waste by Agent or Agent's employees, agents, subcontractors or representatives thereof. Agent shall also be responsible for increased inspection, testing, study and analysis costs made necessary due to reasonable concerns of the Company as to the content of the Waste following discovery of potentially Unacceptable Waste. This indemnification and other obligations stated in this paragraph shall survive the termination of this Agreement.
14. **Insurance.** Agent shall maintain in full force and effect throughout the term of this Agreement the following types of insurance in at least the amounts specified below:

All insurance will be by insurers authorized to do business in the state in which the Facility is located. Prior to Agent being allowed on Facility premises, Agent shall provide the Company with certificates of insurance or other satisfactory evidence that such insurance has been procured and is in force. Said policies shall not thereafter be canceled, be permitted to expire, or be changed without thirty (30) days advance written notice to the Company. Agent warrants that it will secure the above minimum amounts of insurance from any transportation of the Waste to the Facility.

15. **Failure to Perform.** Neither party hereto shall be liable for its failure to perform hereunder due to circumstances not its fault and beyond its reasonable control, including, but not limited to, strikes or other labor disputes, riots, protests, civil disturbances or sabotage, changes in law, fires, floods, compliance with government requests, explosions, accidents, weather, lack of required natural resources, or acts of God affecting either party hereto. In the event of any of the circumstances provided for in the preceding sentence, including, but not limited to, whether any federal, state or local court or governmental authority takes any action which would (i) close or restrict operations at the Facility, (ii) limit the quantity or prohibit the disposal of Waste at the Facility, or (iii) limit the ability of or prohibit Agent from delivering Waste to the Facility, the Company shall have the right, at its option, to reduce, suspend or terminate Agent's access to the Facility immediately, without prior notice and without any additional liabilities between the parties, other than Agent's payment obligation hereunder. Neither Party is required hereunder to settle any labor dispute against its own best judgment.
16. **Other Termination.** The occurrence of any of the following events shall also constitute an event of default by the Agent and shall give the Company the right to immediately terminate this Agreement:

- (A) A petition for reorganization or bankruptcy filed by or against the Agent.
- (B) Failure by Agent to pay any amounts due to Company.
- (C) Any breach by Agent of any of its obligations pursuant to the Agreement.

Agent shall be liable for and shall indemnify, defend and hold harmless Company from any losses, claims expenses or damages incurred by the Company as a result of termination hereunder.

17. **Assignment.** Agent may not assign, transfer or otherwise vest in any other Company, entity or person, in whole or in part, any of its rights or obligations under the Agreement without the prior written consent of the Company, provided, however, that the Company may without any such prior written consent, assign its rights and/or obligations under the Agreement to a subsidiary or affiliate corporation.
18. **Right of Disposal.** This Agreement does not grant any rights to dispose of Waste other than in accordance herewith. The Company reserves the right to immediately terminate access to the Facility by Agent and Agent's personnel in the event of breach or violation by Agent of any of the terms of this Agreement, the Company's operating rules or payment policies or any applicable laws or regulations.
19. **Continuing Compliance.** The Agent has a continuing obligation to inform the Company of any new information, or information not previously provided to the Company by Agent and/or Generator which may affect the acceptability of the Waste by the Company. Further, the Agent shall comply with all Company requests for evidence of Agent's continuing compliance with the terms of the Agreement including but not limited to the following: (i) providing new, updated Waste profiles on the Waste(s) offered for disposal, (ii) providing appropriate certification that the Waste being offered for disposal is accurately reflected by the appropriate Application or, (iii) re-sample the Waste at Agent's expense if reasonable cause exists as to its acceptability under the terms of this Agreement or, (iv) allow the Company to re-sample the Waste at Agent's expense if reasonable cause exists as to its acceptability under the terms of this Agreement or (v) all of the above.
20. **Miscellaneous.**
  - (A) This Agreement shall be governed by the laws of the State in which the Facility is located.
  - (B) No waiver of a breach of any of the obligations contained in the Agreement shall be construed to be a waiver of any prior or succeeding breach of the same obligation or of any other obligation of this Agreement.
  - (C) No modification, release, discharge or waiver of any provision or obligation hereof shall be of any force, or effect, unless in writing signed by all parties to this Agreement.
  - (D) Agent shall treat as confidential and not disclose to others during or subsequent to the terms of this Agreement, except as is necessary to perform this Agreement, or to comply with any applicable law or regulation any information (including any technical information, experience or date) regarding the Company's plans, programs, plants, processes, products, costs, equipment or operations which may come within the knowledge of the Agent or its employees in the performance of this Agreement, without in each instance securing the prior written consent of the other Company.
  - (E) If any term, phrase, obligation or provision of this Agreement shall be held to be invalid, illegal or unenforceable in any respect, this Agreement shall remain in effect and be construed without regard to such term, phrase, obligation or provision.
  - (F) This Agreement constitutes the entire understanding between the parties, replacing and amending any prior agreements between the parties, and shall be binding upon all parties hereto, their successors, heirs, representatives and assigns. Any provision, term or condition in any acknowledgement, purchase order or other response by Agent which is in addition to or different from the provisions of this Agreement shall be deemed objected to by the Company and shall be of no effect.
  - (G) Agent represents, warrants and covenants that it is and during the term of this Agreement, will remain, in compliance with and will perform its obligations pursuant to all applicable laws and regulations and shall indemnify, defend and hold harmless the Company from any breach thereof.
  - (H) It is the understanding and agreement of the parties that the Company is an independent contractor, and is not an agent, nor an authorized representative of the Agent. It is the further understanding and agreement of the parties that Agent is an authorized representative of Generator.
21. **Notices.** All notices herein provided for shall be considered as having been given upon being placed in the mail, certified postage prepaid addressed to the Company or Agent at the address herein set forth in this Agreement or to such other address as may be given to the other party in writing.
22. **Liquidated Damages.** In the event that this Agreement is terminated by the Agent in a manner not in accordance with paragraph 4 hereof, or terminated due to a breach of this Agreement by the Agent, the Agent shall pay, as liquidated damages, and not as a penalty, the greater of an amount equal to six (6) months' service charges or the Agent's most recent monthly charge multiplied by six (6). The Agent shall be given credit for any advance payments made hereunder, however, in computing the amount owed as liquidated damages hereunder. The Agent acknowledges that this liquidated damages clause is reasonable and is applicable to recover damages related to its investment in equipment, development of landfills and hiring of employees undertaken by the Company to service its customers including the Agent. This liquidated damages clause in no way relieves the Agent from its obligations and liability for other cost or damages as set forth elsewhere in this Agreement.

Coverages	Minimum Amounts of Insurance
Worker's Compensation	Statutory
General Liability	\$500,000 combined single limit
Automobile Liability	\$500,000 combined single limit

AGENT: Brian Hoops

Republic Services, INC./COMPANY: [Signature]



# Republic Services, Inc.

18500 N. Allied Way, Phoenix, AZ 85054

## SPECIAL WASTE DEPARTMENT DECISION

	Waste Profile # 51231714660	Expiration Date 12/7/2017	
<b>I. Decision Request:</b>	<input checked="" type="checkbox"/> Initial <input type="checkbox"/> Recertification <input type="checkbox"/> Change		
Disposal Facility: 5123 - Sunshine Canyon Landfill			
Generator Name: Farm Fresh Produce			
Generator Site Address: 4593 East 49th Street			
City: Vernon	County: _____	State: CA	Zip: _____
Name of Waste: Food Products			
Estimated Annual Volume: 1 Tons			

**II. Special Waste Department Decision:**     Approved     Rejected


Management Method(s):     Landfill     Solidification     Bioremediation     Transfer Facility

Problematic Special Waste according to Republic?     Yes     No

If yes, which one? \_\_\_\_\_

Approved by Special Waste Review Committee?     Yes     No     Not Applicable

### Precautions, Conditions or Limitations on Approval

Special Waste Analyst Signature: 

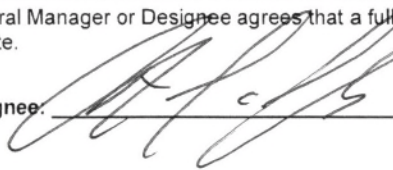
Date: 9/7/2017

Name (Printed): KEITH DIAMANTI

**III. Facility Decision:**     Approved     Rejected

Precautions, Conditions or Limitations on Approval

By signing below, the General Manager or Designee agrees that a fully executed Special Waste Service Agreement is on file for this profile and that the special waste file is complete.

General Manager or Designee: 

Date: 9/7/2017

Name (Printed): Chris Coyle



# EXPRESS WASTE PROFILE

Requested Disposal Facility: 5123 Sunshine Canyon LF CA

Waste Profile #

5123 17 14660

Sales Rep #. 525 - Stacy Loveland

Saveable fill in form. Restricted printing until all required (yellow) fields are completed.

## I. Generator Information

Generator Name: Farm Fresh Produce

Generator Site Address: 4593 East 49th Street

City: Vernon

County:

State: California

Zip: 90058

State ID/Reg No:

State Approval/Waste Code:

(if applicable) NAICS #.

Generator Mailing Address (if different): 4593 East 49th Street

City: Vernon

County:

State: California

Zip: 90058

Generator Contact Name: Jay Lam

Email: jay@farmfreshproduceca.com

Phone Number: (323) 583-1128

Ext: 101

Fax Number:

## II. Billing Information

Bill To: Farm Fresh Produce

Contact Name:

Billing Address:

Email:

City:

State:

Zip:

Phone:

## III. Waste Stream Information

Name of Waste:

(Petroleum products-applies only to contaminated media and debris).

- Diesel Fuel
- Home Heating Fuel #1-6
- Kerosene
- Aviation Fuel
- Hydraulic Fluid
- Unleaded Gasoline (UST Corrective Action)

- Weathered Wood
- RCRA Empty Containers
- Treated Medical Waste
- Animal Carcass (non infectious)
- Plant Trash
- Meth Contaminated Debris

- Friable Asbestos
- Non Friable Asbestos
- Cured Asphalt
- Tires
- Food Products (Including Animal Food)

Process Generating Waste: Sweet Potatoes from Hawaii - Being dispose of due to non-common pest found in one box (weevil). Dept. of Agriculture need this procedure to be done in order to fulfill their requirements.

Method of Shipment:  BULK  DRUM  BAGGED  OTHER:

Estimated Annual Volume: 1

Tons

Frequency:  ONE TIME  ONGOING

## IV. Certification

I hereby certify that to the best of my knowledge and belief, the information contained herein is a true and accurate description of the waste material being offered for disposal. I further certify that by utilizing this profile, neither myself nor any other employee of the company will deliver for disposal or attempt to deliver for disposal any waste which is classified as toxic waste, hazardous waste or infectious waste, or any other waste material this facility is prohibited from accepting by law. Our company hereby agrees to fully indemnify this disposal facility against any damages resulting from this certification being inaccurate or untrue. I further certify that the company has not altered the form or content of this profile sheet as provided by Republic Services, Inc.

Jay Lam/President

Authorized Representative Name/Title (Type or Print)

Authorized Representative Signature

Farm Fresh Produce

Company Name

9-7-17

Date



# SPECIAL WASTE SERVICE AGREEMENT NON-HAZARDOUS WASTES

Special Waste Profile Number: 5123 17 14660

### Generator Billing Information

Name: FARM FRESH PRODUCE  
(ACCT CASH # 321)  
Address: 4593 EAST 49<sup>TH</sup> STREET  
City: VERNON  
State: CA Zip: 90058  
Phone: 323.583.1128 Fax: \_\_\_\_\_  
Contact: JAY LAM

### Republic Waste Location (Company)

SUNSHINE CANYON LANDFILL (5123)  
14747 SAN FERNANDO ROAD  
SYLMAR, CA 91342  
818.362.2141

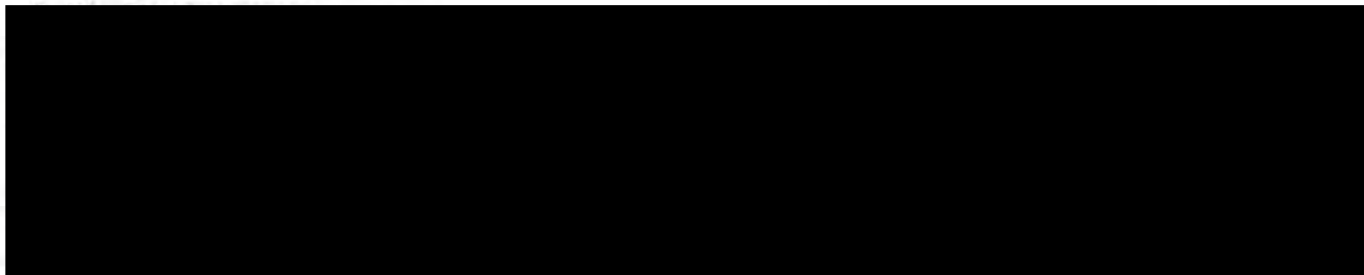
Project: FOOD PRODUCTS

County and State  
of Origin:

LOS ANGELES, CA

Additional Information: \_\_\_\_\_

1. **Special Waste Service.** Subject to the terms and conditions contained herein, the Company and the Generator agree to be legally bound hereby and the Company agrees to accept at its Facility, Acceptable Waste (hereinafter referred to as "Special Waste" or "Waste") delivered by Generator, and which is acceptable to the Company as herein provided.
2. **Acceptable Waste.** Only those Special Wastes described in Paragraph 3 herein and in any Special Waste Profile(s) which number is identical to the contract number referenced above, and which Profile(s) are hereby incorporated by reference herein, and which Waste is subsequently approved by the Company and is otherwise in accordance with all laws, regulations and permits, shall be acceptable for disposal at the Facility ("Acceptable Waste").



Cannot Exceed Daily Volume of 1 TON Without Prior Approval of Company.

(B) **Incorporation by Reference.** In addition to Special Waste Profile(s), the following documents are incorporated by reference into this Agreement as if fully set forth herein.

1) N/A

2) N/A

4. **Term of Agreement.** This Agreement is effective for 3 months, commencing 9/7/2017 and shall automatically be renewed for a similar term thereafter unless either party shall give written notice (via certified mail) of termination to the other party at least thirty (30) days prior written notice.

THE COMPANY AND THE GENERATOR, IN CONSIDERATION OF THE MUTUAL OBLIGATIONS CONTAINED HEREIN, AGREE THAT THIS IS A LEGALLY BINDING AGREEMENT WHICH IS SUBJECT TO THE TERMS AND CONDITIONS SET FORTH ON THIS PAGE AND ON THE REVERSE SIDE OF THIS DOCUMENT. IN ADDITION, THE GENERATOR IS CERTIFYING THE ATTACHED TERMS AND CONDITIONS HAVE BEEN REVIEWED AND INITIALLED AT THE BOTTOM OF THE PAGE.

GENERATOR

SIGNATURE (AUTHORIZED REPRESENTATIVE)

Jay Lam, President  
NAME AND TITLE (PLEASE PRINT)

08 SEP 2017  
DATE

REPUBLIC SERVICES, INC/COMPANY

SIGNATURE (AUTHORIZED REPRESENTATIVE)

Stacy Loveland - SW Executive  
NAME AND TITLE (PLEASE PRINT)

NAME AND TITLE (PLEASE PRINT)

9/8/2017  
DATE

## Terms and Conditions of Special Waste Service Agreement

5. **The Agreement.** This agreement of the parties ("Agreement") for the disposal of Special Waste shall consist of this Agreement, riders to the Agreement (if any) and any Application, permit and approval that may be applicable to such Waste.
6. **Waste Accepted at Facility.** Generator represents, warrants and covenants that the Waste delivered to Company at its Facility hereunder will be Acceptable Waste and will not contain any unacceptable quantity of hazardous materials or substances, radioactive materials or substances, or toxic waste or substances, as defined by applicable federal, state, local or provincial laws or regulations. Any Waste which does not meet these requirements shall hereinafter be referred to as "Unacceptable Waste". The Generator shall in all matters relating to the collection, transportation and disposal of the Waste hereunder, comply with all applicable federal, state and local laws, regulations, rules and orders regarding the same. The word "Facility" shall mean any landfill, transfer station or other location used to transfer, process or otherwise dispose of such Waste.
7. **Special Waste.** Generator represents, warrants and covenants that the Waste delivered to Company hereunder (i) will not contain any Special Waste that is not specifically described on any Application which is attached hereto or which is subsequently approved by the Company, (ii) will meet the material description as set forth in any Application and otherwise in all significant respects and (iii) will not contain Unacceptable Waste. The parties may incorporate additional Special Waste as part of this Agreement if prior to delivery of such Waste to Company, Generator has provided an Application for such Waste and Company has approved disposal of such Waste within the limitations and conditions contained in Company's written notice of approval of Special Waste Disposal. Tith to any and all Waste handled or disposed of by Company shall at all times remain with Generator and Broker (if a Broker is involved).
8. **Rights of Refusal/Rejection.** The Generator shall inspect all Waste at the place(s) of collection and shall remove any and all Unacceptable Waste. Company has the right to refuse, or to reject after acceptance, any load(s) of Waste(s) delivered to its Facility including if the Company believes the Generator has breached (or is breaching) its representations, warranties, covenants or agreements hereunder, or any applicable federal, state or local laws, regulations, rules or orders, even if only a portion of such Waste load is unacceptable. The Company shall have the right to inspect all vehicles and containers of Waste haulers, including the Generator's vehicles, in order to determine whether the Waste is Acceptable Waste or Unacceptable Waste pursuant to this Agreement and all applicable federal, state and local laws, rules and regulations. The Company's exercise, or failure to exercise, its rights hereunder shall not operate to relieve the Generator of its responsibilities or liability under this Agreement. The Generator shall be responsible for, and bear all reasonable expenses and damages incurred by the Company, as a result of the Unacceptable Waste and in the reloading and removal of Unacceptable Waste disposed in the Facility. The Company, may also, in its sole discretion, require the Generator to promptly remove the Unacceptable Waste.
9. **Limited License to Enter.** This Agreement provides Generator with a license to enter the Facility for the limited purpose of, and only to the extent necessary for, off-loading Acceptable Waste at the Facility in the manner directed by Company. Except in an emergency, Generator's personnel shall not leave the immediate vicinity of their vehicle. After off-loading the Waste, Generator's personnel shall promptly leave the Facility. Under no circumstances shall Generator or its personnel engage in any scavenging of Waste or other materials at the Facility. The Company reserves the right to make and enforce reasonable rules and regulations concerning the operation of the Facility, the conduct of the drivers and others on the Facility premises, quantities and sources of Waste, and any other matters necessary or desirable for the safe, legal and efficient operation of the Facility including, but not limited to, speed limits on haul roads imposed by the Company, and the wearing of hard hats and other personal protection equipment by all individuals allowed on the Facility premises. Generator agrees to conform to such rules and regulations as they may be established and amended from time to time. Company may refuse to accept Waste from and shall deny an entrance license to, any of Generator's personnel whom Company believes is under the influence of alcohol or other chemical substances. Generator shall be solely responsible for its employees and subcontractors performing their obligations in a safe manner when at the facility of Company.
10. **Charges and Payment.** Payment shall be made by Generator within sixty (60) days after receipt of invoice from Company. In the event that any amount is overdue, the Company may terminate this Agreement. Generator agrees to pay a finance charge equal to the maximum interest rate permitted by law. Generator shall be liable for all taxes, fees, or other charges imposed upon the disposal of the Waste by federal, state, local or provincial laws and regulations. Company, from time to time, may modify its rates upon sixty (60) days written notice to Generator.
11. **Termination.** Generator's obligations, representations, warranties and covenants regarding the Waste delivered and all indemnities shall survive termination of this Agreement. Should Generator materially default in any of its obligations hereunder, then Company may immediately terminate this Agreement and Generator shall be liable for all costs and damages incurred by the Company.
12. **Driver's Knowledge and Authority.** Generator represents, warrants and covenants that its drivers who deliver Waste to Company's Facility have been advised by Generator of the Company's prohibition on deliveries of hazardous materials or substances, radioactive materials or substances, or toxic waste or substances or any other Unacceptable Waste to the Facility of Company's restrictions on deliveries of Special Waste to the Facility, of the definitions of "Hazardous Waste and Hazardous Substances" as provided by applicable federal, state and local law, rules and regulations and "Special Waste" as provided herein, and of the terms of the license to enter Company's Facility.
13. **Indemnification.** Generator shall indemnify, defend and hold harmless the Company and its subsidiaries, affiliates and parent corporations, as applicable and their respective officers, directors, lenders, employees, subcontractors and agents from and against any and all claims, suits, losses, liabilities, settlements, damages, fines, costs and expenses, including reasonable attorneys fees arising under federal, state or local laws, regulations or ordinances, or relating to the content of the Waste, or arising out of or in connection with any breach of this Agreement or arising out of the negligent collection, transportation and disposal of Waste by Generator or Generator's employees, agents, subcontractors or representatives thereof. Generator shall also be responsible for increased inspection, testing, study and analysis costs made necessary due to reasonable concerns of the Company as to the content of the Waste following discovery of potentially Unacceptable Waste. This indemnification and other obligations stated in this paragraph shall survive the termination of this Agreement.
14. **Insurance.** Generator shall maintain in full force and effect throughout the term of this Agreement the following types of insurance in at least the amounts specified below:

Coverages	Minimum Amounts of Insurance
Worker's Compensation	Statutory
General Liability	\$500,000 combined single limit
Automobile Liability	\$500,000 combined single limit

All insurance will be by insurers authorized to do business in the state in which the Facility is located. Prior to Generator being allowed on Facility premises, Generator shall provide the Company with certificates of insurance or other satisfactory evidence that such insurance has been procured and is in force. Said policies shall not thereafter be canceled, be permitted to expire or lapse, or be changed without thirty (30) days advance written notice to the Company. Generator warrants that it will secure the above minimum amounts of insurance from any transportation of the Waste to the Facility.

15. **Failure to Perform.** Neither party hereto shall be liable for its failure to perform hereunder due to circumstances not its fault and beyond its reasonable control, including, but not limited to, strikes or other labor disputes, riots, protests, civil disturbances or sabotage, changes in law, fires, floods, compliance with government requests, explosions, accidents, weather, lack of required natural resources, or acts of God affecting either party hereto. In the event of any of the circumstances provided for in the preceding sentences, including, but not limited to, whether any federal, state or local court or governmental authority takes any action which would (i) close or restrict operations at the Facility, (ii) limit the quantity or prohibit the disposal of Waste at the Facility, or (iii) limit the ability of or prohibit Generator from delivering Waste to the Facility, the Company shall have the right, at its option, to reduce, suspend or terminate Generator's access to the Facility immediately, without prior notice and without any additional liabilities between the parties, other than Generator's payment obligation hereunder. Neither Party is required hereunder to settle any labor dispute against its own best judgment.

16. **Other Termination.** The occurrence of any of the following events shall also constitute an event of default by Generator and shall give the Company the right to immediately terminate this Agreement:

- (A) A petition for reorganization or bankruptcy filed by or against the Generator.
- (B) Failure by Generator to pay any amounts due to Company.
- (C) Any breach by Generator of any of its obligations pursuant to the Agreement.

Generator shall be liable for and shall indemnify, defend and hold harmless Company from any losses, claims expenses or damages incurred by the Company as a result of termination hereunder.

17. **Assignment.** Generator may not assign, transfer or otherwise vest in any other Company, entity or person, in whole or in part, any of its rights or obligations under the Agreement without the prior written consent of the Company, provided, however, that the Company may without any such prior written consent, assign its rights and/or obligations under the Agreement to a subsidiary or affiliate corporation.

18. **Right of Disposal.** This Agreement does not grant any rights to dispose of Waste other than in accordance herewith. The Company reserves the right to immediately terminate access to the Facility by Generator and Generator's personnel in the event of breach or violation by Generator of any of the terms of this Agreement, the Company's operating rules or payment policies or any applicable laws or regulations.


19. **Continuing Compliance.** The Generator has a continuing obligation to inform the Company of any new information, or information not previously provided to the Company by Generator which may affect the acceptability of the Waste by the Company. Further, the Generator shall comply with all Company requests for evidence of Generator's continuing compliance with the terms of the Agreement including but not limited to the following: (i) providing new, updated Waste profiles on the Waste(s) offered for disposal or, (ii) providing appropriate certification that the Waste being offered for disposal is accurately reflected by the appropriate Application or, (iii) re-sample the Waste at Generator's expense if reasonable cause exists as to its acceptability under the terms of this Agreement or, (iv) allow the Company to re-sample the Waste at Generator's expense if reasonable cause exists as to its acceptability under the terms of this Agreement or (v) all of the above.

### 20. Miscellaneous

- (A) This Agreement shall be governed by the laws of the State in which the Facility is located.
- (B) No waiver of a breach of any of the obligations contained in the Agreement shall be construed to be a waiver of any prior or succeeding breach of the same obligation or of any other obligation of this Agreement.
- (C) No modification, release, discharge or waiver of any provision or obligation hereof shall be of any force, or effect, unless in writing signed by all parties to this Agreement.
- (D) Generator shall treat as confidential and not disclose to others during or subsequent to the terms of this Agreement, except as is necessary to perform this Agreement, or to comply with any applicable law or regulation any information (including any technical information, experience or data) regarding the Company's plans, programs, plants, processes, products, costs, equipment or operations which may come within the knowledge of the Generator or its employees in the performance of this Agreement, without in each instance securing the prior written consent of the other Company.
- (E) If any term, phrase, obligation or provision of this Agreement shall be held to be invalid, illegal or unenforceable in any respect, this Agreement shall remain in effect and be construed without regard to such term, phrase, obligation or provision.
- (F) This Agreement constitutes the entire understanding between the parties, replacing and amending any prior agreements between the parties, and shall be binding upon all parties hereto, their successors, heirs, representatives and assigns. Any provision, term or condition in any acknowledgement, purchase order or other response by Generator which is in addition to or different from the provisions of this Agreement shall be deemed objected to by the Company and shall be of no effect.
- (G) Generator represents, warrants and covenants that it is and, during the term of this Agreement will remain, in compliance with and will perform its obligations pursuant to all applicable laws and regulations and shall indemnify, defend and hold harmless the Company from any breach thereof.
- (H) It is the understanding and agreement of the parties that the Company is an independent contractor, and is not an agent, nor an authorized representative of the Generator.

21. **Notices.** All notices herein provided for shall be considered as having been given upon being placed in the mail, certified postage prepaid addressed to the Company or Generator at the address herein set forth in this Agreement or to such other address as may be given to the other party in writing.

22. **Liquidated Damages.** In the event that this Agreement is terminated by the Generator in a manner not in accordance with paragraph 4 hereof, or terminated due to a breach of this Agreement by the Generator, the Generator shall pay, as liquidated damages, and not as a penalty, the greater of an amount equal to six (6) months' service charges or the Generator's most recent monthly charge multiplied by six (6). The Generator shall be given credit for any advance payments made hereunder, however, in computing the amount owed as liquidated damages hereunder. The Generator acknowledges that this liquidated damages clause is reasonable and is applicable to recover damages related to its investment in equipment, development of landfills and hiring of employees undertaken by the Company to service its customers including the Generator. This liquidated damages clause in no way relieves the Generator from its obligations and liability for other cost or damages as set forth elsewhere in this Agreement.

GENERATOR: 

Republic Services, Inc/COMPANY: 

May 2009





# Republic Services, Inc.

18500 N. Allied Way, Phoenix, AZ 85054

## SPECIAL WASTE DEPARTMENT DECISION

Waste Profile #  
51231715077

Expiration Date  
12/14/2017

### I. Decision Request:

Initial    Recertification    Change

Disposal Facility: 5123 - Sunshine Canyon Landfill

Generator Name: Fifiel Company

Generator Site Address: 2968 W 6th Street

City: Los Angeles

County:

State: CA

Zip:

Name of Waste: Weathered Wood

Estimated Annual Volume: 10 Cubic Yards

### II. Special Waste Department Decision:   Approved   Rejected

Management Method(s):    Landfill    Solidification    Bioremediation    Transfer Facility

Problematic Special Waste according to Republic?    Yes    No

If yes, which one? \_\_\_\_\_

Approved by Special Waste Review Committee?    Yes    No    Not Applicable

### Precautions, Conditions or Limitations on Approval

Disposal of TWW must be in accordance with the California Health and Safety Code (HSC) sections 24143.1.5, 25150.7 and 25150.8.

Special Waste Analyst Signature: \_\_\_\_\_

Name (Printed): Suzanne Glass

Date: 9/14/2017

### III. Facility Decision:

Approved    Rejected

### Precautions, Conditions or Limitations on Approval

\_\_\_\_\_

By signing below, the General Manager or Designee agrees that a fully executed Special Waste Service Agreement is on file for this profile and that the special waste file is complete.

General Manager or Designee: \_\_\_\_\_

Name (Printed): Chris Coyle

Date: 9/14/2017



Requested Disposal Facility: 5123 Sunshine Canyon LF CA

Waste Profile #
51231715077
Sales Rep #. 177 - Fred Hays

Saveable fill in form. Restricted printing until all required (yellow) fields are completed.

**I. Generator Information**

Generator Name: Fifiel Company			
Generator Site Address: 2968 W 6th Street			
City: Los Angeles	County: Los Angeles	State: California	Zip: 90020
State ID/Reg No:	State Approval/Waste Code: (if applicable)		NAICS #. 237310
Generator Mailing Address (if different): 12121 Wilshire Blvd, Suite 720			
City: Los Angeles	County: Los Angeles	State: California	Zip: 90049
Generator Contact Name: Don Carp		Email: dcarp@fifielco.com	
Phone Number: (808) 216-4256	Ext:	Fax Number:	

**II. Billing Information**

Bill To: O.L. Development, Inc.		Contact Name: Lawrence Nemeth	
Billing Address: 2923 Thornton Ave		Email: lawrence@oldevelopment.net	
City: Burbank	State: CA	Zip: 91504	Phone: (818) 940-9573

**III. Waste Stream Information**

Name of Waste: <small>(Petroleum products-applies only to contaminated media and debris).</small>	<input type="checkbox"/> Diesel Fuel	<input checked="" type="checkbox"/> Weathered Wood	<input type="checkbox"/> Friable Asbestos
	<input type="checkbox"/> Home Heating Fuel #1-6	<input type="checkbox"/> RCRA Empty Containers	<input type="checkbox"/> Non Friable Asbestos
	<input type="checkbox"/> Kerosene	<input type="checkbox"/> Treated Medical Waste	<input type="checkbox"/> Cured Asphalt
	<input type="checkbox"/> Aviation Fuel	<input type="checkbox"/> Animal Carcass (non infectious)	<input type="checkbox"/> Tires
	<input type="checkbox"/> Hydraulic Fluid	<input type="checkbox"/> Plant Trash	<input type="checkbox"/> Food Products <small>(Including Animal Food)</small>
	<input type="checkbox"/> Unleaded Gasoline (UST Corrective Action)	<input type="checkbox"/> Meth Contaminated Debris	

Process Generating Waste: Resurfacing of city of LA street under B-Permit BR003601 exposed abandoned railroad tracks and ties. Removal is ordered by City of Los Angeles inspector to allow for proper street restoration. Railroad ties are to be removed and disposed of at approved landfill, wood tie max length will be 48".

Method of Shipment: <input checked="" type="checkbox"/> BULK <input type="checkbox"/> DRUM <input type="checkbox"/> BAGGED <input type="checkbox"/> OTHER:
Estimated Annual Volume: 10 Cubic Yards
Frequency: <input checked="" type="checkbox"/> ONE TIME <input type="checkbox"/> ONGOING

**IV. Certification**


I hereby certify that to the best of my knowledge and belief, the information contained herein is a true and accurate description of the waste material being offered for disposal. I further certify that by utilizing this profile, neither myself nor any other employee of the company will deliver for disposal or attempt to deliver for disposal any waste which is classified as toxic waste, hazardous waste or infectious waste, or any other waste material this facility is prohibited from accepting by law. Our company hereby agrees to fully indemnify this disposal facility against any damages resulting from this certification being inaccurate or untrue. I further certify that the company has not altered the form or content of this profile sheet as provided by Republic Services, Inc.

Lawrence Nemeth/Project Manager	O.L. Development, Inc.
Authorized Representative Name/Title (Type or Print)	Company Name
	9/14/17
Authorized Representative Signature	Date



**THIRD PARTY SIGNATURE AUTHORIZATION  
for Special Waste Disposal**

Date: 9/14/17

This Authorization is only valid for ~~3 years~~ months  from the above date.

To Whom It May Concern:

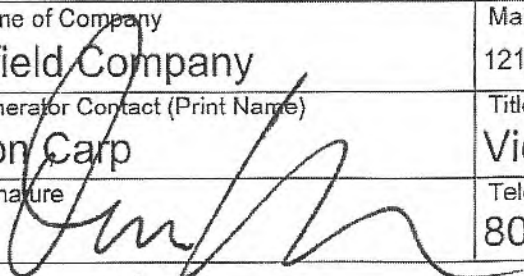
Please be advised that the following company/individual has been appointed to work as our agent for purposes of managing waste materials that we may generate.

Name of Authorized Agent <b>Lawrence Nemeth</b>	Title <b>Project Manager</b>
Name of Company <b>O.L. Development, Inc</b>	Telephone Number <b>8189409573</b>

The above broker/individual is authorized to act as our authorized agent for the following purposes:

- Complete and sign Special Waste Profile.
- Complete and sign Special Waste Profile-Recertification.
- Authorize amendments to Special Waste Profile.
- Sign contracts to dispose and/or transport material.
- Sign certifications necessary to comply with landfill requirements.
- Sign manifests to initiate shipment to disposal facilities.

Our authorized agent will notify us prior to any action stated above, and will provide us with copies of any documents bearing our name.

Name of Company <b>Fifield Company</b>	Mailing Address 12121 Wilshire Blvd suite 720 LA, CA 90049
Generator Contact (Print Name) <b>Don Carp</b>	Title <b>Vice President</b>
Signature 	Telephone Number <b>8082164256</b>

9/14/17



# AGENT SPECIAL WASTE SERVICE AGREEMENT NON-HAZARDOUS WASTES

Special Waste Profile Number: 5123 17 15077

### Agent Billing Information

Name: OL DEVELOPMENT INC  
(ACCOUNT# CASH 321)  
Address: 2923 THORNTON AVE  
City: BURBANK  
State: CA Zip: 91504  
Phone: 818.940.9573 Fax: \_\_\_\_\_  
Contact: LAWRENCE NEMETH

### Republic Waste Location (Company)

SUNSHINE CANYON LANDFILL (5123)  
14747 SAN FERNANDO ROAD  
SYLMAR, CA 91342  
818.362.2141

Project: FIFIELD COMPANY County and State of Origin: LOS ANGELES, CALIFORNIA  
Generator Address: 2968 W 6<sup>TH</sup> STREET, LOS ANGELES, CA 90020  
Additional Information: CONTACT: DON CARP | PHONE: 808.216.4256

- Special Waste Service.** Subject to the terms and conditions contained herein, the Company and the Agent agree to be legally bound hereby and the Company agrees to accept at its Facility, Acceptable Waste (hereinafter referred to as "Special Waste" or "Waste") delivered by Agent, and which is acceptable to the Company as herein provided.
- Acceptable Waste.** Only those Special Wastes described in Paragraph 3 herein and in any Special Waste Profile(s) which number is identical to the contract number referenced above, and which Profile(s) are hereby incorporated by reference herein, and which Waste is subsequently approved by the Company and is otherwise in accordance with all laws, regulations and permits, shall be acceptable for disposal at the Facility ("Acceptable Waste").



Cannot Exceed Daily Volume of 10 CUBIC YARDS Without Prior Approval of Company.

(B) **Incorporation by Reference.** In addition to Special Waste Profile(s), the following documents are incorporated by reference into this Agreement as if fully set forth herein.

- 1) N/A
- 2) N/A

4. **Term of Agreement.** This Agreement is effective for 3 months, commencing 9/14/2017 and shall automatically be renewed for a similar term thereafter unless either party shall give written notice (via certified mail) of termination to the other party at least thirty (30) days prior written notice.

THE COMPANY AND THE AGENT, IN CONSIDERATION OF THE MUTUAL OBLIGATIONS CONTAINED HEREIN, AGREE THAT THIS IS A LEGALLY BINDING AGREEMENT WHICH IS SUBJECT TO THE TERMS AND CONDITIONS SET FORTH ON THIS PAGE AND ON THE REVERSE SIDE OF THIS DOCUMENT. IN ADDITION, THE GENERATOR IS CERTIFYING THE ATTACHED TERMS AND CONDITIONS HAVE BEEN REVIEWED AND INITIALLED AT THE BOTTOM OF THE PAGE.

### AGENT

[Signature]  
SIGNATURE (AUTHORIZED REPRESENTATIVE)  
LAWRENCE NEMETH  
NAME AND TITLE (PLEASE PRINT) PROJECT MGR  
9/15/17  
DATE

### REPUBLIC SERVICES, INC/COMPANY

[Signature]  
SIGNATURE (AUTHORIZED REPRESENTATIVE)  
Stacy Loveland - SW Executive  
NAME AND TITLE (PLEASE PRINT)  
9/15/2017  
DATE

# Terms and Conditions of Agent Special Waste Service Agreement

5. **The Agreement.** This agreement of the parties ("Agreement") for the disposal of Special Waste shall consist of this Agreement, riders to the Agreement (if any) and any Application, permit and approval that may be applicable to such Waste.
6. **Waste Accepted at Facility.** Agent represents, warrants and covenants that the Waste delivered to Company at its Facility hereunder will be Acceptable Waste and will not contain any unacceptable quantity of hazardous materials or substances, radioactive materials or substances, or toxic waste or substances, as defined by applicable federal, state, local or provincial laws or regulations. Any Waste which does not meet these requirements shall hereinafter be referred to as "Unacceptable Waste". The Agent shall in all matters relating to the collection, transportation and disposal of the Waste hereunder, comply with all applicable federal, state and local laws, regulations, rules and orders regarding the same. The word "Facility" shall mean any landfill, transfer station or other location used to transfer, process or otherwise dispose of such Waste.
7. **Special Waste.** Agent represents, warrants and covenants that the Waste delivered to Company hereunder (i) will not contain any Special Waste that is not specifically described on any Application which is attached hereto and which is subsequently approved by the Company, (ii) will meet the material description as set forth in any Application and otherwise in all significant respects and (iii) will not contain Unacceptable Waste. The parties may incorporate additional Special Waste as part of this Agreement if prior to delivery of such Waste to Company, Agent has provided an Application for such Waste and Company has approved disposal of such Waste within the limitations and conditions contained in Company's written notice of approval of Special Waste. Title to any and all Waste handled or disposed of by Company shall at all times remain with Generator and Agent.
8. **Rights of Refusal/Rejection.** The Agent shall inspect all Waste at the place(s) of collection and shall remove any and all Unacceptable Waste. Company has the right to refuse, or to reject after acceptance, any load(s) of Waste(s) delivered to its Facility including if the Company believes the Agent has breached (or is breaching) its representations, warranties, covenants or agreements hereunder, or any applicable federal, state or local laws, regulations, rules or orders, even if only a portion of such Waste load is unacceptable. The Company shall have the right to inspect all vehicles of Waste haulers, including the Agent's vehicles, in order to determine whether the Waste is Acceptable Waste or Unacceptable Waste pursuant to this Agreement and all applicable federal, state and local laws, rules and regulations. The Company's exercise, or failure to exercise, its rights hereunder shall not operate to relieve the Agent of its responsibilities or liability under this Agreement. The Agent shall be responsible for, and bear all reasonable expenses and damages incurred by the Company, as a result of the Unacceptable Waste and in the reloading and removal of Unacceptable Waste disposed in the Facility. The Company, may also, in its sole discretion, require the Agent to promptly remove the Unacceptable Waste.
9. **Limited License to Enter.** This Agreement provides Agent with a license to enter the Facility for the limited purpose of, and only to the extent necessary for, off-loading Acceptable Waste at the Facility in the manner directed by Company. Except in an emergency, Agent's personnel shall not leave the immediate vicinity of their vehicle. After off-loading the Waste, Agent's personnel shall promptly leave the Facility. Under no circumstances shall Agent or its personnel engage in any scavenging of Waste or other materials at the Facility. The Company reserves the right to make and enforce reasonable rules and regulations concerning the operation of the Facility, the conduct of the drivers and others on the Facility premises, quantities and sources of Waste, and any other matters necessary or desirable for the safe, legal and efficient operation of the Facility including, but not limited to, speed limits on haul roads imposed by the Company, and the wearing of hard hats and other personal protection equipment by all individuals allowed on the Facility premises. Agent agrees to conform to such rules and regulations as they may be established and amended from time to time. Company may refuse to accept Waste from and shall deny an entrance license to, any of Agent's personnel whom Company believes is under the influence of alcohol or other chemical substances. Agent shall be solely responsible for its employees and subcontractors performing their obligations in a safe manner when at the facility of Company.
10. **Charges and Payment.** Payment shall be made by Agent within sixty (60) days after receipt of invoice from Company. In the event that any amount is overdue, the Company may terminate this Agreement. Agent agrees to pay a finance charge equal to the maximum interest rate permitted by law. Agent shall be liable for all taxes, fees, or other charges imposed upon the disposal of the Waste by federal, state, local or provincial laws and regulations. Company, from time to time, may modify its rates upon sixty (60) days written notice to Agent. Agent hereby agrees that the Company's right to receive payments under this Agreement is unconditional and is not conditioned upon Agent first receiving payment from Generator or any other party.
11. **Termination.** Agent's obligations, representations, warranties and covenants regarding the Waste delivered and all indemnities shall survive termination of this Agreement. Should Agent materially default in any of its obligations hereunder, then Company may immediately terminate this Agreement and Agent shall be liable for all costs and damages incurred by the Company.
12. **Driver's Knowledge and Authority.** Agent represents, warrants and covenants that its drivers who deliver Waste to Company's Facility have been advised by Agent of the Company's prohibition on deliveries of hazardous materials or substances, radioactive materials or substances, or toxic waste or substances or any other Unacceptable Waste to the Facility, of Company's restrictions on deliveries of Special Waste to the Facility of the definitions of "Hazardous Waste and Hazardous Substances" as provided by applicable federal, state and local law, rules and regulations and "Special Waste" as provided herein, and of the terms of this license to enter Company's Facility.
13. **Indemnification.** Agent shall indemnify, defend and hold harmless the Company and its subsidiaries, affiliates and parent corporations, as applicable and their respective officers, directors, lenders, employees, subcontractors and agents from and against any and all claims, suits, losses, liabilities, assessments, damages, fines, costs and expenses, including reasonable attorneys fees arising under federal, state or local laws, regulations or ordinances, or relating to the content of the Waste, or arising out of or in connection with any breach of this Agreement or arising out of the negligent collection, transportation and disposal of Waste by Agent or Agent's employees, agents, subcontractors or representatives thereof. Agent shall also be responsible for increased inspection, testing, study and analysis costs made necessary due to reasonable concerns of the Company as to the content of the Waste following discovery of potentially Unacceptable Waste. This indemnification and other obligations stated in this paragraph shall survive the termination of this Agreement.
14. **Insurance.** Agent shall maintain in full force and effect throughout the term of this Agreement the following types of insurance in at least the amounts specified below:

Coverages	Minimum Amounts of Insurance
Worker's Compensation	Statutory
General Liability	\$500,000 combined single limit
Automobile Liability	\$500,000 combined single limit

All insurance will be by insurers authorized to do business in the state in which the Facility is located. Prior to Agent being allowed on Facility premises, Agent shall provide the Company with certificates of insurance or other satisfactory evidence that such insurance has been procured and is in force. Said policies shall not thereafter be canceled, be permitted to expire, or be changed without thirty (30) days advance written notice to the Company. Agent warrants that it will secure the above minimum amounts of insurance from any transportation of the Waste to the Facility.

15. **Failure to Perform.** Neither party hereto shall be liable for its failure to perform hereunder due to circumstances not its fault and beyond its reasonable control, including, but not limited to, strikes or other labor disputes, riots, protests, civil disturbances or sabotage, changes in law, fires, floods, compliance with government requests, explosions, accidents, weather, lack of required natural resources, or acts of God affecting either party hereto. In the event of any of the circumstances provided for in the preceding sentence, including, but not limited to, whether any federal, state or local court or governmental authority takes any action which would (i) close or restrict operations at the Facility, (ii) limit the quantity or prohibit the disposal of Waste at the Facility, or (iii) limit the ability of or prohibit Agent from delivering Waste to the Facility, the Company shall have the right, at its option, to reduce, suspend or terminate Agent's access to the Facility immediately, without prior notice and without any additional liabilities between the parties, other than Agent's payment obligation hereunder. Neither Party is required hereunder to settle any labor dispute against its own best judgment.

16. **Other Termination.** The occurrence of any of the following events shall also constitute an event of default by the Agent and shall give the Company the right to immediately terminate this Agreement:

- (A) A petition for reorganization or bankruptcy filed by or against the Agent.
- (B) Failure by Agent to pay any amounts due to Company.
- (C) Any breach by Agent of any of its obligations pursuant to the Agreement.

Agent shall be liable for and shall indemnify, defend and hold harmless Company from any losses, claims expenses or damages incurred by the Company as a result of termination hereunder.

17. **Assignment.** Agent may not assign, transfer or otherwise vest in any other Company, entity or person, in whole or in part, any of its rights or obligations under the Agreement without the prior written consent of the Company, provided, however, that the Company may without any such prior written consent, assign its rights and/or obligations under the Agreement to a subsidiary or affiliate corporation.

18. **Right of Disposal.** This Agreement does not grant any rights to dispose of Waste other than in accordance herewith. The Company reserves the right to immediately terminate access to the Facility by Agent and Agent's personnel in the event of breach or violation by Agent of any of the terms of this Agreement, the Company's operating rules or payment policies or any applicable laws or regulations.

19. **Continuing Compliance.** The Agent has a continuing obligation to inform the Company of any new information, or information not previously provided to the Company by Agent and/or Generator which may affect the acceptability of the Waste by the Company. Further, the Agent shall comply with all Company requests for evidence of Agent's continuing compliance with the terms of the Agreement including but not limited to the following: (i) providing new, updated Waste profiles on the Waste(s) offered for disposal or, (ii) providing appropriate certification that the Waste being offered for disposal is accurately reflected by the appropriate Application or, (iii) re-sample the Waste at Agent's expense if reasonable cause exists as to its acceptability under the terms of this Agreement or, (iv) allow the Company to re-sample the Waste at Agent's expense if reasonable cause exists as to its acceptability under the terms of this Agreement or (v) all of the above.

20. **Miscellaneous.**

- (A) This Agreement shall be governed by the laws of the State in which the Facility is located.
- (B) No waiver of a breach of any of the obligations contained in the Agreement shall be construed to be a waiver of any prior or succeeding breach of the same obligation or of any other obligation of this Agreement.
- (C) No modification, release, discharge or waiver of any provision or obligation hereof shall be of any force, or effect, unless in writing signed by all parties to this Agreement.
- (D) Agent shall treat as confidential and not disclose to others during or subsequent to the terms of this Agreement, except as is necessary to perform this Agreement, or to comply with any applicable law or regulation any information (including any technical information, experience or date) regarding the Company's plans, programs, plants, processes, products, costs, equipment or operations which may come within the knowledge of the Agent or its employees in the performance of this Agreement, without in each instance securing the prior written consent of the other Company.
- (E) If any term, phrase, obligation or provision of this Agreement shall be held to be invalid, illegal or unenforceable in any respect, this Agreement shall remain in effect and be construed without regard to such term, phrase, obligation or provision.
- (F) This Agreement constitutes the entire understanding between the parties, replacing and amending any prior agreements between the parties, and shall be binding upon all parties hereto, their successors, heirs, representatives and assigns. Any provision, term or condition in any acknowledgement, purchase order or other response by Agent which is in addition to or different from the provisions of this Agreement shall be deemed objected to by the Company and shall be of no effect.
- (G) Agent represents, warrants and covenants that it is and during the term of this Agreement, will remain, in compliance with and will perform its obligations pursuant to all applicable laws and regulations and shall indemnify, defend and hold harmless the Company from any breach thereof.
- (H) It is the understanding and agreement of the parties that the Company is an independent contractor, and is not an agent, nor an authorized representative of the Agent. It is the further understanding and agreement of the parties that Agent is an authorized representative of Generator.

21. **Notices.** All notices herein provided for shall be considered as having been given upon being placed in the mail, certified postage prepaid addressed to the Company or Agent at the address herein set forth in this Agreement or to such other address as may be given to the other party in writing.

22. **Liquidated Damages.** In the event that this Agreement is terminated by the Agent in a manner not in accordance with paragraph 4 hereof, or terminated due to a breach of this Agreement by the Agent, the Agent shall pay, as liquidated damages, and not as a penalty, the greater of an amount equal to six (6) months' service charges or the Agent's most recent monthly charge multiplied by six (6). The Agent shall be given credit for any advance payments made hereunder, however, in computing the amount owed as liquidated damages hereunder. The Agent acknowledges that this liquidated damages clause is reasonable and is applicable to recover damages related to its investment in equipment, development of landfills and hiring of employees undertaken by the Company to service its customers including the Agent. This liquidated damages clause in no way relieves the Agent from its obligations and liability for other cost or damages as set forth elsewhere in this Agreement.

AGENT: \_\_\_\_\_

Republic Services, INC./COMPANY: \_\_\_\_\_

May 2009



PRINT SAVE SUBMIT EMAIL ATTACHMENTS CLOSE

will have to be removed to accommodate new direct resurfacing

District Office: Metro 2 Phone (213) 485-5080

THIS MEMO DELIVERED TO

BUREAU OF CONTRACT ADMINISTRATION  
INSPECTOR OF PUBLIC WORKS

Calvin Hall  
NAME

By  
INSPECTOR'S SIGNATURE

ON 08/30/2017 11:00 A.M.  
DATE & TIME

Alex Jimenez  
INSPECTOR'S NAME PRINTED

FOR OFFICE USE ONLY

- DISTRIBUTION
- ORIGINAL Main Office for mailing
  - WHITE Issue on Job
  - BLUE Main Office
  - CANARY Job Employee
  - GREEN District Office

Division Chief

Supervisor



PRINT SAVE SUBMIT EMAIL ATTACHMENTS CLOSE

Form 1000-ME (Rev. 2007)

DEPARTMENT OF PUBLIC WORKS  
City of Los Angeles  
BUREAU OF CONTRACT ADMINISTRATION

# JOB MEMORANDUM

1

To: Calvin Hall

Job Title: 6th St. (SS) from Virgil Ave. to Commonwealth Ave

Job Number: BR003601

Contractor/Permittee: Cobalt

Subject: Offgrade and broken pavement

Per Construction Note #12 and #14 on the approved plans (Index #P-38201) you are to "remove all existing improvements that interfere with this project" and "Repair or Replace any existing offgrade or broken pavement, curb, gutter or sidewalk immediately adjacent to or within the area of this improvement to the satisfaction of the City Engineer". In addition to these removals pavement resurfacing along 6th St., Commonwealth Ave and Virgil Ave shall be coldplanned and resurfaced to the Centerline of the street to match new elevations. Please note that there are existing rails and ties along the centerline of 6th St which will have to be removed to accommodate new street resurfacing.



Republic Services, Inc.

18500 N. Allied Way, Phoenix, AZ 85054

SPECIAL WASTE DEPARTMENT DECISION

	Waste Profile # 51231718639	Expiration Date 11/13/2018	
I. Decision Request:	<input checked="" type="checkbox"/> Initial <input type="checkbox"/> Recertification <input type="checkbox"/> Change		
Disposal Facility: 5123 - Sunshine Canyon Landfill			
Generator Name: FoodLinx Global Logistics			
Generator Site Address: 19640 South Rancho Way			
City: Dominguez Hills	County:	State: CA	Zip:
Name of Waste: Food Products			
Estimated Annual Volume: 3000 Pounds			

II. Special Waste Department Decision:    Approved    Rejected

Management Method(s):    Landfill    Solidification    Bioremediation    Transfer Facility

Problematic Special Waste according to Republic?    Yes    No

If yes, which one? \_\_\_\_\_

Approved by Special Waste Review Committee?    Yes    No    Not Applicable

Precautions, Conditions or Limitations on Approval

This material must be buried immediately upon receipt at the landfill.

Special Waste Analyst Signature: \_\_\_\_\_  
Date: 11/13/2017

Name (Printed): Suzanne Glass

III. Facility Decision:    Approved    Rejected

Precautions, Conditions or Limitations on Approval

By signing below, the General Manager or Designer agrees that a fully executed Special Waste Service Agreement is on file for this profile and that the special waste file is complete.

General Manager or Designer: \_\_\_\_\_  
Date: 11/13/2017

Name (Printed): Chris Coyle





Requested Disposal Facility: 5123 Sunshine Canyon LF CA

Waste Profile #
5123 17 18639
Sales Rep #. 525 - Stacy Loveland

Saveable fill in form. Restricted printing until all required (yellow) fields are completed.

**I. Generator Information**

Generator Name: FOODLINX GLOBAL LOGISTICS			
Generator Site Address: 19640 SOUTH RANCHO WAY			
City: DOMINGUEZ HILLS	County: LOS ANGELES	State: California	Zip: 90221
State ID/Reg No:	State Approval/Waste Code:	(if applicable)	NAICS #.
Generator Mailing Address (if different): 751 DEEP VALLEY DRIVE			
City: ROLLING HILLS ESTATA	County: LOS ANGELES	State: California	Zip: 90274
Generator Contact Name: RAYMOND TO		Email: raymond@foodlinx.com	
Phone Number: (310) 575-2950	Ext:	Fax Number: (650) 305-2288	

**II. Billing Information**

Bill To: MARUZEN OF AMERICA INC.	Contact Name: ALAN CERVANTES		
Billing Address: 19640 SOUTH RANCHO WAY	Email: alan@maruzencoldstorage.com		
City: DOMINGUEZ HILLS	State: CALIFORNIA	Zip: 90221	Phone: (310) 632-9993

**III. Waste Stream Information**

Name of Waste: <small>(Petroleum products-applies only to contaminated media and debris).</small>	<input type="checkbox"/> Diesel Fuel	<input type="checkbox"/> Weathered Wood	<input type="checkbox"/> Friable Asbestos
	<input type="checkbox"/> Home Heating Fuel #1-6	<input type="checkbox"/> RCRA Empty Containers	<input type="checkbox"/> Non Friable Asbestos
	<input type="checkbox"/> Kerosene	<input type="checkbox"/> Treated Medical Waste	<input type="checkbox"/> Cured Asphalt
	<input type="checkbox"/> Aviation Fuel	<input type="checkbox"/> Animal Carcass (non infectious)	<input type="checkbox"/> Tires
	<input type="checkbox"/> Hydraulic Fluid	<input type="checkbox"/> Plant Trash	<input checked="" type="checkbox"/> Food Products <small>(Including Animal Food)</small>
	<input type="checkbox"/> Unleaded Gasoline (UST Corrective Action)	<input type="checkbox"/> Meth Contaminated Debris	

Process Generating Waste: CHOCOLATE WAS DAMAGE IN ROUTE TO COLD STORAGE

Method of Shipment: <input type="checkbox"/> BULK <input type="checkbox"/> DRUM <input type="checkbox"/> BAGGED <input checked="" type="checkbox"/> OTHER: BOXES
Estimated Annual Volume: 3,000 Pounds
Frequency: <input checked="" type="checkbox"/> ONE TIME <input type="checkbox"/> ONGOING

**IV. Certification**

I hereby certify that to the best of my knowledge and belief, the information contained herein is a true and accurate description of the waste material being offered for disposal. I further certify that by utilizing this profile, neither myself nor any other employee of the company will deliver for disposal or attempt to deliver for disposal any waste which is classified as toxic waste, hazardous waste or infectious waste, or any other waste material this facility is prohibited from accepting by law. Our company hereby agrees to fully indemnify this disposal facility against any damages resulting from this certification being inaccurate or untrue. I further certify that the company has not altered the form or content of this profile sheet as provided by Republic Services, Inc.

ALAN CERVANTES / OPERATIONS Authorized Representative Name/Title (Type of Print)	MARUZEN OF AMERICA INC. Company Name
	11/13/17 Date
Authorized Representative Signature	



**THIRD PARTY SIGNATURE AUTHORIZATION  
for Special Waste Disposal**

Date: 11/10/17

This Authorization is only valid for 3 years  
from the above date.

To Whom It May Concern:

Please be advised that the following company/individual has been appointed to work as our agent for purposes of managing waste materials that we may generate.

Name of Authorized Agent <b>Alan Cervantes</b>	Title <b>Operations</b>
Name of Company <b>Maruzen of America Inc.</b>	Telephone Number <b>310 632-9993</b>

The above broker/individual is authorized to act as our authorized agent for the following purposes:

- Complete and sign Special Waste Profile.
- Complete and sign Special Waste Profile-Recertification.
- Authorize amendments to Special Waste Profile.
- Sign contracts to dispose and/or transport material.
- Sign certifications necessary to comply with landfill requirements.
- Sign manifests to initiate shipment to disposal facilities.

Our authorized agent will notify us prior to any action stated above, and will provide us with copies of any documents bearing our name.

Name of Company <b>Foodlinx Inc.</b>	Mailing Address 751 Deep Valley Dr Rolling Hills Estates CA
Generator Contact (Print Name) <b>Raymond To</b>	Title <b>Logistics Supervisor</b>
Signature 	Telephone Number <b>310 575-3950</b>



# AGENT SPECIAL WASTE SERVICE AGREEMENT NON-HAZARDOUS WASTES

Special Waste Profile Number: 5123 17 18639

**Agent Billing Information**

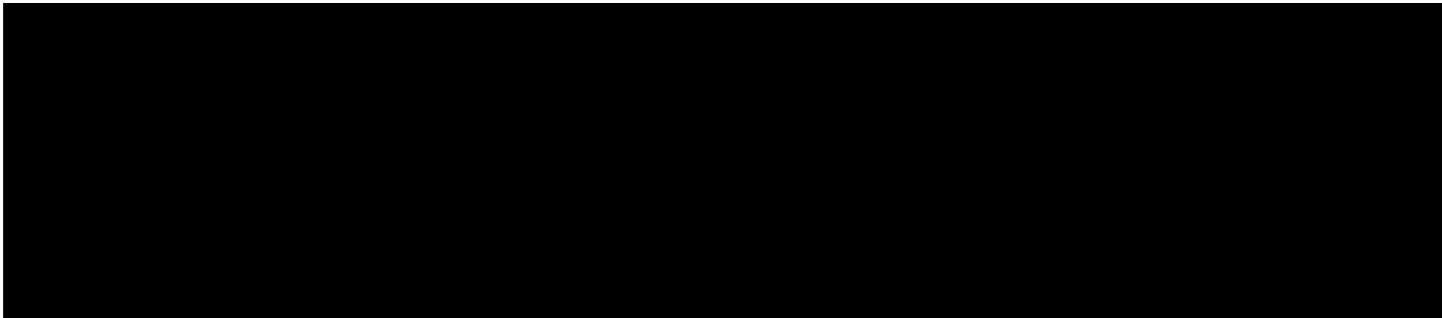
Name: MARUZEN OF AMERICAN INC  
(ACCOUNT# CASH 321)  
Address: 19640 SOUTH RANCHO WAY  
City: DOMINGUEZ HILLS  
State: CA Zip: 90221  
Phone: 310.632.9993 Fax: \_\_\_\_\_  
Contact: ALAN CERVANTES

**Republic Waste Location (Company)**

SUNSHINE CANYON LANDFILL (5123)  
14747 SAN FERNANDO ROAD  
SYLMAR, CA 91342  
818.362.2141

Project: FOODLINX GLOBAL LOGISTICS County and State of Origin: LOS ANGELES, CALIFORNIA  
Generator Address: 19640 SOUTH RANCHO WAY, DOMINGUEZ HILLS, CA 90221  
Additional Information: CONTACT: RAYMOND TO | PHONE:310.575.2950

- Special Waste Service.** Subject to the terms and conditions contained herein, the Company and the Agent agree to be legally bound hereby and the Company agrees to accept at its Facility, Acceptable Waste (hereinafter referred to as "Special Waste" or "Waste") delivered by Agent, and which is acceptable to the Company as herein provided.
- Acceptable Waste.** Only those Special Wastes described in Paragraph 3 herein and in any Special Waste Profile(s) which number is identical to the contract number referenced above, and which Profile(s) are hereby incorporated by reference herein, and which Waste is subsequently approved by the Company and is otherwise in accordance with all laws, regulations and permits, shall be acceptable for disposal at the Facility ("Acceptable Waste").



Cannot Exceed Daily Volume of 3,000 POUNDS Without Prior Approval of Company.

(B) **Incorporation by Reference.** In addition to Special Waste Profile(s), the following documents are incorporated by reference into this Agreement as if fully set forth herein.

- 1) N/A
- 2) N/A

4. **Term of Agreement.** This Agreement is effective for **12** months, commencing **11/13/2017** and shall automatically be renewed for a similar term thereafter unless either party shall give written notice (via certified mail) of termination to the other party at least thirty (30) days prior written notice.

THE COMPANY AND THE AGENT, IN CONSIDERATION OF THE MUTUAL OBLIGATIONS CONTAINED HEREIN, AGREE THAT THIS IS A LEGALLY BINDING AGREEMENT WHICH IS SUBJECT TO THE TERMS AND CONDITIONS SET FORTH ON THIS PAGE AND ON THE REVERSE SIDE OF THIS DOCUMENT. IN ADDITION, THE GENERATOR IS CERTIFYING THE ATTACHED TERMS AND CONDITIONS HAVE BEEN REVIEWED AND INITIALLED AT THE BOTTOM OF THE PAGE.

**AGENT**

SIGNATURE (AUTHORIZED REPRESENTATIVE)

Alan Cervantes Operations  
NAME AND TITLE (PLEASE PRINT)

DATE 11/28/17

**REPUBLIC SERVICES, INC/COMPANY**

SIGNATURE (AUTHORIZED REPRESENTATIVE)

Stacy Loveland - SW Executive  
NAME AND TITLE (PLEASE PRINT)

DATE 11/28/2017

# Terms and Conditions of Agent Special Waste Service Agreement

5. **The Agreement.** This agreement of the parties ("Agreement") for the disposal of Special Waste shall consist of this Agreement, riders to the Agreement (if any) and any Application, permit and approval that may be applicable to such Waste.
6. **Waste Accepted at Facility.** Agent represents, warrants and covenants that the Waste delivered to Company at its Facility hereunder will be Acceptable Waste and will not contain any unacceptable quantity of hazardous materials or substances, radioactive materials or substances, or toxic waste or substances, as defined by applicable federal, state, local or provincial laws or regulations. Any Waste which does not meet these requirements shall hereinafter be referred to as "Unacceptable Waste". The Agent shall in all matters relating to the collection, transportation and disposal of the Waste hereunder, comply with all applicable federal, state and local laws, regulations, rules and orders regarding the same. The word "Facility" shall mean any landfill, transfer station or other location used to transfer, process or otherwise dispose of such Waste.
7. **Special Waste.** Agent represents, warrants and covenants that the Waste delivered to Company hereunder (i) will not contain any Special Waste that is not specifically described on any Application which is attached hereto and which is subsequently approved by the Company, (ii) will meet the material description as set forth in any Application and otherwise in all significant respects and (iii) will not contain Unacceptable Waste. The parties may incorporate additional Special Waste as part of this Agreement if prior to delivery of such Waste to Company, Agent has provided an Application for such Waste and Company has approved disposal of such Waste within the limitations and conditions contained in Company's written notice of approval of Special Waste. Title to any and all Waste handled or disposed of by Company shall at all times remain with Generator and Agent.
8. **Rights of Refusal/Rejection.** The Agent shall inspect all Waste at the place(s) of collection and shall remove any and all Unacceptable Waste. Company has the right to refuse, or to reject after acceptance, any load(s) of Waste(s) delivered to its Facility including if the Company believes the Agent has breached (or is breaching) its representations, warranties, covenants or agreements hereunder, or any applicable federal, state or local laws, regulations, rules or orders, even if only a portion of such Waste load is unacceptable. The Company shall have the right to inspect all vehicles of Waste haulers, including the Agent's vehicles, in order to determine whether the Waste is Acceptable Waste or Unacceptable Waste pursuant to this Agreement and all applicable federal, state and local laws, rules and regulations. The Company's exercise, or failure to exercise, its rights hereunder shall not operate to relieve the Agent of its responsibilities or liability under this Agreement. The Agent shall be responsible for, and bear all reasonable expenses and damages incurred by the Company, as a result of the Unacceptable Waste and in the reloading and removal of Unacceptable Waste disposed in the Facility. The Company, may also, in its sole discretion, require the Agent to promptly remove the Unacceptable Waste.
9. **Limited License to Enter.** This Agreement provides Agent with a license to enter the Facility for the limited purpose of, and only to the extent necessary for, off-loading Acceptable Waste at the Facility in the manner directed by Company. Except in an emergency, Agent's personnel shall not leave the immediate vicinity of their vehicle. After off-loading the Waste, Agent's personnel shall promptly leave the Facility. Under no circumstances shall Agent or its personnel engage in any scavenging of Waste or other materials at the Facility. The Company reserves the right to make and enforce reasonable rules and regulations concerning the operation of the Facility, the conduct of the drivers and others on the Facility premises, quantities and sources of Waste, and any other matters necessary or desirable for the safe, legal and efficient operation of the Facility including, but not limited to, speed limits on haul roads imposed by the Company, and the wearing of hard hats and other personal protection equipment by all individuals allowed on the Facility premises. Agent agrees to conform to such rules and regulations as they may be established and amended from time to time. Company may refuse to accept Waste from and shall deny an entrance license to, any of Agent's personnel whom Company believes is under the influence of alcohol or other chemical substances. Agent shall be solely responsible for its employees and subcontractors performing their obligations in a safe manner when at the facility of Company.
10. **Charges and Payment.** Payment shall be made by Agent within sixty (60) days after receipt of invoice from Company. In the event that any amount is overdue, the Company may terminate this Agreement. Agent agrees to pay a finance charge equal to the maximum interest rate permitted by law. Agent shall be liable for all taxes, fees, or other charges imposed upon the disposal of the Waste by federal, state, local or provincial laws and regulations. Company, from time to time, may modify its rates upon sixty (60) days written notice to Agent. Agent hereby agrees that the Company's right to receive payments under this Agreement is unconditional and is not conditioned upon Agent first receiving payment from Generator or any other party.
11. **Termination.** Agent's obligations, representations, warranties and covenants regarding the Waste delivered and all indemnities shall survive termination of this Agreement. Should Agent materially default in any of its obligations hereunder, then Company may immediately terminate this Agreement and Agent shall be liable for all costs and damages incurred by the Company.
12. **Driver's Knowledge and Authority.** Agent represents, warrants and covenants that its drivers who deliver Waste to Company's Facility have been advised by Agent of the Company's prohibition on deliveries of hazardous materials or substances, radioactive materials or substances, or toxic waste or substances or any other Unacceptable Waste to the Facility, of Company's restrictions on deliveries of Special Waste to the Facility of the definitions of "Hazardous Waste and Hazardous Substances" as provided by applicable federal, state and local law, rules and regulations and "Special Waste" as provided herein, and of the terms of this license to enter Company's Facility.
13. **Indemnification.** Agent shall indemnify, defend and hold harmless the Company and its subsidiaries, affiliates and parent corporations, as applicable and their respective officers, directors, lenders, employees, subcontractors and agents from and against any and all claims, suits, losses, liabilities, assessments, damages, fines, costs and expenses, including reasonable attorneys fees arising under federal, state or local laws, regulations or ordinances, or relating to the content of the Waste, or arising out of or in connection with any breach of this Agreement or arising out of the negligent collection, transportation and disposal of Waste by Agent or Agent's employees, agents, subcontractors or representatives thereof. Agent shall also be responsible for increased inspection, testing, study and analysis costs made necessary due to reasonable concerns of the Company as to the content of the Waste following discovery of potentially Unacceptable Waste. This indemnification and other obligations stated in this paragraph shall survive the termination of this Agreement.
14. **Insurance.** Agent shall maintain in full force and effect throughout the term of this Agreement the following types of insurance in at least the amounts specified below:

Coverages	Minimum Amounts of Insurance
Worker's Compensation	Statutory
General Liability	\$500,000 combined single limit
Automobile Liability	\$500,000 combined single limit

All insurance will be by insurers authorized to do business in the state in which the Facility is located. Prior to Agent being allowed on Facility premises, Agent shall provide the Company with certificates of insurance or other satisfactory evidence that such insurance has been procured and is in force. Said policies shall not thereafter be canceled, be permitted to expire, or be changed without thirty (30) days advance written notice to the Company. Agent warrants that it will secure the above minimum amounts of insurance from any transportation of the Waste to the Facility.

15. **Failure to Perform.** Neither party hereto shall be liable for its failure to perform hereunder due to circumstances not its fault and beyond its reasonable control, including, but not limited to, strikes or other labor disputes, riots, protests, civil disturbances or sabotage, changes in law, fires, floods, compliance with government requests, explosions, accidents, weather, lack of required natural resources, or acts of God affecting either party hereto. In the event of any of the circumstances provided for in the preceding sentence, including, but not limited to, whether any federal, state or local court or governmental authority takes any action which would (i) close or restrict operations at the Facility (ii) limit the quantity or prohibit the disposal of Waste at the Facility, or (iii) limit the ability of or prohibit Agent from delivering Waste to the Facility, the Company shall have the right, at its option, to reduce, suspend or terminate Agent's access to the Facility immediately, without prior notice and without any additional liabilities between the parties, other than Agent's payment obligation hereunder. Neither Party is required hereunder to settle any labor dispute against its own best judgment.
16. **Other Termination.** The occurrence of any of the following events shall also constitute an event of default by the Agent and shall give the Company the right to immediately terminate this Agreement:
  - (A) A petition for reorganization or bankruptcy filed by or against the Agent.
  - (B) Failure by Agent to pay any amounts due to Company.
  - (C) Any breach by Agent of any of its obligations pursuant to the Agreement.

Agent shall be liable for and shall indemnify, defend and hold harmless Company from any losses, claims expenses or damages incurred by the Company as a result of termination hereunder.

17. **Assignment.** Agent may not assign, transfer or otherwise vest in any other Company, entity or person, in whole or in part, any of its rights or obligations under the Agreement without the prior written consent of the Company, provided, however, that the Company may without any such prior written consent, assign its rights and/or obligations under the Agreement to a subsidiary or affiliate corporation.
18. **Right of Disposal.** This Agreement does not grant any rights to dispose of Waste other than in accordance herewith. The Company reserves the right to immediately terminate access to the Facility by Agent and Agent's personnel in the event of breach or violation by Agent of any of the terms of this Agreement, the Company's operating rules or payment policies or any applicable laws or regulations.
19. **Continuing Compliance.** The Agent has a continuing obligation to inform the Company of any new information, or information not previously provided to the Company by Agent and/or Generator which may affect the acceptability of the Waste by the Company. Further, the Agent shall comply with all Company requests for evidence of Agent's continuing compliance with the terms of the Agreement including but not limited to the following: (i) providing new, updated Waste profiles on the Waste(s) offered for disposal or, (ii) providing appropriate certification that the Waste being offered for disposal is accurately reflected by the appropriate Application or, (iii) re-sample the Waste at Agent's expense if reasonable cause exists as to its acceptability under the terms of this Agreement or, (iv) allow the Company to re-sample the Waste at Agent's expense if reasonable cause exists as to its acceptability under the terms of this Agreement or (v) all of the above.
20. **Miscellaneous.**
  - (A) This Agreement shall be governed by the laws of the State in which the Facility is located.
  - (B) No waiver of a breach of any of the obligations contained in the Agreement shall be construed to be a waiver of any prior or succeeding breach of the same obligation or of any other obligation of this Agreement.
  - (C) No modification, release, discharge or waiver of any provision or obligation hereof shall be of any force, or effect, unless in writing signed by all parties to this Agreement.
  - (D) Agent shall treat as confidential and not disclose to others during or subsequent to the terms of this Agreement, except as is necessary to perform this Agreement, or to comply with any applicable law or regulation any information (including any technical information, experience or data) regarding the Company's plans, programs, plants, processes, products, costs, equipment or operations which may come within the knowledge of the Agent or its employees in the performance of this Agreement, without in each instance securing the prior written consent of the other Company.
  - (E) If any term, phrase, obligation or provision of this Agreement shall be held to be invalid, illegal or unenforceable in any respect, this Agreement shall remain in effect and be construed without regard to such term, phrase, obligation or provision.
  - (F) This Agreement constitutes the entire understanding between the parties, replacing and amending any prior agreements between the parties, and shall be binding upon all parties hereto, their successors, heirs, representatives and assigns. Any provision, term or condition in any acknowledgement, purchase order or other response by Agent which is in addition to or different from the provisions of this Agreement shall be deemed objected to by the Company and shall be of no effect.
  - (G) Agent represents, warrants and covenants that it is and during the term of this Agreement, will remain in compliance with and will perform its obligations pursuant to all applicable laws and regulations and shall indemnify, defend and hold harmless the Company from any breach thereof.
  - (H) It is the understanding and agreement of the parties that the Company is an independent contractor, and is not an agent, nor an authorized representative of the Agent. It is the further understanding and agreement of the parties that Agent is an authorized representative of Generator.
21. **Notices.** All notices herein provided for shall be considered as having been given upon being placed in the mail, certified postage prepaid addressed to the Company or Agent at the address herein set forth in this Agreement or to such other address as may be given to the other party in writing.
22. **Liquidated Damages.** In the event that this Agreement is terminated by the Agent in a manner not in accordance with paragraph 4 hereof, or terminated due to a breach of this Agreement by the Agent, the Agent shall pay, as liquidated damages, and not as a penalty, the greater of an amount equal to six (6) months' service charges or the Agent's most recent monthly charge multiplied by six (6). The Agent shall be given credit for any advance payments made hereunder, however, in computing the amount owed as liquidated damages hereunder. The Agent acknowledges that this liquidated damages clause is reasonable and is applicable to recover damages related to its investment in equipment, development of landfills and hiring of employees undertaken by the Company to service its customers including the Agent. This liquidated damages clause in no way relieves the Agent from its obligations and liability for other cost or damages as set forth elsewhere in this Agreement.



# Republic Services, Inc.

18500 N. Allied Way, Phoenix, AZ 85054

## SPECIAL WASTE DEPARTMENT DECISION

	Waste Profile # 51231714699	Expiration Date 12/7/2017	
<b>I. Decision Request:</b>	<input checked="" type="checkbox"/> Initial <input type="checkbox"/> Recertification <input type="checkbox"/> Change		
Disposal Facility: 5123 - Sunshine Canyon Landfill			
Generator Name: Golden Kingdom Produce Inc			
Generator Site Address: 1995 E 20th St 20			
City: Los Angeles	County: _____	State: CA	Zip: _____
Name of Waste: Food Products			
Estimated Annual Volume: 13 Tons			

**II. Special Waste Department Decision:**     Approved     Rejected


Management Method(s):     Landfill     Solidification     Bioremediation     Transfer Facility

Problematic Special Waste according to Republic?     Yes     No

If yes, which one? \_\_\_\_\_

Approved by Special Waste Review Committee?     Yes     No     Not Applicable

### Precautions, Conditions or Limitations on Approval

Special Waste Analyst Signature: 

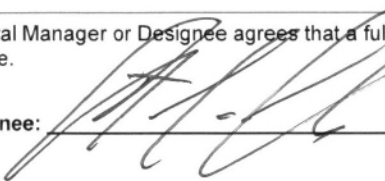
Date: 9/8/2017

Name (Printed): KEITH DIAMANTI

**III. Facility Decision:**     Approved     Rejected

### Precautions, Conditions or Limitations on Approval

By signing below, the General Manager or Designee agrees that a fully executed Special Waste Service Agreement is on file for this profile and that the special waste file is complete.

General Manager or Designee: 

Date: 9/8/2017

Name (Printed): Chris Coyle



**EXPRESS WASTE PROFILE**

Requested Disposal Facility: 5123 Sunshine Canyon LF CA

Waste Profile #
5123 17 14699
Sales Rep #. <b>525 - Stacy Loveland</b>

Saveable fill in form. Restricted printing until all required (yellow) fields are completed.

**I. Generator Information**

Generator Name: Golden Kingdom Produce, Inc.			
Generator Site Address: 1995 E 20th st #20			
City: Los Angeles	County: CA	State: California	Zip: 90058
State ID/Reg No:	State Approval/Waste Code:	(if applicable)	NAICS #.
Generator Mailing Address (if different): 1995-E 20th st #20			
City: Los Angeles	County: Los Angeles	State: California	Zip: 90058
Generator Contact Name: BRUCE OH		Email: goldenkingdompro@gmail.com	
Phone Number: (213) 742-7768	Ext:	Fax Number: (213) 742-8923	

**II. Billing Information**

Bill To: Golden Kingdom Produce, Inc.	Contact Name: SANDY SHIN		
Billing Address: 1995 e 20th st #20	Email: goldenkingdompro@gamil.com		
City: Los Angeles	State: CA	Zip: 90058	Phone:

**III. Waste Stream Information**

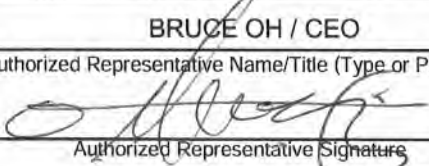
Name of Waste: <small>(Petroleum products-applies only to contaminated media and debris).</small>	<input type="checkbox"/> Diesel Fuel	<input type="checkbox"/> Weathered Wood	<input type="checkbox"/> Friable Asbestos
	<input type="checkbox"/> Home Heating Fuel #1-6	<input type="checkbox"/> RCRA Empty Containers	<input type="checkbox"/> Non Friable Asbestos
	<input type="checkbox"/> Kerosene	<input type="checkbox"/> Treated Medical Waste	<input type="checkbox"/> Cured Asphalt
	<input type="checkbox"/> Aviation Fuel	<input type="checkbox"/> Animal Carcass (non infectious)	<input type="checkbox"/> Tires
	<input type="checkbox"/> Hydraulic Fluid	<input type="checkbox"/> Plant Trash	<input checked="" type="checkbox"/> Food Products <small>(Including Animal Food)</small>
<input type="checkbox"/> Unleaded Gasoline (UST Corrective Action)	<input type="checkbox"/> Meth Contaminated Debris		

Process Generating Waste: Los Angeles County Agriculture commissioner came here and had inspection of purple yams. we were instructed to dispose purple yams because it has insects in it.

Method of Shipment: <input checked="" type="checkbox"/> BULK <input type="checkbox"/> DRUM <input type="checkbox"/> BAGGED <input type="checkbox"/> OTHER:
Estimated Annual Volume: <u>13</u> Tons
Frequency: <input checked="" type="checkbox"/> ONE TIME <input type="checkbox"/> ONGOING

**IV. Certification**

I hereby certify that to the best of my knowledge and belief, the information contained herein is a true and accurate description of the waste material being offered for disposal. I further certify that by utilizing this profile, neither myself nor any other employee of the company will deliver for disposal or attempt to deliver for disposal any waste which is classified as toxic waste, hazardous waste or infectious waste, or any other waste material this facility is prohibited from accepting by law. Our company hereby agrees to fully indemnify this disposal facility against any damages resulting from this certification being inaccurate or untrue. I further certify that the company has not altered the form or content of this profile sheet as provided by Republic Services, Inc.

<u>BRUCE OH / CEO</u> Authorized Representative Name/Title (Type or Print)	<u>GOLDEN KINGDOM PRODUCE, INC.</u> Company Name
 Authorized Representative Signature	<u>SEPTEMBER 7, 2017</u> Date



# SPECIAL WASTE SERVICE AGREEMENT NON-HAZARDOUS WASTES

Special Waste Profile Number: 5123 17 14699

### Generator Billing Information

Name: GOLDEN KINGDOM PRODUCE INC  
(ACCT CASH # 321)  
Address: 1995 E 20<sup>TH</sup> ST #20  
City: LOS ANGELES  
State: CA Zip: 90058  
Phone: 213.742.7768 Fax: \_\_\_\_\_  
Contact: BRUCE OH

### Republic Waste Location (Company)

SUNSHINE CANYON LANDFILL (5123)  
14747 SAN FERNANDO ROAD  
SYLMAR, CA 91342  
818.362.2141

Project: FOOD PRODUCTS County and State of Origin: LOS ANGELES, CA

Additional Information: \_\_\_\_\_

- Special Waste Service.** Subject to the terms and conditions contained herein, the Company and the Generator agree to be legally bound hereby and the Company agrees to accept at its Facility, Acceptable Waste (hereinafter referred to as "Special Waste" or "Waste") delivered by Generator, and which is acceptable to the Company as herein provided.
- Acceptable Waste.** Only those Special Wastes described in Paragraph 3 herein and in any Special Waste Profile(s) which number is identical to the contract number referenced above, and which Profile(s) are hereby incorporated by reference herein, and which Waste is subsequently approved by the Company and is otherwise in accordance with all laws, regulations and permits, shall be acceptable for disposal at the Facility ("Acceptable Waste").



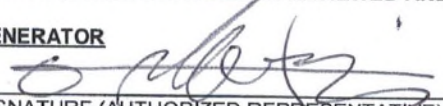
Cannot Exceed Daily Volume of 13 TONS Without Prior Approval of Company.

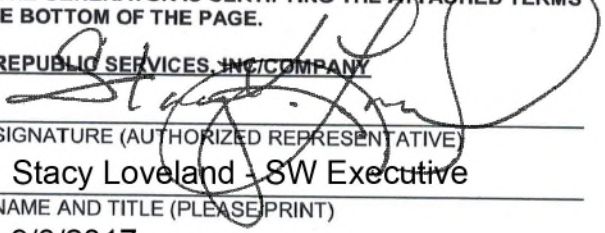
(B) **Incorporation by Reference.** In addition to Special Waste Profile(s), the following documents are incorporated by reference into this Agreement as if fully set forth herein.

- 1) N/A
- 2) N/A

4. **Term of Agreement.** This Agreement is effective for 3 months, commencing 9/8/2017 and shall automatically be renewed for a similar term thereafter unless either party shall give written notice (via certified mail) of termination to the other party at least thirty (30) days prior written notice.

THE COMPANY AND THE GENERATOR, IN CONSIDERATION OF THE MUTUAL OBLIGATIONS CONTAINED HEREIN, AGREE THAT THIS IS A LEGALLY BINDING AGREEMENT WHICH IS SUBJECT TO THE TERMS AND CONDITIONS SET FORTH ON THIS PAGE AND ON THE REVERSE SIDE OF THIS DOCUMENT. IN ADDITION, THE GENERATOR IS CERTIFYING THE ATTACHED TERMS AND CONDITIONS HAVE BEEN REVIEWED AND INITIALLED AT THE BOTTOM OF THE PAGE.

GENERATOR  
  
SIGNATURE (AUTHORIZED REPRESENTATIVE)  
BRUCE OH / CEO  
NAME AND TITLE (PLEASE PRINT)  
9/8/2017  
DATE

REPUBLIC SERVICES, INC/COMPANY  
  
SIGNATURE (AUTHORIZED REPRESENTATIVE)  
Stacy Loveland - SW Executive  
NAME AND TITLE (PLEASE PRINT)  
9/8/2017  
DATE

# Terms and Conditions of Special Waste Service Agreement

5. **The Agreement.** This agreement of the parties ("Agreement") for the disposal of Special Waste shall consist of this Agreement, riders to the Agreement (if any) and any Application, permit and approval that may be applicable to such Waste.
6. **Waste Accepted at Facility.** Generator represents, warrants and covenants that the Waste delivered to Company at its Facility hereunder will be Acceptable Waste and will not contain any unacceptable quantity of hazardous materials or substances, radioactive materials or substances, or toxic waste or substances, as defined by applicable federal, state, local or provincial laws or regulations. Any Waste which does not meet these requirements shall hereinafter be referred to as "Unacceptable Waste". The Generator shall in all matters relating to the collection, transportation and disposal of the Waste hereunder, comply with all applicable federal, state and local laws, regulations, rules and orders regarding the same. The word "Facility" shall mean any landfill, transfer station or other location used to transfer, process or otherwise dispose of such Waste.
7. **Special Waste.** Generator represents, warrants and covenants that the Waste delivered to Company hereunder (i) will not contain any Special Waste that is not specifically described on any Application which is attached hereto or which is subsequently approved by the Company, (ii) will meet the material description as set forth in any Application and otherwise in all significant respects and (iii) will not contain Unacceptable Waste. The parties may incorporate additional Special Waste as part of this Agreement if prior to delivery of such Waste to Company, Generator has provided an Application for such Waste and Company has approved disposal of such Waste within the limitations and conditions contained in Company's written notice of approval of Special Waste Disposal. Title to any and all Waste handled or disposed of by Company shall at all times remain with Generator and Broker (if a Broker is involved).
8. **Rights of Refusal/Rejection.** The Generator shall inspect all Waste at the place(s) of collection and shall remove any and all Unacceptable Waste. Company has the right to refuse, or to reject after acceptance, any load(s) of Waste(s) delivered to its Facility including if the Company believes the Generator has breached (or is breaching) its representations, warranties, covenants or agreements hereunder, or any applicable federal, state or local laws, regulations, rules or orders, even if only a portion of such Waste load is unacceptable. The Company shall have the right to inspect all vehicles and containers of Waste haulers, including the Generator's vehicles, in order to determine whether the Waste is Acceptable Waste or Unacceptable Waste pursuant to this Agreement and all applicable federal, state and local laws, rules and regulations. The Company's exercise, or failure to exercise, its rights hereunder shall not operate to relieve the Generator of its responsibilities or liability under this Agreement. The Generator shall be responsible for, and bear all reasonable expenses and damages incurred by the Company, as a result of the Unacceptable Waste and in the reloading and removal of Unacceptable Waste disposed in the Facility. The Company, may also, in its sole discretion, require the Generator to promptly remove the Unacceptable Waste.
9. **Limited License to Enter.** This Agreement provides Generator with a license to enter the Facility for the limited purpose of, and only to the extent necessary for, off-loading Acceptable Waste at the Facility in the manner directed by Company. Except in an emergency, Generator's personnel shall not leave the immediate vicinity of their vehicle. After off-loading the Waste, Generator's personnel shall promptly leave the Facility. Under no circumstances shall Generator or its personnel engage in any scavenging of Waste or other materials at the Facility. The Company reserves the right to make and enforce reasonable rules and regulations concerning the operation of the Facility, the conduct of the drivers and others on the Facility premises, quantities and sources of Waste, and any other matters necessary or desirable for the safe, legal and efficient operation of the Facility including, but not limited to, speed limits on haul roads imposed by the Company, and the wearing of hard hats and other personal protection equipment by all individuals allowed on the Facility premises. Generator agrees to conform to such rules and regulations as they may be established and amended from time to time. Company may refuse to accept Waste from and shall deny an entrance license to, any of Generator's personnel whom Company believes is under the influence of alcohol or other chemical substances. Generator shall be solely responsible for its employees and subcontractors performing their obligations in a safe manner when at the facility of Company.
10. **Charges and Payment.** Payment shall be made by Generator within sixty (60) days after receipt of invoice from Company. In the event that any amount is overdue, the Company may terminate this Agreement. Generator agrees to pay a finance charge equal to the maximum interest rate permitted by law. Generator shall be liable for all taxes, fees, or other charges imposed upon the disposal of the Waste by federal, state, local or provincial laws and regulations. Company, from time to time, may modify its rates upon sixty (60) days written notice to Generator.
11. **Termination.** Generator's obligations, representations, warranties and covenants regarding the Waste delivered and all indemnities shall survive termination of this Agreement. Should Generator materially default in any of its obligations hereunder, then Company may immediately terminate this Agreement and Generator shall be liable for all costs and damages incurred by the Company.
12. **Driver's Knowledge and Authority.** Generator represents, warrants and covenants that its drivers who deliver Waste to Company's Facility have been advised by Generator of the Company's prohibition on deliveries of hazardous materials or substances, radioactive materials or substances, or toxic waste or substances or any other Unacceptable Waste to the Facility of Company's restrictions on deliveries of Special Waste to the Facility, of the definitions of "Hazardous Waste and Hazardous Substances" as provided by applicable federal, state and local law, rules and regulations and "Special Waste" as provided herein, and of the terms of this license to enter Company's Facility.
13. **Indemnification.** Generator shall indemnify, defend and hold harmless the Company and its subsidiaries, affiliates and parent corporations, as applicable and their respective officers, directors, lenders, employees, subcontractors and agents from and against any and all claims, suits, losses, liabilities, assessments, damages, fines, costs and expenses, including reasonable attorneys fees arising under federal, state or local laws, regulations or ordinances, or relating to the content of the Waste, or arising out of or in connection with any breach of this Agreement or arising out of the negligent collection, transportation and disposal of Waste by Generator or Generator's employees, agents, subcontractors or representatives thereof. Generator shall also be responsible for increased inspection, testing, study and analysis costs made necessary due to reasonable concerns of the Company as to the content of the Waste following discovery of potentially Unacceptable Waste. This indemnification and other obligations stated in this paragraph shall survive the termination of this Agreement.
14. **Insurance.** Generator shall maintain in full force and effect throughout the term of this Agreement the following types of insurance in at least the amounts specified below:

Coverages	Minimum Amounts of Insurance
Worker's Compensation	Statutory
General Liability	\$500,000 combined single limit
Automobile Liability	\$500,000 combined single limit

All insurance will be by insurers authorized to do business in the state in which the Facility is located. Prior to Generator being allowed on Facility premises, Generator shall provide the Company with certificates of insurance or other satisfactory evidence that such insurance has been procured and is in force. Said policies shall not thereafter be canceled, be permitted to expire or lapse, or be changed without thirty (30) days advance written notice to the Company. Generator warrants that it will secure the above minimum amounts of insurance from any transportation of the Waste to the Facility.

15. **Failure to Perform.** Neither party hereto shall be liable for its failure to perform hereunder due to circumstances not its fault and beyond its reasonable control, including, but not limited to, strikes or other labor disputes, riots, protests, civil disturbances or sabotage, changes in law, fires, floods, compliance with government requests, explosions, accidents, weather, lack of required natural resources, or acts of God affecting either party hereto. In the event of any of the circumstances provided for in the preceding sentence, including, but not limited to, whether any federal, state or local court or governmental authority takes any action which would (i) close or restrict operations at the Facility, (ii) limit the quantity or prohibit the disposal of Waste at the Facility, or (iii) limit the ability of or prohibit Generator from delivering Waste to the Facility, the Company shall have the right, at its option, to reduce, suspend or terminate Generator's access to the Facility immediately, without prior notice and without any additional liabilities between the parties, other than Generator's payment obligation hereunder. Neither Party is required hereunder to settle any labor dispute against its own best judgment.
16. **Other Termination.** The occurrence of any of the following events shall also constitute an event of default by the Generator and shall give the Company the right to immediately terminate this Agreement:
  - (A) A petition for reorganization or bankruptcy filed by or against the Generator.
  - (B) Failure by Generator to pay any amounts due to Company.
  - (C) Any breach by Generator of any of its obligations pursuant to the Agreement.

Generator shall be liable for and shall indemnify, defend and hold harmless Company from any losses, claims expenses or damages incurred by the Company as a result of termination hereunder.
17. **Assignment.** Generator may not assign, transfer or otherwise vest in any other Company, entity or person, in whole or in part, any of its rights or obligations under the Agreement without the prior written consent of the Company, provided, however, that the Company may without any such prior written consent, assign its rights and/or obligations under the Agreement to a subsidiary or affiliate corporation.
18. **Right of Disposal.** This Agreement does not grant any rights to dispose of Waste other than in accordance herewith. The Company reserves the right to immediately terminate access to the Facility by Generator and Generator's personnel in the event of breach or violation by Generator of any of the terms of this Agreement, the Company's operating rules or payment policies or any applicable laws or regulations.
19. **Continuing Compliance.** The Generator has a continuing obligation to inform the Company of any new information, or information not previously provided to the Company by Generator which may affect the acceptability of the Waste by the Company. Further, the Generator shall comply with all Company requests for evidence of Generator's continuing compliance with the terms of the Agreement including but not limited to the following: (i) providing new, updated Waste profiles on the Waste(s) offered for disposal or, (ii) providing appropriate certification that the Waste being offered for disposal is accurately reflected by the appropriate Application or, (iii) re-sample the Waste at Generator's expense if reasonable cause exists as to its acceptability under the terms of this Agreement or, (iv) allow the Company to re-sample the Waste at Generator's expense if reasonable cause exists as to its acceptability under the terms of this Agreement or (v) all of the above.
20. **Miscellaneous.**
  - (A) This Agreement shall be governed by the laws of the State in which the Facility is located.
  - (B) No waiver of a breach of any of the obligations contained in the Agreement shall be construed to be a waiver of any prior or succeeding breach of the same obligation or of any other obligation of this Agreement.
  - (C) No modification, release, discharge or waiver of any provision or obligation hereof shall be of any force, or effect, unless in writing signed by all parties to this Agreement.
  - (D) Generator shall treat as confidential and not disclose to others during or subsequent to the terms of this Agreement, except as is necessary to perform this Agreement, or to comply with any applicable law or regulation any information (including any technical information, experience or data) regarding the Company's plans, programs, plants, processes, products, costs, equipment or operations which may come within the knowledge of the Generator or its employees in the performance of this Agreement, without in each instance securing the prior written consent of the other Company.
  - (E) If any term, phrase, obligation or provision of this Agreement shall be held to be invalid, illegal or unenforceable in any respect, this Agreement shall remain in effect and be construed without regard to such term, phrase, obligation or provision.
  - (F) This Agreement constitutes the entire understanding between the parties, replacing and amending any prior agreements between the parties, and shall be binding upon all parties hereto, their successors, heirs, representatives and assigns. Any provision, term or condition in any acknowledgement, purchase order or other response by Generator which is in addition to or different from the provisions of this Agreement shall be deemed objected to by the Company and shall be of no effect.
  - (G) Generator represents, warrants and covenants that it is and, during the term of this Agreement will remain, in compliance with and will perform its obligations pursuant to all applicable laws and regulations and shall indemnify, defend and hold harmless the Company from any breach thereof.
  - (H) It is the understanding and agreement of the parties that the Company is an independent contractor, and is not an agent, nor an authorized representative of the Generator.
21. **Notices.** All notices herein provided for shall be considered as having been given upon being placed in the mail, certified postage prepaid addressed to the Company or Generator at the address herein set forth in this Agreement or to such other address as may be given to the other party in writing.
22. **Liquidated Damages.** In the event that this Agreement is terminated by the Generator in a manner not in accordance with paragraph 4 hereof, or terminated due to a breach of this Agreement by the Generator, the Generator shall pay, as liquidated damages, and not as a penalty, the greater of an amount equal to six (6) months' service charges or the Generator's most recent monthly charge multiplied by six (6). The Generator shall be given credit for any advance payments made hereunder, however, in computing the amount owed as liquidated damages hereunder. The Generator acknowledges that this liquidated damages clause is reasonable and is applicable to recover damages related to its investment in equipment, development of landfills and hiring of employees undertaken by the Company to service its customers including the Generator. This liquidated damages clause in no way relieves the Generator from its obligations and liability for other cost or damages as set forth elsewhere in this Agreement.

GENERATOR: \_\_\_\_\_

Republic Services, Inc/COMPANY: \_\_\_\_\_

May 2009





# Republic Services, Inc.

18500 N. Allied Way, Phoenix, AZ 85054

## SPECIAL WASTE DEPARTMENT DECISION

<b>I. Decision Request:</b>	Waste Profile #	Expiration Date	
	51231716349	10/4/2018	
	<input checked="" type="checkbox"/> Initial	<input type="checkbox"/> Recertification	<input type="checkbox"/> Change
Disposal Facility: 5123 - Sunshine Canyon Landfill			
Generator Name: Golden Kingdom Produce Inc			
Generator Site Address: 1995 E 20th St 12			
City: Los Angeles	County: _____	State: CA	Zip: _____
Name of Waste: Food Products			
Estimated Annual Volume: 15 Tons			

**II. Special Waste Department Decision:**  Approved  Rejected

Management Method(s):  Landfill  Solidification  Bioremediation  Transfer Facility

Problematic Special Waste according to Republic?  Yes  No

If yes, which one? \_\_\_\_\_

Approved by Special Waste Review Committee?  Yes  No  Not Applicable

### Precautions, Conditions or Limitations on Approval

Special Waste Analyst Signature: 

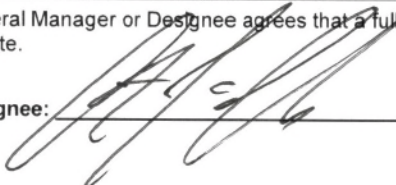
Date: 10/6/2017

Name (Printed): KEITH DIAMANTI

**III. Facility Decision:**  Approved  Rejected

### Precautions, Conditions or Limitations on Approval

By signing below, the General Manager or Designee agrees that a fully executed Special Waste Service Agreement is on file for this profile and that the special waste file is complete.

General Manager or Designee: 

Date: 10/6/2017

Name (Printed): Chris Coyle



Requested Disposal Facility: 5123 Sunshine Canyon LF CA

Saveable fill in form. Restricted printing until all required (yellow) fields are completed.

Waste Profile #
5123 17 16349
Sales Rep #. 525 - Stacy Loveland

**I. Generator Information**

Generator Name: Golden Kingdom Produce, Inc.			
Generator Site Address: 1995 E. 20th St #12			
City: Los Angeles	County:	State: California	Zip: 90058
State ID/Reg No:	State Approval/Waste Code:	(if applicable)	NAICS #.
Generator Mailing Address (if different): 1995 E. 20th St #12			
City: Los Angeles	County: Los Angeles	State: California	Zip: 90058
Generator Contact Name: Bruce Oh		Email:	
Phone Number: (213) 742-7768	Ext:	Fax Number:	

**II. Billing Information**

Bill To: Golden Kingdom Produce, Inc.	Contact Name: Sandy Shin		
Billing Address: 1995 E. 20th St #12	Email:		
City: Los Angeles	State: ca	Zip: 90058	Phone: (213) 742-7762

**III. Waste Stream Information**

Name of Waste. <small>(Petroleum products-applies only to contaminated media and debris).</small>	<input type="checkbox"/> Diesel Fuel	<input type="checkbox"/> Weathered Wood	<input type="checkbox"/> Friable Asbestos
	<input type="checkbox"/> Home Heating Fuel #1-6	<input type="checkbox"/> RCRA Empty Containers	<input type="checkbox"/> Non Friable Asbestos
	<input type="checkbox"/> Kerosene	<input type="checkbox"/> Treated Medical Waste	<input type="checkbox"/> Cured Asphalt
	<input type="checkbox"/> Aviation Fuel	<input type="checkbox"/> Animal Carcass (non infectious)	<input type="checkbox"/> Tires
	<input type="checkbox"/> Hydraulic Fluid	<input type="checkbox"/> Plant Trash	<input checked="" type="checkbox"/> Food Products <small>(Including Animal Food)</small>
	<input type="checkbox"/> Unleaded Gasoline (UST Corrective Action)	<input type="checkbox"/> Meth Contaminated Debris	

Process Generating Waste: OLD RADISHES NEED TO BE THROWN AWAY

Method of Shipment:  BULK  DRUM  BAGGED  OTHER:

Estimated Annual Volume: 15 Tons

Frequency:  ONE TIME  ONGOING

**IV. Certification**

I hereby certify that to the best of my knowledge and belief, the information contained herein is a true and accurate description of the waste material being offered for disposal. I further certify that by utilizing this profile, neither myself nor any other employee of the company will deliver for disposal or attempt to deliver for disposal any waste which is classified as toxic waste, hazardous waste or infectious waste, or any other waste material this facility is prohibited from accepting by law. Our company hereby agrees to fully indemnify this disposal facility against any damages resulting from this certification being inaccurate or untrue. I further certify that the company has not altered the form or content of this profile sheet as provided by Republic Services, Inc.

Bruce Oh/CEO	Golden Kingdom Produce, INC.
Authorized Representative Name/Title (Type or Print)	Company Name
	10/4/17
Authorized Representative Signature	Date



# SPECIAL WASTE SERVICE AGREEMENT NON-HAZARDOUS WASTES

Special Waste Profile Number: 5123 17 16349

### Generator Billing Information

Name: GOLDEN KINGDOM PRODUCE INC  
(ACCT CASH # 321)  
Address: 1995 E 20<sup>TH</sup> ST #12  
City: LOS ANGELES  
State: CA Zip: 90058  
Phone: 213.742.7768 Fax: \_\_\_\_\_  
Contact: SANDY SHIN

### Republic Waste Location (Company)

SUNSHINE CANYON LANDFILL (5123)  
14747 SAN FERNANDO ROAD  
SYLMAR, CA 91342  
818.362.2141

Project: FOOD PRODUCTS County and State of Origin: LOS ANGELES, CA

Additional Information: \_\_\_\_\_

- Special Waste Service.** Subject to the terms and conditions contained herein, the Company and the Generator agree to be legally bound hereby and the Company agrees to accept at its Facility, Acceptable Waste (hereinafter referred to as "Special Waste" or "Waste") delivered by Generator, and which is acceptable to the Company as herein provided.
- Acceptable Waste.** Only those Special Wastes described in Paragraph 3 herein and in any Special Waste Profile(s) which number is identical to the contract number referenced above, and which Profile(s) are hereby incorporated by reference herein, and which Waste is subsequently approved by the Company and is otherwise in accordance with all laws, regulations and permits, shall be acceptable for disposal at the Facility ("Acceptable Waste").



Cannot Exceed Daily Volume of 15 TONS Without Prior Approval of Company.

(B) **Incorporation by Reference.** In addition to Special Waste Profile(s), the following documents are incorporated by reference into this Agreement as if fully set forth herein.

- 1) N/A
- 2) N/A

4. **Term of Agreement.** This Agreement is effective for 12 months, commencing 10/6/2017 and shall automatically be renewed for a similar term thereafter unless either party shall give written notice (via certified mail) of termination to the other party at least thirty (30) days prior written notice.

THE COMPANY AND THE GENERATOR, IN CONSIDERATION OF THE MUTUAL OBLIGATIONS CONTAINED HEREIN, AGREE THAT THIS IS A LEGALLY BINDING AGREEMENT WHICH IS SUBJECT TO THE TERMS AND CONDITIONS SET FORTH ON THIS PAGE AND ON THE REVERSE SIDE OF THIS DOCUMENT. IN ADDITION, THE GENERATOR IS CERTIFYING THE ATTACHED TERMS AND CONDITIONS HAVE BEEN REVIEWED AND INITIALLED AT THE BOTTOM OF THE PAGE.

### GENERATOR

[Signature]  
SIGNATURE (AUTHORIZED REPRESENTATIVE)  
Bruce Oh / CEO  
NAME AND TITLE (PLEASE PRINT)  
10/10/17  
DATE

### REPUBLIC SERVICES, INC/COMPANY

[Signature]  
SIGNATURE (AUTHORIZED REPRESENTATIVE)  
Stacy Loveland - SW Executive  
NAME AND TITLE (PLEASE PRINT)  
10/11/2017  
DATE

## Terms and Conditions of Special Waste Service Agreement

5. **The Agreement.** This agreement of the parties ("Agreement") for the disposal of Special Waste shall consist of this Agreement, riders to the Agreement (if any) and any Application, permit and approval that may be applicable to such Waste.
6. **Waste Accepted at Facility.** Generator represents, warrants and covenants that the Waste delivered to Company at its Facility hereunder will be Acceptable Waste and will not contain any unacceptable quantity of hazardous materials or substances, radioactive materials or substances, or toxic waste or substances, as defined by applicable federal, state, local or provincial laws or regulations. Any Waste which does not meet these requirements shall hereinafter be referred to as "Unacceptable Waste". The Generator shall in all matters relating to the collection, transportation and disposal of the Waste hereunder, comply with all applicable federal, state and local laws, regulations, rules and orders regarding the same. The word "Facility" shall mean any landfill, transfer station or other location used to transfer, process or otherwise dispose of such Waste.
7. **Special Waste.** Generator represents, warrants and covenants that the Waste delivered to Company hereunder (i) will not contain any Special Waste that is not specifically described on any Application which is attached hereto or which is subsequently approved by the Company, (ii) will meet the material description as set forth in any Application and otherwise in all significant respects and (iii) will not contain Unacceptable Waste. The parties may incorporate additional Special Waste as part of this Agreement if prior to delivery of such Waste to Company, Generator has provided an Application for such Waste and Company has approved disposal of such Waste within the limitations and conditions contained in Company's written notice of approval of Special Waste Disposal. Title to any and all Waste handled or disposed of by Company shall at all times remain with Generator and Broker (if a Broker is involved).
8. **Rights of Refusal/Rejection.** The Generator shall inspect all Waste at the place(s) of collection and shall remove any and all Unacceptable Waste. Company has the right to refuse, or to reject after acceptance, any load(s) of Waste(s) delivered to its Facility including if the Company believes the Generator has breached (or is breaching) its representations, warranties, covenants or agreements hereunder, or any applicable federal, state or local laws, regulations, rules or orders, even if only a portion of such Waste load is unacceptable. The Company shall have the right to inspect all vehicles and containers of Waste haulers, including the Generator's vehicles, in order to determine whether the Waste is Acceptable Waste or Unacceptable Waste pursuant to this Agreement and all applicable federal, state and local laws, rules and regulations. The Company's exercise, or failure to exercise, its rights hereunder shall not operate to relieve the Generator of its responsibilities or liability under this Agreement. The Generator shall be responsible for, and bear all reasonable expenses and damages incurred by the Company, as a result of the Unacceptable Waste and in the reloading and removal of Unacceptable Waste disposed in the Facility. The Company, may also, in its sole discretion, require the Generator to promptly remove the Unacceptable Waste.
9. **Limited License to Enter.** This Agreement provides Generator with a license to enter the Facility for the limited purpose of, and only to the extent necessary for, off-loading Acceptable Waste at the Facility in the manner directed by Company. Except in an emergency, Generator's personnel shall not leave the immediate vicinity of their vehicle. After off-loading the Waste, Generator's personnel shall promptly leave the Facility. Under no circumstances shall Generator or its personnel engage in any scavenging of Waste or other materials at the Facility. The Company reserves the right to make and enforce reasonable rules and regulations concerning the operation of the Facility, the conduct of the drivers and others on the Facility premises, quantities and sources of Waste, and any other matters necessary or desirable for the safe, legal and efficient operation of the Facility including, but not limited to, speed limits on haul roads imposed by the Company, and the wearing of hard hats and other personal protection equipment by all individuals allowed on the Facility premises. Generator agrees to conform to such rules and regulations as they may be established and amended from time to time. Company may refuse to accept Waste from and shall deny an entrance license to, any of Generator's personnel whom Company believes is under the influence of alcohol or other chemical substances. Generator shall be solely responsible for its employees and subcontractors performing their obligations in a safe manner when at the facility of Company.
10. **Charges and Payment.** Payment shall be made by Generator within sixty (60) days after receipt of invoice from Company. In the event that any amount is overdue, the Company may terminate this Agreement. Generator agrees to pay a finance charge equal to the maximum interest rate permitted by law. Generator shall be liable for all taxes, fees, or other charges imposed upon the disposal of the Waste by federal, state, local or provincial laws and regulations. Company, from time to time, may modify its rates upon sixty (60) days written notice to Generator.
11. **Termination.** Generator's obligations, representations, warranties and covenants regarding the Waste delivered and all indemnities shall survive termination of this Agreement. Should Generator materially default in any of its obligations hereunder, then Company may immediately terminate this Agreement and Generator shall be liable for all costs and damages incurred by the Company.
12. **Driver's Knowledge and Authority.** Generator represents, warrants and covenants that its drivers who deliver Waste to Company's Facility have been advised by Generator of the Company's prohibition on deliveries of hazardous materials or substances, radioactive materials or substances, or toxic waste or substances or any other Unacceptable Waste to the Facility of Company's restrictions on deliveries of Special Waste to the Facility, of the definitions of "Hazardous Waste and Hazardous Substances" as provided by applicable federal, state and local law, rules and regulations and "Special Waste" as provided herein, and of the terms of this license to enter Company's Facility.
13. **Indemnification.** Generator shall indemnify, defend and hold harmless the Company and its subsidiaries, affiliates and parent corporations, as applicable and their respective officers, directors, partners, employees, subcontractors and agents (past and present) and all claims, suits, losses, liabilities, assessments, damages, fines, penalties and expenses, including reasonable attorneys fees arising under federal, state or local laws, regulations or ordinances, or relating to the content of the Waste, or arising out of or in connection with any breach of this Agreement or arising out of the negligent collection, transportation and disposal of Waste by Generator or Generator's employees, agents, subcontractors or representatives thereof. Generator shall also be responsible for increased inspection, testing, study and analysis costs made necessary due to reasonable concerns of the Company as to the content of the Waste following discovery of potentially Unacceptable Waste. This indemnification and other obligations stated in this paragraph shall survive the termination of this Agreement.
14. **Insurance.** Generator shall maintain in full force and effect throughout the term of this Agreement the following types of insurance in at least the amounts specified below:

Coverages	Minimum Amounts of Insurance
Worker's Compensation	Statutory
General Liability	\$500,000 combined single limit
Automobile Liability	\$500,000 combined single limit

All insurance will be by insurers authorized to do business in the state in which the Facility is located. Prior to Generator being allowed on Facility premises, Generator shall provide the Company with certificates of insurance or other satisfactory evidence that such insurance has been procured and is in force. Said policies shall not thereafter be canceled, be permitted to expire or lapse, or be changed without thirty (30) days advance written notice to the Company. Generator warrants that it will secure the above minimum amounts of insurance from any transportation of the Waste to the Facility.

15. **Failure to Perform.** Neither party hereto shall be liable for its failure to perform hereunder due to circumstances not its fault and beyond its reasonable control, including, but not limited to, strikes or other labor disputes, riots, protests, civil disturbances or sabotage, changes in law, fires, floods, compliance with government requests, explosions, accidents, weather, lack of required natural resources, or acts of God affecting either party hereto. In the event of any of the circumstances provided for in the preceding sentence, including, but not limited to, whether any federal, state or local court or governmental authority takes any action which would (i) close or restrict operations at the Facility, (ii) limit the quantity or prohibit the disposal of Waste at the Facility, or (iii) limit the ability of or prohibit Generator from delivering Waste to the Facility, the Company shall have the right, at its option, to reduce, suspend or terminate Generator's access to the Facility immediately, without prior notice and without any additional liabilities between the parties, other than Generator's payment obligation hereunder. Neither Party is required hereunder to settle any labor dispute against its own best judgment.

16. **Other Termination.** The occurrence of any of the following events shall also constitute an event of default by the Generator and shall give the Company the right to immediately terminate this Agreement:

- (A) A petition for reorganization or bankruptcy filed by or against the Generator.
- (B) Failure by Generator to pay any amounts due to Company.
- (C) Any breach by Generator of any of its obligations pursuant to the Agreement.

Generator shall be liable for and shall indemnify, defend and hold harmless Company from any losses, claims expenses or damages incurred by the Company as a result of termination hereunder.

17. **Assignment.** Generator may not assign, transfer or otherwise vest in any other Company, entity or person, in whole or in part, any of its rights or obligations under the Agreement without the prior written consent of the Company, provided, however, that the Company may without any such prior written consent, assign its rights and/or obligations under the Agreement to a subsidiary or affiliate corporation.

18. **Right of Disposal.** This Agreement does not grant any rights to dispose of Waste other than in accordance herewith. The Company reserves the right to immediately terminate access to the Facility by Generator and Generator's personnel in the event of breach or violation by Generator of any of the terms of this Agreement, the Company's operating rules or payment policies or any applicable laws or regulations.

19. **Continuing Compliance.** The Generator has a continuing obligation to inform the Company of any new information, or information not previously provided to the Company by Generator which may affect the acceptability of the Waste by the Company. Further, the Generator shall comply with all Company requests for evidence of Generator's continuing compliance with the terms of the Agreement including but not limited to the following: (i) providing new, updated Waste profiles on the Waste(s) offered for disposal or, (ii) providing appropriate certification that the Waste being offered for disposal is accurately reflected by the appropriate Application or, (iii) re-sample the Waste at Generator's expense if reasonable cause exists as to its acceptability under the terms of this Agreement or, (iv) allow the Company to re-sample the Waste at Generator's expense if reasonable cause exists as to its acceptability under the terms of this Agreement or (v) all of the above.

### 20. Miscellaneous.

- (A) This Agreement shall be governed by the laws of the State in which the Facility is located.
- (B) No waiver of a breach of any of the obligations contained in the Agreement shall be construed to be a waiver of any prior or succeeding breach of the same obligation or of any other obligation of this Agreement.
- (C) No modification, release, discharge or waiver of any provision or obligation hereof shall be of any force, or effect, unless in writing signed by all parties to this Agreement.
- (D) Generator shall treat as confidential and not disclose to others during or subsequent to the terms of this Agreement, except as is necessary to perform this Agreement, or to comply with any applicable law or regulation any information (including any technical information, experience or data) regarding the Company's plans, programs, plants, processes, products, costs, equipment or operations which may come within the knowledge of the Generator or its employees in the performance of this Agreement, without in each instance securing the prior written consent of the other Company.
- (E) If any term, phrase, obligation or provision of this Agreement shall be held to be invalid, illegal or unenforceable in any respect, this Agreement shall remain in effect and be construed without regard to such term, phrase, obligation or provision.
- (F) This Agreement constitutes the entire understanding between the parties, replacing and amending any prior agreements between the parties, and shall be binding upon all parties hereto, their successors, heirs, representatives and assigns. Any provision, term or condition in any acknowledgement, purchase order or other response by Generator which is in addition to or different from the provisions of this Agreement shall be deemed objected to by the Company and shall be of no effect.
- (G) Generator represents, warrants and covenants that it is and, during the term of this Agreement will remain, in compliance with and will perform its obligations pursuant to all applicable laws and regulations and shall indemnify, defend and hold harmless the Company from any breach thereof.
- (H) It is the understanding and agreement of the parties that the Company is an independent contractor, and is not an agent, nor an authorized representative of the Generator.

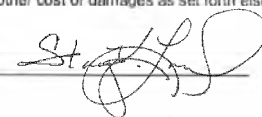
21. **Notices.** All notices herein provided for shall be considered as having been given upon being placed in the mail, certified postage prepaid addressed to the Company or Generator at the address herein set forth in this Agreement or to such other address as may be given to the other party in writing.

22. **Liquidated Damages.** In the event that this Agreement is terminated by the Generator in a manner not in accordance with paragraph 4 hereof, or terminated due to a breach of this Agreement by the Generator, the Generator shall pay, as liquidated damages, and not as a penalty, the greater of an amount equal to six (6) months' service charges or the Generator's most recent monthly charge multiplied by six (6). The Generator shall be given credit for any advance payments made hereunder, however, in computing the amount owed as liquidated damages hereunder. The Generator acknowledges that this liquidated damages clause is reasonable and is applicable to recover damages related to its investment in equipment, development of landfills and hiring of employees undertaken by the Company to service its customers including the Generator. This liquidated damages clause in no way relieves the Generator from its obligations and liability for other cost or damages as set forth elsewhere in this Agreement.

GENERATOR:



Republic Services, Inc/COMPANY:



May 2009



# Republic Services, Inc.

18500 N. Allied Way, Phoenix, AZ 85054

## SPECIAL WASTE DEPARTMENT DECISION

	Waste Profile # 51231712548	Expiration Date 8/2/2020	
<b>I. Decision Request:</b>	<input checked="" type="checkbox"/> Initial <input type="checkbox"/> Recertification <input type="checkbox"/> Change		
Disposal Facility: 5123 - Sunshine Canyon Landfill			
Generator Name: Green Island Produce Inc			
Generator Site Address: 4423 Hawthorne Ave			
City: Vernon	County: <input type="text"/>	State: CA	Zip: <input type="text"/>
Name of Waste: Food Products (Sweet Potatoes)			
Estimated Annual Volume: 1000 Pounds			

**II. Special Waste Department Decision:**     Approved     Rejected

Management Method(s):     Landfill     Solidification     Bioremediation     Transfer Facility

Problematic Special Waste according to Republic?     Yes     No

If yes, which one?

Approved by Special Waste Review Committee?     Yes     No     Not Applicable

### Precautions, Conditions or Limitations on Approval

Special Waste Analyst Signature: *Ray Rutkowski*    Name (Printed): Raymond Rutkowski  
 Date: 8/3/2017

**III. Facility Decision:**     Approved     Rejected

**Precautions, Conditions or Limitations on Approval**

By signing below, the General Manager or Designee agrees that a fully executed Special Waste Service Agreement is on file for this profile and that the special waste file is complete.

General Manager or Designee: *Rob Sherman*    Name (Printed): Rob Sherman  
 Date: 8/3/2017



EXPRESS WASTE PROFILE

Requested Disposal Facility: 5123 Sunshine Canyon LF CA

Waste Profile #
5123 17 12548
Sales Rep #. 525 - Stacy Loveland

Saveable fill in form. Restricted printing until all required (yellow) fields are completed.

I. Generator Information

Generator Name: GREEN ISLAND PRODUCE, INC.			
Generator Site Address: 4423 HAWTHORNE AVE.			
City: VERNON	County: LOS ANGELES	State: California	Zip: 90058
State ID/Reg No:	State Approval/Waste Code:	(if applicable)	NAICS #.
Generator Mailing Address (if different): 4423 HAWTHORNE AVE.			
City: VERNON	County: LOS ANGELES	State: California	Zip: 90058
Generator Contact Name: JEFF LIU		Email: giproduce@yahoo.com	
Phone Number: (323) 234-5888	Ext:	Fax Number: (323) 846-9630	

II. Billing Information

Bill To: GREEN ISLAND PRODUCE, INC.	Contact Name: JEFF LIU		
Billing Address: 4423 HAWTHORNE AVE.	Email: giproduce@yahoo.com		
City: VERNON	State: CA	Zip: 90058	Phone: (323) 234-5888

III. Waste Stream Information

Name of Waste: <small>(Petroleum products-applies only to contaminated media and debris).</small>	<input type="checkbox"/> Diesel Fuel	<input type="checkbox"/> Weathered Wood	<input type="checkbox"/> Friable Asbestos
	<input type="checkbox"/> Home Heating Fuel #1-6	<input type="checkbox"/> RCRA Empty Containers	<input type="checkbox"/> Non Friable Asbestos
	<input type="checkbox"/> Kerosene	<input type="checkbox"/> Treated Medical Waste	<input type="checkbox"/> Cured Asphalt
	<input type="checkbox"/> Aviation Fuel	<input type="checkbox"/> Animal Carcass (non infectious)	<input type="checkbox"/> Tires
	<input type="checkbox"/> Hydraulic Fluid	<input type="checkbox"/> Plant Trash	<input checked="" type="checkbox"/> Food Products <small>(Including Animal Food)</small>
	<input type="checkbox"/> Unleaded Gasoline (UST Corrective Action)	<input type="checkbox"/> Meth Contaminated Debris	

Process Generating Waste: LA COUNTY AGRICULTURE INSPECTED 37cs OF SWEET POTATO @ 30LBS PER BOX AND FOUND THAT THEY WERE INFESTED WITH INSECTS

Method of Shipment: <input checked="" type="checkbox"/> BULK <input type="checkbox"/> DRUM <input checked="" type="checkbox"/> BAGGED <input type="checkbox"/> OTHER:
Estimated Annual Volume: 1,100 Pounds
Frequency: <input type="checkbox"/> ONE TIME <input checked="" type="checkbox"/> ONGOING

IV. Certification

I hereby certify that to the best of my knowledge and belief, the information contained herein is a true and accurate description of the waste material being offered for disposal. I further certify that by utilizing this profile, neither myself nor any other employee of the company will deliver for disposal or attempt to deliver for disposal any waste which is classified as toxic waste, hazardous waste or infectious waste, or any other waste material this facility is prohibited from accepting by law. Our company hereby agrees to fully indemnify this disposal facility against any damages resulting from this certification being inaccurate or untrue. I further certify that the company has not altered the form or content of this profile sheet as provided by Republic Services, Inc.

JEFF LIU ; MANAGER	GREEN ISLAND PRODUCE, INC.
Authorized Representative Name (Type or Print)	Company Name
	08/03/2017
Authorized Representative Signature	Date



# SPECIAL WASTE SERVICE AGREEMENT NON-HAZARDOUS WASTES

Special Waste Profile Number: 5123 17 12548

**Generator Billing Information**

Name: GREEN ISLAND PRODUCE  
(ACCT CASH # 321)  
Address: 4423 HAWTHORNE AVE  
City: VERNON  
State: CA Zip: 90058  
Phone: 323.234.5888 Fax: \_\_\_\_\_  
Contact: JEFF LIU

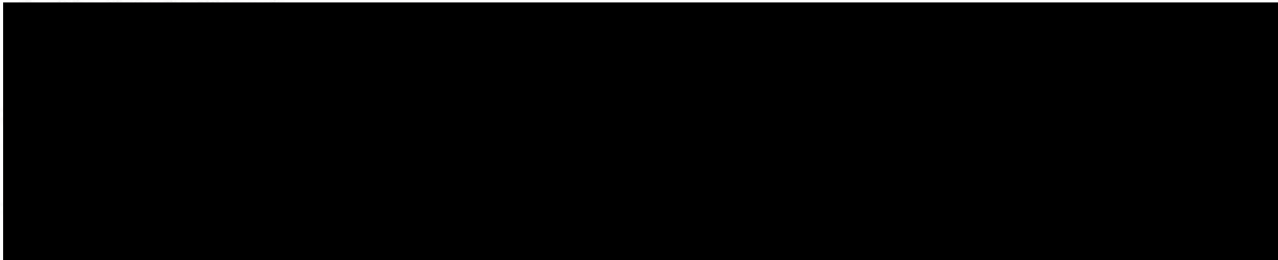
**Republic Waste Location (Company)**

SUNSHINE CANYON LANDFILL (5123)  
14747 SAN FERNANDO ROAD  
SYLMAR, CA 91342  
818.362.2141

Project: FOOD PRODUCTS County and State of Origin: LOS ANGELES, CA

Additional Information: \_\_\_\_\_

1. **Special Waste Service.** Subject to the terms and conditions contained herein, the Company and the Generator agree to be legally bound hereby and the Company agrees to accept at its Facility, Acceptable Waste (hereinafter referred to as "Special Waste" or "Waste") delivered by Generator, and which is acceptable to the Company as herein provided.
2. **Acceptable Waste.** Only those Special Wastes described in Paragraph 3 herein and in any Special Waste Profile(s) which number is identical to the contract number referenced above, and which Profile(s) are hereby incorporated by reference herein, and which Waste is subsequently approved by the Company and is otherwise in accordance with all laws, regulations and permits, shall be acceptable for disposal at the Facility ("Acceptable Waste").



Cannot Exceed Daily Volume of 1000 POUNDS Without Prior Approval of Company.

- (B) **Incorporation by Reference.** In addition to Special Waste Profile(s), the following documents are incorporated by reference into this Agreement as if fully set forth herein.
- 1) N/A
  - 2) N/A

4. **Term of Agreement.** This Agreement is effective for 36 months, commencing 8/1/2017 and shall automatically be renewed for a similar term thereafter unless either party shall give written notice (via certified mail) of termination to the other party at least thirty (30) days prior written notice.

THE COMPANY AND THE GENERATOR, IN CONSIDERATION OF THE MUTUAL OBLIGATIONS CONTAINED HEREIN, AGREE THAT THIS IS A LEGALLY BINDING AGREEMENT WHICH IS SUBJECT TO THE TERMS AND CONDITIONS SET FORTH ON THIS PAGE AND ON THE REVERSE SIDE OF THIS DOCUMENT. IN ADDITION, THE GENERATOR IS CERTIFYING THE ATTACHED TERMS AND CONDITIONS HAVE BEEN REVIEWED AND INITIALLED AT THE BOTTOM OF THE PAGE.

**GENERATOR**  
  
SIGNATURE (AUTHORIZED REPRESENTATIVE)  
Jeff Liu - Manager  
NAME AND TITLE (PLEASE PRINT)  
8-4-17  
DATE

**REPUBLIC SERVICES, INC/COMPANY**  
  
SIGNATURE (AUTHORIZED REPRESENTATIVE)  
Stacy Loveland - SW Executive  
NAME AND TITLE (PLEASE PRINT)  
8/4/2017  
DATE

## Terms and Conditions of Special Waste Service Agreement

5. **The Agreement.** This agreement of the parties ("Agreement") for the disposal of Special Waste shall consist of this Agreement, riders to the Agreement (if any) and any Application, permit and approval that may be applicable to such Waste.
6. **Waste Accepted at Facility.** Generator represents, warrants and covenants that the Waste delivered to Company at its Facility hereunder will be Acceptable Waste and will not contain any unacceptable quantity of hazardous materials or substances, radioactive materials or substances, or toxic waste or substances, as defined by applicable federal, state, local or provincial laws or regulations. Any Waste which does not meet these requirements shall hereinafter be referred to as "Unacceptable Waste". The Generator shall in all matters relating to the collection, transportation and disposal of the Waste hereunder, comply with all applicable federal, state and local laws, regulations, rules and orders regarding the same. The word "Facility" shall mean any landfill, transfer station or other location used to transfer, process or otherwise dispose of such Waste.
7. **Special Waste.** Generator represents, warrants and covenants that the Waste delivered to Company hereunder (i) will not contain any Special Waste that is not specifically described on any Application which is attached hereto or which is subsequently approved by the Company, (ii) will meet the material description as set forth in any Application and otherwise in all significant respects and (iii) will not contain Unacceptable Waste. The parties may incorporate additional Special Waste as part of this Agreement if prior to delivery of such Waste to Company, Generator has provided an Application for such Waste and Company has approved disposal of such Waste within the limitations and conditions contained in Company's written notice of approval of Special Waste Disposal. Title to any and all Waste handled or disposed of by Company shall at all times remain with Generator and Broker (if a Broker is involved).
8. **Rights of Refusal/Rejection.** The Generator shall inspect all Waste at the place(s) of collection and shall remove any and all Unacceptable Waste. Company has the right to refuse, or to reject after acceptance, any load(s) of Waste(s) delivered to its Facility including if the Company believes the Generator has breached (or is breaching) its representations, warranties, covenants or agreements hereunder, or any applicable federal, state or local laws, regulations, rules or orders, even if only a portion of such Waste load is unacceptable. The Company shall have the right to inspect all vehicles and containers of Waste haulers, including the Generator's vehicles, in order to determine whether the Waste is Acceptable Waste or Unacceptable Waste pursuant to this Agreement and all applicable federal, state and local laws, rules and regulations. The Company's exercise, or failure to exercise, its rights hereunder shall not operate to relieve the Generator of its responsibilities or liability under this Agreement. The Generator shall be responsible for, and bear all reasonable expenses and damages incurred by the Company, as a result of the Unacceptable Waste and in the reloading and removal of Unacceptable Waste disposed in the Facility. The Company, may also, in its sole discretion, require the Generator to promptly remove the Unacceptable Waste.
9. **Limited License to Enter.** This Agreement provides Generator with a license to enter the Facility for the limited purpose of, and only to the extent necessary for, off-loading Acceptable Waste at the Facility in the manner directed by Company. Except in an emergency, Generator's personnel shall not leave the immediate vicinity of their vehicle. After off-loading the Waste, Generator's personnel shall promptly leave the Facility. Under no circumstances shall Generator or its personnel engage in any scavenging of Waste or other materials at the Facility. The Company reserves the right to make and enforce reasonable rules and regulations concerning the operation of the Facility, the conduct of the drivers and others on the Facility premises, quantities and sources of Waste, and any other matters necessary or desirable for the safe, legal and efficient operation of the Facility including, but not limited to, speed limits on haul roads imposed by the Company, and the wearing of hard hats and other personal protection equipment by all individuals allowed on the Facility premises. Generator agrees to conform to such rules and regulations as they may be established and amended from time to time. Company may refuse to accept Waste from and shall deny an entrance license to, any of Generator's personnel whom Company believes is under the influence of alcohol or other chemical substances. Generator shall be solely responsible for its employees and subcontractors performing their obligations in a safe manner when at the facility of Company.
10. **Charges and Payment.** Payment shall be made by Generator within sixty (60) days after receipt of invoice from Company. In the event that any amount is overdue, the Company may terminate this Agreement. Generator agrees to pay a finance charge equal to the maximum interest rate permitted by law. Generator shall be liable for all taxes, fees, or other charges imposed upon the disposal of the Waste by federal, state, local or provincial laws and regulations. Company, from time to time, may modify its rates upon sixty (60) days written notice to Generator.
11. **Termination.** Generator's obligations, representations, warranties and covenants regarding the Waste delivered and all indemnities shall survive termination of this Agreement. Should Generator materially default in any of its obligations hereunder, then Company may immediately terminate this Agreement and Generator shall be liable for all costs and damages incurred by the Company.
12. **Driver's Knowledge and Authority.** Generator represents, warrants and covenants that its drivers who deliver Waste to Company's Facility have been advised by Generator of the Company's prohibition on deliveries of hazardous materials or substances, radioactive materials or substances, or toxic waste or substances or any other Unacceptable Waste to the Facility of Company's restrictions on deliveries of Special Waste to the Facility, of the definitions of "Hazardous Waste and Hazardous Substances" as provided by applicable federal, state and local law, rules and regulations and "Special Waste" as provided herein, and of the terms of this license to enter Company's Facility.
13. **Indemnification.** Generator shall indemnify, defend and hold harmless the Company and its subsidiaries, affiliates and parent corporations, as applicable and their respective officers, directors, lenders, employees, subcontractors and agents from and against any and all claims, suits, losses, liabilities, assessments, damages, fines, costs and expenses, including reasonable attorneys fees arising under federal, state or local laws, regulations or ordinances, or relating to the content of the Waste, or arising out of or in connection with any breach of this Agreement or arising out of the negligent collection, transportation and disposal of Waste by Generator or Generator's employees, agents, subcontractors or representatives thereof. Generator shall also be responsible for increased inspection, testing, study and analysis costs made necessary due to reasonable concerns of the Company as to the content of the Waste following discovery of potentially Unacceptable Waste. This indemnification and other obligations stated in this paragraph shall survive the termination of this Agreement.
14. **Insurance.** Generator shall maintain in full force and effect throughout the term of this Agreement the following types of insurance in at least the amounts specified below:

Coverages	Minimum Amounts of Insurance
Worker's Compensation	Statutory
General Liability	\$500,000 combined single limit
Automobile Liability	\$500,000 combined single limit

All insurance will be by insurers authorized to do business in the state in which the Facility is located. Prior to Generator being allowed on Facility premises, Generator shall provide the Company with certificates of insurance or other satisfactory evidence that such insurance has been procured and is in force. Said policies shall not hereafter be canceled, be permitted to expire or lapse, or be changed without thirty (30) days advance written notice to the Company. Generator warrants that it will secure the above minimum amounts of insurance from any transportation of the Waste to the Facility.

15. **Failure to Perform.** Neither party hereto shall be liable for its failure to perform hereunder due to circumstances not its fault and beyond its reasonable control, including, but not limited to, strikes or other labor disputes, riots, protests, civil disturbances or sabotage, changes in law, fires, floods, compliance with government requests, explosions, accidents, weather, lack of required natural resources, or acts of God affecting either party hereto. In the event of any of the circumstances provided for in the preceding sentence, including, but not limited to, whether any federal, state or local court or governmental authority takes any action which would (i) close or restrict operations at the Facility, (ii) limit the quantity or prohibit the disposal of Waste at the Facility, or (iii) limit the ability of or prohibit Generator from delivering Waste to the Facility, the Company shall have the right, at its option, to reduce, suspend or terminate Generator's access to the Facility immediately, without prior notice and without any additional liabilities between the parties, other than Generator's payment obligation hereunder. Neither Party is required hereunder to settle any labor dispute against its own best judgment.

16. **Other Termination.** The occurrence of any of the following events shall also constitute an event of default by the Generator and shall give the Company the right to immediately terminate this Agreement:

- (A) A petition for reorganization or bankruptcy filed by or against the Generator.
- (B) Failure by Generator to pay any amounts due to Company.
- (C) Any breach by Generator of any of its obligations pursuant to the Agreement.

Generator shall be liable for and shall indemnify, defend and hold harmless Company from any losses, claims expenses or damages incurred by the Company as a result of termination hereunder.

17. **Assignment.** Generator may not assign, transfer or otherwise vest in any other Company, entity or person, in whole or in part, any of its rights or obligations under the Agreement without the prior written consent of the Company, provided, however, that the Company may without any such prior written consent, assign its rights and/or obligations under the Agreement to a subsidiary or affiliate corporation.

18. **Right of Disposal.** This Agreement does not grant any rights to dispose of Waste other than in accordance herewith. The Company reserves the right to immediately terminate access to the Facility by Generator and Generator's personnel in the event of breach or violation by Generator of any of the terms of this Agreement, the Company's operating rules or payment policies or any applicable laws or regulations.

19. **Continuing Compliance.** The Generator has a continuing obligation to inform the Company of any new information, or information not previously provided to the Company by Generator which may affect the acceptability of the Waste by the Company. Further, the Generator shall comply with all Company requests for evidence of Generator's continuing compliance with the terms of the Agreement including but not limited to the following: (i) providing new, updated Waste profiles on the Waste(s) offered for disposal or, (ii) providing appropriate certification that the Waste being offered for disposal is accurately reflected by the appropriate Application or, (iii) re-sample the Waste at Generator's expense if reasonable cause exists as to its acceptability under the terms of this Agreement or, (iv) allow the Company to re-sample the Waste at Generator's expense if reasonable cause exists as to its acceptability under the terms of this Agreement or (v) all of the above.

### 20. Miscellaneous:

- (A) This Agreement shall be governed by the laws of the State in which the Facility is located.
- (B) No waiver of a breach of any of the obligations contained in the Agreement shall be construed to be a waiver of any prior or succeeding breach of the same obligation or of any other obligation of this Agreement.
- (C) No modification, release, discharge or waiver of any provision or obligation hereof shall be of any force, or effect, unless in writing signed by all parties to this Agreement.
- (D) Generator shall treat as confidential and not disclose to others during or subsequent to the terms of this Agreement, except as is necessary to perform this Agreement, or to comply with any applicable law or regulation any information (including any technical information, experience or data) regarding the Company's plans, programs, plants, processes, products, costs, equipment or operations which may come within the knowledge of the Generator or its employees in the performance of this Agreement, without in each instance securing the prior written consent of the other Company.
- (E) If any term, phrase, obligation or provision of this Agreement shall be held to be invalid, illegal or unenforceable in any respect, this Agreement shall remain in effect and be construed without regard to such term, phrase, obligation or provision.
- (F) This Agreement constitutes the entire understanding between the parties, replacing and amending any prior agreements between the parties, and shall be binding upon all parties hereto, their successors, heirs, representatives and assigns. Any provision, term or condition in any acknowledgment, purchase order or other response by Generator which is in addition to or different from the provisions of this Agreement shall be deemed objected to by the Company and shall be of no effect.
- (G) Generator represents, warrants and covenants that it is and, during the term of this Agreement will remain, in compliance with and will perform its obligations pursuant to all applicable laws and regulations and shall indemnify, defend and hold harmless the Company from any breach thereof.
- (H) It is the understanding and agreement of the parties that the Company is an independent contractor, and is not an agent, nor an authorized representative of the Generator.

21. **Notices.** All notices herein provided for shall be considered as having been given upon being placed in the mail, certified postage prepaid addressed to the Company or Generator at the address herein set forth in this Agreement or to such other address as may be given to the other party in writing.

22. **Liquidated Damages.** In the event that this Agreement is terminated by the Generator in a manner not in accordance with paragraph 4 hereof, or terminated due to a breach of this Agreement by the Generator, the Generator shall pay, as liquidated damages, and not as a penalty, the greater of an amount equal to six (6) months' service charges of the Generator's most recent monthly charge multiplied by six (6). The Generator shall be given credit for any advance payments made hereunder, however, in computing the amount owed as liquidated damages hereunder. The Generator acknowledges that this liquidated damages clause is reasonable and is applicable to recover damages related to its investment in equipment, development of landfills and hiring of employees undertaken by the Company to service its customers including the Generator. This liquidated damages clause in no way relieves the Generator from its obligations and liability for other cost or damages as set forth elsewhere in this Agreement.

GENERATOR: \_\_\_\_\_

Republic Services, Inc/COMPANY: \_\_\_\_\_

May 2009





# Republic Services, Inc.

18500 N. Allied Way, Phoenix, AZ 85054

## SPECIAL WASTE DEPARTMENT DECISION

	Waste Profile # 51231713836	Expiration Date 11/24/2017	
<b>I. Decision Request:</b>	<input checked="" type="checkbox"/> Initial <input type="checkbox"/> Recertification <input type="checkbox"/> Change		
Disposal Facility: 5123 - Sunshine Canyon Landfill			
Generator Name: IQ Produce LLC			
Generator Site Address: 4604 East 48th Street			
City: Vernon	County: _____	State: CA	Zip: _____
Name of Waste: Food Products			
Estimated Annual Volume: 500 Pounds			

**II. Special Waste Department Decision:**     Approved     Rejected


Management Method(s):     Landfill     Solidification     Bioremediation     Transfer Facility

Problematic Special Waste according to Republic?     Yes     No

If yes, which one? \_\_\_\_\_

Approved by Special Waste Review Committee?     Yes     No     Not Applicable

### Precautions, Conditions or Limitations on Approval

Special Waste Analyst Signature: 


Date: 8/24/2017

Name (Printed): KEITH DIAMANTI

**III. Facility Decision:**     Approved     Rejected

### Precautions, Conditions or Limitations on Approval

By signing below, the General Manager or Designee agrees that a fully executed Special Waste Service Agreement is on file for this profile and that the special waste file is complete.

General Manager or Designee: 

Date: 8/24/2017

Name (Printed): Rob Sherman



Requested Disposal Facility: 5123 Sunshine Canyon LF CA

Waste Profile #
5123 17 13836
Sales Rep #. 525 - Stacy Loveland

Saveable fill in form. Restricted printing until all required (yellow) fields are completed.

**I. Generator Information**

Generator Name: IQ PRODUCE, LLC			
Generator Site Address: 4604 East 48th Street			
City: Vernon	County: Los Angeles	State: California	Zip: 90058
State ID/Reg No:	State Approval/Waste Code:	(if applicable)	NAICS #.
Generator Mailing Address (if different): 4604 East 48th Street			
City: Vernon	County: Los Angeles	State: California	Zip: 90058
Generator Contact Name: Ting Chen		Email: ting.chen@iqproduce.com	
Phone Number: (323) 863-5788	Ext:	Fax Number:	

**II. Billing Information**

Bill To: IQ Produce LLC	Contact Name: Ting Chen		
Billing Address: 4604 East 48th Street	Email: ting.chen@iqproduce.com		
City: Vernon	State: CA	Zip: 90058	Phone: (323) 863-5788

**III. Waste Stream Information**

Name of Waste: <small>(Petroleum products-applies only to contaminated media and debris).</small>	<input type="checkbox"/> Diesel Fuel	<input type="checkbox"/> Weathered Wood	<input type="checkbox"/> Friable Asbestos
	<input type="checkbox"/> Home Heating Fuel #1-6	<input type="checkbox"/> RCRA Empty Containers	<input type="checkbox"/> Non Friable Asbestos
	<input type="checkbox"/> Kerosene	<input type="checkbox"/> Treated Medical Waste	<input type="checkbox"/> Cured Asphalt
	<input type="checkbox"/> Aviation Fuel	<input type="checkbox"/> Animal Carcass (non infectious)	<input type="checkbox"/> Tires
	<input type="checkbox"/> Hydraulic Fluid	<input type="checkbox"/> Plant Trash	<input checked="" type="checkbox"/> Food Products <small>(Including Animal Food)</small>
	<input type="checkbox"/> Unleaded Gasoline (UST Corrective Action)	<input type="checkbox"/> Meth Contaminated Debris	

Process Generating Waste: 15 boxes of Purple Yam produce deemed unsellable by LA Agriculture due to pests that should not be in the local region

Method of Shipment: <input type="checkbox"/> BULK <input type="checkbox"/> DRUM <input type="checkbox"/> BAGGED <input checked="" type="checkbox"/> OTHER:
Estimated Annual Volume: 500 Pounds
Frequency: <input checked="" type="checkbox"/> ONE TIME <input type="checkbox"/> ONGOING

**IV. Certification**

I hereby certify that to the best of my knowledge and belief, the information contained herein is a true and accurate description of the waste material being offered for disposal. I further certify that by utilizing this profile, neither myself nor any other employee of the company will deliver for disposal or attempt to deliver for disposal any waste which is classified as toxic waste, hazardous waste or infectious waste, or any other waste material this facility is prohibited from accepting by law. Our company hereby agrees to fully indemnify this disposal facility against any damages resulting from this certification being inaccurate or untrue. I further certify that the company has not altered the form or content of this profile sheet as provided by Republic Services, Inc.

Ting Chen	IQ Produce LLC
Authorized Representative Name/Title (Type or Print)	Company Name
	8/24/17
Authorized Representative Signature	Date



# SPECIAL WASTE SERVICE AGREEMENT NON-HAZARDOUS WASTES

Special Waste Profile Number: 5123 17 13836

### Generator Billing Information

Name: IQ PRODUCE LLC  
(ACCT CASH # 321)  
Address: 4604 EAST 48<sup>TH</sup> STREET  
City: VERNON  
State: CA Zip: 90058  
Phone: 323.863.5788 Fax: \_\_\_\_\_  
Contact: TING CHEN

### Republic Waste Location (Company)

SUNSHINE CANYON LANDFILL (5123)  
14747 SAN FERNANDO ROAD  
SYLMAR, CA 91342  
818.362.2141

Project: FOOD PRODUCTS County and State of Origin: LOS ANGELES, CA

Additional Information: \_\_\_\_\_

- Special Waste Service.** Subject to the terms and conditions contained herein, the Company and the Generator agree to be legally bound hereby and the Company agrees to accept at its Facility, Acceptable Waste (hereinafter referred to as "Special Waste" or "Waste") delivered by Generator, and which is acceptable to the Company as herein provided.
- Acceptable Waste.** Only those Special Wastes described in Paragraph 3 herein and in any Special Waste Profile(s) which number is identical to the contract number referenced above, and which Profile(s) are hereby incorporated by reference herein, and which Waste is subsequently approved by the Company and is otherwise in accordance with all laws, regulations and permits, shall be acceptable for disposal at the Facility ("Acceptable Waste").



Cannot Exceed Daily Volume of 500 POUNDS Without Prior Approval of Company.

(B) **Incorporation by Reference.** In addition to Special Waste Profile(s), the following documents are incorporated by reference into this Agreement as if fully set forth herein.

- 1) N/A
- 2) N/A

4. **Term of Agreement.** This Agreement is effective for 3 months, commencing 8/24/2017 and shall automatically be renewed for a similar term thereafter unless either party shall give written notice (via certified mail) of termination to the other party at least thirty (30) days prior written notice.

THE COMPANY AND THE GENERATOR, IN CONSIDERATION OF THE MUTUAL OBLIGATIONS CONTAINED HEREIN, AGREE THAT THIS IS A LEGALLY BINDING AGREEMENT WHICH IS SUBJECT TO THE TERMS AND CONDITIONS SET FORTH ON THIS PAGE AND ON THE REVERSE SIDE OF THIS DOCUMENT. IN ADDITION, THE GENERATOR IS CERTIFYING THE ATTACHED TERMS AND CONDITIONS HAVE BEEN REVIEWED AND INITIALLED AT THE BOTTOM OF THE PAGE.

**GENERATOR**

*Ting Chen*  
SIGNATURE (AUTHORIZED REPRESENTATIVE)  
Ting Chen Operation  
NAME AND TITLE (PLEASE PRINT)  
8/24/17  
DATE

**REPUBLIC SERVICES, INC/COMPANY**

*Stacy Loveland*  
SIGNATURE (AUTHORIZED REPRESENTATIVE)  
Stacy Loveland - SW Executive  
NAME AND TITLE (PLEASE PRINT)  
8/24/2017  
DATE

## Terms and Conditions of Special Waste Service Agreement

5. **The Agreement.** This agreement of the parties ("Agreement") for the disposal of Special Waste shall consist of this Agreement, orders to the Agreement (if any) and any Application, permit and approval that may be applicable to such Waste.
6. **Waste Accepted at Facility.** Generator represents, warrants and covenants that the Waste delivered to Company at its Facility hereunder will be Acceptable Waste and will not contain any unacceptable quantity of hazardous materials or substances, radioactive materials or substances, or toxic waste or substances, as defined by applicable federal, state, local or provincial laws or regulations. Any Waste which does not meet these requirements shall hereinafter be referred to as "Unacceptable Waste". The Generator shall in all matters relating to the collection, transportation and disposal of the Waste hereunder, comply with all applicable federal, state and local laws, regulations, rules and orders regarding the same. The word "Facility" shall mean any landfill, transfer station or other location used to transfer, process or otherwise dispose of such Waste.
7. **Special Waste.** Generator represents, warrants and covenants that the Waste delivered to Company hereunder (i) will not contain any Special Waste that is not specifically described on any Application which is attached hereto or which is subsequently approved by the Company, (ii) will meet the material description as set forth in any Application and otherwise in all significant respects and (iii) will not contain Unacceptable Waste. The parties may incorporate additional Special Waste as part of this Agreement if prior to delivery of such Waste to Company, Generator has provided an Application for such Waste and Company has approved disposal of such Waste within the limitations and conditions contained in Company's written notice of approval of Special Waste Disposal. Title to any and all Waste handled or disposed of by Company shall at all times remain with Generator and Broker (if a Broker is involved).
8. **Rights of Refusal/Rejection.** The Generator shall inspect all Waste at the place(s) of collection and shall remove any and all Unacceptable Waste. Company has the right to refuse, or to reject after acceptance, any load(s) of Waste(s) delivered to its Facility including if the Company believes the Generator has breached (or is breaching) its representations, warranties, covenants or agreements hereunder, or any applicable federal, state or local laws, regulations, rules or orders, even if only a portion of such Waste load is unacceptable. The Company shall have the right to inspect all vehicles and containers of Waste haulers, including the Generator's vehicles, in order to determine whether the Waste is Acceptable Waste or Unacceptable Waste pursuant to this Agreement and all applicable federal, state and local laws, rules and regulations. The Company's exercise, or failure to exercise, its rights hereunder shall not operate to relieve the Generator of its responsibilities or liability under this Agreement. The Generator shall be responsible for, and bear all reasonable expenses and damages incurred by the Company, as a result of the Unacceptable Waste and in the reloading and removal of Unacceptable Waste disposed in the Facility. The Company, may also, in its sole discretion, require the Generator to promptly remove the Unacceptable Waste.
9. **Limited License to Enter.** This Agreement provides Generator with a license to enter the Facility for the limited purpose of, and only to the extent necessary for, off-loading Acceptable Waste at the Facility in the manner directed by Company. Except in an emergency, Generator's personnel shall not leave the immediate vicinity of their vehicle. After off-loading the Waste, Generator's personnel shall promptly leave the Facility. Under no circumstances shall Generator or its personnel engage in any scavenging of Waste or other materials at the Facility. The Company reserves the right to make and enforce reasonable rules and regulations concerning the operation of the Facility, the conduct of the drivers and others on the Facility premises, quantities and sources of Waste, and any other matters necessary or desirable for the safe, legal and efficient operation of the Facility including, but not limited to, speed limits on haul roads imposed by the Company, and the wearing of hard hats and other personal protection equipment by all individuals allowed on the Facility premises. Generator agrees to conform to such rules and regulations as they may be established and amended from time to time. Company may refuse to accept Waste from and shall deny an entrance license to, any of Generator's personnel whom Company believes is under the influence of alcohol or other chemical substances. Generator shall be solely responsible for its employees and subcontractors performing their obligations in a safe manner when at the facility of Company.
10. **Charges and Payment.** Payment shall be made by Generator within sixty (60) days after receipt of invoice from Company. In the event that any amount is overdue, the Company may terminate this Agreement. Generator agrees to pay a finance charge equal to the maximum interest rate permitted by law. Generator shall be liable for all taxes, fees, or other charges imposed upon the disposal of the Waste by federal, state, local or provincial laws and regulations. Company, from time to time, may modify its rates upon sixty (60) days written notice to Generator.
11. **Termination.** Generator's obligations, representations, warranties and covenants regarding the Waste delivered and all indemnities shall survive termination of this Agreement. Should Generator materially default in any of its obligations hereunder, then Company may immediately terminate this Agreement and Generator shall be liable for all costs and damages incurred by the Company.
12. **Driver's Knowledge and Authority.** Generator represents, warrants and covenants that its drivers who deliver Waste to Company's Facility have been advised by Generator of the Company's prohibition on deliveries of hazardous materials or substances, radioactive materials or substances, or toxic waste or substances or any other Unacceptable Waste to the Facility of Company's restrictions on deliveries of Special Waste to the Facility, of the definitions of "Hazardous Waste and Hazardous Substances" as provided by applicable federal, state and local law, rules and regulations and "Special Waste" as provided herein, and of the terms of this license to enter Company's Facility.
13. **Indemnification.** Generator shall indemnify, defend and hold harmless the Company and its subsidiaries, affiliates and parent corporations, as applicable and their respective officers, directors, lenders, employees, subcontractors and agents from and against any and all claims, suits, losses, liabilities, assessments, damages, fines, costs and expenses, including reasonable attorneys fees arising under federal, state or local laws, regulations or ordinances, or relating to the content of the Waste, or arising out of or in connection with any breach of this Agreement or arising out of the negligent collection, transportation and disposal of Waste by Generator or Generator's employees, agents, subcontractors or representatives thereof. Generator shall also be responsible for increased inspection, testing, study and analysis costs made necessary due to reasonable concerns of the Company as to the content of the Waste following discovery of potentially Unacceptable Waste. This indemnification and other obligations stated in this paragraph shall survive the termination of this Agreement.
14. **Insurance.** Generator shall maintain in full force and effect throughout the term of this Agreement the following types of insurance in at least the amounts specified below:

Coverages	Minimum Amounts of Insurance
Worker's Compensation	Statutory
General Liability	\$500,000 combined single limit
Automobile Liability	\$500,000 combined single limit

All Insurance will be by insurers authorized to do business in the state in which the Facility is located. Prior to Generator being allowed on Facility premises, Generator shall provide the Company with certificates of insurance or other satisfactory evidence that such insurance has been procured and is in force. Said policies shall not thereafter be canceled, be permitted to expire or lapse, or be changed without thirty (30) days advance written notice to the Company. Generator warrants that it will secure the above minimum amounts of insurance from any transportation of the Waste to the Facility.

15. **Failure to Perform.** Neither party hereto shall be liable for its failure to perform hereunder due to circumstances not its fault and beyond its reasonable control, including, but not limited to, strikes or other labor disputes, riots, protests, civil disturbances or sabotage, changes in law, fires, floods, compliance with government requests, explosions, accidents, weather, lack of required natural resources, or acts of God affecting either party hereto. In the event of any of the circumstances provided for in the preceding sentence, including, but not limited to, whether any federal, state or local court or governmental authority takes any action which would (i) close or restrict operations at the Facility, (ii) limit the quantity or prohibit the disposal of Waste at the Facility, or (iii) limit the ability of or prohibit Generator from delivering Waste to the Facility, the Company shall have the right, at its option, to reduce, suspend or terminate Generator's access to the Facility immediately, without prior notice and without any additional liabilities between the parties, other than Generator's payment obligation hereunder. Neither Party is required hereunder to settle any labor dispute against its own best judgment.
16. **Other Termination.** The occurrence of any of the following events shall also constitute an event of default by the Generator and shall give the Company the right to immediately terminate this Agreement:
  - (A) A petition for reorganization or bankruptcy filed by or against the Generator,
  - (B) Failure by Generator to pay any amounts due to Company,
  - (C) Any breach by Generator of any of its obligations pursuant to the Agreement.

Generator shall be liable for and shall indemnify, defend and hold harmless Company from any losses, claims expenses or damages incurred by the Company as a result of termination hereunder.
17. **Assignment.** Generator may not assign, transfer or otherwise vest in any other Company, entity or person, in whole or in part, any of its rights or obligations under the Agreement without the prior written consent of the Company, provided, however, that the Company may without any such prior written consent, assign its rights and/or obligations under the Agreement to a subsidiary or affiliate corporation.
18. **Right of Disposal.** This Agreement does not grant any rights to dispose of Waste other than in accordance herewith. The Company reserves the right to immediately terminate access to the Facility by Generator and Generator's personnel in the event of breach or violation by Generator of any of the terms of this Agreement, the Company's operating rules or payment policies or any applicable laws or regulations.
19. **Continuing Compliance.** The Generator has a continuing obligation to inform the Company of any new information, or information not previously provided to the Company by Generator which may affect the acceptability of the Waste by the Company. Further, the Generator shall comply with all Company requests for evidence of Generator's continuing compliance with the terms of the Agreement including but not limited to the following: (i) providing new, updated Waste profiles on the Waste(s) offered for disposal or, (ii) providing appropriate certification that the Waste being offered for disposal is accurately reflected by the appropriate Application or, (iii) re-sample the Waste at Generator's expense if reasonable cause exists as to its acceptability under the terms of this Agreement or, (iv) allow the Company to re-sample the Waste at Generator's expense if reasonable cause exists as to its acceptability under the terms of this Agreement or (v) all of the above.
20. **Miscellaneous.**
  - (A) This Agreement shall be governed by the laws of the State in which the Facility is located.
  - (B) No waiver of a breach of any of the obligations contained in the Agreement shall be construed to be a waiver of any prior or succeeding breach of the same obligation or of any other obligation of this Agreement.
  - (C) No modification, release, discharge or waiver of any provision or obligation hereof shall be of any force, or effect, unless in writing signed by all parties to this Agreement.
  - (D) Generator shall treat as confidential and not disclose to others during or subsequent to the terms of this Agreement, except as is necessary to perform this Agreement, or to comply with any applicable law or regulation any information (including any technical information, experience or data) regarding the Company's plans, programs, plants, processes, products, costs, equipment or operations which may come within the knowledge of the Generator or its employees in the performance of this Agreement, without in each instance securing the prior written consent of the other Company.
  - (E) If any term, phrase, obligation or provision of this Agreement shall be held to be invalid, illegal or unenforceable in any respect, this Agreement shall remain in effect and be construed without regard to such term, phrase, obligation or provision.
  - (F) This Agreement constitutes the entire understanding between the parties, replacing and amending any prior agreements between the parties, and shall be binding upon all parties hereto, their successors, heirs, representatives and assigns. Any provision, term or condition in any acknowledgement, purchase order or other response by Generator which is in addition to or different from the provisions of this Agreement shall be deemed objected to by the Company and shall be of no effect.
  - (G) Generator represents, warrants and covenants that it is and, during the term of this Agreement will remain, in compliance with and will perform its obligations pursuant to all applicable laws and regulations and shall indemnify, defend and hold harmless the Company from any breach thereof.
  - (H) It is the understanding and agreement of the parties that the Company is an independent contractor, and is not an agent, nor an authorized representative of the Generator.
21. **Notices.** All notices herein provided for shall be considered as having been given upon being placed in the mail, certified postage prepaid addressed to the Company or Generator at the address herein set forth in this Agreement or to such other address as may be given to the other party in writing.
22. **Liquidated Damages.** In the event that this Agreement is terminated by the Generator in a manner not in accordance with paragraph 4 hereof, or terminated due to a breach of this Agreement by the Generator, the Generator shall pay, as liquidated damages, and not as a penalty, the greater of an amount equal to six (6) months' service charges or the Generator's most recent monthly charge multiplied by six (6). The Generator shall be given credit for any advance payments made hereunder, however, in computing the amount owed as liquidated damages hereunder. The Generator acknowledges that this liquidated damages clause is reasonable and is applicable to recover damages related to its investment in equipment, development of landfills and hiring of employees undertaken by the Company to service its customers including the Generator. This liquidated damages clause in no way relieves the Generator from its obligations and liability for other cost or damages as set forth elsewhere in this Agreement.

GENERATOR: \_\_\_\_\_

Republic Services, Inc/COMPANY: \_\_\_\_\_

May 2009



# Republic Services, Inc.

18500 N. Allied Way, Phoenix, AZ 85054

## SPECIAL WASTE DEPARTMENT DECISION

I. Decision Request:	Waste Profile # 5123142199	Expiration Date 9/7/2020	
	<input type="checkbox"/> Initial <input checked="" type="checkbox"/> Recertification <input type="checkbox"/> Change		
Disposal Facility: 5123 - Sunshine Canyon Landfill			
Generator Name: Kirkhill			
Generator Site Address: 12023 Woodruff Avenue			
City: Downey	County:	State: CA	Zip:
Name of Waste: Filtered Carbon Media			
Estimated Annual Volume: 50 Tons			

II. Special Waste Department Decision:     Approved     Rejected

Management Method(s):     Landfill     Solidification     Bioremediation     Transfer Facility


Problematic Special Waste according to Republic?     Yes     No

If yes, which one? \_\_\_\_\_

Approved by Special Waste Review Committee?     Yes     No     Not Applicable

### Precautions, Conditions or Limitations on Approval

All conditions of the original profile and approval remain in effect.

Special Waste Analyst Signature: 

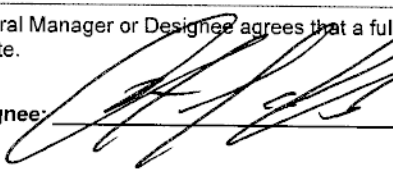
Date: 9/11/2017

Name (Printed): KEITH DIAMANTI

III. Facility Decision:     Approved     Rejected

### Precautions, Conditions or Limitations on Approval

By signing below, the General Manager or Designee agrees that a fully executed Special Waste Service Agreement is on file for this profile and that the special waste file is complete.

General Manager or Designee: 

Date: 9/11/2017

Name (Printed): Chris Coyle



## SPECIAL WASTE PROFILE - RECERTIFICATION

Saveable fill-in form. Restricted printing until all required (yellow) fields are completed.

Disposal Facility: 5123 Sunshine Canyon LF CA

Waste Profile #
5123142199

### I. Generator Information

Generator Name: Kirkhill			
Generator Site Address: 12023 Woodruff Ave			
City: Downey	County:	State: California	Zip: 90241
State ID/Reg No:	State Approval/Waste Code:	NAICS #: 32629110	
Generator Mailing Address (if different): <input type="checkbox"/> 12023 Woodruff Ave			
City: Downey	County:	State: California	Zip: 90241
Generator Contact Name: MICHAEL KILROY		Email: MKILROY@KIRKHILLRUBBER.COM	
Phone Number: (562) 803-1117		Fax Number:	

### II. Waste Stream Information

Name of Waste: FILTERED CARBON MEDIA	
Check Section 1 OR Section 2 below:	
1. <input type="checkbox"/>	<p><u>There has been a change</u> in the characteristics of the waste stream due to the following:</p> <ul style="list-style-type: none"> <li>a. Change of a raw material used in the waste generating process.</li> <li>b. Change in the waste generating process itself.</li> <li>c. Change in a physical characteristic of the waste.</li> <li>d. New information has been documented concerning the human health effects of exposure to the waste.</li> </ul> <p><b>If any of these changes have occurred, a new laboratory analysis and profile sheet must be completed. Attach copies of the new chemical analysis and new Special Waste Profile with the appropriate signatures.</b></p>
2. <input checked="" type="checkbox"/>	<p><u>There have been no changes</u> that would alter the physical characteristics of the special waste stream. Updated analytical may be required.</p>

### III. Representative Sample Certification

No Sample Taken

Is the representative sample collected to prepare this profile and laboratory analysis, collected in accordance with U.S. EPA 40 CFR 261.20(c) guidelines or equivalent rules?	<input checked="" type="checkbox"/> YES or <input type="checkbox"/> NO
Type of Sample: <input checked="" type="checkbox"/> COMPOSITE SAMPLE <input type="checkbox"/> GRAB SAMPLE	
Sample Date: 9/1/2017	
Sample ID Numbers: 17-09-0040-1	

### IV. Certification

I hereby certify that to the best of my knowledge and belief, the information contained in the Special Waste Profile - Recertification and the information in the Original Special Waste Profile is true, complete and accurate.

MICHAEL KILROY, FINANCIAL SECRETARY — KIRKHILL

Authorized Representative Name And Title (Printed)

Authorized Representative Signature

Company Name

09/08/2017

Date



SPECIAL WASTE SERVICE AGREEMENT
NON-HAZARDOUS WASTES

Special Waste Profile Number: 5123 14 2199

Generator Billing Information

Republic Waste Location (Company)

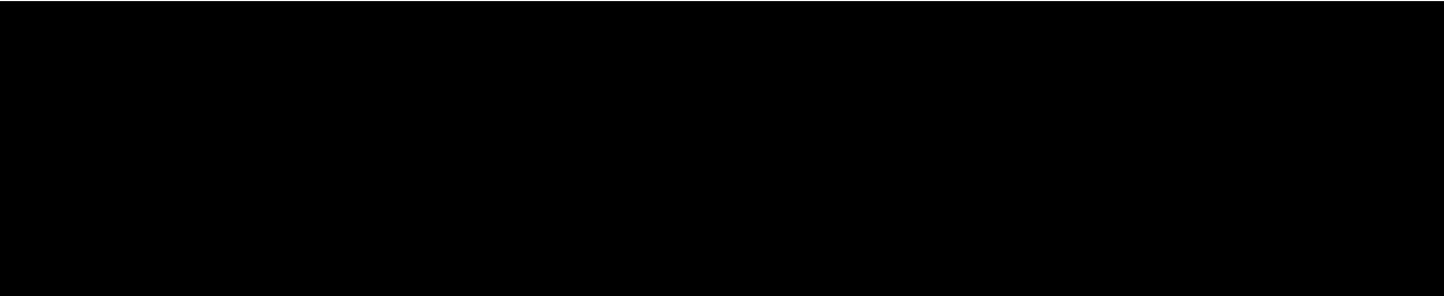
Name: KIRKHILL (ACCT # 100439)
Address: 12023 WOODRUFF AVENUE
City: DOWNEY
State: CA Zip: 90241
Phone: 562.803.1117 Fax:
Contact: MICHAEL KILROY

SUNSHINE CANYON LANDFILL (5123)
14747 SAN FERNANDO ROAD
SYLMAR, CA 91342
818.362.2141

Project: FILTERED CARBON MEDIA County and State of Origin: LOS ANGELES, CA

Additional Information:

- 1. Special Waste Service. Subject to the terms and conditions contained herein, the Company and the Generator agree to be legally bound hereby...
2. Acceptable Waste. Only those Special Wastes described in Paragraph 3 herein and in any Special Waste Profile(s) which number is identical to the contract number referenced above...



Cannot Exceed Daily Volume of 50 TONS Without Prior Approval of Company.

(B) Incorporation by Reference. In addition to Special Waste Profile(s), the following documents are incorporated by reference into this Agreement as if fully set forth herein.

- 1) N/A
2) N/A

4. Term of Agreement. This Agreement is effective for 36 months, commencing 9/11/2017 and shall automatically be renewed for a similar term thereafter unless either party shall give written notice (via certified mail) of termination to the other party at least thirty (30) days prior written notice.

THE COMPANY AND THE GENERATOR, IN CONSIDERATION OF THE MUTUAL OBLIGATIONS CONTAINED HEREIN, AGREE THAT THIS IS A LEGALLY BINDING AGREEMENT WHICH IS SUBJECT TO THE TERMS AND CONDITIONS SET FORTH ON THIS PAGE AND ON THE REVERSE SIDE OF THIS DOCUMENT. IN ADDITION, THE GENERATOR IS CERTIFYING THE ATTACHED TERMS AND CONDITIONS HAVE BEEN REVIEWED AND INITIALLED AT THE BOTTOM OF THE PAGE.

GENERATOR
[Signature]
SIGNATURE (AUTHORIZED REPRESENTATIVE)
MICHAEL KILROY - OPERATIONS
NAME AND TITLE (PLEASE PRINT)
9/11/2017
DATE

REPUBLIC SERVICES, INC/COMPANY
[Signature]
SIGNATURE (AUTHORIZED REPRESENTATIVE)
Stacy Loveland - SW Executive
NAME AND TITLE (PLEASE PRINT)
9/11/2017
DATE

# Terms and Conditions of Special Waste Service Agreement

5. **The Agreement.** This agreement of the parties ("Agreement") for the disposal of Special Waste shall consist of this Agreement, riders to the Agreement (if any) and any Application, permit and approval that may be applicable to such Waste.
6. **Waste Accepted at Facility.** Generator represents, warrants and covenants that the Waste delivered to Company at its Facility hereunder will be Acceptable Waste and will not contain any unacceptable quantity of hazardous materials or substances, radioactive materials or substances, or toxic waste or substances, as defined by applicable federal, state, local or provincial laws or regulations. Any Waste which does not meet these requirements shall hereinafter be referred to as "Unacceptable Waste". The Generator shall in all matters relating to the collection, transportation and disposal of the Waste hereunder, comply with all applicable federal, state and local laws, regulations, rules and orders regarding the same. The word "Facility" shall mean any landfill, transfer station or other location used to transfer, process or otherwise dispose of such Waste.
7. **Special Waste.** Generator represents, warrants and covenants that the Waste delivered to Company hereunder (i) will not contain any Special Waste that is not specifically described on any Application which is attached hereto or which is subsequently approved by the Company, (ii) will meet the material description as set forth in any Application and otherwise in all significant respects and (iii) will not contain Unacceptable Waste. The parties may incorporate additional Special Waste as part of this Agreement if prior to delivery of such Waste to Company, Generator has provided an Application for such Waste and Company has approved disposal of such Waste within the limitations and conditions contained in Company's written notice of approval of Special Waste Disposal. Title to any and all Waste handled or disposed of by Company shall at all times remain with Generator and Broker (if a Broker is involved).
8. **Rights of Refusal/Rejection.** The Generator shall inspect all Waste at the place(s) of collection and shall remove any and all Unacceptable Waste. Company has the right to refuse, or to reject after acceptance, any load(s) of Waste(s) delivered to its Facility including if the Company believes the Generator has breached (or is breaching) its representations, warranties, covenants or agreements hereunder, or any applicable federal, state or local laws, regulations, rules or orders, even if only a portion of such Waste load is unacceptable. The Company shall have the right to inspect all vehicles and containers of Waste haulers, including the Generator's vehicles, in order to determine whether the Waste is Acceptable Waste or Unacceptable Waste pursuant to this Agreement and all applicable federal, state and local laws, rules and regulations. The Company's exercise, or failure to exercise, its rights hereunder shall not operate to relieve the Generator of its responsibilities or liability under this Agreement. The Generator shall be responsible for, and bear all reasonable expenses and damages incurred by the Company, as a result of the Unacceptable Waste and in the reloading and removal of Unacceptable Waste disposed in the Facility. The Company, may also, in its sole discretion, require the Generator to promptly remove the Unacceptable Waste.
9. **Limited License to Enter.** This Agreement provides Generator with a license to enter the Facility for the limited purpose of, and only to the extent necessary for, off-loading Acceptable Waste at the Facility in the manner directed by Company. Except in an emergency, Generator's personnel shall not leave the immediate vicinity of their vehicle. After off-loading the Waste, Generator's personnel shall promptly leave the Facility. Under no circumstances shall Generator or its personnel engage in any scavenging of Waste or other materials at the Facility. The Company reserves the right to make and enforce reasonable rules and regulations concerning the operation of the Facility, the conduct of the drivers and others on the Facility premises, quantities and sources of Waste, and any other matters necessary or desirable for the safe, legal and efficient operation of the Facility including, but not limited to, speed limits on haul roads imposed by the Company, and the wearing of hard hats and other personal protection equipment by all individuals allowed on the Facility premises. Generator agrees to conform to such rules and regulations as they may be established and amended from time to time. Company may refuse to accept Waste from and shall deny an entrance license to, any of Generator's personnel whom Company believes is under the influence of alcohol or other chemical substances. Generator shall be solely responsible for its employees and subcontractors performing their obligations in a safe manner when at the facility of Company.
10. **Charges and Payment.** Payment shall be made by Generator within sixty (60) days after receipt of invoice from Company. In the event that any amount is overdue, the Company may terminate this Agreement. Generator agrees to pay a finance charge equal to the maximum interest rate permitted by law. Generator shall be liable for all taxes, fees, or other charges imposed upon the disposal of the Waste by federal, state, local or provincial laws and regulations. Company, from time to time, may modify its rates upon sixty (60) days written notice to Generator.
11. **Termination.** Generator's obligations, representations, warranties and covenants regarding the Waste delivered and all indemnities shall survive termination of this Agreement. Should Generator materially default in any of its obligations hereunder, then Company may immediately terminate this Agreement and Generator shall be liable for all costs and damages incurred by the Company.
12. **Driver's Knowledge and Authority.** Generator represents, warrants and covenants that its drivers who deliver Waste to Company's Facility have been advised by Generator of the Company's prohibition on deliveries of hazardous materials or substances, radioactive materials or substances, or toxic waste or substances or any other Unacceptable Waste to the Facility of Company's restrictions on deliveries of Special Waste to the Facility, of the definitions of "Hazardous Waste and Hazardous Substances" as provided by applicable federal, state and local law, rules and regulations and "Special Waste" as provided herein, and of the terms of this license to enter Company's Facility.
13. **Indemnification.** Generator shall indemnify, defend and hold harmless the Company and its subsidiaries, affiliates and parent corporations, as applicable and their respective officers, directors, lenders, employees, subcontractors and agents from and against any and all claims, suits, losses, liabilities, assessments, damages, fines, costs and expenses, including reasonable attorneys fees arising under federal, state or local laws, regulations or ordinances, or relating to the content of the Waste, or arising out of or in connection with any breach of this Agreement or arising out of the negligent collection, transportation and disposal of Waste by Generator or Generator's employees, agents, subcontractors or representatives thereof. Generator shall also be responsible for increased inspection, testing, study and analysis costs made necessary due to reasonable concerns of the Company as to the content of the Waste following discovery of potentially Unacceptable Waste. This indemnification and other obligations stated in this paragraph shall survive the termination of this Agreement.
14. **Insurance.** Generator shall maintain in full force and effect throughout the term of this Agreement the following types of insurance in at least the amounts specified below.

Coverages	Minimum Amounts of Insurance
Worker's Compensation	Statutory
General Liability	\$500,000 combined single limit
Automobile Liability	\$500,000 combined single limit

All insurance will be by insurers authorized to do business in the state in which the Facility is located. Prior to Generator being allowed on Facility premises, Generator shall provide the Company with certificates of insurance or other satisfactory evidence that such insurance has been procured and is in force. Said policies shall not thereafter be canceled, be permitted to expire or lapse, or be changed without thirty (30) days advance written notice to the Company. Generator warrants that it will secure the above minimum amounts of insurance from any transportation of the Waste to the Facility.

15. **Failure to Perform.** Neither party hereto shall be liable for its failure to perform hereunder due to circumstances not its fault and beyond its reasonable control, including, but not limited to, strikes or other labor disputes, riots, protests, civil disturbances or sabotage, changes in law, fires, floods, compliance with government requests, explosions, accidents, weather, lack of required natural resources, or acts of God affecting either party hereto. In the event of any of the circumstances provided for in the preceding sentence, including, but not limited to, whether any federal, state or local court or governmental authority takes any action which would (i) close or restrict operations at the Facility, (ii) limit the quantity or prohibit the disposal of Waste at the Facility, or (iii) limit the ability of or prohibit Generator from delivering Waste to the Facility, the Company shall have the right, at its option, to reduce, suspend or terminate Generator's access to the Facility immediately, without prior notice and without any additional liabilities between the parties, other than Generator's payment obligation hereunder. Neither Party is required hereunder to settle any labor dispute against its own best judgment.

16. **Other Termination.** The occurrence of any of the following events shall also constitute an event of default by the Generator and shall give the Company the right to immediately terminate this Agreement.

- (A) A petition for reorganization or bankruptcy filed by or against the Generator.
- (B) Failure by Generator to pay any amounts due to Company
- (C) Any breach by Generator of any of its obligations pursuant to the Agreement

Generator shall be liable for and shall indemnify, defend and hold harmless Company from any losses, claims expenses or damages incurred by the Company as a result of termination hereunder.

17. **Assignment.** Generator may not assign, transfer or otherwise vest in any other Company, entity or person, in whole or in part, any of its rights or obligations under the Agreement without the prior written consent of the Company, provided, however, that the Company may without any such prior written consent, assign its rights and/or obligations under the Agreement to a subsidiary or affiliate corporation.

18. **Right of Disposal.** This Agreement does not grant any rights to dispose of Waste other than in accordance herewith. The Company reserves the right to immediately terminate access to the Facility by Generator and Generator's personnel in the event of breach or violation by Generator of any of the terms of this Agreement, the Company's operating rules or payment policies or any applicable laws or regulations.

19. **Continuing Compliance.** The Generator has a continuing obligation to inform the Company of any new information, or information not previously provided to the Company by Generator which may affect the acceptability of the Waste by the Company. Further, the Generator shall comply with all Company requests for evidence of Generator's continuing compliance with the terms of the Agreement including but not limited to the following: (i) providing new, updated Waste profiles on the Waste(s) offered for disposal or, (ii) providing appropriate certification that the Waste being offered for disposal is accurately reflected by the appropriate Application or, (iii) re-sample the Waste at Generator's expense if reasonable cause exists as to its acceptability under the terms of this Agreement or, (iv) allow the Company to re-sample the Waste at Generator's expense if reasonable cause exists as to its acceptability under the terms of this Agreement or (v) all of the above.

## 20. Miscellaneous

- (A) This Agreement shall be governed by the laws of the State in which the Facility is located.
- (B) No waiver of a breach of any of the obligations contained in the Agreement shall be construed to be a waiver of any prior or succeeding breach of the same obligation or of any other obligation of this Agreement.
- (C) No modification, release, discharge or waiver of any provision or obligation hereof shall be of any force, or effect, unless in writing signed by all parties to this Agreement.
- (D) Generator shall treat as confidential and not disclose to others during or subsequent to the terms of this Agreement, except as is necessary to perform this Agreement, or to comply with any applicable law or regulation any information (including any technical information, experience or data) regarding the Company's plans, programs, plants, processes, products, costs, equipment or operations which may come within the knowledge of the Generator or its employees in the performance of this Agreement, without in each instance securing the prior written consent of the other Company.
- (E) If any term, phrase, obligation or provision of this Agreement shall be held to be invalid, illegal or unenforceable in any respect, this Agreement shall remain in effect and be construed without regard to such term, phrase, obligation or provision.
- (F) This Agreement constitutes the entire understanding between the parties, replacing and amending any prior agreements between the parties, and shall be binding upon all parties hereto, their successors, heirs, representatives and assigns. Any provision, term or condition in any acknowledgement, purchase order or other response by Generator which is in addition to or different from the provisions of this Agreement shall be deemed objected to by the Company and shall be of no effect.
- (G) Generator represents, warrants and covenants that it is and, during the term of this Agreement will remain, in compliance with and will perform its obligations pursuant to all applicable laws and regulations and shall indemnify, defend and hold harmless the Company from any breach thereof.
- (H) It is the understanding and agreement of the parties that the Company is an independent contractor, and is not an agent, nor an authorized representative of the Generator.

21. **Notices.** All notices herein provided for shall be considered as having been given upon being placed in the mail, certified postage prepaid addressed to the Company or Generator at the address herein set forth in this Agreement or to such other address as may be given to the other party in writing.

22. **Liquidated Damages.** In the event that this Agreement is terminated by the Generator in a manner not in accordance with paragraph 4 hereof, or terminated due to a breach of this Agreement by the Generator, the Generator shall pay, as liquidated damages, and not as a penalty, the greater of an amount equal to six (6) months' service charges or the Generator's most recent monthly charge multiplied by six (6). The Generator shall be given credit for any advance payments made hereunder, however, in computing the amount owed as liquidated damages hereunder. The Generator acknowledges that this liquidated damages clause is reasonable and is applicable to recover damages related to its investment in equipment, development of landfills and hiring of employees undertaken by the Company to service its customers including the Generator. This liquidated damages clause in no way relieves the Generator from its obligations and liability for other cost or damages as set forth elsewhere in this Agreement.

GENERATOR: \_\_\_\_\_

Republic Services, Inc./COMPANY: \_\_\_\_\_

May 2009





**WORK ORDER NUMBER: 17-09-0040**

*The difference is service*



AIR | SOIL | WATER | MARINE CHEMISTRY

**Analytical Report For**

**Client:** Kirkhill Rubber

**Client Project Name:** Chemical Testing

**Attention:** Mike Kilroy  
12023 Woodruff Avenue  
Downey, CA 90241-5603

Approved for release on 09/07/2017 by:  
Don Burley  
Project Manager

ResultLink ▶

Email your PM ▶

Eurofins Calscience, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.



# Contents

Client Project Name: Chemical Testing  
Work Order Number: 17-09-0040

1	Work Order Narrative. . . . .	3
2	Sample Summary. . . . .	4
3	Client Sample Data. . . . .	5
	3.1 EPA 300.0 Anions (Solid). . . . .	5
	3.2 EPA 6010B ICP Metals (Solid). . . . .	6
4	Quality Control Sample Data. . . . .	7
	4.1 MS/MSD. . . . .	7
	4.2 LCS/LCSD. . . . .	9
5	Sample Analysis Summary. . . . .	11
6	Glossary of Terms and Qualifiers. . . . .	12
7	Chain-of-Custody/Sample Receipt Form. . . . .	13

**Condition Upon Receipt:**

Samples were received under Chain-of-Custody (COC) on 09/01/17. They were assigned to Work Order 17-09-0040.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

**Holding Times:**

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of  $\leq 15$  minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

**Quality Control:**

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

**Subcontractor Information:**

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

**Additional Comments:**

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

**Sample Summary**

---

Client: Kirkhill Rubber	Work Order: 17-09-0040
12023 Woodruff Avenue	Project Name: Chemical Testing
Downey, CA 90241-5603	PO Number:
	Date/Time Received: 09/01/17 13:04
	Number of Containers: 1

Attn: Mike Kilroy

---

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
Carbon Media	17-09-0040-1	09/01/17 10:00	1	Solid

## Analytical Report

Kirkhill Rubber	Date Received:	09/01/17
12023 Woodruff Avenue	Work Order:	17-09-0040
Downey, CA 90241-5603	Preparation:	N/A
	Method:	EPA 300.0
	Units:	mg/kg
Project: Chemical Testing		Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
<b>Carbon Media</b>	<b>17-09-0040-1-A</b>	<b>09/01/17 10:00</b>	<b>Solid</b>	<b>IC 7</b>	<b>09/02/17</b>	<b>09/02/17 17:07</b>	<b>170902L01P</b>

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Sulfate	74	10	1.00	

<b>Method Blank</b>	<b>099-12-922-879</b>	<b>N/A</b>	<b>Solid</b>	<b>IC 7</b>	<b>09/02/17</b>	<b>09/02/17 16:30</b>	<b>170902L01P</b>
---------------------	-----------------------	------------	--------------	-------------	-----------------	---------------------------	-------------------

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Sulfate	ND	10	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

## Analytical Report

Kirkhill Rubber  
12023 Woodruff Avenue  
Downey, CA 90241-5603

Date Received: 09/01/17  
Work Order: 17-09-0040  
Preparation: EPA 3050B  
Method: EPA 6010B  
Units: mg/kg

Project: Chemical Testing

Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
<b>Carbon Media</b>	<b>17-09-0040-1-A</b>	<b>09/01/17 10:00</b>	<b>Solid</b>	<b>ICP 7300</b>	<b>09/02/17</b>	<b>09/06/17 11:38</b>	<b>170901L02</b>

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Barium	ND	0.488	0.976	

<b>Method Blank</b>	<b>097-01-002-25301</b>	<b>N/A</b>	<b>Solid</b>	<b>ICP 7300</b>	<b>09/01/17</b>	<b>09/01/17 19:02</b>	<b>170901L02</b>
---------------------	-------------------------	------------	--------------	-----------------	-----------------	---------------------------	------------------

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Qualifiers</u>
Barium	ND	0.490	0.980	



Calscience

## Quality Control - Spike/Spike Duplicate

Kirkhill Rubber  
12023 Woodruff Avenue  
Downey, CA 90241-5603

Date Received: 09/01/17  
Work Order: 17-09-0040  
Preparation: N/A  
Method: EPA 300.0

Project: Chemical Testing

Page 1 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
Carbon Media	Sample	Solid	IC 7	09/02/17	09/02/17 17:07	170902S01P
Carbon Media	Matrix Spike	Solid	IC 7	09/02/17	09/02/17 17:25	170902S01P
Carbon Media	Matrix Spike Duplicate	Solid	IC 7	09/02/17	09/02/17 17:43	170902S01P

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Sulfate	73.84	500.0	481.9	82	483.6	82	80-120	0	0-20	

RPD: Relative Percent Difference. CL: Control Limits



Calscience

## Quality Control - Spike/Spike Duplicate

Kirkhill Rubber  
12023 Woodruff Avenue  
Downey, CA 90241-5603

Date Received: 09/01/17  
Work Order: 17-09-0040  
Preparation: EPA 3050B  
Method: EPA 6010B

Project: Chemical Testing

Page 2 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
17-08-2291-1	Sample	Solid	ICP 7300	09/01/17	09/01/17 19:05	170901S02
17-08-2291-1	Matrix Spike	Solid	ICP 7300	09/01/17	09/01/17 19:06	170901S02
17-08-2291-1	Matrix Spike Duplicate	Solid	ICP 7300	09/01/17	09/01/17 19:07	170901S02

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Barium	85.41	25.00	134.8	198	122.7	149	75-125	9	0-20	3

RPD: Relative Percent Difference. CL: Control Limits



## Quality Control - LCS

Kirkhill Rubber	Date Received:	09/01/17
12023 Woodruff Avenue	Work Order:	17-09-0040
Downey, CA 90241-5603	Preparation:	N/A
	Method:	EPA 300.0
Project: Chemical Testing		Page 1 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
<b>099-12-922-879</b>	<b>LCS</b>	<b>Solid</b>	<b>IC 7</b>	<b>09/02/17</b>	<b>09/02/17 16:48</b>	<b>170902L01P</b>
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
Sulfate		500.0	494.3	99	90-110	

## Quality Control - LCS

Kirkhill Rubber	Date Received:	09/01/17
12023 Woodruff Avenue	Work Order:	17-09-0040
Downey, CA 90241-5603	Preparation:	EPA 3050B
	Method:	EPA 6010B
Project: Chemical Testing		Page 2 of 2

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
<b>097-01-002-25301</b>	<b>LCS</b>	<b>Solid</b>	<b>ICP 7300</b>	<b>09/01/17</b>	<b>09/01/17 19:03</b>	<b>170901L02</b>
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
Barium		25.00	27.25	109	80-120	

## Sample Analysis Summary Report

Work Order: 17-09-0040

Page 1 of 1

<u>Method</u>	<u>Extraction</u>	<u>Chemist ID</u>	<u>Instrument</u>	<u>Analytical Location</u>
EPA 300.0	N/A	834	IC 7	1
EPA 6010B	EPA 3050B	771	ICP 7300	1

## Glossary of Terms and Qualifiers

Work Order: 17-09-0040

Page 1 of 1

<u>Qualifiers</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.
	Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.
	A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.



**SAMPLE RECEIPT CHECKLIST**

COOLER 1 OF 1

CLIENT: KIRK HILL

DATE: 09/01/2017

**TEMPERATURE:** (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)  
 Thermometer ID: SC6 (CF: +0.2°C); Temperature (w/o CF): 25.6 °C (w/ CF): 25.8 °C;  Blank  Sample  
 Sample(s) outside temperature criteria (PM/APM contacted by: \_\_\_\_\_)  
 Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling  
 Sample(s) received at ambient temperature; placed on ice for transport by courier  
 Ambient Temperature:  Air  Filter Checked by: 826

**CUSTODY SEAL:**

Cooler	<input type="checkbox"/> Present and Intact	<input type="checkbox"/> Present but Not Intact	<input checked="" type="checkbox"/> Not Present	<input type="checkbox"/> N/A	Checked by: <u>826</u>
Sample(s)	<input type="checkbox"/> Present and Intact	<input type="checkbox"/> Present but Not Intact	<input checked="" type="checkbox"/> Not Present	<input type="checkbox"/> N/A	Checked by: <u>778</u>

**SAMPLE CONDITION:**

	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples .....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
COC document(s) received complete .....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> Sampling date <input type="checkbox"/> Sampling time <input type="checkbox"/> Matrix <input type="checkbox"/> Number of containers <input type="checkbox"/> No analysis requested <input type="checkbox"/> Not relinquished <input type="checkbox"/> No relinquished date <input type="checkbox"/> No relinquished time			
Sampler's name indicated on COC .....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container label(s) consistent with COC .....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sample container(s) intact and in good condition .....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Proper containers for analyses requested .....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sufficient volume/mass for analyses requested .....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Samples received within holding time .....	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Aqueous samples for certain analyses received within 15-minute holding time			
<input type="checkbox"/> pH <input type="checkbox"/> Residual Chlorine <input type="checkbox"/> Dissolved Sulfide <input type="checkbox"/> Dissolved Oxygen .....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Proper preservation chemical(s) noted on COC and/or sample container .....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Unpreserved aqueous sample(s) received for certain analyses			
<input type="checkbox"/> Volatile Organics <input type="checkbox"/> Total Metals <input type="checkbox"/> Dissolved Metals			
Acid/base preserved samples - pH within acceptable range .....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Container(s) for certain analysis free of headspace.....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
<input type="checkbox"/> Volatile Organics <input type="checkbox"/> Dissolved Gases (RSK-175) <input type="checkbox"/> Dissolved Oxygen (SM 4500) <input type="checkbox"/> Carbon Dioxide (SM 4500) <input type="checkbox"/> Ferrous Iron (SM 3500) <input type="checkbox"/> Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation .....	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**CONTAINER TYPE:** (Trip Blank Lot Number: \_\_\_\_\_)

**Aqueous:**  VOA  VOA<sub>h</sub>  VOA<sub>na2</sub>  100PJ  100PJ<sub>na2</sub>  125AGB  125AGB<sub>h</sub>  125AGB<sub>p</sub>  125PB  125PB<sub>z</sub>na (pH\_\_9)  
 250AGB  250CGB  250CGBs (pH\_\_2)  250PB  250PB<sub>n</sub> (pH\_\_2)  500AGB  500AGJ  500AGJs (pH\_\_2)  500PB  
 1AGB  1AGB<sub>na2</sub>  1AGBs (pH\_\_2)  1AGBs (O&G)  1PB  1PB<sub>na</sub> (pH\_\_12)  \_\_\_\_\_  \_\_\_\_\_

**Solid:**  4ozCGJ  8ozCGJ  16ozCGJ  Sleeve (\_\_\_\_)  EnCores® (\_\_\_\_)  TerraCores® (\_\_\_\_)  1ICGJ  \_\_\_\_\_  \_\_\_\_\_

**Air:**  Tedlar™  Canister  Sorbent Tube  PUF  \_\_\_\_\_ **Other Matrix** (\_\_\_\_):  \_\_\_\_\_  \_\_\_\_\_  \_\_\_\_\_

Container: **A** = Amber, **B** = Bottle, **C** = Clear, **E** = Envelope, **G** = Glass, **J** = Jar, **P** = Plastic, and **Z** = Ziploc/Resealable Bag

Preservative: **b** = buffered, **f** = filtered, **h** = HCl, **n** = HNO<sub>3</sub>, **na** = NaOH, **na<sub>2</sub>** = Na<sub>2</sub>S<sub>2</sub>O<sub>3</sub>, **p** = H<sub>3</sub>PO<sub>4</sub>, **s** = H<sub>2</sub>SO<sub>4</sub>, **u** = ultra-pure, **x** = Na<sub>2</sub>SO<sub>3</sub>+NaHSO<sub>4</sub>.H<sub>2</sub>O, **z**na = Zn (CH<sub>3</sub>CO<sub>2</sub>)<sub>2</sub> + NaOH

Labeled/Checked by: 770  
 Reviewed by: 1017



# Republic Services, Inc.

18500 N. Allied Way, Phoenix, AZ 85054

## SPECIAL WASTE DEPARTMENT DECISION

Waste Profile #  
51231713383

Expiration Date  
2/15/2018

### I. Decision Request:

Initial     Recertification     Change

Disposal Facility: 5123 - Sunshine Canyon Landfill

Generator Name: Los Angeles Department of Water and Power

Generator Site Address: 15000 1/2 Mulholland Dr

City: Los Angeles

County:

State: CA

Zip:

Name of Waste: HDPE (High Density Polyethylene - Plastic) Shade Balls

Estimated Annual Volume: 246 Tons

### II. Special Waste Department Decision:    Approved    Rejected

Management Method(s):     Landfill     Solidification     Bioremediation     Transfer Facility

Problematic Special Waste according to Republic?     Yes     No

If yes, which one? \_\_\_\_\_

Approved by Special Waste Review Committee?     Yes     No     Not Applicable

### Precautions, Conditions or Limitations on Approval

Special Waste Analyst Signature: *Joseph M. Sorokach*  
Date: 8/17/2017

Name (Printed): Joseph Sorokach

### III. Facility Decision:    Approved    Rejected

### Precautions, Conditions or Limitations on Approval

HDPE Balls are to be crushed/smashed prior to delivery to the landfill.

By signing below, the General Manager or Designee agrees that a fully executed Special Waste Service Agreement is on file for this profile and that the special waste file is complete.

General Manager or Designee: *Chris Coyle*  
Date: 8/17/2017

Name (Printed): Chris Coyle

Requested Disposal Facility: 5123 Sunshine Canyon LF CA

Waste Profile #  5123 17 13383
Sales Rep #: 177 - Fred Hays

Saveable fill-in form. Restricted printing until all required (yellow) fields are completed.

**I. Generator Information**

Generator Name: Los Angeles Department of Water and Power			
Generator Site Address: 15000 1/2 Mulholland Dr.			
City: Los Angeles	County: Los Angeles	State: California	Zip: 90077
State ID/Reg No: NA	State Approval/Waste Code: NA	(if applicable)	NAICS # :
Generator Mailing Address (if different): <input type="checkbox"/> 15000 1/2 Mulholland Dr.			
City: Los Angeles	County:	State: California	Zip: 90077
Generator Contact Name: Brent Dolan		Email: brent.dolan@ladwp.com	
Phone Number: (213) 792-4774	Ext: NA	Fax Number:	

**II. Billing Information**

Bill To: Kiewit Infrastructure West Co.	Contact Name: Troy Huntington		
Billing Address: 10704 Shoemaker Ave.	Email: troy.huntington@kiewt.com		
City: Santa Fe Springs	State: California	Zip: 90670	Phone: (562) 946-1816

**III. Waste Stream Information**

Name of Waste: HDPE (High Density Polyethylene - Plastic) Shade Balls	
Process Generating Waste: Disposal of shade balls that were used to protect potable water from evaporating at the surface of the Stone Canyon Reservoir.	
Type of Waste:	<input checked="" type="checkbox"/> INDUSTRIAL PROCESS WASTE <input type="checkbox"/> POLLUTION CONTROL WASTE
Physical State:	<input checked="" type="checkbox"/> SOLID <input type="checkbox"/> SEMI-SOLID <input type="checkbox"/> POWDER <input type="checkbox"/> LIQUID
Method of Shipment:	<input checked="" type="checkbox"/> BULK <input type="checkbox"/> DRUM <input type="checkbox"/> BAGGED <input type="checkbox"/> OTHER:
Estimated Annual Volume:	246 Tons
Frequency:	<input checked="" type="checkbox"/> ONE TIME <input type="checkbox"/> ONGOING
Disposal Consideration:	<input checked="" type="checkbox"/> LANDFILL <input type="checkbox"/> SOLIDIFICATION <input type="checkbox"/> BIOREMEDIATION

**IV. Representative Sample Certification**

NO SAMPLE TAKEN

Is the representative sample collected to prepare this profile and laboratory analysis, collected in accordance with U.S. EPA 40 CFR 261.20(c) guidelines or equivalent rules?	<input type="checkbox"/> YES or <input type="checkbox"/> NO
Type of Sample:	<input type="checkbox"/> COMPOSITE SAMPLE <input type="checkbox"/> GRAB SAMPLE
Sample Date:	
Sample ID Numbers:	



Waste Profile #
5123 17 13383

**V. Physical Characteristics of Waste**

Characteristic Components		% by Weight (range)			
1. HDPE (High Density Polyethylene - Plastic)		100			
2.					
3.					
4.					
5.					
Color	Odor (describe)	Does Waste Contain Free Liquids?	% Solids	pH:	Flash Point
Black	NA	<input type="checkbox"/> YES or <input checked="" type="checkbox"/> NO	100	NA	NA °F

*Attach Laboratory Analytical Report (and/or Material Safety Data Sheet) Including Chain of Custody and Required Parameters Provided for this Profile*

Does this waste or generating process contain regulated concentrations of the following Pesticides and/or Herbicides: Chlordane, Endrin, Heptachlor (and its epoxides), Lindane, Methoxychlor, Toxaphene, 2,4-D, or 2,4,5-TP Silvex as defined in 40 CFR 261.33?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Does this waste contain reactive sulfides (greater than 500 ppm) or reactive cyanide (greater than 250 ppm)[reference 40 CFR 261.23(a)(5)]?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Does this waste contain regulated concentrations of Polychlorinated Biphenyls (PCBs) as defined in 40 CFR Part 761?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Does this waste contain concentrations of listed hazardous wastes defined in 40 CFR 261.31, 261.32, 261.33, including RCRA F-Listed Solvents?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Does this waste exhibit a Hazardous Characteristic as defined by Federal and/or State regulations?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Does this waste contain regulated concentrations of 2,3,7,8-Tetrachlorodibenzodioxin (2,3,7,8-TCDD), or any other dioxin as defined in 40 CFR 261.31?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Is this a regulated Radioactive Waste as defined by Federal and/or State regulations?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Is this a regulated Medical or Infectious Waste as defined by Federal and/or State regulations?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Is this waste a reactive or heat generating waste?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Does the waste contain sulfur or sulfur by-products?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Is this waste generated at a Federal Superfund Clean Up Site?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Is this waste from a TSD facility, TSD like facility or consolidator?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No

**VI. Certification**

I hereby certify that to the best of my knowledge and belief, the information contained herein is a true, complete and accurate description of the waste material being offered for disposal and all known or suspected hazards have been disclosed. All Analytical Results/Material Safety Data Sheets submitted are truthful and complete and are representative of the waste.

I further certify that by utilizing this profile, neither myself nor any other employee of the company will deliver for disposal or attempt to deliver for disposal any waste which is classified as toxic waste, hazardous waste or infectious waste, or any other waste material this facility is prohibited from accepting by law. I shall immediately give written notice of any change or condition pertaining to the waste not provided herein. Our company hereby agrees to fully indemnify this disposal facility against any damages resulting from this certification being inaccurate or untrue.

I further certify that the company has not altered the form or content of this profile sheet as provided by Republic Services Inc.

Brent Dolan

Los Angeles Department of Water and Power

Authorized Representative Name And Title (Type or Print)

Company Name



8/15/17

Authorized Representative Signature

Date



**THIRD PARTY SIGNATURE AUTHORIZATION  
for Special Waste Disposal**

Date: 08/15/17

This Authorization is only valid for 3 years  
from the above date.

To Whom It May Concern:


Please be advised that the following company/individual has been appointed to work as our agent for purposes of managing waste materials that we may generate.

Name of Authorized Agent <b>Arturo Kaloyan</b>	Title <b>Superintendent</b>
Name of Company <b>Kiewit Infrastructure West Co.</b>	Telephone Number <b>(310)310-9369</b>

The above broker/individual is authorized to act as our authorized agent for the following purposes:

- Complete and sign Special Waste Profile.
- Complete and sign Special Waste Profile-Recertification.
- Authorize amendments to Special Waste Profile.
- Sign contracts to dispose and/or transport material.
- Sign certifications necessary to comply with landfill requirements.
- Sign manifests to initiate shipment to disposal facilities.

Our authorized agent will notify us prior to any action stated above, and will provide us with copies of any documents bearing our name.

Name of Company Los Angeles Department of Water and Power	Mailing Address 510 E. 2nd Street Los Angeles, CA 90012
Generator Contact (Print Name) <b>Brent Dolan</b>	Title <b>Resident Engineer</b>
Signature 	Telephone Number <b>(213)792-4774</b>



AGENT SPECIAL WASTE SERVICE AGREEMENT
NON-HAZARDOUS WASTES

Special Waste Profile Number: 5123 17 13383

Agent Billing Information

Name: KIEWIT INFRASTRUCTURE WEST CO (ACCT # 333375)
Address: 10704 SHOE MAKER AVE
City: SANTA FE SPRINGS
State: CALIFORNIA Zip: 90670
Phone: 562.946.1816 Fax:
Contact: TROY HUNTINGTON

Republic Waste Location (Company)

SUNSHINE CANYON LANDFILL (5123)
14747 SAN FERNANDO ROAD
SYMAR, CA 91342
818.833.6500

County and State

Project: LOS ANGELES DEPARTMENT OF WATER & POWER of Origin: LOS ANGELES, CALIFORNIA
Generator Address: 15000 1/2 MULHOLLAND DR, LOS ANGELES, CA 90077 | KIEWIT PO#:
Additional Information: CONTACT: BRENT DOLAN | PHONE: 213.792.4774

- 1. Special Waste Service. Subject to the terms and conditions contained herein, the Company and the Agent agree to be legally bound hereby and the Company agrees to accept at its Facility, Acceptable Waste (hereinafter referred to as "Special Waste" or "Waste") delivered by Agent, and which is acceptable to the Company as herein provided.
2. Acceptable Waste. Only those Special Wastes described in Paragraph 3 herein and in any Special Waste Profile(s) which number is

this Agreement as if fully set forth herein.

- 1) N/A
2) N/A

- 4. Term of Agreement. This Agreement is effective for 7 months, 8/17/2017 and shall automatically be renewed for a similar term thereafter unless either party shall give written notice (via certified mail) of termination to the other party at least thirty (30) days prior written notice. MSA overrides any termination dates.

THE COMPANY AND THE AGENT, IN CONSIDERATION OF THE MUTUAL OBLIGATIONS CONTAINED HEREIN, AGREE THAT THIS IS A LEGALLY BINDING AGREEMENT WHICH IS SUBJECT TO THE TERMS AND CONDITIONS SET FORTH WITHIN MSA HELD BETWEEN THE TWO COMPANIES.

AGENT

Signature of James Makarevich

JAMES MAKAREVICH, PROJECT MGR.

11/09/2017
DATE

REPUBLIC SERVICES, INC/COMPANY

Signature of Fred Hays II

Fred Hays - Director of MES

11/9/2017
DATE



21



CERTIFIED TO NSF/ANSI 61



ARTISAN  
CA  
91702

W.R.





# Republic Services, Inc.

18500 N. Allied Way, Phoenix, AZ 85054

## SPECIAL WASTE DEPARTMENT DECISION

	Waste Profile # 51231710788	Expiration Date 9/30/2017	
I. Decision Request:	<input checked="" type="checkbox"/> Initial <input type="checkbox"/> Recertification <input type="checkbox"/> Change		
Disposal Facility: 5123 - Sunshine Canyon Landfill			
Generator Name: Lucky Taro Inc			
Generator Site Address: 1884 E 22nd St			
City: Los Angeles	County:	State: CA	Zip:
Name of Waste: Food Products			
Estimated Annual Volume: 5 Tons			

II. Special Waste Department Decision:     Approved     Rejected

Management Method(s):     Landfill     Solidification     Bioremediation     Transfer Facility

Problematic Special Waste according to Republic?     Yes     No

If yes, which one? \_\_\_\_\_

Approved by Special Waste Review Committee?     Yes     No     Not Applicable

### Precautions, Conditions or Limitations on Approval

FOOD PRODUCT: This waste must be buried immediately upon receipt at the landfill.

Special Waste Analyst Signature: Joseph M. Sorokach  
Date: 7/6/2017

Name (Printed): Joseph Sorokach

III. Facility Decision:     Approved     Rejected

### Precautions, Conditions or Limitations on Approval

By signing below, the General Manager or Designee agrees that a fully executed Special Waste Service Agreement is on file for this profile and that the special waste file is complete.

General Manager or Designee: Rob Sherman  
Date: 7/6/2017

Name (Printed): Rob Sherman





EXPRESS WASTE PROFILE

Requested Disposal Facility: 5123 Sunshine Canyon LF CA

Waste Profile #
5123 17 10788
Sales Rep #: 525 - Stacy Loveland

Saveable fill in form. Restricted printing until all required (yellow) fields are completed.

I. Generator Information

Generator Name: LUCKY TARO, INC.			
Generator Site Address: 1884 E. 22ND ST.			
City: LOS ANGELES	County: LOS ANGELES	State: California	Zip: 90058
State ID/Reg No:	State Approval/Waste Code:	(if applicable)	NAICS #.
Generator Mailing Address (if different): 1884 E. 22ND ST.			
City: LOS ANGELES	County: LOS ANGELES	State: California	Zip: 90058
Generator Contact Name: MINUT OR HANNA		Email: minut@luckytaroinc.com	
Phone Number: (213) 113-3338	Ext:	Fax Number: (213) 745-8555	

II. Billing Information

Bill To: LUCKY TARO, INC.	Contact Name: MINUT		
Billing Address: 1884 E. 22ND ST.	Email: minut@luckytaroinc.com		
City: LOS ANGELES	State: CA	Zip: 90058	Phone: (213) 748-9555

III. Waste Stream Information

Name of Waste: <small>(Petroleum products-applies only to contaminated media and debris).</small>	<input type="checkbox"/> Diesel Fuel	<input type="checkbox"/> Weathered Wood	<input type="checkbox"/> Friable Asbestos
	<input type="checkbox"/> Home Heating Fuel #1-6	<input type="checkbox"/> RCRA Empty Containers	<input type="checkbox"/> Non Friable Asbestos
	<input type="checkbox"/> Kerosene	<input type="checkbox"/> Treated Medical Waste	<input type="checkbox"/> Cured Asphalt
	<input type="checkbox"/> Aviation Fuel	<input type="checkbox"/> Animal Carcass (non infectious)	<input type="checkbox"/> Tires
	<input type="checkbox"/> Hydraulic Fluid	<input type="checkbox"/> Plant Trash	<input checked="" type="checkbox"/> Food Products <small>(Including Animal Food)</small>
	<input type="checkbox"/> Unleaded Gasoline (UST Corrective Action)	<input type="checkbox"/> Meth Contaminated Debris	

Process Generating Waste: WE HAVE PURPLE YAM, TARO STEM, GALANGA & TURMERIC THAT NEED TO BE DISPOSED DUE TO FAILING TO PASS INSPECTION BY THE AGRICULTURAL COMMISSIONER/WEIGHTS AND MEASURES DEPARTMENT.

Method of Shipment: <input type="checkbox"/> BULK <input type="checkbox"/> DRUM <input checked="" type="checkbox"/> BAGGED <input type="checkbox"/> OTHER:
Estimated Annual Volume: 5 Tons
Frequency: <input checked="" type="checkbox"/> ONE TIME <input checked="" type="checkbox"/> ONGOING

One time per  
Generator 7/6/2017

IV. Certification

I hereby certify that to the best of my knowledge and belief, the information contained herein is a true and accurate description of the waste material being offered for disposal. I further certify that by utilizing this profile, neither myself nor any other employee of the company will deliver for disposal or attempt to deliver for disposal any waste which is classified as toxic waste, hazardous waste or infectious waste, or any other waste material this facility is prohibited from accepting by law. Our company hereby agrees to fully indemnify this disposal facility against any damages resulting from this certification being inaccurate or untrue. I further certify that the company has not altered the form or content of this profile sheet as provided by Republic Services, Inc.

MINUT MAO Authorized Representative Name/Title (Type or Print)	LUCKY TARO, INC. Company Name
	07/06/2017 Date
Authorized Representative Signature	

# SPECIAL WASTE SERVICE AGREEMENT NON-HAZARDOUS WASTES

Special Waste Profile Number: 5123 17 10788

### Generator Billing Information

Name: LUCKY TARO INC  
(ACCT CASH # 321)  
Address: 1884 E 22<sup>ND</sup> ST  
City: LOS ANGELES  
State: CA Zip: 90058  
Phone: 213.748.9555 Fax: \_\_\_\_\_  
Contact: MINUT

### Republic Waste Location (Company)

SUNSHINE CANYON LANDFILL (5123)  
14747 SAN FERNANDO ROAD  
SYLMAR, CA 91342  
818.362.2141

Project: FOOD PRODUCTS County and State of Origin: LOS ANGELES, CA

Additional Information: \_\_\_\_\_

1. **Special Waste Service.** Subject to the terms and conditions contained herein, the Company and the Generator agree to be legally bound hereby and the Company agrees to accept at its Facility, Acceptable Waste (hereinafter referred to as "Special Waste" or "Waste") delivered by Generator, and which is acceptable to the Company as herein provided.
2. **Acceptable Waste.** Only those Special Wastes described in Paragraph 3 herein and in any Special Waste Profile(s) which number is identical to the contract number referenced above, and which Profile(s) are hereby incorporated by reference herein, and which Waste is subsequently approved by the Company and is otherwise in accordance with all laws, regulations and permits, shall be acceptable for disposal at the Facility ("Acceptable Waste").

Cannot Exceed Daily Volume of 5 TONS Without Prior Approval of Company.

(B) **Incorporation by Reference.** In addition to Special Waste Profile(s), the following documents are incorporated by reference into this Agreement as if fully set forth herein.

1) N/A

2) N/A

4. **Term of Agreement.** This Agreement is effective for 2 months, commencing 7/6/2017 and shall automatically be renewed for a similar term thereafter unless either party shall give written notice (via certified mail) of termination to the other party at least thirty (30) days prior written notice.

THE COMPANY AND THE GENERATOR, IN CONSIDERATION OF THE MUTUAL OBLIGATIONS CONTAINED HEREIN, AGREE THAT THIS IS A LEGALLY BINDING AGREEMENT WHICH IS SUBJECT TO THE TERMS AND CONDITIONS SET FORTH ON THIS PAGE AND ON THE REVERSE SIDE OF THIS DOCUMENT. IN ADDITION, THE GENERATOR IS CERTIFYING THE ATTACHED TERMS AND CONDITIONS HAVE BEEN REVIEWED AND INITIALLED AT THE BOTTOM OF THE PAGE.

GENERATOR

SIGNATURE (AUTHORIZED REPRESENTATIVE)

MINUT MAO, Accountant

NAME AND TITLE (PLEASE PRINT)

07/06/2017

DATE

REPUBLIC SERVICES, INC/COMPANY

SIGNATURE (AUTHORIZED REPRESENTATIVE)

Stacy Loveland - SW Executive

NAME AND TITLE (PLEASE PRINT)

7/6/2017

DATE

## Terms and Conditions of Special Waste Service Agreement

5. **The Agreement.** This agreement of the parties ("Agreement") for the disposal of Special Waste shall consist of this Agreement, riders to the Agreement (if any) and any Application, permit and approval that may be applicable to such Waste.
6. **Waste Accepted at Facility.** Generator represents, warrants and covenants that the Waste delivered to Company at its Facility hereunder will be Acceptable Waste and will not contain any unacceptable quantity of hazardous materials or substances, radioactive materials or substances, or toxic waste or substances, as defined by applicable federal, state, local or provincial laws or regulations. Any Waste which does not meet these requirements shall hereinafter be referred to as "Unacceptable Waste". The Generator shall in all matters relating to the collection, transportation and disposal of the Waste hereunder, comply with all applicable federal, state and local laws, regulations, rules and orders regarding the same. The word "Facility" shall mean any landfill, transfer station or other location used to transfer, process or otherwise dispose of such Waste.
7. **Special Waste.** Generator represents, warrants and covenants that the Waste delivered to Company hereunder (i) will not contain any Special Waste that is not specifically described on any Application which is attached hereto or which is subsequently approved by the Company, (ii) will meet the material description as set forth in any Application and otherwise in all significant respects and (iii) will not contain Unacceptable Waste. The parties may incorporate additional Special Waste as part of this Agreement if prior to delivery of such Waste to Company, Generator has provided an Application for such Waste and Company has approved disposal of such Waste within the limitations and conditions contained in Company's written notice of approval of Special Waste Disposal. Title to any and all Waste handled or disposed of by Company shall at all times remain with Generator and Broker (if a Broker is involved).
8. **Rights of Refusal/Rejection.** The Generator shall inspect all Waste at the place(s) of collection and shall remove any and all Unacceptable Waste. Company has the right to refuse, or to reject after acceptance, any load(s) of Waste(s) delivered to its Facility including if the Company believes the Generator has breached (or is breaching) its representations, warranties, covenants or agreements hereunder, or any applicable federal, state or local laws, regulations, rules or orders, even if only a portion of such Waste load is unacceptable. The Company shall have the right to inspect all vehicles and containers of Waste haulers, including the Generator's vehicles, in order to determine whether the Waste is Acceptable Waste or Unacceptable Waste pursuant to this Agreement and all applicable federal, state and local laws, rules and regulations. The Company's exercise, or failure to exercise, its rights hereunder shall not operate to relieve the Generator of its responsibilities or liability under this Agreement. The Generator shall be responsible for, and bear all reasonable expense and damages incurred by the Company, as a result of the Unacceptable Waste and in the reloading and removal of Unacceptable Waste disposed in the Facility. The Company, may also, in its sole discretion, require the Generator to promptly remove the Unacceptable Waste.
9. **Limited License to Enter.** This Agreement provides Generator with a license to enter the Facility for the limited purpose of, and only to the extent necessary for, off-loading Acceptable Waste at the Facility in the manner directed by Company. Except in an emergency, Generator's personnel shall not leave the immediate vicinity of their vehicle. After off-loading the Waste, Generator's personnel shall promptly leave the Facility. Under no circumstances shall Generator or its personnel engage in any scavenging of Waste or other materials at the Facility. The Company reserves the right to make and enforce reasonable rules and regulations concerning the operation of the Facility, the conduct of the drivers and others on the Facility premises, quantities and sources of Waste, and any other matters necessary or desirable for the safe, legal and efficient operation of the Facility including, but not limited to, speed limits on haul roads imposed by the Company, and the wearing of hard hats and other personal protection equipment by all individuals allowed on the Facility premises. Generator agrees to conform to such rules and regulations as they may be established and amended from time to time. Company may refuse to accept Waste from and shall deny an entrance license to, any of Generator's personnel whom Company believes is under the influence of alcohol or other chemical substances. Generator shall be solely responsible for its employees and subcontractors performing their obligations in a safe manner when at the facility of Company.
10. **Charges and Payment.** Payment shall be made by Generator within sixty (60) days after receipt of invoice from Company. In the event that any amount is overdue, the Company may terminate this Agreement. Generator agrees to pay a finance charge equal to the maximum interest rate permitted by law. Generator shall be liable for all taxes, fees, or other charges imposed upon the disposal of the Waste by federal, state, local or provincial laws and regulations. Company, from time to time, may modify its rates upon sixty (60) days written notice to Generator.
11. **Termination.** Generator's obligations, representations, warranties and covenants regarding the Waste delivered and all indemnities shall survive termination of this Agreement. Should Generator materially default in any of its obligations hereunder, then Company may immediately terminate this Agreement and Generator shall be liable for all costs and damages incurred by the Company.
12. **Driver's Knowledge and Authority.** Generator represents, warrants and covenants that its drivers who deliver Waste to Company's Facility have been advised by Generator of the Company's prohibition on deliveries of hazardous materials or substances, radioactive materials or substances, or toxic waste or substances or any other Unacceptable Waste to the Facility of Company's restrictions on deliveries of Special Waste to the Facility, of the definitions of "Hazardous Waste and Hazardous Substances" as provided by applicable federal, state and local law, rules and regulations and "Special Waste" as provided herein, and of the terms of this license to enter Company's Facility.
13. **Indemnification.** Generator shall indemnify, defend and hold harmless the Company and its subsidiaries, affiliates and parent corporations, as applicable and their respective officers, directors, lenders, employees, subcontractors and agents from and against any and all claims, suits, losses, liabilities, assessments, damages, fines, costs and expenses, including reasonable attorneys fees arising under federal, state or local laws, regulations or ordinances, or relating to the content of the Waste, or arising out of or in connection with any breach of this Agreement or arising out of the negligent collection, transportation and disposal of Waste by Generator or Generator's employees, agents, subcontractors or representatives thereof. Generator shall also be responsible for increased inspection, testing, study and analysis costs made necessary due to reasonable concerns of the Company as to the content of the Waste following discovery of potentially Unacceptable Waste. This indemnification and other obligations stated in this paragraph shall survive the termination of this Agreement.
14. **Insurance.** Generator shall maintain in full force and effect throughout the term of this Agreement the following types of insurance in at least the amounts specified below:

Coverages	Minimum Amounts of Insurance
Worker's Compensation	Statutory
General Liability	\$500,000 combined single limit
Automobile Liability	\$500,000 combined single limit

All insurance will be by insurers authorized to do business in the state in which the Facility is located. Prior to Generator being allowed on Facility premises, Generator shall provide the Company with certificates of insurance or other satisfactory evidence that such insurance has been procured and is in force. Said policies shall not thereafter be canceled, be permitted to expire or lapse, or be changed without thirty (30) days advance written notice to the Company. Generator warrants that it will secure the above minimum amounts of insurance from any transportation of the Waste to the Facility.

15. **Failure to Perform.** Neither party hereto shall be liable for its failure to perform hereunder due to circumstances not its fault and beyond its reasonable control, including, but not limited to, strikes or other labor disputes, riots, protests, civil disturbances or sabotage, changes in law, fires, floods, compliance with government requests, explosions, accidents, weather, lack of required natural resources, or acts of God affecting either party hereto. In the event of any of the circumstances provided for in the preceding sentence, including, but not limited to, whether any federal, state or local court or governmental authority takes any action which would (i) close or restrict operations at the Facility, (ii) limit the quantity or prohibit the disposal of Waste at the Facility, or (iii) limit the ability of or prohibit Generator from delivering Waste to the Facility, the Company shall have the right, at its option, to reduce, suspend or terminate Generator's access to the Facility immediately, without prior notice and without any additional liabilities between the parties, other than Generator's payment obligation hereunder. Neither Party is required hereunder to settle any labor dispute against its own best judgment.
16. **Other Termination.** The occurrence of any of the following events shall also constitute an event of default by the Generator and shall give the Company the right to immediately terminate this Agreement:
- (A) A petition for reorganization or bankruptcy filed by or against the Generator.
  - (B) Failure by Generator to pay any amounts due to Company.
  - (C) Any breach by Generator of any of its obligations pursuant to the Agreement.
- Generator shall be liable for and shall indemnify, defend and hold harmless Company from any losses, claims expenses or damages incurred by the Company as a result of termination hereunder.
17. **Assignment.** Generator may not assign, transfer or otherwise vest in any other Company, entity or person, in whole or in part, any of its rights or obligations under the Agreement without the prior written consent of the Company, provided, however, that the Company may without any such prior written consent, assign its rights and/or obligations under the Agreement to a subsidiary or affiliate corporation.
18. **Right of Disposal.** This Agreement does not grant any rights to dispose of Waste other than in accordance herewith. The Company reserves the right to immediately terminate access to the Facility by Generator and Generator's personnel in the event of breach or violation by Generator of any of the terms of this Agreement, the Company's operating rules or payment policies or any applicable laws or regulations.
19. **Continuing Compliance.** The Generator has a continuing obligation to inform the Company of any new information, or information not previously provided to the Company by Generator which may affect the acceptability of the Waste by the Company. Further, the Generator shall comply with all Company requests for evidence of Generator's continuing compliance with the terms of the Agreement including but not limited to the following: (i) providing new, updated Waste profiles on the Waste(s) offered for disposal or, (ii) providing appropriate certification that the Waste being offered for disposal is accurately reflected by the appropriate Application or, (iii) re-sample the Waste at Generator's expense if reasonable cause exists as to its acceptability under the terms of this Agreement or, (iv) allow the Company to re-sample the Waste at Generator's expense if reasonable cause exists as to its acceptability under the terms of this Agreement or (v) all of the above.
20. **Miscellaneous.**
- (A) This Agreement shall be governed by the laws of the State in which the Facility is located.
  - (B) No waiver of a breach of any of the obligations contained in the Agreement shall be construed to be a waiver of any prior or succeeding breach of the same obligation or of any other obligation of this Agreement.
  - (C) No modification, release, discharge or waiver of any provision or obligation hereof shall be of any force, or effect, unless in writing signed by all parties to this Agreement.
  - (D) Generator shall treat as confidential and not disclose to others during or subsequent to the terms of this Agreement, except as is necessary to perform this Agreement, or to comply with any applicable law or regulation any information (including any technical information, experience or data) regarding the Company's plans, programs, plants, processes, products, costs, equipment or operations which may come within the knowledge of the Generator or its employees in the performance of this Agreement, without in each instance securing the prior written consent of the other Company.
  - (E) If any term, phrase, obligation or provision of this Agreement shall be held to be invalid, illegal or unenforceable in any respect, this Agreement shall remain in effect and be construed without regard to such term, phrase, obligation or provision.
  - (F) This Agreement constitutes the entire understanding between the parties, replacing and amending any prior agreements between the parties, and shall be binding upon all parties hereto, their successors, heirs, representatives and assigns. Any provision, term or condition in any acknowledgement, purchase order or other response by Generator which is in addition to or different from the provisions of this Agreement shall be deemed objected to by the Company and shall be of no effect.
  - (G) Generator represents, warrants and covenants that it is and, during the term of this Agreement will remain, in compliance with and will perform its obligations pursuant to all applicable laws and regulations and shall indemnify, defend and hold harmless the Company from any breach thereof.
  - (H) It is the understanding and agreement of the parties that the Company is an independent contractor, and is not an agent, nor an authorized representative of the Generator.
21. **Notices.** All notices herein provided for shall be considered as having been given upon being placed in the mail, certified postage prepaid addressed to the Company or Generator at the address herein set forth in this Agreement or to such other address as may be given to the other party in writing.
22. **Liquidated Damages.** In the event that this Agreement is terminated by the Generator in a manner not in accordance with paragraph 4 hereof, or terminated due to a breach of this Agreement by the Generator, the Generator shall pay, as liquidated damages, and not as a penalty, the greater of an amount equal to six (6) months' service charges or the Generator's most recent monthly charge multiplied by six (6). The Generator shall be given credit for any advance payments made hereunder, however, in computing the amount owed as liquidated damages hereunder. The Generator acknowledges that this liquidated damages clause is reasonable and is applicable to recover damages related to its investment in equipment, development of landfills and hiring of employees undertaken by the Company to service its customers including the Generator. This liquidated damages clause in no way relieves the Generator from its obligations and liability for other cost or damages as set forth elsewhere in this Agreement.

GENERATOR: \_\_\_\_\_

Republic Services, Inc/COMPANY: \_\_\_\_\_

May 2009

From: LUCKY TARO  
 Dump info on order  
 # 173-11470266

75 boxes to be dumped  
 on Wednesday 07/05/17  
 @ 9:30am Hawaiian Air

Contact:  
 email: hanna@luckytaro.com  
 fax: (213) 745 8555

AGRICULTURAL COMMISSIONER WEIGHTS AND MEASURES  
 PROVIDE A RECORD OF ANY QUARANTINE VIOLATIONS.

J 01807

INSPECTOR / COLLECTOR Mason & Ruse Date 6-25-17

MATERIAL in VIOLATION  
 Number & Kind 75 bags & boxes of taro stems & galangs

Held  Not Held DN HOLD <sup>0207</sup>

REMAINDER is unrestricted, may be/has been released and consists of NONE <sup>note A H ①</sup>

AWB 173-11470266

RECEIVER Lucky Taro <sup>note A T</sup>  
 Address 1884 S. 22nd St, Vernon, CA 90058 <sup>(213) 748-9555</sup>

SHIPPER Chuan Produce & Commodity Forwarders

Address 2312 Kamehameha Hwy, Bldg. B, Honolulu, HI 96819

Origin of Material Honolulu, HI

CARRIER: Name & Town Hawaiian, LA Phone \_\_\_\_\_

AIR  TRUCK  SHIP  OTHER

SHIP'S CHARGES  
 Return Passage Guaranteed: Yes  No

SHIPMENT  Held or Hawaiian form LAX

BORDER NOTICES  
 SNo \_\_\_\_\_ Serial Numbers \_\_\_\_\_

Condition on arrival  F  P (explain)


Required certificates present USDA-APHIS-PPQ, Honolulu, HI #221

VIOLATION Code or Quar No	Name of Quarantine	Nature of Violation
<u>6061.5</u>	<u>Infested</u>	<u>Infested with live pests</u>

Pest Specimens submitted?  None  Insect  Disease  Mera  Weeds  Other (explain) slug  
 Remarks: Dants - taro stems - heavy (mobile pest)  
① slug - taro stems - trace

FINAL DISPOSITION  
 Inspector \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_  
 Destroyed  (how) \_\_\_\_\_  
 Diverted  to \_\_\_\_\_ Returned  \_\_\_\_\_  
 Treated  \_\_\_\_\_ (Details of treatment)  
 Certificate secured  Permit secured  Plant Pest/ID seized  Released \_\_\_\_\_  
 Option of  Ship'r  Rec'r  Carrier  Smta  Ag Com \_\_\_\_\_ All \_\_\_\_\_   
 Physical condition of shipment at time of final disposition \_\_\_\_\_ Remanded



 <p><b>STATE OF CALIFORNIA DEPARTMENT OF FOOD AND AGRICULTURE PLANT HEALTH AND PEST PREVENTION SERVICES</b></p> <p><b>PEST AND DAMAGE RECORD</b></p>	<b>PDR NUMBER 190P06619999</b>			Date collected <b>6/25/2017</b>		
	Lab <input type="checkbox"/> ENTO <input type="checkbox"/> SEED	PLANT PATH <input type="checkbox"/> BOTANY	NEMA <input type="checkbox"/> VERT	Time Collected		
	NOR Number:			<b>RUSH</b>		
	Number of samples:					
Location: <b>19</b>	Owner/receiver Owner <b>Lucky Taro, Inc.</b>		Collector <b>Mason, Ruse</b>			
Activity: <b>01</b>	Address/physical description <b>1884 East 22nd Street</b>		Affil. <b>F S C E U O</b> Describe Other			
Situation: <b>06</b>	City <b>Los Angeles</b>		State <b>CA</b>			
Section:	Zip code <b>90058</b>	Quarantine shipper/broker				
Township:	County <b>Los Angeles</b>		Name <b>Chuan Produce, Commodity Forwarders</b>			
Range:	Phone <b>(213) 748-9555</b>	Fax	Latitude	Address <b>2912 Kamehameha Hwy, Bldg. B</b>		
Base and meridian:	E-mail	Longitude	City <b>Honolulu</b>	Zip code <b>96819</b>		
	Cross street		State/Country <b>HI US</b>			
			Phone	Fax	Latitude <b>21.332203</b>	
Quarantine destination		E-mail		Longitude <b>-157.88628</b>		
Quarantine origin (where host grown)			Carrier (ground/air/maritime)			
City	County	State/Country <b>HI</b>	Zip	Business name	Flight number	
Shipment size / units /		Program <b>HR - High Risk Pest Exclusion</b>		License plate	License state	Tail/ship number
Submitter remarks <b>Pheidole sp. /J01807 (Permit #221 )</b>			General or Plant Pathology			
Suspect			Number of involved: of plants affected: Plant distribution: Plant parts affected			
Send report to: Name: <b>Los Angeles County Ag Comm</b> Phone: Fax: Email:			<input type="checkbox"/> Bark <input type="checkbox"/> Blossoms <input type="checkbox"/> Branches, large <input type="checkbox"/> Branches, terminal <input type="checkbox"/> Buds <input type="checkbox"/> Bulbs or Corms <input type="checkbox"/> Fruit or nuts <input type="checkbox"/> Growing tips <input type="checkbox"/> Roots, large <input type="checkbox"/> Leaves, upper surface <input type="checkbox"/> Petiole <input type="checkbox"/> Stem <input type="checkbox"/> Rootlets <input type="checkbox"/> Trunk <input type="checkbox"/> Seeds <input type="checkbox"/> Tubers <input type="checkbox"/> Leaves, lower surface			
Entomology Trap number/ Grid number/ Last service date/ Latitude Trap type/ Trap density/ Longitude Survey method			Plant symptoms <input type="checkbox"/> Canker <input type="checkbox"/> Die back <input type="checkbox"/> Fruit rot <input type="checkbox"/> Fruit spot <input type="checkbox"/> Galls <input type="checkbox"/> Gumming <input type="checkbox"/> Internal discoloration <input type="checkbox"/> Leaf fall <input type="checkbox"/> Leaf mottling <input type="checkbox"/> Leaf spot <input type="checkbox"/> Malformation <input type="checkbox"/> Marginal burn <input type="checkbox"/> Root rot <input type="checkbox"/> Rough bark <input type="checkbox"/> Shot hole <input type="checkbox"/> Slow Decline <input type="checkbox"/> Stunting <input type="checkbox"/> Sudden collapse <input type="checkbox"/> Wilting <input type="checkbox"/> Yellowing			

Sample

Sample Tag	Location Description		Latitude	Remarks
	Quantity and unit	Lot Number	Longitude	
Total pest count or number per (sweep, leaf, acre, trap, root, stem etc) Count:			Entomology: Conditions <input type="checkbox"/> Dead <input type="checkbox"/> Alive <input type="checkbox"/> Unknown Stages <input type="checkbox"/> Egg <input type="checkbox"/> Larva <input type="checkbox"/> Nymph <input type="checkbox"/> Pupa <input type="checkbox"/> Adult	

<i>Nematology</i>	<i>Botany/Vertebrate:</i> Acreage net: Acreage gross:
-------------------	---

**Host**

Host Tag	Common Name	Scientific Name	Type plants	Nema Field Block Type
	Taro stem			
	Variety	Container Size	Quantity and Units	Nema Field Block
Remarks				

**Identifications**

Lab	Scientist	Rating	Common Name
Entomology	Kevin Williams	Q	ant
Date	Order	Family	
6/27/2017	Hymenoptera	Formicidae	
Genus	Species		
Pheidole	sp.		
Sub-Species	Higher Category		
	(phylum) Arthropoda, (class) Insecta		
<b>General Identification Notes</b>			
<i>Entomology</i>			
Mature:	Dead:	Egg:	Adult:
Immature:	Alive:	Larva:	Male:
Mated:	Unknown:	Nymph:	Female:
		Pupa:	
<b>Egg Viability:</b>			
<b>Egg Viability Notes:</b>			
<b>Instar Notes:</b>			



# Republic Services, Inc.

18500 N. Allied Way, Phoenix, AZ 85054

## SPECIAL WASTE DEPARTMENT DECISION

Waste Profile #  
51231716988

Expiration Date  
10/16/2020

### I. Decision Request:

Initial     Recertification     Change

Disposal Facility: 5123 - Sunshine Canyon Landfill

Generator Name: Lucky Taro Inc

Generator Site Address: 1884 E 22nd St

City: Los Angeles

County:

State: CA

Zip:

Name of Waste: Food Products

Estimated Annual Volume: 15,000 Pounds

II. Special Waste Department Decision:     Approved     Rejected

Management Method(s):     Landfill     Solidification     Bioremediation     Transfer Facility

Problematic Special Waste according to Republic?     Yes     No

If yes, which one? \_\_\_\_\_

Approved by Special Waste Review Committee?     Yes     No     Not Applicable

### Precautions, Conditions or Limitations on Approval

FOOD PRODUCT: This waste must be buried immediately upon receipt at the landfill.

Special Waste Analyst Signature: *Joseph M. Sorokach*

Date: 10/17/2017

Name (Printed): Joseph Sorokach

III. Facility Decision:     Approved     Rejected

### Precautions, Conditions or Limitations on Approval

By signing below, the General Manager or Designee agrees that a fully executed Special Waste Service Agreement is on file for this profile and that the special waste file is complete.

General Manager or Designee: *Chris Coyle*

Date: 10/17/2017

Name (Printed): Chris Coyle





EXPRESS WASTE PROFILE

Requested Disposal Facility: 5123 Sunshine Canyon LF CA

Waste Profile #
5123 17 16988
Sales Rep #. 525 - Stacy Loveland

Saveable fill in form. Restricted printing until all required (yellow) fields are completed.

I. Generator Information

Generator Name: LUCKY TARO, INC.			
Generator Site Address: 1884 E. 22ND ST			
City: LOS ANGELES	County: LOS ANGELES	State: California	Zip: 90058
State ID/Reg No:	State Approval/Waste Code: (if applicable)		NAICS #.
Generator Mailing Address (if different): 1884 E. 22ND ST			
City: LOS ANGELES	County: LOS ANGELES	State: California	Zip: 90058
Generator Contact Name: HANNA LE		Email: hanna@luckytaro.com	
Phone Number: (323) 840-7777	Ext:	Fax Number: (213) 745-8555	

II. Billing Information

Bill To: LUCKY TARO, INC	Contact Name: HANNA		
Billing Address: 1884 E 22ND ST	Email: hanna@luckytaro.com		
City: LOS ANGELES	State: CA	Zip: 90058	Phone: (323) 840-7777

III. Waste Stream Information

Name of Waste: <small>(Petroleum products-applies only to contaminated media and debris).</small>	<input type="checkbox"/> Diesel Fuel	<input type="checkbox"/> Weathered Wood	<input type="checkbox"/> Friable Asbestos
	<input type="checkbox"/> Home Heating Fuel #1-6	<input type="checkbox"/> RCRA Empty Containers	<input type="checkbox"/> Non Friable Asbestos
	<input type="checkbox"/> Kerosene	<input type="checkbox"/> Treated Medical Waste	<input type="checkbox"/> Cured Asphalt
	<input type="checkbox"/> Aviation Fuel	<input type="checkbox"/> Animal Carcass (non infectious)	<input type="checkbox"/> Tires
	<input type="checkbox"/> Hydraulic Fluid	<input type="checkbox"/> Plant Trash	<input checked="" type="checkbox"/> Food Products <small>(Including Animal Food)</small>
	<input type="checkbox"/> Unleaded Gasoline (UST Corrective Action)	<input type="checkbox"/> Meth Contaminated Debris	

Process Generating Waste: VARIOUS PRODUCES (EITHER BAGGED OR BOXED) THAT FAILED INSPECTION

Method of Shipment: <input type="checkbox"/> BULK <input type="checkbox"/> DRUM <input checked="" type="checkbox"/> BAGGED <input checked="" type="checkbox"/> OTHER: BOX
Estimated Annual Volume: 15,000 Pounds
Frequency: <input type="checkbox"/> ONE TIME <input checked="" type="checkbox"/> ONGOING

IV. Certification

I hereby certify that to the best of my knowledge and belief, the information contained herein is a true and accurate description of the waste material being offered for disposal. I further certify that by utilizing this profile, neither myself nor any other employee of the company will deliver for disposal or attempt to deliver for disposal any waste which is classified as toxic waste, hazardous waste or infectious waste, or any other waste material this facility is prohibited from accepting by law. Our company hereby agrees to fully indemnify this disposal facility against any damages resulting from this certification being inaccurate or untrue. I further certify that the company has not altered the form or content of this profile sheet as provided by Republic Services, Inc.

HANNA LE Authorized Representative Name/Title (Type or Print)	LUCKY TARO Company Name
 Authorized Representative Signature	10/16/2017 Date



# SPECIAL WASTE SERVICE AGREEMENT NON-HAZARDOUS WASTES

Special Waste Profile Number: 5123 17 16988

Generator Billing Information

Name: LUCKY TARO INC  
(ACCT CASH # 321)  
Address: 1884 E 22<sup>ND</sup> STREET  
City: LOS ANGELES  
State: CA Zip: 90058  
Phone: 323.840.7777 Fax: \_\_\_\_\_  
Contact: HANNA LE

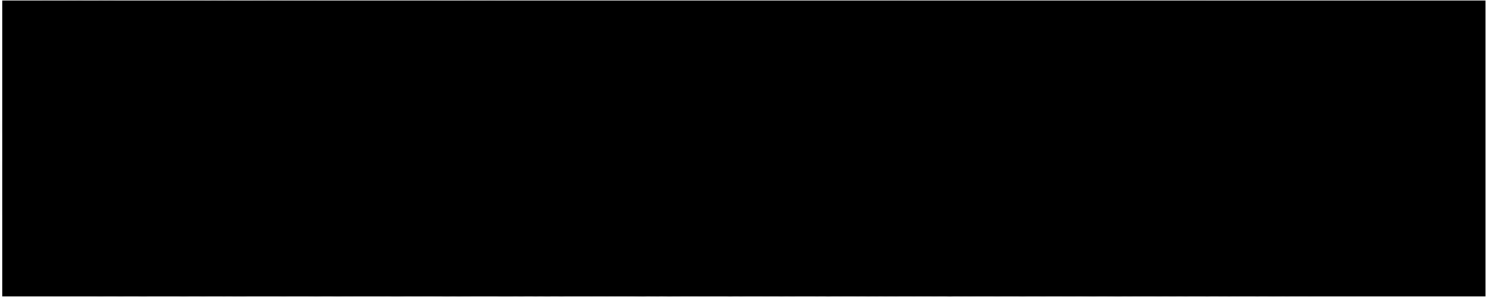
Republic Waste Location (Company)

SUNSHINE CANYON LANDFILL (5123)  
14747 SAN FERNANDO ROAD  
SYLMAR, CA 91342  
818.362.2141

Project: FOOD PRODUCTS County and State of Origin: LOS ANGELES, CA

Additional Information: \_\_\_\_\_

- Special Waste Service.** Subject to the terms and conditions contained herein, the Company and the Generator agree to be legally bound hereby and the Company agrees to accept at its Facility, Acceptable Waste (hereinafter referred to as "Special Waste" or "Waste") delivered by Generator, and which is acceptable to the Company as herein provided.
- Acceptable Waste.** Only those Special Wastes described in Paragraph 3 herein and in any Special Waste Profile(s) which number is identical to the contract number referenced above, and which Profile(s) are hereby incorporated by reference herein, and which Waste is subsequently approved by the Company and is otherwise in accordance with all laws, regulations and permits, shall be acceptable for disposal at the Facility ("Acceptable Waste").



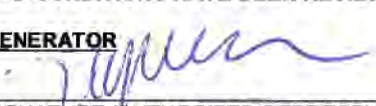
Cannot Exceed Daily Volume of 15,000 POUNDS Without Prior Approval of Company.

(B) **Incorporation by Reference.** In addition to Special Waste Profile(s), the following documents are incorporated by reference into this Agreement as if fully set forth herein.

- 1) N/A
- 2) N/A

4. **Term of Agreement.** This Agreement is effective for 36 months, commencing 10/17/2017 and shall automatically be renewed for a similar term thereafter unless either party shall give written notice (via certified mail) of termination to the other party at least thirty (30) days prior written notice.

**THE COMPANY AND THE GENERATOR, IN CONSIDERATION OF THE MUTUAL OBLIGATIONS CONTAINED HEREIN, AGREE THAT THIS IS A LEGALLY BINDING AGREEMENT WHICH IS SUBJECT TO THE TERMS AND CONDITIONS SET FORTH ON THIS PAGE AND ON THE REVERSE SIDE OF THIS DOCUMENT. IN ADDITION, THE GENERATOR IS CERTIFYING THE ATTACHED TERMS AND CONDITIONS HAVE BEEN REVIEWED AND INITIALLED AT THE BOTTOM OF THE PAGE.**

**GENERATOR**  
  
SIGNATURE (AUTHORIZED REPRESENTATIVE)  
HANNA LE - ACCOUNTING CLERK  
NAME AND TITLE (PLEASE PRINT)  
10/17/2017  
DATE

**REPUBLIC SERVICES, INC/COMPANY**  
  
SIGNATURE (AUTHORIZED REPRESENTATIVE)  
Stacy Loveland - SW Executive  
NAME AND TITLE (PLEASE PRINT)  
10/17/2017  
DATE

# Terms and Conditions of Special Waste Service Agreement

5. **The Agreement.** This agreement of the parties ("Agreement") for the disposal of Special Waste shall consist of this Agreement, riders to the Agreement (if any) and any Application, permit and approval that may be applicable to such Waste.
6. **Waste Accepted at Facility.** Generator represents, warrants and covenants that the Waste delivered to Company at its Facility hereunder will be Acceptable Waste and will not contain any unacceptable quantity of hazardous materials or substances, radioactive materials or substances, or toxic waste or substances, as defined by applicable federal, state, local or provincial laws or regulations. Any Waste which does not meet these requirements shall hereinafter be referred to as "Unacceptable Waste". The Generator shall in all matters relating to the collection, transportation and disposal of the Waste hereunder, comply with all applicable federal, state and local laws, regulations, rules and orders regarding the same. The word "Facility" shall mean any landfill, transfer station or other location used to transfer, process or otherwise dispose of such Waste.
7. **Special Waste.** Generator represents, warrants and covenants that the Waste delivered to Company hereunder (i) will not contain any Special Waste that is not specifically described on any Application which is attached hereto or which is subsequently approved by the Company, (ii) will meet the material description as set forth in any Application and otherwise in all significant respects and (iii) will not contain Unacceptable Waste. The parties may incorporate additional Special Waste as part of this Agreement if prior to delivery of such Waste to Company, Generator has provided an Application for such Waste and Company has approved disposal of such Waste within the limitations and conditions contained in Company's written notice of approval of Special Waste Disposal. Title to any and all Waste handled or disposed of by Company shall at all times remain with Generator and Broker (if a Broker is involved).
8. **Rights of Refusal/Rejection.** The Generator shall inspect all Waste at the place(s) of collection and shall remove any and all Unacceptable Waste. Company has the right to refuse, or to reject after acceptance, any load(s) of Waste(s) delivered to its Facility including if the Company believes the Generator has breached (or is breaching) its representations, warranties, covenants or agreements hereunder, or any applicable federal, state or local laws, regulations, rules or orders, even if only a portion of such Waste load is unacceptable. The Company shall have the right to inspect all vehicles and containers of Waste haulers, including the Generator's vehicles, in order to determine whether the Waste is Acceptable Waste or Unacceptable Waste pursuant to this Agreement and all applicable federal, state and local laws, rules and regulations. The Company's exercise, or failure to exercise, its rights hereunder shall not operate to relieve the Generator of its responsibilities or liability under this Agreement. The Generator shall be responsible for, and bear all reasonable expenses and damages incurred by the Company, as a result of the Unacceptable Waste and in the reloading and removal of Unacceptable Waste disposed in the Facility. The Company, may also, in its sole discretion, require the Generator to promptly remove the Unacceptable Waste.
9. **Limited License to Enter.** This Agreement provides Generator with a license to enter the Facility for the limited purpose of, and only to the extent necessary for, off-loading Acceptable Waste at the Facility in the manner directed by Company. Except in an emergency, Generator's personnel shall not leave the immediate vicinity of their vehicle. After off-loading the Waste, Generator's personnel shall promptly leave the Facility. Under no circumstances shall Generator or its personnel engage in any scavenging of Waste or other materials at the Facility. The Company reserves the right to make and enforce reasonable rules and regulations concerning the operation of the Facility, the conduct of the drivers and others on the Facility premises, quantities and sources of Waste, and any other matters necessary or desirable for the safe, legal and efficient operation of the Facility including, but not limited to, speed limits on haul roads imposed by the Company, and the wearing of hard hats and other personal protection equipment by all individuals allowed on the Facility premises. Generator agrees to conform to such rules and regulations as they may be established and amended from time to time. Company may refuse to accept Waste from and shall deny an entrance license to, any of Generator's personnel whom Company believes is under the influence of alcohol or other chemical substances. Generator shall be solely responsible for its employees and subcontractors performing their obligations in a safe manner when at the facility of Company.
10. **Charges and Payment.** Payment shall be made by Generator within sixty (60) days after receipt of invoice from Company. In the event that any amount is overdue, the Company may terminate this Agreement. Generator agrees to pay a finance charge equal to the maximum interest rate permitted by law. Generator shall be liable for all taxes, fees, or other charges imposed upon the disposal of the Waste by federal, state, local or provincial laws and regulations. Company, from time to time, may modify its rates upon sixty (60) days written notice to Generator.
11. **Termination.** Generator's obligations, representations, warranties and covenants regarding the Waste delivered and all indemnities shall survive termination of this Agreement. Should Generator materially default in any of its obligations hereunder, then Company may immediately terminate this Agreement and Generator shall be liable for all costs and damages incurred by the Company.
12. **Driver's Knowledge and Authority.** Generator represents, warrants and covenants that its drivers who deliver Waste to Company's Facility have been advised by Generator of the Company's prohibition on deliveries of hazardous materials or substances, radioactive materials or substances, or toxic waste or substances or any other Unacceptable Waste to the Facility of Company's restrictions on deliveries of Special Waste to the Facility, of the definitions of "Hazardous Waste and Hazardous Substances" as provided by applicable federal, state and local law, rules and regulations and "Special Waste" as provided herein, and of the terms of this license to enter Company's Facility.
13. **Indemnification.** Generator shall indemnify, defend and hold harmless the Company and its subsidiaries, affiliates and parent corporations, as applicable and their respective officers, directors, lenders, employees, subcontractors and agents from and against any and all claims, suits, losses, liabilities, assessments, damages, fines, costs and expenses, including reasonable attorneys fees arising under federal, state or local laws, regulations or ordinances, or relating to the content of the Waste, or arising out of or in connection with any breach of this Agreement or arising out of the negligent collection, transportation and disposal of Waste by Generator or Generator's employees, agents, subcontractors or representatives thereof. Generator shall also be responsible for increased inspection, testing, study and analysis costs made necessary due to reasonable concerns of the Company as to the content of the Waste following discovery of potentially Unacceptable Waste. This indemnification and other obligations stated in this paragraph shall survive the termination of this Agreement.
14. **Insurance.** Generator shall maintain in full force and effect throughout the term of this Agreement the following types of insurance in at least the amounts specified below:

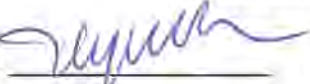
Coverages	Minimum Amounts of Insurance
Worker's Compensation	Statutory
General Liability	\$500,000 combined single limit
Automobile Liability	\$500,000 combined single limit

All insurance will be by insurers authorized to do business in the state in which the Facility is located. Prior to Generator being allowed on Facility premises, Generator shall provide the Company with certificates of insurance or other satisfactory evidence that such insurance has been procured and is in force. Said policies shall not thereafter be canceled, be permitted to expire or lapse, or be changed without thirty (30) days advance written notice to the Company. Generator warrants that it will secure the above minimum amounts of insurance from any transportation of the Waste to the Facility.

15. **Failure to Perform.** Neither party hereto shall be liable for its failure to perform hereunder due to circumstances not its fault and beyond its reasonable control, including, but not limited to, strikes or other labor disputes, riots, protests, civil disturbances or sabotage, changes in law, fires, floods, compliance with government requests, explosions, accidents, weather, lack of required natural resources, or acts of God affecting either party hereto. In the event of any of the circumstances provided for in the preceding sentence, including, but not limited to, whether any federal, state or local court or governmental authority takes any action which would (i) close or restrict operations at the Facility, (ii) limit the quantity or prohibit the disposal of Waste at the Facility, or (iii) limit the ability of or prohibit Generator from delivering Waste to the Facility, the Company shall have the right, at its option, to reduce, suspend or terminate Generator's access to the Facility immediately, without prior notice and without any additional liabilities between the parties, other than Generator's payment obligation hereunder. Neither Party is required hereunder to settle any labor dispute against its own best judgment.
16. **Other Termination.** The occurrence of any of the following events shall also constitute an event of default by the Generator and shall give the Company the right to immediately terminate this Agreement:
  - (A) A petition for reorganization or bankruptcy filed by or against the Generator.
  - (B) Failure by Generator to pay any amounts due to Company.
  - (C) Any breach by Generator of any of its obligations pursuant to the Agreement.

Generator shall be liable for and shall indemnify, defend and hold harmless Company from any losses, claims expenses or damages incurred by the Company as a result of termination hereunder.
17. **Assignment.** Generator may not assign, transfer or otherwise vest in any other Company, entity or person, in whole or in part, any of its rights or obligations under the Agreement without the prior written consent of the Company, provided, however, that the Company may without any such prior written consent, assign its rights and/or obligations under the Agreement to a subsidiary or affiliate corporation.
18. **Right of Disposal.** This Agreement does not grant any rights to dispose of Waste other than in accordance herewith. The Company reserves the right to immediately terminate access to the Facility by Generator and Generator's personnel in the event of breach or violation by Generator of any of the terms of this Agreement, the Company's operating rules or payment policies or any applicable laws or regulations.
19. **Continuing Compliance.** The Generator has a continuing obligation to inform the Company of any new information, or information not previously provided to the Company by Generator which may affect the acceptability of the Waste by the Company. Further, the Generator shall comply with all Company requests for evidence of Generator's continuing compliance with the terms of the Agreement including but not limited to the following: (i) providing new, updated Waste profiles on the Waste(s) offered for disposal or, (ii) providing appropriate certification that the Waste being offered for disposal is accurately reflected by the appropriate Application or, (iii) re-sample the Waste at Generator's expense if reasonable cause exists as to its acceptability under the terms of this Agreement or, (iv) allow the Company to re-sample the Waste at Generator's expense if reasonable cause exists as to its acceptability under the terms of this Agreement or (v) all of the above.
20. **Miscellaneous.**
  - (A) This Agreement shall be governed by the laws of the State in which the Facility is located.
  - (B) No waiver of a breach of any of the obligations contained in the Agreement shall be construed to be a waiver of any prior or succeeding breach of the same obligation or of any other obligation of this Agreement.
  - (C) No modification, release, discharge or waiver of any provision or obligation hereof shall be of any force, or effect, unless in writing signed by all parties to this Agreement.
  - (D) Generator shall treat as confidential and not disclose to others during or subsequent to the terms of this Agreement, except as is necessary to perform this Agreement, or to comply with any applicable law or regulation any information (including any technical information, experience or data) regarding the Company's plans, programs, plants, processes, products, costs, equipment or operations which may come within the knowledge of the Generator or its employees in the performance of this Agreement, without in each instance securing the prior written consent of the other Company.
  - (E) If any term, phrase, obligation or provision of this Agreement shall be held to be invalid, illegal or unenforceable in any respect, this Agreement shall remain in effect and be construed without regard to such term, phrase, obligation or provision.
  - (F) This Agreement constitutes the entire understanding between the parties, replacing and amending any prior agreements between the parties, and shall be binding upon all parties hereto, their successors, heirs, representatives and assigns. Any provision, term or condition in any acknowledgement, purchase order or other response by Generator which is in addition to or different from the provisions of this Agreement shall be deemed objected to by the Company and shall be of no effect.
  - (G) Generator represents, warrants and covenants that it is and, during the term of this Agreement will remain, in compliance with and will perform its obligations pursuant to all applicable laws and regulations and shall indemnify, defend and hold harmless the Company from any breach thereof.
  - (H) It is the understanding and agreement of the parties that the Company is an independent contractor, and is not an agent, nor an authorized representative of the Generator.
21. **Notices.** All notices herein provided for shall be considered as having been given upon being placed in the mail, certified postage prepaid addressed to the Company or Generator at the address herein set forth in this Agreement or to such other address as may be given to the other party in writing.
22. **Liquidated Damages.** In the event that this Agreement is terminated by the Generator in a manner not in accordance with paragraph 4 hereof, or terminated due to a breach of this Agreement by the Generator, the Generator shall pay, as liquidated damages, and not as a penalty, the greater of an amount equal to six (6) months' service charges or the Generator's most recent monthly charge multiplied by six (6). The Generator shall be given credit for any advance payments made hereunder, however, in computing the amount owed as liquidated damages hereunder. The Generator acknowledges that this liquidated damages clause is reasonable and is applicable to recover damages related to its investment in equipment, development of landfills and hiring of employees undertaken by the Company to service its customers including the Generator. This liquidated damages clause in no way relieves the Generator from its obligations and liability for other cost or damages as set forth elsewhere in this Agreement.

GENERATOR:



Republic Services, Inc/COMPANY



May 2009



# Republic Services, Inc.

18500 N. Allied Way, Phoenix, AZ 85054

## SPECIAL WASTE DEPARTMENT DECISION

Waste Profile #  
51231717438

Expiration Date  
1/24/2018

### I. Decision Request:

Initial     Recertification     Change

Disposal Facility: 5123 - Sunshine Canyon Landfill

Generator Name: May Produce Co Inc

Generator Site Address: 3099 Del Mar Ave

City: Rosemead

County:

State: CA

Zip:

Name of Waste: Food Products

Estimated Annual Volume: 3600 Pounds

### II. Special Waste Department Decision:    Approved    Rejected

Management Method(s):     Landfill     Solidification     Bioremediation     Transfer Facility

Problematic Special Waste according to Republic?     Yes     No

If yes, which one? \_\_\_\_\_

Approved by Special Waste Review Committee?     Yes     No     Not Applicable

### Precautions, Conditions or Limitations on Approval

This material must be buried immediately upon receipt at the landfill.

Special Waste Analyst Signature: \_\_\_\_\_

Date: 10/24/2017

Name (Printed): Suzanne Glass

### III. Facility Decision:

Approved     Rejected

### Precautions, Conditions or Limitations on Approval

By signing below, the General Manager or Designee agrees that a fully executed Special Waste Service Agreement is on file for this profile and that the special waste file is complete.

General Manager or Designee: \_\_\_\_\_

Date: 10/24/2017

Name (Printed): Chris Coyle



Requested Disposal Facility: 5123 Sunshine Canyon LF CA

Waste Profile #

5123 17 17438

Saveable fill in form. Restricted printing until all required (yellow) fields are completed.

Sales Rep # 525 - Stacy Loveland

**I. Generator Information**

Generator Name: May Produce Co. Inc.

Generator Site Address: 3099 Del Mar Ave.

City: Rosemead County: USA State: California Zip: 91770

State ID/Reg No: State Approval/Waste Code: (if applicable) NAICS #.

Generator Mailing Address (if different): 3099 Del Mar Ave.

City: Rosemead County: Rosemead State: California Zip: 91770

Generator Contact Name: May Produce Co. Inc. Email: Albert@mayproduce.com

Phone Number: (626) 572-3168 Ext: Fax Number: (626) 572-2888

**II. Billing Information**

Bill To: May Produce Co. Inc. Contact Name: Albert Ku

Billing Address: 3099 Del Mar Ave Email: Albert@mayproduce.com

City: Rosemead State: CA Zip: 91770 Phone: (626) 572-3168

**III. Waste Stream Information**

- |  |  |  |   |
|--|--|--|---|
| Name of Waste:<br><small>(Petroleum products-applies only to contaminated media and debris).</small> | <input type="checkbox"/> Diesel Fuel                               | <input type="checkbox"/> Weathered Wood                  | <input type="checkbox"/> Friable Asbestos   |
|  | <input type="checkbox"/> Home Heating Fuel #1-6                    | <input type="checkbox"/> RCRA Empty Containers           | <input type="checkbox"/> Non Friable Asbestos   |
|  | <input type="checkbox"/> Kerosene                                  | <input type="checkbox"/> Treated Medical Waste           | <input type="checkbox"/> Cured Asphalt  |
|  | <input type="checkbox"/> Aviation Fuel                             | <input type="checkbox"/> Animal Carcass (non infectious) | <input type="checkbox"/> Tires  |
|  | <input type="checkbox"/> Hydraulic Fluid                           | <input type="checkbox"/> Plant Trash                     | <input checked="" type="checkbox"/> Food Products<br><small>(Including Animal Food)</small> |
|  | <input type="checkbox"/> Unleaded Gasoline (UST Corrective Action) | <input type="checkbox"/> Meth Contaminated Debris        |   |

Process Generating Waste: USDA hold, found unwanted bugs in purple yams from Hawaii

Method of Shipment:  BULK  DRUM  BAGGED  OTHER:

Estimated Annual Volume: 3,600 Pounds

Frequency:  ONE TIME  ONGOING

**IV. Certification**

I hereby certify that to the best of my knowledge and belief, the information contained herein is a true and accurate description of the waste material being offered for disposal. I further certify that by utilizing this profile, neither myself nor any other employee of the company will deliver for disposal or attempt to deliver for disposal any waste which is classified as toxic waste, hazardous waste or infectious waste, or any other waste material this facility is prohibited from accepting by law. Our company hereby agrees to fully indemnify this disposal facility against any damages resulting from this certification being inaccurate or untrue. I further certify that the company has not altered the form or content of this profile sheet as provided by Republic Services, Inc.

Albert Ku CFO

Authorized Representative Name/Title (Type or Print)

Authorized Representative Signature

May Produce Co. Inc.

Company Name

10/24/17

Date



# SPECIAL WASTE SERVICE AGREEMENT NON-HAZARDOUS WASTES

Special Waste Profile Number: 5123 17 17438

### Generator Billing Information

Name: MAY PRODUCE CO INC  
(ACCT CASH # 321)  
Address: 3099 DEL MAR AVE  
City: ROSEMEAD  
State: CA Zip: 91770  
Phone: 626.572.3168 Fax: 626.572.2888  
Contact: ALBERT KU

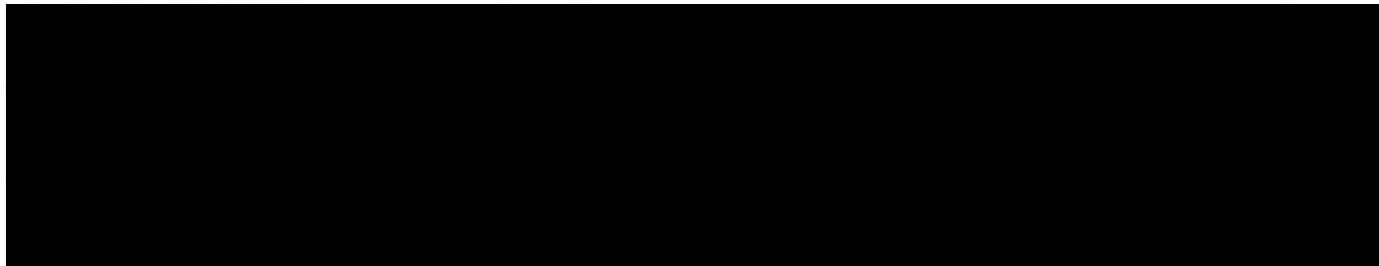
### Republic Waste Location (Company)

SUNSHINE CANYON LANDFILL (5123)  
14747 SAN FERNANDO ROAD  
SYLMAR, CA 91342  
818.362.2141

Project: FOOD PRODUCTS County and State of Origin: LOS ANGELES, CA

Additional Information: \_\_\_\_\_

- Special Waste Service.** Subject to the terms and conditions contained herein, the Company and the Generator agree to be legally bound hereby and the Company agrees to accept at its Facility, Acceptable Waste (hereinafter referred to as "Special Waste" or "Waste") delivered by Generator, and which is acceptable to the Company as herein provided.
- Acceptable Waste.** Only those Special Wastes described in Paragraph 3 herein and in any Special Waste Profile(s) which number is identical to the contract number referenced above, and which Profile(s) are hereby incorporated by reference herein, and which Waste is subsequently approved by the Company and is otherwise in accordance with all laws, regulations and permits, shall be acceptable for disposal at the Facility ("Acceptable Waste").



Cannot Exceed Daily Volume of 3,600 POUNDS Without Prior Approval of Company.

(B) **Incorporation by Reference.** In addition to Special Waste Profile(s), the following documents are incorporated by reference into this Agreement as if fully set forth herein.

1) N/A

2) N/A

- Term of Agreement.** This Agreement is effective for 12 months, commencing 10/24/2017 and shall automatically be renewed for a similar term thereafter unless either party shall give written notice (via certified mail) of termination to the other party at least thirty (30) days prior written notice.

THE COMPANY AND THE GENERATOR, IN CONSIDERATION OF THE MUTUAL OBLIGATIONS CONTAINED HEREIN, AGREE THAT THIS IS A LEGALLY BINDING AGREEMENT WHICH IS SUBJECT TO THE TERMS AND CONDITIONS SET FORTH ON THIS PAGE AND ON THE REVERSE SIDE OF THIS DOCUMENT. IN ADDITION, THE GENERATOR IS CERTIFYING THE ATTACHED TERMS AND CONDITIONS HAVE BEEN REVIEWED AND INITIALLED AT THE BOTTOM OF THE PAGE.

**GENERATOR**

[Signature]  
SIGNATURE (AUTHORIZED REPRESENTATIVE)

ALBERT KU CFO  
NAME AND TITLE (PLEASE PRINT)

10-24-17  
DATE

**REPUBLIC SERVICES, INC/COMPANY**

[Signature]  
SIGNATURE (AUTHORIZED REPRESENTATIVE)

Stacy Loveland - SW Executive  
NAME AND TITLE (PLEASE PRINT)

10/25/2017  
DATE

# Terms and Conditions of Special Waste Service Agreement

5. **The Agreement.** This agreement of the parties ("Agreement") for the disposal of Special Waste shall consist of this Agreement, riders to the Agreement (if any) and any Application, permit and approval that may be applicable to such Waste.
6. **Waste Accepted at Facility.** Generator represents, warrants and covenants that the Waste delivered to Company at its Facility hereunder will be Acceptable Waste and will not contain any unacceptable quantity of hazardous materials or substances, radioactive materials or substances, or toxic waste or substances, as defined by applicable federal, state, local or provincial laws or regulations. Any Waste which does not meet these requirements shall hereinafter be referred to as "Unacceptable Waste". The Generator shall in all matters relating to the collection, transportation and disposal of the Waste hereunder, comply with all applicable federal, state and local laws, regulations, rules and orders regarding the same. The word "Facility" shall mean any landfill, transfer station or other location used to transfer, process or otherwise dispose of such Waste.
7. **Special Waste.** Generator represents, warrants and covenants that the Waste delivered to Company hereunder (i) will not contain any Special Waste that is not specifically described on any Application which is attached hereto or which is subsequently approved by the Company, (ii) will meet the material description as set forth in any Application and otherwise in all significant respects and (iii) will not contain Unacceptable Waste. The parties may incorporate additional Special Waste as part of this Agreement if prior to delivery of such Waste to Company, Generator has provided an Application for such Waste and Company has approved disposal of such Waste within the limitations and conditions contained in Company's written notice of approval of Special Waste Disposal. Title to any and all Waste handled or disposed of by Company shall at all times remain with Generator and Broker (if a Broker is involved).
8. **Rights of Refusal/Rejection.** The Generator shall inspect all Waste at the place(s) of collection and shall remove any and all Unacceptable Waste. Company has the right to refuse, or to reject after acceptance, any load(s) of Waste(s) delivered to its Facility including if the Company believes the Generator has breached (or is breaching) its representations, warranties, covenants or agreements hereunder, or any applicable federal, state or local laws, regulations, rules or orders, even if only a portion of such Waste load is unacceptable. The Company shall have the right to inspect all vehicles and containers of Waste haulers, including the Generator's vehicles, in order to determine whether the Waste is Acceptable Waste or Unacceptable Waste pursuant to this Agreement and all applicable federal, state and local laws, rules and regulations. The Company's exercise, or failure to exercise, its rights hereunder shall not operate to relieve the Generator of its responsibilities or liability under this Agreement. The Generator shall be responsible for, and bear all reasonable expenses and damages incurred by the Company, as a result of the Unacceptable Waste and in the reloading and removal of Unacceptable Waste disposed in the Facility. The Company, may also, in its sole discretion, require the Generator to promptly remove the Unacceptable Waste.
9. **Limited License to Enter.** This Agreement provides Generator with a license to enter the Facility for the limited purpose of, and only to the extent necessary for, off-loading Acceptable Waste at the Facility in the manner directed by Company. Except in an emergency, Generator's personnel shall not leave the immediate vicinity of their vehicle. After off-loading the Waste, Generator's personnel shall promptly leave the Facility. Under no circumstances shall Generator or its personnel engage in any scavenging of Waste or other materials at the Facility. The Company reserves the right to make and enforce reasonable rules and regulations concerning the operation of the Facility, the conduct of the drivers and others on the Facility premises, quantities and sources of Waste, and any other matters necessary or desirable for the safe, legal and efficient operation of the Facility including, but not limited to, speed limits on haul roads imposed by the Company, and the wearing of hard hats and other personal protection equipment by all individuals allowed on the Facility premises. Generator agrees to conform to such rules and regulations as they may be established and amended from time to time. Company may refuse to accept Waste from and shall deny an entrance license to, any of Generator's personnel whom Company believes is under the influence of alcohol or other chemical substances. Generator shall be solely responsible for its employees and subcontractors performing their obligations in a safe manner when at the facility of Company.
10. **Charges and Payment.** Payment shall be made by Generator within sixty (60) days after receipt of invoice from Company. In the event that any amount is overdue, the Company may terminate this Agreement. Generator agrees to pay a finance charge equal to the maximum interest rate permitted by law. Generator shall be liable for all taxes, fees, or other charges imposed upon the disposal of the Waste by federal, state, local or provincial laws and regulations. Company, from time to time, may modify its rates upon sixty (60) days written notice to Generator.
11. **Termination.** Generator's obligations, representations, warranties and covenants regarding the Waste delivered and all indemnities shall survive termination of this Agreement. Should Generator materially default in any of its obligations hereunder, then Company may immediately terminate this Agreement and Generator shall be liable for all costs and damages incurred by the Company.
12. **Driver's Knowledge and Authority.** Generator represents, warrants and covenants that its drivers who deliver Waste to Company's Facility have been advised by Generator of the Company's prohibition on deliveries of hazardous materials or substances, radioactive materials or substances, or toxic waste or substances or any other Unacceptable Waste to the Facility of Company's restrictions on deliveries of Special Waste to the Facility, of the definitions of "Hazardous Waste and Hazardous Substances" as provided by applicable federal, state and local law, rules and regulations and "Special Waste" as provided herein, and of the terms of this license to enter Company's Facility.
13. **Indemnification.** Generator shall indemnify, defend and hold harmless the Company and its subsidiaries, affiliates and parent corporations, as applicable and their respective officers, directors, lenders, employees, subcontractors and agents from and against any and all claims, suits, losses, liabilities, assessments, damages, fines, costs and expenses, including reasonable attorneys fees arising under federal, state or local laws, regulations or ordinances, or relating to the content of the Waste, or arising out of or in connection with any breach of this Agreement or arising out of the negligent collection, transportation and disposal of Waste by Generator or Generator's employees, agents, subcontractors or representatives thereof. Generator shall also be responsible for increased inspection, testing, study and analysis costs made necessary due to reasonable concerns of the Company as to the content of the Waste following discovery of potentially Unacceptable Waste. This indemnification and other obligations stated in this paragraph shall survive the termination of this Agreement.
14. **Insurance.** Generator shall maintain in full force and effect throughout the term of this Agreement the following types of insurance in at least the amounts specified below:

Coverages	Minimum Amounts of Insurance
Worker's Compensation	Statutory
General Liability	\$500,000 combined single limit
Automobile Liability	\$500,000 combined single limit

All insurance will be by insurers authorized to do business in the state in which the Facility is located. Prior to Generator being allowed on Facility premises, Generator shall provide the Company with certificates of insurance or other satisfactory evidence that such insurance has been procured and is in force. Said policies shall not thereafter be canceled, be permitted to expire or lapse, or be changed without thirty (30) days advance written notice to the Company. Generator warrants that it will secure the above minimum amounts of insurance from any transportation of the Waste to the Facility.

15. **Failure to Perform.** Neither party hereto shall be liable for its failure to perform hereunder due to circumstances not its fault and beyond its reasonable control, including, but not limited to, strikes or other labor disputes, riots, protests, civil disturbances or sabotage, changes in law, fires, floods, compliance with government requests, explosions, accidents, weather, lack of required natural resources, or acts of God affecting either party hereto. In the event of any of the circumstances provided for in the preceding sentence, including, but not limited to, whether any federal, state or local court or governmental authority takes any action which would (i) close or restrict operations at the Facility, (ii) limit the quantity or prohibit the disposal of Waste at the Facility, or (iii) limit the ability of or prohibit Generator from delivering Waste to the Facility, the Company shall have the right, at its option, to reduce, suspend or terminate Generator's access to the Facility immediately, without prior notice and without any additional liabilities between the parties, other than Generator's payment obligation hereunder. Neither Party is required hereunder to settle any labor dispute against its own best judgment.

16. **Other Termination.** The occurrence of any of the following events shall also constitute an event of default by the Generator and shall give the Company the right to immediately terminate this Agreement:

- (A) A petition for reorganization or bankruptcy filed by or against the Generator.
- (B) Failure by Generator to pay any amounts due to Company.
- (C) Any breach by Generator of any of its obligations pursuant to the Agreement.

Generator shall be liable for and shall indemnify, defend and hold harmless Company from any losses, claims expenses or damages incurred by the Company as a result of termination hereunder.

17. **Assignment.** Generator may not assign, transfer or otherwise vest in any other Company, entity or person, in whole or in part, any of its rights or obligations under the Agreement without the prior written consent of the Company, provided, however, that the Company may without any such prior written consent, assign its rights and/or obligations under the Agreement to a subsidiary or affiliate corporation.

18. **Right of Disposal.** This Agreement does not grant any rights to dispose of Waste other than in accordance herewith. The Company reserves the right to immediately terminate access to the Facility by Generator and Generator's personnel in the event of breach or violation by Generator of any of the terms of this Agreement, the Company's operating rules or payment policies or any applicable laws or regulations.

19. **Continuing Compliance.** The Generator has a continuing obligation to inform the Company of any new information, or information not previously provided to the Company by Generator which may affect the acceptability of the Waste by the Company. Further, the Generator shall comply with all Company requests for evidence of Generator's continuing compliance with the terms of the Agreement including but not limited to the following: (i) providing new, updated Waste profiles on the Waste(s) offered for disposal or, (ii) providing appropriate certification that the Waste being offered for disposal is accurately reflected by the appropriate Application or, (iii) re-sample the Waste at Generator's expense if reasonable cause exists as to its acceptability under the terms of this Agreement or, (iv) allow the Company to re-sample the Waste at Generator's expense if reasonable cause exists as to its acceptability under the terms of this Agreement or (v) all of the above.

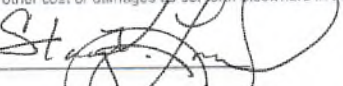
20. **Miscellaneous.**

- (A) This Agreement shall be governed by the laws of the State in which the Facility is located.
- (B) No waiver of a breach of any of the obligations contained in the Agreement shall be construed to be a waiver of any prior or succeeding breach of the same obligation or of any other obligation of this Agreement.
- (C) No modification, release, discharge or waiver of any provision or obligation hereof shall be of any force, or effect, unless in writing signed by all parties to this Agreement.
- (D) Generator shall treat as confidential and not disclose to others during or subsequent to the terms of this Agreement, except as is necessary to perform this Agreement, or to comply with any applicable law or regulation any information (including any technical information, experience or data) regarding the Company's plans, programs, plants, processes, products, costs, equipment or operations which may come within the knowledge of the Generator or its employees in the performance of this Agreement, without in each instance securing the prior written consent of the other Company.
- (E) If any term, phrase, obligation or provision of this Agreement shall be held to be invalid, illegal or unenforceable in any respect, this Agreement shall remain in effect and be construed without regard to such term, phrase, obligation or provision.
- (F) This Agreement constitutes the entire understanding between the parties, replacing and amending any prior agreements between the parties, and shall be binding upon all parties hereto, their successors, heirs, representatives and assigns. Any provision, term or condition in any acknowledgement, purchase order or other response by Generator which is in addition to or different from the provisions of this Agreement shall be deemed objected to by the Company and shall be of no effect.
- (G) Generator represents, warrants and covenants that it is and, during the term of this Agreement will remain, in compliance with and will perform its obligations pursuant to all applicable laws and regulations and shall indemnify, defend and hold harmless the Company from any breach thereof.
- (H) It is the understanding and agreement of the parties that the Company is an independent contractor, and is not an agent, nor an authorized representative of the Generator.

21. **Notices.** All notices herein provided for shall be considered as having been given upon being placed in the mail, certified postage prepaid addressed to the Company or Generator at the address herein set forth in this Agreement or to such other address as may be given to the other party in writing.

22. **Liquidated Damages.** In the event that this Agreement is terminated by the Generator in a manner not in accordance with paragraph 4 hereof, or terminated due to a breach of this Agreement by the Generator, the Generator shall pay, as liquidated damages, and not as a penalty, the greater of an amount equal to six (6) months' service charges or the Generator's most recent monthly charge multiplied by six (6). The Generator shall be given credit for any advance payments made hereunder, however, in computing the amount owed as liquidated damages hereunder. The Generator acknowledges that this liquidated damages clause is reasonable and is applicable to recover damages related to its investment in equipment, development of landfills and hiring of employees undertaken by the Company to service its customers including the Generator. This liquidated damages clause in no way relieves the Generator from its obligations and liability for other cost or damages as set forth elsewhere in this Agreement.

GENERATOR: 

Republic Services, Inc/COMPANY: 



# Republic Services, Inc.

18500 N. Allied Way, Phoenix, AZ 85054

## SPECIAL WASTE DEPARTMENT DECISION

	Waste Profile # 51231710878	Expiration Date 10/7/2017	
<b>I. Decision Request:</b>	<input checked="" type="checkbox"/> Initial	<input type="checkbox"/> Recertification	<input type="checkbox"/> Change
Disposal Facility: 5123 - Sunshine Canyon Landfill			
Generator Name: Mega Produce			
Generator Site Address: 715 S Central Ave			
City: Los Angeles	County: _____	State: CA	Zip: _____
Name of Waste: 53 Taro Stem and 39 Galangal			
Estimated Annual Volume: 1 Tons			

**II. Special Waste Department Decision:**     **Approved**     **Rejected**

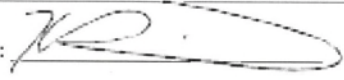
Management Method(s):     Landfill     Solidification     Bioremediation     Transfer Facility

Problematic Special Waste according to Republic?     Yes     No

If yes, which one? \_\_\_\_\_

Approved by Special Waste Review Committee?     Yes     No     Not Applicable

### Precautions, Conditions or Limitations on Approval

Special Waste Analyst Signature: 

Date: 7/10/2017

Name (Printed): KEITH DIAMANTI

**III. Facility Decision:**     **Approved**     **Rejected**

### Precautions, Conditions or Limitations on Approval

By signing below, the General Manager or Designee agrees that a fully executed Special Waste Service Agreement is on file for this profile and that the special waste file is complete.

General Manager or Designee: 

Date: 7/10/2017

Name (Printed): Rob Sherman



Requested Disposal Facility: 5123 Sunshine Canyon LF CA

Waste Profile # <b>5123 17 10878</b>
---

Saveable fill-in form. Restricted printing until all required (yellow) fields are completed.

**I. Generator Information**

Sales Rep #: 525 - Stacy Loveland
-----------------------------------

Generator Name: MEGA PRODUCE			
Generator Site Address: 715 S.CENTRAL AVE			
City: LOS ANGELES	County: LA	State: California	Zip: 90021
State ID/Reg No:	State Approval/Waste Code: (if applicable)		NAICS #:
Generator Mailing Address (if different): <input type="checkbox"/> 715 S.CENTRAL AVE			
City: LOS ANGELES	County: LA	State: California	Zip: 90021
Generator Contact Name: TOMMY SALIM		Email: megaproduce@aol.com	
Phone Number: (213) 688-8898	Ext:	Fax Number: (213) 688-8868	

**II. Billing Information**

Bill To: MEGA PRODUCE	Contact Name: TOMMY SALIM		
Billing Address: 715 S. CENTRAL AVE		Email: megaproduce@aol.com	
City: LOS ANGELES	State: CA	Zip: 90021	Phone: (213) 688-8868

**III. Waste Stream Information**

Name of Waste: 53 TARO STEM AND 39 GALANGAL	
Process Generating Waste: The Department of Food and Agriculture ordered us to destroy the following items, 53 Taro Stems & 39 Galangals, due to live infested pests named ants.	
Type of Waste:	<input type="checkbox"/> INDUSTRIAL PROCESS WASTE <input checked="" type="checkbox"/> POLLUTION CONTROL WASTE
Physical State:	<input checked="" type="checkbox"/> SOLID <input type="checkbox"/> SEMI-SOLID <input type="checkbox"/> POWDER <input type="checkbox"/> LIQUID
Method of Shipment:	<input type="checkbox"/> BULK <input type="checkbox"/> DRUM <input checked="" type="checkbox"/> BAGGED <input type="checkbox"/> OTHER:
Estimated Annual Volume:	1 Tons
Frequency:	<input checked="" type="checkbox"/> ONE TIME <input type="checkbox"/> ONGOING
Disposal Consideration:	<input checked="" type="checkbox"/> LANDFILL <input type="checkbox"/> SOLIDIFICATION <input type="checkbox"/> BIOREMEDIATION

**IV. Representative Sample Certification**

NO SAMPLE TAKEN

Is the representative sample collected to prepare this profile and laboratory analysis, collected in accordance with U.S. EPA 40 CFR 261.20(c) guidelines or equivalent rules?	<input type="checkbox"/> YES or <input type="checkbox"/> NO
--	---

Type of Sample: <input type="checkbox"/> COMPOSITE SAMPLE <input type="checkbox"/> GRAB SAMPLE
--

Sample Date:
--------------

Waste Profile #
5123 17 10878

**V. Physical Characteristics of Waste**

Characteristic Components		% by Weight (range)			
1. Herbs and Spices		100 package tablet			
2.					
3.					
4.					
5.					
Color	Odor (describe)	Does Waste Contain Free Liquids?	% Solids	pH:	Flash Point
NA	NA	<input type="checkbox"/> YES or <input checked="" type="checkbox"/> NO	100	NA	NA °F

**Attach Laboratory Analytical Report (and/or Material Safety Data Sheet) Including Chain of Custody and Required Parameters Provided for this Profile**

Does this waste or generating process contain regulated concentrations of the following Pesticides and/or Herbicides: Chlordane, Endrin, Heptachlor (and its epoxides), Lindane, Methoxychlor, Toxaphene, 2,4-D, or 2,4,5-TP Silvex as defined in 40 CFR 261.33?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Does this waste contain reactive sulfides (greater than 500 ppm) or reactive cyanide (greater than 250 ppm)[reference 40 CFR 261.23(a)(5)]?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Does this waste contain regulated concentrations of Polychlorinated Biphenyls (PCBs) as defined in 40 CFR Part 761?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Does this waste contain concentrations of listed hazardous wastes defined in 40 CFR 261.31, 261.32, 261.33, including RCRA F-Listed Solvents?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Does this waste exhibit a Hazardous Characteristic as defined by Federal and/or State regulations?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Does this waste contain regulated concentrations of 2,3,7,8-Tetrachlorodibenzodioxin (2,3,7,8-TCDD), or any other dioxin as defined in 40 CFR 261.31?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Is this a regulated Radioactive Waste as defined by Federal and/or State regulations?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Is this a regulated Medical or Infectious Waste as defined by Federal and/or State regulations?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Is this waste a reactive or heat generating waste?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Does the waste contain sulfur or sulfur by-products?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Is this waste generated at a Federal Superfund Clean Up Site?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Is this waste from a TSD facility, TSD like facility or consolidator?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No

**VI. Certification**

I hereby certify that to the best of my knowledge and belief, the information contained herein is a true, complete and accurate description of the waste material being offered for disposal and all known or suspected hazards have been disclosed. All Analytical Results/Material Safety Data Sheets submitted are truthful and complete and are representative of the waste.

I further certify that by utilizing this profile, neither myself nor any other employee of the company will deliver for disposal or attempt to deliver for disposal any waste which is classified as toxic waste, hazardous waste or infectious waste, or any other waste material this facility is prohibited from accepting by law. I shall immediately give written notice of any change or condition pertaining to the waste not provided herein. Our company hereby agrees to fully indemnify this disposal facility against any damages resulting from this certification being inaccurate or untrue.

I further certify that the company has not altered the form or content of this profile sheet as provided by Republic Services Inc.

TOMMY SALIM

MEGA PRODUCE

Authorized Representative Name And Title (Type or Print)

Company Name



07/07/2017

Authorized Representative Signature

Date



# SPECIAL WASTE SERVICE AGREEMENT NON-HAZARDOUS WASTES

Special Waste Profile Number: 5123 17 10878

### Generator Billing Information

Name: MEGA PRODUCE  
(ACCT CASH # 321)  
Address: 715 S CENTRAL AVE  
City: LOS ANGELES  
State: CA Zip: 90021  
Phone: 213.688.8898 Fax: \_\_\_\_\_  
Contact: TOMMY SALIM

### Republic Waste Location (Company)

SUNSHINE CANYON LANDFILL (5123)  
14747 SAN FERNANDO ROAD  
SYLMAR, CA 91342  
818.362.2141

Project: FOOD PRODUCTS County and State of Origin: LOS ANGELES, CA

Additional Information: \_\_\_\_\_

- Special Waste Service.** Subject to the terms and conditions contained herein, the Company and the Generator agree to be legally bound hereby and the Company agrees to accept at its Facility, Acceptable Waste (hereinafter referred to as "Special Waste" or "Waste") delivered by Generator, and which is acceptable to the Company as herein provided.
- Acceptable Waste.** Only those Special Wastes described in Paragraph 3 herein and in any Special Waste Profile(s) which number is identical to the contract number referenced above, and which Profile(s) are hereby incorporated by reference herein, and which Waste is subsequently approved by the Company and is otherwise in accordance with all laws, regulations and permits, shall be acceptable for disposal at the Facility ("Acceptable Waste").

3. (A) **Rates for Disposal:**

<u>Waste</u>	<u>Disposal Method</u>	<u>Disposal Rate:</u>	<u>Fees / Taxes / Misc.</u>	<u>Transportation</u>
FOOD PRODUCTS	LANDFILL	\$57 PER TON WITH A \$330 MINIMUM PER LOAD	TAXES, ERF, & FRF APPLY	N/A
Additional Information: ENVIRONMENTAL RECOVERY FEE (ERF) \$16.25 PER LOAD   FUEL RECOVERY FEE (FRF) 4-8% CALCULATED ON TONNAGE AT TIME OF DISPOSAL (PER LOAD)   INVOICE AND LATE FEES APPLY MATERIAL CODE: XD-SW-FOOD WASTES   PROFILE EXPIRES: 10/7/2017   A completed / signed manifest is required for each profiled approved load received at Sunshine Landfill (Please schedule all loads 24 hours in advance)				

Generator shall also be liable for all taxes, fees, or other charges imposed by federal, state, local or provincial laws and regulations.


Cannot Exceed Daily Volume of 1 TONS Without Prior Approval of Company.

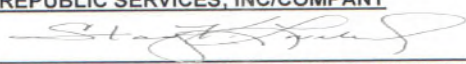
(B) **Incorporation by Reference.** In addition to Special Waste Profile(s), the following documents are incorporated by reference into this Agreement as if fully set forth herein.

- 1) N/A
- 2) N/A

- Term of Agreement.** This Agreement is effective for 3 months, commencing 7/10/2017 and shall automatically be renewed for a similar term thereafter unless either party shall give written notice (via certified mail) of termination to the other party at least thirty (30) days prior written notice.

THE COMPANY AND THE GENERATOR, IN CONSIDERATION OF THE MUTUAL OBLIGATIONS CONTAINED HEREIN, AGREE THAT THIS IS A LEGALLY BINDING AGREEMENT WHICH IS SUBJECT TO THE TERMS AND CONDITIONS SET FORTH ON THIS PAGE AND ON THE REVERSE SIDE OF THIS DOCUMENT. IN ADDITION, THE GENERATOR IS CERTIFYING THE ATTACHED TERMS AND CONDITIONS HAVE BEEN REVIEWED AND INITIALLED AT THE BOTTOM OF THE PAGE.

GENERATOR  
  
SIGNATURE (AUTHORIZED REPRESENTATIVE)  
Tommy Salim (owner of MEGA PRODUCE)  
NAME AND TITLE (PLEASE PRINT)  
07/10/17  
DATE

REPUBLIC SERVICES, INC/COMPANY  
  
SIGNATURE (AUTHORIZED REPRESENTATIVE)  
Stacy Loveland, Special Waste Exec  
NAME AND TITLE (PLEASE PRINT)  
7-10-17  
DATE

## Terms and Conditions of Special Waste Service Agreement

5. **The Agreement.** This agreement of the parties ("Agreement") for the disposal of Special Waste shall consist of this Agreement, riders to the Agreement (if any) and any Application, permit and approval that may be applicable to such Waste.
6. **Waste Accepted at Facility.** Generator represents, warrants and covenants that the Waste delivered to Company at its Facility hereunder will be Acceptable Waste and will not contain any unacceptable quantity of hazardous materials or substances, radioactive materials or substances, or toxic waste or substances, as defined by applicable federal, state, local or provincial laws or regulations. Any Waste which does not meet these requirements shall hereinafter be referred to as "Unacceptable Waste". The Generator shall in all matters relating to the collection, transportation and disposal of the Waste hereunder, comply with all applicable federal, state and local laws, regulations, rules and orders regarding the same. The word "Facility" shall mean any landfill, transfer station or other location used to transfer, process or otherwise dispose of such Waste.
7. **Special Waste.** Generator represents, warrants and covenants that the Waste delivered to Company hereunder (i) will not contain any Special Waste that is not specifically described on any Application which is attached hereto or which is subsequently approved by the Company, (ii) will meet the material description as set forth in any Application and otherwise in all significant respects and (iii) will not contain Unacceptable Waste. The parties may incorporate additional Special Waste as part of this Agreement if prior to delivery of such Waste to Company, Generator has provided an Application for such Waste and Company has approved disposal of such Waste within the limitations and conditions contained in Company's written notice of approval of Special Waste Disposal. Title to any and all Waste handled or disposed of by Company shall at all times remain with Generator and Broker (if a Broker is involved).
8. **Rights of Refusal/Rejection.** The Generator shall inspect all Waste at the place(s) of collection and shall remove any and all Unacceptable Waste. Company has the right to refuse, or to reject after acceptance, any load(s) of Waste(s) delivered to its Facility including if the Company believes the Generator has breached (or is breaching) its representations, warranties, covenants or agreements hereunder, or any applicable federal, state or local laws, regulations, rules or orders, even if only a portion of such Waste load is unacceptable. The Company shall have the right to inspect all vehicles and containers of Waste haulers, including the Generator's vehicles, in order to determine whether the Waste is Acceptable Waste or Unacceptable Waste pursuant to this Agreement and all applicable federal, state and local laws, rules and regulations. The Company's exercise, or failure to exercise, its rights hereunder shall not operate to relieve the Generator of its responsibilities or liability under this Agreement. The Generator shall be responsible for, and bear all reasonable expenses and damages incurred by the Company, as a result of the Unacceptable Waste and in the reloading and removal of Unacceptable Waste disposed in the Facility. The Company, may also, in its sole discretion, require the Generator to promptly remove the Unacceptable Waste.
9. **Limited License to Enter.** This Agreement provides Generator with a license to enter the Facility for the limited purpose of, and only to the extent necessary for, off-loading Acceptable Waste at the Facility in the manner directed by Company. Except in an emergency, Generator's personnel shall not leave the immediate vicinity of their vehicle. After off-loading the Waste, Generator's personnel shall promptly leave the Facility. Under no circumstances shall Generator or its personnel engage in any scavenging of Waste or other materials at the Facility. The Company reserves the right to make and enforce reasonable rules and regulations concerning the operation of the Facility, the conduct of the drivers and others on the Facility premises, quantities and sources of Waste, and any other matters necessary or desirable for the safe, legal and efficient operation of the Facility including, but not limited to, speed limits on haul roads imposed by the Company, and the wearing of hard hats and other personal protection equipment by all individuals allowed on the Facility premises. Generator agrees to conform to such rules and regulations as they may be established and amended from time to time. Company may refuse to accept Waste from and shall deny an entrance license to, any of Generator's personnel whom Company believes is under the influence of alcohol or other chemical substances. Generator shall be solely responsible for its employees and subcontractors performing their obligations in a safe manner when at the facility of Company.
10. **Charges and Payment.** Payment shall be made by Generator within sixty (60) days after receipt of invoice from Company. In the event that any amount is overdue, the Company may terminate this Agreement. Generator agrees to pay a finance charge equal to the maximum interest rate permitted by law. Generator shall be liable for all taxes, fees, or other charges imposed upon the disposal of the Waste by federal, state, local or provincial laws and regulations. Company, from time to time, may modify its rates upon sixty (60) days written notice to Generator.
11. **Termination.** Generator's obligations, representations, warranties and covenants regarding the Waste delivered and all indemnities shall survive termination of this Agreement. Should Generator materially default in any of its obligations hereunder, then Company may immediately terminate this Agreement and Generator shall be liable for all costs and damages incurred by the Company.
12. **Driver's Knowledge and Authority.** Generator represents, warrants and covenants that its drivers who deliver Waste to Company's Facility have been advised by Generator of the Company's prohibition on deliveries of hazardous materials or substances, radioactive materials or substances, or toxic waste or substances or any other Unacceptable Waste to the Facility of the Company's restrictions on deliveries of Special Waste to the Facility, of the definitions of "Hazardous Waste and Hazardous Substances" as provided by applicable federal, state and local law, rules and regulations and "Special Waste" as provided herein, and of the terms of this license to enter Company's Facility.
13. **Indemnification.** Generator shall indemnify, defend and hold harmless the Company and its subsidiaries, affiliates and parent corporations, as applicable and their respective officers, directors, lenders, employees, subcontractors and agents from and against any and all claims, suits, losses, liabilities, assessments, damages, fines, costs and expenses, including reasonable attorneys fees arising under federal, state or local laws, regulations or ordinances, or relating to the content of the Waste, or arising out of or in connection with any breach of this Agreement or arising out of the negligent collection, transportation and disposal of Waste by Generator or Generator's employees, agents, subcontractors or representatives thereof. Generator shall also be responsible for increased inspection, testing, study and analysis costs made necessary due to reasonable concerns of the Company as to the content of the Waste following discovery of potentially Unacceptable Waste. This indemnification and other obligations stated in this paragraph shall survive the termination of this Agreement.
14. **Insurance.** Generator shall maintain in full force and effect throughout the term of this Agreement the following types of insurance in at least the amounts specified below:

Coverages	Minimum Amounts of Insurance
Worker's Compensation	Statutory
General Liability	\$500,000 combined single limit
Automobile Liability	\$500,000 combined single limit

All insurance will be by insurers authorized to do business in the state in which the Facility is located. Prior to Generator being allowed on Facility premises, Generator shall provide the Company with certificates of insurance or other satisfactory evidence that such insurance has been procured and is in force. Said policies shall not thereafter be canceled, be permitted to expire or lapse, or be changed without thirty (30) days advance written notice to the Company. Generator warrants that it will secure the above minimum amounts of insurance from any transportation of the Waste to the Facility.

15. **Failure to Perform.** Neither party hereto shall be liable for its failure to perform hereunder due to circumstances not its fault and beyond its reasonable control, including, but not limited to, strikes or other labor disputes, riots, protests, civil disturbances or sabotage, changes in law, fires, floods, compliance with government requests, explosions, accidents, weather, lack of required natural resources, or acts of God affecting either party hereto. In the event of any of the circumstances provided for in the preceding sentence, including, but not limited to, whether any federal, state or local court or governmental authority takes any action which would (i) close or restrict operations at the Facility, (ii) limit the quantity or prohibit the disposal of Waste at the Facility, or (iii) limit the ability of or prohibit Generator from delivering Waste to the Facility, the Company shall have the right, at its option, to reduce, suspend or terminate Generator's access to the Facility immediately, without prior notice and without any additional liabilities between the parties, other than Generator's payment obligation hereunder. Neither Party is required hereunder to settle any labor dispute against its own best judgment.

16. **Other Termination.** The occurrence of any of the following events shall also constitute an event of default by the Generator and shall give the Company the right to immediately terminate this Agreement.

- (A) A petition for reorganization or bankruptcy filed by or against the Generator.
- (B) Failure by Generator to pay any amounts due to Company.
- (C) Any breach by Generator of any of its obligations pursuant to the Agreement.

Generator shall be liable for and shall indemnify, defend and hold harmless Company from any losses, claims expenses or damages incurred by the Company as a result of termination hereunder.

17. **Assignment.** Generator may not assign, transfer or otherwise vest in any other Company, entity or person, in whole or in part, any of its rights or obligations under the Agreement without the prior written consent of the Company, provided, however, that the Company may without any such prior written consent, assign its rights and/or obligations under the Agreement to a subsidiary or affiliate corporation.

18. **Right of Disposal.** This Agreement does not grant any rights to dispose of Waste other than in accordance herewith. The Company reserves the right to immediately terminate access to the Facility by Generator and Generator's personnel in the event of breach or violation by Generator of any of the terms of this Agreement, the Company's operating rules or payment policies or any applicable laws or regulations.

19. **Continuing Compliance.** The Generator has a continuing obligation to inform the Company of any new information, or information not previously provided to the Company by Generator which may affect the acceptability of the Waste by the Company. Further, the Generator shall comply with all Company requests for evidence of Generator's continuing compliance with the terms of the Agreement including but not limited to the following: (i) providing new, updated Waste profiles on the Waste(s) offered for disposal or, (ii) providing appropriate certification that the Waste being offered for disposal is accurately reflected by the appropriate Application or, (iii) re-sample the Waste at Generator's expense if reasonable cause exists as to its acceptability under the terms of this Agreement or, (iv) allow the Company to re-sample the Waste at Generator's expense if reasonable cause exists as to its acceptability under the terms of this Agreement or (v) all of the above.

### 20. Miscellaneous

- (A) This Agreement shall be governed by the laws of the State in which the Facility is located.
- (B) No waiver of a breach of any of the obligations contained in the Agreement shall be construed to be a waiver of any prior or succeeding breach of the same obligation or of any other obligation of this Agreement.
- (C) No modification, release, discharge or waiver of any provision or obligation hereof shall be of any force, or effect, unless in writing signed by all parties to this Agreement.
- (D) Generator shall treat as confidential and not disclose to others during or subsequent to the terms of this Agreement, except as is necessary to perform this Agreement, or to comply with any applicable law or regulation any information (including any technical information, experience or data) regarding the Company's plans, programs, plants, processes, products, costs, equipment or operations which may come within the knowledge of the Generator or its employees in the performance of this Agreement, without in each instance securing the prior written consent of the other Company.
- (E) If any term, phrase, obligation or provision of this Agreement shall be held to be invalid, illegal or unenforceable in any respect, this Agreement shall remain in effect and be construed without regard to such term, phrase, obligation or provision.
- (F) This Agreement constitutes the entire understanding between the parties, replacing and amending any prior agreements between the parties, and shall be binding upon all parties hereto, their successors, heirs, representatives and assigns. Any provision, term or condition in any acknowledgment, purchase order or other response by Generator which is in addition to or different from the provisions of this Agreement shall be deemed objected to by the Company and shall be of no effect.
- (G) Generator represents, warrants and covenants that it is and, during the term of this Agreement will remain, in compliance with and will perform its obligations pursuant to all applicable laws and regulations and shall indemnify, defend and hold harmless the Company from any breach thereof.
- (H) It is the understanding and agreement of the parties that the Company is an independent contractor, and is not an agent, nor an authorized representative of the Generator.


21. **Notices.** All notices herein provided for shall be considered as having been given upon being placed in the mail, certified postage prepaid addressed to the Company or Generator at the address herein set forth in this Agreement or to such other address as may be given to the other party in writing.

22. **Liquidated Damages.** In the event that this Agreement is terminated by the Generator in a manner not in accordance with paragraph 4 hereof, or terminated due to a breach of this Agreement by the Generator, the Generator shall pay, as liquidated damages, and not as a penalty, the greater of an amount equal to six (6) months' service charges or the Generator's most recent monthly charge multiplied by six (6). The Generator shall be given credit for any advance payments made hereunder, however, in computing the amount owed as liquidated damages hereunder. The Generator acknowledges that this liquidated damages clause is reasonable and is applicable to recover damages related to its investment in equipment, development of landfills and hiring of employees undertaken by the Company to service its customers including the Generator. This liquidated damages clause in no way relieves the Generator from its obligations and liability for other cost or damages as set forth elsewhere in this Agreement.

GENERATOR: \_\_\_\_\_

Republic Services, Inc/COMPANY: \_\_\_\_\_

May 2009

 <p><b>STATE OF CALIFORNIA</b>  <b>DEPARTMENT OF FOOD AND AGRICULTURE</b>  <b>PLANT HEALTH AND</b>  <b>PEST PREVENTION SERVICES</b></p> <p><b>PEST AND DAMAGE RECORD</b></p>	<b>PDR NUMBER 190P06620013</b>			Date collected <b>6/29/2017</b>
	Lab ENTO SEED	PLANT PATH BOTANY	NEMA VERT	Time Collected
	NOR Number:			<b>RUSH</b>
	Number of samples:			
Location: <b>19</b>	Owner/receiver		Collector <b>Weston, Ofiabulu</b>	
Activity: <b>01</b>	Owner <b>Mega Produce</b>		Affil. F S C E U O Describe Other	
Situation: <b>06</b>	Address/physical description <b>715 S. Central Ave</b>		Quarantine shipper/broker	
Section:	City <b>Los Angeles</b>	State <b>CA</b>	Zip code <b>90021</b>	Name <b>Chuan Produce</b>
Township:	County <b>Los Angeles</b>			Address <b>2312 Kamehameha Hwy, Bldg. B</b>
Range:	Phone <b>(213) 688-8898</b>	Fax	Latitude	City <b>Honolulu</b>
Base and meridian:	E-mail		Longitude	Zip code <b>96819</b>
	Cross street			State/Country <b>HI US</b>
	Phone		Fax	Latitude <b>21.332203</b>
Quarantine destination			E-mail	Longitude <b>-157.88628</b>
Quarantine origin (where host grown)				Carrier (ground/air/maritime)
City	County	State/Country <b>HI</b>	Zip	Business name
Shipment size / units /		Program <b>HR - High Risk Pest Exclusion</b>	License plate	License state
Flight number		Tail/ship number		
Submitter remarks <b>Pheidole sp. J00831 Permit #218</b>			General or Plant Pathology	
Suspect			Number of involved: of plants affected: Plant distribution: Plant parts affected	
Send report to: Name: <b>Los Angeles County Ag Comm</b> Phone: Fax: Email:			Bark                      Bulbs or Corms                      Leaves, upper surface Blossoms                      Fruit or nuts                      Petiole                      Stem Branches, large                      Growing tips                      Rootlets                      Trunk Branches, terminal                      Roots, large                      Seeds                      Tubers Buds                      Leaves, lower surface	
Entomology Trap number    Grid number    Last service date    Latitude Trap type                      Trap density                      Longitude per Survey method			Plant symptoms Canker                      Gummy                      Malformation                      Slow Decline Die back                      Internal discoloration                      Marginal burn                      Stunting Fruit rot                      Leaf fall                      Root rot                      Sudden collapse Fruit spot                      Leaf mottling                      Rough bark                      Wilting Galls                      Leaf spot                      Shot hole                      Yellowing	

Sample

Sample Tag	Location Description		Latitude	Remarks
	Quantity and unit	Lot Number	Longitude	
Total pest count or number per (sweep, leaf, acre, trap, root, stem etc) Count:			Entomology: Conditions    Dead    Alive    Unknown Stages    Egg    Larva    Nymph    Pupa    Adult	

Nematology	Botany/Vertebrate: Acreage net: Acreage gross:
------------	--

Host

Host Tag	Common Name Taro and Galanga	Scientific Name	Type	Nema Field Block Type
	Variety	Container Size	Quantity and Units	Nema Field Block
	Remarks			

Identifications

Lab Entomology	Scientist Kevin Williams	Rating Q	Common Name ant
Date 7/5/2017	Order Hymenoptera	Family Formicidae	
Genus Pheidole		Species sp.	
Sub-Species		Higher Category (phylum) Arthropoda, (class) Insecta	
General Identification Notes			
<i>Entomology</i>			
Mature:	Dead:	Egg:	Adult:
Immature:	Alive:	Larva:	Male:
Mated:	Unknown:	Nymph:	Female:
		Pupa:	
Egg Viability:			
Egg Viability Notes:			
Instar Notes:			

4

AGRICULTURAL COMMISSIONER WEIGHTS AND MEASURES  
PROVIDE A RECORD OF ANY QUARANTINE VIOLATIONS.

J 00831

INSPECTOR / COLLECTOR Weston / E. Abate / Phinney Date 6/29/17  
MATERIAL in VIOLATION 53 Taro stems & 39 Galanga (TOTAL = 92) ON HOLD  
Number & Kind

Held  Not Held  
(Entire CAN ON HOLD)

REMAINDER is unrestricted, may be/has been released and consists of  
N/A

RECEIVER Mega Produce  
Address 715 South Central Avenue, LA, CA 90021 / (213) 688-8890

SHIPPER Chuan Produce / OFE  
Address 2312 KAMEHAMEHA Highway Building B  
Origin of Material Honolulu, HI 96819

CARRIER Name & Town HAWAIIAN / LAX Phone \_\_\_\_\_  
 AIR  TRUCK  SHIP  OTHER

SHIPMENT  Held at HAWAIIAN Town LAX  
Condition on arrival -  G  F  P (explain)

Required certificates present USDA APHIS, PPQ Insp # 218

VIOLATION Code or Quar. No. 64642 Name of Quarantine In Fested Nature of Violation In Fested with Live Pests

Pest Specimens submitted?  None  Insect  Disease  Nema  Weeds  Other (explain)  
Remarks: 1) Taro stems - Ants - HI  
2) Galanga - Ants - HI

FINAL DISPOSITION  
Inspector \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_  
Destroyed  (how) \_\_\_\_\_  
Diverted  to \_\_\_\_\_ Returned  \_\_\_\_\_  
Treated  \_\_\_\_\_

Certificate secured  Permit secured  Plant Pest/ID secured   
Option of  Ship'r  Rec'r  Carrier  State  Ag. Com.  
Physical condition of shipment at time of final disposition \_\_\_\_\_  
Released: All \_\_\_\_\_   
Remainder \_\_\_\_\_







# Republic Services, Inc.

18500 N. Allied Way, Phoenix, AZ 85054

## SPECIAL WASTE DEPARTMENT DECISION

	Waste Profile # 51231711516	Expiration Date 1/19/2018	
<b>I. Decision Request:</b>	<input checked="" type="checkbox"/> Initial	<input type="checkbox"/> Recertification	<input type="checkbox"/> Change
Disposal Facility: 5123 - Sunshine Canyon Landfill			
Generator Name: Port of Long Beach			
Generator Site Address: Pier A and Pier S			
City: Long Beach	County: _____	State: CA	Zip: _____
Name of Waste: Pier A and Pier S Soil Stockpiles			
Estimated Annual Volume: 4733 Cubic Yards			

**II. Special Waste Department Decision:**     **Approved**     **Rejected**


Management Method(s):     Landfill     Solidification     Bioremediation     Transfer Facility

Problematic Special Waste according to Republic?     Yes     No

If yes, which one? \_\_\_\_\_

Approved by Special Waste Review Committee?     Yes     No     Not Applicable

### Precautions, Conditions or Limitations on Approval

Special Waste Analyst Signature: 

Date: 7/19/2017

Name (Printed): KEITH DIAMANTI

**III. Facility Decision:**     **Approved**     **Rejected**

Precautions, Conditions or Limitations on Approval

By signing below, the General Manager or Designee agrees that a fully executed Special Waste Service Agreement is on file for this profile and that the special waste file is complete.

General Manager or Designee: 

Date: 7/19/2017

Name (Printed): Rob Sherman





Waste Profile #
5123 17 11516

**V. Physical Characteristics of Waste**

Characteristic Components	% by Weight (range)
1. Pier A: Two CMB and soil mixed stockpiles 670 cy and 63 cy	15
2. Pier S: Four 1,000 cy soil stockpiles	85
3.	
4.	
5.	

Color	Odor (describe)	Does Waste Contain Free Liquids?	% Solids	pH:	Flash Point
Brown and	N/A	<input type="checkbox"/> YES or <input checked="" type="checkbox"/> NO	100	N/A	N/A °F

**Attach Laboratory Analytical Report (and/or Material Safety Data Sheet) Including Chain of Custody and Required Parameters Provided for this Profile**

Does this waste or generating process contain regulated concentrations of the following Pesticides and/or Herbicides: Chlordane, Endrin, Heptachlor (and its epoxides), Lindane, Methoxychlor, Toxaphene, 2,4-D, or 2,4,5-TP Silvex as defined in 40 CFR 261.33?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Does this waste contain reactive sulfides (greater than 500 ppm) or reactive cyanide (greater than 250 ppm)[reference 40 CFR 261.23(a)(5)]?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Does this waste contain regulated concentrations of Polychlorinated Biphenyls (PCBs) as defined in 40 CFR Part 761?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Does this waste contain concentrations of listed hazardous wastes defined in 40 CFR 261.31, 261.32, 261.33, including RCRA F-Listed Solvents?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Does this waste exhibit a Hazardous Characteristic as defined by Federal and/or State regulations?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Does this waste contain regulated concentrations of 2,3,7,8-Tetrachlorodibenzodioxin (2,3,7,8-TCDD), or any other dioxin as defined in 40 CFR 261.31?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Is this a regulated Radioactive Waste as defined by Federal and/or State regulations?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Is this a regulated Medical or Infectious Waste as defined by Federal and/or State regulations?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Is this waste a reactive or heat generating waste?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Does the waste contain sulfur or sulfur by-products?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Is this waste generated at a Federal Superfund Clean Up Site?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No
Is this waste from a TSD facility, TSD like facility or consolidator?	<input type="checkbox"/> Yes or <input checked="" type="checkbox"/> No

**VI. Certification**

I hereby certify that to the best of my knowledge and belief, the information contained herein is a true, complete and accurate description of the waste material being offered for disposal and all known or suspected hazards have been disclosed. All Analytical Results/Material Safety Data Sheets submitted are truthful and complete and are representative of the waste.

I further certify that by utilizing this profile, neither myself nor any other employee of the company will deliver for disposal or attempt to deliver for disposal any waste which is classified as toxic waste, hazardous waste or infectious waste, or any other waste material this facility is prohibited from accepting by law. I shall immediately give written notice of any change or condition pertaining to the waste not provided herein. Our company hereby agrees to fully indemnify this disposal facility against any damages resulting from this certification being inaccurate or untrue.

I further certify that the company has not altered the form or content of this profile sheet as provided by Republic Services Inc.

Daniel J. Ramsey on behalf of PORS

Authorized Representative Name And Title (Type or Print)

Port of Long Beach

Company Name

Authorized Representative Signature

7/18/17

Date

7/13/2017

**Addendum to Special Waste Profile**  
**Pier A and Pier S Soil Stockpiles**  
**Port of Long Beach, CA**  
**Generating Site Address Locations**  
(Prepared for Republic Services)

The wastes under this profile originate from two separate locations that are described below.

Pier A: Two CMB and Soil Mixed Stockpiles (670 cy and 63 cy)

Address: Near intersection of Pier A Way and Pier B Street, Terminal Island, CA

Pier S: Four 1,000 cy soil stockpiles

Address: Near intersection of Highway CA-47 and New Dock Street, Terminal Island, CA

Signature (POLB Authorized Representative)

David T. Ramsey  
on behalf of POLB

Name (Print)

 7/14/17

Signature/Date



# AGENT SPECIAL WASTE SERVICE AGREEMENT NON-HAZARDOUS WASTES

Special Waste Profile Number: 5123 17 11516

**Agent Billing Information**

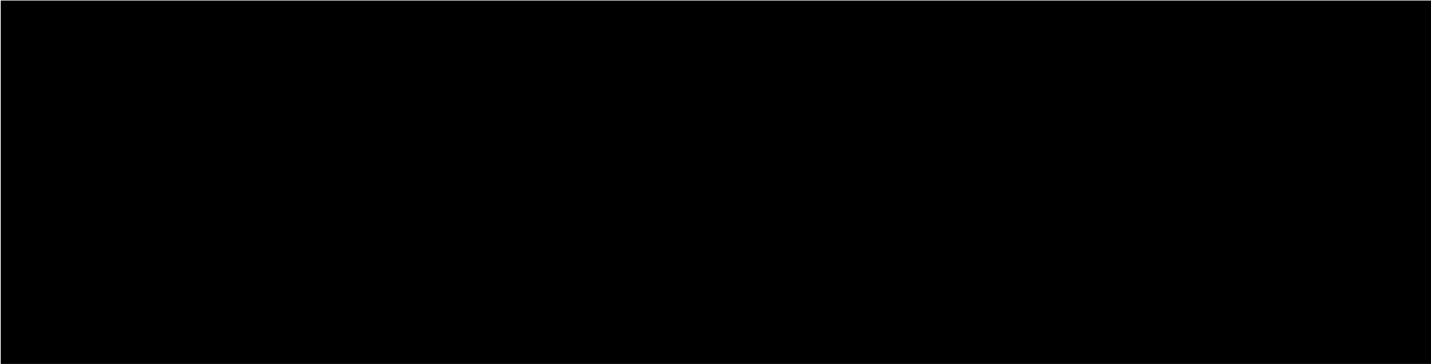
**Republic Waste Location (Company)**

Name: LOVCO CONSTRUCTION INC (ACCT # )  
Address: 1300 BURNETT STREET  
City: SIGNAL HILL  
State: CALIFORNIA Zip: 90755  
Phone: 562.595.1601 Fax: \_\_\_\_\_  
Contact: BRETT HAAGSMA

SUNSHINE CANYON LANDFILL (5123)  
14747 SAN FERNANDO ROAD  
SYMAR, CA 91342  
818.833.6500

**Project:** PORT OF LONG BEACH **County and State of Origin:** LOS ANGELES, CALIFORNIA  
**Generator Address:** PIER A & S, LONG BEACH, CA 90815  
**Additional Information:** CONTACT: DANIEL RAMSAY | PHONE: 562.283.7100


1. **Special Waste Service.** Subject to the terms and conditions contained herein, the Company and the Agent agree to be legally bound hereby and the Company agrees to accept at its Facility, Acceptable Waste (hereinafter referred to as "Special Waste" or "Waste") delivered by Agent, and which is acceptable to the Company as herein provided.
2. **Acceptable Waste.** Only those Special Wastes described in Paragraph 3 herein and in any Special Waste Profile(s) which number is identical to the contract number referenced above, and which Profile(s) are hereby incorporated by reference herein, and which Waste is subsequently approved by the Company and is otherwise in accordance with all laws, regulations and permits, shall be acceptable for disposal at the Facility ("Acceptable Waste").




(B) **Incorporation by Reference.** In addition to Special Waste Profile(s), the following documents are incorporated by reference into this Agreement as if fully set forth herein.  
1) N/A  
2) N/A

4. **Term of Agreement.** This Agreement is effective for 6 months, commencing 7/19/2017 and shall automatically be renewed for a similar term thereafter unless either party shall give written notice (via certified mail) of termination to the other party at least thirty (30) days prior written notice.

**THE COMPANY AND THE AGENT, IN CONSIDERATION OF THE MUTUAL OBLIGATIONS CONTAINED HEREIN, AGREE THAT THIS IS A LEGALLY BINDING AGREEMENT WHICH IS SUBJECT TO THE TERMS AND CONDITIONS SET FORTH ON THIS PAGE AND ON THE REVERSE SIDE OF THIS DOCUMENT. IN ADDITION, THE GENERATOR IS CERTIFYING THE ATTACHED TERMS AND CONDITIONS HAVE BEEN REVIEWED AND INITIALLED AT THE BOTTOM OF THE PAGE.**

**AGENT**  
  
SIGNATURE (AUTHORIZED REPRESENTATIVE)  
Matthew J. Lovingier - Vice President  
NAME AND TITLE (PLEASE PRINT)  
07/20/2017  
DATE

**REPUBLIC SERVICES, INC/COMPANY**  
  
SIGNATURE (AUTHORIZED REPRESENTATIVE)  
Fred Hays - Director of MESE  
NAME AND TITLE (PLEASE PRINT)  
7/20/2017  
DATE

# Terms and Conditions of Agent Special Waste Service Agreement

5. **The Agreement.** This agreement of the parties ("Agreement") for the disposal of Special Waste shall consist of this Agreement, riders to the Agreement (if any) and any Application, permit and approval that may be applicable to such Waste.
6. **Waste Accepted at Facility.** Agent represents, warrants and covenants that the Waste delivered to Company at its Facility hereunder will be Acceptable Waste and will not contain any unacceptable quantity of hazardous materials or substances, radioactive materials or substances, or toxic waste or substances, as defined by applicable federal, state, local or provincial laws or regulations. Any Waste which does not meet these requirements shall hereinafter be referred to as "Unacceptable Waste". The Agent shall in all matters relating to the collection, transportation and disposal of the Waste hereunder, comply with all applicable federal, state and local laws, regulations, rules and orders regarding the same. The word "Facility" shall mean any landfill, transfer station or other location used to transfer, process or otherwise dispose of such Waste.
7. **Special Waste.** Agent represents, warrants and covenants that the Waste delivered to Company hereunder (i) will not contain any Special Waste that is not specifically described on any Application which is attached hereto and which is subsequently approved by the Company, (ii) will meet the material description as set forth in any Application and otherwise in all significant respects and (iii) will not contain Unacceptable Waste. The parties may incorporate additional Special Waste as part of this Agreement if prior to delivery of such Waste to Company, Agent has provided an Application for such Waste and Company has approved disposal of such Waste within the limitations and conditions contained in Company's written notice of approval of Special Waste. Title to any and all Waste handled or disposed of by Company shall at all times remain with Generator and Agent.
8. **Rights of Refusal/Rejection.** The Agent shall inspect all Waste at the place(s) of collection and shall remove any and all Unacceptable Waste. Company has the right to refuse, or to reject after acceptance, any load(s) of Waste(s) delivered to its Facility including if the Company believes the Agent has breached (or is breaching) its representations, warranties, covenants or agreements hereunder, or any applicable federal, state or local laws, regulations, rules or orders, even if only a portion of such Waste load is unacceptable. The Company shall have the right to inspect all vehicles of Waste haulers, including the Agent's vehicles, in order to determine whether the Waste is Acceptable Waste or Unacceptable Waste pursuant to this Agreement and all applicable federal, state and local laws, rules and regulations. The Company's exercise, or failure to exercise, its rights hereunder shall not operate to relieve the Agent of its responsibilities or liability under this Agreement. The Agent shall be responsible for, and bear all reasonable expenses and damages incurred by the Company, as a result of the Unacceptable Waste and in the reloading and removal of Unacceptable Waste disposed in the Facility. The Company, may also, in its sole discretion, require the Agent to promptly remove the Unacceptable Waste.
9. **Limited License to Enter.** This Agreement provides Agent with a license to enter the Facility for the limited purpose of, and only to the extent necessary for, off-loading Acceptable Waste at the Facility in the manner directed by Company. Except in an emergency, Agent's personnel shall not leave the immediate vicinity of their vehicle. After off-loading the Waste, Agent's personnel shall promptly leave the Facility. Under no circumstances shall Agent or its personnel engage in any scavenging of Waste or other materials at the Facility. The Company reserves the right to make and enforce reasonable rules and regulations concerning the operation of the Facility, the conduct of the drivers and others on the Facility premises, quantities and sources of Waste, and any other matters necessary or desirable for the safe, legal and efficient operation of the Facility including, but not limited to, speed limits on haul roads imposed by the Company, and the wearing of hard hats and other personal protection equipment by all individuals allowed on the Facility premises. Agent agrees to conform to such rules and regulations as they may be established and amended from time to time. Company may refuse to accept Waste from and shall deny an entrance license to, any of Agent's personnel whom Company believes is under the influence of alcohol or other chemical substances. Agent shall be solely responsible for its employees and subcontractors performing their obligations in a safe manner when at the facility of Company.
10. **Charges and Payment.** Payment shall be made by Agent within sixty (60) days after receipt of invoice from Company. In the event that any amount is overdue, the Company may terminate this Agreement. Agent agrees to pay a finance charge equal to the maximum interest rate permitted by law. Agent shall be liable for all taxes, fees, or other charges imposed upon the disposal of the Waste by federal, state, local or provincial laws and regulations. Company, from time to time, may modify its rates upon sixty (60) days written notice to Agent. Agent hereby agrees that the Company's right to receive payments under this Agreement is unconditional and is not conditioned upon Agent first receiving payment from Generator or any other party.
11. **Termination.** Agent's obligations, representations, warranties and covenants regarding the Waste delivered and all indemnities shall survive termination of this Agreement. Should Agent materially default in any of its obligations hereunder, then Company may immediately terminate this Agreement and Agent shall be liable for all costs and damages incurred by the Company.
12. **Driver's Knowledge and Authority.** Agent represents, warrants and covenants that its drivers who deliver Waste to Company's Facility have been advised by Agent of the Company's prohibition on deliveries of hazardous materials or substances, radioactive materials or substances, or toxic waste or substances or any other Unacceptable Waste to the Facility, of Company's restrictions on deliveries of Special Waste to the Facility of the definitions of "Hazardous Waste and Hazardous Substances" as provided by applicable federal, state and local law, rules and regulations and "Special Waste" as provided herein, and of the terms of this license to enter Company's Facility.
13. **Indemnification.** Agent shall indemnify, defend and hold harmless the Company and its subsidiaries, affiliates and parent corporations, as applicable and their respective officers, directors, lenders, employees, subcontractors and agents from and against any and all claims, suits, losses, liabilities, assessments, damages, fines, costs and expenses, including reasonable attorneys fees arising under federal, state or local laws, regulations or ordinances, or relating to the content of the Waste, or arising out of or in connection with any breach of this Agreement or arising out of the negligent collection, transportation and disposal of Waste by Agent or Agent's employees, agents, subcontractors or representatives thereof. Agent shall also be responsible for increased inspection, testing, study and analysis costs made necessary due to reasonable concerns of the Company as to the content of the Waste following discovery of potentially Unacceptable Waste. This indemnification and other obligations stated in this paragraph shall survive the termination of this Agreement.
14. **Insurance.** Agent shall maintain in full force and effect throughout the term of this Agreement the following types of insurance in at least the amounts specified below:

All insurance will be by insurers authorized to do business in the state in which the Facility is located. Prior to Agent being allowed on Facility premises, Agent shall provide the Company with certificates of insurance or other satisfactory evidence that such insurance has been procured and is in force. Said policies shall not thereafter be canceled, be permitted to expire, or be changed without thirty (30) days advance written notice to the Company. Agent warrants that it will secure the above minimum amounts of insurance from any transportation of the Waste to the Facility.

15. **Failure to Perform.** Neither party hereto shall be liable for its failure to perform hereunder due to circumstances not its fault and beyond its reasonable control, including, but not limited to, strikes or other labor disputes, riots, protests, civil disturbances or sabotage, changes in law, fires, floods, compliance with government requests, explosions, accidents, weather, lack of required natural resources, or acts of God affecting either party hereto. In the event of any of the circumstances provided for in the preceding sentence, including, but not limited to, whether any federal, state or local court or governmental authority takes any action which would (i) close or restrict operations at the Facility, (ii) limit the quantity or prohibit the disposal of Waste at the Facility, or (iii) limit the ability of or prohibit Agent from delivering Waste to the Facility, the Company shall have the right, at its option, to reduce, suspend or terminate Agent's access to the Facility immediately, without prior notice and without any additional liabilities between the parties, other than Agent's payment obligation hereunder. Neither Party is required hereunder to settle any labor dispute against its own best judgment.
16. **Other Termination.** The occurrence of any of the following events shall also constitute an event of default by the Agent and shall give the Company the right to immediately terminate this Agreement:
  - (A) A petition for reorganization or bankruptcy filed by or against the Agent.
  - (B) Failure by Agent to pay any amounts due to Company.
  - (C) Any breach by Agent of any of its obligations pursuant to the Agreement.

Agent shall be liable for and shall indemnify, defend and hold harmless Company from any losses, claims expenses or damages incurred by the Company as a result of termination hereunder.

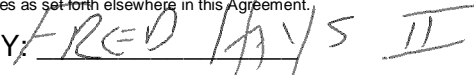
17. **Assignment.** Agent may not assign, transfer or otherwise vest in any other Company, entity or person, in whole or in part, any of its rights or obligations under the Agreement without the prior written consent of the Company, provided, however, that the Company may without any such prior written consent, assign its rights and/or obligations under the Agreement to a subsidiary or affiliate corporation.
18. **Right of Disposal.** This Agreement does not grant any rights to dispose of Waste other than in accordance herewith. The Company reserves the right to immediately terminate access to the Facility by Agent and Agent's personnel in the event of breach or violation by Agent of any of the terms of this Agreement, the Company's operating rules or payment policies or any applicable laws or regulations.
19. **Continuing Compliance.** The Agent has a continuing obligation to inform the Company of any new information, or information not previously provided to the Company by Agent and/or Generator which may affect the acceptability of the Waste by the Company. Further, the Agent shall comply with all Company requests for evidence of Agent's continuing compliance with the terms of the Agreement including but not limited to the following: (i) providing new, updated Waste profiles on the Waste(s) offered for disposal, (ii) providing appropriate certification that the Waste being offered for disposal is accurately reflected by the appropriate Application or, (iii) re-sample the Waste at Agent's expense if reasonable cause exists as to its acceptability under the terms of this Agreement or, (iv) allow the Company to re-sample the Waste at Agent's expense if reasonable cause exists as to its acceptability under the terms of this Agreement or (v) all of the above.
20. **Miscellaneous.**
  - (A) This Agreement shall be governed by the laws of the State in which the Facility is located.
  - (B) No waiver of a breach of any of the obligations contained in the Agreement shall be construed to be a waiver of any prior or succeeding breach of the same obligation or of any other obligation of this Agreement.
  - (C) No modification, release, discharge or waiver of any provision or obligation hereof shall be of any force, or effect, unless in writing signed by all parties to this Agreement.
  - (D) Agent shall treat as confidential and not disclose to others during or subsequent to the terms of this Agreement, except as is necessary to perform this Agreement, or to comply with any applicable law or regulation any information (including any technical information, experience or date) regarding the Company's plans, programs, plants, processes, products, costs, equipment or operations which may come within the knowledge of the Agent or its employees in the performance of this Agreement, without in each instance securing the prior written consent of the other Company.
  - (E) If any term, phrase, obligation or provision of this Agreement shall be held to be invalid, illegal or unenforceable in any respect, this Agreement shall remain in effect and be construed without regard to such term, phrase, obligation or provision.
  - (F) This Agreement constitutes the entire understanding between the parties, replacing and amending any prior agreements between the parties, and shall be binding upon all parties hereto, their successors, heirs, representatives and assigns. Any provision, term or condition in any acknowledgement, purchase order or other response by Agent which is in addition to or different from the provisions of this Agreement shall be deemed objected to by the Company and shall be of no effect.
  - (G) Agent represents, warrants and covenants that it is and during the term of this Agreement, will remain, in compliance with and will perform its obligations pursuant to all applicable laws and regulations and shall indemnify, defend and hold harmless the Company from any breach thereof.
  - (H) It is the understanding and agreement of the parties that the Company is an independent contractor, and is not an agent, nor an authorized representative of the Agent. It is the further understanding and agreement of the parties that Agent is an authorized representative of Generator.

21. **Notices.** All notices herein provided for shall be considered as having been given upon being placed in the mail, certified postage prepaid addressed to the Company or Agent at the address herein set forth in this Agreement or to such other address as may be given to the other party in writing.

22. **Liquidated Damages.** In the event that this Agreement is terminated by the Agent in a manner not in accordance with paragraph 4 hereof, or terminated due to a breach of this Agreement by the Agent, the Agent shall pay, as liquidated damages, and not as a penalty, the greater of an amount equal to six (6) months' service charges or the Agent's most recent monthly charge multiplied by six (6). The Agent shall be given credit for any advance payments made hereunder, however, in computing the amount owed as liquidated damages hereunder. The Agent acknowledges that this liquidated damages clause is reasonable and is applicable to recover damages related to its investment in equipment, development of landfills and hiring of employees undertaken by the Company to service its customers including the Agent. This liquidated damages clause in no way relieves the Agent from its obligations and liability for other cost or damages as set forth elsewhere in this Agreement.

Coverages	Minimum Amounts of Insurance
Worker's Compensation	Statutory
General Liability	\$500,000 combined single limit
Automobile Liability	\$500,000 combined single limit

AGENT: 

Republic Services, INC./COMPANY: 

May 2009

Ms. Kristine Dyck  
Environmental Planning Division  
Port of Long Beach  
4801 Airport Plaza Drive  
Long Beach, CA 90815

**Subject: Soil Stockpile Management and Characterization for Pier A, Contract HD-8438.**

### **Introduction**

Tetra Tech is pleased to provide the analytical results from the soil stockpile management and characterization for Pier A sampling event completed on January 11, 2017, located in Long Beach, CA.

### **Field Activities**

A total of four samples, including one duplicate, were collected from two adjacent soil stockpiles located within the vacant lot at the intersection of Pier B Street and Pier A Way in Long Beach, California (Figure 1 and Figure 2). The soil samples were collected at 3-foot depths below the stockpile surface with new one-time use scupulas. The collected stockpile soil was deposited into laboratory supplied Teflon™-lined glass jars and Terra Core® 5035 kits. After collection, soil samples were stored in an iced cooler and delivered under chain-of-custody to SunStar Laboratories (state certified), located in Lake Forest, CA.

### **Results**

SunStar completed the following United States Environmental Protection Agency (USEPA) SW-846 soil analyses as stipulated in the Port of Long Beach (POLB) Surplus Soil-Material Reuse Requirements (2006).

All soil analytical results are provided in Tables 1 through 6 and are compared to POLB maximum soil-material reuse values (POLB, 2006). Concentrations of TRPH (1,400 mg/kg) and benzo(a)pyrene (340 µg/kg) in sample SP-003 exceed their respective soil-material reuse values. All other analytes are below maximum soil-material reuse concentrations. If you have any questions, please feel free to contact me at (626) 470-2391.

Eric Nelson



Sr. Project Geologist  
Tetra Tech, Inc.

### **References**

Surplus Soil-Material Reuse Requirements, Port of Long Beach (POLB), March 29, 2006

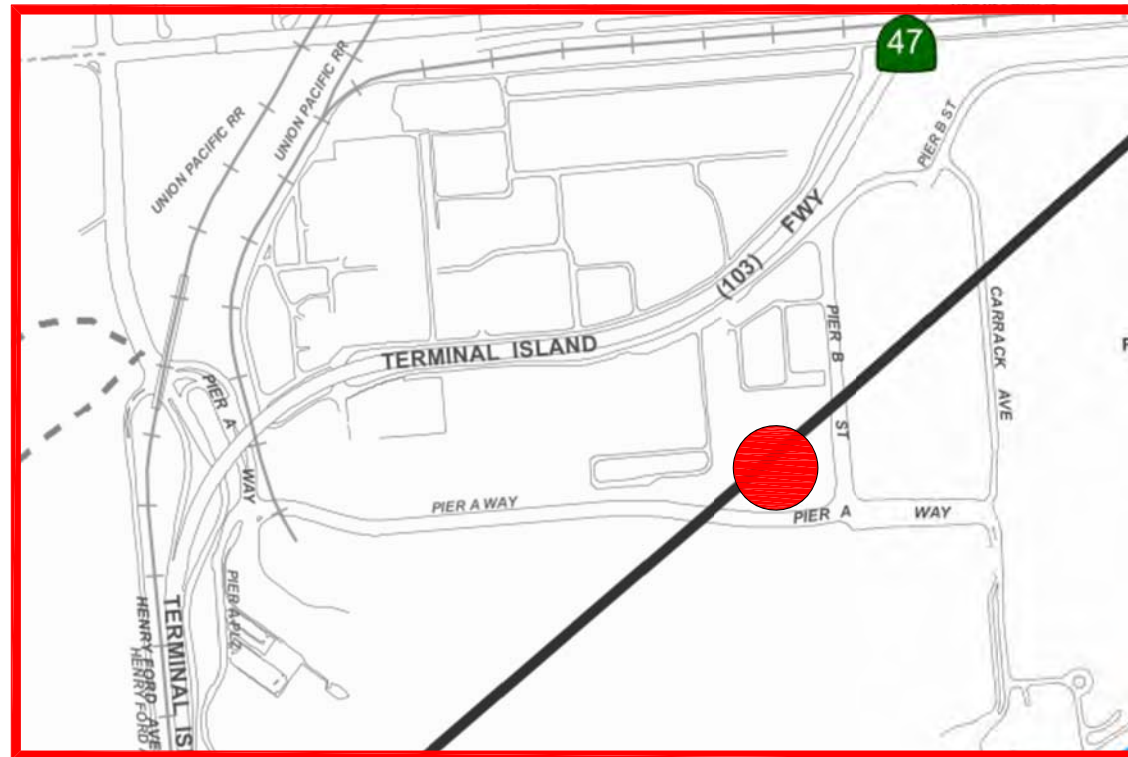
### **Attachments**

Figures

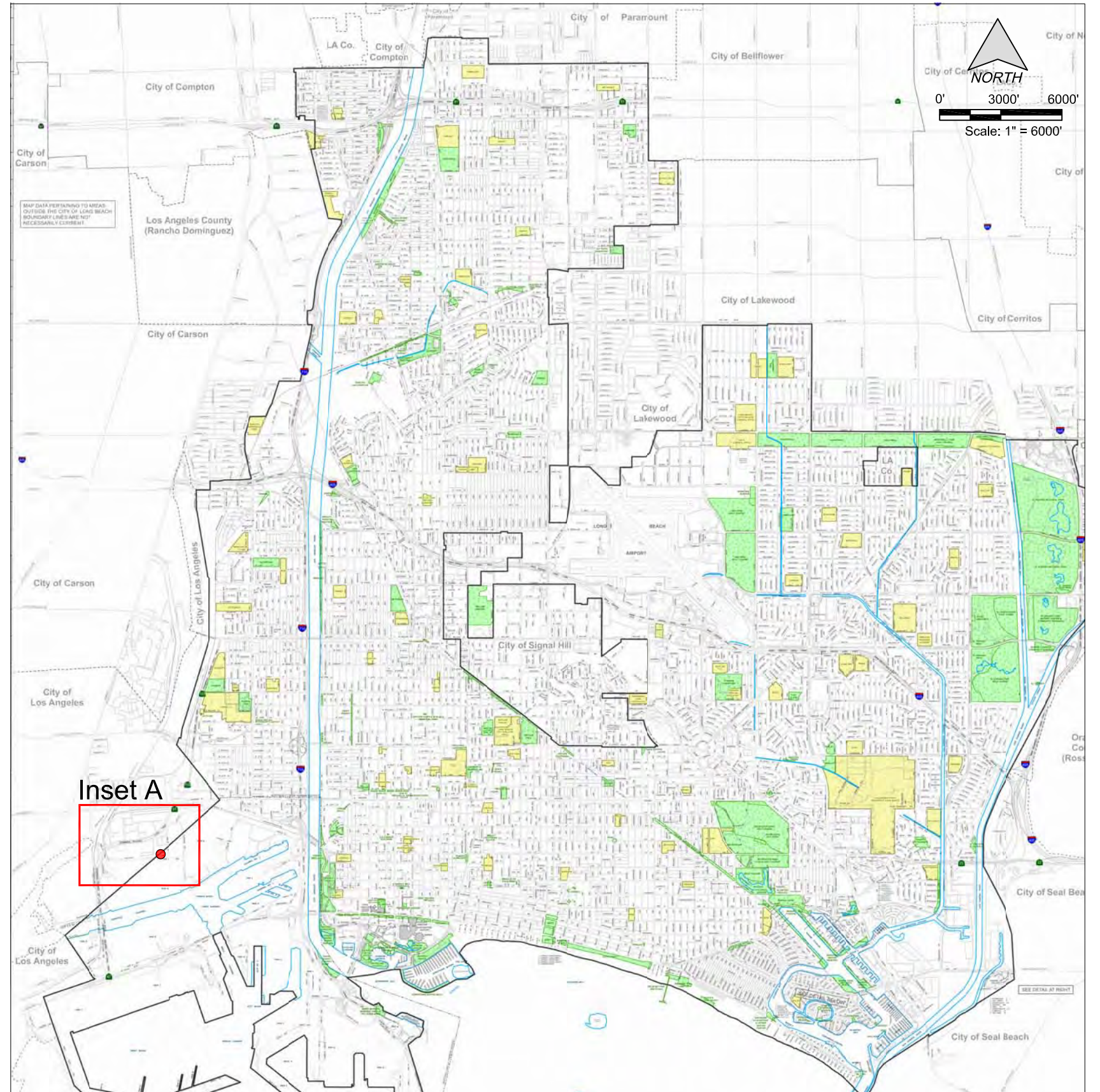
Tables

Laboratory Report

Inset A





Scale: 1"=1000'



Map Reference: City of Long Beach,  
Department of Technology and Innovation GIS

J:\PAS\PROJECTS\Port of Long Beach\84380.09 Pier A Stockpile\Figures\Pier A Stockpile Figure 1 and Figure 2.dwg

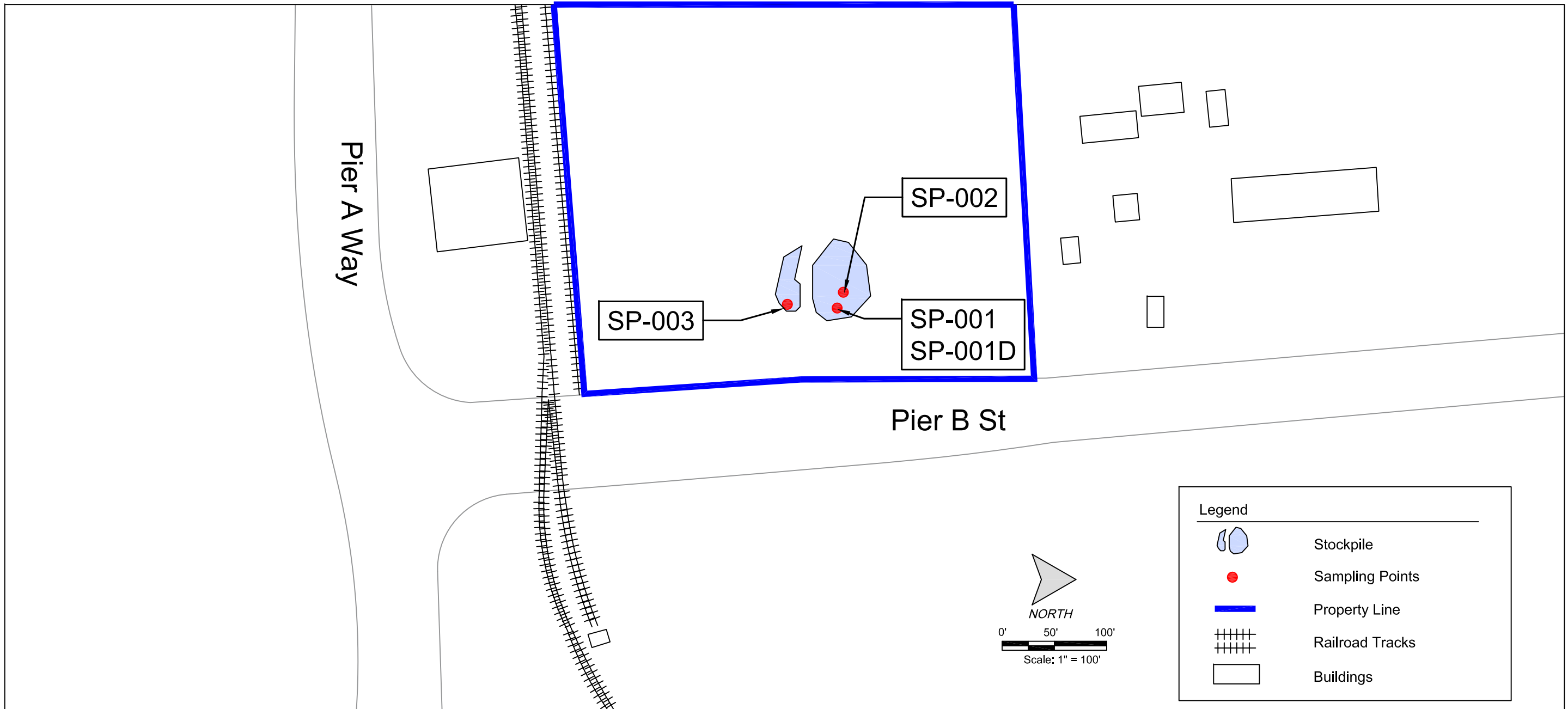
PROGRAM MANAGER:	E.N.	Prepared By:	 <b>Tetra Tech</b> 3475 E. Foothill Blvd. Pasadena, California 91107
PREPARED BY:	J.K.	Prepared For:	
CHECKED BY:	S.F.	 <b>THE PORT OF LONG BEACH</b> 4801 Airport Plaza Drive Long Beach, California, 90815	

Prepared For:

Figure 1  
Site Location  
Pier A Stock Pile Sampling

DATE	February 2017
SCALE	1"=60'
PROJECT NUMBER	84380.09







**Table 1**  
**VOC Results by USEPA Method 8260**  
**µg/kg**

Sample ID	Sample Date	Benzene	Toluene	Ethylbenzene	m,p-Xylene	o-Xylene	Total Xylene
SP-001	1/11/2017	ND(<0.18)	ND(<0.19)	ND(<0.18)	ND(<0.34)	ND(<0.16)	ND(<0.34)
SP-001D	1/11/2017	ND(<0.18)	ND(<0.19)	ND(<0.19)	ND(<0.35)	ND(<0.16)	ND(<0.35)
SP-002	1/11/2017	ND(<0.16)	ND(<0.17)	ND(<0.16)	ND(<0.30)	ND(<0.14)	ND(<0.30)
SP-003	1/11/2017	ND(<0.17)	ND(<0.18)	ND(<0.17)	ND(<0.32)	ND(<0.15)	ND(<0.32)
POLB Screening Criteria (µg/kg)		44	2,000	8,000	ND	ND	23,000

**LEGEND**

VOC = Volatile organic compound

USEPA = United States Environmental Protection Agency

POLB = Port of Long Beach

ND(<#) = Non-detect with method detection limit

µg/kg = microgram per kilogram

= Value exceeds screening criteria

<sup>T</sup> = Total xylenes calculated

\* Screening criteria values taken from POLB Surplus Soil-Material Reuse Requirements March 29, 2006

**Table 2**  
**TRPH and TPH Results by USEPA Method 418.1 and 8015B**  
**mg/kg**

Sample ID	Sample Date	TRPH	TPH Gas (C6-C12)	TPH Diesel (C13-C28)	TPH Heavy (C29-C40)
SP-001	1/11/2017	54	ND(<0.25)	43	580
SP-001D	1/11/2017	100	ND(<0.25)	170	710
SP-002	1/11/2017	140	ND(<0.25)	180	960
SP-003	1/11/2017	1,400	ND(<0.25)	220	2,000
POLB Screening Criteria (mg/kg)		1,000	--	--	--

**LEGEND**

USEPA = United States Environmental Protection Agency

POLB = Port of Long Beach

TRPH = Total recoverable petroleum hydrocarbons

TPH = Total petroleum hydrocarbon

ND(<#) = Non-detect with method detection limit

mg/kg = miligram per kilogram

= Value exceeds screening criteria

-- = Not established

\* Screening criteria values taken from POLB Surplus Soil-Material Reuse Requirements March 29, 2006

**Table 3**  
**Organochlorine Pesticide Results by USEPA Method 8081A**  
**µg/kg**

Sample ID	Sample Date	alpha-Chlordane	Endosulfan I	4,4'-DDE	Dieldrin	Endrin	4,4'-DDD	Endosulfan II	4,4'-DDT	Endrin aldehyde	Endosulfan sulfate	alpha-BHC	Methoxychlor	Endrin ketone	Toxaphene	gamma-BHC (Lindane)	beta-BHC	delta-BHC	Heptachlor	Aldrin	Heptachlor epoxide	gamma-Chlordane
SP-001	1/11/2017	ND(<0.53)	ND(<0.50)	ND(<1.5)	ND(<0.47)	ND(<0.43)	ND(<0.35)	ND(<0.56)	ND(<2.5)	ND(<0.70)	ND(<0.47)	ND(<0.33)	ND(<0.45)	ND(<0.45)	ND(<58)	ND(<0.42)	ND(<0.71)	ND(<0.67)	ND(<0.51)	ND(<0.47)	ND(<0.46)	ND(<0.42)
SP-001D	1/11/2017	ND(<0.53)	ND(<0.50)	ND(<1.5)	ND(<0.47)	ND(<0.43)	ND(<0.35)	ND(<0.56)	ND(<2.5)	ND(<0.70)	ND(<0.47)	ND(<0.33)	ND(<0.45)	ND(<0.45)	ND(<58)	ND(<0.42)	ND(<0.71)	ND(<0.67)	ND(<0.51)	ND(<0.47)	ND(<0.46)	ND(<0.42)
SP-002	1/11/2017	ND(<0.53)	ND(<0.50)	ND(<1.5)	ND(<0.47)	ND(<0.43)	ND(<0.35)	ND(<0.56)	ND(<2.5)	ND(<0.70)	ND(<0.47)	ND(<0.33)	ND(<0.45)	ND(<0.45)	ND(<58)	ND(<0.42)	ND(<0.71)	ND(<0.67)	ND(<0.51)	ND(<0.47)	ND(<0.46)	ND(<0.42)
SP-003	1/11/2017	14	ND(<0.50)	ND(<1.5)	ND(<0.47)	ND(<0.43)	ND(<0.35)	ND(<0.56)	ND(<2.5)	ND(<0.70)	ND(<0.47)	ND(<0.33)	ND(<0.45)	ND(<0.45)	ND(<58)	ND(<0.42)	ND(<0.71)	ND(<0.67)	ND(<0.51)	ND(<0.47)	ND(<0.46)	10
POLB Screening Criteria (ug/kg)		1,600 <sup>c</sup>	370,000 <sup>es</sup>	900	30	190	900	370,000 <sup>es</sup>	900	190 <sup>e</sup>	370,000 <sup>es</sup>	90	99,000	190 <sup>e</sup>	440	440	320	440 <sup>l</sup>	110	29	53	1,600 <sup>c</sup>

**LEGEND**

USEPA = United States Environmental Protection Agency

POLB = Port of Long Beach

ND(<#) = Non-detect with method detection limit

µg/kg = microgram per kilogram

= Value exceeds screening criteria

<sup>c</sup> = Total chlordane screening value used

<sup>e</sup> = Endrin screening value used

<sup>es</sup> = Endosulfan screening value used

<sup>l</sup> = gamma-BHC screening value used

\* Screening criteria values taken from POLB

Surplus Soil-Material Reuse Requirements

March 29, 2006

**Table 4**  
**PCB Results by USEPA Method 8082**  
**µg/kg**

Sample ID	Sample Date	PCB-1016	PCB-1221	PCB-1232	PCB-1242	PCB-1248	PCB-1254	PCB-1260
SP-001	1/11/2017	ND(<3.7)	ND(<3.7)	ND(<3.7)	ND(<3.7)	ND(<3.7)	ND(<3.7)	ND(<3.7)
SP-001D	1/11/2017	ND(<3.7)	ND(<3.7)	ND(<3.7)	ND(<3.7)	ND(<3.7)	ND(<3.7)	ND(<3.7)
SP-002	1/11/2017	ND(<3.7)	ND(<3.7)	ND(<3.7)	ND(<3.7)	ND(<3.7)	ND(<3.7)	14
SP-003	1/11/2017	ND(<3.7)	ND(<3.7)	ND(<3.7)	ND(<3.7)	ND(<3.7)	ND(<3.7)	38
POLB Screening Criteria (µg/kg)		3,900	220	220	220	220	220	220

**LEGEND**

PCB = Polychlorinated biphenyl

USEPA = United States Environmental  
Protection Agency

POLB = Port of Long Beach

ND(<#) = Non-detect with method detection limit

µg/kg = microgram per kilogram

= Value exceeds screening criteria

\* Screening criteria values taken from POLB

Surplus Soil-Material Reuse Requirements

March 29, 2006

**Table 5**  
**PAH Results by USEPA Method 8270 SIM**  
**µg/kg**

Sample ID	Sample Date	Acenaphthene	Benzo (k) fluoranthene	Benzo (g,h,i) perylene	Benzo (a) pyrene	Chrysene	Acenaphthylene	Dibenz (a,h) anthracene	Anthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	Benzo (a) anthracene	Naphthalene	Phenanthrene	Pyrene	Benzo (b) fluoranthene
SP-001	1/11/2017	ND(<7.7)	ND(<6.8)	ND(<16)	ND(<5.4)	ND(<5.1)	ND(<8.2)	ND(<10)	ND(<7.6)	ND(<6.5)	ND(<7.1)	ND(<7.7)	ND(<5.5)	ND(<7.5)	ND(<7.4)	ND(<6.2)	ND(<4.5)
SP-001D	1/11/2017	ND(<7.8)	ND(<6.8)	ND(<16)	ND(<5.4)	ND(<5.2)	ND(<8.3)	ND(<10)	ND(<7.6)	ND(<6.5)	ND(<7.2)	ND(<7.8)	ND(<5.6)	ND(<7.6)	ND(<7.4)	ND(<6.2)	ND(<4.6)
SP-002	1/11/2017	ND(<7.7)	ND(<6.8)	ND(<16)	ND(<5.3)	ND(<5.1)	ND(<8.2)	ND(<10)	ND(<7.6)	ND(<6.4)	ND(<7.1)	ND(<7.7)	ND(<5.5)	ND(<7.5)	ND(<7.3)	ND(<6.1)	ND(<4.5)
SP-003	1/11/2017	ND(<7.7)	200	140	340	320	ND(<8.2)	50	ND(<7.6)	540	ND(<7.1)	150	440	ND(<7.5)	230	840	480
POLB Screening Criteria (µg/kg)		3,700,000	380	620	62	3,800	620	62	22,000,000	2,300,000	2,700,000	620	620	1,700	620	2,300,000	620

**LEGEND**

PAH = Polycyclic aromatic hydrocarbons

USEPA = United States Environmental

Protection Agency

POLB = Port of Long Beach

ND(<#) = Non-detect with method detection limit

µg/kg = microgram per kilogram

■ = Value exceeds screening criteria

\* Screening criteria values taken from POLB

Surplus Soil-Material Reuse Requirements

March 29, 2006

**Table 6**  
**Metal Results by USEPA Method 6010B and 7470/7471**  
**mg/kg**

Sampling Date	Sample ID	Antimony	Lead	Molybdenum	Nickel	Selenium	Thallium	Vanadium	Zinc	Silver	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Mercury
1/11/2017	SP-001	ND (<0.014)	ND (<0.010)	ND (<0.002)	8.5	ND (<0.022)	ND (<0.017)	22	9	ND (<0.005)	ND (<0.008)	110	ND (<0.002)	ND (<0.001)	8.3	4.7	9.4	ND (<0.027)
1/11/2017	SP-001D	ND (<0.014)	ND (<0.010)	ND (<0.002)	12	ND (<0.022)	ND (<0.017)	22	9.5	ND (<0.005)	ND (<0.008)	120	ND (<0.002)	ND (<0.001)	9.3	5	11	ND (<0.027)
1/11/2017	SP-002	ND (<0.013)	ND (<0.009)	ND (<0.002)	8.2	ND (<0.020)	ND (<0.016)	21	8.8	ND (<0.005)	ND (<0.007)	110	ND (<0.001)	ND (<0.001)	8.4	4.6	9.4	ND (<0.027)
1/11/2017	SP-003	ND (<0.013)	ND (<0.009)	ND (<0.002)	6.2	ND (<0.020)	ND (<0.016)	13	6.9	ND (<0.005)	ND (<0.007)	78	ND (<0.001)	ND (<0.001)	6.4	3.3	8.9	ND (<0.027)
POLB Screening Criteria (mg/kg)		31	50	390	200	10	5.2	78	2,500	50	20	1,000	7.5	10	50	800	250	2.0

**LEGEND**

USEPA = United States Environmental Protection Agency

POLB = Port of Long Beach

ND(<#) = Non-detect with method detection limit

mg/kg = miligram per kilogram

= Value exceeds screening criteria

\* Screening criteria values taken from

POLB Surplus Soil-Material Reuse

Requirements March 29, 2006







25712 Commercentre Drive  
Lake Forest, California 92630  
949.297.5020 Phone  
949.297.5027 Fax

19 January 2017

Eric Nelson  
Tetra Tech - Pasadena  
3475 E. Foothill Blvd.  
Pasadena, CA 91107  
RE: Pier A Railyard (PARY)

Enclosed are the results of analyses for samples received by the laboratory on 01/11/17 16:25. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Rose Fasheh  
Project Manager



25712 Commercentre Drive  
Lake Forest, California 92630  
949.297.5020 Phone  
949.297.5027 Fax

Tetra Tech - Pasadena  
3475 E. Foothill Blvd.  
Pasadena CA, 91107

Project: Pier A Railyard (PARY)  
Project Number: T84380.09  
Project Manager: Eric Nelson

Reported:  
01/19/17 12:01

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
TB01112017	T170053-01	Water	01/11/17 10:30	01/11/17 16:25
SP-001	T170053-02	Soil	01/11/17 10:38	01/11/17 16:25
SP-001D	T170053-03	Soil	01/11/17 10:40	01/11/17 16:25
SP-002	T170053-04	Soil	01/11/17 10:42	01/11/17 16:25
SP-003	T170053-05	Soil	01/11/17 10:46	01/11/17 16:25

SunStar Laboratories, Inc.

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Rose Fasheh, Project Manager



25712 Commercentre Drive  
 Lake Forest, California 92630  
 949.297.5020 Phone  
 949.297.5027 Fax

Tetra Tech - Pasadena  
 3475 E. Foothill Blvd.  
 Pasadena CA, 91107

Project: Pier A Railyard (PARY)  
 Project Number: T84380.09  
 Project Manager: Eric Nelson

Reported:  
 01/19/17 12:01

**DETECTIONS SUMMARY**

**Sample ID:** TB01112017

**Laboratory ID:** T170053-01

No Results Detected

**Sample ID:** SP-001

**Laboratory ID:** T170053-02

Analyte	Reporting		Units	Method	Notes
	Result	Limit			
C13-C28 (DRO)	43	10	mg/kg	EPA 8015B	
C29-C40 (MORO)	580	10	mg/kg	EPA 8015B	
Barium	110	1.0	mg/kg	EPA 6010B	
Chromium	8.3	2.0	mg/kg	EPA 6010B	
Cobalt	4.7	2.0	mg/kg	EPA 6010B	
Copper	9.4	1.0	mg/kg	EPA 6010B	
Nickel	8.5	2.0	mg/kg	EPA 6010B	
Vanadium	22	5.0	mg/kg	EPA 6010B	
Zinc	9.0	1.0	mg/kg	EPA 6010B	
TRPH	54	3.8	mg/kg	EPA 418.1	

**Sample ID:** SP-001D

**Laboratory ID:** T170053-03

Analyte	Reporting		Units	Method	Notes
	Result	Limit			
C13-C28 (DRO)	170	10	mg/kg	EPA 8015B	
C29-C40 (MORO)	710	10	mg/kg	EPA 8015B	
Barium	120	1.0	mg/kg	EPA 6010B	
Chromium	9.3	2.0	mg/kg	EPA 6010B	
Cobalt	5.0	2.0	mg/kg	EPA 6010B	
Copper	11	1.0	mg/kg	EPA 6010B	
Nickel	12	2.0	mg/kg	EPA 6010B	
Vanadium	22	5.0	mg/kg	EPA 6010B	
Zinc	9.5	1.0	mg/kg	EPA 6010B	
TRPH	100	4.0	mg/kg	EPA 418.1	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rose Fasheh, Project Manager

Tetra Tech - Pasadena  
3475 E. Foothill Blvd.  
Pasadena CA, 91107

Project: Pier A Railyard (PARY)  
Project Number: T84380.09  
Project Manager: Eric Nelson

Reported:  
01/19/17 12:01

Sample ID: SP-002

Laboratory ID: T170053-04

Analyte	Result	Reporting		Units	Method	Notes
		Limit				
C13-C28 (DRO)	180	10		mg/kg	EPA 8015B	
C29-C40 (MORO)	960	10		mg/kg	EPA 8015B	
Barium	110	0.91		mg/kg	EPA 6010B	
Chromium	8.4	1.8		mg/kg	EPA 6010B	
Cobalt	4.6	1.8		mg/kg	EPA 6010B	
Copper	9.4	0.91		mg/kg	EPA 6010B	
Nickel	8.2	1.8		mg/kg	EPA 6010B	
Vanadium	21	4.5		mg/kg	EPA 6010B	
Zinc	8.8	0.91		mg/kg	EPA 6010B	
PCB-1260	14	10		ug/kg	EPA 8082	
TRPH	140	4.0		mg/kg	EPA 418.1	

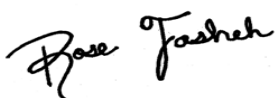
Sample ID: SP-003

Laboratory ID: T170053-05

Analyte	Result	Reporting		Units	Method	Notes
		Limit				
C13-C28 (DRO)	220	10		mg/kg	EPA 8015B	
C29-C40 (MORO)	2000	10		mg/kg	EPA 8015B	
Barium	78	0.91		mg/kg	EPA 6010B	
Chromium	6.4	1.8		mg/kg	EPA 6010B	
Cobalt	3.3	1.8		mg/kg	EPA 6010B	
Copper	8.9	0.91		mg/kg	EPA 6010B	
Nickel	6.2	1.8		mg/kg	EPA 6010B	
Vanadium	13	4.5		mg/kg	EPA 6010B	
Zinc	6.9	0.91		mg/kg	EPA 6010B	
gamma-Chlordane	10	5.0		ug/kg	EPA 8081A	
alpha-Chlordane	14	5.0		ug/kg	EPA 8081A	
PCB-1260	38	10		ug/kg	EPA 8082	
Benzo (a) anthracene	440	25		ug/kg	EPA 8270C SIM	
Benzo (b) fluoranthene	480	50		ug/kg	EPA 8270C SIM	
Benzo (k) fluoranthene	200	50		ug/kg	EPA 8270C SIM	
Benzo (g,h,i) perylene	140	25		ug/kg	EPA 8270C SIM	
Benzo (a) pyrene	340	50		ug/kg	EPA 8270C SIM	
Chrysene	320	25		ug/kg	EPA 8270C SIM	
Dibenz (a,h) anthracene	50	25		ug/kg	EPA 8270C SIM	
Fluoranthene	540	25		ug/kg	EPA 8270C SIM	
Indeno (1,2,3-cd) pyrene	150	25		ug/kg	EPA 8270C SIM	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.



Rose Fasheh, Project Manager



25712 Commercentre Drive  
 Lake Forest, California 92630  
 949.297.5020 Phone  
 949.297.5027 Fax

Tetra Tech - Pasadena  
 3475 E. Foothill Blvd.  
 Pasadena CA, 91107

Project: Pier A Railyard (PARY)  
 Project Number: T84380.09  
 Project Manager: Eric Nelson

**Reported:**  
 01/19/17 12:01

**Sample ID:** SP-003

**Laboratory ID:** T170053-05

Analyte	Result	Reporting		Units	Method	Notes
		Limit				
Phenanthrene	230	25		ug/kg	EPA 8270C SIM	
Pyrene	840	50		ug/kg	EPA 8270C SIM	
TRPH	1400	20		mg/kg	EPA 418.1	

SunStar Laboratories, Inc.

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Rose Fasheh, Project Manager



25712 Commercentre Drive  
 Lake Forest, California 92630  
 949.297.5020 Phone  
 949.297.5027 Fax

Tetra Tech - Pasadena  
 3475 E. Foothill Blvd.  
 Pasadena CA, 91107

Project: Pier A Railyard (PARY)  
 Project Number: T84380.09  
 Project Manager: Eric Nelson

Reported:  
 01/19/17 12:01

**TB01112017**  
**T170053-01 (Water)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

Bromobenzene	ND	1.0	ug/l	1	7011216	01/12/17	01/12/17	EPA 8260B	
Bromochloromethane	ND	1.0	"	"	"	"	"	"	
Bromodichloromethane	ND	1.0	"	"	"	"	"	"	
Bromoform	ND	1.0	"	"	"	"	"	"	
Bromomethane	ND	1.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.0	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.0	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.0	"	"	"	"	"	"	
Carbon tetrachloride	ND	0.50	"	"	"	"	"	"	
Chlorobenzene	ND	1.0	"	"	"	"	"	"	
Chloroethane	ND	1.0	"	"	"	"	"	"	
Chloroform	ND	1.0	"	"	"	"	"	"	
Chloromethane	ND	1.0	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.0	"	"	"	"	"	"	
Dibromochloromethane	ND	1.0	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.0	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	1.0	"	"	"	"	"	"	
Dibromomethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.0	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	0.50	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.0	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.0	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.0	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.0	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.0	"	"	"	"	"	"	

SunStar Laboratories, Inc.

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Rose Fasheh, Project Manager



25712 Commercentre Drive  
 Lake Forest, California 92630  
 949.297.5020 Phone  
 949.297.5027 Fax

Tetra Tech - Pasadena  
 3475 E. Foothill Blvd.  
 Pasadena CA, 91107

Project: Pier A Railyard (PARY)  
 Project Number: T84380.09  
 Project Manager: Eric Nelson

Reported:  
 01/19/17 12:01

**TB01112017**  
**T170053-01 (Water)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

cis-1,3-Dichloropropene	ND	0.50	ug/l	1	7011216	01/12/17	01/12/17	EPA 8260B	
trans-1,3-Dichloropropene	ND	0.50	"	"	"	"	"	"	
Hexachlorobutadiene	ND	1.0	"	"	"	"	"	"	
Isopropylbenzene	ND	1.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.0	"	"	"	"	"	"	
Methylene chloride	ND	1.0	"	"	"	"	"	"	
Naphthalene	ND	1.0	"	"	"	"	"	"	
n-Propylbenzene	ND	1.0	"	"	"	"	"	"	
Styrene	ND	1.0	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	1.0	"	"	"	"	"	"	
Tetrachloroethene	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1.0	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	1.0	"	"	"	"	"	"	
Trichloroethene	ND	1.0	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.0	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	1.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.0	"	"	"	"	"	"	
Vinyl chloride	ND	1.0	"	"	"	"	"	"	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
m,p-Xylene	ND	1.0	"	"	"	"	"	"	
o-Xylene	ND	0.50	"	"	"	"	"	"	
Tert-amyl methyl ether	ND	2.0	"	"	"	"	"	"	
Tert-butyl alcohol	ND	10	"	"	"	"	"	"	
Di-isopropyl ether	ND	2.0	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	2.0	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	1.0	"	"	"	"	"	"	

SunStar Laboratories, Inc.

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Rose Fasheh, Project Manager





25712 Commercentre Drive  
 Lake Forest, California 92630  
 949.297.5020 Phone  
 949.297.5027 Fax

Tetra Tech - Pasadena 3475 E. Foothill Blvd. Pasadena CA, 91107	Project: Pier A Railyard (PARY) Project Number: T84380.09 Project Manager: Eric Nelson	Reported: 01/19/17 12:01
---	--	-----------------------------

**TB01112017**  
**T170053-01 (Water)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

Surrogate: 4-Bromofluorobenzene	114 %	83.5-119			7011216	01/12/17	01/12/17	EPA 8260B	
Surrogate: Dibromofluoromethane	95.8 %	81-136			"	"	"	"	
Surrogate: Toluene-d8	112 %	88.8-117			"	"	"	"	

SunStar Laboratories, Inc.

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Rose Fasheh, Project Manager



25712 Commercentre Drive  
 Lake Forest, California 92630  
 949.297.5020 Phone  
 949.297.5027 Fax

Tetra Tech - Pasadena 3475 E. Foothill Blvd. Pasadena CA, 91107	Project: Pier A Railyard (PARY) Project Number: T84380.09 Project Manager: Eric Nelson	Reported: 01/19/17 12:01
---	--	-----------------------------

**SP-001**  
**T170053-02 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

**Extractable Petroleum Hydrocarbons by 8015B**

C6-C12 (GRO)	ND	10	mg/kg	1	701129	01/11/17	01/13/17	EPA 8015B	
<b>C13-C28 (DRO)</b>	<b>43</b>	10	"	"	"	"	"	"	
<b>C29-C40 (MORO)</b>	<b>580</b>	10	"	"	"	"	"	"	
<i>Surrogate: p-Terphenyl</i>		97.9 %		65-135	"	"	"	"	

**Metals by EPA 6010B**

Antimony	ND	3.0	mg/kg	1	7011213	01/12/17	01/13/17	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
<b>Barium</b>	<b>110</b>	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
<b>Chromium</b>	<b>8.3</b>	2.0	"	"	"	"	"	"	
<b>Cobalt</b>	<b>4.7</b>	2.0	"	"	"	"	"	"	
<b>Copper</b>	<b>9.4</b>	1.0	"	"	"	"	"	"	
Lead	ND	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
<b>Nickel</b>	<b>8.5</b>	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
<b>Vanadium</b>	<b>22</b>	5.0	"	"	"	"	"	"	
<b>Zinc</b>	<b>9.0</b>	1.0	"	"	"	"	"	"	

**Cold Vapor Extraction EPA 7470/7471**

Mercury	ND	0.10	mg/kg	1	7011214	01/12/17	01/13/17	EPA 7471A Soil	
---------	----	------	-------	---	---------	----------	----------	-------------------	--

SunStar Laboratories, Inc.

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Rose Fasheh, Project Manager



25712 Commercentre Drive  
 Lake Forest, California 92630  
 949.297.5020 Phone  
 949.297.5027 Fax

Tetra Tech - Pasadena 3475 E. Foothill Blvd. Pasadena CA, 91107	Project: Pier A Railyard (PARY) Project Number: T84380.09 Project Manager: Eric Nelson	Reported: 01/19/17 12:01
---	--	-----------------------------

**SP-001**  
**T170053-02 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

**Organochlorine Pesticides by EPA Method 8081A**

alpha-BHC	ND	5.0	ug/kg	1	7011219	01/12/17	01/16/17	EPA 8081A	
gamma-BHC (Lindane)	ND	5.0	"	"	"	"	"	"	
beta-BHC	ND	5.0	"	"	"	"	"	"	
delta-BHC	ND	5.0	"	"	"	"	"	"	
Heptachlor	ND	5.0	"	"	"	"	"	"	
Aldrin	ND	5.0	"	"	"	"	"	"	
Heptachlor epoxide	ND	5.0	"	"	"	"	"	"	
gamma-Chlordane	ND	5.0	"	"	"	"	"	"	
alpha-Chlordane	ND	5.0	"	"	"	"	"	"	
Endosulfan I	ND	5.0	"	"	"	"	"	"	
4,4'-DDE	ND	5.0	"	"	"	"	"	"	
Dieldrin	ND	5.0	"	"	"	"	"	"	
Endrin	ND	5.0	"	"	"	"	"	"	
4,4'-DDD	ND	5.0	"	"	"	"	"	"	
Endosulfan II	ND	5.0	"	"	"	"	"	"	
4,4'-DDT	ND	5.0	"	"	"	"	"	"	
Endrin aldehyde	ND	5.0	"	"	"	"	"	"	
Endosulfan sulfate	ND	5.0	"	"	"	"	"	"	
Methoxychlor	ND	10	"	"	"	"	"	"	
Endrin ketone	ND	5.0	"	"	"	"	"	"	
Toxaphene	ND	200	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		95.7 %	35-140		"	"	"	"	
Surrogate: Decachlorobiphenyl		64.9 %	35-140		"	"	"	"	

**Polychlorinated Biphenyls by EPA Method 8082**

PCB-1016	ND	10	ug/kg	1	7011221	01/12/17	01/17/17	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	ND	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rose Fasheh, Project Manager



25712 Commercentre Drive  
 Lake Forest, California 92630  
 949.297.5020 Phone  
 949.297.5027 Fax

Tetra Tech - Pasadena  
 3475 E. Foothill Blvd.  
 Pasadena CA, 91107

Project: Pier A Railyard (PARY)  
 Project Number: T84380.09  
 Project Manager: Eric Nelson

Reported:  
 01/19/17 12:01

**SP-001**  
**T170053-02 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

**Polychlorinated Biphenyls by EPA Method 8082**

Surrogate: Tetrachloro-meta-xylene	76.8 %	35-140			7011221	01/12/17	01/17/17	EPA 8082	
Surrogate: Decachlorobiphenyl	69.1 %	35-140			"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Bromobenzene	ND	3.6	ug/kg	1	7011217	01/12/17	01/12/17	EPA 8260B/5035	
Bromochloromethane	ND	3.6	"	"	"	"	"	"	
Bromodichloromethane	ND	3.6	"	"	"	"	"	"	
Bromoform	ND	3.6	"	"	"	"	"	"	
Bromomethane	ND	3.6	"	"	"	"	"	"	
n-Butylbenzene	ND	3.6	"	"	"	"	"	"	
sec-Butylbenzene	ND	3.6	"	"	"	"	"	"	
tert-Butylbenzene	ND	3.6	"	"	"	"	"	"	
Carbon tetrachloride	ND	3.6	"	"	"	"	"	"	
Chlorobenzene	ND	3.6	"	"	"	"	"	"	
Chloroethane	ND	3.6	"	"	"	"	"	"	
Chloroform	ND	3.6	"	"	"	"	"	"	
Chloromethane	ND	3.6	"	"	"	"	"	"	
2-Chlorotoluene	ND	3.6	"	"	"	"	"	"	
4-Chlorotoluene	ND	3.6	"	"	"	"	"	"	
Dibromochloromethane	ND	3.6	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	7.2	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	3.6	"	"	"	"	"	"	
Dibromomethane	ND	3.6	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	3.6	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	3.6	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	3.6	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	3.6	"	"	"	"	"	"	
1,1-Dichloroethane	ND	3.6	"	"	"	"	"	"	
1,2-Dichloroethane	ND	3.6	"	"	"	"	"	"	
1,1-Dichloroethene	ND	3.6	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	3.6	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	3.6	"	"	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rose Fasheh, Project Manager



25712 Commercentre Drive  
 Lake Forest, California 92630  
 949.297.5020 Phone  
 949.297.5027 Fax

Tetra Tech - Pasadena  
 3475 E. Foothill Blvd.  
 Pasadena CA, 91107

Project: Pier A Railyard (PARY)  
 Project Number: T84380.09  
 Project Manager: Eric Nelson

Reported:  
 01/19/17 12:01

**SP-001**  
**T170053-02 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
1,2-Dichloropropane	ND	3.6	ug/kg	1	7011217	01/12/17	01/12/17	EPA 8260B/5035	
1,3-Dichloropropane	ND	3.6	"	"	"	"	"	"	
2,2-Dichloropropane	ND	3.6	"	"	"	"	"	"	
1,1-Dichloropropene	ND	3.6	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	3.6	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	3.6	"	"	"	"	"	"	
Hexachlorobutadiene	ND	3.6	"	"	"	"	"	"	
Isopropylbenzene	ND	3.6	"	"	"	"	"	"	
p-Isopropyltoluene	ND	3.6	"	"	"	"	"	"	
Methylene chloride	ND	3.6	"	"	"	"	"	"	
Naphthalene	ND	3.6	"	"	"	"	"	"	
n-Propylbenzene	ND	3.6	"	"	"	"	"	"	
Styrene	ND	3.6	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	3.6	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	3.6	"	"	"	"	"	"	
Tetrachloroethene	ND	3.6	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	3.6	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	3.6	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	3.6	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	3.6	"	"	"	"	"	"	
Trichloroethene	ND	3.6	"	"	"	"	"	"	
Trichlorofluoromethane	ND	3.6	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	3.6	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	3.6	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	3.6	"	"	"	"	"	"	
Vinyl chloride	ND	3.6	"	"	"	"	"	"	
Benzene	ND	3.6	"	"	"	"	"	"	
Toluene	ND	3.6	"	"	"	"	"	"	
Ethylbenzene	ND	3.6	"	"	"	"	"	"	
m,p-Xylene	ND	7.2	"	"	"	"	"	"	
o-Xylene	ND	3.6	"	"	"	"	"	"	

SunStar Laboratories, Inc.

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Rose Fasheh, Project Manager



25712 Commercentre Drive  
 Lake Forest, California 92630  
 949.297.5020 Phone  
 949.297.5027 Fax

Tetra Tech - Pasadena 3475 E. Foothill Blvd. Pasadena CA, 91107	Project: Pier A Railyard (PARY) Project Number: T84380.09 Project Manager: Eric Nelson	Reported: 01/19/17 12:01
---	--	-----------------------------

**SP-001**  
**T170053-02 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

Tert-amyl methyl ether	ND	14	ug/kg	1	7011217	01/12/17	01/12/17	EPA 8260B/5035	
Tert-butyl alcohol	ND	36	"	"	"	"	"	"	
Di-isopropyl ether	ND	14	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	14	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	14	"	"	"	"	"	"	
Surrogate: Toluene-d8		126 %	85.5-116		"	"	"	"	S-GC
Surrogate: 4-Bromofluorobenzene		123 %	81.2-123		"	"	"	"	
Surrogate: Dibromofluoromethane		134 %	95.7-135		"	"	"	"	

**Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring**

Acenaphthene	ND	50	ug/kg	1	7011019	01/12/17	01/19/17	EPA 8270C SIM	
Acenaphthylene	ND	25	"	"	"	"	"	"	
Anthracene	ND	25	"	"	"	"	"	"	
Benzo (a) anthracene	ND	25	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	50	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	50	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	25	"	"	"	"	"	"	
Benzo (a) pyrene	ND	50	"	"	"	"	"	"	
Chrysene	ND	25	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	25	"	"	"	"	"	"	
Fluoranthene	ND	25	"	"	"	"	"	"	
Fluorene	ND	50	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	25	"	"	"	"	"	"	
Naphthalene	ND	25	"	"	"	"	"	"	
Phenanthrene	ND	25	"	"	"	"	"	"	
Pyrene	ND	50	"	"	"	"	"	"	
Surrogate: Terphenyl-dl4		122 %	18-137		"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rose Fasheh, Project Manager



25712 Commercentre Drive  
 Lake Forest, California 92630  
 949.297.5020 Phone  
 949.297.5027 Fax

Tetra Tech - Pasadena 3475 E. Foothill Blvd. Pasadena CA, 91107	Project: Pier A Railyard (PARY) Project Number: T84380.09 Project Manager: Eric Nelson	Reported: 01/19/17 12:01
---	--	-----------------------------

**SP-001**  
**T170053-02 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

**Conventional Chemistry Parameters by APHA/EPA/ASTM Methods**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
TRPH	54	3.8	mg/kg	1	7011225	01/12/17	01/13/17	EPA 418.1	

SunStar Laboratories, Inc.

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Rose Fasheh, Project Manager



25712 Commercentre Drive  
 Lake Forest, California 92630  
 949.297.5020 Phone  
 949.297.5027 Fax

Tetra Tech - Pasadena  
 3475 E. Foothill Blvd.  
 Pasadena CA, 91107

Project: Pier A Railyard (PARY)  
 Project Number: T84380.09  
 Project Manager: Eric Nelson

Reported:  
 01/19/17 12:01

**SP-001D**  
**T170053-03 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

**Extractable Petroleum Hydrocarbons by 8015B**

C6-C12 (GRO)	ND	10	mg/kg	1	701129	01/11/17	01/13/17	EPA 8015B	
<b>C13-C28 (DRO)</b>	<b>170</b>	10	"	"	"	"	"	"	
<b>C29-C40 (MORO)</b>	<b>710</b>	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		102 %	65-135		"	"	"	"	

**Metals by EPA 6010B**

Antimony	ND	3.0	mg/kg	1	7011213	01/12/17	01/13/17	EPA 6010B	
Silver	ND	2.0	"	"	"	"	"	"	
Arsenic	ND	5.0	"	"	"	"	"	"	
<b>Barium</b>	<b>120</b>	1.0	"	"	"	"	"	"	
Beryllium	ND	1.0	"	"	"	"	"	"	
Cadmium	ND	2.0	"	"	"	"	"	"	
<b>Chromium</b>	<b>9.3</b>	2.0	"	"	"	"	"	"	
<b>Cobalt</b>	<b>5.0</b>	2.0	"	"	"	"	"	"	
<b>Copper</b>	<b>11</b>	1.0	"	"	"	"	"	"	
Lead	ND	3.0	"	"	"	"	"	"	
Molybdenum	ND	5.0	"	"	"	"	"	"	
<b>Nickel</b>	<b>12</b>	2.0	"	"	"	"	"	"	
Selenium	ND	5.0	"	"	"	"	"	"	
Thallium	ND	2.0	"	"	"	"	"	"	
<b>Vanadium</b>	<b>22</b>	5.0	"	"	"	"	"	"	
<b>Zinc</b>	<b>9.5</b>	1.0	"	"	"	"	"	"	

**Cold Vapor Extraction EPA 7470/7471**

Mercury	ND	0.10	mg/kg	1	7011214	01/12/17	01/13/17	EPA 7471A Soil	
---------	----	------	-------	---	---------	----------	----------	-------------------	--

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rose Fasheh, Project Manager





25712 Commercentre Drive  
 Lake Forest, California 92630  
 949.297.5020 Phone  
 949.297.5027 Fax

Tetra Tech - Pasadena  
 3475 E. Foothill Blvd.  
 Pasadena CA, 91107

Project: Pier A Railyard (PARY)  
 Project Number: T84380.09  
 Project Manager: Eric Nelson

Reported:  
 01/19/17 12:01

**SP-001D**  
**T170053-03 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

**Organochlorine Pesticides by EPA Method 8081A**

alpha-BHC	ND	5.0	ug/kg	1	7011219	01/12/17	01/16/17	EPA 8081A	
gamma-BHC (Lindane)	ND	5.0	"	"	"	"	"	"	
beta-BHC	ND	5.0	"	"	"	"	"	"	
delta-BHC	ND	5.0	"	"	"	"	"	"	
Heptachlor	ND	5.0	"	"	"	"	"	"	
Aldrin	ND	5.0	"	"	"	"	"	"	
Heptachlor epoxide	ND	5.0	"	"	"	"	"	"	
gamma-Chlordane	ND	5.0	"	"	"	"	"	"	
alpha-Chlordane	ND	5.0	"	"	"	"	"	"	
Endosulfan I	ND	5.0	"	"	"	"	"	"	
4,4'-DDE	ND	5.0	"	"	"	"	"	"	
Dieldrin	ND	5.0	"	"	"	"	"	"	
Endrin	ND	5.0	"	"	"	"	"	"	
4,4'-DDD	ND	5.0	"	"	"	"	"	"	
Endosulfan II	ND	5.0	"	"	"	"	"	"	
4,4'-DDT	ND	5.0	"	"	"	"	"	"	
Endrin aldehyde	ND	5.0	"	"	"	"	"	"	
Endosulfan sulfate	ND	5.0	"	"	"	"	"	"	
Methoxychlor	ND	10	"	"	"	"	"	"	
Endrin ketone	ND	5.0	"	"	"	"	"	"	
Toxaphene	ND	200	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		98.1 %		35-140	"	"	"	"	
Surrogate: Decachlorobiphenyl		65.4 %		35-140	"	"	"	"	

**Polychlorinated Biphenyls by EPA Method 8082**

PCB-1016	ND	10	ug/kg	1	7011221	01/12/17	01/17/17	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	ND	10	"	"	"	"	"	"	
PCB-1260	ND	10	"	"	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rose Fasheh, Project Manager



25712 Commercentre Drive  
 Lake Forest, California 92630  
 949.297.5020 Phone  
 949.297.5027 Fax

Tetra Tech - Pasadena 3475 E. Foothill Blvd. Pasadena CA, 91107	Project: Pier A Railyard (PARY) Project Number: T84380.09 Project Manager: Eric Nelson	Reported: 01/19/17 12:01
---	--	-----------------------------

**SP-001D**  
**T170053-03 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

**Polychlorinated Biphenyls by EPA Method 8082**

Surrogate: Tetrachloro-meta-xylene	72.7 %	35-140			7011221	01/12/17	01/17/17	EPA 8082	
Surrogate: Decachlorobiphenyl	69.8 %	35-140			"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Bromobenzene	ND	3.7	ug/kg	1	7011217	01/12/17	01/12/17	EPA 8260B/5035	
Bromochloromethane	ND	3.7	"	"	"	"	"	"	
Bromodichloromethane	ND	3.7	"	"	"	"	"	"	
Bromoform	ND	3.7	"	"	"	"	"	"	
Bromomethane	ND	3.7	"	"	"	"	"	"	
n-Butylbenzene	ND	3.7	"	"	"	"	"	"	
sec-Butylbenzene	ND	3.7	"	"	"	"	"	"	
tert-Butylbenzene	ND	3.7	"	"	"	"	"	"	
Carbon tetrachloride	ND	3.7	"	"	"	"	"	"	
Chlorobenzene	ND	3.7	"	"	"	"	"	"	
Chloroethane	ND	3.7	"	"	"	"	"	"	
Chloroform	ND	3.7	"	"	"	"	"	"	
Chloromethane	ND	3.7	"	"	"	"	"	"	
2-Chlorotoluene	ND	3.7	"	"	"	"	"	"	
4-Chlorotoluene	ND	3.7	"	"	"	"	"	"	
Dibromochloromethane	ND	3.7	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	7.4	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	3.7	"	"	"	"	"	"	
Dibromomethane	ND	3.7	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	3.7	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	3.7	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	3.7	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	3.7	"	"	"	"	"	"	
1,1-Dichloroethane	ND	3.7	"	"	"	"	"	"	
1,2-Dichloroethane	ND	3.7	"	"	"	"	"	"	
1,1-Dichloroethene	ND	3.7	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	3.7	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	3.7	"	"	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rose Fasheh, Project Manager



25712 Commercentre Drive  
 Lake Forest, California 92630  
 949.297.5020 Phone  
 949.297.5027 Fax

Tetra Tech - Pasadena  
 3475 E. Foothill Blvd.  
 Pasadena CA, 91107

Project: Pier A Railyard (PARY)  
 Project Number: T84380.09  
 Project Manager: Eric Nelson

Reported:  
 01/19/17 12:01

**SP-001D**  
**T170053-03 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
1,2-Dichloropropane	ND	3.7	ug/kg	1	7011217	01/12/17	01/12/17	EPA 8260B/5035	
1,3-Dichloropropane	ND	3.7	"	"	"	"	"	"	
2,2-Dichloropropane	ND	3.7	"	"	"	"	"	"	
1,1-Dichloropropene	ND	3.7	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	3.7	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	3.7	"	"	"	"	"	"	
Hexachlorobutadiene	ND	3.7	"	"	"	"	"	"	
Isopropylbenzene	ND	3.7	"	"	"	"	"	"	
p-Isopropyltoluene	ND	3.7	"	"	"	"	"	"	
Methylene chloride	ND	3.7	"	"	"	"	"	"	
Naphthalene	ND	3.7	"	"	"	"	"	"	
n-Propylbenzene	ND	3.7	"	"	"	"	"	"	
Styrene	ND	3.7	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	3.7	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	3.7	"	"	"	"	"	"	
Tetrachloroethene	ND	3.7	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	3.7	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	3.7	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	3.7	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	3.7	"	"	"	"	"	"	
Trichloroethene	ND	3.7	"	"	"	"	"	"	
Trichlorofluoromethane	ND	3.7	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	3.7	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	3.7	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	3.7	"	"	"	"	"	"	
Vinyl chloride	ND	3.7	"	"	"	"	"	"	
Benzene	ND	3.7	"	"	"	"	"	"	
Toluene	ND	3.7	"	"	"	"	"	"	
Ethylbenzene	ND	3.7	"	"	"	"	"	"	
m,p-Xylene	ND	7.4	"	"	"	"	"	"	
o-Xylene	ND	3.7	"	"	"	"	"	"	

SunStar Laboratories, Inc.

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Rose Fasheh, Project Manager



25712 Commercentre Drive  
 Lake Forest, California 92630  
 949.297.5020 Phone  
 949.297.5027 Fax

Tetra Tech - Pasadena 3475 E. Foothill Blvd. Pasadena CA, 91107	Project: Pier A Railyard (PARY) Project Number: T84380.09 Project Manager: Eric Nelson	Reported: 01/19/17 12:01
---	--	-----------------------------

**SP-001D**  
**T170053-03 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

Tert-amyl methyl ether	ND	15	ug/kg	1	7011217	01/12/17	01/12/17	EPA 8260B/5035	
Tert-butyl alcohol	ND	37	"	"	"	"	"	"	
Di-isopropyl ether	ND	15	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	15	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	15	"	"	"	"	"	"	
<i>Surrogate: Toluene-d8</i>		80.1 %		85.5-116	"	"	"	"	S-GC
<i>Surrogate: 4-Bromofluorobenzene</i>		93.9 %		81.2-123	"	"	"	"	
<i>Surrogate: Dibromofluoromethane</i>		134 %		95.7-135	"	"	"	"	

**Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring**

Acenaphthene	ND	50	ug/kg	1	7011019	01/12/17	01/19/17	EPA 8270C SIM	
Acenaphthylene	ND	25	"	"	"	"	"	"	
Anthracene	ND	25	"	"	"	"	"	"	
Benzo (a) anthracene	ND	25	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	50	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	50	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	25	"	"	"	"	"	"	
Benzo (a) pyrene	ND	50	"	"	"	"	"	"	
Chrysene	ND	25	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	25	"	"	"	"	"	"	
Fluoranthene	ND	25	"	"	"	"	"	"	
Fluorene	ND	50	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	25	"	"	"	"	"	"	
Naphthalene	ND	25	"	"	"	"	"	"	
Phenanthrene	ND	25	"	"	"	"	"	"	
Pyrene	ND	50	"	"	"	"	"	"	
<i>Surrogate: Terphenyl-dl4</i>		114 %		18-137	"	"	"	"	

SunStar Laboratories, Inc.

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Rose Fasheh, Project Manager



25712 Commercentre Drive  
 Lake Forest, California 92630  
 949.297.5020 Phone  
 949.297.5027 Fax

Tetra Tech - Pasadena 3475 E. Foothill Blvd. Pasadena CA, 91107	Project: Pier A Railyard (PARY) Project Number: T84380.09 Project Manager: Eric Nelson	Reported: 01/19/17 12:01
---	--	-----------------------------

**SP-001D**  
**T170053-03 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

**Conventional Chemistry Parameters by APHA/EPA/ASTM Methods**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
TRPH	100	4.0	mg/kg	1	7011225	01/12/17	01/13/17	EPA 418.1	

SunStar Laboratories, Inc.

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Rose Fasheh, Project Manager



25712 Commercentre Drive  
 Lake Forest, California 92630  
 949.297.5020 Phone  
 949.297.5027 Fax

Tetra Tech - Pasadena 3475 E. Foothill Blvd. Pasadena CA, 91107	Project: Pier A Railyard (PARY) Project Number: T84380.09 Project Manager: Eric Nelson	Reported: 01/19/17 12:01
---	--	-----------------------------

**SP-002**  
**T170053-04 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

**Extractable Petroleum Hydrocarbons by 8015B**

C6-C12 (GRO)	ND	10	mg/kg	1	701129	01/11/17	01/13/17	EPA 8015B	
<b>C13-C28 (DRO)</b>	<b>180</b>	10	"	"	"	"	"	"	
<b>C29-C40 (MORO)</b>	<b>960</b>	10	"	"	"	"	"	"	
Surrogate: <i>p</i> -Terphenyl		96.8 %		65-135	"	"	"	"	

**Metals by EPA 6010B**

Antimony	ND	2.7	mg/kg	1	7011213	01/12/17	01/13/17	EPA 6010B	
Silver	ND	1.8	"	"	"	"	"	"	
Arsenic	ND	4.5	"	"	"	"	"	"	
<b>Barium</b>	<b>110</b>	0.91	"	"	"	"	"	"	
Beryllium	ND	0.91	"	"	"	"	"	"	
Cadmium	ND	1.8	"	"	"	"	"	"	
<b>Chromium</b>	<b>8.4</b>	1.8	"	"	"	"	"	"	
<b>Cobalt</b>	<b>4.6</b>	1.8	"	"	"	"	"	"	
<b>Copper</b>	<b>9.4</b>	0.91	"	"	"	"	"	"	
Lead	ND	2.7	"	"	"	"	"	"	
Molybdenum	ND	4.5	"	"	"	"	"	"	
<b>Nickel</b>	<b>8.2</b>	1.8	"	"	"	"	"	"	
Selenium	ND	4.5	"	"	"	"	"	"	
Thallium	ND	1.8	"	"	"	"	"	"	
<b>Vanadium</b>	<b>21</b>	4.5	"	"	"	"	"	"	
<b>Zinc</b>	<b>8.8</b>	0.91	"	"	"	"	"	"	

**Cold Vapor Extraction EPA 7470/7471**

Mercury	ND	0.10	mg/kg	1	7011214	01/12/17	01/13/17	EPA 7471A Soil	
---------	----	------	-------	---	---------	----------	----------	-------------------	--

SunStar Laboratories, Inc.

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Rose Fasheh, Project Manager



25712 Commercentre Drive  
 Lake Forest, California 92630  
 949.297.5020 Phone  
 949.297.5027 Fax

Tetra Tech - Pasadena 3475 E. Foothill Blvd. Pasadena CA, 91107	Project: Pier A Railyard (PARY) Project Number: T84380.09 Project Manager: Eric Nelson	Reported: 01/19/17 12:01
---	--	-----------------------------

**SP-002**  
**T170053-04 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

**Organochlorine Pesticides by EPA Method 8081A**

alpha-BHC	ND	5.0	ug/kg	1	7011219	01/12/17	01/16/17	EPA 8081A	
gamma-BHC (Lindane)	ND	5.0	"	"	"	"	"	"	
beta-BHC	ND	5.0	"	"	"	"	"	"	
delta-BHC	ND	5.0	"	"	"	"	"	"	
Heptachlor	ND	5.0	"	"	"	"	"	"	
Aldrin	ND	5.0	"	"	"	"	"	"	
Heptachlor epoxide	ND	5.0	"	"	"	"	"	"	
gamma-Chlordane	ND	5.0	"	"	"	"	"	"	
alpha-Chlordane	ND	5.0	"	"	"	"	"	"	
Endosulfan I	ND	5.0	"	"	"	"	"	"	
4,4'-DDE	ND	5.0	"	"	"	"	"	"	
Dieldrin	ND	5.0	"	"	"	"	"	"	
Endrin	ND	5.0	"	"	"	"	"	"	
4,4'-DDD	ND	5.0	"	"	"	"	"	"	
Endosulfan II	ND	5.0	"	"	"	"	"	"	
4,4'-DDT	ND	5.0	"	"	"	"	"	"	
Endrin aldehyde	ND	5.0	"	"	"	"	"	"	
Endosulfan sulfate	ND	5.0	"	"	"	"	"	"	
Methoxychlor	ND	10	"	"	"	"	"	"	
Endrin ketone	ND	5.0	"	"	"	"	"	"	
Toxaphene	ND	200	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		101 %	35-140		"	"	"	"	
Surrogate: Decachlorobiphenyl		65.1 %	35-140		"	"	"	"	

**Polychlorinated Biphenyls by EPA Method 8082**

PCB-1016	ND	10	ug/kg	1	7011221	01/12/17	01/17/17	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	ND	10	"	"	"	"	"	"	
<b>PCB-1260</b>	<b>14</b>	10	"	"	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rose Fasheh, Project Manager



25712 Commercentre Drive  
 Lake Forest, California 92630  
 949.297.5020 Phone  
 949.297.5027 Fax

Tetra Tech - Pasadena 3475 E. Foothill Blvd. Pasadena CA, 91107	Project: Pier A Railyard (PARY) Project Number: T84380.09 Project Manager: Eric Nelson	Reported: 01/19/17 12:01
---	--	-----------------------------

**SP-002**  
**T170053-04 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

**Polychlorinated Biphenyls by EPA Method 8082**

Surrogate: Tetrachloro-meta-xylene	72.2 %	35-140			7011221	01/12/17	01/17/17	EPA 8082	
Surrogate: Decachlorobiphenyl	65.0 %	35-140			"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Bromobenzene	ND	3.2	ug/kg	1	7011217	01/12/17	01/12/17	EPA 8260B/5035	
Bromochloromethane	ND	3.2	"	"	"	"	"	"	
Bromodichloromethane	ND	3.2	"	"	"	"	"	"	
Bromoform	ND	3.2	"	"	"	"	"	"	
Bromomethane	ND	3.2	"	"	"	"	"	"	
n-Butylbenzene	ND	3.2	"	"	"	"	"	"	
sec-Butylbenzene	ND	3.2	"	"	"	"	"	"	
tert-Butylbenzene	ND	3.2	"	"	"	"	"	"	
Carbon tetrachloride	ND	3.2	"	"	"	"	"	"	
Chlorobenzene	ND	3.2	"	"	"	"	"	"	
Chloroethane	ND	3.2	"	"	"	"	"	"	
Chloroform	ND	3.2	"	"	"	"	"	"	
Chloromethane	ND	3.2	"	"	"	"	"	"	
2-Chlorotoluene	ND	3.2	"	"	"	"	"	"	
4-Chlorotoluene	ND	3.2	"	"	"	"	"	"	
Dibromochloromethane	ND	3.2	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	6.4	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	3.2	"	"	"	"	"	"	
Dibromomethane	ND	3.2	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	3.2	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	3.2	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	3.2	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	3.2	"	"	"	"	"	"	
1,1-Dichloroethane	ND	3.2	"	"	"	"	"	"	
1,2-Dichloroethane	ND	3.2	"	"	"	"	"	"	
1,1-Dichloroethene	ND	3.2	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	3.2	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	3.2	"	"	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rose Fasheh, Project Manager





25712 Commercentre Drive  
 Lake Forest, California 92630  
 949.297.5020 Phone  
 949.297.5027 Fax

Tetra Tech - Pasadena  
 3475 E. Foothill Blvd.  
 Pasadena CA, 91107

Project: Pier A Railyard (PARY)  
 Project Number: T84380.09  
 Project Manager: Eric Nelson

Reported:  
 01/19/17 12:01

**SP-002**  
**T170053-04 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
1,2-Dichloropropane	ND	3.2	ug/kg	1	7011217	01/12/17	01/12/17	EPA 8260B/5035	
1,3-Dichloropropane	ND	3.2	"	"	"	"	"	"	
2,2-Dichloropropane	ND	3.2	"	"	"	"	"	"	
1,1-Dichloropropene	ND	3.2	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	3.2	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	3.2	"	"	"	"	"	"	
Hexachlorobutadiene	ND	3.2	"	"	"	"	"	"	
Isopropylbenzene	ND	3.2	"	"	"	"	"	"	
p-Isopropyltoluene	ND	3.2	"	"	"	"	"	"	
Methylene chloride	ND	3.2	"	"	"	"	"	"	
Naphthalene	ND	3.2	"	"	"	"	"	"	
n-Propylbenzene	ND	3.2	"	"	"	"	"	"	
Styrene	ND	3.2	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	3.2	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	3.2	"	"	"	"	"	"	
Tetrachloroethene	ND	3.2	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	3.2	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	3.2	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	3.2	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	3.2	"	"	"	"	"	"	
Trichloroethene	ND	3.2	"	"	"	"	"	"	
Trichlorofluoromethane	ND	3.2	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	3.2	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	3.2	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	3.2	"	"	"	"	"	"	
Vinyl chloride	ND	3.2	"	"	"	"	"	"	
Benzene	ND	3.2	"	"	"	"	"	"	
Toluene	ND	3.2	"	"	"	"	"	"	
Ethylbenzene	ND	3.2	"	"	"	"	"	"	
m,p-Xylene	ND	6.4	"	"	"	"	"	"	
o-Xylene	ND	3.2	"	"	"	"	"	"	

SunStar Laboratories, Inc.

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Rose Fasheh, Project Manager



25712 Commercentre Drive  
 Lake Forest, California 92630  
 949.297.5020 Phone  
 949.297.5027 Fax

Tetra Tech - Pasadena 3475 E. Foothill Blvd. Pasadena CA, 91107	Project: Pier A Railyard (PARY) Project Number: T84380.09 Project Manager: Eric Nelson	Reported: 01/19/17 12:01
---	--	-----------------------------

**SP-002**  
**T170053-04 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

Tert-amyl methyl ether	ND	13	ug/kg	1	7011217	01/12/17	01/12/17	EPA 8260B/5035	
Tert-butyl alcohol	ND	32	"	"	"	"	"	"	
Di-isopropyl ether	ND	13	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	13	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	13	"	"	"	"	"	"	
<i>Surrogate: Toluene-d8</i>		90.5 %	85.5-116		"	"	"	"	
<i>Surrogate: 4-Bromofluorobenzene</i>		100 %	81.2-123		"	"	"	"	
<i>Surrogate: Dibromofluoromethane</i>		126 %	95.7-135		"	"	"	"	

**Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring**

Acenaphthene	ND	50	ug/kg	1	7011019	01/12/17	01/19/17	EPA 8270C SIM	
Acenaphthylene	ND	25	"	"	"	"	"	"	
Anthracene	ND	25	"	"	"	"	"	"	
Benzo (a) anthracene	ND	25	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	50	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	50	"	"	"	"	"	"	
Benzo (g,h,i) perylene	ND	25	"	"	"	"	"	"	
Benzo (a) pyrene	ND	50	"	"	"	"	"	"	
Chrysene	ND	25	"	"	"	"	"	"	
Dibenz (a,h) anthracene	ND	25	"	"	"	"	"	"	
Fluoranthene	ND	25	"	"	"	"	"	"	
Fluorene	ND	50	"	"	"	"	"	"	
Indeno (1,2,3-cd) pyrene	ND	25	"	"	"	"	"	"	
Naphthalene	ND	25	"	"	"	"	"	"	
Phenanthrene	ND	25	"	"	"	"	"	"	
Pyrene	ND	50	"	"	"	"	"	"	
<i>Surrogate: Terphenyl-dl4</i>		122 %	18-137		"	"	"	"	

SunStar Laboratories, Inc.

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Rose Fasheh, Project Manager



25712 Commercentre Drive  
 Lake Forest, California 92630  
 949.297.5020 Phone  
 949.297.5027 Fax

Tetra Tech - Pasadena 3475 E. Foothill Blvd. Pasadena CA, 91107	Project: Pier A Railyard (PARY) Project Number: T84380.09 Project Manager: Eric Nelson	Reported: 01/19/17 12:01
---	--	-----------------------------

**SP-002**  
**T170053-04 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

**Conventional Chemistry Parameters by APHA/EPA/ASTM Methods**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
TRPH	140	4.0	mg/kg	1	7011225	01/12/17	01/13/17	EPA 418.1	

SunStar Laboratories, Inc.

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Rose Fasheh, Project Manager



25712 Commercentre Drive  
 Lake Forest, California 92630  
 949.297.5020 Phone  
 949.297.5027 Fax

Tetra Tech - Pasadena 3475 E. Foothill Blvd. Pasadena CA, 91107	Project: Pier A Railyard (PARY) Project Number: T84380.09 Project Manager: Eric Nelson	Reported: 01/19/17 12:01
---	--	-----------------------------

**SP-003**  
**T170053-05 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

**Extractable Petroleum Hydrocarbons by 8015B**

C6-C12 (GRO)	ND	10	mg/kg	1	701129	01/11/17	01/13/17	EPA 8015B	
<b>C13-C28 (DRO)</b>	<b>220</b>	10	"	"	"	"	"	"	
<b>C29-C40 (MORO)</b>	<b>2000</b>	10	"	"	"	"	"	"	
Surrogate: p-Terphenyl		93.2 %	65-135		"	"	"	"	

**Metals by EPA 6010B**

Antimony	ND	2.7	mg/kg	1	7011213	01/12/17	01/13/17	EPA 6010B	
Silver	ND	1.8	"	"	"	"	"	"	
Arsenic	ND	4.5	"	"	"	"	"	"	
<b>Barium</b>	<b>78</b>	0.91	"	"	"	"	"	"	
Beryllium	ND	0.91	"	"	"	"	"	"	
Cadmium	ND	1.8	"	"	"	"	"	"	
<b>Chromium</b>	<b>6.4</b>	1.8	"	"	"	"	"	"	
<b>Cobalt</b>	<b>3.3</b>	1.8	"	"	"	"	"	"	
<b>Copper</b>	<b>8.9</b>	0.91	"	"	"	"	"	"	
Lead	ND	2.7	"	"	"	"	"	"	
Molybdenum	ND	4.5	"	"	"	"	"	"	
<b>Nickel</b>	<b>6.2</b>	1.8	"	"	"	"	"	"	
Selenium	ND	4.5	"	"	"	"	"	"	
Thallium	ND	1.8	"	"	"	"	"	"	
<b>Vanadium</b>	<b>13</b>	4.5	"	"	"	"	"	"	
<b>Zinc</b>	<b>6.9</b>	0.91	"	"	"	"	"	"	

**Cold Vapor Extraction EPA 7470/7471**

Mercury	ND	0.10	mg/kg	1	7011214	01/12/17	01/13/17	EPA 7471A Soil	
---------	----	------	-------	---	---------	----------	----------	-------------------	--

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rose Fasheh, Project Manager



25712 Commercentre Drive  
 Lake Forest, California 92630  
 949.297.5020 Phone  
 949.297.5027 Fax

Tetra Tech - Pasadena 3475 E. Foothill Blvd. Pasadena CA, 91107	Project: Pier A Railyard (PARY) Project Number: T84380.09 Project Manager: Eric Nelson	Reported: 01/19/17 12:01
---	--	-----------------------------

**SP-003**  
**T170053-05 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

**Organochlorine Pesticides by EPA Method 8081A**

alpha-BHC	ND	5.0	ug/kg	1	7011219	01/12/17	01/16/17	EPA 8081A	
gamma-BHC (Lindane)	ND	5.0	"	"	"	"	"	"	
beta-BHC	ND	5.0	"	"	"	"	"	"	
delta-BHC	ND	5.0	"	"	"	"	"	"	
Heptachlor	ND	5.0	"	"	"	"	"	"	
Aldrin	ND	5.0	"	"	"	"	"	"	
Heptachlor epoxide	ND	5.0	"	"	"	"	"	"	
<b>gamma-Chlordane</b>	<b>10</b>	5.0	"	"	"	"	"	"	
<b>alpha-Chlordane</b>	<b>14</b>	5.0	"	"	"	"	"	"	
Endosulfan I	ND	5.0	"	"	"	"	"	"	
4,4'-DDE	ND	5.0	"	"	"	"	"	"	
Dieldrin	ND	5.0	"	"	"	"	"	"	
Endrin	ND	5.0	"	"	"	"	"	"	
4,4'-DDD	ND	5.0	"	"	"	"	"	"	
Endosulfan II	ND	5.0	"	"	"	"	"	"	
4,4'-DDT	ND	5.0	"	"	"	"	"	"	
Endrin aldehyde	ND	5.0	"	"	"	"	"	"	
Endosulfan sulfate	ND	5.0	"	"	"	"	"	"	
Methoxychlor	ND	10	"	"	"	"	"	"	
Endrin ketone	ND	5.0	"	"	"	"	"	"	
Toxaphene	ND	200	"	"	"	"	"	"	
Surrogate: Tetrachloro-meta-xylene		91.4 %	35-140		"	"	"	"	
Surrogate: Decachlorobiphenyl		95.6 %	35-140		"	"	"	"	

**Polychlorinated Biphenyls by EPA Method 8082**

PCB-1016	ND	10	ug/kg	1	7011221	01/12/17	01/17/17	EPA 8082	
PCB-1221	ND	10	"	"	"	"	"	"	
PCB-1232	ND	10	"	"	"	"	"	"	
PCB-1242	ND	10	"	"	"	"	"	"	
PCB-1248	ND	10	"	"	"	"	"	"	
PCB-1254	ND	10	"	"	"	"	"	"	
<b>PCB-1260</b>	<b>38</b>	10	"	"	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rose Fasheh, Project Manager



25712 Commercentre Drive  
 Lake Forest, California 92630  
 949.297.5020 Phone  
 949.297.5027 Fax

Tetra Tech - Pasadena 3475 E. Foothill Blvd. Pasadena CA, 91107	Project: Pier A Railyard (PARY) Project Number: T84380.09 Project Manager: Eric Nelson	Reported: 01/19/17 12:01
---	--	-----------------------------

**SP-003**  
**T170053-05 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

**Polychlorinated Biphenyls by EPA Method 8082**

Surrogate: Tetrachloro-meta-xylene	73.7 %	35-140			7011221	01/12/17	01/17/17	EPA 8082	
Surrogate: Decachlorobiphenyl	63.7 %	35-140			"	"	"	"	

**Volatile Organic Compounds by EPA Method 8260B**

Bromobenzene	ND	3.4	ug/kg	1	7011217	01/12/17	01/12/17	EPA 8260B/5035	
Bromochloromethane	ND	3.4	"	"	"	"	"	"	
Bromodichloromethane	ND	3.4	"	"	"	"	"	"	
Bromoform	ND	3.4	"	"	"	"	"	"	
Bromomethane	ND	3.4	"	"	"	"	"	"	
n-Butylbenzene	ND	3.4	"	"	"	"	"	"	
sec-Butylbenzene	ND	3.4	"	"	"	"	"	"	
tert-Butylbenzene	ND	3.4	"	"	"	"	"	"	
Carbon tetrachloride	ND	3.4	"	"	"	"	"	"	
Chlorobenzene	ND	3.4	"	"	"	"	"	"	
Chloroethane	ND	3.4	"	"	"	"	"	"	
Chloroform	ND	3.4	"	"	"	"	"	"	
Chloromethane	ND	3.4	"	"	"	"	"	"	
2-Chlorotoluene	ND	3.4	"	"	"	"	"	"	
4-Chlorotoluene	ND	3.4	"	"	"	"	"	"	
Dibromochloromethane	ND	3.4	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	6.8	"	"	"	"	"	"	
1,2-Dibromoethane (EDB)	ND	3.4	"	"	"	"	"	"	
Dibromomethane	ND	3.4	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	3.4	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	3.4	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	3.4	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	3.4	"	"	"	"	"	"	
1,1-Dichloroethane	ND	3.4	"	"	"	"	"	"	
1,2-Dichloroethane	ND	3.4	"	"	"	"	"	"	
1,1-Dichloroethene	ND	3.4	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	3.4	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	3.4	"	"	"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rose Fasheh, Project Manager



25712 Commercentre Drive  
 Lake Forest, California 92630  
 949.297.5020 Phone  
 949.297.5027 Fax

Tetra Tech - Pasadena  
 3475 E. Foothill Blvd.  
 Pasadena CA, 91107

Project: Pier A Railyard (PARY)  
 Project Number: T84380.09  
 Project Manager: Eric Nelson

Reported:  
 01/19/17 12:01

**SP-003**  
**T170053-05 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
1,2-Dichloropropane	ND	3.4	ug/kg	1	7011217	01/12/17	01/12/17	EPA 8260B/5035	
1,3-Dichloropropane	ND	3.4	"	"	"	"	"	"	
2,2-Dichloropropane	ND	3.4	"	"	"	"	"	"	
1,1-Dichloropropene	ND	3.4	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	3.4	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	3.4	"	"	"	"	"	"	
Hexachlorobutadiene	ND	3.4	"	"	"	"	"	"	
Isopropylbenzene	ND	3.4	"	"	"	"	"	"	
p-Isopropyltoluene	ND	3.4	"	"	"	"	"	"	
Methylene chloride	ND	3.4	"	"	"	"	"	"	
Naphthalene	ND	3.4	"	"	"	"	"	"	
n-Propylbenzene	ND	3.4	"	"	"	"	"	"	
Styrene	ND	3.4	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	3.4	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	3.4	"	"	"	"	"	"	
Tetrachloroethene	ND	3.4	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	3.4	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	3.4	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	3.4	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	3.4	"	"	"	"	"	"	
Trichloroethene	ND	3.4	"	"	"	"	"	"	
Trichlorofluoromethane	ND	3.4	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	3.4	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	3.4	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	3.4	"	"	"	"	"	"	
Vinyl chloride	ND	3.4	"	"	"	"	"	"	
Benzene	ND	3.4	"	"	"	"	"	"	
Toluene	ND	3.4	"	"	"	"	"	"	
Ethylbenzene	ND	3.4	"	"	"	"	"	"	
m,p-Xylene	ND	6.8	"	"	"	"	"	"	
o-Xylene	ND	3.4	"	"	"	"	"	"	

SunStar Laboratories, Inc.

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Rose Fasheh, Project Manager



25712 Commercentre Drive  
 Lake Forest, California 92630  
 949.297.5020 Phone  
 949.297.5027 Fax

Tetra Tech - Pasadena  
 3475 E. Foothill Blvd.  
 Pasadena CA, 91107

Project: Pier A Railyard (PARY)  
 Project Number: T84380.09  
 Project Manager: Eric Nelson

Reported:  
 01/19/17 12:01

**SP-003**  
**T170053-05 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

**Volatile Organic Compounds by EPA Method 8260B**

Tert-amyl methyl ether	ND	14	ug/kg	1	7011217	01/12/17	01/12/17	EPA 8260B/5035	
Tert-butyl alcohol	ND	34	"	"	"	"	"	"	
Di-isopropyl ether	ND	14	"	"	"	"	"	"	
Ethyl tert-butyl ether	ND	14	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	14	"	"	"	"	"	"	
Surrogate: Toluene-d8		83.2 %	85.5-116		"	"	"	"	S-GC
Surrogate: 4-Bromofluorobenzene		83.4 %	81.2-123		"	"	"	"	
Surrogate: Dibromofluoromethane		140 %	95.7-135		"	"	"	"	S-GC

**Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring**

Acenaphthene	ND	50	ug/kg	1	7011019	01/12/17	01/19/17	EPA 8270C SIM	
Acenaphthylene	ND	25	"	"	"	"	"	"	
Anthracene	ND	25	"	"	"	"	"	"	
<b>Benzo (a) anthracene</b>	<b>440</b>	25	"	"	"	"	"	"	
<b>Benzo (b) fluoranthene</b>	<b>480</b>	50	"	"	"	"	"	"	
<b>Benzo (k) fluoranthene</b>	<b>200</b>	50	"	"	"	"	"	"	
<b>Benzo (g,h,i) perylene</b>	<b>140</b>	25	"	"	"	"	"	"	
<b>Benzo (a) pyrene</b>	<b>340</b>	50	"	"	"	"	"	"	
<b>Chrysene</b>	<b>320</b>	25	"	"	"	"	"	"	
<b>Dibenz (a,h) anthracene</b>	<b>50</b>	25	"	"	"	"	"	"	
<b>Fluoranthene</b>	<b>540</b>	25	"	"	"	"	"	"	
Fluorene	ND	50	"	"	"	"	"	"	
<b>Indeno (1,2,3-cd) pyrene</b>	<b>150</b>	25	"	"	"	"	"	"	
Naphthalene	ND	25	"	"	"	"	"	"	
<b>Phenanthrene</b>	<b>230</b>	25	"	"	"	"	"	"	
<b>Pyrene</b>	<b>840</b>	50	"	"	"	"	"	"	
Surrogate: Terphenyl-dl4		106 %	18-137		"	"	"	"	

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rose Fasheh, Project Manager





25712 Commercentre Drive  
 Lake Forest, California 92630  
 949.297.5020 Phone  
 949.297.5027 Fax

Tetra Tech - Pasadena 3475 E. Foothill Blvd. Pasadena CA, 91107	Project: Pier A Railyard (PARY) Project Number: T84380.09 Project Manager: Eric Nelson	Reported: 01/19/17 12:01
---	--	-----------------------------

**SP-003**  
**T170053-05 (Soil)**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
---------	--------	-----------------	-------	----------	-------	----------	----------	--------	-------

**SunStar Laboratories, Inc.**

**Conventional Chemistry Parameters by APHA/EPA/ASTM Methods**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
TRPH	1400	20	mg/kg	5	7011225	01/12/17	01/13/17	EPA 418.1	

SunStar Laboratories, Inc.

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Rose Fasheh, Project Manager



25712 Commercentre Drive  
 Lake Forest, California 92630  
 949.297.5020 Phone  
 949.297.5027 Fax

Tetra Tech - Pasadena 3475 E. Foothill Blvd. Pasadena CA, 91107	Project: Pier A Railyard (PARY) Project Number: T84380.09 Project Manager: Eric Nelson	Reported: 01/19/17 12:01
---	--	-----------------------------

**Extractable Petroleum Hydrocarbons by 8015B - Quality Control**  
**SunStar Laboratories, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch 7011129 - EPA 3550B GC**

**Blank (7011129-BLK1)**

Prepared: 01/11/17 Analyzed: 01/12/17

C6-C12 (GRO)	ND	10	mg/kg							
C13-C28 (DRO)	ND	10	"							
C29-C40 (MORO)	ND	10	"							
Surrogate: <i>p</i> -Terphenyl	99.0		"	104		95.0	65-135			

SunStar Laboratories, Inc.

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Rose Fasheh, Project Manager



25712 Commercentre Drive  
 Lake Forest, California 92630  
 949.297.5020 Phone  
 949.297.5027 Fax

Tetra Tech - Pasadena 3475 E. Foothill Blvd. Pasadena CA, 91107	Project: Pier A Railyard (PARY) Project Number: T84380.09 Project Manager: Eric Nelson	Reported: 01/19/17 12:01
---	--	-----------------------------

**Extractable Petroleum Hydrocarbons by 8015B - Quality Control**

**SunStar Laboratories, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch 7011129 - EPA 3550B GC**

**LCS (7011129-BS1)**

Prepared: 01/11/17 Analyzed: 01/12/17

C13-C28 (DRO)	450	10	mg/kg	485		91.7	75-125			
Surrogate: <i>p</i> -Terphenyl	89.8		"	97.1		92.5	65-135			

SunStar Laboratories, Inc.

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Rose Fasheh, Project Manager



25712 Commercentre Drive  
 Lake Forest, California 92630  
 949.297.5020 Phone  
 949.297.5027 Fax

Tetra Tech - Pasadena 3475 E. Foothill Blvd. Pasadena CA, 91107	Project: Pier A Railyard (PARY) Project Number: T84380.09 Project Manager: Eric Nelson	Reported: 01/19/17 12:01
---	--	-----------------------------

**Extractable Petroleum Hydrocarbons by 8015B - Quality Control**

**SunStar Laboratories, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch 7011129 - EPA 3550B GC**

Matrix Spike (7011129-MS1)	Source: T170050-02			Prepared: 01/11/17		Analyzed: 01/13/17	
C13-C28 (DRO)	2100	50	mg/kg	495	1700	78.6	75-125
Surrogate: <i>p</i> -Terphenyl	89.3		"	99.0		90.2	65-135

SunStar Laboratories, Inc.

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Rose Fasheh, Project Manager



25712 Commercentre Drive  
 Lake Forest, California 92630  
 949.297.5020 Phone  
 949.297.5027 Fax

Tetra Tech - Pasadena 3475 E. Foothill Blvd. Pasadena CA, 91107	Project: Pier A Railyard (PARY) Project Number: T84380.09 Project Manager: Eric Nelson	Reported: 01/19/17 12:01
---	--	-----------------------------

**Extractable Petroleum Hydrocarbons by 8015B - Quality Control**

**SunStar Laboratories, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch 7011129 - EPA 3550B GC**

**Matrix Spike Dup (7011129-MSD1)**

Source: T170050-02

Prepared: 01/11/17 Analyzed: 01/13/17

C13-C28 (DRO)	2300	50	mg/kg	510	1700	108	75-125	7.50	20	
Surrogate: <i>p</i> -Terphenyl	97.0		"	102		95.0	65-135			

SunStar Laboratories, Inc.

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Rose Fasheh, Project Manager



25712 Commercentre Drive  
 Lake Forest, California 92630  
 949.297.5020 Phone  
 949.297.5027 Fax

Tetra Tech - Pasadena  
 3475 E. Foothill Blvd.  
 Pasadena CA, 91107

Project: Pier A Railyard (PARY)  
 Project Number: T84380.09  
 Project Manager: Eric Nelson

Reported:  
 01/19/17 12:01

**Extractable Petroleum Hydrocarbons by 8015B - Quality Control**

**SunStar Laboratories, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Metals by EPA 6010B - Quality Control**

**SunStar Laboratories, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch 7011213 - EPA 3051**

**Blank (7011213-BLK1)**

Prepared: 01/12/17 Analyzed: 01/13/17

Antimony	ND	3.0	mg/kg							
Silver	ND	2.0	"							
Arsenic	ND	5.0	"							
Barium	ND	1.0	"							
Beryllium	ND	1.0	"							
Cadmium	ND	2.0	"							
Chromium	ND	2.0	"							
Cobalt	ND	2.0	"							
Copper	ND	1.0	"							
Lead	ND	3.0	"							
Molybdenum	ND	5.0	"							
Nickel	ND	2.0	"							
Selenium	ND	5.0	"							
Thallium	ND	2.0	"							
Vanadium	ND	5.0	"							
Zinc	ND	1.0	"							

**LCS (7011213-BS1)**

Prepared: 01/12/17 Analyzed: 01/13/17

Arsenic	98.6	5.0	mg/kg	100		98.6	75-125			
Barium	101	1.0	"	100		101	75-125			
Cadmium	99.7	2.0	"	100		99.7	75-125			
Chromium	100	2.0	"	100		100	75-125			
Lead	103	3.0	"	100		103	75-125			

**Matrix Spike (7011213-MS1)**

Source: T170053-02

Prepared: 01/12/17 Analyzed: 01/13/17

Arsenic	97.5	5.0	mg/kg	100	2.32	95.2	75-125			
Barium	201	1.0	"	100	112	89.2	75-125			
Cadmium	91.1	2.0	"	100	0.561	90.6	75-125			
Chromium	99.7	2.0	"	100	8.29	91.4	75-125			
Lead	101	3.0	"	100	ND	101	75-125			

SunStar Laboratories, Inc.

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Rose Fasheh, Project Manager



25712 Commercentre Drive  
 Lake Forest, California 92630  
 949.297.5020 Phone  
 949.297.5027 Fax

Tetra Tech - Pasadena 3475 E. Foothill Blvd. Pasadena CA, 91107	Project: Pier A Railyard (PARY) Project Number: T84380.09 Project Manager: Eric Nelson	Reported: 01/19/17 12:01
---	--	-----------------------------

**Metals by EPA 6010B - Quality Control**

**SunStar Laboratories, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch 7011213 - EPA 3051**

Matrix Spike Dup (7011213-MSD1)	Source: T170053-02			Prepared: 01/12/17		Analyzed: 01/13/17				
Arsenic	97.6	5.0	mg/kg	100	2.32	95.3	75-125	0.123	20	
Barium	207	1.0	"	100	112	94.5	75-125	2.64	20	
Cadmium	90.9	2.0	"	100	0.561	90.3	75-125	0.308	20	
Chromium	98.1	2.0	"	100	8.29	89.8	75-125	1.59	20	
Lead	98.7	3.0	"	100	ND	98.7	75-125	2.45	20	

SunStar Laboratories, Inc.

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Rose Fasheh, Project Manager



25712 Commercentre Drive  
 Lake Forest, California 92630  
 949.297.5020 Phone  
 949.297.5027 Fax

Tetra Tech - Pasadena 3475 E. Foothill Blvd. Pasadena CA, 91107	Project: Pier A Railyard (PARY) Project Number: T84380.09 Project Manager: Eric Nelson	Reported: 01/19/17 12:01
---	--	-----------------------------

**Cold Vapor Extraction EPA 7470/7471 - Quality Control**  
**SunStar Laboratories, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch 7011214 - EPA 7471A Soil**

<b>Blank (7011214-BLK1)</b>		Prepared: 01/12/17 Analyzed: 01/13/17								
Mercury	ND	0.10	mg/kg							
<b>LCS (7011214-BS1)</b>		Prepared: 01/12/17 Analyzed: 01/13/17								
Mercury	0.353	0.10	mg/kg	0.410		86.1	75-125			
<b>Matrix Spike (7011214-MS1)</b>		<b>Source: T170053-02</b>		Prepared: 01/12/17 Analyzed: 01/13/17						
Mercury	0.362	0.10	mg/kg	0.385	0.0366	84.7	75-125			
<b>Matrix Spike Dup (7011214-MSD1)</b>		<b>Source: T170053-02</b>		Prepared: 01/12/17 Analyzed: 01/13/17						
Mercury	0.368	0.10	mg/kg	0.391	0.0366	84.9	75-125	1.63	20	

SunStar Laboratories, Inc.

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Rose Fasheh, Project Manager





25712 Commercentre Drive  
 Lake Forest, California 92630  
 949.297.5020 Phone  
 949.297.5027 Fax

Tetra Tech - Pasadena  
 3475 E. Foothill Blvd.  
 Pasadena CA, 91107

Project: Pier A Railyard (PARY)  
 Project Number: T84380.09  
 Project Manager: Eric Nelson

Reported:  
 01/19/17 12:01

**Organochlorine Pesticides by EPA Method 8081A - Quality Control**

**SunStar Laboratories, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch 7011219 - EPA 3550 ECD/GCMS**

**Blank (7011219-BLK1)**

Prepared: 01/12/17 Analyzed: 01/16/17

alpha-BHC	ND	5.0	ug/kg							
gamma-BHC (Lindane)	ND	5.0	"							
beta-BHC	ND	5.0	"							
delta-BHC	ND	5.0	"							
Heptachlor	ND	5.0	"							
Aldrin	ND	5.0	"							
Heptachlor epoxide	ND	5.0	"							
gamma-Chlordane	ND	5.0	"							
alpha-Chlordane	ND	5.0	"							
Endosulfan I	ND	5.0	"							
4,4'-DDE	ND	5.0	"							
Dieldrin	ND	5.0	"							
Endrin	ND	5.0	"							
4,4'-DDD	ND	5.0	"							
Endosulfan II	ND	5.0	"							
4,4'-DDT	ND	5.0	"							
Endrin aldehyde	ND	5.0	"							
Endosulfan sulfate	ND	5.0	"							
Methoxychlor	ND	10	"							
Endrin ketone	ND	5.0	"							
Toxaphene	ND	200	"							
Surrogate: Tetrachloro-meta-xylene	9.86		"	9.90		99.5	35-140			
Surrogate: Decachlorobiphenyl	10.1		"	9.90		102	35-140			

**LCS (7011219-BS1)**

Prepared: 01/12/17 Analyzed: 01/16/17

gamma-BHC (Lindane)	84.7	5.0	ug/kg	78.4		108	40-120			
Heptachlor	71.5	5.0	"	78.4		91.2	40-120			
Aldrin	90.9	5.0	"	78.4		116	40-120			
Dieldrin	90.4	5.0	"	78.4		115	40-120			
Endrin	90.8	5.0	"	78.4		116	40-120			
4,4'-DDT	93.3	5.0	"	78.4		119	33-147			
Surrogate: Tetrachloro-meta-xylene	8.79		"	9.80		89.7	35-140			
Surrogate: Decachlorobiphenyl	8.46		"	9.80		86.3	35-140			

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rose Fasheh, Project Manager



25712 Commercentre Drive  
 Lake Forest, California 92630  
 949.297.5020 Phone  
 949.297.5027 Fax

Tetra Tech - Pasadena 3475 E. Foothill Blvd. Pasadena CA, 91107	Project: Pier A Railyard (PARY) Project Number: T84380.09 Project Manager: Eric Nelson	Reported: 01/19/17 12:01
---	--	-----------------------------

**Organochlorine Pesticides by EPA Method 8081A - Quality Control**

**SunStar Laboratories, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch 7011219 - EPA 3550 ECD/GCMS**

**LCS Dup (7011219-BSD1)**

Prepared: 01/12/17 Analyzed: 01/16/17

gamma-BHC (Lindane)	86.2	5.0	ug/kg	79.2		109	40-120	0.737	30	
Heptachlor	74.6	5.0	"	79.2		94.2	40-120	3.28	30	
Aldrin	86.9	5.0	"	79.2		110	40-120	5.56	30	
Dieldrin	85.6	5.0	"	79.2		108	40-120	6.41	30	
Endrin	94.6	5.0	"	79.2		119	40-120	3.05	30	
4,4'-DDT	90.1	5.0	"	79.2		114	33-147	4.47	30	
Surrogate: Tetrachloro-meta-xylene	9.36		"	9.90		94.5	35-140			
Surrogate: Decachlorobiphenyl	9.12		"	9.90		92.1	35-140			

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rose Fasheh, Project Manager



25712 Commercentre Drive  
 Lake Forest, California 92630  
 949.297.5020 Phone  
 949.297.5027 Fax

Tetra Tech - Pasadena 3475 E. Foothill Blvd. Pasadena CA, 91107	Project: Pier A Railyard (PARY) Project Number: T84380.09 Project Manager: Eric Nelson	Reported: 01/19/17 12:01
---	--	-----------------------------

**Polychlorinated Biphenyls by EPA Method 8082 - Quality Control**

**SunStar Laboratories, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch 7011221 - EPA 3550 ECD/GCMS**

**Blank (7011221-BLK1)**

Prepared: 01/12/17 Analyzed: 01/17/17

PCB-1016	ND	10	ug/kg							
PCB-1221	ND	10	"							
PCB-1232	ND	10	"							
PCB-1242	ND	10	"							
PCB-1248	ND	10	"							
PCB-1254	ND	10	"							
PCB-1260	ND	10	"							
Surrogate: Tetrachloro-meta-xylene	7.46		"	9.90		75.3	35-140			
Surrogate: Decachlorobiphenyl	7.58		"	9.90		76.6	35-140			

**LCS (7011221-BS1)**

Prepared: 01/12/17 Analyzed: 01/17/17

PCB-1016	86.0	10	ug/kg	100		86.0	40-130			
PCB-1260	91.1	10	"	100		91.1	40-130			
Surrogate: Tetrachloro-meta-xylene	7.72		"	10.0		77.2	35-140			
Surrogate: Decachlorobiphenyl	7.58		"	10.0		75.8	35-140			

**LCS Dup (7011221-BSD1)**

Prepared: 01/12/17 Analyzed: 01/17/17

PCB-1016	88.6	10	ug/kg	100		88.6	40-130	3.04	30	
PCB-1260	99.4	10	"	100		99.4	40-130	8.64	30	
Surrogate: Tetrachloro-meta-xylene	7.77		"	10.0		77.7	35-140			
Surrogate: Decachlorobiphenyl	7.57		"	10.0		75.7	35-140			

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rose Fasheh, Project Manager



25712 Commercentre Drive  
 Lake Forest, California 92630  
 949.297.5020 Phone  
 949.297.5027 Fax

Tetra Tech - Pasadena  
 3475 E. Foothill Blvd.  
 Pasadena CA, 91107

Project: Pier A Railyard (PARY)  
 Project Number: T84380.09  
 Project Manager: Eric Nelson

Reported:  
 01/19/17 12:01

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**

**SunStar Laboratories, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch 7011216 - EPA 5030 GCMS**

**Blank (7011216-BLK1)**

Prepared & Analyzed: 01/12/17

Bromobenzene	ND	1.0	ug/l							
Bromochloromethane	ND	1.0	"							
Bromodichloromethane	ND	1.0	"							
Bromoform	ND	1.0	"							
Bromomethane	ND	1.0	"							
n-Butylbenzene	ND	1.0	"							
sec-Butylbenzene	ND	1.0	"							
tert-Butylbenzene	ND	1.0	"							
Carbon tetrachloride	ND	0.50	"							
Chlorobenzene	ND	1.0	"							
Chloroethane	ND	1.0	"							
Chloroform	ND	1.0	"							
Chloromethane	ND	1.0	"							
2-Chlorotoluene	ND	1.0	"							
4-Chlorotoluene	ND	1.0	"							
Dibromochloromethane	ND	1.0	"							
1,2-Dibromo-3-chloropropane	ND	5.0	"							
1,2-Dibromoethane (EDB)	ND	1.0	"							
Dibromomethane	ND	1.0	"							
1,2-Dichlorobenzene	ND	1.0	"							
1,3-Dichlorobenzene	ND	1.0	"							
1,4-Dichlorobenzene	ND	1.0	"							
Dichlorodifluoromethane	ND	0.50	"							
1,1-Dichloroethane	ND	1.0	"							
1,2-Dichloroethane	ND	0.50	"							
1,1-Dichloroethene	ND	1.0	"							
cis-1,2-Dichloroethene	ND	1.0	"							
trans-1,2-Dichloroethene	ND	1.0	"							
1,2-Dichloropropane	ND	1.0	"							
1,3-Dichloropropane	ND	1.0	"							
2,2-Dichloropropane	ND	1.0	"							
1,1-Dichloropropene	ND	1.0	"							
cis-1,3-Dichloropropene	ND	0.50	"							
trans-1,3-Dichloropropene	ND	0.50	"							
Hexachlorobutadiene	ND	1.0	"							
Isopropylbenzene	ND	1.0	"							

SunStar Laboratories, Inc.

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Rose Fasheh, Project Manager



25712 Commercentre Drive  
 Lake Forest, California 92630  
 949.297.5020 Phone  
 949.297.5027 Fax

Tetra Tech - Pasadena  
 3475 E. Foothill Blvd.  
 Pasadena CA, 91107

Project: Pier A Railyard (PARY)  
 Project Number: T84380.09  
 Project Manager: Eric Nelson

Reported:  
 01/19/17 12:01

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**

**SunStar Laboratories, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch 7011216 - EPA 5030 GCMS**

**Blank (7011216-BLK1)**

Prepared & Analyzed: 01/12/17

p-Isopropyltoluene	ND	1.0	ug/l							
Methylene chloride	ND	1.0	"							
Naphthalene	ND	1.0	"							
n-Propylbenzene	ND	1.0	"							
Styrene	ND	1.0	"							
1,1,2,2-Tetrachloroethane	ND	1.0	"							
1,1,1,2-Tetrachloroethane	ND	1.0	"							
Tetrachloroethene	ND	1.0	"							
1,2,3-Trichlorobenzene	ND	1.0	"							
1,2,4-Trichlorobenzene	ND	1.0	"							
1,1,2-Trichloroethane	ND	1.0	"							
1,1,1-Trichloroethane	ND	1.0	"							
Trichloroethene	ND	1.0	"							
Trichlorofluoromethane	ND	1.0	"							
1,2,3-Trichloropropane	ND	1.0	"							
1,3,5-Trimethylbenzene	ND	1.0	"							
1,2,4-Trimethylbenzene	ND	1.0	"							
Vinyl chloride	ND	1.0	"							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
m,p-Xylene	ND	1.0	"							
o-Xylene	ND	0.50	"							
Tert-amyl methyl ether	ND	2.0	"							
Tert-butyl alcohol	ND	10	"							
Di-isopropyl ether	ND	2.0	"							
Ethyl tert-butyl ether	ND	2.0	"							
Methyl tert-butyl ether	ND	1.0	"							
Surrogate: 4-Bromofluorobenzene	10.7		"	10.0		107	83.5-119			
Surrogate: Dibromofluoromethane	9.61		"	10.0		96.1	81-136			
Surrogate: Toluene-d8	11.1		"	10.0		111	88.8-117			

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rose Fasheh, Project Manager



25712 Commercentre Drive  
 Lake Forest, California 92630  
 949.297.5020 Phone  
 949.297.5027 Fax

Tetra Tech - Pasadena  
 3475 E. Foothill Blvd.  
 Pasadena CA, 91107

Project: Pier A Railyard (PARY)  
 Project Number: T84380.09  
 Project Manager: Eric Nelson

Reported:  
 01/19/17 12:01

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**

**SunStar Laboratories, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch 7011216 - EPA 5030 GCMS**

**LCS (7011216-BS1)**

Prepared & Analyzed: 01/12/17

Chlorobenzene	24.0	1.0	ug/l	25.0		96.2	75-125			
1,1-Dichloroethene	22.1	1.0	"	25.0		88.6	75-125			
Trichloroethene	25.3	1.0	"	25.0		101	75-125			
Benzene	25.2	0.50	"	25.0		101	75-125			
Toluene	23.9	0.50	"	25.0		95.6	75-125			
Surrogate: 4-Bromofluorobenzene	11.7		"	10.0		117	83.5-119			
Surrogate: Dibromofluoromethane	9.22		"	10.0		92.2	81-136			
Surrogate: Toluene-d8	10.9		"	10.0		109	88.8-117			

**LCS Dup (7011216-BS1)**

Prepared & Analyzed: 01/12/17

Chlorobenzene	26.0	1.0	ug/l	25.0		104	75-125	7.79	20	
1,1-Dichloroethene	24.1	1.0	"	25.0		96.4	75-125	8.49	20	
Trichloroethene	25.2	1.0	"	25.0		101	75-125	0.643	20	
Benzene	25.4	0.50	"	25.0		102	75-125	0.839	20	
Toluene	26.4	0.50	"	25.0		106	75-125	9.84	20	
Surrogate: 4-Bromofluorobenzene	11.6		"	10.0		116	83.5-119			
Surrogate: Dibromofluoromethane	9.24		"	10.0		92.4	81-136			
Surrogate: Toluene-d8	11.1		"	10.0		111	88.8-117			

**Batch 7011217 - EPA 5035 GCMS**

**Blank (7011217-BLK1)**

Prepared & Analyzed: 01/12/17

Bromobenzene	ND	5.0	ug/kg							
Bromochloromethane	ND	5.0	"							
Bromodichloromethane	ND	5.0	"							
Bromoform	ND	5.0	"							
Bromomethane	ND	5.0	"							
n-Butylbenzene	ND	5.0	"							
sec-Butylbenzene	ND	5.0	"							
tert-Butylbenzene	ND	5.0	"							
Carbon tetrachloride	ND	5.0	"							
Chlorobenzene	ND	5.0	"							
Chloroethane	ND	5.0	"							
Chloroform	ND	5.0	"							
Chloromethane	ND	5.0	"							
2-Chlorotoluene	ND	5.0	"							

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rose Fasheh, Project Manager



25712 Commercentre Drive  
 Lake Forest, California 92630  
 949.297.5020 Phone  
 949.297.5027 Fax

Tetra Tech - Pasadena  
 3475 E. Foothill Blvd.  
 Pasadena CA, 91107

Project: Pier A Railyard (PARY)  
 Project Number: T84380.09  
 Project Manager: Eric Nelson

Reported:  
 01/19/17 12:01

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**

**SunStar Laboratories, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch 7011217 - EPA 5035 GCMS**

**Blank (7011217-BLK1)**

Prepared & Analyzed: 01/12/17

4-Chlorotoluene	ND	5.0	ug/kg
Dibromochloromethane	ND	5.0	"
1,2-Dibromo-3-chloropropane	ND	10	"
1,2-Dibromoethane (EDB)	ND	5.0	"
Dibromomethane	ND	5.0	"
1,2-Dichlorobenzene	ND	5.0	"
1,3-Dichlorobenzene	ND	5.0	"
1,4-Dichlorobenzene	ND	5.0	"
Dichlorodifluoromethane	ND	5.0	"
1,1-Dichloroethane	ND	5.0	"
1,2-Dichloroethane	ND	5.0	"
1,1-Dichloroethene	ND	5.0	"
cis-1,2-Dichloroethene	ND	5.0	"
trans-1,2-Dichloroethene	ND	5.0	"
1,2-Dichloropropane	ND	5.0	"
1,3-Dichloropropane	ND	5.0	"
2,2-Dichloropropane	ND	5.0	"
1,1-Dichloropropene	ND	5.0	"
cis-1,3-Dichloropropene	ND	5.0	"
trans-1,3-Dichloropropene	ND	5.0	"
Hexachlorobutadiene	ND	5.0	"
Isopropylbenzene	ND	5.0	"
p-Isopropyltoluene	ND	5.0	"
Methylene chloride	ND	5.0	"
Naphthalene	ND	5.0	"
n-Propylbenzene	ND	5.0	"
Styrene	ND	5.0	"
1,1,2,2-Tetrachloroethane	ND	5.0	"
1,1,1,2-Tetrachloroethane	ND	5.0	"
Tetrachloroethene	ND	5.0	"
1,2,3-Trichlorobenzene	ND	5.0	"
1,2,4-Trichlorobenzene	ND	5.0	"
1,1,2-Trichloroethane	ND	5.0	"
1,1,1-Trichloroethane	ND	5.0	"
Trichloroethene	ND	5.0	"
Trichlorofluoromethane	ND	5.0	"

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rose Fasheh, Project Manager



25712 Commercentre Drive  
 Lake Forest, California 92630  
 949.297.5020 Phone  
 949.297.5027 Fax

Tetra Tech - Pasadena  
 3475 E. Foothill Blvd.  
 Pasadena CA, 91107

Project: Pier A Railyard (PARY)  
 Project Number: T84380.09  
 Project Manager: Eric Nelson

Reported:  
 01/19/17 12:01

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**

**SunStar Laboratories, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch 7011217 - EPA 5035 GCMS**

**Blank (7011217-BLK1)**

Prepared & Analyzed: 01/12/17

1,2,3-Trichloropropane	ND	5.0	ug/kg							
1,3,5-Trimethylbenzene	ND	5.0	"							
1,2,4-Trimethylbenzene	ND	5.0	"							
Vinyl chloride	ND	5.0	"							
Benzene	ND	5.0	"							
Toluene	ND	5.0	"							
Ethylbenzene	ND	5.0	"							
m,p-Xylene	ND	10	"							
o-Xylene	ND	5.0	"							
Tert-amyl methyl ether	ND	20	"							
Tert-butyl alcohol	ND	50	"							
Di-isopropyl ether	ND	20	"							
Ethyl tert-butyl ether	ND	20	"							
Methyl tert-butyl ether	ND	20	"							
Surrogate: Toluene-d8	43.0		"	39.5		109	85.5-116			
Surrogate: 4-Bromofluorobenzene	42.4		"	39.5		107	81.2-123			
Surrogate: Dibromofluoromethane	34.4		"	39.5		87.0	95.7-135			S-GC

**LCS (7011217-BS1)**

Prepared & Analyzed: 01/12/17

Chlorobenzene	122	5.0	ug/kg	99.0		124	75-125			
1,1-Dichloroethene	116	5.0	"	99.0		117	75-125			
Trichloroethene	112	5.0	"	99.0		113	75-125			
Benzene	117	5.0	"	99.0		119	75-125			
Toluene	115	5.0	"	99.0		116	75-125			
Surrogate: Toluene-d8	39.4		"	39.6		99.5	85.5-116			
Surrogate: 4-Bromofluorobenzene	40.5		"	39.6		102	81.2-123			
Surrogate: Dibromofluoromethane	38.7		"	39.6		97.6	95.7-135			

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rose Fasheh, Project Manager





25712 Commercentre Drive  
 Lake Forest, California 92630  
 949.297.5020 Phone  
 949.297.5027 Fax

Tetra Tech - Pasadena  
 3475 E. Foothill Blvd.  
 Pasadena CA, 91107

Project: Pier A Railyard (PARY)  
 Project Number: T84380.09  
 Project Manager: Eric Nelson

Reported:  
 01/19/17 12:01

**Volatile Organic Compounds by EPA Method 8260B - Quality Control**

**SunStar Laboratories, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch 7011217 - EPA 5035 GCMS**

**LCS Dup (7011217-BSD1)**

Prepared & Analyzed: 01/12/17

Chlorobenzene	122	5.0	ug/kg	99.6	123	75-125	0.109	20		
1,1-Dichloroethene	120	5.0	"	99.6	120	75-125	3.30	20		
Trichloroethene	114	5.0	"	99.6	115	75-125	2.00	20		
Benzene	120	5.0	"	99.6	120	75-125	2.10	20		
Toluene	117	5.0	"	99.6	118	75-125	1.79	20		
Surrogate: Toluene-d8	39.6		"	39.8	99.4	85.5-116				
Surrogate: 4-Bromofluorobenzene	40.1		"	39.8	101	81.2-123				
Surrogate: Dibromofluoromethane	39.7		"	39.8	99.8	95.7-135				

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rose Fasheh, Project Manager



25712 Commercentre Drive  
 Lake Forest, California 92630  
 949.297.5020 Phone  
 949.297.5027 Fax

Tetra Tech - Pasadena  
 3475 E. Foothill Blvd.  
 Pasadena CA, 91107

Project: Pier A Railyard (PARY)  
 Project Number: T84380.09  
 Project Manager: Eric Nelson

Reported:  
 01/19/17 12:01

**Polynuclear Aromatic Compounds by GC/MS with Selected Ion Monitoring - Quality Control**

**SunStar Laboratories, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch 7011019 - EPA 3510C GCMS/ECD**

**Blank (7011019-BLK1)**

Prepared: 01/10/17 Analyzed: 01/18/17

Acenaphthene	ND	10	ug/kg							
Acenaphthylene	ND	5.0	"							
Anthracene	ND	5.0	"							
Benzo (a) anthracene	ND	5.0	"							
Benzo (b) fluoranthene	ND	10	"							
Benzo (k) fluoranthene	ND	10	"							
Benzo (g,h,i) perylene	ND	5.0	"							
Benzo (a) pyrene	ND	10	"							
Chrysene	ND	5.0	"							
Dibenz (a,h) anthracene	ND	5.0	"							
Fluoranthene	ND	5.0	"							
Fluorene	ND	10	"							
Indeno (1,2,3-cd) pyrene	ND	5.0	"							
Naphthalene	ND	5.0	"							
Phenanthrene	ND	5.0	"							
Pyrene	ND	10	"							

Surrogate: Terphenyl-dl4 341 " 321 106 18-137

**LCS (7011019-BS1)**

Prepared: 01/10/17 Analyzed: 01/18/17

Acenaphthene	171	10	ug/kg	323		52.9	50-130			
Pyrene	169	10	"	323		52.3	50-130			

Surrogate: Terphenyl-dl4 329 " 323 102 18-137

**LCS Dup (7011019-BSD1)**

Prepared: 01/10/17 Analyzed: 01/18/17

Acenaphthene	173	10	ug/kg	333		51.9	50-130	1.37	31	
Pyrene	173	10	"	333		51.8	50-130	2.32	31	

Surrogate: Terphenyl-dl4 355 " 333 106 18-137

SunStar Laboratories, Inc.

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Rose Fasheh, Project Manager



25712 Commercentre Drive  
 Lake Forest, California 92630  
 949.297.5020 Phone  
 949.297.5027 Fax

Tetra Tech - Pasadena  
 3475 E. Foothill Blvd.  
 Pasadena CA, 91107

Project: Pier A Railyard (PARY)  
 Project Number: T84380.09  
 Project Manager: Eric Nelson

Reported:  
 01/19/17 12:01

**Conventional Chemistry Parameters by APHA/EPA/ASTM Methods - Quality Control**

**SunStar Laboratories, Inc.**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

**Batch 7011225 - 418.1 / 5520C&F Mod.**

**Blank (7011225-BLK1)**

Prepared: 01/12/17 Analyzed: 01/13/17

TRPH	ND	4.0	mg/kg							
------	----	-----	-------	--	--	--	--	--	--	--

**LCS (7011225-BS1)**

Prepared: 01/12/17 Analyzed: 01/13/17

TRPH	50	4.0	mg/kg	52.4		95.5	75-125			
------	----	-----	-------	------	--	------	--------	--	--	--

**LCS Dup (7011225-BSD1)**

Prepared: 01/12/17 Analyzed: 01/13/17

TRPH	50	4.0	mg/kg	52.4		95.4	75-125	0.0840	20	
------	----	-----	-------	------	--	------	--------	--------	----	--

SunStar Laboratories, Inc.

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

Rose Fasheh, Project Manager



25712 Commercentre Drive  
Lake Forest, California 92630  
949.297.5020 Phone  
949.297.5027 Fax

Tetra Tech - Pasadena  
3475 E. Foothill Blvd.  
Pasadena CA, 91107

Project: Pier A Railyard (PARY)  
Project Number: T84380.09  
Project Manager: Eric Nelson

Reported:  
01/19/17 12:01

### Notes and Definitions

- S-GC Surrogate recovery outside of established control limits. The data was accepted based on valid recovery of the remaining surrogate(s).
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

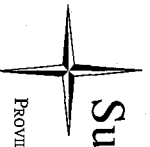
---

SunStar Laboratories, Inc.

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*

---

Rose Fasheh, Project Manager



SunStar  
Laboratories, Inc.

Chain of Custody Record

PROVIDING QUALITY ANALYTICAL SERVICES NATIONWIDE  
25712 Commercentre Drive, Lake Forest, CA 92630  
949-297-5020

Client: Tetra Tech / PCLB  
Address: 3475 E Foothill Blvd  
Phone: 626-470-2391 Fax: \_\_\_\_\_  
Project Manager: Eric Nelson

Date: 1-11-17 Page: 7 of 7  
Project Name: Pier A Rail Yard (PARY)  
Collector: Sean Fulcher (SF) Client Project #: T84380.09  
Batch #: 710053 EDF #: \_\_\_\_\_

Sample ID	Date Sampled	Time	Sample Type	Container Type	8260	8260 + OXY	8260 BTEX, OXY only	8270 - Pesticides 8081	8021 BTEX	8015M (gasoline)	8015M (diesel)	8015M Ext./Carbon Chair <u>6-644</u>	6010/7000 Title 22 Metals	6020 ICP-MS Metals	PCBs 8082	PAH 8310	TRPH 418.1	Laboratory ID #	Comments/Preservative	Total # of containers
<u>TB01112017</u>	<u>1-11-17</u>	<u>10:30</u>	<u>Water</u>	<u>N/A</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<u>01</u>		<u>2</u>
<u>SP-001</u>		<u>10:48</u>	<u>Soil</u>	<u>Mixed</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<u>02</u>	<u>Strong reaction to NaOH</u>	<u>4</u>
<u>SP-007D</u>		<u>10:50</u>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<u>03</u>		<u>4</u>
<u>SP-002</u>		<u>10:42</u>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<u>04</u>		<u>5</u>
<u>SP-003</u>		<u>10:46</u>			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<u>05</u>		<u>5</u>
Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time	Total # of containers	Chain of Custody seals Y/N/NA Seals intact? Y/N/NA Received good condition/cold										Notes					
<u>[Signature]</u>	<u>1-11-17 12:30</u>	<u>[Signature]</u>	<u>1-11-17 12:30</u>												<u>Tetra Tech EOD</u>					
<u>[Signature]</u>	<u>1-11-17 15:30</u>	<u>[Signature]</u>	<u>1-11-17 15:30</u>												<u>Standard EOD</u>					
Relinquished by: (signature)	Date / Time	Received by: (signature)	Date / Time	Turn around time:																
<u>[Signature]</u>	<u>1-11-17 10:25</u>	<u>[Signature]</u>	<u>1-11-17 16:25</u>																	

Sample disposal Instructions: Disposal @ \$2.00 each \_\_\_\_\_

Return to client \_\_\_\_\_ Pickup \_\_\_\_\_

COC 152496

## SAMPLE RECEIVING REVIEW SHEET

Batch/Work Order #: 7170053

Client Name: TETRA TECH - PASADENA Project: PIER A RAILYARD (PARY)

Delivered by:  Client  SunStar Courier  GSO  FedEx  Other

If Courier, Received by: JOEY Date/Time Courier Received: 1-11-17 / 15:30

Lab Received by: SUNNY Date/Time Lab Received: 1-11-17 / 16:25

Total number of coolers received: 0

Temperature: Cooler #1	3.9	°C +/- the CF (- 0.2°C) =	3.7	°C corrected temperature
Temperature: Cooler #2		°C +/- the CF (- 0.2°C) =		°C corrected temperature
Temperature: Cooler #3		°C +/- the CF (- 0.2°C) =		°C corrected temperature
<b>Temperature criteria = ≤ 6°C (no frozen containers)</b>		Within criteria?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
<b>IF NO:</b>				
Samples received on ice?	<input type="checkbox"/> Yes		<input type="checkbox"/> No → Complete Non-Conformance Sheet	
If on ice, samples received same day collected?	<input type="checkbox"/> Yes → Acceptable		<input type="checkbox"/> No → Complete Non-Conformance Sheet	

Custody seals intact on cooler/sample  Yes  No\*  N/A

Sample containers intact  Yes  No\*

Sample labels match Chain of Custody IDs  Yes  No\*

Total number of containers received match COC  Yes  No\*

Proper containers received for analyses requested on COC  Yes  No\*

Proper preservative indicated on COC/containers for analyses requested  Yes  No\*  N/A

Complete shipment received in good condition with correct temperatures, containers, labels, volumes preservatives and within method specified holding times  Yes  No\*

\* Complete Non-Conformance Receiving Sheet if checked Cooler/Sample Review - Initials and date: SL 1-11-17

**Comments:** \_\_\_\_\_

**WORK ORDER**

**T170053**

<b>Client: Tetra Tech - Pasadena</b>	<b>Project Manager: Rose Fasheh</b>
<b>Project: Pier A Railyard (PARY)</b>	<b>Project Number: T84380.09</b>

**Report To:**  
Tetra Tech - Pasadena  
Eric Nelson  
3475 E. Foothill Blvd.  
Pasadena, CA 91107

Date Due:	01/19/17 17:00 (5 day TAT)	Date Received:	01/11/17 16:25
Received By:	Sunny Lounethone	Date Logged In:	01/11/17 16:32
Logged In By:	Sunny Lounethone		

Samples Received at: **3.7°C**

Custody Seals	No	Received On Ice	Yes
Containers Intact	Yes		
COC/Labels Agree	Yes		
Preservation Confir	Yes		

Analysis	Due	TAT	Expires	Comments
<b>T170053-01 TB01112017 [Water] Sampled 01/11/17 10:30 (GMT-08:00) Pacific Time (US &amp;</b>				
8260	01/19/17 15:00	5	01/25/17 10:30	+ OXY
<b>T170053-02 SP-001 [Soil] Sampled 01/11/17 10:38 (GMT-08:00) Pacific Time (US &amp;</b>				
418.1 TRPH	01/19/17 15:00	5	02/08/17 10:38	
6010 Title 22	01/19/17 15:00	5	07/10/17 10:38	
8015 Carbon Chain	01/19/17 15:00	5	01/25/17 10:38	
8081 Pesticides	01/19/17 15:00	5	01/25/17 10:38	
8082 PCB	01/19/17 15:00	5	01/25/17 10:38	
8260 5035	01/19/17 15:00	5	01/25/17 10:38	+ OXY
8270C PAH SIM	01/19/17 15:00	5	01/25/17 10:38	
<b>T170053-03 SP-001D [Soil] Sampled 01/11/17 10:40 (GMT-08:00) Pacific Time (US &amp;</b>				
418.1 TRPH	01/19/17 15:00	5	02/08/17 10:40	
6010 Title 22	01/19/17 15:00	5	07/10/17 10:40	
8015 Carbon Chain	01/19/17 15:00	5	01/25/17 10:40	
8081 Pesticides	01/19/17 15:00	5	01/25/17 10:40	
8082 PCB	01/19/17 15:00	5	01/25/17 10:40	
8260 5035	01/19/17 15:00	5	01/25/17 10:40	+ OXY
8270C PAH SIM	01/19/17 15:00	5	01/25/17 10:40	

**WORK ORDER**

**T170053**

<b>Client:</b> Tetra Tech - Pasadena	<b>Project Manager:</b> Rose Fasheh
<b>Project:</b> Pier A Railyard (PARY)	<b>Project Number:</b> T84380.09

Analysis	Due	TAT	Expires	Comments
<b>T170053-04 SP-002 [Soil] Sampled 01/11/17 10:42 (GMT-08:00) Pacific Time (US &amp;</b>				
418.1 TRPH	01/19/17 15:00	5	02/08/17 10:42	
6010 Title 22	01/19/17 15:00	5	07/10/17 10:42	
8015 Carbon Chain	01/19/17 15:00	5	01/25/17 10:42	
8081 Pesticides	01/19/17 15:00	5	01/25/17 10:42	
8082 PCB	01/19/17 15:00	5	01/25/17 10:42	
8260 5035	01/19/17 15:00	5	01/25/17 10:42	+ OXY
8270C PAH SIM	01/19/17 15:00	5	01/25/17 10:42	

<b>T170053-05 SP-003 [Soil] Sampled 01/11/17 10:46 (GMT-08:00) Pacific Time (US &amp;</b>				
418.1 TRPH	01/19/17 15:00	5	02/08/17 10:46	
6010 Title 22	01/19/17 15:00	5	07/10/17 10:46	
8015 Carbon Chain	01/19/17 15:00	5	01/25/17 10:46	
8081 Pesticides	01/19/17 15:00	5	01/25/17 10:46	
8082 PCB	01/19/17 15:00	5	01/25/17 10:46	
8260 5035	01/19/17 15:00	5	01/25/17 10:46	+ OXY
8270C PAH SIM	01/19/17 15:00	5	01/25/17 10:46	

<b>Analysis groups included in this work order</b>	
<i>6010 Title 22</i>	
subgroup 6010B T22	7470/71 Hg





STATE WATER RESOURCES CONTROL BOARD  
REGIONAL WATER QUALITY CONTROL BOARDS



CALIFORNIA STATE

ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM

## CERTIFICATE OF ENVIRONMENTAL ACCREDITATION

Is hereby granted to

**Sunstar Laboratories, Inc.**

25712 Commercentre Drive

Lake Forest, CA 92630

Scope of the certificate is limited to the  
"Fields of Testing"  
which accompany this Certificate.

Continued accredited status depends on successful completion of on-site inspection, proficiency testing studies, and payment of applicable fees.

This Certificate is granted in accordance with provisions of  
Section 100825, et seq. of the Health and Safety Code.

Certificate No.: **2250**

Expiration Date: **7/31/2018**

Effective Date: **8/1/2016**

A handwritten signature in black ink, appearing to read "Christine Sotelo".

Sacramento, California  
subject to forfeiture or revocation

Christine Sotelo, Chief  
Environmental Laboratory Accreditation Program



CALIFORNIA STATE  
ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM  
Accredited Fields of Testing



**Sunstar Laboratories, Inc.**

25712 Commercentre Drive  
Lake Forest, CA 92630  
Phone: 949-297-5020

Certificate No. 2250  
Expiration Date 7/31/2018

**Field of Testing: 108 - Inorganic Chemistry of Wastewater**

108.110	001	Turbidity	EPA 180.1
108.120	001	Bromide	EPA 300.0
108.120	002	Chloride	EPA 300.0
108.120	003	Fluoride	EPA 300.0
108.120	004	Nitrate	EPA 300.0
108.120	005	Nitrite	EPA 300.0
108.120	007	Phosphate, Ortho	EPA 300.0
108.120	008	Sulfate	EPA 300.0
108.323	001	Chemical Oxygen Demand	EPA 410.4
108.381	002	Oil & Grease Total	EPA 1664 Rev. B
108.410	001	Alkalinity	SM2320B-1997
108.430	001	Conductivity	SM2510B-1997
108.440	001	Residue, Total	SM2540B-1997
108.441	001	Residue, Filterable TDS	SM2540C-1997
108.442	001	Residue, Non-filterable TSS	SM2540D-1997
108.443	001	Residue, Settleable	SM2540F-1997
108.472	001	Cyanide, Total	SM4500-CN E-1999
108.490	001	Hydrogen Ion (pH)	SM4500-H+ B-2000
108.504	001	Ammonia	SM4500-NH3 B,G-1997
108.505	002	Kjeldahl Nitrogen, Total (as N)	SM4500-NH3 F-1997
108.536	001	Oxygen, dissolved	SM4500-O G-2001
108.584	001	Sulfide (as S)	SM4500-S= D-2000
108.592	001	Biochemical Oxygen Demand	SM5210B-2001
108.597	001	Organic Carbon-Total (TOC)	SM5310C-2000
108.605	001	Surfactants	SM5540C-2000

**Field of Testing: 109 - Toxic Chemical Elements of Wastewater**

109.010	001	Aluminum	EPA 200.7
109.010	002	Antimony	EPA 200.7
109.010	003	Arsenic	EPA 200.7
109.010	004	Barium	EPA 200.7
109.010	005	Beryllium	EPA 200.7
109.010	006	Boron	EPA 200.7
109.010	007	Cadmium	EPA 200.7
109.010	009	Chromium	EPA 200.7
109.010	010	Cobalt	EPA 200.7
109.010	011	Copper	EPA 200.7
109.010	012	Iron	EPA 200.7
109.010	013	Lead	EPA 200.7

As of 10/7/2016, this list supersedes all previous lists for this certificate number.  
Customers: Please verify the current accreditation standing with the State.

109.010	015	Manganese	EPA 200.7
109.010	016	Molybdenum	EPA 200.7
109.010	017	Nickel	EPA 200.7
109.010	019	Selenium	EPA 200.7
109.010	021	Silver	EPA 200.7
109.010	023	Thallium	EPA 200.7
109.010	026	Vanadium	EPA 200.7
109.010	027	Zinc	EPA 200.7
109.020	002	Antimony	EPA 200.8
109.020	003	Arsenic	EPA 200.8
109.020	004	Barium	EPA 200.8
109.020	005	Beryllium	EPA 200.8
109.020	006	Cadmium	EPA 200.8
109.020	007	Chromium	EPA 200.8
109.020	008	Cobalt	EPA 200.8
109.020	009	Copper	EPA 200.8
109.020	010	Lead	EPA 200.8
109.020	011	Manganese	EPA 200.8
109.020	012	Molybdenum	EPA 200.8
109.020	013	Nickel	EPA 200.8
109.020	014	Selenium	EPA 200.8
109.020	015	Silver	EPA 200.8
109.020	016	Thallium	EPA 200.8
109.020	017	Vanadium	EPA 200.8
109.020	018	Zinc	EPA 200.8
109.104	001	Chromium (VI)	EPA 218.6

**Field of Testing: 110 - Volatile Organic Chemistry of Wastewater**

110.040	000	Purgeable Organic Compounds	EPA 624
---------	-----	-----------------------------	---------

**Field of Testing: 111 - Semi-volatile Organic Chemistry of Wastewater**

111.100	000	Acid/base/neutral Organic Compounds	EPA 625
111.170	000	Pesticides & PCBs	EPA 608

**Field of Testing: 114 - Inorganic Chemistry of Hazardous Waste**

114.010	001	Antimony	EPA 6010B
114.010	002	Arsenic	EPA 6010B
114.010	003	Barium	EPA 6010B
114.010	004	Beryllium	EPA 6010B
114.010	005	Cadmium	EPA 6010B
114.010	006	Chromium	EPA 6010B
114.010	007	Cobalt	EPA 6010B
114.010	008	Copper	EPA 6010B
114.010	009	Lead	EPA 6010B
114.010	010	Molybdenum	EPA 6010B
114.010	011	Nickel	EPA 6010B
114.010	012	Selenium	EPA 6010B
114.010	013	Silver	EPA 6010B
114.010	014	Thallium	EPA 6010B

114.010	015	Vanadium	EPA 6010B
114.010	016	Zinc	EPA 6010B
114.020	001	Antimony	EPA 6020
114.020	002	Arsenic	EPA 6020
114.020	003	Barium	EPA 6020
114.020	004	Beryllium	EPA 6020
114.020	005	Cadmium	EPA 6020
114.020	006	Chromium	EPA 6020
114.020	007	Cobalt	EPA 6020
114.020	008	Copper	EPA 6020
114.020	009	Lead	EPA 6020
114.020	010	Molybdenum	EPA 6020
114.020	011	Nickel	EPA 6020
114.020	012	Selenium	EPA 6020
114.020	013	Silver	EPA 6020
114.020	014	Thallium	EPA 6020
114.020	015	Vanadium	EPA 6020
114.020	016	Zinc	EPA 6020
114.025	001	Mercury	EPA 6020A
114.103	001	Chromium (VI)	EPA 7196A
114.106	001	Chromium (VI)	EPA 7199
114.140	001	Mercury	EPA 7470A
114.141	001	Mercury	EPA 7471A
114.240	001	Corrosivity - pH Determination	EPA 9040B
114.241	001	Corrosivity - pH Determination	EPA 9045C

**Field of Testing: 115 - Extraction Test of Hazardous Waste**

115.021	001	TCLP Inorganics	EPA 1311
115.030	001	Waste Extraction Test (WET)	CCR Chapter 11, Article 5, Appendix II
115.040	001	Synthetic Precipitation Leaching Procedure (SPLP)	EPA 1312

**Field of Testing: 116 - Volatile Organic Chemistry of Hazardous Waste**

116.020	031	Ethanol and Methanol	EPA 8015B
116.030	001	Gasoline-range Organics	EPA 8015B
116.040	041	Methyl tert-butyl Ether (MTBE)	EPA 8021B
116.040	062	BTEX	EPA 8021B
116.080	000	Volatile Organic Compounds	EPA 8260B
116.080	120	Oxygenates	EPA 8260B

**Field of Testing: 117 - Semi-volatile Organic Chemistry of Hazardous Waste**

117.010	001	Diesel-range Total Petroleum Hydrocarbons	EPA 8015B
117.017	001	TRPH Screening	EPA 418.1
117.110	000	Extractable Organics	EPA 8270C
117.210	000	Pesticides & PCBs	EPA 8081A
117.220	000	PCBs	EPA 8082
117.240	000	Organophosphorus Pesticides	EPA 8141A
117.250	000	Chlorinated Herbicides	EPA 8151A

**Field of Testing: 120 - Physical Properties of Hazardous Waste**

120.070	001	Corrosivity - pH Determination	EPA 9040B
---------	-----	--------------------------------	-----------

As of 10/7/2016, this list supersedes all previous lists for this certificate number.  
Customers: Please verify the current accreditation standing with the State.

120.080 001 Corrosivity - pH Determination

EPA 9045C

---



**CALIFORNIA STATE  
ENVIRONMENTAL LABORATORY ACCREDITATION PROGRAM  
Accredited Fields of Testing**



**Sunstar Laboratories, Inc.**

25712 Commercentre Drive  
Lake Forest, CA 92630  
Phone: 949-297-5020

**Certificate No. 2250  
Expiration Date 7/31/2018**

**Field of Testing: 108 - Inorganic Chemistry of Wastewater**

108.110	001	Turbidity	EPA 180.1
108.120	001	Bromide	EPA 300.0
108.120	002	Chloride	EPA 300.0
108.120	003	Fluoride	EPA 300.0
108.120	004	Nitrate	EPA 300.0
108.120	005	Nitrite	EPA 300.0
108.120	007	Phosphate, Ortho	EPA 300.0
108.120	008	Sulfate	EPA 300.0
108.323	001	Chemical Oxygen Demand	EPA 410.4
108.381	002	Oil & Grease Total	EPA 1664 Rev. B
108.410	001	Alkalinity	SM2320B-1997
108.430	001	Conductivity	SM2510B-1997
108.440	001	Residue, Total	SM2540B-1997
108.441	001	Residue, Filterable TDS	SM2540C-1997
108.442	001	Residue, Non-filterable TSS	SM2540D-1997
108.443	001	Residue, Settleable	SM2540F-1997
108.470	001	Cyanide, Total	SM4500-CN B or C-1999
108.472	001	Cyanide, Total	SM4500-CN E-1999
108.490	001	Hydrogen Ion (pH)	SM4500-H+ B-2000
108.504	001	Ammonia	SM4500-NH3 B,G-1997
108.505	002	Kjeldahl Nitrogen, Total (as N)	SM4500-NH3 F-1997
108.536	001	Oxygen, dissolved	SM4500-O G-2001
108.584	001	Sulfide (as S)	SM4500-S= D-2000
108.592	001	Biochemical Oxygen Demand	SM5210B-2001
108.597	001	Organic Carbon-Total (TOC)	SM5310C-2000
108.605	001	Surfactants	SM5540C-2000

**Field of Testing: 109 - Toxic Chemical Elements of Wastewater**

109.010	001	Aluminum	EPA 200.7
109.010	002	Antimony	EPA 200.7
109.010	003	Arsenic	EPA 200.7
109.010	004	Barium	EPA 200.7
109.010	005	Beryllium	EPA 200.7
109.010	006	Boron	EPA 200.7
109.010	007	Cadmium	EPA 200.7
109.010	009	Chromium	EPA 200.7
109.010	010	Cobalt	EPA 200.7
109.010	011	Copper	EPA 200.7
109.010	012	Iron	EPA 200.7

As of 10/18/2016, this list supersedes all previous lists for this certificate number.  
Customers: Please verify the current accreditation standing with the State.

109.010	013	Lead	EPA 200.7
109.010	015	Manganese	EPA 200.7
109.010	016	Molybdenum	EPA 200.7
109.010	017	Nickel	EPA 200.7
109.010	019	Selenium	EPA 200.7
109.010	021	Silver	EPA 200.7
109.010	023	Thallium	EPA 200.7
109.010	026	Vanadium	EPA 200.7
109.010	027	Zinc	EPA 200.7
109.020	002	Antimony	EPA 200.8
109.020	003	Arsenic	EPA 200.8
109.020	004	Barium	EPA 200.8
109.020	005	Beryllium	EPA 200.8
109.020	006	Cadmium	EPA 200.8
109.020	007	Chromium	EPA 200.8
109.020	008	Cobalt	EPA 200.8
109.020	009	Copper	EPA 200.8
109.020	010	Lead	EPA 200.8
109.020	011	Manganese	EPA 200.8
109.020	012	Molybdenum	EPA 200.8
109.020	013	Nickel	EPA 200.8
109.020	014	Selenium	EPA 200.8
109.020	015	Silver	EPA 200.8
109.020	016	Thallium	EPA 200.8
109.020	017	Vanadium	EPA 200.8
109.020	018	Zinc	EPA 200.8
109.104	001	Chromium (VI)	EPA 218.6

**Field of Testing:** 110 - Volatile Organic Chemistry of Wastewater

110.040	000	Purgeable Organic Compounds	EPA 624
---------	-----	-----------------------------	---------

**Field of Testing:** 111 - Semi-volatile Organic Chemistry of Wastewater

111.100	000	Acid/base/neutral Organic Compounds	EPA 625
111.170	000	Pesticides & PCBs	EPA 608

**Field of Testing:** 114 - Inorganic Chemistry of Hazardous Waste

114.010	001	Antimony	EPA 6010B
114.010	002	Arsenic	EPA 6010B
114.010	003	Barium	EPA 6010B
114.010	004	Beryllium	EPA 6010B
114.010	005	Cadmium	EPA 6010B
114.010	006	Chromium	EPA 6010B
114.010	007	Cobalt	EPA 6010B
114.010	008	Copper	EPA 6010B
114.010	009	Lead	EPA 6010B
114.010	010	Molybdenum	EPA 6010B
114.010	011	Nickel	EPA 6010B
114.010	012	Selenium	EPA 6010B
114.010	013	Silver	EPA 6010B

114.010	014	Thallium	EPA 6010B
114.010	015	Vanadium	EPA 6010B
114.010	016	Zinc	EPA 6010B
114.020	001	Antimony	EPA 6020
114.020	002	Arsenic	EPA 6020
114.020	003	Barium	EPA 6020
114.020	004	Beryllium	EPA 6020
114.020	005	Cadmium	EPA 6020
114.020	006	Chromium	EPA 6020
114.020	007	Cobalt	EPA 6020
114.020	008	Copper	EPA 6020
114.020	009	Lead	EPA 6020
114.020	010	Molybdenum	EPA 6020
114.020	011	Nickel	EPA 6020
114.020	012	Selenium	EPA 6020
114.020	013	Silver	EPA 6020
114.020	014	Thallium	EPA 6020
114.020	015	Vanadium	EPA 6020
114.020	016	Zinc	EPA 6020
114.025	001	Mercury	EPA 6020A
114.103	001	Chromium (VI)	EPA 7196A
114.106	001	Chromium (VI)	EPA 7199
114.140	001	Mercury	EPA 7470A
114.141	001	Mercury	EPA 7471A
114.222	001	Cyanide	EPA 9014
114.240	001	Corrosivity - pH Determination	EPA 9040B
114.241	001	Corrosivity - pH Determination	EPA 9045C

**Field of Testing: 115 - Extraction Test of Hazardous Waste**

115.021	001	TCLP Inorganics	EPA 1311
115.030	001	Waste Extraction Test (WET)	CCR Chapter 11, Article 5, Appendix II
115.040	001	Synthetic Precipitation Leaching Procedure (SPLP)	EPA 1312

**Field of Testing: 116 - Volatile Organic Chemistry of Hazardous Waste**

116.020	031	Ethanol and Methanol	EPA 8015B
116.030	001	Gasoline-range Organics	EPA 8015B
116.040	041	Methyl tert-butyl Ether (MTBE)	EPA 8021B
116.040	062	BTEX	EPA 8021B
116.080	000	Volatile Organic Compounds	EPA 8260B
116.080	120	Oxygenates	EPA 8260B

**Field of Testing: 117 - Semi-volatile Organic Chemistry of Hazardous Waste**

117.010	001	Diesel-range Total Petroleum Hydrocarbons	EPA 8015B
117.017	001	TRPH Screening	EPA 418.1
117.110	000	Extractable Organics	EPA 8270C
117.210	000	Pesticides & PCBs	EPA 8081A
117.220	000	PCBs	EPA 8082
117.240	000	Organophosphorus Pesticides	EPA 8141A
117.250	000	Chlorinated Herbicides	EPA 8151A



---

**Field of Testing:** 120 - Physical Properties of Hazardous Waste

---

120.070	001	Corrosivity - pH Determination	EPA 9040B
120.080	001	Corrosivity - pH Determination	EPA 9045C

---

October 25, 2016

Ms. Kris Dyck  
Environmental Planning Division  
Port of Long Beach  
4801 Airport Plaza Drive  
Long Beach, CA 90815

**Site: Pier S Soil Stockpile  
Long Beach, California 90802**

**Reference: Summary of Pier S Soil Stockpile Segregation and Characterization Activities**

Kris,

Parsons is providing this letter report to the Port of Long Beach (POLB) Environmental Planning Division to document Parsons activities which included segregation of one existing soil stockpile into smaller stockpiles, and subsequent environmental soil sampling and analyses of each discrete stockpile. These activities were conducted to support the POLB in their future decision making process regarding disposition of the stockpiled soil. Per POLB's request, soil samples were collected, analyzed, and the data compared to the POLB's Surplus Soil-Material Reuse Requirements (March 2006) and regulations governing hazardous waste.

## 1.0 INTRODUCTION

Parsons submits this letter report summarizing the soil stockpiling, and sampling and analyses activities, for approximately 4,000 cubic yards of soil which have been stockpiled at this Pier S location (Figure 1). Attachments to this letter report include the tabulated summaries of analytical data (Tables 1 through 6), a drawing depicting the approximate soil sampling locations (Appendix A), certified analytical laboratory reports (Appendix B), and photographs (Appendix C) showing the field activities described in this letter report.

## 2.0 PRE-FIELD AND FIELD ACTIVITIES

### Pre-field:

The following was completed prior to the soil stockpile sampling fieldwork:

- Prepared a Site-specific Health and Safety Plan.
- Coordinated with POLB staff regarding schedule and scope



Field:

Parsons and Innovative Construction Solutions (ICS) initiated fieldwork on October 11, 2016. Parsons supervised ICS, who segregated the originally existing (estimated to be approximately 4,000 cy) stockpile into four separate smaller (approximately 1,000 cy) stockpiles.

The approximate 1,000 cy soil stockpiles were prepared between October 11 and 13, 2016. Soil sampling activities at each stockpile were performed as the stockpiles were completed; sampling was conducted on October 12 and 13, 2016. Three primary soil samples and one duplicate soil sample were collected from each approximately 1,000 cy stockpile. Each duplicate soil sample was collected in the same borehole as the primary sample by removing the soil from an interval immediately adjacent to the primary sample.

At each soil sampling location, the samples were collected by hand digging approximately 3 feet into the side of the stockpile to expose moist soil in accordance with POLB guidelines. Once the 3 foot hole was established, a hand trowel was used to scoop soil into a 9-ounce glass jar. Terra Core™ samples were collected by pressing a disposal Terra Core™ T-handle into the sidewalls of the hand dug holes, just above the bottom of the hole.

The hand trowel was decontaminated before each sample location using a wash of de-ionized water and Alconox followed by a two stage rinse of de-ionized water. Leather gloves were worn when performing the hand digging and new disposal Nitrile gloves were donned by field personnel when collecting the soil samples.

Each soil sample was collected in a 9 ounce jar and four 40 ml vials (preserved with sodium bisulfate or methanol). The 40 ml vials were filled with soil using Terra Core™ samplers in accordance with Environmental Protection Agency (EPA) Method 5035. All sample containers were provided by the analytical laboratory. The Terra Core™ samples and glass jar were labeled, placed in sealable new plastic bags, and immediately placed into coolers for temporary storage and subsequent shipping to the certified analytical laboratory for chemical analyses. One equipment blank (sample identification EB-1) was collected by pouring deionized water over the soil sampling trowel, which had been cleaned by the decontamination procedure detailed in the paragraph above. Samples inside the coolers were maintained at 4 degrees Celsius (or below) using bagged ice. Chain-of-custody (COC) protocol was followed for all soil samples collected for laboratory analysis. The COCs accompanied the samples from the subject Site to the laboratory.

The discrete soil samples were identified by stockpile identification and sample number. For example, the first sample collected from stockpile number 1 was identified as “SP-1-1” and the second sample collected from stockpile number 1 was identified as “SP-1-2”. Each duplicate soil sample was collected at the third sample location from each stockpile, and the duplicate sample was hidden from the analytical laboratory by labeling the sample with the suffix “-33”. For example, the duplicate sample for stockpile SP-1 at sample location 3 is identified as “SP-1-33”. A Mini-Rae® photoionization detector (PID) was calibrated daily with 100 parts per million (ppm) isobutylene gas. The PID was used to monitor for the potential presence and concentration of organic vapors originating from the stockpiles during the stockpile preparation. No VOC concentrations above background (<1.0 parts per million) were noted during the work. Dust

suppression was achieved by constant watering of the work area from a water truck during the stockpile preparation work.

The approximate sample locations are shown on Figure 2.

After the soil sampling was completed at each stockpile, the stockpile was completely covered with 6-millimeter thick polyethylene sheeting which were weighted down with sandbags on the top, sides, and perimeter of each stockpile. Additionally, the base perimeter of each stockpile was surrounded with straw waddle.

Photographs depicting the various stages of the field activities are provided in Appendix C.

### 3.0 LABORATORY ANALYSES

The following samples were submitted under chain of custody to Orange Coast Analytical, Inc., (Orange Coast) in Tustin, California:

- Twelve primary and four duplicate soil samples
- One equipment blank water sample

The soil samples were analyzed by Orange Coast for:

- Total Petroleum Hydrocarbons (TPH) – Gasoline Range Organics C4-C12 using EPA Method 5035 and 8015M
- TPH Diesel Range C13-C22 and Oil Range C23-C40 using EPA Method 8015M
- Organochlorine Pesticides (OCPs) using EPA Method 8081A
- Polychlorinated Biphenyls (PCBs) using EPA Method 8082
- Volatile Organic Compounds (VOCs) using EPA Method 8260B/5035
- Polynuclear Aromatic Hydrocarbons (PAHs) using EPA Method 8310
- California Title 22 Metals using EPA Method 6000/7000.

Laboratory analytical results from the soil sampling activities are tabulated on Tables 1 through 4, which also list the maximum (or threshold) concentration limits for soil reuse within the Harbor District (POLB Surplus Soil-Material Reuse Requirements).

Table 1 provides analytical results for TPH, VOCs and PCBs, Table 2 provides results for OCPs, Table 3 provides results for PAHs, and Table 4 provides results for metals. Analytical results indicated non-detectable levels of PCBs and VOCs and so these compounds are not individually tabulated. The analytical laboratory reporting limit for each VOC and PCB compound reported were below the POLB reporting limit requirement. A copy of the certified laboratory analytical report is included in Appendix B.

#### 4.0 FINDINGS

None of the soil samples collected from the four stockpiles generated during these activities contained detectable concentrations of analytes which exceed State or Federal hazardous waste criteria. In addition, there were no detectable concentrations which exceed the POLB's Surplus Soil-Material Reuse Requirements. The equipment blank water sample was non-detect for the same suite of analytes as the soil samples.

#### 5.0 CONCLUSIONS

Based on a review of the analytical laboratory data generated from the 12 primary soil samples and four duplicate soil samples collected, the soil stockpiles designated as SP-1 through SP-4 located in the vicinity of Pier S at the Port of Long Beach are suitable for reuse within the Harbor District, in accordance with the POLB's Surplus Soil-Material Reuse Requirements. If you have questions or comments regarding this document, please contact Jim Goepel (Parsons) at 626-440-6013.

Sincerely,



Pete Shair, PG  
Principal Geologist



James Goepel, POLB Program Manager

#### Attachments:

- Table 1 – TPH/VOCs/PCBs in Soil
- Table 2 – Organochlorine Pesticides in Soil
- Table 3 – PAHs in Soil
- Table 4 – Metals in Soil
- Appendix A – Figures
  - Figure 1 – Site Vicinity Map
  - Figure 2 – Soil Stockpile Sampling Location Map
- Appendix B – Certified Laboratory Analytical Reports
- Appendix C – Fieldwork Photographs

# TABLES



Table 1 -TPH, VOCs and PCBs in Soil

Port of Long Beach  
Pier S Soil Stockpiles

Sample Description	Date Sampled	Matrix	TRPH	TPH-g (8015)	TPH-d (8105)	TPH-mo (8015)	Benzene	Ethylbenzene	Toluene	Total Xylenes	Other VOCs	PCBs
Units			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg <sup>1</sup>	mg/kg <sup>1</sup>	mg/kg <sup>1</sup>	mg/kg <sup>1</sup>	mg/kg <sup>1</sup>	mg/kg <sup>1</sup>
POLB Maximum Concentration Limits for Reuse			1,000	NA	NA	NA	0.044	8.0	2.0	23	ND	*
SP-1-1	10/12/2016	Soil	<b>240</b>	<0.25	<10	<b>240</b>	<0.0020	<0.0025	<0.0025	<0.0020	<ND	<ND
SP-1-2	10/12/2016	Soil	<b>95</b>	<0.25	<10	<b>95</b>	<0.0020	<0.0025	<0.0025	<0.0020	<ND	<ND
SP-1-3	10/12/2016	Soil	<b>150</b>	<0.25	<10	<b>150</b>	<0.0020	<0.0025	<0.0025	<0.0020	<ND	<ND
SP-1-33	10/12/2016	Soil	<b>160</b>	<0.25	<10	<b>160</b>	<0.0020	<0.0025	<0.0025	<0.0020	<ND	<ND
SP-2-1	10/12/2016	Soil	<b>150</b>	<0.25	<10	<b>150</b>	<0.0020	<0.0025	<0.0025	<0.0020	<ND	<ND
SP-2-2	10/12/2016	Soil	<b>47</b>	<0.25	<10	<b>47</b>	<0.0020	<0.0025	<0.0025	<0.0020	<ND	<ND
SP-2-3	10/12/2016	Soil	<b>82</b>	<0.25	<10	<b>82</b>	<0.0020	<0.0025	<0.0025	<0.0020	<ND	<ND
SP-2-33	10/12/2016	Soil	<b>100</b>	<0.25	<10	<b>100</b>	<0.0020	<0.0025	<0.0025	<0.0020	<ND	<ND
SP-3-1	10/12/2016	Soil	<b>303</b>	<0.25	<b>13</b>	<b>290</b>	<0.0020	<0.0025	<0.0025	<0.0020	<ND	<ND
SP-3-2	10/12/2016	Soil	<b>491</b>	<0.25	<b>21</b>	<b>470</b>	<0.0020	<0.0025	<0.0025	<0.0020	<ND	<ND
SP-3-3	10/12/2016	Soil	<b>71</b>	<0.25	<10	<b>71</b>	<0.0020	<0.0025	<0.0025	<0.0020	<ND	<ND
SP-3-33	10/12/2016	Soil	<b>49</b>	<0.25	<10	<b>49</b>	<0.0020	<0.0025	<0.0025	<0.0020	<ND	<ND
SP-4-1	10/13/2016	Soil	<b>211</b>	<0.25	<b>11</b>	<b>200</b>	<0.0020	<0.0025	<0.0025	<0.0020	<ND	<ND
SP-4-2	10/13/2016	Soil	<b>349</b>	<0.25	<b>19</b>	<b>330</b>	<0.0020	<0.0025	<0.0025	<0.0020	<ND	<ND
SP-4-3	10/13/2016	Soil	<b>210</b>	<0.25	<10	<b>210</b>	<0.0020	<0.0025	<0.0025	<0.0020	<ND	<ND
SP-4-33	10/13/2016	Soil	<b>120</b>	<0.25	<10	<b>120</b>	<0.0020	<0.0025	<0.0025	<0.0020	<ND	<ND

Detections are in **bold** text

ND = Non-detect < reporting limit

mg/kg = milligrams per kilogram

The individual reporting limits for all non detect values were less than POLB reuse criteria

TPH-g = Total Petroleum Hydrocarbons as gasoline (C4-C12)

TPH-d = Total Petroleum Hydrocarbons as diesel (C13-C22)

TPH-mo = Total Petroleum Hydrocarbons as motor oil (C23-C40)

VOCs = Volatile Organic Compounds

NA - POLB Maximum Concentration Limits for Reuse is not available

\* PCBs reported non-detect concentrations were all below the POLB reuse criteria

<sup>1</sup> - analytical results for VOCs and PCBs are reported in units of micrograms per kilogram (µg/kg) in the laboratory reports (Appendix A).

**Table 2 - Organochlorine Pesticides in Soil**  
**Port of Long Beach**  
**Pier S Soil Stockpiles**

Sample Description	Date Sampled	Matrix	4,4'-DDD	4,4'-DDE	4,4'-DDT	Aldrin	alpha-BHC	beta-BHC	Chlordane	delta-BHC	1,2-Dibromo-3-chloropropane	Dieldrin	Endosulfan I	Endosulfan II	Endosulfan sulfate	Endrin
<b>Units</b>			mg/kg <sup>1</sup>	mg/kg <sup>1</sup>	mg/kg <sup>1</sup>	mg/kg <sup>1</sup>	mg/kg <sup>1</sup>	mg/kg <sup>1</sup>	mg/kg <sup>1</sup>	mg/kg <sup>1</sup>	mg/kg <sup>1</sup>	mg/kg <sup>1</sup>	mg/kg <sup>1</sup>	mg/kg <sup>1</sup>	mg/kg <sup>1</sup>	mg/kg <sup>1</sup>
<b>POLB Maximum Concentration Limits for Reuse</b>			0.9	0.9	0.9	0.029	0.09	0.32	1.6	NA <sup>2</sup>	0.46	0.03	370	370	NA <sup>2</sup>	0.19
SP-1-1	10/12/2016	Soil	<0.020	<b>0.065</b>	<0.020	<0.004	<0.010	<0.010	<0.060	<0.020	<0.005	<0.004	<0.020	<0.010	<0.020	<0.020
SP-1-2	10/12/2016	Soil	<0.010	<0.005	<0.010	<0.002	<0.005	<0.005	<0.030	<0.010	<0.005	<0.002	<0.010	<0.005	<0.010	<0.010
SP-1-3	10/12/2016	Soil	<0.010	<b>0.048</b>	<0.010	<0.002	<0.005	<0.005	<0.030	<0.010	<0.005	<0.002	<0.010	<0.005	<0.010	<0.010
SP-1-33	10/12/2016	Soil	<0.010	<b>0.011</b>	<0.010	<0.002	<0.005	<0.005	<0.030	<0.010	<0.005	<0.002	<0.010	<0.005	<0.010	<0.010
SP-2-1	10/12/2016	Soil	<0.050	<b>0.094</b>	<0.050	<0.010	<0.025	<0.025	<0.150	<0.005	<0.005	<0.010	<0.005	<0.025	<0.005	<0.005
SP-2-2	10/12/2016	Soil	<0.050	<b>0.13</b>	<0.050	<0.010	<0.025	<0.025	<0.150	<0.005	<0.005	<0.010	<0.005	<0.025	<0.005	<0.005
SP-2-3	10/12/2016	Soil	<0.010	<b>0.057</b>	<0.010	<0.002	<0.005	<0.005	<0.030	<0.010	<0.005	<0.002	<0.010	<0.005	<0.010	<0.010
SP-2-33	10/12/2016	Soil	<0.010	<0.005	<0.010	<0.002	<0.005	<0.005	<0.030	<0.010	<0.005	<0.002	<0.010	<0.005	<0.010	<0.010
SP-3-1	10/12/2016	Soil	<0.010	<b>0.018</b>	<0.010	<0.002	<0.005	<0.005	<0.030	<0.010	<0.005	<0.002	<0.010	<0.005	<0.010	<0.010
SP-3-2	10/12/2016	Soil	<0.050	<b>0.2</b>	<0.050	<0.010	<0.025	<0.025	<0.150	<0.005	<0.005	<0.010	<0.005	<0.025	<0.005	<0.005
SP-3-3	10/12/2016	Soil	<0.010	<b>0.01</b>	<0.010	<0.002	<0.005	<0.005	<0.030	<0.010	<0.005	<0.002	<0.010	<0.005	<0.010	<0.010
SP-3-33	10/12/2016	Soil	<0.040	<0.020	<0.040	<0.008	<0.020	<0.020	<0.120	<0.040	<0.005	<0.008	<0.040	<0.020	<0.040	<0.040
SP-4-1	10/13/2016	Soil	<0.010	<0.005	<0.010	<0.002	<0.005	<0.005	<0.030	<0.010	<0.005	<0.002	<0.010	<0.005	<0.010	<0.010
SP-4-2	10/13/2016	Soil	<0.050	<0.025	<0.050	<0.010	<0.025	<0.025	<0.150	<0.005	<0.005	<0.010	<0.005	<0.025	<0.005	<0.005
SP-4-3	10/13/2016	Soil	<0.050	<0.025	<0.050	<0.010	<0.025	<0.025	<0.150	<0.005	<0.005	<0.010	<0.005	<0.025	<0.005	<0.005
SP-4-33	10/13/2016	Soil	<0.050	<0.025	<0.050	<0.010	<0.025	<0.025	<0.150	<0.005	<0.005	<0.010	<0.005	<0.025	<0.005	<0.005

Detections are in **bold** text

< = not detected above the reporting limit provided

mg/kg = milligrams per kilogram

OCPs = Organochlorine Pesticides

The individual reporting limits for all non detect values were less than POLB reuse criteria

<sup>1</sup> - analytical results for OCPs are reported in units of micrograms per kilogram (µg/kg) in the laboratory reports (Appendix A).

<sup>2</sup> - there is no current POLB Maximum Concentration Limit



**Table 2 - Organochlorine Pesticides in Soil**  
**Port of Long Beach**  
**Pier S Soil Stockpiles**

Sample Description	Date Sampled	Matrix	Endrin aldehyde	Endrin ketone	Gamma-BHC	Heptachlor	Heptachlor epoxide	Methoxychlor	Toxaphene
<b>Units</b>			mg/kg <sup>1</sup>	mg/kg <sup>1</sup>	mg/kg <sup>1</sup>	mg/kg <sup>1</sup>	mg/kg <sup>1</sup>	mg/kg <sup>1</sup>	mg/kg <sup>1</sup>
<b>POLB Maximum Concentration Limits for Reuse</b>			NA <sup>2</sup>	NA <sup>2</sup>	0.44	0.11	0.053	99	0.44
SP-1-1	10/12/2016	Soil	<0.020	<0.010	<0.010	<0.004	<0.010	<0.020	<0.080
SP-1-2	10/12/2016	Soil	<0.010	<0.005	<0.005	<0.002	<0.005	<0.010	<0.040
SP-1-3	10/12/2016	Soil	<0.010	<0.005	<0.005	<0.002	<0.005	<0.010	<0.040
SP-1-33	10/12/2016	Soil	<0.010	<0.005	<0.005	<0.002	<0.005	<0.010	<0.040
SP-2-1	10/12/2016	Soil	<0.005	<0.025	<0.025	<0.010	<0.025	<0.005	<0.200
SP-2-2	10/12/2016	Soil	<0.005	<0.025	<0.025	<0.010	<0.025	<0.005	<0.200
SP-2-3	10/12/2016	Soil	<0.010	<0.005	<0.005	<0.002	<0.005	<0.010	<0.040
SP-2-33	10/12/2016	Soil	<0.010	<0.005	<0.005	<0.002	<0.005	<0.010	<0.040
SP-3-1	10/12/2016	Soil	<0.010	<0.005	<0.005	<0.002	<0.005	<0.010	<0.040
SP-3-2	10/12/2016	Soil	<0.005	<0.025	<0.025	<0.010	<0.025	<0.005	<0.200
SP-3-3	10/12/2016	Soil	<0.010	<0.005	<0.005	<0.002	<0.005	<0.010	<0.040
SP-3-33	10/12/2016	Soil	<0.040	<0.020	<0.020	<0.008	<0.020	<0.040	<0.160
SP-4-1	10/13/2016	Soil	<0.010	<0.005	<0.005	<0.002	<0.005	<0.010	<0.040
SP-4-2	10/13/2016	Soil	<0.005	<0.025	<0.025	<0.010	<0.025	<0.005	<0.200
SP-4-3	10/13/2016	Soil	<0.005	<0.025	<0.025	<0.010	<0.025	<0.005	<0.200
SP-4-33	10/13/2016	Soil	<0.005	<0.025	<0.025	<0.010	<0.025	<0.005	<0.200

Detections are in **bold** text

< = not detected above the reporting limit provided

mg/kg = milligrams per kilogram

OCPs = Organochlorine Pesticides

The individual reporting limits for all non detect values were less than POLB reuse criteria

<sup>1</sup> - analytical results for OCPs are reported in units of micrograms per kilogram (µg/kg) in the laboratory reports (Appendix A).

<sup>2</sup> - there is no current POLB Maximum Concentration Limit

**Table 3 - Polyaromatic Hydrocarbons in Soil**  
**Port of Long Beach**  
**Pier S Soil Stockpiles**

Sample Description	Date Sampled	Matrix	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene
Units			mg/kg <sup>1</sup>	mg/kg <sup>1</sup>	mg/kg <sup>1</sup>	mg/kg <sup>1</sup>	mg/kg <sup>1</sup>	mg/kg <sup>1</sup>	mg/kg <sup>1</sup>	mg/kg <sup>1</sup>	mg/kg <sup>1</sup>	mg/kg <sup>1</sup>	mg/kg <sup>1</sup>	mg/kg <sup>1</sup>	mg/kg <sup>1</sup>	mg/kg <sup>1</sup>	mg/kg <sup>1</sup>	mg/kg <sup>1</sup>
POLB Maximum Concentration Limits for Reuse			3,700	0.62	22,000	0.62	0.062	0.62	0.62	0.38	3.8	0.062	2,300	2,700	0.62	1.7	0.62	2,300
SP-1-1	10/12/2016	Soil	<0.002	<0.005	<0.002	<0.002	<b>0.022</b>	<0.002	<0.002	<0.002	<b>0.0087</b>	<0.002	<b>0.023</b>	<0.010	<b>0.049</b>	<0.005	<b>0.0062</b>	<b>0.015</b>
SP-1-2	10/12/2016	Soil	<0.002	<0.005	<0.002	<0.002	<b>0.011</b>	<0.002	<0.002	<b>0.011</b>	<b>0.0053</b>	<b>0.0029</b>	<0.002	<0.010	<b>0.013</b>	<0.005	<b>0.0042</b>	<b>0.0048</b>
SP-1-3	10/12/2016	Soil	<0.002	<0.005	<0.002	<0.002	<b>0.011</b>	<0.002	<0.002	<0.002	<b>0.0051</b>	<b>0.004</b>	<b>0.0048</b>	<0.010	<b>0.018</b>	<0.005	<b>0.0049</b>	<b>0.0082</b>
SP-1-33	10/12/2016	Soil	<0.002	<0.005	<0.002	<0.002	<b>0.011</b>	<0.002	<0.002	<b>0.007</b>	<b>0.0065</b>	<b>0.0032</b>	<b>0.0086</b>	<0.010	<0.002	<0.005	<b>0.0029</b>	<b>0.0076</b>
SP-2-1	10/12/2016	Soil	<0.002	<0.005	<0.002	<0.002	<b>0.0097</b>	<0.002	<0.002	<b>0.0099</b>	<b>0.0052</b>	<b>0.0058</b>	<0.002	<0.010	<b>0.02</b>	<0.005	<b>0.0031</b>	<b>0.011</b>
SP-2-2	10/12/2016	Soil	<0.002	<0.005	<0.002	<0.002	<b>0.023</b>	<0.002	<0.002	<b>0.0058</b>	<b>0.0066</b>	<b>0.0048</b>	<b>0.013</b>	<0.010	<b>0.019</b>	<0.005	<b>0.0072</b>	<b>0.011</b>
SP-2-3	10/12/2016	Soil	<0.002	<0.005	<0.002	<0.002	<b>0.021</b>	<0.002	<0.002	<b>0.01</b>	<b>0.0053</b>	<b>0.0052</b>	<b>0.011</b>	<0.010	<0.002	<0.005	<b>0.0037</b>	<b>0.014</b>
SP-2-33	10/12/2016	Soil	<0.002	<0.005	<0.002	<0.002	<b>0.016</b>	<0.002	<0.002	<b>0.01</b>	<b>0.0075</b>	<0.002	<b>0.022</b>	<0.010	<0.002	<0.005	<b>0.0042</b>	<b>0.0093</b>
SP-3-1	10/12/2016	Soil	<0.002	<0.005	<0.002	<0.002	<b>0.017</b>	<0.002	<0.002	<b>0.0096</b>	<b>0.007</b>	<b>0.0083</b>	<0.002	<0.010	<0.002	<b>0.0074</b>	<0.002	<b>0.021</b>
SP-3-2	10/12/2016	Soil	<0.002	<0.005	<0.002	<0.002	<b>0.031</b>	<0.002	<0.002	<b>0.0099</b>	<b>0.0094</b>	<0.002	<0.002	<0.010	<0.002	<b>0.0076</b>	<b>0.0045</b>	<b>0.013</b>
SP-3-3	10/12/2016	Soil	<0.002	<0.005	<0.002	<0.002	<b>0.019</b>	<0.002	<0.002	<b>0.0085</b>	<b>0.0099</b>	<b>0.006</b>	<b>0.036</b>	<0.010	<0.002	<0.005	<b>0.0055</b>	<b>0.053</b>
SP-3-33	10/12/2016	Soil	<0.002	<0.005	<0.002	<0.002	<b>0.015</b>	<0.002	<0.002	<b>0.0043</b>	<b>0.005</b>	<b>0.0036</b>	<b>0.0043</b>	<0.010	<b>0.016</b>	<0.005	<b>0.0034</b>	<b>0.015</b>
SP-4-1	10/13/2016	Soil	<0.002	<0.005	<0.002	<0.002	<b>0.026</b>	<0.002	<0.002	<b>0.021</b>	<b>0.011</b>	<0.002	<0.002	<0.010	<0.002	<0.005	<b>0.0049</b>	<b>0.02</b>
SP-4-2	10/13/2016	Soil	<b>0.006</b>	<0.005	<0.002	<0.002	<b>0.041</b>	<0.002	<0.002	<b>0.021</b>	<b>0.027</b>	<0.002	<0.002	<0.010	<0.002	<b>0.006</b>	<b>0.037</b>	<b>0.05</b>
SP-4-3	10/13/2016	Soil	<0.002	<0.005	<0.002	<0.002	<0.002	<0.002	<0.002	<0.002	<b>0.0078</b>	<0.002	<0.002	<0.010	<b>0.017</b>	<0.005	<b>0.0027</b>	<b>0.0098</b>
SP-4-33	10/13/2016	Soil	<0.002	<0.005	<0.002	<b>0.033</b>	<b>0.027</b>	<0.002	<0.002	<b>0.017</b>	<b>0.031</b>	<b>0.0046</b>	<b>0.034</b>	<0.010	<b>0.037</b>	<0.005	<b>0.005</b>	<b>0.023</b>

Detections are in **bold** text

< = not detected above the reporting limit provided

mg/kg = milligrams per kilogram

PAH = polyaromatic hydrocarbons

The individual reporting limits for all non detect values were less than POLB reuse criteria

<sup>1</sup> - analytical results for PAHs are reported in units of micrograms per kilogram (µg/kg) in the laboratory reports (Appendix A).

**Table 4 - Metals in Soil**  
**Port of Long Beach**  
**Pier S Soil Stockpiles**

Sample Description	Date Sampled	Matrix	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
<b>Units</b>			mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
<b>POLB Maximum Concentration Limits for Reuse</b>			31	20	1,000	7.5	10	50	800	250	50	2	390	200	10	50	5.2	78	2,500
SP-1-1	10/12/2016	Soil	<1.0	<b>5.5</b>	<b>95</b>	<0.50	<b>0.22</b>	<b>15</b>	<b>7.5</b>	<b>15</b>	<b>14</b>	<0.10	<1.0	<b>14</b>	<1.0	<0.50	<2.0	<b>33</b>	<b>63</b>
SP-1-2	10/12/2016	Soil	<1.0	<b>6.9</b>	<b>130</b>	<0.50	<b>0.37</b>	<b>22</b>	<b>10</b>	<b>25</b>	<b>11</b>	<0.10	<1.0	<b>19</b>	<1.0	<0.50	<2.0	<b>39</b>	<b>72</b>
SP-1-3	10/12/2016	Soil	<1.0	<b>4.9</b>	<b>89</b>	<0.50	<b>0.29</b>	<b>18</b>	<b>8.9</b>	<b>18</b>	<b>7.7</b>	<0.10	<1.0	<b>15</b>	<1.0	<0.50	<2.0	<b>36</b>	<b>54</b>
SP-1-33	10/12/2016	Soil	<1.0	<b>5.2</b>	<b>90</b>	<0.50	<b>0.25</b>	<b>19</b>	<b>7.7</b>	<b>18</b>	<b>9</b>	<0.10	<1.0	<b>15</b>	<b>1.2</b>	<0.50	<2.0	<b>33</b>	<b>53</b>
SP-2-1	10/12/2016	Soil	<1.0	<b>3.7</b>	<b>68</b>	<0.50	<0.20	<b>13</b>	<b>6.2</b>	<b>12</b>	<b>5.9</b>	<0.10	<1.0	<b>11</b>	<b>1.9</b>	<0.50	<2.0	<b>25</b>	<b>40</b>
SP-2-2	10/12/2016	Soil	<1.0	<b>5.2</b>	<b>81</b>	<0.50	<b>0.28</b>	<b>17</b>	<b>7.3</b>	<b>25</b>	<b>8.4</b>	<0.10	<1.0	<b>14</b>	<b>1.5</b>	<0.50	<2.0	<b>31</b>	<b>56</b>
SP-2-3	10/12/2016	Soil	<1.0	<b>5.2</b>	<b>80</b>	<0.50	<0.20	<b>15</b>	<b>7.4</b>	<b>14</b>	<b>6.8</b>	<0.10	<1.0	<b>13</b>	<b>1.3</b>	<0.50	<2.0	<b>29</b>	<b>50</b>
SP-2-33	10/12/2016	Soil	<1.0	<b>4.9</b>	<b>83</b>	<0.50	<0.20	<b>15</b>	<b>7.2</b>	<b>14</b>	<b>6.8</b>	<0.10	<1.0	<b>13</b>	<1.0	<0.50	<2.0	<b>30</b>	<b>48</b>
SP-3-1	10/12/2016	Soil	<1.0	<b>5.5</b>	<b>98</b>	<0.50	<b>0.21</b>	<b>16</b>	<b>7.5</b>	<b>15</b>	<b>11</b>	<0.10	<1.0	<b>13</b>	<1.0	<0.50	<2.0	<b>31</b>	<b>57</b>
SP-3-2	10/12/2016	Soil	<1.0	<b>5.5</b>	<b>80</b>	<0.50	<b>0.2</b>	<b>16</b>	<b>7.5</b>	<b>42</b>	<b>11</b>	<0.10	<1.0	<b>14</b>	<b>2</b>	<0.50	<2.0	<b>32</b>	<b>54</b>
SP-3-3	10/12/2016	Soil	<1.0	<b>4.6</b>	<b>67</b>	<0.50	<0.20	<b>16</b>	<b>7.2</b>	<b>13</b>	<b>6.5</b>	<0.10	<1.0	<b>13</b>	<1.0	<0.50	<2.0	<b>28</b>	<b>45</b>
SP-3-33	10/12/2016	Soil	<1.0	<b>6.4</b>	<b>72</b>	<0.50	<b>0.22</b>	<b>15</b>	<b>7.4</b>	<b>13</b>	<b>6</b>	<0.10	<1.0	<b>13</b>	<1.0	<0.50	<2.0	<b>32</b>	<b>46</b>
SP-4-1	10/13/2016	Soil	<1.0	<b>5.5</b>	<b>120</b>	<0.50	<b>0.25</b>	<b>16</b>	<b>8.2</b>	<b>21</b>	<b>9.5</b>	<0.10	<1.0	<b>14</b>	<b>1.7</b>	<0.50	<2.0	<b>34</b>	<b>69</b>
SP-4-2	10/13/2016	Soil	<1.0	<b>5.2</b>	<b>80</b>	<0.50	<b>0.21</b>	<b>16</b>	<b>7.4</b>	<b>15</b>	<b>7.6</b>	<0.10	<1.0	<b>13</b>	<b>1.6</b>	<0.50	<2.0	<b>31</b>	<b>51</b>
SP-4-3	10/13/2016	Soil	<1.0	<b>5.1</b>	<b>86</b>	<0.50	<b>0.26</b>	<b>16</b>	<b>7.8</b>	<b>18</b>	<b>9.6</b>	<0.10	<1.0	<b>14</b>	<b>1.6</b>	<0.50	<2.0	<b>31</b>	<b>67</b>
SP-4-33	10/13/2016	Soil	<1.0	<b>5.2</b>	<b>92</b>	<0.50	<b>0.26</b>	<b>23</b>	<b>7.5</b>	<b>18</b>	<b>46</b>	<0.10	<1.0	<b>14</b>	<b>1.4</b>	<0.50	<2.0	<b>31</b>	<b>73</b>

Detections are in **bold text**

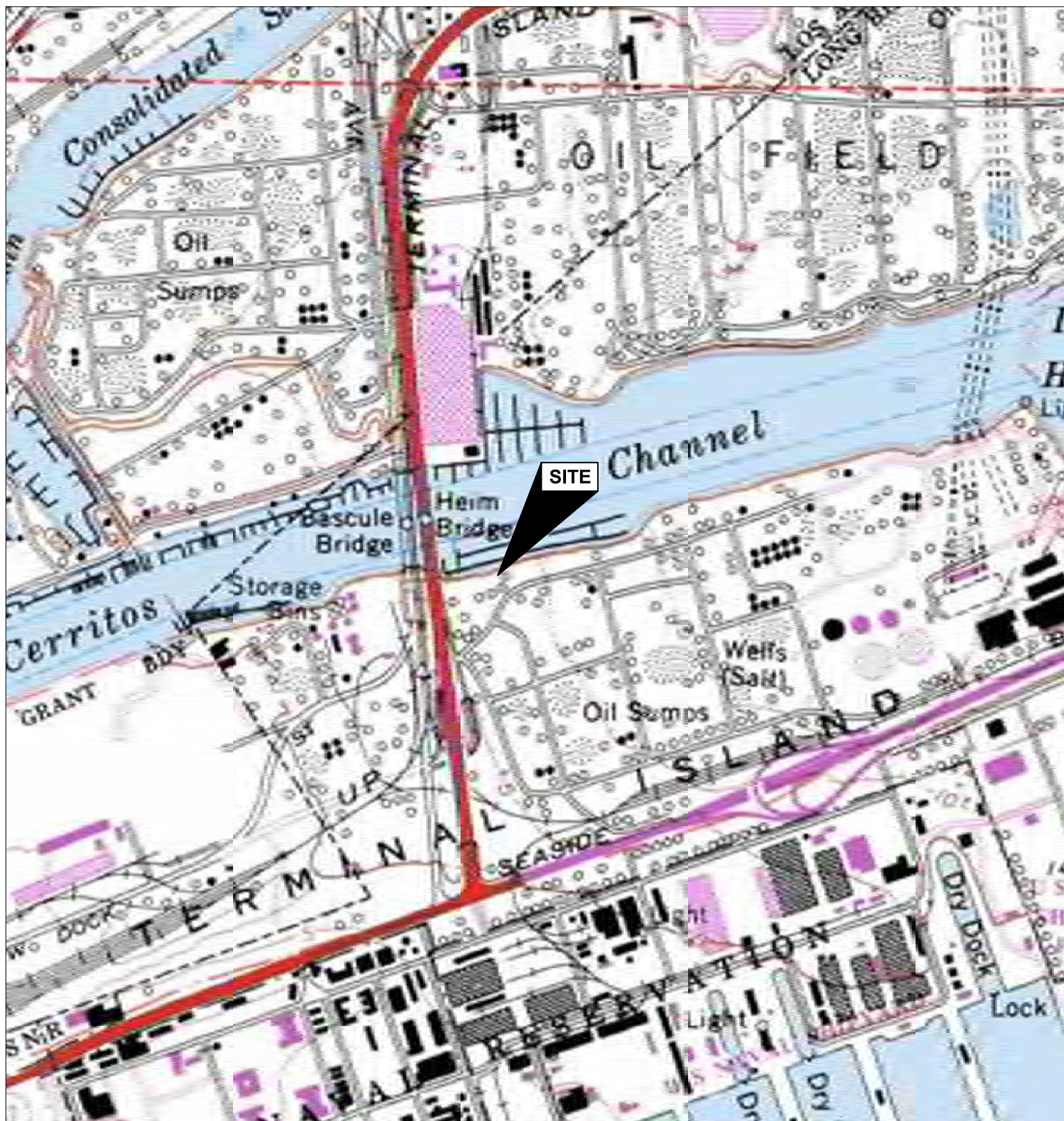
< = not detected above the reporting limit provided

mg/kg = milligrams per kilogram

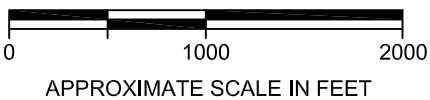
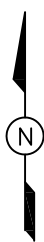
The individual reporting limits for all non detect values were less than POLB reuse criteria

**APPENDIX A**  
**Figures**





Note: Base Map from United States Geological Survey (USGS),  
7.5 Minute Series, US Topo of Long Beach Quadrangle, 1964.



**FIGURE 1**  
**SITE VICINITY MAP**

PORT OF LONG BEACH  
PIER S VICINITY  
LONG BEACH, CA


**PARSONS**

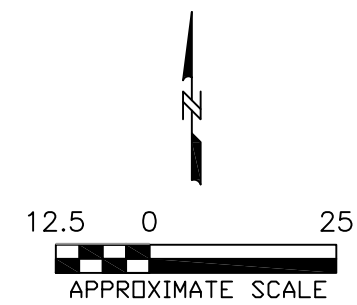
Pasadena, CA



Note: Soil samples were collected on October 12-13, 2016  
 Lightly shaded Google Earth background provided for initial stockpile reference.

**LEGEND**

- SOIL SAMPLE LOCATION AND IDENTIFICATION (LOCATIONS ARE APPROXIMATE)
- SP-1** SOIL STOCKPILE #1
-  SLOPE OF STOCKPILE



**FIGURE 2**  
**SOIL STOCKPILE SAMPLING**  
**LOCATION MAP**

PORT OF LONG BEACH  
 PIER S VICINITY  
 LONG BEACH, CA

**PARSONS**

Pasadena, CA

**APPENDIX B**  
**Certified Laboratory Analytical Reports**





**Orange Coast Analytical, Inc.**

3002 Dow, Suite 532, Tustin, CA 92780 (714) 832-0064 Fax (714) 832-0067  
4620 E. Elwood, Suite 4, Phoenix, AZ 85040 (480) 736-0960 Fax (480) 736-0970

**LABORATORY REPORT FORM**

ORANGE COAST ANALYTICAL, INC.

3002 Dow Suite 532 Tustin, CA 92780

(714) 832-0064

Laboratory Certification (ELAP) No.: 2576

Expiration Date: 2017

Los Angeles County Sanitation District Lab ID# 10206

Laboratory Director's Name:

Mark Noorani

Client: Parsons Environment & Infrastructure, Inc.

Laboratory Reference: PEI 22419

Project Name: Port of Long Beach - Pier S Stockpile


Project Number: 450148.02000

Date Received: 10/13/2016

Date Reported: 10/21/2016

Chain of Custody Received:

Analytical Method: 8015B, 8310, 8081A, 8082, 8260B, 6010B,  
7471A, 7470A,

  
\_\_\_\_\_  
Mark Noorani, Laboratory Director



Mr. Jim Goepel  
Parsons Environment & Infrastructure, Inc.  
100 W. Walnut St  
Pasadena, CA, 91124

Lab Reference #: PEI 22419  
Project Name: Port of Long Beach - Pier S Stockpile  
Project #: 450148.02000

### **Case Narrative**

#### **Sample Receipt:**

All samples on the Chain of Custody were received by OCA on ice.  
2 Coolers received on ice at 3.4°C and 4.4°C.

#### **Holding Times:**

All samples were analyzed within required holding times unless otherwise noted in the data qualifier section of the report.

#### **Analytical Methods:**

Sample analysis was performed following the analytical methods listed on the cover page.

#### **Data Qualifiers:**

Within this report, data qualifiers may have been assigned to clarify deviations in common laboratory procedures or any divergence from laboratory QA/QC criteria. If a data qualifier has been used, it will appear in the back of the report along with its description. All method QA/QC criteria have been met unless otherwise noted in the data qualifier section.

#### **Definition of Terms:**

The definitions of common terms and acronyms used in the report have been placed at the back of the report to assist data users.

#### **Comments:**

None

Mr. Jim Goepel  
Parsons Environment & Infrastructure, Inc.  
100 W. Walnut St  
Pasadena, CA, 91124

Lab Reference #: PEI 22419  
Project Name: Port of Long Beach - Pier S Stockpile  
Project #: 450148.02000

**Client Sample Summary**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Matrix
SP-1-1	22419-001	10/13/2016	10/12/2016	Soil
SP-1-2	22419-002	10/13/2016	10/12/2016	Soil
SP-1-3	22419-003	10/13/2016	10/12/2016	Soil
SP-1-33	22419-004	10/13/2016	10/12/2016	Soil
SP-2-1	22419-005	10/13/2016	10/12/2016	Soil
SP-2-2	22419-006	10/13/2016	10/12/2016	Soil
SP-2-3	22419-007	10/13/2016	10/12/2016	Soil
SP-2-33	22419-008	10/13/2016	10/12/2016	Soil
SP-3-1	22419-009	10/13/2016	10/12/2016	Soil
SP-3-2	22419-010	10/13/2016	10/12/2016	Soil
SP-3-3	22419-011	10/13/2016	10/12/2016	Soil
SP-3-33	22419-012	10/13/2016	10/12/2016	Soil
SP-4-1	22419-013	10/13/2016	10/13/2016	Soil
SP-4-2	22419-014	10/13/2016	10/13/2016	Soil
SP-4-3	22419-015	10/13/2016	10/13/2016	Soil
SP-4-33	22419-016	10/13/2016	10/13/2016	Soil
EB-1	22419-017	10/13/2016	10/13/2016	Water

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Extractable Fuel Hydrocarbons (EPA 8015B)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
SP-1-1	22419-001	10/13/2016	10/12/2016	10/19/2016	10/19/2016	Soil

ANALYTE                      mg/kg    Surrogate:                      % RC\*  
 C13-C22    <10    Octacosane    87  
Dilution Factor: 1    \* Acc Recovery: 63-155 %  
Data Qualifiers: None

SP-1-1	22419-001	10/13/2016	10/12/2016	10/19/2016	10/19/2016	Soil
--------	-----------	------------	------------	------------	------------	------

ANALYTE                      mg/kg    Surrogate:                      % RC\*  
 C23-C40    240    Octacosane    87  
Dilution Factor: 1    \* Acc Recovery: 63-155 %  
Data Qualifiers: None

SP-1-2	22419-002	10/13/2016	10/12/2016	10/19/2016	10/19/2016	Soil
--------	-----------	------------	------------	------------	------------	------

ANALYTE                      mg/kg    Surrogate:                      % RC\*  
 C13-C22    <10    Octacosane    121  
Dilution Factor: 1    \* Acc Recovery: 63-155 %  
Data Qualifiers: None

SP-1-2	22419-002	10/13/2016	10/12/2016	10/19/2016	10/19/2016	Soil
--------	-----------	------------	------------	------------	------------	------

ANALYTE                      mg/kg    Surrogate:                      % RC\*  
 C23-C40    95    Octacosane    121  
Dilution Factor: 1    \* Acc Recovery: 63-155 %  
Data Qualifiers: None

SP-1-3	22419-003	10/13/2016	10/12/2016	10/19/2016	10/19/2016	Soil
--------	-----------	------------	------------	------------	------------	------

ANALYTE                      mg/kg    Surrogate:                      % RC\*  
 C13-C22    <10    Octacosane    111  
Dilution Factor: 1    \* Acc Recovery: 63-155 %  
Data Qualifiers: None

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Extractable Fuel Hydrocarbons (EPA 8015B)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
SP-1-3	22419-003	10/13/2016	10/12/2016	10/19/2016	10/19/2016	Soil

ANALYTE                      mg/kg                                      Surrogate:                      % RC\*  
 C23-C40                                      150                                      Octacosane                      111  
Dilution Factor: 1                                      \* Acc Recovery: 63-155 %  
Data Qualifiers: None

SP-1-33	22419-004	10/13/2016	10/12/2016	10/19/2016	10/19/2016	Soil
---------	-----------	------------	------------	------------	------------	------

ANALYTE                      mg/kg                                      Surrogate:                      % RC\*  
 C13-C22                                      <10                                      Octacosane                      102  
Dilution Factor: 1                                      \* Acc Recovery: 63-155 %  
Data Qualifiers: None

SP-1-33	22419-004	10/13/2016	10/12/2016	10/19/2016	10/19/2016	Soil
---------	-----------	------------	------------	------------	------------	------

ANALYTE                      mg/kg                                      Surrogate:                      % RC\*  
 C23-C40                                      160                                      Octacosane                      102  
Dilution Factor: 1                                      \* Acc Recovery: 63-155 %  
Data Qualifiers: None

SP-2-1	22419-005	10/13/2016	10/12/2016	10/19/2016	10/19/2016	Soil
--------	-----------	------------	------------	------------	------------	------

ANALYTE                      mg/kg                                      Surrogate:                      % RC\*  
 C13-C22                                      <10                                      Octacosane                      122  
Dilution Factor: 1                                      \* Acc Recovery: 63-155 %  
Data Qualifiers: None

SP-2-1	22419-005	10/13/2016	10/12/2016	10/19/2016	10/19/2016	Soil
--------	-----------	------------	------------	------------	------------	------

ANALYTE                      mg/kg                                      Surrogate:                      % RC\*  
 C23-C40                                      150                                      Octacosane                      122  
Dilution Factor: 1                                      \* Acc Recovery: 63-155 %  
Data Qualifiers: None



Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Extractable Fuel Hydrocarbons (EPA 8015B)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
SP-2-33	22419-008	10/13/2016	10/12/2016	10/19/2016	10/20/2016	Soil

ANALYTE                      mg/kg    Surrogate:                      % RC\*  
 C23-C40                                      100    Octacosane                      131  
Dilution Factor: 1    \* Acc Recovery: 63-155 %  
Data Qualifiers: None

SP-3-1	22419-009	10/13/2016	10/12/2016	10/19/2016	10/20/2016	Soil
--------	-----------	------------	------------	------------	------------	------

ANALYTE                      mg/kg    Surrogate:                      % RC\*  
 C13-C22                                      13    Octacosane                      134  
Dilution Factor: 1    \* Acc Recovery: 63-155 %  
Data Qualifiers: None

SP-3-1	22419-009	10/13/2016	10/12/2016	10/19/2016	10/20/2016	Soil
--------	-----------	------------	------------	------------	------------	------

ANALYTE                      mg/kg    Surrogate:                      % RC\*  
 C23-C40                                      290    Octacosane                      134  
Dilution Factor: 1    \* Acc Recovery: 63-155 %  
Data Qualifiers: None

SP-3-2	22419-010	10/13/2016	10/12/2016	10/19/2016	10/20/2016	Soil
--------	-----------	------------	------------	------------	------------	------

ANALYTE                      mg/kg    Surrogate:                      % RC\*  
 C13-C22                                      21    Octacosane                      115  
Dilution Factor: 1    \* Acc Recovery: 63-155 %  
Data Qualifiers: None

SP-3-2	22419-010	10/13/2016	10/12/2016	10/19/2016	10/20/2016	Soil
--------	-----------	------------	------------	------------	------------	------

ANALYTE                      mg/kg    Surrogate:                      % RC\*  
 C23-C40                                      470    Octacosane                      115  
Dilution Factor: 1    \* Acc Recovery: 63-155 %  
Data Qualifiers: None

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Extractable Fuel Hydrocarbons (EPA 8015B)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
SP-3-3	22419-011	10/13/2016	10/12/2016	10/19/2016	10/20/2016	Soil

ANALYTE                      mg/kg    Surrogate:                      % RC\*  
 C13-C22    <10    Octacosane                      121  
Dilution Factor: 1    \* Acc Recovery: 63-155 %  
Data Qualifiers: None

SP-3-3	22419-011	10/13/2016	10/12/2016	10/19/2016	10/20/2016	Soil
--------	-----------	------------	------------	------------	------------	------

ANALYTE                      mg/kg    Surrogate:                      % RC\*  
 C23-C40    71    Octacosane                      121  
Dilution Factor: 1    \* Acc Recovery: 63-155 %  
Data Qualifiers: None

SP-3-33	22419-012	10/13/2016	10/12/2016	10/19/2016	10/20/2016	Soil
---------	-----------	------------	------------	------------	------------	------

ANALYTE                      mg/kg    Surrogate:                      % RC\*  
 C13-C22    <10    Octacosane                      116  
Dilution Factor: 1    \* Acc Recovery: 63-155 %  
Data Qualifiers: None

SP-3-33	22419-012	10/13/2016	10/12/2016	10/19/2016	10/20/2016	Soil
---------	-----------	------------	------------	------------	------------	------

ANALYTE                      mg/kg    Surrogate:                      % RC\*  
 C23-C40    49    Octacosane                      116  
Dilution Factor: 1    \* Acc Recovery: 63-155 %  
Data Qualifiers: None

SP-4-1	22419-013	10/13/2016	10/13/2016	10/19/2016	10/20/2016	Soil
--------	-----------	------------	------------	------------	------------	------

ANALYTE                      mg/kg    Surrogate:                      % RC\*  
 C13-C22    11    Octacosane                      117  
Dilution Factor: 1    \* Acc Recovery: 63-155 %  
Data Qualifiers: None

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Extractable Fuel Hydrocarbons (EPA 8015B)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
SP-4-1	22419-013	10/13/2016	10/13/2016	10/19/2016	10/20/2016	Soil

ANALYTE                      mg/kg                                      Surrogate:                      % RC\*  
 C23-C40                                      200                                      Octacosane                      117  
Dilution Factor: 1                                      \* Acc Recovery: 63-155 %  
Data Qualifiers: None

SP-4-2	22419-014	10/13/2016	10/13/2016	10/19/2016	10/20/2016	Soil
--------	-----------	------------	------------	------------	------------	------

ANALYTE                      mg/kg                                      Surrogate:                      % RC\*  
 C13-C22                                      19                                      Octacosane                      115  
Dilution Factor: 1                                      \* Acc Recovery: 63-155 %  
Data Qualifiers: None

SP-4-2	22419-014	10/13/2016	10/13/2016	10/19/2016	10/20/2016	Soil
--------	-----------	------------	------------	------------	------------	------

ANALYTE                      mg/kg                                      Surrogate:                      % RC\*  
 C23-C40                                      330                                      Octacosane                      115  
Dilution Factor: 1                                      \* Acc Recovery: 63-155 %  
Data Qualifiers: None

SP-4-3	22419-015	10/13/2016	10/13/2016	10/19/2016	10/20/2016	Soil
--------	-----------	------------	------------	------------	------------	------

ANALYTE                      mg/kg                                      Surrogate:                      % RC\*  
 C13-C22                                      <10                                      Octacosane                      133  
Dilution Factor: 1                                      \* Acc Recovery: 63-155 %  
Data Qualifiers: None

SP-4-3	22419-015	10/13/2016	10/13/2016	10/19/2016	10/20/2016	Soil
--------	-----------	------------	------------	------------	------------	------

ANALYTE                      mg/kg                                      Surrogate:                      % RC\*  
 C23-C40                                      210                                      Octacosane                      133  
Dilution Factor: 1                                      \* Acc Recovery: 63-155 %  
Data Qualifiers: None



Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Extractable Fuel Hydrocarbons (EPA 8015B)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
SP-4-33	22419-016	10/13/2016	10/13/2016	10/19/2016	10/20/2016	Soil

ANALYTE                      mg/kg    Surrogate:                      % RC\*  
 C13-C22    <10    Octacosane                      124  
Dilution Factor: 1    \* Acc Recovery: 63-155 %  
Data Qualifiers: None

SP-4-33	22419-016	10/13/2016	10/13/2016	10/19/2016	10/20/2016	Soil
---------	-----------	------------	------------	------------	------------	------

ANALYTE                      mg/kg    Surrogate:                      % RC\*  
 C23-C40    120    Octacosane                      124  
Dilution Factor: 1    \* Acc Recovery: 63-155 %  
Data Qualifiers: None

Method Blank	MBJB1019163			10/19/2016	10/19/2016	Soil
--------------	-------------	--	--	------------	------------	------

ANALYTE                      mg/kg    Surrogate:                      % RC\*  
 C13-C22    <10    Octacosane                      84  
Dilution Factor: 1    \* Acc Recovery: 63-155 %  
Data Qualifiers: None

Method Blank	MBJB1019163			10/19/2016	10/19/2016	Soil
--------------	-------------	--	--	------------	------------	------

ANALYTE                      mg/kg    Surrogate:                      % RC\*  
 C23-C40    <30    Octacosane                      84  
Dilution Factor: 1    \* Acc Recovery: 63-155 %  
Data Qualifiers: None

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Gasoline Range Organics - GROs (EPA M8015B)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
SP-1-1	22419-001	10/13/2016	10/12/2016	10/12/2016	10/18/2016	Soil
<u>ANALYTE</u>	<u>mg/kg</u>			<u>Surrogate:</u>	<u>% RC*</u>	
TPH as GROs(C4-C12)	<0.25			$\alpha$ - $\alpha$ - $\alpha$ -Trifluorotoluene	76	
<u>Dilution Factor:</u> 1				* Acceptable Recovery: 46-130 %		
<u>Data Qualifiers:</u> None						
SP-1-2	22419-002	10/13/2016	10/12/2016	10/12/2016	10/18/2016	Soil
<u>ANALYTE</u>	<u>mg/kg</u>			<u>Surrogate:</u>	<u>% RC*</u>	
TPH as GROs(C4-C12)	<0.25			$\alpha$ - $\alpha$ - $\alpha$ -Trifluorotoluene	73	
<u>Dilution Factor:</u> 1				* Acceptable Recovery: 46-130 %		
<u>Data Qualifiers:</u> None						
SP-1-3	22419-003	10/13/2016	10/12/2016	10/12/2016	10/18/2016	Soil
<u>ANALYTE</u>	<u>mg/kg</u>			<u>Surrogate:</u>	<u>% RC*</u>	
TPH as GROs(C4-C12)	<0.25			$\alpha$ - $\alpha$ - $\alpha$ -Trifluorotoluene	78	
<u>Dilution Factor:</u> 1				* Acceptable Recovery: 46-130 %		
<u>Data Qualifiers:</u> None						
SP-1-33	22419-004	10/13/2016	10/12/2016	10/12/2016	10/18/2016	Soil
<u>ANALYTE</u>	<u>mg/kg</u>			<u>Surrogate:</u>	<u>% RC*</u>	
TPH as GROs(C4-C12)	<0.25			$\alpha$ - $\alpha$ - $\alpha$ -Trifluorotoluene	73	
<u>Dilution Factor:</u> 1				* Acceptable Recovery: 46-130 %		
<u>Data Qualifiers:</u> None						
SP-2-1	22419-005	10/13/2016	10/12/2016	10/12/2016	10/18/2016	Soil
<u>ANALYTE</u>	<u>mg/kg</u>			<u>Surrogate:</u>	<u>% RC*</u>	
TPH as GROs(C4-C12)	<0.25			$\alpha$ - $\alpha$ - $\alpha$ -Trifluorotoluene	71	
<u>Dilution Factor:</u> 1				* Acceptable Recovery: 46-130 %		
<u>Data Qualifiers:</u> None						

Gasoline Range Organics (GROs) are quantitated against a gasoline standard.

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Gasoline Range Organics - GROs (EPA M8015B)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
SP-2-2	22419-006	10/13/2016	10/12/2016	10/12/2016	10/18/2016	Soil
<u>ANALYTE</u>	<u>mg/kg</u>			<u>Surrogate:</u>	<u>% RC*</u>	
TPH as GROs(C4-C12)	<0.25			$\alpha$ - $\alpha$ - $\alpha$ -Trifluorotoluene	76	
<u>Dilution Factor:</u> 1				* Acceptable Recovery: 46-130 %		
<u>Data Qualifiers:</u> None						
SP-2-3	22419-007	10/13/2016	10/12/2016	10/12/2016	10/18/2016	Soil
<u>ANALYTE</u>	<u>mg/kg</u>			<u>Surrogate:</u>	<u>% RC*</u>	
TPH as GROs(C4-C12)	<0.25			$\alpha$ - $\alpha$ - $\alpha$ -Trifluorotoluene	77	
<u>Dilution Factor:</u> 1				* Acceptable Recovery: 46-130 %		
<u>Data Qualifiers:</u> None						
SP-2-33	22419-008	10/13/2016	10/12/2016	10/12/2016	10/18/2016	Soil
<u>ANALYTE</u>	<u>mg/kg</u>			<u>Surrogate:</u>	<u>% RC*</u>	
TPH as GROs(C4-C12)	<0.25			$\alpha$ - $\alpha$ - $\alpha$ -Trifluorotoluene	77	
<u>Dilution Factor:</u> 1				* Acceptable Recovery: 46-130 %		
<u>Data Qualifiers:</u> None						
SP-3-1	22419-009	10/13/2016	10/12/2016	10/12/2016	10/18/2016	Soil
<u>ANALYTE</u>	<u>mg/kg</u>			<u>Surrogate:</u>	<u>% RC*</u>	
TPH as GROs(C4-C12)	<0.25			$\alpha$ - $\alpha$ - $\alpha$ -Trifluorotoluene	72	
<u>Dilution Factor:</u> 1				* Acceptable Recovery: 46-130 %		
<u>Data Qualifiers:</u> None						
SP-3-2	22419-010	10/13/2016	10/12/2016	10/12/2016	10/18/2016	Soil
<u>ANALYTE</u>	<u>mg/kg</u>			<u>Surrogate:</u>	<u>% RC*</u>	
TPH as GROs(C4-C12)	<0.25			$\alpha$ - $\alpha$ - $\alpha$ -Trifluorotoluene	78	
<u>Dilution Factor:</u> 1				* Acceptable Recovery: 46-130 %		
<u>Data Qualifiers:</u> None						

Gasoline Range Organics (GROs) are quantitated against a gasoline standard.

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Gasoline Range Organics - GROs (EPA M8015B)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
SP-3-3	22419-011	10/13/2016	10/12/2016	10/12/2016	10/18/2016	Soil
<u>ANALYTE</u>	<u>mg/kg</u>			<u>Surrogate:</u>	<u>% RC*</u>	
TPH as GROs(C4-C12)	<0.25			$\alpha$ - $\alpha$ - $\alpha$ -Trifluorotoluene	73	
<u>Dilution Factor:</u> 1				* Acceptable Recovery: 46-130 %		
<u>Data Qualifiers:</u> None						
SP-3-33	22419-012	10/13/2016	10/12/2016	10/12/2016	10/18/2016	Soil
<u>ANALYTE</u>	<u>mg/kg</u>			<u>Surrogate:</u>	<u>% RC*</u>	
TPH as GROs(C4-C12)	<0.25			$\alpha$ - $\alpha$ - $\alpha$ -Trifluorotoluene	72	
<u>Dilution Factor:</u> 1				* Acceptable Recovery: 46-130 %		
<u>Data Qualifiers:</u> None						
SP-4-1	22419-013	10/13/2016	10/13/2016	10/13/2016	10/18/2016	Soil
<u>ANALYTE</u>	<u>mg/kg</u>			<u>Surrogate:</u>	<u>% RC*</u>	
TPH as GROs(C4-C12)	<0.25			$\alpha$ - $\alpha$ - $\alpha$ -Trifluorotoluene	68	
<u>Dilution Factor:</u> 1				* Acceptable Recovery: 46-130 %		
<u>Data Qualifiers:</u> None						
SP-4-2	22419-014	10/13/2016	10/13/2016	10/13/2016	10/18/2016	Soil
<u>ANALYTE</u>	<u>mg/kg</u>			<u>Surrogate:</u>	<u>% RC*</u>	
TPH as GROs(C4-C12)	<0.25			$\alpha$ - $\alpha$ - $\alpha$ -Trifluorotoluene	67	
<u>Dilution Factor:</u> 1				* Acceptable Recovery: 46-130 %		
<u>Data Qualifiers:</u> None						
SP-4-3	22419-015	10/13/2016	10/13/2016	10/13/2016	10/18/2016	Soil
<u>ANALYTE</u>	<u>mg/kg</u>			<u>Surrogate:</u>	<u>% RC*</u>	
TPH as GROs(C4-C12)	<0.25			$\alpha$ - $\alpha$ - $\alpha$ -Trifluorotoluene	68	
<u>Dilution Factor:</u> 1				* Acceptable Recovery: 46-130 %		
<u>Data Qualifiers:</u> None						

Gasoline Range Organics (GROs) are quantitated against a gasoline standard.

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Gasoline Range Organics - GROs (EPA M8015B)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
SP-4-33	22419-016	10/13/2016	10/13/2016	10/13/2016	10/18/2016	Soil

<u>ANALYTE</u>	<u>mg/kg</u>	<u>Surrogate:</u>	<u>% RC*</u>
TPH as GROs(C4-C12)	<0.25	$\alpha$ - $\alpha$ - $\alpha$ -Trifluorotoluene	71
<u>Dilution Factor:</u> 1		* Acceptable Recovery: 46-130 %	
<u>Data Qualifiers:</u> None			

Method Blank	MBJB1018161			10/18/2016	10/18/2016	Soil
--------------	-------------	--	--	------------	------------	------

<u>ANALYTE</u>	<u>mg/kg</u>	<u>Surrogate:</u>	<u>% RC*</u>
TPH as GROs(C4-C12)	<0.25	$\alpha$ - $\alpha$ - $\alpha$ -Trifluorotoluene	76
<u>Dilution Factor:</u> 1		* Acceptable Recovery: 46-130 %	
<u>Data Qualifiers:</u> None			

Gasoline Range Organics (GROs) are quantitated against a gasoline standard.

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Polynuclear Aromatic Hydrocarbons (EPA 8310)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
SP-1-1	22419-001	10/13/2016	10/12/2016	10/13/2016	10/17/2016	Soil

ANALYTE	CAS #	µg/kg	Surrogate:	% RC*
Acenaphthene:	83-32-9	<2	Nitrobenzene-d5	55
Acenaphthylene:	208-96-8	<5		
Anthracene:	120-12-7	<2	* Acceptable Recovery: 40-130 %	
Benz(a)anthracene:	56-55-3	<2		
Benzo(a)pyrene:	50-32-8	22		
Benzo(b)fluoranthene:	205-99-2	<2	<u>Dilution Factor:</u> 1	
Benzo(k)fluoranthene:	207-08-9	<2	<u>Data Qualifiers:</u> None	
Benzo(g,h,i)perylene:	191-24-2	<2		
Chrysene:	218-01-9	8.7		
Dibenz(a,h)anthracene:	53-70-3	<2		
Fluoranthene:	206-44-0	23		
Pyrene:	129-00-0	15		
Fluorene:	86-73-7	<10		
Phenanthrene:	85-01-8	6.2		
Indeno(1,2,3-cd)pyrene:	193-39-5	49		
Naphthalene:	91-20-3	<5		

SP-1-2	22419-002	10/13/2016	10/12/2016	10/13/2016	10/17/2016	Soil
--------	-----------	------------	------------	------------	------------	------

ANALYTE	CAS #	µg/kg	Surrogate:	% RC*
Acenaphthene:	83-32-9	<2	Nitrobenzene-d5	68
Acenaphthylene:	208-96-8	<5		
Anthracene:	120-12-7	<2	* Acceptable Recovery: 40-130 %	
Benz(a)anthracene:	56-55-3	<2		
Benzo(a)pyrene:	50-32-8	11		
Benzo(b)fluoranthene:	205-99-2	<2	<u>Dilution Factor:</u> 1	
Benzo(k)fluoranthene:	207-08-9	11	<u>Data Qualifiers:</u> C8,	
Benzo(g,h,i)perylene:	191-24-2	<2		
Chrysene:	218-01-9	5.3		
Dibenz(a,h)anthracene:	53-70-3	2.9		
Fluoranthene:	206-44-0	<2		
Pyrene:	129-00-0	4.8		
Fluorene:	86-73-7	<10		
Phenanthrene:	85-01-8	4.2		
Indeno(1,2,3-cd)pyrene:	193-39-5	13		
Naphthalene:	91-20-3	<5		

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Polynuclear Aromatic Hydrocarbons (EPA 8310)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
SP-1-3	22419-003	10/13/2016	10/12/2016	10/13/2016	10/17/2016	Soil

ANALYTE	CAS #	µg/kg	Surrogate:	% RC*
Acenaphthene:	83-32-9	<2	Nitrobenzene-d5	81
Acenaphthylene:	208-96-8	<5		
Anthracene:	120-12-7	<2	* Acceptable Recovery: 40-130 %	
Benz(a)anthracene:	56-55-3	<2		
Benzo(a)pyrene:	50-32-8	11		
Benzo(b)fluoranthene:	205-99-2	<2	<u>Dilution Factor:</u> 1	
Benzo(k)fluoranthene:	207-08-9	<2	<u>Data Qualifiers:</u> None	
Benzo(g,h,i)perylene:	191-24-2	<2		
Chrysene:	218-01-9	5.1		
Dibenz(a,h)anthracene:	53-70-3	4.0		
Fluoranthene:	206-44-0	4.8		
Pyrene:	129-00-0	8.2		
Fluorene:	86-73-7	<10		
Phenanthrene:	85-01-8	4.9		
Indeno(1,2,3-cd)pyrene:	193-39-5	18		
Naphthalene:	91-20-3	<5		

SP-1-33	22419-004	10/13/2016	10/12/2016	10/13/2016	10/17/2016	Soil
---------	-----------	------------	------------	------------	------------	------

ANALYTE	CAS #	µg/kg	Surrogate:	% RC*
Acenaphthene:	83-32-9	<2	Nitrobenzene-d5	72
Acenaphthylene:	208-96-8	<5		
Anthracene:	120-12-7	<2	* Acceptable Recovery: 40-130 %	
Benz(a)anthracene:	56-55-3	<2		
Benzo(a)pyrene:	50-32-8	11		
Benzo(b)fluoranthene:	205-99-2	<2	<u>Dilution Factor:</u> 1	
Benzo(k)fluoranthene:	207-08-9	7.0	<u>Data Qualifiers:</u> C8,	
Benzo(g,h,i)perylene:	191-24-2	<2		
Chrysene:	218-01-9	6.5		
Dibenz(a,h)anthracene:	53-70-3	3.2		
Fluoranthene:	206-44-0	8.6		
Pyrene:	129-00-0	7.6		
Fluorene:	86-73-7	<10		
Phenanthrene:	85-01-8	2.9		
Indeno(1,2,3-cd)pyrene:	193-39-5	<2		
Naphthalene:	91-20-3	<5		

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Polynuclear Aromatic Hydrocarbons (EPA 8310)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
SP-2-1	22419-005	10/13/2016	10/12/2016	10/13/2016	10/17/2016	Soil

ANALYTE	CAS #	µg/kg	Surrogate:	% RC*
Acenaphthene:	83-32-9	<2	Nitrobenzene-d5	69
Acenaphthylene:	208-96-8	<5		
Anthracene:	120-12-7	<2	* Acceptable Recovery: 40-130 %	
Benz(a)anthracene:	56-55-3	<2		
Benzo(a)pyrene:	50-32-8	9.7		
Benzo(b)fluoranthene:	205-99-2	<2	<u>Dilution Factor:</u> 1	
Benzo(k)fluoranthene:	207-08-9	9.9	<u>Data Qualifiers:</u> C8,	
Benzo(g,h,i)perylene:	191-24-2	<2		
Chrysene:	218-01-9	5.2		
Dibenz(a,h)anthracene:	53-70-3	5.8		
Fluoranthene:	206-44-0	<2		
Pyrene:	129-00-0	11		
Fluorene:	86-73-7	<10		
Phenanthrene:	85-01-8	3.1		
Indeno(1,2,3-cd)pyrene:	193-39-5	20		
Naphthalene:	91-20-3	<5		

SP-2-2	22419-006	10/13/2016	10/12/2016	10/13/2016	10/17/2016	Soil
--------	-----------	------------	------------	------------	------------	------

ANALYTE	CAS #	µg/kg	Surrogate:	% RC*
Acenaphthene:	83-32-9	<2	Nitrobenzene-d5	78
Acenaphthylene:	208-96-8	<5		
Anthracene:	120-12-7	<2	* Acceptable Recovery: 40-130 %	
Benz(a)anthracene:	56-55-3	<2		
Benzo(a)pyrene:	50-32-8	23		
Benzo(b)fluoranthene:	205-99-2	<2	<u>Dilution Factor:</u> 1	
Benzo(k)fluoranthene:	207-08-9	5.8	<u>Data Qualifiers:</u> C8,	
Benzo(g,h,i)perylene:	191-24-2	<2		
Chrysene:	218-01-9	6.6		
Dibenz(a,h)anthracene:	53-70-3	4.8		
Fluoranthene:	206-44-0	13		
Pyrene:	129-00-0	11		
Fluorene:	86-73-7	<10		
Phenanthrene:	85-01-8	7.2		
Indeno(1,2,3-cd)pyrene:	193-39-5	19		
Naphthalene:	91-20-3	<5		



Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Polynuclear Aromatic Hydrocarbons (EPA 8310)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
SP-2-3	22419-007	10/13/2016	10/12/2016	10/13/2016	10/17/2016	Soil

ANALYTE	CAS #	µg/kg	Surrogate:	% RC*
Acenaphthene:	83-32-9	<2	Nitrobenzene-d5	74
Acenaphthylene:	208-96-8	<5		
Anthracene:	120-12-7	<2	* Acceptable Recovery: 40-130 %	
Benz(a)anthracene:	56-55-3	<2		
Benzo(a)pyrene:	50-32-8	21		
Benzo(b)fluoranthene:	205-99-2	<2	Dilution Factor: 1	
Benzo(k)fluoranthene:	207-08-9	10	Data Qualifiers: C8,	
Benzo(g,h,i)perylene:	191-24-2	<2		
Chrysene:	218-01-9	5.3		
Dibenz(a,h)anthracene:	53-70-3	5.2		
Fluoranthene:	206-44-0	11		
Pyrene:	129-00-0	14		
Fluorene:	86-73-7	<10		
Phenanthrene:	85-01-8	3.7		
Indeno(1,2,3-cd)pyrene:	193-39-5	<2		
Naphthalene:	91-20-3	<5		

SP-2-33	22419-008	10/13/2016	10/12/2016	10/13/2016	10/17/2016	Soil
---------	-----------	------------	------------	------------	------------	------

ANALYTE	CAS #	µg/kg	Surrogate:	% RC*
Acenaphthene:	83-32-9	<2	Nitrobenzene-d5	76
Acenaphthylene:	208-96-8	<5		
Anthracene:	120-12-7	<2	* Acceptable Recovery: 40-130 %	
Benz(a)anthracene:	56-55-3	<2		
Benzo(a)pyrene:	50-32-8	16		
Benzo(b)fluoranthene:	205-99-2	<2	Dilution Factor: 1	
Benzo(k)fluoranthene:	207-08-9	10	Data Qualifiers: C8,	
Benzo(g,h,i)perylene:	191-24-2	<2		
Chrysene:	218-01-9	7.5		
Dibenz(a,h)anthracene:	53-70-3	<2		
Fluoranthene:	206-44-0	22		
Pyrene:	129-00-0	9.3		
Fluorene:	86-73-7	<10		
Phenanthrene:	85-01-8	4.2		
Indeno(1,2,3-cd)pyrene:	193-39-5	<2		
Naphthalene:	91-20-3	<5		

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Polynuclear Aromatic Hydrocarbons (EPA 8310)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
SP-3-1	22419-009	10/13/2016	10/12/2016	10/13/2016	10/17/2016	Soil

ANALYTE	CAS #	µg/kg	Surrogate:	% RC*
Acenaphthene:	83-32-9	<2	Nitrobenzene-d5	93
Acenaphthylene:	208-96-8	<5		
Anthracene:	120-12-7	<2	* Acceptable Recovery: 40-130 %	
Benz(a)anthracene:	56-55-3	<2		
Benzo(a)pyrene:	50-32-8	17		
Benzo(b)fluoranthene:	205-99-2	<2	Dilution Factor: 1	
Benzo(k)fluoranthene:	207-08-9	9.6	Data Qualifiers: C8,	
Benzo(g,h,i)perylene:	191-24-2	<2		
Chrysene:	218-01-9	7.0		
Dibenz(a,h)anthracene:	53-70-3	8.3		
Fluoranthene:	206-44-0	<2		
Pyrene:	129-00-0	21		
Fluorene:	86-73-7	<10		
Phenanthrene:	85-01-8	<2		
Indeno(1,2,3-cd)pyrene:	193-39-5	<2		
Naphthalene:	91-20-3	7.4		

SP-3-2	22419-010	10/13/2016	10/12/2016	10/13/2016	10/17/2016	Soil
--------	-----------	------------	------------	------------	------------	------

ANALYTE	CAS #	µg/kg	Surrogate:	% RC*
Acenaphthene:	83-32-9	<2	Nitrobenzene-d5	68
Acenaphthylene:	208-96-8	<5		
Anthracene:	120-12-7	<2	* Acceptable Recovery: 40-130 %	
Benz(a)anthracene:	56-55-3	<2		
Benzo(a)pyrene:	50-32-8	31		
Benzo(b)fluoranthene:	205-99-2	<2	Dilution Factor: 1	
Benzo(k)fluoranthene:	207-08-9	9.9	Data Qualifiers: C8,	
Benzo(g,h,i)perylene:	191-24-2	<2		
Chrysene:	218-01-9	9.4		
Dibenz(a,h)anthracene:	53-70-3	<2		
Fluoranthene:	206-44-0	<2		
Pyrene:	129-00-0	13		
Fluorene:	86-73-7	<10		
Phenanthrene:	85-01-8	4.5		
Indeno(1,2,3-cd)pyrene:	193-39-5	<2		
Naphthalene:	91-20-3	7.6		

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Polynuclear Aromatic Hydrocarbons (EPA 8310)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
SP-3-3	22419-011	10/13/2016	10/12/2016	10/13/2016	10/17/2016	Soil

ANALYTE	CAS #	µg/kg	Surrogate:	% RC*
Acenaphthene:	83-32-9	<2	Nitrobenzene-d5	75
Acenaphthylene:	208-96-8	<5		
Anthracene:	120-12-7	<2	* Acceptable Recovery: 40-130 %	
Benz(a)anthracene:	56-55-3	<2		
Benzo(a)pyrene:	50-32-8	19		
Benzo(b)fluoranthene:	205-99-2	<2	<u>Dilution Factor:</u> 1	
Benzo(k)fluoranthene:	207-08-9	8.5	<u>Data Qualifiers:</u> C8,	
Benzo(g,h,i)perylene:	191-24-2	<2		
Chrysene:	218-01-9	9.9		
Dibenz(a,h)anthracene:	53-70-3	6.0		
Fluoranthene:	206-44-0	36		
Pyrene:	129-00-0	53		
Fluorene:	86-73-7	<10		
Phenanthrene:	85-01-8	5.5		
Indeno(1,2,3-cd)pyrene:	193-39-5	<2		
Naphthalene:	91-20-3	<5		

SP-3-33	22419-012	10/13/2016	10/12/2016	10/13/2016	10/17/2016	Soil
---------	-----------	------------	------------	------------	------------	------

ANALYTE	CAS #	µg/kg	Surrogate:	% RC*
Acenaphthene:	83-32-9	<2	Nitrobenzene-d5	87
Acenaphthylene:	208-96-8	<5		
Anthracene:	120-12-7	<2	* Acceptable Recovery: 40-130 %	
Benz(a)anthracene:	56-55-3	<2		
Benzo(a)pyrene:	50-32-8	15		
Benzo(b)fluoranthene:	205-99-2	<2	<u>Dilution Factor:</u> 1	
Benzo(k)fluoranthene:	207-08-9	4.3	<u>Data Qualifiers:</u> C8,	
Benzo(g,h,i)perylene:	191-24-2	<2		
Chrysene:	218-01-9	5.0		
Dibenz(a,h)anthracene:	53-70-3	3.6		
Fluoranthene:	206-44-0	4.3		
Pyrene:	129-00-0	15		
Fluorene:	86-73-7	<10		
Phenanthrene:	85-01-8	3.4		
Indeno(1,2,3-cd)pyrene:	193-39-5	16		
Naphthalene:	91-20-3	<5		

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Polynuclear Aromatic Hydrocarbons (EPA 8310)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
SP-4-1	22419-013	10/13/2016	10/13/2016	10/13/2016	10/17/2016	Soil

ANALYTE	CAS #	µg/kg	Surrogate:	% RC*
Acenaphthene:	83-32-9	<2	Nitrobenzene-d5	77
Acenaphthylene:	208-96-8	<5		
Anthracene:	120-12-7	<2	* Acceptable Recovery: 40-130 %	
Benz(a)anthracene:	56-55-3	<2		
Benzo(a)pyrene:	50-32-8	26		
Benzo(b)fluoranthene:	205-99-2	<2	Dilution Factor: 1	
Benzo(k)fluoranthene:	207-08-9	21	Data Qualifiers: C8,	
Benzo(g,h,i)perylene:	191-24-2	<2		
Chrysene:	218-01-9	11		
Dibenz(a,h)anthracene:	53-70-3	<2		
Fluoranthene:	206-44-0	<2		
Pyrene:	129-00-0	20		
Fluorene:	86-73-7	<10		
Phenanthrene:	85-01-8	4.9		
Indeno(1,2,3-cd)pyrene:	193-39-5	<2		
Naphthalene:	91-20-3	<5		

SP-4-2	22419-014	10/13/2016	10/13/2016	10/13/2016	10/17/2016	Soil
--------	-----------	------------	------------	------------	------------	------

ANALYTE	CAS #	µg/kg	Surrogate:	% RC*
Acenaphthene:	83-32-9	6.0	Nitrobenzene-d5	85
Acenaphthylene:	208-96-8	<5		
Anthracene:	120-12-7	<2	* Acceptable Recovery: 40-130 %	
Benz(a)anthracene:	56-55-3	<2		
Benzo(a)pyrene:	50-32-8	41		
Benzo(b)fluoranthene:	205-99-2	<2	Dilution Factor: 1	
Benzo(k)fluoranthene:	207-08-9	21	Data Qualifiers: None	
Benzo(g,h,i)perylene:	191-24-2	<2		
Chrysene:	218-01-9	27		
Dibenz(a,h)anthracene:	53-70-3	<2		
Fluoranthene:	206-44-0	<2		
Pyrene:	129-00-0	50		
Fluorene:	86-73-7	<10		
Phenanthrene:	85-01-8	37		
Indeno(1,2,3-cd)pyrene:	193-39-5	<2		
Naphthalene:	91-20-3	6.0		

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Polynuclear Aromatic Hydrocarbons (EPA 8310)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
SP-4-3	22419-015	10/13/2016	10/13/2016	10/13/2016	10/17/2016	Soil

ANALYTE	CAS #	µg/kg	Surrogate:	% RC*
Acenaphthene:	83-32-9	<2	Nitrobenzene-d5	58
Acenaphthylene:	208-96-8	<5		
Anthracene:	120-12-7	<2	* Acceptable Recovery: 40-130 %	
Benz(a)anthracene:	56-55-3	<2		
Benzo(a)pyrene:	50-32-8	<2		
Benzo(b)fluoranthene:	205-99-2	<2	<u>Dilution Factor:</u> 1	
Benzo(k)fluoranthene:	207-08-9	<2	<u>Data Qualifiers:</u> None	
Benzo(g,h,i)perylene:	191-24-2	<2		
Chrysene:	218-01-9	7.8		
Dibenz(a,h)anthracene:	53-70-3	<2		
Fluoranthene:	206-44-0	<2		
Pyrene:	129-00-0	9.8		
Fluorene:	86-73-7	<10		
Phenanthrene:	85-01-8	2.7		
Indeno(1,2,3-cd)pyrene:	193-39-5	17		
Naphthalene:	91-20-3	<5		

SP-4-33	22419-016	10/13/2016	10/13/2016	10/13/2016	10/17/2016	Soil
---------	-----------	------------	------------	------------	------------	------

ANALYTE	CAS #	µg/kg	Surrogate:	% RC*
Acenaphthene:	83-32-9	<2	Nitrobenzene-d5	74
Acenaphthylene:	208-96-8	<5		
Anthracene:	120-12-7	<2	* Acceptable Recovery: 40-130 %	
Benz(a)anthracene:	56-55-3	33		
Benzo(a)pyrene:	50-32-8	27		
Benzo(b)fluoranthene:	205-99-2	<2	<u>Dilution Factor:</u> 1	
Benzo(k)fluoranthene:	207-08-9	17	<u>Data Qualifiers:</u> C8,	
Benzo(g,h,i)perylene:	191-24-2	<2		
Chrysene:	218-01-9	31		
Dibenz(a,h)anthracene:	53-70-3	4.6		
Fluoranthene:	206-44-0	34		
Pyrene:	129-00-0	23		
Fluorene:	86-73-7	<10		
Phenanthrene:	85-01-8	5.0		
Indeno(1,2,3-cd)pyrene:	193-39-5	37		
Naphthalene:	91-20-3	<5		

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Polynuclear Aromatic Hydrocarbons (EPA 8310)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Method Blank	MBIN1013161			10/13/2016	10/17/2016	Soil

ANALYTE	CAS #	µg/kg	Surrogate:	% RC*
Acenaphthene:	83-32-9	<2	Nitrobenzene-d5	110
Acenaphthylene:	208-96-8	<5		
Anthracene:	120-12-7	<2	* Acceptable Recovery: 40-130 %	
Benz(a)anthracene:	56-55-3	<2		
Benzo(a)pyrene:	50-32-8	<2		
Benzo(b)fluoranthene:	205-99-2	<2	<u>Dilution Factor:</u> 1	
Benzo(k)fluoranthene:	207-08-9	<2	<u>Data Qualifiers:</u> None	
Benzo(g,h,i)perylene:	191-24-2	<2		
Chrysene:	218-01-9	<2		
Dibenz(a,h)anthracene:	53-70-3	<2		
Fluoranthene:	206-44-0	<2		
Pyrene:	129-00-0	<2		
Fluorene:	86-73-7	<10		
Phenanthrene:	85-01-8	<2		
Indeno(1,2,3-cd)pyrene:	193-39-5	<2		
Naphthalene:	91-20-3	<5		

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Organochlorine Pesticides (EPA 8081A)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
SP-1-1	22419-001	10/13/2016	10/12/2016	10/13/2016	10/19/2016	Soil

<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>	<u>Surrogate:</u>	<u>% RC*</u>
Aldrin	309-00-2	<4	Decachlorobiphenyl	24
alpha-BHC	319-84-6	<10		
beta-BHC	319-85-7	<10		
gamma-BHC (Lindane)	58-89-9	<10		
delta-BHC	319-86-8	<20		
Chlordane	57-74-9	<60		
4,4'-DDD	72-54-8	<20		
4,4'-DDE	72-55-9	65		
4,4'-DDT	50-29-3	<20		
Dieldrin	60-57-1	<4		
Endosulfan I	959-98-8	<20		
Endosulfan II	33213-65-9	<10		
Endosulfan sulfate	1031-07-8	<20		
Endrin	72-20-8	<20		
Endrin aldehyde	7421-93-4	<20		
Endrin ketone	53494-70-5	<10		
Heptachlor	76-44-8	<4		
Heptachlor epoxide	1024-57-3	<10		
Methoxychlor	72-43-5	<20		
Toxaphene	8001-35-2	<80		

\* Acceptable Recovery: 31-146 %

Dilution Factor: 2

Data Qualifiers: D1, S5,

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Organochlorine Pesticides (EPA 8081A)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
SP-1-2	22419-002	10/13/2016	10/12/2016	10/13/2016	10/19/2016	Soil

<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>
Aldrin	309-00-2	<2
alpha-BHC	319-84-6	<5
beta-BHC	319-85-7	<5
gamma-BHC (Lindane)	58-89-9	<5
delta-BHC	319-86-8	<10
Chlordane	57-74-9	<30
4,4'-DDD	72-54-8	<10
4,4'-DDE	72-55-9	<5
4,4'-DDT	50-29-3	<10
Dieldrin	60-57-1	<2
Endosulfan I	959-98-8	<10
Endosulfan II	33213-65-9	<5
Endosulfan sulfate	1031-07-8	<10
Endrin	72-20-8	<10
Endrin aldehyde	7421-93-4	<10
Endrin ketone	53494-70-5	<5
Heptachlor	76-44-8	<2
Heptachlor epoxide	1024-57-3	<5
Methoxychlor	72-43-5	<10
Toxaphene	8001-35-2	<40

Surrogate: Decachlorobiphenyl  
% RC\* 14  
 \* Acceptable Recovery: 31-146 %  
Dilution Factor: 1  
Data Qualifiers: S5,



Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Organochlorine Pesticides (EPA 8081A)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
SP-1-3	22419-003	10/13/2016	10/12/2016	10/13/2016	10/19/2016	Soil

<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>	<u>Surrogate:</u>	<u>% RC*</u>
Aldrin	309-00-2	<2	Decachlorobiphenyl	42
alpha-BHC	319-84-6	<5		
beta-BHC	319-85-7	<5		
gamma-BHC (Lindane)	58-89-9	<5		
delta-BHC	319-86-8	<10		
Chlordane	57-74-9	<30		
4,4'-DDD	72-54-8	<10		
4,4'-DDE	72-55-9	48		
4,4'-DDT	50-29-3	<10		
Dieldrin	60-57-1	<2		
Endosulfan I	959-98-8	<10		
Endosulfan II	33213-65-9	<5		
Endosulfan sulfate	1031-07-8	<10		
Endrin	72-20-8	<10		
Endrin aldehyde	7421-93-4	<10		
Endrin ketone	53494-70-5	<5		
Heptachlor	76-44-8	<2		
Heptachlor epoxide	1024-57-3	<5		
Methoxychlor	72-43-5	<10		
Toxaphene	8001-35-2	<40		

\* Acceptable Recovery: 31-146 %

Dilution Factor: 1

Data Qualifiers: None

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Organochlorine Pesticides (EPA 8081A)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
SP-1-33	22419-004	10/13/2016	10/12/2016	10/13/2016	10/19/2016	Soil

<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>	<u>Surrogate:</u>	<u>% RC*</u>
Aldrin	309-00-2	<2	Decachlorobiphenyl	17
alpha-BHC	319-84-6	<5		
beta-BHC	319-85-7	<5		
gamma-BHC (Lindane)	58-89-9	<5		
delta-BHC	319-86-8	<10		
Chlordane	57-74-9	<30		
4,4'-DDD	72-54-8	<10		
4,4'-DDE	72-55-9	11		
4,4'-DDT	50-29-3	<10		
Dieldrin	60-57-1	<2		
Endosulfan I	959-98-8	<10		
Endosulfan II	33213-65-9	<5		
Endosulfan sulfate	1031-07-8	<10		
Endrin	72-20-8	<10		
Endrin aldehyde	7421-93-4	<10		
Endrin ketone	53494-70-5	<5		
Heptachlor	76-44-8	<2		
Heptachlor epoxide	1024-57-3	<5		
Methoxychlor	72-43-5	<10		
Toxaphene	8001-35-2	<40		

\* Acceptable Recovery: 31-146 %

Dilution Factor: 1

Data Qualifiers: S5,

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Organochlorine Pesticides (EPA 8081A)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
SP-2-1	22419-005	10/13/2016	10/12/2016	10/13/2016	10/20/2016	Soil

<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>	<u>Surrogate:</u>	<u>% RC*</u>
Aldrin	309-00-2	<10	Decachlorobiphenyl	39
alpha-BHC	319-84-6	<25		
beta-BHC	319-85-7	<25		
gamma-BHC (Lindane)	58-89-9	<25		
delta-BHC	319-86-8	<50		
Chlordane	57-74-9	<150		
4,4'-DDD	72-54-8	<50		
4,4'-DDE	72-55-9	94		
4,4'-DDT	50-29-3	<50		
Dieldrin	60-57-1	<10		
Endosulfan I	959-98-8	<50		
Endosulfan II	33213-65-9	<25		
Endosulfan sulfate	1031-07-8	<50		
Endrin	72-20-8	<50		
Endrin aldehyde	7421-93-4	<50		
Endrin ketone	53494-70-5	<25		
Heptachlor	76-44-8	<10		
Heptachlor epoxide	1024-57-3	<25		
Methoxychlor	72-43-5	<50		
Toxaphene	8001-35-2	<200		

\* Acceptable Recovery: 31-146 %

Dilution Factor: 5

Data Qualifiers: D1,

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Organochlorine Pesticides (EPA 8081A)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
SP-2-2	22419-006	10/13/2016	10/12/2016	10/13/2016	10/20/2016	Soil

<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>	<u>Surrogate:</u>	<u>% RC*</u>
Aldrin	309-00-2	<10	Decachlorobiphenyl	49
alpha-BHC	319-84-6	<25		
beta-BHC	319-85-7	<25		
gamma-BHC (Lindane)	58-89-9	<25		
delta-BHC	319-86-8	<50		
Chlordane	57-74-9	<150		
4,4'-DDD	72-54-8	<50		
4,4'-DDE	72-55-9	130		
4,4'-DDT	50-29-3	<50		
Dieldrin	60-57-1	<10		
Endosulfan I	959-98-8	<50		
Endosulfan II	33213-65-9	<25		
Endosulfan sulfate	1031-07-8	<50		
Endrin	72-20-8	<50		
Endrin aldehyde	7421-93-4	<50		
Endrin ketone	53494-70-5	<25		
Heptachlor	76-44-8	<10		
Heptachlor epoxide	1024-57-3	<25		
Methoxychlor	72-43-5	<50		
Toxaphene	8001-35-2	<200		

\* Acceptable Recovery: 31-146 %

Dilution Factor: 5

Data Qualifiers: D1,

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Organochlorine Pesticides (EPA 8081A)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
SP-2-3	22419-007	10/13/2016	10/12/2016	10/13/2016	10/19/2016	Soil

<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>	<u>Surrogate:</u>	<u>% RC*</u>
Aldrin	309-00-2	<2	Decachlorobiphenyl	37
alpha-BHC	319-84-6	<5		
beta-BHC	319-85-7	<5		
gamma-BHC (Lindane)	58-89-9	<5		
delta-BHC	319-86-8	<10		
Chlordane	57-74-9	<30		
4,4'-DDD	72-54-8	<10		
4,4'-DDE	72-55-9	57		
4,4'-DDT	50-29-3	<10		
Dieldrin	60-57-1	<2		
Endosulfan I	959-98-8	<10		
Endosulfan II	33213-65-9	<5		
Endosulfan sulfate	1031-07-8	<10		
Endrin	72-20-8	<10		
Endrin aldehyde	7421-93-4	<10		
Endrin ketone	53494-70-5	<5		
Heptachlor	76-44-8	<2		
Heptachlor epoxide	1024-57-3	<5		
Methoxychlor	72-43-5	<10		
Toxaphene	8001-35-2	<40		

\* Acceptable Recovery: 31-146 %

Dilution Factor: 1

Data Qualifiers: S5,

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Organochlorine Pesticides (EPA 8081A)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
SP-2-33	22419-008	10/13/2016	10/12/2016	10/13/2016	10/19/2016	Soil

<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>	<u>Surrogate:</u>	<u>% RC*</u>
Aldrin	309-00-2	<2	Decachlorobiphenyl	10
alpha-BHC	319-84-6	<5		
beta-BHC	319-85-7	<5		
gamma-BHC (Lindane)	58-89-9	<5		
delta-BHC	319-86-8	<10		
Chlordane	57-74-9	<30		
4,4'-DDD	72-54-8	<10		
4,4'-DDE	72-55-9	<5		
4,4'-DDT	50-29-3	<10		
Dieldrin	60-57-1	<2		
Endosulfan I	959-98-8	<10		
Endosulfan II	33213-65-9	<5		
Endosulfan sulfate	1031-07-8	<10		
Endrin	72-20-8	<10		
Endrin aldehyde	7421-93-4	<10		
Endrin ketone	53494-70-5	<5		
Heptachlor	76-44-8	<2		
Heptachlor epoxide	1024-57-3	<5		
Methoxychlor	72-43-5	<10		
Toxaphene	8001-35-2	<40		

\* Acceptable Recovery: 31-146 %

Dilution Factor: 1

Data Qualifiers: S5,

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Organochlorine Pesticides (EPA 8081A)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
SP-3-1	22419-009	10/13/2016	10/12/2016	10/13/2016	10/19/2016	Soil

<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>	<u>Surrogate:</u>	<u>% RC*</u>
Aldrin	309-00-2	<2	Decachlorobiphenyl	16
alpha-BHC	319-84-6	<5		
beta-BHC	319-85-7	<5		
gamma-BHC (Lindane)	58-89-9	<5		
delta-BHC	319-86-8	<10		
Chlordane	57-74-9	<30		
4,4'-DDD	72-54-8	<10		
4,4'-DDE	72-55-9	18		
4,4'-DDT	50-29-3	<10		
Dieldrin	60-57-1	<2		
Endosulfan I	959-98-8	<10		
Endosulfan II	33213-65-9	<5		
Endosulfan sulfate	1031-07-8	<10		
Endrin	72-20-8	<10		
Endrin aldehyde	7421-93-4	<10		
Endrin ketone	53494-70-5	<5		
Heptachlor	76-44-8	<2		
Heptachlor epoxide	1024-57-3	<5		
Methoxychlor	72-43-5	<10		
Toxaphene	8001-35-2	<40		

\* Acceptable Recovery: 31-146 %

Dilution Factor: 1

Data Qualifiers: S5,

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Organochlorine Pesticides (EPA 8081A)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
SP-3-2	22419-010	10/13/2016	10/12/2016	10/13/2016	10/20/2016	Soil

<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>	<u>Surrogate:</u>	<u>% RC*</u>
Aldrin	309-00-2	<10	Decachlorobiphenyl	34
alpha-BHC	319-84-6	<25		
beta-BHC	319-85-7	<25		
gamma-BHC (Lindane)	58-89-9	<25		
delta-BHC	319-86-8	<50		
Chlordane	57-74-9	<150		
4,4'-DDD	72-54-8	<50		
4,4'-DDE	72-55-9	200		
4,4'-DDT	50-29-3	<50		
Dieldrin	60-57-1	<10		
Endosulfan I	959-98-8	<50		
Endosulfan II	33213-65-9	<25		
Endosulfan sulfate	1031-07-8	<50		
Endrin	72-20-8	<50		
Endrin aldehyde	7421-93-4	<50		
Endrin ketone	53494-70-5	<25		
Heptachlor	76-44-8	<10		
Heptachlor epoxide	1024-57-3	<25		
Methoxychlor	72-43-5	<50		
Toxaphene	8001-35-2	<200		

\* Acceptable Recovery: 31-146 %

Dilution Factor: 5

Data Qualifiers: D1, S5,



Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Organochlorine Pesticides (EPA 8081A)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
SP-3-3	22419-011	10/13/2016	10/12/2016	10/13/2016	10/19/2016	Soil

<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>	<u>Surrogate:</u>	<u>% RC*</u>
Aldrin	309-00-2	<2	Decachlorobiphenyl	15
alpha-BHC	319-84-6	<5		
beta-BHC	319-85-7	<5		
gamma-BHC (Lindane)	58-89-9	<5		
delta-BHC	319-86-8	<10		
Chlordane	57-74-9	<30		
4,4'-DDD	72-54-8	<10		
4,4'-DDE	72-55-9	10		
4,4'-DDT	50-29-3	<10		
Dieldrin	60-57-1	<2		
Endosulfan I	959-98-8	<10		
Endosulfan II	33213-65-9	<5		
Endosulfan sulfate	1031-07-8	<10		
Endrin	72-20-8	<10		
Endrin aldehyde	7421-93-4	<10		
Endrin ketone	53494-70-5	<5		
Heptachlor	76-44-8	<2		
Heptachlor epoxide	1024-57-3	<5		
Methoxychlor	72-43-5	<10		
Toxaphene	8001-35-2	<40		

\* Acceptable Recovery: 31-146 %  
Dilution Factor: 1  
Data Qualifiers: S5,

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Organochlorine Pesticides (EPA 8081A)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
SP-3-33	22419-012	10/13/2016	10/12/2016	10/13/2016	10/19/2016	Soil

<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>
Aldrin	309-00-2	<8
alpha-BHC	319-84-6	<20
beta-BHC	319-85-7	<20
gamma-BHC (Lindane)	58-89-9	<20
delta-BHC	319-86-8	<40
Chlordane	57-74-9	<120
4,4'-DDD	72-54-8	<40
4,4'-DDE	72-55-9	<20
4,4'-DDT	50-29-3	<40
Dieldrin	60-57-1	<8
Endosulfan I	959-98-8	<40
Endosulfan II	33213-65-9	<20
Endosulfan sulfate	1031-07-8	<40
Endrin	72-20-8	<40
Endrin aldehyde	7421-93-4	<40
Endrin ketone	53494-70-5	<20
Heptachlor	76-44-8	<8
Heptachlor epoxide	1024-57-3	<20
Methoxychlor	72-43-5	<40
Toxaphene	8001-35-2	<160

Surrogate: Decachlorobiphenyl    % RC\* 15  
 \* Acceptable Recovery: 31-146 %  
Dilution Factor: 4  
Data Qualifiers: D1, S5,

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Organochlorine Pesticides (EPA 8081A)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
SP-4-1	22419-013	10/13/2016	10/13/2016	10/13/2016	10/19/2016	Soil

<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>	<u>Surrogate:</u>	<u>% RC*</u>
Aldrin	309-00-2	<2	Decachlorobiphenyl	7
alpha-BHC	319-84-6	<5		
beta-BHC	319-85-7	<5		
gamma-BHC (Lindane)	58-89-9	<5		
delta-BHC	319-86-8	<10		
Chlordane	57-74-9	<30		
4,4'-DDD	72-54-8	<10		
4,4'-DDE	72-55-9	<5		
4,4'-DDT	50-29-3	<10		
Dieldrin	60-57-1	<2		
Endosulfan I	959-98-8	<10		
Endosulfan II	33213-65-9	<5		
Endosulfan sulfate	1031-07-8	<10		
Endrin	72-20-8	<10		
Endrin aldehyde	7421-93-4	<10		
Endrin ketone	53494-70-5	<5		
Heptachlor	76-44-8	<2		
Heptachlor epoxide	1024-57-3	<5		
Methoxychlor	72-43-5	<10		
Toxaphene	8001-35-2	<40		

\* Acceptable Recovery: 31-146 %

Dilution Factor: 1

Data Qualifiers: S5,

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Organochlorine Pesticides (EPA 8081A)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
SP-4-2	22419-014	10/13/2016	10/13/2016	10/13/2016	10/20/2016	Soil

<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>
Aldrin	309-00-2	<10
alpha-BHC	319-84-6	<25
beta-BHC	319-85-7	<25
gamma-BHC (Lindane)	58-89-9	<25
delta-BHC	319-86-8	<50
Chlordane	57-74-9	<150
4,4'-DDD	72-54-8	<50
4,4'-DDE	72-55-9	<25
4,4'-DDT	50-29-3	<50
Dieldrin	60-57-1	<10
Endosulfan I	959-98-8	<50
Endosulfan II	33213-65-9	<25
Endosulfan sulfate	1031-07-8	<50
Endrin	72-20-8	<50
Endrin aldehyde	7421-93-4	<50
Endrin ketone	53494-70-5	<25
Heptachlor	76-44-8	<10
Heptachlor epoxide	1024-57-3	<25
Methoxychlor	72-43-5	<50
Toxaphene	8001-35-2	<200

Surrogate: Decachlorobiphenyl  
% RC\* 12  
 \* Acceptable Recovery: 31-146 %  
Dilution Factor: 5  
Data Qualifiers: D1, S5,

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Organochlorine Pesticides (EPA 8081A)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
SP-4-3	22419-015	10/13/2016	10/13/2016	10/13/2016	10/20/2016	Soil

<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>	<u>Surrogate:</u>	<u>% RC*</u>
Aldrin	309-00-2	<10	Decachlorobiphenyl	6
alpha-BHC	319-84-6	<25		
beta-BHC	319-85-7	<25		
gamma-BHC (Lindane)	58-89-9	<25		
delta-BHC	319-86-8	<50		
Chlordane	57-74-9	<150		
4,4'-DDD	72-54-8	<50		
4,4'-DDE	72-55-9	<25		
4,4'-DDT	50-29-3	<50		
Dieldrin	60-57-1	<10		
Endosulfan I	959-98-8	<50		
Endosulfan II	33213-65-9	<25		
Endosulfan sulfate	1031-07-8	<50		
Endrin	72-20-8	<50		
Endrin aldehyde	7421-93-4	<50		
Endrin ketone	53494-70-5	<25		
Heptachlor	76-44-8	<10		
Heptachlor epoxide	1024-57-3	<25		
Methoxychlor	72-43-5	<50		
Toxaphene	8001-35-2	<200		

\* Acceptable Recovery: 31-146 %

Dilution Factor: 5

Data Qualifiers: D1, S5,

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Organochlorine Pesticides (EPA 8081A)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
SP-4-33	22419-016	10/13/2016	10/13/2016	10/13/2016	10/20/2016	Soil

<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>
Aldrin	309-00-2	<10
alpha-BHC	319-84-6	<25
beta-BHC	319-85-7	<25
gamma-BHC (Lindane)	58-89-9	<25
delta-BHC	319-86-8	<50
Chlordane	57-74-9	<150
4,4'-DDD	72-54-8	<50
4,4'-DDE	72-55-9	<25
4,4'-DDT	50-29-3	<50
Dieldrin	60-57-1	<10
Endosulfan I	959-98-8	<50
Endosulfan II	33213-65-9	<25
Endosulfan sulfate	1031-07-8	<50
Endrin	72-20-8	<50
Endrin aldehyde	7421-93-4	<50
Endrin ketone	53494-70-5	<25
Heptachlor	76-44-8	<10
Heptachlor epoxide	1024-57-3	<25
Methoxychlor	72-43-5	<50
Toxaphene	8001-35-2	<200

Surrogate: Decachlorobiphenyl  
% RC\* 18  
 \* Acceptable Recovery: 31-146 %  
Dilution Factor: 5  
Data Qualifiers: D1, S5,

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Organochlorine Pesticides (EPA 8081A)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Method Blank	MBAV1013163			10/13/2016	10/19/2016	Soil

<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>	<u>Surrogate:</u>	<u>% RC*</u>
Aldrin	309-00-2	<2	Decachlorobiphenyl	72
alpha-BHC	319-84-6	<5		
beta-BHC	319-85-7	<5		
gamma-BHC (Lindane)	58-89-9	<5		
delta-BHC	319-86-8	<10		
Chlordane	57-74-9	<30		
4,4'-DDD	72-54-8	<10		
4,4'-DDE	72-55-9	<5		
4,4'-DDT	50-29-3	<10		
Dieldrin	60-57-1	<2		
Endosulfan I	959-98-8	<10		
Endosulfan II	33213-65-9	<5		
Endosulfan sulfate	1031-07-8	<10		
Endrin	72-20-8	<10		
Endrin aldehyde	7421-93-4	<10		
Endrin ketone	53494-70-5	<5		
Heptachlor	76-44-8	<2		
Heptachlor epoxide	1024-57-3	<5		
Methoxychlor	72-43-5	<10		
Toxaphene	8001-35-2	<40		

\* Acceptable Recovery: 31-146 %

Dilution Factor: 1

Data Qualifiers: None

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Polychlorinated Biphenyl's (EPA 8082)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
SP-1-1	22419-001	10/13/2016	10/12/2016	10/13/2016	10/17/2016	Soil

<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>	<u>Surrogate:</u>	<u>% RC*</u>
PCB-1016	12674-11-2	<50	Decachlorobiphenyl	24
PCB-1221	11104-28-2	<50		
PCB-1232	11141-16-5	<50	* Acceptable Recovery: 31-146 %	
PCB-1242	53469-21-9	<50	<u>Dilution Factor:</u> 2	
PCB-1248	12672-29-6	<50	<u>Data Qualifiers:</u> D1, S5,	
PCB-1254	11097-69-1	<50		
PCB-1260	11096-82-5	<50		

SP-1-2	22419-002	10/13/2016	10/12/2016	10/13/2016	10/17/2016	Soil
--------	-----------	------------	------------	------------	------------	------

<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>	<u>Surrogate:</u>	<u>% RC*</u>
PCB-1016	12674-11-2	<25	Decachlorobiphenyl	40
PCB-1221	11104-28-2	<25		
PCB-1232	11141-16-5	<25	* Acceptable Recovery: 31-146 %	
PCB-1242	53469-21-9	<25	<u>Dilution Factor:</u> 1	
PCB-1248	12672-29-6	<25	<u>Data Qualifiers:</u> None	
PCB-1254	11097-69-1	<25		
PCB-1260	11096-82-5	<25		

SP-1-3	22419-003	10/13/2016	10/12/2016	10/13/2016	10/17/2016	Soil
--------	-----------	------------	------------	------------	------------	------

<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>	<u>Surrogate:</u>	<u>% RC*</u>
PCB-1016	12674-11-2	<25	Decachlorobiphenyl	45
PCB-1221	11104-28-2	<25		
PCB-1232	11141-16-5	<25	* Acceptable Recovery: 31-146 %	
PCB-1242	53469-21-9	<25	<u>Dilution Factor:</u> 1	
PCB-1248	12672-29-6	<25	<u>Data Qualifiers:</u> None	
PCB-1254	11097-69-1	<25		
PCB-1260	11096-82-5	<25		



Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Polychlorinated Biphenyl's (EPA 8082)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
SP-1-33	22419-004	10/13/2016	10/12/2016	10/13/2016	10/17/2016	Soil

<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>	<u>Surrogate:</u>	<u>% RC*</u>
PCB-1016	12674-11-2	<25	Decachlorobiphenyl	32
PCB-1221	11104-28-2	<25		
PCB-1232	11141-16-5	<25	* Acceptable Recovery: 31-146 %	
PCB-1242	53469-21-9	<25	<u>Dilution Factor:</u> 1	
PCB-1248	12672-29-6	<25	<u>Data Qualifiers:</u> None	
PCB-1254	11097-69-1	<25		
PCB-1260	11096-82-5	<25		

SP-2-1	22419-005	10/13/2016	10/12/2016	10/13/2016	10/18/2016	Soil
--------	-----------	------------	------------	------------	------------	------

<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>	<u>Surrogate:</u>	<u>% RC*</u>
PCB-1016	12674-11-2	<25	Decachlorobiphenyl	43
PCB-1221	11104-28-2	<25		
PCB-1232	11141-16-5	<25	* Acceptable Recovery: 31-146 %	
PCB-1242	53469-21-9	<25	<u>Dilution Factor:</u> 1	
PCB-1248	12672-29-6	<25	<u>Data Qualifiers:</u> None	
PCB-1254	11097-69-1	<25		
PCB-1260	11096-82-5	<25		

SP-2-2	22419-006	10/13/2016	10/12/2016	10/13/2016	10/18/2016	Soil
--------	-----------	------------	------------	------------	------------	------

<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>	<u>Surrogate:</u>	<u>% RC*</u>
PCB-1016	12674-11-2	<25	Decachlorobiphenyl	42
PCB-1221	11104-28-2	<25		
PCB-1232	11141-16-5	<25	* Acceptable Recovery: 31-146 %	
PCB-1242	53469-21-9	<25	<u>Dilution Factor:</u> 1	
PCB-1248	12672-29-6	<25	<u>Data Qualifiers:</u> None	
PCB-1254	11097-69-1	<25		
PCB-1260	11096-82-5	<25		

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Polychlorinated Biphenyl's (EPA 8082)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
SP-2-3	22419-007	10/13/2016	10/12/2016	10/13/2016	10/18/2016	Soil

<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>	<u>Surrogate:</u>	<u>% RC*</u>
PCB-1016	12674-11-2	<25	Decachlorobiphenyl	33
PCB-1221	11104-28-2	<25		
PCB-1232	11141-16-5	<25	* Acceptable Recovery: 31-146 %	
PCB-1242	53469-21-9	<25	<u>Dilution Factor:</u> 1	
PCB-1248	12672-29-6	<25	<u>Data Qualifiers:</u> None	
PCB-1254	11097-69-1	<25		
PCB-1260	11096-82-5	<25		

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
SP-2-33	22419-008	10/13/2016	10/12/2016	10/13/2016	10/18/2016	Soil

<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>	<u>Surrogate:</u>	<u>% RC*</u>
PCB-1016	12674-11-2	<25	Decachlorobiphenyl	9
PCB-1221	11104-28-2	<25		
PCB-1232	11141-16-5	<25	* Acceptable Recovery: 31-146 %	
PCB-1242	53469-21-9	<25	<u>Dilution Factor:</u> 1	
PCB-1248	12672-29-6	<25	<u>Data Qualifiers:</u> S5,	
PCB-1254	11097-69-1	<25		
PCB-1260	11096-82-5	<25		

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
SP-3-1	22419-009	10/13/2016	10/12/2016	10/13/2016	10/18/2016	Soil

<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>	<u>Surrogate:</u>	<u>% RC*</u>
PCB-1016	12674-11-2	<25	Decachlorobiphenyl	15
PCB-1221	11104-28-2	<25		
PCB-1232	11141-16-5	<25	* Acceptable Recovery: 31-146 %	
PCB-1242	53469-21-9	<25	<u>Dilution Factor:</u> 1	
PCB-1248	12672-29-6	<25	<u>Data Qualifiers:</u> S5,	
PCB-1254	11097-69-1	<25		
PCB-1260	11096-82-5	<25		

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Polychlorinated Biphenyl's (EPA 8082)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
SP-3-2	22419-010	10/13/2016	10/12/2016	10/13/2016	10/20/2016	Soil

<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>	<u>Surrogate:</u>	<u>% RC*</u>
PCB-1016	12674-11-2	<125	Decachlorobiphenyl	37
PCB-1221	11104-28-2	<125		
PCB-1232	11141-16-5	<125	* Acceptable Recovery: 31-146 %	
PCB-1242	53469-21-9	<125	<u>Dilution Factor:</u> 5	
PCB-1248	12672-29-6	<125	<u>Data Qualifiers:</u> D1,	
PCB-1254	11097-69-1	<125		
PCB-1260	11096-82-5	<125		

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
SP-3-3	22419-011	10/13/2016	10/12/2016	10/13/2016	10/18/2016	Soil

<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>	<u>Surrogate:</u>	<u>% RC*</u>
PCB-1016	12674-11-2	<25	Decachlorobiphenyl	14
PCB-1221	11104-28-2	<25		
PCB-1232	11141-16-5	<25	* Acceptable Recovery: 31-146 %	
PCB-1242	53469-21-9	<25	<u>Dilution Factor:</u> 1	
PCB-1248	12672-29-6	<25	<u>Data Qualifiers:</u> S5,	
PCB-1254	11097-69-1	<25		
PCB-1260	11096-82-5	<25		

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
SP-3-33	22419-012	10/13/2016	10/12/2016	10/13/2016	10/17/2016	Soil

<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>	<u>Surrogate:</u>	<u>% RC*</u>
PCB-1016	12674-11-2	<50	Decachlorobiphenyl	23
PCB-1221	11104-28-2	<50		
PCB-1232	11141-16-5	<50	* Acceptable Recovery: 31-146 %	
PCB-1242	53469-21-9	<50	<u>Dilution Factor:</u> 2	
PCB-1248	12672-29-6	<50	<u>Data Qualifiers:</u> D1, S5,	
PCB-1254	11097-69-1	<50		
PCB-1260	11096-82-5	<50		

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Polychlorinated Biphenyl's (EPA 8082)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
SP-4-1	22419-013	10/13/2016	10/13/2016	10/13/2016	10/18/2016	Soil

<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>	<u>Surrogate:</u>	<u>% RC*</u>
PCB-1016	12674-11-2	<25	Decachlorobiphenyl	7
PCB-1221	11104-28-2	<25		
PCB-1232	11141-16-5	<25	* Acceptable Recovery: 31-146 %	
PCB-1242	53469-21-9	<25	<u>Dilution Factor:</u> 1	
PCB-1248	12672-29-6	<25	<u>Data Qualifiers:</u> S5,	
PCB-1254	11097-69-1	<25		
PCB-1260	11096-82-5	<25		

SP-4-2	22419-014	10/13/2016	10/13/2016	10/13/2016	10/18/2016	Soil
--------	-----------	------------	------------	------------	------------	------

<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>	<u>Surrogate:</u>	<u>% RC*</u>
PCB-1016	12674-11-2	<25	Decachlorobiphenyl	9
PCB-1221	11104-28-2	<25		
PCB-1232	11141-16-5	<25	* Acceptable Recovery: 31-146 %	
PCB-1242	53469-21-9	<25	<u>Dilution Factor:</u> 1	
PCB-1248	12672-29-6	<25	<u>Data Qualifiers:</u> S5,	
PCB-1254	11097-69-1	<25		
PCB-1260	11096-82-5	<25		

SP-4-3	22419-015	10/13/2016	10/13/2016	10/13/2016	10/18/2016	Soil
--------	-----------	------------	------------	------------	------------	------

<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>	<u>Surrogate:</u>	<u>% RC*</u>
PCB-1016	12674-11-2	<25	Decachlorobiphenyl	5
PCB-1221	11104-28-2	<25		
PCB-1232	11141-16-5	<25	* Acceptable Recovery: 31-146 %	
PCB-1242	53469-21-9	<25	<u>Dilution Factor:</u> 1	
PCB-1248	12672-29-6	<25	<u>Data Qualifiers:</u> S5,	
PCB-1254	11097-69-1	<25		
PCB-1260	11096-82-5	<25		

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Polychlorinated Biphenyl's (EPA 8082)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
SP-4-33	22419-016	10/13/2016	10/13/2016	10/13/2016	10/20/2016	Soil

<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>	<u>Surrogate:</u>	<u>% RC*</u>
PCB-1016	12674-11-2	<125	Decachlorobiphenyl	21
PCB-1221	11104-28-2	<125		
PCB-1232	11141-16-5	<125	* Acceptable Recovery: 31-146 %	
PCB-1242	53469-21-9	<125	<u>Dilution Factor:</u> 5	
PCB-1248	12672-29-6	<125	<u>Data Qualifiers:</u> D1, S5,	
PCB-1254	11097-69-1	<125		
PCB-1260	11096-82-5	<125		

Method Blank	MBAV1013163		10/13/2016	10/17/2016	Soil
--------------	-------------	--	------------	------------	------

<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>	<u>Surrogate:</u>	<u>% RC*</u>
PCB-1016	12674-11-2	<25	Decachlorobiphenyl	80
PCB-1221	11104-28-2	<25		
PCB-1232	11141-16-5	<25	* Acceptable Recovery: 31-146 %	
PCB-1242	53469-21-9	<25	<u>Dilution Factor:</u> 1	
PCB-1248	12672-29-6	<25	<u>Data Qualifiers:</u> None	
PCB-1254	11097-69-1	<25		
PCB-1260	11096-82-5	<25		

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Volatile Organics by GC/MS (EPA 8260B)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
SP-1-1	22419-001	10/13/2016	10/12/2016	10/12/2016	10/13/2016	Soil

<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>	<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>
t-Amyl methyl ether (TAME)	994-05-8	<10	trans-1,3-Dichloropropene	10061-02-6	<2.5
Benzene	71-43-2	<2.0	Diisopropyl ether (DIPE)	108-20-3	<10
Bromobenzene	108-86-1	<2.5	Ethyl t-butyl ether (ETBE)	637-92-3	<10
Bromochloromethane	74-97-5	<2.5	Ethylbenzene	100-41-4	<2.5
Bromodichloromethane	75-27-4	<2.5	Hexachlorobutadiene	87-68-3	<5.0
Bromoform	75-25-2	<2.5	Isopropylbenzene	98-82-8	<2.5
Bromomethane	74-83-9	<10	4-Isopropyltoluene	99-87-6	<2.5
tert-Butyl alcohol (TBA)	75-65-0	<50	Methyl t-butyl ether (MTBE)	1634-04-4	<5.0
n-Butylbenzene	104-51-8	<2.5	Methylene chloride	75-09-2	<10
sec-Butylbenzene	135-98-8	<2.5	Naphthalene	91-20-3	<2.5
tert-Butylbenzene	98-06-6	<2.5	n-Propylbenzene	103-65-1	<2.5
Carbon tetrachloride	56-23-5	<2.5	Styrene	100-42-5	<2.5
Chlorobenzene	108-90-7	<2.5	1,1,1,2-Tetrachloroethane	630-20-6	<2.5
Chloroethane	75-00-3	<5.0	1,1,2,2-Tetrachloroethane	79-34-5	<2.5
Chloroform	67-66-3	<2.5	Tetrachloroethene	127-18-4	<2.5
Chloromethane	74-87-3	<5.0	Toluene	108-88-3	<2.5
2-Chlorotoluene	95-49-8	<2.5	1,2,3-Trichlorobenzene	87-61-6	<2.5
4-Chlorotoluene	106-43-4	<2.5	1,2,4-Trichlorobenzene	120-82-1	<2.5
Dibromochloromethane	124-48-1	<2.5	1,1,1-Trichloroethane	71-55-6	<2.5
1,2-Dibromo-3-chloropropane	96-12-8	<5.0	1,1,2-Trichloroethane	79-00-5	<2.5
1,2-Dibromoethane	106-93-4	<2.5	Trichloroethene	79-01-6	<2.5
Dibromomethane	74-95-3	<2.5	Trichlorofluoromethane	75-69-4	<5.0
1,2-Dichlorobenzene	95-50-1	<2.5	1,2,3-Trichloropropane	96-18-4	<2.5
1,3-Dichlorobenzene	541-73-1	<2.5	1,2,4-Trimethylbenzene	95-63-6	<2.5
1,4-Dichlorobenzene	106-46-7	<2.5	1,3,5-Trimethylbenzene	108-67-8	<2.5
Dichlorodifluoromethane	75-71-8	<2.5	Vinyl Chloride	75-01-4	<2.5
1,1-Dichloroethane	75-34-3	<2.5	Xylenes, Total	1330-20-7	<2.0
1,2-Dichloroethane	107-06-2	<2.5			
1,1-Dichloroethene	75-35-4	<2.5			
cis-1,2-Dichloroethene	156-59-2	<2.5			
trans-1,2-Dichloroethene	156-60-5	<2.5			
1,2-Dichloropropane	78-87-5	<2.5			
1,3-Dichloropropane	142-28-9	<2.5			
2,2-Dichloropropane	594-20-7	<2.5			
1,1-Dichloropropene	563-58-6	<2.5			
cis-1,3-Dichloropropene	10061-01-5	<2.5			

<u>Surrogate:</u>	<u>% RC</u>	<u>Acceptable % RC</u>	<u>Dilution Factor:</u> 1
Dibromofluoromethane:	103	33-130 %	<u>Data Qualifiers:</u> None
Toluene-d8:	82	60-130 %	
4-Bromofluorobenzene:	78	54-130 %	

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Volatile Organics by GC/MS (EPA 8260B)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
SP-1-2	22419-002	10/13/2016	10/12/2016	10/12/2016	10/13/2016	Soil

<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>	<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>
t-Amyl methyl ether (TAME)	994-05-8	<10	trans-1,3-Dichloropropene	10061-02-6	<2.5
Benzene	71-43-2	<2.0	Diisopropyl ether (DIPE)	108-20-3	<10
Bromobenzene	108-86-1	<2.5	Ethyl t-butyl ether (ETBE)	637-92-3	<10
Bromochloromethane	74-97-5	<2.5	Ethylbenzene	100-41-4	<2.5
Bromodichloromethane	75-27-4	<2.5	Hexachlorobutadiene	87-68-3	<5.0
Bromoform	75-25-2	<2.5	Isopropylbenzene	98-82-8	<2.5
Bromomethane	74-83-9	<10	4-Isopropyltoluene	99-87-6	<2.5
tert-Butyl alcohol (TBA)	75-65-0	<50	Methyl t-butyl ether (MTBE)	1634-04-4	<5.0
n-Butylbenzene	104-51-8	<2.5	Methylene chloride	75-09-2	<10
sec-Butylbenzene	135-98-8	<2.5	Naphthalene	91-20-3	<2.5
tert-Butylbenzene	98-06-6	<2.5	n-Propylbenzene	103-65-1	<2.5
Carbon tetrachloride	56-23-5	<2.5	Styrene	100-42-5	<2.5
Chlorobenzene	108-90-7	<2.5	1,1,1,2-Tetrachloroethane	630-20-6	<2.5
Chloroethane	75-00-3	<5.0	1,1,2,2-Tetrachloroethane	79-34-5	<2.5
Chloroform	67-66-3	<2.5	Tetrachloroethene	127-18-4	<2.5
Chloromethane	74-87-3	<5.0	Toluene	108-88-3	<2.5
2-Chlorotoluene	95-49-8	<2.5	1,2,3-Trichlorobenzene	87-61-6	<2.5
4-Chlorotoluene	106-43-4	<2.5	1,2,4-Trichlorobenzene	120-82-1	<2.5
Dibromochloromethane	124-48-1	<2.5	1,1,1-Trichloroethane	71-55-6	<2.5
1,2-Dibromo-3-chloropropane	96-12-8	<5.0	1,1,2-Trichloroethane	79-00-5	<2.5
1,2-Dibromoethane	106-93-4	<2.5	Trichloroethene	79-01-6	<2.5
Dibromomethane	74-95-3	<2.5	Trichlorofluoromethane	75-69-4	<5.0
1,2-Dichlorobenzene	95-50-1	<2.5	1,2,3-Trichloropropane	96-18-4	<2.5
1,3-Dichlorobenzene	541-73-1	<2.5	1,2,4-Trimethylbenzene	95-63-6	<2.5
1,4-Dichlorobenzene	106-46-7	<2.5	1,3,5-Trimethylbenzene	108-67-8	<2.5
Dichlorodifluoromethane	75-71-8	<2.5	Vinyl Chloride	75-01-4	<2.5
1,1-Dichloroethane	75-34-3	<2.5	Xylenes, Total	1330-20-7	<2.0
1,2-Dichloroethane	107-06-2	<2.5			
1,1-Dichloroethene	75-35-4	<2.5			
cis-1,2-Dichloroethene	156-59-2	<2.5			
trans-1,2-Dichloroethene	156-60-5	<2.5			
1,2-Dichloropropane	78-87-5	<2.5			
1,3-Dichloropropane	142-28-9	<2.5			
2,2-Dichloropropane	594-20-7	<2.5			
1,1-Dichloropropene	563-58-6	<2.5			
cis-1,3-Dichloropropene	10061-01-5	<2.5			

<u>Surrogate:</u>	<u>% RC</u>	<u>Acceptable % RC</u>	<u>Dilution Factor:</u> 1
Dibromofluoromethane:	101	33-130 %	<u>Data Qualifiers:</u> None
Toluene-d8:	81	60-130 %	
4-Bromofluorobenzene:	77	54-130 %	

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Volatile Organics by GC/MS (EPA 8260B)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
SP-1-3	22419-003	10/13/2016	10/12/2016	10/12/2016	10/13/2016	Soil

<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>	<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>
t-Amyl methyl ether (TAME)	994-05-8	<10	trans-1,3-Dichloropropene	10061-02-6	<2.5
Benzene	71-43-2	<2.0	Diisopropyl ether (DIPE)	108-20-3	<10
Bromobenzene	108-86-1	<2.5	Ethyl t-butyl ether (ETBE)	637-92-3	<10
Bromochloromethane	74-97-5	<2.5	Ethylbenzene	100-41-4	<2.5
Bromodichloromethane	75-27-4	<2.5	Hexachlorobutadiene	87-68-3	<5.0
Bromoform	75-25-2	<2.5	Isopropylbenzene	98-82-8	<2.5
Bromomethane	74-83-9	<10	4-Isopropyltoluene	99-87-6	<2.5
tert-Butyl alcohol (TBA)	75-65-0	<50	Methyl t-butyl ether (MTBE)	1634-04-4	<5.0
n-Butylbenzene	104-51-8	<2.5	Methylene chloride	75-09-2	<10
sec-Butylbenzene	135-98-8	<2.5	Naphthalene	91-20-3	<2.5
tert-Butylbenzene	98-06-6	<2.5	n-Propylbenzene	103-65-1	<2.5
Carbon tetrachloride	56-23-5	<2.5	Styrene	100-42-5	<2.5
Chlorobenzene	108-90-7	<2.5	1,1,1,2-Tetrachloroethane	630-20-6	<2.5
Chloroethane	75-00-3	<5.0	1,1,2,2-Tetrachloroethane	79-34-5	<2.5
Chloroform	67-66-3	<2.5	Tetrachloroethene	127-18-4	<2.5
Chloromethane	74-87-3	<5.0	Toluene	108-88-3	<2.5
2-Chlorotoluene	95-49-8	<2.5	1,2,3-Trichlorobenzene	87-61-6	<2.5
4-Chlorotoluene	106-43-4	<2.5	1,2,4-Trichlorobenzene	120-82-1	<2.5
Dibromochloromethane	124-48-1	<2.5	1,1,1-Trichloroethane	71-55-6	<2.5
1,2-Dibromo-3-chloropropane	96-12-8	<5.0	1,1,2-Trichloroethane	79-00-5	<2.5
1,2-Dibromoethane	106-93-4	<2.5	Trichloroethene	79-01-6	<2.5
Dibromomethane	74-95-3	<2.5	Trichlorofluoromethane	75-69-4	<5.0
1,2-Dichlorobenzene	95-50-1	<2.5	1,2,3-Trichloropropane	96-18-4	<2.5
1,3-Dichlorobenzene	541-73-1	<2.5	1,2,4-Trimethylbenzene	95-63-6	<2.5
1,4-Dichlorobenzene	106-46-7	<2.5	1,3,5-Trimethylbenzene	108-67-8	<2.5
Dichlorodifluoromethane	75-71-8	<2.5	Vinyl Chloride	75-01-4	<2.5
1,1-Dichloroethane	75-34-3	<2.5	Xylenes, Total	1330-20-7	<2.0
1,2-Dichloroethane	107-06-2	<2.5			
1,1-Dichloroethene	75-35-4	<2.5			
cis-1,2-Dichloroethene	156-59-2	<2.5			
trans-1,2-Dichloroethene	156-60-5	<2.5			
1,2-Dichloropropane	78-87-5	<2.5			
1,3-Dichloropropane	142-28-9	<2.5			
2,2-Dichloropropane	594-20-7	<2.5			
1,1-Dichloropropene	563-58-6	<2.5			
cis-1,3-Dichloropropene	10061-01-5	<2.5			

<u>Surrogate:</u>	<u>% RC</u>	<u>Acceptable % RC</u>	<u>Dilution Factor:</u> 1
Dibromofluoromethane:	102	33-130 %	<u>Data Qualifiers:</u> None
Toluene-d8:	82	60-130 %	
4-Bromofluorobenzene:	77	54-130 %	



Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Volatile Organics by GC/MS (EPA 8260B)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
SP-1-33	22419-004	10/13/2016	10/12/2016	10/12/2016	10/13/2016	Soil

<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>	<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>
t-Amyl methyl ether (TAME)	994-05-8	<10	trans-1,3-Dichloropropene	10061-02-6	<2.5
Benzene	71-43-2	<2.0	Diisopropyl ether (DIPE)	108-20-3	<10
Bromobenzene	108-86-1	<2.5	Ethyl t-butyl ether (ETBE)	637-92-3	<10
Bromochloromethane	74-97-5	<2.5	Ethylbenzene	100-41-4	<2.5
Bromodichloromethane	75-27-4	<2.5	Hexachlorobutadiene	87-68-3	<5.0
Bromoform	75-25-2	<2.5	Isopropylbenzene	98-82-8	<2.5
Bromomethane	74-83-9	<10	4-Isopropyltoluene	99-87-6	<2.5
tert-Butyl alcohol (TBA)	75-65-0	<50	Methyl t-butyl ether (MTBE)	1634-04-4	<5.0
n-Butylbenzene	104-51-8	<2.5	Methylene chloride	75-09-2	<10
sec-Butylbenzene	135-98-8	<2.5	Naphthalene	91-20-3	<2.5
tert-Butylbenzene	98-06-6	<2.5	n-Propylbenzene	103-65-1	<2.5
Carbon tetrachloride	56-23-5	<2.5	Styrene	100-42-5	<2.5
Chlorobenzene	108-90-7	<2.5	1,1,1,2-Tetrachloroethane	630-20-6	<2.5
Chloroethane	75-00-3	<5.0	1,1,2,2-Tetrachloroethane	79-34-5	<2.5
Chloroform	67-66-3	<2.5	Tetrachloroethene	127-18-4	<2.5
Chloromethane	74-87-3	<5.0	Toluene	108-88-3	<2.5
2-Chlorotoluene	95-49-8	<2.5	1,2,3-Trichlorobenzene	87-61-6	<2.5
4-Chlorotoluene	106-43-4	<2.5	1,2,4-Trichlorobenzene	120-82-1	<2.5
Dibromochloromethane	124-48-1	<2.5	1,1,1-Trichloroethane	71-55-6	<2.5
1,2-Dibromo-3-chloropropane	96-12-8	<5.0	1,1,2-Trichloroethane	79-00-5	<2.5
1,2-Dibromoethane	106-93-4	<2.5	Trichloroethene	79-01-6	<2.5
Dibromomethane	74-95-3	<2.5	Trichlorofluoromethane	75-69-4	<5.0
1,2-Dichlorobenzene	95-50-1	<2.5	1,2,3-Trichloropropane	96-18-4	<2.5
1,3-Dichlorobenzene	541-73-1	<2.5	1,2,4-Trimethylbenzene	95-63-6	<2.5
1,4-Dichlorobenzene	106-46-7	<2.5	1,3,5-Trimethylbenzene	108-67-8	<2.5
Dichlorodifluoromethane	75-71-8	<2.5	Vinyl Chloride	75-01-4	<2.5
1,1-Dichloroethane	75-34-3	<2.5	Xylenes, Total	1330-20-7	<2.0
1,2-Dichloroethane	107-06-2	<2.5			
1,1-Dichloroethene	75-35-4	<2.5			
cis-1,2-Dichloroethene	156-59-2	<2.5			
trans-1,2-Dichloroethene	156-60-5	<2.5			
1,2-Dichloropropane	78-87-5	<2.5			
1,3-Dichloropropane	142-28-9	<2.5			
2,2-Dichloropropane	594-20-7	<2.5			
1,1-Dichloropropene	563-58-6	<2.5			
cis-1,3-Dichloropropene	10061-01-5	<2.5			

<u>Surrogate:</u>	<u>% RC</u>	<u>Acceptable % RC</u>	<u>Dilution Factor:</u> 1
Dibromofluoromethane:	102	33-130 %	<u>Data Qualifiers:</u> None
Toluene-d8:	82	60-130 %	
4-Bromofluorobenzene:	76	54-130 %	

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Volatile Organics by GC/MS (EPA 8260B)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
SP-2-1	22419-005	10/13/2016	10/12/2016	10/12/2016	10/14/2016	Soil

<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>	<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>
t-Amyl methyl ether (TAME)	994-05-8	<10	trans-1,3-Dichloropropene	10061-02-6	<2.5
Benzene	71-43-2	<2.0	Diisopropyl ether (DIPE)	108-20-3	<10
Bromobenzene	108-86-1	<2.5	Ethyl t-butyl ether (ETBE)	637-92-3	<10
Bromochloromethane	74-97-5	<2.5	Ethylbenzene	100-41-4	<2.5
Bromodichloromethane	75-27-4	<2.5	Hexachlorobutadiene	87-68-3	<5.0
Bromoform	75-25-2	<2.5	Isopropylbenzene	98-82-8	<2.5
Bromomethane	74-83-9	<10	4-Isopropyltoluene	99-87-6	<2.5
tert-Butyl alcohol (TBA)	75-65-0	<50	Methyl t-butyl ether (MTBE)	1634-04-4	<5.0
n-Butylbenzene	104-51-8	<2.5	Methylene chloride	75-09-2	<10
sec-Butylbenzene	135-98-8	<2.5	Naphthalene	91-20-3	<2.5
tert-Butylbenzene	98-06-6	<2.5	n-Propylbenzene	103-65-1	<2.5
Carbon tetrachloride	56-23-5	<2.5	Styrene	100-42-5	<2.5
Chlorobenzene	108-90-7	<2.5	1,1,1,2-Tetrachloroethane	630-20-6	<2.5
Chloroethane	75-00-3	<5.0	1,1,2,2-Tetrachloroethane	79-34-5	<2.5
Chloroform	67-66-3	<2.5	Tetrachloroethene	127-18-4	<2.5
Chloromethane	74-87-3	<5.0	Toluene	108-88-3	<2.5
2-Chlorotoluene	95-49-8	<2.5	1,2,3-Trichlorobenzene	87-61-6	<2.5
4-Chlorotoluene	106-43-4	<2.5	1,2,4-Trichlorobenzene	120-82-1	<2.5
Dibromochloromethane	124-48-1	<2.5	1,1,1-Trichloroethane	71-55-6	<2.5
1,2-Dibromo-3-chloropropane	96-12-8	<5.0	1,1,2-Trichloroethane	79-00-5	<2.5
1,2-Dibromoethane	106-93-4	<2.5	Trichloroethene	79-01-6	<2.5
Dibromomethane	74-95-3	<2.5	Trichlorofluoromethane	75-69-4	<5.0
1,2-Dichlorobenzene	95-50-1	<2.5	1,2,3-Trichloropropane	96-18-4	<2.5
1,3-Dichlorobenzene	541-73-1	<2.5	1,2,4-Trimethylbenzene	95-63-6	<2.5
1,4-Dichlorobenzene	106-46-7	<2.5	1,3,5-Trimethylbenzene	108-67-8	<2.5
Dichlorodifluoromethane	75-71-8	<2.5	Vinyl Chloride	75-01-4	<2.5
1,1-Dichloroethane	75-34-3	<2.5	Xylenes, Total	1330-20-7	<2.0
1,2-Dichloroethane	107-06-2	<2.5			
1,1-Dichloroethene	75-35-4	<2.5			
cis-1,2-Dichloroethene	156-59-2	<2.5			
trans-1,2-Dichloroethene	156-60-5	<2.5			
1,2-Dichloropropane	78-87-5	<2.5			
1,3-Dichloropropane	142-28-9	<2.5			
2,2-Dichloropropane	594-20-7	<2.5			
1,1-Dichloropropene	563-58-6	<2.5			
cis-1,3-Dichloropropene	10061-01-5	<2.5			

<u>Surrogate:</u>	<u>% RC</u>	<u>Acceptable % RC</u>	<u>Dilution Factor:</u> 1
Dibromofluoromethane:	85	33-130 %	<u>Data Qualifiers:</u> None
Toluene-d8:	83	60-130 %	
4-Bromofluorobenzene:	83	54-130 %	

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Volatile Organics by GC/MS (EPA 8260B)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
SP-2-2	22419-006	10/13/2016	10/12/2016	10/12/2016	10/14/2016	Soil

<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>	<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>
t-Amyl methyl ether (TAME)	994-05-8	<10	trans-1,3-Dichloropropene	10061-02-6	<2.5
Benzene	71-43-2	<2.0	Diisopropyl ether (DIPE)	108-20-3	<10
Bromobenzene	108-86-1	<2.5	Ethyl t-butyl ether (ETBE)	637-92-3	<10
Bromochloromethane	74-97-5	<2.5	Ethylbenzene	100-41-4	<2.5
Bromodichloromethane	75-27-4	<2.5	Hexachlorobutadiene	87-68-3	<5.0
Bromoform	75-25-2	<2.5	Isopropylbenzene	98-82-8	<2.5
Bromomethane	74-83-9	<10	4-Isopropyltoluene	99-87-6	<2.5
tert-Butyl alcohol (TBA)	75-65-0	<50	Methyl t-butyl ether (MTBE)	1634-04-4	<5.0
n-Butylbenzene	104-51-8	<2.5	Methylene chloride	75-09-2	<10
sec-Butylbenzene	135-98-8	<2.5	Naphthalene	91-20-3	<2.5
tert-Butylbenzene	98-06-6	<2.5	n-Propylbenzene	103-65-1	<2.5
Carbon tetrachloride	56-23-5	<2.5	Styrene	100-42-5	<2.5
Chlorobenzene	108-90-7	<2.5	1,1,1,2-Tetrachloroethane	630-20-6	<2.5
Chloroethane	75-00-3	<5.0	1,1,2,2-Tetrachloroethane	79-34-5	<2.5
Chloroform	67-66-3	<2.5	Tetrachloroethene	127-18-4	<2.5
Chloromethane	74-87-3	<5.0	Toluene	108-88-3	<2.5
2-Chlorotoluene	95-49-8	<2.5	1,2,3-Trichlorobenzene	87-61-6	<2.5
4-Chlorotoluene	106-43-4	<2.5	1,2,4-Trichlorobenzene	120-82-1	<2.5
Dibromochloromethane	124-48-1	<2.5	1,1,1-Trichloroethane	71-55-6	<2.5
1,2-Dibromo-3-chloropropane	96-12-8	<5.0	1,1,2-Trichloroethane	79-00-5	<2.5
1,2-Dibromoethane	106-93-4	<2.5	Trichloroethene	79-01-6	<2.5
Dibromomethane	74-95-3	<2.5	Trichlorofluoromethane	75-69-4	<5.0
1,2-Dichlorobenzene	95-50-1	<2.5	1,2,3-Trichloropropane	96-18-4	<2.5
1,3-Dichlorobenzene	541-73-1	<2.5	1,2,4-Trimethylbenzene	95-63-6	<2.5
1,4-Dichlorobenzene	106-46-7	<2.5	1,3,5-Trimethylbenzene	108-67-8	<2.5
Dichlorodifluoromethane	75-71-8	<2.5	Vinyl Chloride	75-01-4	<2.5
1,1-Dichloroethane	75-34-3	<2.5	Xylenes, Total	1330-20-7	<2.0
1,2-Dichloroethane	107-06-2	<2.5			
1,1-Dichloroethene	75-35-4	<2.5			
cis-1,2-Dichloroethene	156-59-2	<2.5			
trans-1,2-Dichloroethene	156-60-5	<2.5			
1,2-Dichloropropane	78-87-5	<2.5			
1,3-Dichloropropane	142-28-9	<2.5			
2,2-Dichloropropane	594-20-7	<2.5			
1,1-Dichloropropene	563-58-6	<2.5			
cis-1,3-Dichloropropene	10061-01-5	<2.5			

<u>Surrogate:</u>	<u>% RC</u>	<u>Acceptable % RC</u>	<u>Dilution Factor:</u> 1
Dibromofluoromethane:	90	33-130 %	<u>Data Qualifiers:</u> None
Toluene-d8:	83	60-130 %	
4-Bromofluorobenzene:	81	54-130 %	

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Volatile Organics by GC/MS (EPA 8260B)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
SP-2-3	22419-007	10/13/2016	10/12/2016	10/12/2016	10/14/2016	Soil

<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>	<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>
t-Amyl methyl ether (TAME)	994-05-8	<10	trans-1,3-Dichloropropene	10061-02-6	<2.5
Benzene	71-43-2	<2.0	Diisopropyl ether (DIPE)	108-20-3	<10
Bromobenzene	108-86-1	<2.5	Ethyl t-butyl ether (ETBE)	637-92-3	<10
Bromochloromethane	74-97-5	<2.5	Ethylbenzene	100-41-4	<2.5
Bromodichloromethane	75-27-4	<2.5	Hexachlorobutadiene	87-68-3	<5.0
Bromoform	75-25-2	<2.5	Isopropylbenzene	98-82-8	<2.5
Bromomethane	74-83-9	<10	4-Isopropyltoluene	99-87-6	<2.5
tert-Butyl alcohol (TBA)	75-65-0	<50	Methyl t-butyl ether (MTBE)	1634-04-4	<5.0
n-Butylbenzene	104-51-8	<2.5	Methylene chloride	75-09-2	<10
sec-Butylbenzene	135-98-8	<2.5	Naphthalene	91-20-3	<2.5
tert-Butylbenzene	98-06-6	<2.5	n-Propylbenzene	103-65-1	<2.5
Carbon tetrachloride	56-23-5	<2.5	Styrene	100-42-5	<2.5
Chlorobenzene	108-90-7	<2.5	1,1,1,2-Tetrachloroethane	630-20-6	<2.5
Chloroethane	75-00-3	<5.0	1,1,2,2-Tetrachloroethane	79-34-5	<2.5
Chloroform	67-66-3	<2.5	Tetrachloroethene	127-18-4	<2.5
Chloromethane	74-87-3	<5.0	Toluene	108-88-3	<2.5
2-Chlorotoluene	95-49-8	<2.5	1,2,3-Trichlorobenzene	87-61-6	<2.5
4-Chlorotoluene	106-43-4	<2.5	1,2,4-Trichlorobenzene	120-82-1	<2.5
Dibromochloromethane	124-48-1	<2.5	1,1,1-Trichloroethane	71-55-6	<2.5
1,2-Dibromo-3-chloropropane	96-12-8	<5.0	1,1,2-Trichloroethane	79-00-5	<2.5
1,2-Dibromoethane	106-93-4	<2.5	Trichloroethene	79-01-6	<2.5
Dibromomethane	74-95-3	<2.5	Trichlorofluoromethane	75-69-4	<5.0
1,2-Dichlorobenzene	95-50-1	<2.5	1,2,3-Trichloropropane	96-18-4	<2.5
1,3-Dichlorobenzene	541-73-1	<2.5	1,2,4-Trimethylbenzene	95-63-6	<2.5
1,4-Dichlorobenzene	106-46-7	<2.5	1,3,5-Trimethylbenzene	108-67-8	<2.5
Dichlorodifluoromethane	75-71-8	<2.5	Vinyl Chloride	75-01-4	<2.5
1,1-Dichloroethane	75-34-3	<2.5	Xylenes, Total	1330-20-7	<2.0
1,2-Dichloroethane	107-06-2	<2.5			
1,1-Dichloroethene	75-35-4	<2.5			
cis-1,2-Dichloroethene	156-59-2	<2.5			
trans-1,2-Dichloroethene	156-60-5	<2.5			
1,2-Dichloropropane	78-87-5	<2.5			
1,3-Dichloropropane	142-28-9	<2.5			
2,2-Dichloropropane	594-20-7	<2.5			
1,1-Dichloropropene	563-58-6	<2.5			
cis-1,3-Dichloropropene	10061-01-5	<2.5			

<u>Surrogate:</u>	<u>% RC</u>	<u>Acceptable % RC</u>	<u>Dilution Factor:</u> 1
Dibromofluoromethane:	90	33-130 %	<u>Data Qualifiers:</u> None
Toluene-d8:	82	60-130 %	
4-Bromofluorobenzene:	78	54-130 %	

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Volatile Organics by GC/MS (EPA 8260B)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
SP-2-33	22419-008	10/13/2016	10/12/2016	10/12/2016	10/14/2016	Soil

<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>	<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>
t-Amyl methyl ether (TAME)	994-05-8	<10	trans-1,3-Dichloropropene	10061-02-6	<2.5
Benzene	71-43-2	<2.0	Diisopropyl ether (DIPE)	108-20-3	<10
Bromobenzene	108-86-1	<2.5	Ethyl t-butyl ether (ETBE)	637-92-3	<10
Bromochloromethane	74-97-5	<2.5	Ethylbenzene	100-41-4	<2.5
Bromodichloromethane	75-27-4	<2.5	Hexachlorobutadiene	87-68-3	<5.0
Bromoform	75-25-2	<2.5	Isopropylbenzene	98-82-8	<2.5
Bromomethane	74-83-9	<10	4-Isopropyltoluene	99-87-6	<2.5
tert-Butyl alcohol (TBA)	75-65-0	<50	Methyl t-butyl ether (MTBE)	1634-04-4	<5.0
n-Butylbenzene	104-51-8	<2.5	Methylene chloride	75-09-2	<10
sec-Butylbenzene	135-98-8	<2.5	Naphthalene	91-20-3	<2.5
tert-Butylbenzene	98-06-6	<2.5	n-Propylbenzene	103-65-1	<2.5
Carbon tetrachloride	56-23-5	<2.5	Styrene	100-42-5	<2.5
Chlorobenzene	108-90-7	<2.5	1,1,1,2-Tetrachloroethane	630-20-6	<2.5
Chloroethane	75-00-3	<5.0	1,1,2,2-Tetrachloroethane	79-34-5	<2.5
Chloroform	67-66-3	<2.5	Tetrachloroethene	127-18-4	<2.5
Chloromethane	74-87-3	<5.0	Toluene	108-88-3	<2.5
2-Chlorotoluene	95-49-8	<2.5	1,2,3-Trichlorobenzene	87-61-6	<2.5
4-Chlorotoluene	106-43-4	<2.5	1,2,4-Trichlorobenzene	120-82-1	<2.5
Dibromochloromethane	124-48-1	<2.5	1,1,1-Trichloroethane	71-55-6	<2.5
1,2-Dibromo-3-chloropropane	96-12-8	<5.0	1,1,2-Trichloroethane	79-00-5	<2.5
1,2-Dibromoethane	106-93-4	<2.5	Trichloroethene	79-01-6	<2.5
Dibromomethane	74-95-3	<2.5	Trichlorofluoromethane	75-69-4	<5.0
1,2-Dichlorobenzene	95-50-1	<2.5	1,2,3-Trichloropropane	96-18-4	<2.5
1,3-Dichlorobenzene	541-73-1	<2.5	1,2,4-Trimethylbenzene	95-63-6	<2.5
1,4-Dichlorobenzene	106-46-7	<2.5	1,3,5-Trimethylbenzene	108-67-8	<2.5
Dichlorodifluoromethane	75-71-8	<2.5	Vinyl Chloride	75-01-4	<2.5
1,1-Dichloroethane	75-34-3	<2.5	Xylenes, Total	1330-20-7	<2.0
1,2-Dichloroethane	107-06-2	<2.5			
1,1-Dichloroethene	75-35-4	<2.5			
cis-1,2-Dichloroethene	156-59-2	<2.5			
trans-1,2-Dichloroethene	156-60-5	<2.5			
1,2-Dichloropropane	78-87-5	<2.5			
1,3-Dichloropropane	142-28-9	<2.5			
2,2-Dichloropropane	594-20-7	<2.5			
1,1-Dichloropropene	563-58-6	<2.5			
cis-1,3-Dichloropropene	10061-01-5	<2.5			

<u>Surrogate:</u>	<u>% RC</u>	<u>Acceptable % RC</u>	<u>Dilution Factor:</u> 1
Dibromofluoromethane:	92	33-130 %	<u>Data Qualifiers:</u> None
Toluene-d8:	82	60-130 %	
4-Bromofluorobenzene:	79	54-130 %	

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Volatile Organics by GC/MS (EPA 8260B)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
SP-3-1	22419-009	10/13/2016	10/12/2016	10/12/2016	10/14/2016	Soil

<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>	<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>
t-Amyl methyl ether (TAME)	994-05-8	<10	trans-1,3-Dichloropropene	10061-02-6	<2.5
Benzene	71-43-2	<2.0	Diisopropyl ether (DIPE)	108-20-3	<10
Bromobenzene	108-86-1	<2.5	Ethyl t-butyl ether (ETBE)	637-92-3	<10
Bromochloromethane	74-97-5	<2.5	Ethylbenzene	100-41-4	<2.5
Bromodichloromethane	75-27-4	<2.5	Hexachlorobutadiene	87-68-3	<5.0
Bromoform	75-25-2	<2.5	Isopropylbenzene	98-82-8	<2.5
Bromomethane	74-83-9	<10	4-Isopropyltoluene	99-87-6	<2.5
tert-Butyl alcohol (TBA)	75-65-0	<50	Methyl t-butyl ether (MTBE)	1634-04-4	<5.0
n-Butylbenzene	104-51-8	<2.5	Methylene chloride	75-09-2	<10
sec-Butylbenzene	135-98-8	<2.5	Naphthalene	91-20-3	<2.5
tert-Butylbenzene	98-06-6	<2.5	n-Propylbenzene	103-65-1	<2.5
Carbon tetrachloride	56-23-5	<2.5	Styrene	100-42-5	<2.5
Chlorobenzene	108-90-7	<2.5	1,1,1,2-Tetrachloroethane	630-20-6	<2.5
Chloroethane	75-00-3	<5.0	1,1,2,2-Tetrachloroethane	79-34-5	<2.5
Chloroform	67-66-3	<2.5	Tetrachloroethene	127-18-4	<2.5
Chloromethane	74-87-3	<5.0	Toluene	108-88-3	<2.5
2-Chlorotoluene	95-49-8	<2.5	1,2,3-Trichlorobenzene	87-61-6	<2.5
4-Chlorotoluene	106-43-4	<2.5	1,2,4-Trichlorobenzene	120-82-1	<2.5
Dibromochloromethane	124-48-1	<2.5	1,1,1-Trichloroethane	71-55-6	<2.5
1,2-Dibromo-3-chloropropane	96-12-8	<5.0	1,1,2-Trichloroethane	79-00-5	<2.5
1,2-Dibromoethane	106-93-4	<2.5	Trichloroethene	79-01-6	<2.5
Dibromomethane	74-95-3	<2.5	Trichlorofluoromethane	75-69-4	<5.0
1,2-Dichlorobenzene	95-50-1	<2.5	1,2,3-Trichloropropane	96-18-4	<2.5
1,3-Dichlorobenzene	541-73-1	<2.5	1,2,4-Trimethylbenzene	95-63-6	<2.5
1,4-Dichlorobenzene	106-46-7	<2.5	1,3,5-Trimethylbenzene	108-67-8	<2.5
Dichlorodifluoromethane	75-71-8	<2.5	Vinyl Chloride	75-01-4	<2.5
1,1-Dichloroethane	75-34-3	<2.5	Xylenes, Total	1330-20-7	<2.0
1,2-Dichloroethane	107-06-2	<2.5			
1,1-Dichloroethene	75-35-4	<2.5			
cis-1,2-Dichloroethene	156-59-2	<2.5			
trans-1,2-Dichloroethene	156-60-5	<2.5			
1,2-Dichloropropane	78-87-5	<2.5			
1,3-Dichloropropane	142-28-9	<2.5			
2,2-Dichloropropane	594-20-7	<2.5			
1,1-Dichloropropene	563-58-6	<2.5			
cis-1,3-Dichloropropene	10061-01-5	<2.5			

<u>Surrogate:</u>	<u>% RC</u>	<u>Acceptable % RC</u>	<u>Dilution Factor:</u> 1
Dibromofluoromethane:	93	33-130 %	<u>Data Qualifiers:</u> None
Toluene-d8:	82	60-130 %	
4-Bromofluorobenzene:	79	54-130 %	

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Volatile Organics by GC/MS (EPA 8260B)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
SP-3-2	22419-010	10/13/2016	10/12/2016	10/12/2016	10/14/2016	Soil

<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>	<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>
t-Amyl methyl ether (TAME)	994-05-8	<10	trans-1,3-Dichloropropene	10061-02-6	<2.5
Benzene	71-43-2	<2.0	Diisopropyl ether (DIPE)	108-20-3	<10
Bromobenzene	108-86-1	<2.5	Ethyl t-butyl ether (ETBE)	637-92-3	<10
Bromochloromethane	74-97-5	<2.5	Ethylbenzene	100-41-4	<2.5
Bromodichloromethane	75-27-4	<2.5	Hexachlorobutadiene	87-68-3	<5.0
Bromoform	75-25-2	<2.5	Isopropylbenzene	98-82-8	<2.5
Bromomethane	74-83-9	<10	4-Isopropyltoluene	99-87-6	<2.5
tert-Butyl alcohol (TBA)	75-65-0	<50	Methyl t-butyl ether (MTBE)	1634-04-4	<5.0
n-Butylbenzene	104-51-8	<2.5	Methylene chloride	75-09-2	<10
sec-Butylbenzene	135-98-8	<2.5	Naphthalene	91-20-3	<2.5
tert-Butylbenzene	98-06-6	<2.5	n-Propylbenzene	103-65-1	<2.5
Carbon tetrachloride	56-23-5	<2.5	Styrene	100-42-5	<2.5
Chlorobenzene	108-90-7	<2.5	1,1,1,2-Tetrachloroethane	630-20-6	<2.5
Chloroethane	75-00-3	<5.0	1,1,2,2-Tetrachloroethane	79-34-5	<2.5
Chloroform	67-66-3	<2.5	Tetrachloroethene	127-18-4	<2.5
Chloromethane	74-87-3	<5.0	Toluene	108-88-3	<2.5
2-Chlorotoluene	95-49-8	<2.5	1,2,3-Trichlorobenzene	87-61-6	<2.5
4-Chlorotoluene	106-43-4	<2.5	1,2,4-Trichlorobenzene	120-82-1	<2.5
Dibromochloromethane	124-48-1	<2.5	1,1,1-Trichloroethane	71-55-6	<2.5
1,2-Dibromo-3-chloropropane	96-12-8	<5.0	1,1,2-Trichloroethane	79-00-5	<2.5
1,2-Dibromoethane	106-93-4	<2.5	Trichloroethene	79-01-6	<2.5
Dibromomethane	74-95-3	<2.5	Trichlorofluoromethane	75-69-4	<5.0
1,2-Dichlorobenzene	95-50-1	<2.5	1,2,3-Trichloropropane	96-18-4	<2.5
1,3-Dichlorobenzene	541-73-1	<2.5	1,2,4-Trimethylbenzene	95-63-6	<2.5
1,4-Dichlorobenzene	106-46-7	<2.5	1,3,5-Trimethylbenzene	108-67-8	<2.5
Dichlorodifluoromethane	75-71-8	<2.5	Vinyl Chloride	75-01-4	<2.5
1,1-Dichloroethane	75-34-3	<2.5	Xylenes, Total	1330-20-7	<2.0
1,2-Dichloroethane	107-06-2	<2.5			
1,1-Dichloroethene	75-35-4	<2.5			
cis-1,2-Dichloroethene	156-59-2	<2.5			
trans-1,2-Dichloroethene	156-60-5	<2.5			
1,2-Dichloropropane	78-87-5	<2.5			
1,3-Dichloropropane	142-28-9	<2.5			
2,2-Dichloropropane	594-20-7	<2.5			
1,1-Dichloropropene	563-58-6	<2.5			
cis-1,3-Dichloropropene	10061-01-5	<2.5			

<u>Surrogate:</u>	<u>% RC</u>	<u>Acceptable % RC</u>	<u>Dilution Factor:</u> 1
Dibromofluoromethane:	93	33-130 %	<u>Data Qualifiers:</u> None
Toluene-d8:	84	60-130 %	
4-Bromofluorobenzene:	79	54-130 %	

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Volatile Organics by GC/MS (EPA 8260B)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
SP-3-3	22419-011	10/13/2016	10/12/2016	10/12/2016	10/14/2016	Soil

<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>	<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>
t-Amyl methyl ether (TAME)	994-05-8	<10	trans-1,3-Dichloropropene	10061-02-6	<2.5
Benzene	71-43-2	<2.0	Diisopropyl ether (DIPE)	108-20-3	<10
Bromobenzene	108-86-1	<2.5	Ethyl t-butyl ether (ETBE)	637-92-3	<10
Bromochloromethane	74-97-5	<2.5	Ethylbenzene	100-41-4	<2.5
Bromodichloromethane	75-27-4	<2.5	Hexachlorobutadiene	87-68-3	<5.0
Bromoform	75-25-2	<2.5	Isopropylbenzene	98-82-8	<2.5
Bromomethane	74-83-9	<10	4-Isopropyltoluene	99-87-6	<2.5
tert-Butyl alcohol (TBA)	75-65-0	<50	Methyl t-butyl ether (MTBE)	1634-04-4	<5.0
n-Butylbenzene	104-51-8	<2.5	Methylene chloride	75-09-2	<10
sec-Butylbenzene	135-98-8	<2.5	Naphthalene	91-20-3	<2.5
tert-Butylbenzene	98-06-6	<2.5	n-Propylbenzene	103-65-1	<2.5
Carbon tetrachloride	56-23-5	<2.5	Styrene	100-42-5	<2.5
Chlorobenzene	108-90-7	<2.5	1,1,1,2-Tetrachloroethane	630-20-6	<2.5
Chloroethane	75-00-3	<5.0	1,1,2,2-Tetrachloroethane	79-34-5	<2.5
Chloroform	67-66-3	<2.5	Tetrachloroethene	127-18-4	<2.5
Chloromethane	74-87-3	<5.0	Toluene	108-88-3	<2.5
2-Chlorotoluene	95-49-8	<2.5	1,2,3-Trichlorobenzene	87-61-6	<2.5
4-Chlorotoluene	106-43-4	<2.5	1,2,4-Trichlorobenzene	120-82-1	<2.5
Dibromochloromethane	124-48-1	<2.5	1,1,1-Trichloroethane	71-55-6	<2.5
1,2-Dibromo-3-chloropropane	96-12-8	<5.0	1,1,2-Trichloroethane	79-00-5	<2.5
1,2-Dibromoethane	106-93-4	<2.5	Trichloroethene	79-01-6	<2.5
Dibromomethane	74-95-3	<2.5	Trichlorofluoromethane	75-69-4	<5.0
1,2-Dichlorobenzene	95-50-1	<2.5	1,2,3-Trichloropropane	96-18-4	<2.5
1,3-Dichlorobenzene	541-73-1	<2.5	1,2,4-Trimethylbenzene	95-63-6	<2.5
1,4-Dichlorobenzene	106-46-7	<2.5	1,3,5-Trimethylbenzene	108-67-8	<2.5
Dichlorodifluoromethane	75-71-8	<2.5	Vinyl Chloride	75-01-4	<2.5
1,1-Dichloroethane	75-34-3	<2.5	Xylenes, Total	1330-20-7	<2.0
1,2-Dichloroethane	107-06-2	<2.5			
1,1-Dichloroethene	75-35-4	<2.5			
cis-1,2-Dichloroethene	156-59-2	<2.5			
trans-1,2-Dichloroethene	156-60-5	<2.5			
1,2-Dichloropropane	78-87-5	<2.5			
1,3-Dichloropropane	142-28-9	<2.5			
2,2-Dichloropropane	594-20-7	<2.5			
1,1-Dichloropropene	563-58-6	<2.5			
cis-1,3-Dichloropropene	10061-01-5	<2.5			

<u>Surrogate:</u>	<u>% RC</u>	<u>Acceptable % RC</u>	<u>Dilution Factor:</u> 1
Dibromofluoromethane:	95	33-130 %	<u>Data Qualifiers:</u> None
Toluene-d8:	82	60-130 %	
4-Bromofluorobenzene:	78	54-130 %	



Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Volatile Organics by GC/MS (EPA 8260B)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
SP-3-33	22419-012	10/13/2016	10/12/2016	10/12/2016	10/14/2016	Soil

<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>	<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>
t-Amyl methyl ether (TAME)	994-05-8	<10	trans-1,3-Dichloropropene	10061-02-6	<2.5
Benzene	71-43-2	<2.0	Diisopropyl ether (DIPE)	108-20-3	<10
Bromobenzene	108-86-1	<2.5	Ethyl t-butyl ether (ETBE)	637-92-3	<10
Bromochloromethane	74-97-5	<2.5	Ethylbenzene	100-41-4	<2.5
Bromodichloromethane	75-27-4	<2.5	Hexachlorobutadiene	87-68-3	<5.0
Bromoform	75-25-2	<2.5	Isopropylbenzene	98-82-8	<2.5
Bromomethane	74-83-9	<10	4-Isopropyltoluene	99-87-6	<2.5
tert-Butyl alcohol (TBA)	75-65-0	<50	Methyl t-butyl ether (MTBE)	1634-04-4	<5.0
n-Butylbenzene	104-51-8	<2.5	Methylene chloride	75-09-2	<10
sec-Butylbenzene	135-98-8	<2.5	Naphthalene	91-20-3	<2.5
tert-Butylbenzene	98-06-6	<2.5	n-Propylbenzene	103-65-1	<2.5
Carbon tetrachloride	56-23-5	<2.5	Styrene	100-42-5	<2.5
Chlorobenzene	108-90-7	<2.5	1,1,1,2-Tetrachloroethane	630-20-6	<2.5
Chloroethane	75-00-3	<5.0	1,1,2,2-Tetrachloroethane	79-34-5	<2.5
Chloroform	67-66-3	<2.5	Tetrachloroethene	127-18-4	<2.5
Chloromethane	74-87-3	<5.0	Toluene	108-88-3	<2.5
2-Chlorotoluene	95-49-8	<2.5	1,2,3-Trichlorobenzene	87-61-6	<2.5
4-Chlorotoluene	106-43-4	<2.5	1,2,4-Trichlorobenzene	120-82-1	<2.5
Dibromochloromethane	124-48-1	<2.5	1,1,1-Trichloroethane	71-55-6	<2.5
1,2-Dibromo-3-chloropropane	96-12-8	<5.0	1,1,2-Trichloroethane	79-00-5	<2.5
1,2-Dibromoethane	106-93-4	<2.5	Trichloroethene	79-01-6	<2.5
Dibromomethane	74-95-3	<2.5	Trichlorofluoromethane	75-69-4	<5.0
1,2-Dichlorobenzene	95-50-1	<2.5	1,2,3-Trichloropropane	96-18-4	<2.5
1,3-Dichlorobenzene	541-73-1	<2.5	1,2,4-Trimethylbenzene	95-63-6	<2.5
1,4-Dichlorobenzene	106-46-7	<2.5	1,3,5-Trimethylbenzene	108-67-8	<2.5
Dichlorodifluoromethane	75-71-8	<2.5	Vinyl Chloride	75-01-4	<2.5
1,1-Dichloroethane	75-34-3	<2.5	Xylenes, Total	1330-20-7	<2.0
1,2-Dichloroethane	107-06-2	<2.5			
1,1-Dichloroethene	75-35-4	<2.5			
cis-1,2-Dichloroethene	156-59-2	<2.5			
trans-1,2-Dichloroethene	156-60-5	<2.5			
1,2-Dichloropropane	78-87-5	<2.5			
1,3-Dichloropropane	142-28-9	<2.5			
2,2-Dichloropropane	594-20-7	<2.5			
1,1-Dichloropropene	563-58-6	<2.5			
cis-1,3-Dichloropropene	10061-01-5	<2.5			

<u>Surrogate:</u>	<u>% RC</u>	<u>Acceptable % RC</u>	<u>Dilution Factor:</u> 1
Dibromofluoromethane:	97	33-130 %	<u>Data Qualifiers:</u> None
Toluene-d8:	82	60-130 %	
4-Bromofluorobenzene:	78	54-130 %	

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Volatile Organics by GC/MS (EPA 8260B)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
SP-4-1	22419-013	10/13/2016	10/13/2016	10/13/2016	10/14/2016	Soil

<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>	<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>
t-Amyl methyl ether (TAME)	994-05-8	<10	trans-1,3-Dichloropropene	10061-02-6	<2.5
Benzene	71-43-2	<2.0	Diisopropyl ether (DIPE)	108-20-3	<10
Bromobenzene	108-86-1	<2.5	Ethyl t-butyl ether (ETBE)	637-92-3	<10
Bromochloromethane	74-97-5	<2.5	Ethylbenzene	100-41-4	<2.5
Bromodichloromethane	75-27-4	<2.5	Hexachlorobutadiene	87-68-3	<5.0
Bromoform	75-25-2	<2.5	Isopropylbenzene	98-82-8	<2.5
Bromomethane	74-83-9	<10	4-Isopropyltoluene	99-87-6	<2.5
tert-Butyl alcohol (TBA)	75-65-0	<50	Methyl t-butyl ether (MTBE)	1634-04-4	<5.0
n-Butylbenzene	104-51-8	<2.5	Methylene chloride	75-09-2	<10
sec-Butylbenzene	135-98-8	<2.5	Naphthalene	91-20-3	<2.5
tert-Butylbenzene	98-06-6	<2.5	n-Propylbenzene	103-65-1	<2.5
Carbon tetrachloride	56-23-5	<2.5	Styrene	100-42-5	<2.5
Chlorobenzene	108-90-7	<2.5	1,1,1,2-Tetrachloroethane	630-20-6	<2.5
Chloroethane	75-00-3	<5.0	1,1,2,2-Tetrachloroethane	79-34-5	<2.5
Chloroform	67-66-3	<2.5	Tetrachloroethene	127-18-4	<2.5
Chloromethane	74-87-3	<5.0	Toluene	108-88-3	<2.5
2-Chlorotoluene	95-49-8	<2.5	1,2,3-Trichlorobenzene	87-61-6	<2.5
4-Chlorotoluene	106-43-4	<2.5	1,2,4-Trichlorobenzene	120-82-1	<2.5
Dibromochloromethane	124-48-1	<2.5	1,1,1-Trichloroethane	71-55-6	<2.5
1,2-Dibromo-3-chloropropane	96-12-8	<5.0	1,1,2-Trichloroethane	79-00-5	<2.5
1,2-Dibromoethane	106-93-4	<2.5	Trichloroethene	79-01-6	<2.5
Dibromomethane	74-95-3	<2.5	Trichlorofluoromethane	75-69-4	<5.0
1,2-Dichlorobenzene	95-50-1	<2.5	1,2,3-Trichloropropane	96-18-4	<2.5
1,3-Dichlorobenzene	541-73-1	<2.5	1,2,4-Trimethylbenzene	95-63-6	<2.5
1,4-Dichlorobenzene	106-46-7	<2.5	1,3,5-Trimethylbenzene	108-67-8	<2.5
Dichlorodifluoromethane	75-71-8	<2.5	Vinyl Chloride	75-01-4	<2.5
1,1-Dichloroethane	75-34-3	<2.5	Xylenes, Total	1330-20-7	<2.0
1,2-Dichloroethane	107-06-2	<2.5			
1,1-Dichloroethene	75-35-4	<2.5			
cis-1,2-Dichloroethene	156-59-2	<2.5			
trans-1,2-Dichloroethene	156-60-5	<2.5			
1,2-Dichloropropane	78-87-5	<2.5			
1,3-Dichloropropane	142-28-9	<2.5			
2,2-Dichloropropane	594-20-7	<2.5			
1,1-Dichloropropene	563-58-6	<2.5			
cis-1,3-Dichloropropene	10061-01-5	<2.5			

<u>Surrogate:</u>	<u>% RC</u>	<u>Acceptable % RC</u>	<u>Dilution Factor:</u> 1
Dibromofluoromethane:	96	33-130 %	<u>Data Qualifiers:</u> None
Toluene-d8:	83	60-130 %	
4-Bromofluorobenzene:	78	54-130 %	

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Volatile Organics by GC/MS (EPA 8260B)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
SP-4-2	22419-014	10/13/2016	10/13/2016	10/13/2016	10/14/2016	Soil

<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>	<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>
t-Amyl methyl ether (TAME)	994-05-8	<10	trans-1,3-Dichloropropene	10061-02-6	<2.5
Benzene	71-43-2	<2.0	Diisopropyl ether (DIPE)	108-20-3	<10
Bromobenzene	108-86-1	<2.5	Ethyl t-butyl ether (ETBE)	637-92-3	<10
Bromochloromethane	74-97-5	<2.5	Ethylbenzene	100-41-4	<2.5
Bromodichloromethane	75-27-4	<2.5	Hexachlorobutadiene	87-68-3	<5.0
Bromoform	75-25-2	<2.5	Isopropylbenzene	98-82-8	<2.5
Bromomethane	74-83-9	<10	4-Isopropyltoluene	99-87-6	<2.5
tert-Butyl alcohol (TBA)	75-65-0	<50	Methyl t-butyl ether (MTBE)	1634-04-4	<5.0
n-Butylbenzene	104-51-8	<2.5	Methylene chloride	75-09-2	<10
sec-Butylbenzene	135-98-8	<2.5	Naphthalene	91-20-3	<2.5
tert-Butylbenzene	98-06-6	<2.5	n-Propylbenzene	103-65-1	<2.5
Carbon tetrachloride	56-23-5	<2.5	Styrene	100-42-5	<2.5
Chlorobenzene	108-90-7	<2.5	1,1,1,2-Tetrachloroethane	630-20-6	<2.5
Chloroethane	75-00-3	<5.0	1,1,2,2-Tetrachloroethane	79-34-5	<2.5
Chloroform	67-66-3	<2.5	Tetrachloroethene	127-18-4	<2.5
Chloromethane	74-87-3	<5.0	Toluene	108-88-3	<2.5
2-Chlorotoluene	95-49-8	<2.5	1,2,3-Trichlorobenzene	87-61-6	<2.5
4-Chlorotoluene	106-43-4	<2.5	1,2,4-Trichlorobenzene	120-82-1	<2.5
Dibromochloromethane	124-48-1	<2.5	1,1,1-Trichloroethane	71-55-6	<2.5
1,2-Dibromo-3-chloropropane	96-12-8	<5.0	1,1,2-Trichloroethane	79-00-5	<2.5
1,2-Dibromoethane	106-93-4	<2.5	Trichloroethene	79-01-6	<2.5
Dibromomethane	74-95-3	<2.5	Trichlorofluoromethane	75-69-4	<5.0
1,2-Dichlorobenzene	95-50-1	<2.5	1,2,3-Trichloropropane	96-18-4	<2.5
1,3-Dichlorobenzene	541-73-1	<2.5	1,2,4-Trimethylbenzene	95-63-6	<2.5
1,4-Dichlorobenzene	106-46-7	<2.5	1,3,5-Trimethylbenzene	108-67-8	<2.5
Dichlorodifluoromethane	75-71-8	<2.5	Vinyl Chloride	75-01-4	<2.5
1,1-Dichloroethane	75-34-3	<2.5	Xylenes, Total	1330-20-7	<2.0
1,2-Dichloroethane	107-06-2	<2.5			
1,1-Dichloroethene	75-35-4	<2.5			
cis-1,2-Dichloroethene	156-59-2	<2.5			
trans-1,2-Dichloroethene	156-60-5	<2.5			
1,2-Dichloropropane	78-87-5	<2.5			
1,3-Dichloropropane	142-28-9	<2.5			
2,2-Dichloropropane	594-20-7	<2.5			
1,1-Dichloropropene	563-58-6	<2.5			
cis-1,3-Dichloropropene	10061-01-5	<2.5			

<u>Surrogate:</u>	<u>% RC</u>	<u>Acceptable % RC</u>	<u>Dilution Factor:</u> 1
Dibromofluoromethane:	97	33-130 %	<u>Data Qualifiers:</u> None
Toluene-d8:	83	60-130 %	
4-Bromofluorobenzene:	78	54-130 %	

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Volatile Organics by GC/MS (EPA 8260B)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
SP-4-3	22419-015	10/13/2016	10/13/2016	10/13/2016	10/14/2016	Soil

<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>	<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>
t-Amyl methyl ether (TAME)	994-05-8	<10	trans-1,3-Dichloropropene	10061-02-6	<2.5
Benzene	71-43-2	<2.0	Diisopropyl ether (DIPE)	108-20-3	<10
Bromobenzene	108-86-1	<2.5	Ethyl t-butyl ether (ETBE)	637-92-3	<10
Bromochloromethane	74-97-5	<2.5	Ethylbenzene	100-41-4	<2.5
Bromodichloromethane	75-27-4	<2.5	Hexachlorobutadiene	87-68-3	<5.0
Bromoform	75-25-2	<2.5	Isopropylbenzene	98-82-8	<2.5
Bromomethane	74-83-9	<10	4-Isopropyltoluene	99-87-6	<2.5
tert-Butyl alcohol (TBA)	75-65-0	<50	Methyl t-butyl ether (MTBE)	1634-04-4	<5.0
n-Butylbenzene	104-51-8	<2.5	Methylene chloride	75-09-2	<10
sec-Butylbenzene	135-98-8	<2.5	Naphthalene	91-20-3	<2.5
tert-Butylbenzene	98-06-6	<2.5	n-Propylbenzene	103-65-1	<2.5
Carbon tetrachloride	56-23-5	<2.5	Styrene	100-42-5	<2.5
Chlorobenzene	108-90-7	<2.5	1,1,1,2-Tetrachloroethane	630-20-6	<2.5
Chloroethane	75-00-3	<5.0	1,1,2,2-Tetrachloroethane	79-34-5	<2.5
Chloroform	67-66-3	<2.5	Tetrachloroethene	127-18-4	<2.5
Chloromethane	74-87-3	<5.0	Toluene	108-88-3	<2.5
2-Chlorotoluene	95-49-8	<2.5	1,2,3-Trichlorobenzene	87-61-6	<2.5
4-Chlorotoluene	106-43-4	<2.5	1,2,4-Trichlorobenzene	120-82-1	<2.5
Dibromochloromethane	124-48-1	<2.5	1,1,1-Trichloroethane	71-55-6	<2.5
1,2-Dibromo-3-chloropropane	96-12-8	<5.0	1,1,2-Trichloroethane	79-00-5	<2.5
1,2-Dibromoethane	106-93-4	<2.5	Trichloroethene	79-01-6	<2.5
Dibromomethane	74-95-3	<2.5	Trichlorofluoromethane	75-69-4	<5.0
1,2-Dichlorobenzene	95-50-1	<2.5	1,2,3-Trichloropropane	96-18-4	<2.5
1,3-Dichlorobenzene	541-73-1	<2.5	1,2,4-Trimethylbenzene	95-63-6	<2.5
1,4-Dichlorobenzene	106-46-7	<2.5	1,3,5-Trimethylbenzene	108-67-8	<2.5
Dichlorodifluoromethane	75-71-8	<2.5	Vinyl Chloride	75-01-4	<2.5
1,1-Dichloroethane	75-34-3	<2.5	Xylenes, Total	1330-20-7	<2.0
1,2-Dichloroethane	107-06-2	<2.5			
1,1-Dichloroethene	75-35-4	<2.5			
cis-1,2-Dichloroethene	156-59-2	<2.5			
trans-1,2-Dichloroethene	156-60-5	<2.5			
1,2-Dichloropropane	78-87-5	<2.5			
1,3-Dichloropropane	142-28-9	<2.5			
2,2-Dichloropropane	594-20-7	<2.5			
1,1-Dichloropropene	563-58-6	<2.5			
cis-1,3-Dichloropropene	10061-01-5	<2.5			

<u>Surrogate:</u>	<u>% RC</u>	<u>Acceptable % RC</u>	<u>Dilution Factor:</u> 1
Dibromofluoromethane:	98	33-130 %	<u>Data Qualifiers:</u> None
Toluene-d8:	82	60-130 %	
4-Bromofluorobenzene:	77	54-130 %	

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Volatile Organics by GC/MS (EPA 8260B)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
SP-4-33	22419-016	10/13/2016	10/13/2016	10/13/2016	10/14/2016	Soil

<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>	<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>
t-Amyl methyl ether (TAME)	994-05-8	<10	trans-1,3-Dichloropropene	10061-02-6	<2.5
Benzene	71-43-2	<2.0	Diisopropyl ether (DIPE)	108-20-3	<10
Bromobenzene	108-86-1	<2.5	Ethyl t-butyl ether (ETBE)	637-92-3	<10
Bromochloromethane	74-97-5	<2.5	Ethylbenzene	100-41-4	<2.5
Bromodichloromethane	75-27-4	<2.5	Hexachlorobutadiene	87-68-3	<5.0
Bromoform	75-25-2	<2.5	Isopropylbenzene	98-82-8	<2.5
Bromomethane	74-83-9	<10	4-Isopropyltoluene	99-87-6	<2.5
tert-Butyl alcohol (TBA)	75-65-0	<50	Methyl t-butyl ether (MTBE)	1634-04-4	<5.0
n-Butylbenzene	104-51-8	<2.5	Methylene chloride	75-09-2	<10
sec-Butylbenzene	135-98-8	<2.5	Naphthalene	91-20-3	<2.5
tert-Butylbenzene	98-06-6	<2.5	n-Propylbenzene	103-65-1	<2.5
Carbon tetrachloride	56-23-5	<2.5	Styrene	100-42-5	<2.5
Chlorobenzene	108-90-7	<2.5	1,1,1,2-Tetrachloroethane	630-20-6	<2.5
Chloroethane	75-00-3	<5.0	1,1,2,2-Tetrachloroethane	79-34-5	<2.5
Chloroform	67-66-3	<2.5	Tetrachloroethene	127-18-4	<2.5
Chloromethane	74-87-3	<5.0	Toluene	108-88-3	<2.5
2-Chlorotoluene	95-49-8	<2.5	1,2,3-Trichlorobenzene	87-61-6	<2.5
4-Chlorotoluene	106-43-4	<2.5	1,2,4-Trichlorobenzene	120-82-1	<2.5
Dibromochloromethane	124-48-1	<2.5	1,1,1-Trichloroethane	71-55-6	<2.5
1,2-Dibromo-3-chloropropane	96-12-8	<5.0	1,1,2-Trichloroethane	79-00-5	<2.5
1,2-Dibromoethane	106-93-4	<2.5	Trichloroethene	79-01-6	<2.5
Dibromomethane	74-95-3	<2.5	Trichlorofluoromethane	75-69-4	<5.0
1,2-Dichlorobenzene	95-50-1	<2.5	1,2,3-Trichloropropane	96-18-4	<2.5
1,3-Dichlorobenzene	541-73-1	<2.5	1,2,4-Trimethylbenzene	95-63-6	<2.5
1,4-Dichlorobenzene	106-46-7	<2.5	1,3,5-Trimethylbenzene	108-67-8	<2.5
Dichlorodifluoromethane	75-71-8	<2.5	Vinyl Chloride	75-01-4	<2.5
1,1-Dichloroethane	75-34-3	<2.5	Xylenes, Total	1330-20-7	<2.0
1,2-Dichloroethane	107-06-2	<2.5			
1,1-Dichloroethene	75-35-4	<2.5			
cis-1,2-Dichloroethene	156-59-2	<2.5			
trans-1,2-Dichloroethene	156-60-5	<2.5			
1,2-Dichloropropane	78-87-5	<2.5			
1,3-Dichloropropane	142-28-9	<2.5			
2,2-Dichloropropane	594-20-7	<2.5			
1,1-Dichloropropene	563-58-6	<2.5			
cis-1,3-Dichloropropene	10061-01-5	<2.5			

<u>Surrogate:</u>	<u>% RC</u>	<u>Acceptable % RC</u>	<u>Dilution Factor:</u> 1
Dibromofluoromethane:	99	33-130 %	<u>Data Qualifiers:</u> None
Toluene-d8:	82	60-130 %	
4-Bromofluorobenzene:	76	54-130 %	

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Volatile Organics by GC/MS (EPA 8260B)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Method Blank	MBHT1013162			10/13/2016	10/13/2016	Soil

<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>	<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/kg</u>
t-Amyl methyl ether (TAME)	994-05-8	<10	trans-1,3-Dichloropropene	10061-02-6	<2.5
Benzene	71-43-2	<2.0	Diisopropyl ether (DIPE)	108-20-3	<10
Bromobenzene	108-86-1	<2.5	Ethyl t-butyl ether (ETBE)	637-92-3	<10
Bromochloromethane	74-97-5	<2.5	Ethylbenzene	100-41-4	<2.5
Bromodichloromethane	75-27-4	<2.5	Hexachlorobutadiene	87-68-3	<5.0
Bromoform	75-25-2	<2.5	Isopropylbenzene	98-82-8	<2.5
Bromomethane	74-83-9	<10	4-Isopropyltoluene	99-87-6	<2.5
tert-Butyl alcohol (TBA)	75-65-0	<50	Methyl t-butyl ether (MTBE)	1634-04-4	<5.0
n-Butylbenzene	104-51-8	<2.5	Methylene chloride	75-09-2	<10
sec-Butylbenzene	135-98-8	<2.5	Naphthalene	91-20-3	<2.5
tert-Butylbenzene	98-06-6	<2.5	n-Propylbenzene	103-65-1	<2.5
Carbon tetrachloride	56-23-5	<2.5	Styrene	100-42-5	<2.5
Chlorobenzene	108-90-7	<2.5	1,1,1,2-Tetrachloroethane	630-20-6	<2.5
Chloroethane	75-00-3	<5.0	1,1,2,2-Tetrachloroethane	79-34-5	<2.5
Chloroform	67-66-3	<2.5	Tetrachloroethene	127-18-4	<2.5
Chloromethane	74-87-3	<5.0	Toluene	108-88-3	<2.5
2-Chlorotoluene	95-49-8	<2.5	1,2,3-Trichlorobenzene	87-61-6	<2.5
4-Chlorotoluene	106-43-4	<2.5	1,2,4-Trichlorobenzene	120-82-1	<2.5
Dibromochloromethane	124-48-1	<2.5	1,1,1-Trichloroethane	71-55-6	<2.5
1,2-Dibromo-3-chloropropane	96-12-8	<5.0	1,1,2-Trichloroethane	79-00-5	<2.5
1,2-Dibromoethane	106-93-4	<2.5	Trichloroethene	79-01-6	<2.5
Dibromomethane	74-95-3	<2.5	Trichlorofluoromethane	75-69-4	<5.0
1,2-Dichlorobenzene	95-50-1	<2.5	1,2,3-Trichloropropane	96-18-4	<2.5
1,3-Dichlorobenzene	541-73-1	<2.5	1,2,4-Trimethylbenzene	95-63-6	<2.5
1,4-Dichlorobenzene	106-46-7	<2.5	1,3,5-Trimethylbenzene	108-67-8	<2.5
Dichlorodifluoromethane	75-71-8	<2.5	Vinyl Chloride	75-01-4	<2.5
1,1-Dichloroethane	75-34-3	<2.5	Xylenes, Total	1330-20-7	<2.0
1,2-Dichloroethane	107-06-2	<2.5			
1,1-Dichloroethene	75-35-4	<2.5			
cis-1,2-Dichloroethene	156-59-2	<2.5			
trans-1,2-Dichloroethene	156-60-5	<2.5			
1,2-Dichloropropane	78-87-5	<2.5			
1,3-Dichloropropane	142-28-9	<2.5			
2,2-Dichloropropane	594-20-7	<2.5			
1,1-Dichloropropene	563-58-6	<2.5			
cis-1,3-Dichloropropene	10061-01-5	<2.5			

<u>Surrogate:</u>	<u>% RC</u>	<u>Acceptable % RC</u>	<u>Dilution Factor:</u> 1
Dibromofluoromethane:	102	33-130 %	<u>Data Qualifiers:</u> None
Toluene-d8:	82	60-130 %	
4-Bromofluorobenzene:	77	54-130 %	

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Volatile Organics by GC/MS (EPA 8260B)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
EB-1	22419-017	10/13/2016	10/13/2016	10/13/2016	10/13/2016	Water

<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/L</u>	<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/L</u>
t-Amyl methyl ether (TAME)	994-05-8	<1.0	trans-1,3-Dichloropropene	10061-02-6	<0.50
Benzene	71-43-2	<0.50	Diisopropyl ether (DIPE)	108-20-3	<1.0
Bromobenzene	108-86-1	<0.50	Ethyl t-butyl ether (ETBE)	637-92-3	<1.0
Bromochloromethane	74-97-5	<0.50	Ethylbenzene	100-41-4	<0.50
Bromodichloromethane	75-27-4	<1.0	Hexachlorobutadiene	87-68-3	<0.50
Bromoform	75-25-2	<0.50	Isopropylbenzene	98-82-8	<0.50
Bromomethane	74-83-9	<5.0	4-Isopropyltoluene	99-87-6	<0.50
tert-Butyl alcohol (TBA)	75-65-0	<10	Methyl t-butyl ether (MTBE)	1634-04-4	<1.0
n-Butylbenzene	104-51-8	<0.50	Methylene chloride	75-09-2	<5.0
sec-Butylbenzene	135-98-8	<0.50	Naphthalene	91-20-3	<0.50
tert-Butylbenzene	98-06-6	<0.50	n-Propylbenzene	103-65-1	<0.50
Carbon tetrachloride	56-23-5	<0.50	Styrene	100-42-5	<0.50
Chlorobenzene	108-90-7	<0.50	1,1,1,2-Tetrachloroethane	630-20-6	<0.50
Chloroethane	75-00-3	<5.0	1,1,2,2-Tetrachloroethane	79-34-5	<0.50
Chloroform	67-66-3	<0.50	Tetrachloroethene	127-18-4	<0.50
Chloromethane	74-87-3	<5.0	Toluene	108-88-3	<0.50
2-Chlorotoluene	95-49-8	<0.50	1,2,3-Trichlorobenzene	87-61-6	<0.50
4-Chlorotoluene	106-43-4	<0.50	1,2,4-Trichlorobenzene	120-82-1	<0.50
Dibromochloromethane	124-48-1	<0.50	1,1,1-Trichloroethane	71-55-6	<0.50
1,2-Dibromo-3-chloropropane	96-12-8	<2.0	1,1,2-Trichloroethane	79-00-5	<0.50
1,2-Dibromoethane	106-93-4	<0.50	Trichloroethene	79-01-6	<0.50
Dibromomethane	74-95-3	<0.50	Trichlorofluoromethane	75-69-4	<2.0
1,2-Dichlorobenzene	95-50-1	<0.50	1,2,3-Trichloropropane	96-18-4	<0.50
1,3-Dichlorobenzene	541-73-1	<0.50	1,2,4-Trimethylbenzene	95-63-6	<0.50
1,4-Dichlorobenzene	106-46-7	<0.50	1,3,5-Trimethylbenzene	108-67-8	<0.50
Dichlorodifluoromethane	75-71-8	<2.0	Vinyl Chloride	75-01-4	<0.50
1,1-Dichloroethane	75-34-3	<0.50	Xylenes, Total	1330-20-7	<2.0
1,2-Dichloroethane	107-06-2	<0.50			
1,1-Dichloroethene	75-35-4	<0.50			
cis-1,2-Dichloroethene	156-59-2	<0.50			
trans-1,2-Dichloroethene	156-60-5	<0.50			
1,2-Dichloropropane	78-87-5	<1.0			
1,3-Dichloropropane	142-28-9	<0.50			
2,2-Dichloropropane	594-20-7	<0.50			
1,1-Dichloropropene	563-58-6	<0.50			
cis-1,3-Dichloropropene	10061-01-5	<0.50			

<u>Surrogate:</u>	<u>% RC</u>	<u>Acceptable % RC</u>	<u>Dilution Factor:</u> 1
Dibromofluoromethane:	102	58-130 %	<u>Data Qualifiers:</u> None
Toluene-d8:	83	58-130 %	
4-Bromofluorobenzene:	76	53-130 %	

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Volatile Organics by GC/MS (EPA 8260B)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Method Blank	MBHT1013161			10/13/2016	10/13/2016	Water

<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/L</u>	<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/L</u>
t-Amyl methyl ether (TAME)	994-05-8	<1.0	trans-1,3-Dichloropropene	10061-02-6	<0.50
Benzene	71-43-2	<0.50	Diisopropyl ether (DIPE)	108-20-3	<1.0
Bromobenzene	108-86-1	<0.50	Ethyl t-butyl ether (ETBE)	637-92-3	<1.0
Bromochloromethane	74-97-5	<0.50	Ethylbenzene	100-41-4	<0.50
Bromodichloromethane	75-27-4	<1.0	Hexachlorobutadiene	87-68-3	<0.50
Bromoform	75-25-2	<0.50	Isopropylbenzene	98-82-8	<0.50
Bromomethane	74-83-9	<5.0	4-Isopropyltoluene	99-87-6	<0.50
tert-Butyl alcohol (TBA)	75-65-0	<10	Methyl t-butyl ether (MTBE)	1634-04-4	<1.0
n-Butylbenzene	104-51-8	<0.50	Methylene chloride	75-09-2	<5.0
sec-Butylbenzene	135-98-8	<0.50	Naphthalene	91-20-3	<0.50
tert-Butylbenzene	98-06-6	<0.50	n-Propylbenzene	103-65-1	<0.50
Carbon tetrachloride	56-23-5	<0.50	Styrene	100-42-5	<0.50
Chlorobenzene	108-90-7	<0.50	1,1,1,2-Tetrachloroethane	630-20-6	<0.50
Chloroethane	75-00-3	<5.0	1,1,2,2-Tetrachloroethane	79-34-5	<0.50
Chloroform	67-66-3	<0.50	Tetrachloroethene	127-18-4	<0.50
Chloromethane	74-87-3	<5.0	Toluene	108-88-3	<0.50
2-Chlorotoluene	95-49-8	<0.50	1,2,3-Trichlorobenzene	87-61-6	<0.50
4-Chlorotoluene	106-43-4	<0.50	1,2,4-Trichlorobenzene	120-82-1	<0.50
Dibromochloromethane	124-48-1	<0.50	1,1,1-Trichloroethane	71-55-6	<0.50
1,2-Dibromo-3-chloropropane	96-12-8	<2.0	1,1,2-Trichloroethane	79-00-5	<0.50
1,2-Dibromoethane	106-93-4	<0.50	Trichloroethene	79-01-6	<0.50
Dibromomethane	74-95-3	<0.50	Trichlorofluoromethane	75-69-4	<2.0
1,2-Dichlorobenzene	95-50-1	<0.50	1,2,3-Trichloropropane	96-18-4	<0.50
1,3-Dichlorobenzene	541-73-1	<0.50	1,2,4-Trimethylbenzene	95-63-6	<0.50
1,4-Dichlorobenzene	106-46-7	<0.50	1,3,5-Trimethylbenzene	108-67-8	<0.50
Dichlorodifluoromethane	75-71-8	<2.0	Vinyl chloride	75-01-4	<0.50
1,1-Dichloroethane	75-34-3	<0.50	Xylenes, Total	1330-20-7	<2.0
1,2-Dichloroethane	107-06-2	<0.50			
1,1-Dichloroethene	75-35-4	<0.50			
cis-1,2-Dichloroethene	156-59-2	<0.50			
trans-1,2-Dichloroethene	156-60-5	<0.50			
1,2-Dichloropropane	78-87-5	<1.0			
1,3-Dichloropropane	142-28-9	<0.50			
2,2-Dichloropropane	594-20-7	<0.50			
1,1-Dichloropropene	563-58-6	<0.50			
cis-1,3-Dichloropropene	10061-01-5	<0.50			

<u>Surrogate:</u>	<u>% RC</u>	<u>Acceptable % RC</u>	<u>Dilution Factor:</u> 1
Dibromofluoromethane:	98	58-130 %	<u>Data Qualifiers:</u> None
Toluene-d8:	83	58-130 %	
4-Bromofluorobenzene:	78	53-130 %	



Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Extractable Fuel Hydrocarbons (EPA 8015B)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
EB-1	22419-017	10/13/2016	10/13/2016	10/18/2016	10/18/2016	Water

ANALYTE                      mg/L                                      Surrogate:                      % RC\*  
 C13-C22                      <0.1    Octacosane                      67  
Dilution Factor: 1    \* Acc Recovery: 43-146 %  
Data Qualifiers: None

EB-1	22419-017	10/13/2016	10/13/2016	10/18/2016	10/18/2016	Water
------	-----------	------------	------------	------------	------------	-------

ANALYTE                      mg/L                                      Surrogate:                      % RC\*  
 C23-C40                      <0.3    Octacosane                      67  
Dilution Factor: 1    \* Acc Recovery: 43-146 %  
Data Qualifiers: None

Method Blank	MBIN1018169			10/18/2016	10/18/2016	Water
--------------	-------------	--	--	------------	------------	-------

ANALYTE                      mg/L                                      Surrogate:                      % RC\*  
 C13-C22                      <0.1    Octacosane                      59  
Dilution Factor: 1    \* Acc Recovery: 43-146 %  
Data Qualifiers: None

Method Blank	MBIN1018169			10/18/2016	10/18/2016	Water
--------------	-------------	--	--	------------	------------	-------

ANALYTE                      mg/L                                      Surrogate:                      % RC\*  
 C23-C40                      <0.3    Octacosane                      59  
Dilution Factor: 1    \* Acc Recovery: 43-146 %  
Data Qualifiers: None

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Gasoline Range Organics - GROs (EPA M8015B)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
EB-1	22419-017	10/13/2016	10/13/2016	10/14/2016	10/14/2016	Water

ANALYTE                      µg/L                                      Surrogate:                      % RC\*  
 TPH as GROs(C4-C12)                      <50                                      α-α-α-Trifluorotoluene                      75  
Dilution Factor: 1                                      \* Acceptable Recovery: 45-130 %  
Data Qualifiers: None

Method Blank	MBJB1014161			10/14/2016	10/14/2016	Water
--------------	-------------	--	--	------------	------------	-------

ANALYTE                      µg/L                                      Surrogate:                      % RC\*  
 TPH as GROs(C4-C12)                      <50                                      α-α-α-Trifluorotoluene                      64  
Dilution Factor: 1                                      \* Acceptable Recovery: 45-130 %  
Data Qualifiers: None

Gasoline Range Organics (GROs) are quantitated against a gasoline standard.

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Organochlorine Pesticides (EPA 8081A)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
EB-1	22419-017	10/13/2016	10/13/2016	10/18/2016	10/20/2016	Water

<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/L</u>	<u>Surrogate:</u>	<u>% RC*</u>
Aldrin	309-00-2	<0.05	Decachlorobiphenyl	106
alpha-BHC	319-84-6	<0.05		
beta-BHC	319-85-7	<0.05		
gamma-BHC (Lindane)	58-89-9	<0.05		
delta-BHC	319-86-8	<0.05		
Chlordane	57-74-9	<0.2		
4,4'-DDD	72-54-8	<0.05		
4,4'-DDE	72-55-9	<0.05		
4,4'-DDT	50-29-3	<0.05		
Dieldrin	60-57-1	<0.05		
Endosulfan I	959-98-8	<0.05		
Endosulfan II	33213-65-9	<0.05		
Endosulfan sulfate	1031-07-8	<0.05		
Endrin	72-20-8	<0.05		
Endrin aldehyde	7421-93-4	<0.05		
Endrin ketone	53494-70-5	<0.05		
Heptachlor	76-44-8	<0.05		
Heptachlor epoxide	1024-57-3	<0.05		
Methoxychlor	72-43-5	<0.05		
Toxaphene	8001-35-2	<0.5		

\* Acceptable Recovery: 30-167 %

Dilution Factor: 1

Data Qualifiers: None

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Organochlorine Pesticides (EPA 8081A)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Method Blank	MBIN1013163			10/18/2016	10/20/2016	Water

<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/L</u>	<u>Surrogate:</u>	<u>% RC*</u>
Aldrin	309-00-2	<0.05	Decachlorobiphenyl	96
alpha-BHC	319-84-6	<0.05		
beta-BHC	319-85-7	<0.05		
gamma-BHC (Lindane)	58-89-9	<0.05		
delta-BHC	319-86-8	<0.05		
Chlordane	57-74-9	<0.2		
4,4'-DDD	72-54-8	<0.05		
4,4'-DDE	72-55-9	<0.05		
4,4'-DDT	50-29-3	<0.05		
Dieldrin	60-57-1	<0.05		
Endosulfan I	959-98-8	<0.05		
Endosulfan II	33213-65-9	<0.05		
Endosulfan sulfate	1031-07-8	<0.05		
Endrin	72-20-8	<0.05		
Endrin aldehyde	7421-93-4	<0.05		
Endrin ketone	53494-70-5	<0.05		
Heptachlor	76-44-8	<0.05		
Heptachlor epoxide	1024-57-3	<0.05		
Methoxychlor	72-43-5	<0.05		
Toxaphene	8001-35-2	<0.5		

\* Acceptable Recovery: 30-167 %  
  
Dilution Factor: 1  
Data Qualifiers: None

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Polychlorinated Biphenyl's (EPA 8082)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
EB-1	22419-017	10/13/2016	10/13/2016	10/13/2016	10/20/2016	Water

<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/L</u>	<u>Surrogate:</u>	<u>% RC*</u>
PCB-1016	12674-11-2	<0.5	Decachlorobiphenyl	121
PCB-1221	11104-28-2	<0.5		
PCB-1232	11141-16-5	<0.5	* Acceptable Recovery: 30-167 %	
PCB-1242	53469-21-9	<0.5	<u>Dilution Factor:</u> 1	
PCB-1248	12672-29-6	<0.5	<u>Data Qualifiers:</u> None	
PCB-1254	11097-69-1	<0.5		
PCB-1260	11096-82-5	<0.5		

Method Blank	MBIN1013163		10/13/2016	10/20/2016	Water

<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/L</u>	<u>Surrogate:</u>	<u>% RC*</u>
PCB-1016	12674-11-2	<0.5	Decachlorobiphenyl	109
PCB-1221	11104-28-2	<0.5		
PCB-1232	11141-16-5	<0.5	* Acceptable Recovery: 30-167 %	
PCB-1242	53469-21-9	<0.5	<u>Dilution Factor:</u> 1	
PCB-1248	12672-29-6	<0.5	<u>Data Qualifiers:</u> None	
PCB-1254	11097-69-1	<0.5		
PCB-1260	11096-82-5	<0.5		

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Polynuclear Aromatic Hydrocarbons (EPA 8310)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
EB-1	22419-017	10/13/2016	10/13/2016	10/18/2016	10/19/2016	Water

<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/L</u>	<u>Surrogate:</u>	<u>% RC*</u>
Acenaphthene:	83-32-9	<0.05		
Acenaphthylene:	208-96-8	<0.05	Nitrobenzene-d5	140
Anthracene:	120-12-7	<0.05		
Benz(a)anthracene:	56-55-3	<0.05	* Acceptable Recovery: 10-166 %	
Benzo(a)pyrene:	50-32-8	<0.05		
Benzo(b)fluoranthene:	205-99-2	<0.05	<u>Dilution Factor:</u> 1	
Benzo(k)fluoranthene:	207-08-9	<0.05	<u>Data Qualifiers:</u> None	
Benzo(g,h,i)perylene:	191-24-2	<0.05		
Chrysene:	218-01-9	<0.05		
Dibenz(a,h)anthracene:	53-70-3	<0.05		
Fluoranthene:	206-44-0	<0.05		
Pyrene:	129-00-0	<0.05		
Fluorene:	86-73-7	<0.05		
Phenanthrene:	85-01-8	<0.05		
Indeno(1,2,3-cd)pyrene:	193-39-5	<0.05		
Naphthalene:	91-20-3	<0.05		

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Polynuclear Aromatic Hydrocarbons (EPA 8310)**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Date Extracted	Date Analyzed	Matrix
Method Blank	MBAV1018161			10/18/2016	10/19/2016	Water

<u>ANALYTE</u>	<u>CAS #</u>	<u>µg/L</u>	<u>Surrogate:</u>	<u>% RC*</u>
Acenaphthene:	83-32-9	<0.05	Nitrobenzene-d5	66
Acenaphthylene:	208-96-8	<0.05		
Anthracene:	120-12-7	<0.05		
Benz(a)anthracene:	56-55-3	<0.05	* Acceptable Recovery: 10-166 %	
Benzo(a)pyrene:	50-32-8	<0.05		
Benzo(b)fluoranthene:	205-99-2	<0.05	<u>Dilution Factor:</u> 1	
Benzo(k)fluoranthene:	207-08-9	<0.05	<u>Data Qualifiers:</u> None	
Benzo(g,h,i)perylene:	191-24-2	<0.05		
Chrysene:	218-01-9	<0.05		
Dibenz(a,h)anthracene:	53-70-3	<0.05		
Fluoranthene:	206-44-0	<0.05		
Pyrene:	129-00-0	<0.05		
Fluorene:	86-73-7	<0.05		
Phenanthrene:	85-01-8	<0.05		
Indeno(1,2,3-cd)pyrene:	193-39-5	<0.05		
Naphthalene:	91-20-3	<0.05		

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Metals**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Matrix
SP-1-1	22419-001	10/13/2016	10/12/2016	Soil

<u>ANALYTE</u>	<u>EPA Method</u>	<u>Result</u>	<u>Units</u>	<u>Date Extracted</u>	<u>Date Analyzed</u>	<u>Qual</u>	<u>DF</u>
Antimony	6010B	<1.0	mg/kg	10/18/16	10/19/16	--	1
Arsenic	6010B	5.5	mg/kg	10/18/16	10/19/16	--	1
Barium	6010B	95	mg/kg	10/18/16	10/19/16	--	1
Beryllium	6010B	<0.50	mg/kg	10/18/16	10/19/16	--	1
Cadmium	6010B	0.22	mg/kg	10/18/16	10/19/16	--	1
Chromium	6010B	15	mg/kg	10/18/16	10/19/16	--	1
Cobalt	6010B	7.5	mg/kg	10/18/16	10/19/16	--	1
Copper	6010B	15	mg/kg	10/18/16	10/19/16	--	1
Lead	6010B	14	mg/kg	10/18/16	10/19/16	--	1
Mercury	7471A	<0.10	mg/kg	10/17/16	10/19/16	--	1
Molybdenum	6010B	<1.0	mg/kg	10/18/16	10/19/16	--	1
Nickel	6010B	14	mg/kg	10/18/16	10/19/16	--	1
Selenium	6010B	<1.0	mg/kg	10/18/16	10/19/16	--	1
Silver	6010B	<0.50	mg/kg	10/18/16	10/19/16	--	1
Thallium	6010B	<2.0	mg/kg	10/18/16	10/19/16	--	1
Vanadium	6010B	33	mg/kg	10/18/16	10/19/16	--	1
Zinc	6010B	63	mg/kg	10/18/16	10/19/16	--	1



Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Metals**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Matrix
SP-1-2	22419-002	10/13/2016	10/12/2016	Soil

<u>ANALYTE</u>	<u>EPA Method</u>	<u>Result</u>	<u>Units</u>	<u>Date Extracted</u>	<u>Date Analyzed</u>	<u>Qual</u>	<u>DF</u>
Antimony	6010B	<1.0	mg/kg	10/18/16	10/19/16	--	1
Arsenic	6010B	6.9	mg/kg	10/18/16	10/19/16	--	1
Barium	6010B	130	mg/kg	10/18/16	10/19/16	--	1
Beryllium	6010B	<0.50	mg/kg	10/18/16	10/19/16	--	1
Cadmium	6010B	0.37	mg/kg	10/18/16	10/19/16	--	1
Chromium	6010B	22	mg/kg	10/18/16	10/19/16	--	1
Cobalt	6010B	10	mg/kg	10/18/16	10/19/16	--	1
Copper	6010B	25	mg/kg	10/18/16	10/19/16	--	1
Lead	6010B	11	mg/kg	10/18/16	10/19/16	--	1
Mercury	7471A	<0.10	mg/kg	10/17/16	10/19/16	--	1
Molybdenum	6010B	<1.0	mg/kg	10/18/16	10/19/16	--	1
Nickel	6010B	19	mg/kg	10/18/16	10/19/16	--	1
Selenium	6010B	<1.0	mg/kg	10/18/16	10/19/16	--	1
Silver	6010B	<0.50	mg/kg	10/18/16	10/19/16	--	1
Thallium	6010B	<2.0	mg/kg	10/18/16	10/19/16	--	1
Vanadium	6010B	39	mg/kg	10/18/16	10/19/16	--	1
Zinc	6010B	72	mg/kg	10/18/16	10/19/16	--	1

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Metals**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Matrix
SP-1-3	22419-003	10/13/2016	10/12/2016	Soil

<u>ANALYTE</u>	<u>EPA Method</u>	<u>Result</u>	<u>Units</u>	<u>Date Extracted</u>	<u>Date Analyzed</u>	<u>Qual</u>	<u>DF</u>
Antimony	6010B	<1.0	mg/kg	10/18/16	10/19/16	--	1
Arsenic	6010B	4.9	mg/kg	10/18/16	10/19/16	--	1
Barium	6010B	89	mg/kg	10/18/16	10/19/16	--	1
Beryllium	6010B	<0.50	mg/kg	10/18/16	10/19/16	--	1
Cadmium	6010B	0.29	mg/kg	10/18/16	10/19/16	--	1
Chromium	6010B	18	mg/kg	10/18/16	10/19/16	--	1
Cobalt	6010B	8.9	mg/kg	10/18/16	10/19/16	--	1
Copper	6010B	18	mg/kg	10/18/16	10/19/16	--	1
Lead	6010B	7.7	mg/kg	10/18/16	10/19/16	--	1
Mercury	7471A	<0.10	mg/kg	10/17/16	10/19/16	--	1
Molybdenum	6010B	<1.0	mg/kg	10/18/16	10/19/16	--	1
Nickel	6010B	15	mg/kg	10/18/16	10/19/16	--	1
Selenium	6010B	<1.0	mg/kg	10/18/16	10/19/16	--	1
Silver	6010B	<0.50	mg/kg	10/18/16	10/19/16	--	1
Thallium	6010B	<2.0	mg/kg	10/18/16	10/19/16	--	1
Vanadium	6010B	36	mg/kg	10/18/16	10/19/16	--	1
Zinc	6010B	54	mg/kg	10/18/16	10/19/16	--	1

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Metals**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Matrix
SP-1-33	22419-004	10/13/2016	10/12/2016	Soil

<u>ANALYTE</u>	<u>EPA Method</u>	<u>Result</u>	<u>Units</u>	<u>Date Extracted</u>	<u>Date Analyzed</u>	<u>Qual</u>	<u>DF</u>
Antimony	6010B	<1.0	mg/kg	10/18/16	10/19/16	--	1
Arsenic	6010B	5.2	mg/kg	10/18/16	10/19/16	--	1
Barium	6010B	90	mg/kg	10/18/16	10/19/16	--	1
Beryllium	6010B	<0.50	mg/kg	10/18/16	10/19/16	--	1
Cadmium	6010B	0.25	mg/kg	10/18/16	10/19/16	--	1
Chromium	6010B	19	mg/kg	10/18/16	10/19/16	--	1
Cobalt	6010B	7.7	mg/kg	10/18/16	10/19/16	--	1
Copper	6010B	18	mg/kg	10/18/16	10/19/16	--	1
Lead	6010B	9.0	mg/kg	10/18/16	10/19/16	--	1
Mercury	7471A	<0.10	mg/kg	10/17/16	10/19/16	--	1
Molybdenum	6010B	<1.0	mg/kg	10/18/16	10/19/16	--	1
Nickel	6010B	15	mg/kg	10/18/16	10/19/16	--	1
Selenium	6010B	1.2	mg/kg	10/18/16	10/19/16	--	1
Silver	6010B	<0.50	mg/kg	10/18/16	10/19/16	--	1
Thallium	6010B	<2.0	mg/kg	10/18/16	10/19/16	--	1
Vanadium	6010B	33	mg/kg	10/18/16	10/19/16	--	1
Zinc	6010B	53	mg/kg	10/18/16	10/19/16	--	1

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Metals**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Matrix
SP-2-1	22419-005	10/13/2016	10/12/2016	Soil

<u>ANALYTE</u>	<u>EPA Method</u>	<u>Result</u>	<u>Units</u>	<u>Date Extracted</u>	<u>Date Analyzed</u>	<u>Qual</u>	<u>DF</u>
Antimony	6010B	<1.0	mg/kg	10/18/16	10/19/16	--	1
Arsenic	6010B	3.7	mg/kg	10/18/16	10/19/16	--	1
Barium	6010B	68	mg/kg	10/18/16	10/19/16	--	1
Beryllium	6010B	<0.50	mg/kg	10/18/16	10/19/16	--	1
Cadmium	6010B	<0.20	mg/kg	10/18/16	10/19/16	--	1
Chromium	6010B	13	mg/kg	10/18/16	10/19/16	--	1
Cobalt	6010B	6.2	mg/kg	10/18/16	10/19/16	--	1
Copper	6010B	12	mg/kg	10/18/16	10/19/16	--	1
Lead	6010B	5.9	mg/kg	10/18/16	10/19/16	--	1
Mercury	7471A	<0.10	mg/kg	10/17/16	10/19/16	--	1
Molybdenum	6010B	<1.0	mg/kg	10/18/16	10/19/16	--	1
Nickel	6010B	11	mg/kg	10/18/16	10/19/16	--	1
Selenium	6010B	1.9	mg/kg	10/18/16	10/19/16	--	1
Silver	6010B	<0.50	mg/kg	10/18/16	10/19/16	--	1
Thallium	6010B	<2.0	mg/kg	10/18/16	10/19/16	--	1
Vanadium	6010B	25	mg/kg	10/18/16	10/19/16	--	1
Zinc	6010B	40	mg/kg	10/18/16	10/19/16	--	1

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Metals**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Matrix
SP-2-2	22419-006	10/13/2016	10/12/2016	Soil

<u>ANALYTE</u>	<u>EPA Method</u>	<u>Result</u>	<u>Units</u>	<u>Date Extracted</u>	<u>Date Analyzed</u>	<u>Qual</u>	<u>DF</u>
Antimony	6010B	<1.0	mg/kg	10/18/16	10/19/16	--	1
Arsenic	6010B	5.2	mg/kg	10/18/16	10/19/16	--	1
Barium	6010B	81	mg/kg	10/18/16	10/19/16	--	1
Beryllium	6010B	<0.50	mg/kg	10/18/16	10/19/16	--	1
Cadmium	6010B	0.28	mg/kg	10/18/16	10/19/16	--	1
Chromium	6010B	17	mg/kg	10/18/16	10/19/16	--	1
Cobalt	6010B	7.3	mg/kg	10/18/16	10/19/16	--	1
Copper	6010B	25	mg/kg	10/18/16	10/19/16	--	1
Lead	6010B	8.4	mg/kg	10/18/16	10/19/16	--	1
Mercury	7471A	<0.10	mg/kg	10/17/16	10/19/16	--	1
Molybdenum	6010B	<1.0	mg/kg	10/18/16	10/19/16	--	1
Nickel	6010B	14	mg/kg	10/18/16	10/19/16	--	1
Selenium	6010B	1.5	mg/kg	10/18/16	10/19/16	--	1
Silver	6010B	<0.50	mg/kg	10/18/16	10/19/16	--	1
Thallium	6010B	<2.0	mg/kg	10/18/16	10/19/16	--	1
Vanadium	6010B	31	mg/kg	10/18/16	10/19/16	--	1
Zinc	6010B	56	mg/kg	10/18/16	10/19/16	--	1

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Metals**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Matrix
SP-2-3	22419-007	10/13/2016	10/12/2016	Soil

<u>ANALYTE</u>	<u>EPA Method</u>	<u>Result</u>	<u>Units</u>	<u>Date Extracted</u>	<u>Date Analyzed</u>	<u>Qual</u>	<u>DF</u>
Antimony	6010B	<1.0	mg/kg	10/18/16	10/19/16	--	1
Arsenic	6010B	5.2	mg/kg	10/18/16	10/19/16	--	1
Barium	6010B	80	mg/kg	10/18/16	10/19/16	--	1
Beryllium	6010B	<0.50	mg/kg	10/18/16	10/19/16	--	1
Cadmium	6010B	<0.20	mg/kg	10/18/16	10/19/16	--	1
Chromium	6010B	15	mg/kg	10/18/16	10/19/16	--	1
Cobalt	6010B	7.4	mg/kg	10/18/16	10/19/16	--	1
Copper	6010B	14	mg/kg	10/18/16	10/19/16	--	1
Lead	6010B	6.8	mg/kg	10/18/16	10/19/16	--	1
Mercury	7471A	<0.10	mg/kg	10/17/16	10/19/16	--	1
Molybdenum	6010B	<1.0	mg/kg	10/18/16	10/19/16	--	1
Nickel	6010B	13	mg/kg	10/18/16	10/19/16	--	1
Selenium	6010B	1.3	mg/kg	10/18/16	10/19/16	--	1
Silver	6010B	<0.50	mg/kg	10/18/16	10/19/16	--	1
Thallium	6010B	<2.0	mg/kg	10/18/16	10/19/16	--	1
Vanadium	6010B	29	mg/kg	10/18/16	10/19/16	--	1
Zinc	6010B	50	mg/kg	10/18/16	10/19/16	--	1

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Metals**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Matrix
SP-2-33	22419-008	10/13/2016	10/12/2016	Soil

<u>ANALYTE</u>	<u>EPA Method</u>	<u>Result</u>	<u>Units</u>	<u>Date Extracted</u>	<u>Date Analyzed</u>	<u>Qual</u>	<u>DF</u>
Antimony	6010B	<1.0	mg/kg	10/18/16	10/19/16	--	1
Arsenic	6010B	4.9	mg/kg	10/18/16	10/19/16	--	1
Barium	6010B	83	mg/kg	10/18/16	10/19/16	--	1
Beryllium	6010B	<0.50	mg/kg	10/18/16	10/19/16	--	1
Cadmium	6010B	<0.20	mg/kg	10/18/16	10/19/16	--	1
Chromium	6010B	15	mg/kg	10/18/16	10/19/16	--	1
Cobalt	6010B	7.2	mg/kg	10/18/16	10/19/16	--	1
Copper	6010B	14	mg/kg	10/18/16	10/19/16	--	1
Lead	6010B	6.8	mg/kg	10/18/16	10/19/16	--	1
Mercury	7471A	<0.10	mg/kg	10/17/16	10/19/16	--	1
Molybdenum	6010B	<1.0	mg/kg	10/18/16	10/19/16	--	1
Nickel	6010B	13	mg/kg	10/18/16	10/19/16	--	1
Selenium	6010B	<1.0	mg/kg	10/18/16	10/19/16	--	1
Silver	6010B	<0.50	mg/kg	10/18/16	10/19/16	--	1
Thallium	6010B	<2.0	mg/kg	10/18/16	10/19/16	--	1
Vanadium	6010B	30	mg/kg	10/18/16	10/19/16	--	1
Zinc	6010B	48	mg/kg	10/18/16	10/19/16	--	1

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Metals**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Matrix
SP-3-1	22419-009	10/13/2016	10/12/2016	Soil

<u>ANALYTE</u>	<u>EPA Method</u>	<u>Result</u>	<u>Units</u>	<u>Date Extracted</u>	<u>Date Analyzed</u>	<u>Qual</u>	<u>DF</u>
Antimony	6010B	<1.0	mg/kg	10/18/16	10/19/16	--	1
Arsenic	6010B	5.5	mg/kg	10/18/16	10/19/16	--	1
Barium	6010B	98	mg/kg	10/18/16	10/19/16	--	1
Beryllium	6010B	<0.50	mg/kg	10/18/16	10/19/16	--	1
Cadmium	6010B	0.21	mg/kg	10/18/16	10/19/16	--	1
Chromium	6010B	16	mg/kg	10/18/16	10/19/16	--	1
Cobalt	6010B	7.5	mg/kg	10/18/16	10/19/16	--	1
Copper	6010B	15	mg/kg	10/18/16	10/19/16	--	1
Lead	6010B	11	mg/kg	10/18/16	10/19/16	--	1
Mercury	7471A	<0.10	mg/kg	10/17/16	10/19/16	--	1
Molybdenum	6010B	<1.0	mg/kg	10/18/16	10/19/16	--	1
Nickel	6010B	13	mg/kg	10/18/16	10/19/16	--	1
Selenium	6010B	<1.0	mg/kg	10/18/16	10/19/16	--	1
Silver	6010B	<0.50	mg/kg	10/18/16	10/19/16	--	1
Thallium	6010B	<2.0	mg/kg	10/18/16	10/19/16	--	1
Vanadium	6010B	31	mg/kg	10/18/16	10/19/16	--	1
Zinc	6010B	57	mg/kg	10/18/16	10/19/16	--	1



Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Metals**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Matrix
SP-3-2	22419-010	10/13/2016	10/12/2016	Soil

<u>ANALYTE</u>	<u>EPA Method</u>	<u>Result</u>	<u>Units</u>	<u>Date Extracted</u>	<u>Date Analyzed</u>	<u>Qual</u>	<u>DF</u>
Antimony	6010B	<1.0	mg/kg	10/18/16	10/19/16	--	1
Arsenic	6010B	5.5	mg/kg	10/18/16	10/19/16	--	1
Barium	6010B	80	mg/kg	10/18/16	10/19/16	--	1
Beryllium	6010B	<0.50	mg/kg	10/18/16	10/19/16	--	1
Cadmium	6010B	0.20	mg/kg	10/18/16	10/19/16	--	1
Chromium	6010B	16	mg/kg	10/18/16	10/19/16	--	1
Cobalt	6010B	7.5	mg/kg	10/18/16	10/19/16	--	1
Copper	6010B	42	mg/kg	10/18/16	10/19/16	--	1
Lead	6010B	11	mg/kg	10/18/16	10/19/16	--	1
Mercury	7471A	<0.10	mg/kg	10/17/16	10/19/16	--	1
Molybdenum	6010B	<1.0	mg/kg	10/18/16	10/19/16	--	1
Nickel	6010B	14	mg/kg	10/18/16	10/19/16	--	1
Selenium	6010B	2.0	mg/kg	10/18/16	10/19/16	--	1
Silver	6010B	<0.50	mg/kg	10/18/16	10/19/16	--	1
Thallium	6010B	<2.0	mg/kg	10/18/16	10/19/16	--	1
Vanadium	6010B	32	mg/kg	10/18/16	10/19/16	--	1
Zinc	6010B	54	mg/kg	10/18/16	10/19/16	--	1

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Metals**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Matrix
SP-3-3	22419-011	10/13/2016	10/12/2016	Soil

<u>ANALYTE</u>	<u>EPA Method</u>	<u>Result</u>	<u>Units</u>	<u>Date Extracted</u>	<u>Date Analyzed</u>	<u>Qual</u>	<u>DF</u>
Antimony	6010B	<1.0	mg/kg	10/18/16	10/19/16	--	1
Arsenic	6010B	4.6	mg/kg	10/18/16	10/19/16	--	1
Barium	6010B	67	mg/kg	10/18/16	10/19/16	--	1
Beryllium	6010B	<0.50	mg/kg	10/18/16	10/19/16	--	1
Cadmium	6010B	<0.20	mg/kg	10/18/16	10/19/16	--	1
Chromium	6010B	16	mg/kg	10/18/16	10/19/16	--	1
Cobalt	6010B	7.2	mg/kg	10/18/16	10/19/16	--	1
Copper	6010B	13	mg/kg	10/18/16	10/19/16	--	1
Lead	6010B	6.5	mg/kg	10/18/16	10/19/16	--	1
Mercury	7471A	<0.10	mg/kg	10/17/16	10/19/16	--	1
Molybdenum	6010B	<1.0	mg/kg	10/18/16	10/19/16	--	1
Nickel	6010B	13	mg/kg	10/18/16	10/19/16	--	1
Selenium	6010B	<1.0	mg/kg	10/18/16	10/19/16	--	1
Silver	6010B	<0.50	mg/kg	10/18/16	10/19/16	--	1
Thallium	6010B	<2.0	mg/kg	10/18/16	10/19/16	--	1
Vanadium	6010B	28	mg/kg	10/18/16	10/19/16	--	1
Zinc	6010B	45	mg/kg	10/18/16	10/19/16	--	1

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Metals**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Matrix
SP-3-33	22419-012	10/13/2016	10/12/2016	Soil

<u>ANALYTE</u>	<u>EPA Method</u>	<u>Result</u>	<u>Units</u>	<u>Date Extracted</u>	<u>Date Analyzed</u>	<u>Qual</u>	<u>DF</u>
Antimony	6010B	<1.0	mg/kg	10/18/16	10/19/16	--	1
Arsenic	6010B	6.4	mg/kg	10/18/16	10/19/16	--	1
Barium	6010B	72	mg/kg	10/18/16	10/19/16	--	1
Beryllium	6010B	<0.50	mg/kg	10/18/16	10/19/16	--	1
Cadmium	6010B	0.22	mg/kg	10/18/16	10/19/16	--	1
Chromium	6010B	15	mg/kg	10/18/16	10/19/16	--	1
Cobalt	6010B	7.4	mg/kg	10/18/16	10/19/16	--	1
Copper	6010B	13	mg/kg	10/18/16	10/19/16	--	1
Lead	6010B	6.0	mg/kg	10/18/16	10/19/16	--	1
Mercury	7471A	<0.10	mg/kg	10/17/16	10/19/16	--	1
Molybdenum	6010B	<1.0	mg/kg	10/18/16	10/19/16	--	1
Nickel	6010B	13	mg/kg	10/18/16	10/19/16	--	1
Selenium	6010B	<1.0	mg/kg	10/18/16	10/19/16	--	1
Silver	6010B	<0.50	mg/kg	10/18/16	10/19/16	--	1
Thallium	6010B	<2.0	mg/kg	10/18/16	10/19/16	--	1
Vanadium	6010B	32	mg/kg	10/18/16	10/19/16	--	1
Zinc	6010B	46	mg/kg	10/18/16	10/19/16	--	1

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Metals**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Matrix
SP-4-1	22419-013	10/13/2016	10/13/2016	Soil

<u>ANALYTE</u>	<u>EPA Method</u>	<u>Result</u>	<u>Units</u>	<u>Date Extracted</u>	<u>Date Analyzed</u>	<u>Qual</u>	<u>DF</u>
Antimony	6010B	<1.0	mg/kg	10/18/16	10/19/16	--	1
Arsenic	6010B	5.5	mg/kg	10/18/16	10/19/16	--	1
Barium	6010B	120	mg/kg	10/18/16	10/19/16	--	1
Beryllium	6010B	<0.50	mg/kg	10/18/16	10/19/16	--	1
Cadmium	6010B	0.25	mg/kg	10/18/16	10/19/16	--	1
Chromium	6010B	16	mg/kg	10/18/16	10/19/16	--	1
Cobalt	6010B	8.2	mg/kg	10/18/16	10/19/16	--	1
Copper	6010B	21	mg/kg	10/18/16	10/19/16	--	1
Lead	6010B	9.5	mg/kg	10/18/16	10/19/16	--	1
Mercury	7471A	<0.10	mg/kg	10/17/16	10/19/16	--	1
Molybdenum	6010B	<1.0	mg/kg	10/18/16	10/19/16	--	1
Nickel	6010B	14	mg/kg	10/18/16	10/19/16	--	1
Selenium	6010B	1.7	mg/kg	10/18/16	10/19/16	--	1
Silver	6010B	<0.50	mg/kg	10/18/16	10/19/16	--	1
Thallium	6010B	<2.0	mg/kg	10/18/16	10/19/16	--	1
Vanadium	6010B	34	mg/kg	10/18/16	10/19/16	--	1
Zinc	6010B	69	mg/kg	10/18/16	10/19/16	--	1

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Metals**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Matrix
SP-4-2	22419-014	10/13/2016	10/13/2016	Soil

<u>ANALYTE</u>	<u>EPA Method</u>	<u>Result</u>	<u>Units</u>	<u>Date Extracted</u>	<u>Date Analyzed</u>	<u>Qual</u>	<u>DF</u>
Antimony	6010B	<1.0	mg/kg	10/18/16	10/19/16	--	1
Arsenic	6010B	5.2	mg/kg	10/18/16	10/19/16	--	1
Barium	6010B	80	mg/kg	10/18/16	10/19/16	--	1
Beryllium	6010B	<0.50	mg/kg	10/18/16	10/19/16	--	1
Cadmium	6010B	0.21	mg/kg	10/18/16	10/19/16	--	1
Chromium	6010B	16	mg/kg	10/18/16	10/19/16	--	1
Cobalt	6010B	7.4	mg/kg	10/18/16	10/19/16	--	1
Copper	6010B	15	mg/kg	10/18/16	10/19/16	--	1
Lead	6010B	7.6	mg/kg	10/18/16	10/19/16	--	1
Mercury	7471A	<0.10	mg/kg	10/17/16	10/19/16	--	1
Molybdenum	6010B	<1.0	mg/kg	10/18/16	10/19/16	--	1
Nickel	6010B	13	mg/kg	10/18/16	10/19/16	--	1
Selenium	6010B	1.6	mg/kg	10/18/16	10/19/16	--	1
Silver	6010B	<0.50	mg/kg	10/18/16	10/19/16	--	1
Thallium	6010B	<2.0	mg/kg	10/18/16	10/19/16	--	1
Vanadium	6010B	31	mg/kg	10/18/16	10/19/16	--	1
Zinc	6010B	51	mg/kg	10/18/16	10/19/16	--	1

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Metals**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Matrix
SP-4-3	22419-015	10/13/2016	10/13/2016	Soil

<u>ANALYTE</u>	<u>EPA Method</u>	<u>Result</u>	<u>Units</u>	<u>Date Extracted</u>	<u>Date Analyzed</u>	<u>Qual</u>	<u>DF</u>
Antimony	6010B	<1.0	mg/kg	10/18/16	10/19/16	--	1
Arsenic	6010B	5.1	mg/kg	10/18/16	10/19/16	--	1
Barium	6010B	86	mg/kg	10/18/16	10/19/16	--	1
Beryllium	6010B	<0.50	mg/kg	10/18/16	10/19/16	--	1
Cadmium	6010B	0.26	mg/kg	10/18/16	10/19/16	--	1
Chromium	6010B	16	mg/kg	10/18/16	10/19/16	--	1
Cobalt	6010B	7.8	mg/kg	10/18/16	10/19/16	--	1
Copper	6010B	18	mg/kg	10/18/16	10/19/16	--	1
Lead	6010B	9.6	mg/kg	10/18/16	10/19/16	--	1
Mercury	7471A	<0.10	mg/kg	10/17/16	10/19/16	--	1
Molybdenum	6010B	<1.0	mg/kg	10/18/16	10/19/16	--	1
Nickel	6010B	14	mg/kg	10/18/16	10/19/16	--	1
Selenium	6010B	1.6	mg/kg	10/18/16	10/19/16	--	1
Silver	6010B	<0.50	mg/kg	10/18/16	10/19/16	--	1
Thallium	6010B	<2.0	mg/kg	10/18/16	10/19/16	--	1
Vanadium	6010B	31	mg/kg	10/18/16	10/19/16	--	1
Zinc	6010B	67	mg/kg	10/18/16	10/19/16	--	1

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Metals**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Matrix
SP-4-33	22419-016	10/13/2016	10/13/2016	Soil

<u>ANALYTE</u>	<u>EPA Method</u>	<u>Result</u>	<u>Units</u>	<u>Date Extracted</u>	<u>Date Analyzed</u>	<u>Qual</u>	<u>DF</u>
Antimony	6010B	<1.0	mg/kg	10/18/16	10/19/16	--	1
Arsenic	6010B	5.2	mg/kg	10/18/16	10/19/16	--	1
Barium	6010B	92	mg/kg	10/18/16	10/19/16	--	1
Beryllium	6010B	<0.50	mg/kg	10/18/16	10/19/16	--	1
Cadmium	6010B	0.26	mg/kg	10/18/16	10/19/16	--	1
Chromium	6010B	23	mg/kg	10/18/16	10/19/16	--	1
Cobalt	6010B	7.5	mg/kg	10/18/16	10/19/16	--	1
Copper	6010B	18	mg/kg	10/18/16	10/19/16	--	1
Lead	6010B	46	mg/kg	10/18/16	10/19/16	--	1
Mercury	7471A	<0.10	mg/kg	10/17/16	10/19/16	--	1
Molybdenum	6010B	<1.0	mg/kg	10/18/16	10/19/16	--	1
Nickel	6010B	14	mg/kg	10/18/16	10/19/16	--	1
Selenium	6010B	1.4	mg/kg	10/18/16	10/19/16	--	1
Silver	6010B	<0.50	mg/kg	10/18/16	10/19/16	--	1
Thallium	6010B	<2.0	mg/kg	10/18/16	10/19/16	--	1
Vanadium	6010B	31	mg/kg	10/18/16	10/19/16	--	1
Zinc	6010B	73	mg/kg	10/18/16	10/19/16	--	1

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Metals**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Matrix				
Method Blank				Soil				
<u>MB ID</u>	<u>ANALYTE</u>	<u>EPA Method</u>	<u>Result</u>	<u>Units</u>	<u>Date Extracted</u>	<u>Date Analyzed</u>	<u>Qual</u>	<u>DF</u>
MBSG1018162	Antimony	6010B	<1.0	mg/kg	10/18/16	10/19/16	--	1
MBSG1018162	Arsenic	6010B	<0.50	mg/kg	10/18/16	10/19/16	--	1
MBSG1018162	Barium	6010B	<0.50	mg/kg	10/18/16	10/19/16	--	1
MBSG1018162	Beryllium	6010B	<0.50	mg/kg	10/18/16	10/19/16	--	1
MBSG1018162	Cadmium	6010B	<0.20	mg/kg	10/18/16	10/19/16	--	1
MBSG1018162	Chromium	6010B	<0.50	mg/kg	10/18/16	10/19/16	--	1
MBSG1018162	Cobalt	6010B	<0.50	mg/kg	10/18/16	10/19/16	--	1
MBSG1018162	Copper	6010B	<2.0	mg/kg	10/18/16	10/19/16	--	1
MBSG1018162	Lead	6010B	<0.50	mg/kg	10/18/16	10/19/16	--	1
MBSG1017164	Mercury	7471A	<0.10	mg/kg	10/17/16	10/19/16	--	1
MBSG1018162	Molybdenum	6010B	<1.0	mg/kg	10/18/16	10/19/16	--	1
MBSG1018162	Nickel	6010B	<0.50	mg/kg	10/18/16	10/19/16	--	1
MBSG1018162	Selenium	6010B	<1.0	mg/kg	10/18/16	10/19/16	--	1
MBSG1018162	Silver	6010B	<0.50	mg/kg	10/18/16	10/19/16	--	1
MBSG1018162	Thallium	6010B	<2.0	mg/kg	10/18/16	10/19/16	--	1
MBSG1018162	Vanadium	6010B	<0.50	mg/kg	10/18/16	10/19/16	--	1
MBSG1018162	Zinc	6010B	<2.0	mg/kg	10/18/16	10/19/16	--	1



Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Metals**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Matrix
EB-1	22419-017	10/13/2016	10/13/2016	Water

<u>ANALYTE</u>	<u>EPA Method</u>	<u>Result</u>	<u>Units</u>	<u>Date Extracted</u>	<u>Date Analyzed</u>	<u>Qual</u>	<u>DF</u>
Antimony	6010B	<0.10	mg/L	10/17/16	10/19/16	--	1
Arsenic	6010B	<0.010	mg/L	10/17/16	10/19/16	--	1
Barium	6010B	<0.010	mg/L	10/17/16	10/19/16	--	1
Beryllium	6010B	<0.010	mg/L	10/17/16	10/19/16	--	1
Cadmium	6010B	<0.0040	mg/L	10/17/16	10/19/16	--	1
Chromium	6010B	<0.010	mg/L	10/17/16	10/19/16	--	1
Cobalt	6010B	<0.010	mg/L	10/17/16	10/19/16	--	1
Copper	6010B	<0.010	mg/L	10/17/16	10/19/16	--	1
Lead	6010B	<0.040	mg/L	10/17/16	10/19/16	--	1
Mercury	7470A	<0.0010	mg/L	10/17/16	10/19/16	--	1
Molybdenum	6010B	<0.050	mg/L	10/17/16	10/19/16	--	1
Nickel	6010B	<0.010	mg/L	10/17/16	10/19/16	--	1
Selenium	6010B	<0.10	mg/L	10/17/16	10/19/16	--	1
Silver	6010B	<0.010	mg/L	10/17/16	10/19/16	--	1
Thallium	6010B	<0.10	mg/L	10/17/16	10/19/16	--	1
Vanadium	6010B	<0.010	mg/L	10/17/16	10/19/16	--	1
Zinc	6010B	<0.020	mg/L	10/17/16	10/19/16	--	1

Mr. Jim Goepel  
 Parsons Environment & Infrastructure, Inc.  
 100 W. Walnut St  
 Pasadena, CA, 91124

Lab Reference #: PEI 22419  
 Project Name: Port of Long Beach - Pier S Stockpile  
 Project #: 450148.02000

**Metals**

Client Sample ID	Lab Sample Number	Date Received	Date Sampled	Matrix				
Method Blank				Water				
<u>MB ID</u>	<u>ANALYTE</u>	<u>EPA Method</u>	<u>Result</u>	<u>Units</u>	<u>Date Extracted</u>	<u>Date Analyzed</u>	<u>Qual</u>	<u>DF</u>
MBCT1017162	Antimony	6010B	<0.10	mg/L	10/17/16	10/19/16	--	1
MBCT1017162	Arsenic	6010B	<0.010	mg/L	10/17/16	10/19/16	--	1
MBCT1017162	Barium	6010B	<0.010	mg/L	10/17/16	10/19/16	--	1
MBCT1017162	Beryllium	6010B	<0.010	mg/L	10/17/16	10/19/16	--	1
MBCT1017162	Cadmium	6010B	<0.0040	mg/L	10/17/16	10/19/16	--	1
MBCT1017162	Chromium	6010B	<0.010	mg/L	10/17/16	10/19/16	--	1
MBCT1017162	Cobalt	6010B	<0.010	mg/L	10/17/16	10/19/16	--	1
MBCT1017162	Copper	6010B	<0.010	mg/L	10/17/16	10/19/16	--	1
MBCT1017162	Lead	6010B	<0.040	mg/L	10/17/16	10/19/16	--	1
MBJA1017161	Mercury	7470A	<0.0010	mg/L	10/17/16	10/19/16	--	1
MBCT1017162	Molybdenum	6010B	<0.050	mg/L	10/17/16	10/19/16	--	1
MBCT1017162	Nickel	6010B	<0.010	mg/L	10/17/16	10/19/16	--	1
MBCT1017162	Selenium	6010B	<0.10	mg/L	10/17/16	10/19/16	--	1
MBCT1017162	Silver	6010B	<0.010	mg/L	10/17/16	10/19/16	--	1
MBCT1017162	Thallium	6010B	<0.10	mg/L	10/17/16	10/19/16	--	1
MBCT1017162	Vanadium	6010B	<0.010	mg/L	10/17/16	10/19/16	--	1
MBCT1017162	Zinc	6010B	<0.020	mg/L	10/17/16	10/19/16	--	1

**QA/QC Report**  
**for**  
**Extactable Fuel Hydrocarbons (EPA 8015B/8015M)**  
Reporting units: ppm

**Matrix Spike (MS) / Matrix Spike Duplicate (MSD)**

Date of Extraction: 10/19/2016

Date of Analysis: 10/19/2016

Dup Date of Analysis: 10/19/2016

Laboratory Sample #: 22419-007

MS/MSD Qualifiers: None

Reference #: PEI 22419

Analyte	R1	SPC CONC	MS	MSD	%MS	%MSD	RPD	ACP %MS	ACP RPD	Qual
EFH as Diesel	11.0	1000	1340	1480	133	147	10	70-157	20	<input type="checkbox"/>

**Surrogate Recoveries for Spike Samples**

Surrogate (%RC)	MS	MSD	Qual
Octacosane	109	123	<input type="checkbox"/>

LCS	LCSD	Qual
89	81	<input type="checkbox"/>

ACP % RC
63-155

**Laboratory Control Sample**

Date of Extraction: 10/19/2016

Date of Analysis: 10/19/2016

Dup Date of Analysis: 10/19/2016

Laboratory Sample #: JB1019163

LCS Qualifiers: None

Analyte	SPC CONC	LCS	LCSD	%LCS	%LCSD	RPD	ACP %LCS	ACP RPD	Qual
EFH as Diesel	1000	1060	1100	106	110	4	70-136	20	<input type="checkbox"/>

**QA/QC Report**  
**for**  
**Volatile Fuel Hydrocarbons (EPA 8015B)**  
Reporting units: ppm

**Matrix Spike (MS) / Matrix Spike Duplicate (MSD)**

Date of Extraction: 10/18/2016

Date of Analysis: 10/18/2016

Dup Date of Analysis: 10/18/2016

Laboratory Sample #: 22422-001

MS/MSD Qualifiers: None

Reference #: PEI 22419

Analyte	R1	SPC CONC	MS	MSD	%MS	%MSD	RPD	ACP %MS	ACP RPD	Qual
VFH as Gasoline	0.00	0.250	0.155	0.167	62	67	7	35-141	28	<input type="checkbox"/>

**Surrogate Recoveries for Spike Samples**

Surrogate (%RC)	MS	MSD	Qual
$\alpha$ - $\alpha$ - $\alpha$ -Trifluorotoluene	79	81	<input type="checkbox"/>

LCS	LCSD	Qual
90	83	<input type="checkbox"/>

ACP % RC
46-130

**Laboratory Control Sample**

Date of Extraction: 10/18/2016

Date of Analysis: 10/18/2016

Dup Date of Analysis: 10/18/2016

Laboratory Sample #: JB1018161

LCS Qualifiers: None

Analyte	SPC CONC	LCS	LCSD	%LCS	%LCSD	RPD	ACP %LCS	ACP RPD	Qual
VFH as Gasoline	0.250	0.206	0.189	82	76	9	46-131	32	<input type="checkbox"/>

**QA/QC Report**  
**for**  
**Polynuclear Aromatic Hydrocarbons (EPA 8310)**  
Reporting units: ppb

**Matrix Spike (MS) / Matrix Spike Duplicate (MSD)**

Date of Extraction: 10/13/2016

Date of Analysis: 10/17/2016

Dup Date of Analysis: 10/17/2016

Laboratory Sample #: 22419-003

MS/MSD Qualifiers: M2,

Reference #: PEI 22419

Analyte	R1	SPC CONC	MS	MSD	%MS	%MSD	RPD	ACP %MS	ACP RPD	Qual
Acenaphthene	0.00	25.0	15.5	14.9	62	60	4	48-140	20	<input type="checkbox"/>
Anthracene	0.00	25.0	11.9	12.7	48	51	7	55-130	20	<input checked="" type="checkbox"/>
Pyrene	8.20	25.0	24.2	23.9	64	63	1	62-130	20	<input type="checkbox"/>
Chrysene	5.10	25.0	21.2	21.9	64	67	3	68-130	20	<input checked="" type="checkbox"/>
Benzo(a)pyrene	11.0	25.0	29.2	27.7	73	67	5	55-130	20	<input type="checkbox"/>

**Surrogate Recoveries for Spike Samples**

Surrogate (%RC)	MS	MSD	Qual
Nitrobenzene-d5	85	101	<input type="checkbox"/>

LCS	LCSD	Qual
120.	107	<input type="checkbox"/>

ACP % RC
40-130

**Laboratory Control Sample**

Date of Extraction: 10/13/2016

Date of Analysis: 10/17/2016

Dup Date of Analysis: 10/17/2016

Laboratory Sample #: IN1013161

LCS Qualifiers: None

Analyte	SPC CONC	LCS	LCSD	%LCS	%LCSD	RPD	ACP %LCS	ACP RPD	Qual
Acenaphthene	25.0	25.3	24.8	101	99	2	62-137	20	<input type="checkbox"/>
Anthracene	25.0	19.4	19.7	78	79	2	52-130	20	<input type="checkbox"/>
Pyrene	25.0	19.2	20.5	77	82	7	70-130	20	<input type="checkbox"/>
Chrysene	25.0	22.0	22.3	88	89	1	70-130	20	<input type="checkbox"/>
Benzo(a)pyrene	25.0	23.4	25.0	94	100	7	49-130	20	<input type="checkbox"/>

**QA/QC Report**  
for  
**Organochlorinated Pesticides (EPA 8081A)**  
Reporting units: ppb

**Matrix Spike (MS) / Matrix Spike Duplicate (MSD)**

Date of Extraction: 10/13/2016

Date of Analysis: 10/19/2016

Dup Date of Analysis: 10/19/2016

Laboratory Sample #: 22419-012

MS/MSD Qualifiers: M2, R2,

Reference #: PEI 22419

Analyte	R1	SPC CONC	MS	MSD	%MS	%MSD	RPD	ACP %MS	ACP RPD	Qual
Gamma-BHC	0.00	20.0	0.00	6.82	0	34	200	34-130	29	<input checked="" type="checkbox"/>
Heptachlor	0.00	20.0	2.63	10.1	13	50	117	40-130	27	<input checked="" type="checkbox"/>
Aldrin	0.00	20.0	2.78	8.57	14	43	102	39-130	30	<input checked="" type="checkbox"/>
Dieldrin	0.00	50.0	0.673	19.6	1	39	187	34-130	29	<input checked="" type="checkbox"/>
Endrin	0.00	50.0	1.56	39.4	3	79	185	30-143	26	<input checked="" type="checkbox"/>
DDT	0.00	50.0	3.56	61.9	7	124	178	32-140	26	<input checked="" type="checkbox"/>

**Surrogate Recoveries for Spike Samples**

Surrogate (%RC)	MS	MSD	Qual
Decachlorobiphenyl	39	51	<input type="checkbox"/>

LCS	LCSD	Qual
111	104	<input type="checkbox"/>

ACP % RC
31-146

**Laboratory Control Sample**

Date of Extraction: 10/13/2016

Date of Analysis: 10/19/2016

Dup Date of Analysis: 10/19/2016

Laboratory Sample #: AV1013163A

LCS Qualifiers: None

Analyte	SPC CONC	LCS	LCSD	%LCS	%LCSD	RPD	ACP %LCS	ACP RPD	Qual
Gamma-BHC	20.0	18.7	17.6	94	88	6	42-130	21	<input type="checkbox"/>
Heptachlor	20.0	18.2	16.9	91	84	7	36-134	27	<input type="checkbox"/>
Aldrin	20.0	18.9	17.6	94	88	7	42-130	26	<input type="checkbox"/>
Dieldrin	50.0	54.9	52.6	110	105	4	46-130	22	<input type="checkbox"/>
Endrin	50.0	56.4	53.1	113	106	6	48-132	20	<input type="checkbox"/>
DDT	50.0	49.3	47.0	99	94	5	45-132	21	<input type="checkbox"/>

**QA/QC Report**  
**for**  
**Polychlorinated Biphenyl's (EPA 8082)**  
Reporting units: ppb

**Matrix Spike (MS) / Matrix Spike Duplicate (MSD)**

Date of Extraction: 10/13/2016

Date of Analysis: 10/17/2016

Dup Date of Analysis: 10/17/2016

Laboratory Sample #: 22419-012

MS/MSD Qualifiers: M2,

Reference #: PEI 22419

Analyte	R1	SPC CONC	MS	MSD	%MS	%MSD	RPD	ACP %MS	ACP RPD	Qual
PCB-1016	0.00	150	36.8	34.2	25	23	7	41-130	29	<input type="checkbox"/>
PCB-1260	0.00	150	87.1	81.5	58	54	7	34-135	27	<input type="checkbox"/>

**Surrogate Recoveries for Spike Samples**

Surrogate (%RC)	MS	MSD	Qual
Decachlorobiphenyl	77	63	<input type="checkbox"/>

LCS	LCSD	Qual
93	112	<input type="checkbox"/>

ACP % RC
31-146

**Laboratory Control Sample**

Date of Extraction: 10/13/2016

Date of Analysis: 10/17/2016

Dup Date of Analysis: 10/17/2016

Laboratory Sample #: AV1013163B

LCS Qualifiers: None

Analyte	SPC CONC	LCS	LCSD	%LCS	%LCSD	RPD	ACP %LCS	ACP RPD	Qual
PCB-1016	150	102	108	68	72	6	44-130	23	<input type="checkbox"/>
PCB-1260	150	116	123	77	82	6	45-130	23	<input type="checkbox"/>

**QA/QC Report**  
**for**  
**Volatile Organic Compounds (EPA 8260B)**  
Reporting units: ppb

**Matrix Spike (MS) / Matrix Spike Duplicate (MSD)**

Date of Extraction: 10/13/2016

Date of Analysis: 10/13/2016

Dup Date of Analysis: 10/13/2016

Laboratory Sample #: 22419-001

MS/MSD Qualifiers: None

Reference #: PEI 22419

Analyte	R1	SPC CONC	MS	MSD	%MS	%MSD	RPD	ACP %MS	ACP RPD	Qual
1,1-Dichloroethene	0.00	10.0	10.1	9.39	101	94	7	55-130	20	<input type="checkbox"/>
Benzene	0.00	10.0	11.1	10.7	111	107	4	68-130	20	<input type="checkbox"/>
Trichloroethene	0.00	10.0	11.7	11.5	117	115	2	67-130	20	<input type="checkbox"/>
Toluene	0.00	10.0	10.1	9.92	101	99	2	70-130	20	<input type="checkbox"/>
Chlorobenzene	0.00	10.0	11.2	10.9	112	109	3	70-130	20	<input type="checkbox"/>

**Surrogate Recoveries for Spike Samples**

Surrogate (%RC)	MS	MSD	Qual
Dibromofluoromethane	101	102	<input type="checkbox"/>
Toluene-d8	83	83	<input type="checkbox"/>
4-Bromofluorobenzene	79	80	<input type="checkbox"/>

LCS	LCSD	Qual
101	101	<input type="checkbox"/>
82	82	<input type="checkbox"/>
79	80	<input type="checkbox"/>

ACP % RC
33-130
60-130
54-130

**Laboratory Control Sample**

Date of Extraction: 10/13/2016

Date of Analysis: 10/13/2016

Dup Date of Analysis: 10/13/2016

Laboratory Sample #: HT1013162

LCS Qualifiers: None

Analyte	SPC CONC	LCS	LCSD	%LCS	%LCSD	RPD	ACP %LCS	ACP RPD	Qual
1,1-Dichloroethene	10.0	9.74	9.17	97	92	6	58-130	20	<input type="checkbox"/>
Benzene	10.0	10.9	10.4	109	104	5	70-130	20	<input type="checkbox"/>
Trichloroethene	10.0	11.6	11.3	116	113	3	70-130	20	<input type="checkbox"/>
Toluene	10.0	9.99	9.75	100	98	2	70-130	20	<input type="checkbox"/>
Chlorobenzene	10.0	11.0	10.6	110	106	4	70-130	20	<input type="checkbox"/>



**QA/QC Report**  
for  
**Volatile Organic Compounds (EPA 8260B)**  
Reporting units: ppb

**Matrix Spike (MS) / Matrix Spike Duplicate (MSD)**

Date of Extraction: 10/14/2016

Date of Analysis: 10/14/2016

Dup Date of Analysis: 10/14/2016

Laboratory Sample #: 22419-005

MS/MSD Qualifiers: None

Reference #: PEI 22419

Analyte	R1	SPC CONC	MS	MSD	%MS	%MSD	RPD	ACP %MS	ACP RPD	Qual
1,1-Dichloroethene	0.00	10.0	10.1	9.84	101	98	3	55-130	20	<input type="checkbox"/>
Benzene	0.00	10.0	10.8	10.5	108	105	3	68-130	20	<input type="checkbox"/>
Trichloroethene	0.00	10.0	11.5	11.4	115	114	1	67-130	20	<input type="checkbox"/>
Toluene	0.00	10.0	9.60	9.42	96	94	2	70-130	20	<input type="checkbox"/>
Chlorobenzene	0.00	10.0	10.6	10.3	106	103	3	70-130	20	<input type="checkbox"/>

**Surrogate Recoveries for Spike Samples**

Surrogate (%RC)	MS	MSD	Qual
Dibromofluoromethane	103	102	<input type="checkbox"/>
Toluene-d8	82	81	<input type="checkbox"/>
4-Bromofluorobenzene	79	79	<input type="checkbox"/>

LCS	LCSD	Qual
104	105	<input type="checkbox"/>
81	81	<input type="checkbox"/>
77	78	<input type="checkbox"/>

ACP % RC
33-130
60-130
54-130

**Laboratory Control Sample**

Date of Extraction: 10/14/2016

Date of Analysis: 10/14/2016

Dup Date of Analysis: 10/14/2016

Laboratory Sample #: HT1014161

LCS Qualifiers: None

Analyte	SPC CONC	LCS	LCSD	%LCS	%LCSD	RPD	ACP %LCS	ACP RPD	Qual
1,1-Dichloroethene	10.0	10.3	9.81	103	98	5	58-130	20	<input type="checkbox"/>
Benzene	10.0	10.8	10.4	108	104	4	70-130	20	<input type="checkbox"/>
Trichloroethene	10.0	11.7	11.3	117	113	3	70-130	20	<input type="checkbox"/>
Toluene	10.0	9.50	9.33	95	93	2	70-130	20	<input type="checkbox"/>
Chlorobenzene	10.0	10.7	10.4	107	104	3	70-130	20	<input type="checkbox"/>

**QA/QC Report**  
**for**  
**Volatile Organic Compounds (EPA 8260B)**  
Reporting units: ppb

**Matrix Spike (MS) / Matrix Spike Duplicate (MSD)**

Date of Extraction: 10/13/2016

Date of Analysis: 10/13/2016

Dup Date of Analysis: 10/13/2016

Laboratory Sample #: 22416-002

MS/MSD Qualifiers: None

Reference #: PEI 22419

Analyte	R1	SPC CONC	MS	MSD	%MS	%MSD	RPD	ACP %MS	ACP RPD	Qual
1,1-Dichloroethene	0.00	10.0	11.1	10.3	111	103	7	56-130	20	<input type="checkbox"/>
Benzene	0.00	10.0	11.5	10.7	115	107	7	70-130	20	<input type="checkbox"/>
Trichloroethene	0.00	10.0	12.3	11.9	123	119	3	69-130	20	<input type="checkbox"/>
Toluene	0.00	10.0	10.6	10.1	106	101	5	68-130	20	<input type="checkbox"/>
Chlorobenzene	0.00	10.0	11.4	11.1	114	111	3	70-130	20	<input type="checkbox"/>

**Surrogate Recoveries for Spike Samples**

Surrogate (%RC)	MS	MSD	Qual
Dibromofluoromethane	103	103	<input type="checkbox"/>
Toluene-d8	84	84	<input type="checkbox"/>
4-Bromofluorobenzene	80	82	<input type="checkbox"/>

LCS	LCSD	Qual
96	97	<input type="checkbox"/>
82	83	<input type="checkbox"/>
79	79	<input type="checkbox"/>

ACP % RC
58-130
58-130
53-130

**Laboratory Control Sample**

Date of Extraction: 10/13/2016

Date of Analysis: 10/13/2016

Dup Date of Analysis: 10/13/2016

Laboratory Sample #: HT1013161

LCS Qualifiers: None

Analyte	SPC CONC	LCS	LCSD	%LCS	%LCSD	RPD	ACP %LCS	ACP RPD	Qual
1,1-Dichloroethene	10.0	10.3	9.76	103	98	5	59-130	20	<input type="checkbox"/>
Benzene	10.0	11.2	10.9	112	109	3	70-130	20	<input type="checkbox"/>
Trichloroethene	10.0	11.8	11.4	118	114	3	70-130	20	<input type="checkbox"/>
Toluene	10.0	10.3	9.92	103	99	4	70-130	20	<input type="checkbox"/>
Chlorobenzene	10.0	11.3	10.9	113	109	4	70-130	20	<input type="checkbox"/>

**QA/QC Report**  
**for**  
**Extactable Fuel Hydrocarbons (EPA 8015B/8015M)**  
Reporting units: ppm

**Laboratory Control Spike (LCS) / Laboratory Control Spike Duplicate (LCSD)**

Date of Extraction: 10/18/2016

Date of Analysis: 10/18/2016

Dup Date of Analysis: 10/18/2016

Laboratory Sample #: IN1018169

LCS/LCSD Qualifiers: None

Reference #: PEI 22419

Analyte	SPC CONC	LCS	LCSD	%LCS	%LCSD	RPD	ACP %LCS	ACP RPD	Qual
EFH as Diesel	2.00	1.71	1.32	86	66	26	49-130	26	<input type="checkbox"/>

**Surrogate Recoveries for Spike Samples**

Surrogate (%RC)	LCS	LCSD	Qual
Octacosane	70	68	<input type="checkbox"/>

ACP % RC
43-146

**QA/QC Report**  
**for**  
**Volatile Fuel Hydrocarbons (EPA 8015B)**  
Reporting units: ppb

**Matrix Spike (MS) / Matrix Spike Duplicate (MSD)**

Date of Extraction: 10/14/2016

Date of Analysis: 10/14/2016

Dup Date of Analysis: 10/14/2016

Laboratory Sample #: 22416-003

MS/MSD Qualifiers: None

Reference #: PEI 22419

Analyte	R1	SPC CONC	MS	MSD	%MS	%MSD	RPD	ACP %MS	ACP RPD	Qual
VFH as Gasoline	0.00	100	72.0	67.0	72	67	7	45-134	29	<input type="checkbox"/>

**Surrogate Recoveries for Spike Samples**

Surrogate (%RC)	MS	MSD	Qual
$\alpha$ - $\alpha$ -Trifluorotoluene	85	82	<input type="checkbox"/>

LCS	LCSD	Qual
88	84	<input type="checkbox"/>

ACP % RC
45-130

**Laboratory Control Sample**

Date of Extraction: 10/14/2016

Date of Analysis: 10/14/2016

Dup Date of Analysis: 10/14/2016

Laboratory Sample #: JB1014161

LCS Qualifiers: None

Analyte	SPC CONC	LCS	LCSD	%LCS	%LCSD	RPD	ACP %LCS	ACP RPD	Qual
VFH as Gasoline	100	78.0	77.0	78	77	1	48-135	31	<input type="checkbox"/>

**QA/QC Report**  
**for**  
**Organochlorinated Pesticides (EPA 8081A)**  
Reporting units: ppb

**Laboratory Control Spike (LCS) / Laboratory Control Spike Duplicate (LCSD)**

Date of Extraction: 10/18/2016

Date of Analysis: 10/20/2016

Dup Date of Analysis: 10/20/2016

Laboratory Sample #: IN1013163A

MS/MSD Qualifiers: None

Reference #: PEI 22419

Analyte	SPC CONC	LCS	LCSD	%LCS	%LCSD	RPD	ACP %LCS	ACP RPD	Qual
Gamma-BHC	0.200	0.198	0.170	99	85	15	44-130	25	<input type="checkbox"/>
Heptachlor	0.200	0.158	0.144	79	72	9	46-130	28	<input type="checkbox"/>
Aldrin	0.200	0.151	0.126	75	63	18	48-130	28	<input type="checkbox"/>
Dieldrin	0.500	0.542	0.479	108	96	12	56-130	23	<input type="checkbox"/>
Endrin	0.500	0.555	0.492	111	98	12	54-130	24	<input type="checkbox"/>
DDT	0.500	0.488	0.436	98	87	11	47-130	28	<input type="checkbox"/>

**Surrogate Recoveries for Spike Samples**

Surrogate (%RC)	LCS	LCSD	Qual
Decachlorobiphenyl	104	90	<input type="checkbox"/>

ACP % RC
30-167

**QA/QC Report**  
**for**  
**Polychlorinated Biphenyl's (EPA 8082)**  
Reporting units: ppb

**Laboratory Control Spike (LCS) / Laboratory Control Spike Duplicate (LCSD)**

Date of Extraction: 10/13/2016

Date of Analysis: 10/20/2016

Dup Date of Analysis: 10/20/2016

Laboratory Sample #: IN1013163B

LCS/LCSD Qualifiers: None

Reference #: PEI 22419

Analyte	SPC CONC	LCS	LCSD	%LCS	%LCSD	RPD	ACP %LCS	ACP RPD	Qual
PCB-1016	1.50	1.10	1.08	73	72	2	41-130	28	<input type="checkbox"/>
PCB-1260	1.50	1.48	1.36	99	91	8	46-130	27	<input type="checkbox"/>

**Surrogate Recoveries for Spike Samples**

Surrogate (%RC)	LCS	LCSD	Qual
Decachlorobiphenyl	125	110	<input type="checkbox"/>

ACP % RC
30-167

**QA/QC Report**  
**for**  
**Polynuclear Aromatic Hydrocarbons (EPA 8310)**  
Reporting units: ppb

**Laboratory Control Spike (LCS) / Laboratory Control Spike Duplicate (LCSD)**

Date of Extraction: 10/18/2016

Date of Analysis: 10/19/2016

Dup Date of Analysis: 10/19/2016

Laboratory Sample #: AV1018161

MS/MSD Qualifiers: L2, R2,

Reference #: PEI 22419

Analyte	SPC CONC	LCS	LCSD	%LCS	%LCSD	RPD	ACP %LCS	ACP RPD	Qual
Acenaphthene	0.250	0.166	0.169	66	68	2	54-137	20	<input type="checkbox"/>
Anthracene	0.250	0.114	0.148	46	59	26	59-130	20	<input checked="" type="checkbox"/>
Pyrene	0.250	0.149	0.161	60	64	8	62-130	20	<input type="checkbox"/>
Chrysene	0.250	0.158	0.178	63	71	12	64-123	20	<input type="checkbox"/>
Benzo(a)pyrene	0.250	0.199	0.167	80	67	17	59-130	20	<input type="checkbox"/>

**Surrogate Recoveries for Spike Samples**

Surrogate (%RC)	LCS	LCSD	Qual
Nitrobenzene-d5	91	95	<input type="checkbox"/>

ACP % RC
10-166

**QA/QC Report  
for  
Metals**

Reference #: PEI 22419

Reporting units: ppm

**Matrix Spike (MS) / Matrix Spike Duplicate (MSD)**

6010B/7471A

Analyte	Date of Extraction	MS Date of Analysis	MSD Date of Analysis	Laboratory Sample #	R1	SPC CONC	MS	MSD	%MS	%MSD	RPD	ACP %MS	ACP RPD	Qual
Mercury	10/17/2016	10/19/2016	10/19/2016	22419-001	0.00	1.00	0.950	0.957	95	96	1	80-120	20	--
Antimony	10/18/2016	10/19/2016	10/19/2016	22419-001	0.00	20.0	2.75	2.36	14	12	15	75-125	20	M2,
Arsenic	10/18/2016	10/19/2016	10/19/2016	22419-001	5.50	20.0	25.1	24.5	98	95	2	75-125	20	--
Barium	10/18/2016	10/19/2016	10/19/2016	22419-001	95.0	20.0	110	125	75	150	13	75-125	20	M3,
Beryllium	10/18/2016	10/19/2016	10/19/2016	22419-001	0.00	20.0	19.8	19.7	99	99	1	75-125	20	--
Cadmium	10/18/2016	10/19/2016	10/19/2016	22419-001	0.220	20.0	19.9	19.7	98	97	1	75-125	20	--
Chromium	10/18/2016	10/19/2016	10/19/2016	22419-001	15.0	20.0	35.2	33.6	101	93	5	75-125	20	--
Cobalt	10/18/2016	10/19/2016	10/19/2016	22419-001	7.50	20.0	26.8	26.4	96	94	2	75-125	20	--
Copper	10/18/2016	10/19/2016	10/19/2016	22419-001	15.0	20.0	36.7	36.4	109	107	1	75-125	20	--
Lead	10/18/2016	10/19/2016	10/19/2016	22419-001	14.0	20.0	27.2	27.6	66	68	1	75-125	20	M3,
Molybdenum	10/18/2016	10/19/2016	10/19/2016	22419-001	0.00	20.0	17.9	17.7	89	89	1	75-125	20	--
Nickel	10/18/2016	10/19/2016	10/19/2016	22419-001	14.0	20.0	34.8	33.0	104	95	5	75-125	20	--
Selenium	10/18/2016	10/19/2016	10/19/2016	22419-001	0.00	20.0	20.6	21.0	103	105	2	75-125	20	--
Silver	10/18/2016	10/19/2016	10/19/2016	22419-001	0.00	20.0	18.2	18.2	91	91	0	75-125	20	--
Thallium	10/18/2016	10/19/2016	10/19/2016	22419-001	0.00	20.0	13.6	13.6	68	68	0	75-125	20	M2,
Vanadium	10/18/2016	10/19/2016	10/19/2016	22419-001	33.0	20.0	51.5	51.3	93	91	0	75-125	20	--
Zinc	10/18/2016	10/19/2016	10/19/2016	22419-001	63.0	20.0	82.1	83.1	95	100	1	75-125	20	--



**QA/QC Report  
for  
Metals**

Reference #: PEI 22419

Reporting units: ppm

**Laboratory Control Sample**

Analyte	Date of Extraction	LCS Date of Analysis	LCSD Date of Analysis	Laboratory Sample #	SPC CONC	LCS	LCSD	%LCS	% LCSD	RPD	ACP %LCS	ACP RPD	Qual
Mercury	10/17/2016	10/19/2016	10/19/2016	JA1017164	1.00	0.935	0.923	94	92	1	80-120	20	--
Antimony	10/18/2016	10/19/2016	10/19/2016	SG1018162	20.0	20.7	20.2	104	101	2	80-120	20	--
Arsenic	10/18/2016	10/19/2016	10/19/2016	SG1018162	20.0	19.4	19.2	97	96	1	80-120	20	--
Barium	10/18/2016	10/19/2016	10/19/2016	SG1018162	20.0	21.3	21.1	106	106	1	80-120	20	--
Beryllium	10/18/2016	10/19/2016	10/19/2016	SG1018162	20.0	19.5	19.6	98	98	1	80-120	20	--
Cadmium	10/18/2016	10/19/2016	10/19/2016	SG1018162	20.0	19.5	19.3	98	96	1	80-120	20	--
Chromium	10/18/2016	10/19/2016	10/19/2016	SG1018162	20.0	19.2	18.9	96	94	2	80-120	20	--
Cobalt	10/18/2016	10/19/2016	10/19/2016	SG1018162	20.0	19.9	19.7	100	99	1	80-120	20	--
Copper	10/18/2016	10/19/2016	10/19/2016	SG1018162	20.0	20.8	20.5	104	102	1	80-120	20	--
Lead	10/18/2016	10/19/2016	10/19/2016	SG1018162	20.0	20.2	20.1	101	100	0	80-120	20	--
Molybdenum	10/18/2016	10/19/2016	10/19/2016	SG1018162	20.0	20.6	20.3	103	101	1	80-120	20	--
Nickel	10/18/2016	10/19/2016	10/19/2016	SG1018162	20.0	21.0	20.9	105	104	0	80-120	20	--
Selenium	10/18/2016	10/19/2016	10/19/2016	SG1018162	20.0	19.4	19.2	97	96	1	80-120	20	--
Silver	10/18/2016	10/19/2016	10/19/2016	SG1018162	20.0	20.0	19.8	100	99	1	80-120	20	--
Thallium	10/18/2016	10/19/2016	10/19/2016	SG1018162	20.0	20.5	19.9	102	100	3	80-120	20	--
Vanadium	10/18/2016	10/19/2016	10/19/2016	SG1018162	20.0	19.2	18.8	96	94	2	80-120	20	--
Zinc	10/18/2016	10/19/2016	10/19/2016	SG1018162	20.0	20.0	18.9	100	94	6	80-120	20	--

**QA/QC Report  
for  
Metals**

Reference #: PEI 22419

Reporting units: ppm

**Matrix Spike (MS) / Matrix Spike Duplicate (MSD)**

**6010B/7470A**

Analyte	Date of Extraction	MS Date of Analysis	MSD Date of Analysis	Laboratory Sample #	R1	SPC CONC	MS	MSD	%MS	%MSD	RPD	ACP %MS	ACP RPD	Qual
Mercury	10/17/2016	10/19/2016	10/19/2016	22417-004	0.00	0.00500	0.00460	0.00452	92	90	2	80-120	20	--
Antimony	10/17/2016	10/19/2016	10/19/2016	22419-017	0.00	0.200	0.203	0.192	101	96	6	75-125	20	--
Arsenic	10/17/2016	10/19/2016	10/19/2016	22419-017	0.00	0.200	0.189	0.186	94	93	2	75-125	20	--
Barium	10/17/2016	10/19/2016	10/19/2016	22419-017	0.00	0.200	0.215	0.210	108	105	2	75-125	20	--
Beryllium	10/17/2016	10/19/2016	10/19/2016	22419-017	0.00	0.200	0.188	0.184	94	92	2	75-125	20	--
Cadmium	10/17/2016	10/19/2016	10/19/2016	22419-017	0.00	0.200	0.190	0.195	95	97	3	75-125	20	--
Chromium	10/17/2016	10/19/2016	10/19/2016	22419-017	0.00	0.200	0.184	0.177	92	88	4	75-125	20	--
Cobalt	10/17/2016	10/19/2016	10/19/2016	22419-017	0.00	0.200	0.203	0.198	101	99	2	75-125	20	--
Copper	10/17/2016	10/19/2016	10/19/2016	22419-017	0.00	0.200	0.204	0.197	102	98	3	75-125	20	--
Lead	10/17/2016	10/19/2016	10/19/2016	22419-017	0.00	0.200	0.197	0.194	98	97	2	75-125	20	--
Molybdenum	10/17/2016	10/19/2016	10/19/2016	22419-017	0.00	0.200	0.196	0.190	98	95	3	75-125	20	--
Nickel	10/17/2016	10/19/2016	10/19/2016	22419-017	0.00	0.200	0.205	0.198	102	99	3	75-125	20	--
Selenium	10/17/2016	10/19/2016	10/19/2016	22419-017	0.00	0.200	0.194	0.183	97	91	6	75-125	20	--
Silver	10/17/2016	10/19/2016	10/19/2016	22419-017	0.00	0.200	0.200	0.195	100	97	3	75-125	20	--
Thallium	10/17/2016	10/19/2016	10/19/2016	22419-017	0.00	0.200	0.194	0.193	97	97	1	75-125	20	--
Vanadium	10/17/2016	10/19/2016	10/19/2016	22419-017	0.00	0.200	0.184	0.178	92	89	3	75-125	20	--
Zinc	10/17/2016	10/19/2016	10/19/2016	22419-017	0.00	0.200	0.172	0.168	86	84	2	75-125	20	--

**QA/QC Report  
for  
Metals**

Reference #: PEI 22419

Reporting units: ppm

**Laboratory Control Sample**

Analyte	Date of Extraction	LCS Date of Analysis	LCSD Date of Analysis	Laboratory Sample #	SPC CONC	LCS	LCSD	%LCS	% LCSD	RPD	ACP %LCS	ACP RPD	Qual
Antimony	10/17/2016	10/19/2016	10/19/2016	CT1017162	0.200	0.205	0.211	102	105	3	80-120	20	--
Arsenic	10/17/2016	10/19/2016	10/19/2016	CT1017162	0.200	0.196	0.197	98	98	1	80-120	20	--
Barium	10/17/2016	10/19/2016	10/19/2016	CT1017162	0.200	0.206	0.211	103	105	2	80-120	20	--
Beryllium	10/17/2016	10/19/2016	10/19/2016	CT1017162	0.200	0.200	0.195	100	97	3	80-120	20	--
Cadmium	10/17/2016	10/19/2016	10/19/2016	CT1017162	0.200	0.193	0.195	97	97	1	80-120	20	--
Chromium	10/17/2016	10/19/2016	10/19/2016	CT1017162	0.200	0.187	0.189	94	94	1	80-120	20	--
Cobalt	10/17/2016	10/19/2016	10/19/2016	CT1017162	0.200	0.209	0.211	104	105	1	80-120	20	--
Copper	10/17/2016	10/19/2016	10/19/2016	CT1017162	0.200	0.211	0.212	105	106	0	80-120	20	--
Lead	10/17/2016	10/19/2016	10/19/2016	CT1017162	0.200	0.202	0.206	101	103	2	80-120	20	--
Molybdenum	10/17/2016	10/19/2016	10/19/2016	CT1017162	0.200	0.202	0.204	101	102	1	80-120	20	--
Nickel	10/17/2016	10/19/2016	10/19/2016	CT1017162	0.200	0.209	0.211	104	105	1	80-120	20	--
Selenium	10/17/2016	10/19/2016	10/19/2016	CT1017162	0.200	0.194	0.203	97	101	5	80-120	20	--
Silver	10/17/2016	10/19/2016	10/19/2016	CT1017162	0.200	0.193	0.197	97	98	2	80-120	20	--
Thallium	10/17/2016	10/19/2016	10/19/2016	CT1017162	0.200	0.201	0.204	100	102	1	80-120	20	--
Vanadium	10/17/2016	10/19/2016	10/19/2016	CT1017162	0.200	0.189	0.190	94	95	1	80-120	20	--
Zinc	10/17/2016	10/19/2016	10/19/2016	CT1017162	0.200	0.179	0.185	90	93	3	80-120	20	--
Mercury	10/17/2016	10/19/2016	10/19/2016	JA1017161	0.00500	0.00488	0.00471	98	94	4	80-120	20	--

# Data Qualifier Definitions

## Qualifier

C8 = Sample RPD between the primary and confirmatory analysis exceeded 40%. Per EPA Method 8000B, the greater value was reported as there was no evidence of chromatographic problems.

22419-002	8310	Benzo(k)fluoranthene
22419-004	8310	Benzo(k)fluoranthene
22419-005	8310	Benzo(k)fluoranthene
22419-006	8310	Benzo(a)pyrene
22419-008	8310	Chrysene
22419-009	8310	Benzo(k)fluoranthene
22419-010	8310	Benzo(k)fluoranthene
22419-011	8310	Phenanthrene
22419-012	8310	Benzo(a)pyrene
22419-013	8310	Benzo(a)pyrene and Benzo(k)fluoranthene
22419-016	8310	Benzo(a)anthracene and Benzo(k)fluoranthene

C8 = Sample RPD between the primary and confirmatory analysis exceeded 40%. Per EPA Method 8000C, the lower value was reported as there was no evidence of chromatographic problems.

22419-007	8310	Benzo(a)pyrene and Benzo(k)fluoranthene
-----------	------	---

D1 = Sample required dilution due to matrix.

L2 = The associated blank spike recovery was below laboratory acceptance limits.

AV1018161	8310	Anthracene	LCS
-----------	------	------------	-----

M2 = Matrix spike recovery was low, the associated blank spike recovery was acceptable.

22419-001	6010B	Antimony	MS/MSD
22419-001	6010B	Thallium	MS/MSD
22419-003	8310	Anthracene	MS
22419-003	8310	Anthracene	MSD
22419-003	8310	Chrysene	MS
22419-003	8310	Chrysene	MSD
22419-012	8081A	Aldrin	MS
22419-012	8081A	DDT	MS
22419-012	8081A	Dieldrin	MS
22419-012	8081A	Endrin	MS
22419-012	8081A	Gamma-BHC	MS
22419-012	8081A	Heptachlor	MS
22419-012	8082	PCB-1016	MS/MSD

M3 = The spike recovery value is unusable since the analyte concentration in the sample is disproportionate to spike level. The associated blank spike recovery was acceptable.

22419-001	6010B	Barium	MS/MSD
22419-001	6010B	Lead	MS/MSD

R2 = RPD/RSD exceeded the laboratory acceptance limit.

22419-012	8081A	Aldrin	MS/MSD
22419-012	8081A	DDT	MS/MSD
22419-012	8081A	Dieldrin	MS/MSD
22419-012	8081A	Endrin	MS/MSD
22419-012	8081A	Gamma-BHC	MS/MSD
22419-012	8081A	Heptachlor	MS/MSD
AV1018161	8310	Anthracene	LCS/LCSD

S5 = Surrogate recovery was below laboratory acceptance limits.

## Definition of terms:

R1	Result of unspiked laboratory sample used for matrix spike determination.
SP CONC (or Spike Conc.)	Spike concentration added to sample or blank
MS	Matrix Spike sample result
MSD	Matrix Spike Duplicate sample result
%MS	Percent recovery of MS: $\{(MS-R1) / SP\ CONC\} \times 100$
%MSD	Percent recovery of MSD: $\{(MSD-R1) / SP\ CONC\} \times 100$
RPD (for MS/MSD)	Relative Percent Difference: $\{(MS-MSD) / (MS+MSD)\} \times 100 \times 2$
LCS	Laboratory Control Sample result
LCSD	Laboratory Control Sample Duplicate result
%LCS	Percent recovery of LCS: $\{(LCS) / SP\ CONC\} \times 100$
%LCSD	Percent recovery of LCSD: $\{(LCSD) / SP\ CONC\} \times 100$
RPD (for LCS/LCSD)	Relative Percent Difference: $\{(LCS-LCSD) / (LCS+LCSD)\} \times 100 \times 2$
ACP %LCS	Acceptable percent recovery range for Laboratory Control Samples.
ACP %MS	Acceptable percent recovery range for Matrix Spike samples
ACP RPD	Acceptable Relative Percent Difference
D	Detectable, result must be greater than zero
Qual	A checked box indicates a data qualifier was utilized and/or required for this analyte see attached explanation.
ND	Analyte Not Detected



# ORANGE COAST ANALYTICAL, INC.

www.ocalab.com

3002 Dow, Suite 532  
Tustin, CA 92780  
(714) 832-0064 Fax (714) 832-0067

4620 E. Elwood, Suite 4  
Phoenix, AZ 85040  
(480) 736-0960 Fax (480) 736-0970

Lab Job No: 22419  
Page 1 of 3

CUSTOMER INFORMATION		PROJECT INFORMATION	
COMPANY: Parsons		PROJECT NAME: Port of Long Beach - Pier S Stockpile	
SEND REPORT TO: Jim Goepel		NUMBER: 450148.02000	
ADDRESS: 100 West Walnut Street		ADDRESS: Pier S at Port of Long Beach	
Pasadena, CA 91124			
EMAIL: jim.goepel@parsons.com		P.O. #:	
PHONE: 626-440-6013 FAX: 626-440-2993		SAMPLED BY: P. Shair	

### ANALYSIS / CONTAINER / PRESERVATIVE

TPH-Full Range (C4-C40) (801)	Organochl. Pesticides (8081A)	PCBs (8082)	VOCs (8260B)	PAHs (8310)	CA TMs <sup>PS</sup> metals (6000/7000)
X	X	X	X	X	X
X	X	X	X	X	X
X	X	X	X	X	X
X	X	X	X	X	X
X	X	X	X	X	X
X	X	X	X	X	X
X	X	X	X	X	X
X	X	X	X	X	X
X	X	X	X	X	X
X	X	X	X	X	X
X	X	X	X	X	X
X	X	X	X	X	X
X	X	X	X	X	X
X	X	X	X	X	X
X	X	X	X	X	X

REQUIRED TAT: Std (5-day)

SAMPLE ID	NO. OF CONTAINERS	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	TPH-Full Range (C4-C40) (801)	Organochl. Pesticides (8081A)	PCBs (8082)	VOCs (8260B)	PAHs (8310)	CA TMs <sup>PS</sup> metals (6000/7000)	REMARKS / PRECAUTIONS
1 SP-1-1	5	10/12/16	0730	SS	X	X	X	X	X	X	
2 SP-1-2	5	10/12/16	0735	SS	X	X	X	X	X	X	
3 SP-1-3	5	10/12/16	0740	SS	X	X	X	X	X	X	
4 SP-1-33	5	10/12/16	0745	SS	X	X	X	X	X	X	
5 SP-2-1	5	10/12/16	0840	SS	X	X	X	X	X	X	
6 SP-2-2	5	10/12/16	0845	SS	X	X	X	X	X	X	
7 SP-2-3	5	10/12/16	0850	SS	X	X	X	X	X	X	
8 SP-2-33	5	10/12/16	0855	SS	X	X	X	X	X	X	
9 SP-3-1	5	10/12/16	1210	SS	X	X	X	X	X	X	
10 SP-3-2	5	10/12/16	1215	SS	X	X	X	X	X	X	
11 SP-3-3	5	10/12/16	1220	SS	X	X	X	X	X	X	
12 SP-3-33	5	10/12/16	1225	SS	X	X	X	X	X	X	
13 SP-4-1	5	10-13-16	0815	SS	X	X	X	X	X	X	
14 SP-4-2	5	10-13-16	0820	SS	X	X	X	X	X	X	

Total No. of Samples: Method of Shipment: Preservative: 1 = Ice 2 = HCl 3 = HNO<sub>3</sub> 4 = H<sub>2</sub>SO<sub>4</sub> 5 = NaOH 6 = Other

Relinquished By: <u>Pete Shair</u> Date/Time: <u>10-13-16 1120</u>	Received By: <u>[Signature]</u> Date/Time: <u>10-13-16 1120</u>	Sample Matrix: WW - Wastewater DW - Drinkingwater SS - Soil/Solid GW - Groundwater OT - Other _____
Relinquished By: <u>[Signature]</u> Date/Time: <u>10-13-16 1320</u>	Received For Lab By: <u>OCALAB</u> Date/Time: <u>10/13/16 1320</u>	Sample Integrity: Intact <input checked="" type="checkbox"/> On Ice _____ °C

All samples remain the property of the client who is responsible for disposal. A disposal fee may be imposed if client fails to pickup samples.



**ORANGE COAST ANALYTICAL, INC.**

**www.ocalab.com**

3002 Dow, Suite 532  
Tustin, CA 92780  
(714) 832-0064 Fax (714) 832-0067

4620 E. Elwood, Suite 4  
Phoenix, AZ 85040  
(480) 736-0960 Fax (480) 736-0970

### Analysis Request and Chain of Custody Record

Lab Job No: 22419  
Page 2 of 3

CUSTOMER INFORMATION		PROJECT INFORMATION	
COMPANY: Parsons		PROJECT NAME: Port of Long Beach - Pier S Stockpile	
SEND REPORT TO: Jim Goepel		NUMBER: 450148.02000	
ADDRESS: 100 West Walnut Street		ADDRESS: Pier S at Port of Long Beach	
Pasadena, CA 91124			
EMAIL: jim.goepel@parsons.com		P.O. #:	
PHONE: 626-440-6013 FAX: 626-440-2993		SAMPLED BY: P. Shair	

ANAYSIS / CONTAINER / PRESERVATIVE						
TPH-Full Range (C4-C40) (801)	Organochl. Pesticides (8081A)	PCBs (8082)	VOCs (8260B)	PAHs (8310)	CA Title 22 metals (6000/7000)	

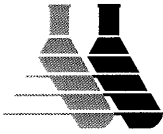
REQUIRED TAT: Std (5-day)

SAMPLE ID	NO. OF CONTAINERS	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	TPH-Full Range (C4-C40) (801)	Organochl. Pesticides (8081A)	PCBs (8082)	VOCs (8260B)	PAHs (8310)	CA Title 22 metals (6000/7000)	REMARKS / PRECAUTIONS
15 SP-4-3	5	10/13 /16	0825	SS	X	X	X	X	X	X	
16 SP-4-33	5	10/13 /16	0830	SS	X	X	X	X	X	X	
<del>5</del>	<del>5</del>	<del>10/ /16</del>	<del></del>	<del>SS</del>	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>	
<del>5</del>	<del>5</del>	<del>10/ /16</del>	<del></del>	<del>SS</del>	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>	
<del>5</del>	<del>5</del>	<del>10/ /16</del>	<del></del>	<del>SS</del>	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>	
<del>5</del>	<del>5</del>	<del>10/ /16</del>	<del></del>	<del>SS</del>	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>	
<del>5</del>	<del>5</del>	<del>10/ /16</del>	<del></del>	<del>SS</del>	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>	
<del>5</del>	<del>5</del>	<del>10/ /16</del>	<del></del>	<del>SS</del>	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>	
<del>5</del>	<del>5</del>	<del>10/ /16</del>	<del></del>	<del>SS</del>	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>	
<del>5</del>	<del>5</del>	<del>10/ /16</del>	<del></del>	<del>SS</del>	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>	
<del>5</del>	<del>5</del>	<del>10/ /16</del>	<del></del>	<del>SS</del>	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>	
<del>5</del>	<del>5</del>	<del>10/ /16</del>	<del></del>	<del>SS</del>	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>	
<del>5</del>	<del>5</del>	<del>10/ /16</del>	<del></del>	<del>SS</del>	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>	
<del>5</del>	<del>5</del>	<del>10/ /16</del>	<del></del>	<del>SS</del>	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>	
<del>5</del>	<del>5</del>	<del>10/ /16</del>	<del></del>	<del>SS</del>	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>	<del></del>	

Total No. of Samples: \_\_\_\_\_ Method of Shipment: \_\_\_\_\_ Preservative: 1 = Ice 2 = HCl 3 = HNO<sub>3</sub> 4 = H<sub>2</sub>SO<sub>4</sub> 5 = NaOH 6 = Other

Relinquished By: <u>Peter Shair</u> Date/Time: <u>10-13-16 1120</u>	Received By: <u>[Signature]</u> Date/Time: <u>10-13-16 1120</u>	Sample Matrix: WW - Wastewater DW - Drinkingwater SS - Soil/Solid GW - Groundwater OT - Other _____
Relinquished By: _____ Date/Time: <u>10-13-16 1320</u>	Received By: _____ Date/Time: _____	Sample Integrity: Intact _____ On Ice _____ °C
Relinquished By: _____ Date/Time: _____	Received For Lab By: <u>OCACA</u> Date/Time: <u>10/13/16 1320</u>	

All samples remain the property of the client who is responsible for disposal. A disposal fee may be imposed if client fails to pickup samples.



**ORANGE COAST ANALYTICAL, INC.**

**www.ocalab.com**

3002 Dow, Suite 532  
Tustin, CA 92780  
(714) 832-0064 Fax (714) 832-0067

4620 E. Elwood, Suite 4  
Phoenix, AZ 85040  
(480) 736-0960 Fax (480) 736-0970

**Analysis Request and Chain of Custody Record**

Lab Job No: 22419  
Page 3 of 3

CUSTOMER INFORMATION		PROJECT INFORMATION	
COMPANY: Parsons		PROJECT NAME: Port of Long Beach - Pier S Stockpile	
SEND REPORT TO: Jim Goepel		NUMBER: 450148.02000	
ADDRESS: 100 West Walnut Street		ADDRESS: Pier S at Port of Long Beach	
Pasadena, CA 91124			
EMAIL: jim.goepel@parsons.com		P.O. #:	
PHONE: 626-440-6013 FAX: 626-440-2993		SAMPLED BY: P. Shair	

ANALYSIS / CONTAINER / PRESERVATIVE					
TPH-Full Range (C4-C40) (801)					
Organochl. Pesticides (8081A)					
PCBs (8082)					
VOCs (8260B)					
PAHs (8310)					
CA Tittel 22 metals (6000/7000)					

REQUIRED TAT: Std (5-day)

SAMPLE ID	NO. OF CONTAINERS	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	TPH-Full Range (C4-C40) (801)	Organochl. Pesticides (8081A)	PCBs (8082)	VOCs (8260B)	PAHs (8310)	CA Tittel 22 metals (6000/7000)	REMARKS / PRECAUTIONS
17 EB-1	5	10/13/16	0730	Water	X	X	X	X	X	X	
	5	10/ /16		SS P5							
	5	10/ /16		SS							
	5	10/ /16		SS							
	5	10/ /16		SS							
	5	10/ /16		SS							
	5	10/ /16		SS							
	5	10/ /16		SS							
	5	10/ /16		SS							
	5	10/ /16		SS							
	5	10/ /16		SS							
	5	10/ /16		SS							

Total No. of Samples: Method of Shipment: Preservative: 1 = Ice 2 = HCl 3 = HNO<sub>3</sub> 4 = H<sub>2</sub>SO<sub>4</sub> 5 = NaOH 6 = Other

Relinquished By: <u>Pete Shair</u> Date/Time: <u>10-13-16 1120</u>	Received By: <u>[Signature]</u> Date/Time: <u>10-13-16 1120</u>	Sample Matrix: WW - Wastewater DW - Drinkingwater SS - Soil/Solid GW - Groundwater OT - Other _____
Relinquished By: <u>[Signature]</u> Date/Time: <u>10-13-16 1320</u>	Received For Lab By: <u>OCACA</u> Date/Time: <u>10/13/16 1320</u>	Sample Integrity: Intact _____ On Ice _____ °C

All samples remain the property of the client who is responsible for disposal. A disposal fee may be imposed if client fails to pickup samples.



# Sample Receipt Report

Laboratory Reference PEI 22419

Logged in by MM

Received: 10/13/16 11:20 Company Name: Parsons Environment & Infrastructure.  
Method of Shipment: Hand Delivered Project Manager: Mr. Jim Goepel  
Shipping Container: Cooler Project Name: Port of Long Beach - Pier S Stockpile  
# Shipping Containers: 1 Project #: 450148.02000

Sample Quantity  
16 Soil                      1 Water

Chain of Custody	Complete <input checked="" type="checkbox"/>	Incomplete <input type="checkbox"/>	None <input type="checkbox"/>
Samples On Ice	Yes, Wet <input checked="" type="checkbox"/>	Yes, Blue <input type="checkbox"/>	No <input type="checkbox"/>
Temperature	<u>          </u> °C		
Shipping Intact	Yes <input checked="" type="checkbox"/>	N/A <input type="checkbox"/>	No <input type="checkbox"/>
Shipping Custody Seals Intact	Yes <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Samples Intact	Yes <input checked="" type="checkbox"/>		No <input type="checkbox"/>
Sample Custody Seals Intact	Yes <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Custody Seals Signed & Dated	Yes <input type="checkbox"/>	N/A <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Proper Test Containers	Yes <input checked="" type="checkbox"/>		No <input type="checkbox"/>
Proper Test Preservations	Yes <input checked="" type="checkbox"/>		No <input type="checkbox"/>
Samples Within Hold Times	Yes <input checked="" type="checkbox"/>		No <input type="checkbox"/>
VOAs Have Zero Headspace	Yes <input type="checkbox"/>	N/A <input type="checkbox"/>	No <input type="checkbox"/>
Sample Labels	Complete <input checked="" type="checkbox"/>	Incomplete <input type="checkbox"/>	None <input type="checkbox"/>
Sample Information Matches COC	Yes <input checked="" type="checkbox"/>	N/A <input type="checkbox"/>	No <input type="checkbox"/>

## Notes

2 Coolers received on ice at 3.4°C and 4.4°C.

Client Notified \_\_\_\_\_ By \_\_\_\_\_ On \_\_\_\_\_

**APPENDIX C**  
**Fieldwork Photographs**



**PHOTOGRAPHS – Page 1**



**Viewing NE at south side the eastern half of the initially existing soil stockpile.**



**Viewing approximately north at the initially existing stockpile.**

**PHOTOGRAPHS – Page 2**



**Viewing E at stockpile preparation.**



**Viewing E at stockpile preparation.**

**PHOTOGRAPHS – Page 3**



**Viewing NW at stockpile preparation.**



**Viewing W at stockpile preparation.**

**PHOTOGRAPHS – Page 4**



**Viewing W at eastern side of completed soil stockpile SP-4.**



**Viewing NW at the final soil stockpiles SP-1 through SP-4.**

**PHOTOGRAPHS – Page 5**



**Viewing N between covered stockpiles with waddles in place.**



**Viewing N between covered stockpiles with waddles in place.**

**PHOTOGRAPHS – Page 6**



**Viewing E at south side final covered soil stockpiles.**



**Viewing E at south side final covered soil stockpiles, protected by chain-link fence.**





# Republic Services, Inc.

18500 N. Allied Way, Phoenix, AZ 85054

## SPECIAL WASTE DEPARTMENT DECISION

Waste Profile #  
51231715072

Expiration Date  
9/12/2018

### I. Decision Request:

Initial     Recertification     Change

Disposal Facility: 5123 - Sunshine Canyon Landfill

Generator Name: T Fresh Company dba Yes Produce

Generator Site Address: 150 N Willow Ave

City: City of Industry

County:

State: CA

Zip:

Name of Waste: Food Products

Estimated Annual Volume: 930 Pounds

### II. Special Waste Department Decision:    Approved    Rejected

Management Method(s):     Landfill     Solidification     Bioremediation     Transfer Facility

Problematic Special Waste according to Republic?     Yes     No

If yes, which one?

Approved by Special Waste Review Committee?     Yes     No     Not Applicable

### Precautions, Conditions or Limitations on Approval

Special Waste Analyst Signature: 

Date: 9/14/2017

Name (Printed): KEITH DIAMANTI

### III. Facility Decision:

Approved     Rejected

### Precautions, Conditions or Limitations on Approval

By signing below, the General Manager or Designee agrees that a fully executed Special Waste Service Agreement is on file for this profile and that the special waste file is complete.

General Manager or Designee: 

Date: 9/14/2017

Name (Printed): Chris Coyle



Requested Disposal Facility: 5123 Sunshine Canyon LF CA

Waste Profile #

5123 17 15072

Saveable fill in form. Restricted printing until all required (yellow) fields are completed.

Sales Rep #. 525 - Stacy Loveland

### I. Generator Information

Generator Name: T Fresh Company dba Yes Produce

Generator Site Address: 150 N Willow Ave

City: City of Industry County: USA State: California Zip: 91746

State ID/Reg No: 272144308 State Approval/Waste Code: (if applicable) NAICS #. 424480

Generator Mailing Address (if different): 150 N Willow Ave

City: City of Industry County: USA State: California Zip: 91746

Generator Contact Name: Sho Chung Email: tfresh@yesproduce.com

Phone Number: (626) 968-2088 Ext: Fax Number: (626) 968-8896

### II. Billing Information

Bill To: T-Fresh Company dba Yes Produce Contact Name: Sho Chung

Billing Address: 150 N Willow Ave Email: tfresh@yesproduce.com

City: City of Industry State: Ca Zip: 91746 Phone: (626) 968-2088

### III. Waste Stream Information

- |  |  |  |   |
|--|--|--|---|
| Name of Waste:<br><small>(Petroleum products-applies only to contaminated media and debris).</small> | <input type="checkbox"/> Diesel Fuel                               | <input type="checkbox"/> Weathered Wood                  | <input type="checkbox"/> Friable Asbestos   |
|  | <input type="checkbox"/> Home Heating Fuel #1-6                    | <input type="checkbox"/> RCRA Empty Containers           | <input type="checkbox"/> Non Friable Asbestos   |
|  | <input type="checkbox"/> Kerosene                                  | <input type="checkbox"/> Treated Medical Waste           | <input type="checkbox"/> Cured Asphalt  |
|  | <input type="checkbox"/> Aviation Fuel                             | <input type="checkbox"/> Animal Carcass (non infectious) | <input type="checkbox"/> Tires  |
|  | <input type="checkbox"/> Hydraulic Fluid                           | <input type="checkbox"/> Plant Trash                     | <input checked="" type="checkbox"/> Food Products<br><small>(Including Animal Food)</small> |
|  | <input type="checkbox"/> Unleaded Gasoline (UST Corrective Action) | <input type="checkbox"/> Meth Contaminated Debris        |   |

Process Generating Waste: Hawaiian Galanga stopped by the airport due to pests.

Method of Shipment:  BULK  DRUM  BAGGED  OTHER:

Estimated Annual Volume: 930 Pounds

Frequency:  ONE TIME  ONGOING

### IV. Certification

I hereby certify that to the best of my knowledge and belief, the information contained herein is a true and accurate description of the waste material being offered for disposal. I further certify that by utilizing this profile, neither myself nor any other employee of the company will deliver for disposal or attempt to deliver for disposal any waste which is classified as toxic waste, hazardous waste or infectious waste, or any other waste material this facility is prohibited from accepting by law. Our company hereby agrees to fully indemnify this disposal facility against any damages resulting from this certification being inaccurate or untrue. I further certify that the company has not altered the form or content of this profile sheet as provided by Republic Services, Inc.

Sho Chung

Authorized Representative Name/Title (Type or Print)

Authorized Representative Signature

T Fresh Company dba Yes Produce

Company Name

9/12/17

Date



# SPECIAL WASTE SERVICE AGREEMENT NON-HAZARDOUS WASTES

Special Waste Profile Number: 5123 17 15072

### Generator Billing Information

Name: T FRESH COMPANY DBA YES PRODUCE  
(ACCT CASH # 321)  
Address: 150 N WILLOW AVE  
City: CITY OF INDUSTRY  
State: CA Zip: 91746  
Phone: 626.968.2088 Fax: \_\_\_\_\_  
Contact: SHO CHUNG

### Republic Waste Location (Company)

SUNSHINE CANYON LANDFILL (5123)  
14747 SAN FERNANDO ROAD  
SYLMAR, CA 91342  
818.362.2141

Project: FOOD PRODUCTS County and State of Origin: LOS ANGELES, CA

Additional Information: \_\_\_\_\_

- Special Waste Service.** Subject to the terms and conditions contained herein, the Company and the Generator agree to be legally bound hereby and the Company agrees to accept at its Facility, Acceptable Waste (hereinafter referred to as "Special Waste" or "Waste") delivered by Generator, and which is acceptable to the Company as herein provided.
- Acceptable Waste.** Only those Special Wastes described in Paragraph 3 herein and in any Special Waste Profile(s) which number is identical to the contract number referenced above, and which Profile(s) are hereby incorporated by reference herein, and which Waste is subsequently approved by the Company and is otherwise in accordance with all laws, regulations and permits, shall be acceptable for disposal at the Facility ("Acceptable Waste").

Cannot Exceed Daily Volume of 930 POUNDS Without Prior Approval of Company.

(B) **Incorporation by Reference.** In addition to Special Waste Profile(s), the following documents are incorporated by reference into this Agreement as if fully set forth herein.

1) N/A

2) N/A

- Term of Agreement.** This Agreement is effective for 12 months, commencing 9/14/2017 and shall automatically be renewed for a similar term thereafter unless either party shall give written notice (via certified mail) of termination to the other party at least thirty (30) days prior written notice.

THE COMPANY AND THE GENERATOR, IN CONSIDERATION OF THE MUTUAL OBLIGATIONS CONTAINED HEREIN, AGREE THAT THIS IS A LEGALLY BINDING AGREEMENT WHICH IS SUBJECT TO THE TERMS AND CONDITIONS SET FORTH ON THIS PAGE AND ON THE REVERSE SIDE OF THIS DOCUMENT. IN ADDITION, THE GENERATOR IS CERTIFYING THE ATTACHED TERMS AND CONDITIONS HAVE BEEN REVIEWED AND INITIALLED AT THE BOTTOM OF THE PAGE.

### GENERATOR

SIGNATURE (AUTHORIZED REPRESENTATIVE)  
Sho Chung / Accounting  
NAME AND TITLE (PLEASE PRINT)  
Sept 15, 2017  
DATE

### REPUBLIC SERVICES, INC/COMPANY

SIGNATURE (AUTHORIZED REPRESENTATIVE)  
Stacy Loveland - SW Executive  
NAME AND TITLE (PLEASE PRINT)  
9/15/2017  
DATE

# Terms and Conditions of Special Waste Service Agreement

5. **The Agreement.** This agreement of the parties ("Agreement") for the disposal of Special Waste shall consist of this Agreement, riders to the Agreement (if any) and any Application, permit and approval that may be applicable to such Waste.
6. **Waste Accepted at Facility.** Generator represents, warrants and covenants that the Waste delivered to Company at its Facility hereunder will be Acceptable Waste and will not contain any unacceptable quantity of hazardous materials or substances, radioactive materials or substances, or toxic waste or substances, as defined by applicable federal, state, local or provincial laws or regulations. Any Waste which does not meet these requirements shall hereinafter be referred to as "Unacceptable Waste". The Generator shall in all matters relating to the collection, transportation and disposal of the Waste hereunder, comply with all applicable federal, state and local laws, regulations, rules and orders regarding the same. The word "Facility" shall mean any landfill, transfer station or other location used to transfer, process or otherwise dispose of such Waste.
7. **Special Waste.** Generator represents, warrants and covenants that the Waste delivered to Company hereunder (i) will not contain any Special Waste that is not specifically described on any Application which is attached hereto or which is subsequently approved by the Company, (ii) will meet the material description as set forth in any Application and otherwise in all significant respects and (iii) will not contain Unacceptable Waste. The parties may incorporate additional Special Waste as part of this Agreement if prior to delivery of such Waste to Company, Generator has provided an Application for such Waste and Company has approved disposal of such Waste within the limitations and conditions contained in Company's written notice of approval of Special Waste Disposal. Title to any and all Waste handled or disposed of by Company shall at all times remain with Generator and Broker (if a Broker is involved).
8. **Rights of Refusal/Rejection.** The Generator shall inspect all Waste at the place(s) of collection and shall remove any and all Unacceptable Waste. Company has the right to refuse, or to reject after acceptance, any load(s) of Waste(s) delivered to its Facility including if the Company believes the Generator has breached (or is breaching) its representations, warranties, covenants or agreements hereunder, or any applicable federal, state or local laws, regulations, rules or orders, even if only a portion of such Waste load is unacceptable. The Company shall have the right to inspect all vehicles and containers of Waste haulers, including the Generator's vehicles, in order to determine whether the Waste is Acceptable Waste or Unacceptable Waste pursuant to this Agreement and all applicable federal, state and local laws, rules and regulations. The Company's exercise, or failure to exercise, its rights hereunder shall not operate to relieve the Generator of its responsibilities or liability under this Agreement. The Generator shall be responsible for, and bear all reasonable expenses and damages incurred by the Company, as a result of the Unacceptable Waste and in the reloading and removal of Unacceptable Waste disposed in the Facility. The Company, may also, in its sole discretion, require the Generator to promptly remove the Unacceptable Waste.
9. **Limited License to Enter.** This Agreement provides Generator with a license to enter the Facility for the limited purpose of, and only to the extent necessary for, off-loading Acceptable Waste at the Facility in the manner directed by Company. Except in an emergency, Generator's personnel shall not leave the immediate vicinity of their vehicle. After off-loading the Waste, Generator's personnel shall promptly leave the Facility. Under no circumstances shall Generator or its personnel engage in any scavenging of Waste or other materials at the Facility. The Company reserves the right to make and enforce reasonable rules and regulations concerning the operation of the Facility, the conduct of the drivers and others on the Facility premises, quantities and sources of Waste, and any other matters necessary or desirable for the safe, legal and efficient operation of the Facility including, but not limited to, speed limits on haul roads imposed by the Company, and the wearing of hard hats and other personal protection equipment by all individuals allowed on the Facility premises. Generator agrees to conform to such rules and regulations as they may be established and amended from time to time. Company may refuse to accept Waste from and shall deny an entrance license to, any of Generator's personnel whom Company believes is under the influence of alcohol or other chemical substances. Generator shall be solely responsible for its employees and subcontractors performing their obligations in a safe manner when at the facility of Company.
10. **Charges and Payment.** Payment shall be made by Generator within sixty (60) days after receipt of invoice from Company. In the event that any amount is overdue, the Company may terminate this Agreement. Generator agrees to pay a finance charge equal to the maximum interest rate permitted by law. Generator shall be liable for all taxes, fees, or other charges imposed upon the disposal of the Waste by federal, state, local or provincial laws and regulations. Company, from time to time, may modify its rates upon sixty (60) days written notice to Generator.
11. **Termination.** Generator's obligations, representations, warranties and covenants regarding the Waste delivered and all indemnities shall survive termination of this Agreement. Should Generator materially default in any of its obligations hereunder, then Company may immediately terminate this Agreement and Generator shall be liable for all costs and damages incurred by the Company.
12. **Driver's Knowledge and Authority.** Generator represents, warrants and covenants that its drivers who deliver Waste to Company's Facility have been advised by Generator of the Company's prohibition on deliveries of hazardous materials or substances, radioactive materials or substances, or toxic waste or substances or any other Unacceptable Waste to the Facility of Company's restrictions on deliveries of Special Waste to the Facility, of the definitions of "Hazardous Waste and Hazardous Substances" as provided by applicable federal, state and local law, rules and regulations and "Special Waste" as provided herein, and of the terms of this license to enter Company's Facility.
13. **Indemnification.** Generator shall indemnify, defend and hold harmless the Company and its subsidiaries, affiliates and parent corporations, as applicable and their respective officers, directors, lenders, employees, subcontractors and agents from and against any and all claims, suits, losses, liabilities, assessments, damages, fines, costs and expenses, including reasonable attorneys fees arising under federal, state or local laws, regulations or ordinances, or relating to the content of the Waste, or arising out of or in connection with any breach of this Agreement or arising out of the negligent collection, transportation and disposal of Waste by Generator or Generator's employees, agents, subcontractors or representatives thereof. Generator shall also be responsible for increased inspection, testing, study and analysis costs made necessary due to reasonable concerns of the Company as to the content of the Waste following discovery of potentially Unacceptable Waste. This indemnification and other obligations stated in this paragraph shall survive the termination of this Agreement.
14. **Insurance.** Generator shall maintain in full force and effect throughout the term of this Agreement the following types of insurance in at least the amounts specified below:

Coverages	Minimum Amounts of Insurance
Worker's Compensation	Statutory
General Liability	\$500,000 combined single limit
Automobile Liability	\$500,000 combined single limit

T Fresh Company

GENERATOR:

All insurance will be by insurers authorized to do business in the state in which the Facility is located. Prior to Generator being allowed on Facility premises, Generator shall provide the Company with certificates of insurance or other satisfactory evidence that such insurance has been procured and is in force. Said policies shall not thereafter be canceled, be permitted to expire or lapse, or be changed without thirty (30) days advance written notice to the Company. Generator warrants that it will secure the above minimum amounts of insurance from any transportation of the Waste to the Facility.

15. **Failure to Perform.** Neither party hereto shall be liable for its failure to perform hereunder due to circumstances not its fault and beyond its reasonable control, including, but not limited to, strikes or other labor disputes, riots, protests, civil disturbances or sabotage, changes in law, fires, floods, compliance with government requests, explosions, accidents, weather, lack of required natural resources, or acts of God affecting either party hereto. In the event of any of the circumstances provided for in the preceding sentence, including, but not limited to, whether any federal, state or local court or governmental authority takes any action which would (i) close or restrict operations at the Facility, (ii) limit the quantity or prohibit the disposal of Waste at the Facility, or (iii) limit the ability of or prohibit Generator from delivering Waste to the Facility, the Company shall have the right, at its option, to reduce, suspend or terminate Generator's access to the Facility immediately, without prior notice and without any additional liabilities between the parties, other than Generator's payment obligation hereunder. Neither Party is required hereunder to settle any labor dispute against its own best judgment.
16. **Other Termination.** The occurrence of any of the following events shall also constitute an event of default by the Generator and shall give the Company the right to immediately terminate this Agreement:
  - (A) A petition for reorganization or bankruptcy filed by or against the Generator.
  - (B) Failure by Generator to pay any amounts due to Company.
  - (C) Any breach by Generator of any of its obligations pursuant to the Agreement.

Generator shall be liable for and shall indemnify, defend and hold harmless Company from any losses, claims expenses or damages incurred by the Company as a result of termination hereunder.
17. **Assignment.** Generator may not assign, transfer or otherwise vest in any other Company, entity or person, in whole or in part, any of its rights or obligations under the Agreement without the prior written consent of the Company, provided, however, that the Company may without any such prior written consent, assign its rights and/or obligations under the Agreement to a subsidiary or affiliate corporation.
18. **Right of Disposal.** This Agreement does not grant any rights to dispose of Waste other than in accordance herewith. The Company reserves the right to immediately terminate access to the Facility by Generator and Generator's personnel in the event of breach or violation by Generator of any of the terms of this Agreement, the Company's operating rules or payment policies or any applicable laws or regulations.
19. **Continuing Compliance.** The Generator has a continuing obligation to inform the Company of any new information, or information not previously provided to the Company by Generator which may affect the acceptability of the Waste by the Company. Further, the Generator shall comply with all Company requests for evidence of Generator's continuing compliance with the terms of the Agreement including but not limited to the following: (i) providing new, updated Waste profiles on the Waste(s) offered for disposal or, (ii) providing appropriate certification that the Waste being offered for disposal is accurately reflected by the appropriate Application or, (iii) re-sample the Waste at Generator's expense if reasonable cause exists as to its acceptability under the terms of this Agreement or, (iv) allow the Company to re-sample the Waste at Generator's expense if reasonable cause exists as to its acceptability under the terms of this Agreement or (v) all of the above.
20. **Miscellaneous.**
  - (A) This Agreement shall be governed by the laws of the State in which the Facility is located.
  - (B) No waiver of a breach of any of the obligations contained in the Agreement shall be construed to be a waiver of any prior or succeeding breach of the same obligation or of any other obligation of this Agreement.
  - (C) No modification, release, discharge or waiver of any provision or obligation hereof shall be of any force, or effect, unless in writing signed by all parties to this Agreement.
  - (D) Generator shall treat as confidential and not disclose to others during or subsequent to the terms of this Agreement, except as is necessary to perform this Agreement, or to comply with any applicable law or regulation any information (including any technical information, experience or data) regarding the Company's plans, programs, plants, processes, products, costs, equipment or operations which may come within the knowledge of the Generator or its employees in the performance of this Agreement, without in each instance securing the prior written consent of the other Company.
  - (E) If any term, phrase, obligation or provision of this Agreement shall be held to be invalid, illegal or unenforceable in any respect, this Agreement shall remain in effect and be construed without regard to such term, phrase, obligation or provision.
  - (F) This Agreement constitutes the entire understanding between the parties, replacing and amending any prior agreements between the parties, and shall be binding upon all parties hereto, their successors, heirs, representatives and assigns. Any provision, term or condition in any acknowledgement, purchase order or other response by Generator which is in addition to or different from the provisions of this Agreement shall be deemed objected to by the Company and shall be of no effect.
  - (G) Generator represents, warrants and covenants that it is and, during the term of this Agreement will remain, in compliance with and will perform its obligations pursuant to all applicable laws and regulations and shall indemnify, defend and hold harmless the Company from any breach thereof.
  - (H) It is the understanding and agreement of the parties that the Company is an independent contractor, and is not an agent, nor an authorized representative of the Generator.
21. **Notices.** All notices herein provided for shall be considered as having been given upon being placed in the mail, certified postage prepaid addressed to the Company or Generator at the address herein set forth in this Agreement or to such other address as may be given to the other party in writing.
22. **Liquidated Damages.** In the event that this Agreement is terminated by the Generator in a manner not in accordance with paragraph 4 hereof, or terminated due to a breach of this Agreement by the Generator, the Generator shall pay, as liquidated damages, and not as a penalty, the greater of an amount equal to six (6) months' service charges or the Generator's most recent monthly charge multiplied by six (6). The Generator shall be given credit for any advance payments made hereunder, however, in computing the amount owed as liquidated damages hereunder. The Generator acknowledges that this liquidated damages clause is reasonable and is applicable to recover damages related to its investment in equipment, development of landfills and hiring of employees undertaken by the Company to service its customers including the Generator. This liquidated damages clause in no way releases the Generator from its obligations and liability for other cost or damages as set forth elsewhere in this Agreement.

May 2009

Republic Services, Inc/COMPANY:



# Republic Services, Inc.

18500 N. Allied Way, Phoenix, AZ 85054

## SPECIAL WASTE DEPARTMENT DECISION

Waste Profile #  
51231714790

Expiration Date  
9/11/2018

### I. Decision Request:

Initial     Recertification     Change

Disposal Facility: 5123 - Sunshine Canyon Landfill

Generator Name: Yi Bao Produce Group Inc

Generator Site Address: 3015 Leonis Blvd

City: Vernon

County: \_\_\_\_\_

State: CA

Zip: \_\_\_\_\_

Name of Waste: Food Products

Estimated Annual Volume: 780 Tons

### II. Special Waste Department Decision:    Approved    Rejected

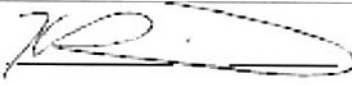
Management Method(s):     Landfill     Solidification     Bioremediation     Transfer Facility

Problematic Special Waste according to Republic?     Yes     No

If yes, which one? \_\_\_\_\_

Approved by Special Waste Review Committee?     Yes     No     Not Applicable

### Precautions, Conditions or Limitations on Approval

Special Waste Analyst Signature: 

Date: 9/11/2017

Name (Printed): KEITH DIAMANTI

### III. Facility Decision:

Approved     Rejected  
Precautions, Conditions or Limitations on Approval

By signing below, the General Manager or Designee agrees that a fully executed Special Waste Service Agreement is on file for this profile and that the special waste file is complete.

General Manager or Designee: 

Date: 9/11/2017

Name (Printed): Charles Cayle



Requested Disposal Facility: 5123 Sunshine Canyon LF CA

Saveable fill in form. Restricted printing until all required (yellow) fields are completed.

Waste Profile #
5123 17 14790
Sales Rep #. 525 - Stacy Loveland

**I. Generator Information**

Generator Name: Yi Bao Produce Group Inc			
Generator Site Address: 3015 Leonis Blvd			
City: Vernon	County: USA	State: California	Zip: 90058
State ID/Reg No: N/A	State Approval/Waste Code: (if applicable)		NAICS #.
Generator Mailing Address (if different): 3015 Leonis Blvd			
City: Vernon	County: Vernon	State: California	Zip: 90058
Generator Contact Name: John Shao		Email: john@yipaoinc.com	
Phone Number: (323) 826-9928	Ext:	Fax Number: (323) 826-9998	

**II. Billing Information**

Bill To: Yi Bao Produce Group Inc	Contact Name: John Shao		
Billing Address: 3015 Leonis Blvd	Email:		
City: Vernon	State: CA	Zip: 90058	Phone: (323) 826-9928

**III. Waste Stream Information**

Name of Waste: <small>(Petroleum products-applies only to contaminated media and debris).</small>	<input type="checkbox"/> Diesel Fuel	<input type="checkbox"/> Weathered Wood	<input type="checkbox"/> Friable Asbestos
	<input type="checkbox"/> Home Heating Fuel #1-6	<input type="checkbox"/> RCRA Empty Containers	<input type="checkbox"/> Non Friable Asbestos
	<input type="checkbox"/> Kerosene	<input type="checkbox"/> Treated Medical Waste	<input type="checkbox"/> Cured Asphalt
	<input type="checkbox"/> Aviation Fuel	<input type="checkbox"/> Animal Carcass (non infectious)	<input type="checkbox"/> Tires
	<input type="checkbox"/> Hydraulic Fluid	<input checked="" type="checkbox"/> Plant Trash	<input checked="" type="checkbox"/> Food Products <small>(Including Animal Food)</small>
	<input type="checkbox"/> Unleaded Gasoline (UST Corrective Action)	<input type="checkbox"/> Meth Contaminated Debris	

Process Generating Waste: Type of waste: Taro Stem (\*plant) from Hawaii  
Reason for the disposal : pest (\*insect)

Method of Shipment: <input checked="" type="checkbox"/> BULK <input type="checkbox"/> DRUM <input type="checkbox"/> BAGGED <input type="checkbox"/> OTHER: BOX
Estimated Annual Volume: <u>780</u> Tons
Frequency: <input checked="" type="checkbox"/> ONE TIME <input type="checkbox"/> ONGOING

**IV. Certification**

I hereby certify that to the best of my knowledge and belief, the information contained herein is a true and accurate description of the waste material being offered for disposal. I further certify that by utilizing this profile, neither myself nor any other employee of the company will deliver for disposal or attempt to deliver for disposal any waste which is classified as toxic waste, hazardous waste or infectious waste, or any other waste material this facility is prohibited from accepting by law. Our company hereby agrees to fully indemnify this disposal facility against any damages resulting from this certification being inaccurate or untrue. I further certify that the company has not altered the form or content of this profile sheet as provided by Republic Services, Inc.

<u>John Shao</u> Authorized Representative Name/Title (Type or Print)	<u>Yi Bao Produce Group Inc</u> Company Name
 Authorized Representative Signature	<u>9/11/17</u> Date



# SPECIAL WASTE SERVICE AGREEMENT NON-HAZARDOUS WASTES

Special Waste Profile Number: 5123 17 14790

### Generator Billing Information

Name: YI BAO PRODUCE GROUP INC  
(ACCT CASH # 321)  
Address: 3015 LEONIS BLVD  
City: VERNON  
State: CA Zip: 90058  
Phone: 323.826.9928 Fax: \_\_\_\_\_  
Contact: JOHN SHAO

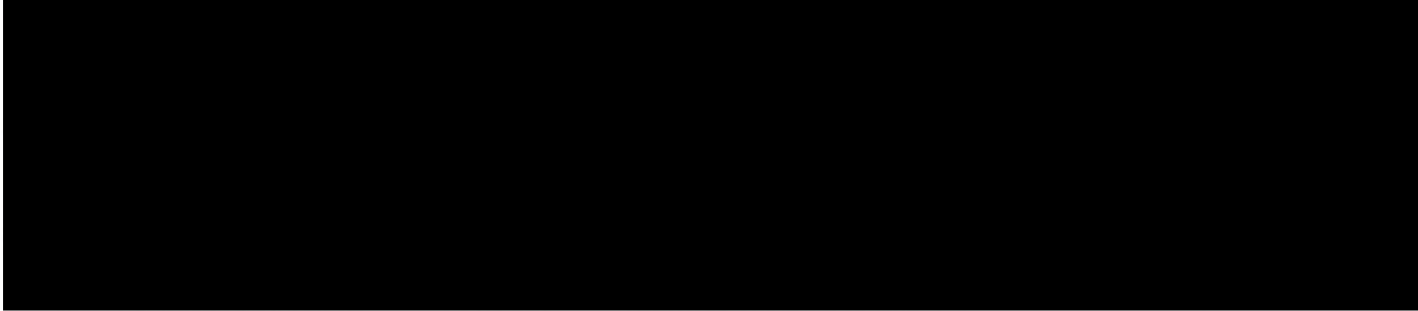
### Republic Waste Location (Company)

SUNSHINE CANYON LANDFILL (5123)  
14747 SAN FERNANDO ROAD  
SYLMAR, CA 91342  
818.362.2141

Project: FOOD PRODUCTS County and State of Origin: LOS ANGELES, CA

Additional Information: taro stem (Plant)

- Special Waste Service.** Subject to the terms and conditions contained herein, the Company and the Generator agree to be legally bound hereby and the Company agrees to accept at its Facility, Acceptable Waste (hereinafter referred to as "Special Waste" or "Waste") delivered by Generator, and which is acceptable to the Company as herein provided.
- Acceptable Waste.** Only those Special Wastes described in Paragraph 3 herein and in any Special Waste Profile(s) which number is identical to the contract number referenced above, and which Profile(s) are hereby incorporated by reference herein, and which Waste is subsequently approved by the Company and is otherwise in accordance with all laws, regulations and permits, shall be acceptable for disposal at the Facility ("Acceptable Waste").



Cannot Exceed Daily Volume of 780 TONS Without Prior Approval of Company.

(B) **Incorporation by Reference.** In addition to Special Waste Profile(s), the following documents are incorporated by reference into this Agreement as if fully set forth herein.

1) N/A

2) N/A

- Term of Agreement.** This Agreement is effective for 12 months, commencing 9/11/2017 and shall automatically be renewed for a similar term thereafter unless either party shall give written notice (via certified mail) of termination to the other party at least thirty (30) days prior written notice.

THE COMPANY AND THE GENERATOR, IN CONSIDERATION OF THE MUTUAL OBLIGATIONS CONTAINED HEREIN, AGREE THAT THIS IS A LEGALLY BINDING AGREEMENT WHICH IS SUBJECT TO THE TERMS AND CONDITIONS SET FORTH ON THIS PAGE AND ON THE REVERSE SIDE OF THIS DOCUMENT. IN ADDITION, THE GENERATOR IS CERTIFYING THE ATTACHED TERMS AND CONDITIONS HAVE BEEN REVIEWED AND INITIALLED AT THE BOTTOM OF THE PAGE.

GENERATOR

[Signature]  
SIGNATURE (AUTHORIZED REPRESENTATIVE)

JOHN SHAO / OFFICE MANAGER  
NAME AND TITLE (PLEASE PRINT)

9/11/17  
DATE

REPUBLIC SERVICES, INC/COMPANY

[Signature]  
SIGNATURE (AUTHORIZED REPRESENTATIVE)

Stacy Loveland - SW Executive  
NAME AND TITLE (PLEASE PRINT)

9/12/2017  
DATE

## Terms and Conditions of Special Waste Service Agreement

5. **The Agreement.** This agreement of the parties ("Agreement") for the disposal of Special Waste shall consist of this Agreement, riders to the Agreement (if any) and any Application, permit and approval that may be applicable to such Waste.
6. **Waste Accepted at Facility.** Generator represents, warrants and covenants that the Waste delivered to Company at its Facility hereunder will be Acceptable Waste and will not contain any unacceptable quantity of hazardous materials or substances, radioactive materials or substances, or toxic waste or substances, as defined by applicable federal, state, local or provincial laws or regulations. Any Waste which does not meet these requirements shall hereinafter be referred to as "Unacceptable Waste". The Generator shall in all matters relating to the collection, transportation and disposal of the Waste hereunder, comply with all applicable federal, state and local laws, regulations, rules and orders regarding the same. The word "Facility" shall mean any landfill, transfer station or other location used to transfer, process or otherwise dispose of such Waste.
7. **Special Waste.** Generator represents, warrants and covenants that the Waste delivered to Company hereunder (i) will not contain any Special Waste that is not specifically described on any Application which is attached hereto or which is subsequently approved by the Company, (ii) will meet the material description as set forth in any Application and otherwise in all significant respects and (iii) will not contain Unacceptable Waste. The parties may incorporate additional Special Waste as part of this Agreement if prior to delivery of such Waste to Company, Generator has provided an Application for such Waste and Company has approved disposal of such Waste within the limitations and conditions contained in Company's written notice of approval of Special Waste Disposal. Title to any and all Waste handed or disposed of by Company shall at all times remain with Generator and Broker (if a Broker is involved).
8. **Rights of Refusal/Rejection.** The Generator shall inspect all Waste at the place(s) of collection and shall remove any and all Unacceptable Waste. Company has the right to refuse, or to reject after acceptance, any load(s) of Waste(s) delivered to its Facility including if the Company believes the Generator has breached (or is breaching) its representations, warranties, covenants or agreements hereunder, or any applicable federal, state or local laws, regulations, rules or orders, even if only a portion of such Waste load is unacceptable. The Company shall have the right to inspect all vehicles and containers of Waste haulers, including the Generator's vehicles, in order to determine whether the Waste is Acceptable Waste or Unacceptable Waste pursuant to this Agreement and all applicable federal, state and local laws, rules and regulations. The Company's exercise, or failure to exercise, its rights hereunder shall not operate to relieve the Generator of its responsibilities or liability under this Agreement. The Generator shall be responsible for, and bear all reasonable expenses and damages incurred by the Company, as a result of the Unacceptable Waste and in the reloading and removal of Unacceptable Waste disposed in the Facility. The Company, may also, in its sole discretion, require the Generator to promptly remove the Unacceptable Waste.
9. **Limited License to Enter.** This Agreement provides Generator with a license to enter the Facility for the limited purpose of, and only to the extent necessary for, off-loading Acceptable Waste at the Facility in the manner directed by Company. Except in an emergency, Generator's personnel shall not leave the immediate vicinity of their vehicle. After off-loading the Waste, Generator's personnel shall promptly leave the Facility. Under no circumstances shall Generator or its personnel engage in any scavenging of Waste or other materials at the Facility. The Company reserves the right to make and enforce reasonable rules and regulations concerning the operation of the Facility, the conduct of the drivers and others on the Facility premises, quantities and sources of Waste, and any other matters necessary or desirable for the safe, legal and efficient operation of the Facility including, but not limited to, speed limits on haul roads imposed by the Company, and the wearing of hard hats and other personal protection equipment by all individuals allowed on the Facility premises. Generator agrees to conform to such rules and regulations as they may be established and amended from time to time. Company may refuse to accept Waste from and shall deny an entrance license to, any of Generator's personnel whom Company believes is under the influence of alcohol or other chemical substances. Generator shall be solely responsible for its employees and subcontractors performing their obligations in a safe manner when at the facility of Company.
10. **Charges and Payment.** Payment shall be made by Generator within sixty (60) days after receipt of invoice from Company. In the event that any amount is overdue, the Company may terminate this Agreement. Generator agrees to pay a finance charge equal to the maximum interest rate permitted by law. Generator shall be liable for all taxes, fees, or other charges imposed upon the disposal of the Waste by federal, state, local or provincial laws and regulations. Company, from time to time, may modify its rates upon sixty (60) days written notice to Generator.
11. **Termination.** Generator's obligations, representations, warranties and covenants regarding the Waste delivered and all indemnities shall survive termination of this Agreement. Should Generator materially default in any of its obligations hereunder, then Company may immediately terminate this Agreement and Generator shall be liable for all costs and damages incurred by the Company.
12. **Driver's Knowledge and Authority.** Generator represents, warrants and covenants that its drivers who deliver Waste to Company's Facility have been advised by Generator of the Company's prohibition on deliveries of hazardous materials or substances, radioactive materials or substances, or toxic waste or substances or any other Unacceptable Waste to the Facility of Company's restrictions on deliveries of Special Waste to the Facility, of the definitions of "Hazardous Waste and Hazardous Substances" as provided by applicable federal, state and local law, rules and regulations and "Special Waste" as provided herein, and of the terms of this license to enter Company's Facility.
13. **Indemnification.** Generator shall indemnify, defend and hold harmless the Company and its subsidiaries, affiliates and parent corporations, as applicable and their respective officers, directors, lenders, employees, subcontractors and agents from and against any and all claims, suits, losses, liabilities, assessments, damages, fines, costs and expenses, including reasonable attorneys fees arising under federal, state or local laws, regulations or ordinances, or relating to the content of the Waste, or arising out of or in connection with any breach of this Agreement or arising out of the negligent collection, transportation and disposal of Waste by Generator or Generator's employees, agents, subcontractors or representatives thereof. Generator shall also be responsible for increased inspection, testing, study and analysis costs made necessary due to reasonable concerns of the Company as to the content of the Waste following discovery of potentially Unacceptable Waste. This indemnification and other obligations stated in this paragraph shall survive the termination of this Agreement.
14. **Insurance.** Generator shall maintain in full force and effect throughout the term of this Agreement the following types of insurance in at least the amounts specified below:

Coverages	Minimum Amounts of Insurance
Worker's Compensation	Statutory
General Liability	\$500,000 combined single limit
Automobile Liability	\$500,000 combined single limit

All insurance will be by insurers authorized to do business in the state in which the Facility is located. Prior to Generator being allowed on Facility premises, Generator shall provide the Company with certificates of insurance or other satisfactory evidence that such insurance has been procured and is in force. Said policies shall not thereafter be canceled, be permitted to expire or lapse, or be changed without thirty (30) days advance written notice to the Company. Generator warrants that it will secure the above minimum amounts of insurance from any transportation of the Waste to the Facility.

15. **Failure to Perform.** Neither party hereto shall be liable for its failure to perform hereunder due to circumstances not its fault and beyond its reasonable control, including, but not limited to, strikes or other labor disputes, riots, protests, civil disturbances or sabotage, changes in law, fires, floods, compliance with government requests, explosions, accidents, weather, lack of required natural resources, or acts of God affecting either party hereto. In the event of any of the circumstances provided for in the preceding sentence, including, but not limited to, whether any federal, state or local court or governmental authority takes any action which would (i) close or restrict operations at the Facility, (ii) limit the quantity or prohibit the disposal of Waste at the Facility, or (iii) limit the ability of or prohibit Generator from delivering Waste to the Facility, the Company shall have the right, at its option, to reduce, suspend or terminate Generator's access to the Facility immediately, without prior notice and without any additional liabilities between the parties, other than Generator's payment obligation hereunder. Neither Party is required hereunder to settle any labor dispute against its own best judgment.
16. **Other Termination.** The occurrence of any of the following events shall also constitute an event of default by the Generator and shall give the Company the right to immediately terminate this Agreement:
  - (A) A petition for reorganization or bankruptcy filed by or against the Generator.
  - (B) Failure by Generator to pay any amounts due to Company.
  - (C) Any breach by Generator of any of its obligations pursuant to the Agreement.

Generator shall be liable for and shall indemnify, defend and hold harmless Company from any losses, claims expenses or damages incurred by the Company as a result of termination hereunder.

17. **Assignment.** Generator may not assign, transfer or otherwise vest in any other Company, entity or person, in whole or in part, any of its rights or obligations under the Agreement without the prior written consent of the Company, provided, however, that the Company may without any such prior written consent, assign its rights and/or obligations under the Agreement to a subsidiary or affiliate corporation.
18. **Right of Disposal.** This Agreement does not grant any rights to dispose of Waste other than in accordance herewith. The Company reserves the right to immediately terminate access to the Facility by Generator and Generator's personnel in the event of breach or violation by Generator of any of the terms of this Agreement, the Company's operating rules or payment policies or any applicable laws or regulations.
19. **Continuing Compliance.** The Generator has a continuing obligation to inform the Company of any new information, or information not previously provided to the Company by Generator which may affect the acceptability of the Waste by the Company. Further, the Generator shall comply with all Company requests for evidence of Generator's continuing compliance with the terms of the Agreement including but not limited to the following: (i) providing new, updated Waste profiles on the Waste(s) offered for disposal or, (ii) providing appropriate certification that the Waste being offered for disposal is accurately reflected by the appropriate Application or, (iii) re-sample the Waste at Generator's expense if reasonable cause exists as to its acceptability under the terms of this Agreement or, (iv) allow the Company to re-sample the Waste at Generator's expense if reasonable cause exists as to its acceptability under the terms of this Agreement or (v) all of the above.
20. **Miscellaneous**
  - (A) This Agreement shall be governed by the laws of the State in which the Facility is located.
  - (B) No waiver of a breach of any of the obligations contained in the Agreement shall be construed to be a waiver of any prior or succeeding breach of the same obligation or of any other obligation of this Agreement.
  - (C) No modification, release, discharge or waiver of any provision or obligation hereof shall be of any force, or effect, unless in writing signed by all parties to this Agreement.
  - (D) Generator shall treat as confidential and not disclose to others during or subsequent to the terms of this Agreement, except as is necessary to perform this Agreement, or to comply with any applicable law or regulation any information (including any technical information, experience or data) regarding the Company's plans, programs, plants, processes, products, costs, equipment or operations which may come within the knowledge of the Generator or its employees in the performance of this Agreement, without in each instance securing the prior written consent of the other Company.
  - (E) If any term, phrase, obligation or provision of this Agreement shall be held to be invalid, illegal or unenforceable in any respect, this Agreement shall remain in effect and be construed without regard to such term, phrase, obligation or provision.
  - (F) This Agreement constitutes the entire understanding between the parties, replacing and amending any prior agreements between the parties, and shall be binding upon all parties hereto, their successors, heirs, representatives and assigns. Any provision, term or condition in any acknowledgement, purchase order or other response by Generator which is in addition to or different from the provisions of this Agreement shall be deemed objected to by the Company and shall be of no effect.
  - (G) Generator represents, warrants and covenants that it is and, during the term of this Agreement will remain, in compliance with and will perform its obligations pursuant to all applicable laws and regulations and shall indemnify, defend and hold harmless the Company from any breach thereof.
  - (H) It is the understanding and agreement of the parties that the Company is an independent contractor, and is not an agent, nor an authorized representative of the Generator.

21. **Notices.** All notices herein provided for shall be considered as having been given upon being placed in the mail, certified postage prepaid addressed to the Company or Generator at the address herein set forth in this Agreement or to such other address as may be given to the other party in writing.

22. **Liquidated Damages.** In the event that this Agreement is terminated by the Generator in a manner not in accordance with paragraph 4 hereof, or terminated due to a breach of this Agreement by the Generator, the Generator shall pay, as liquidated damages, and not as a penalty, the greater of an amount equal to six (6) months' service charges or the Generator's most recent monthly charge multiplied by six (6). The Generator shall be given credit for any advance payments made hereunder, however, in computing the amount owed as liquidated damages hereunder. The Generator acknowledges that this liquidated damages clause is reasonable and is applicable to recover damages related to its investment in equipment, development of landfills and hiring of employees undertaken by the Company to service its customers including the Generator. This liquidated damages clause in no way relieves the Generator from its obligations and liability for other cost or damages as set forth elsewhere in this Agreement.

GENERATOR: \_\_\_\_\_

Republic Services, Inc/COMPANY: \_\_\_\_\_

May 2009





# Republic Services, Inc.

18500 N. Allied Way, Phoenix, AZ 85054

## SPECIAL WASTE DEPARTMENT DECISION

	Waste Profile # 51231713836	Expiration Date 11/24/2017	
<b>I. Decision Request:</b>	<input checked="" type="checkbox"/> Initial <input type="checkbox"/> Recertification <input type="checkbox"/> Change		
Disposal Facility: 5123 - Sunshine Canyon Landfill			
Generator Name: IQ Produce LLC			
Generator Site Address: 4604 East 48th Street			
City: Vernon	County: _____	State: CA	Zip: _____
Name of Waste: Food Products			
Estimated Annual Volume: 500 Pounds			

**II. Special Waste Department Decision:**     Approved     Rejected

Management Method(s):     Landfill     Solidification     Bioremediation     Transfer Facility

Problematic Special Waste according to Republic?     Yes     No

If yes, which one? \_\_\_\_\_

Approved by Special Waste Review Committee?     Yes     No     Not Applicable

### Precautions, Conditions or Limitations on Approval

Special Waste Analyst Signature: 

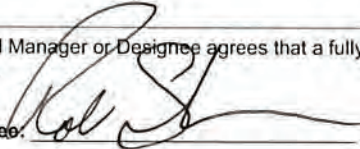
Date: 8/24/2017

Name (Printed): KEITH DIAMANTI

**III. Facility Decision:**     Approved     Rejected

### Precautions, Conditions or Limitations on Approval

By signing below, the General Manager or Designee agrees that a fully executed Special Waste Service Agreement is on file for this profile and that the special waste file is complete.

General Manager or Designee: 

Date: 8/24/2017

Name (Printed): Rob Sherman



Requested Disposal Facility: 5123 Sunshine Canyon LF CA

Saveable fill in form. Restricted printing until all required (yellow) fields are completed.

Waste Profile #
5123 17 13836
Sales Rep #. 525 - Stacy Loveland

**I. Generator Information**

Generator Name: IQ PRODUCE, LLC			
Generator Site Address: 4604 East 48th Street			
City: Vernon	County: Los Angeles	State: California	Zip: 90058
State ID/Reg No:	State Approval/Waste Code:	(if applicable)	NAICS #.
Generator Mailing Address (if different): 4604 East 48th Street			
City: Vernon	County: Los Angeles	State: California	Zip: 90058
Generator Contact Name: Ting Chen		Email: ting.chen@iqproduce.com	
Phone Number: (323) 863-5788	Ext:	Fax Number:	

**II. Billing Information**

Bill To: IQ Produce LLC	Contact Name: Ting Chen		
Billing Address: 4604 East 48th Street	Email: ting.chen@iqproduce.com		
City: Vernon	State: CA	Zip: 90058	Phone: (323) 863-5788

**III. Waste Stream Information**

Name of Waste: <small>(Petroleum products-applies only to contaminated media and debris).</small>	<input type="checkbox"/> Diesel Fuel	<input type="checkbox"/> Weathered Wood	<input type="checkbox"/> Friable Asbestos
	<input type="checkbox"/> Home Heating Fuel #1-6	<input type="checkbox"/> RCRA Empty Containers	<input type="checkbox"/> Non Friable Asbestos
	<input type="checkbox"/> Kerosene	<input type="checkbox"/> Treated Medical Waste	<input type="checkbox"/> Cured Asphalt
	<input type="checkbox"/> Aviation Fuel	<input type="checkbox"/> Animal Carcass (non infectious)	<input type="checkbox"/> Tires
	<input type="checkbox"/> Hydraulic Fluid	<input type="checkbox"/> Plant Trash	<input checked="" type="checkbox"/> Food Products <small>(Including Animal Food)</small>
	<input type="checkbox"/> Unleaded Gasoline (UST Corrective Action)	<input type="checkbox"/> Meth Contaminated Debris	

Process Generating Waste: 15 boxes of Purple Yam produce deemed unsellable by LA Agriculture due to pests that should not be in the local region

Method of Shipment: <input type="checkbox"/> BULK <input type="checkbox"/> DRUM <input type="checkbox"/> BAGGED <input checked="" type="checkbox"/> OTHER:
Estimated Annual Volume: 500 Pounds
Frequency: <input checked="" type="checkbox"/> ONE TIME <input type="checkbox"/> ONGOING

**IV. Certification**

I hereby certify that to the best of my knowledge and belief, the information contained herein is a true and accurate description of the waste material being offered for disposal. I further certify that by utilizing this profile, neither myself nor any other employee of the company will deliver for disposal or attempt to deliver for disposal any waste which is classified as toxic waste, hazardous waste or infectious waste, or any other waste material this facility is prohibited from accepting by law. Our company hereby agrees to fully indemnify this disposal facility against any damages resulting from this certification being inaccurate or untrue. I further certify that the company has not altered the form or content of this profile sheet as provided by Republic Services, Inc.

Ting Chen	IQ Produce LLC
Authorized Representative Name/Title (Type or Print)	Company Name
	8/24/17
Authorized Representative Signature	Date



# SPECIAL WASTE SERVICE AGREEMENT NON-HAZARDOUS WASTES

Special Waste Profile Number: 5123 17 13836

### Generator Billing Information

Name: IQ PRODUCE LLC  
(ACCT CASH # 321)  
Address: 4604 EAST 48<sup>TH</sup> STREET  
City: VERNON  
State: CA Zip: 90058  
Phone: 323.863.5788 Fax: \_\_\_\_\_  
Contact: TING CHEN

### Republic Waste Location (Company)

SUNSHINE CANYON LANDFILL (5123)  
14747 SAN FERNANDO ROAD  
SYLMAR, CA 91342  
818.362.2141

Project: FOOD PRODUCTS County and State of Origin: LOS ANGELES, CA

Additional Information: \_\_\_\_\_

- Special Waste Service.** Subject to the terms and conditions contained herein, the Company and the Generator agree to be legally bound hereby and the Company agrees to accept at its Facility, Acceptable Waste (hereinafter referred to as "Special Waste" or "Waste") delivered by Generator, and which is acceptable to the Company as herein provided.
- Acceptable Waste.** Only those Special Wastes described in Paragraph 3 herein and in any Special Waste Profile(s) which number is identical to the contract number referenced above, and which Profile(s) are hereby incorporated by reference herein, and which Waste is subsequently approved by the Company and is otherwise in accordance with all laws, regulations and permits, shall be acceptable for disposal at the Facility ("Acceptable Waste").



Cannot Exceed Daily Volume of 500 POUNDS Without Prior Approval of Company.

(B) **Incorporation by Reference.** In addition to Special Waste Profile(s), the following documents are incorporated by reference into this Agreement as if fully set forth herein.

- 1) N/A
- 2) N/A

4. **Term of Agreement.** This Agreement is effective for 3 months, commencing 8/24/2017 and shall automatically be renewed for a similar term thereafter unless either party shall give written notice (via certified mail) of termination to the other party at least thirty (30) days prior written notice.

THE COMPANY AND THE GENERATOR, IN CONSIDERATION OF THE MUTUAL OBLIGATIONS CONTAINED HEREIN, AGREE THAT THIS IS A LEGALLY BINDING AGREEMENT WHICH IS SUBJECT TO THE TERMS AND CONDITIONS SET FORTH ON THIS PAGE AND ON THE REVERSE SIDE OF THIS DOCUMENT. IN ADDITION, THE GENERATOR IS CERTIFYING THE ATTACHED TERMS AND CONDITIONS HAVE BEEN REVIEWED AND INITIALLED AT THE BOTTOM OF THE PAGE.

GENERATOR

Ting Chen  
SIGNATURE (AUTHORIZED REPRESENTATIVE)  
Operation  
NAME AND TITLE (PLEASE PRINT)  
8/24/17  
DATE

REPUBLIC SERVICES, INC/COMPANY

Stacy Loveland  
SIGNATURE (AUTHORIZED REPRESENTATIVE)  
SW Executive  
NAME AND TITLE (PLEASE PRINT)  
8/24/2017  
DATE

## Terms and Conditions of Special Waste Service Agreement

5. **The Agreement.** This agreement of the parties ("Agreement") for the disposal of Special Waste shall consist of this Agreement, orders to the Agreement (if any) and any Application, permit and approval that may be applicable to such Waste.
6. **Waste Accepted at Facility.** Generator represents, warrants and covenants that the Waste delivered to Company at its Facility hereunder will be Acceptable Waste and will not contain any unacceptable quantity of hazardous materials or substances, radioactive materials or substances, or toxic waste or substances, as defined by applicable federal, state, local or provincial laws or regulations. Any Waste which does not meet these requirements shall hereinafter be referred to as "Unacceptable Waste". The Generator shall in all matters relating to the collection, transportation and disposal of the Waste hereunder, comply with all applicable federal, state and local laws, regulations, rules and orders regarding the same. The word "Facility" shall mean any landfill, transfer station or other location used to transfer, process or otherwise dispose of such Waste.
7. **Special Waste.** Generator represents, warrants and covenants that the Waste delivered to Company hereunder (i) will not contain any Special Waste that is not specifically described on any Application which is attached hereto or which is subsequently approved by the Company, (ii) will meet the material description as set forth in any Application and otherwise in all significant respects and (iii) will not contain Unacceptable Waste. The parties may incorporate additional Special Waste as part of this Agreement if prior to delivery of such Waste to Company, Generator has provided an Application for such Waste and Company has approved disposal of such Waste within the limitations and conditions contained in Company's written notice of approval of Special Waste Disposal. Title to any and all Waste handled or disposed of by Company shall at all times remain with Generator and Broker (if a Broker is involved).
8. **Rights of Refusal/Rejection.** The Generator shall inspect all Waste at the place(s) of collection and shall remove any and all Unacceptable Waste. Company has the right to refuse, or to reject after acceptance, any load(s) of Waste(s) delivered to its Facility including if the Company believes the Generator has breached (or is breaching) its representations, warranties, covenants or agreements hereunder, or any applicable federal, state or local laws, regulations, rules or orders, even if only a portion of such Waste load is unacceptable. The Company shall have the right to inspect all vehicles and containers of Waste haulers, including the Generator's vehicles, in order to determine whether the Waste is Acceptable Waste or Unacceptable Waste pursuant to this Agreement and all applicable federal, state and local laws, rules and regulations. The Company's exercise, or failure to exercise, its rights hereunder shall not operate to relieve the Generator of its responsibilities or liability under this Agreement. The Generator shall be responsible for, and bear all reasonable expenses and damages incurred by the Company, as a result of the Unacceptable Waste and in the reloading and removal of Unacceptable Waste disposed in the Facility. The Company, may also, in its sole discretion, require the Generator to promptly remove the Unacceptable Waste.
9. **Limited License to Enter.** This Agreement provides Generator with a license to enter the Facility for the limited purpose of, and only to the extent necessary for, off-loading Acceptable Waste at the Facility in the manner directed by Company. Except in an emergency, Generator's personnel shall not leave the immediate vicinity of their vehicle. After off-loading the Waste, Generator's personnel shall promptly leave the Facility. Under no circumstances shall Generator or its personnel engage in any scavenging of Waste or other materials at the Facility. The Company reserves the right to make and enforce reasonable rules and regulations concerning the operation of the Facility, the conduct of the drivers and others on the Facility premises, quantities and sources of Waste, and any other matters necessary or desirable for the safe, legal and efficient operation of the Facility including, but not limited to, speed limits on haul roads imposed by the Company, and the wearing of hard hats and other personal protection equipment by all individuals allowed on the Facility premises. Generator agrees to conform to such rules and regulations as they may be established and amended from time to time. Company may refuse to accept Waste from and shall deny an entrance license to, any of Generator's personnel whom Company believes is under the influence of alcohol or other chemical substances. Generator shall be solely responsible for its employees and subcontractors performing their obligations in a safe manner when at the facility of Company.
10. **Charges and Payment.** Payment shall be made by Generator within sixty (60) days after receipt of invoice from Company. In the event that any amount is overdue, the Company may terminate this Agreement. Generator agrees to pay a finance charge equal to the maximum interest rate permitted by law. Generator shall be liable for all taxes, fees, or other charges imposed upon the disposal of the Waste by federal, state, local or provincial laws and regulations. Company, from time to time, may modify its rates upon sixty (60) days written notice to Generator.
11. **Termination.** Generator's obligations, representations, warranties and covenants regarding the Waste delivered and all indemnities shall survive termination of this Agreement. Should Generator materially default in any of its obligations hereunder, then Company may immediately terminate this Agreement and Generator shall be liable for all costs and damages incurred by the Company.
12. **Driver's Knowledge and Authority.** Generator represents, warrants and covenants that its drivers who deliver Waste to Company's Facility have been advised by Generator of the Company's prohibition on deliveries of hazardous materials or substances, radioactive materials or substances, or toxic waste or substances or any other Unacceptable Waste to the Facility of Company's restrictions on deliveries of Special Waste to the Facility, of the definitions of "Hazardous Waste and Hazardous Substances" as provided by applicable federal, state and local law, rules and regulations and "Special Waste" as provided herein, and of the terms of this license to enter Company's Facility.
13. **Indemnification.** Generator shall indemnify, defend and hold harmless the Company and its subsidiaries, affiliates and parent corporations, as applicable and their respective officers, directors, lenders, employees, subcontractors and agents from and against any and all claims, suits, losses, liabilities, assessments, damages, fines, costs and expenses, including reasonable attorneys fees arising under federal, state or local laws, regulations or ordinances, or relating to the content of the Waste, or arising out of or in connection with any breach of this Agreement or arising out of the negligent collection, transportation and disposal of Waste by Generator or Generator's employees, agents, subcontractors or representatives thereof. Generator shall also be responsible for increased inspection, testing, study and analysis costs made necessary due to reasonable concerns of the Company as to the content of the Waste following discovery of potentially Unacceptable Waste. This indemnification and other obligations stated in this paragraph shall survive the termination of this Agreement.
14. **Insurance.** Generator shall maintain in full force and effect throughout the term of this Agreement the following types of insurance in at least the amounts specified below:
- | Coverages             | Minimum Amounts of Insurance    |
|-----------------------|---------------------------------|
| Worker's Compensation | Statutory                       |
| General Liability     | \$500,000 combined single limit |
| Automobile Liability  | \$500,000 combined single limit |
- All Insurance will be by insurers authorized to do business in the state in which the Facility is located. Prior to Generator being allowed on Facility premises, Generator shall provide the Company with certificates of insurance or other satisfactory evidence that such insurance has been procured and is in force. Said policies shall not thereafter be canceled, be permitted to expire or lapse, or be changed without thirty (30) days advance written notice to the Company. Generator warrants that it will secure the above minimum amounts of insurance from any transportation of the Waste to the Facility.
15. **Failure to Perform.** Neither party hereto shall be liable for its failure to perform hereunder due to circumstances not its fault and beyond its reasonable control, including, but not limited to, strikes or other labor disputes, riots, protests, civil disturbances or sabotage, changes in law, fires, floods, compliance with government requests, explosions, accidents, weather, lack of required natural resources, or acts of God affecting either party hereto. In the event of any of the circumstances provided for in the preceding sentence, including, but not limited to, whether any federal, state or local court or governmental authority takes any action which would (i) close or restrict operations at the Facility, (ii) limit the quantity or prohibit the disposal of Waste at the Facility, or (iii) limit the ability of or prohibit Generator from delivering Waste to the Facility, the Company shall have the right, at its option, to reduce, suspend or terminate Generator's access to the Facility immediately, without prior notice and without any additional liabilities between the parties, other than Generator's payment obligation hereunder. Neither Party is required hereunder to settle any labor dispute against its own best judgment.
16. **Other Termination.** The occurrence of any of the following events shall also constitute an event of default by the Generator and shall give the Company the right to immediately terminate this Agreement:
- (A) A petition for reorganization or bankruptcy filed by or against the Generator,
  - (B) Failure by Generator to pay any amounts due to Company.
  - (C) Any breach by Generator of any of its obligations pursuant to the Agreement.
- Generator shall be liable for and shall indemnify, defend and hold harmless Company from any losses, claims expenses or damages incurred by the Company as a result of termination hereunder.
17. **Assignment.** Generator may not assign, transfer or otherwise vest in any other Company, entity or person, in whole or in part, any of its rights or obligations under the Agreement without the prior written consent of the Company, provided, however, that the Company may without any such prior written consent, assign its rights and/or obligations under the Agreement to a subsidiary or affiliate corporation.
18. **Right of Disposal.** This Agreement does not grant any rights to dispose of Waste other than in accordance herewith. The Company reserves the right to immediately terminate access to the Facility by Generator and Generator's personnel in the event of breach or violation by Generator of any of the terms of this Agreement, the Company's operating rules or payment policies or any applicable laws or regulations.
19. **Continuing Compliance.** The Generator has a continuing obligation to inform the Company of any new information, or information not previously provided to the Company by Generator which may affect the acceptability of the Waste by the Company. Further, the Generator shall comply with all Company requests for evidence of Generator's continuing compliance with the terms of the Agreement including but not limited to the following: (i) providing new, updated Waste profiles on the Waste(s) offered for disposal or, (ii) providing appropriate certification that the Waste being offered for disposal is accurately reflected by the appropriate Application or, (iii) re-sample the Waste at Generator's expense if reasonable cause exists as to its acceptability under the terms of this Agreement or, (iv) allow the Company to re-sample the Waste at Generator's expense if reasonable cause exists as to its acceptability under the terms of this Agreement or (v) all of the above.
20. **Miscellaneous.**
- (A) This Agreement shall be governed by the laws of the State in which the Facility is located.
  - (B) No waiver of a breach of any of the obligations contained in the Agreement shall be construed to be a waiver of any prior or succeeding breach of the same obligation or of any other obligation of this Agreement.
  - (C) No modification, release, discharge or waiver of any provision or obligation hereof shall be of any force, or effect, unless in writing signed by all parties to this Agreement.
  - (D) Generator shall treat as confidential and not disclose to others during or subsequent to the terms of this Agreement, except as is necessary to perform this Agreement, or to comply with any applicable law or regulation any information (including any technical information, experience or data) regarding the Company's plans, programs, plants, processes, products, costs, equipment or operations which may come within the knowledge of the Generator or its employees in the performance of this Agreement, without in each instance securing the prior written consent of the other Company.
  - (E) If any term, phrase, obligation or provision of this Agreement shall be held to be invalid, illegal or unenforceable in any respect, this Agreement shall remain in effect and be construed without regard to such term, phrase, obligation or provision.
  - (F) This Agreement constitutes the entire understanding between the parties, replacing and amending any prior agreements between the parties, and shall be binding upon all parties hereto, their successors, heirs, representatives and assigns. Any provision, term or condition in any acknowledgement, purchase order or other response by Generator which is in addition to or different from the provisions of this Agreement shall be deemed objected to by the Company and shall be of no effect.
  - (G) Generator represents, warrants and covenants that it is and, during the term of this Agreement will remain, in compliance with and will perform its obligations pursuant to all applicable laws and regulations and shall indemnify, defend and hold harmless the Company from any breach thereof.
  - (H) It is the understanding and agreement of the parties that the Company is an independent contractor, and is not an agent, nor an authorized representative of the Generator.
21. **Notices.** All notices herein provided for shall be considered as having been given upon being placed in the mail, certified postage prepaid addressed to the Company or Generator at the address herein set forth in this Agreement or to such other address as may be given to the other party in writing.
22. **Liquidated Damages.** In the event that this Agreement is terminated by the Generator in a manner not in accordance with paragraph 4 hereof, or terminated due to a breach of this Agreement by the Generator, the Generator shall pay, as liquidated damages, and not as a penalty, the greater of an amount equal to six (6) months' service charges or the Generator's most recent monthly charge multiplied by six (6). The Generator shall be given credit for any advance payments made hereunder; however, in computing the amount owed as liquidated damages hereunder, the Generator acknowledges that this liquidated damages clause is reasonable and is applicable to recover damages related to its investment in equipment, development of landfills and hiring of employees undertaken by the Company to service its customers including the Generator. This liquidated damages clause in no way relieves the Generator from its obligations and liability for other cost or damages as set forth elsewhere in this Agreement.

GENERATOR: \_\_\_\_\_

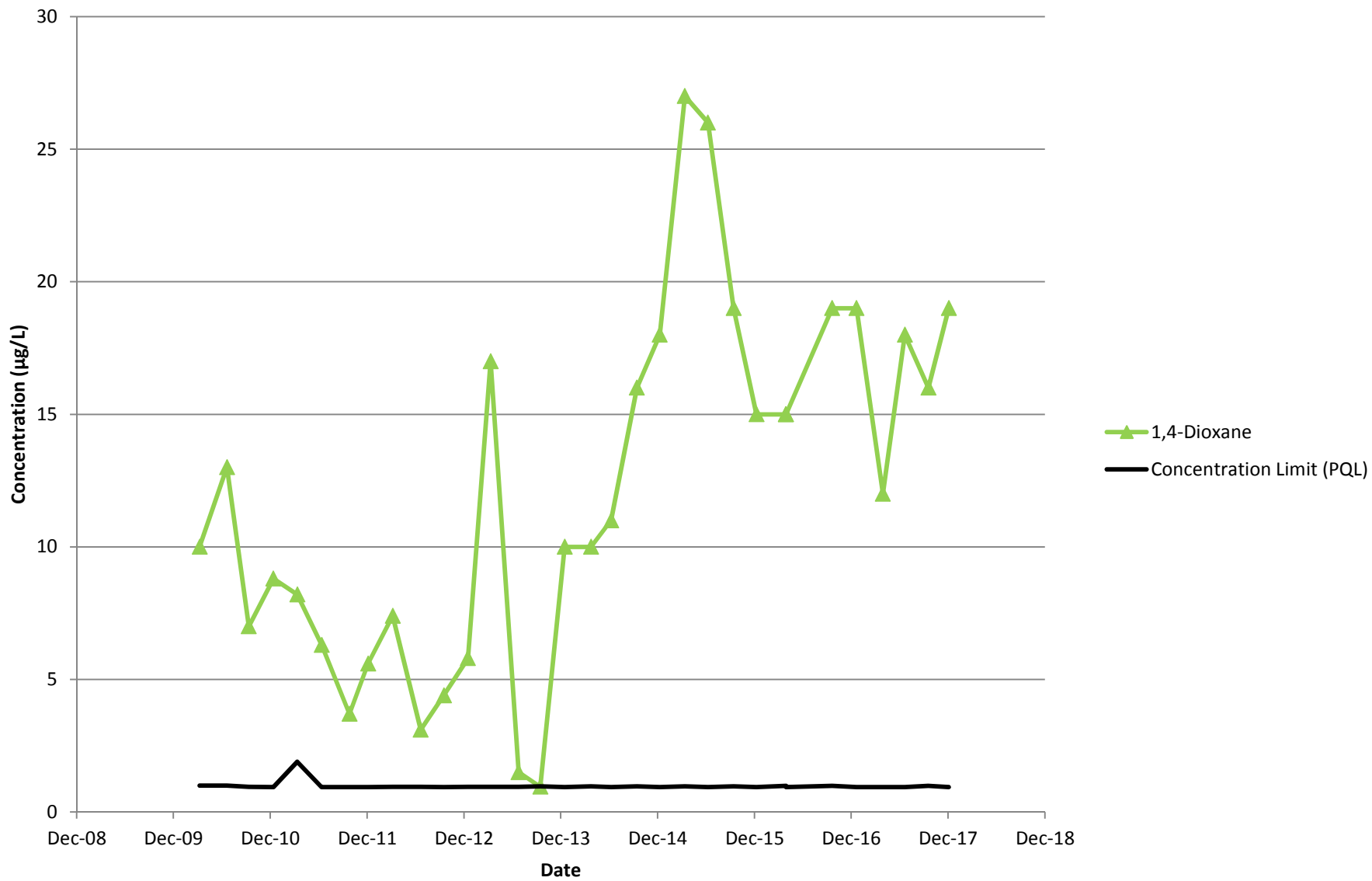
Republic Services, Inc/COMPANY: \_\_\_\_\_

May 2009

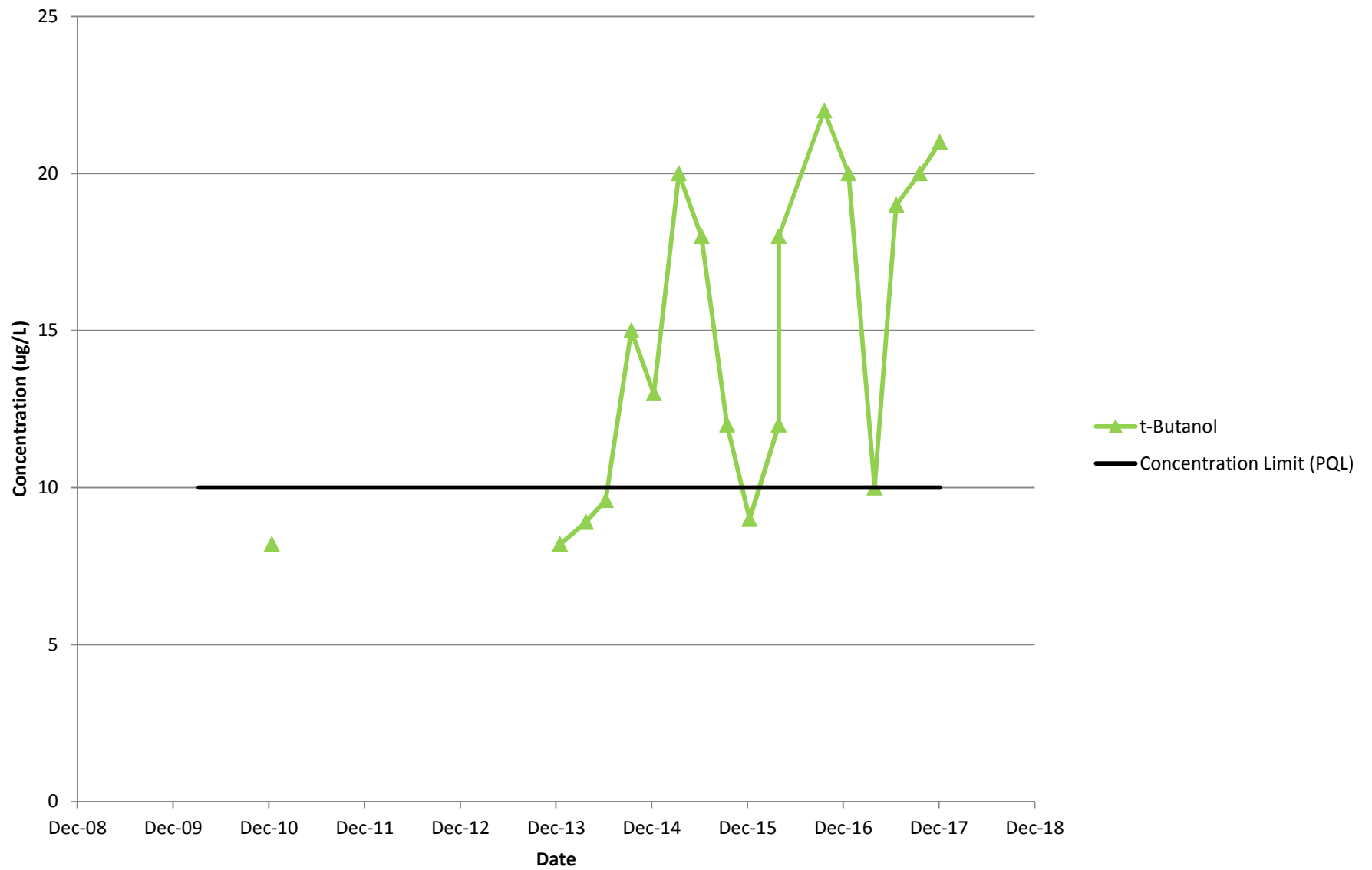
## APPENDIX G

### TRACKING MODE TRENDS

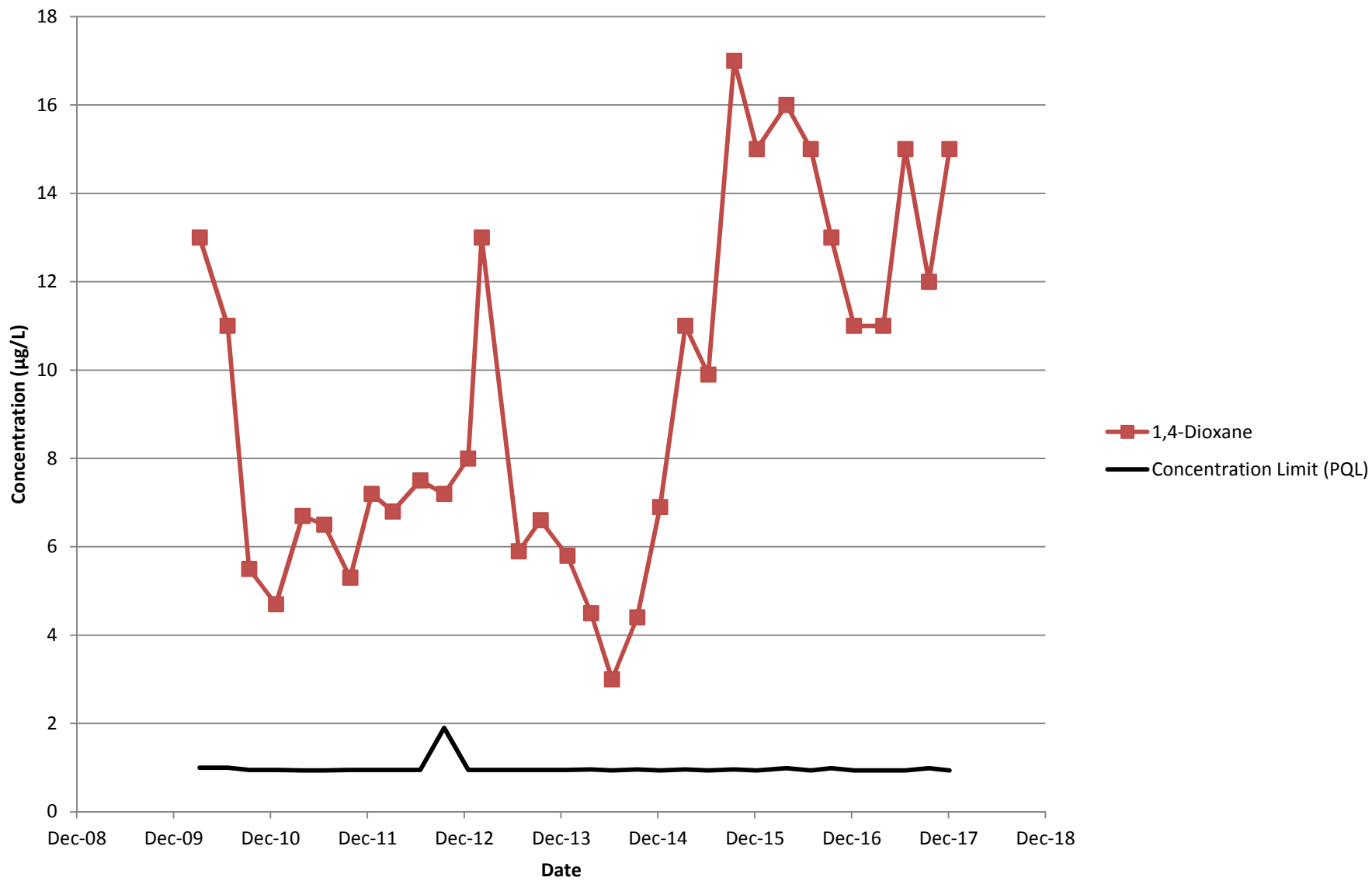
# Tracking Mode Evaluation Shallow Well MW-1



# Tracking Mode Evaluation Shallow Well MW-1

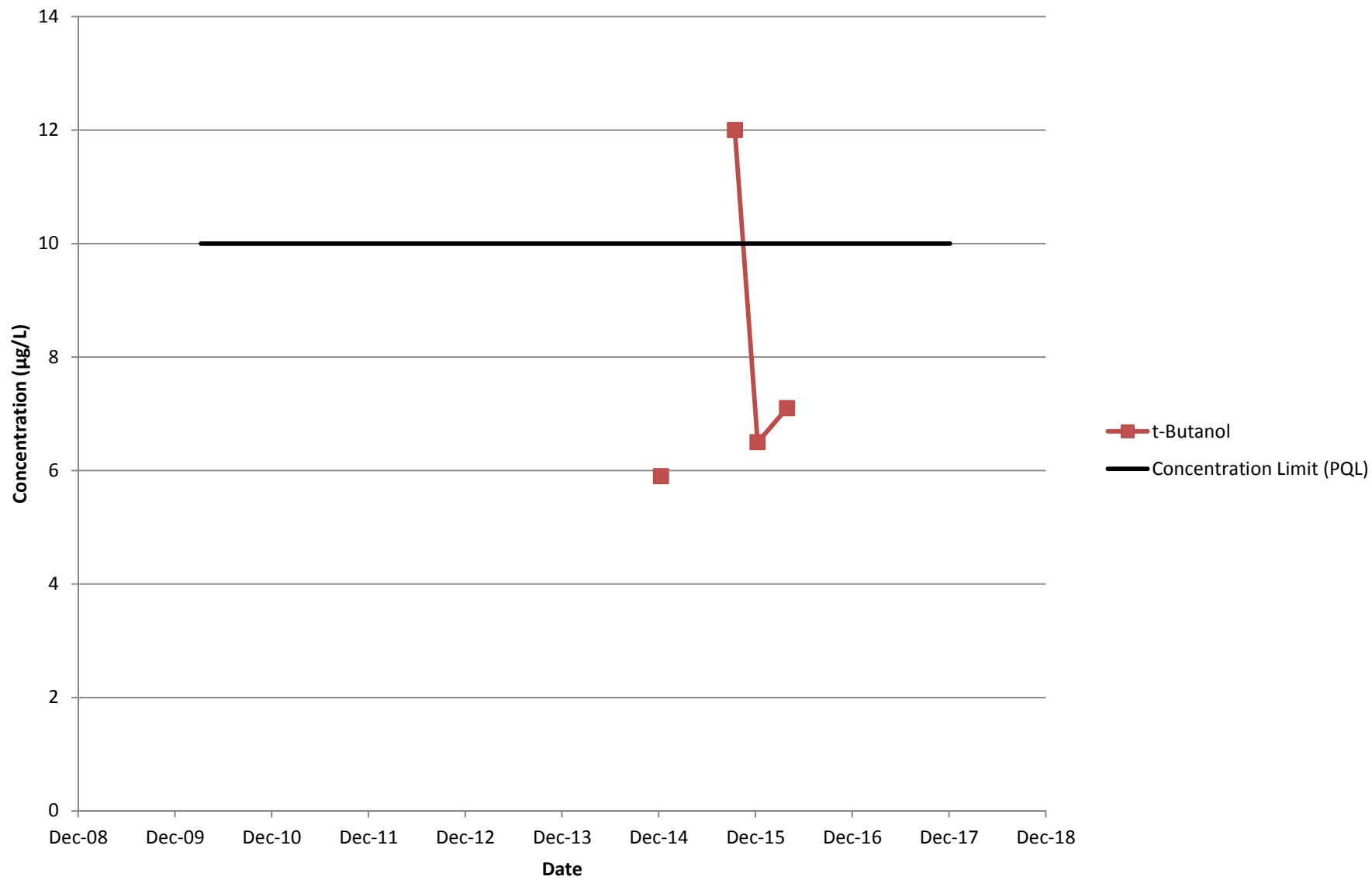


# Tracking Mode Evaluation Shallow Well MW-5

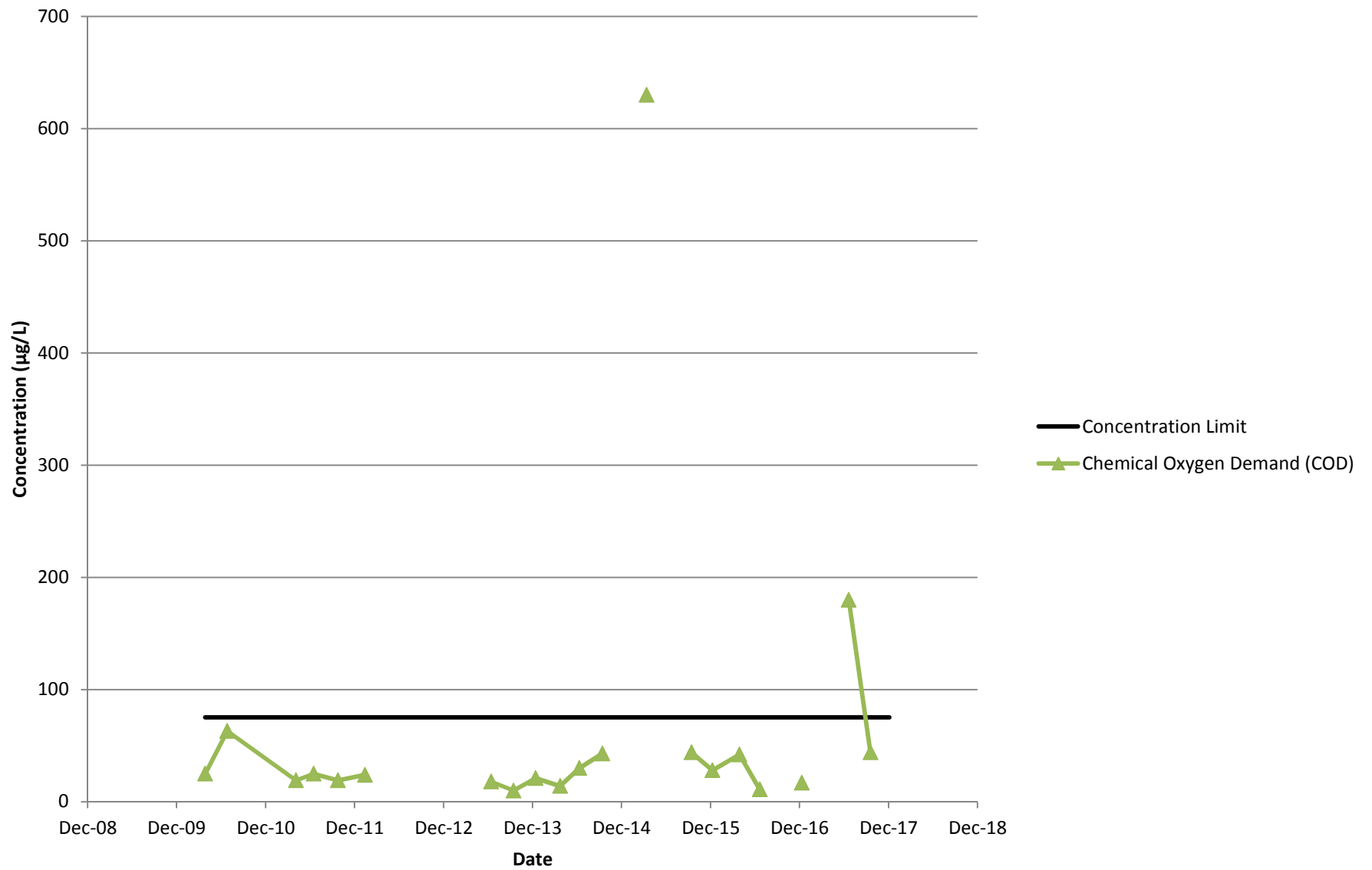




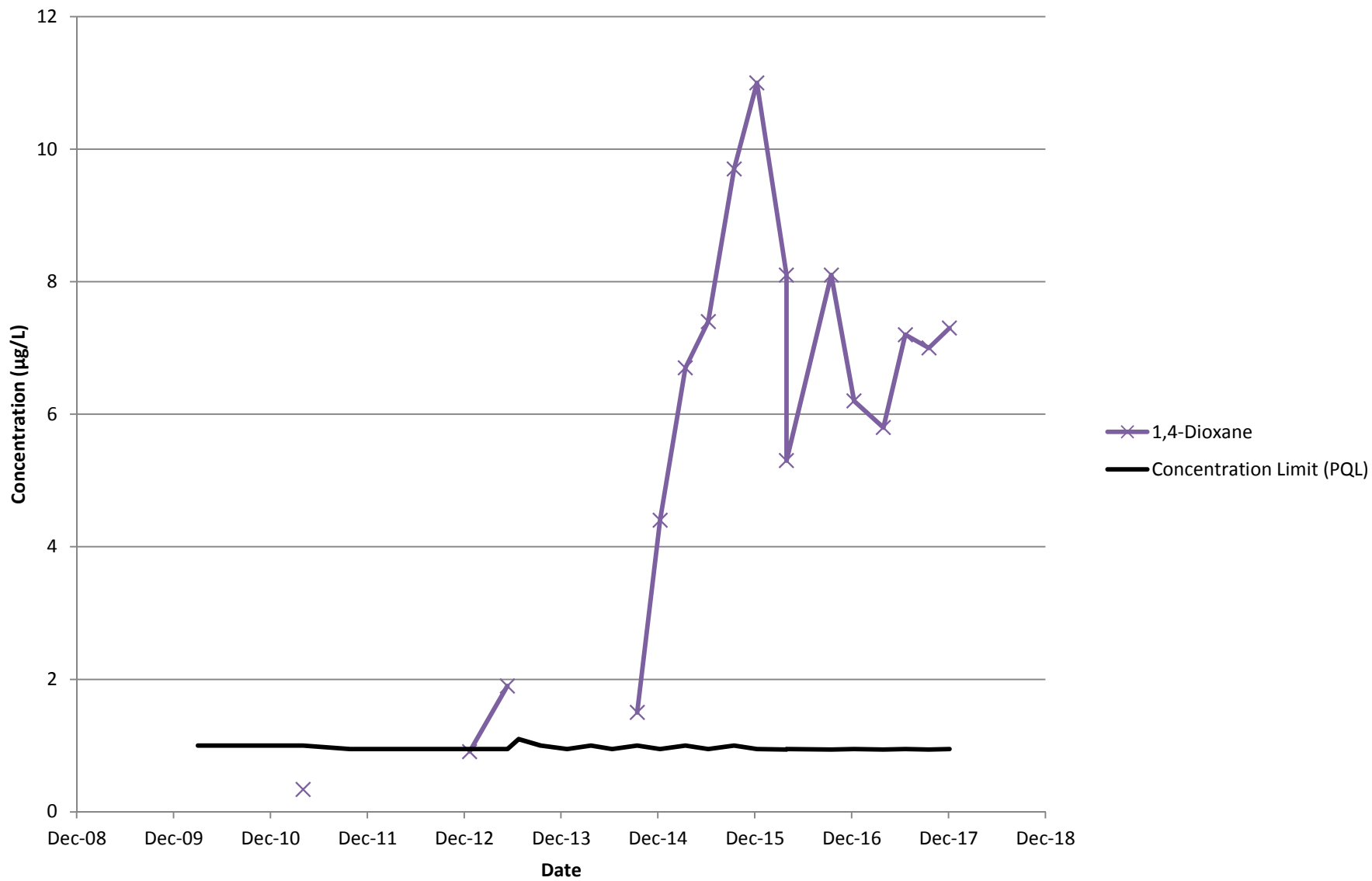
# Tracking Mode Evaluation Shallow Well MW-5



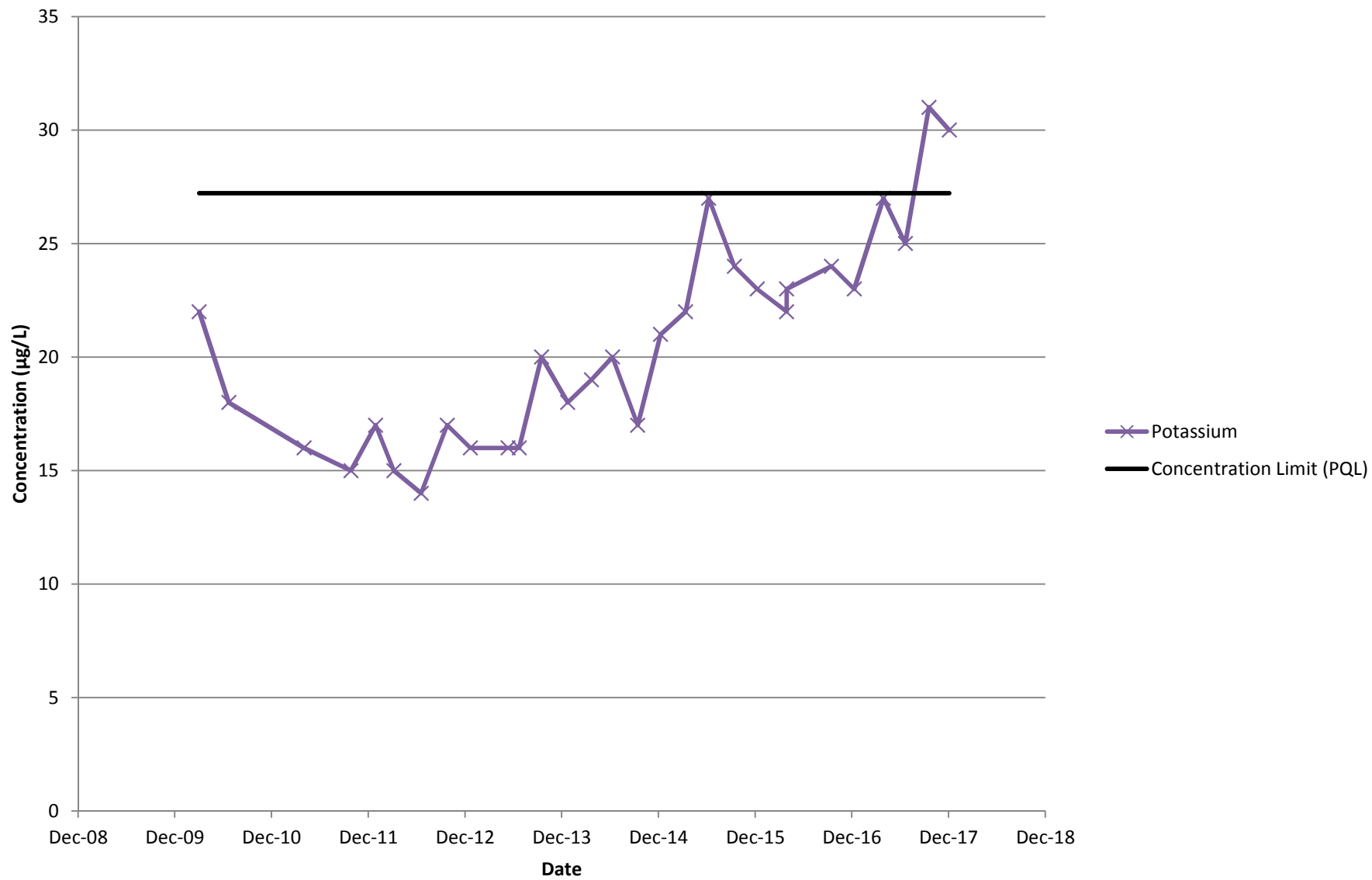
# Tracking Mode Evaluation Shallow Well MW-6



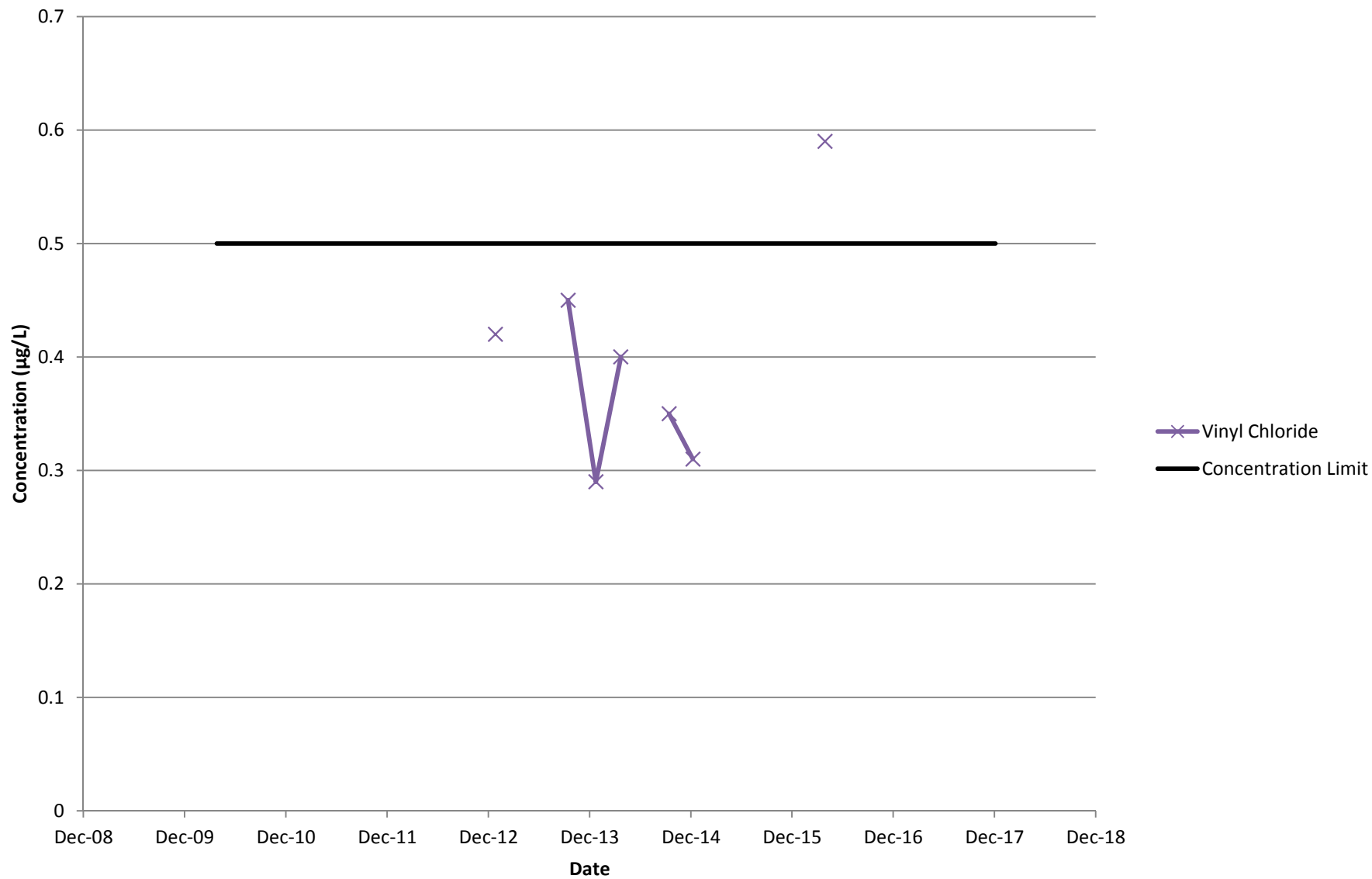
# Tracking Mode Evaluation Shallow Well MW-13R



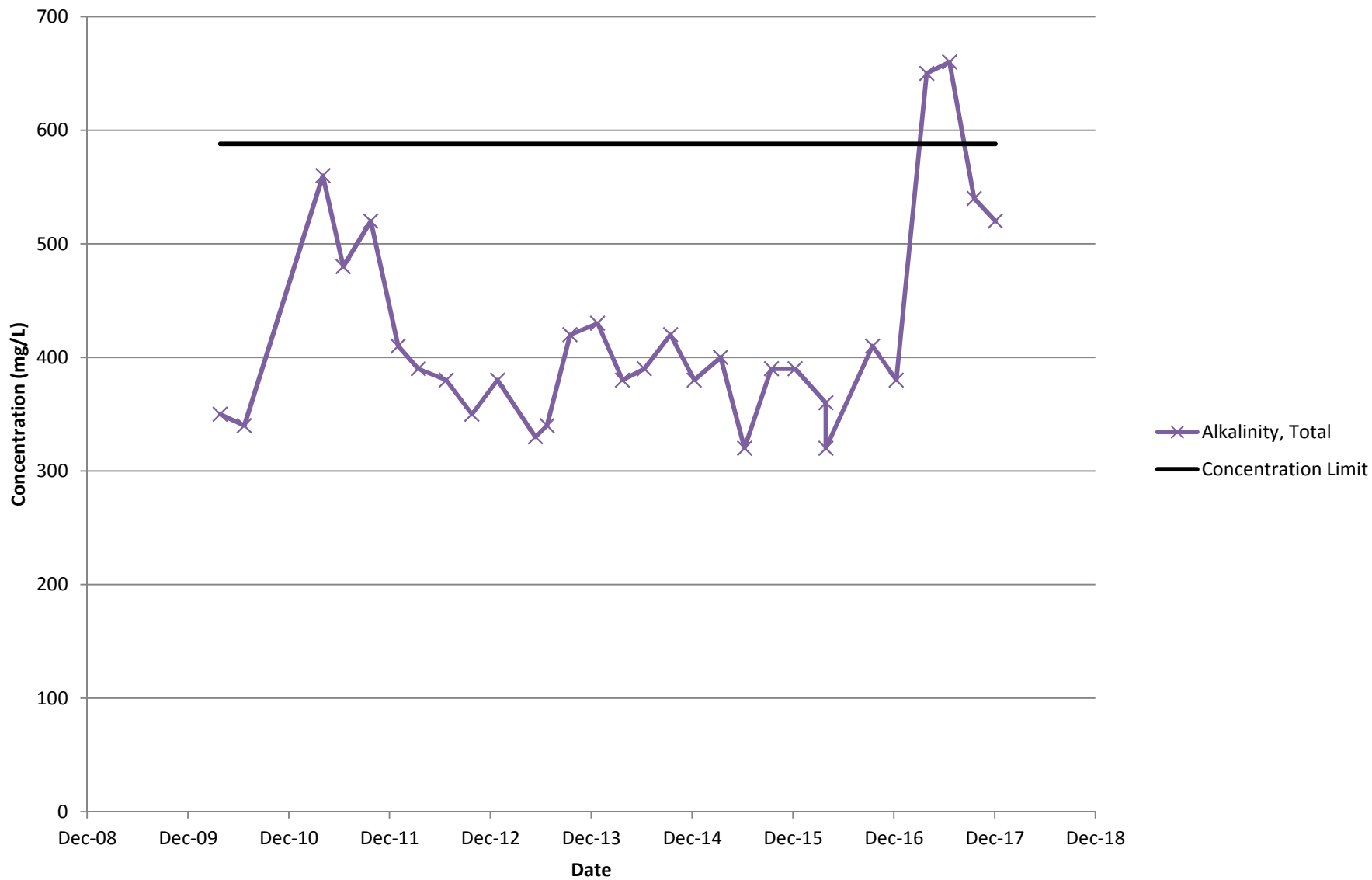
# Tracking Mode Evaluation Shallow Well MW-13R



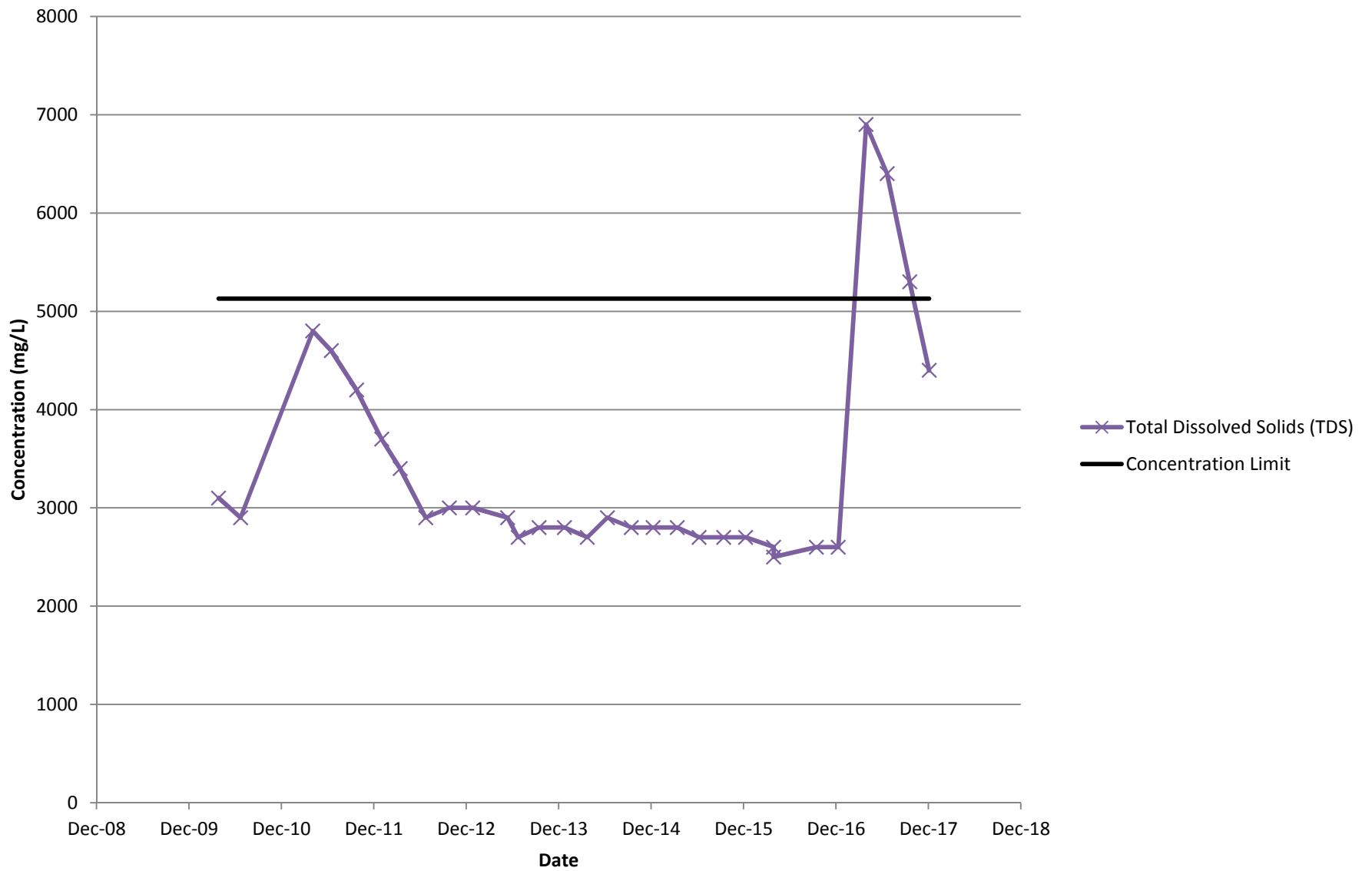
# Tracking Mode Evaluation Shallow Well MW-14



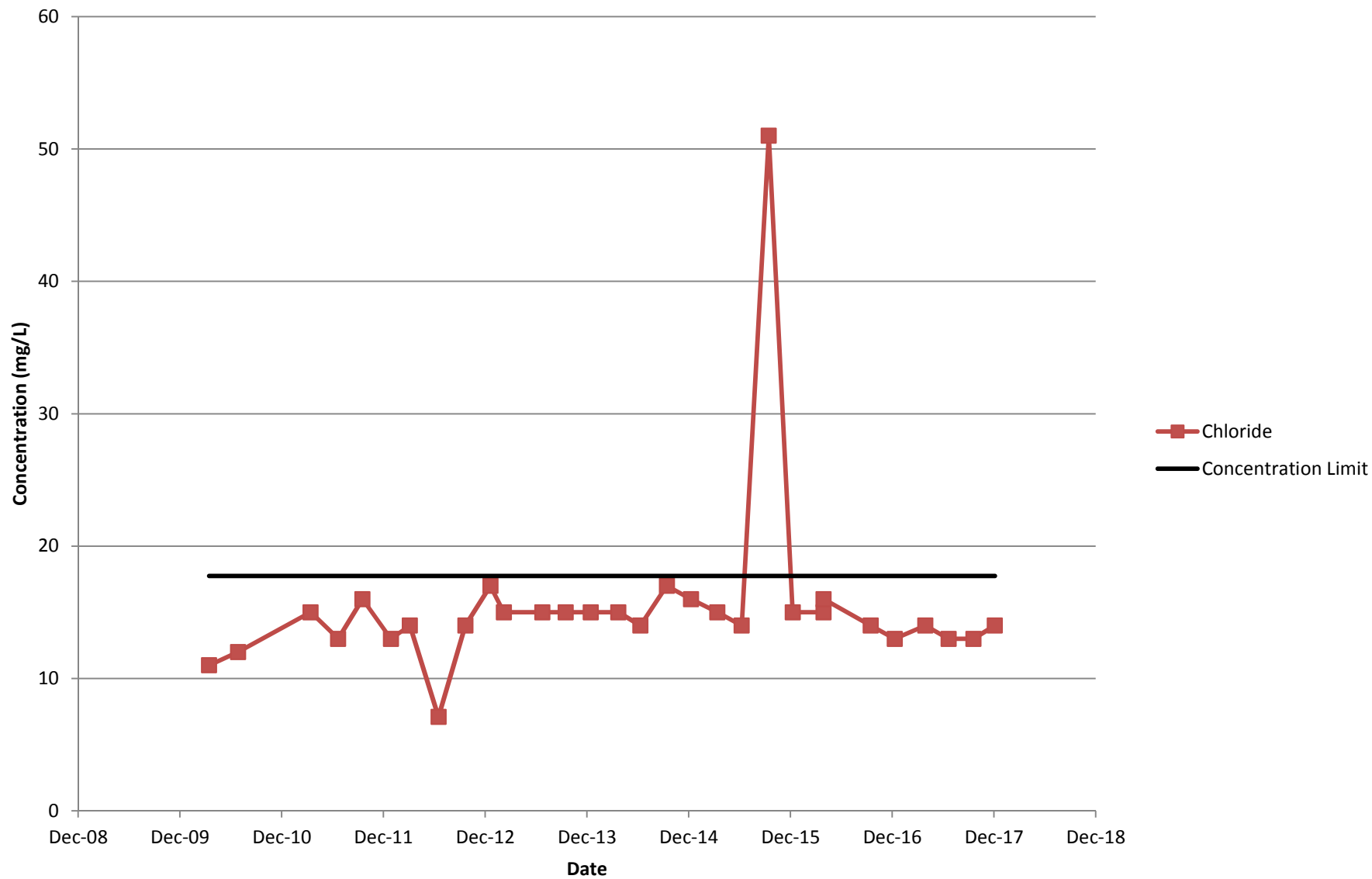
# Tracking Mode Evaluation Shallow Well MW-14



# Tracking Mode Evaluation Shallow Well MW-14

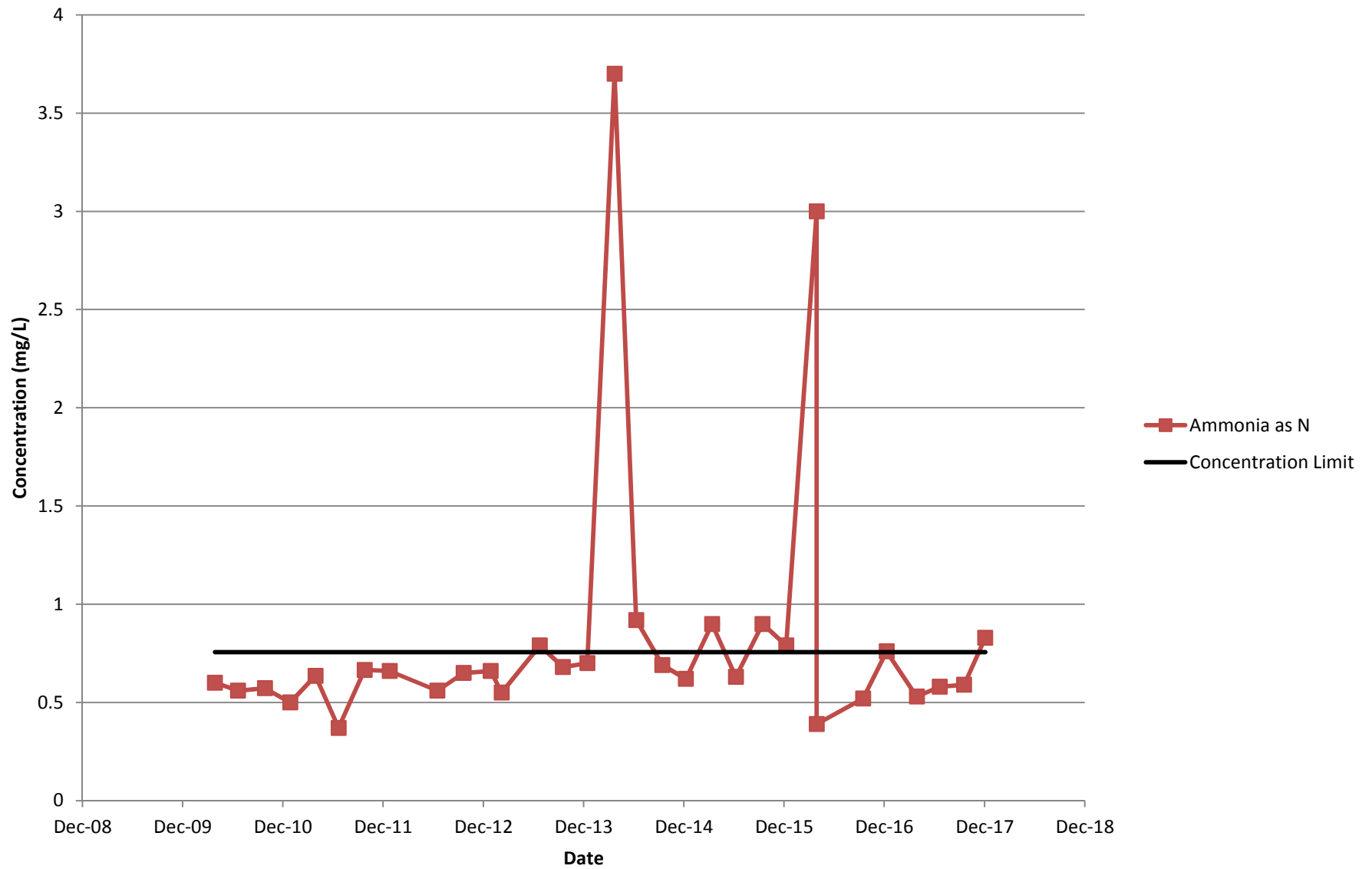


# Tracking Mode Evaluation Deep Well DW-1

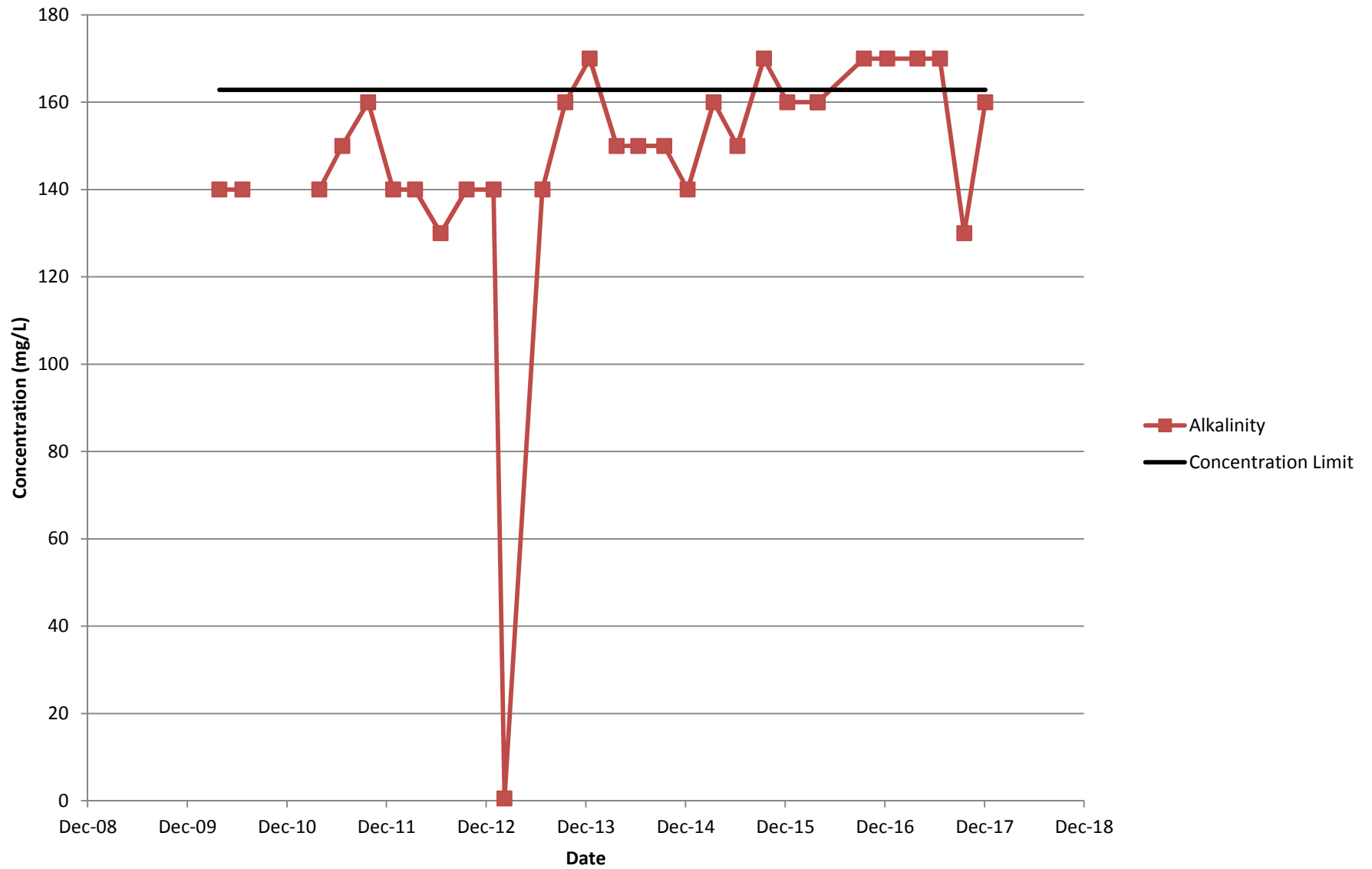




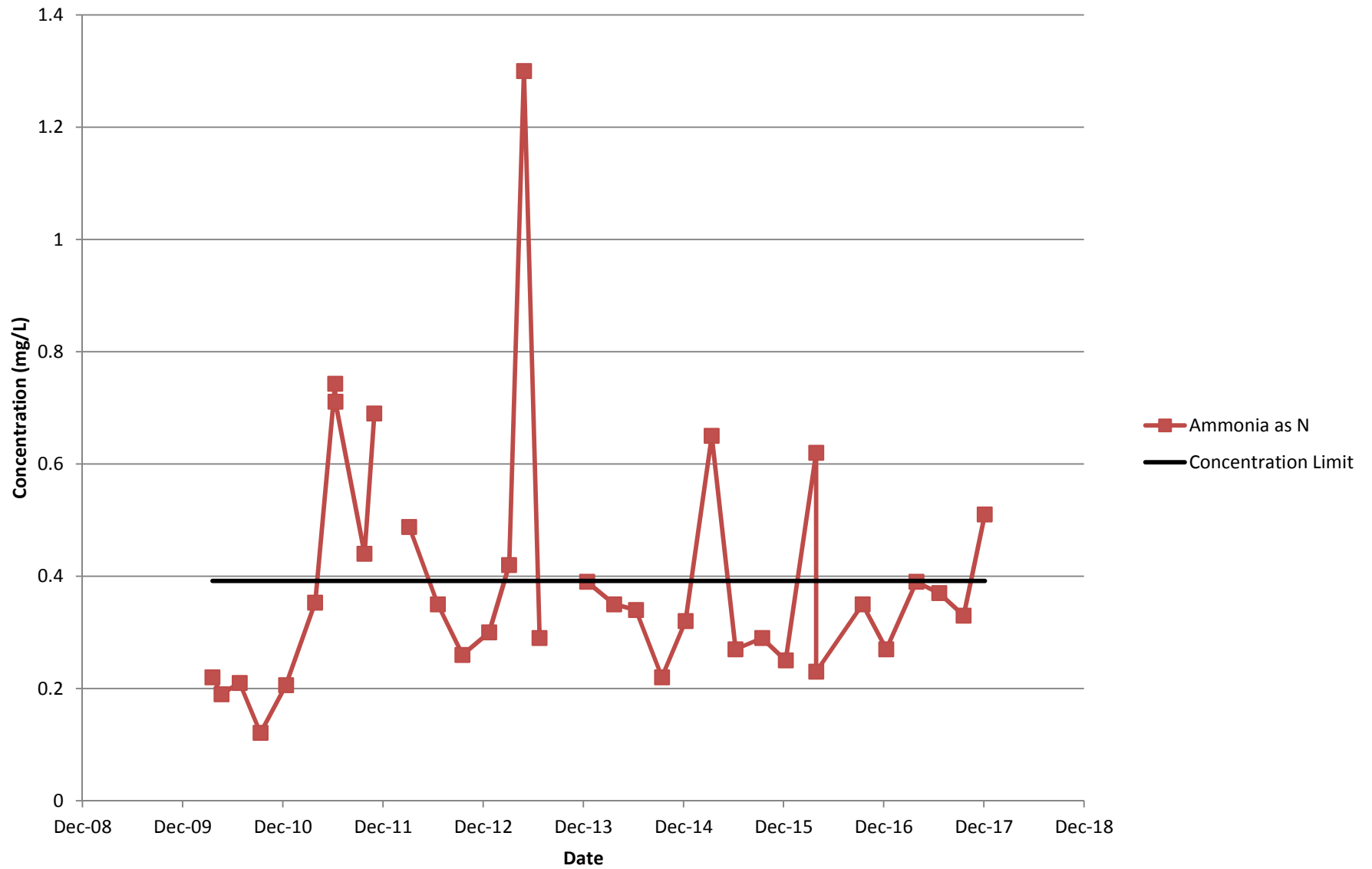
# Tracking Mode Evaluation Deep Well DW-3



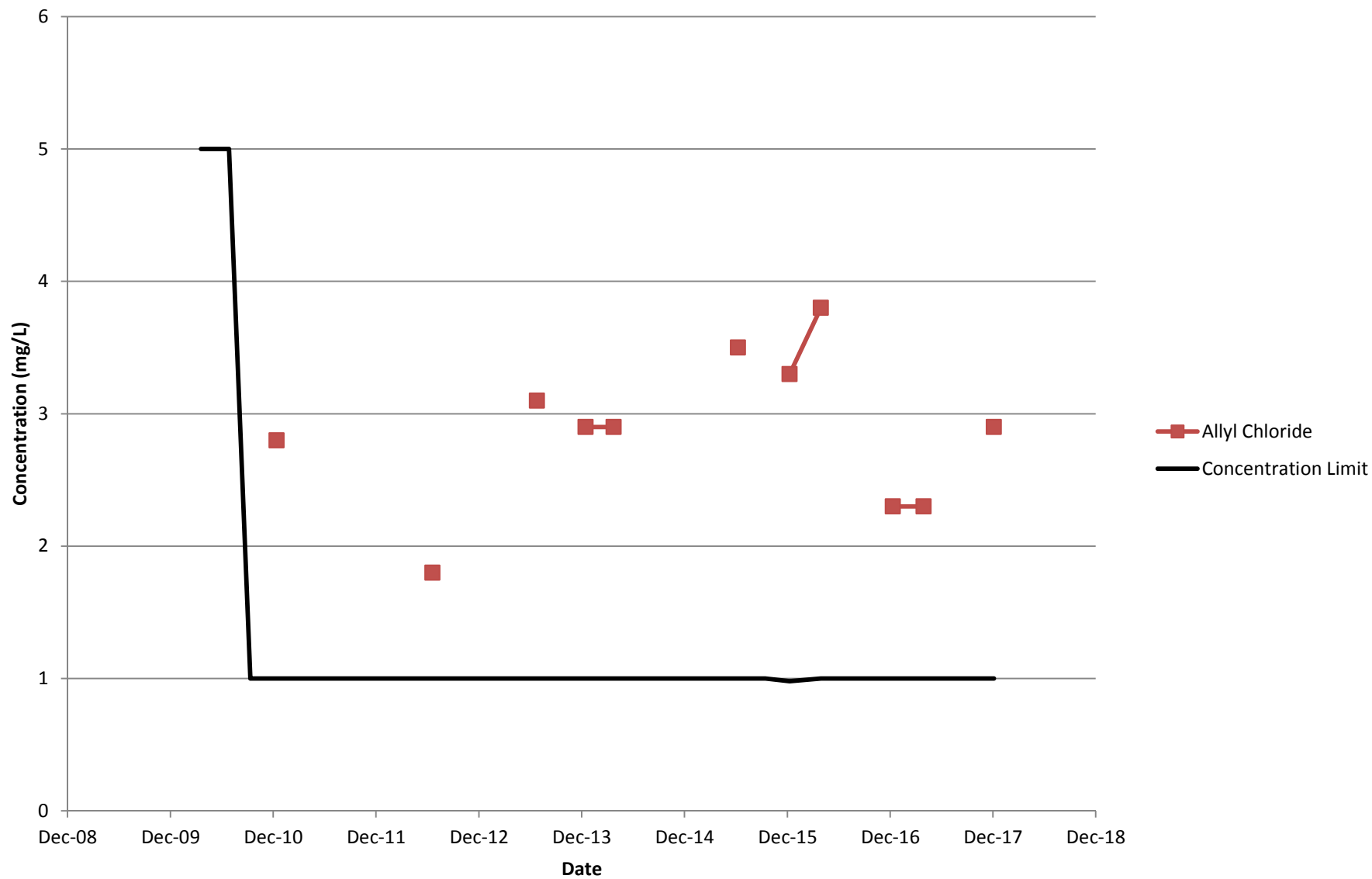
# Tracking Mode Evaluation Deep Well DW-3



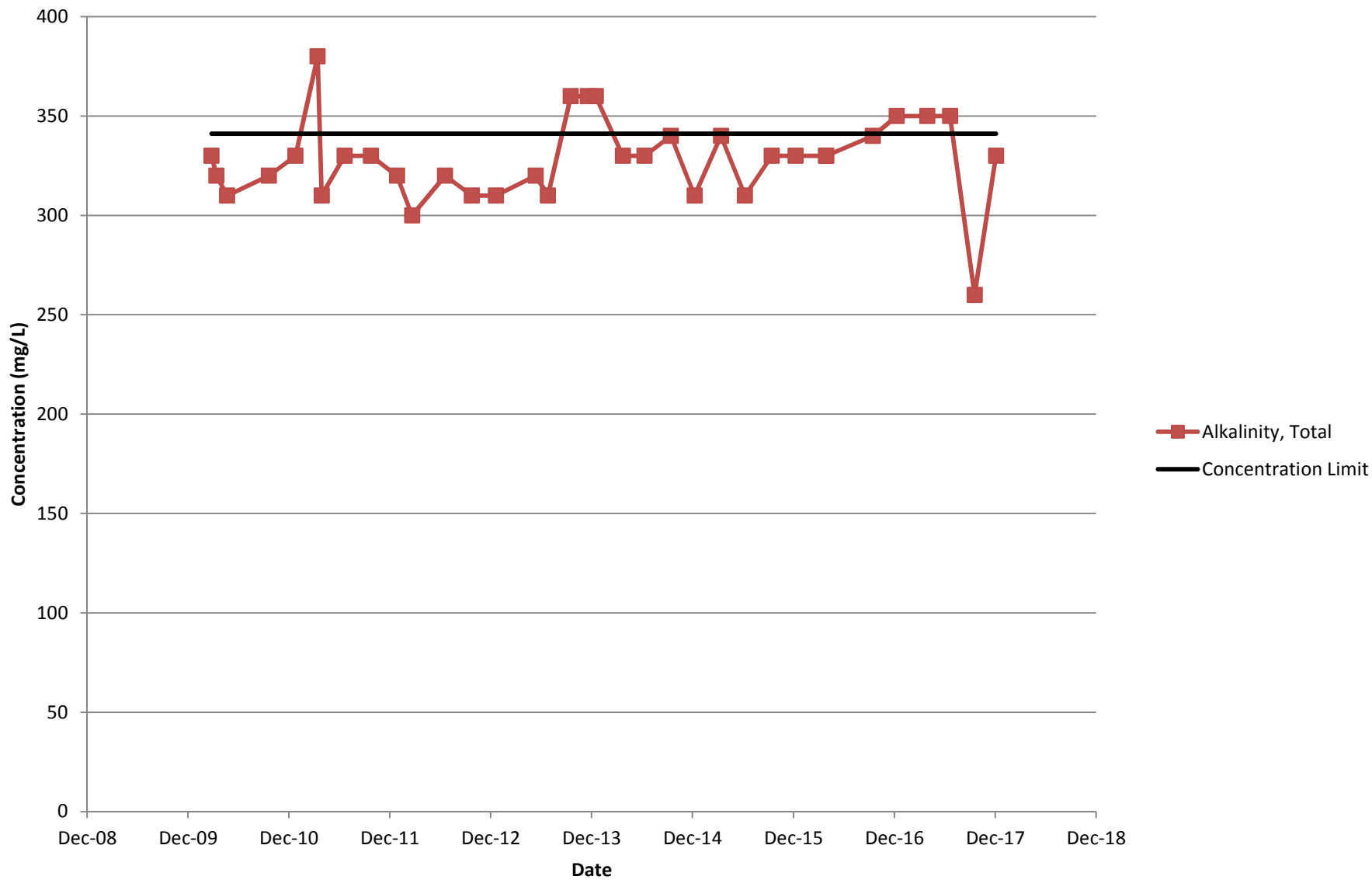
# Tracking Mode Evaluation Deep Well DW-5



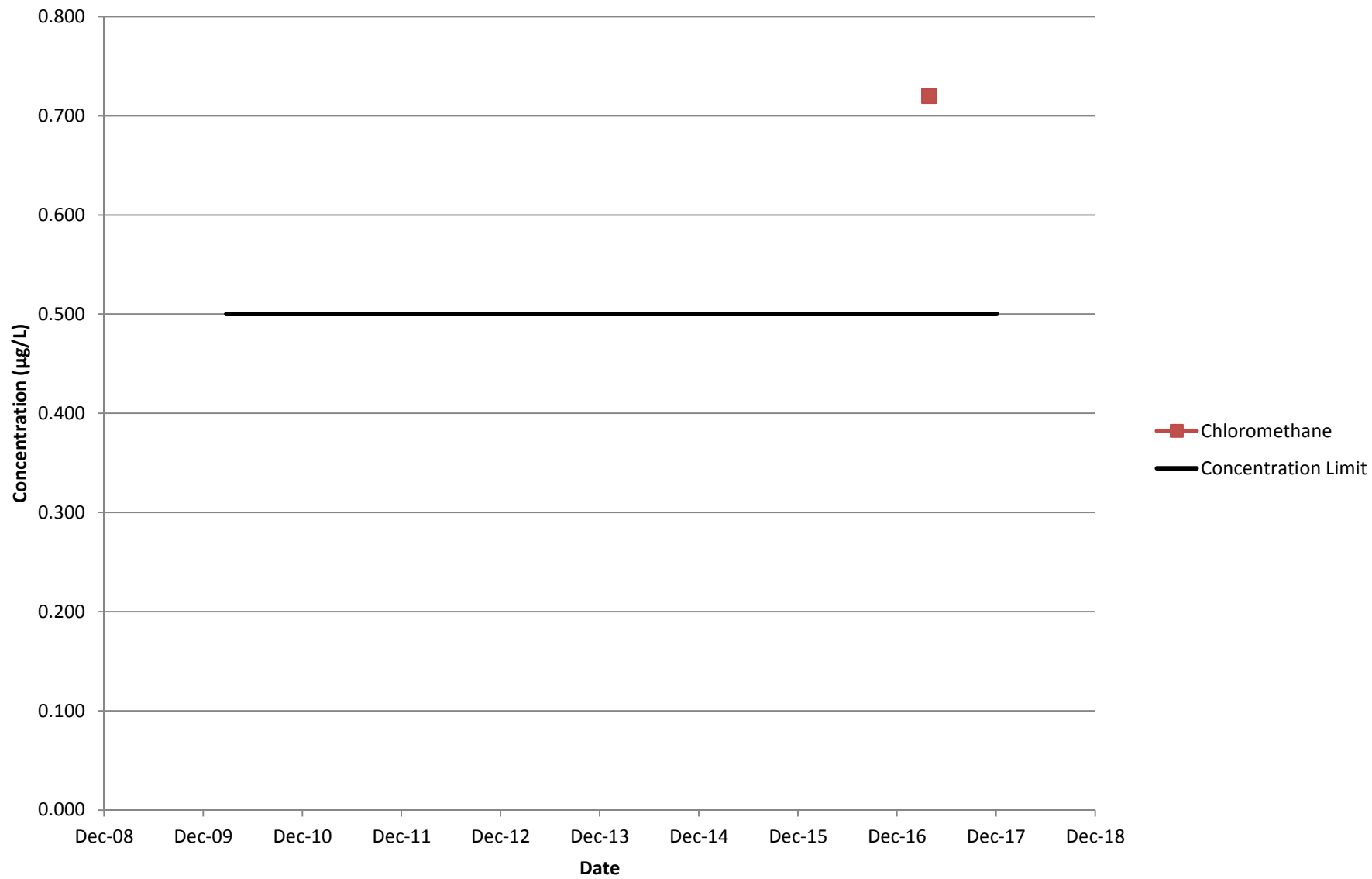
# Tracking Mode Evaluation Deep Well DW-5



# Historical Constituent Concentrations Deep Well PZ-4



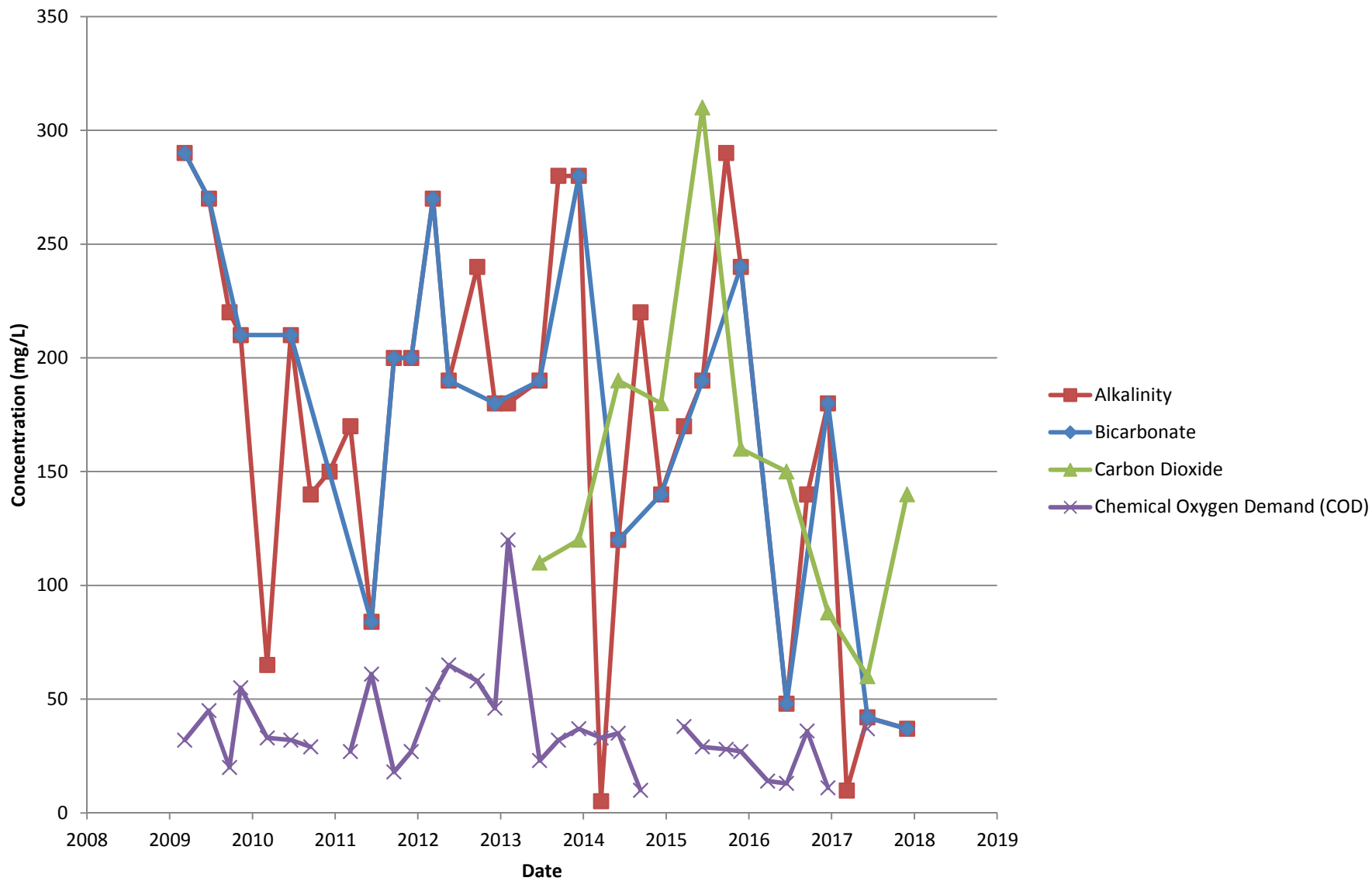
# Historical Consituent Concentrations Deep Well PZ-4



## **APPENDIX H**

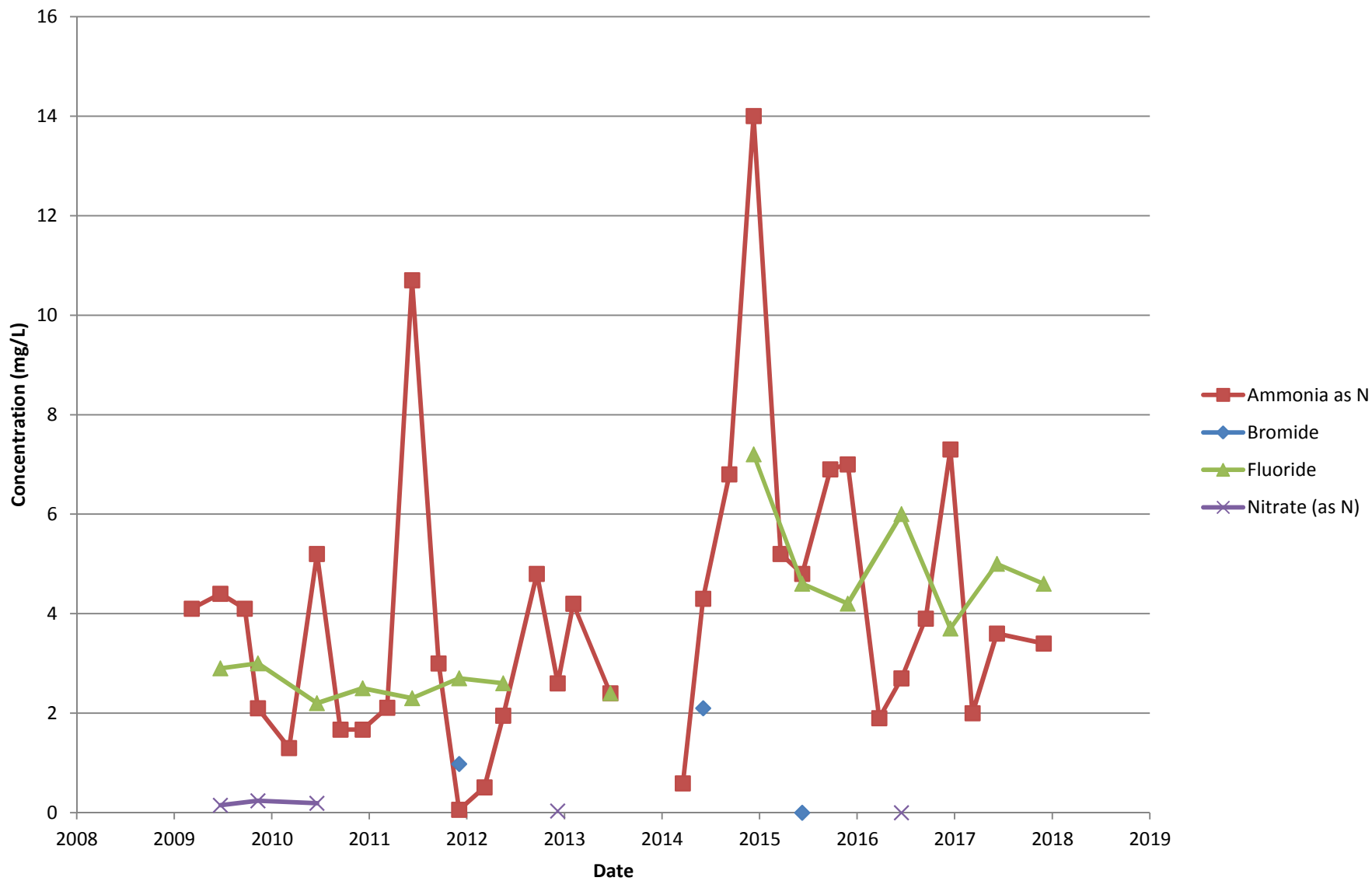
### **GRAPHICAL PRESENTATION OF ANALYTICAL DATA**

## Historical Constituent Concentrations Background Well CM-9R3

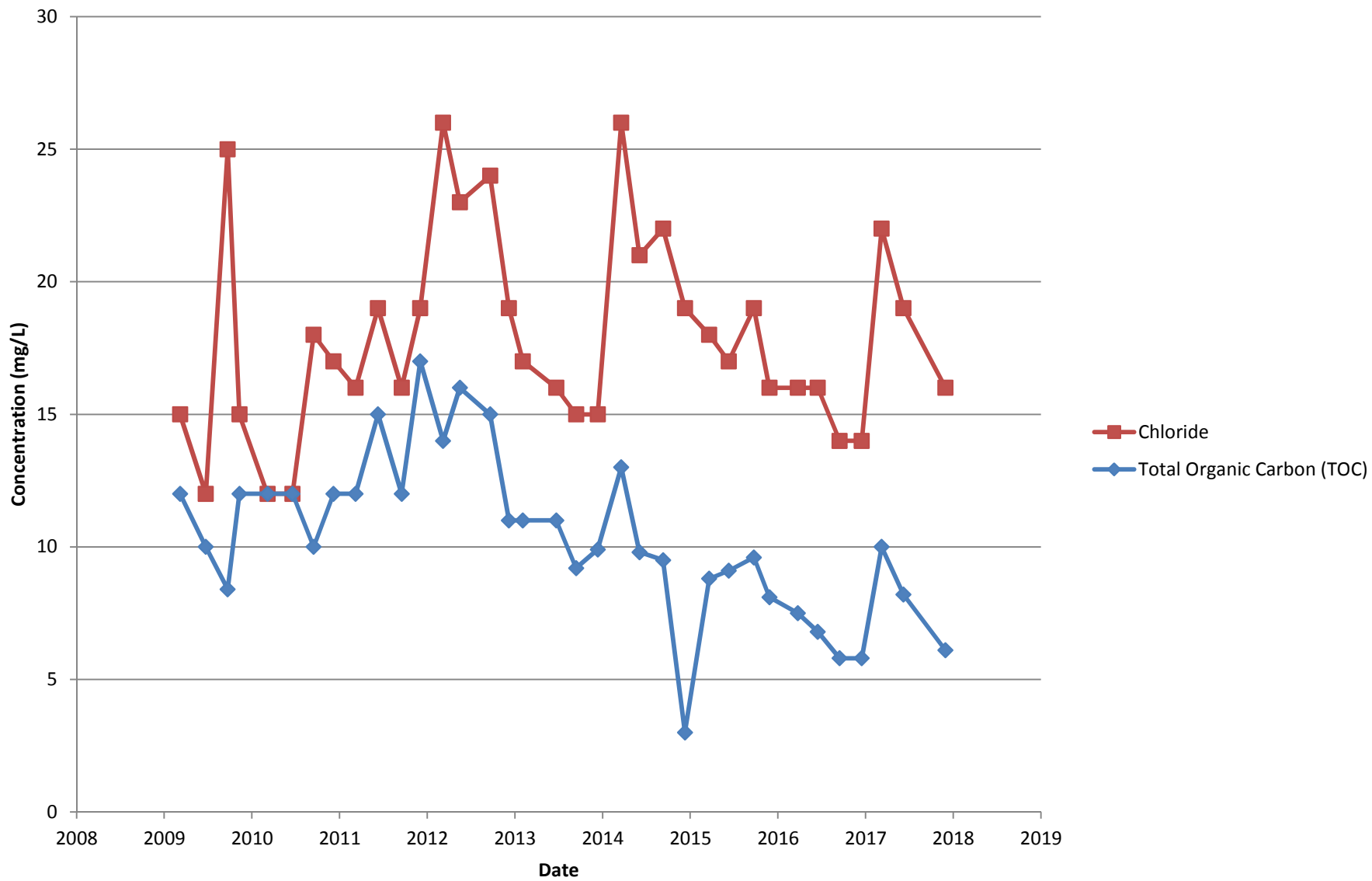




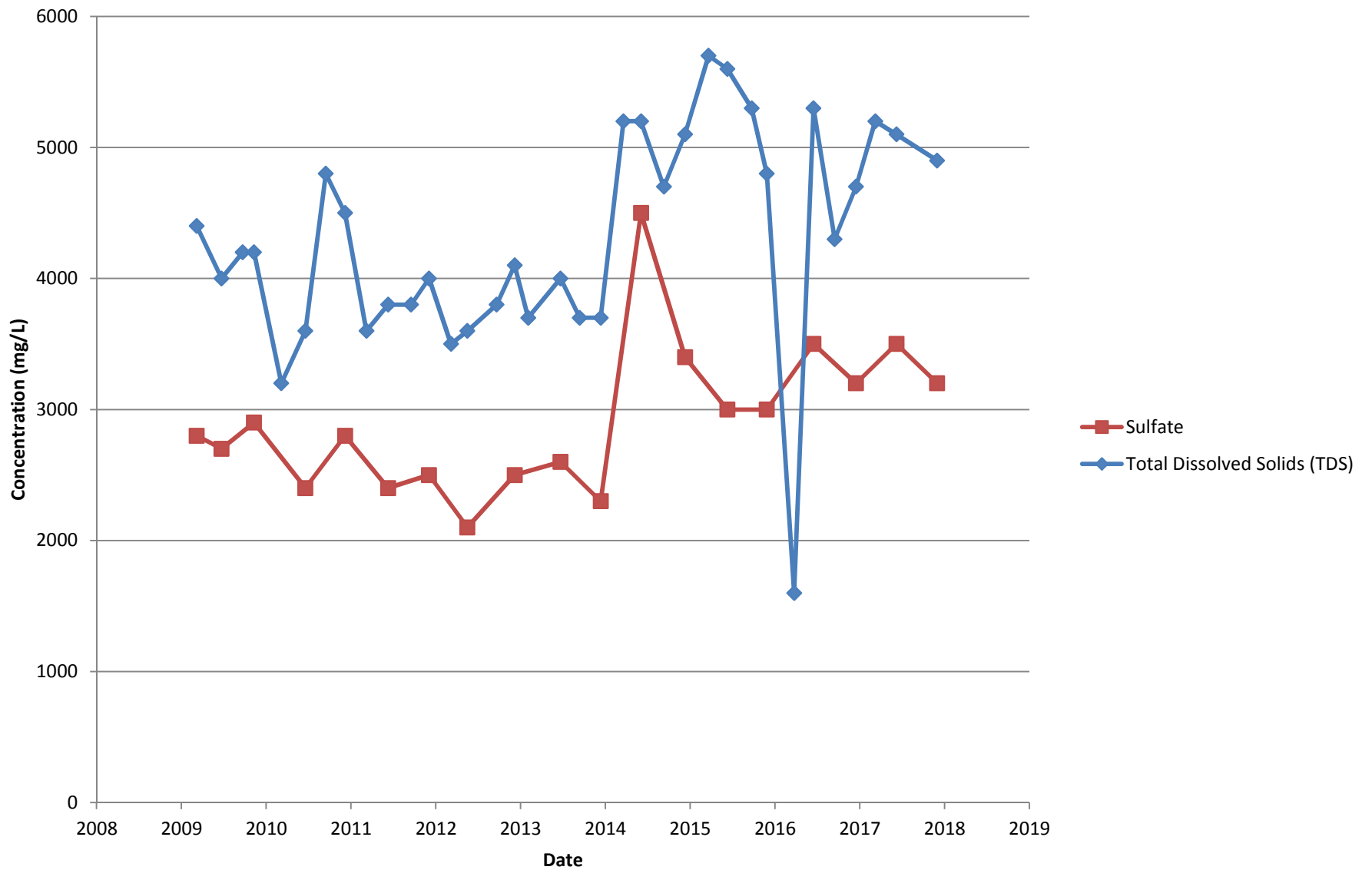
# Historical Consituent Concentrations Background Well CM-9R3



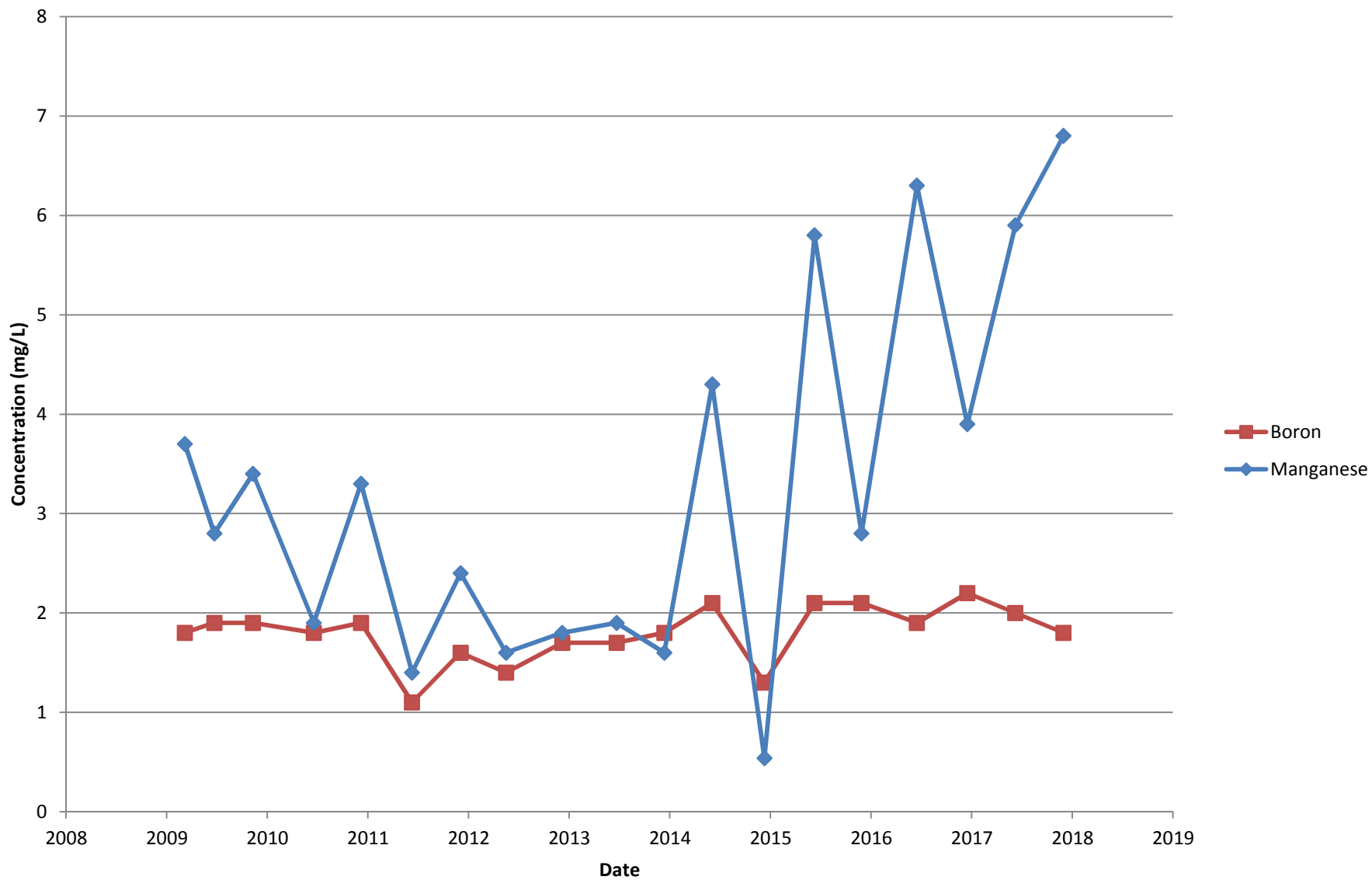
# Historical Constituent Concentrations Background Well CM-9R3



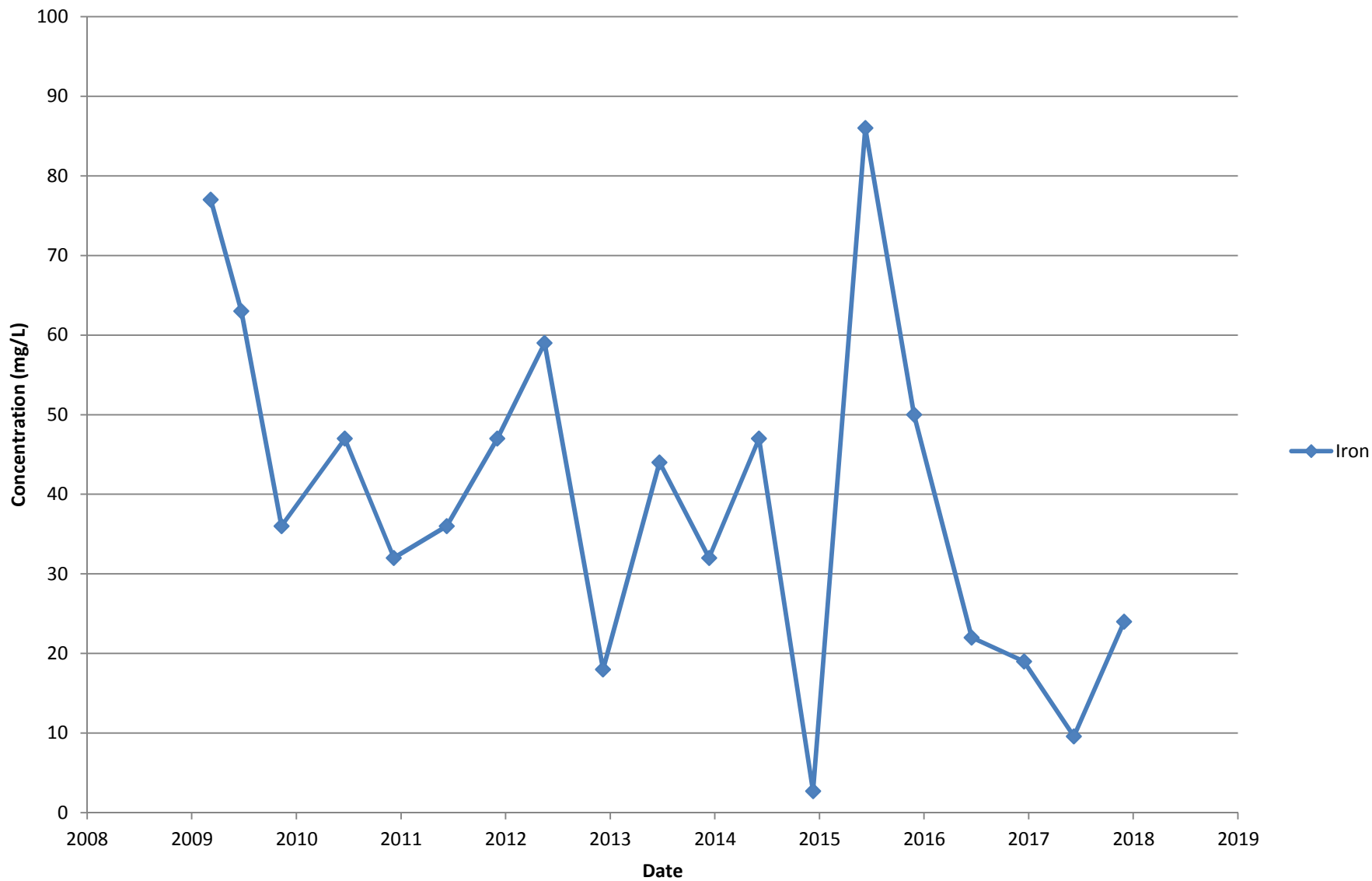
## Historical Constituent Concentrations Background Well CM-9R3



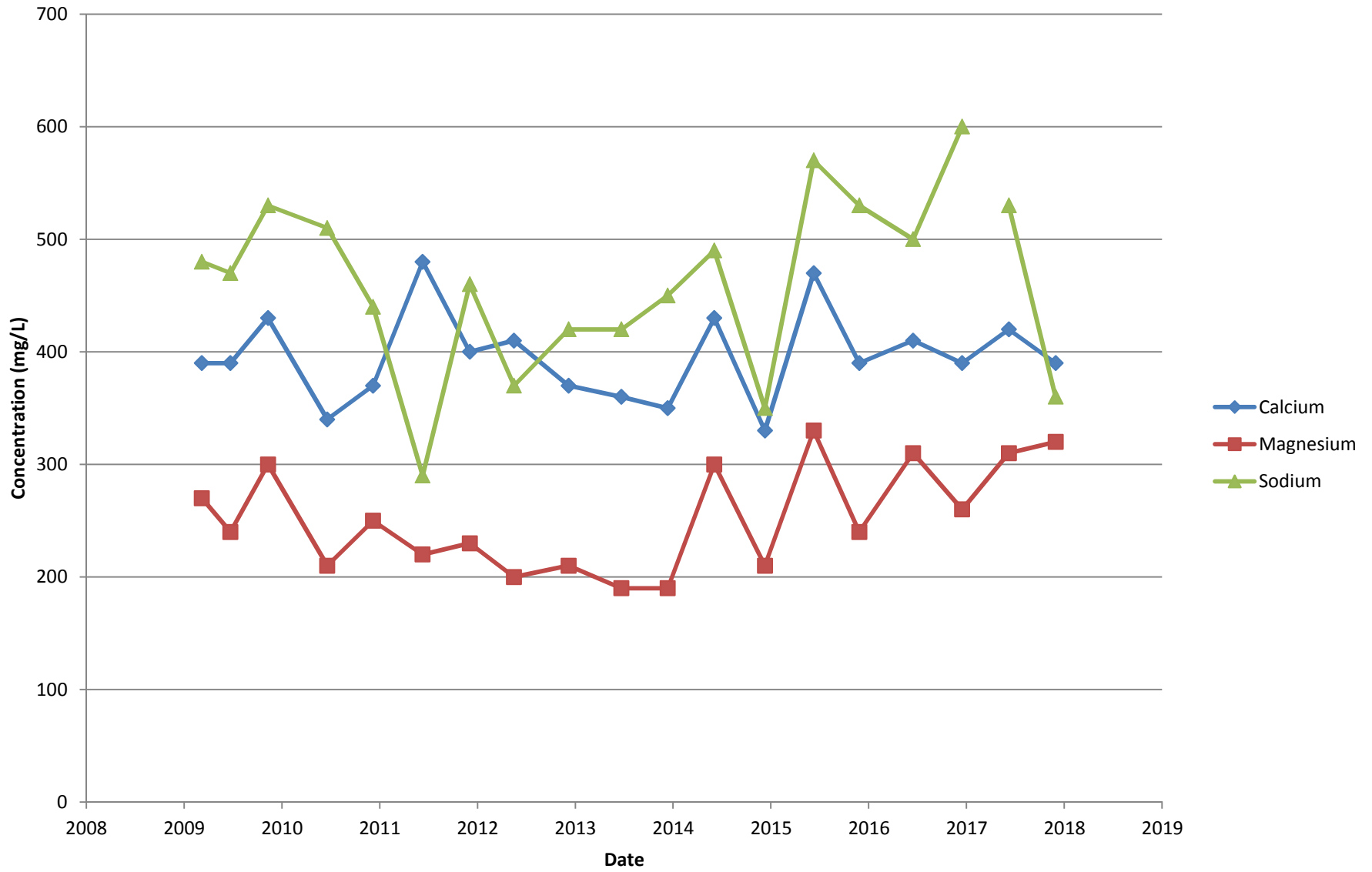
# Historical Constituent Concentrations Background Well CM-9R3



# Historical Constituent Concentrations Background Well CM-9R3

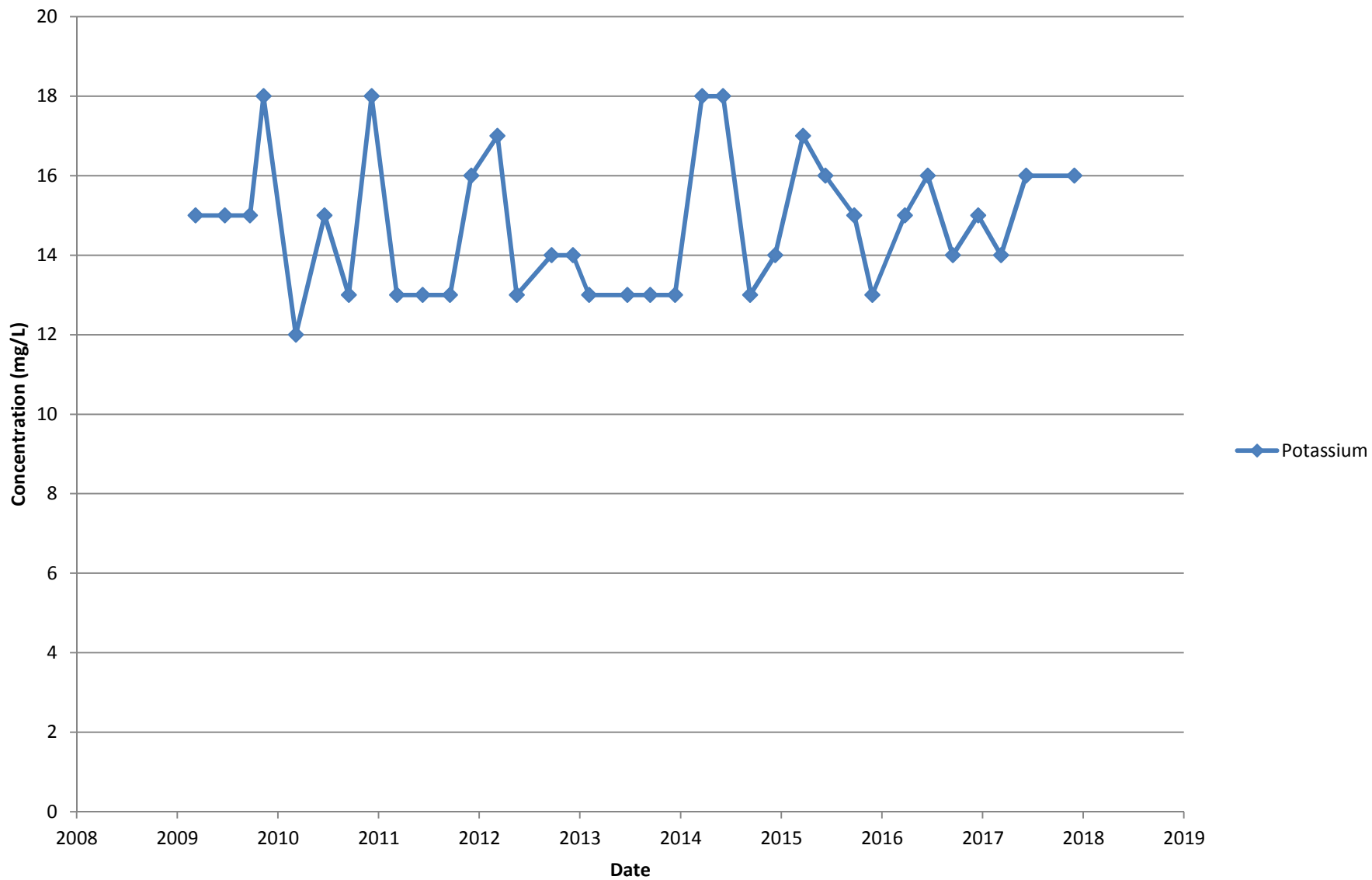


# Historical Constituent Concentrations Background Well CM-9R3

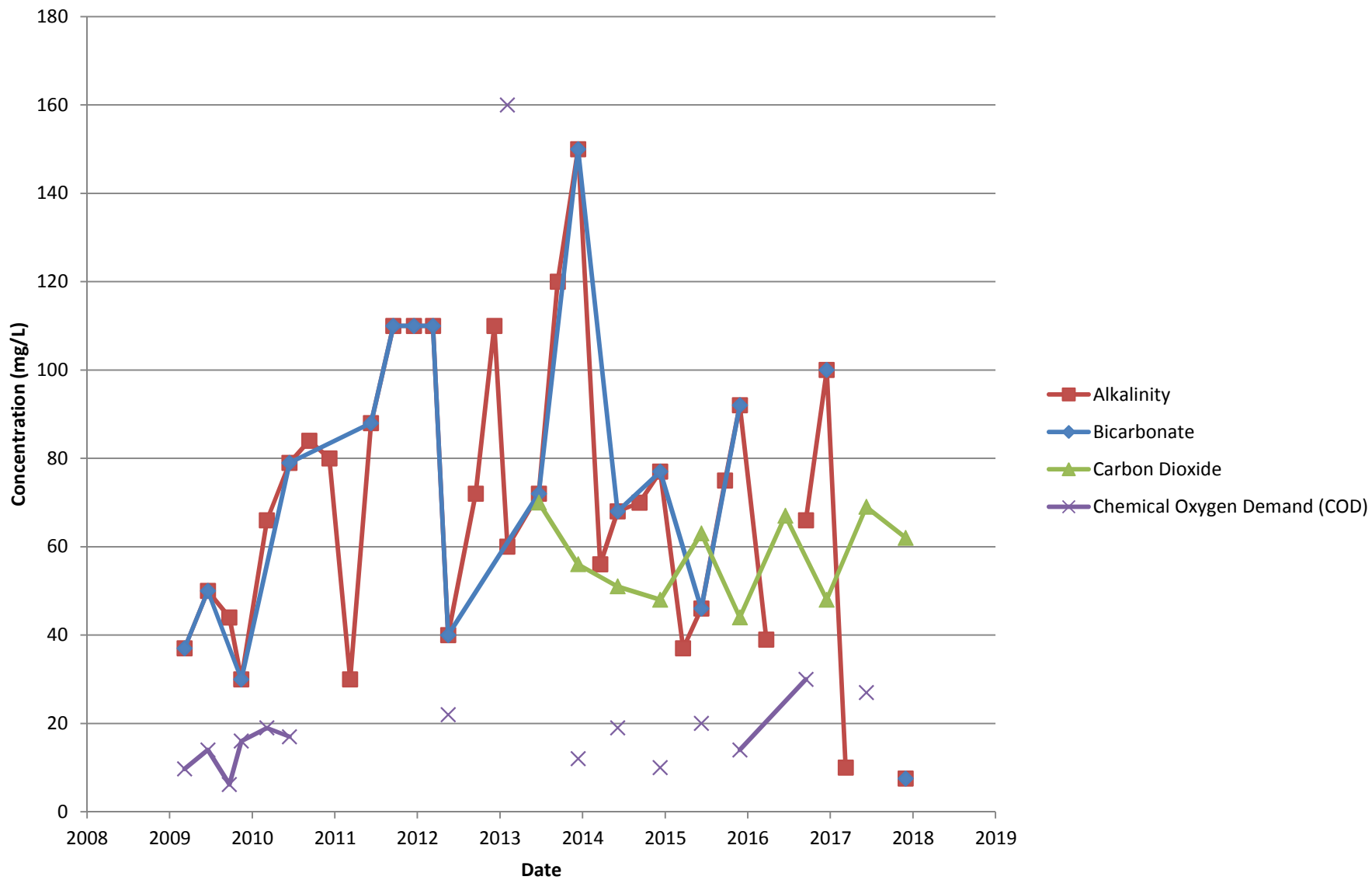


# Historical Constituent Concentrations

## Background Well CM-9R3

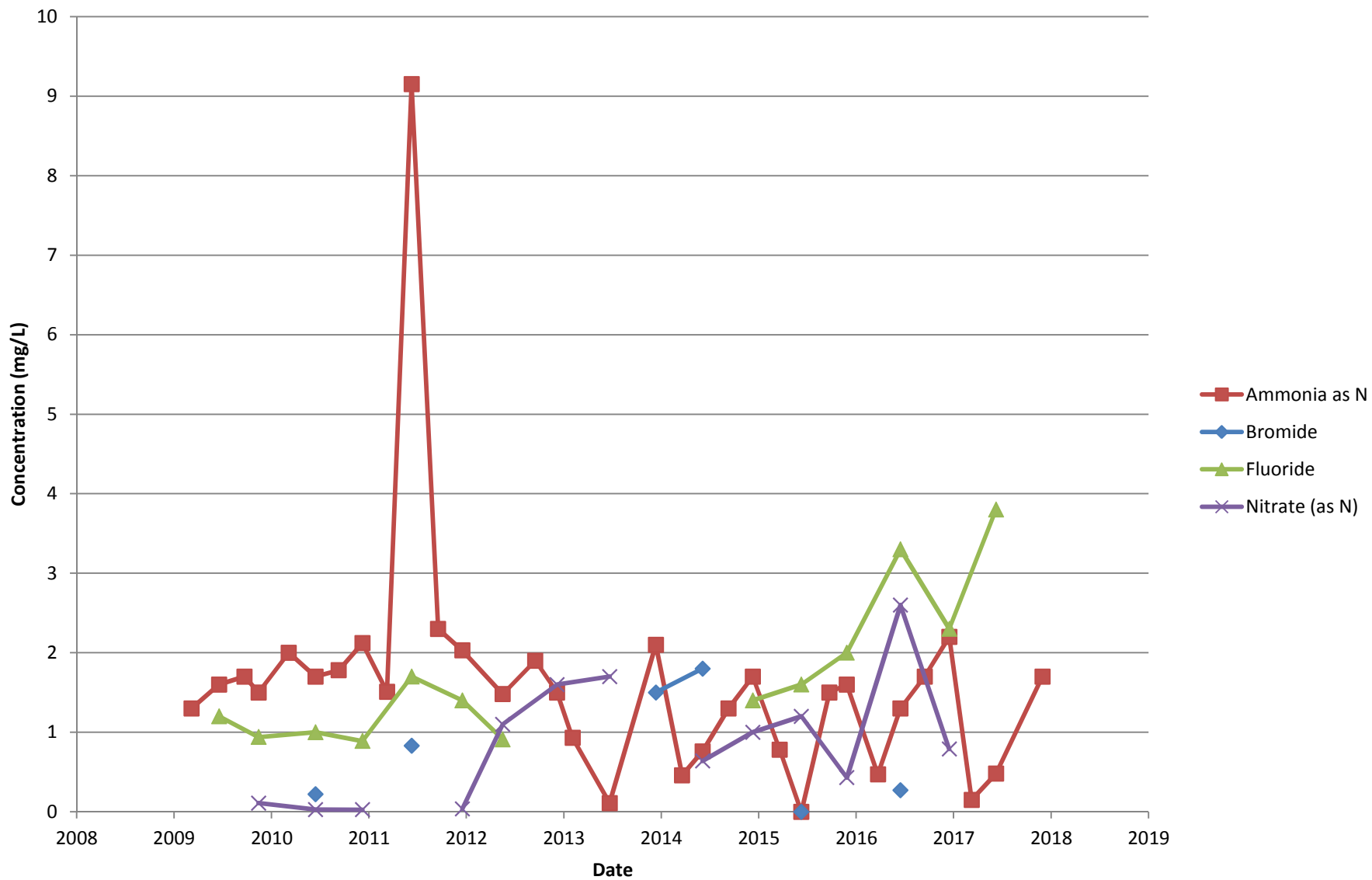


# Historical Constituent Concentrations Background Well CM-11R

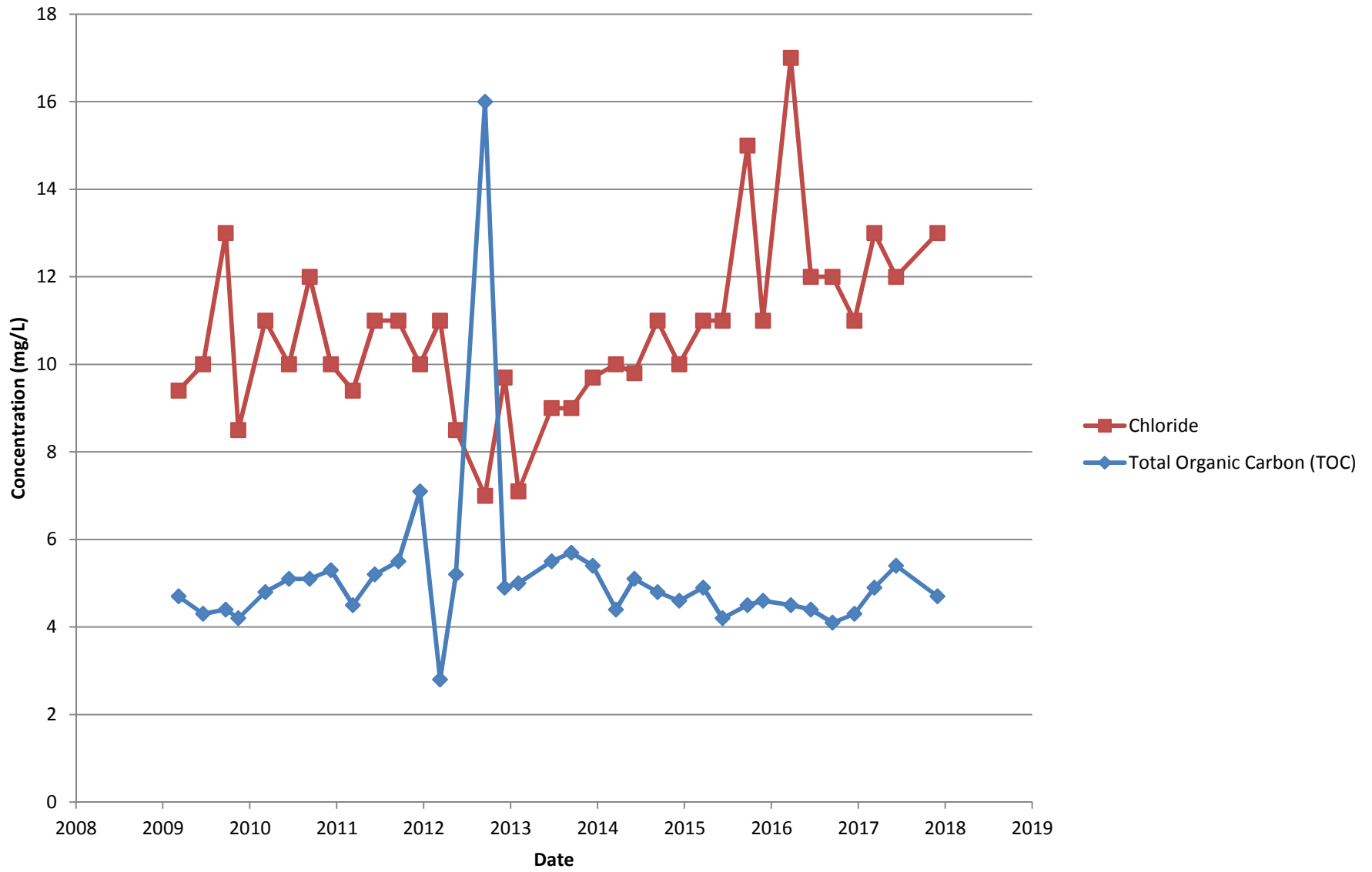




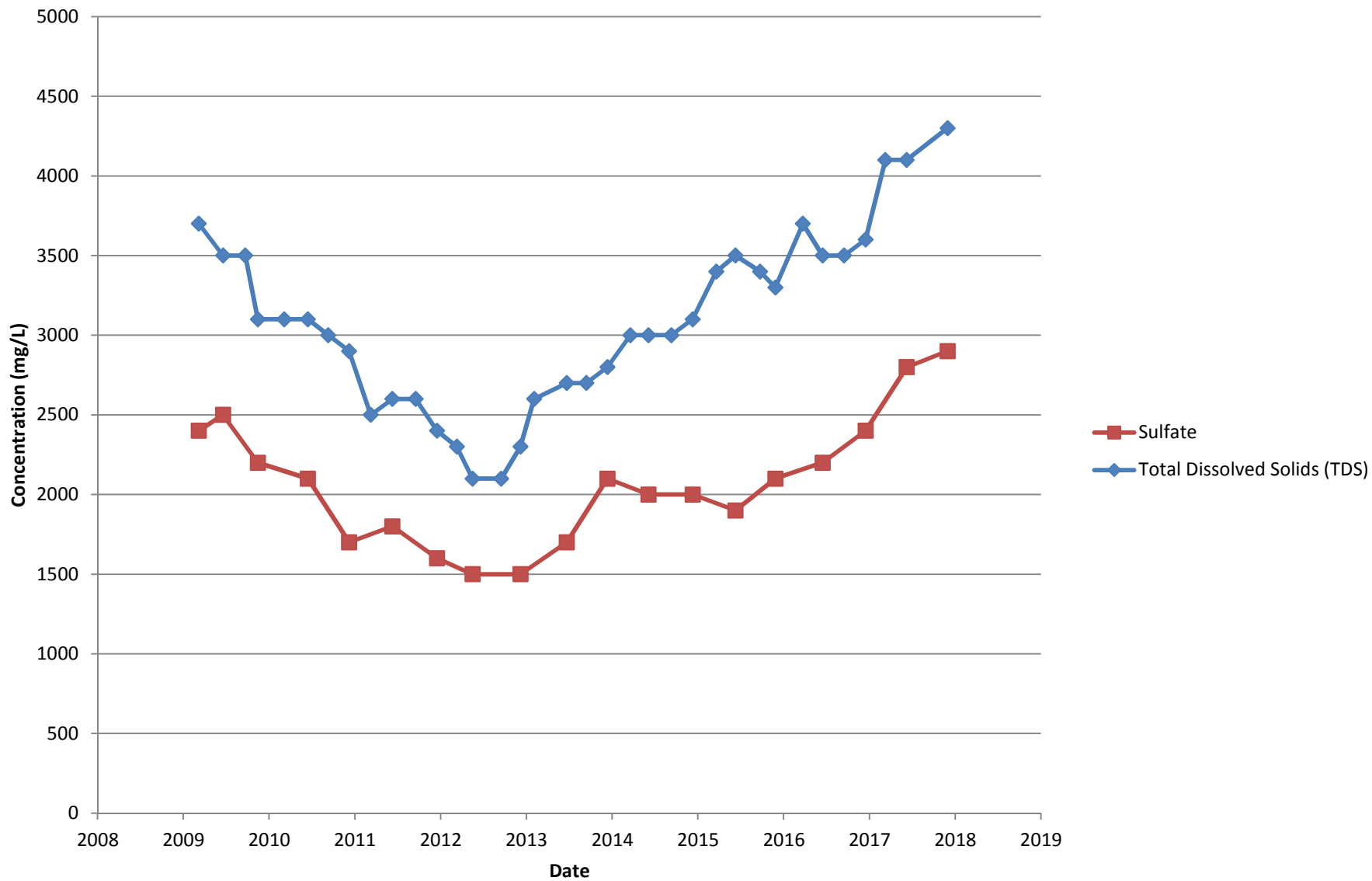
# Historical Consituent Concentrations Background Well CM-11R



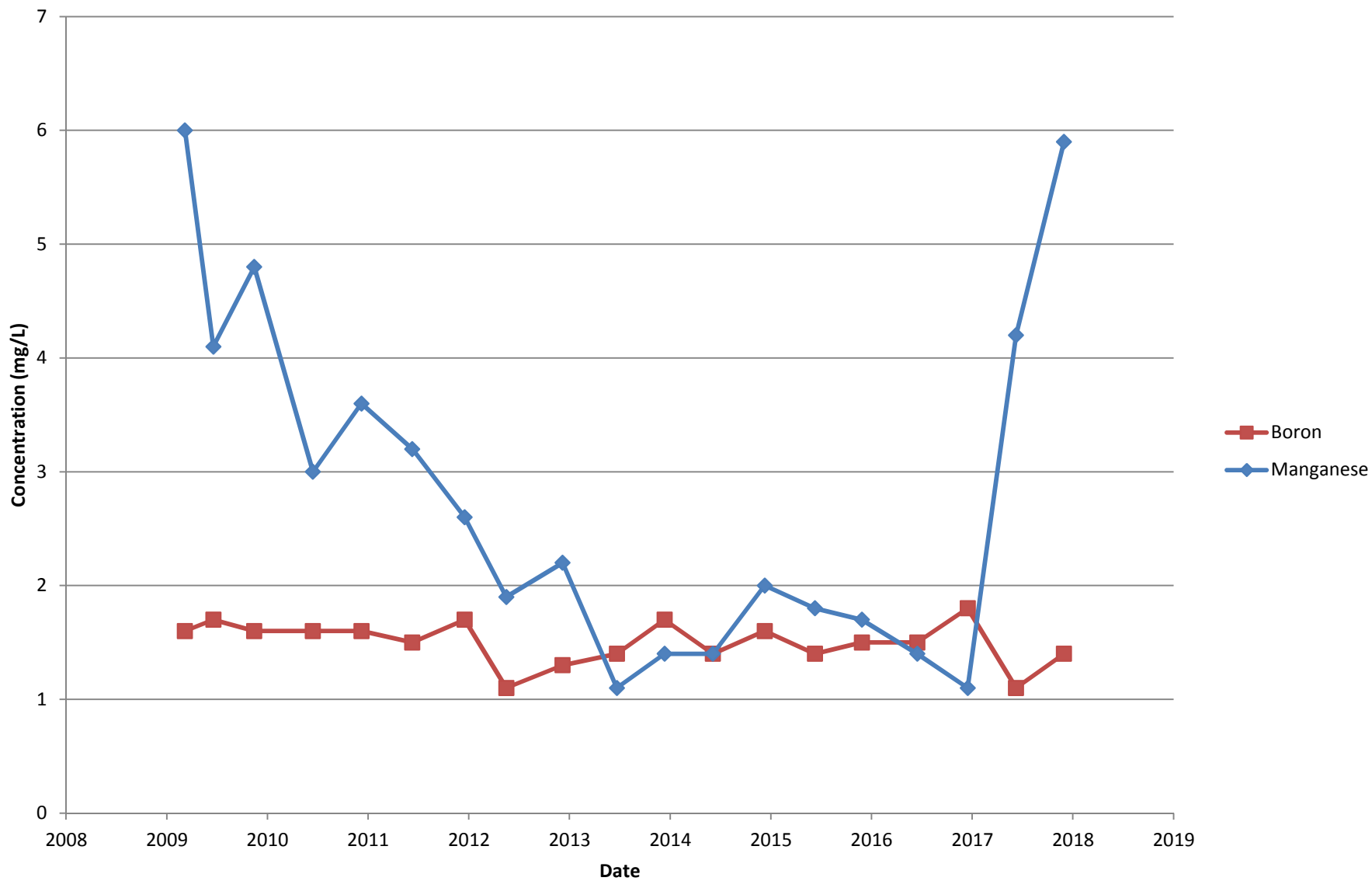
# Historical Constituent Concentrations Background Well CM-11R



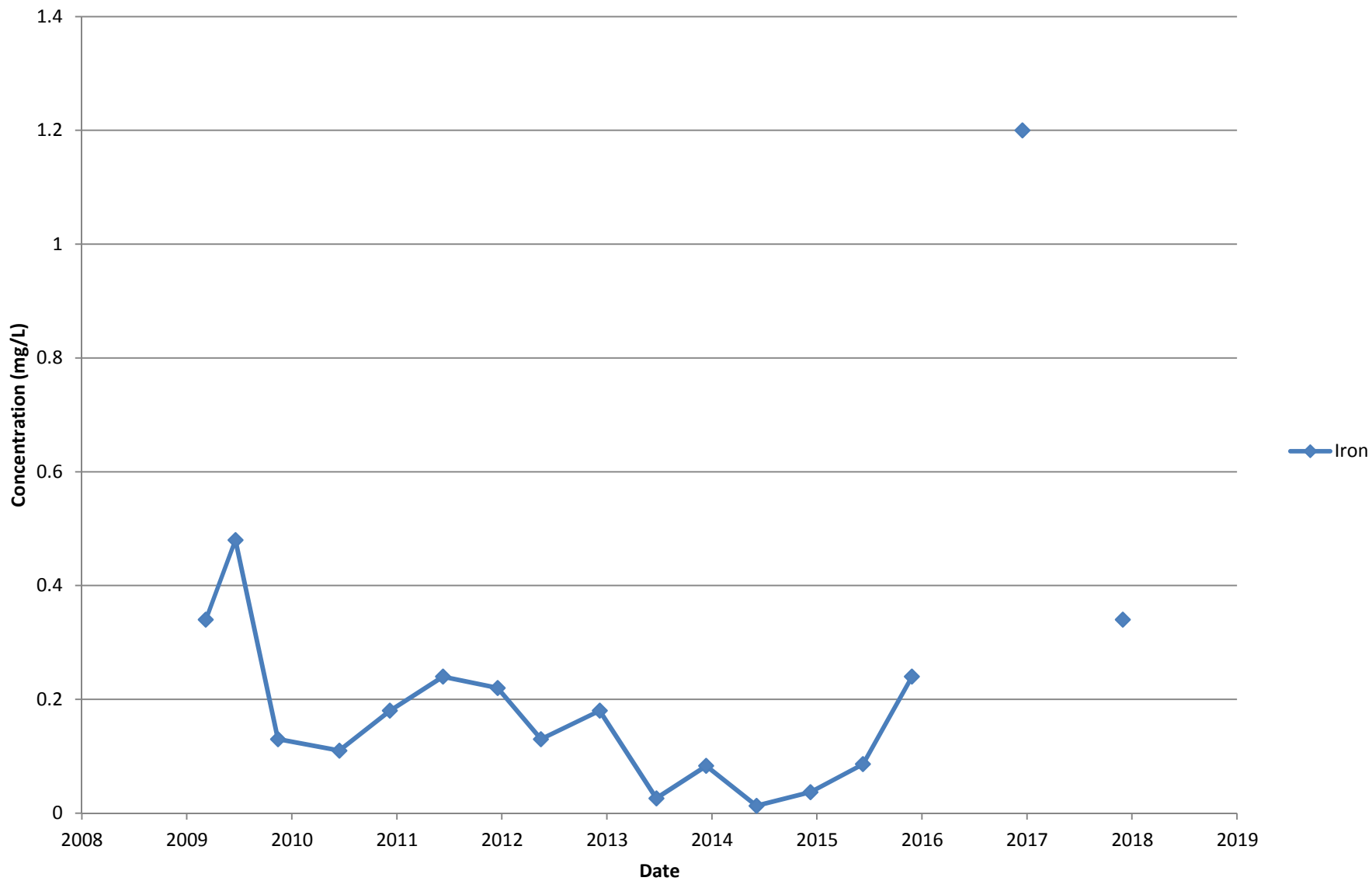
## Historical Constituent Concentrations Background Well CM-11R



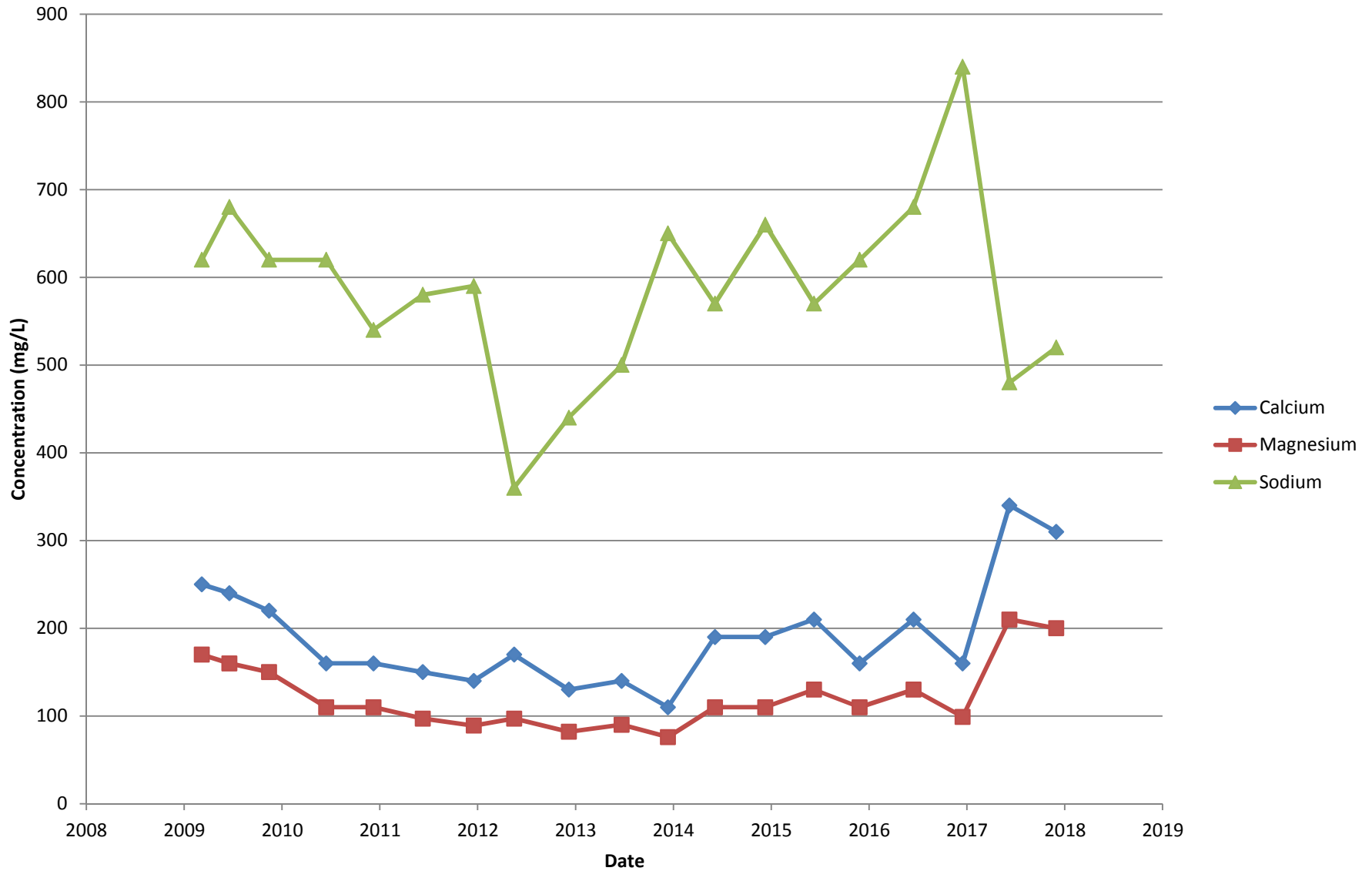
# Historical Constituent Concentrations Background Well CM-11R



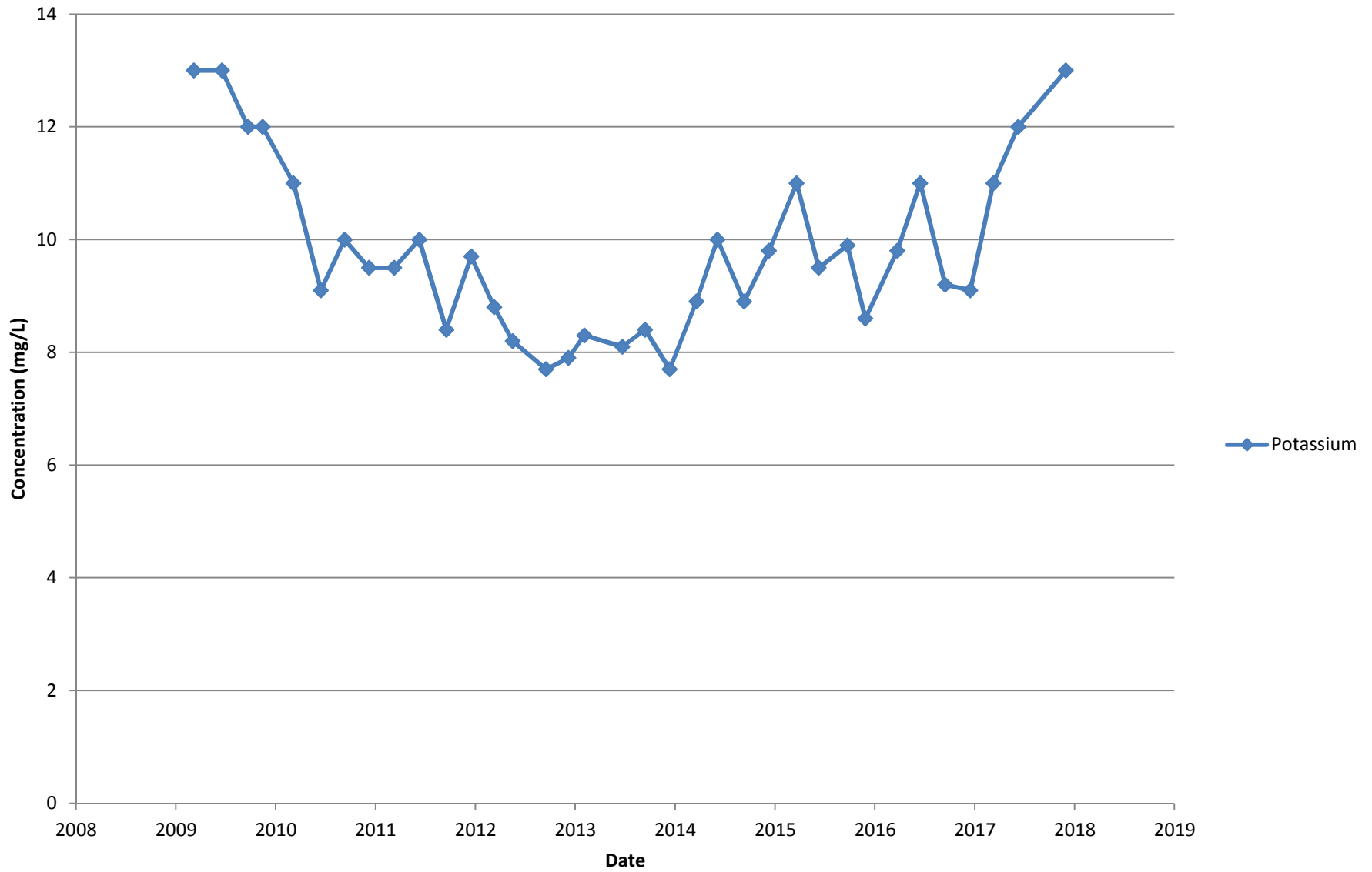
# Historical Constituent Concentrations Background Well CM-11R



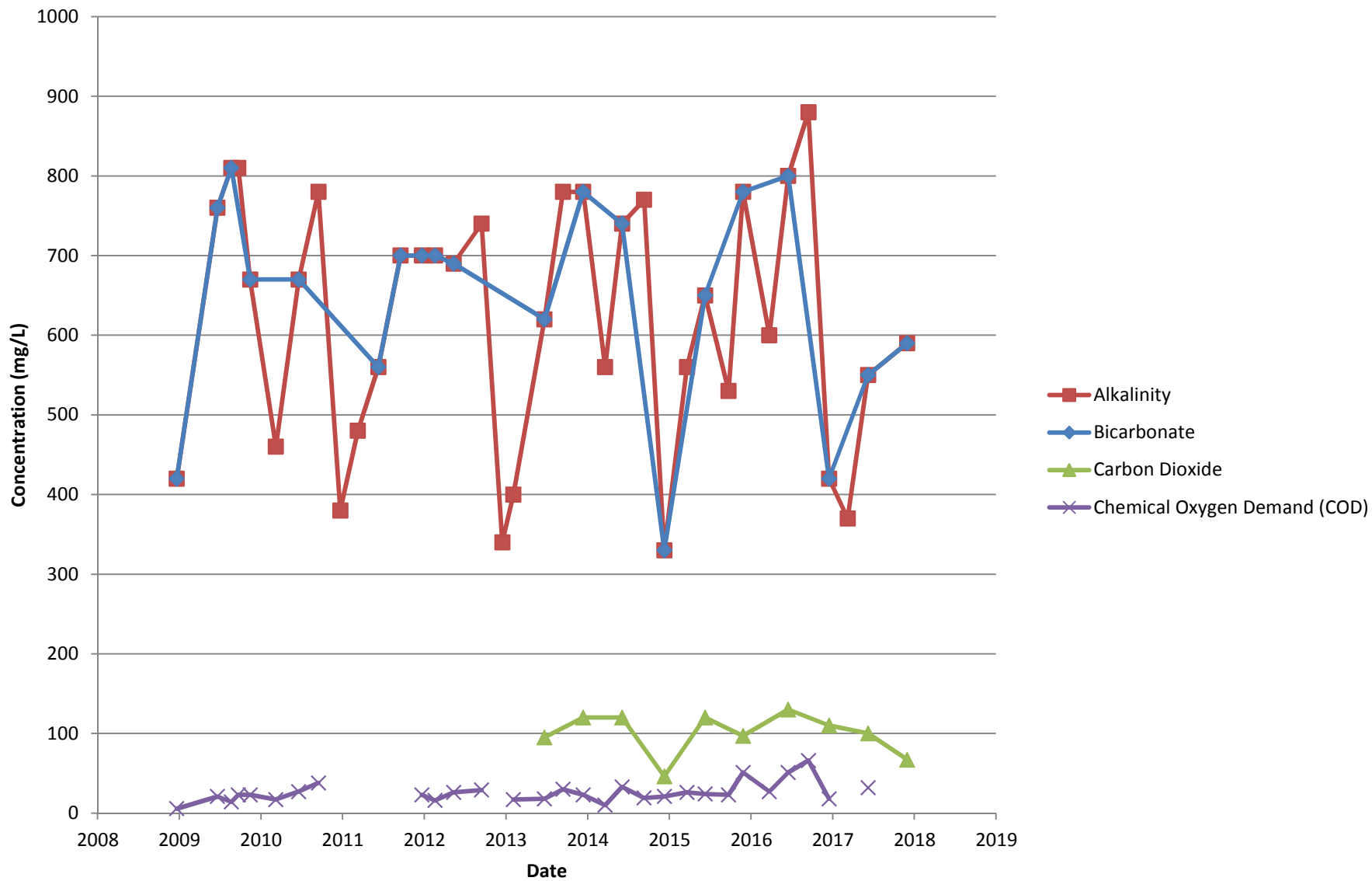
# Historical Constituent Concentrations Background Well CM-11R



# Historical Constituent Concentrations Background Well CM-11R

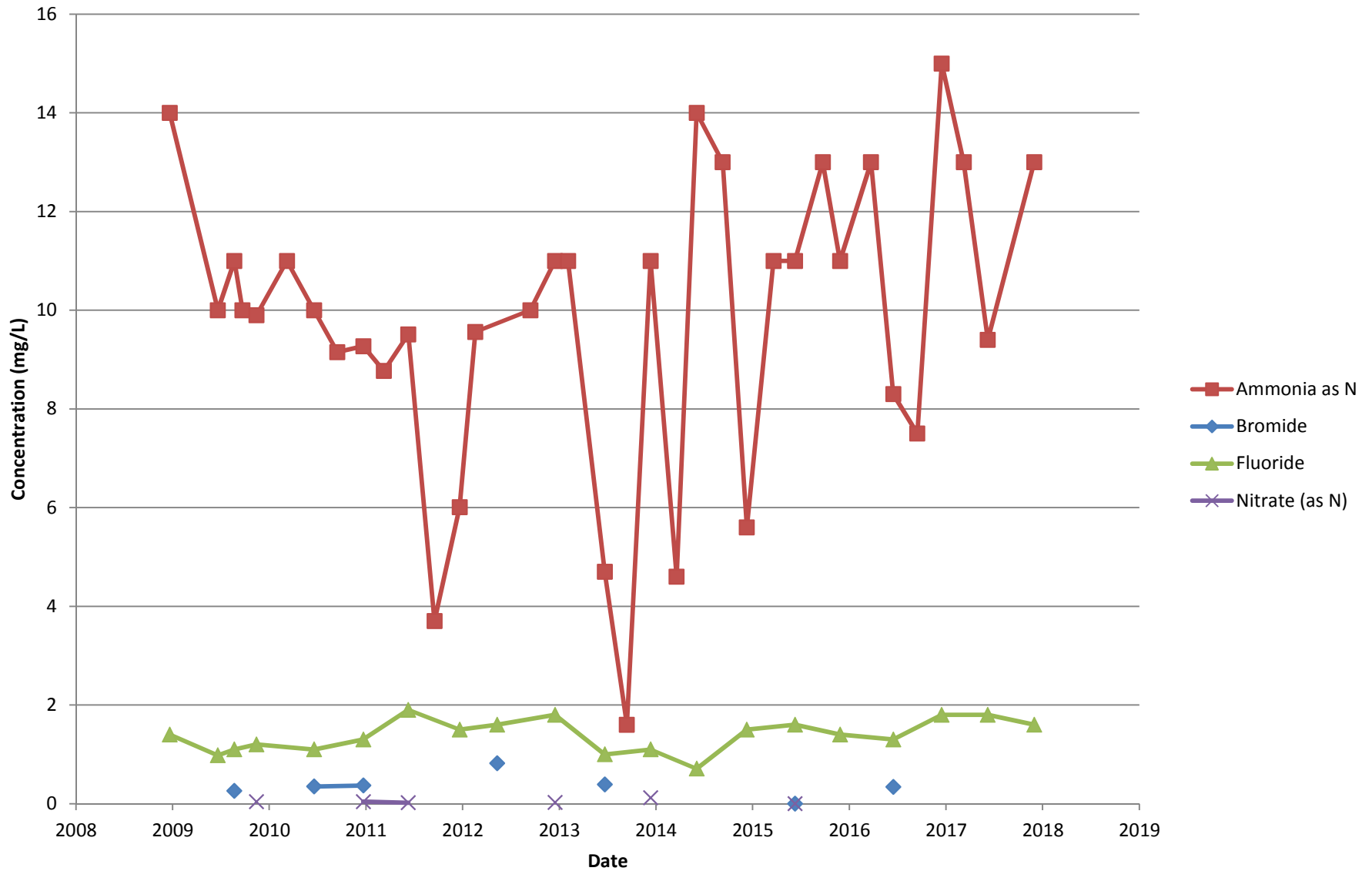


# Historical Constituent Concentrations Background Well CM-10R

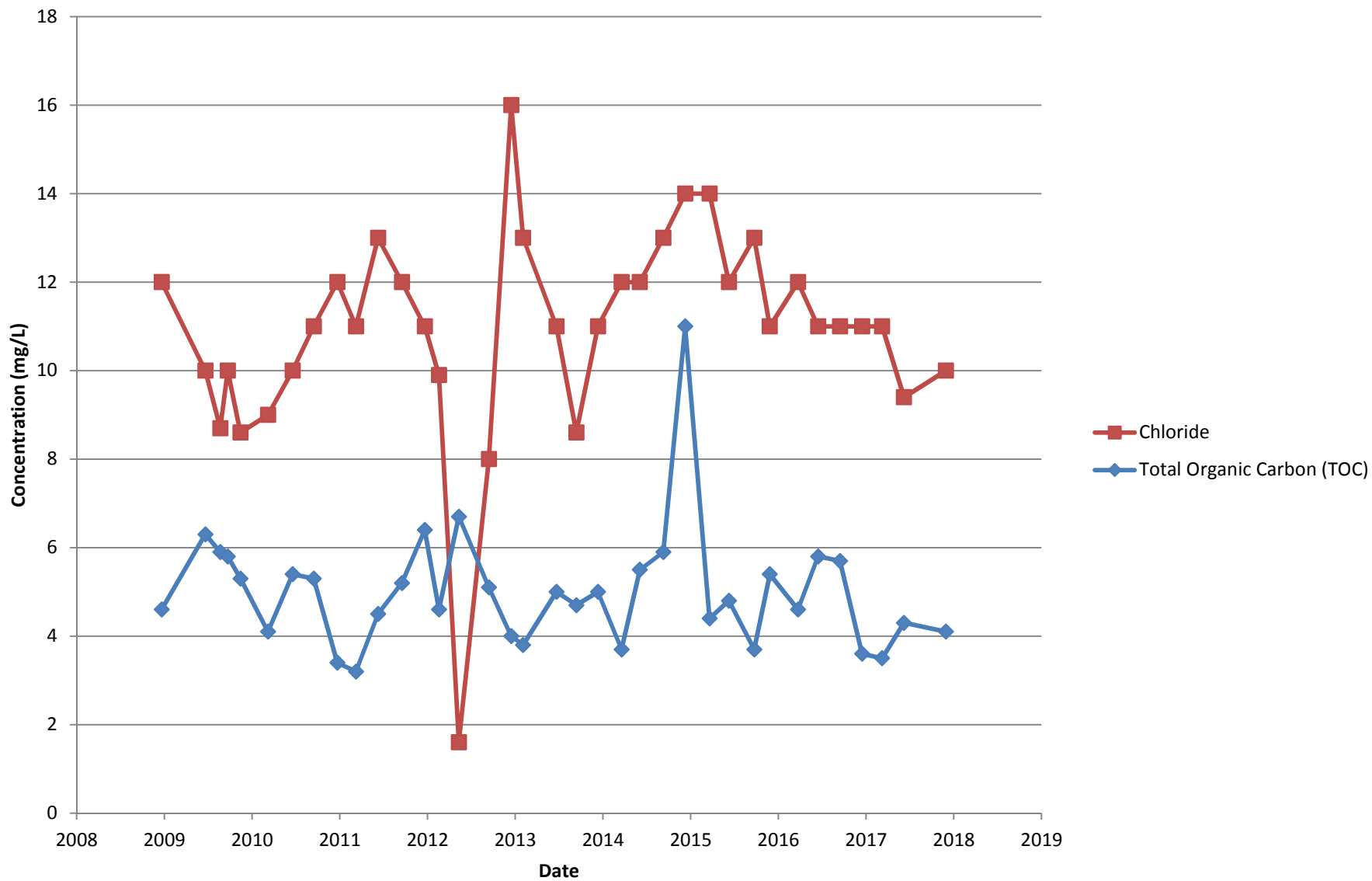




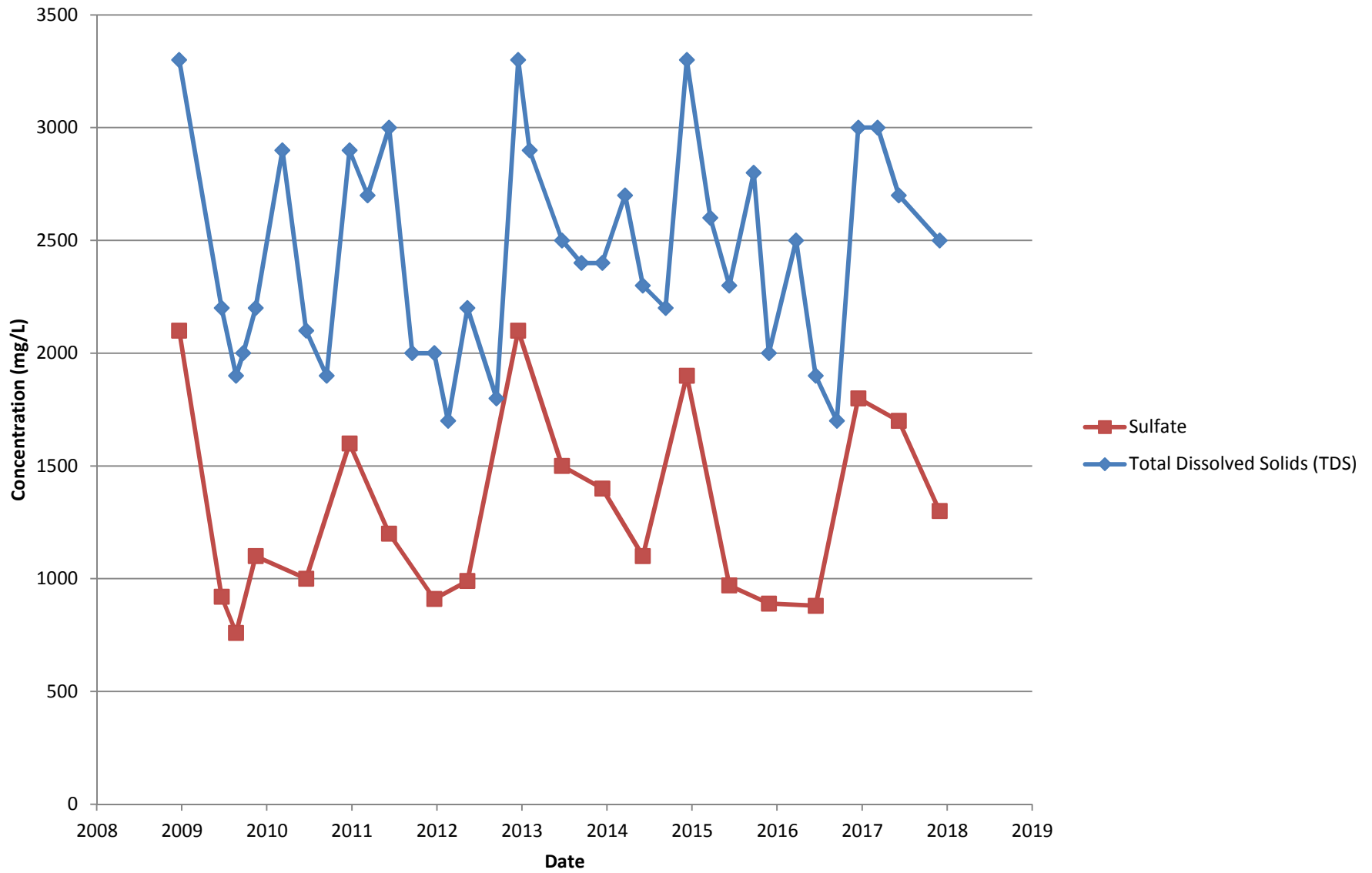
# Historical Constituent Concentrations Background Well CM-10R



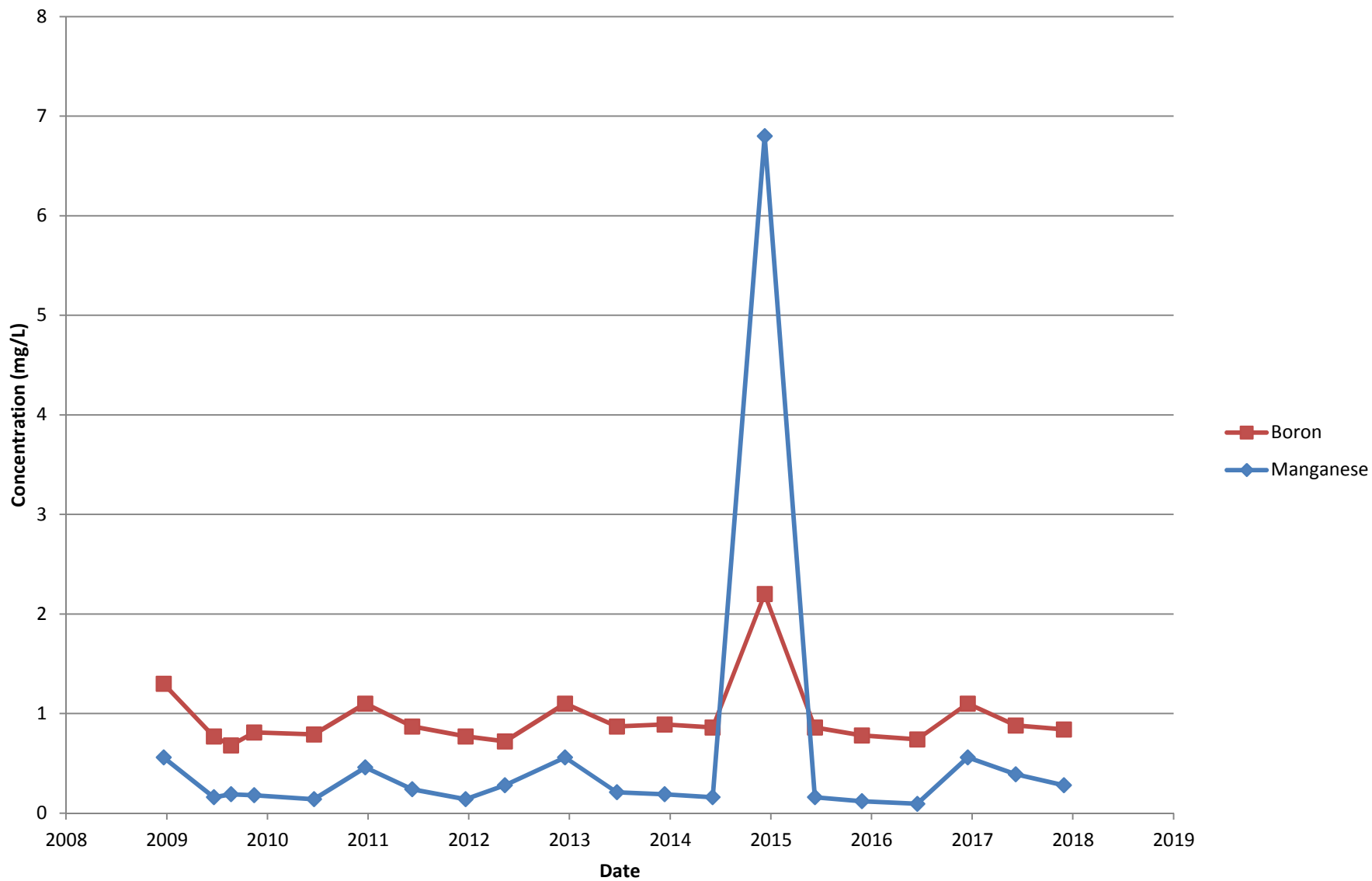
## Historical Constituent Concentrations Background Well CM-10R



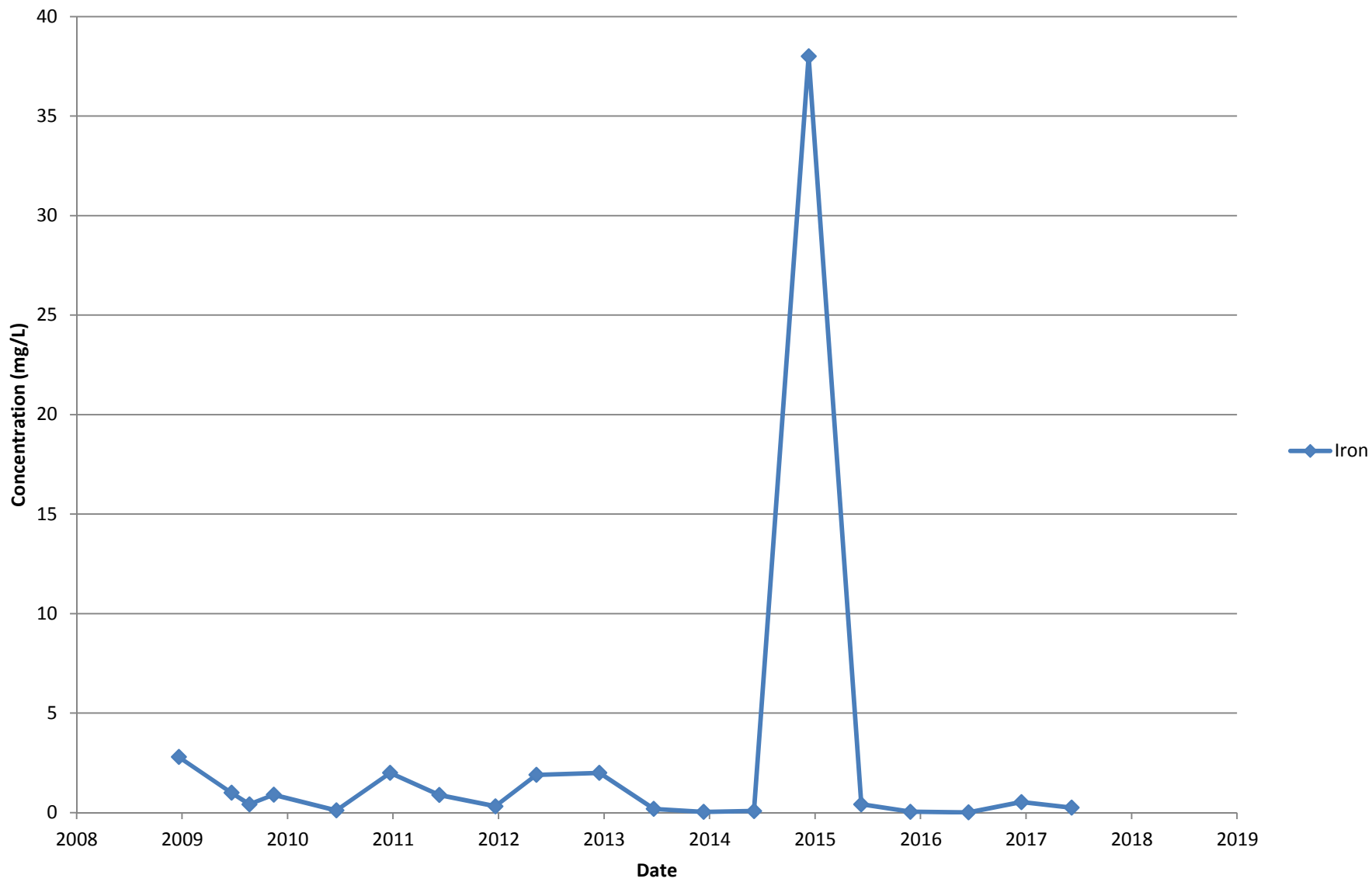
## Historical Constituent Concentrations Background Well CM-10R



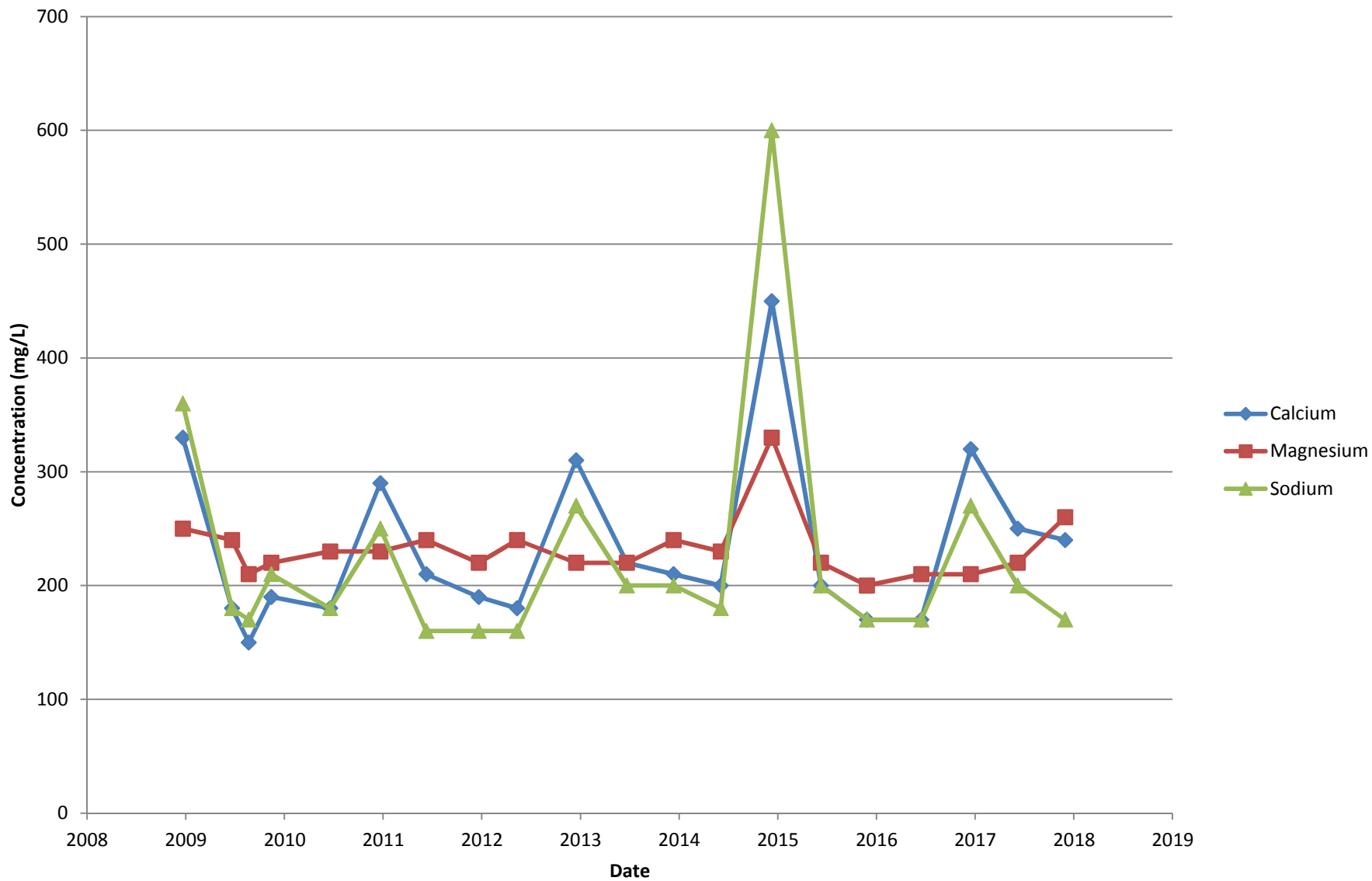
# Historical Constituent Concentrations Background Well CM-10R



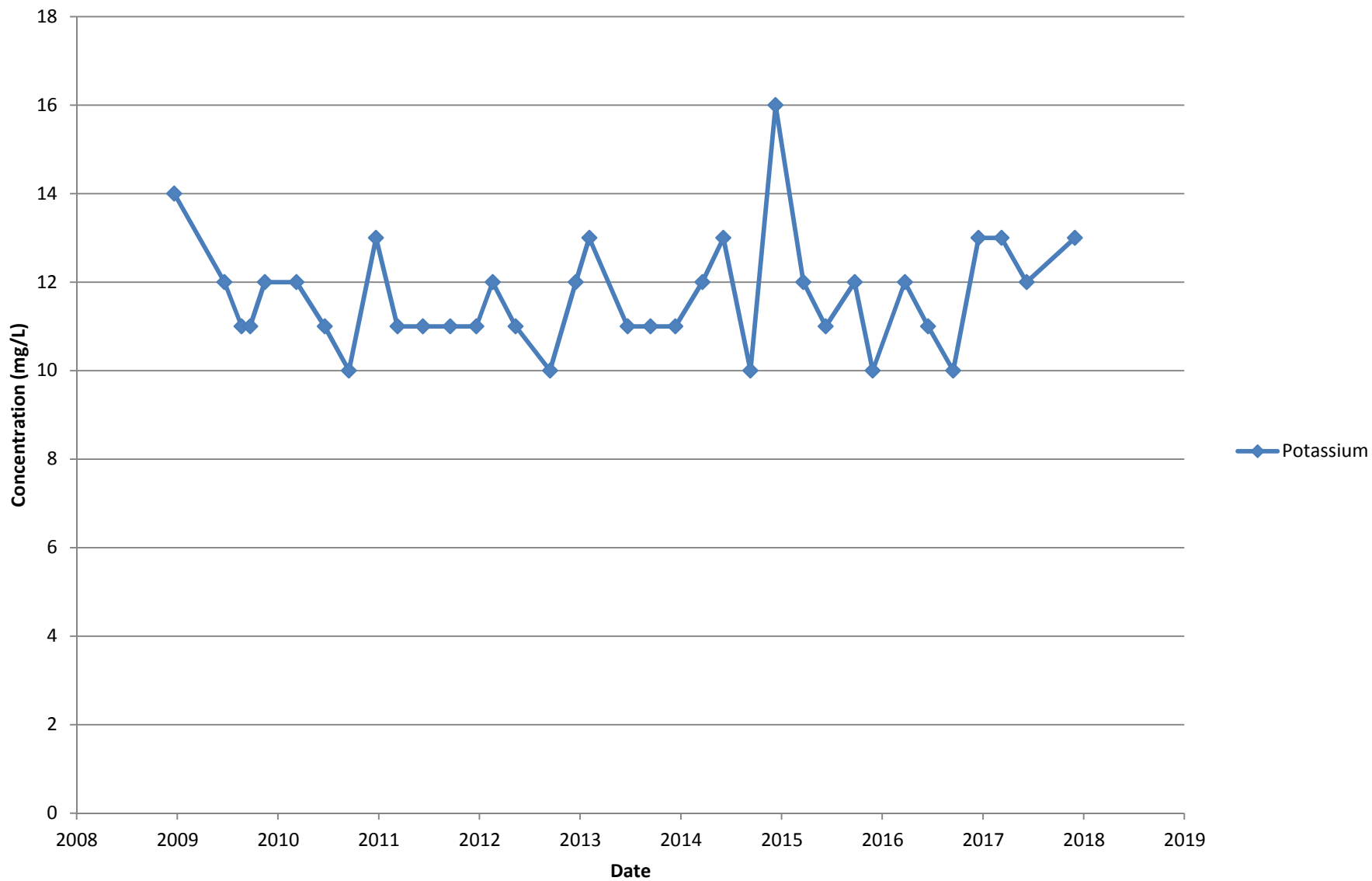
# Historical Constituent Concentrations Background Well CM-10R



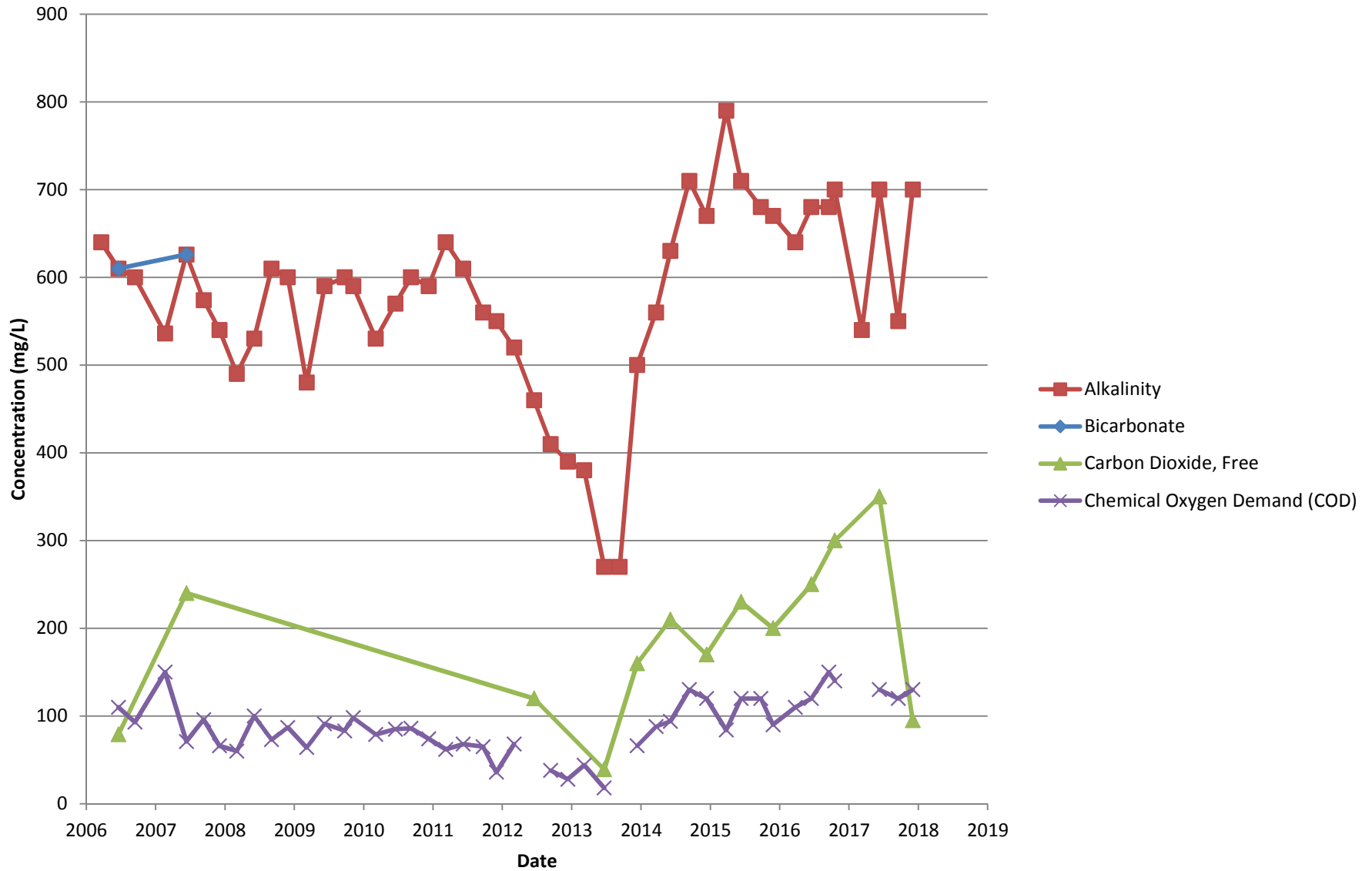
# Historical Constituent Concentrations Background Well CM-10R



# Historical Constituent Concentrations Background Well CM-10R

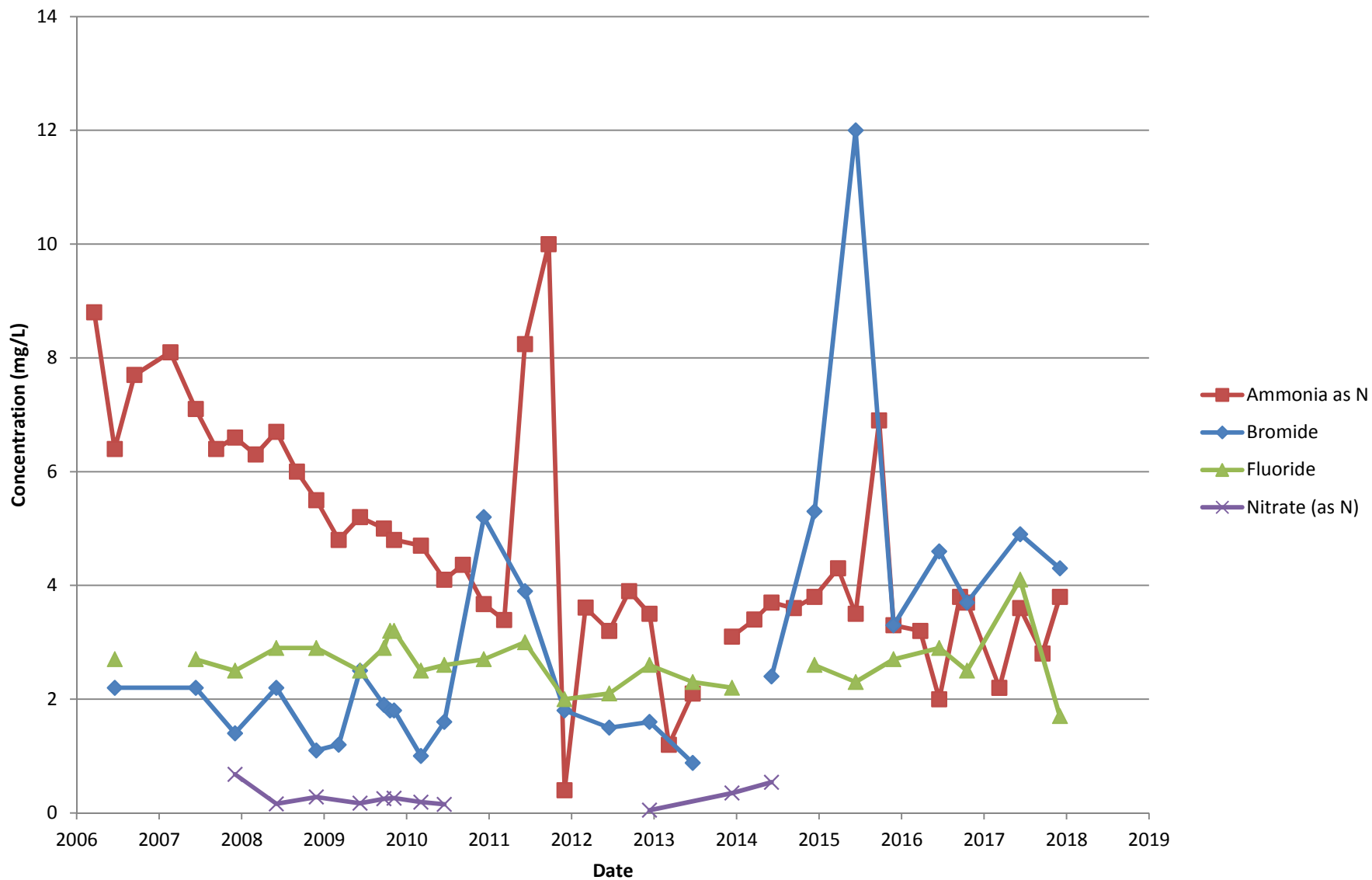


# Historical Constituent Concentrations Shallow Well MW-1

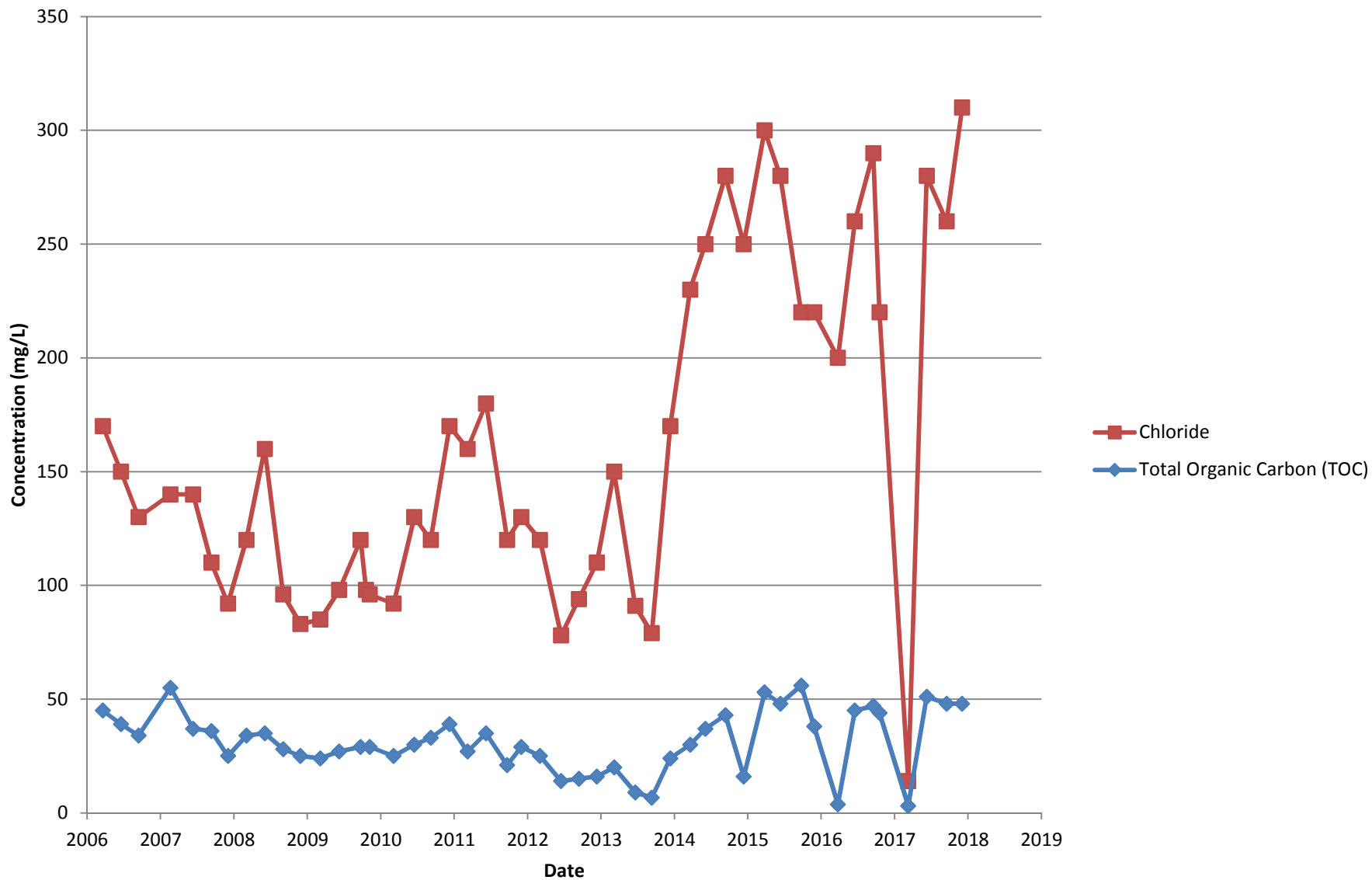




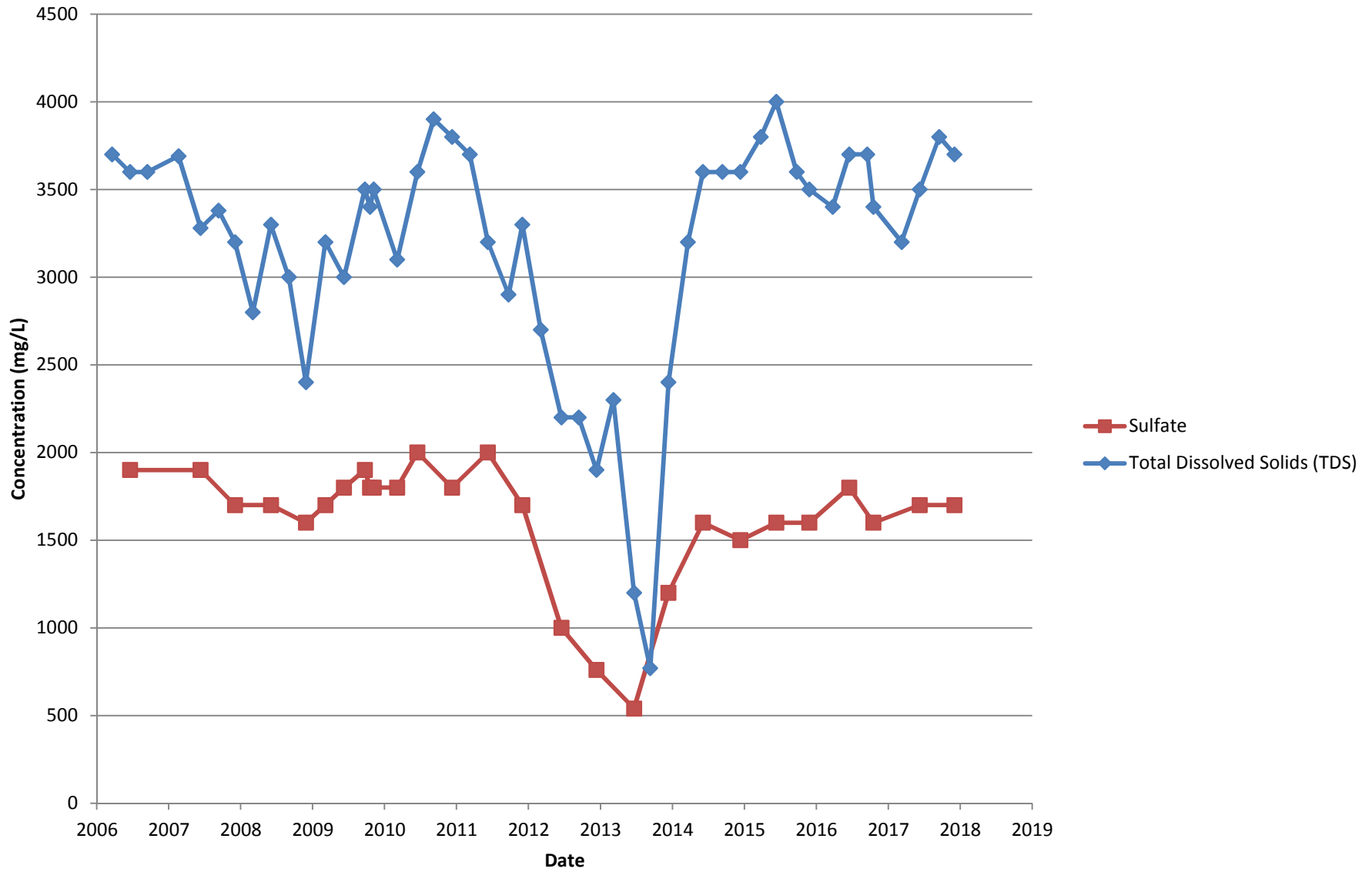
# Historical Constituent Concentrations Shallow Well MW-1



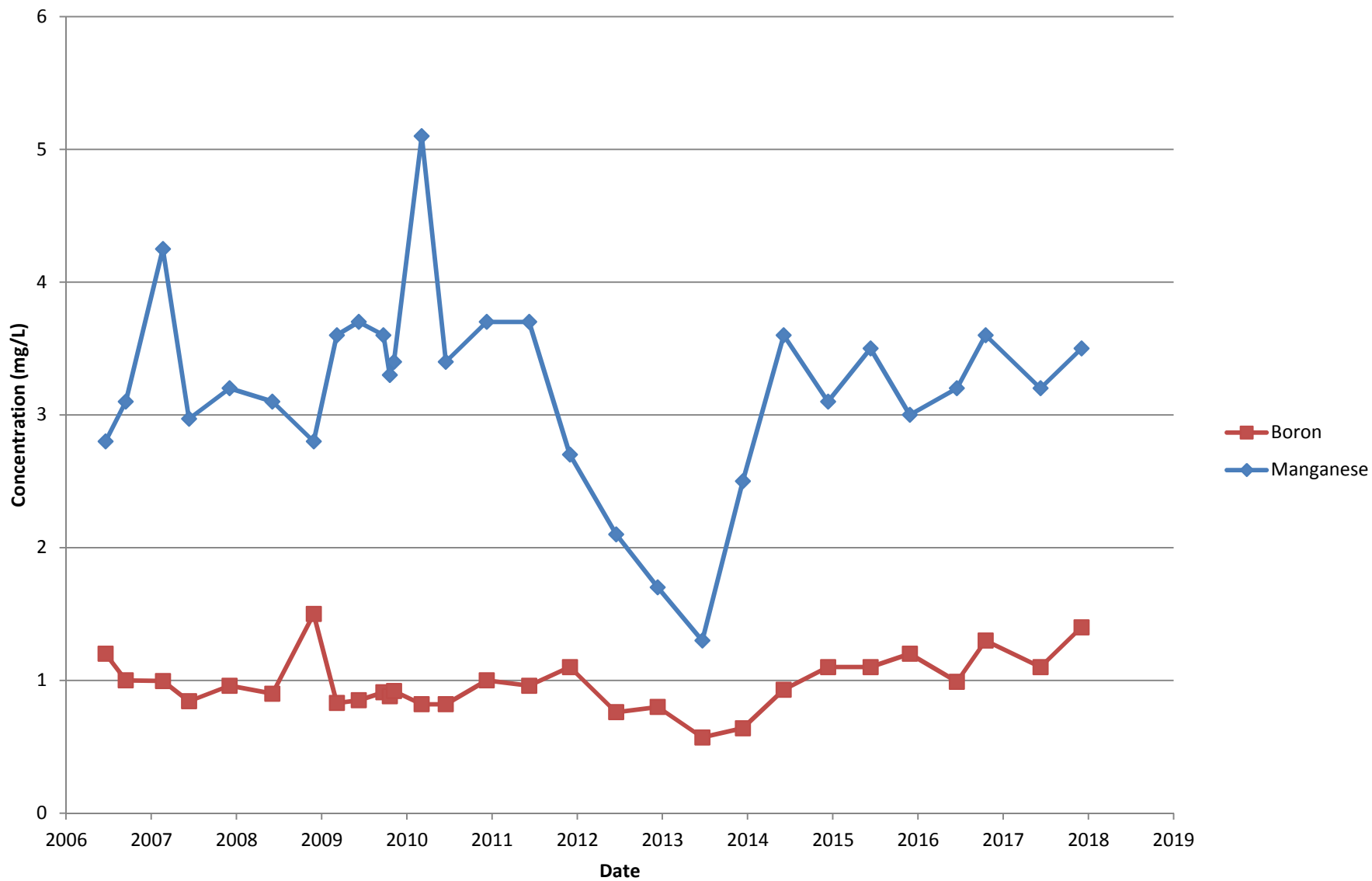
## Historical Constituent Concentrations Shallow Well MW-1



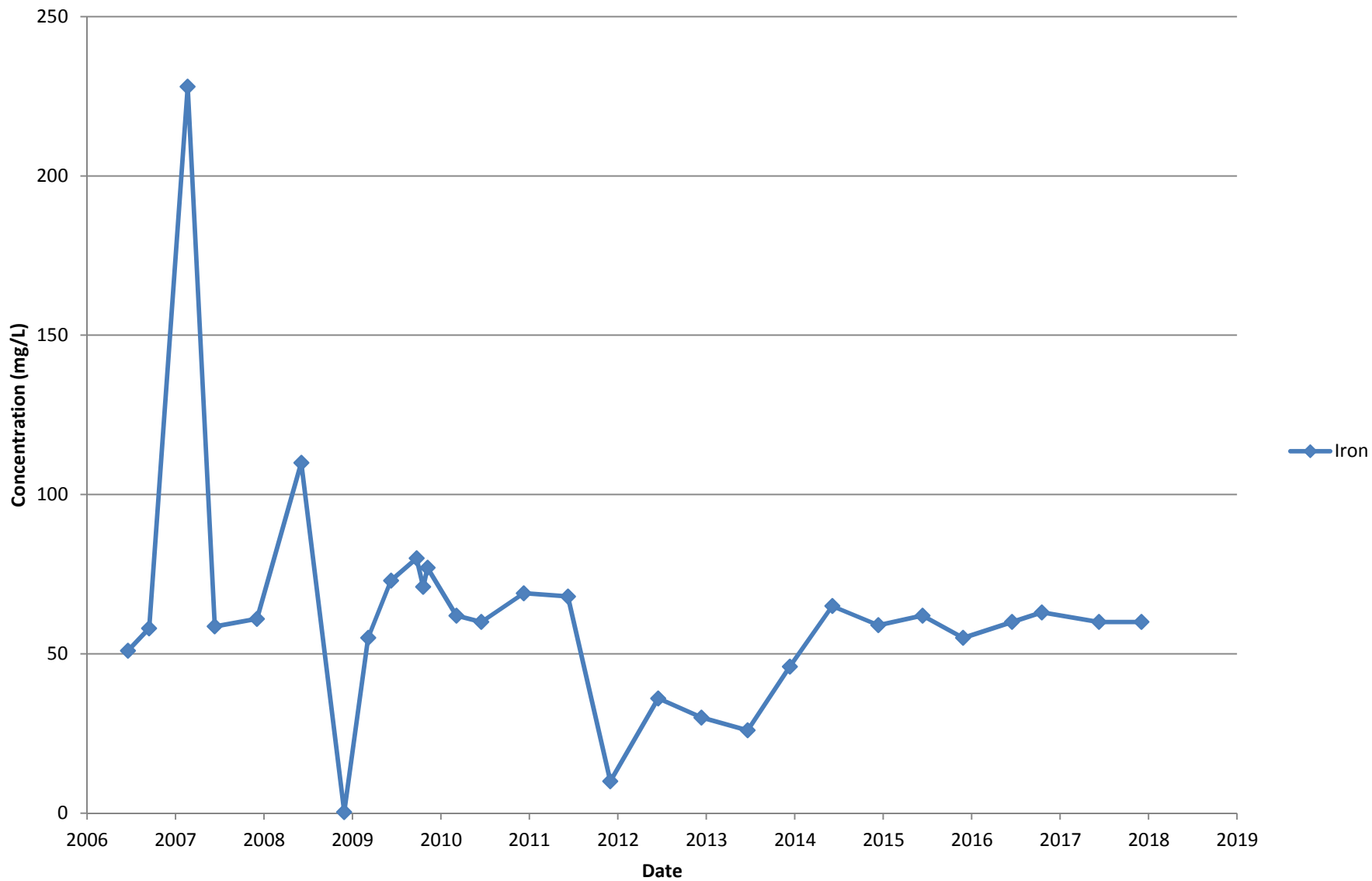
# Historical Constituent Concentrations Shallow Well MW-1



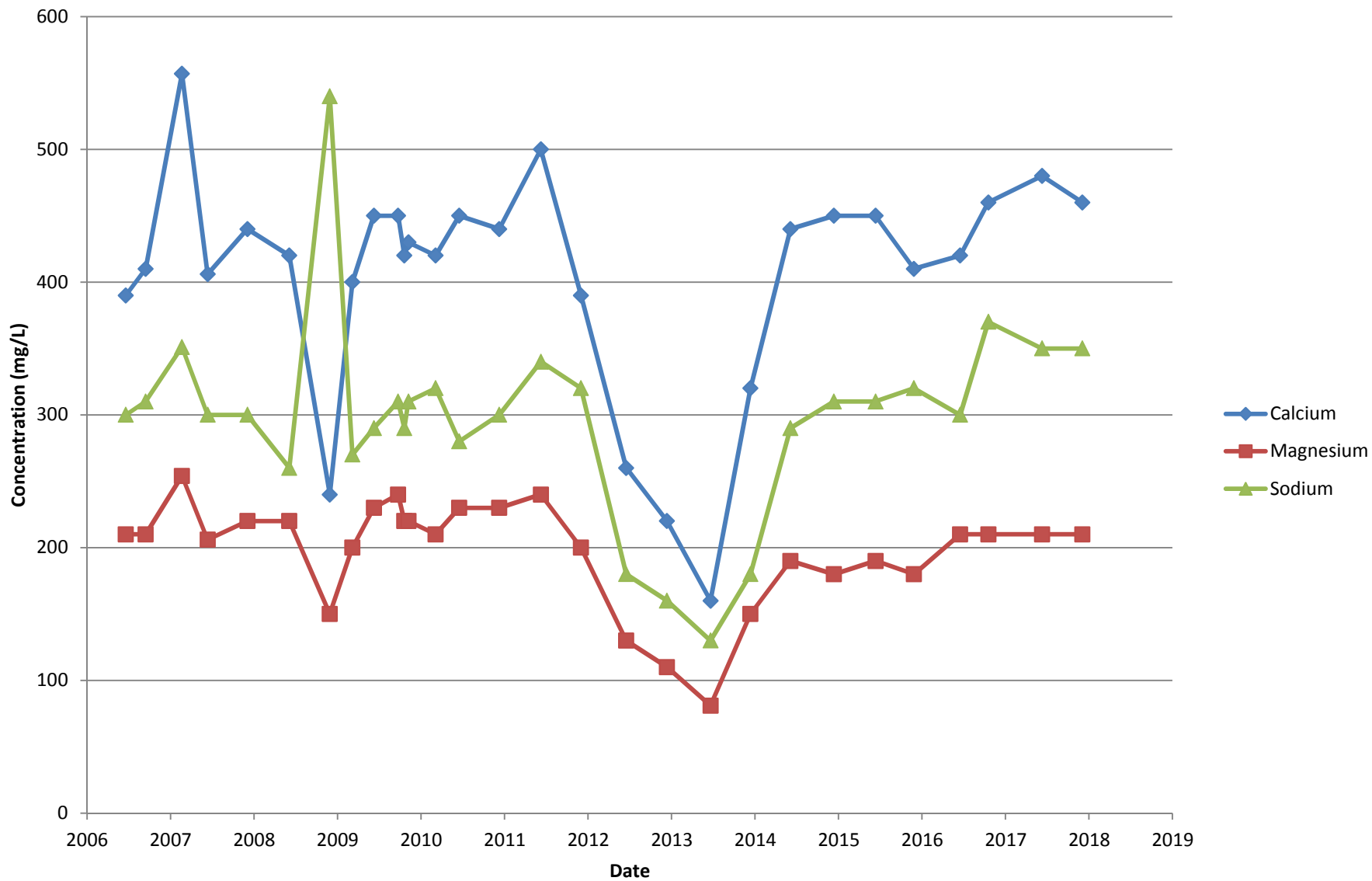
## Historical Constituent Concentrations Shallow Well MW-1



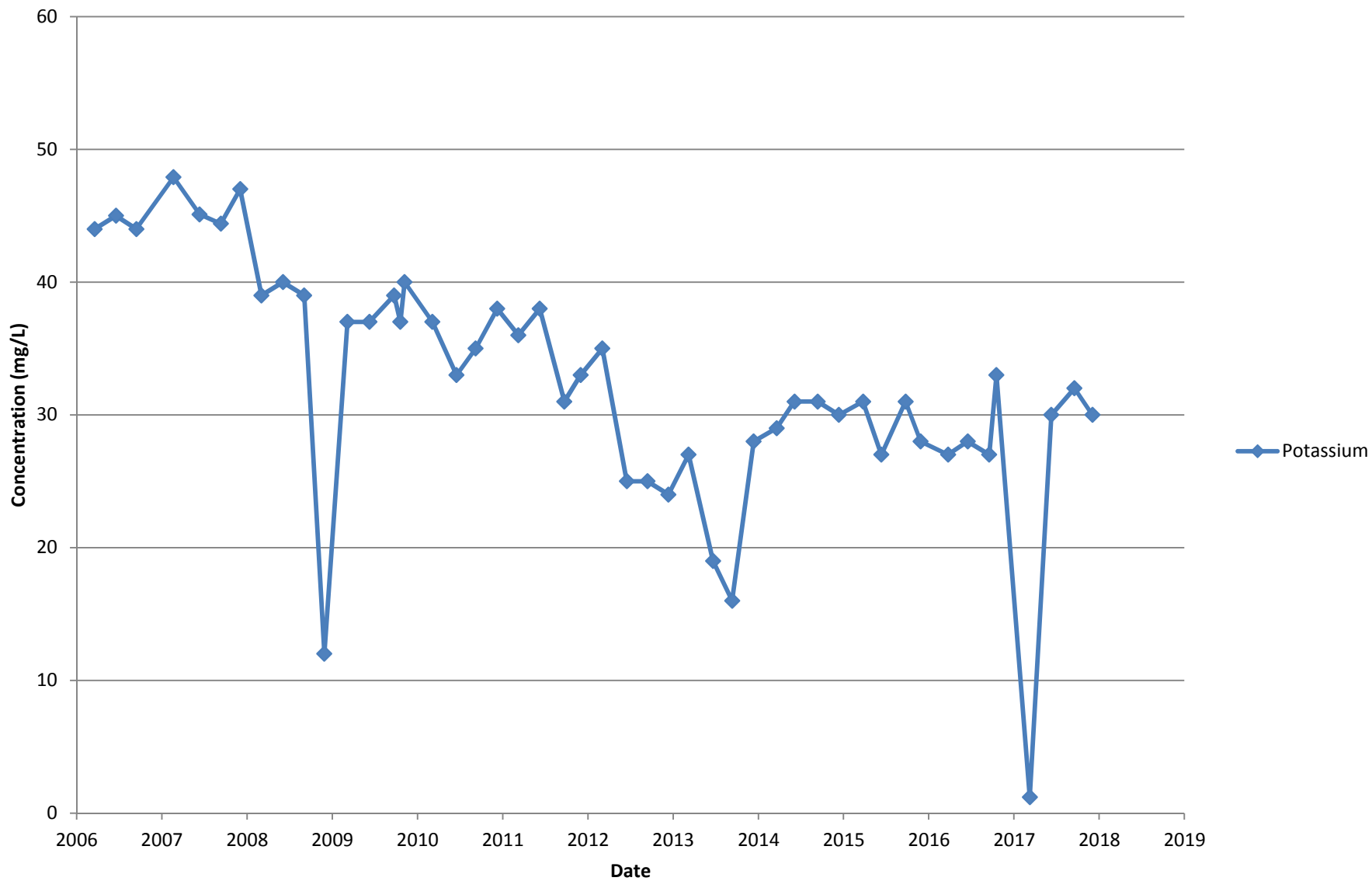
## Historical Constituent Concentrations Shallow Well MW-1



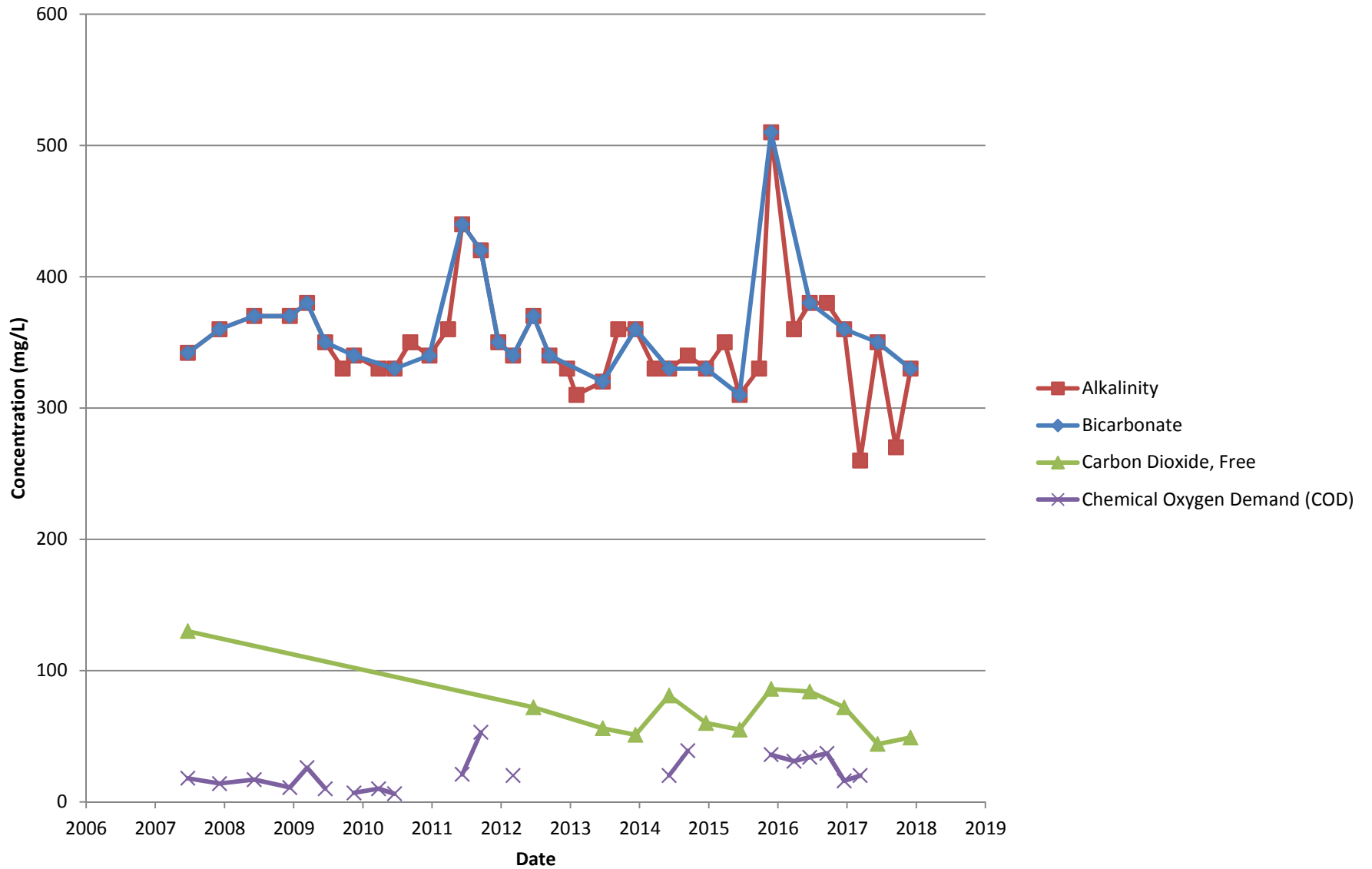
# Historical Constituent Concentrations Shallow Well MW-1



# Historical Constituent Concentrations Shallow Well MW-1

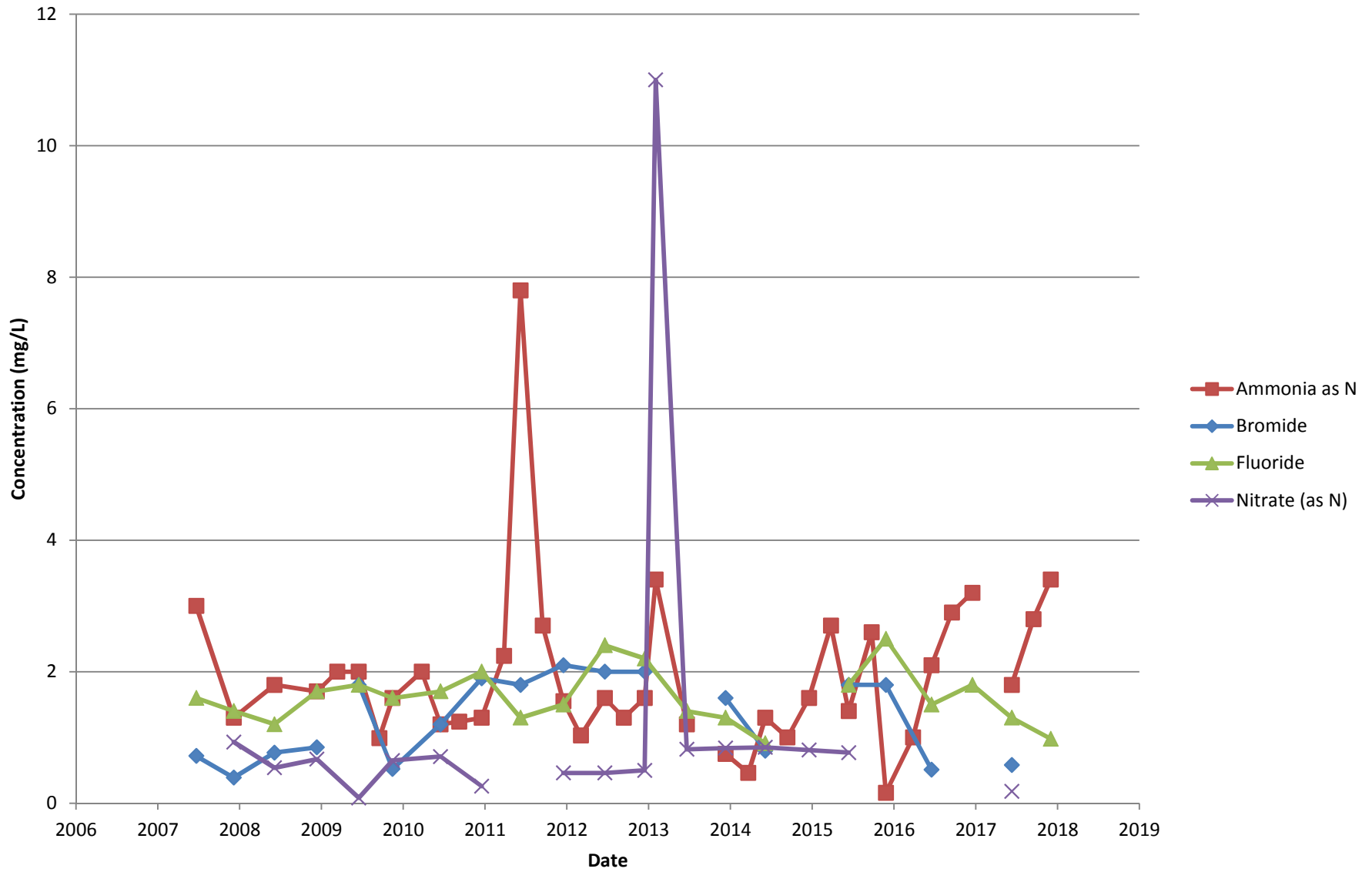


# Historical Constituent Concentrations Shallow Well MW-2A

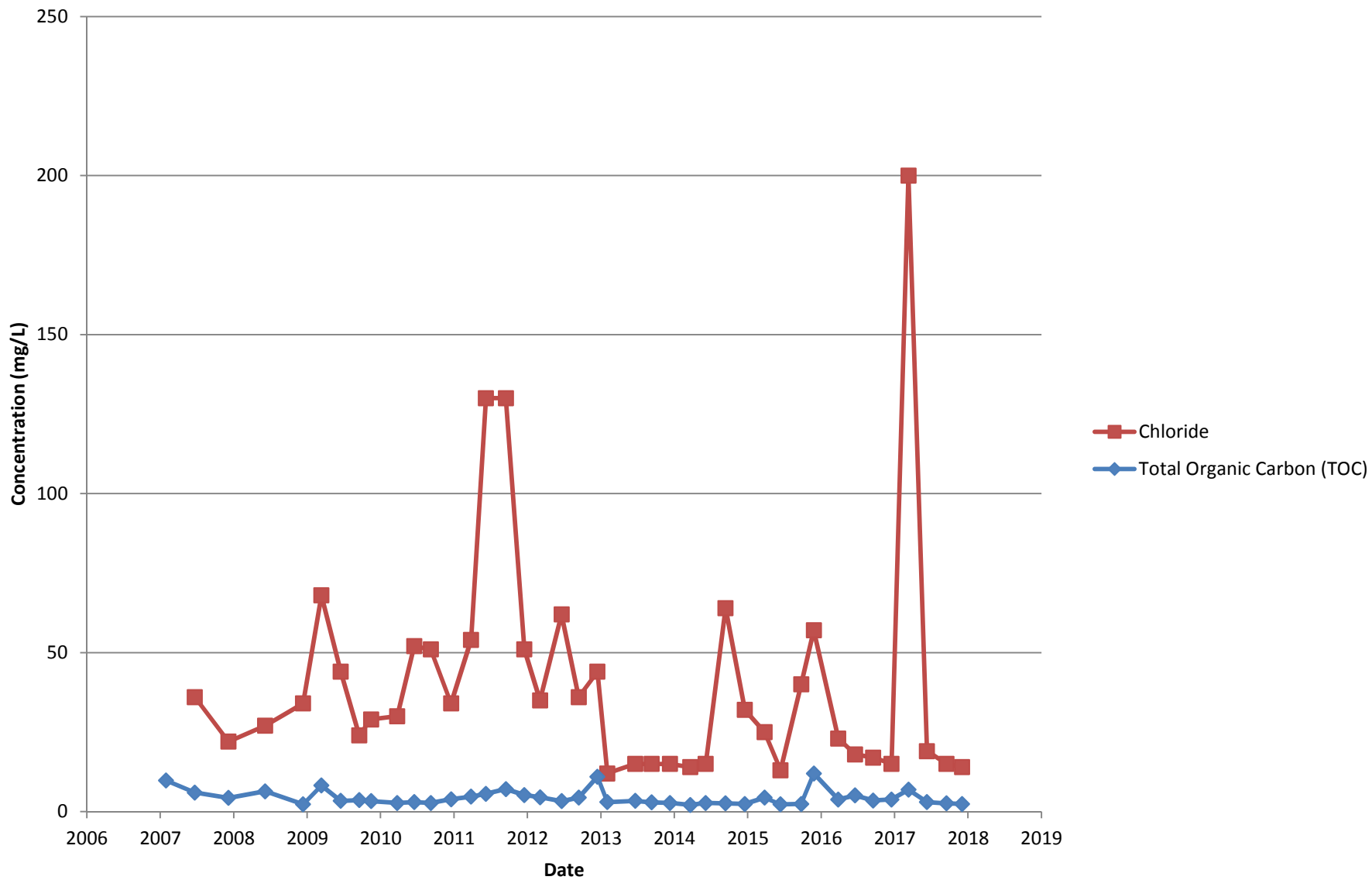




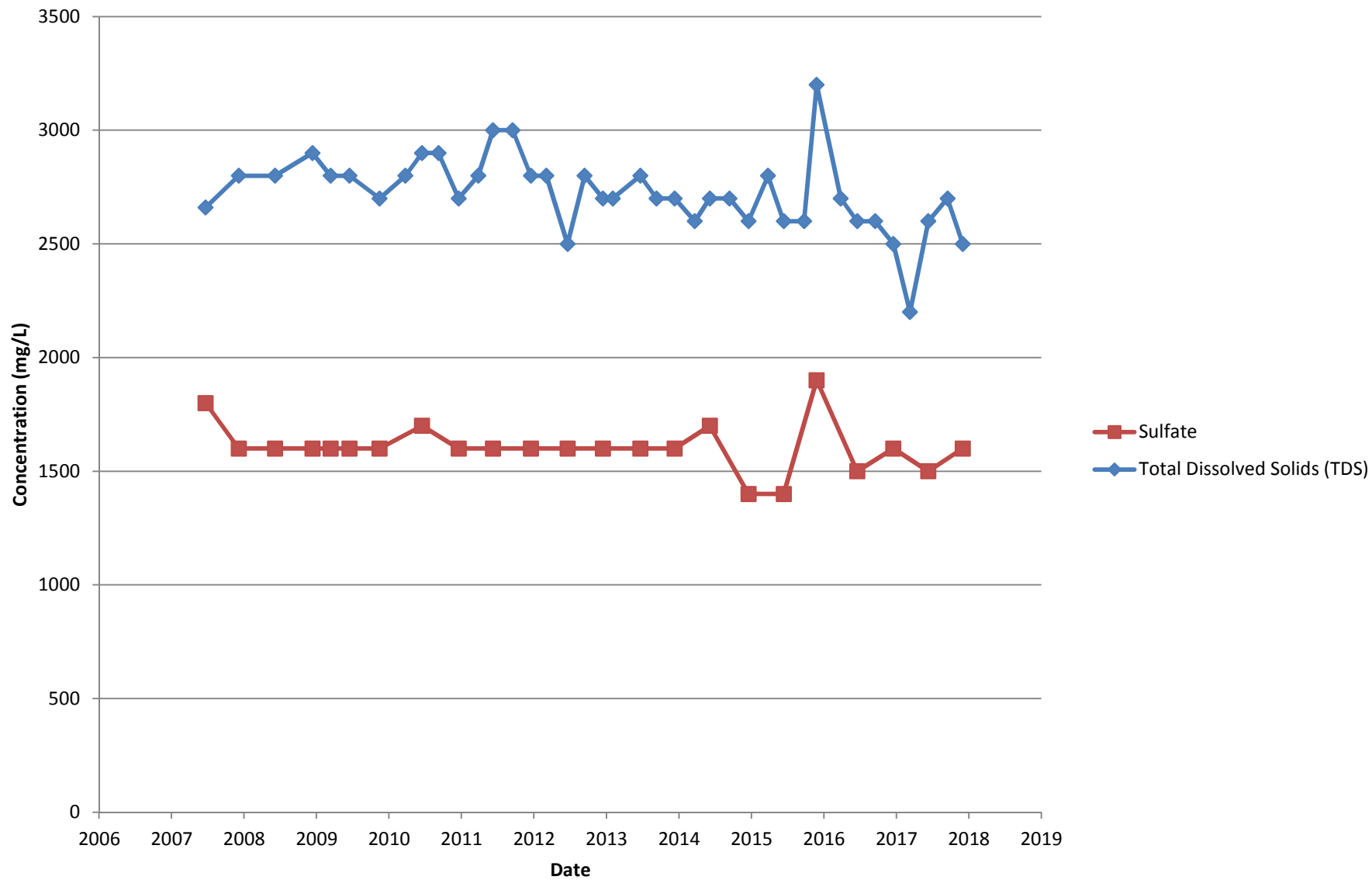
# Historical Consituent Concentrations Shallow Well MW-2A



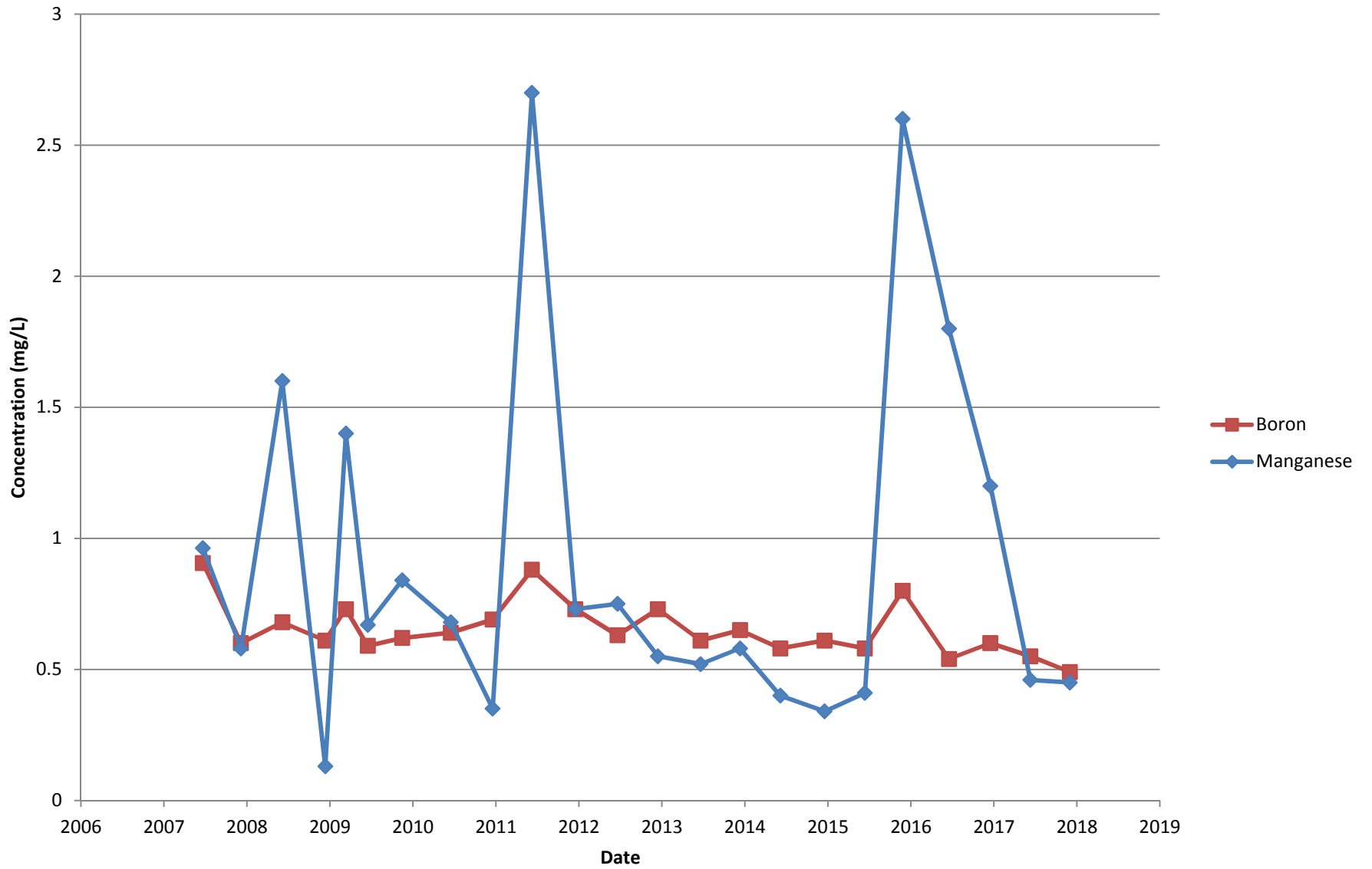
# Historical Constituent Concentrations Shallow Well MW-2A



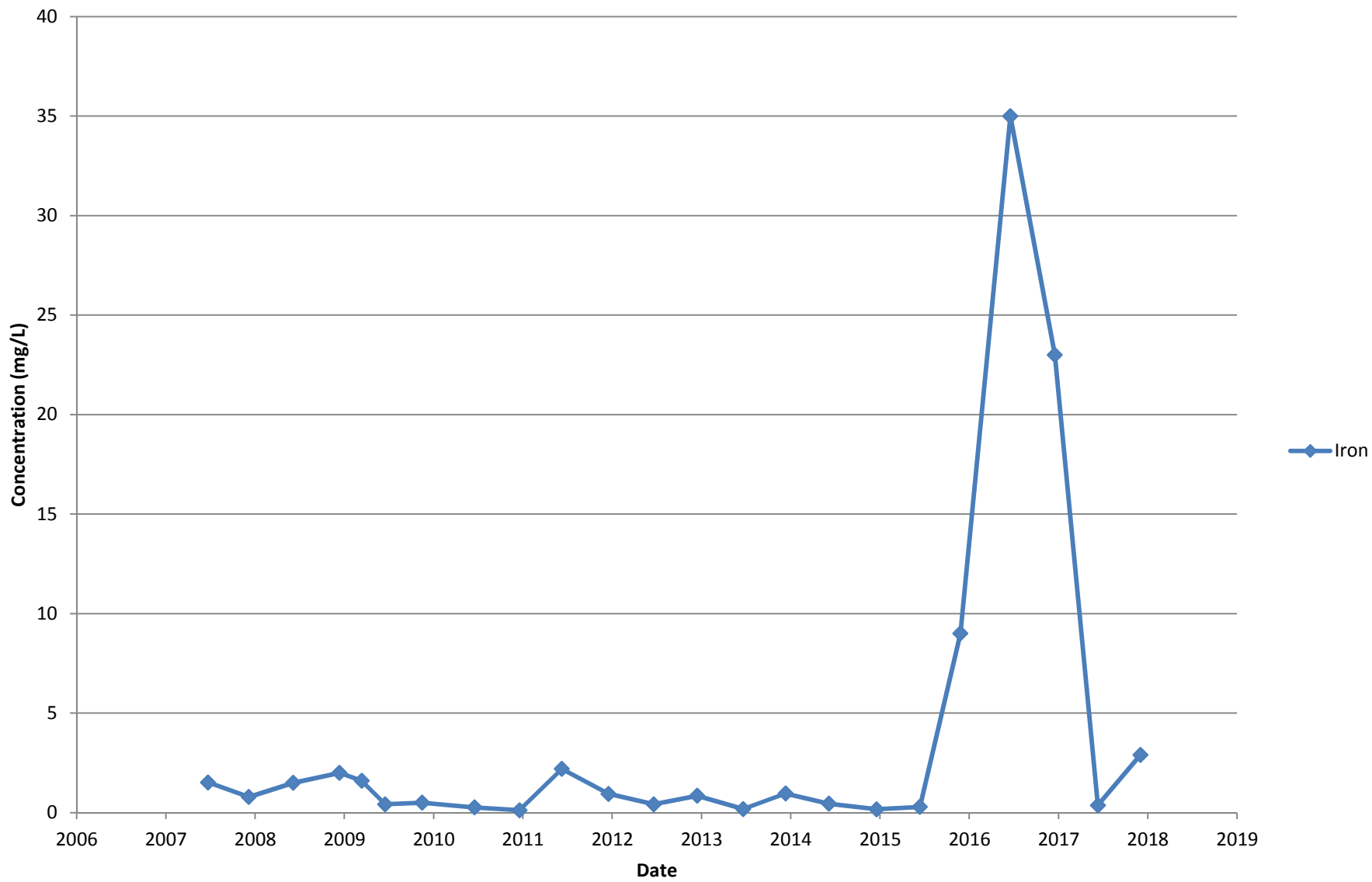
## Historical Constituent Concentrations Shallow Well MW-2A



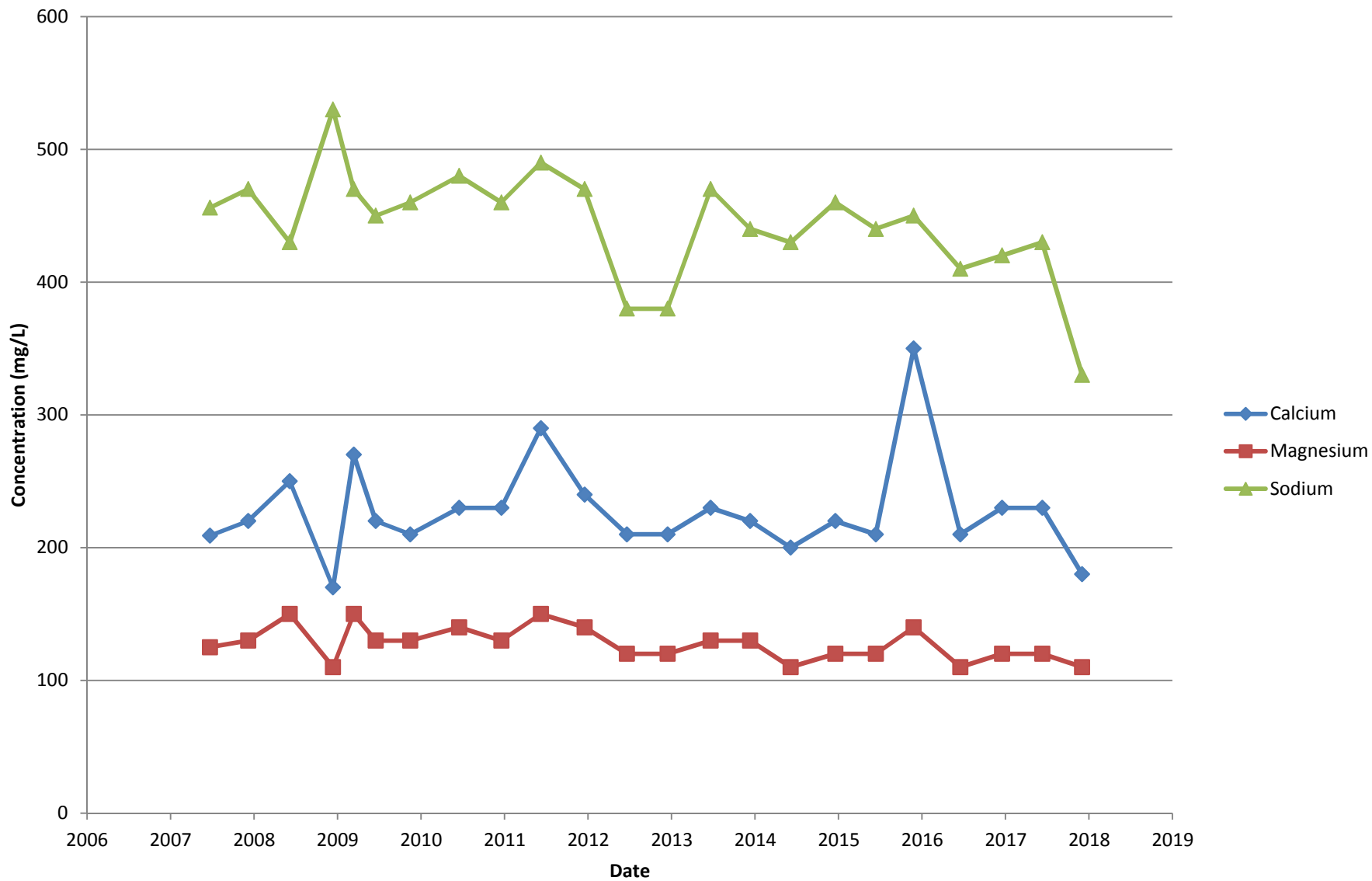
# Historical Constituent Concentrations Shallow Well MW-2A



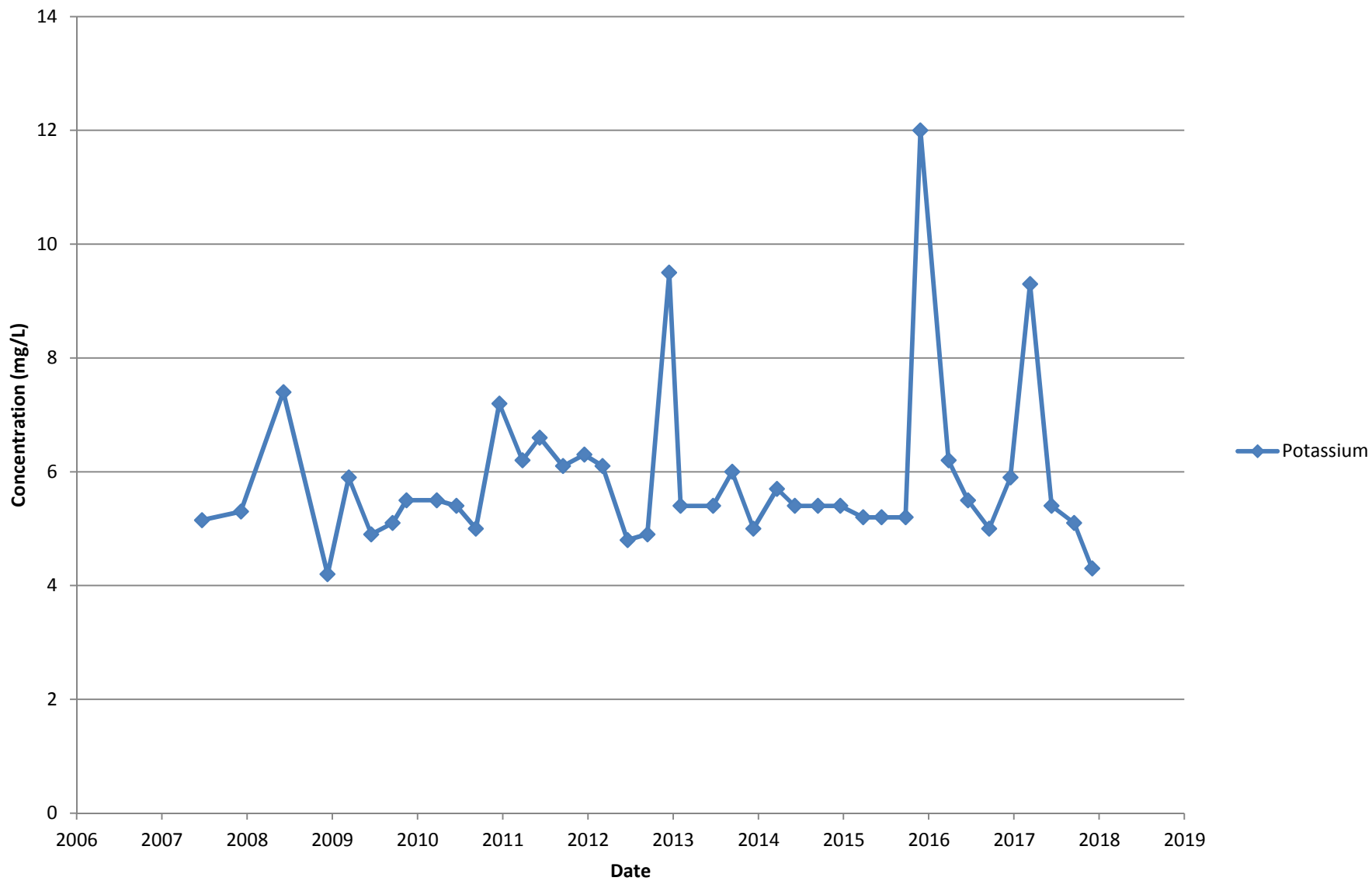
# Historical Constituent Concentrations Shallow Well MW-2A



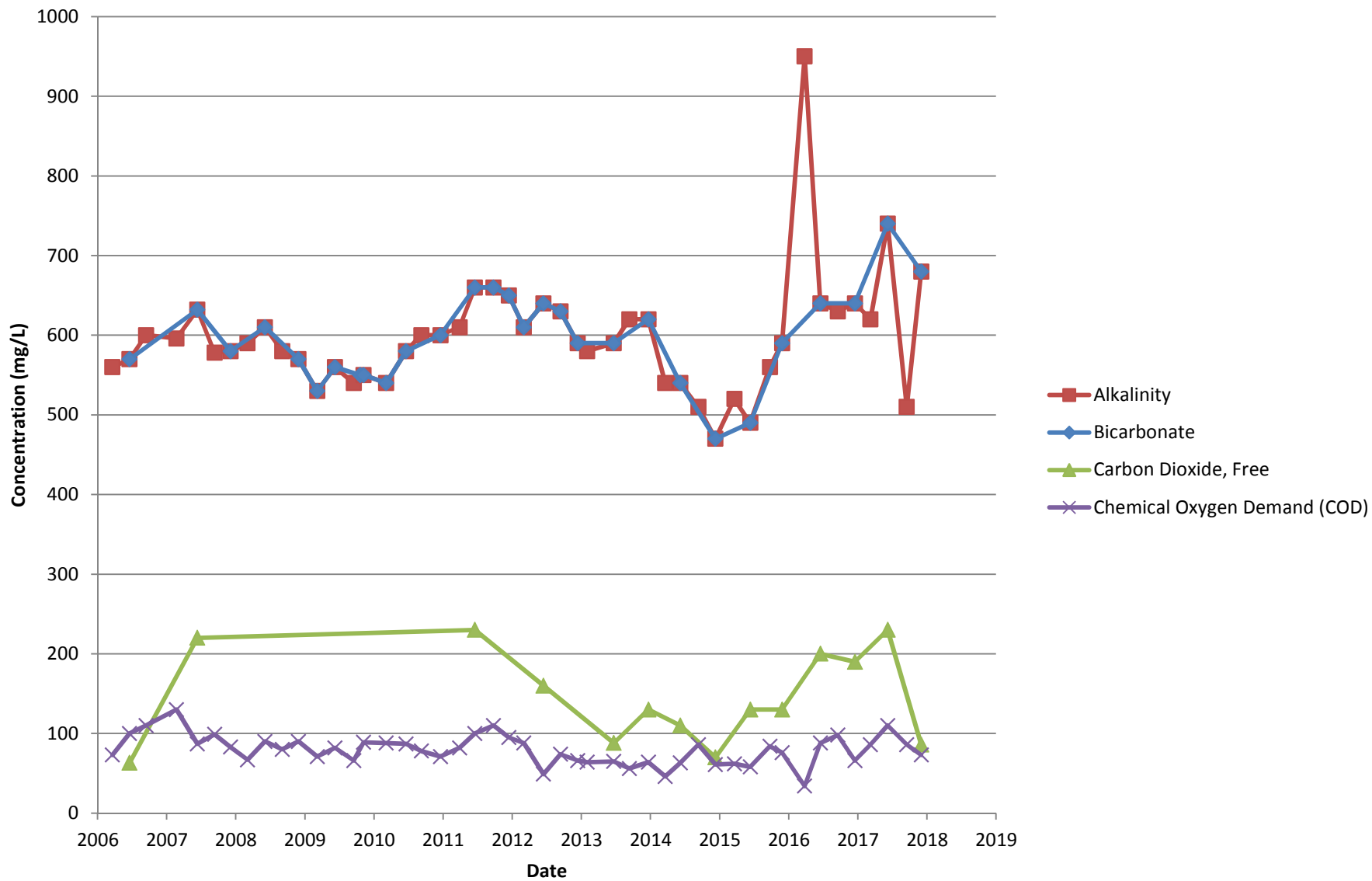
## Historical Constituent Concentrations Shallow Well MW-2A



# Historical Constituent Concentrations Shallow Well MW-2A

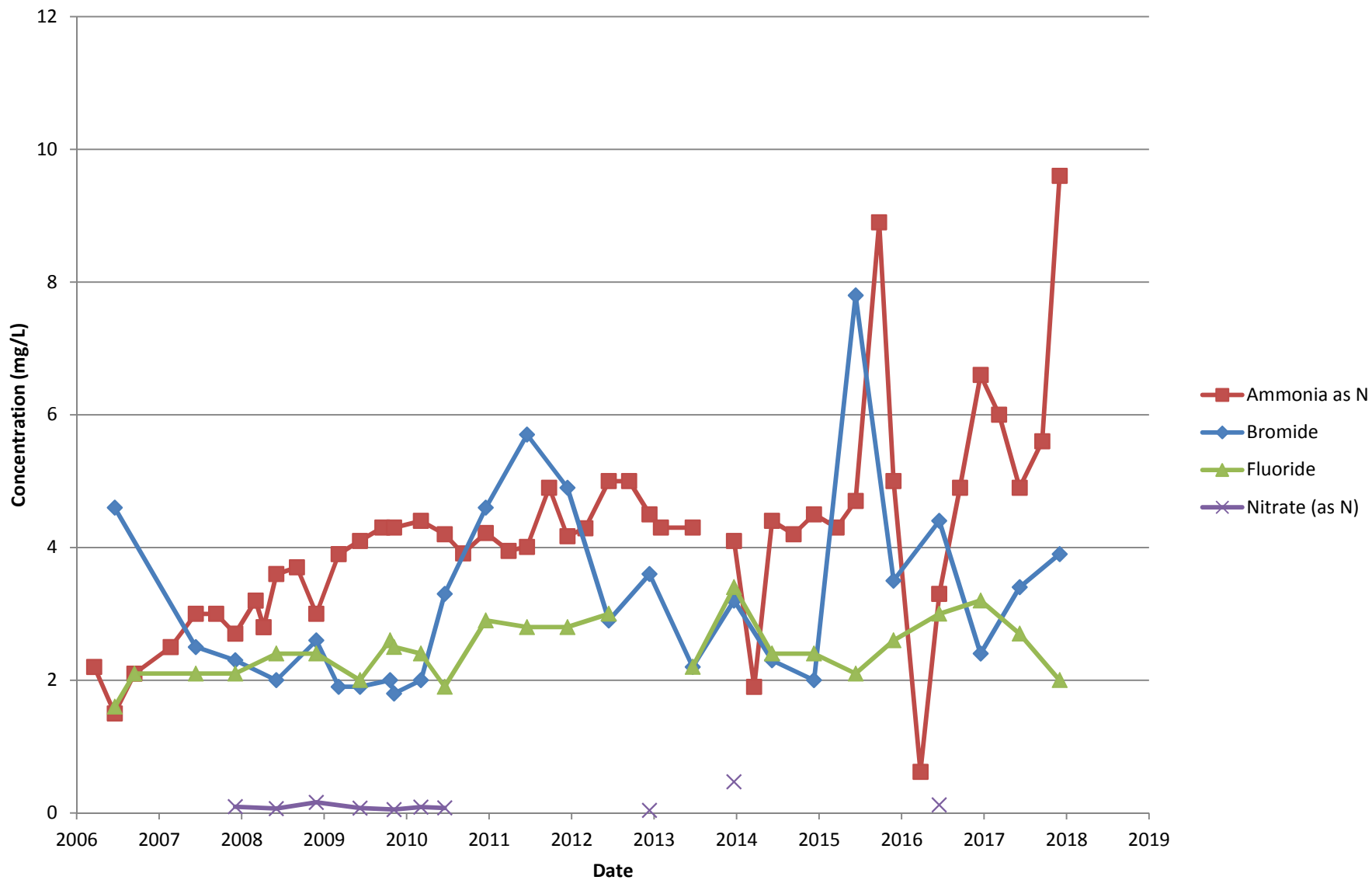


## Historical Constituent Concentrations Shallow Well MW-5

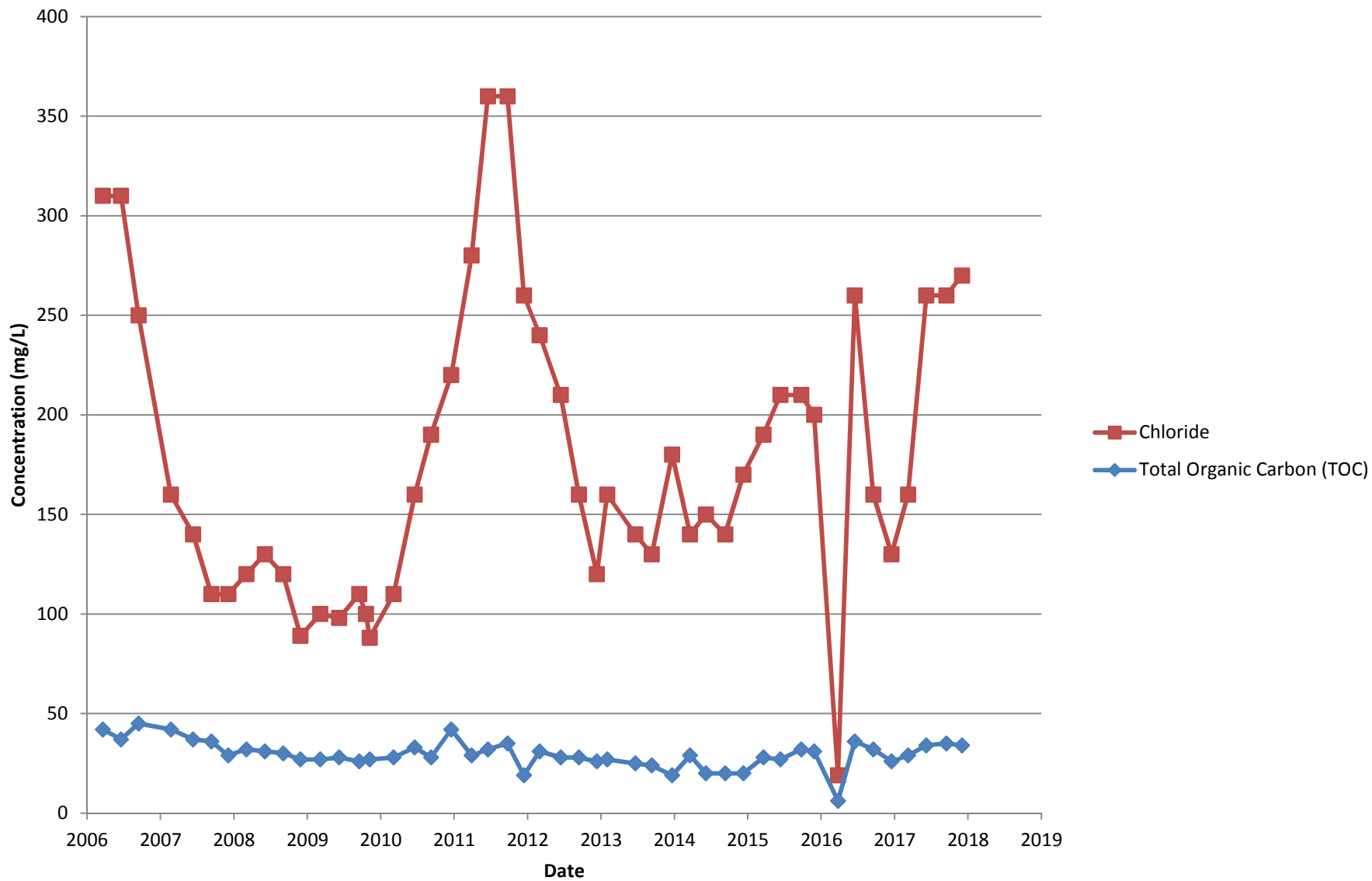




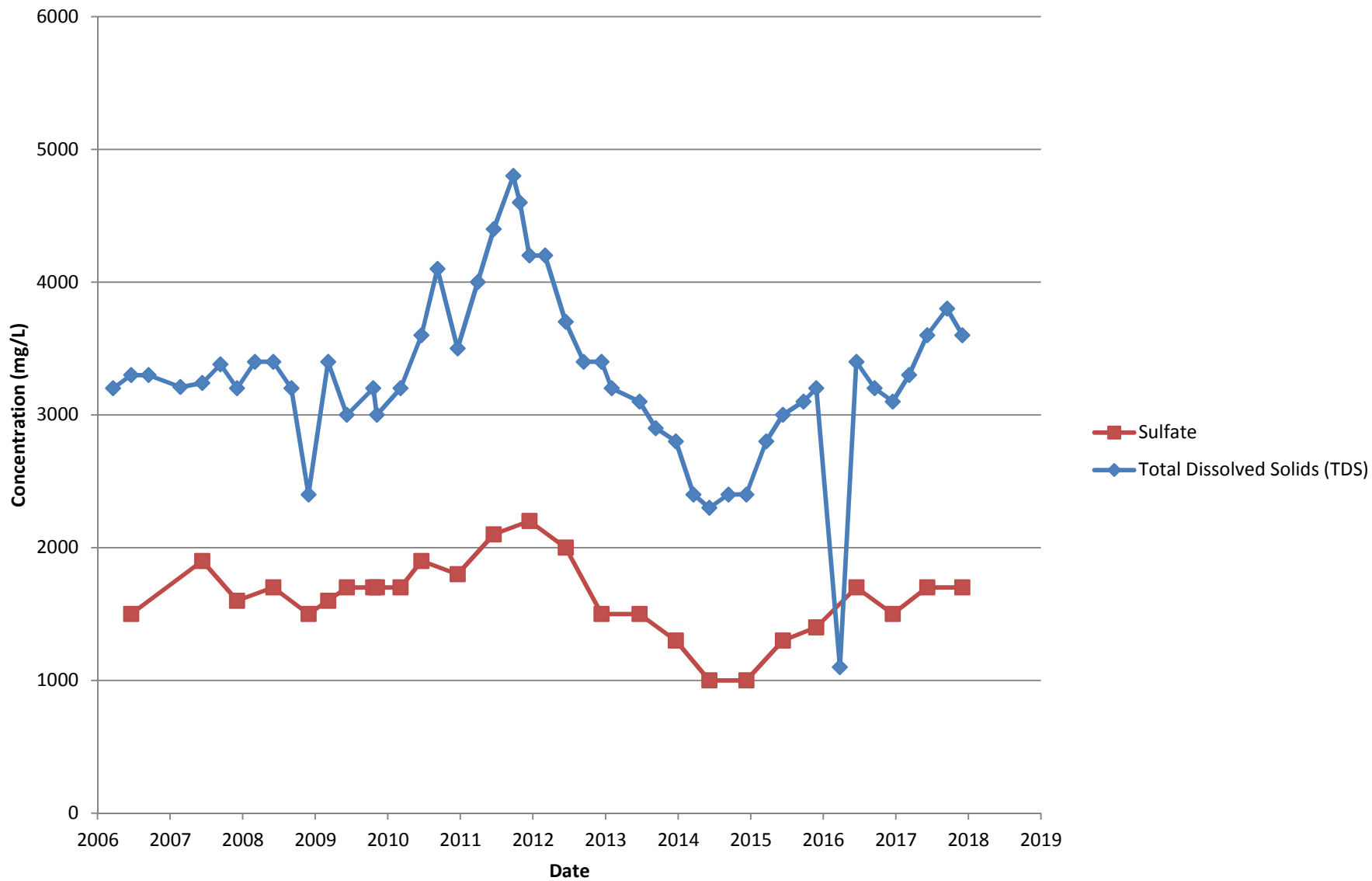
# Historical Constituent Concentrations Shallow Well MW-5



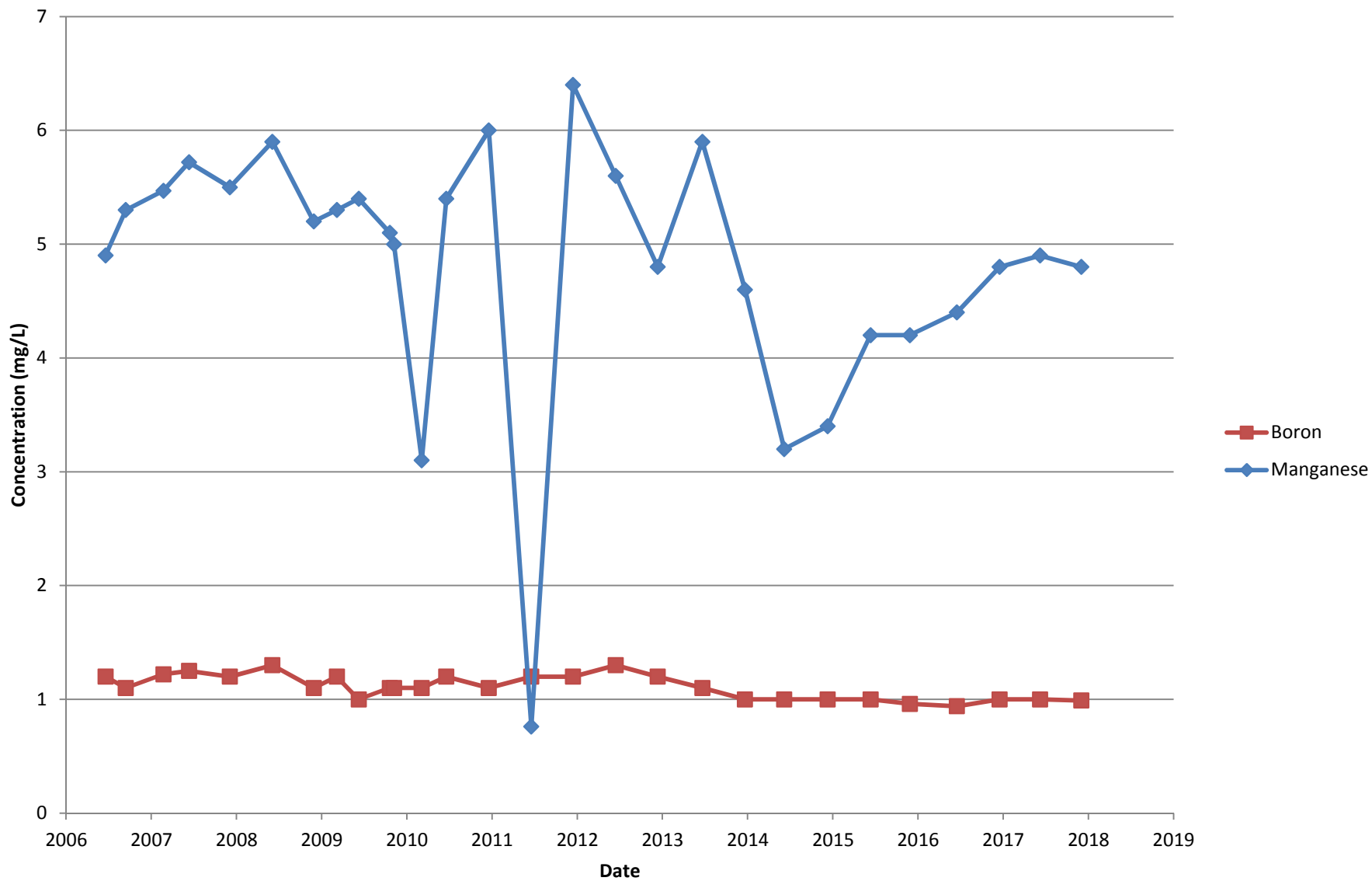
## Historical Constituent Concentrations Shallow Well MW-5



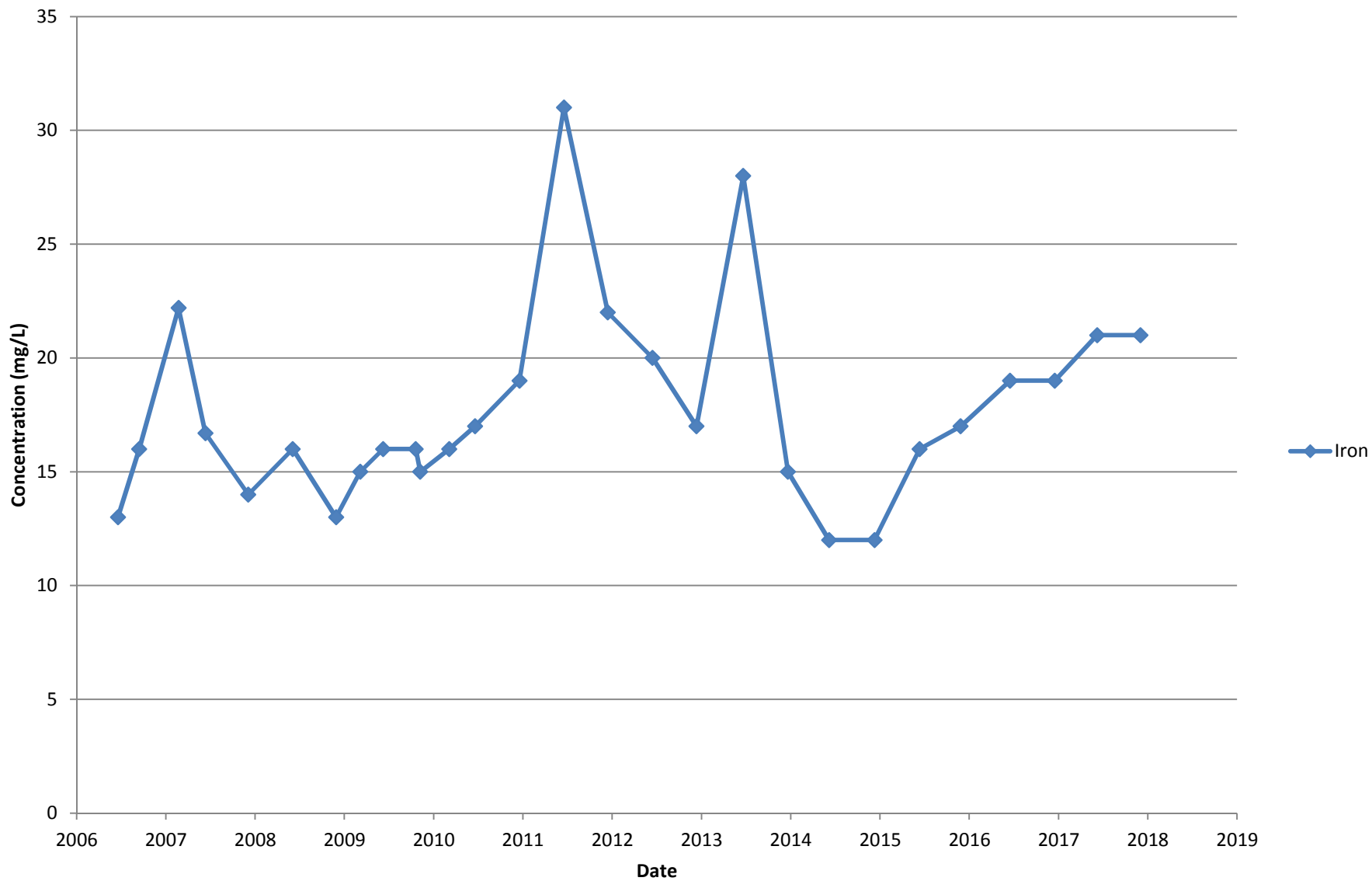
## Historical Constituent Concentrations Shallow Well MW-5



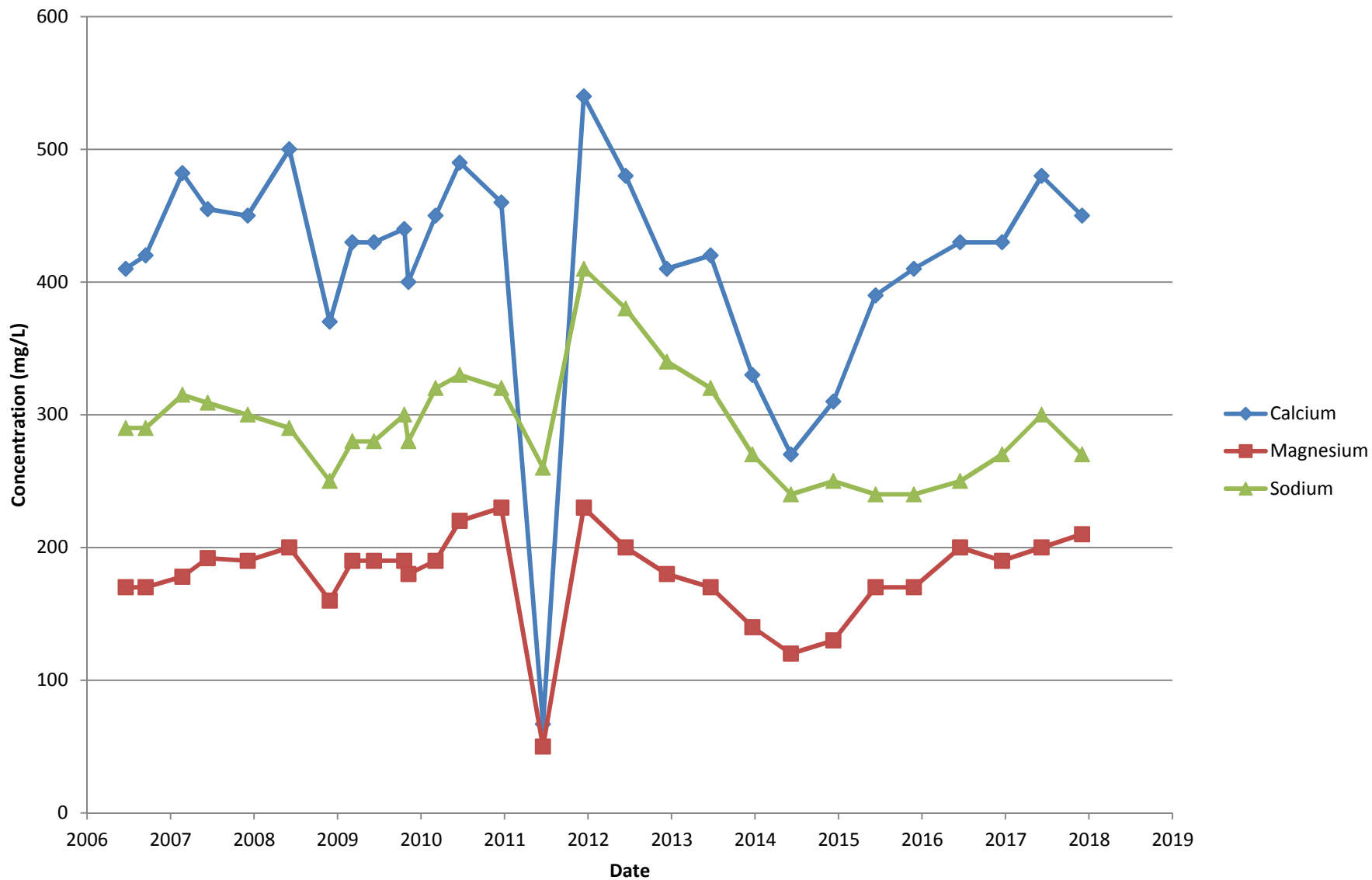
## Historical Constituent Concentrations Shallow Well MW-5



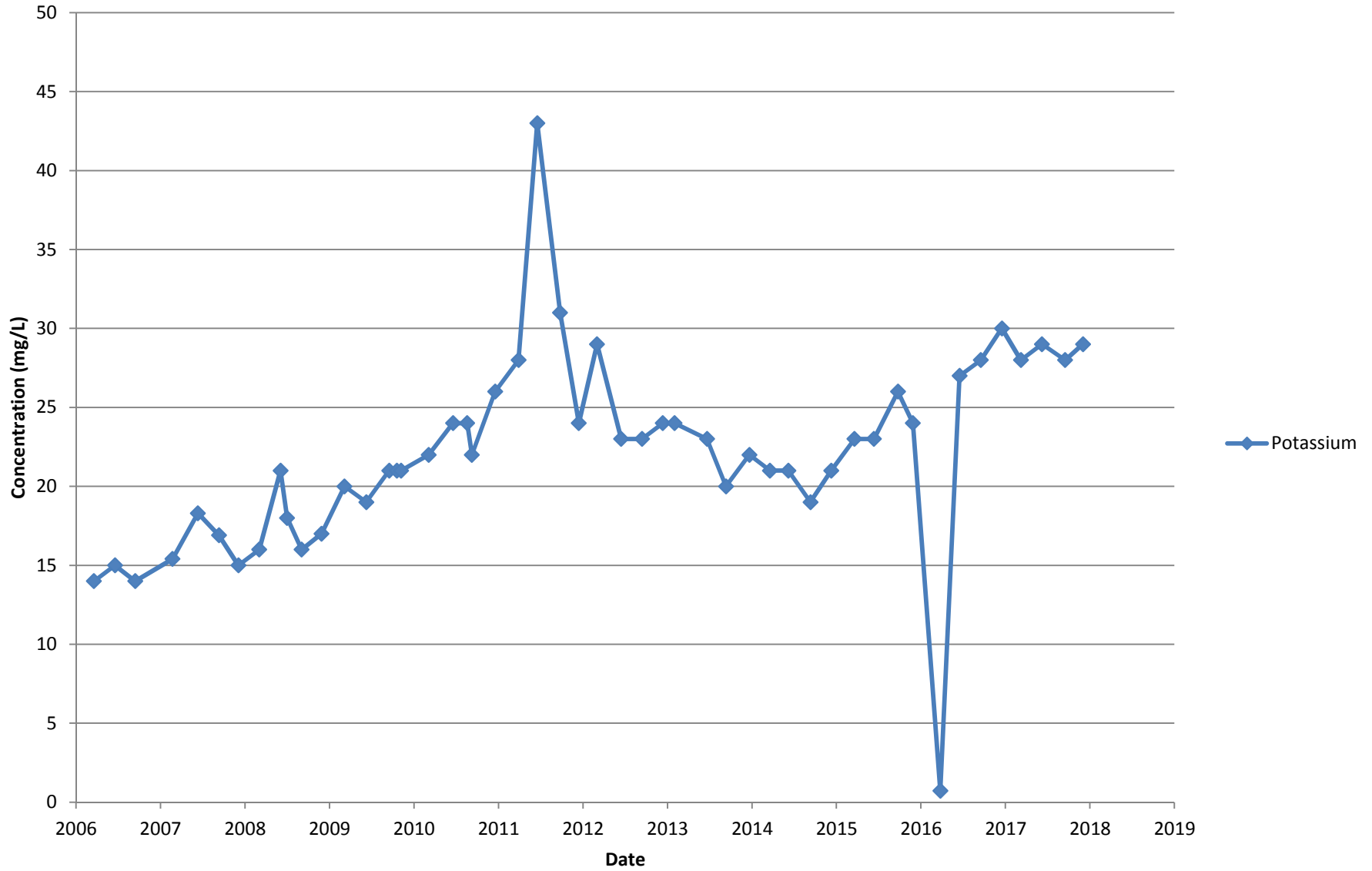
## Historical Constituent Concentrations Shallow Well MW-5



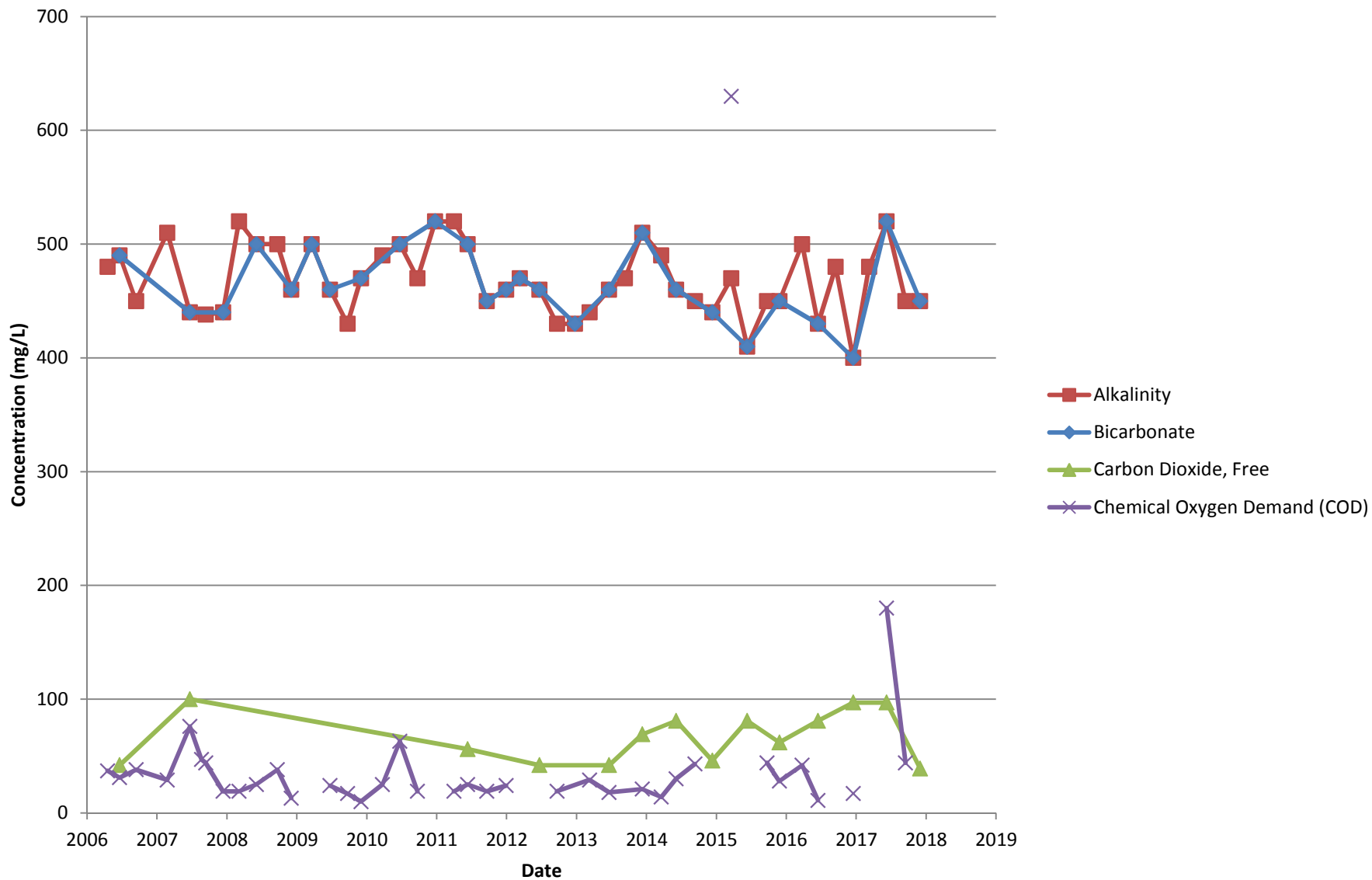
# Historical Constituent Concentrations Shallow Well MW-5



# Historical Constituent Concentrations Shallow Well MW-5

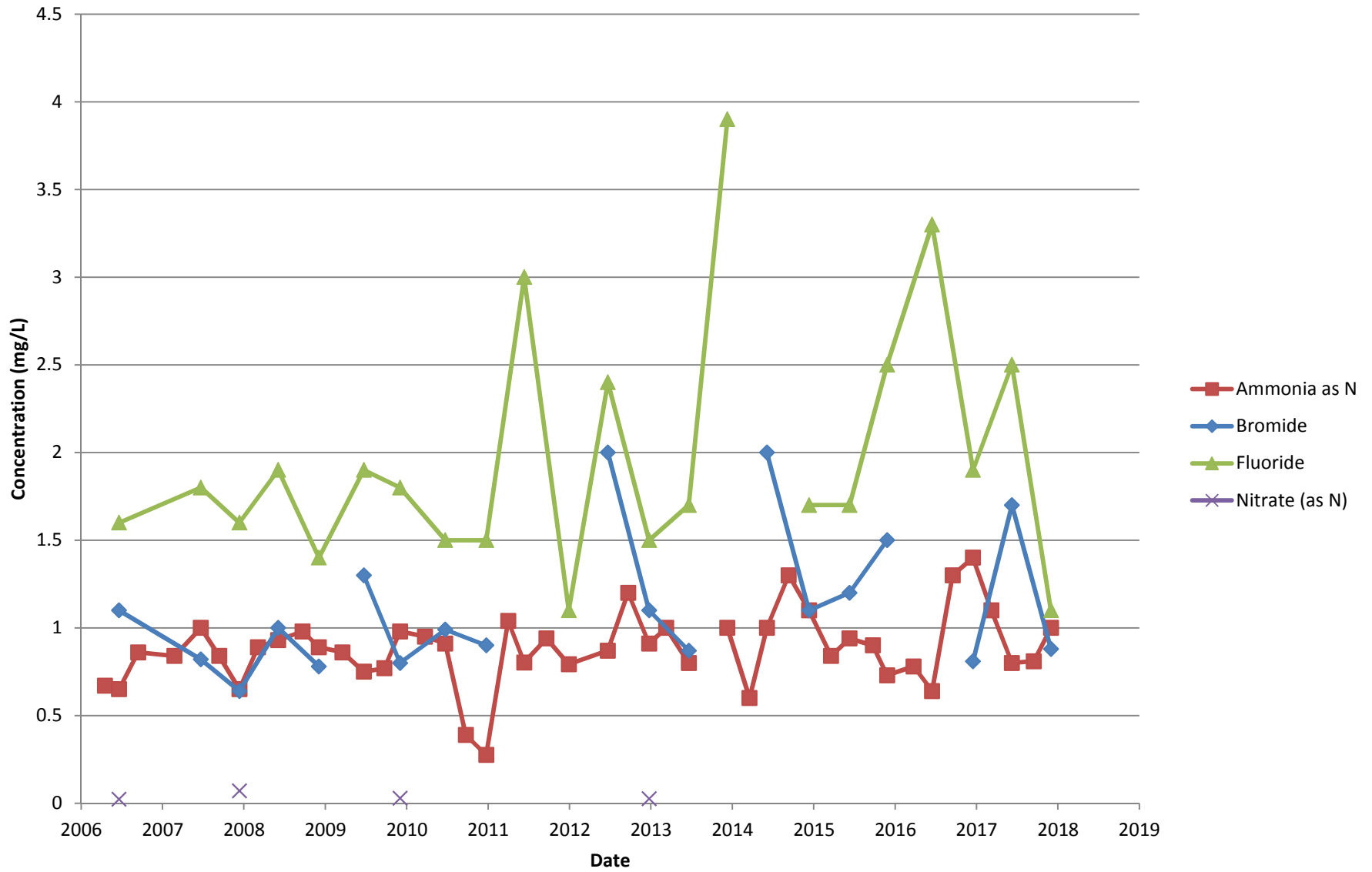


# Historical Constituent Concentrations Shallow Well MW-6

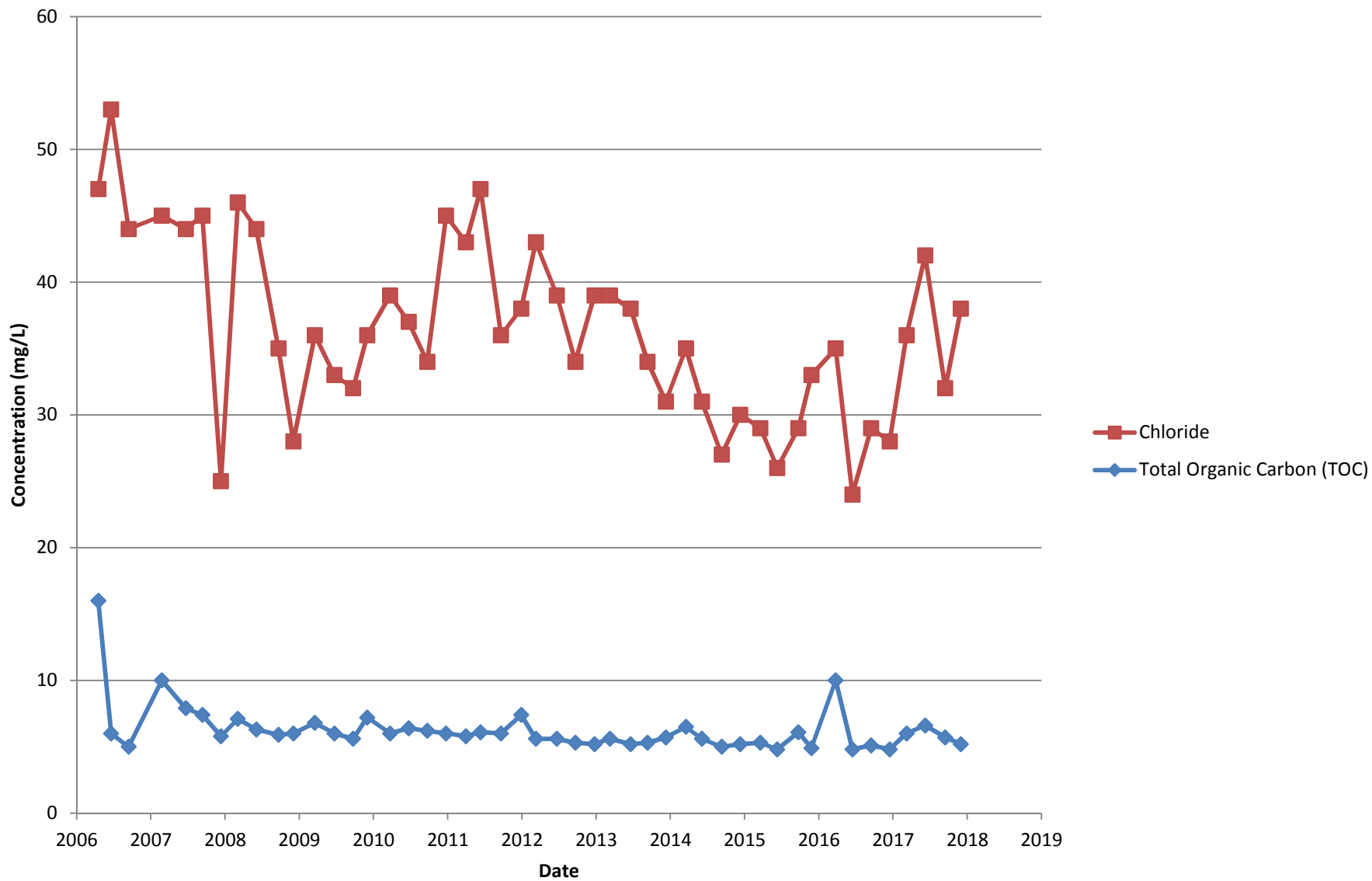




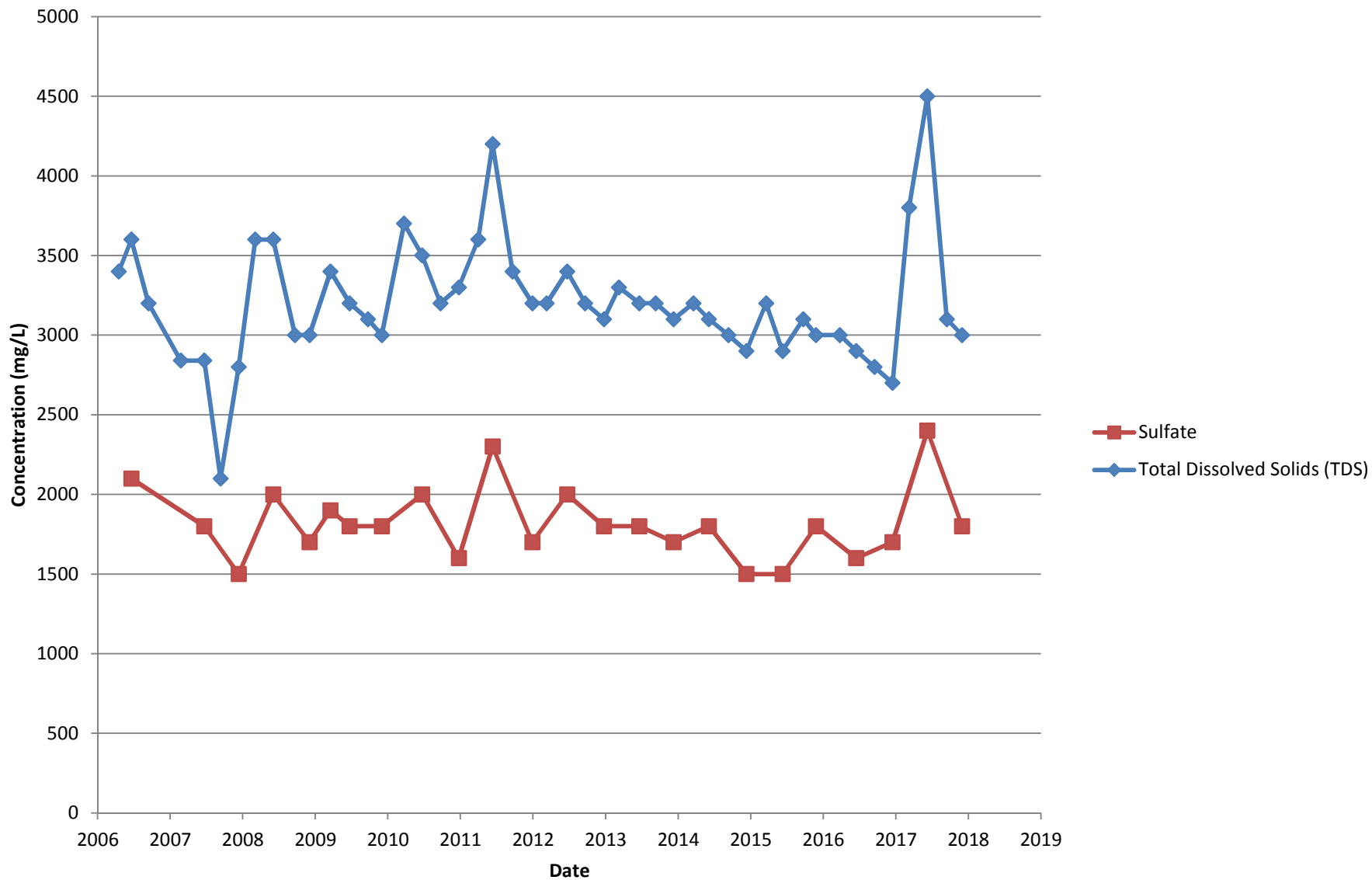
# Historical Constituent Concentrations Shallow Well MW-6



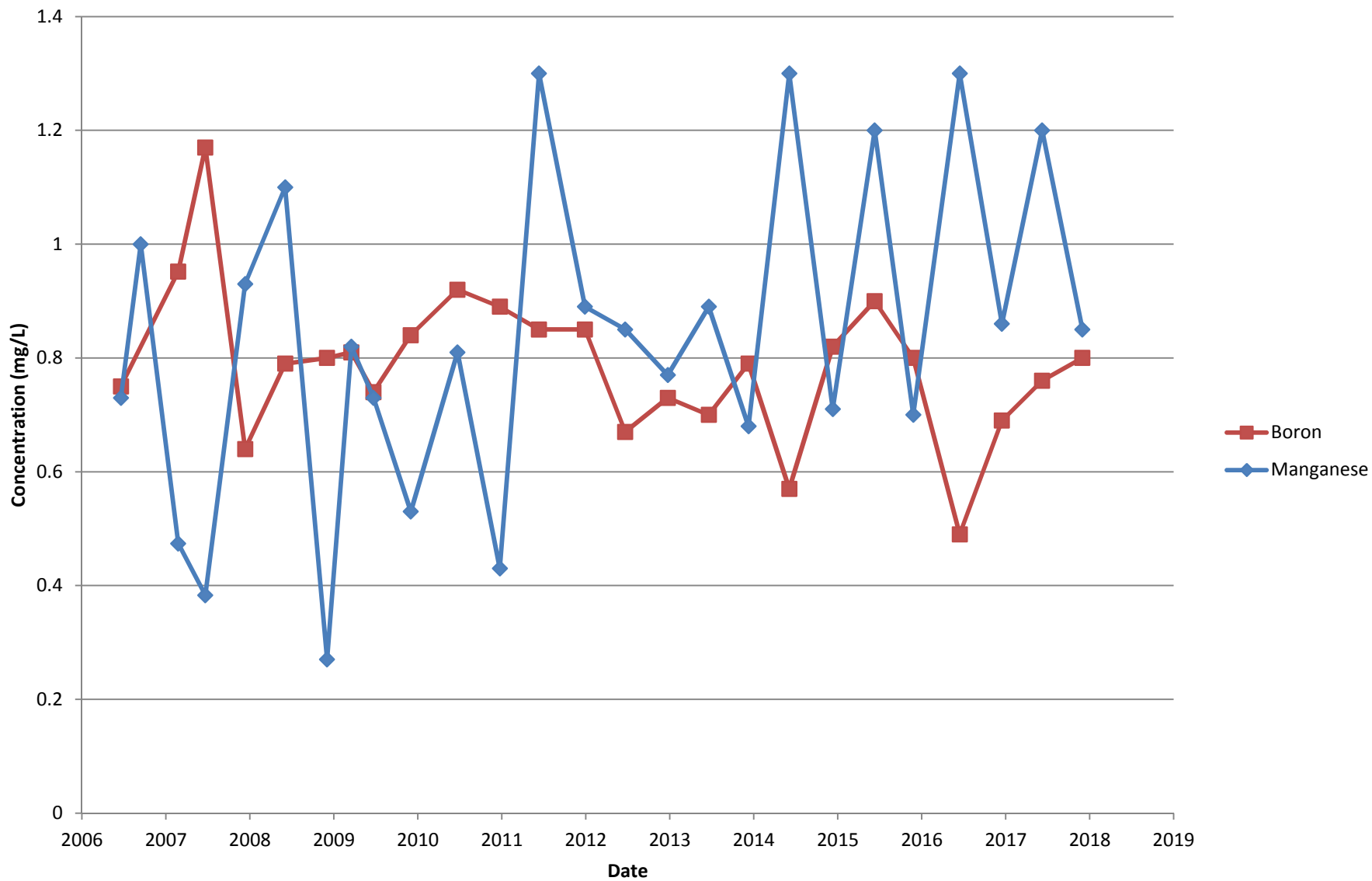
# Historical Constituent Concentrations Shallow Well MW-6



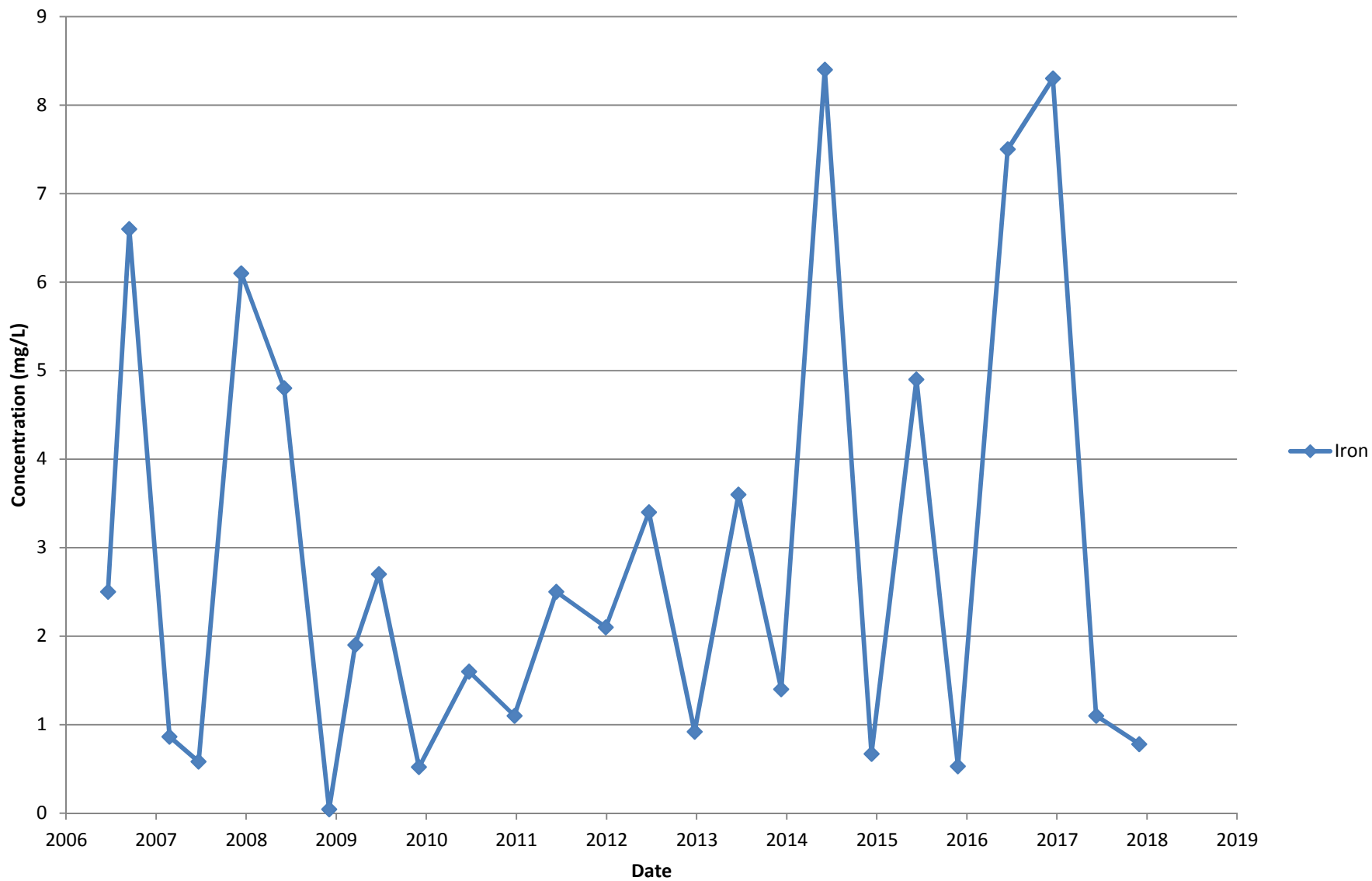
## Historical Constituent Concentrations Shallow Well MW-6



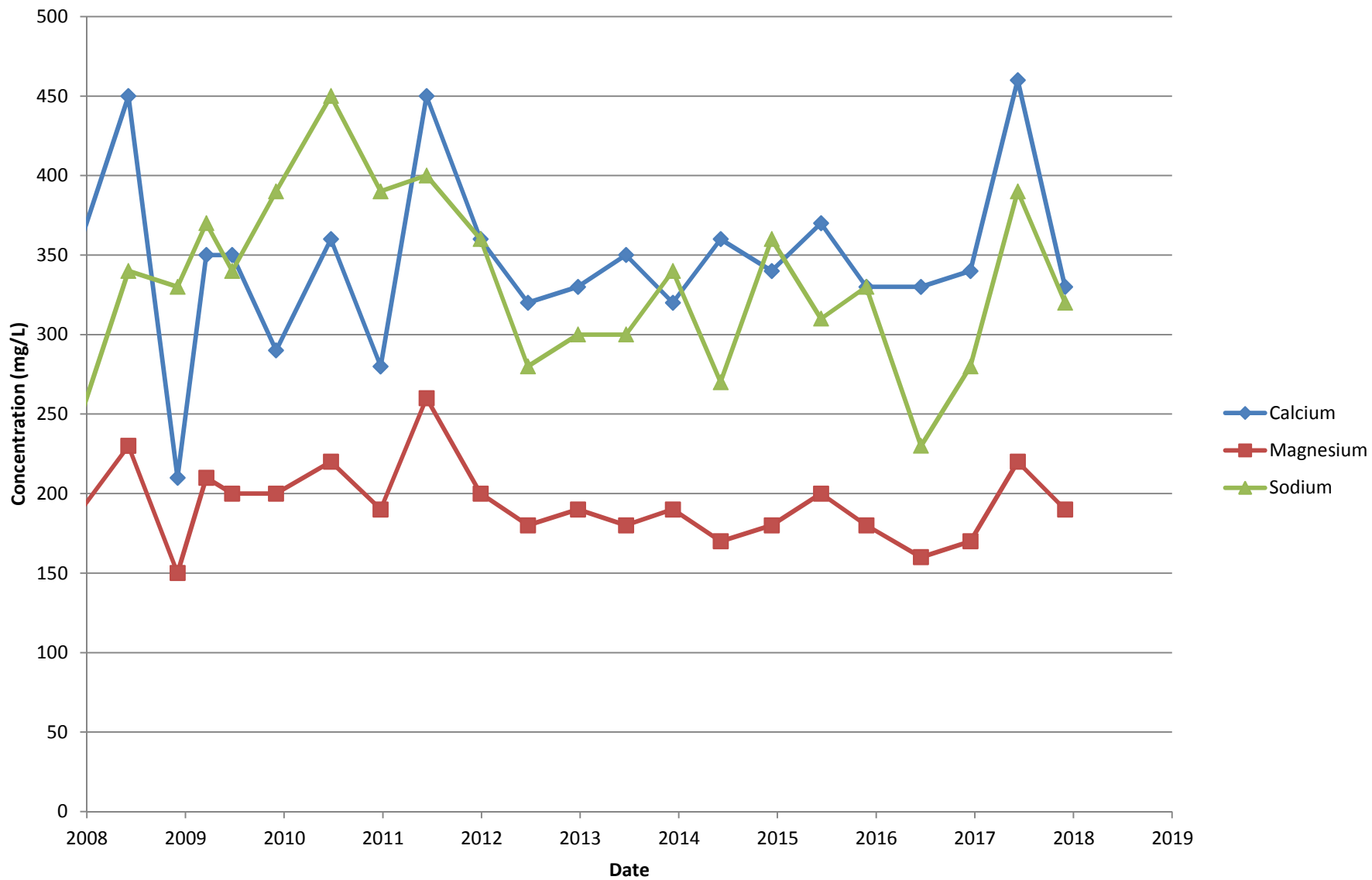
# Historical Constituent Concentrations Shallow Well MW-6



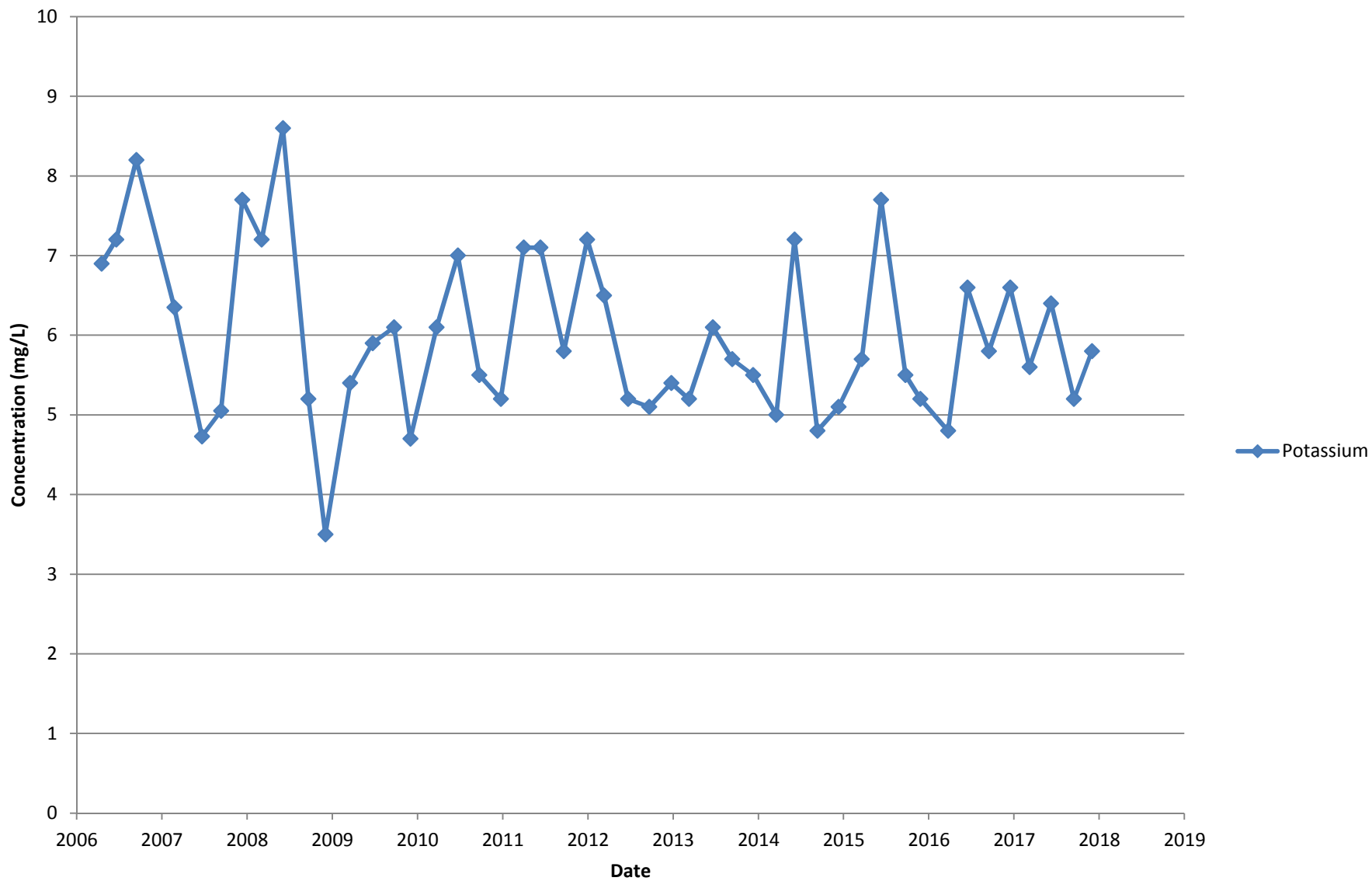
## Historical Constituent Concentrations Shallow Well MW-6



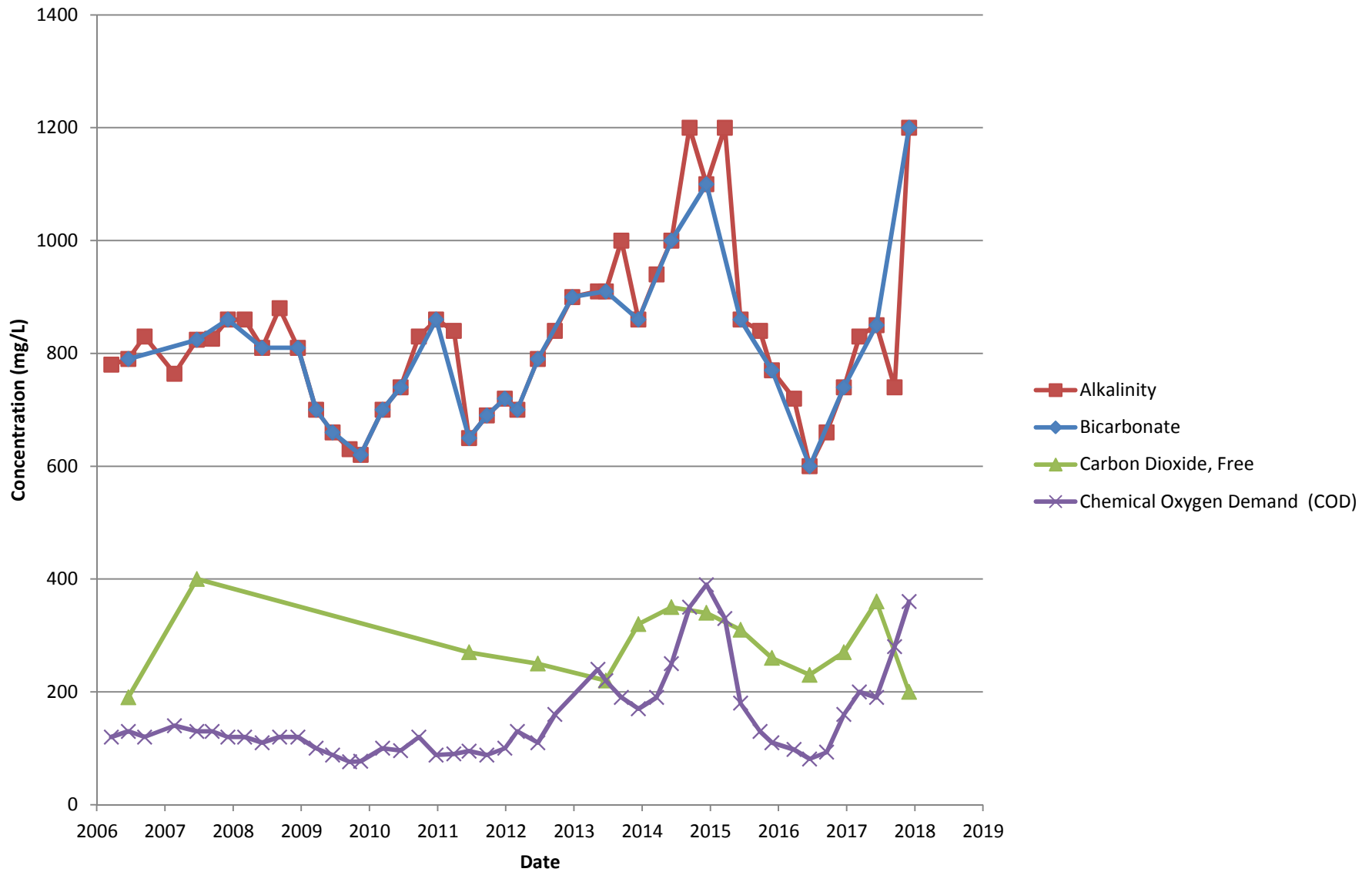
## Historical Constituent Concentrations Shallow Well MW-6



## Historical Constituent Concentrations Shallow Well MW-6

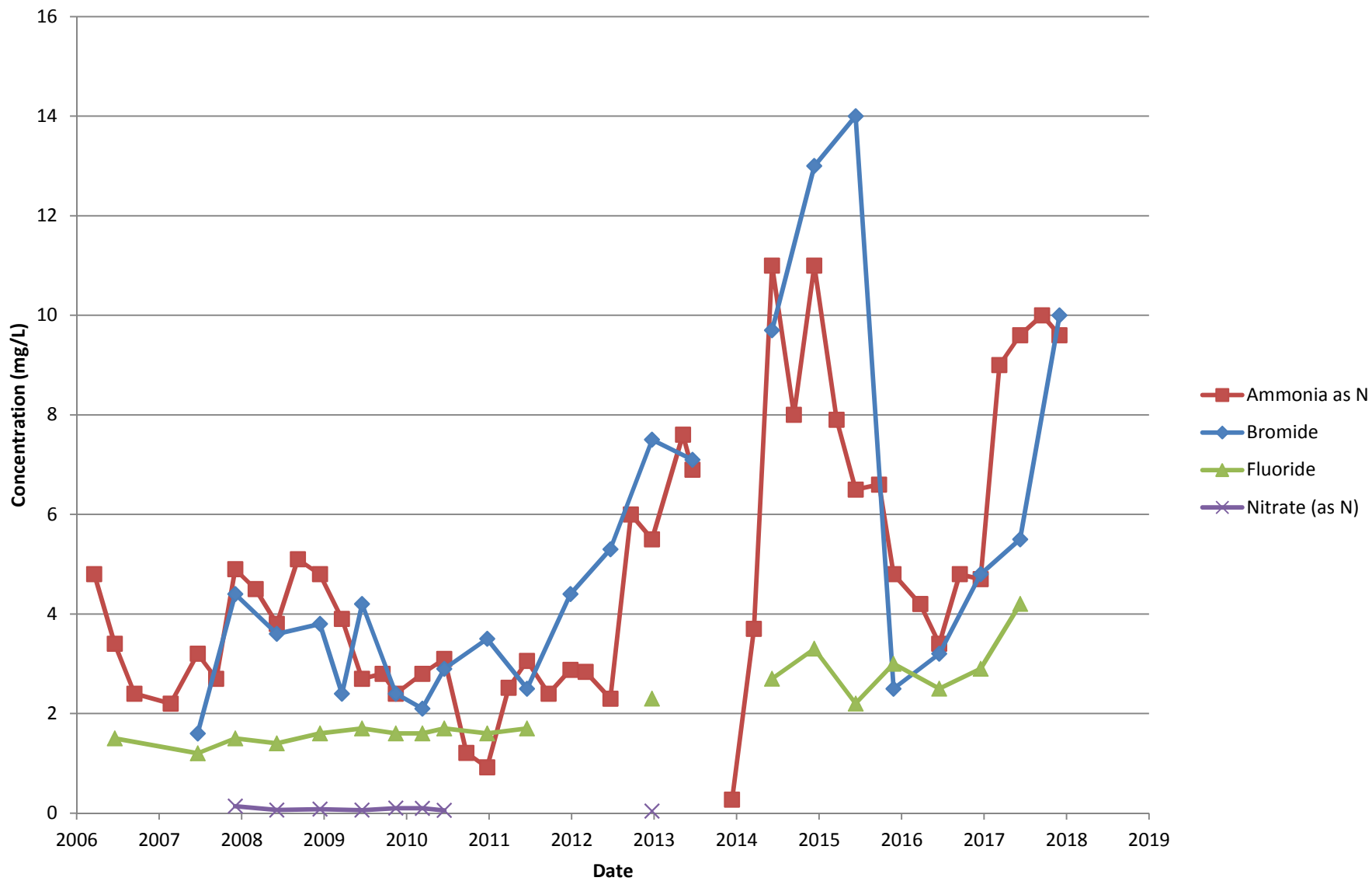


# Historical Constituent Concentrations Shallow Well MW-9

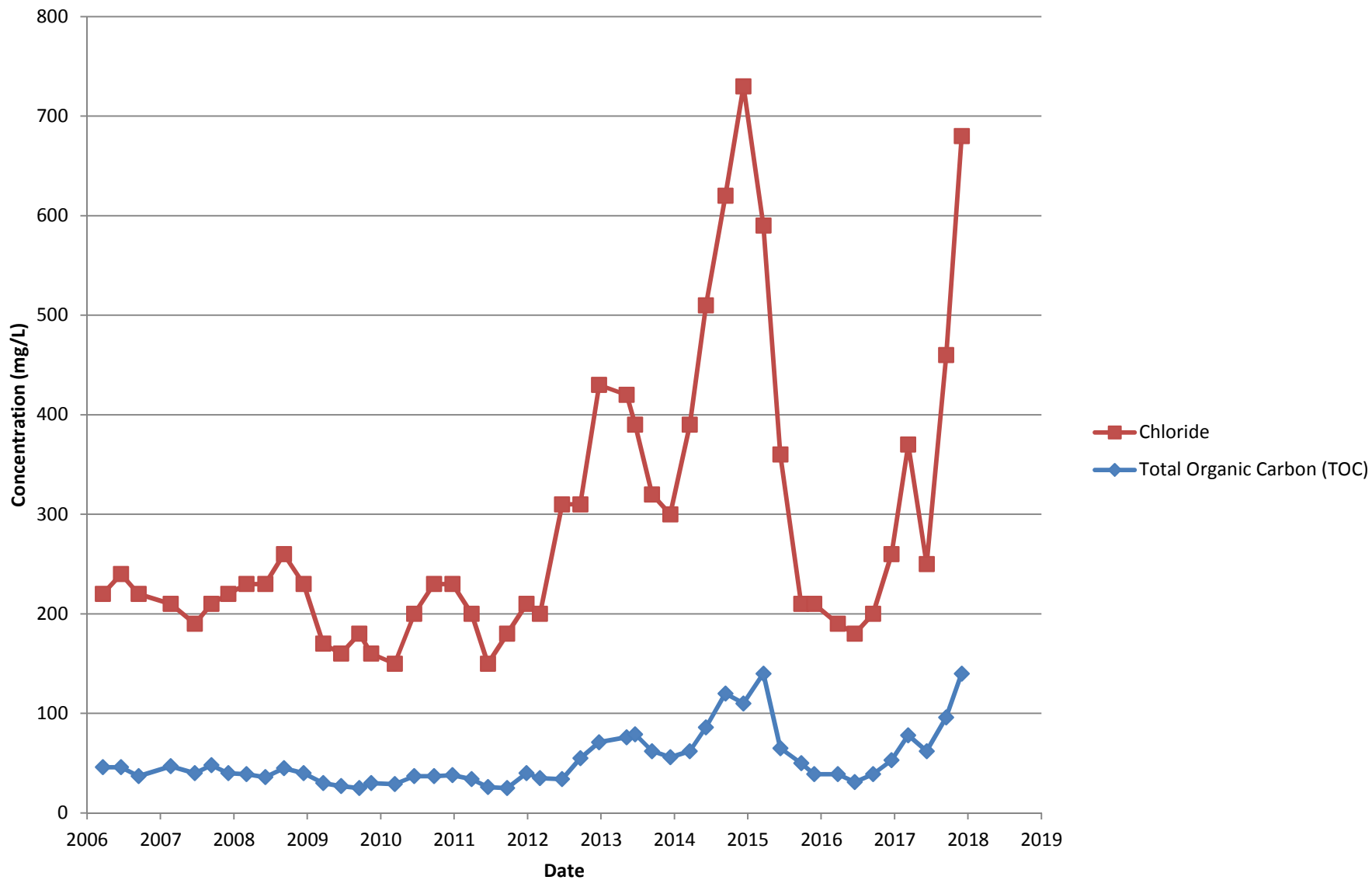




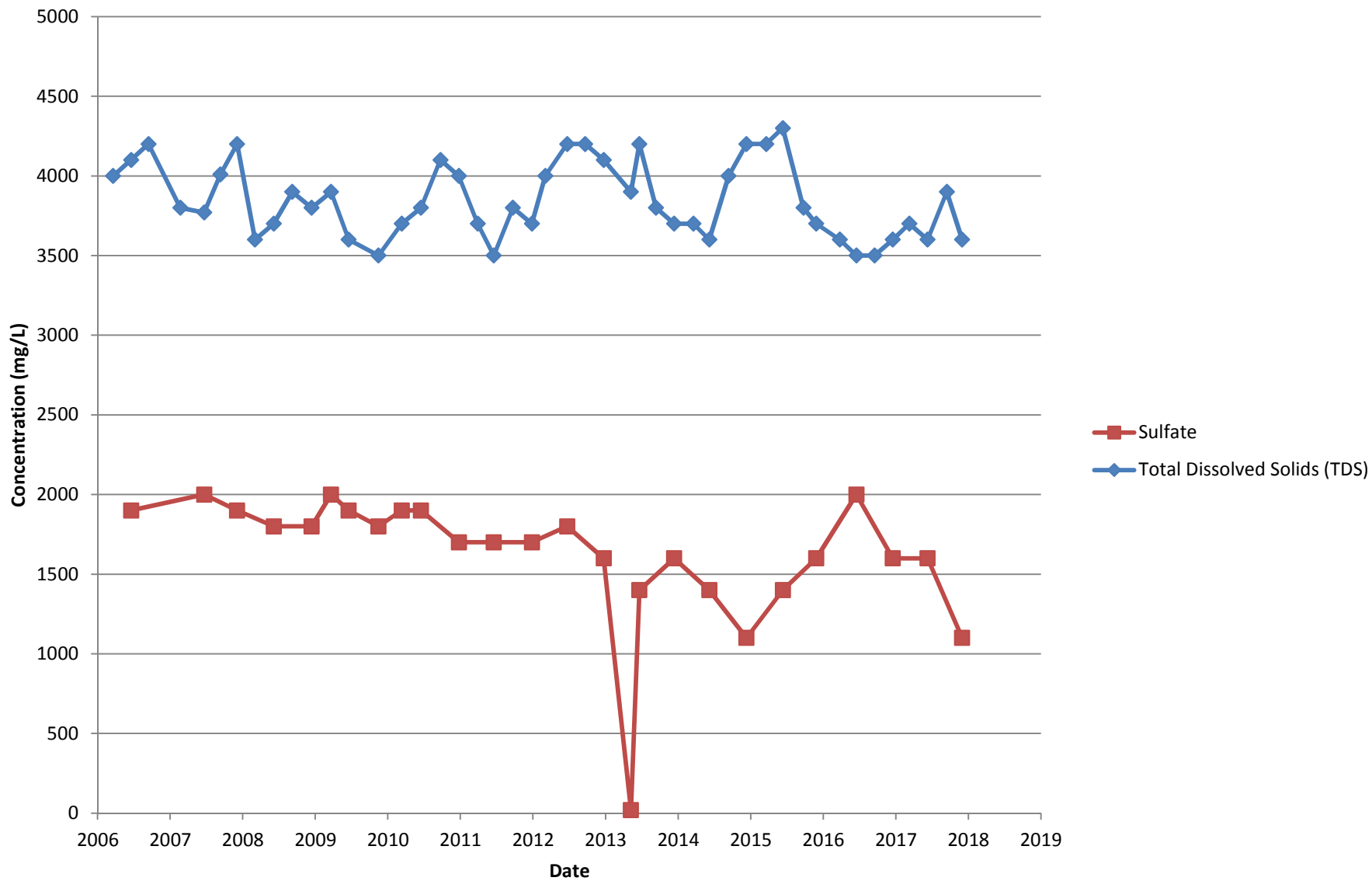
# Historical Constituent Concentrations Shallow Well MW-9



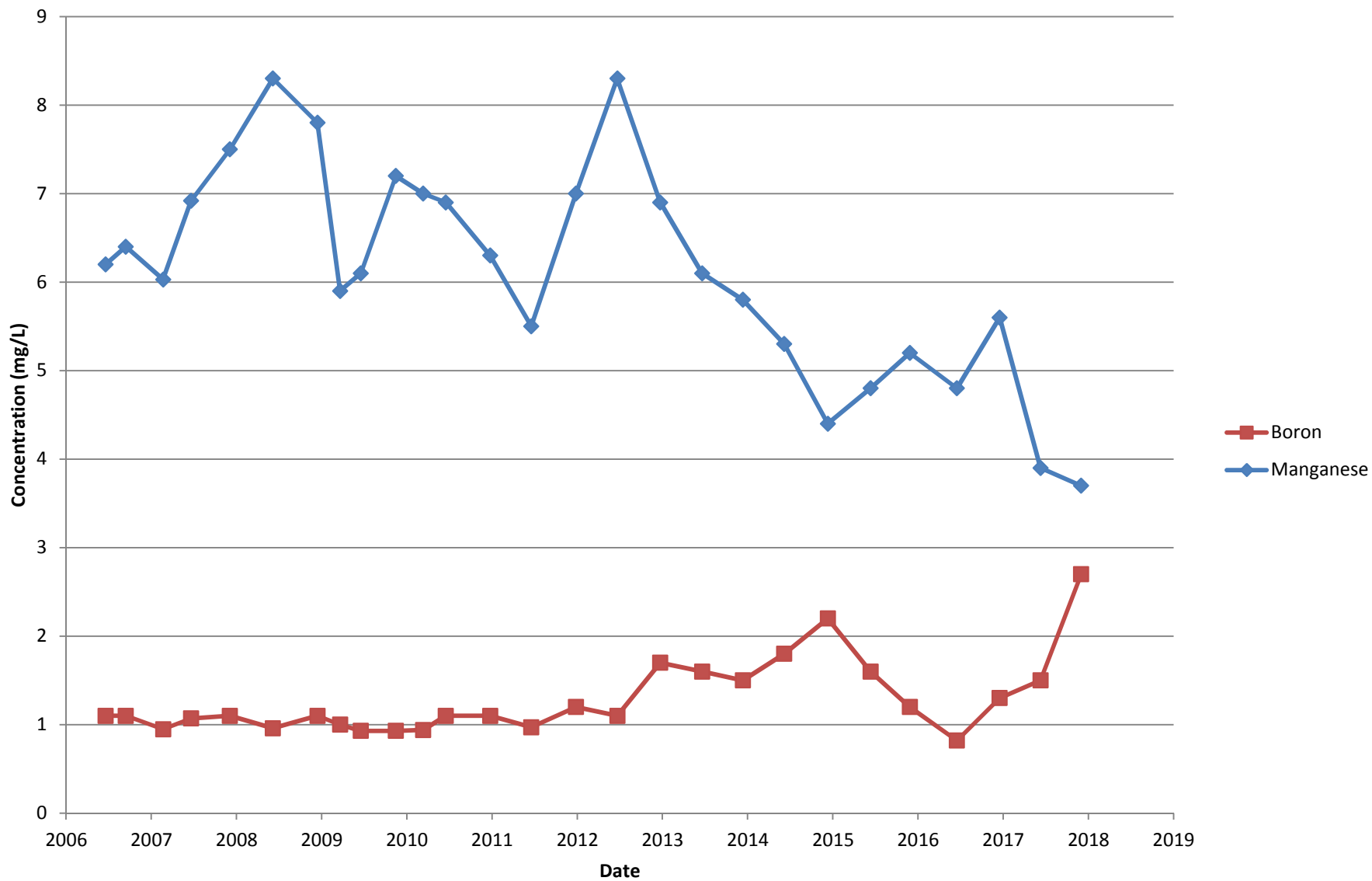
## Historical Constituent Concentrations Shallow Well MW-9



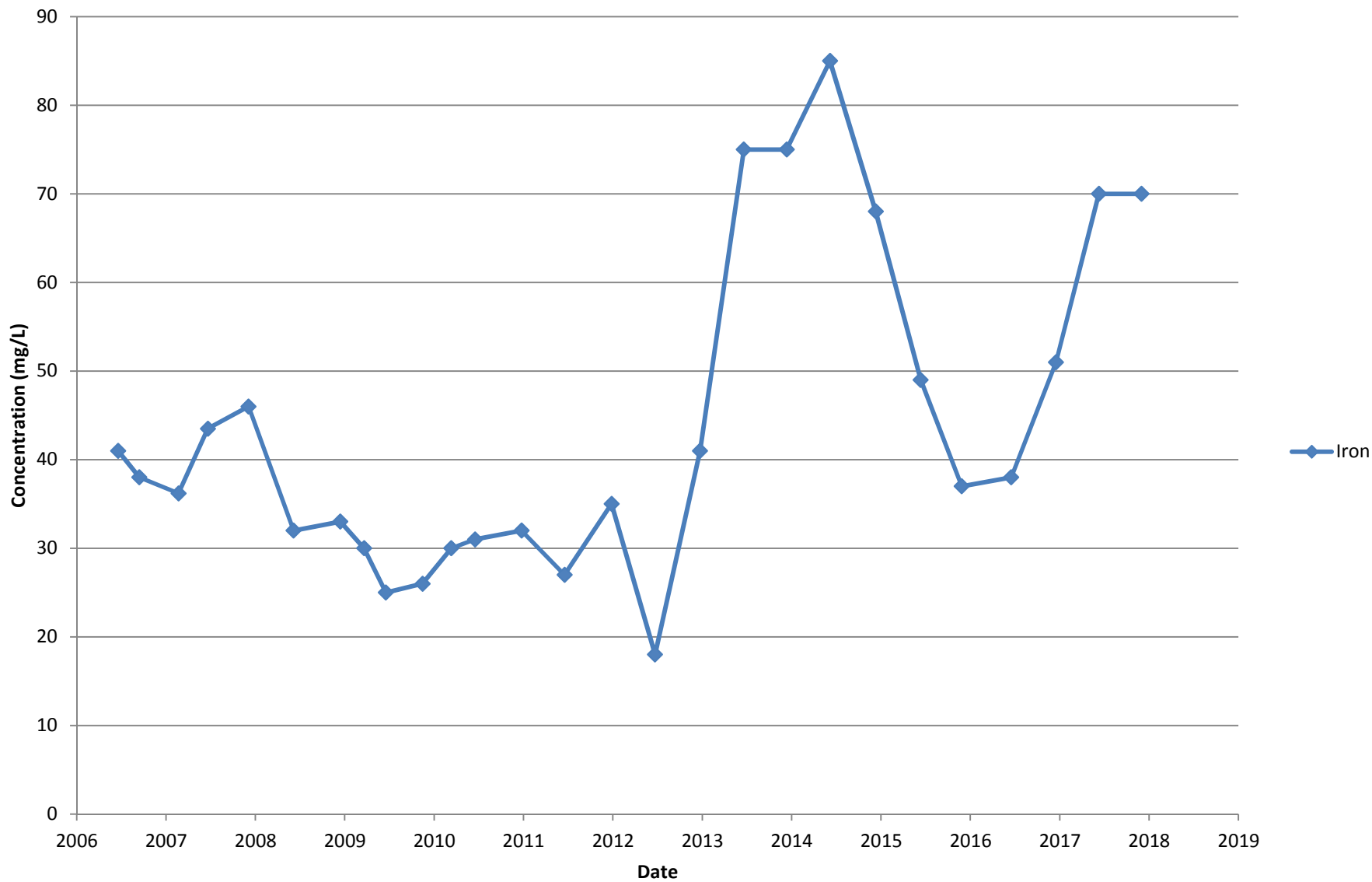
## Historical Constituent Concentrations Shallow Well MW-9



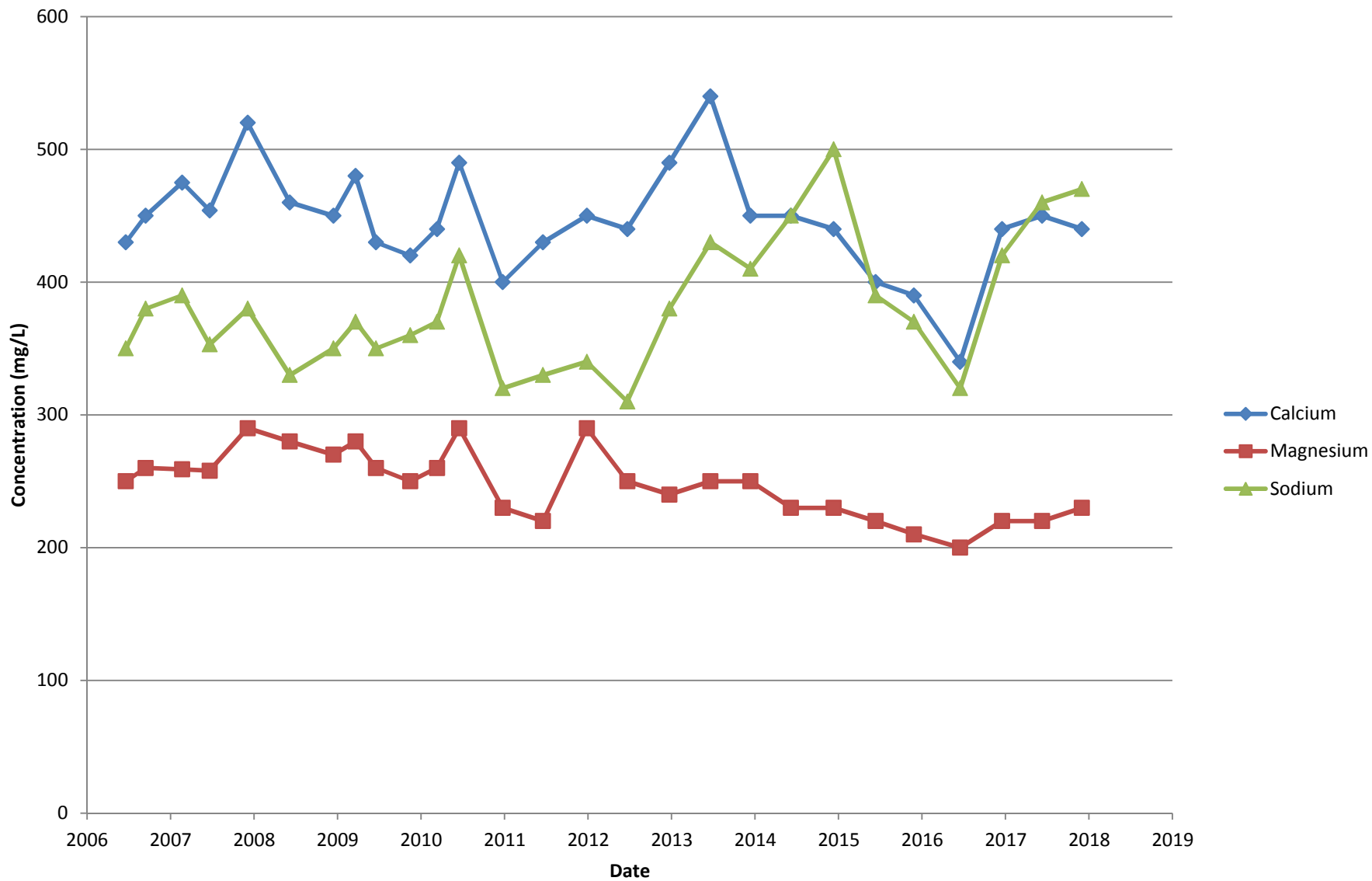
## Historical Constituent Concentrations Shallow Well MW-9



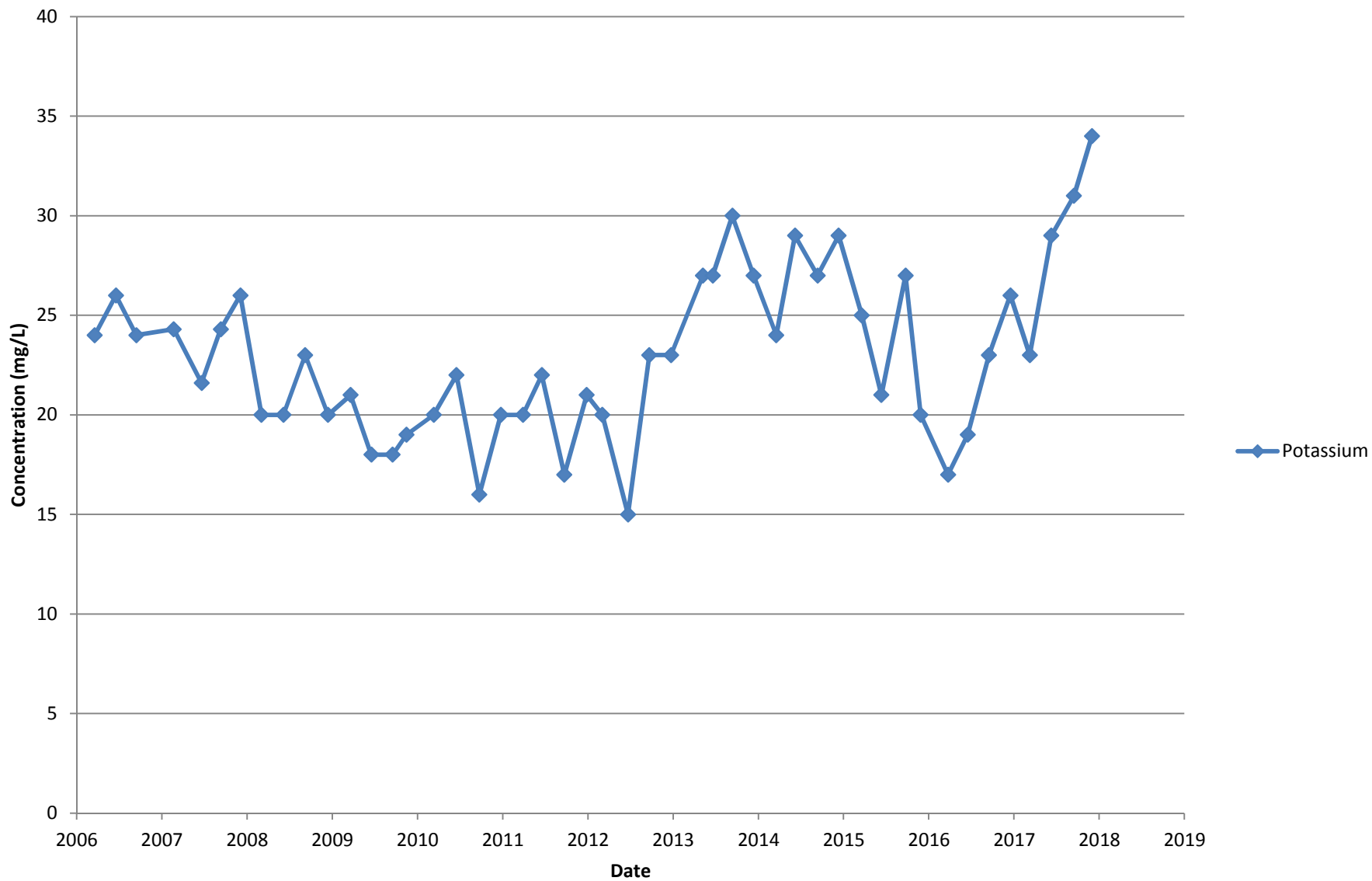
# Historical Constituent Concentrations Shallow Well MW-9



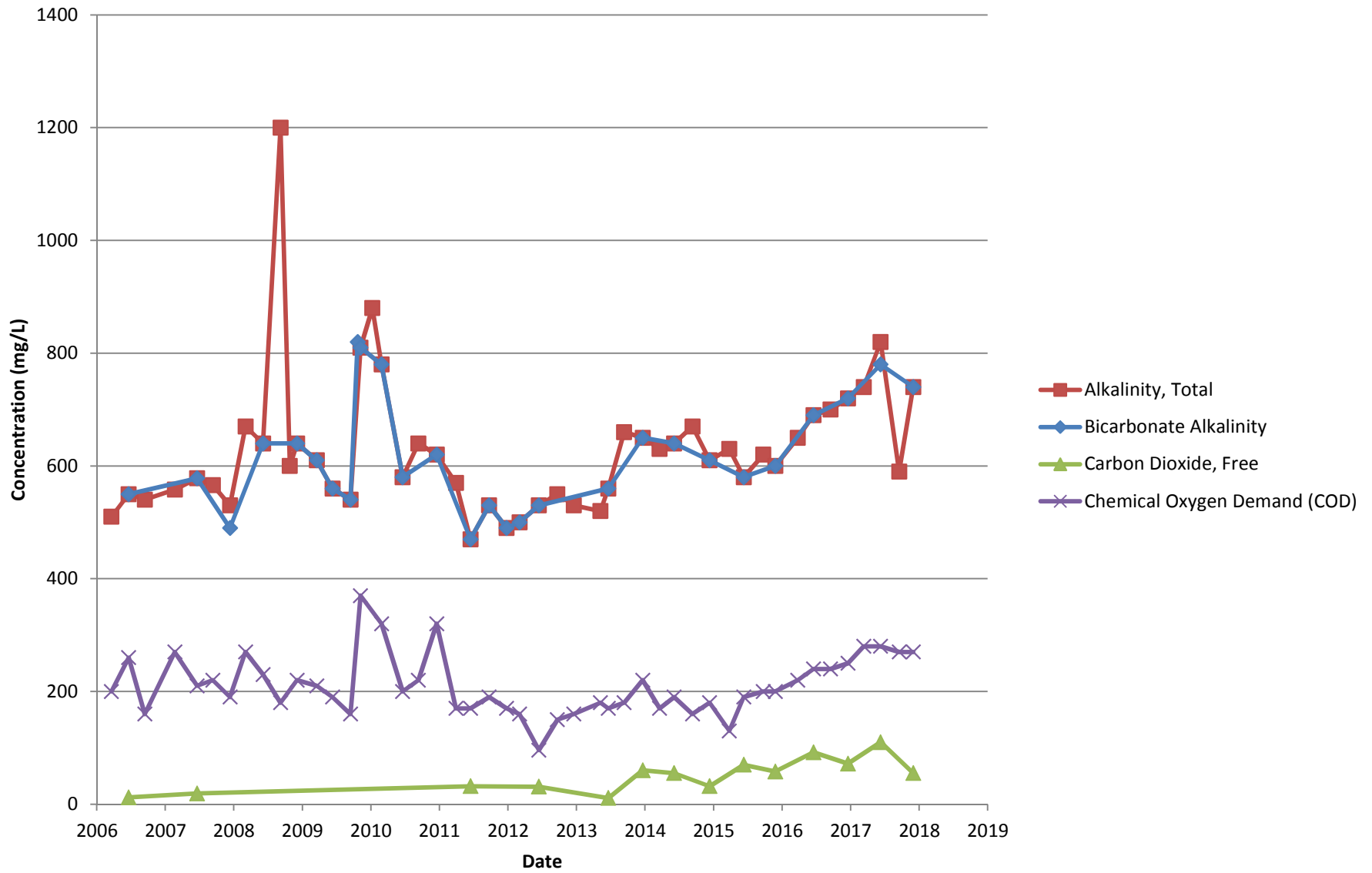
# Historical Constituent Concentrations Shallow Well MW-9



## Historical Constituent Concentrations Shallow Well MW-9

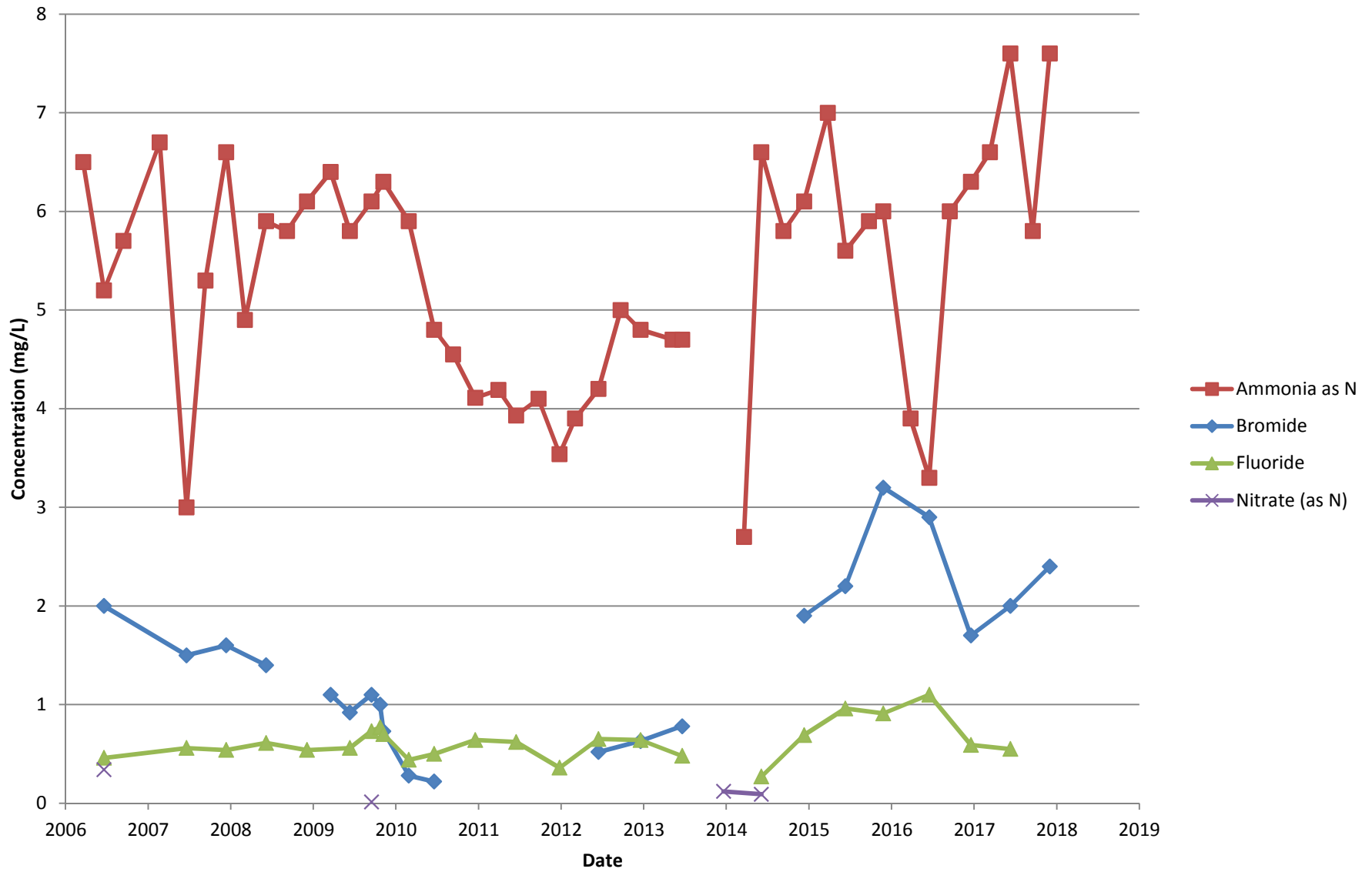


# Historical Constituent Concentrations Shallow Well MW-13R

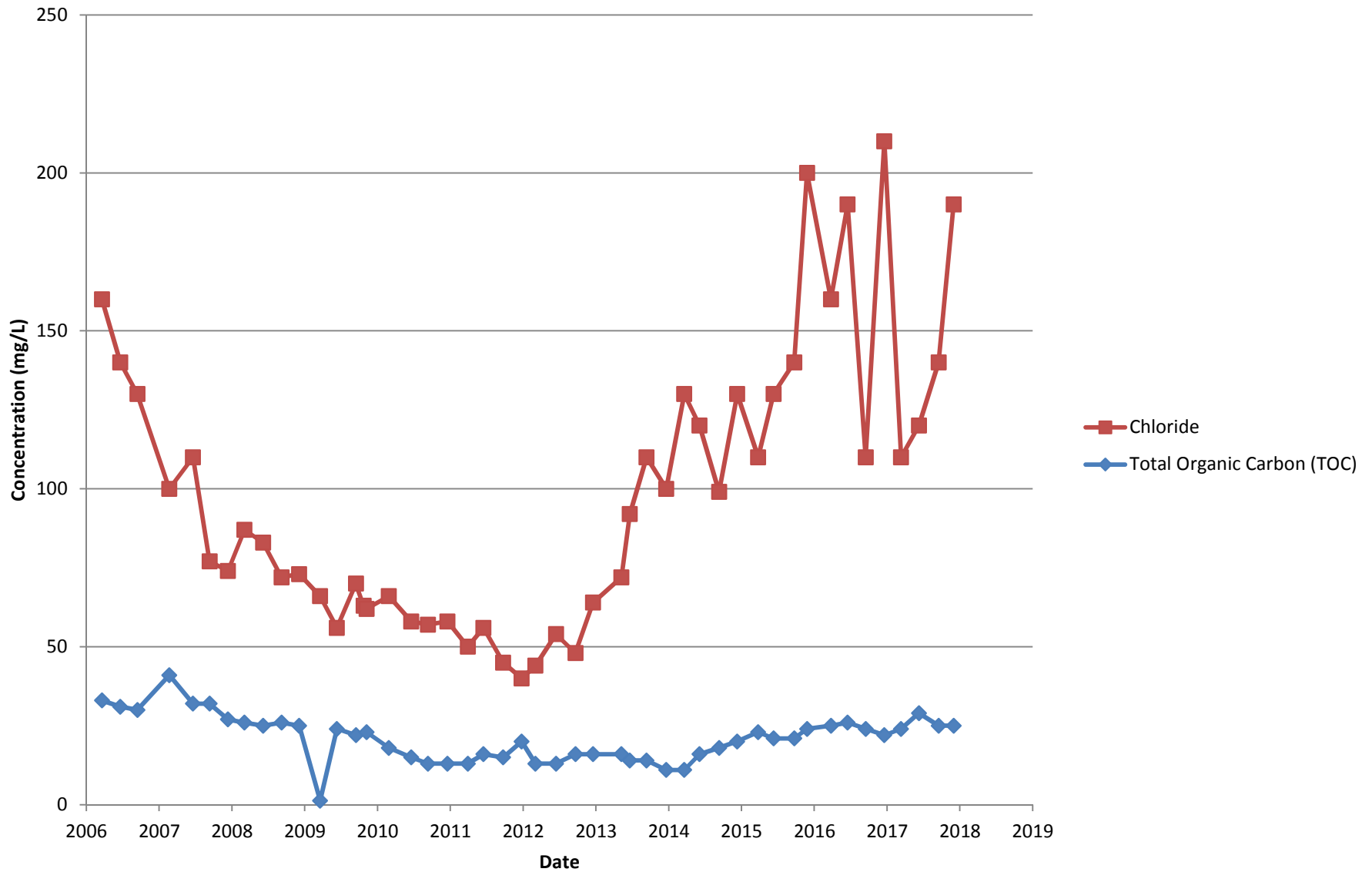




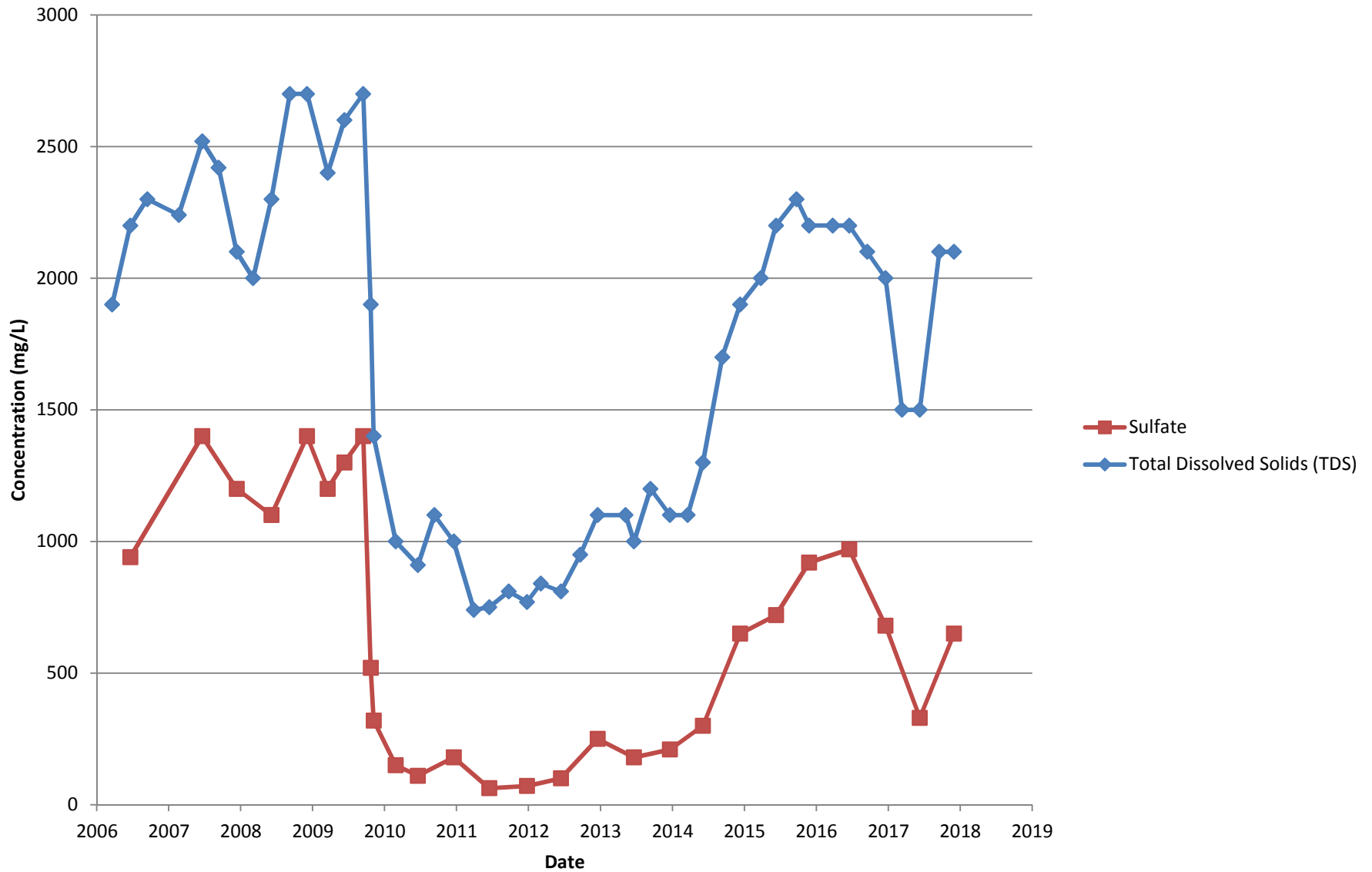
# Historical Constituent Concentrations Shallow Well MW-13R



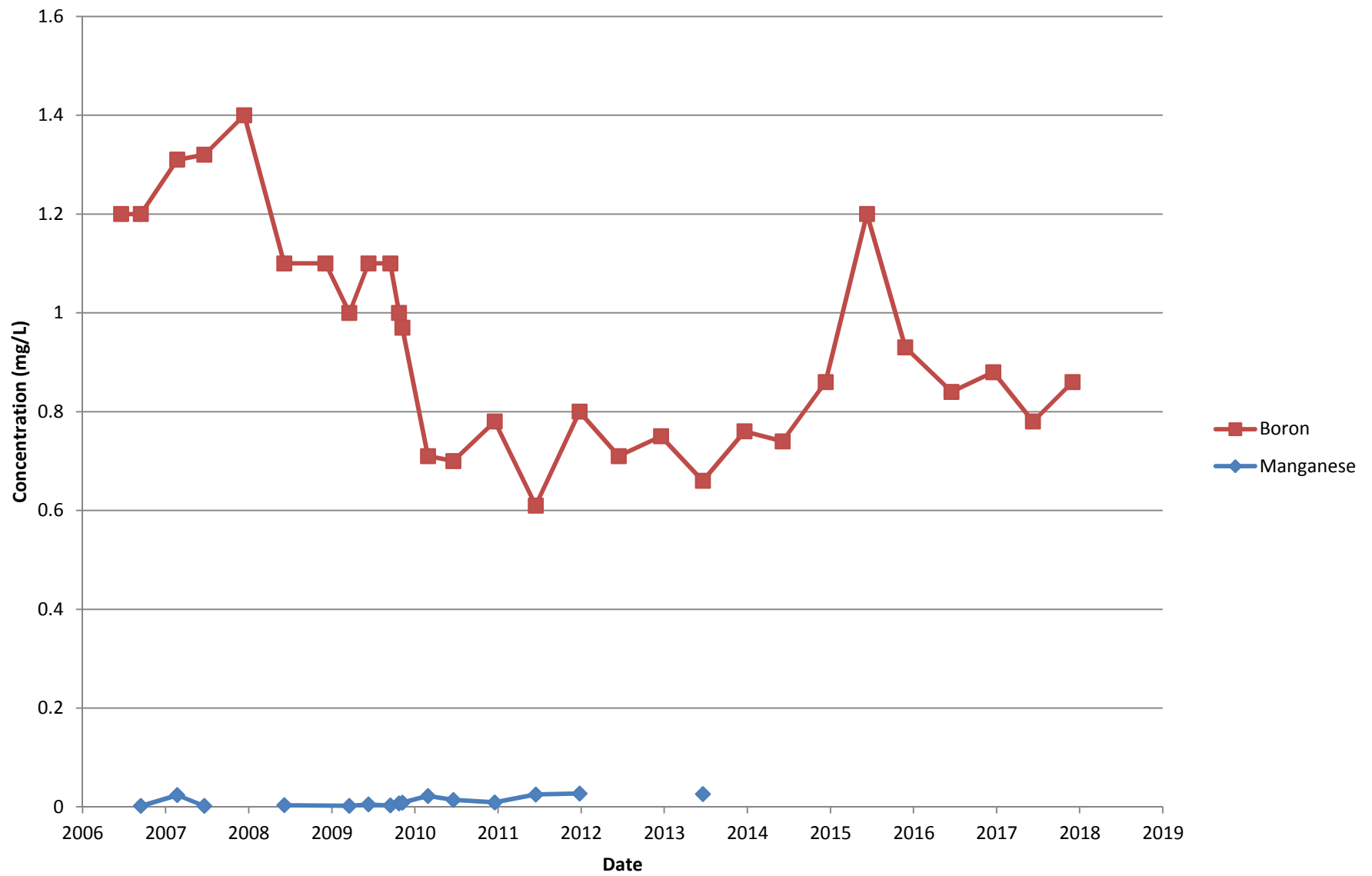
# Historical Constituent Concentrations Shallow Well MW-13R



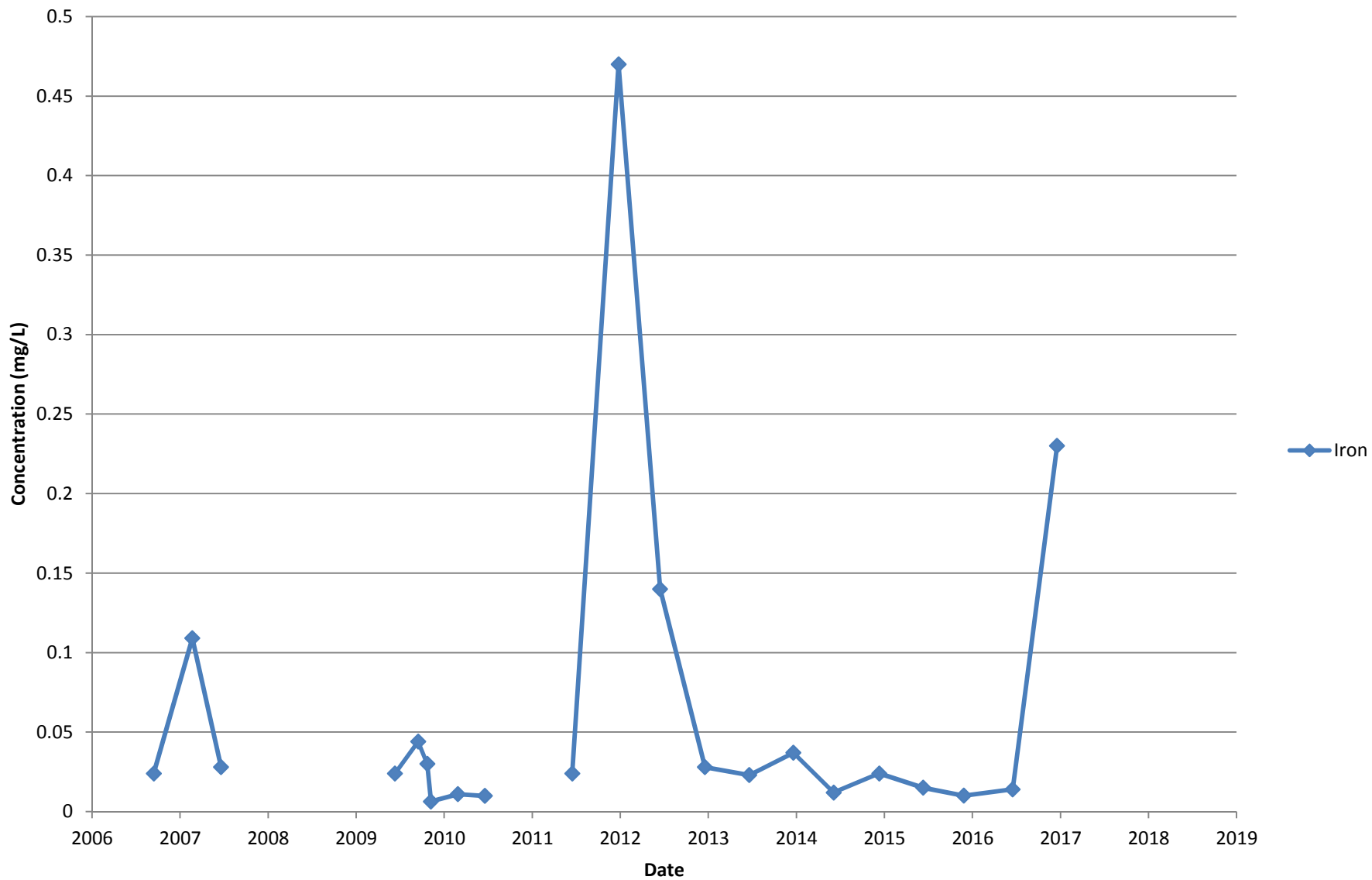
# Historical Constituent Concentrations Shallow Well MW-13R



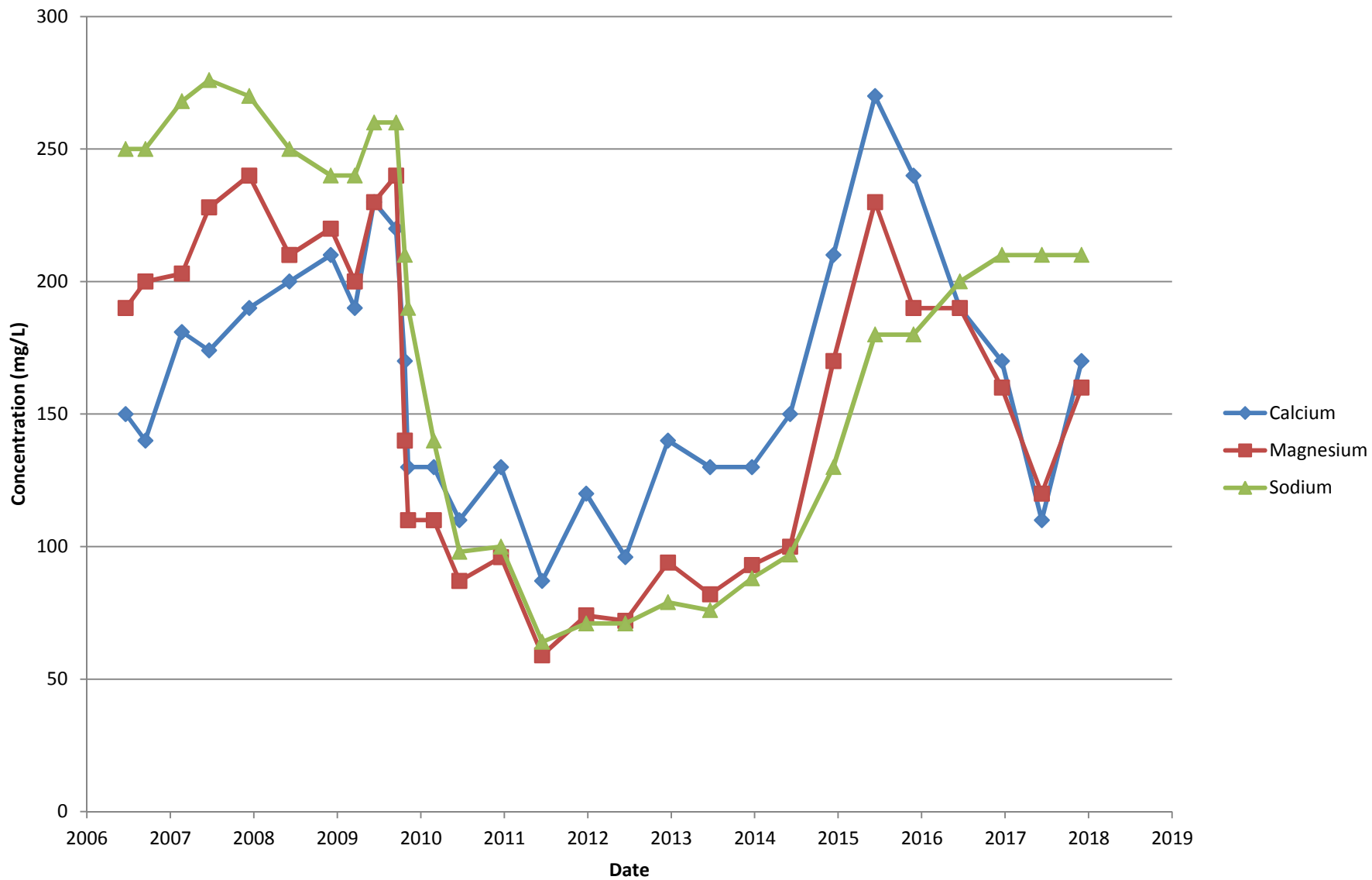
## Historical Constituent Concentrations Shallow Well MW-13R



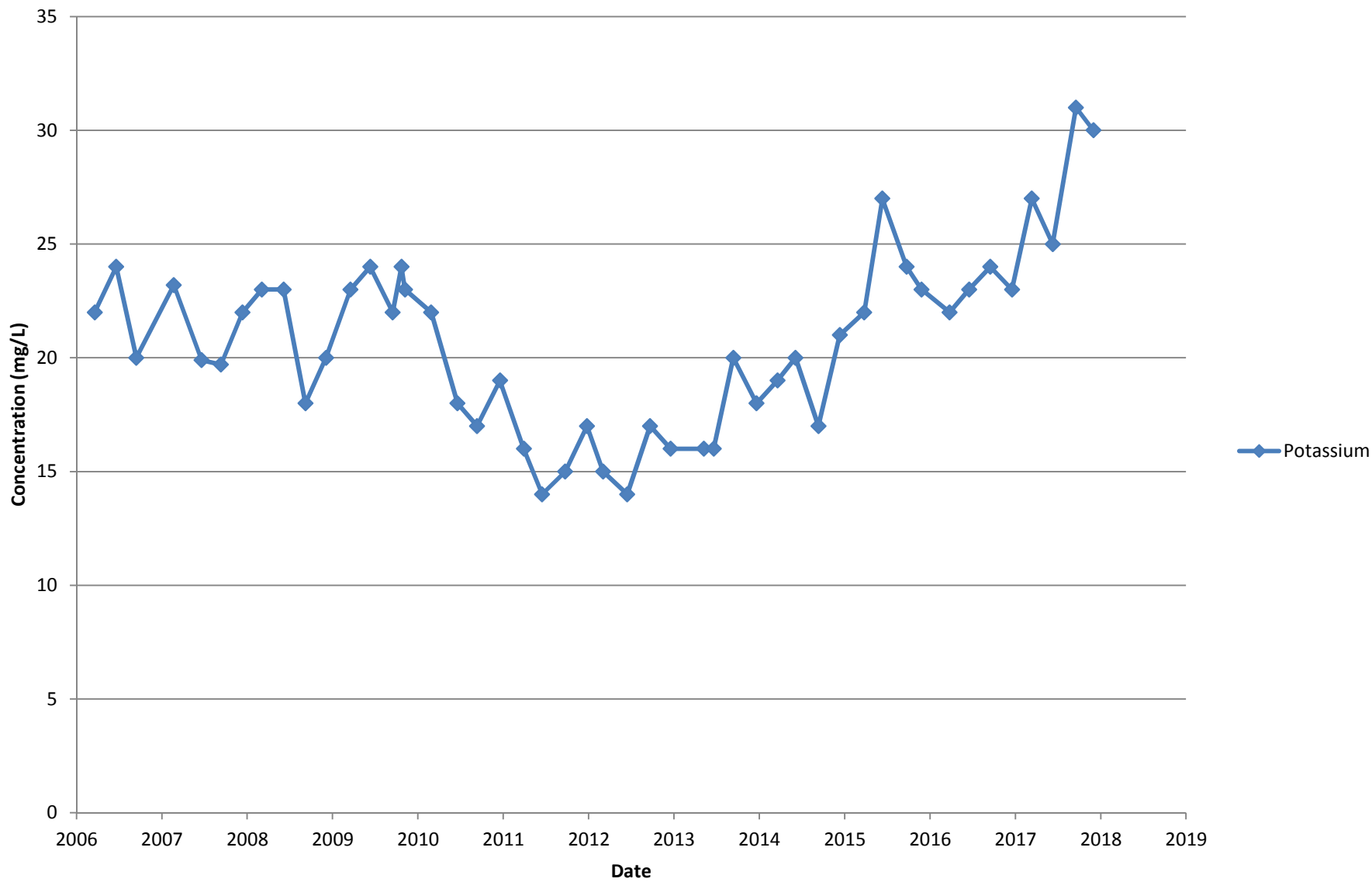
## Historical Constituent Concentrations Shallow Well MW-13R



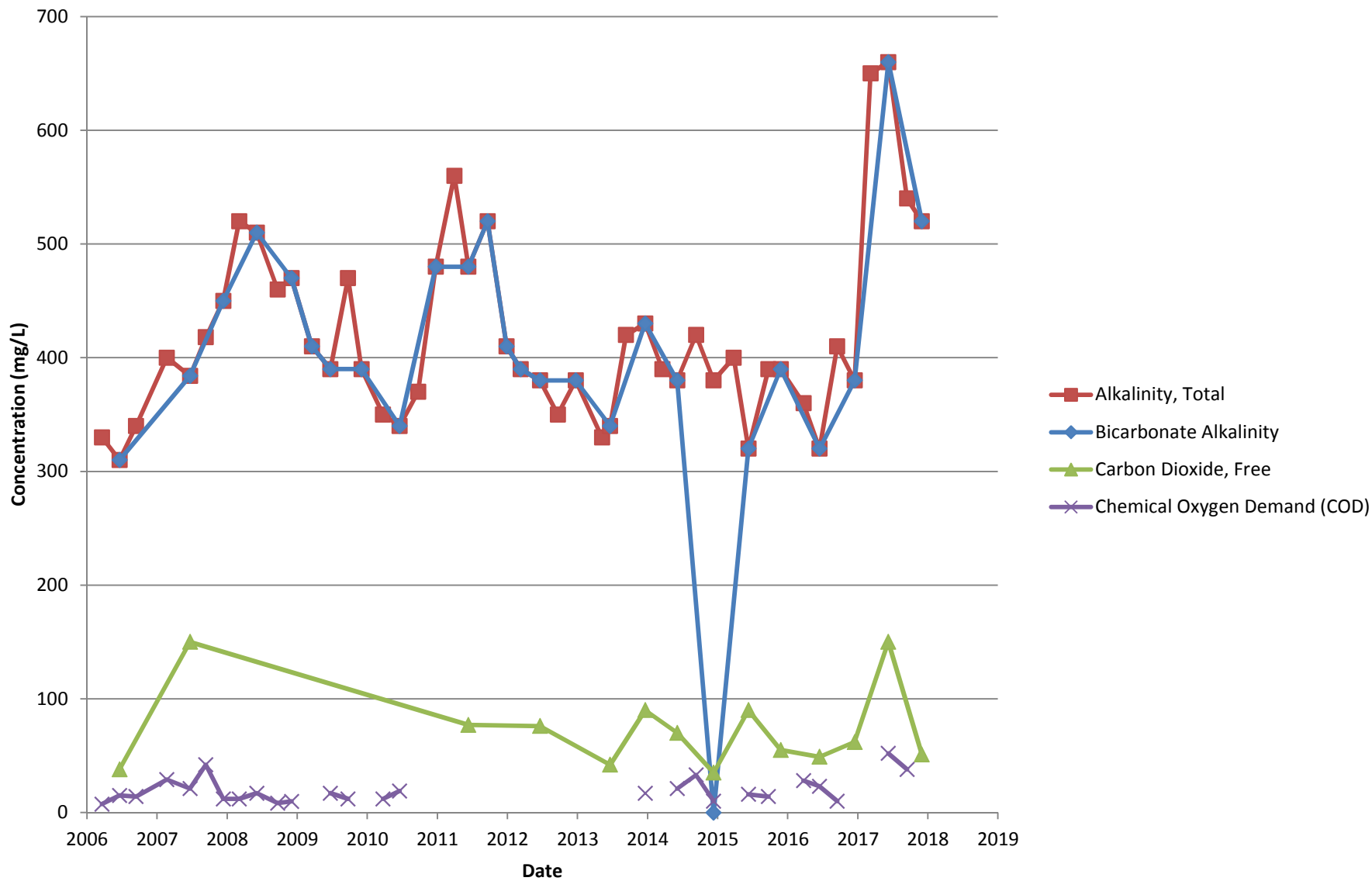
## Historical Constituent Concentrations Shallow Well MW-13R



# Historical Constituent Concentrations Shallow Well MW-13R

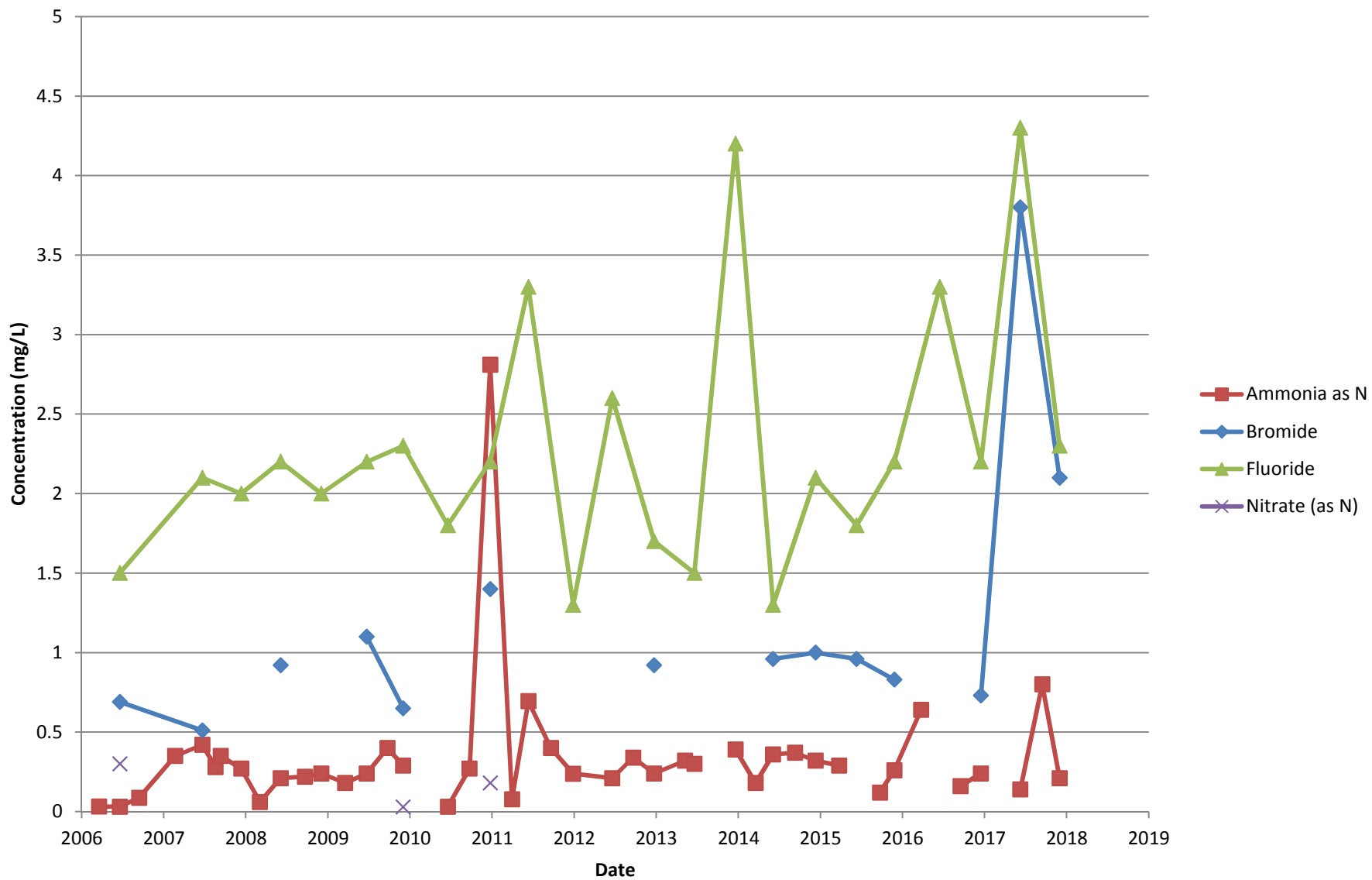


# Historical Constituent Concentrations Shallow Well MW-14

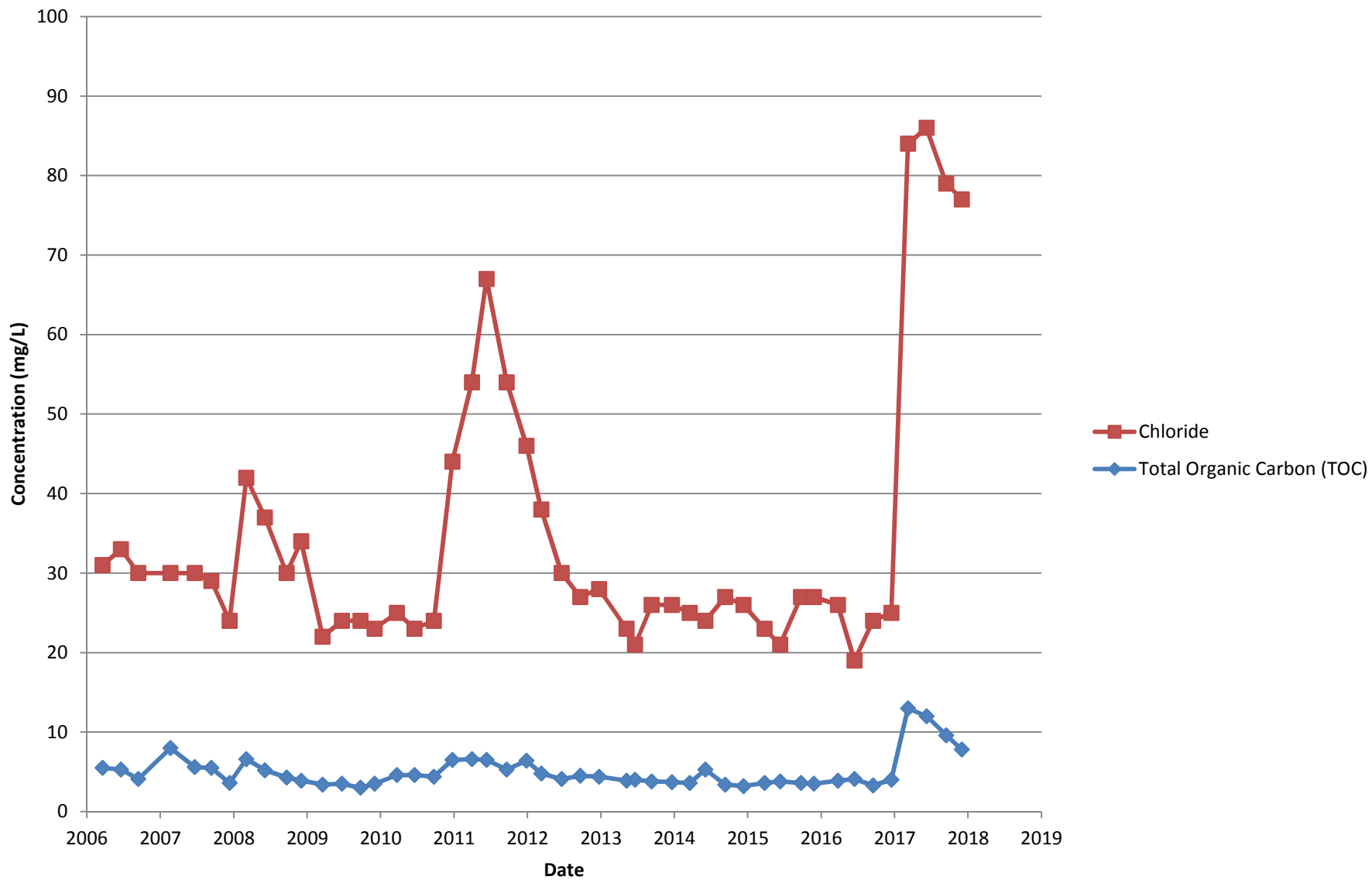




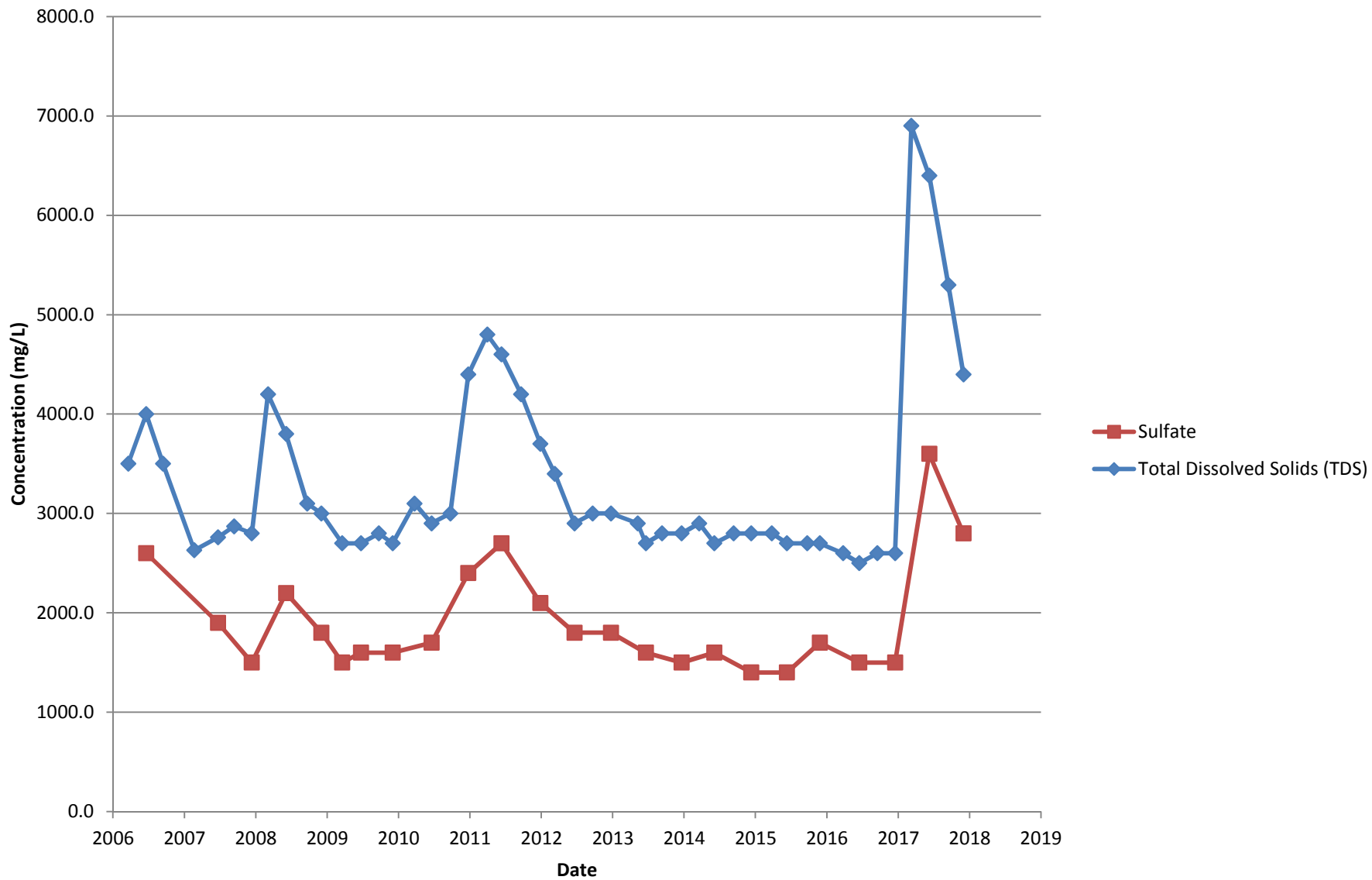
## Historical Constituent Concentrations Shallow Well MW-14



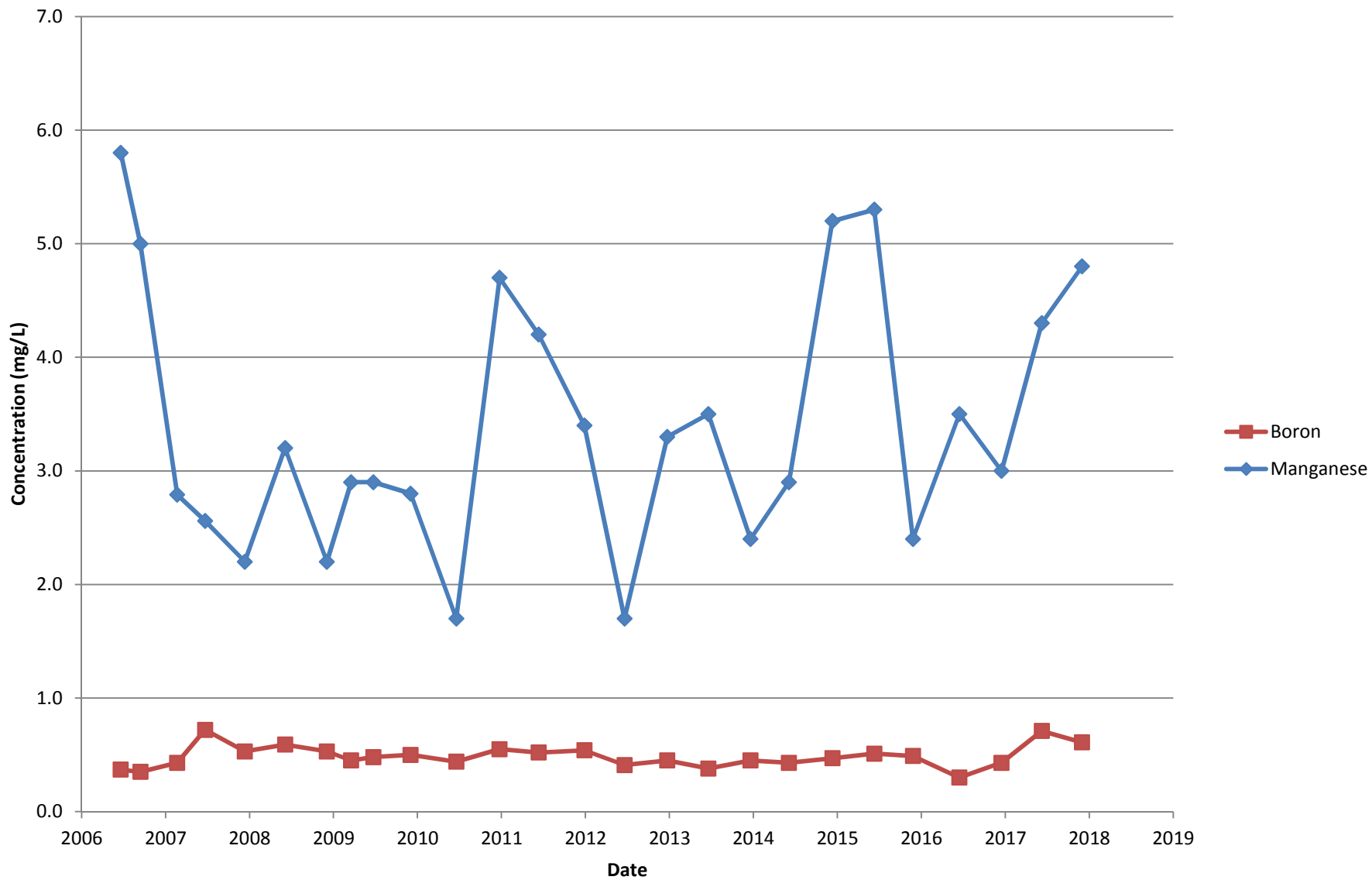
# Historical Constituent Concentrations Shallow Well MW-14



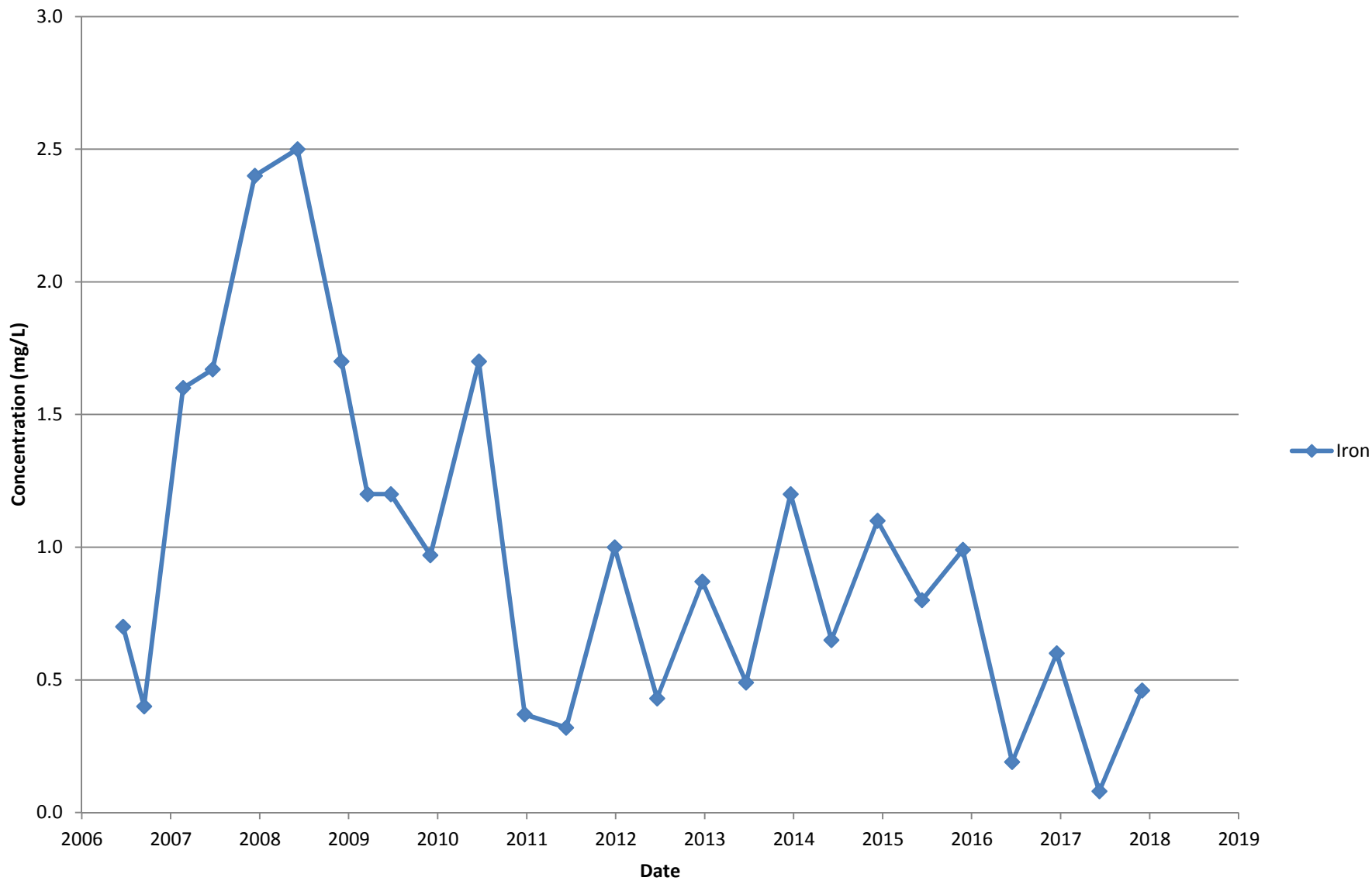
## Historical Constituent Concentrations Shallow Well MW-14



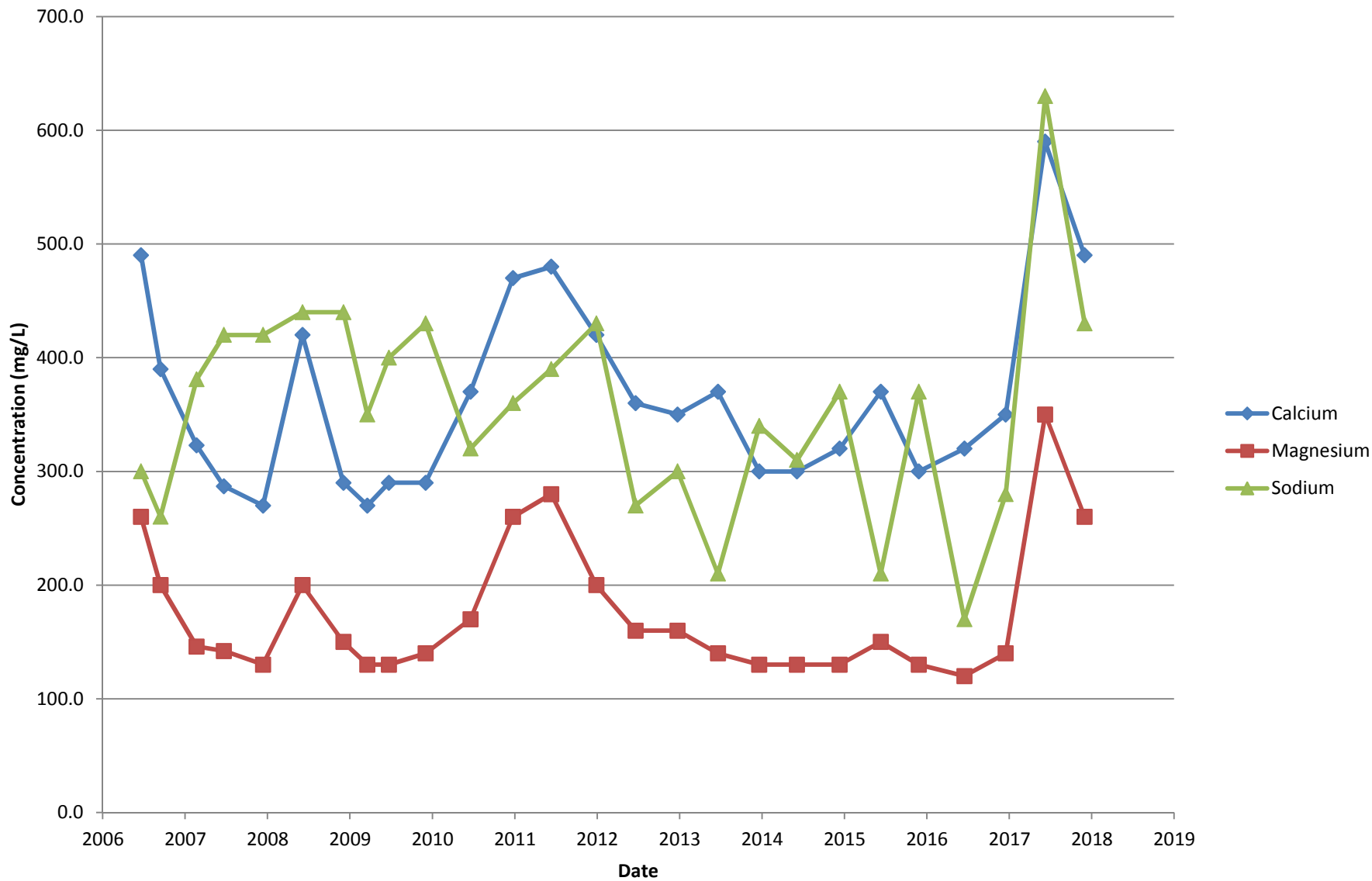
# Historical Constituent Concentrations Shallow Well MW-14



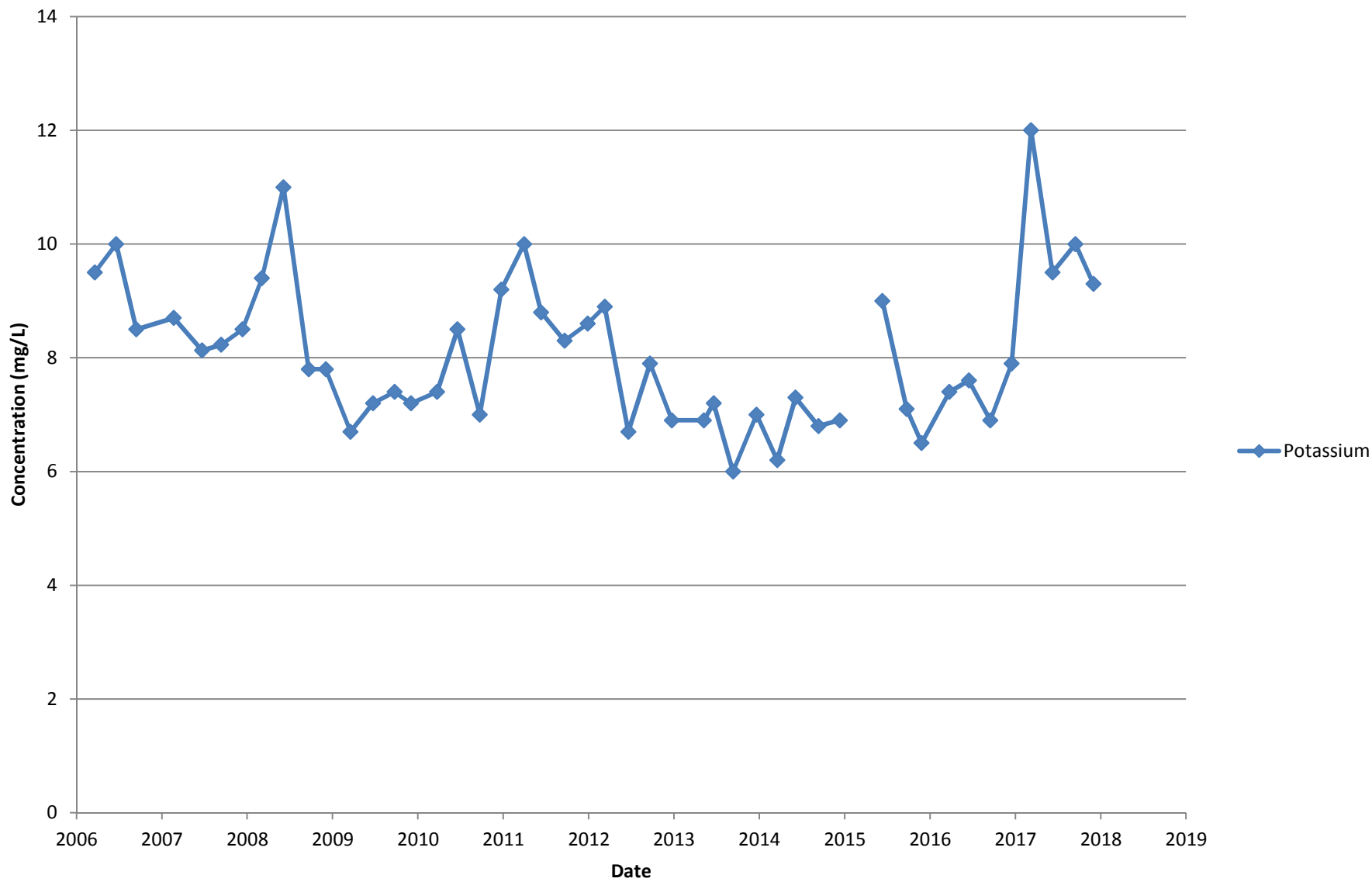
## Historical Constituent Concentrations Shallow Well MW-14



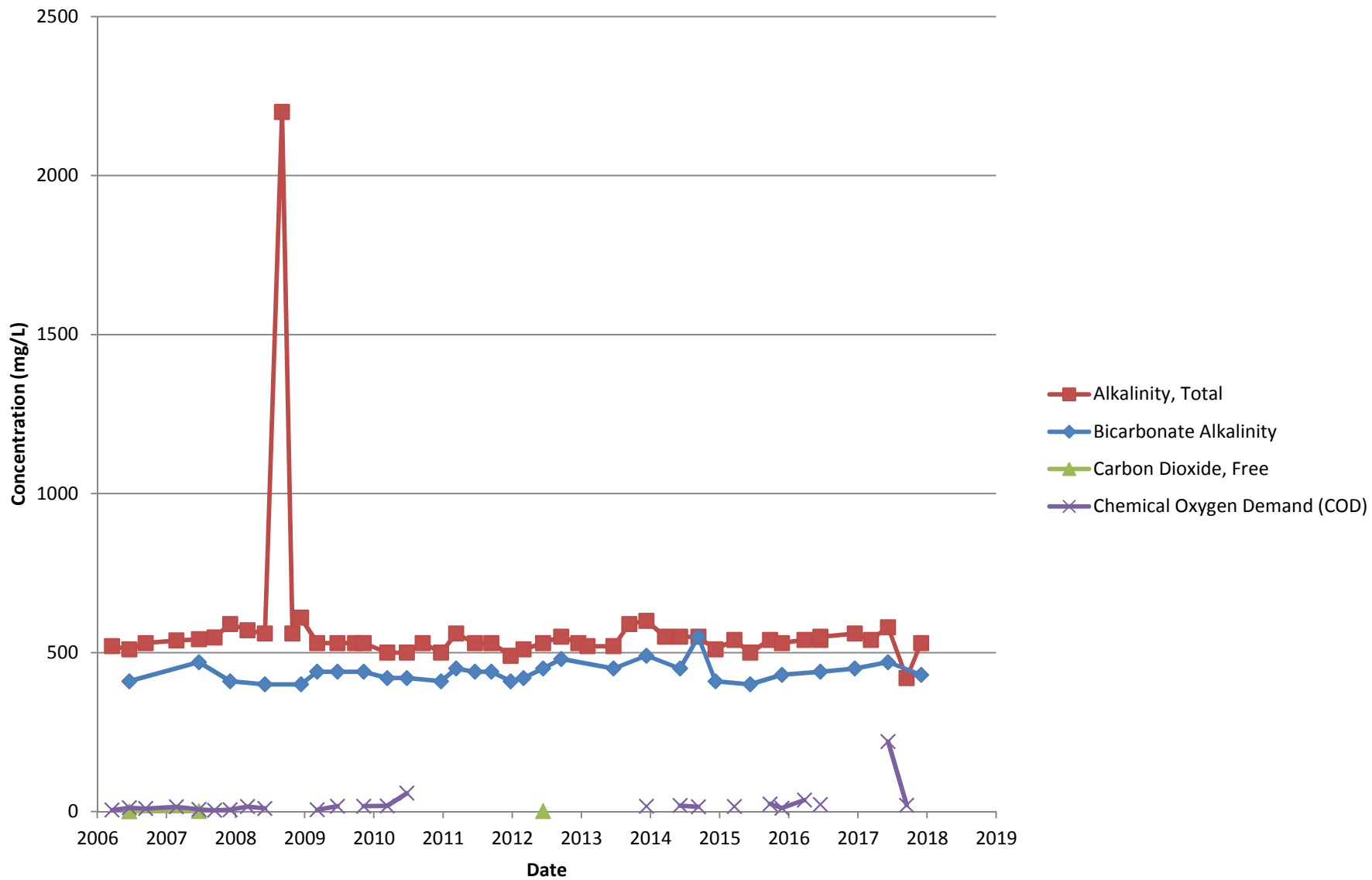
# Historical Constituent Concentrations Shallow Well MW-14



# Historical Constituent Concentrations Shallow Well MW-14

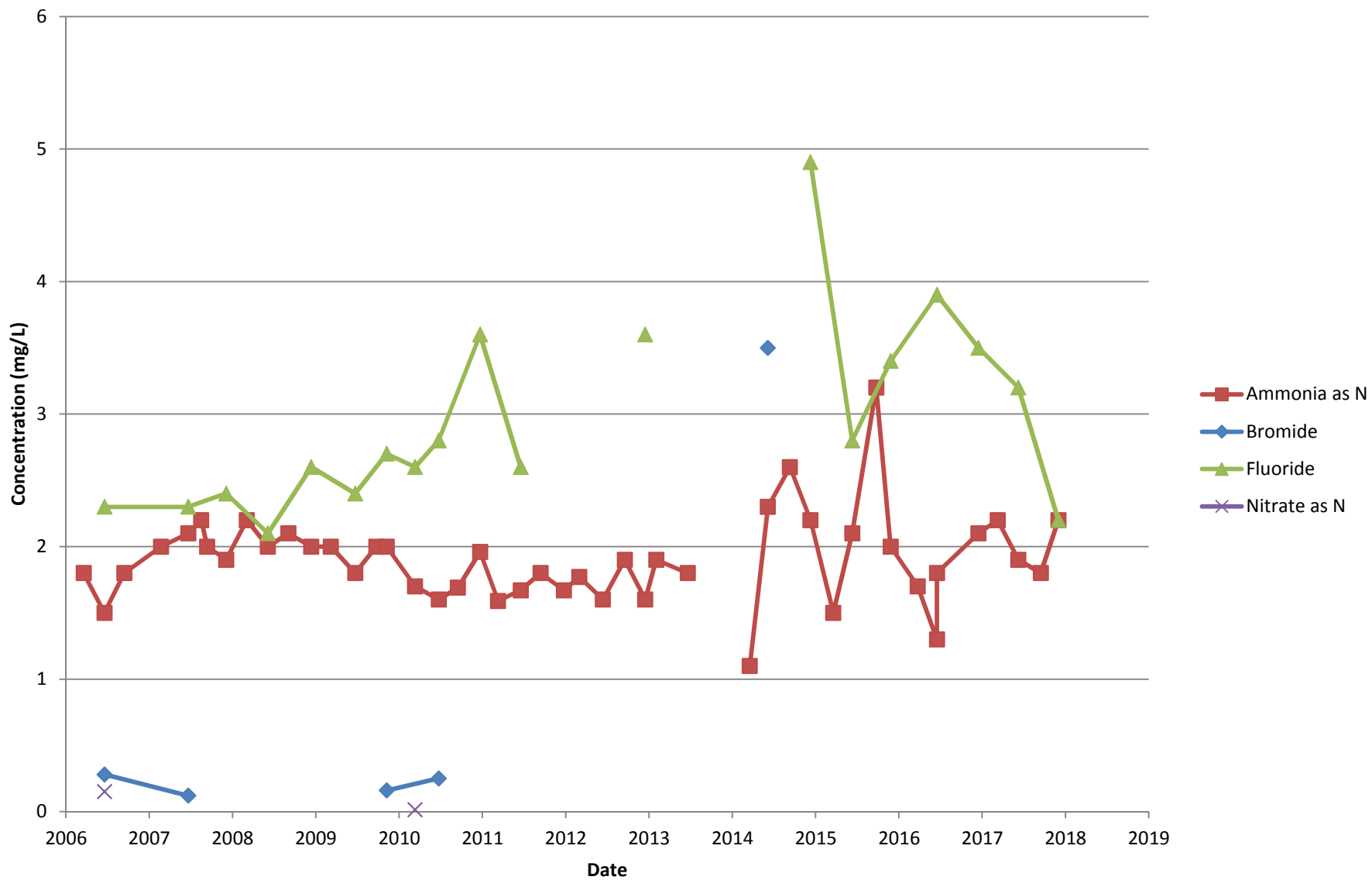


# Historical Constituent Concentrations Deep Well DW-1

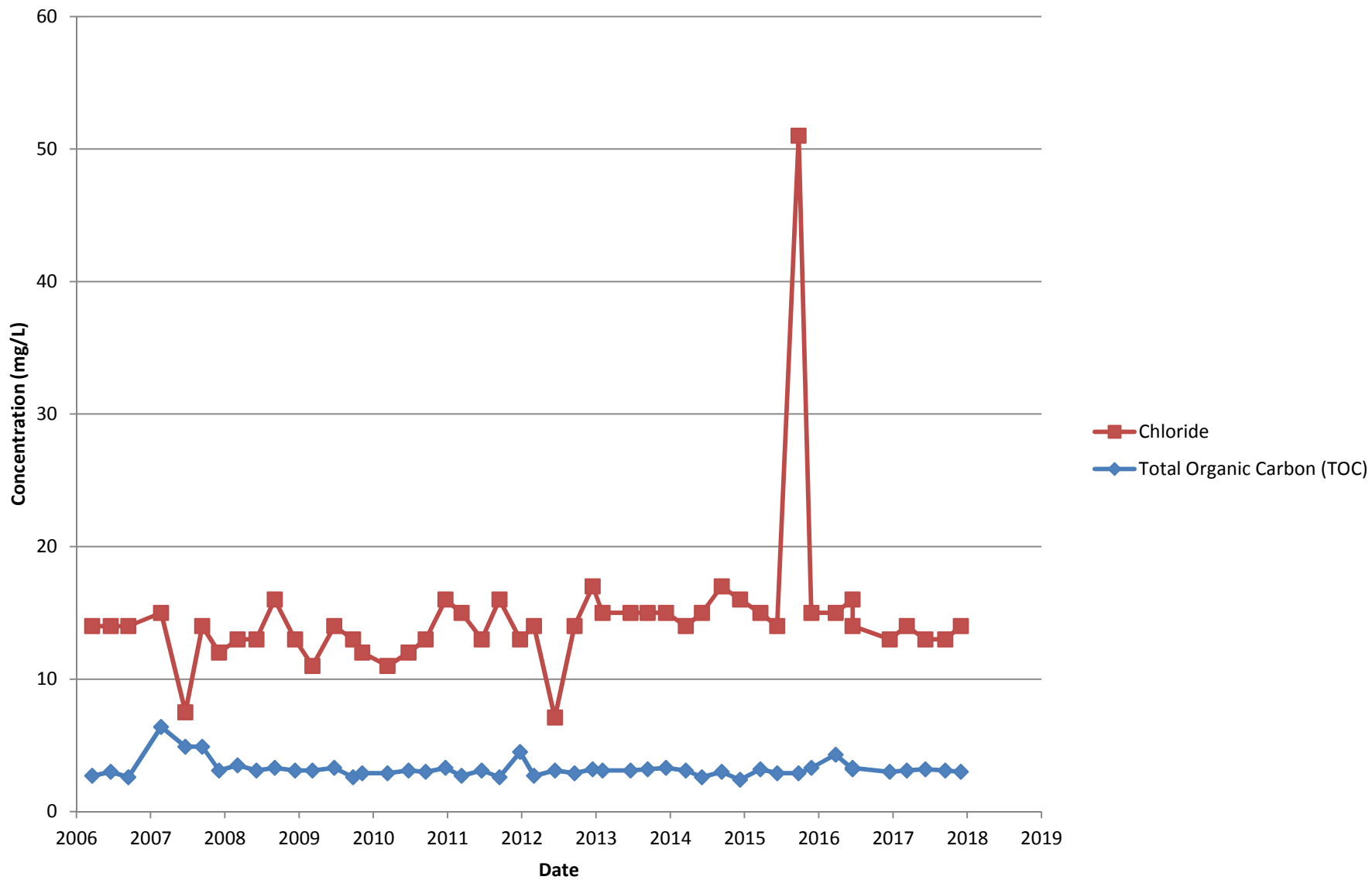




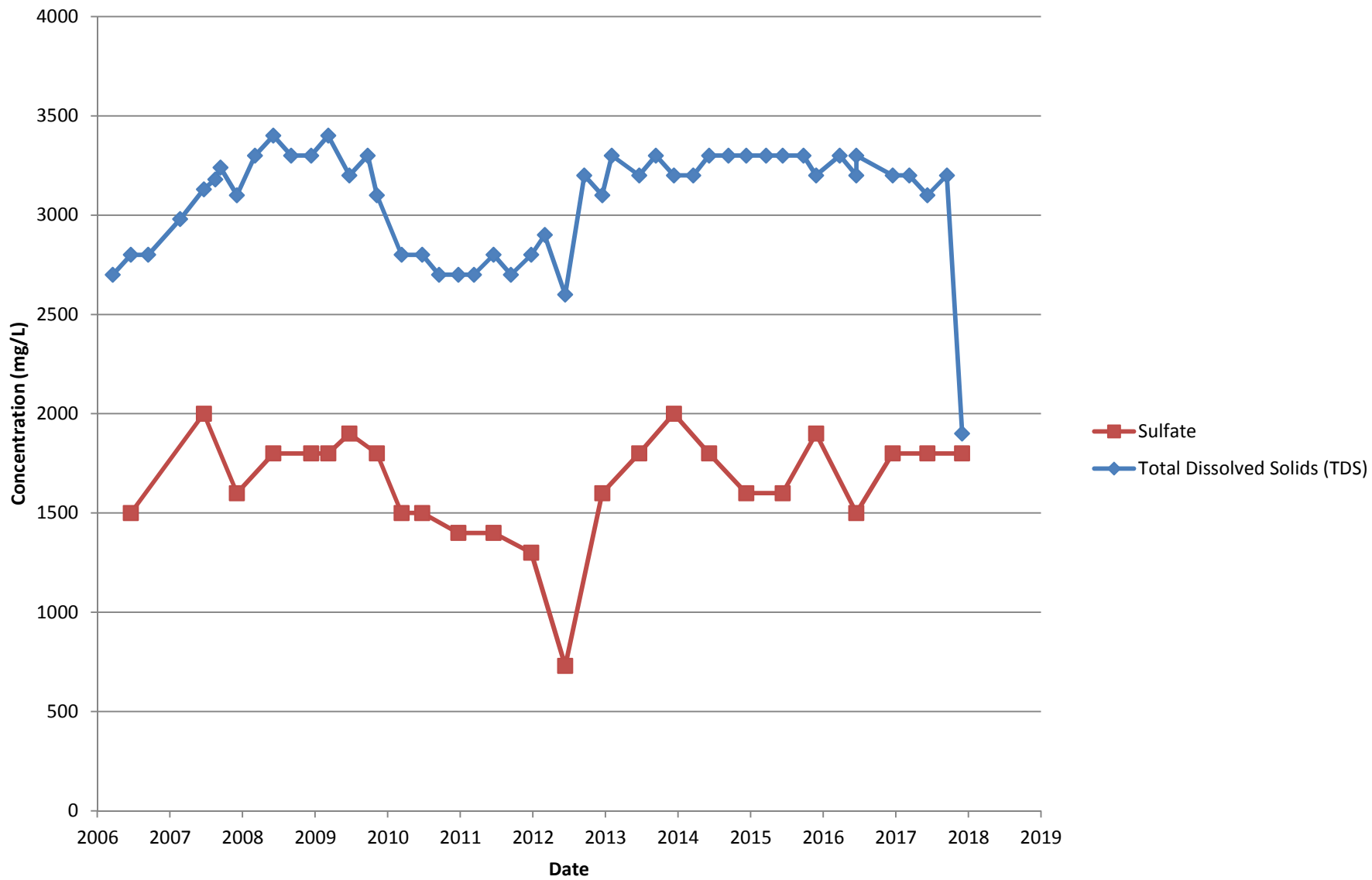
# Historical Constituent Concentrations Deep Well DW-1



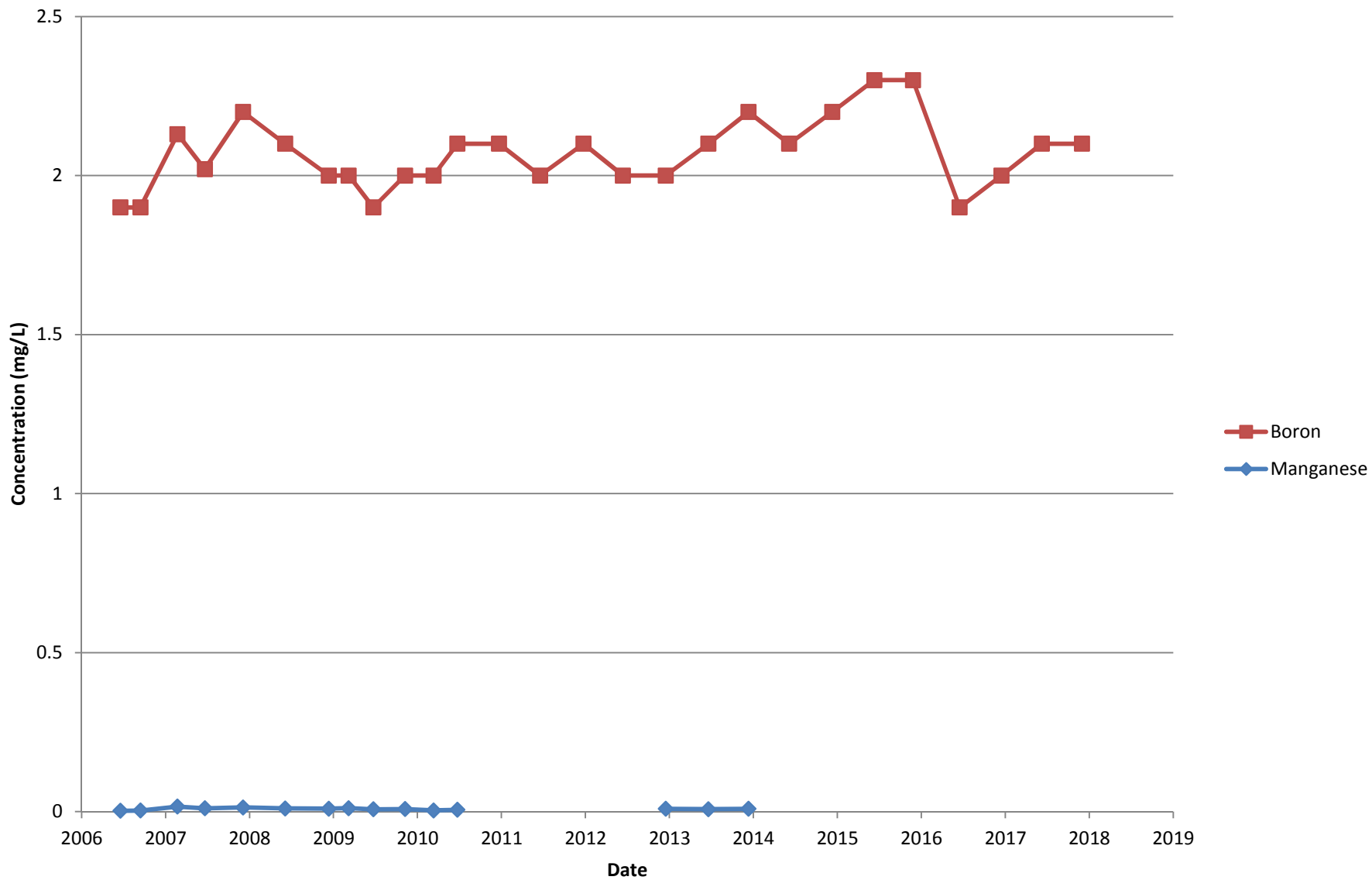
# Historical Constituent Concentrations Deep Well DW-1



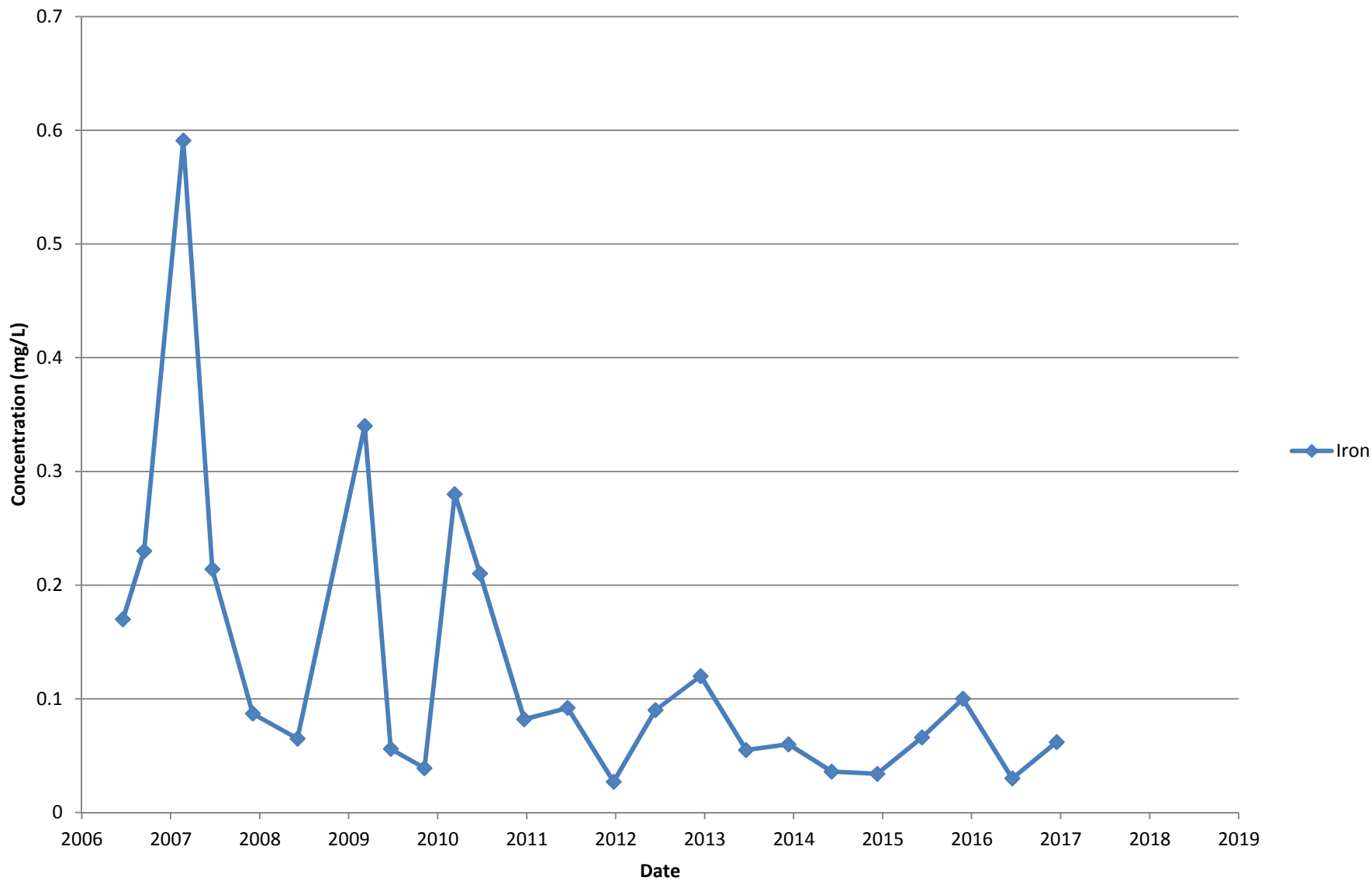
# Historical Constituent Concentrations Deep Well DW-1



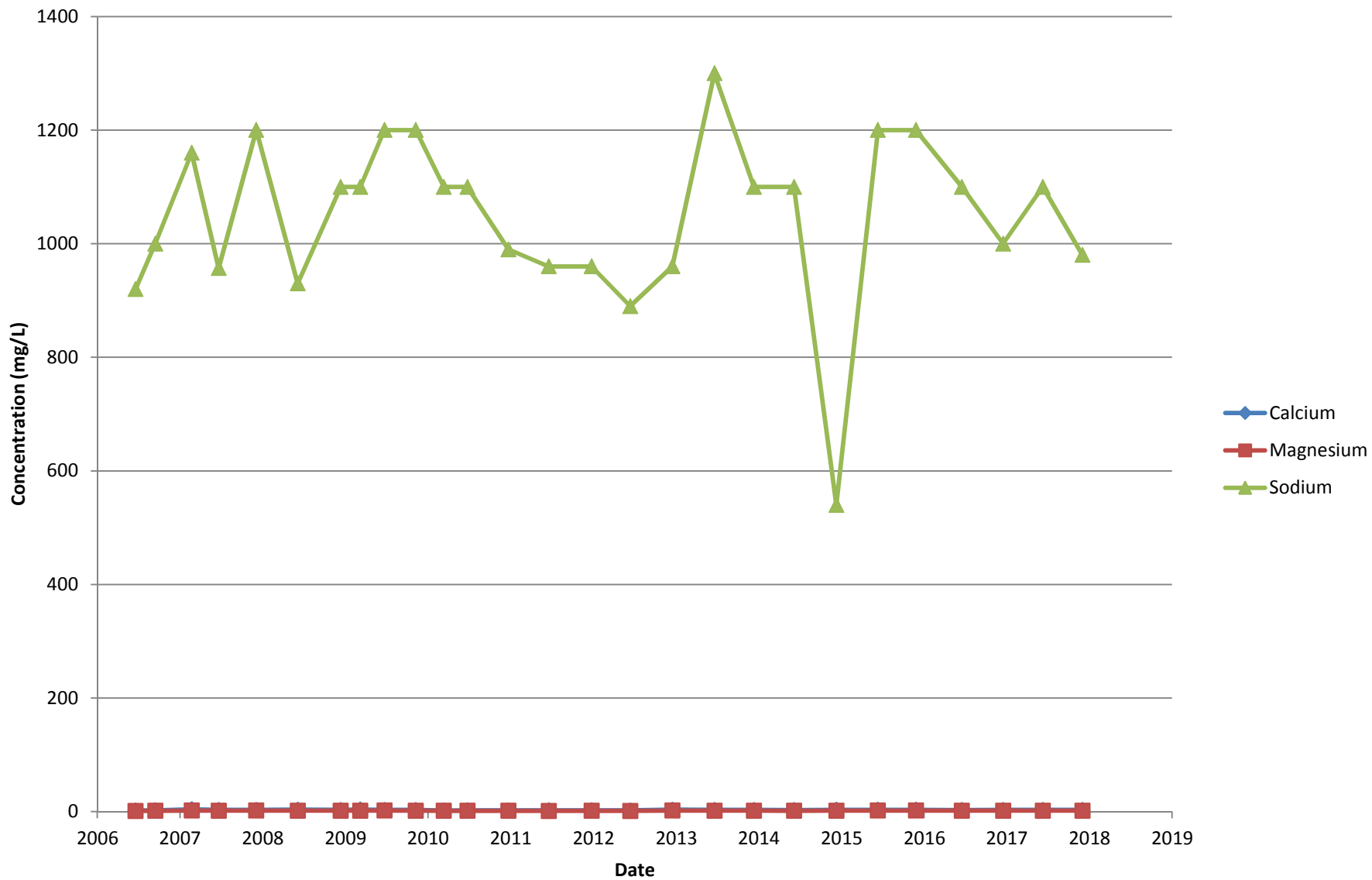
## Historical Constituent Concentrations Deep Well DW-1



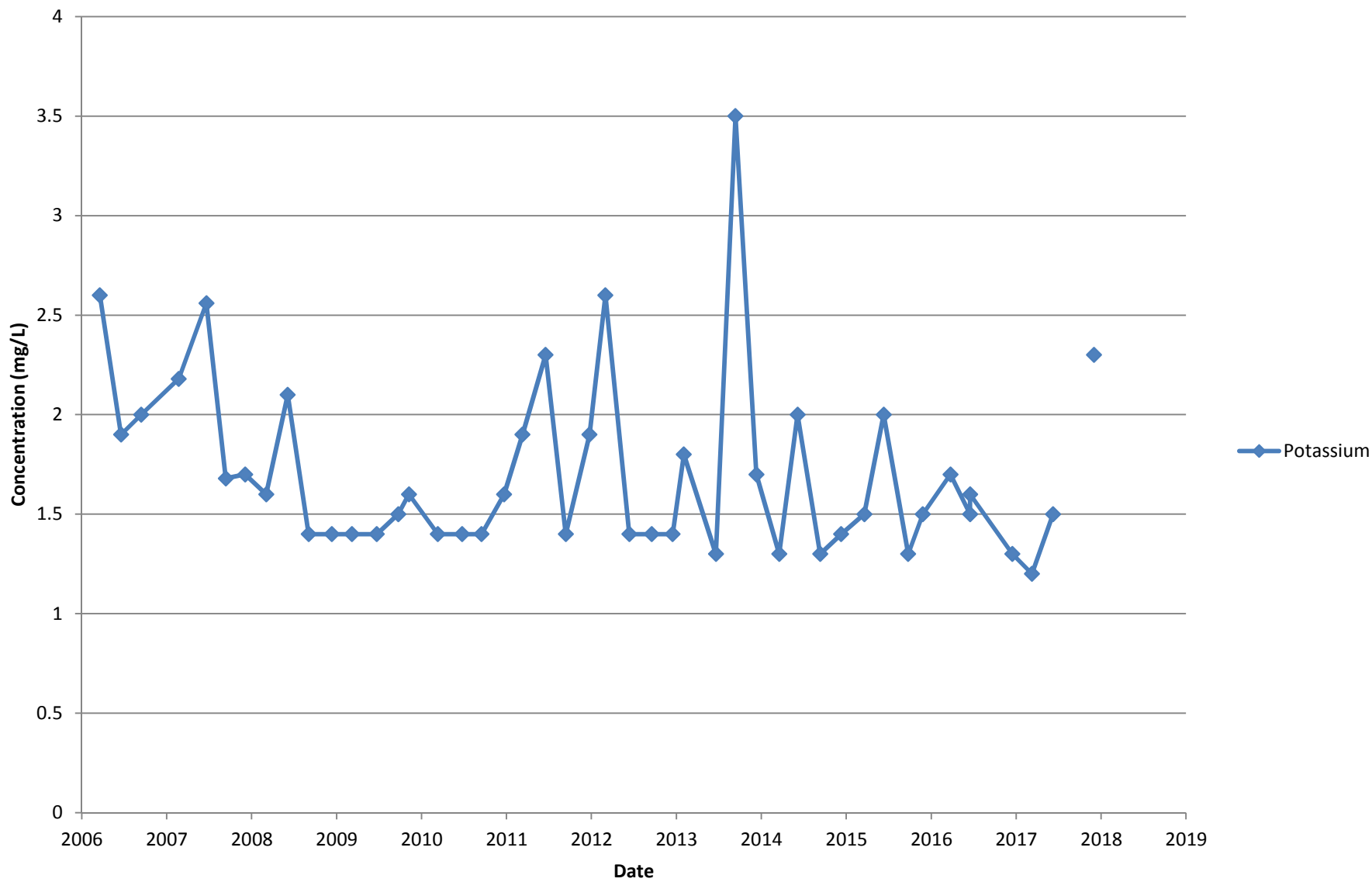
# Historical Constituent Concentrations Deep Well DW-1



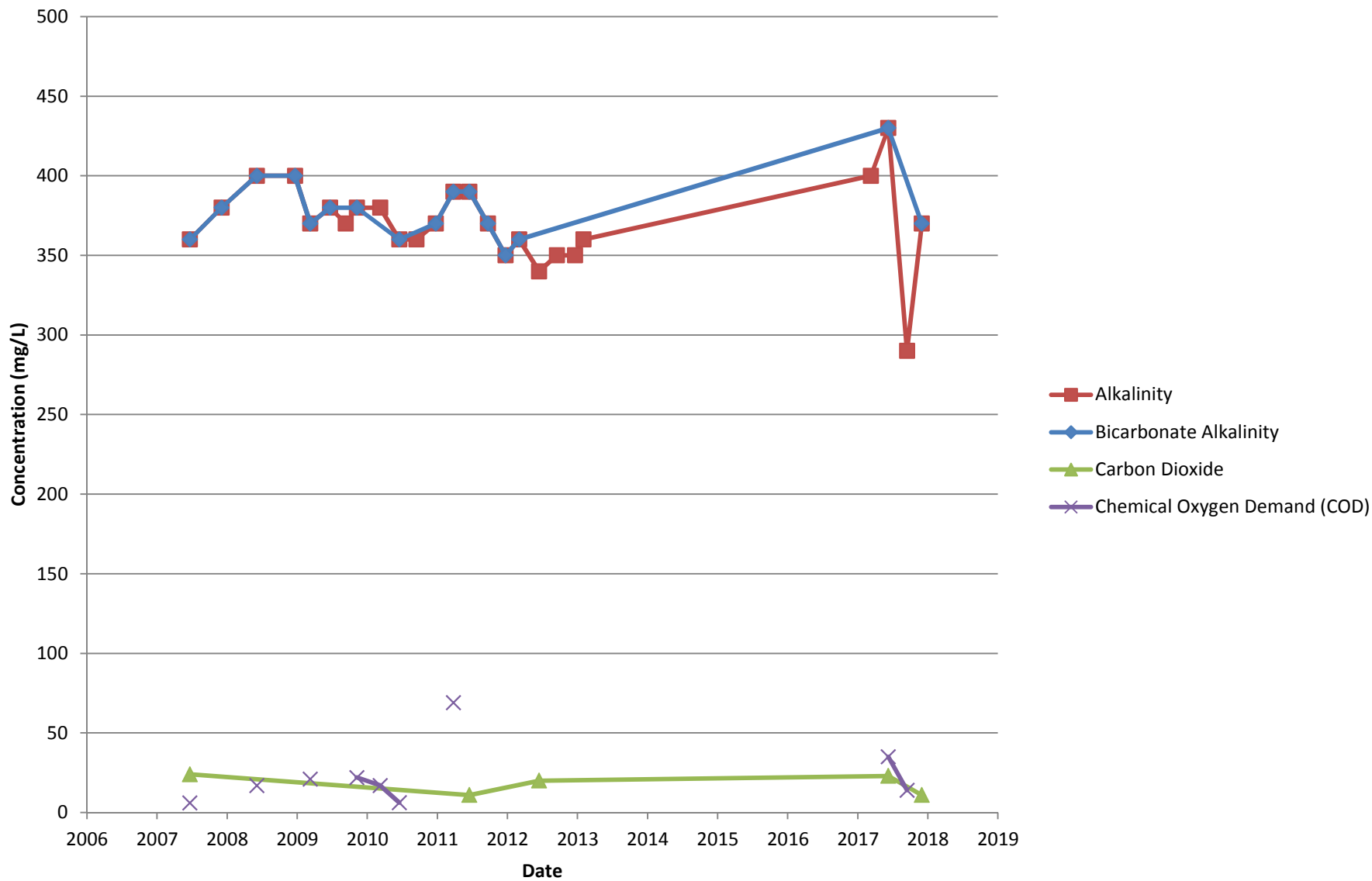
# Historical Constituent Concentrations Deep Well DW-1



# Historical Constituent Concentrations Deep Well DW-1

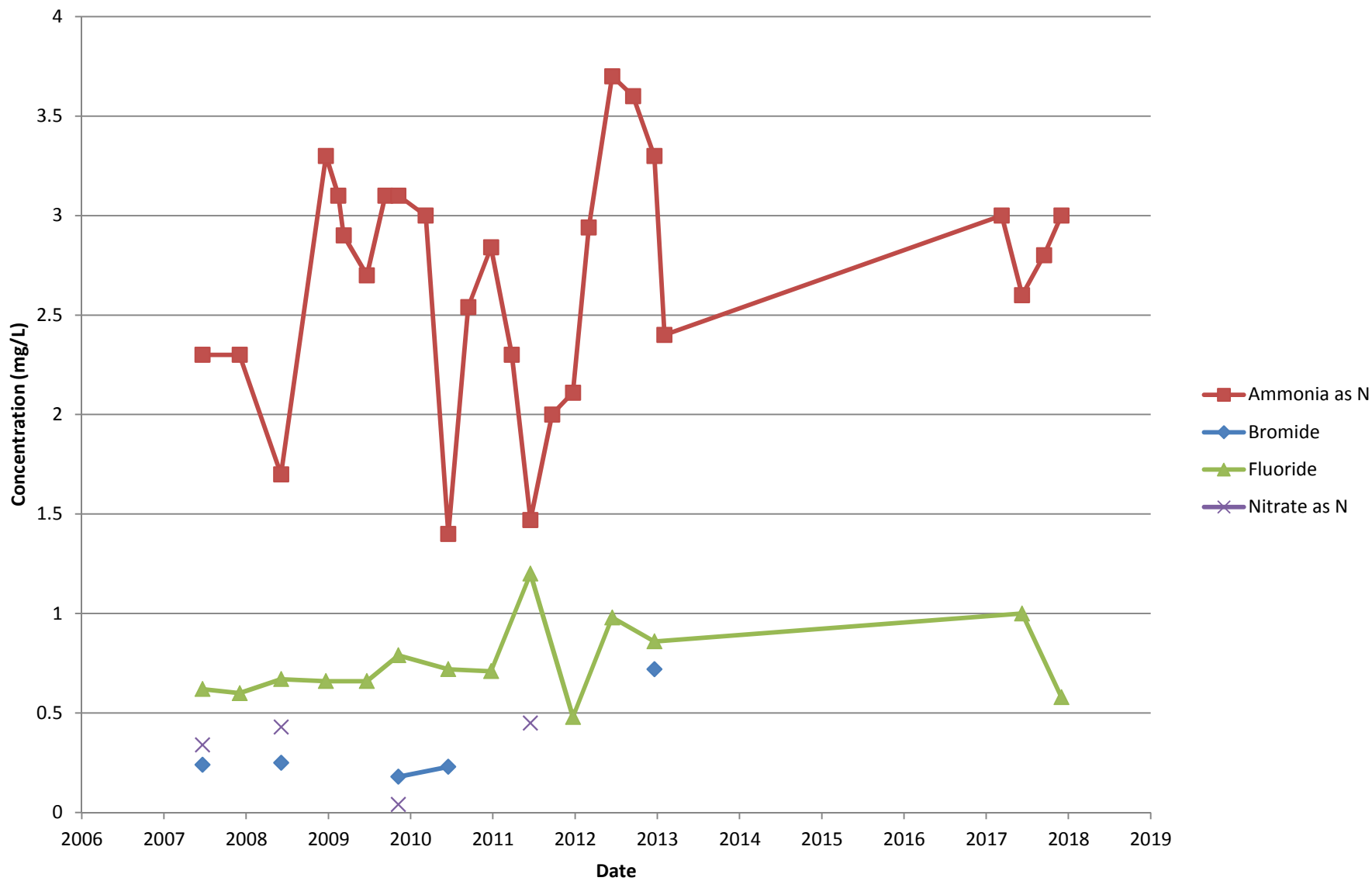


# Historical Constituent Concentrations Deep Well DW-2

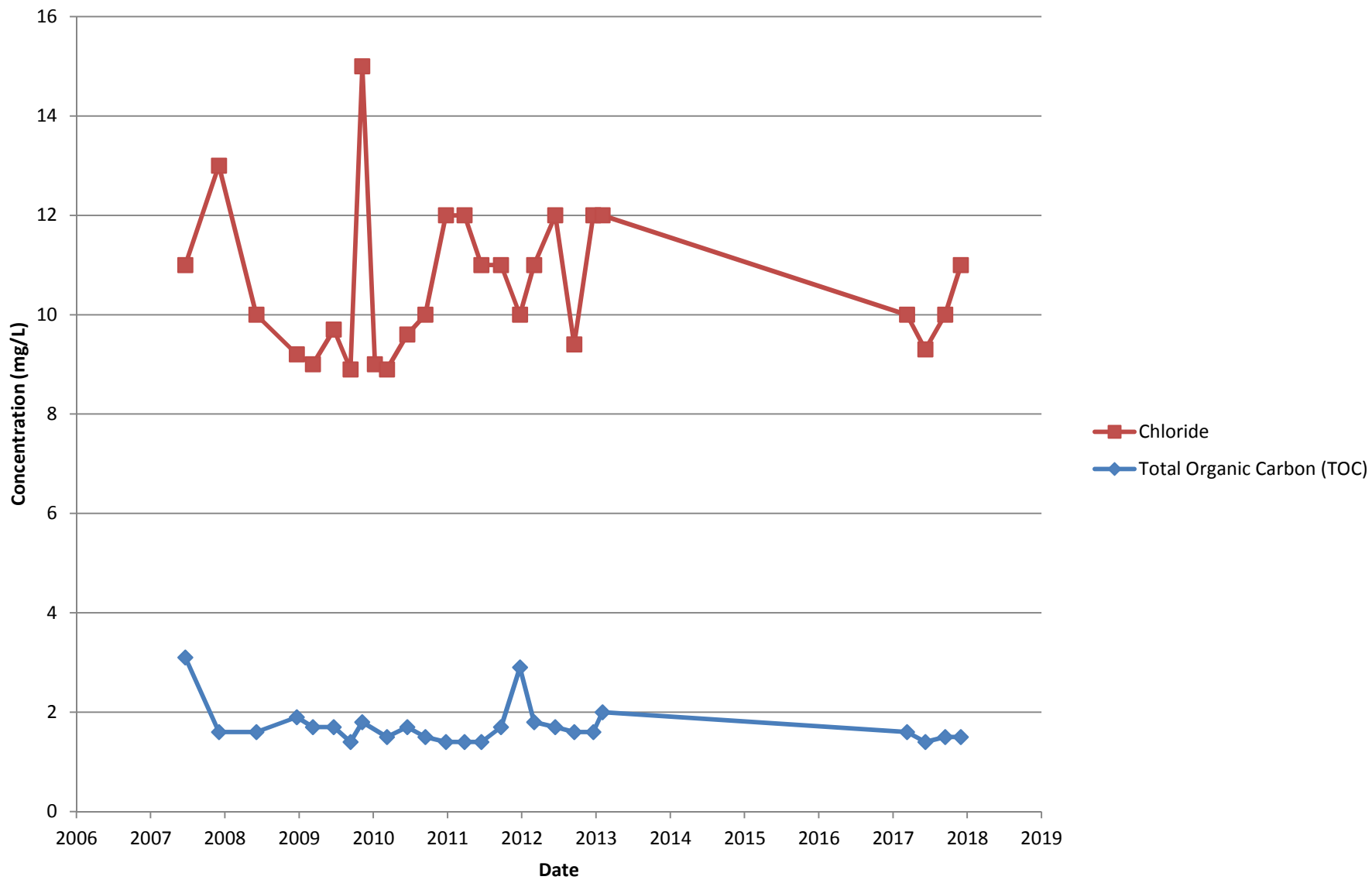




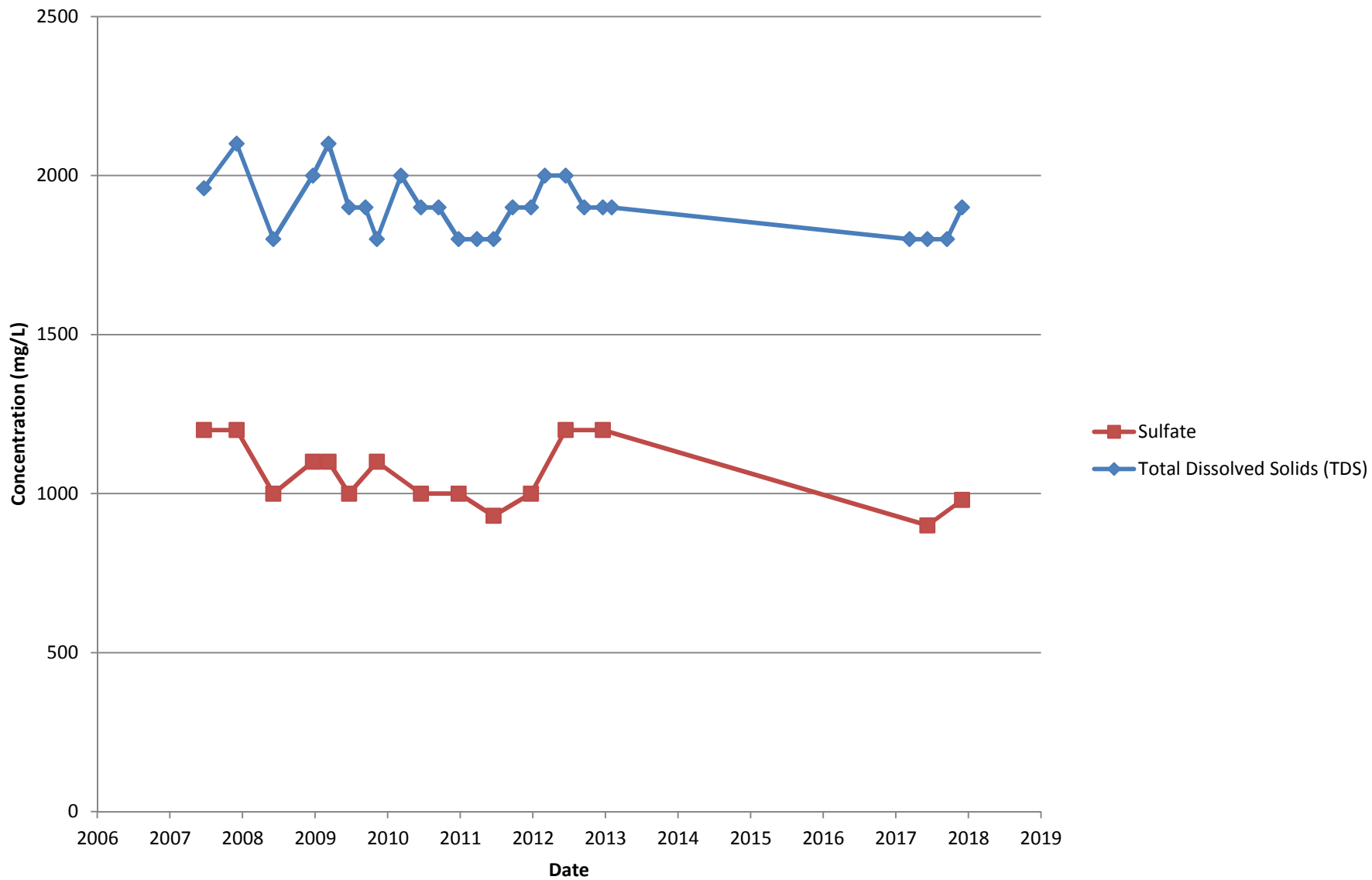
# Historical Constituent Concentrations Deep Well DW-2



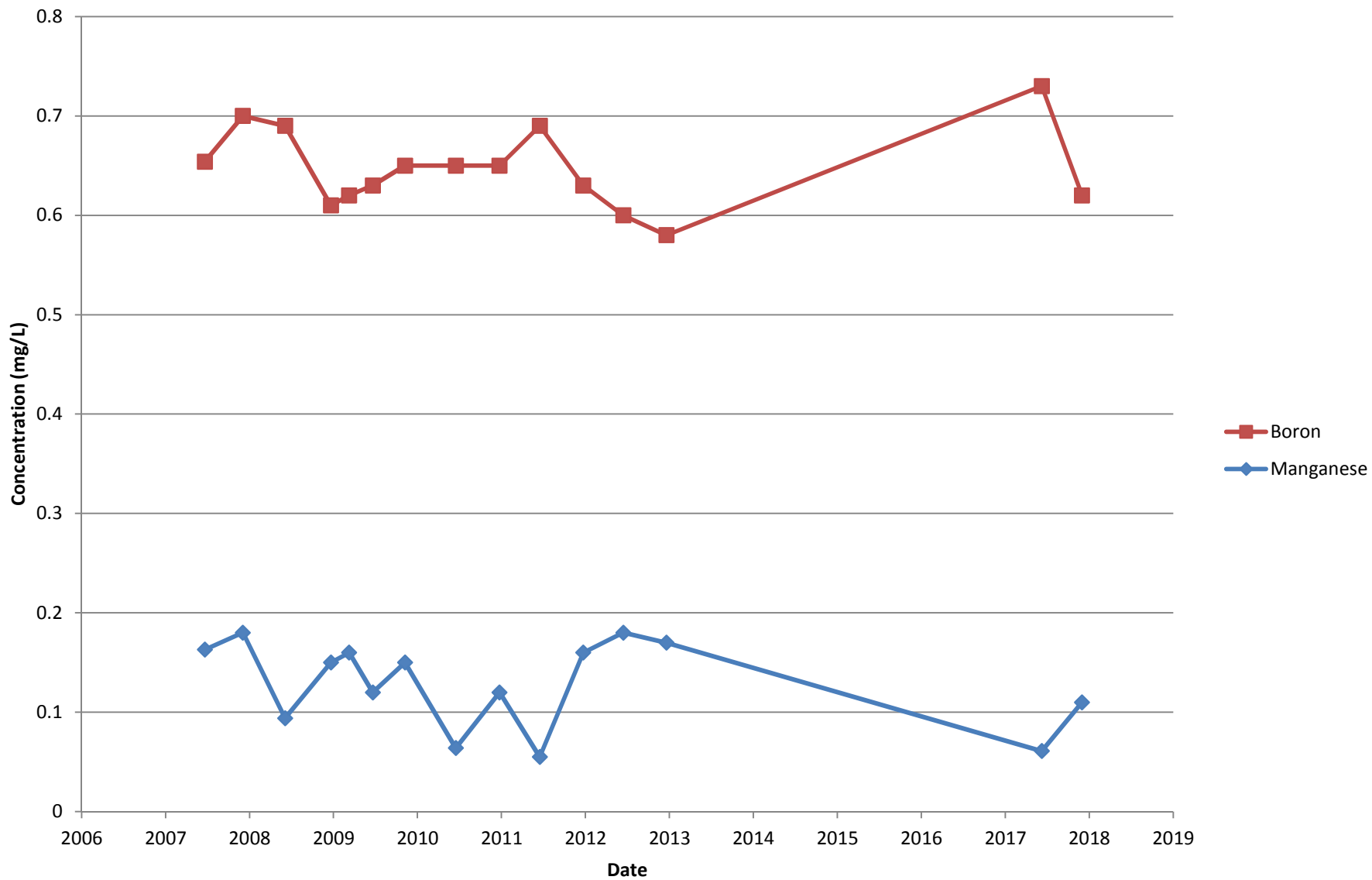
# Historical Constituent Concentrations Deep Well DW-2



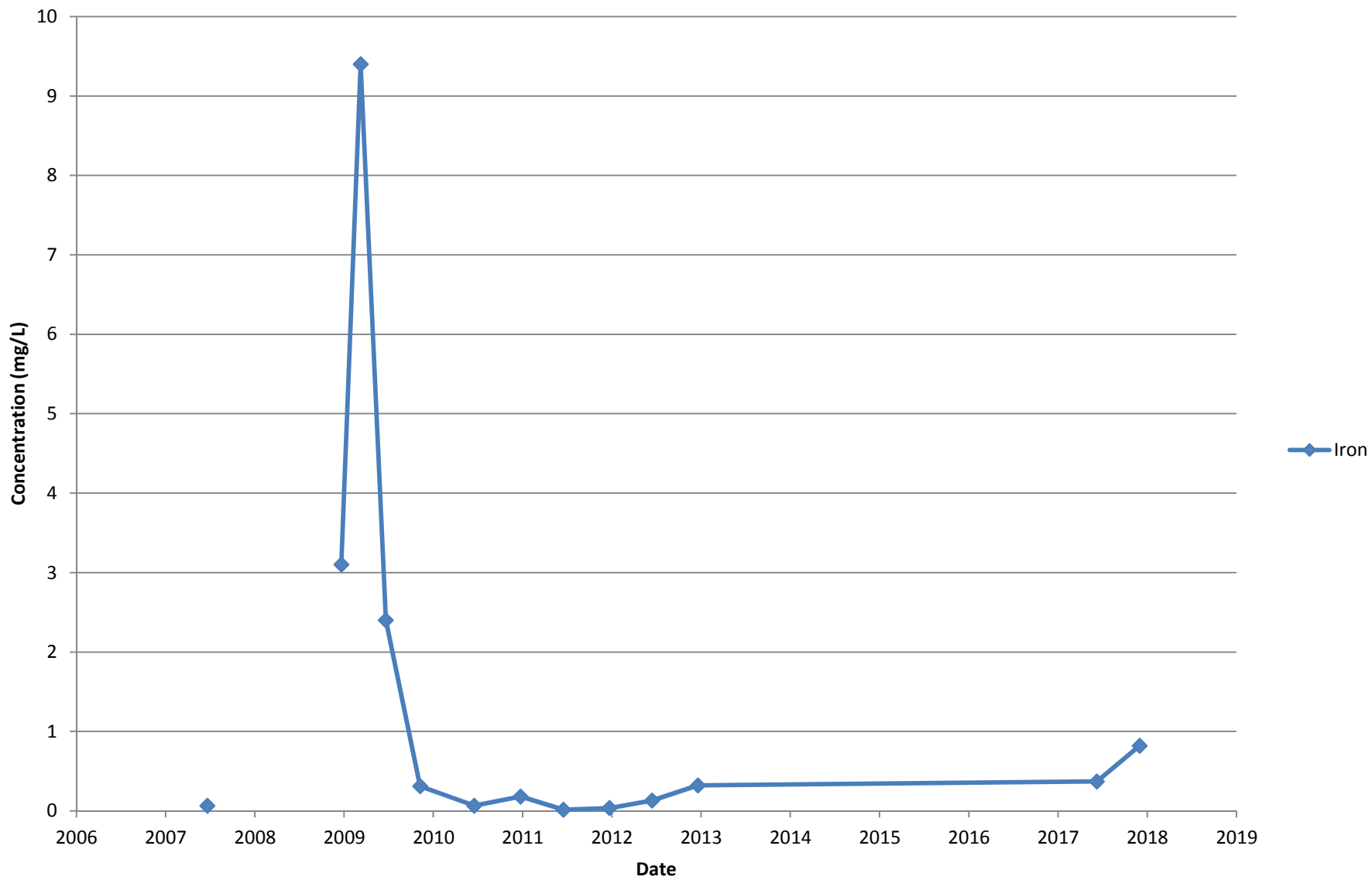
# Historical Constituent Concentrations Deep Well DW-2



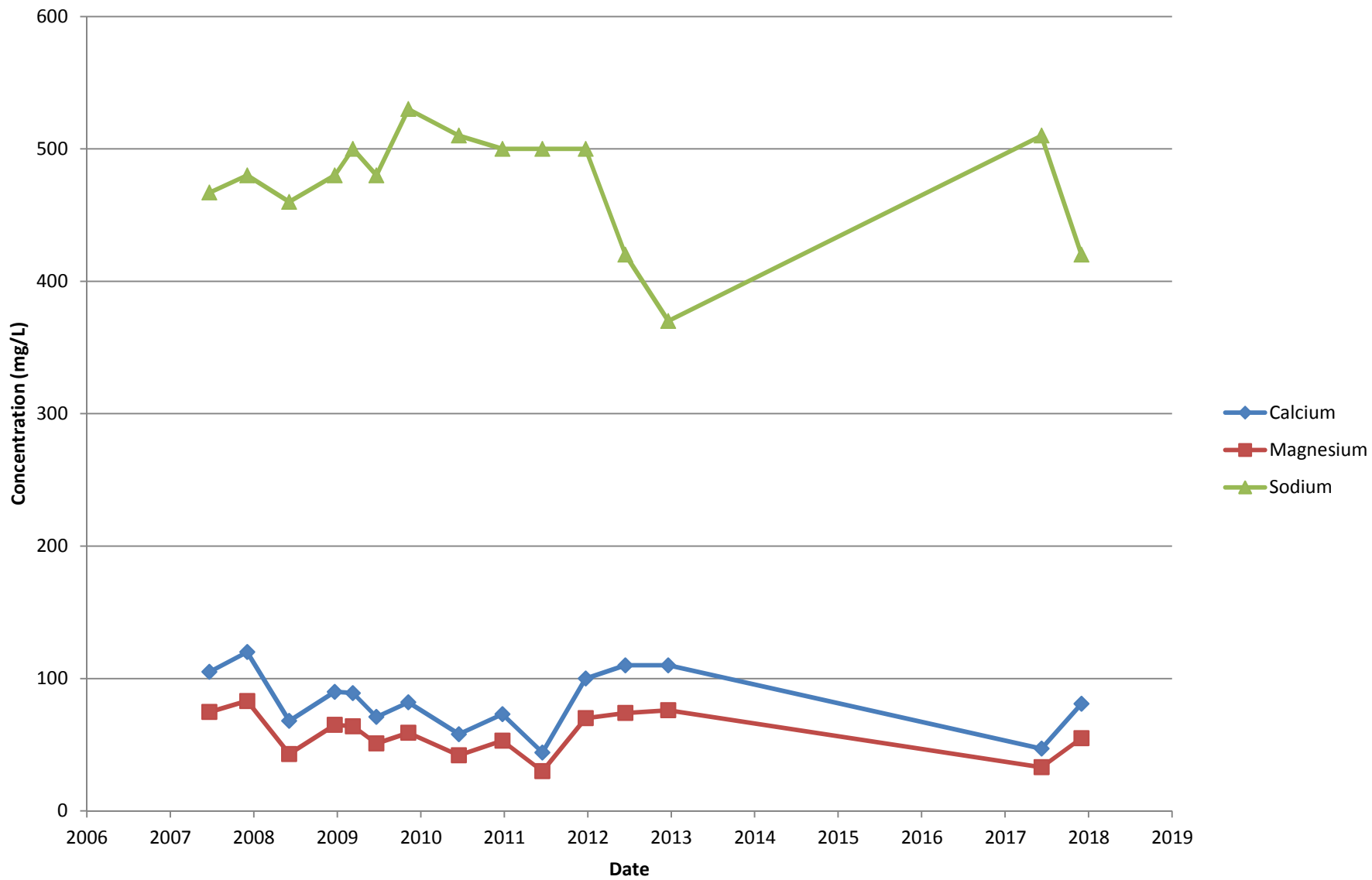
## Historical Constituent Concentrations Deep Well DW-2



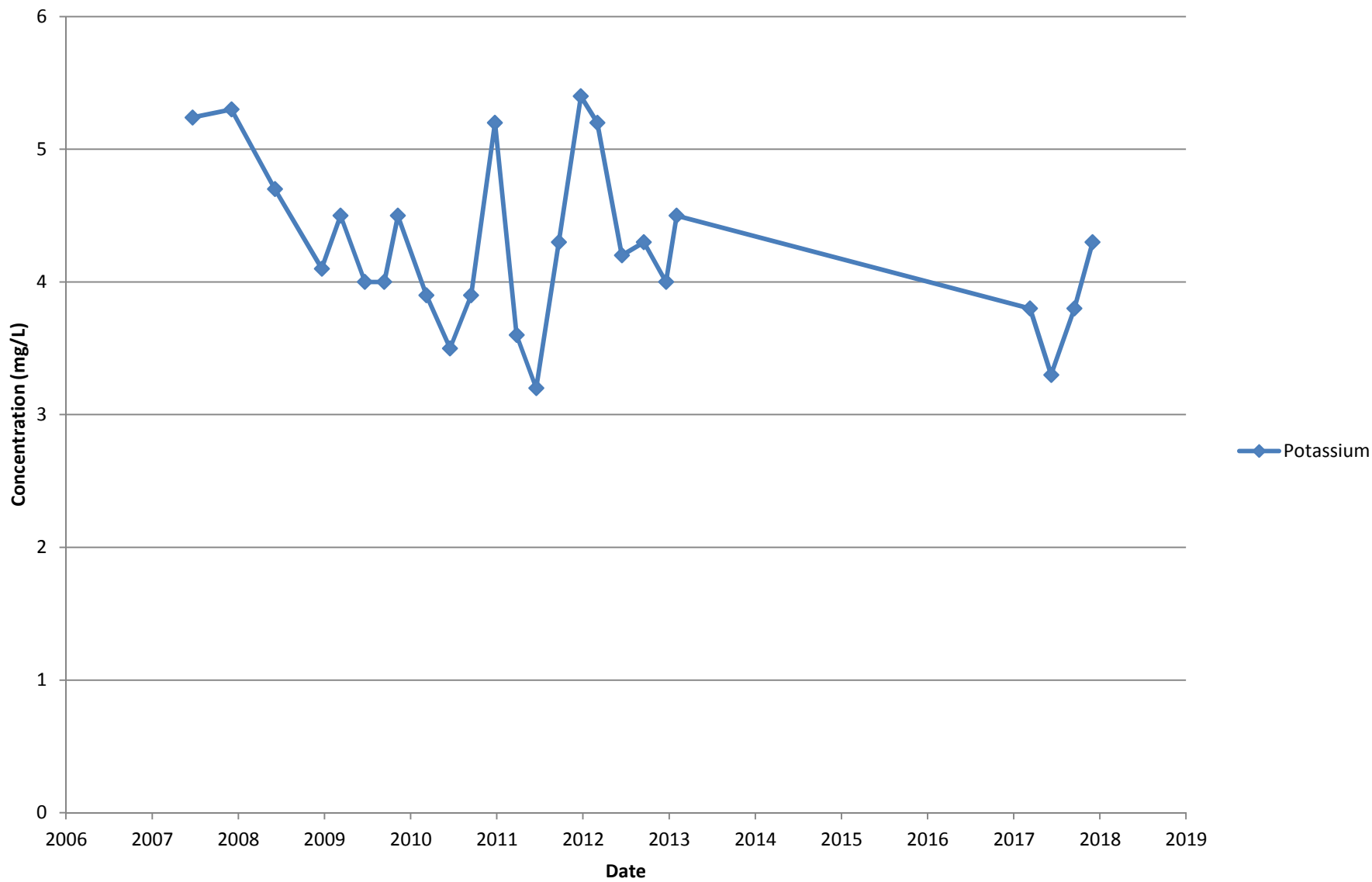
# Historical Constituent Concentrations Deep Well DW-2



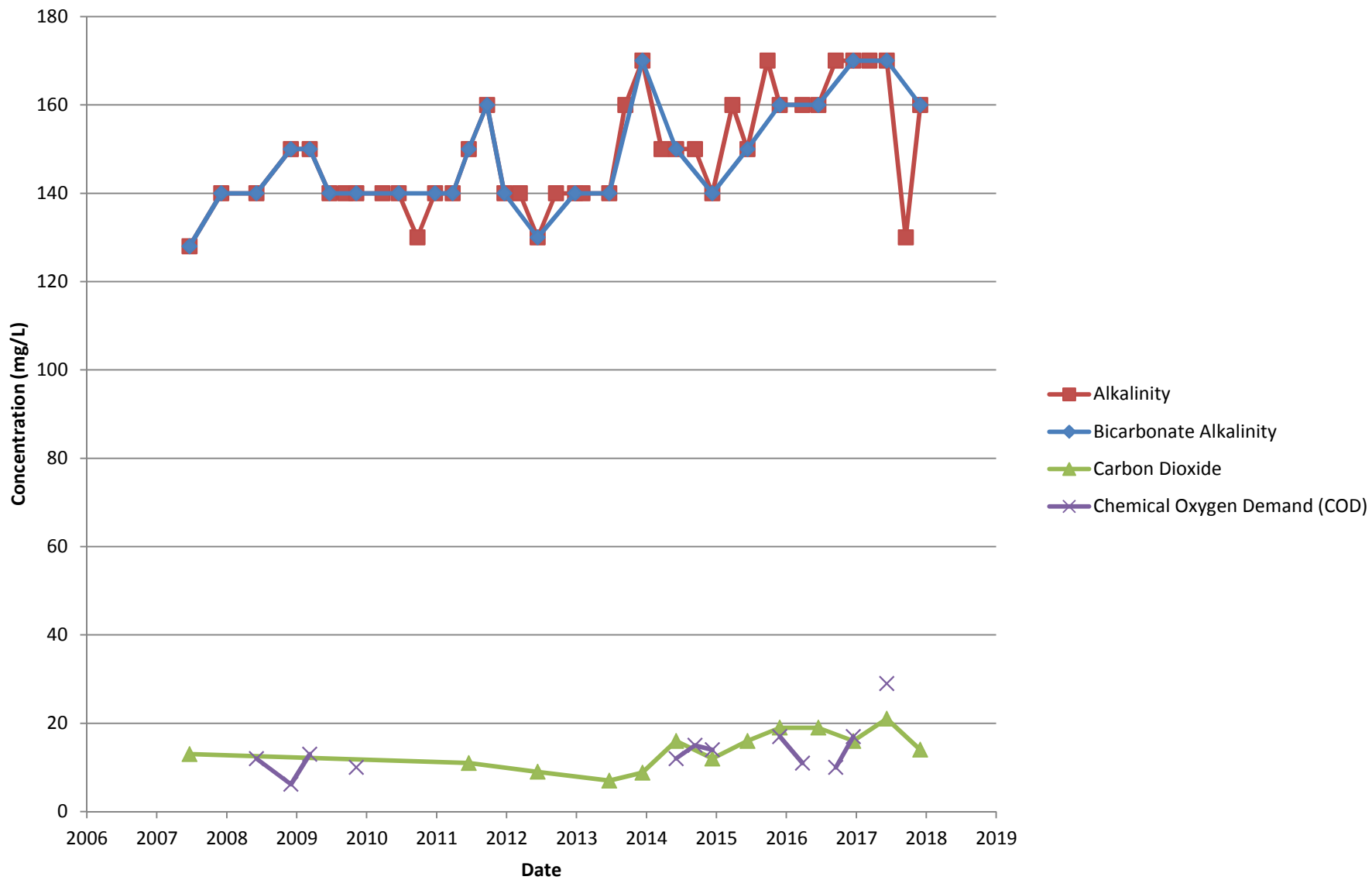
# Historical Constituent Concentrations Deep Well DW-2



# Historical Constituent Concentrations Deep Well DW-2

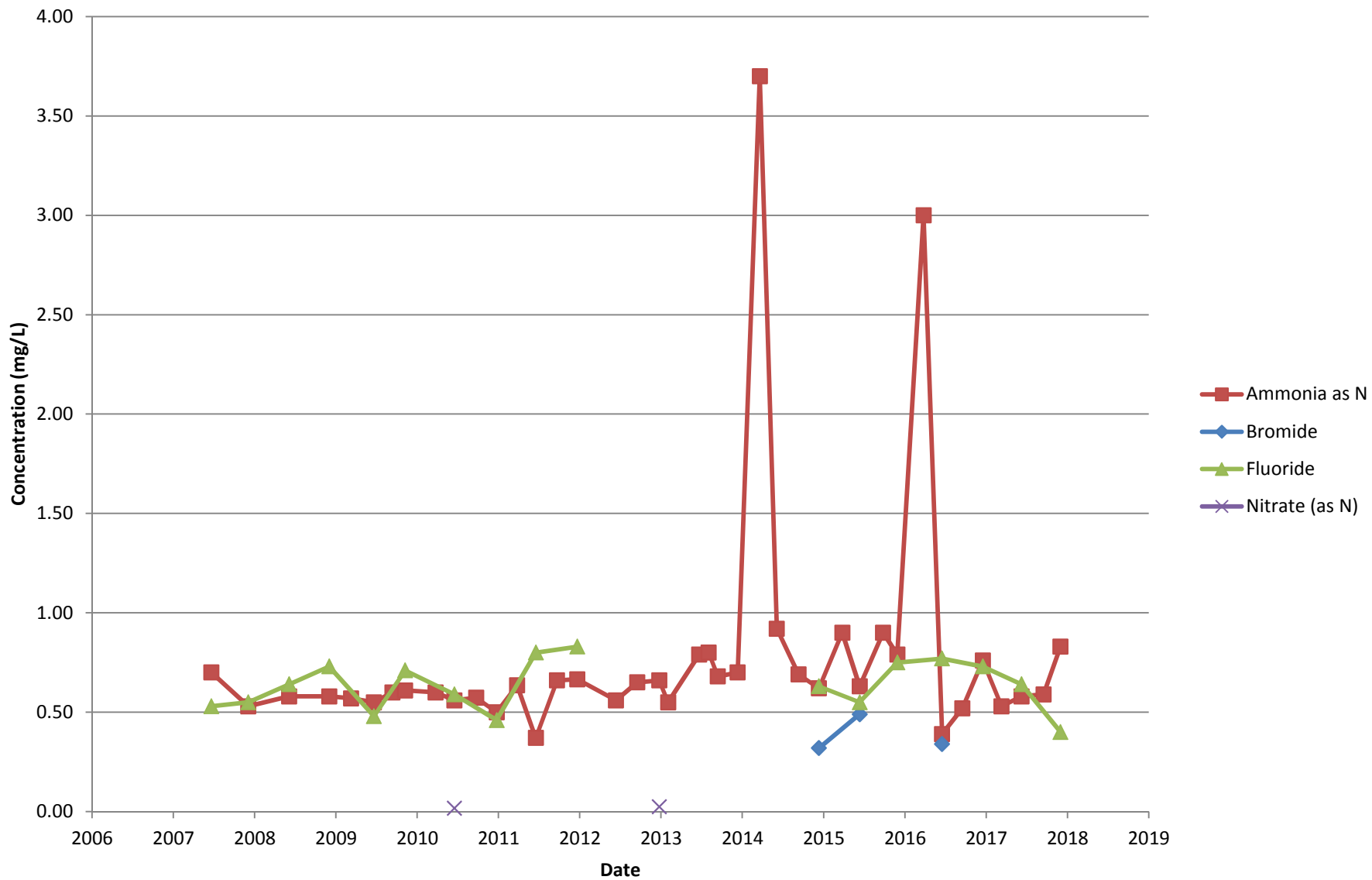


# Historical Constituent Concentrations Deep Well DW-3

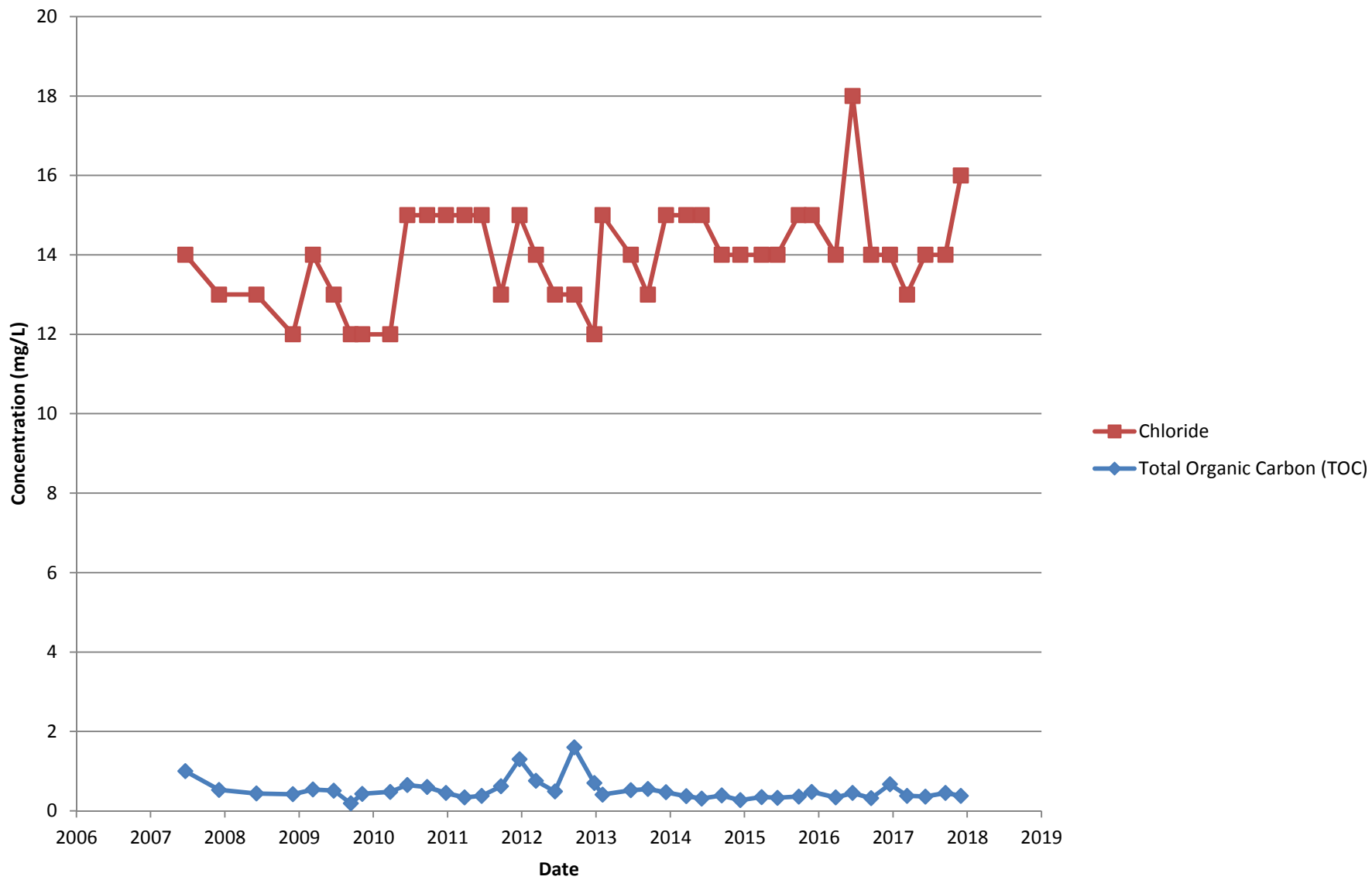




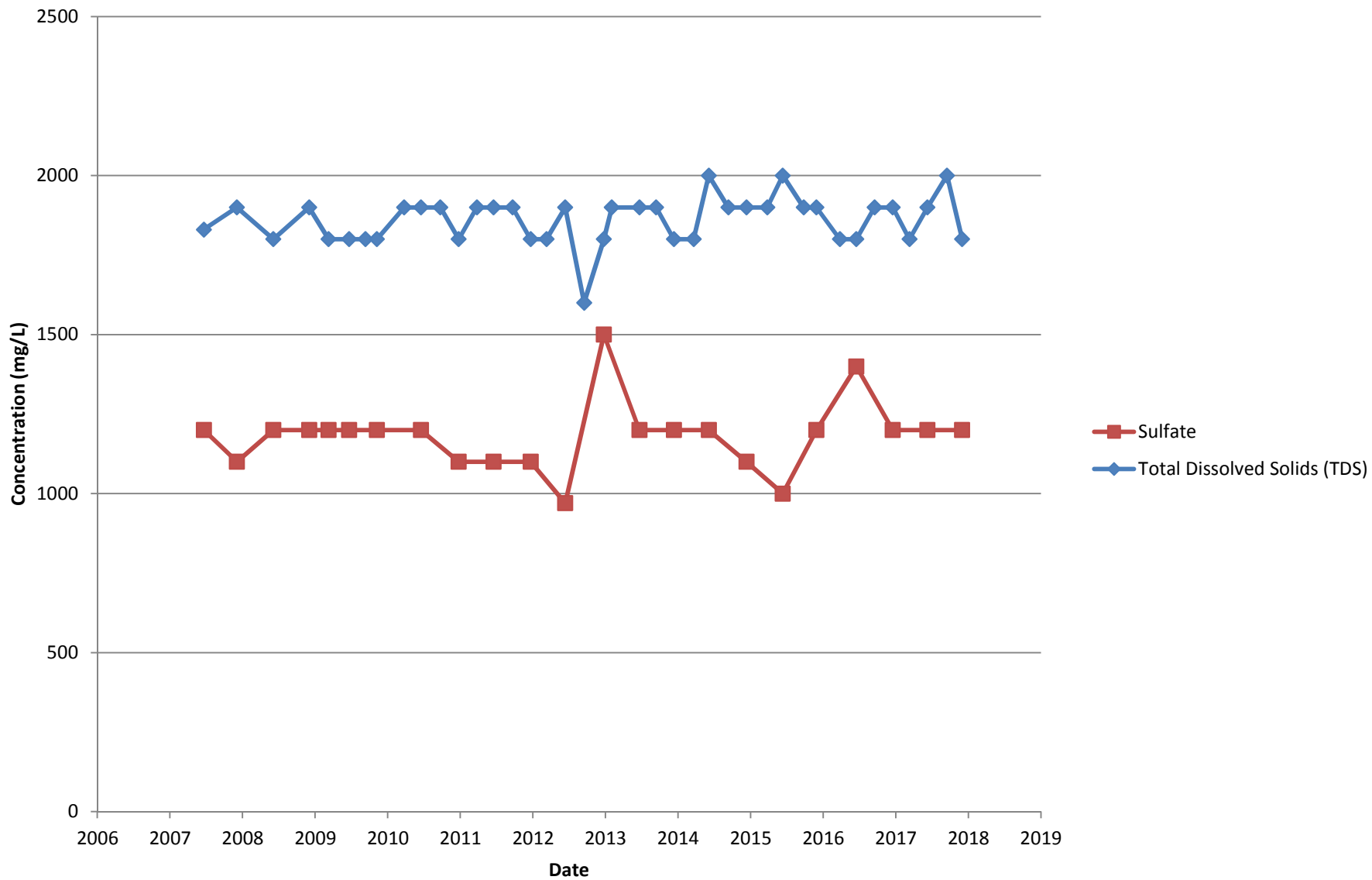
# Historical Constituent Concentrations Deep Well DW-3



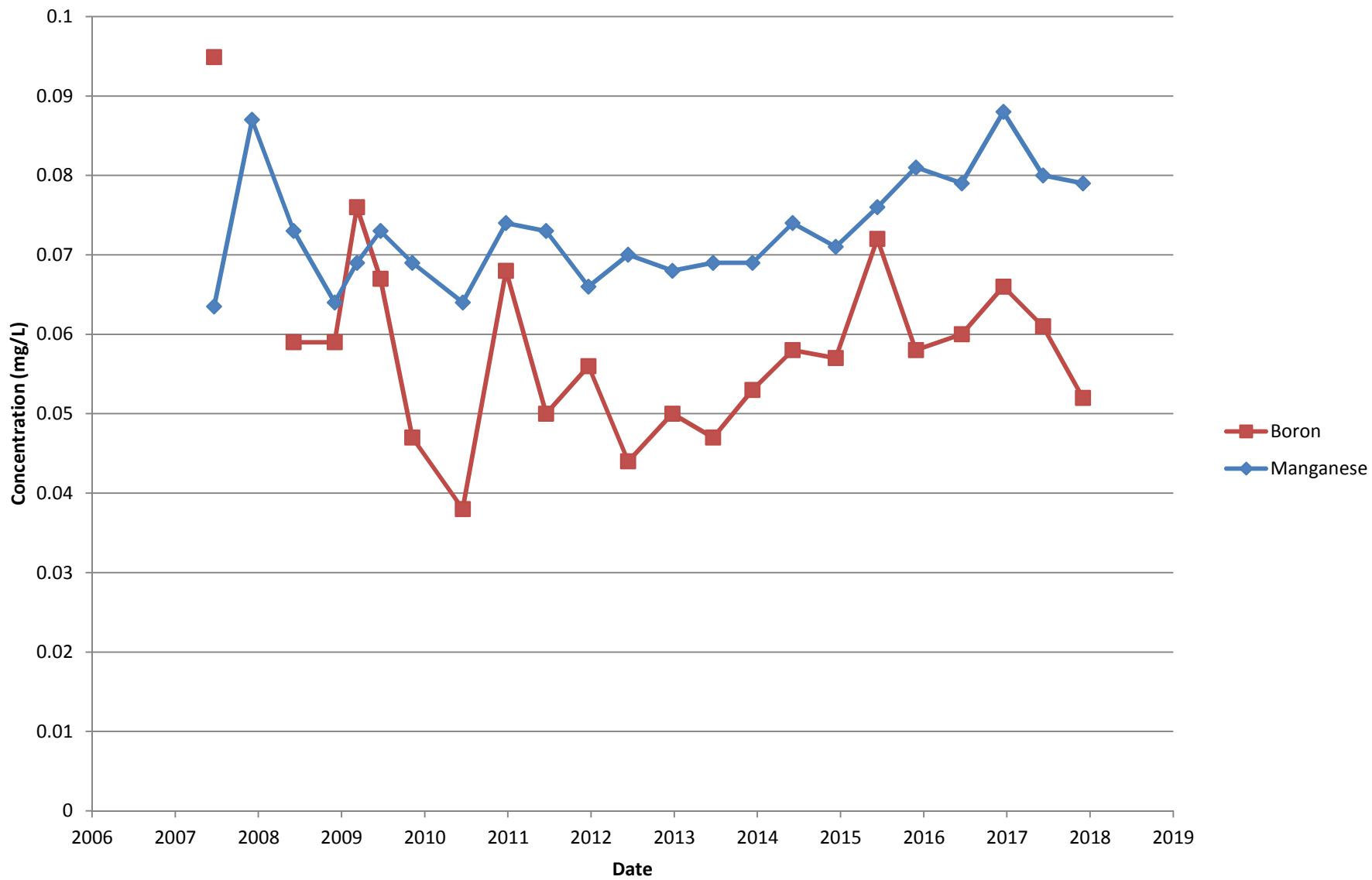
# Historical Constituent Concentrations Deep Well DW-3



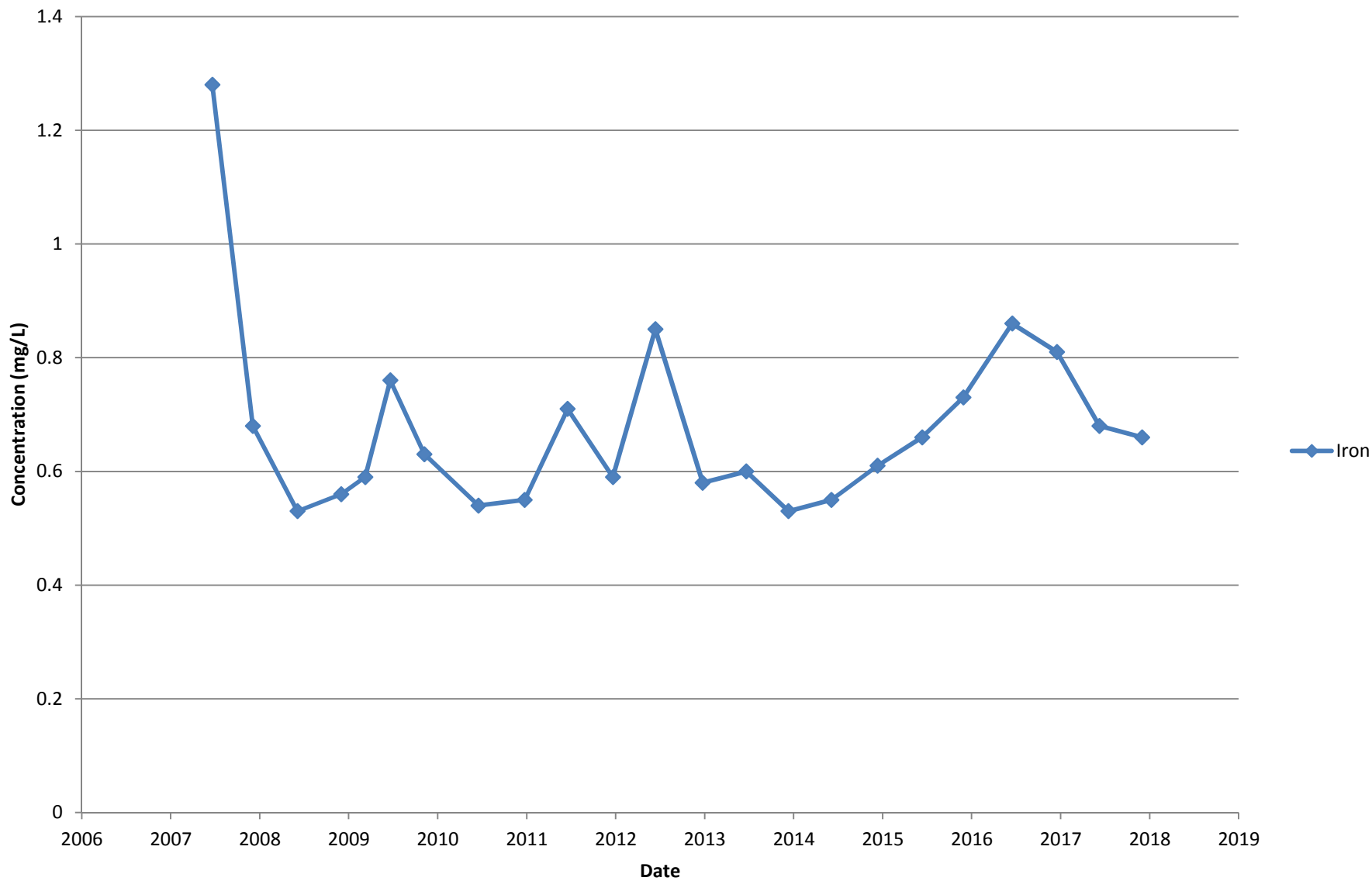
# Historical Constituent Concentrations Deep Well DW-3



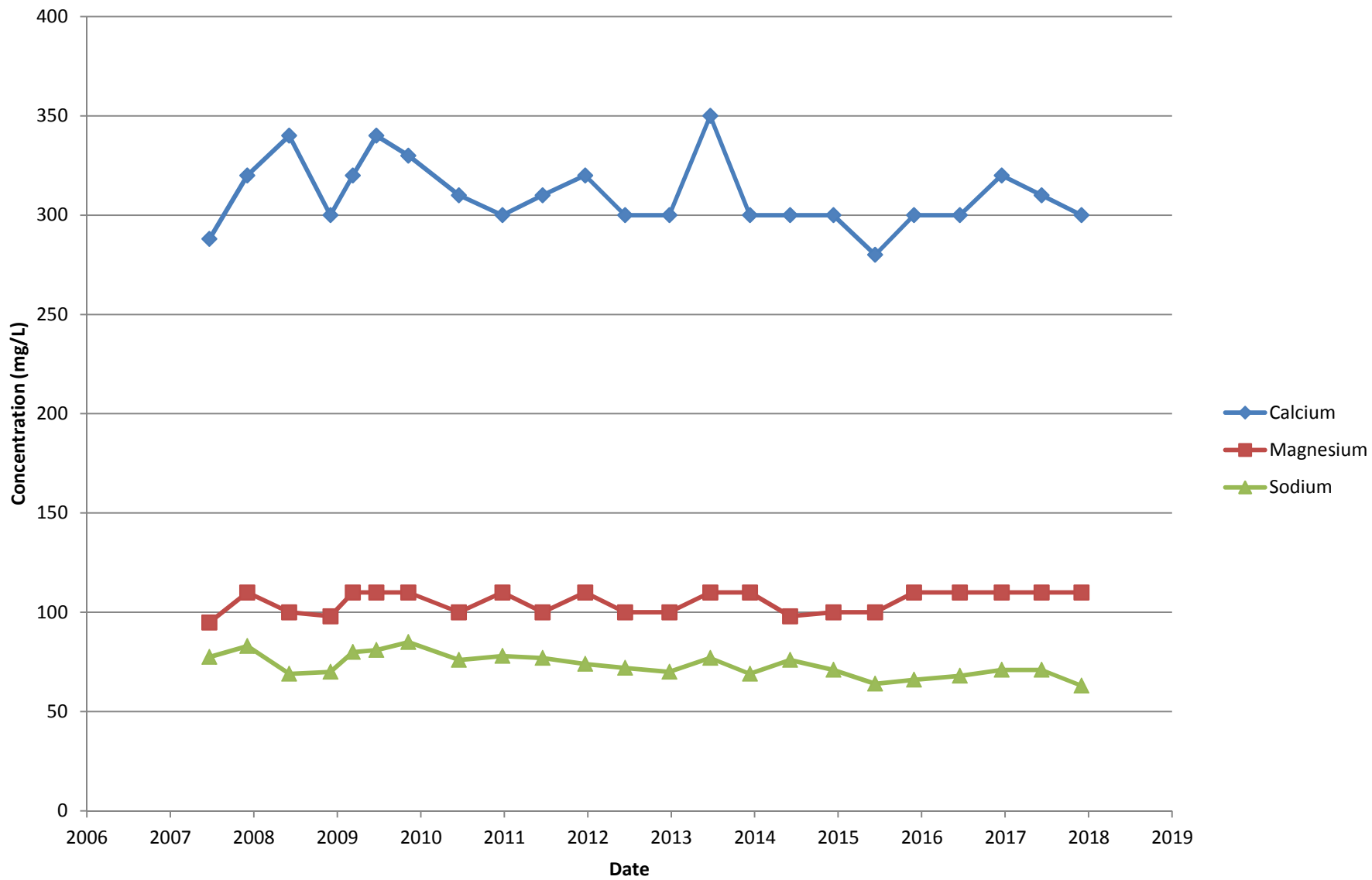
## Historical Constituent Concentrations Deep Well DW-3



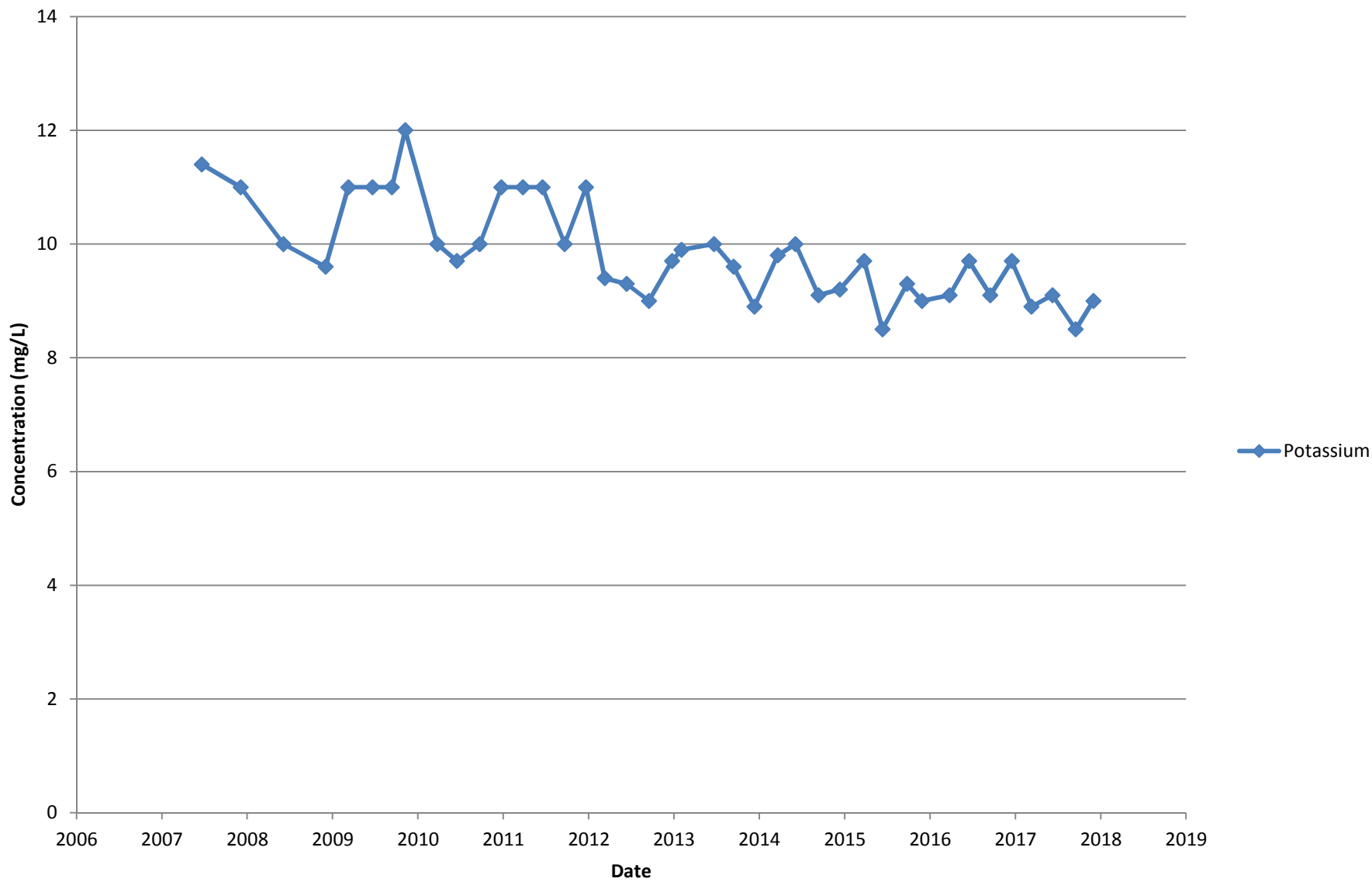
# Historical Constituent Concentrations Deep Well DW-3



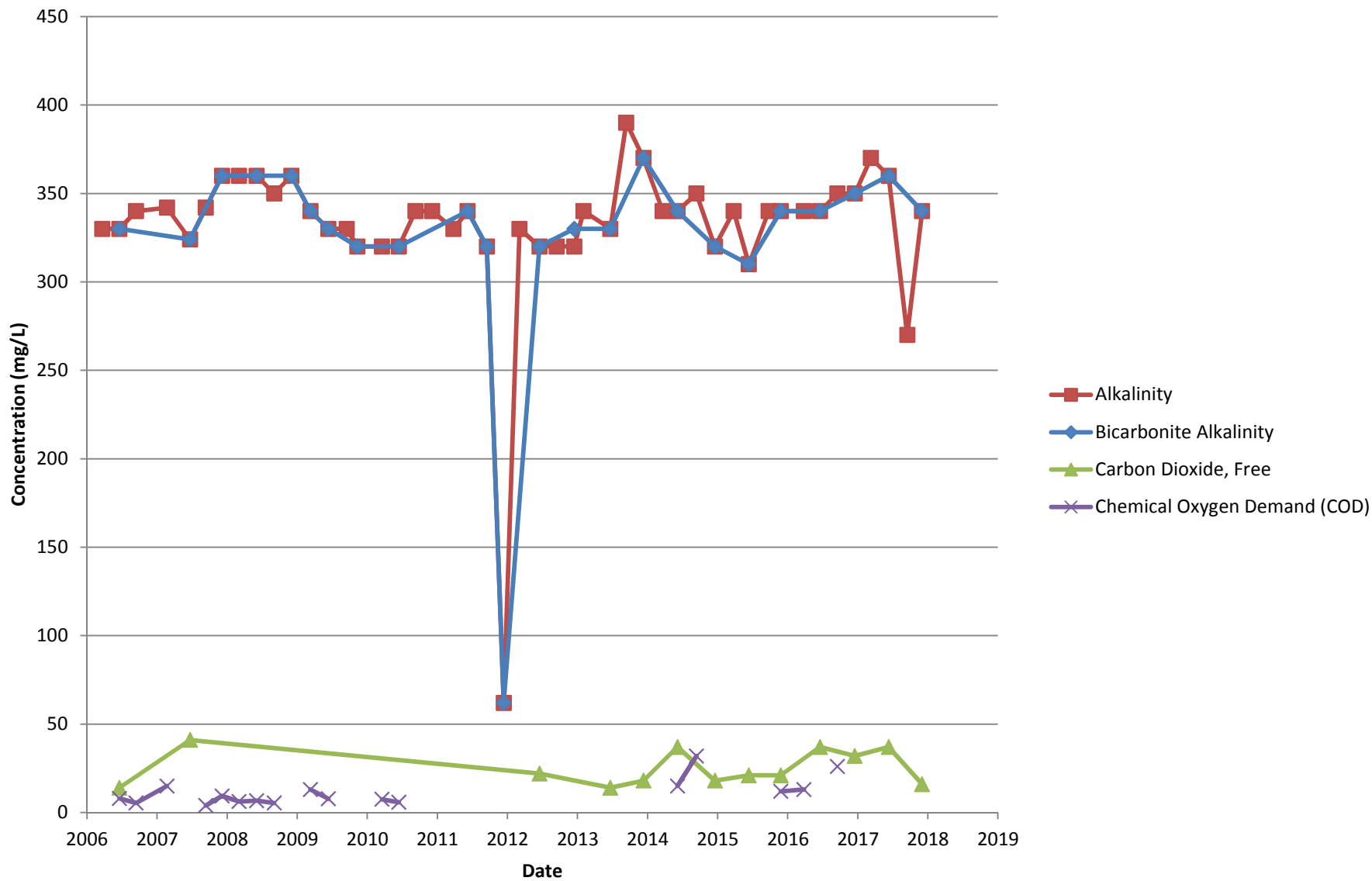
# Historical Constituent Concentrations Deep Well DW-3



# Historical Constituent Concentrations Deep Well DW-3

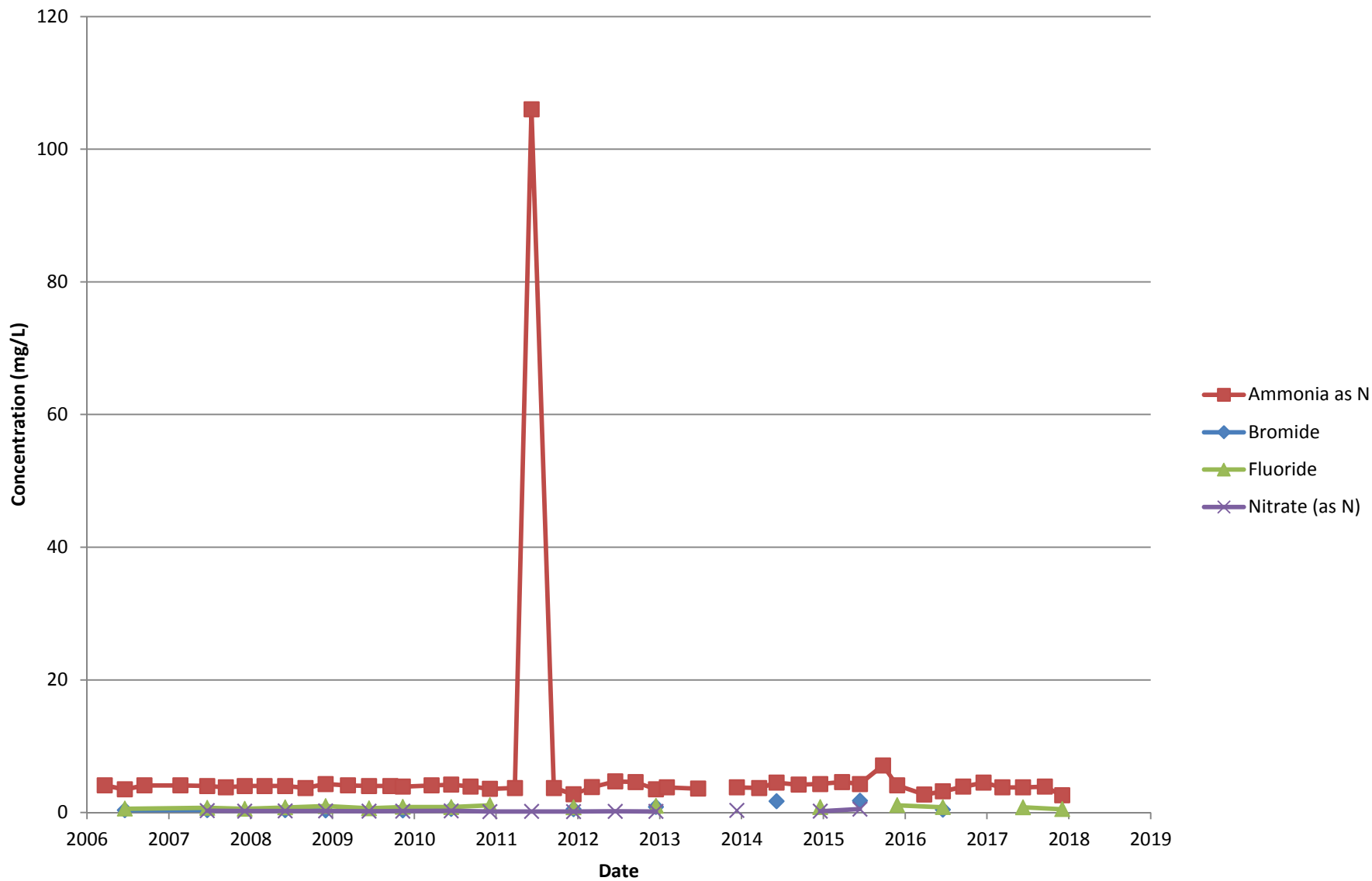


# Historical Constituent Concentrations Deep Well DW-4

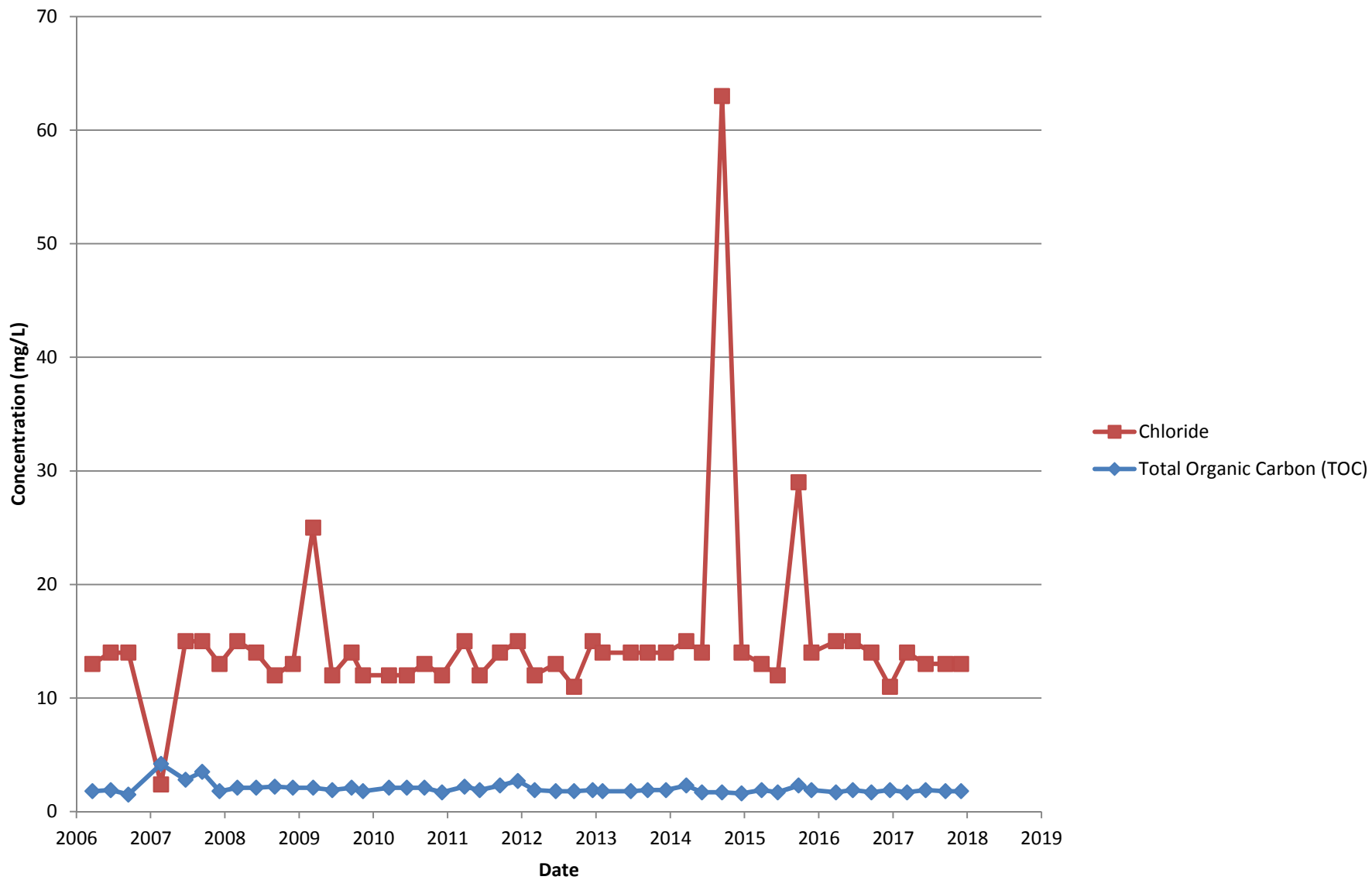




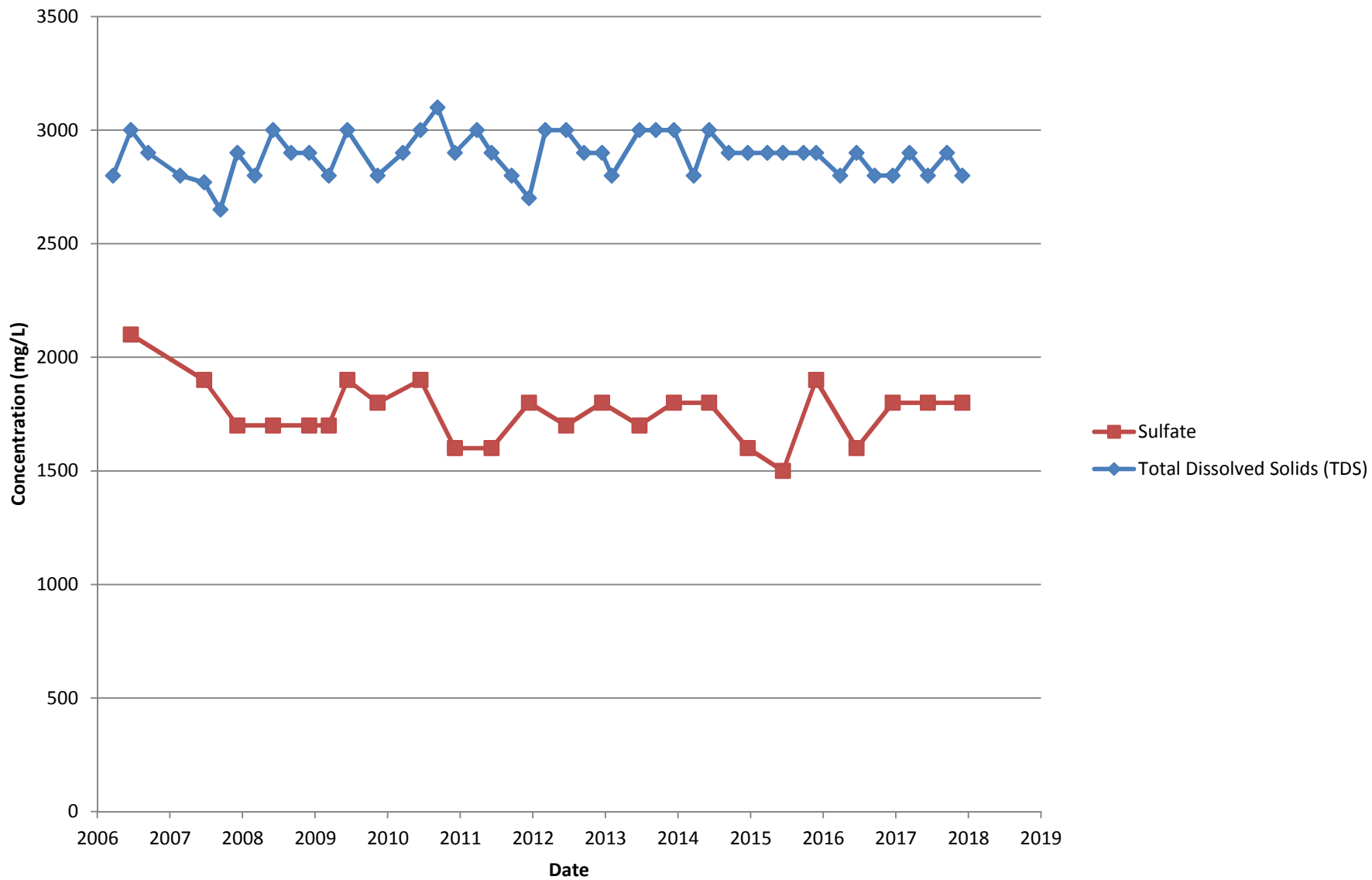
# Historical Constituent Concentrations Deep Well DW-4



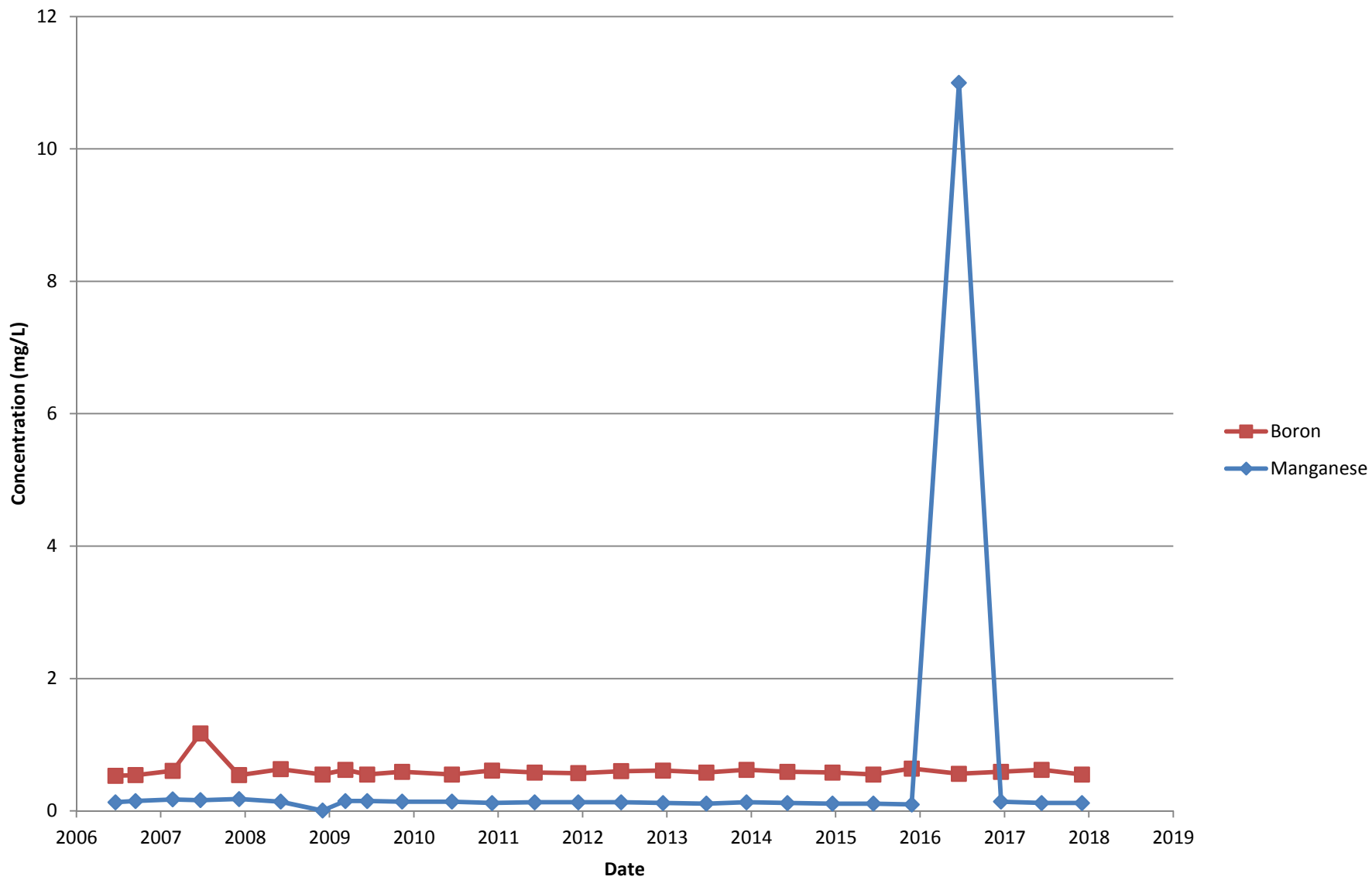
# Historical Constituent Concentrations Deep Well DW-4



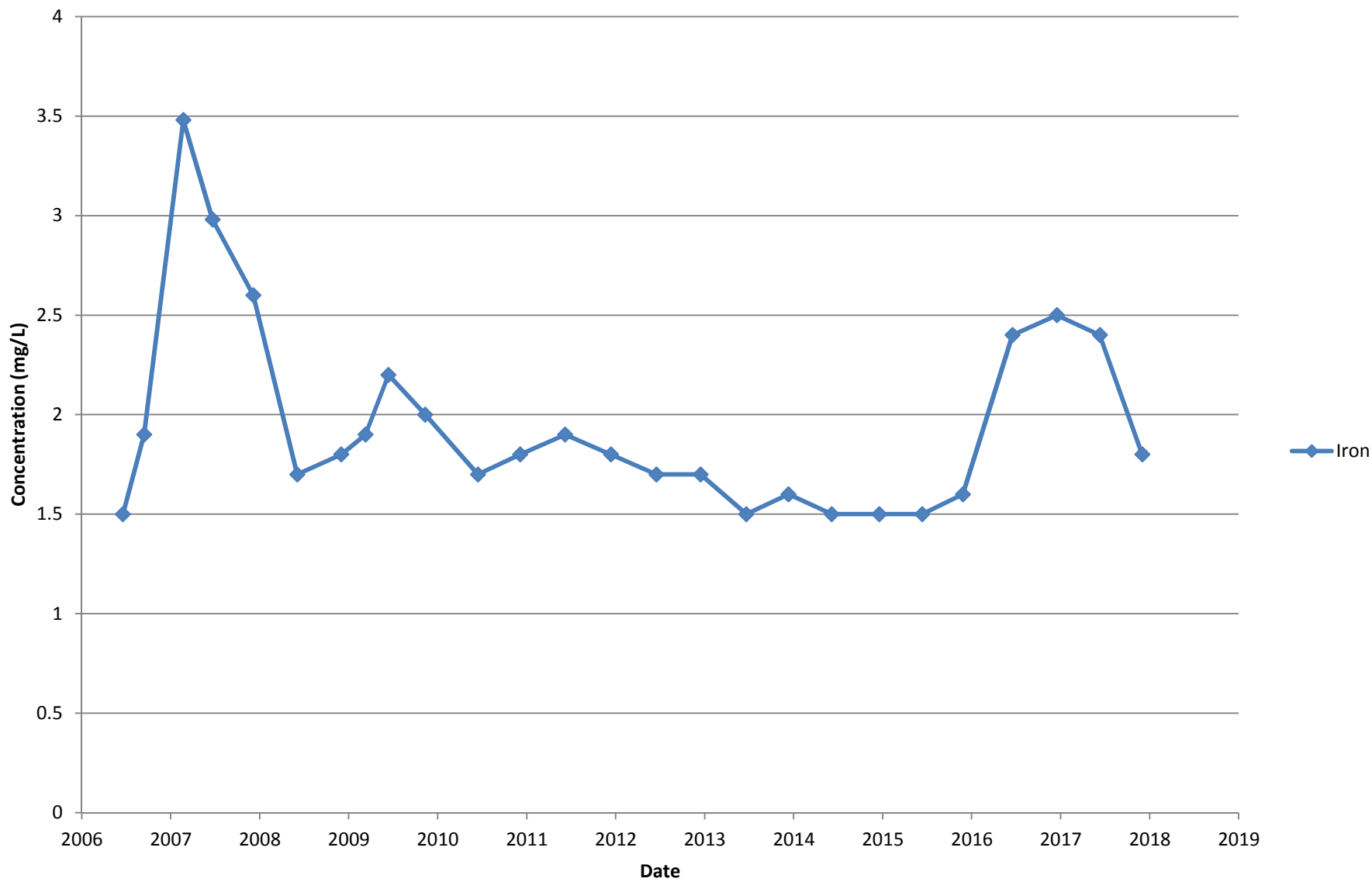
## Historical Constituent Concentrations Deep Well DW-4



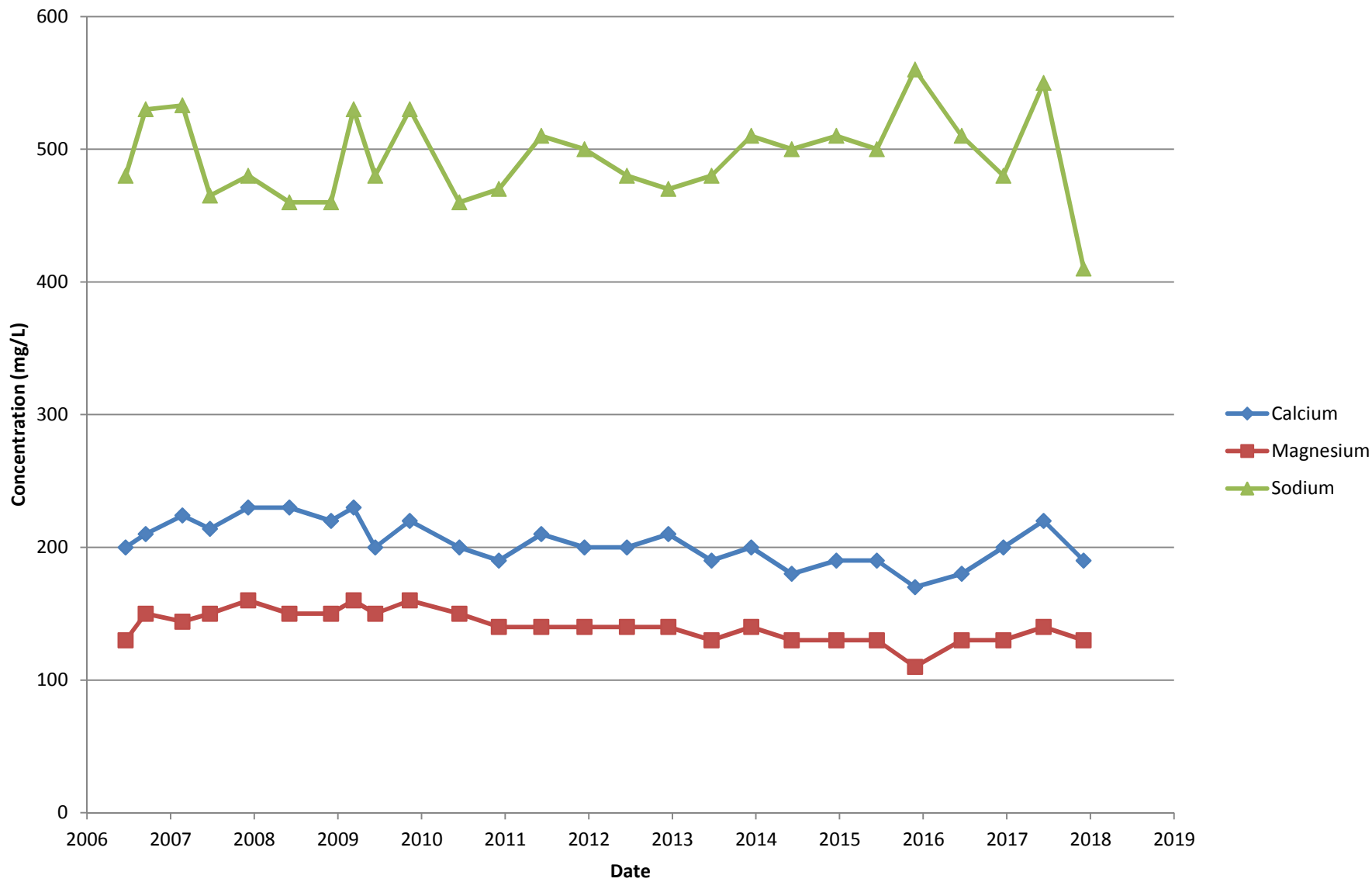
# Historical Constituent Concentrations Deep Well DW-4



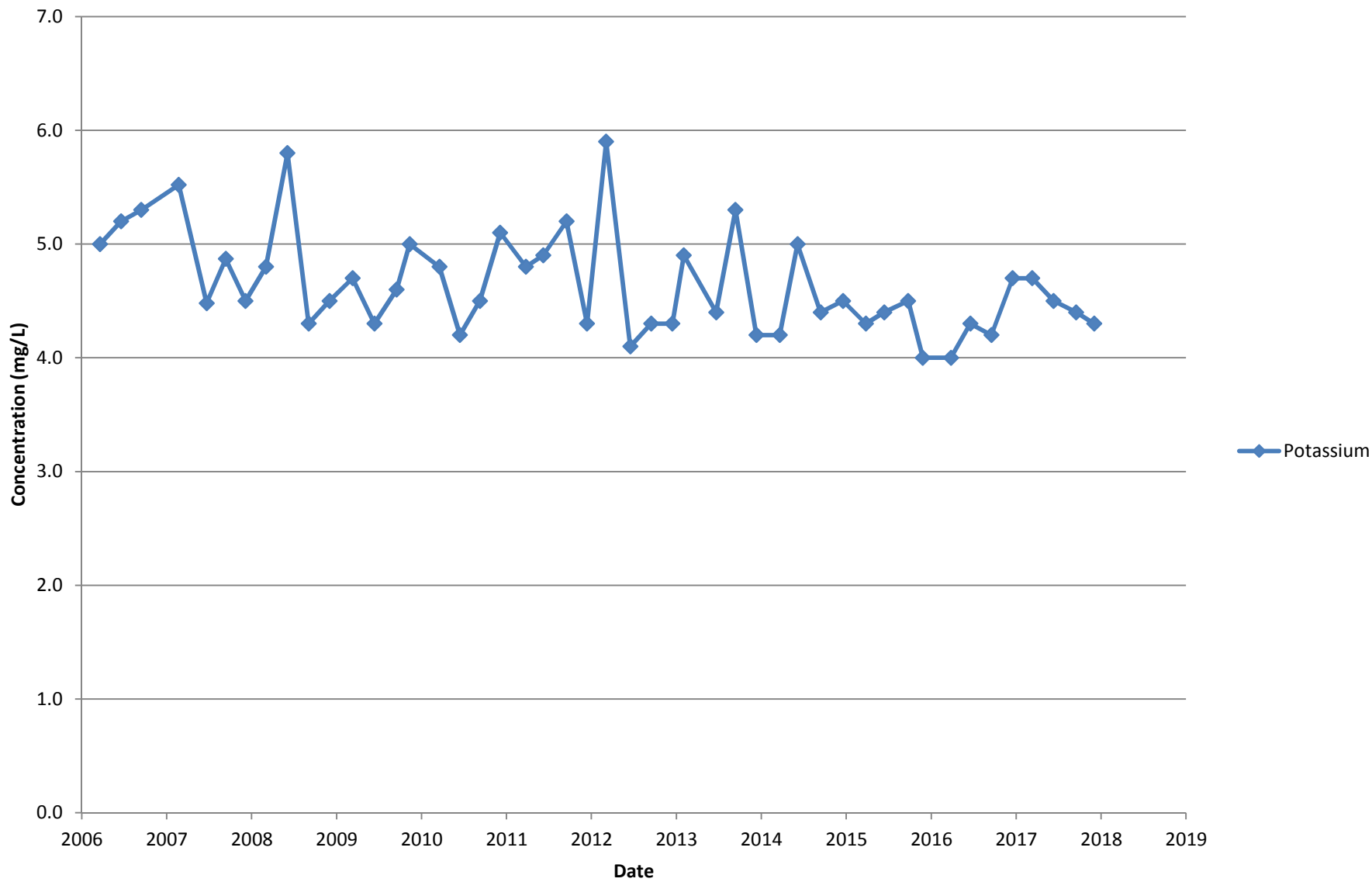
# Historical Constituent Concentrations Deep Well DW-4



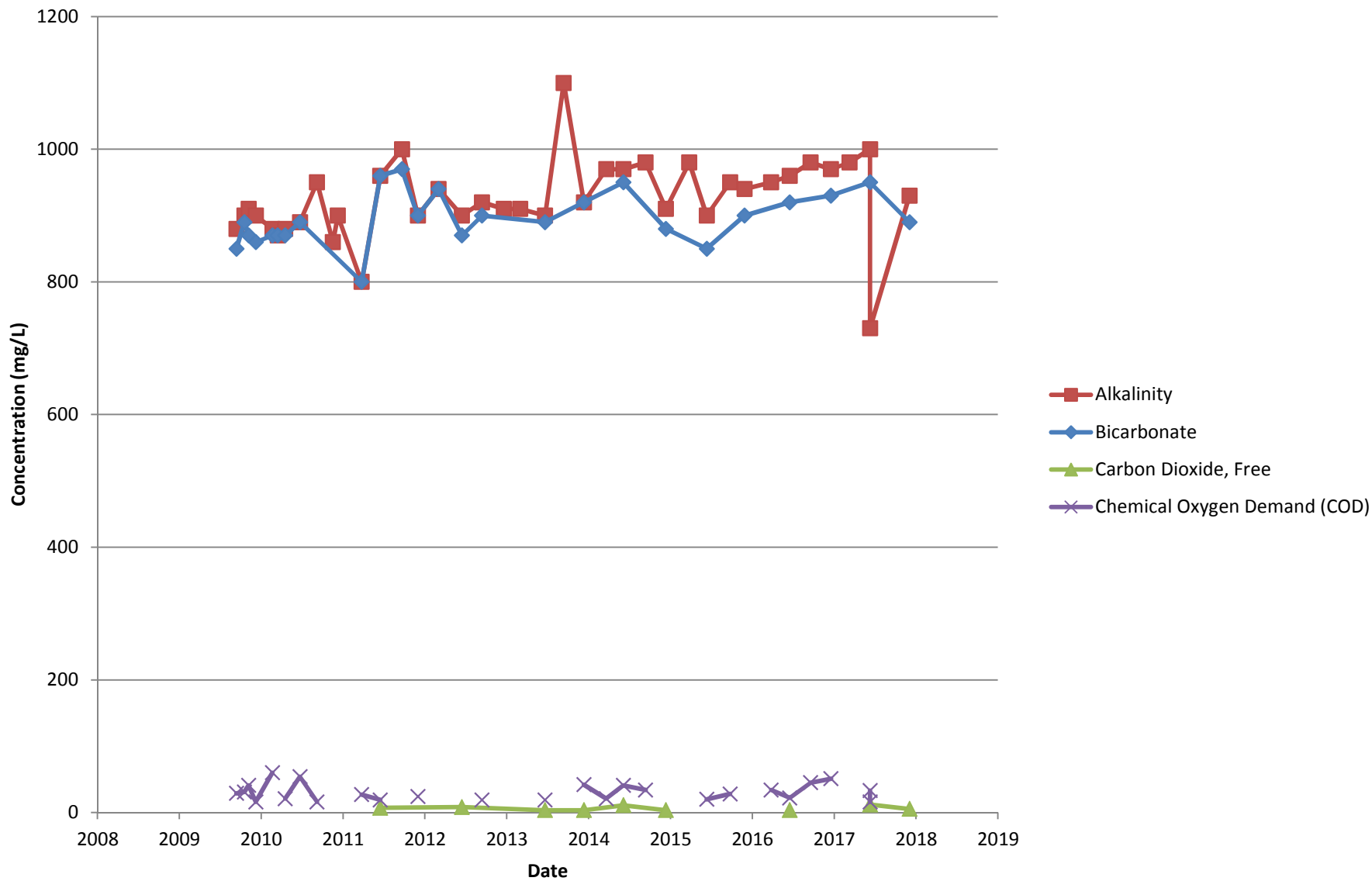
# Historical Constituent Concentrations Deep Well DW-4



# Historical Constituent Concentrations Deep Well DW-4

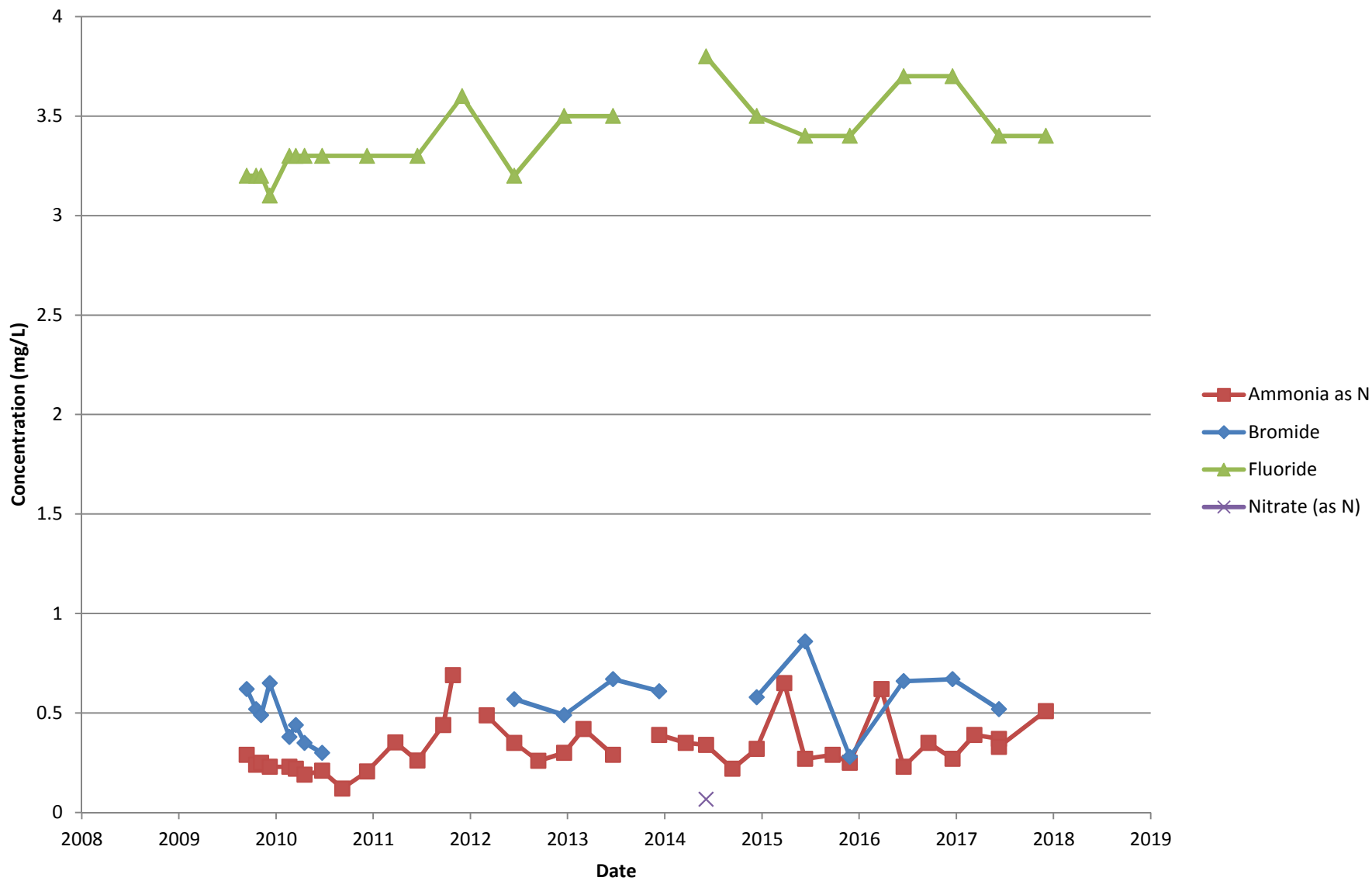


# Historical Constituent Concentrations Deep Well DW-5

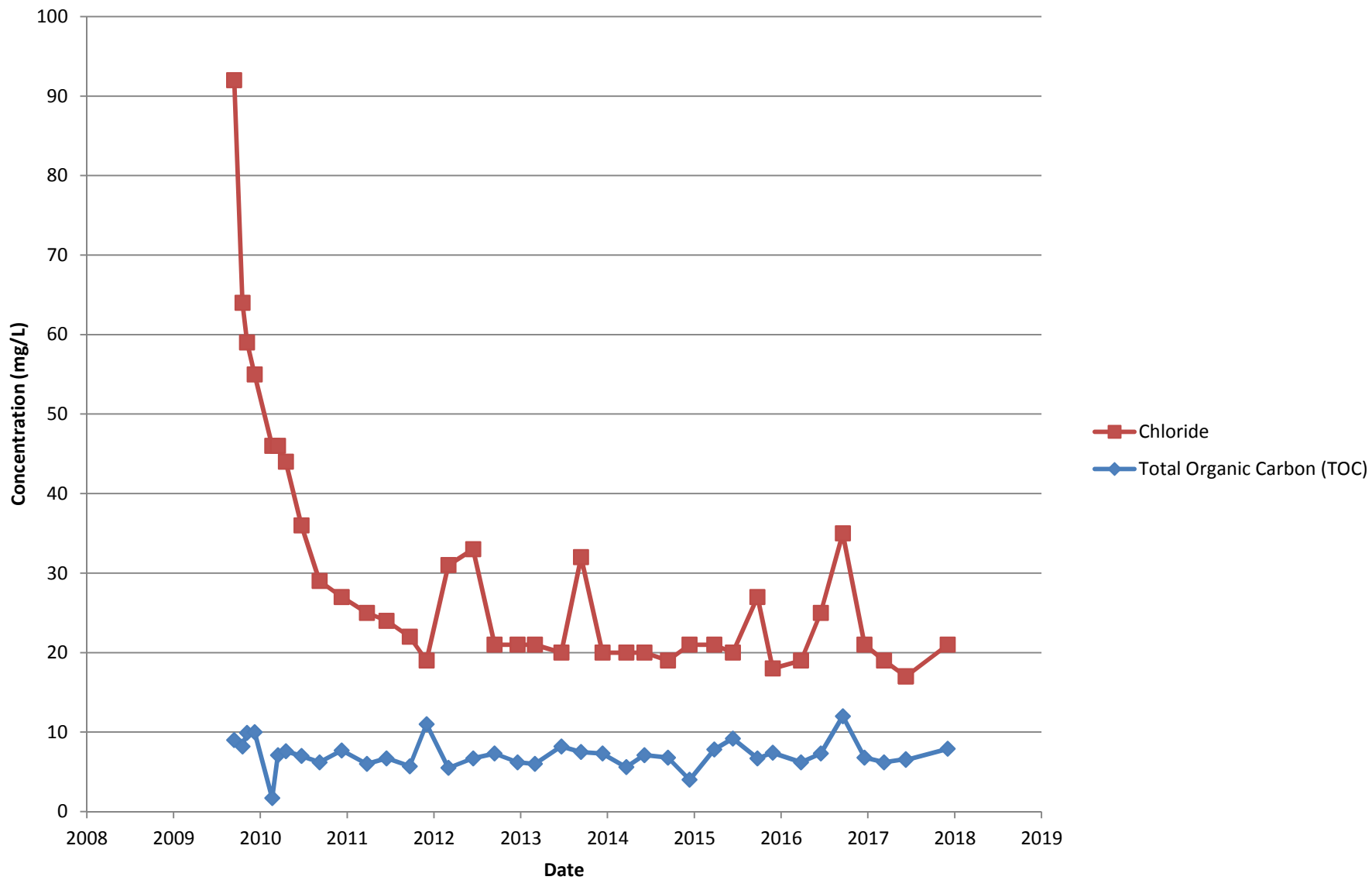




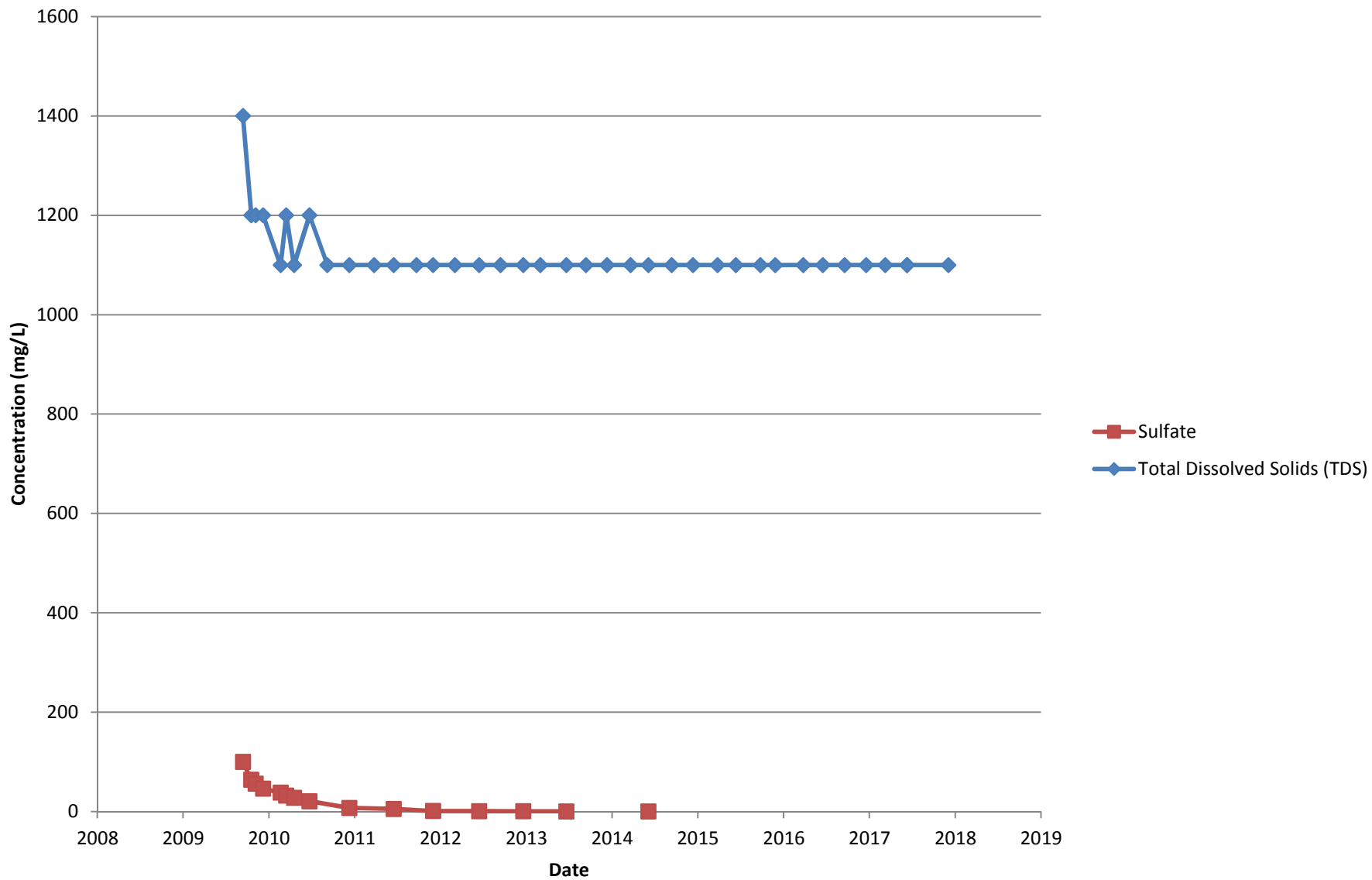
# Historical Constituent Concentrations Deep Well DW-5



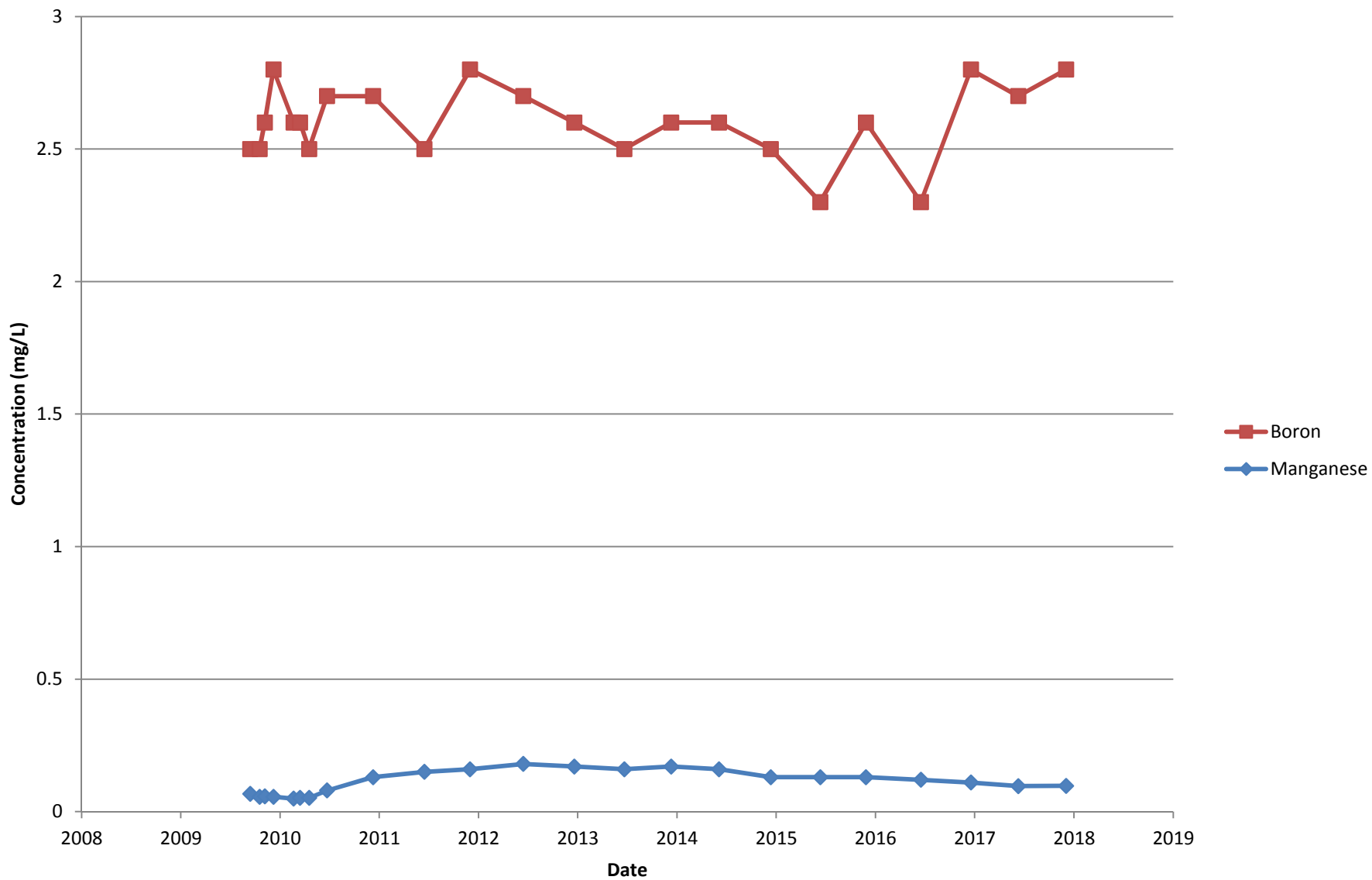
# Historical Constituent Concentrations Deep Well DW-5



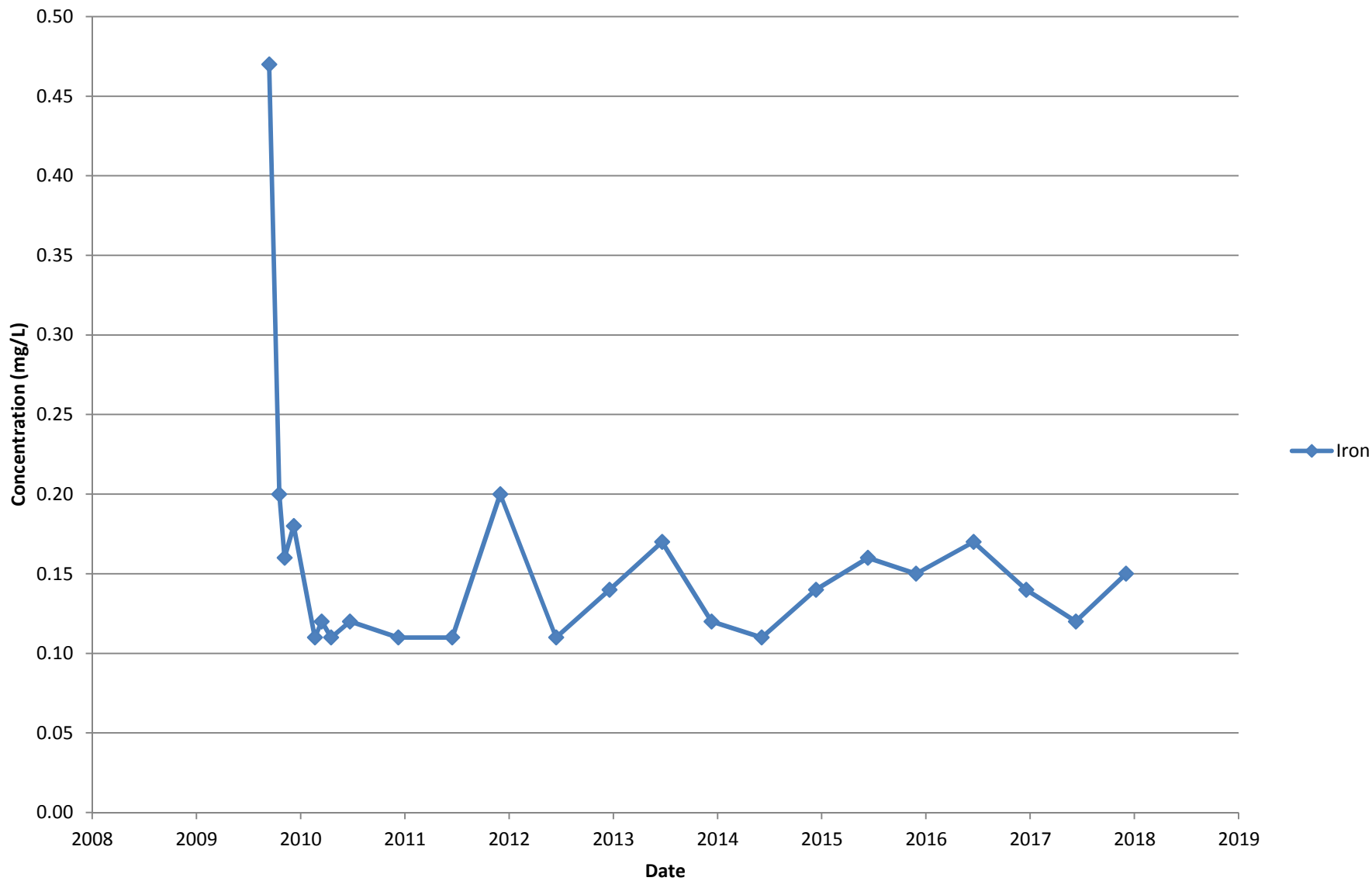
# Historical Constituent Concentrations Deep Well DW-5



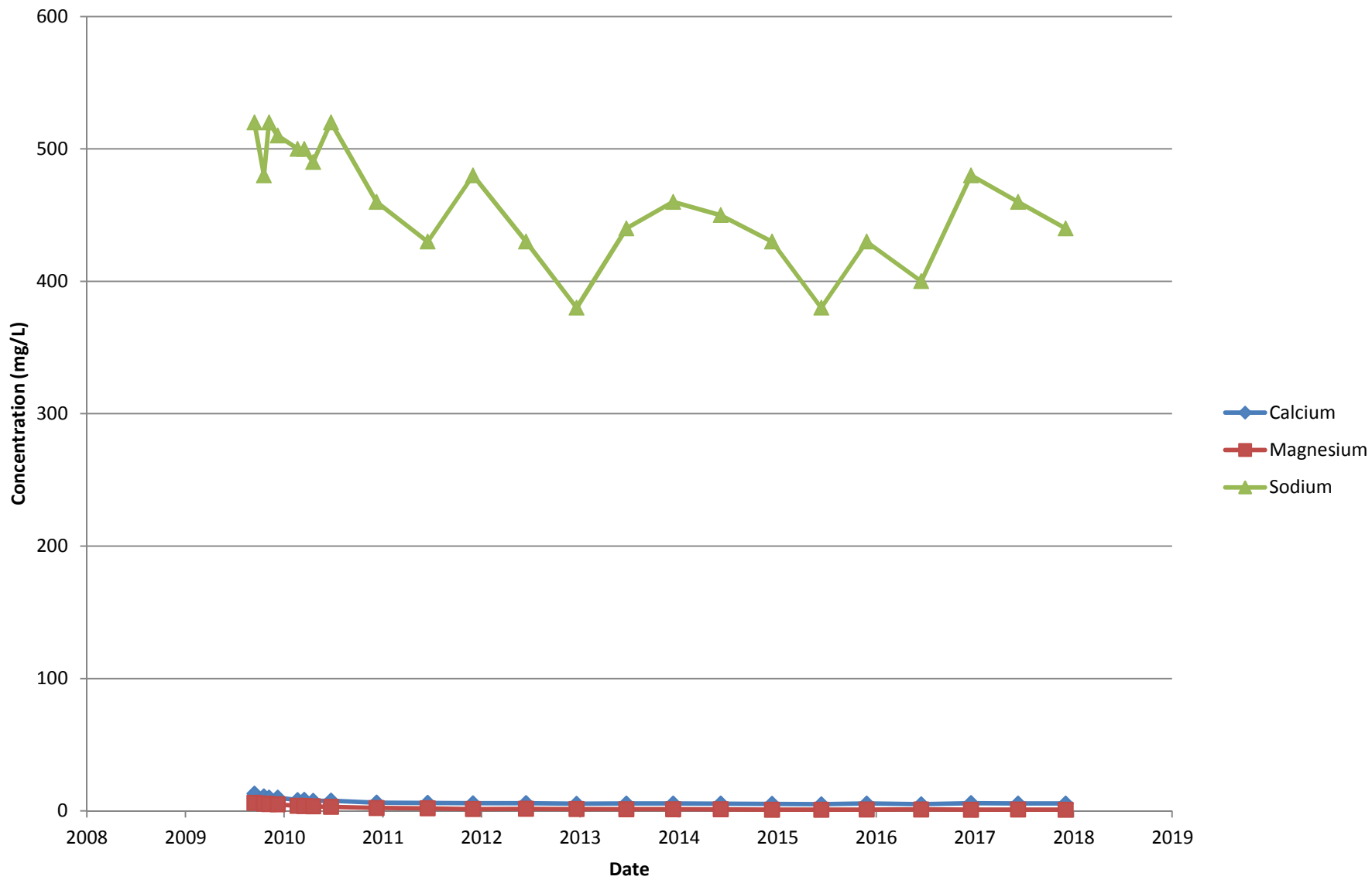
## Historical Constituent Concentrations Deep Well DW-5



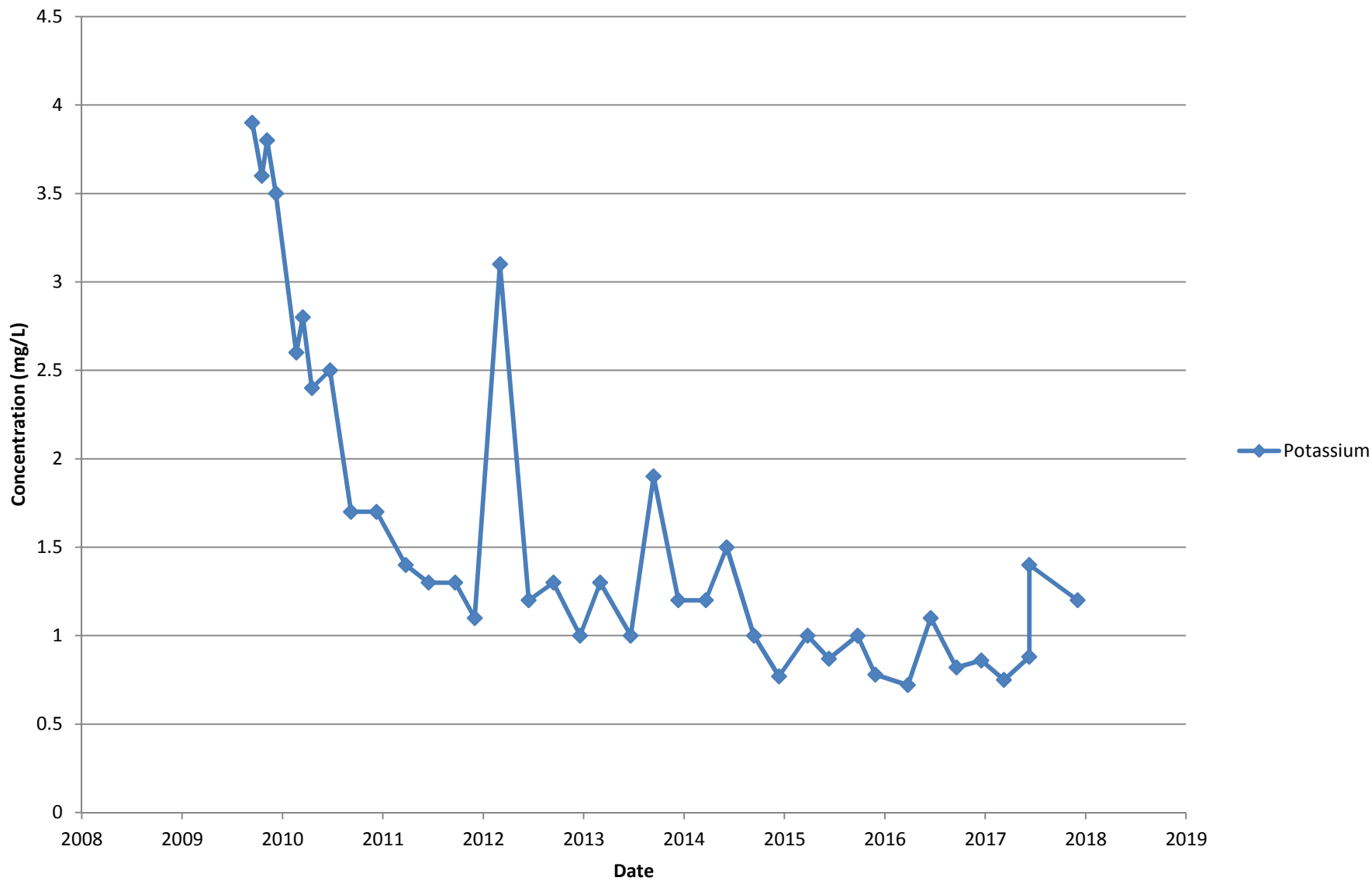
# Historical Constituent Concentrations Deep Well DW-5



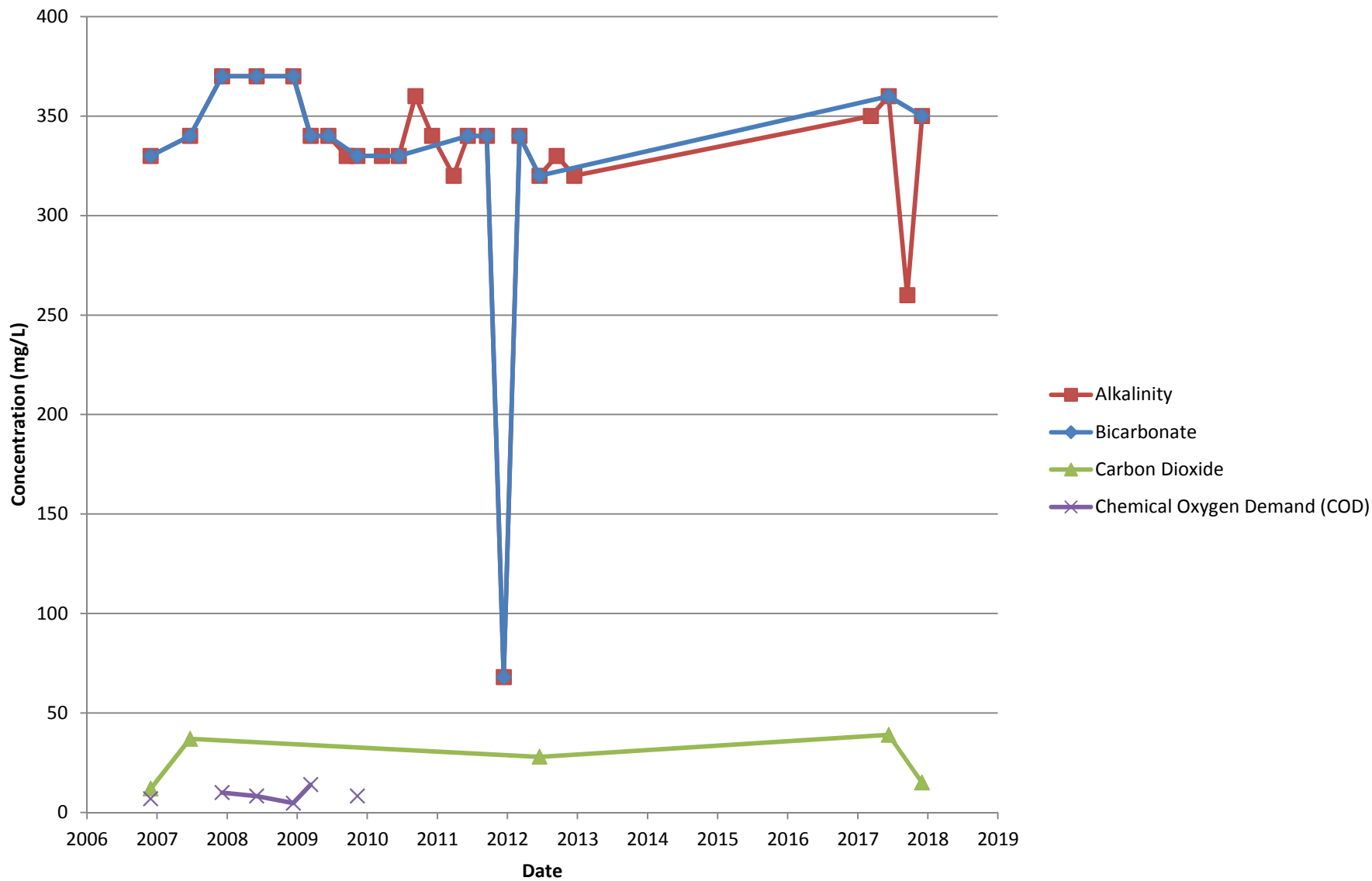
# Historical Constituent Concentrations Deep Well DW-4



# Historical Constituent Concentrations Deep Well DW-5

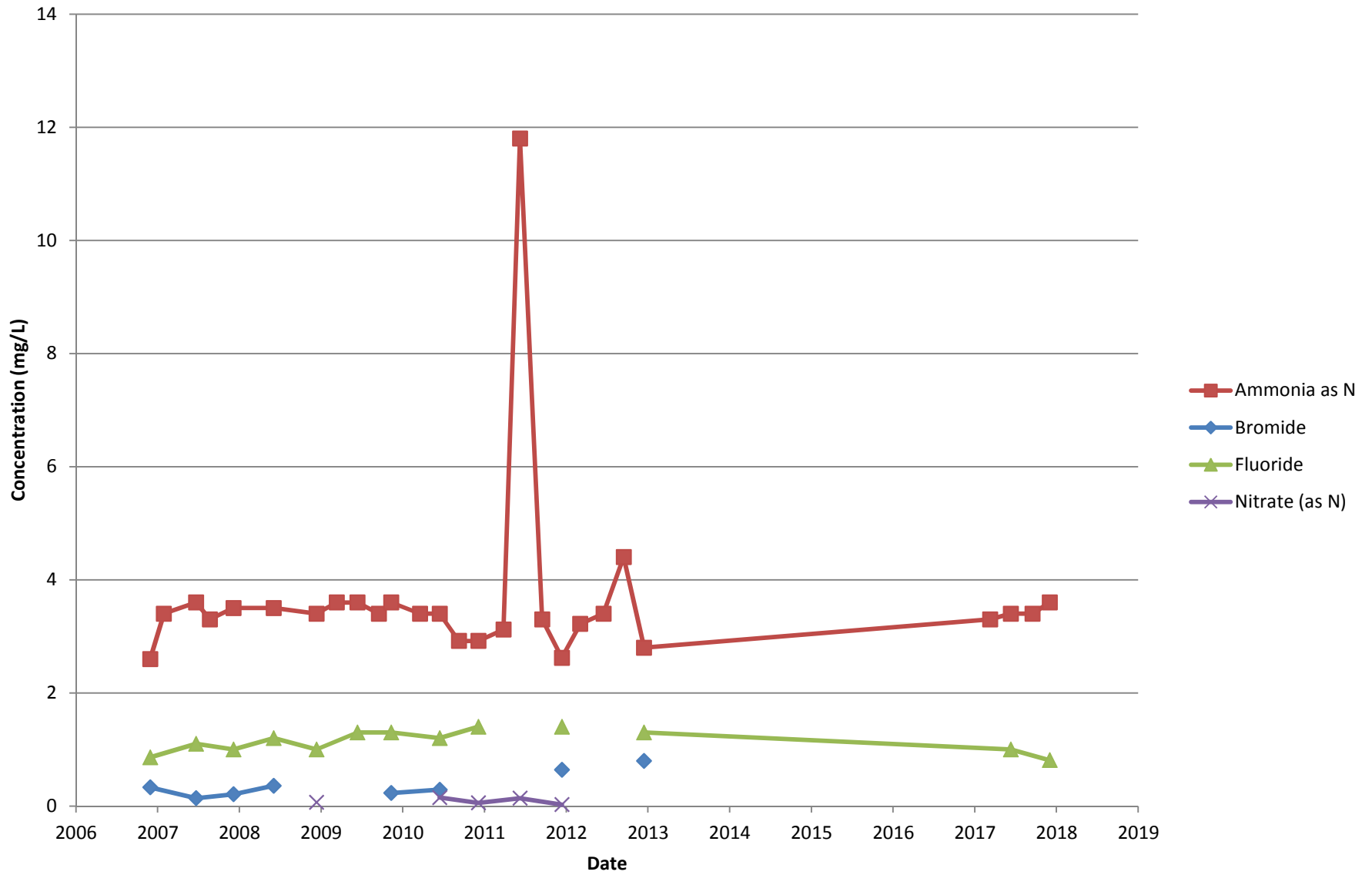


## Historical Constituent Concentrations Deep Well MW-2B

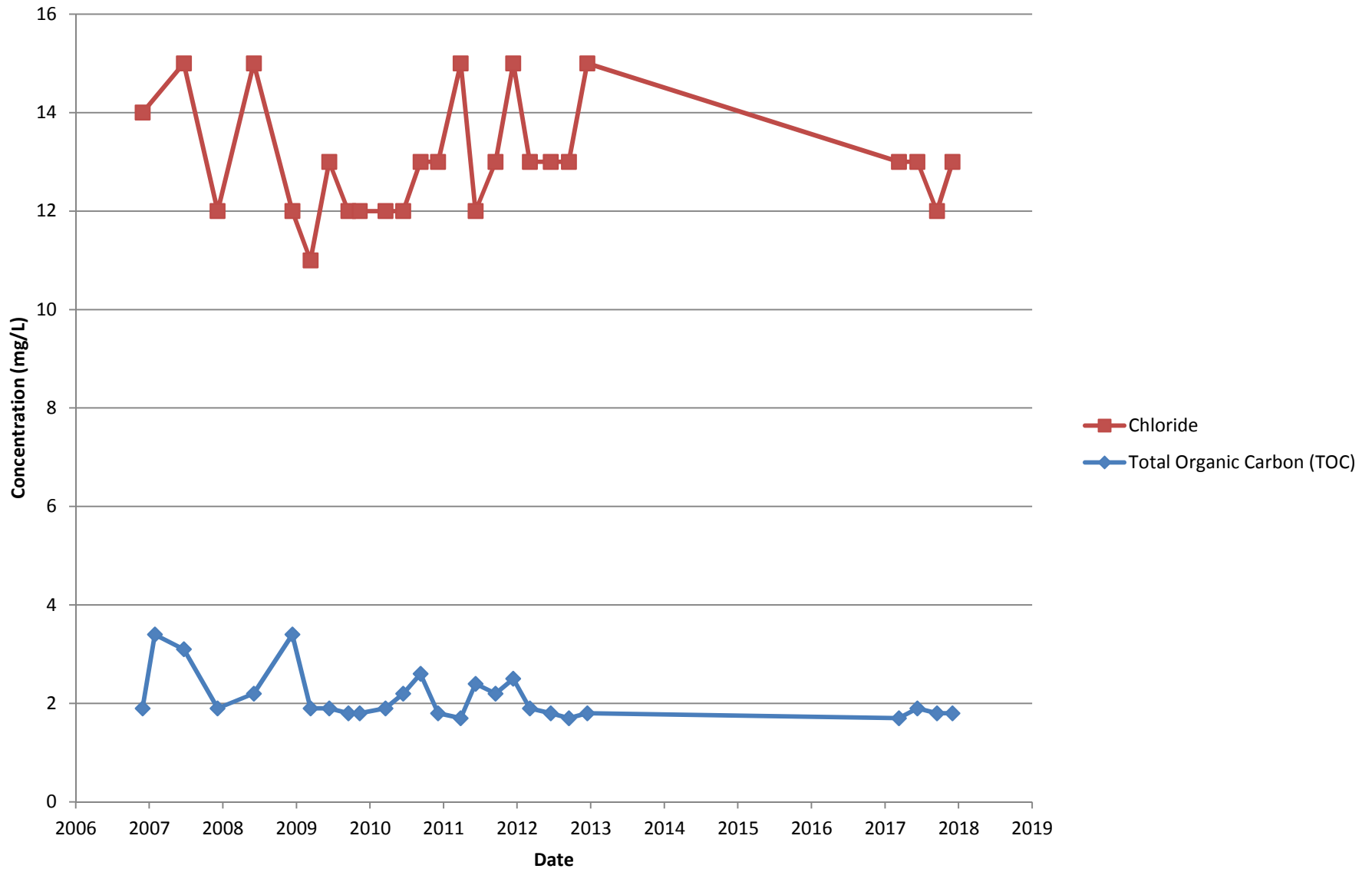




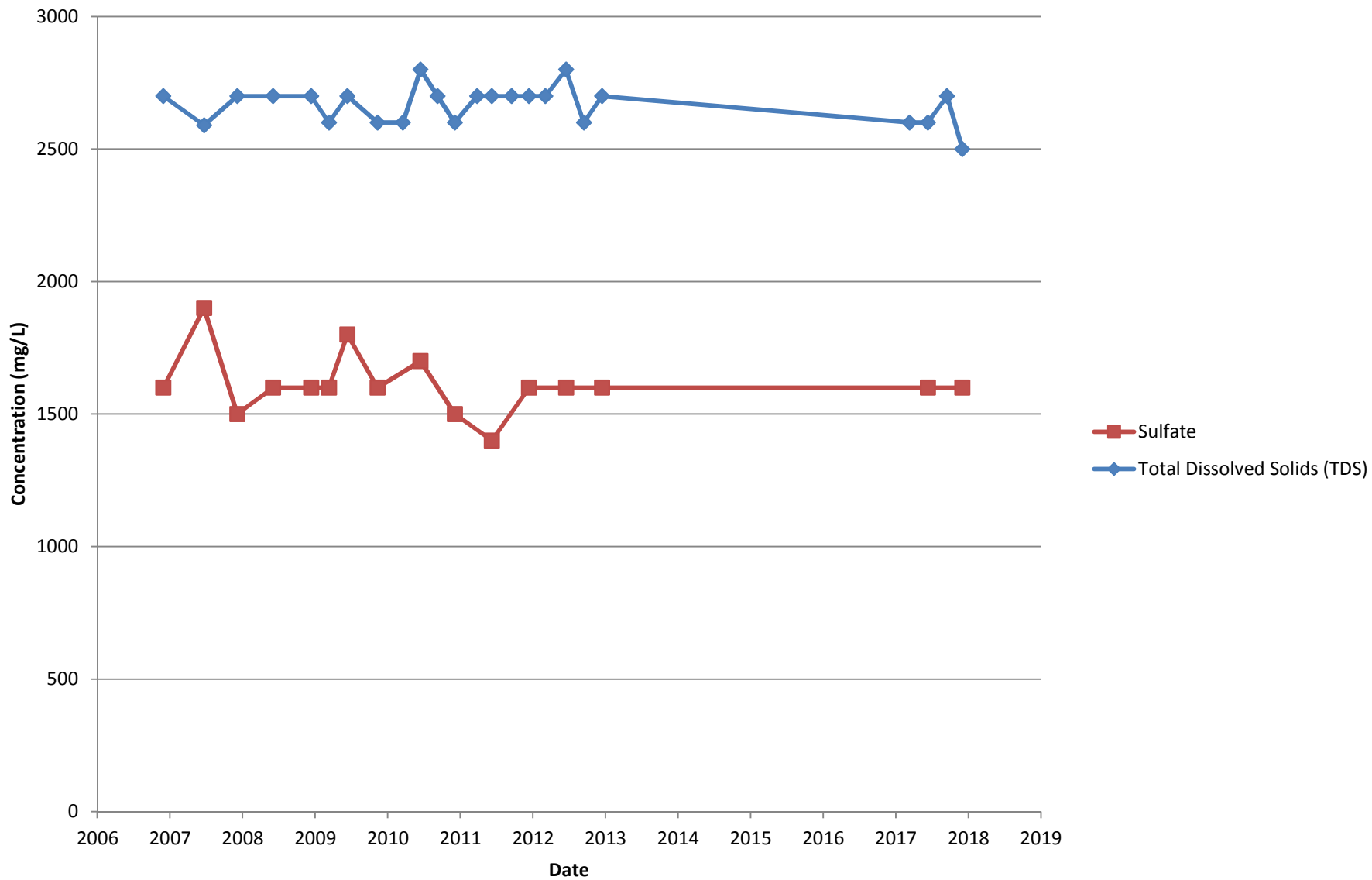
# Historical Consituent Concentrations Deep Well MW-2B



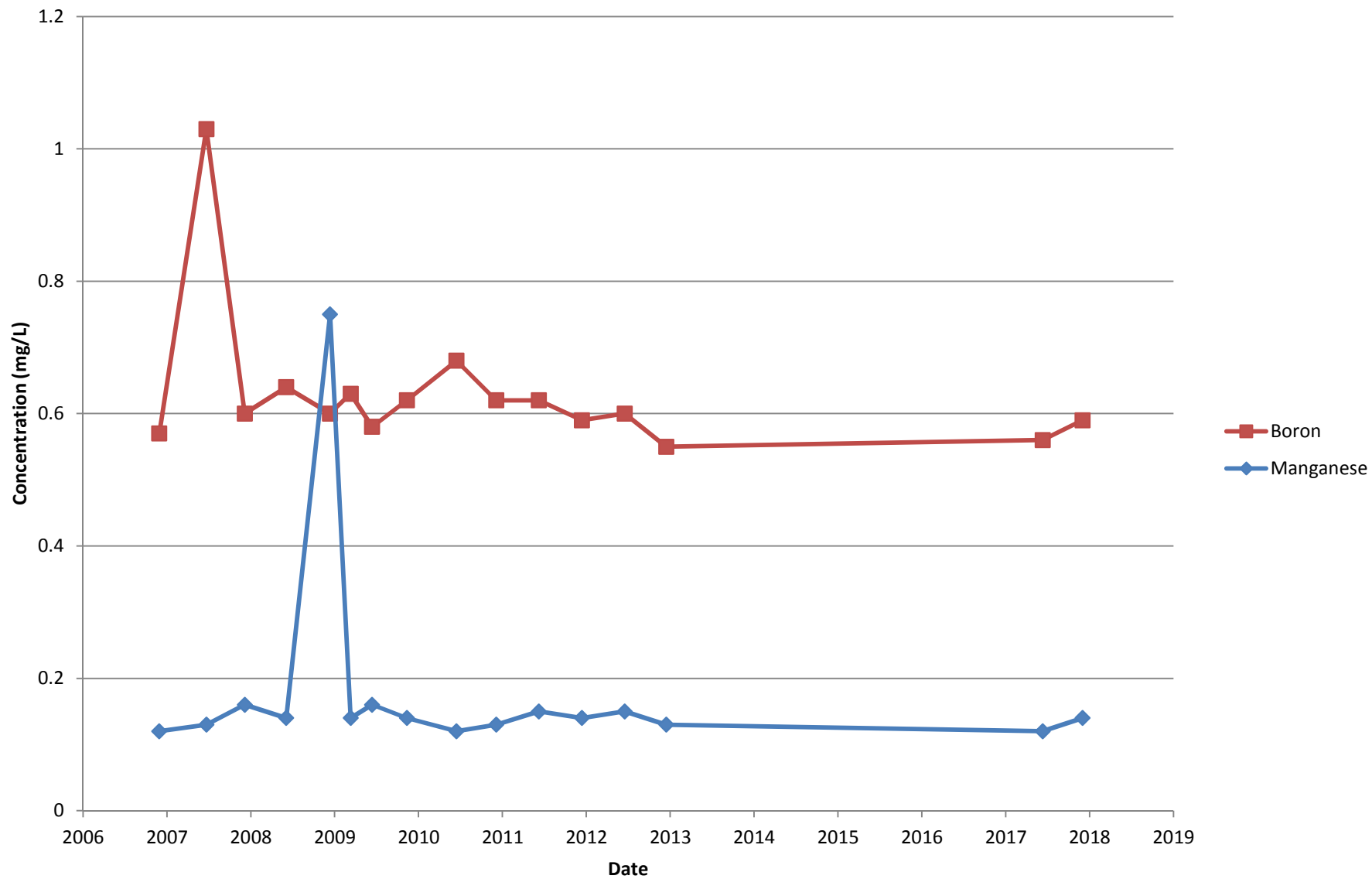
# Historical Constituent Concentrations Deep Well MW-2B



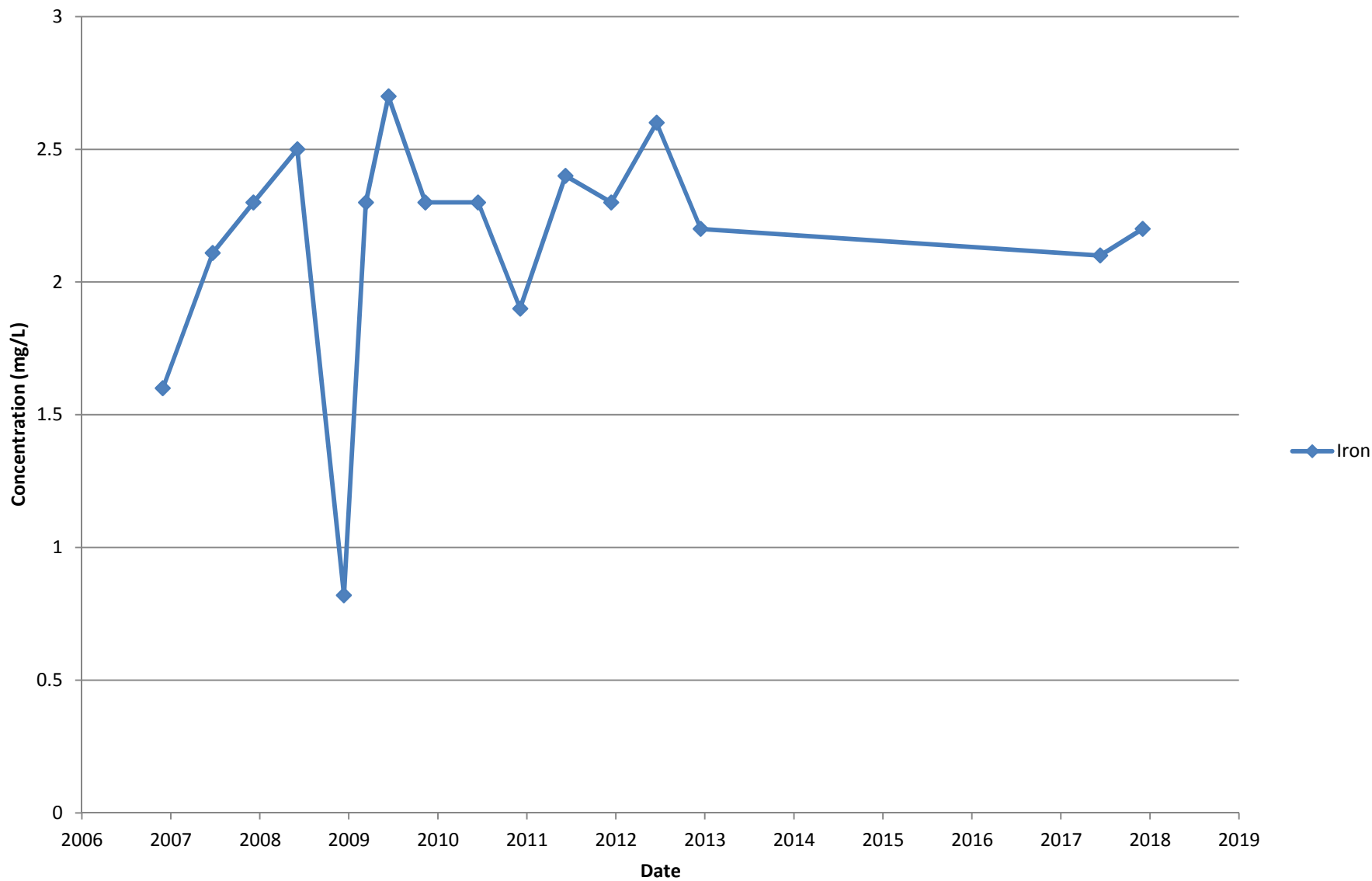
## Historical Constituent Concentrations Deep Well MW-2B



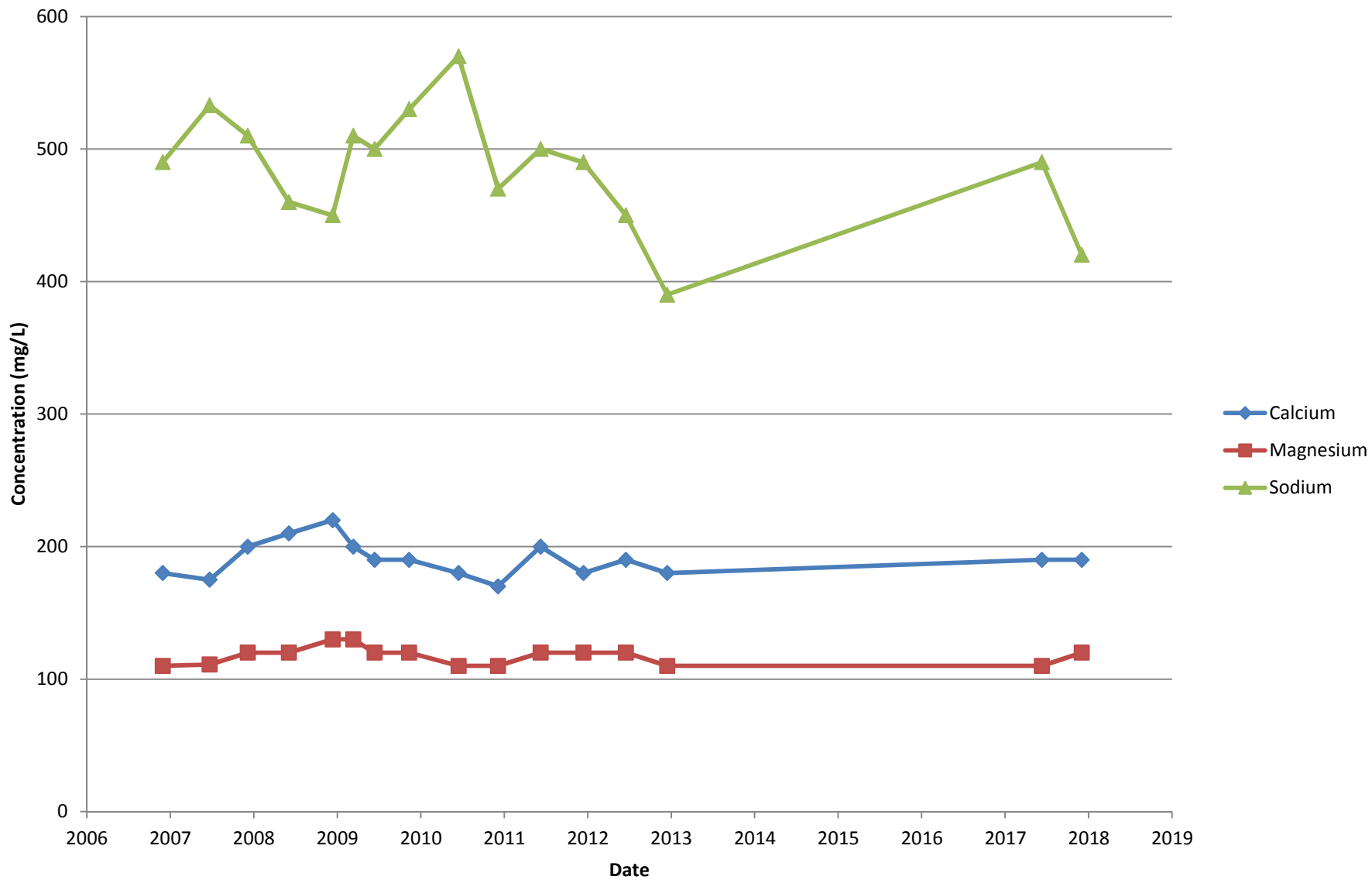
## Historical Constituent Concentrations Deep Well MW-2B



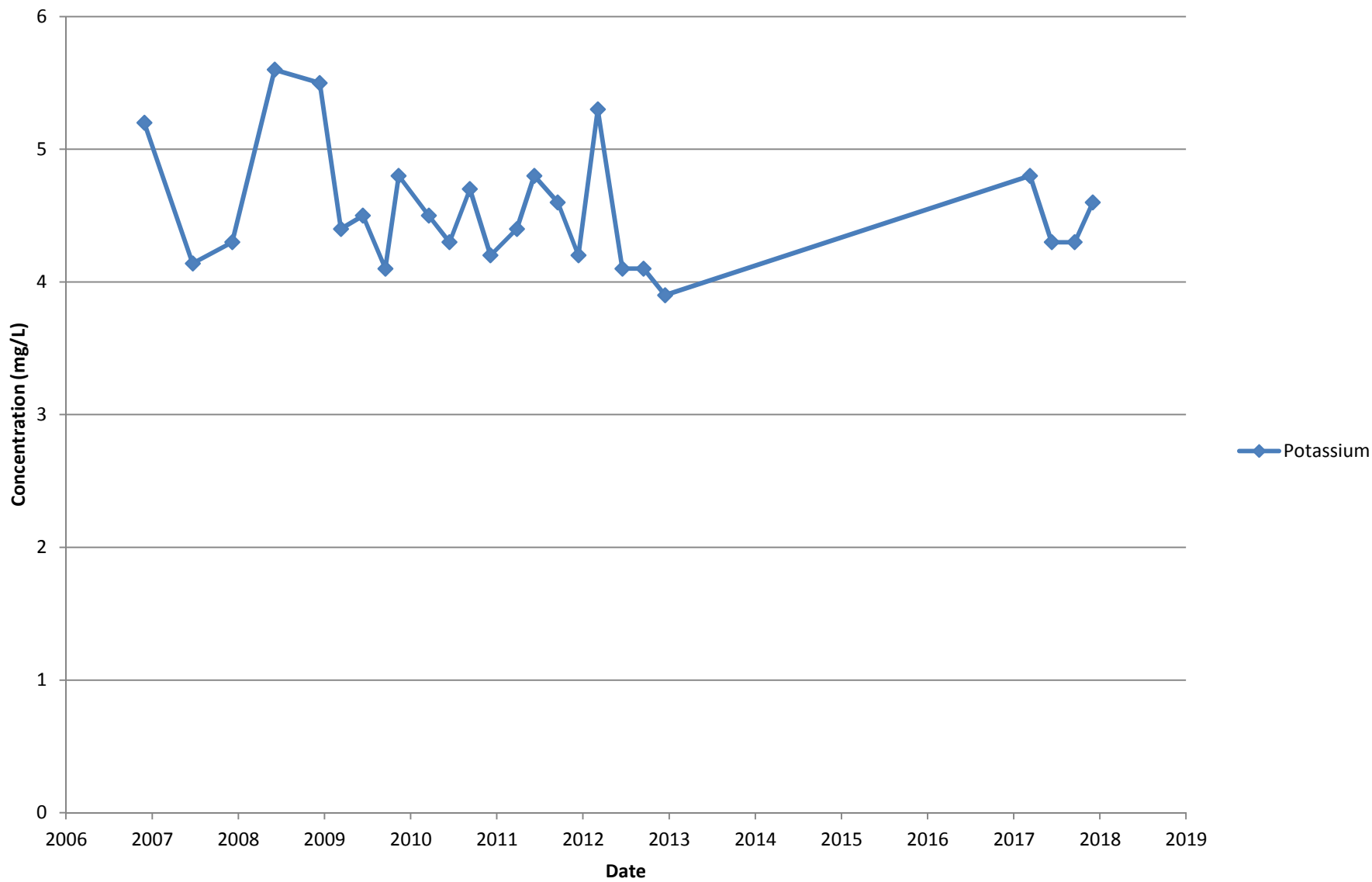
## Historical Constituent Concentrations Deep Well MW-2B



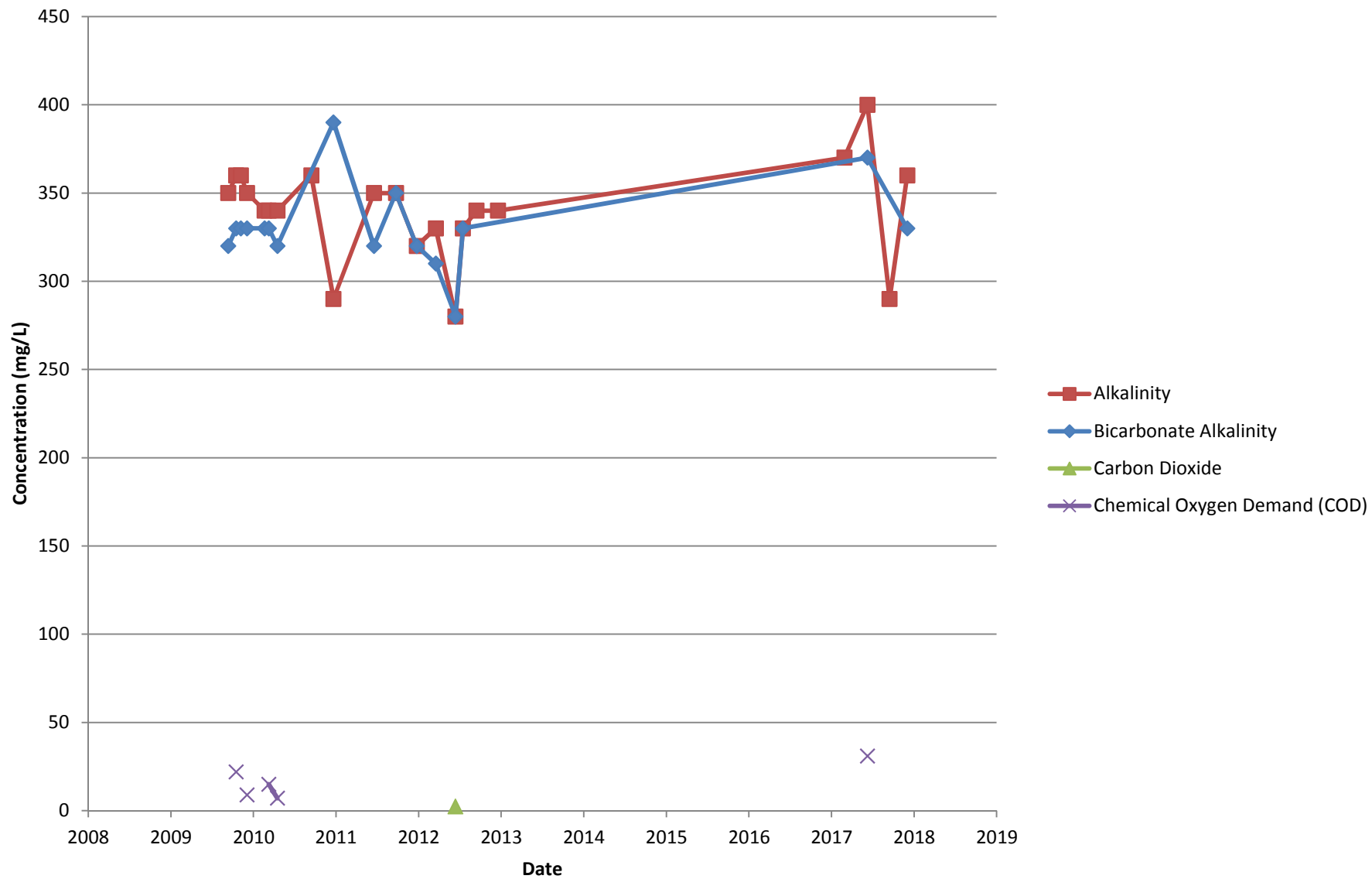
# Historical Constituent Concentrations Deep Well MW-2B



# Historical Constituent Concentrations Deep Well MW-2B

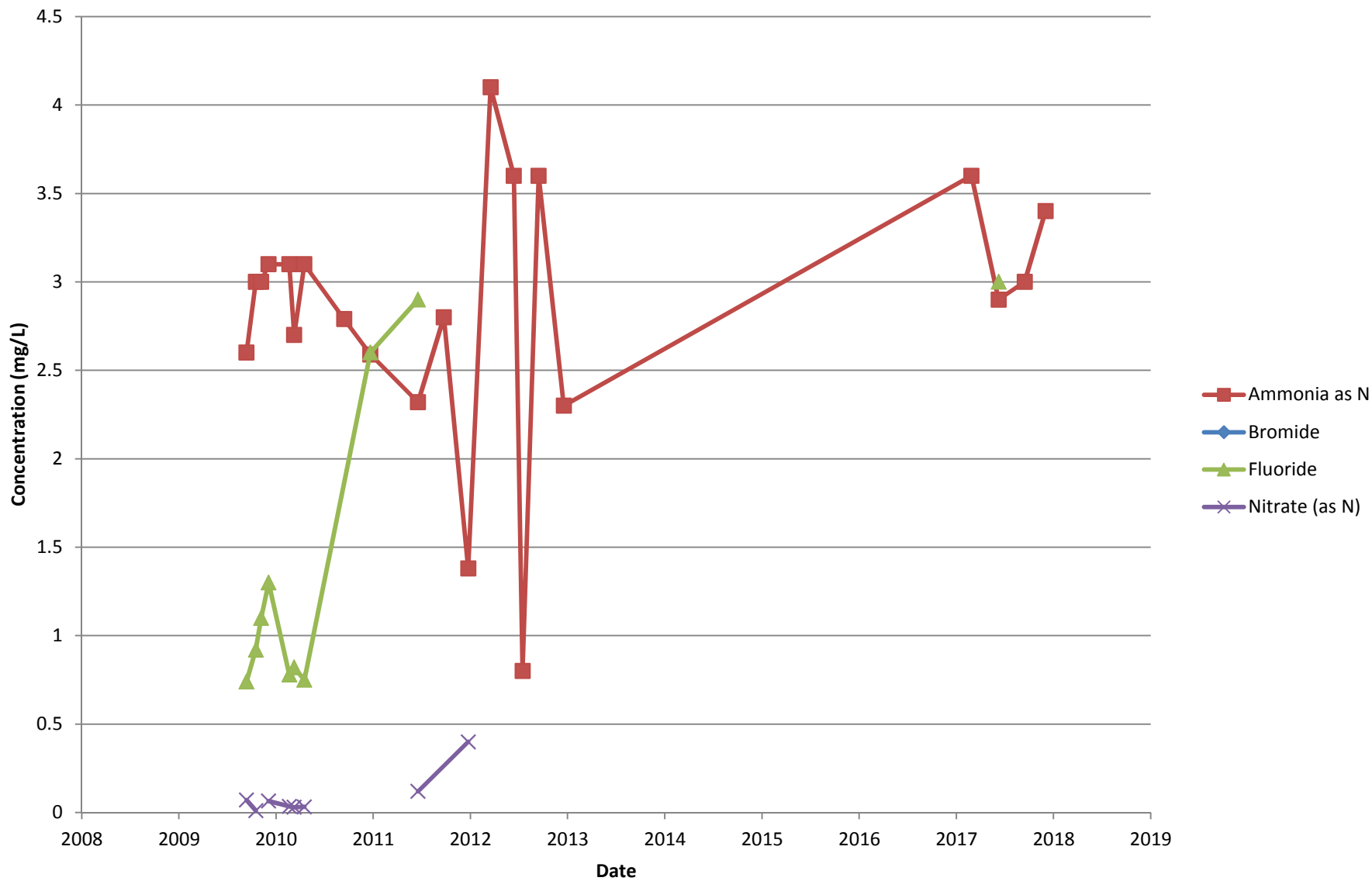


## Historical Constituent Concentrations Deep Well PZ-2

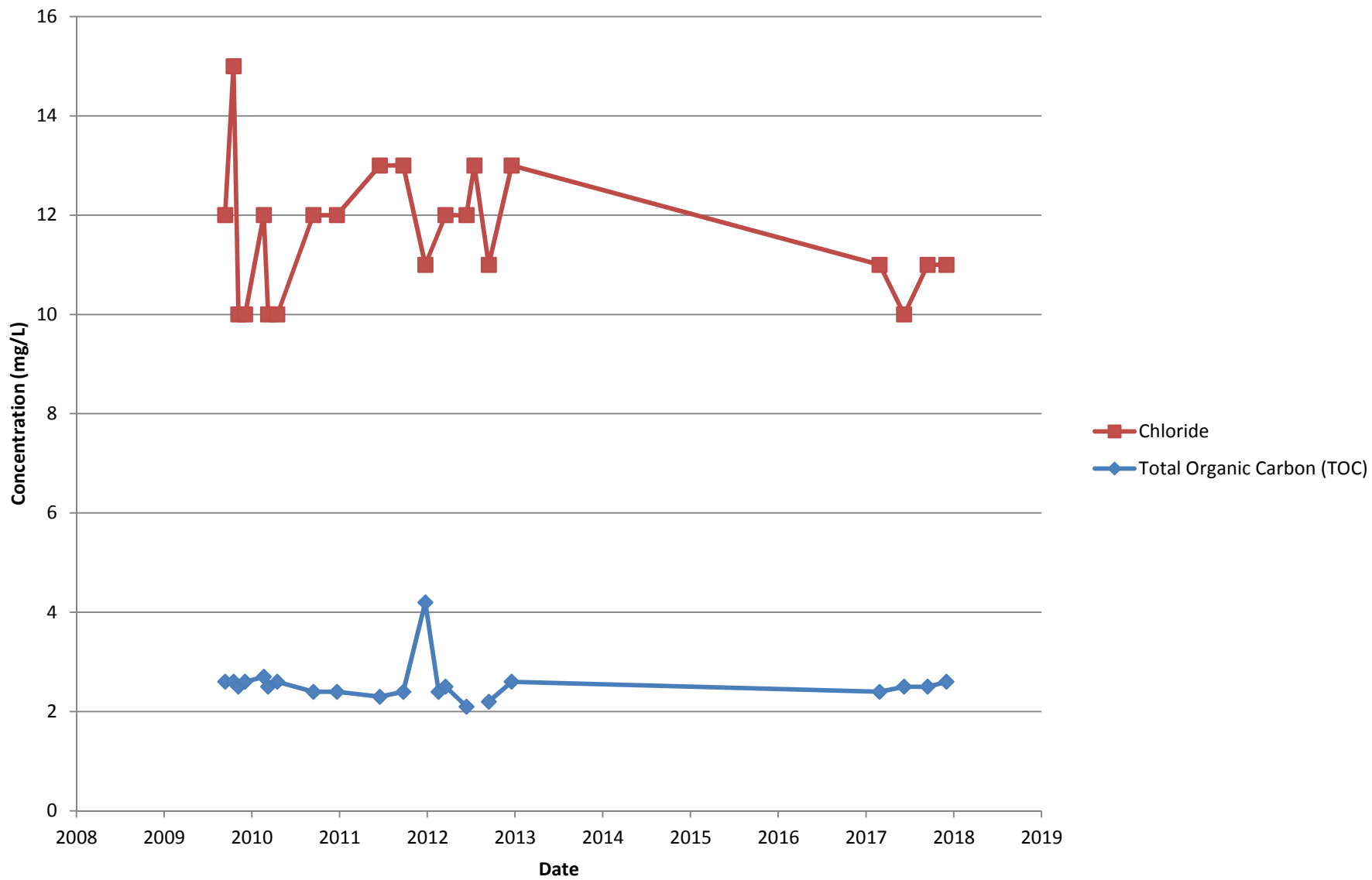




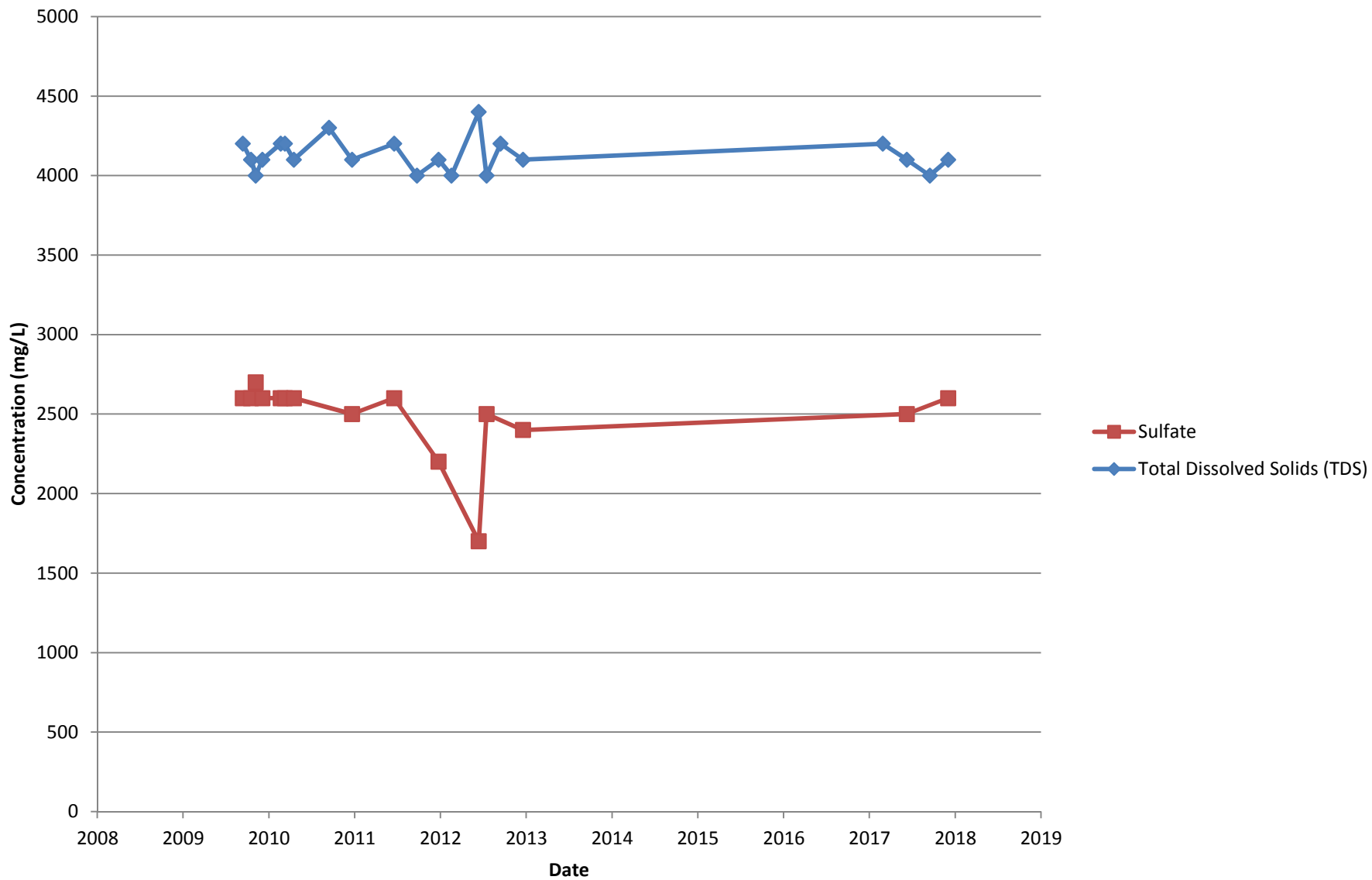
# Historical Constituent Concentrations Deep Well PZ-2



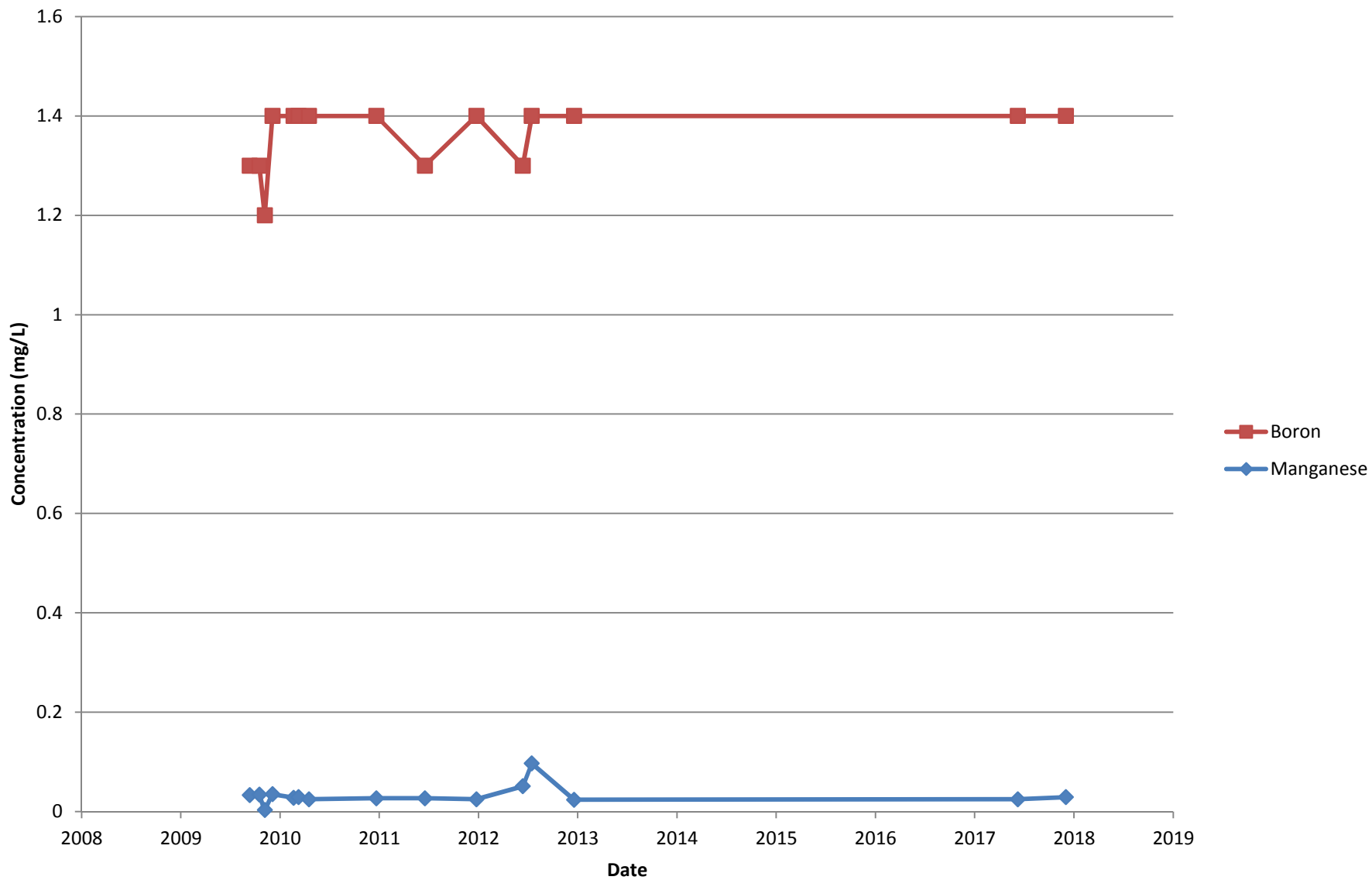
# Historical Constituent Concentrations Deep Well PZ-2



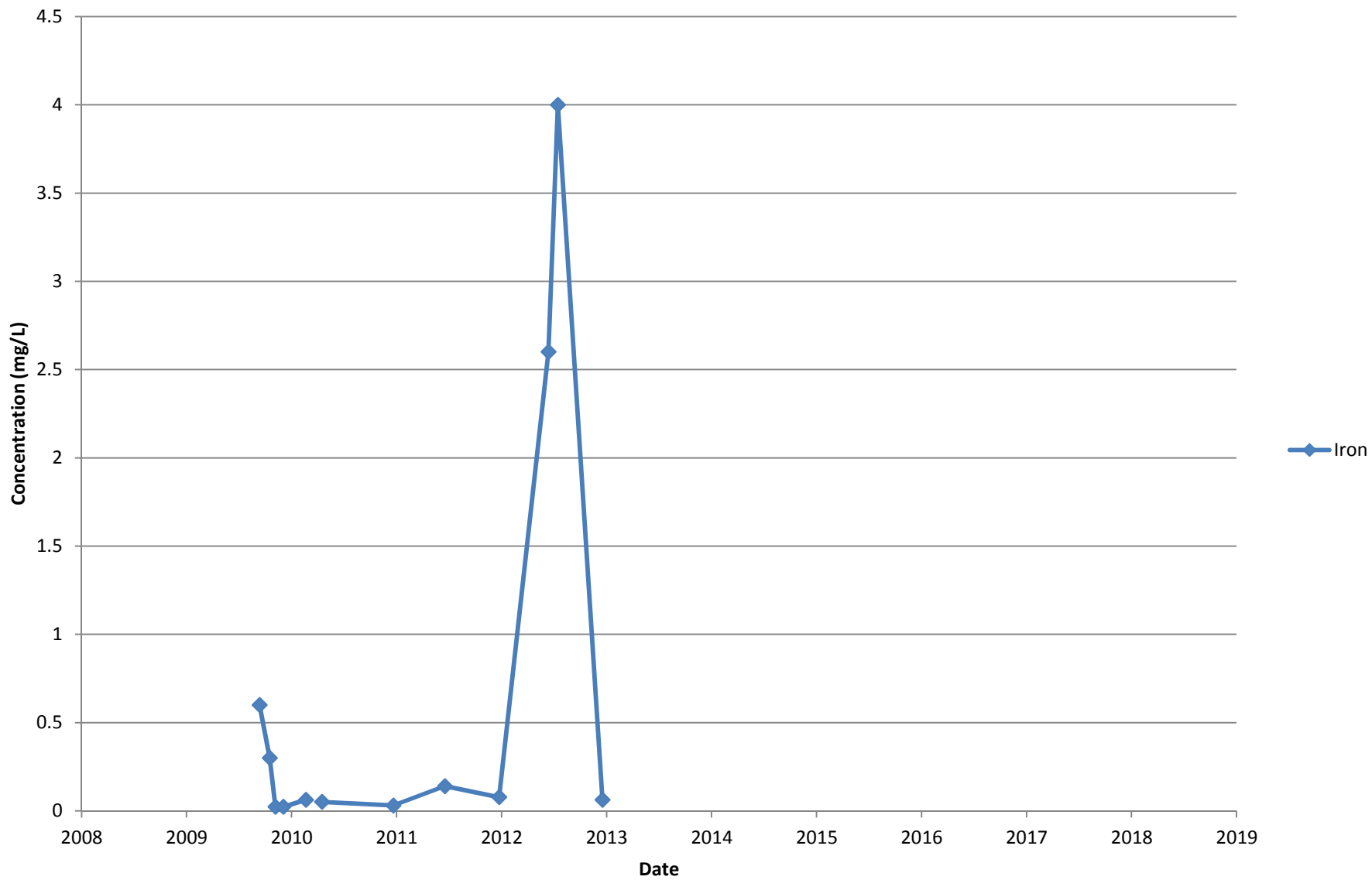
## Historical Constituent Concentrations Deep Well PZ-2



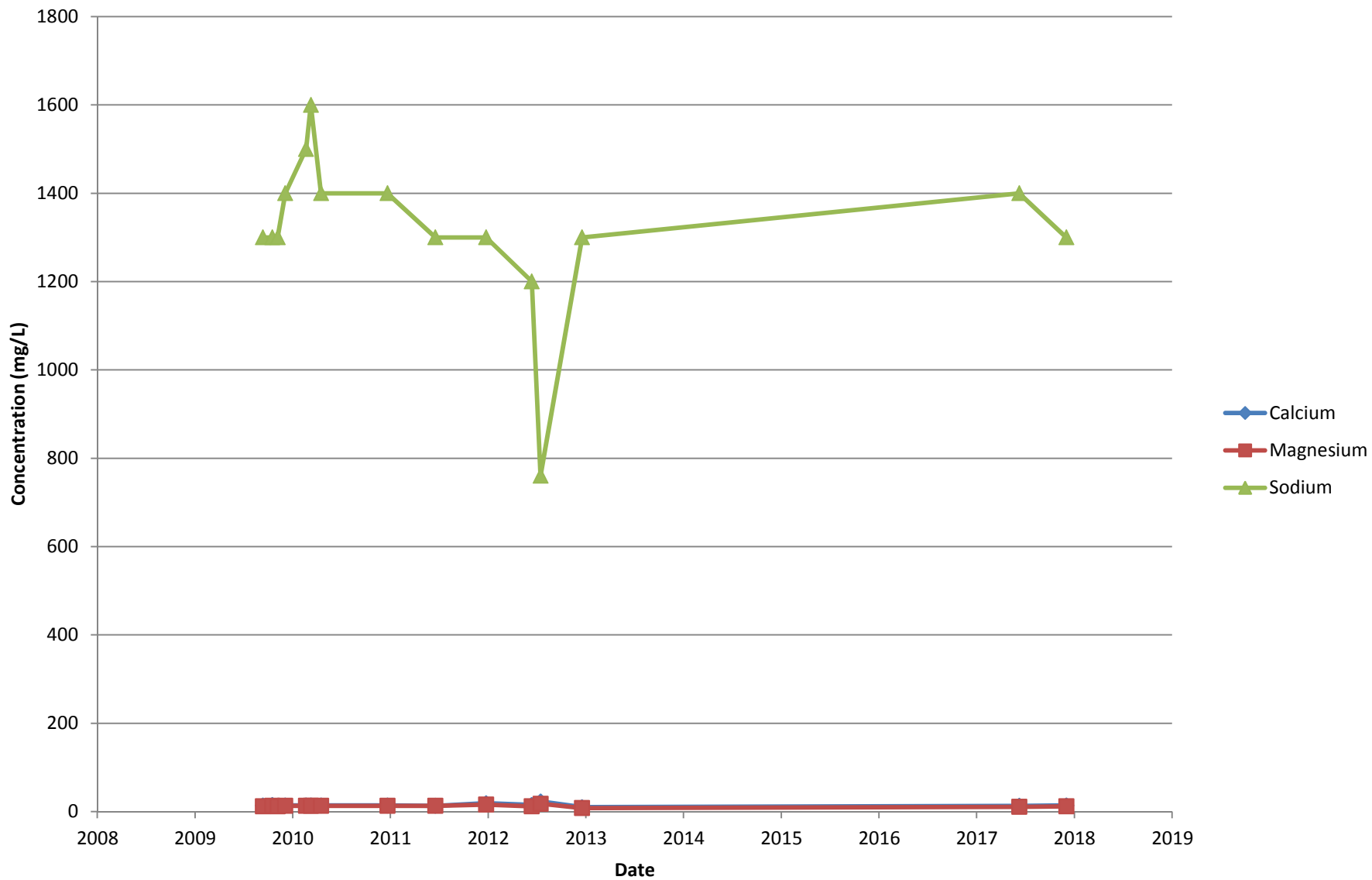
# Historical Constituent Concentrations Deep Well PZ-2



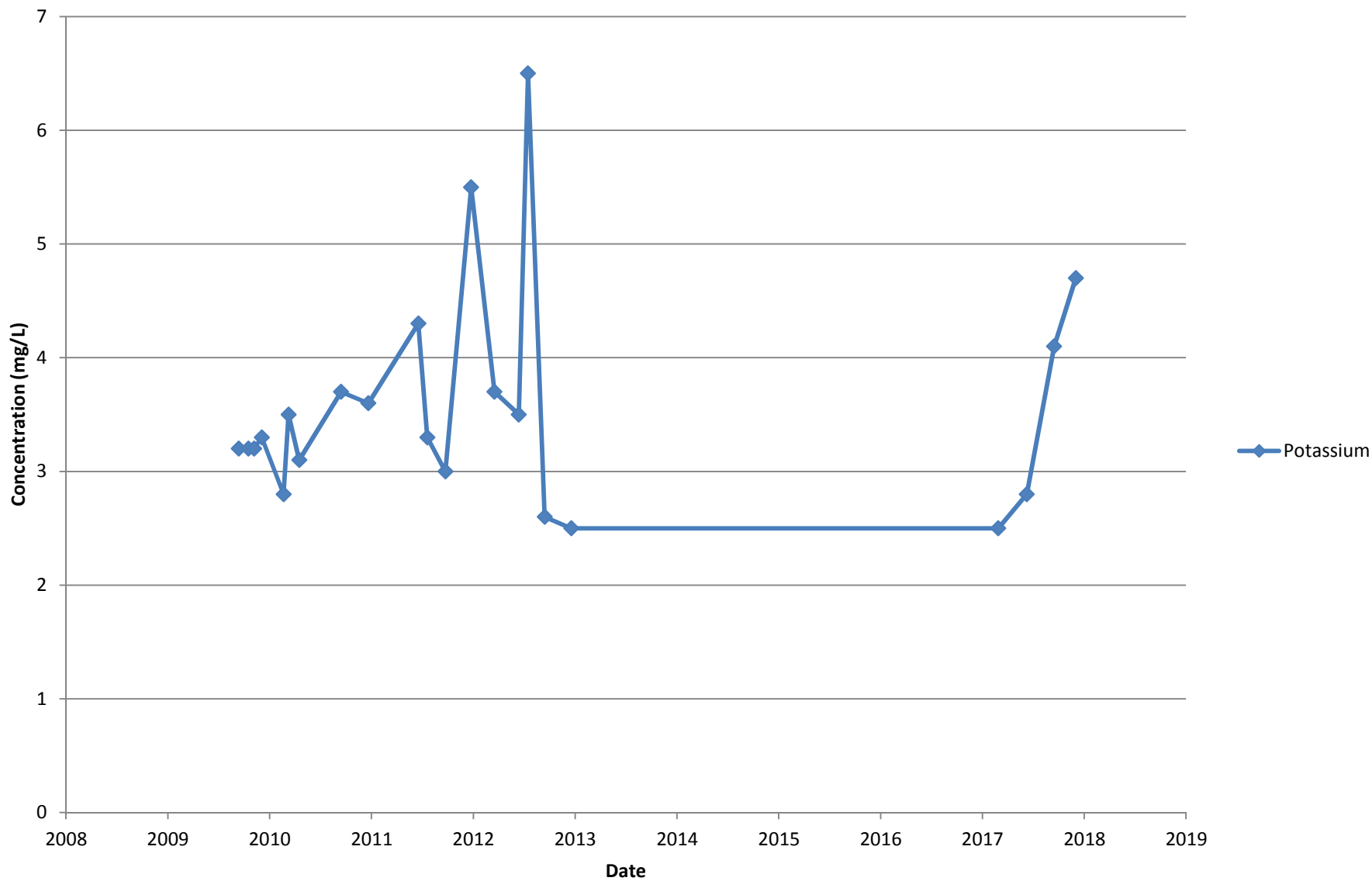
## Historical Constituent Concentrations Deep Well PZ-2



# Historical Constituent Concentrations Deep Well PZ-2



# Historical Constituent Concentrations Deep Well PZ-2

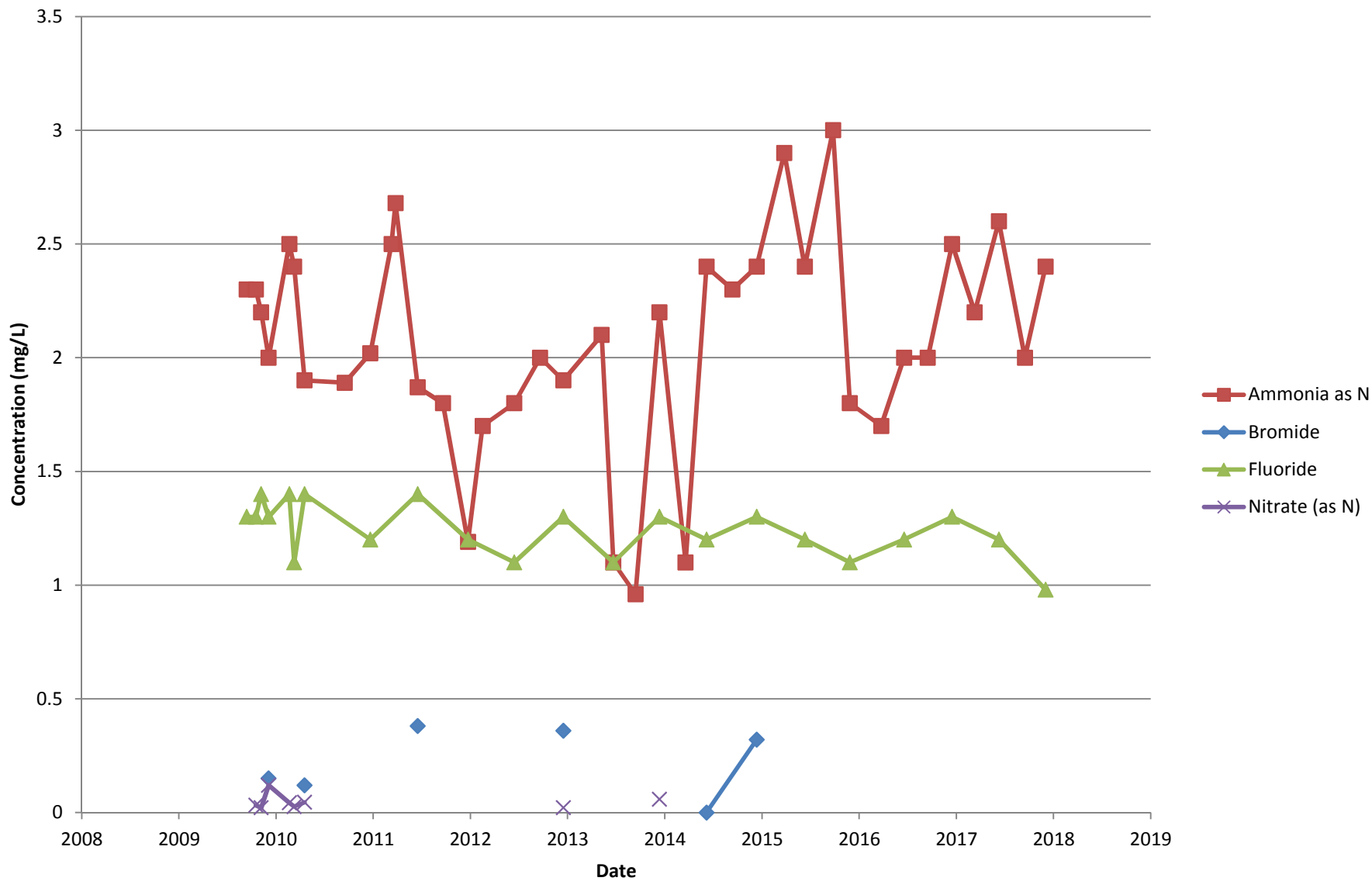


## Historical Constituent Concentrations Deep Well PZ-4

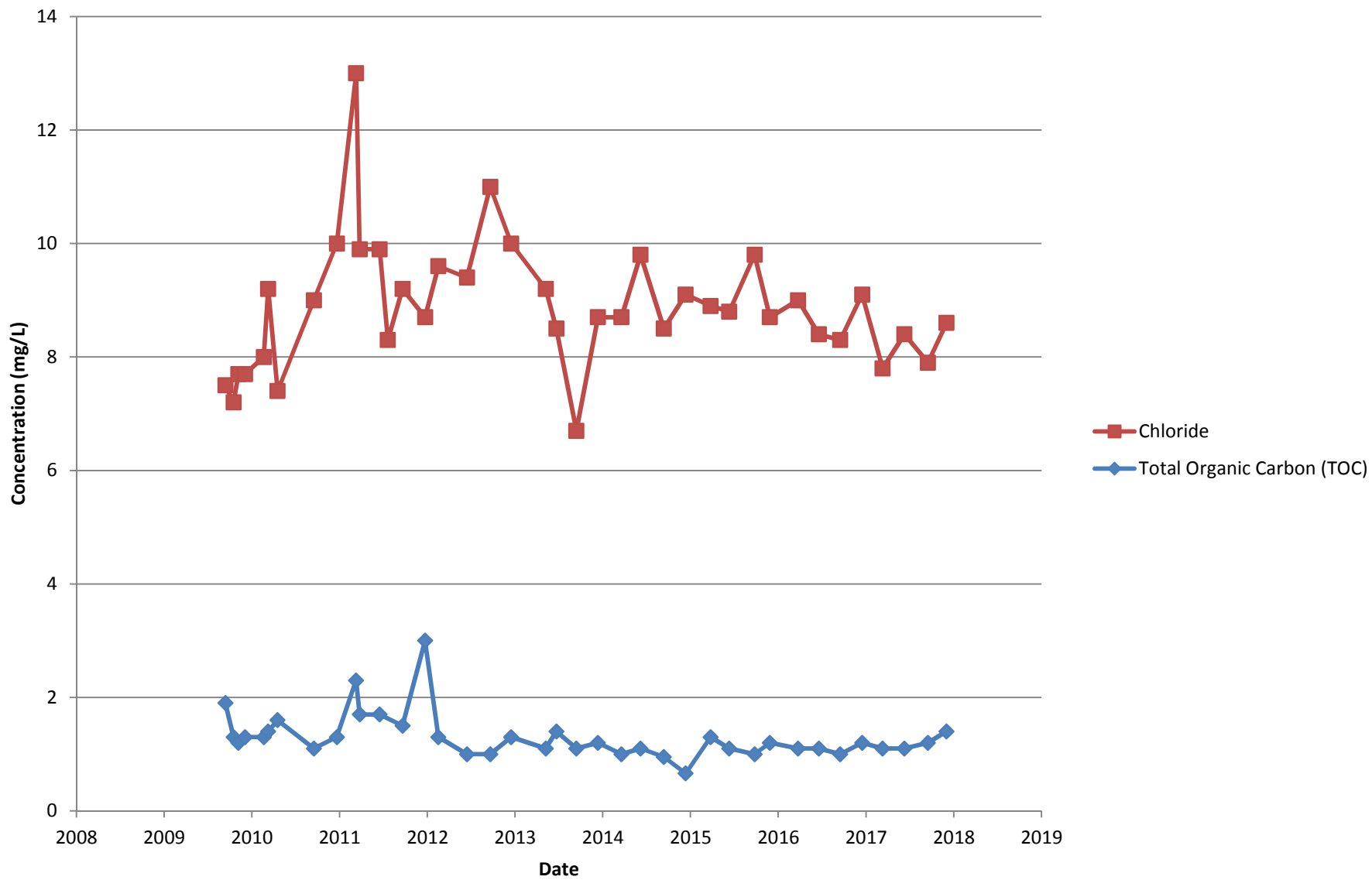




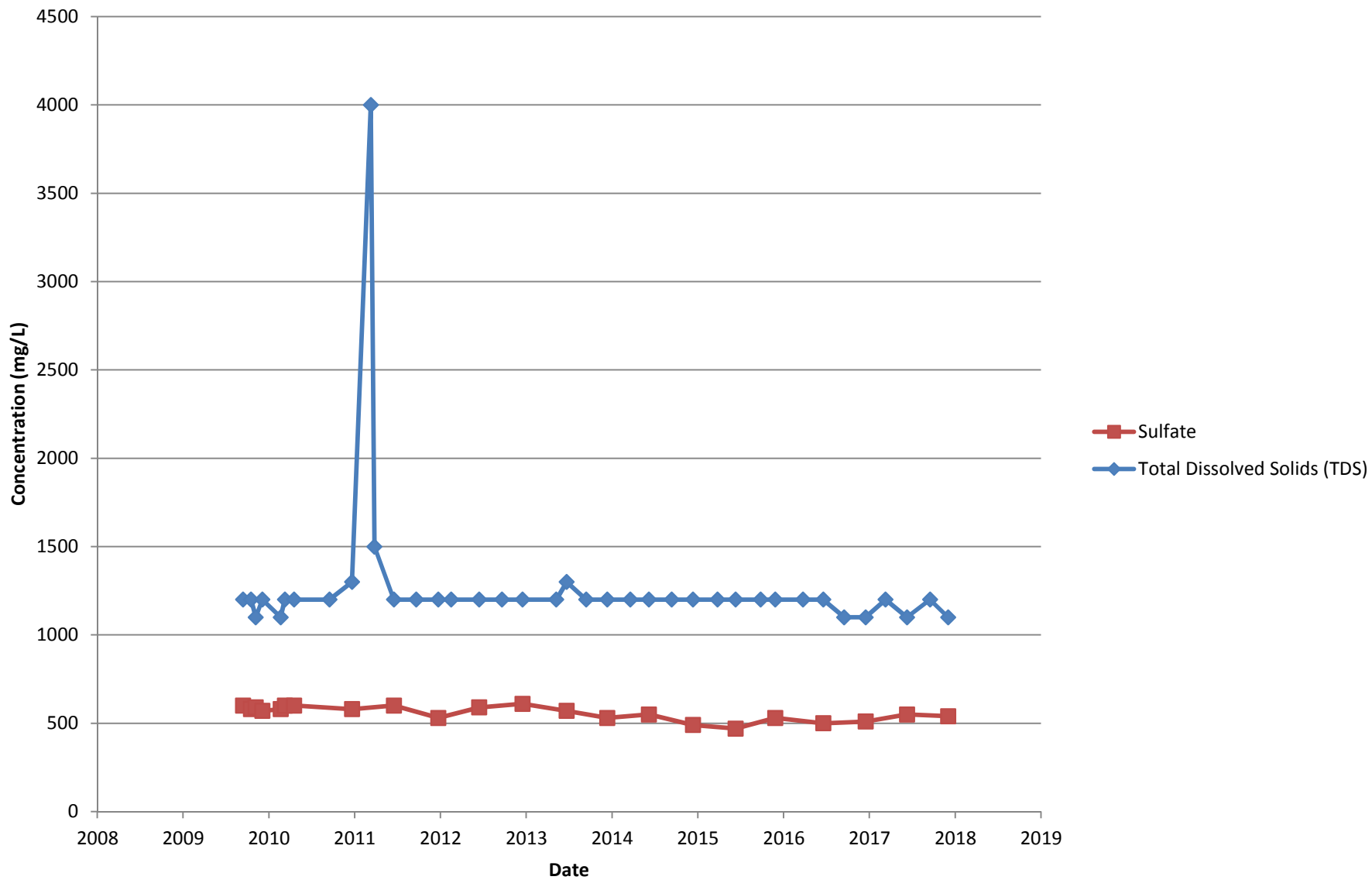
# Historical Constituent Concentrations Deep Well PZ-4



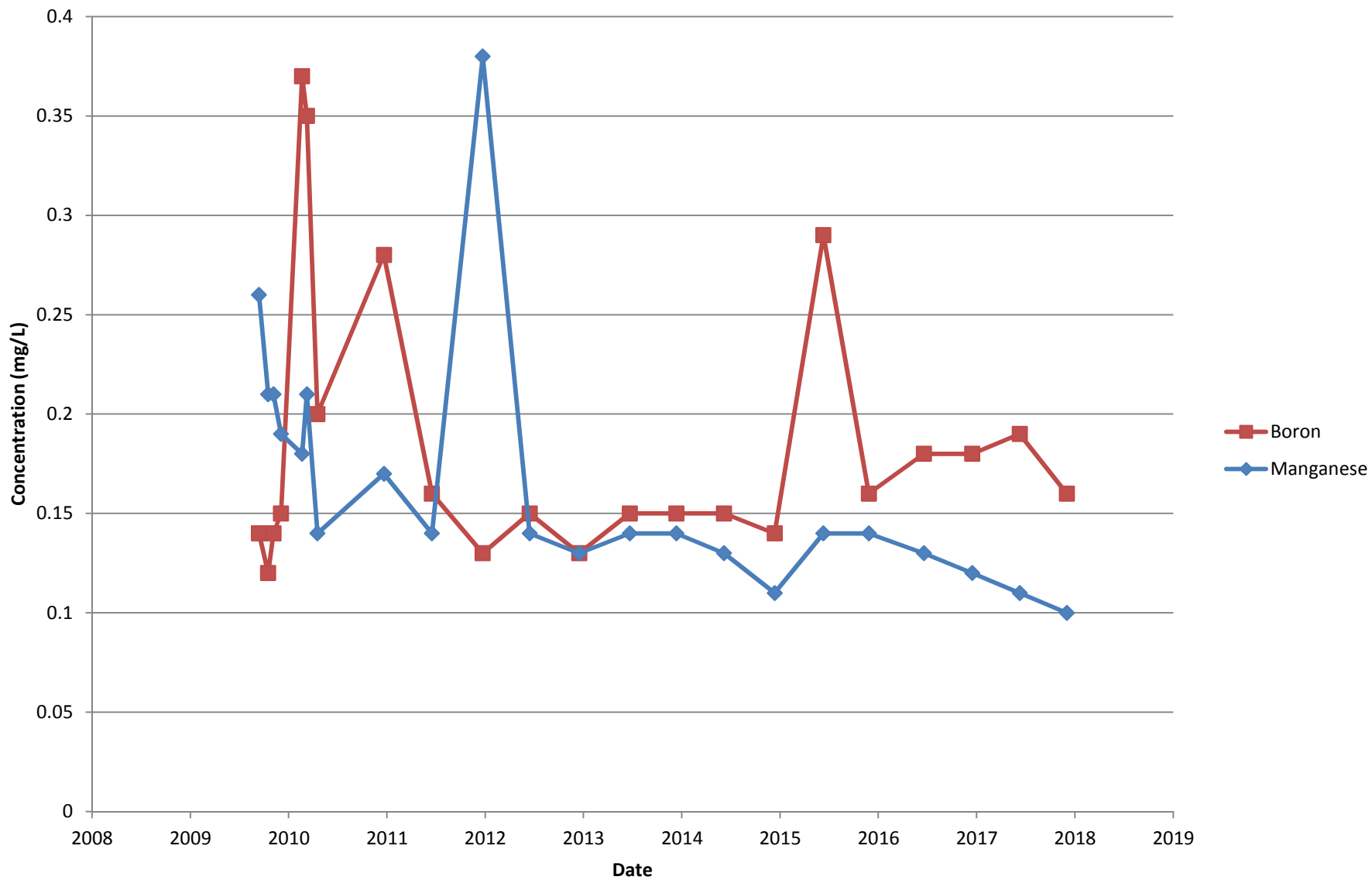
# Historical Constituent Concentrations Deep Well PZ-4



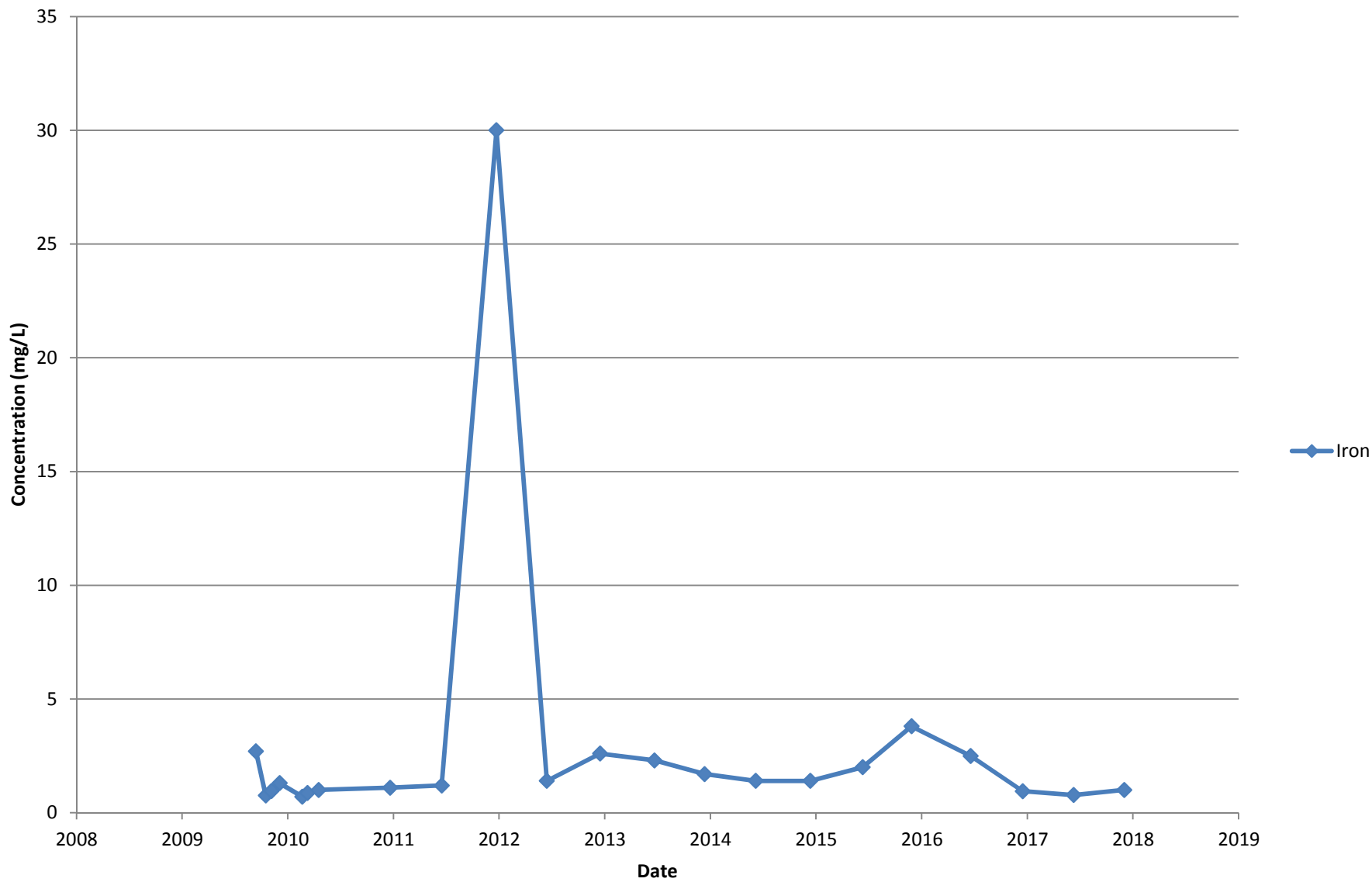
## Historical Constituent Concentrations Deep Well PZ-4



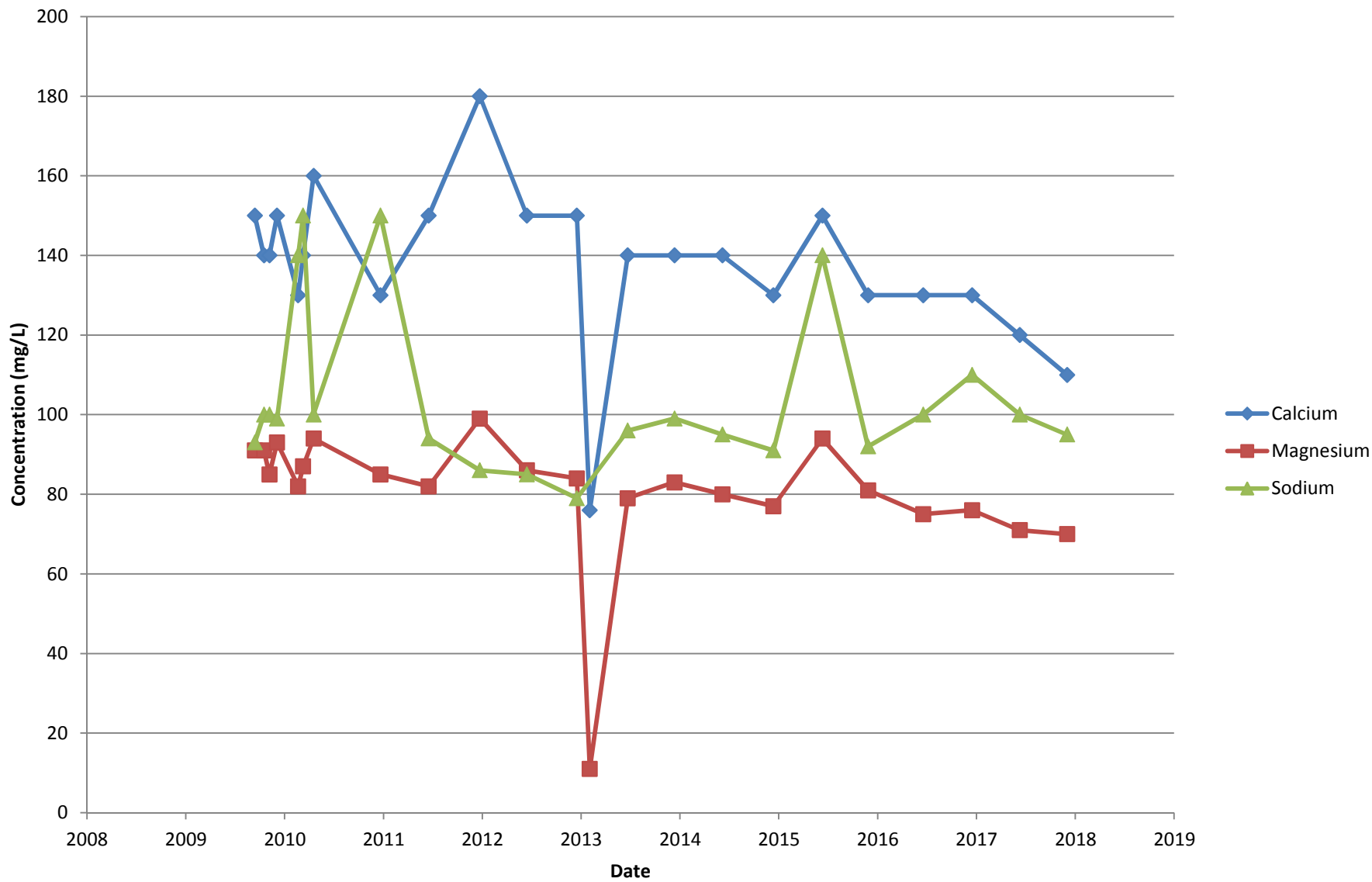
# Historical Constituent Concentrations Deep Well PZ-4



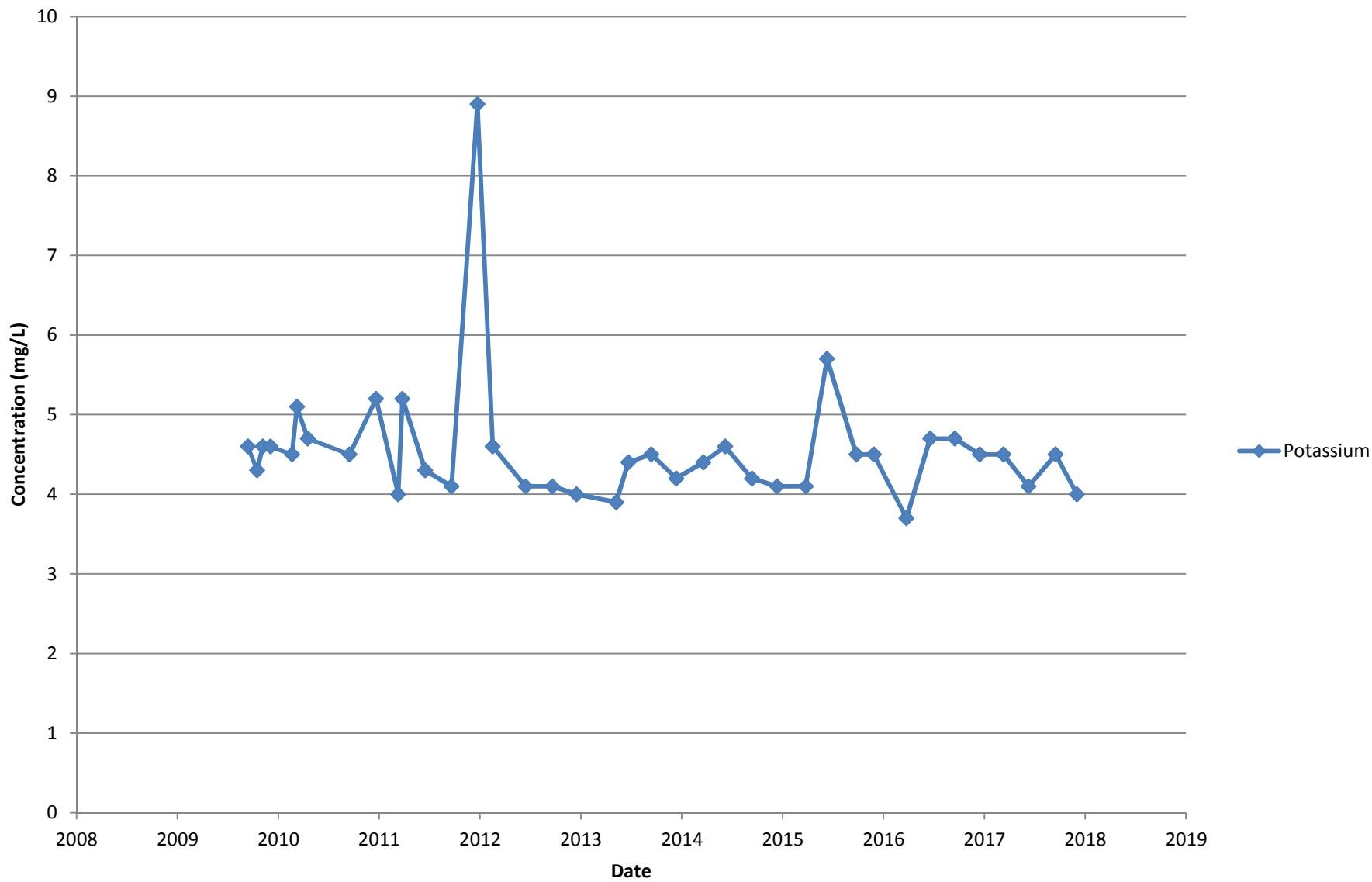
# Historical Constituent Concentrations Deep Well PZ-4



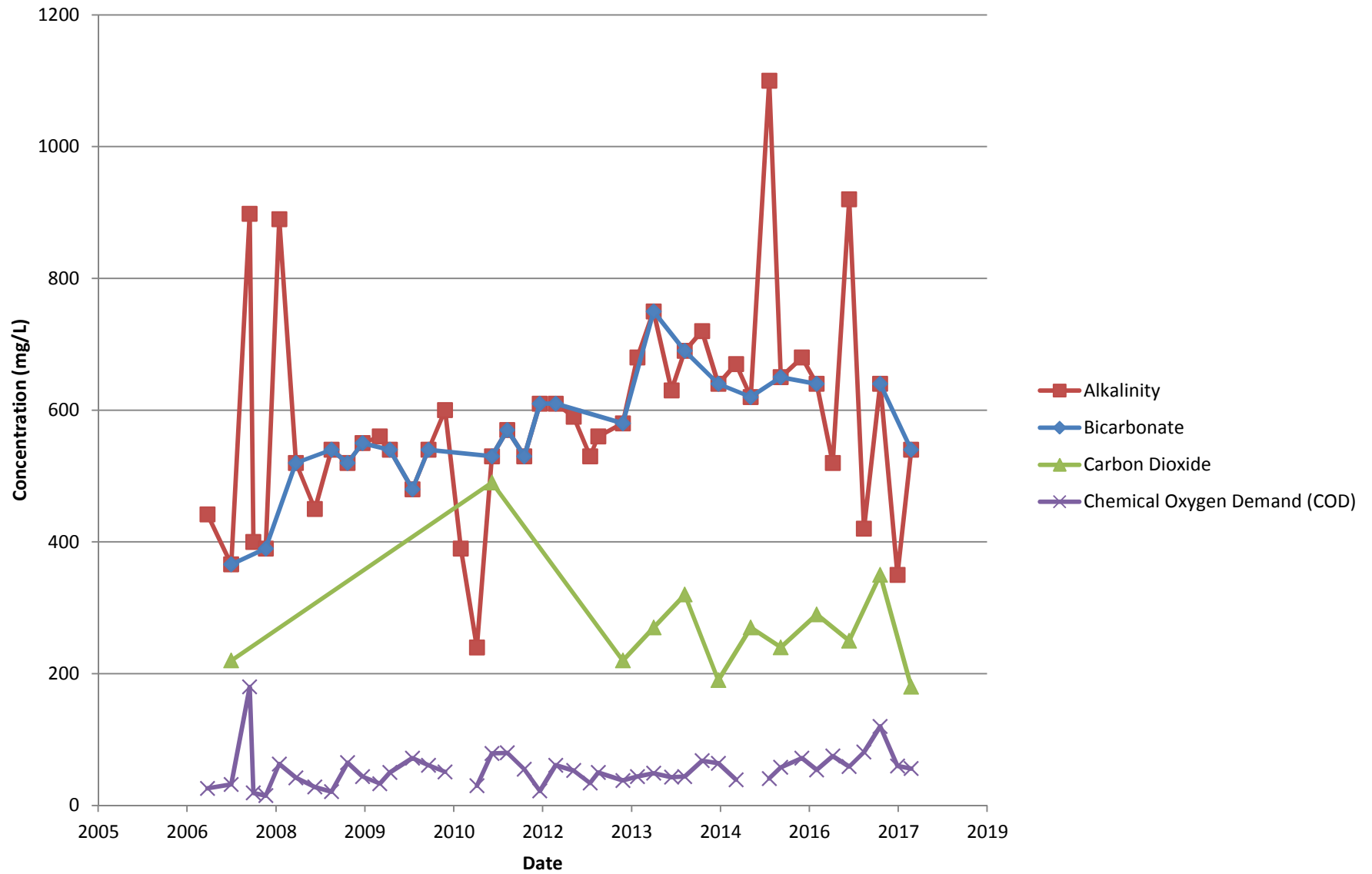
# Historical Constituent Concentrations Deep Well PZ-4



# Historical Constituent Concentrations Deep Well PZ-4



# Historical Constituent Concentrations Subdrain N





**APPENDIX I**

**TABULATED ANALYTICAL DATA**

SUNSHINE CANYON SANITARY LANDFILL  
 HISTORICAL DATA - MONITORING WELL MW-1

ANALYTE	UNITS	Mar 2013	Jun 2013	Sep 2013	Dec 2013	Mar 2014	June 2014	Sep 2014	Dec 2014	Mar 2015	Jun 2015	Sep 2015	Dec 2015	Mar 2016	June 2016	Sept 2016	Dec 2016	Mar 2017	June 2017	Sept 2017	Dec 2017
<b>FIELD PARAMETERS</b>																					
Dissolved Oxygen	mg/L	0.0	0.80	2.6	5.17	5.36	0.72	4.04	0.59	0.61	1.37	1.08	1.00	2.53	3.52	3.21	2.14	2.14	1.66	1.96	2.68
Oxidation-Reduction Potential	mV	-181	-146	-159	-176	-134	-178	-143	-149	-139	-128	-148	-184	-137	-135	-145	-109	-64	-94	-119	-90
pH	units	6.62	7.27	7.16	7.02	6.87	6.78	6.68	6.88	6.21	6.78	6.68	6.60	7.10	6.78	6.77	6.78	6.77	6.38	6.37	6.56
Specific Conductance	umhos/cm	2760	1720	1280	2960	3830	4080	3920	4500	1860	4650	3460	4170	4850	5390	5440	5260	6200	6090	6350	4640
Temperature	C°	20.46	20.26	21.22	21.15	20.69	20.46	25.39	21.37	21.81	21.57	21.73	22.18	21.81	22.21	21.80	21.59	22.09	21.61	21.6	21.61
Turbidity	NTU	24.5	63.9	62	7.4	15.9	3.3	4.9	2.3	3.8	3.1	4.7	5.6	4.7	0.9	7.8	39.7	1.68	119	49.1	3.2
<b>GENERAL CHEMISTRY</b>																					
Alkalinity	mg/L	380	270	270	500	560	630	710	670	790	710	680	670	640	680	680	700	640	700	550	700
Bicarbonate	mg/L	NA	NA	NA	500	NA	630	NA	670	NA	710	NA	670	NA	680	NA	700	NA	700	NA	700
Ammonia as N	mg/L	1.2	2.4	0.05	3.1	3.4	3.7	3.6	3.8	4.3	3.5	6.9	3.3	3.2	2.0	3.8	3.7	2.7	3.6	2.8	3.8
Bromide	mg/L	NA	0.88	NA	1.3	NA	2.4	NA	5.3	NA	12	NA	3.3	NA	4.6	NA	3.7	NA	4.9	NA	4.3
Carbon Dioxide, Free	mg/L	NA	39	NA	160	NA	210	NA	170	NA	230	NA	200	NA	250	NA	300	NA	350	NA	95
Chemical Oxygen Demand (COD)	mg/L	44	16	10	66	88	94	130	120	84	120	120	90	110	120	150	140	95	130	120	130
Chloride	mg/L	NA	91	79	190	230	250	280	250	300	280	220	220	200	260	290	220	290	280	260	310
Fluoride	mg/L	150	2.3	NA	2.2	NA	1.3	NA	2.6	NA	2.3	NA	2.7	NA	2.9	NA	2.5	NA	4.1	NA	1.7
Nitrate (as N)	mg/L	NA	0.080	NA	0.35	NA	0.54	NA	0.11	NA	NA	NA	0.28	NA	0.11	NA	0.11	NA	0.55	NA	0.11
Sulfate	mg/L	NA	540	NA	1200	NA	1600	NA	1500	NA	1600	NA	1600	NA	1800	NA	1600	NA	1700	NA	1700
Sulfide, total	mg/L	NA	0.020	NA	0.020	NA	0.020	NA	0.020	NA	NA	NA	0.020	NA	0.020	NA	0.025	NA	0.027	NA	0.027
Total Dissolved Solids (TDS)	mg/L	2300	1200	770	2400	3200	3600	3600	3600	3800	4000	3600	3500	3400	3700	3700	3400	3600	3500	3800	3700
Total Organic Carbon (TOC)	mg/L	20	9.0	6.7	24	30	37	43	16	53	48	56	38	3.8	45	47	44	33	51	48	48
<b>METALS</b>																					
Arsenic	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0080	NA	NA	NA	NA	NA	NA
Barium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.054	NA	NA	NA	NA	NA	NA
Boron	mg/L	NA	0.57	NA	0.64	NA	0.93	NA	1.1	NA	1.1	NA	1.2	NA	0.99	NA	1.3	NA	1.1	NA	1.4
Calcium	mg/L	NA	180	NA	320	NA	440	NA	450	NA	450	NA	410	NA	420	NA	460	NA	480	NA	460
Cobalt	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0051	NA	NA	NA	NA	NA	NA
Copper	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0073	NA	NA	NA	NA	NA	NA
Iron	mg/L	NA	26	NA	46	NA	65	NA	59	NA	62	NA	55	NA	60	NA	63	NA	60	NA	60
Magnesium	mg/L	NA	81	NA	150	NA	190	NA	180	NA	190	NA	180	NA	210	NA	210	NA	210	NA	210
Nickel	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.023	NA	NA	NA	NA	NA	NA
Manganese	mg/L	NA	1.3	NA	2.5	NA	3.6	NA	3.1	NA	3.5	NA	3.0	NA	3.2	NA	3.6	NA	3.2	NA	3.5
Potassium, total	mg/L	NA	19	16	28	29	31	31	30	31	27	31	28	27	28	27	33	30	30	32	30
Sodium	mg/L	NA	130	NA	180	NA	290	NA	310	NA	310	NA	320	NA	300	NA	370	NA	350	NA	350
Tin	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.028	NA	NA	NA	NA	NA	NA
<b>VOLATILE ORGANIC COMPOUNDS</b>																					
Acetone	ug/L	4.5	4.5	2.5	2.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	10	10	10	10	10	10	10	10	10
tert-Amyl Methyl Ether	ug/L	NA	0.4	NA	NA	NA	NA	0.25	0.25	0.25	NA	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	NA	NA
tert-Butanol	ug/L	6.5	6.5	5	8.3	8.9	9.6	15	13	20	18	12	9.0	12	18	22	20	10	19	20	21
1,4-Dioxane	ug/L	17	1.5	0.95	10	10	11	16	18	27	26	19	15	15	15	19	19	12	18	16	19
Methylene Chloride	ug/L	0.95	0.4	0.25	0.88	0.88	0.88	0.25	0.88	0.88	NA	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Tetrahydrofuran	ug/L	5.0	3.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	6.3	5.0	5.0	5.0	5.0	5.2	5.0	5.0	5.0	5.0	6.7

SUNSHINE CANYON SANITARY LANDFILL  
HISTORICAL DATA - MONITORING WELL MW-2A

ANALYTE	UNITS	Mar 2013	Jun 2013	Sep 2013	Dec 2013	Mar 2014	June 2014	Sep 2014	Dec 2014	Mar 2015	Jun 2015	Sep 2015	Dec 2015	Mar 2016	June 2016	Sept 2016	Dec 2016	Mar 2017	June 2017	Sept 2017	Dec 2017
<b>FIELD PARAMETERS</b>																					
Dissolved Oxygen	mg/L	0	1.14	1.96	0.92	1.03	1.13	1.38	0.73	0.65	1.63	1.01	1.03	0.95	2.44	3.24	2.67	0.96	0.76	1.68	2.99
Oxidation-Reduction Potential	mV	7	63	-7	-3	62	10	59	26	49	107	110	-58	-5	-204	-108	-119	34	-98	-76	-30
pH	units	6.64	7.09	6.99	6.74	6.86	6.83	6.56	6.43	5.84	6.59	6.92	7.17	7.44	7.39	6.99	7.19	7.57	7.99	6.98	7.29
Specific Conductance	umhos/cm	3140	3290	3350	3250	3380	3100	3290	3380	6650	3230	2620	3040	3870	4050	4130	4100	4080	4580	4530	3280
Temperature	C°	23.89	25.76	30.38	22.7	19.5	24.19	25.05	24.04	22.67	25.36	27.81	23.18	21.95	24.23	22.63	20.59	21.32	22.83	22.21	22.37
Turbidity	NTU	113	0.0	1.6	0.2	0.0	0.0	1.6	0.0	0.0	0.4	0.0	7.6	11.1	12.5	3.4	5.3	1.0	0.0	0.0	0.0
<b>GENERAL CHEMISTRY</b>																					
Alkalinity	mg/L	310	320	360	360	330	330	340	330	350	310	330	510	360	380	380	360	260	350	270	330
Alkalinity, Bicarbonate	mg/L	NA	320	NA	360	NA	330	NA	330	NA	310	NA	510	NA	380	NA	360	NA	350	NA	330
Ammonia as N	mg/L	3.4	1.2	0.05	0.75	0.46	1.3	1.0	1.6	2.7	1.4	2.6	0.16	1.0	2.1	2.9	3.2	0.10	1.8	2.8	3.4
Ammonia as NH3	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.19	NA	NA	NA	NA	NA	NA	NA	NA
Bromide	mg/L	NA	0.35	NA	1.6	NA	0.80	NA	13	NA	1.8	NA	1.8	NA	0.51	NA	0.50	NA	0.58	NA	0.50
Carbon Dioxide, Free	mg/L	NA	56	NA	51	NA	81	NA	60	NA	55	NA	86	NA	84	NA	72	NA	44	NA	49
Chemical Oxygen Demand (COD)	mg/L	16	16	10	10	10	20	39	10	10	10	10	36	31	34	37	16	20	10	10	10
Chloride	mg/L	12	15	15	15	14	15	64	32	25	13	40	57	23	18	17	15	200	19	15	14
Fluoride	mg/L	NA	1.4	NA	1.3	NA	0.91	NA	13	NA	1.8	NA	2.5	NA	1.5	NA	1.8	NA	1.3	NA	0.98
Nitrate (as N)	mg/L	11	0.82	NA	0.84	NA	0.85	NA	0.81	NA	0.77	NA	0.28	NA	0.055	NA	0.11	NA	0.18	NA	0.11
Sulfate	mg/L	NA	1600	NA	1600	NA	1700	NA	1400	NA	1400	NA	1900	NA	1500	NA	1600	NA	1500	NA	1600
Sulfide, total	mg/L	NA	NA	NA	0.020	NA	0.020	NA	0.020	NA	0.020	NA	0.020	NA	0.020	NA	0.020	NA	0.027	NA	0.027
Total Dissolved Solids (TDS)	mg/L	2700	2800	2700	2700	2600	2700	2700	2600	2800	2600	2600	3200	2700	2600	2600	2500	2200	2600	2700	2500
Total Organic Carbon (TOC)	mg/L	3.0	3.4	2.9	2.7	2.1	2.7	2.6	2.4	4.4	2.3	2.4	12	3.8	5.1	3.5	3.8	6.9	3.0	2.6	2.4
<b>METALS</b>																					
Arsenic	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.026	NA	NA	NA	NA	NA	NA
Barium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.018	NA	NA	NA	NA	NA	NA
Boron	mg/L	NA	0.61	NA	0.65	NA	0.58	NA	0.61	NA	0.58	NA	0.80	NA	0.54	NA	0.60	NA	0.55	NA	0.49
Calcium	mg/L	NA	230	NA	220	NA	200	NA	220	NA	210	NA	350	NA	210	NA	230	NA	230	NA	180
Iron	mg/L	NA	0.18	NA	0.96	NA	0.45	NA	0.17	NA	0.29	NA	9.0	NA	35	NA	23	NA	0.37	NA	2.9
Magnesium	mg/L	NA	130	NA	130	NA	110	NA	120	NA	120	NA	140	NA	110	NA	120	NA	120	NA	110
Manganese	mg/L	NA	0.52	NA	0.58	NA	0.40	NA	0.34	NA	0.41	NA	2.6	NA	1.8	NA	1.2	NA	0.46	NA	0.45
Potassium, total	mg/L	5.4	5.4	6.0	5.0	5.7	5.4	5.4	5.4	5.2	5.2	5.2	12	6.2	5.5	5.0	5.9	9.3	5.4	5.1	4.3
Sodium	mg/L	470	470	NA	440	NA	430	NA	460	NA	440	NA	450	NA	410	NA	420	NA	430	NA	330
Tin	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.018	NA	NA	NA	NA	NA	NA	NA
<b>VOLATILE ORGANIC COMPOUNDS:</b>																					
1,4-Dioxane	mg/L	0.32	0.33	0.33	0.34	0.54	0.53	0.26	2.0	1.0	0.25	0.25	2.6	0.52	1.7	0.24	0.24	0.25	0.25	0.26	0.26
Chloromethane	µg/L		0.40	0.25		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.66	0.25	0.25	0.25

SUNSHINE CANYON SANITARY LANDFILL  
 HISTORICAL DATA - MONITORING WELL MW-2B

ANALYTE	UNITS	Mar 2013	Jun 2013	Sep 2013	Dec 2013	Mar 2014	Jun 2014	Sep 2014	Dec 2014	Mar 2015	Jun 2015	Sep 2015	Dec 2015	Mar 2016	June 2016	Sept 2016	Dec 2016	Mar 2017	June 2017	Sept 2017	Dec 2017
<b>FIELD PARAMETERS</b>																					
Dissolved Oxygen (DO)	mg/L	0	0.78	2.24	1.19	0.62	1.37	1.40	0.68	0.43	3.39	1.60	1.27	2.98	3.73	3.77	7.98	2.49	0.76	1.26	2.38
Oxidation-Reduction Potential	mV	-156	-144	-151	-81	-169	-112	-122	-125	-132	-118	-128	-122	-119	-113	-114	-171	-111	-158	-109	-127
pH	units	7.23	7.80	7.65	7.51	7.17	7.59	7.28	7.03	6.51	7.28	7.70	7.66	7.50	7.29	7.57	7.37	7.55	8.12	7.15	7.65
Specific Conductance	µmhos/cm	3250	3320	3380	3300	3390	3250	3340	3410	5640	2800	2790	2720	3880	4000	4040	4100	4570	4680	4500	3290
Temperature	C°	21.67	22.56	23.33	21.91	19.76	21.65	23.25	22.35	21.35	22.10	23.62	21.48	21.08	22.21	22.29	21.37	21.74	21.91	22.13	22.34
Turbidity	NTU	1	0.5	0.1	0.0	0.1	0.0	1.6	0.0	0.0	0.0	0.0	0.0	4.5	6.2	2.5	1.3	0.0	0.0	0.0	0.0
<b>GENERAL CHEMISTRY</b>																					
Alkalinity	mg/L	310	330	400	380	350	340	350	320	350	320	340	340	350	340	350	350	350	360	260	350
Alkalinity, Bicarbonate	mg/L														340	NA	350	NA	360	NA	350
Ammonia as N	mg/L	3.60	3.50	0.05	3.40	3.5	4.0	3.6	3.8	4.2	3.8	5.7	3.0	1.0	1.9	3.2	3.5	3.3	3.4	3.4	3.6
Ammonia as NH3	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.6	NA	NA	NA	NA	NA	NA	NA	NA
Bicarbonate	mg/L	NA	330	NA	380	NA	340	NA	320	NA	320	NA	340	NA	NA	NA	NA	NA	NA	NA	NA
Bromide	mg/L	NA	0.35	NA	1.3	NA	0.80	NA	0.50	NA	1.3	NA	0.57	NA	0.42	NA	0.50	NA	0.50	NA	0.50
Carbon Dioxide	mg/L	NA	NA	NA	28	NA	39	NA	30	NA	33	NA	21	NA	39	NA	35	NA	39	NA	15
Chemical Oxygen Demand (COD)	mg/L	NA	16	10	10	10	24	35	10	10	10	10	10	10	10	34	10	10	10	10	10
Chloride	mg/L	12	15	13	14	14	14	64	13	13	12	39	14	15	15	14	12	13	13	12	13
Fluoride	mg/L	NA	1.3	NA	1.3	NA	0.50	NA	1.1	NA	1.6	NA	1.5	NA	1.1	NA	1.6	NA	1.0	NA	0.81
Nitrate (as N)	mg/L	NA	0.16	NA	0.28	NA	0.11	NA	0.11	NA	0.28	NA	0.11	NA	0.42	NA	0.11	NA	0.11	NA	0.11
Sulfate	mg/L	NA	1700	NA	1500	NA	1600	NA	1500	NA	1400	NA	1700	NA	1500	NA	1600	NA	1600	NA	1600
Sulfide	mg/L	NA	0.020	NA	0.020	NA	0.020	NA	0.020	NA	0.020	NA	NA	NA	0.020	NA	0.022	NA	0.027	NA	0.027
Total Dissolved Solids (TDS)	mg/L	2600	2800	2700	2800	2600	2700	2600	2300	2600	2600	2700	2700	2700	2500	2600	2600	2600	2600	2700	2500
Total Organic Carbon (TOC)	mg/L	1.7	1.9	2.0	1.9	2.0	2.0	1.6	1.6	1.9	1.7	1.7	2.0	1.7	2.1	1.8	1.9	1.7	1.9	1.8	1.8
<b>METALS</b>																					
Arsenic	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.014	NA	NA	NA	NA	NA	NA
Beryllium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0017	NA	NA	NA	NA	NA	NA
Boron	mg/L	NA	0.59	NA	0.58	NA	0.59	NA	0.56	NA	0.57	NA	0.62	NA	NA	NA	0.58	NA	0.56	NA	0.59
Calcium	mg/L	NA	220	NA	200	NA	190	NA	190	NA	190	NA	200	NA	NA	NA	190	NA	190	NA	190
Cobalt	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0069	NA	NA	NA	NA	NA	NA
Iron	mg/L	NA	4.3	NA	2.3	NA	2.2	NA	2.2	NA	2.3	NA	2.7	NA	0.010	NA	3.0	NA	2.1	NA	2.2
Magnesium	mg/L	NA	120	NA	120	NA	110	NA	110	NA	120	NA	110	NA	0.010	NA	110	NA	110	NA	120
Manganese	mg/L	NA	0.13	NA	0.14	NA	0.14	NA	0.13	NA	0.13	NA	0.13	NA	0.010	NA	0.13	NA	0.12	NA	0.14
Nickel	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.011	NA	NA	NA	NA	NA	NA
Potassium	mg/L	4.8	4.8	5.5	4.1	4.2	4.8	4.2	4.4	4.2	4.6	4.6	4.3	3.4	0.25	4.0	4.6	4.8	4.3	4.3	4.6
Sodium	mg/L	NA	500	NA	470	NA	470	NA	470	NA	480	NA	490	NA	0.25	NA	450	NA	490	NA	420
<b>VOLATILE ORGANIC COMPOUNDS: ND</b>																					
1,4-Dioxane	µg/L	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	1.8	0.24	0.24	0.27	0.24	0.25	0.25
Chloromethane	µg/L		0.40	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.51	0.25	0.25	0.25

SUNSHINE CANYON SANITARY LANDFILL  
HISTORICAL DATA - MONITORING WELL MW-5

ANALYTE	UNITS	Mar 2013	Jun 2013	Sep 2013	Nov <sup>R</sup> 2013	Dec 2013	Mar 2014	Jun 2014	Sep 2014	Dec 2014	Mar 2015	Jun 2015	Sep 2015	Dec 2015	Mar 2016	June 2016	Sept 2016	Dec 2016	Mar 2017	June 2017	Sept 2017	Dec 2017
<b>FIELD PARAMETERS</b>																						
Dissolved Oxygen (DO)	mg/L	0.0	0.82	10.87	1.08	1.37	1.44	2.30	13.76	0.73	0.58	2.43	0.86	0.78	2.08	4.36	0.88	0.85	2.31	1.39	1.20	1.27
Oxidation-Reduction Potential	mV	-128	-126	-118	-87	-124	-100	-90	-100	-109	-109	-102	-117	-139	-95	-96	-51	-54	-76	-38	-71	86
pH	units	6.58	7.21	7.13	7.08	7.32	6.95	7.10	6.86	6.79	6.10	6.91	6.72	6.60	7.05	6.87	6.39	6.64	6.95	8.32	6.56	6.18
Specific Conductance	umhos/cm	3630	3610	3480	3460	3210	3070	2860	2880	3220	5980	3700	2970	3810	4600	5130	3630	3940	5250	5750	5930	4400
Temperature	C°	19.56	19.96	20.25	19.53	20.15	19.54	19.81	21.59	19.82	21.24	20.59	21.03	20.54	21.11	21.24	21.45	20.80	21.90	21.05	21.86	20.83
Turbidity	NTU	13.2	9.9	2.2	10.3	3.1	4.2	3.5	15.4	3.1	0.0	3.4	2.3	10.1	4.7	12.8	2.5	3.4	7.4	14.3	9.9	7.3
<b>GENERAL CHEMISTRY</b>																						
Alkalinity	mg/L	580	590	620	NA	620	540	540	510	470	520	490	560	590	610	640	630	640	620	740	510	680
Bicarbonate	mg/L	NA	590	NA	NA	620	NA	540	NA	470	NA	490	NA	590	NA	640	NA	640	NA	740	NA	680
Ammonia as N	mg/L	4.30	4.30	0.05	NA	4.1	1.9	4.4	4.2	4.5	4.3	4.7	8.9	5.0	4.2	3.3	4.9	6.6	6.0	4.9	5.6	9.6
Bromide	mg/L	NA	2.2	NA	NA	3.2	NA	2.3	NA	2.0	NA	7.8	NA	3.5	NA	4.4	NA	2.4	NA	3.4	NA	3.9
Carbon Dioxide, Free	mg/L	NA	88	NA	NA	130	NA	110	NA	70	NA	130	NA	130	NA	200	NA	190	NA	230	NA	86
Chemical Oxygen Demand (COD)	mg/L	64	65	56	NA	64	46	63	86	61	62	58	84	76	94	88	98	66	86	110	86	73
Chloride	mg/L	160	140	130	NA	180	140	150	140	170	190	210	210	200	220	260	160	130	160	260	260	270
Fluoride	mg/L	NA	2.2	NA	NA	3.4	NA	2.4	NA	2.4	NA	2.1	NA	2.6	NA	3.0	NA	3.2	NA	2.7	NA	2.0
Nitrate (as N)	mg/L	NA	0.16	NA	NA	0.47	NA	0.11	NA	0.11	NA	0.11	NA	0.11	NA	0.12	NA	0.11	NA	0.28	NA	0.11
Sulfate	mg/L	NA	1500	NA	NA	1300	NA	1000	NA	1000	NA	1300	NA	1400	NA	1700	NA	1500	NA	1700	NA	1700
Sulfide	mg/L	NA	0.02	NA	NA	0.020	NA	0.020	NA	0.020	NA	0.020	NA	0.020	NA	0.020	NA	0.020	NA	0.027	NA	0.027
Total Dissolved Solids (TDS)	mg/L	3200	3100	2900	NA	2800	2400	2300	2400	2400	2800	3000	3100	3200	3300	3400	3200	3100	3300	3600	3800	3600
Total Organic Carbon (TOC)	mg/L	27	25	24	NA	19	29	20	20	20	28	27	32	31	39	36	32	26	29	34	35	34
<b>METALS</b>																						
Arsenic	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.011	NA	NA	NA	NA	NA	NA
Barium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.040	NA	NA	NA	NA	NA	NA
Boron	mg/L	NA	1.1	NA	NA	1.0	NA	1.0	NA	1.0	NA	1.0	NA	0.96	NA	0.94	NA	1.0	NA	1.0	NA	0.99
Calcium	mg/L	NA	420	NA	NA	330	NA	270	NA	310	NA	390	NA	410	NA	430	NA	430	NA	480	NA	450
Cobalt	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0076	NA	NA	NA	NA	NA	NA
Copper	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0056	NA	NA	NA	NA	NA	NA
Iron	mg/L	NA	28	NA	NA	15	NA	12	NA	12	NA	16	NA	17	NA	19	NA	19	NA	21	NA	21
Magnesium	mg/L	NA	170	NA	NA	140	NA	120	NA	130	NA	170	NA	170	NA	200	NA	190	NA	200	NA	210
Manganese	mg/L	NA	5.90	NA	NA	4.6	NA	3.2	NA	3.4	NA	4.2	NA	4.2	NA	4.4	NA	4.8	NA	4.9	NA	4.8
Nickel	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.027	NA	NA	NA	NA	NA	NA
Potassium	mg/L	24	23	20	NA	22	21	21	19	21	23	23	26	24	27	27	28	30	28	29	28	29
Sodium	mg/L	NA	320	NA	NA	270	NA	240	NA	250	NA	240	NA	240	NA	250	NA	270	NA	300	NA	270
Tin	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.026	NA	NA	NA	NA	NA	NA
<b>VOLATILE ORGANIC COMPOUNDS</b>																						
Acetone	µg/L	4.5	4.5	5.3	4.5	2.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	10	16	10	10	10	10	10	11	10
1,4-Dioxane	µg/L	13.0	5.9	6.6	NA	5.8	4.5	3.0	4.4	6.9	11	9.9	14	15	16	15	13	11	11	15	12	15
Methylene Chloride	µg/L	0.95	0.95	0.50	NA	ND	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
t-Butanol	µg/L	6.5	6.5	5.0	NA	5.0	5.0	5.0	5.0	5.9	5.0	5.0	12	6.5	7.1	5.0	5.0	5.0	5.0	5.0	5.0	5.0

SUNSHINE CANYON SANITARY LANDFILL  
HISTORICAL DATA - MONITORING WELL MW-6

ANALYTE	UNITS	Mar 2013	Jun 2013	Sep 2013	Dec 2013	Mar 2014	Jun 2014	Sep 2014	Dec 2014	Mar 2015	Jun 2015	Sep 2015	Dec 2015	Mar 2016	June 2016	Sept 2016	Dec 2016	Mar 2017	June 2017	Sept 2017	Dec 2017
<b>FIELD PARAMETERS</b>																					
Dissolved Oxygen (DO)	mg/L	0	0.70	0.85	1.63	1.02	0.68	2.11	0.75	0.69	0.95	0.76	1.06	10.99	1.00	3.05	1.73	0.78	1.09	1.10	2.92
Oxidation-Reduction Potential	mV	-365	-309	-322	-349	-306	-340	-316	-329	-364	-339	-349	-368	-329	-356	-340	-309	-278	-242	-254	-264
pH	units	7.27	7.27	5.85	7.53	7.47	7.37	6.98	7.19	6.31	7.10	6.87	6.67	7.50	6.79	7.23	7.02	6.78	8.59	6.93	7.2
Specific Conductance	umhos/cm	3750	3870	3690	3810	3810	3650	3670	4270	5390	5060	2960	3790	4370	3490	4270	3920	4120	6030	5320	4220
Temperature	C°	23.66	23.23	28.00	24.13	23.00	25.14	26.09	18.79	23.51	26.23	25.1	24.61	22.62	25.93	25.88	23.45	23.96	22.74	23.11	16.59
Turbidity	NTU	0.0	1.3	0.0	0.7	1.2	0.0	2.4	1.5	0.0	0.9	3.1	2.5	8.5	0.6	12.1	12.9	1.6	1.2	7.4	0.0
<b>GENERAL CHEMISTRY</b>																					
Alkalinity	mg/L	440	460	470	510	490	460	450	440	470	410	450	450	500	430	480	400	480	520	450	450
Alkalinity, bicarbonate	mg/L	NA	460	NA	510	NA	460	NA	440	NA	410	NA	450	NA	430	NA	400	NA	520	NA	450
Ammonia as N	mg/L	1.00	0.80	0.05	1.0	0.60	1.0	1.3	1.1	0.84	0.94	0.90	0.73	0.78	0.64	1.3	1.4	1.1	0.80	0.81	1.0
Ammonia as NH3	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.89	NA	NA	NA	NA	NA	NA	NA	NA
Bromide	mg/L	NA	0.87	NA	2.5	NA	2.0	NA	1.1	NA	1.2	NA	1.5	NA	2.5	NA	0.81	NA	1.7	NA	0.88
Carbon Dioxide, Free	mg/L	NA	42	NA	69	NA	81	NA	46	NA	81	NA	62	NA	81	NA	97	NA	97	NA	39
Chemical Oxygen Demand (COD)	mg/L	NA	18	10	21	14	30	43	10	630	10	44	28	42	11	10	17	10	180	44	10
Chloride	mg/L	39	38	34	31	35	31	27	30	29	26	29	33	35	24	29	28	36	42	32	38
Fluoride	mg/L	NA	1.7	NA	3.9	NA	1.3	NA	1.7	NA	1.7	NA	2.5	NA	3.3	NA	1.9	NA	2.5	NA	1.1
Nitrate (as N)	mg/L	NA	0.16	NA	0.55	NA	0.28	NA	0.11	NA	0.11	NA	0.28	NA	0.55	NA	0.11	NA	0.28	NA	0.11
Sulfate	mg/L	NA	1800	NA	1700	NA	1800	NA	1500	NA	1500	NA	1800	NA	1600	NA	1700	NA	2400	NA	1800
Sulfide, total	mg/L	NA	3.4	NA	6.7	NA	1.8	NA	12	NA	2.6	NA	8.8	NA	1.6	NA	1.2	NA	2.9	NA	7.6
Total Dissolved Solids (TDS)	mg/L	3300	3200	3200	3100	3200	3100	3000	2900	3200	2900	3100	3000	3000	2900	2800	2700	3800	4500	3100	3000
Total Organic Carbon (TOC)	mg/L	5.6	5.2	5.3	5.7	6.5	5.6	5.0	5.2	5.3	4.8	6.1	4.9	10	4.8	5.1	4.8	6.0	6.6	5.7	5.2
<b>METALS</b>																					
Barium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.021	NA	NA	NA	NA	NA	NA
Boron	mg/L	NA	0.70	NA	0.79	NA	0.57	NA	0.82	NA	0.90	NA	0.80	NA	0.49	NA	0.69	NA	0.76	NA	0.8
Calcium	mg/L	NA	350	NA	320	NA	360	NA	340	NA	370	NA	330	NA	330	NA	340	NA	460	NA	330
Iron	mg/L	NA	3.6	NA	1.4	NA	8.4	NA	0.67	NA	4.9	NA	0.53	NA	7.5	NA	8.3	NA	1.1	NA	0.78
Magnesium	mg/L	NA	180	NA	190	NA	170	NA	180	NA	200	NA	180	NA	160	NA	170	NA	220	NA	190
Manganese	mg/L	NA	0.89	NA	0.68	NA	1.3	NA	0.71	NA	1.2	NA	0.70	NA	1.3	NA	0.86	NA	1.2	NA	0.85
Potassium, total	mg/L	5.2	6.1	5.7	5.5	5.0	7.2	4.8	5.1	5.7	7.7	5.5	5.2	4.8	6.6	5.8	6.6	5.6	6.4	5.2	5.8
Sodium	mg/L	NA	300	NA	340	NA	270	NA	360	NA	310	NA	330	NA	230	NA	280	NA	390	NA	320
Tin	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.019	NA	NA	NA	NA	NA	NA	NA
<b>VOLATILE ORGANIC COMPOUNDS</b>																					
Carbon Disulfide	µg/L	0.48	0.48	0.25	2.0	0.25	0.25	0.25	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
Vinyl Chloride	µg/L	0.40	0.40	0.38	0.25	0.25	0.26	0.32	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25

SUNSHINE CANYON SANITARY LANDFILL  
HISTORICAL DATA - MONITORING WELL MW-9

ANALYTE	UNITS	Mar 2013	Jun 2013	Sep 2013	Dec 2013	Mar 2014	Jun 2014	Sep 2014	Dec 2014	Mar 2015	Jun 2015	Sep 2015	Dec 2015	Mar 2016	June 2016	Sept 2016	Dec 2016	Mar 2017	June 2017	Sept 2017	Dec 2017
<b>FIELD PARAMETERS</b>																					
Dissolved Oxygen	mg/L	0	0.57	1.73	1.04	1.31	2.22	1.74	0.57	0.41	2.77	1.60	1.13	1.89	0.73	1.73	0.75	2.51	1.49	1.53	1.3
Oxidation-Reduction Potential	mV	-152	-154	-152	-157	-127	-121	-126	-140	-131	-112	-147	-150	-105	-156	-106	-73	-96	-98	-102	-90
pH	units	6.62	6.98	6.65	6.73	7.02	6.92	6.53	6.61	5.82	6.68	6.59	6.46	6.91	6.31	6.74	6.49	7.02	8.39	6.46	6.49
Specific Conductance	umhos/cm	4630	4990	4930	4660	4640	5050	5240	5730	1080	4930	3610	4600	4990	3840	5220	4840	6660	6440	7180	5830
Temperature	C°	20.76	21.99	23.08	22.59	21.31	21.19	25.15	23.09	27.74	23.99	24.80	22.95	22.61	22.98	24.34	NA	22.79	21.84	24.09	22.93
Turbidity	NTU	8.8	9.3	11.9	14.8	2.9	0.5	0.0	7.2	1.9	0.0	0.0	0.0	16.9	1.4	0.0	0.0	1.1	4.4	0.9	1.0
<b>GENERAL CHEMISTRY</b>																					
Alkalinity	mg/L	910	910	1000	860	940	1000	1200	1100	1200	860	840	770	720	600	660	740	860	850	740	1200
Bicarbonate	mg/L	NA	910	NA	860	NA	1000	NA	1100	NA	860	NA	770	NA	600	NA	740	NA	850	NA	1200
Ammonia as N	mg/L	7.6	6.9	0.05	0.27	3.7	11	8.0	11	7.9	6.5	6.6	4.8	4.2	3.4	4.8	4.7	9.0	9.6	10	9.6
Bromide	mg/L	NA	7.1	NA	2.5	NA	9.7	NA	13	NA	14	NA	2.5	NA	3.2	NA	4.8	NA	5.5	NA	10
Carbon Dioxide, Free	mg/L	NA	220	NA	320	NA	350	NA	340	NA	310	NA	260	NA	230	NA	270	NA	360	NA	200
Chemical Oxygen Demand (COD)	mg/L	240	220	190	170	190	250	350	390	330	180	130	110	98	81	93	160	200	190	280	360
Chloride	mg/L	420	390	320	300	390	510	620	730	590	360	210	210	190	180	200	260	370	250	460	680
Fluoride	mg/L	NA	1.8	NA	2.5	NA	2.7	NA	3.3	NA	2.2	NA	3.0	NA	2.5	NA	2.9	NA	4.2	NA	2.5
Nitrate (as N)	mg/L	2.1	0.40	NA	0.55	NA	0.28	NA	0.28	NA	0.28	NA	0.28	NA	0.11	NA	0.28	NA	0.55	NA	0.55
Sulfate	mg/L	19	1400	NA	1600	NA	1400	NA	1100	NA	1400	NA	1600	NA	2000	NA	1600	NA	1600	NA	1100
Sulfide	mg/L	NA	0.020	NA	0.020	NA	0.020	NA	0.020	NA	0.020	NA	0.020	NA	0.020	NA	0.020	NA	0.027	NA	0.027
Total Dissolved Solids (TDS)	mg/L	3900	4200	3800	3700	3700	3600	4000	4200	4200	4300	3800	3700	3600	3500	3500	3600	3700	3600	3900	4100
Total Organic Carbon (TOC)	mg/L	76	79	62	56	62	86	120	110	140	65	50	39	39	31	39	53	78	62	96	140
<b>METALS</b>																					
Arsenic	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.015	NA	NA	NA	NA	NA	NA
Barium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.030	NA	NA	NA	NA	NA	NA
Boron	mg/L	NA	1.6	NA	1.5	NA	1.8	NA	2.2	NA	1.6	NA	1.2	NA	0.82	NA	1.3	NA	1.5	NA	2.7
Calcium	mg/L	NA	540	NA	450	NA	450	NA	440	NA	400	NA	390	NA	340	NA	440	NA	450	NA	440
Cobalt	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.020	NA	NA	NA	NA	NA	NA
Copper	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0058	NA	NA	NA	NA	NA	NA
Iron	mg/L	NA	75	NA	75	NA	85	NA	68	NA	49	NA	37	NA	38	NA	51	NA	70	NA	70
Magnesium	mg/L	NA	250	NA	250	NA	230	NA	230	NA	220	NA	210	NA	200	NA	220	NA	220	NA	230
Manganese	mg/L	NA	6.1	NA	5.8	NA	5.3	NA	4.4	NA	4.8	NA	5.2	NA	4.8	NA	5.6	NA	3.9	NA	3.7
Nickel	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.021	NA	NA	NA	NA	NA	NA
Potassium	mg/L	27	27	30	27	24	29	27	29	25	21	27	20	17	19	23	26	23	29	31	34
Sodium	mg/L	NA	430	NA	410	NA	450	NA	500	NA	390	NA	370	NA	320	NA	420	NA	460	NA	470
Tin	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.021	NA	NA	NA	NA	NA	NA
<b>VOLATILE ORGANIC COMPOUNDS</b>																					
Acetone	ug/L	4.5	4.5	2.5	9.6	5.6	4.5	4.5	4.5	5.7	9.2	4.5	10	14	10	10	10	13	12	0.50	10
1,4-Dichlorobenzene	ug/L	0.37	0.38	0.25	0.25	0.25	0.25	0.27	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	1.3	0.25
1,4-Dioxane	ug/L	1.0	55	34	39	27	34	47	70	64	43	34	31	23	8.3	19	23	29	11	28	47
cis-1,2-Dichloroethene	ug/L	2.9	4.3	4.2	4.0	3.3	2.2	2.1	1.9	1.3	0.93	1.4	1.5	0.72	0.55	0.5	0.54	0.55	0.94	1.3	0.79
Methylene Chloride	ug/L																	1.4	0.88	4.4	0.88
Methyl tert-butyl ether	ug/L	0.36	0.35	0.48	0.64	0.49	0.38	0.30	0.25	0.25	0.45	0.54	0.49	0.45	0.40	0.36	0.25	0.25	0.61	1.3	0.25
t-Butanol	ug/L	69	92	66	63	56	72	88	95	91	42	24	23	16	20	20	33	55	37	70	110
Tetrahydrofuran	ug/L	8.1	8.5	11	9.5	6.1	13	14	17	14	12	6.0	6.0	6.2	5.0	5.0	6.2	9.4	6.4	25	21

SUNSHINE CANYONSANITARY LANDFILL  
HISTORICAL DATA - MONITORING WELL MW-13R

ANALYTE	UNITS	Mar 2013	Jun 2013	Sep 2013	Dec 2013	Mar 2014	Jun 2014	Sep 2014	Dec 2014	Mar 2015	Jun 2015	Sep 2015	Dec 2015	Mar 2016	June 2016	Sept 2016	Dec 2016	Mar 2017	June 2017	Sept 2017	Dec 2017
<b>FIELD PARAMETERS</b>																					
Dissolved Oxygen (DO)	mg/L	0.0	0.98	2.21	1.09	0.97	1.86	4.01	0.70	0.57	1.47	0.64	0.78	14.26	0.71	1.92	0.87	6.13	0.97	1.80	1.27
Oxidation-Reduction Potential	mV	-402	-369	-401	-407	-330	-358	-379	-384	-402	-369	-405	-420	-388	-433	-391	-357	-325	-363	-307	-349
pH	units	7.43	7.73	7.43	7.59	7.56	7.69	7.37	7.42	6.58	7.35	7.09	7.04	7.68	6.99	7.54	7.25	7.63	9.06	7.19	7.48
Specific Conductance	umhos/cm	1750	1660	1820	1620	1730	930	2250	2610	6630	3830	2370	2800	3530	2790	3540	2990	3220	3340	4160	3110
Temperature	C°	21.84	22.12	22.67	21.91	21.71	21.77	25.18	21.64	24.66	23.08	25.52	24.45	21.00	23.08	25.19	20.94	22.53	23.52	22.74	23.01
Turbidity	NTU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.0	20.8	0.0	0.0	0.0	3.7	0.4	0.0	0.0
<b>GENERAL CHEMISTRY</b>																					
Alkalinity, Total	mg/L	520	560	660	650	630	640	670	610	630	580	620	600	650	690	700	720	740	820	590	740
Bicarbonate Alkalinity	mg/L	NA	560	NA	650	NA	640	NA	610	NA	580	NA	600	NA	690	NA	720	NA	780	NA	740
Ammonia as N	mg/L	4.7	4.7	0.05	0.10	2.7	6.6	5.8	6.1	7.0	5.6	5.9	6.0	3.9	3.3	6.0	6.3	6.6	7.6	5.8	7.6
Ammonia as NH3	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	7.3	NA	NA	NA	NA	NA	NA	NA	NA
Bromide	mg/L	NA	0.78	NA	0.50	NA	0.25	NA	1.9	NA	2.2	NA	3.2	NA	2.9	NA	1.7	NA	2.0	NA	2.4
Carbon Dioxide, Free	mg/L	NA	11	NA	60	NA	55	NA	32	NA	70	NA	58	NA	92	NA	72	NA	110	NA	55
Chemical Oxygen Demand (COD)	mg/L	NA	170	180	220	170	190	160	180	130	190	200	200	220	240	240	250	280	280	270	270
Chloride	mg/L	72	92	110	100	130	120	99	130	110	130	140	200	160	190	110	210	110	120	140	190
Fluoride	mg/L	NA	0.48	NA	0.50	NA	0.27	NA	0.69	NA	0.96	NA	0.91	NA	1.1	NA	0.59	NA	0.55	NA	0.50
Nitrate (as N)	mg/L	4.9	0.080	NA	0.12	NA	0.091	NA	2.8	NA	0.11	NA	0.11	NA	0.11	NA	0.11	NA	0.055	NA	0.11
Sulfate	mg/L	19	180	NA	210	NA	300	NA	650	NA	720	NA	920	NA	970	NA	680	NA	330	NA	650
Sulfide	mg/L	NA	92	NA	67	NA	62	NA	69	NA	74	NA	71	NA	99	NA	100	NA	44	NA	120
Total Dissolved Solids (TDS)	mg/L	1100	1000	1200	1100	1100	1300	1700	1900	2000	2200	2300	2200	2200	2200	2100	2000	1500	1500	2100	2100
Total Organic Carbon (TOC)	mg/L	16	14	14	11	11	16	18	20	23	21	21	24	25	26	24	22	24	29	25	25
<b>METALS</b>																					
Barium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.024	NA	NA	NA	NA	NA	NA
Boron	mg/L	NA	0.66	NA	0.76	NA	0.74	NA	0.86	NA	1.2	NA	0.93	NA	0.84	NA	0.88	NA	0.78	NA	0.86
Calcium	mg/L	NA	130	NA	130	NA	150	NA	210	NA	270	NA	240	NA	190	NA	170	NA	110	NA	170
Copper	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0065	NA	NA	NA	NA	NA	NA
Iron	mg/L	NA	0.023	NA	0.037	NA	0.012	NA	0.024	NA	0.015	NA	0.010	NA	0.014	NA	0.23	NA	0.050	NA	0.050
Magnesium	mg/L	NA	82	NA	93	NA	100	NA	170	NA	230	NA	190	NA	190	NA	160	NA	120	NA	160
Manganese	mg/L	NA	0.026	NA	0.0070	NA	0.010	NA	0.010	NA	0.050	NA	0.010	NA	0.010	NA	0.010	NA	0.010	NA	0.015
Potassium	mg/L	16	16	20	18	19	20	17	21	22	27	24	23	22	23	24	23	27	25	31	30
Sodium	mg/L	NA	76	NA	88	NA	97	NA	130	NA	180	NA	180	NA	200	NA	210	NA	210	NA	210
Tin	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.020	NA	NA	NA	NA	NA	NA
<b>VOLATILE ORGANIC COMPOUNDS</b>																					
Carbon Disulfide	ug/L	0.48	0.48	0.25	6.6	0.25	0.25	0.25	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50
1,4-Dioxane	ug/L	1.9	0.32	0.30	0.29	0.53	0.56	1.5	4.4	6.7	7.4	9.7	11	8.1	5.3	8.1	6.2	5.8	7.2	7.0	7.3
t-Butanol	ug/L	6.5	6.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	7.0	8.5	8.5	7.1	5.0	6.3	5.1	5.9	5.0	5.9



SUNSHINE CANYON SANITARY LANDFILL  
HISTORICAL DATA - MONITORING WELL MW-14

ANALYTE	UNITS	Mar 2013	Jun 2013	Sep 2013	Dec 2013	Mar 2014	Jun 2014	Sep 2014	Dec 2014	Mar 2015	Jun 2015	Sep 2015	Dec 2015	Mar 2016	June 2016	Sept 2016	Dec 2016	Mar 2017	June 2017	Sept 2017	Dec 2017
<b>FIELD PARAMETERS</b>																					
Dissolved Oxygen (DO)	mg/L	0.12	1.18	11.77	1.06	0.96	1.47	2.18	0.88	0.34	2.57	7.25	1.10	2.12	1.39	7.39	1.00	0.71	1.71	1.80	1.12
Oxidation-Reduction Potential	mV	-29	-33	-79	-94.0	-66	-52	-65	-70	-80	-18	-68	-96	-98	-109	-77	8	194	88	-307	21
pH	units	6.81	7.17	7.12	7.38	7.21	7.26	6.95	6.84	6.15	7.76	6.65	6.48	7.24	6.51	7.08	6.73	6.47	8.44	7.19	6.51
Specific Conductance	umhos/cm	3030	3070	2980	3180.0	3190	3200	3230	3370	3810	4210	2600	3340	3900	3010	4030	3430	7280	8420	4160	5200
Temperature	C°	21.58	22.13	25.39	22.88	22.52	22.75	24.21	22.45	22.22	22.95	22.99	22.48	22.00	23.02	22.89	22.34	21.83	21.40	22.74	21.97
Turbidity	NTU	2.4	3.4	1.0	0.0	0.7	0.0	13.9	39.9	0.0	1.0	1.2	0.0	72	0.0	2.5	0.0	0.0	0.0	0.0	3.6
<b>GENERAL CHEMISTRY</b>																					
Alkalinity, Total	mg/L	330	340	420	430	390	380	420	380	400	320	390	390	360	320	410	380	650	660	540	520
Bicarbonate Alkalinity	mg/L	NA	340	NA	430	NA	380	NA	380	NA	320	NA	390	NA	320	NA	380	NA	660	NA	520
Ammonia as N	mg/L	0.32	0.30	0.05	0.39	0.18	0.36	0.37	0.32	0.29	0.10	0.12	0.26	0.64	0.10	0.16	0.24	0.10	0.14	0.80	0.21
Ammonia as NH3	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.31	NA	NA	NA	NA	NA	NA	NA	NA
Bromide	mg/L	NA	0.35	NA	2.5	NA	0.96	NA	1.0	NA	0.96	NA	0.83	NA	2.5	49	0.73	NA	3.8	NA	2.1
Carbon Dioxide, Free	mg/L	NA	42	NA	90	NA	70	NA	35	NA	90	NA	55	NA	55	NA	62	NA	150	NA	51
Chemical Oxygen Demand (COD)	mg/L	16	16	10	17	10	21	33	10	10	16	14	10	28	23	10	10	10	52	38	10
Chloride	mg/L	23	21	26	26	25	24	27	26	23	21	27	27	26	19	24	25	84	86	79	77
Fluoride	mg/L	NA	1.5	NA	4.2	NA	1.3	NA	2.1	NA	1.8	NA	2.2	NA	3.3	NA	2.2	NA	4.3	NA	2.3
Nitrate (as N)	mg/L	NA	0.16	NA	0.55	NA	0.11	NA	0.11	NA	0.11	NA	0.11	NA	0.55	NA	0.11	NA	0.55	NA	0.28
Sulfate	mg/L	NA	1600	NA	1500	NA	1600	NA	1400	NA	1400	NA	1700	NA	1500	NA	1500	NA	3600	NA	2800
Sulfide	mg/L	NA	NA	NA	0.020	NA	0.020	NA	0.020	NA	0.020	NA	0.020	NA	0.020	NA	0.020	NA	0.027	NA	0.027
Total Dissolved Solids (TDS)	mg/L	2900	2700	2800	2800	2900	2700	2800	2800	2800	2700	2700	2700	2600	2500	2600	2600	6900	6400	5300	4400
Total Organic Carbon (TOC)	mg/L	3.9	4.0	3.8	3.7	3.6	5.3	3.4	3.2	3.6	3.8	3.6	3.5	3.9	4.1	3.3	4.0	13	12	9.6	7.8
<b>METALS</b>																					
Barium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.017	NA	NA	NA	NA	NA	NA
Boron	mg/L	NA	0.38	NA	0.45	NA	0.43	NA	0.47	NA	0.51	NA	0.49	NA	0.30	NA	0.43	NA	0.71	NA	0.61
Calcium	mg/L	NA	370	NA	300	NA	300	NA	320	NA	370	NA	300	NA	320	NA	350	NA	590	NA	490
Cobalt	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0031	NA	NA	NA	NA	NA	NA
Iron	mg/L	NA	0.49	NA	1.2	NA	0.65	NA	1.1	NA	0.80	NA	0.99	NA	0.19	NA	0.60	NA	0.080	NA	0.46
Magnesium	mg/L	NA	140	NA	130	NA	130	NA	130	NA	150	NA	130	NA	120	NA	140	NA	350	NA	260
Manganese	mg/L	NA	3.5	NA	2.4	NA	2.9	NA	5.2	NA	5.3	NA	2.4	NA	3.5	NA	3.0	NA	4.3	NA	4.8
Nickel	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.012	NA	NA	NA	NA	NA	NA
Potassium	mg/L	6.9	7.2	6.0	7.0	6.2	7.3	6.8	6.9	0.25	9.0	7.1	6.5	7.4	7.6	6.9	7.9	12	9.5	10	9.3
Sodium	mg/L	NA	210	NA	340	NA	310	NA	370	NA	210	NA	370	NA	170	NA	280	NA	630	NA	430
Tin	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.018	NA	NA	NA	NA	NA	NA
<b>VOLATILE ORGANIC COMPOUNDS</b>																					
1-4-Dioxane	ug/L	0.30	0.30	0.30	0.48	0.51	0.24	0.27	0.24	0.28	0.25	0.23		1.9		0.25	0.25	0.25	0.24	0.24	0.25
Methylene Chloride	ug/L	1.0	0.95	0.50	0.50	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Vinyl Chloride	ug/L	0.37	0.37	0.45	0.29	0.25	0.40	0.35	0.31	0.25	0.25	0.25	0.25	0.59	0.25	0.25	0.25	0.25	0.25	0.25	0.25

SUNSHINE CANYON SANITARY LANDFILL  
HISTORICAL DATA - MONITORING WELL PZ-2

ANALYTE	UNITS	Mar 2013	Jun 2013	Sep 2013	Nov <sup>R</sup> 2013	Dec 2013	Mar 2014	Jun 2014	Sep 2014	Dec 2014	Mar 2015	Jun 2015	Sep 2015	Dec 2015	Mar 2016	June 2016	Sept 2016	Dec 2016	Mar 2017	June 2017	Sept 2017	Dec 2017
<b>FIELD PARAMETERS</b>																						
Dissolved Oxygen (DO)	mg/L	0.42	1.06	6.56	1.09	1.44	0.64	0.58	4.00	0.72	0.63	2.92	0.52	0.65	1.63	0.56	6.59	4.23	1.59	1.19	1.10	2.51
Oxidation-Reduction Potential	mV	-236	-253	-247	-216	-258.0	-223	-243	-244	-221	-232	-191	-194	-220	-226	-216	-173	-153	-128	-128	-114	-134
pH	units	8.55	9.12	9.10	8.79	8.9	8.45	9.09	8.63	8.77	7.78	8.74	8.41	8.17	8.97	8.23	8.93	8.63	8.42	10.39	8.62	7.58
Specific Conductance	umhos/cm	5750	6010	5990	5990	5810.0	5710	5790	5800	5930	7600	7860	4730	5970	6910	5530	7000	6430	6220	7930	8020	5830
Temperature	C°	25.32	26.59	26.44	24.14	24.57	22.81	26.16	25.87	24.43	24.97	28.47	25.80	24.99	23.87	29.21	26.85	NA	25.77	25.71	25.00	24.21
Turbidity	NTU	158.0	4.9	0.0	0.2	0.1	15.1	12.1	100	10.9	0.0	0.4	0.3	2.9	141	0.0	0.0	0.6	0.0	0.7	0.0	
<b>GENERAL CHEMISTRY</b>																						
Alkalinity	mg/L	350	360	390	390	400	370	370	370	350	380	320	350	350	370	360	380	370	370	400	290	360
Ammonia as N	mg/L	3.0	1.6	0.05	NA	3.2	1.4	3.2	3.4	3.5	3.0	3.3	3.4	2.9	3.2	2.7	2.9	3.3	3.6	2.9	3.0	3.4
Ammonia as NH3	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.5	NA	NA	NA	NA	NA	NA	NA
Bicarbonate Alkalinity	mg/L	NA	340	NA	NA	380	NA	330	NA	320	NA	290	NA	330	NA	320	NA	350	NA	370	NA	330
Bromide	mg/L	NA	0.35	NA	NA	2.5	NA	3.4	NA	2.5	NA	1.3	NA	2.5	NA	0.32	NA	2.5	NA	2.5	NA	2.5
Carbon Dioxide	mg/L	NA	2.0	NA	NA	2.0	10	2.0	NA	2.0	NA	2.0	NA	2.0	NA	2.0	NA	2.0	NA	2.0	NA	2.0
Chemical Oxygen Demand (COD)	mg/L	23	16	10	NA	11	10	10	22	10	10	10	10	12	10	10	10	10	10	31	10	10
Chloride	mg/L	13	12	13	NA	13	14	15	15	14	15	15	13	12	11	12	11	11	11	10	11	11
Fluoride	mg/L	NA	1.8	NA	NA	2.5	NA	2.5	NA	3.7	NA	2.3	NA	2.6	NA	0.25	NA	2.5	NA	3.0	NA	2.5
Nitrate (as N)	mg/L	3.9	0.40	NA	NA	0.55	NA	0.55	NA	0.55	NA	0.28	NA	0.55	NA	0.055	NA	0.55	NA	0.55	NA	0.55
Sulfate	mg/L	18	2600	NA	NA	2600	NA	2600	NA	2700	NA	2400	NA	2800	NA	2500	NA	2700	NA	2500	NA	2600
Sulfide	mg/L	NA	0.020	NA	NA	0.045	NA	0.055	NA	0.041	NA	0.041	NA	0.028	NA	0.020	NA	0.037	NA	0.027	NA	0.027
Total Dissolved Solids (TDS)	mg/L	4200	4400	4200	NA	4100	4100	4300	4300	4100	4400	4300	4300	4100	4200	4200	4300	4000	4200	4100	4000	4100
Total Organic Carbon (TOC)	mg/L	2.3	2.6	2.7	NA	2.5	2.1	2.3	2.1	2.1	2.4	2.2	2.3	2.5	2.4	2.7	2.5	2.7	2.4	2.5	2.5	2.6
<b>METALS</b>																						
Barium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.013	NA	NA	NA	NA	NA	NA
Boron	mg/L	NA	1.3	NA	NA	1.4	NA	1.4	NA	1.4	NA	1.7	NA	1.6	NA	1.3	NA	1.4	NA	1.4	NA	1.4
Calcium	mg/L	NA	13	NA	NA	14	NA	14	NA	15	NA	15	NA	17	NA	19	NA	13	NA	13	NA	14
Iron	mg/L	NA	0.89	NA	NA	0.033	NA	0.071	NA	0.45	NA	0.11	NA	0.12	NA	0.046	NA	0.050	NA	0.050	NA	0.050
Magnesium	mg/L	NA	12	NA	NA	13	NA	12	NA	12	NA	14	NA	14	NA	15	NA	11	NA	11	NA	12
Manganese	mg/L	NA	0.034	NA	NA	0.028	NA	0.030	NA	0.032	NA	0.050	NA	0.70	NA	0.024	NA	0.026	NA	0.025	NA	0.029
Potassium	mg/L	4.0	3.4	3.3	NA	3.1	2.9	4.1	3.2	2.8	2.5	3.3	2.8	3.4	2.7	3.2	3.1	2.7	2.5	2.8	4.1	4.7
Sodium	mg/L	NA	1300	NA	NA	1500	NA	1400	NA	1400	NA	1500	NA	1600	NA	1200	NA	1300	NA	1400	NA	1300
<b>VOLATILE ORGANIC COMPOUNDS: ND</b>																						

SUNSHINE CANYON SANITARY LANDFILL  
HISTORICAL DATA - MONITORING WELL PZ-4

ANALYTE	UNITS	Mar 2013	Jun 2013	Sep 2013	Nov <sup>R</sup> 2013	Dec 2013	Mar 2014	Jun 2014	Sep 2014	Dec 2014	Mar 2015	Jun 2015	Sep 2015	Dec 2015	Mar 2016	June 2016	Sept 2016	Dec 2016	Mar 2017	June 2017	Sept 2017	Dec 2017
<b>FIELD PARAMETERS</b>																						
Dissolved Oxygen (DO)	mg/L	0.00	0.0	0.00	0.91	0.74	0.72	0.58	0.62	0.72	0.52	1.07	1.52	1.35	0.79	2.38	1.12	1.95	0.83	1.23	1.24	1.03
Oxidation-Reduction Potential	mV	-115	-36	-18	-51	-79.00	-72	-132	-148	-83	-82	-80	-108	-84	-62	-102	-50	-57	-62	50	72	100
pH	units	6.94	6.76	7.09	7.39	7.26	6.99	7.12	6.95	6.93	6.36	7.03	7.40	7.01	6.86	7.29	6.93	7.52	7.02	7.85	7.69	6.66
Specific Conductance	umhos/cm	6940	1550	1610	1640	1560.00	1670	1570	1580	1660	3640	1580	1220	1190	1620	1950	1480	2220	1760	7850	7690	1600
Temperature	C°	24.06	23.47	23.56	23.20	23.30	17.88	22.94	24.62	22.68	20.93	25.21	24.48	23.21	23.33	24.10	24.96	23.19	24.23	24.14	23.54	23.30
Turbidity	NTU	55.8	52.3	52.2	37.1	21.80	33.7	17.9	65.8	43.2	6.9	3.7	34.8	31.5	8.5	14.0	4.4	2.9	21.4	11.3	2.1	19.4
<b>GENERAL CHEMISTRY</b>																						
Alkalinity, Total	mg/L	320	310	360	360	360	330	330	340	310	340	310	330	330	330	330	340	350	350	350	260	330
Ammonia as N	mg/L	2.1	1.1	0.96	NA	2.2	1.1	2.4	2.3	2.4	2.9	2.4	3.0	1.8	1.7	2.0	2.0	2.5	2.2	2.6	2.0	2.4
Bicarbonate Alkalinity	mg/L	NA	310	NA	NA	360	NA	330	NA	310	NA	310	NA	330	NA	330	NA	350	NA	350	NA	330
Bromide	mg/L	NA	0.35	NA	NA	0.25	NA	0.38	NA	0.32	NA	0.25	NA	0.25	NA	0.25	NA	0.25	NA	0.25	NA	0.25
Carbon Dioxide	mg/L	NA	21	NA	NA	28	NA	35	NA	25	NA	35	NA	33	NA	35	NA	44	NA	60	NA	30
Chemical Oxygen Demand (COD)	mg/L	16	16	10	NA	10	10	14	81	10	10	10	10	13	10	10	10	10	10	23	10	10
Chloride	mg/L	9.2	8.5	6.7	NA	8.7	8.7	9.8	8.5	9.1	8.9	8.8	9.8	8.7	9.0	8.4	8.3	9.1	7.8	8.4	7.9	8.6
Fluoride	mg/L	NA	1.1	NA	NA	1.3	NA	1.2	NA	1.3	NA	1.2	NA	1.1	NA	1.2	NA	1.3	NA	1.2	NA	0.98
Nitrate (as N)	mg/L	3.9	0.080	NA	NA	0.058	0.055	NA	0.055	NA	0.055	NA	0.055	NA	0.055	NA	0.055	NA	0.055	NA	0.055	0.055
Sulfate	mg/L	18	570	NA	NA	530	NA	550	NA	490	NA	470	NA	530	NA	500	NA	510	NA	550	NA	540
Sulfide	mg/L	NA	0.020	NA	NA	0.020	NA	0.020	NA	0.020	NA	0.020	NA	0.020	NA	0.020	NA	0.020	NA	0.027	NA	0.027
Total Dissolved Solids (TDS)	mg/L	1200	1300	1200	NA	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1100	1100	1200	1100	1200	1100
Total Organic Carbon (TOC)	mg/L	1.1	1.4	1.1	NA	1.2	1.0	1.1	0.95	0.66	1.3	1.1	1.0	1.2	1.1	1.1	1.0	1.2	1.1	1.1	1.2	1.4
<b>METALS</b>																						
Antimony	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0062	NA	NA	NA	NA	NA	NA
Arsenic	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0052	NA	NA	NA	NA	NA	NA
Barium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.022	NA	NA	NA	NA	NA	NA
Boron	mg/L	NA	0.15	NA	NA	0.15	NA	0.15	NA	0.14	NA	0.29	NA	0.16	NA	0.18	NA	0.18	NA	0.19	NA	0.16
Calcium	mg/L	NA	140	NA	NA	140	NA	140	NA	130	NA	150	NA	130	NA	130	NA	130	NA	120	NA	110
Chromium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0027	NA	NA	NA	NA	NA	NA
Copper	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0069	NA	NA	NA	NA	NA	NA
Iron	mg/L	NA	2.3	NA	NA	1.7	NA	1.4	NA	1.4	NA	2.0	NA	3.8	NA	2.5	NA	0.95	NA	0.78	NA	1.0
Magnesium	mg/L	NA	79	NA	NA	83	NA	80	NA	77	NA	94	NA	81	NA	75	NA	76	NA	71	NA	70
Manganese	mg/L	NA	0.14	NA	NA	0.14	NA	0.13	NA	0.11	NA	0.14	NA	0.14	NA	0.13	NA	0.12	NA	0.11	NA	0.10
Potassium	mg/L	3.9	4.4	4.5	NA	4.2	4.4	4.6	4.2	4.1	4.1	5.7	4.5	4.5	3.7	4.7	4.7	4.5	4.5	4.1	4.5	4.0
Sodium	mg/L	NA	96	NA	NA	99	NA	95	NA	91	NA	140	NA	92	NA	100	NA	110	NA	100	NA	95
Tin	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.016	NA	NA	NA	NA	NA	NA
<b>VOLATILE ORGANIC COMPOUNDS</b>																						
Chloromethane	ug/L		0.40	0.25			0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.72	0.25	0.25	0.25
Methylene Chloride	ug/L	0.95	0.95	0.25	NA	0.95	0.88	0.90	0.88	0.88	0.88	0.88	0.88	0.88	0.88	NA	0.88	0.88	0.88	0.88	0.88	0.88

SUNSHINE CANYON SANITARY LANDFILL  
HISTORICAL DATA - MONITORING WELL DW-1

ANALYTE	UNITS	Mar 2013	Jun 2013	Sep 2013	Dec 2013	Mar 2014	Jun 2014	Sep 2014	Dec 2014	Mar 2015	Jun 2015	Sep 2015	Dec 2015	Mar 2016	June 2016	Sept 2016	Dec 2016	Mar 2017	June 2017	Sept 2017	Dec 2017
<b>FIELD PARAMETERS</b>																					
Dissolved Oxygen (DO)	mg/L	1.61	3.98	3.50	4.23	3.85	5.32	2.59	7.08	4.91	1.23	3.04	3.97	2.87	5.15	1.55	3.43	4.33	2.78	3.16	4.87
Oxidation-Reduction Potential	mV	-140	-66	-121	-121	10	-154	-293	-77	-155	-235	-241	-186	43	8	-205	-141	-117	-79	-44	62
pH	units	8.79	8.43	9.02	9.72	8.89	8.96	8.64	8.89	8.88	8.85	8.70	7.99	8.56	7.94	8.73	9.08	8.60	8.62	8.76	8.36
Specific Conductance	umhos/cm	4560	4760	4770	4230	4640	4580	4770	4730	1870	4680	4220	4420	4820	4470	4460	3670	4910	6320	6280	4720
Temperature	C°	28.1	27.3	24.5	21.57	22.33	24.64	28.89	17.31	20.92	25.26	25.32	17.74	16.06	29.25	24.43	18.40	21.31	21.40	23.32	15.87
Turbidity	NTU	0.2	1.5	3.8	0.2	0.1	0.0	2.1	0.8	0.0	1.5	3.7	4.1	0.0	0.0	5.8	2.8	1.9	3.9	3.2	0.0
<b>GENERAL CHEMISTRY</b>																					
Alkalinity, Total	mg/L	520	520	590	600	550	550	550	510	540	500	540	530	540	540	550	560	540	580	420	530
Alkalinity, bicarbonate	mg/L	NA	450	NA	490	NA	450	550	410	NA	400	NA	430	NA	440	NA	450	NA	470	NA	430
Ammonia as N	mg/L	1.90	1.80	0.05	0.10	1.1	2.3	2.6	2.2	1.5	2.1	3.2	2.0	1.7	1.3	1.8	2.1	2.2	1.9	1.8	2.2
Ammonia as NH3	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5	NA	NA	NA	NA	NA	NA	NA	NA
Bromide	mg/L	NA	NA	NA	2.5	NA	3.5	NA	2.5	NA	0.50	NA	1.3	NA	1.3	NA	1.3	NA	1.3	NA	1.3
Carbon Dioxide, Free	mg/L	NA	NA	NA	2.0	NA	2.0	NA	2.0	NA	2.0	NA	2.0	NA	2.0	NA	2.0	NA	2.0	NA	2.0
Chemical Oxygen Demand (COD)	mg/L	16	16	10	17	10	19	15	10	16	10	24	11	36	10	22	10	10	220	20	10
Chloride	mg/L	15	15	15	15	14	15	17	16	15	14	51	15	15	16	14	13	14	13	13	14
Fluoride	mg/L	NA	3.5	NA	2.5	NA	2.5	NA	4.9	NA	2.8	NA	3.4	NA	3.9	NA	3.5	NA	3.2	NA	2.2
Nitrate as N	mg/L	NA	0.80	NA	0.55	NA	0.55	NA	0.55	NA	0.11	NA	0.28	NA	0.28	NA	0.28	NA	0.28	NA	0.28
Sulfate	mg/L	NA	1800	NA	2000	NA	1800	NA	1600	NA	1600	NA	1900	NA	1500	NA	1800	NA	1800	NA	1800
Sulfide	mg/L	NA	0.31	NA	0.10	NA	1.8	NA	1.5	NA	0.020	NA	0.24	NA	0.051	NA	0.82	NA	0.49	NA	1.5
Total Dissolved Solids (TDS)	mg/L	3300	3200	3300	3200	3200	3300	3300	3300	3300	3300	3300	3200	3300	3200	3300	3200	3200	3100	3200	3100
Total Organic Carbon (TOC)	mg/L	3.1	3.1	3.2	3.3	3.1	2.6	3.0	2.4	3.2	2.9	2.9	3.3	4.3	3.2	3.3	3.0	3.1	3.2	3.1	3.0
<b>METALS</b>																					
Barium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.013	NA	NA	NA	NA	NA	NA
Boron	mg/L	NA	2.1	NA	2.2	NA	2.1	NA	2.2	NA	2.3	NA	2.3	NA	1.9	NA	2.0	NA	2.1	NA	2.1
Calcium	mg/L	NA	2.9	NA	3.1	NA	2.8	NA	3.3	NA	3.2	NA	3.3	NA	2.7	NA	3.0	NA	3.0	NA	2.9
Iron	mg/L	NA	0.055	NA	0.060	NA	0.036	NA	0.034	NA	0.066	NA	0.10	NA	0.030	NA	0.062	NA	0.050	NA	0.050
Lead	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0046	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	NA	1.6	NA	1.8	NA	1.5	NA	1.7	NA	1.9	NA	2.0	NA	1.7	NA	1.7	NA	1.6	NA	1.7
Manganese	mg/L	NA	0.0078	NA	0.0087	NA	0.010	NA	0.010	NA	0.050	NA	0.020	NA	0.010	NA	0.010	NA	0.010	NA	0.015
Potassium	mg/L	1.8	1.3	3.5	1.7	1.3	2.0	1.3	1.4	1.5	2.0	1.3	1.5	1.7	1.5	1.6	1.3	1.2	1.5	2.3	2.3
Selenium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0080	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NA	1300	NA	1100	NA	1100	NA	540	NA	1200	NA	1200	NA	1100	NA	1000	NA	1100	NA	980
<b>VOLATILE ORGANIC COMPOUNDS</b>																					
t-Butanol	µg/L	7.0	6.5	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
1,4-Dioxane	µg/L	2.2	0.29	0.29	0.25	0.47	0.58	0.24	0.27	0.24	0.25	0.26	0.24	64	0.24	0.24	0.24	0.26	0.25	0.24	0.24
Methylene Chloride	µg/L	0.95	0.95	0.50	0.88	0.88	0.88	0.88	0.88	0.88	0.90	0.88	0.88	0.88	0.88	0.88	0.88	1.3	0.88	0.88	0.88
Methyl tert-butyl ether	µg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.30	0.25

SUNSHINE CANYON SANITARY LANDFILL  
 HISTORICAL DATA - MONITORING WELL DW-2

ANALYTE	UNITS	Mar 2013	Jun 2013	Sep 2013	Dec 2013	Mar 2014	Jun 2014	Sep 2014	Dec 2014	Mar 2015	Jun 2015	Sep 2015	Dec 2015	Mar 2016	June 2016	Sept 2016	Dec 2016	Mar 2017	June 2017	Sept 2017	Dec 2017
<b>FIELD PARAMETERS</b>																					
Dissolved Oxygen	mg/L	0.00	0.0	0.06	0.78	0.79	1.32	0.61	0.76	0.86	1.91	0.68	0.53	0.65	0.73	1.08	1.03	1.35	1.23	1.46	1.40
Oxidation-Reduction Potential	mV	-135	-97	-47	-137.0	-168	-169	-193	-122	-147	-140	-165	-184	-119	-175	-93	-89	-116	-23	15	35
pH	units	7.00	7.41	7.22	7.48	7.24	7.46	7.10	7.39	6.68	7.17	7.27	7.14	7.20	7.18	6.98	7.55	7.15	8.36	7.25	6.94
Specific Conductance	umhos/cm	2620	2710	2800	2720.0	2770	2630	2750	2780	5900	2810	2140	2700	2780	2530	2640	2920	2940	3710	3690	2740
Temperature	C°	19.01	19.56	19.19	19.39	18.04	19.87	20.36	19.03	22.26	19.84	19.91	19.40	19.69	20.95	19.94	19.97	19.89	19.81	19.58	19.45
Turbidity	NTU	0.0	0.6	2.6	0.0	0.0	0.0	22.8	11.2	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.0	2.03	0.0	0.4	0.0
<b>GENERAL CHEMISTRY</b>																					
Alkalinity	mg/L	360	340	390	410	370	390	370	340	380	340	360	360	360	360	370	370	400	430	290	370
Alkalinity, bicarbonate	mg/L	NA	340	NA	410	NA	390	NA	340	NA	340	NA	360	NA	360	NA	370	NA	430	NA	370
Ammonia as N	meq/L	2.4	2.9	0.96	3.4	2.9	4.0	3.6	3.6	4.1	3.7	4.6	3.3	3.1	1.2	3.0	3.3	3.0	2.6	2.8	3.0
Bromide	mg/L	NA	NA	NA	0.68	NA	0.78	NA	0.58	NA	0.88	NA	0.50	NA	0.48	NA	0.36	NA	0.50	NA	0.50
Carbon Dioxide	mg/L	NA	NA	NA	16	NA	28	NA	14	NA	23	NA	32	NA	28	NA	28	NA	23	NA	23
Chemical Oxygen Demand (COD)	mg/L	NA	NA	NA	10	10	23	21	10	10	10	10	10	11	10	28	10	10	35	14	10
Chloride	mg/L	12	11	11	11	11	11	11	11	16	10	12	11	11	14	11	11	10	9.3	10	11
Fluoride	mg/L	NA	NA	NA	0.52	NA	0.50	NA	0.85	NA	0.86	NA	1.2	NA	0.93	NA	0.25	NA	1.0	NA	0.58
Nitrate (as N)	mg/L	2.0	NA	NA	0.11	NA	0.11	NA	0.055	NA	0.11	NA	0.11	NA	0.055	NA	0.055	NA	0.11	NA	0.11
Sulfate	mg/L	17	NA	NA	1100	NA	1100	NA	1000	NA	1000	NA	1100	NA	1100	NA	1100	NA	900	NA	980
Sulfide	mg/L	NA	NA	NA	0.020	NA	0.020	NA	0.020	NA	0.020	NA	0.020	NA	0.020	NA	0.020	NA	0.027	NA	0.081
Total Dissolved Solids (TDS)	mg/L	1900	2000	2000	1900	1900	2000	2000	2000	2000	2000	2000	2000	1900	2000	2000	1900	1800	1800	1800	1900
Total Organic Carbon (TOC)	mg/L	2.0	1.7	1.6	1.5	1.3	2.0	1.5	1.3	1.6	1.4	1.5	1.5	1.4	1.8	1.4	1.6	1.6	1.4	1.5	1.5
<b>METALS</b>																					
Barium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.011	NA	NA	NA	NA	NA	NA
Boron	mg/L	NA	0.61	NA	0.58	NA	0.60	NA	0.59	NA	0.56	NA	0.53	NA	0.56	NA	0.61	NA	0.73	NA	0.62
Calcium	mg/L	NA	140	NA	110	NA	110	NA	110	NA	100	NA	230	NA	100	NA	NA	NA	47	NA	81
Copper	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0056	NA	NA	NA	NA	NA	NA
Iron	mg/L	NA	0.75	NA	0.80	NA	1.2	NA	1.3	NA	1.3	NA	1.2	NA	1.2	NA	1.3	NA	0.37	NA	0.82
Magnesium	mg/L	NA	91	NA	75	NA	71	NA	77	NA	69	NA	64	NA	71	NA	72	NA	33	NA	55
Manganese	mg/L	NA	NA	NA	0.17	NA	0.17	NA	0.16	NA	0.15	NA	0.15	NA	0.13	NA	0.16	NA	0.061	NA	0.11
Potassium	mg/L	4.5	4.8	4.6	4.3	4.0	4.8	3.9	4.5	4.2	4.3	4.4	4.1	4.1	4.2	4.9	4.4	3.8	3.3	3.8	4.3
Sodium	mg/L	NA	470	NA	420	NA	450	NA	450	NA	380	NA	390	NA	400	NA	460	NA	510	NA	420
<b>VOLATILE ORGANIC COMPOUNDS</b>																					
Naphthalene	ug/L	0.40	0.41	0.25	0.40	0.40	0.43	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
t-Butanol	ug/L	6.5	6.5	5.0	5.0	5.0	5.0	5.0	5.0	13	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0

SUNSHINE CANYON SANITARY LANDFILL  
HISTORICAL DATA - MONITORING WELL DW-3

ANALYTE	UNITS	Mar 2013	Jun 2013	Aug <sup>R</sup> 2013	Sep 2013	Dec 2013	Mar 2014	Jun 2014	Sep 2014	Dec 2014	Mar 2015	Jun 2015	Sep 2015	Dec 2015	Mar 2016	June 2016	Sept 2016	Dec 2016	Mar 2017	June 2017	Sept 2017	Dec 2017
<b>FIELD PARAMETERS</b>																						
Dissolved Oxygen (DO)	mg/L	0.05	0.0	0.28	0.46	1.1	0.90	4.06	0.98	1.66	0.89	1.03	1.07	1.06	6.23	0.59	1.21	1.24	1.24	1.11	1.52	1.72
Oxidation-Reduction Potential	mV	-121	-67	40	-20	-105	-125	-136	-163	-82	-97	-93	-125	-139	-92	-136	-39	-46	-64	50	91	87
pH	units	6.96	7.20	7.39	7.27	7.51	7.21	7.40	7.01	7.33	6.62	7.22	7.25	7.1	7.31	7.02	7.04	7.05	7.19	7.93	7.68	6.81
Specific Conductance	µmhos/cm	2060	2110	2240	2180	2150	2180	2110	2210	2090	7700	2250	1680	2150	2250	2020	2100	2320	2380	3060	2800	7220
Temperature	°C	20.5	21.4	21.1	21.4	20.97	19.36	22.06	22.44	20.12	21.22	21.92	21.94	20.77	20.77	22.16	22.26	20.35	22.58	21.28	21.62	20.90
Turbidity	NTU	0.3	0.0	0.3	0.0	0	0.3	0.0	3.7	1.6	0.0	1.7	0.3	0.5	0.0	0.0	1.1	0.0	0.0	0.3	0.0	0.0
<b>GENERAL CHEMISTRY</b>																						
Alkalinity	mg/L	0.55	140	NA	160	170	150	150	150	140	160	150	170	160	160	160	170	170	170	170	130	160
Ammonia as N	mg/L	0.55	0.79	0.80	0.68	0.70	3.7	0.92	0.69	0.62	0.9	0.63	0.9	0.79	3.0	<b>0.39</b>	0.52	0.76	0.53	0.58	0.59	0.83
Bicarbonate Alkalinity	mg/L	NA	140	NA	NA	170	NA	150	NA	140	NA	150	NA	160	NA	160	NA	170	NA	170	NA	160
Bromide	mg/L	0.35	NA	NA	NA	NA	0.50	NA	NA	<b>0.32</b>	NA	<b>0.49</b>	NA	0.25	NA	<b>0.34</b>	NA	0.25	NA	0.25	NA	0.25
Carbon Dioxide	mg/L	NA	7	NA	NA	8.8	NA	16	NA	12	NA	16	NA	19	NA	19	NA	16	NA	21	NA	14
Chemical Oxygen Demand (COD)	mg/L	16	16	NA	10	10	10	12	15	14	10	10	10	17	11	10	10	17	10	29	10	10
Chloride	mg/L	15	14	NA	13	15	15	15	14	14	14	14	15	15	14	18	14	14	13	14	14	16
Fluoride	mg/L	NA	0.35	NA	NA	0.50	NA	0.50	NA	0.63	NA	0.55	NA	0.75	NA	0.77	NA	0.73	NA	0.64	NA	<b>0.40</b>
Nitrate (as N)	mg/L	NA	0.080	NA	NA	0.11	NA	0.11	NA	0.055	NA	0.055	NA	0.055	NA	0.055	NA	0.055	NA	0.055	NA	0.055
Sulfate	mg/L	NA	1200	NA	NA	1200	NA	1200	NA	1100	NA	1000	NA	1200	NA	1400	NA	1200	NA	1200	NA	1200
Sulfide	mg/L	NA	0.020	NA	NA	0.020	NA	0.020	NA	0.020	NA	0.020	NA	0.020	NA	0.020	NA	0.020	NA	0.027	NA	0.027
Total Dissolved Solids (TDS)	mg/L	1900	1900	NA	1900	1800	1800	2000	1900	1900	1900	2000	1900	1900	1800	1800	1900	1900	1800	1900	2000	1800
Total Organic Carbon (TOC)	mg/L	0.41	0.52	NA	0.55	0.47	0.37	0.31	0.39	0.27	0.35	0.33	0.36	0.48	0.34	0.45	0.32	0.67	0.38	0.36	0.45	0.38
<b>METALS</b>																						
Barium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.019	NA	NA	NA	NA	NA	NA
Boron	mg/L	NA	<b>0.047</b>	NA	NA	0.053	NA	0.058	NA	0.057	NA	0.072	NA	0.058	NA	0.060	NA	0.066	NA	0.061	NA	0.052
Calcium	mg/L	73	350	NA	NA	300	NA	300	NA	300	NA	280	NA	300	NA	300	NA	320	NA	310	NA	300
Copper	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<b>0.0056</b>	NA	NA	NA	NA	NA	NA
Iron	mg/L	NA	0.60	NA	NA	0.53	NA	0.55	NA	0.61	NA	0.66	NA	0.73	NA	0.86	NA	0.81	NA	0.68	NA	0.66
Magnesium	mg/L	11	110	NA	NA	110	NA	98	NA	100	NA	100	NA	110	NA	110	NA	110	NA	110	NA	110
Manganese	mg/L	NA	0.069	NA	NA	0.069	NA	0.074	NA	0.071	NA	0.076	NA	0.081	NA	0.079	NA	0.088	NA	0.080	NA	0.079
Potassium	mg/L	9.9	10	NA	9.6	8.9	9.8	10	9.1	9.2	9.7	8.5	9.3	9.0	9.1	9.7	9.1	9.7	8.9	9.1	8.5	9.0
Sodium	mg/L	12	77	NA	NA	69	NA	76	NA	71	NA	64	NA	66	NA	68	NA	71	NA	71	NA	63
Tin	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<b>0.023</b>	NA	NA	NA	NA	NA	NA
<b>VOLATILE ORGANIC COMPOUNDS: ND</b>																						
1,4-Dioxane	µg/L	1	0.28	NA	0.28	0.48	0.48	0.53	0.26	0.26	0.24	0.25	0.25	<b>0.31</b>	0.24	0.23	0.25	0.24	0.25	0.27	0.25	0.25
Chloroform	µg/L		0.33		0.25		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.54	0.25	0.25	0.25
Chloromethane	µg/L		0.40		0.25		0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	1.9	0.25	0.25	0.25
Methylene Chloride	µg/L	0.95	0.95	NA	0.50	0.88	0.88	0.88	0.88	0.88	0.88	<b>0.96</b>	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88

SUNSHINE CANYON SANITARY LANDFILL  
HISTORICAL DATA - MONITORING WELL DW-4

ANALYTE	UNITS	Mar 2013	Jun 2013	Sep 2013	Dec 2013	Mar 2014	Jun 2014	Sep 2014	Dec 2014	Mar 2015	Jun 2015	Sep 2015	Dec 2015	Mar 2016	June 2016	Sept 2016	Dec 2016	Mar 2017	June 2017	Sept 2017	Dec 2017
<b>FIELD PARAMETERS</b>																					
Dissolved Oxygen	mg/L	4.46	1.43	3.69	1.41	1.09	1.50	1.88	0.83	0.48	4.10	1.98	1.62	2.85	3.17	4.25	2.65	8.44	2.17	1.21	2.07
Oxidation-Reduction Potential	mV	-142	-132	-138	-161	-96	-99	-127	-129	-130	-122	-134	-133	-133	-126	-104	-199	-200	-213	-230	-194
pH	units	7.15	7.89	7.68	7.52	7.57	7.57	7.29	7.01	6.46	8.73	7.69	7.69	7.51	7.39	7.57	7.42	7.68	8.22	7.24	7.42
Specific Conductance	umhos/cm	3340	3600	3620	3450	3480	3500	3570	3660	6320	3610	2980	2980	4180	4330	4260	4430	4910	5160	4880	3550
Temperature	C°	21.46	21.66	22.33	22.39	20.94	21.09	22.22	21.48	20.85	21.60	22.66	21.58	20.61	21.62	22.03	20.88	21.83	21.22	21.8	21.67
Turbidity	NTU	1	0.4	0.0	0.7	0.0	0.0	0.4	1.8	0.0	1.4	0.7	6.2	45.1	6.8	10.4	2.4	5.3	2.2	0.2	0.0
<b>GENERAL CHEMISTRY</b>																					
Alkalinity	mg/L	340	330	390	370	340	340	350	320	340	310	340	340	340	340	350	350	370	360	270	340
Ammonia as N	mg/L	3.80	3.60	0.05	3.80	3.7	4.5	4.2	4.3	4.6	4.3	7.1	4.1	2.7	3.2	3.9	4.5	3.8	3.8	3.9	2.6
Ammonia as NH3	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.0	NA	NA	NA	NA	NA	NA	NA	NA
Bicarbonate Alkalinity	mg/L	NA	330	NA	370	NA	340	NA	320	NA	310	NA	340	NA	340	NA	350	NA	360	NA	340
Bromide	mg/L	NA	0.35	NA	1.3	NA	1.7	NA	0.50	NA	1.8	NA	0.50	NA	0.44	NA	0.50	NA	0.50	NA	0.50
Carbon Dioxide, Free	mg/L	NA	14	NA	18	NA	37	NA	18	NA	21	NA	21	NA	37	NA	32	NA	37	NA	16
Chemical Oxygen Demand (COD)	mg/L	16	16	10	10	10	15	32	10	10	10	10	12	13	10	26	10	10	10	10	10
Chloride	mg/L	14	14	14	14	15	14	63	14	13	12	29	14	15	15	14	11	14	13	13	13
Fluoride	mg/L	NA	0.70	NA	1.3	NA	1.3	NA	0.81	NA	1.3	NA	1.1	NA	0.80	NA	0.50	NA	0.78	NA	0.50
Nitrate (as N)	mg/L	NA	0.16	NA	0.32	NA	0.28	NA	0.21	NA	0.51	NA	0.11	NA	0.055	NA	0.11	NA	0.11	NA	0.11
Sulfate	mg/L	NA	1700	NA	1800	NA	1800	NA	1600	NA	1500	NA	1900	NA	1600	NA	1800	NA	1800	NA	1800
Sulfide	mg/L	NA	0.020	NA	0.020	NA	0.020	NA	0.020	NA	0.020	NA	0.020	NA	0.020	NA	0.020	NA	0.027	NA	0.027
Total Dissolved Solids (TDS)	mg/L	2800	3000	3000	3000	2800	3000	2900	2900	2900	2900	2900	2900	2800	2900	2800	2800	2900	2800	2900	2800
Total Organic Carbon (TOC)	mg/L	1.8	1.8	1.9	1.9	2.3	1.7	1.7	1.6	1.9	1.7	2.3	1.9	1.7	1.9	1.7	1.9	1.7	1.9	1.8	1.8
<b>METALS</b>																					
Barium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0078	NA	NA	NA	NA	NA	NA
Boron	mg/L	NA	0.58	NA	0.62	NA	0.59	NA	0.58	NA	0.55	NA	0.64	NA	0.56	NA	0.59	NA	0.62	NA	0.55
Calcium	mg/L	NA	190	NA	200	NA	180	NA	190	NA	190	NA	170	NA	180	NA	200	NA	220	NA	190
Iron	mg/L	NA	1.5	NA	1.6	NA	1.5	NA	1.5	NA	1.5	NA	1.6	NA	2.4	NA	2.5	NA	2.4	NA	1.8
Magnesium	mg/L	NA	130	NA	140	NA	130	NA	130	NA	130	NA	110	NA	130	NA	130	NA	140	NA	130
Manganese	mg/L	NA	0.11	NA	0.13	NA	0.12	NA	0.11	NA	0.11	NA	0.096	NA	0.11	NA	0.14	NA	0.12	NA	0.12
Potassium	mg/L	4.9	4.4	5.3	4.2	4.2	5.0	4.4	4.5	4.3	4.4	4.5	4.0	4.0	4.3	4.2	4.7	4.7	4.5	4.4	4.3
Sodium	mg/L	NA	480	NA	510	NA	500	NA	510	NA	500	NA	560	NA	510	NA	480	NA	550	NA	410
Tin	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.019	NA	NA	NA	NA	NA	NA
<b>VOLATILE ORGANIC COMPOUNDS: ND</b>																					
Chloromethane	ug/L		0.40	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25		0.37	0.25	0.25	0.25
Naphthalene	ug/L		0.41	0.25	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.75	0.56	0.40	0.40	0.40	0.40	0.40	0.40
t-Butanol	ug/L	6.5	6.5	5.0	5.0	5.0	5.0	5.0	8.3	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0

SUNSHINE CANYON SANITARY LANDFILL  
HISTORICAL DATA - MONITORING WELL DW-5

ANALYTE	UNITS	Mar 2013	Jun 2013	Aug <sup>R</sup> 2013	Sep 2013	Dec 2013	Mar 2014	Jun 2014	Sep 2014	Dec 2014	Mar 2015	Jun 2015	Sep 2015	Dec 2015	Mar 2016	June 2016	Sept 2016	Dec 2016	Mar 2017	June 2017	Sept 2017	Dec 2017
<b>FIELD PARAMETERS</b>																						
Dissolved Oxygen	mg/L	0.0	0.73	0.0	2.5	1	1.41	0.52	2.62	0.69	0.62	0.58	0.57	0.55	1.22	4.98	1.45	1.09	1.19	1.36	1.24	1.77
Oxidation-Reduction Potential	mV	-214	-198	-57	-202	-220	-163	-234	-176	-194	-191	-182	-204	-220	-183	-190	-218	-167	-119	-156	-17	-142
pH	units	7.81	8.62	8.05	8.56	8.58	8.40	8.25	8.31	8.50	7.65	8.11	8.21	8.10	8.65	8.49	8.52	8.52	8.94	10.12	8.74	6.45
Specific Conductance	umhos/cm	1750	1580	1840	1680	1530	1650	1530	1390	1740	6340	1780	1320	1660	2030	2100	2110	2190	2400	2250	2240	1640
Temperature	C°	19.50	23.19	20.03	20.82	22.44	19.56	20.28	30.93	18.79	20.36	21.58	20.43	20.93	19.91	21.88	21.03	19.67	21.82	21.32	20.71	20.56
Turbidity	NTU	46.38	12.6	7.0	1.3	3.9	0.6	81.3	3.9	0.2	0.0	18.4	1.4	1.4	31.8	5.0	8.1	38.8	22.1	24.1	1.8	2.2
<b>GENERAL CHEMISTRY</b>																						
Alkalinity	mg/L	910	900	NA	1100	920	970	970	980	910	980	900	950	940	950	960	980	970	980	1000	730	930
Ammonia as N	mg/L	0.42	0.29	NA	0.05	0.39	0.35	0.34	0.22	0.32	0.65	0.27	0.29	<b>0.25</b>	0.62	<b>0.23</b>	<b>0.35</b>	<b>0.27</b>	0.39	<b>0.37</b>	<b>0.33</b>	0.51
Bicarbonate	mg/L	NA	890	NA	NA	920	NA	950	NA	880	NA	850	NA	900	NA	920	NA	930	NA	950	NA	890
Bromide	mg/L	NA	0.67	NA	NA	<b>0.61</b>	NA	0.25	NA	0.58	NA	0.86	NA	<b>0.28</b>	NA	0.66	NA	0.67	NA	0.52	NA	0.25
Carbon Dioxide, Free	mg/L	NA	3.5	NA	NA	3.5	NA	11	NA	3.5	NA	2.0	NA	NA	3.5	NA	2.0	NA	NA	12	NA	5.3
Chemical Oxygen Demand (COD)	mg/L	16	19	NA	10	42	21	41	34	10	10	20	28	10	34	22	45	51	10	33	16	10
Chloride	mg/L	21	20	NA	32	20	20	20	19	21	21	20	27	18	19	25	35	21	19	17	17	21
Fluoride	mg/L	NA	3.5	NA	NA	0.50	NA	3.8	NA	3.5	NA	3.4	NA	3.4	NA	3.7	NA	3.7	NA	3.4	NA	3.4
Nitrate (as N)	mg/L	1.73	0.080	NA	NA	0.11	NA	<b>0.067</b>	NA	0.055	NA	0.055	NA	0.055	NA	0.055	NA	0.055	NA	0.055	NA	0.055
Sulfate	mg/L	18	<b>0.48</b>	NA	NA	0.50	NA	<b>0.30</b>	NA	0.25	NA	0.25	NA	0.25	NA	0.25	NA	0.25	NA	0.25	NA	0.25
Sulfide	mg/L	NA	<b>0.077</b>	NA	NA	0.082	NA	0.052	NA	0.020	NA	0.056	NA	0.056	NA	<b>0.044</b>	NA	0.073	NA	0.027	NA	<b>0.029</b>
Total Dissolved Solids (TDS)	mg/L	1100	1100	NA	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100
Total Organic Carbon (TOC)	mg/L	6.0	8.2	NA	7.5	7.3	5.6	7.1	6.8	4.0	7.8	9.2	6.7	7.4	6.2	7.3	12	6.8	6.2	6.6	6.5	7.9
<b>METALS</b>																						
Arsenic	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<b>0.0078</b>	NA	NA	NA	NA	NA	NA
Barium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.023	NA	NA	NA	NA	NA	NA
Boron	mg/L	NA	2.5	NA	NA	2.6	NA	2.6	NA	2.5	NA	2.3	NA	2.6	NA	2.3	NA	2.8	NA	2.7	NA	2.8
Calcium	mg/L	NA	5.6	NA	NA	5.6	NA	5.5	NA	5.3	NA	5.0	NA	5.6	NA	5.0	NA	5.9	NA	5.6	NA	5.6
Iron	mg/L	NA	0.17	NA	NA	0.12	NA	0.11	NA	0.14	NA	0.16	NA	0.15	NA	0.17	NA	0.14	NA	0.12	NA	0.15
Magnesium	mg/L	NA	1.3	NA	NA	1.3	NA	1.2	NA	0.95	NA	0.94	NA	1	NA	1.1	NA	0.95	NA	0.96	NA	0.93
Manganese	mg/L	NA	0.16	NA	NA	0.17	NA	0.16	NA	0.13	NA	0.13	NA	0.13	NA	0.12	NA	0.11	NA	0.096	NA	0.097
Potassium	mg/L	1.3	1.0	NA	1.9	1.2	1.2	1.5	1.0	0.77	1.0	<b>0.87</b>	1.0	0.78	0.72	1.1	0.82	0.86	0.75	0.88	1.4	1.2
Sodium	mg/L	NA	440	NA	NA	460	NA	450	NA	430	NA	380	NA	430	NA	400	NA	480	NA	460	NA	440
<b>VOLATILE ORGANIC COMPOUNDS</b>																						
Allyl Chloride	ug/L	0.50	3.1	0.70	0.50	2.9	2.9	0.50	0.50	0.50	0.50	3.5	0.50	3.3	3.8	0.50	0.50	2.3	2.3	NA	0.50	2.9
1,4-Dioxane	ug/L	1.00	0.29	NA	0.31	0.28	0.56	0.53	4.4	0.28	0.24	0.27	0.27	<b>0.25</b>	0.24	0.25	0.24	0.26	0.27	0.26	0.24	19
Naphthalene	ug/L	0.41	0.41	NA	0.25	0.40	0.40	<b>0.65</b>	0.40	0.40	0.40	0.40	0.40	<b>0.57</b>	<b>0.91</b>	0.40	0.40	<b>0.86</b>	0.40	0.40	0.40	0.40
t-Butanol	ug/L	5.0	5.0	5.0	5.0	<b>5.7</b>	5.0	5.0	5.0	5.0	<b>8.1</b>	5.0	<b>5.2</b>	5.0	<b>5.4</b>	5.0	5.0	<b>5.0</b>	5.0	5.0	5.0	21
Tetrahydrofuran	ug/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<b>6.7</b>



SUNSHINE CANYON SANITARY LANDFILL  
 HISTORICAL DATA - MONITORING WELL CM-9R3

ANALYTE	UNITS	Mar 2013	Jun 2013	Sep 2013	Dec 2013	Mar 2014	Jun 2014	Sep 2014	Dec 2014	Mar 2015	Jun 2015	Sep 2015	Dec 2015	Mar 2016	June 2016	Sept 2016	Dec 2016	Mar 2017	June 2017	Sept 2017	Dec 2017
<b>FIELD PARAMETERS</b>																					
Dissolved Oxygen	mg/L	0.0	1.06	3.2	1.62	1.55	3.77	7.49	1.41	1.09	2.75	6.85	1.31	1.58	8.08	3.98	1.81	0.99	1.72	2.02	1.67
Oxidation-Reduction Potential	mV	-133	-112	-116	-112	309	17	-26	-13	-104	-80	-78	-75	165	3	-49	-16	272	117	103	69
pH	units	6.37	6.81	6.82	6.82	4.92	6.04	6.18	5.64	5.31	5.80	6.73	6.40	4.91	5.38	6.14	6.58	5.36	7.03	4.86	5.01
Specific Conductance	umhos/cm	4030	4250	4270	3990	5150	4980	4950	5470	5310	7820	4380	4090	6320	6650	6500	7420	6890	7080	6840	4950
Temperature	C°	18.19	18.49	18.42	18.39	18.57	18.69	19.02	18.52	18.59	18.96	19.43	18.86	18.83	19.65	19.49	18.62	18.61	18.24	18.86	18.61
Turbidity	NTU	10.6	0.8	4.5	1.1	21.3	4.0	4.3	75.2	27.9	8.9	9.8	79.4	48.6	36.9	4.0	56.9	21.7	33.3	12.6	11.7
<b>GENERAL CHEMISTRY</b>																					
Alkalinity	mg/L	180	190	280	280	5.1	120	220	140	170	190	290	240	4.0	48	140	180	9.8	42	24	37
Ammonia as N	mg/L	4.2	2.4	0.05	0.10	0.59	4.3	6.8	14	5.2	4.8	6.9	7.0	1.9	2.7	3.9	7.3	2.0	3.6	2.8	3.4
Bicarbonate	mg/L	NA	190	NA	280	NA	120	NA	140	NA	190	NA	240	NA	48	NA	180	NA	42	NA	37
Bromide	mg/L	NA	0.35	NA	2.5	NA	2.1	NA	1.3	NA	1.3	NA	1.3	NA	2.5	NA	1.3	NA	2.5	NA	2.5
Carbon Dioxide	mg/L	NA	110	NA	120	NA	190	NA	180	NA	310	NA	160	NA	150	NA	88	NA	160	NA	140
Chemical Oxygen Demand (COD)	mg/L	120	23	32	37	33	35	10	10	38	29	28	27	14	13	36	11	10	37	20	10
Chloride	mg/L	17	16	15	15	26	21	22	19	18	17	19	16	16	16	14	14	22	19	15	16
Fluoride	mg/L	NA	2.4	NA	2.5	NA	2.5	NA	7.2	NA	4.6	NA	4.2	NA	6.0	NA	3.7	NA	5.0	NA	4.6
Nitrate (as N)	mg/L	9.4	0.16	NA	0.55	NA	0.55	NA	0.28	NA	0.28	NA	0.28	NA	1.1	NA	0.28	NA	0.55	NA	0.55
Sulfate	mg/L	28	2600	NA	2300	NA	4500	NA	3400	NA	3000	NA	3000	NA	3500	NA	3200	NA	3500	NA	3200
Sulfide	mg/L	NA	0.020	NA	0.02	NA	0.087	NA	0.054	NA	0.020	NA	0.020	NA	0.020	NA	0.020	NA	0.027	NA	NA
Total Dissolved Solids (TDS)	mg/L	3700	4000	3700	3700	5200	5200	4700	5100	5700	5600	5300	4800	4600	5300	4300	4700	5200	5100	5100	4900
Total Organic Carbon (TOC)	mg/L	11	11	9.2	9.9	13	9.8	9.5	3.0	8.8	9.1	9.6	8.1	7.5	6.8	5.8	5.8	10	8.2	6.8	6.1
<b>METALS</b>																					
Barium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.013	NA	NA	NA	NA	NA	NA
Beryllium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0018	NA	NA	NA	NA	NA	NA
Boron	mg/L	NA	1.7	NA	1.8	NA	2.1	NA	1.3	NA	2.1	NA	2.1	NA	1.9	NA	2.2	NA	2.0	NA	1.8
Cadmium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.063	NA	NA	NA	NA	NA	NA
Calcium	mg/L	120	360	NA	350	NA	430	NA	330	NA	470	NA	390	NA	410	NA	390	NA	420	NA	390
Cobalt	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.11	NA	NA	NA	NA	NA	NA
Iron	mg/L	NA	44	NA	32	NA	47	NA	2.7	NA	86	NA	50	NA	22	NA	19	NA	9.6	NA	24
Magnesium	mg/L	19	190	NA	190	NA	300	NA	210	NA	330	NA	240	NA	310	NA	260	NA	310	NA	320
Manganese	mg/L	NA	1.9	NA	1.6	NA	4.3	NA	0.54	NA	5.8	NA	2.8	NA	6.3	NA	3.9	NA	5.9	NA	6.8
Nickel	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.69	NA	NA	NA	NA	NA	NA
Potassium	mg/L	13	13	13	13	18	18	13	14	17	16	15	13	15	16	14	15	14	16	14	16
Sodium	mg/L	22	420	NA	450	NA	490	NA	350	NA	570	NA	530	NA	500	NA	600	NA	530	NA	360
Tin	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.018	NA	NA	NA	NA	NA	NA
Zinc	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.58	NA	NA	NA	NA	NA	NA
<b>VOLATILE ORGANIC COMPOUNDS: ND</b>																					
Toluene	µg/L	0.36	0.36	0.25	0.25	0.25	0.25	0.31	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Methylene Chloride	µg/L	0.95	0.4	0.25	0.88	0.88	0.88	0.25	0.88	0.88	NA	0.88	0.88	0.88	0.88	1.1	0.88	0.88	0.88	0.88	0.88

SUNSHINE CANYON LANDFILL  
HISTORICAL DATA - MONITORING WELL CM-10R

ANALYTE	UNITS	Mar 2013	Jun 2013	Sep 2013	Dec 2013	Mar 2014	Jun 2014	Sep 2014	Dec 2014	Mar 2015	Jun 2015	Sep 2015	Dec 2015	Mar 2016	June 2016	Sept 2016	Dec 2016	Mar 2017	June 2017	Sept 2017	Dec 2017
<b>FIELD PARAMETERS</b>																					
Dissolved Oxygen	mg/L	0	1.14	2.91	7.57	6.33	2.73	9.63	1.31	0.60	2.78	2.73	1.09	13.20	6.66	11.72	3.95	1.65	5.38	5.39	5.63
Oxidation-Reduction Potential	mV	-287	-355	-367	-355	-346	-298	-306	-77	-335	-309	-251	-335	-278	-289	-350	-235	-53	-211	-202	-253
pH	units	7.03	7.29	7.25	7.11	6.81	7.20	6.99	6.68	6.14	6.82	7.31	6.89	7.25	7.16	7.07	7.04	7.06	8.60	6.68	6.72
Specific Conductance	µmhos/cm	3370	3060	2930	3070	3360	2770	2720	3730	8230	4110	2800	2170	3630	3420	3130	5060	4820	4330	4390	3060
Temperature	C°	20.32	21.25	21.27	17.80	19.78	21.61	22.59	21.04	20.45	22.45	22.35	20.89	21.06	22.52	22.59	21.62	22.17	21.99	22.21	21.48
Turbidity	NTU	2.6	0.0	0.0	0	0.0	0.1	0.0	0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>GENERAL CHEMISTRY</b>																					
Alkalinity	mg/L	400	620	780	780	560	740	770	330	560	650	530	780	600	800	880	420	370	550	470	590
Ammonia as N	mg/L	11	4.7	1.6	11	4.6	14	13	5.6	11	11	13	11	13	8.3	7.5	15	13	9.4	10	13
Bicarbonate	mg/L	NA	620	NA	780	NA	740	NA	330	NA	650	NA	780	NA	800	NA	420	NA	550	NA	590
Bromide	mg/L	NA	0.39	NA	0.5	NA	0.50	NA	0.50	NA	0.50	NA	0.50	NA	0.34	NA	0.50	NA	0.50	NA	1.3
Carbon Dioxide	mg/L	NA	95	NA	120	10	120	NA	46	NA	120	NA	97	NA	130	NA	110	NA	100	NA	67
Chemical Oxygen Demand (COD)	mg/L	17	18	30	23	NA	33	19	21	26	24	23	51	27	51	66	18	10	32	22	10
Chloride	mg/L	13	11	8.6	11	12	12	13	14	14	12	13	11	12	11	11	11	11	9.4	9.6	10
Fluoride	mg/L	NA	1.0	NA	1.1	NA	0.71	NA	1.5	NA	1.6	NA	1.4	NA	1.3	NA	1.8	NA	1.8	NA	1.6
Nitrate (as N)	mg/L	NA	0.080	NA	0.12	NA	0.11	NA	0.11	NA	0.11	NA	0.11	NA	0.055	NA	0.11	NA	0.11	NA	0.28
Sulfate	mg/L	NA	1500	NA	1400	NA	1100	NA	1900	NA	970	NA	890	NA	880	NA	1800	NA	1700	NA	1300
Sulfide	mg/L	NA	8.1	NA	9.6	NA	13	NA	0.090	NA	12	NA	20	NA	22	NA	4.1	NA	4.8	NA	5.7
Total Dissolved Solids (TDS)	mg/L	2900	2500	2400	2400	2700	2300	2200	3300	2600	2300	2800	2000	2500	1900	1700	3000	3000	2700	2500	2500
Total Organic Carbon (TOC)	mg/L	3.8	5.0	4.7	5.0	3.7	5.5	5.9	11	4.4	4.8	3.7	5.4	4.6	5.8	5.7	3.6	3.5	4.3	4.3	4.1
<b>METALS</b>																					
Barium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.029	NA	NA	NA	NA	NA	NA
Boron	mg/L	NA	0.87	NA	0.89	NA	0.86	NA	2.2	NA	0.86	NA	0.78	NA	0.74	NA	1.1	NA	0.88	NA	0.84
Calcium	mg/L	NA	220	NA	210	NA	200	NA	450	NA	200	NA	170	NA	170	NA	320	NA	250	NA	240
Iron	mg/L	NA	0.19	NA	0.035	NA	0.080	NA	38	NA	0.42	NA	0.044	NA	0.014	NA	0.53	NA	0.25	NA	0.050
Magnesium	mg/L	NA	220	NA	240	NA	230	NA	330	NA	220	NA	200	NA	210	NA	210	NA	220	NA	260
Manganese	mg/L	NA	0.21	NA	0.19	NA	0.16	NA	6.8	NA	0.16	NA	0.12	NA	0.094	NA	0.56	NA	0.39	NA	0.28
Potassium	mg/L	13	11	11	11	12	13	10	16	12	11	12	10	12	11	10	13	13	12	11	13
Sodium	mg/L	NA	200	NA	200	NA	180	NA	600	NA	200	NA	170	NA	170	NA	270	NA	200	NA	170
Tin	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.014	NA	NA	NA	NA	NA	NA
<b>VOLATILE ORGANIC COMPOUNDS: ND</b>																					
1,4-Dioxane	µg/L	0.29	0.29	0.30	0.30	0.50	0.52	0.25	0.25	0.24	0.26	0.28	0.25	0.29	0.24	0.26	0.24	0.24	0.25	0.24	0.28
Methylene Chloride	µg/L	0.95	0.40	0.25	0.88	0.88	0.88	0.25	0.88	0.88	NA	0.88	0.88	0.88	0.88	1.2	0.88	0.88	0.88	0.88	0.88
Vinyl Chloride	µg/L	0.40	0.40	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.54	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25

SUNSHINE CANYON SANITARY LANDFILL  
 HISTORICAL DATA - MONITORING WELL CM-11R

ANALYTE	UNITS	Mar 2013	Jun 2013	Sep 2013	Dec 2013	Mar 2014	Jun 2014	Sep 2014	Dec 2014	Mar 2015	Jun 2015	Sep 2015	Dec 2015	Mar 2016	June 2016	Sept 2016	Dec 2016	Mar 2017	June 2017	Sept 2017	Dec 2017	
<b>FIELD PARAMETERS</b>																						
Dissolved Oxygen	mg/L	0.0	1.23	4.3	3.29	1.78	3.60	2.79	1.58	0.96	2.35	5.88	1.00	1.41	5.13	1.79	2.36	1.18	1.13	1.57	1.66	
Oxidation-Reduction Potential	mV	112	167	155	75	208	160	108	109	183	126	184	137	183	192	117	134	333	366	332	301	
pH	units	6.03	6.26	6.32	6.51	6.19	6.52	6.15	6.18	4.93	5.56	6.23	5.85	6.03	5.8	5.97	6.58	5.66	6.20	4.48	4.52	
Specific Conductance	umhos/cm	3250	3490	3590	3790	3630	3790	2960	3980	4930	5350	3440	3240	5060	5180	5380	6410	6610	5390	5620	4780	
Temperature	C°	18.09	20.33	18.61	14.61	17.42	18.98	36.02	17.06	18.89	23.46	20.10	18.42	18.22	24.01	21.46	15.63	17.38	25.92	25.92	17.38	
Turbidity	NTU	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.6	0.0	0.0	0.0	1.2	0.8	0.0	1.3	0.6	1.0	0.0	0.0	0.0	
<b>GENERAL CHEMISTRY</b>																						
Alkalinity	mg/L	60	72	120	150	56	68	70	77	37	46	75	92	39	4.0		66	100	10	4.0	4.0	7.5
Ammonia as N	mg/L	0.93	0.11	0.05	2.1	0.46	0.76		1.3	1.7	0.78	0.10	1.5	1.6	0.47	1.3	1.7	2.2	0.15	0.48	1.0	1.7
Bicarbonate	mg/L	NA	72	NA	150	NA	68	NA	77	NA	46	NA	92	NA	4.0	NA	100	NA	4.0	NA	NA	7.5
Bromide	mg/L	NA	0.35	NA	1.5	NA	1.8	NA	0.50	NA	0.50	NA	1.3	NA	0.27	NA	1.3	NA	1.3	NA	2.5	NA
Carbon Dioxide	mg/L	NA	70	NA	56	NA	51	NA	48	NA	63	NA	44	NA	67	NA	48	NA	69	NA	62	NA
Chemical Oxygen Demand (COD)	mg/L	160	16	10	12	10	19	10	10	10	20	10	14	10	10	30	10	10	27	15	10	NA
Chloride	mg/L	7.1	9.0	9.0	9.7	10	9.8	11	10	11	11	15	11	17	12	12	11	13	12	13	13	NA
Fluoride	mg/L	NA	0.70	NA	1.3	NA	1.3	NA	1.4	NA	1.6	NA	2.0	NA	3.3	NA	2.3	NA	3.8	NA	2.5	NA
Nitrate (as N)	mg/L	NA	1.7	NA	0.28	NA	0.64	NA	1.0	NA	1.2	NA	0.43	NA	2.6	NA	0.79	NA	0.28	NA	0.55	NA
Sulfate	mg/L	NA	1700	NA	2100	NA	2000	NA	2000	NA	1900	NA	2100	NA	2200	NA	2400	NA	2800	NA	2900	NA
Sulfide	mg/L	NA	0.020	NA	0.020	NA	0.020	NA	0.020	NA	0.020	NA	0.020	NA	0.020	NA	0.020	NA	0.027	NA	0.30	NA
Total Dissolved Solids (TDS)	mg/L	2600	2700	2700	2800	3000	3000	3000	3100	3400	3500	3400	3300	3700	3500	3500	3600	4100	4100	4300	4300	NA
Total Organic Carbon (TOC)	mg/L	5.0	5.5	5.7	5.4	4.4	5.1	4.8	4.6	4.9	4.2	4.5	4.6	4.5	4.4	4.1	4.3	4.9	5.4	5.0	4.7	NA
<b>METALS</b>																						
Barium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.010	NA	NA	NA	NA	NA	NA	NA
Boron	mg/L	NA	1.4	NA	1.7	NA	1.4	NA	1.6	NA	1.4	NA	1.5	NA	1.5	NA	1.8	NA	1.1	NA	1.4	NA
Cadmium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0032	NA	NA	NA	NA	NA	NA	NA
Calcium	mg/L	NA	140	NA	110	NA	190	NA	190	NA	210	NA	160	NA	210	NA	160	NA	340	NA	310	NA
Copper	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0076	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	NA	0.026	NA	0.083	NA	0.013	NA	0.037	NA	0.086	NA	0.24	NA	0.010	NA	1.2	NA	0.050	NA	0.34	NA
Magnesium	mg/L	NA	90	NA	76	NA	110	NA	110	NA	130	NA	110	NA	130	NA	99	NA	210	NA	200	NA
Manganese	mg/L	NA	1.1	NA	1.4	NA	1.4	NA	2.0	NA	1.8	NA	1.7	NA	1.4	NA	1.1	NA	4.2	NA	5.9	NA
Nickel	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.065	NA	NA	NA	NA	NA	NA	NA
Potassium	mg/L	8.3	8.1	8.4	7.7	8.9	10	8.9	9.8	11	9.5	9.9	8.6	9.8	11	9.2	9.1	11	12	12	13	NA
Sodium	mg/L	NA	500	NA	650	NA	570	NA	660	NA	570	NA	620	NA	680	NA	840	NA	480	NA	520	NA
Tin	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.012	NA	NA	NA	NA	NA	NA	NA
Zinc	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.035	NA	NA	NA	NA	NA	NA	NA
<b>VOLATILE ORGANIC COMPOUNDS: ND</b>																						
Methylene Chloride	ug/L	0.95	0.4	0.25	0.88	0.88	0.88	0.25	0.88	0.88	NA	0.88	0.88	0.88	0.88	1.2	0.88	1.4	0.88	0.88	0.88	NA

SUNSHINE CANYON SANITARY LANDFILL  
HISTORICAL DATA - EXTRACTION TRENCH

ANALYTE	UNITS	Mar 2013	Jun 2013	Sep 2013	Dec 2013	Mar 2014	Jun 2014	Sep 2014	Dec 2014	Mar 2015	Jun 2015	Sep 2015	Dec 2015	Mar 2016	June 2016	Sept 2016	Dec 2016	Mar 2017	June 2017	Sept 2017	Dec 2017
<b>FIELD PARAMETERS</b>																					
Dissolved Oxygen	mg/L	1.51	0.48	0.98	0.98	1.31	2.66	1.75	3.43	2.28	1.73	1.62	2.63	1.54	2.20	3.06	3.24	3.02	6.49	3.39	3.66
Oxidation-Reduction Potential	mV	-231	-121	-56	-56	-39	-174	-165	-79	-110	-126	-195	-186	-85	-133	-102	-24	-76	36	50	77
pH	units	7.00	6.29	6.86	6.86	6.69	6.52	6.45	6.67	5.86	6.57	6.52	6.96	6.48	6.58	6.52	6.74	6.65	7.63	6.47	5.80
Specific Conductance	µmhos/cm	5370	5620	4910	4910	4700	4710	4610	4770	1980	4370	4270	-1860	5280	4600	4410	3470	5120	6380	5820	4360
Temperature	C°	24.43	25.10	27.36	27.36	20.76	23.66	23.99	16.3	19.33	28.07	28.23	23.12	21.74	28.01	30.83	17.79	22.54	24.41	24.83	20.91
Turbidity	NTU	22.3	15.7	2.8	2.8	3.6	0.0	9.9	3.3	13.9	4.8	15.7	15.8	16.5	0.8	11.1	12.6	34.7	8.4	0.3	0.1
<b>GENERAL CHEMISTRY</b>																					
Alkalinity	mg/L	270	1300	1100	1100	960	900	910	740	990	710	720	1100	1100	1100	860	810	760	870	610	810
Ammonia as N	meq/L	14	13	0.05	0.05	5.3	15	9.8	14	10	7.7	6.5	23	30	8.2	9.9	8.8	9.5	8.5	6.5	8.2
Bicarbonate	mg/L	NA	1300	NA	NA	NA	900	NA	740	NA	710	NA	1100	NA	1100	NA	810	NA	870	NA	810
Bromide	mg/L	NA	11	NA	NA	NA	6.5	NA	7.9	NA	3.5	NA	8.4	NA	7.4	NA	3.0	NA	4.7	NA	2.2
Carbon Dioxide, Free	mg/L	NA	240	NA	NA	NA	370	NA	180	NA	310	NA	310	NA	300	NA	250	NA	460	NA	160
Chemical Oxygen Demand (COD)	mg/L	500	540	290	290	100	180	160	210	160	100	92	370	360	310	220	130	130	170	110	78
Chloride	mg/L	760	610	440	440	420	290	260	330	380	170	140	500	560	440	320	180	210	240	140	130
Fluoride	mg/L	NA	NA	NA	NA	2.5	NA	2.1	NA	2.2	NA	3.3	NA	3.0	NA	2.2	NA	2.8	NA	1.3	1.3
Nitrate (as N)	mg/L	9.4	0.80	NA	NA	NA	0.55	NA	0.31	NA	0.11	NA	0.28	NA	0.49	NA	0.11	NA	0.28	NA	0.11
Sulfate	mg/L	28	850	NA	NA	NA	1600	NA	1500	NA	1500	NA	1300	NA	1300	NA	1800	NA	1700	NA	1700
Sulfide	mg/L	NA	0.053	NA	NA	NA	0.020	NA	0.020	NA	0.020	NA	0.020	NA	0.020	NA	0.020	NA	0.027	NA	0.027
Total Dissolved Solids (TDS)	mg/L	4100	4100	4100	4100	3800	4200	4100	3900	4000	3800	3600	4100	3900	6300	3700	3500	3700	3600	3400	3600
Total Organic Carbon (TOC)	mg/L	170	160	89	89	30	58	45	71	76	62	34	130	150	130	96	31	52	64	40	49
<b>METALS</b>																					
Arsenic	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.013	NA	NA	NA	NA	NA	NA
Barium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.047	NA	NA	NA	NA	NA	NA
Boron	mg/L	NA	3.2	NA	NA	NA	1.4	NA	1.6	NA	1.7	NA	3.1	NA	2.2	NA	1.6	NA	1.3	NA	1.1
Calcium	mg/L	NA	460	NA	NA	NA	410	NA	470	NA	430	NA	430	NA	410	NA	410	NA	410	NA	410
Chromium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0026	NA	NA	NA	NA	NA	NA
Cobalt	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.013	NA	NA	NA	NA	NA	NA
Iron	mg/L	NA	78	NA	NA	NA	56	NA	48	NA	53	NA	65	NA	37	NA	34	NA	46	NA	51
Magnesium	mg/L	NA	240	NA	NA	NA	210	NA	230	NA	220	NA	230	NA	210	NA	200	NA	210	NA	220
Manganese	mg/L	NA	4.4	NA	NA	NA	4.5	NA	4.2	NA	4.1	NA	3.6	NA	3.4	NA	3.4	NA	5.2	NA	5.3
Nickel	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.049	NA	NA	NA	NA	NA	NA
Potassium	mg/L	69	66	40	40	32	31	30	38	36	27	19	63	58	46	46	37	30	28	21	20
Sodium	mg/L	NA	490	NA	NA	NA	440	NA	450	NA	470	NA	560	NA	500	NA	440	NA	370	NA	310
Tin	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.024	NA	NA	NA	NA	NA	NA
Zinc	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.013	NA	NA	NA	NA	NA	NA
<b>VOLATILE ORGANIC COMPOUNDS</b>																					
1,4-Dioxane	µg/L	150	72	45	45	25	28	24	26	28	28	30	52	44	38	27	20	21	16	13	16
1,4-Dichlorobenzene	µg/L	0.37	0.37	0.33	0.33	0.25	0.25	0.25	0.37	0.25	0.28	0.44	0.38	0.35	0.25	0.25	0.41	0.64	1.7	2.8	2.5
Acetone	µg/L	4.5	12	3.7	3.7	4.5	4.5	4.5	4.5	6.6	4.5	6.4	10	10	10	10	18	10	10	20	10
Chlorobenzene	µg/L	0.37	0.46	0.41	0.41	0.25	0.25	0.31	0.38	0.35	0.27	0.36	0.46	0.47	0.25	0.25	0.25	0.25	0.32	0.50	0.29
cis-1,2-Dichloroethene	µg/L	0.96	1.3	3.8	3.8	2.0	2.6	3.7	2.0	2.5	2.7	1.7	0.96	0.83	0.61	0.54	1.4	1.5	2.1	1.7	1.7
Methyl-tert-butyl ether	µg/L	0.32	0.32	0.44	0.44	0.25	0.69	0.55	0.36	0.38	0.44	0.55	0.25	0.29	0.25	0.25	0.78	0.25	0.94	1.6	1.3
t-Butanol	µg/L	110	120	79	79	65	34	62	48	73	64	58	73	87	80	57	46	41	44	30	39
Tetrahydrofuran	µg/L	18	21	13	13	14	7.8	9.7	8.5	14	11	7.7	11	11	28	9.0	7.8	6.0	6.3	10	12

SUNSHINE CANYON SANITARY LANDFILL  
HISTORICAL DATA - SUBDRAIN N

ANALYTE	UNITS	Mar 2013	Jun 2013	Sep 2013	Dec 2013	Mar 2014	Jun 2014	Sep 2014	Dec 2014	Mar 2015	Jun 2015	Sep 2015	Dec 2015	Mar 2016	June 2016	Sept 2016	Dec 2016	Mar 2017	June 2017	Sept 2017	Dec 2017
<b>FIELD PARAMETERS</b>																					
Dissolved Oxygen	mg/L	1.16	1.39	1.46	2.64	3.92	2.76	2.20	2.31	2.11	2.26	2.05	2.85	2.01	2.59	2.56	3.41	3.07	3.31	2.94	2.6
Oxidation-Reduction Potential	mV	-133	-71	11	-108	-100	-188	-185	-70	-83	-69	-186	-123	-106	-38	-23	36	-31	33	113	94
pH	units	5.36	6.28	6.53	6.99	6.19	6.40	6.11	6.38	6.44	6.4	6.29	6.33	6.40	5.24	6.22	6.23	6.01	7.18	6.29	5.95
Specific Conductance	µmhos/cm	3420	3410	3470	3450	3640	3450	3480	3490	1420	3500	2980	3480	3640	3360	3200	2550	3710	5170	4390	3420
Temperature	C°	23.31	25.79	28.52	24.87	21.95	28.52	29.06	22.34	26.80	29.90	27.03	23.61	26.55	34.40	29.98	18.1	26.46	25.39	26.6	20.8
Turbidity	NTU	54.4	3.6	1.1	0.7	11.2	0.0	2.3	3.2	13.6	4.4	3.3	4.8	0.0	3.3	0.0	0.6	0.6	0.2	0.1	0.3
<b>GENERAL CHEMISTRY</b>																					
Alkalinity	mg/L	560	580	680	750	630	690	720	640	670	620	1100	650	680	640	520	920	420	640	350	540
Ammonia as N	mg/L	2.70	2.80	0.05	2.80	2.6	3.2	3.7	3.5	2.7	3.0	12	2.5	2.6	3.0	3.1	3.9	5.3	3.2	3.9	4.1
Ammonia as NH3	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	3.0	NA	NA	NA	NA	NA	NA	NA	NA
Bicarbonate	mg/L	NA	580	NA	750	NA	690	NA	640	NA	620	NA	650	NA	640	NA	4.0	NA	640	NA	540
Bromide	mg/L	NA	0.74	NA	1.3	NA	25	NA	0.99	NA	1.2	NA	1.3	NA	1.2	NA	1.6	NA	2.0	NA	1.7
Carbon Dioxide	mg/L	NA	220	NA	270	NA	320	NA	190	NA	270	NA	240	NA	290	NA	250	NA	350	NA	180
Chemical Oxygen Demand (COD)	mg/L	NA	50	38	44	49	43	44	68	64	39	10	41	58	72	54	75	59	81	120	60
Chloride	mg/L	23	20	23	22	19	44	25	22	22	22	66	89	69	78	110	120	110	120	140	110
Fluoride	mg/L	NA	1.4	NA	2.7	NA	1.3	NA	2.1	NA	1.8	NA	2.3	NA	2.2	NA	1.3	NA	1.8	NA	1.6
Nitrate (as N)	mg/L	NA	0.16	NA	0.28	NA	0.11	NA	0.11	NA	0.11	NA	0.11	NA	0.055	NA	0.28	NA	0.11	NA	0.28
Sulfate	mg/L	NA	1600	NA	1400	NA	1500	NA	1400	NA	1300	NA	1700	NA	1400	NA	1300	NA	1700	NA	1400
Sulfide	mg/L	NA	0.32	NA	0.55	NA	0.17	NA	0.23	NA	0.051	NA	0.020	NA	0.020	NA	0.020	NA	0.027	NA	0.027
Total Dissolved Solids (TDS)	mg/L	3000	3200	3100	3100	2800	3100	3100	3000	3100	3100	2400	3100	3000	3000	2600	3000	2900	3100	2500	2700
Total Organic Carbon (TOC)	mg/L	18	16	17	19	11	21	16	17	20	17	24	24	26	27	24	24	29	37	29	24
<b>METALS</b>																					
Barium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.030	NA	NA	NA	NA	NA	NA
Boron	mg/L	NA	0.83	NA	0.82	NA	0.91	NA	0.96	NA	0.88	NA	0.98	NA	0.92	NA	0.51	NA	0.83	NA	0.62
Calcium	mg/L	NA	400	NA	340	NA	350	NA	380	NA	350	NA	370	NA	340	NA	260	NA	350	NA	270
Cobalt	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.016	NA	NA	NA	NA	NA	NA
Iron	mg/L	NA	16	NA	13	NA	14	NA	13	NA	9.3	NA	14	NA	16	NA	13	NA	34	NA	13
Magnesium	mg/L	NA	200	NA	180	NA	190	NA	200	NA	190	NA	190	NA	180	NA	180	NA	180	NA	170
Manganese	mg/L	NA	5.2	NA	4.9	NA	5.5	NA	5.7	NA	4.5	NA	5.4	NA	4.8	NA	3.1	NA	6.4	NA	3.9
Nickel	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.042	NA	NA	NA	NA	NA	NA
Potassium	mg/L	12	13	11	12	13	13	11	12	12	12	17	12	12	12	7.9	7.6	9.8	13	7.9	9.8
Tin	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.020	NA	NA	NA	NA	NA	NA
Sodium	mg/L	NA	280	NA	260	NA	260	NA	290	NA	290	NA	280	NA	330	NA	250	NA	290	NA	230
<b>VOLATILE ORGANIC COMPOUNDS</b>																					
Acetone	µg/L	4.5	NA	NA	4.5	4.5	4.5	4.5	4.5	4.5	4.5	10	10	10	10	10	10	10	10	20	10
1,4-Dioxane	µg/L	1	0.29	0.29	0.47	0.47	0.53	0.25	0.27	0.22	0.38	0.26	6.2	5.2	5.3	9.6	15	13	10	12	8.6
1,4-Dichlorobenzene	µg/L	2.6	3.0	2.5	3.1	4.6	4.7	2.8	4.1	5.3	4.4	1.5	4.1	3.7	4.0	0.70	0.68	1.1	3.6	0.50	2.3
Benzene	µg/L	2.2	2.2	2.6	2.6	2.6	2.5	1.4	2.1	2.2	2.1	0.28	1.6	1.5	1.6	0.44	0.25	0.43	0.58	0.50	0.25
Chlorobenzene	µg/L	0.36	0.36	0.25	0.25	0.36	0.41	0.25	0.33	0.33	0.29	0.25	0.33	0.30	0.25	0.25	0.25	0.25	0.25	0.50	0.25
cis-1,2-Dichloroethene	µg/L	4.0	3.7	4.2	4.8	3.2	2.7	1.4	2.1	3.0	3.3	1.6	2.2	1.8	1.8	0.69	0.48	1.1	1.5	0.50	0.55
Ethylbenzene	µg/L	0.25	0.25	0.25	0.25	0.39	0.65	0.29	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.50	0.25
Methyl tert-butyl ether	µg/L	1.6	1.8	2.0	1.9	2.4	2.5	1.4	1.4	1.7	1.6	1.3	1.1	1.5	1.2	0.75	0.45	0.25	1.1	0.50	0.77
t-Butanol	µg/L	6.5	6.5	5.0	5.0	6.6	5.0	5.0	5.0	6.7	5.0	7.3	16	17	14	16	19	19	18	24	14
Vinyl Chloride	µg/L	NA	0.40	0.37	0.29	0.25	0.84	0.49	0.45	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.50	0.25

**SUNSHINE CANYON SANITARY LANDFILL  
HISTORICAL DATA - COMBINED SUBDRAIN**

ANALYTE	UNITS	Sep 2013	Dec 2013	Mar 2014	Jun 2014	Sep 2014	Dec 2014	Mar 2015	Jun 2015	Sep 2015	Dec 2015	Mar 2016	June 2016	Sept 2016	Dec 2016	Mar 2017	June 2017	Sept 2017	Dec 2017
<b>FIELD PARAMETERS</b>																			
Dissolved Oxygen	mg/L	1.62	2.16	1.55	1.51	2.72	6.74	3.04	1.88	2.14	2.19	2.73	3.12	2.52	2.81	3.32	2.62	2.12	3.4
Oxidation-Reduction Potential	mV	-56	-106	-143	-106	-69	-41	-34	-71	108	66	120	89	170	-28	-18	94	224	189
pH	units	7.07	7.33	6.47	6.84	6.01	6.44	6.66	6.44	6.68	7.17	6.97	6.88	6.84	6.56	6.32	7.43	6.69	6.57
Specific Conductance	µmhos/cm	5800	5330	5260	2600	4310	3580	1280	3940	2390	2440	2640	2410	2330	3330	3850	4690	3800	2800
Temperature	C°	24.75	22.69	18.18	34.29	24.79	17.53	24.23	28.87	29.98	21.62	21.73	30.67	34.83	19.93	27.32	28.85	28.82	17.26
Turbidity	NTU	16.1	0.3	9.0	1.5	213	33.6	64.5	191	0.2	10.5	15.9	7.7	11.9	32.4	47.7	75.9	26.7	9.6
<b>GENERAL CHEMISTRY</b>																			
Alkalinity	mg/L	1300	920	960	570	490	540	410	550	310	310	310	320	340	830	210	450	230	300
Ammonia as N	meq/L	0.10	72	45	21	9.4	3.4	4.3	5.4	<b>0.18</b>	0.98	0.92	<b>0.42</b>	0.52	4.6	2.5	1.8	0.75	0.97
Bicarbonate	mg/L	NA	920	NA	570	NA	540	NA	550	NA	310	NA	320	NA	830	NA	450	NA	300
Bromide	mg/L	NA	6.9	NA	4.3	NA	2.6	NA	2.4	NA	<b>0.58</b>	NA	0.61	NA	2.5	NA	1.3	NA	<b>0.77</b>
Carbon Dioxide	mg/L	NA	290	NA	130	NA	190	NA	230	NA	44	NA	37	NA	380	NA	190	NA	42
Chemical Oxygen Demand (COD)	mg/L	550	430	350	210	160	77	10	86	10	<b>13</b>	21	25	27	81	28	75	28	10
Chloride	mg/L	510	460	200	300	340	110	58	130	40	40	38	44	29	130	44	100	54	61
Fluoride	mg/L	NA	<b>4.1</b>	NA	<b>0.73</b>	NA	1.8	NA	1.8	NA	1.6	NA	1.5	NA	2.5	NA	1.9	NA	1.1
Nitrate (as N)	mg/L	NA	0.55	NA	0.11	NA	1.2	NA	0.74	NA	2.3	NA	2.6	NA	0.11	NA	1.9	NA	2.5
Sulfate	mg/L	NA	1500	NA	310	NA	1500	NA	1300	NA	1200	NA	1100	NA	1700	NA	1700	NA	1300
Sulfide	mg/L	NA	0.02	NA	0.020	NA	0.020	NA	0.020	NA	0.020	NA	0.020	NA	0.020	NA	0.027	NA	0.027
Total Dissolved Solids (TDS)	mg/L	4100	3800	3800	1700	3500	3100	2500	3100	2300	2100	2200	2200	1900	3500	3100	2900	2300	2300
Total Organic Carbon (TOC)	mg/L	170	150	58	80	51	25	10	30	4.2	4.5	5.2	4.4	3.9	29	9.9	17	6.1	5.9
<b>METALS</b>																			
Barium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<b>0.0090</b>	NA	NA	NA	NA	NA	NA
Boron	mg/L	NA	2.0	NA	1.9	NA	0.74	NA	0.84	NA	0.18	NA	0.17	NA	1.0	NA	0.54	NA	0.24
Calcium	mg/L	NA	350	NA	160	NA	370	NA	360	NA	250	NA	230	NA	390	NA	330	NA	270
Iron	mg/L	NA	32	NA	5.6	NA	19	NA	21	NA	0.3	NA	0.59	NA	53	NA	14	NA	0.66
Magnesium	mg/L	NA	180	NA	75	NA	200	NA	200	NA	160	NA	150	NA	210	NA	200	NA	200
Manganese	mg/L	NA	6.6	NA	0.75	NA	5.0	NA	3.7	NA	0.42	NA	0.50	NA	4.7	NA	3.7	NA	0.86
Nickel	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.011	NA	NA	NA	NA	NA	NA
Potassium	mg/L	99	72	61	45	20	14	7.0	12	5.8	5.4	6.2	5.5	5.2	17	11	10	6.6	6.9
Sodium	mg/L	NA	570	NA	270	NA	300	NA	330	NA	110	NA	100	NA	360	NA	190	NA	110
Tin	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	<b>0.019</b>	NA	NA	NA	NA	NA	NA
<b>VOLATILE ORGANIC COMPOUNDS</b>																			
1,4-Dichlorobenzene	µg/L	1.4	2.0	1.1	0.25	0.25	<b>0.44</b>	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.80	0.25	0.88	0.25
1,4-Dioxane	µg/L	61	45	51	17	25	14	10	24	2.6	2.1	0.24	2.0	1.4	19	5.5	7.8	2.9	4.1
Acetone	µg/L	10	4.5	<b>6.2</b>	7.3	4.5	4.5	4.5	4.5	10	10	10	10	10	10	10	10	10	10
Benzene	µg/L	0.25	<b>0.39</b>	<b>0.28</b>	0.25	0.25	<b>0.36</b>	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Bromoform	µg/L	0.25	0.25	0.25	3.4	0.25	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Bromochloromethane	µg/L	0.25	0.25	0.25	0.52	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Chlorobenzene	µg/L	0.25	<b>0.28</b>	<b>0.25</b>	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Chloroform	µg/L	0.25	0.25	0.25	<b>0.36</b>	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
cis-1,2-Dichloroethene	µg/L	1.4	2.3	2.1	0.25	1.8	1.4	<b>0.32</b>	0.95	<b>0.42</b>	<b>0.26</b>	<b>0.37</b>	0.25	0.25	2.3	0.52	1.1	<b>0.48</b>	0.51
Dibromochloromethane	µg/L	0.25	0.25	0.25	4.9	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Dibromomethane	µg/L	0.25	0.25	0.25	0.50	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Bromodichloromethane	µg/L	0.25	0.25	0.25	1.2	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Ethylbenzene	µg/L	<b>0.48</b>	0.52	0.78	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Methylene Chloride	µg/L	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	<b>0.89</b>	<b>1.1</b>	0.88	0.88	0.88	0.88	0.88
Methyl tert-butyl ether	µg/L	0.94	1.0	0.88	0.25	0.25	0.66	0.25	0.58	0.25	0.25	0.25	0.25	0.25	1.3	0.25	<b>0.30</b>	0.25	0.25
Naphthalene	µg/L	0.74	1.2	1.6	<b>0.49</b>	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	NA	0.40	0.40	0.40	0.40	0.40
o-Xylene	µg/L	0.25	<b>0.28</b>	<b>0.31</b>	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
t-Butanol	µg/L	82	70	55	35	61	14	11	29	5.0	5.0	5.0	5.0	5.0	36	5.0	12	5.0	5.0
Tetrahydrofuran	µg/L	18	10	12	30	<b>9.3</b>	5.0	5.0	<b>7.4</b>	5.0	5.0	5.0	5.0	5.0	<b>7.2</b>	5.0	5.0	5.0	5.0
Toluene	µg/L	<b>0.25</b>	<b>0.43</b>	<b>0.25</b>	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25

**SUNSHINE CANYON SANITARY LANDFILL  
HISTORICAL LEACHATE DATA: LR-2R**

ANALYTE	UNITS	Oct 2011	Apr 2012	Nov 2012	Oct 2013	Oct 2014	Oct 2015	Apr 2016	Oct 2016	Oct 2017
<b>GENERAL CHEMISTRY:</b>										
Alkalinity, total	mg/L	2600	NA	1900	2000	NA	NA	NA	NA	NA
Alkalinity, bicarbonate	mg/L	2600	NA	1900	2000	NA	NA	NA	NA	NA
Ammonia-Nitrogen	mg/L	370	NA	220	240	NA	NA	NA	NA	NA
Bromide	mg/L	23	NA	28	28	NA	NA	NA	NA	NA
Carbon dioxide, free	mg/L	NA	NA	NA	350	NA	NA	NA	NA	NA
Chemical Oxygen Demand	mg/L	1200	NA	1200	1100	NA	NA	NA	NA	NA
Chloride	mg/L	1700	NA	1800	2000	NA	NA	NA	NA	NA
Cyanide	mg/L	NA	NA	NA	0.017	0.013	0.013	NA	0.013	0.014
Fluoride	mg/L	3	NA	3.5	5	NA	NA	NA	NA	NA
Nitrate+Nitrite	mg/L	0.02	NA	NA	0.026*	NA	NA	NA	NA	NA
Sulfate	mg/L	30	NA	170	180	NA	NA	NA	NA	NA
Sulfide	mg/L	NA	NA	NA	0.89	NA	NA	NA	NA	NA
Total Dissolved Solids	mg/L	5100	NA	5300	5400	NA	NA	NA	NA	NA
Total Organic Carbon	mg/L	330	NA	340	440	NA	NA	NA	NA	NA
<b>METALS:</b>										
Antimony	mg/L	NA	NA	NA	NA	NA	0.012	NA	0.012	NA
Arsenic	mg/L	0.036	NA	NA	NA	0.039	NA	NA	0.034	NA
Barium	mg/L	0.83	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	mg/L	NA	NA	NA	NA	NA	0.0020	NA	0.0010	NA
Boron	mg/L	6.2	NA	NA	6.0	NA	NA	NA	NA	NA
Cadmium	mg/L	NA	NA	NA	NA	NA	0.0040	NA	0.0050	NA
Calcium	mg/L	260	NA	NA	250	NA	NA	NA	NA	NA
Chromium	mg/L	0.018	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	mg/L	0.027	NA	NA	NA	NA	NA	NA	NA	NA
Copper	mg/L	0.0095	NA	NA	NA	0.0050	0.025	NA	0.005	NA
Iron	mg/L	21	NA	NA	25	NA	NA	NA	NA	NA
Lead	mg/L	NA	NA	NA	NA	NA	0.013	NA	0.0025	NA
Magnesium	mg/L	200	NA	NA	210	NA	NA	NA	NA	NA
Manganese	mg/L	0.6	NA	NA	0.5	NA	NA	NA	NA	NA
Mercury	mg/L	NA	NA	NA	NA	NA	0.0010	NA	0.0010	NA
Molybdenum	mg/L	0.008	NA	NA	NA	NA	NA	NA	NA	NA
Nickel	mg/L	0.037	NA	NA	NA	0.024	NA	NA	NA	NA
Potassium	mg/L	280	NA	NA	270	NA	NA	NA	NA	NA
Selenium	mg/L	0.052	NA	NA	NA	NA	NA	NA	NA	NA
Silver	mg/L	NA	NA	NA	NA	NA	0.010	NA	NA	NA
Sodium	mg/L	1000	NA	NA	1000	NA	NA	NA	NA	NA
Thallium	mg/L	0.017	NA	NA	0.016	0.0050	0.014	NA	0.0050	NA
Tin	mg/L	NA	NA	NA	NA	0.012	0.024	NA	0.012	NA
Vanadium	mg/L	0.017	NA	NA	NA	0.013	0.044	NA	NA	NA
Zinc	mg/L	0.1	NA	NA	NA	0.069	NA	NA	NA	NA

**SUNSHINE CANYON SANITARY LANDFILL  
HISTORICAL LEACHATE DATA: LR-2R**

ANALYTE	UNITS	Oct 2011	Apr 2012	Nov 2012	Oct 2013	Oct 2014	Oct 2015	Apr 2016	Oct 2016	Oct 2017
<b>VOLATILE ORGANIC COMPOUNDS (8260B ):</b>										
Acetone	µg/L	16	NA	40	16	26	22	NA	15	27
Benzene	µg/L	3.2	NA	0.75	2.3	4.1	4.2	NA	4.0	3.9
t-Butanol	µg/L	370	NA	200	450	500	470	NA	490	530
Chlorobenzene	µg/L	19	NA	7.5	26	39	32	NA	37	24
1,2-Dichlorobenzene	µg/L	7.4	NA	8.5	11	3.9	2.0	NA	2.3	6.2
1,3-Dichlorobenzene	µg/L	0.35	NA	0.35	0.32	0.39	0.30	NA	0.47	0.33
1,4-Dichlorobenzene	µg/L	6.7	NA	11	12	7.7	4.8	NA	6.5	9.9
cis-1,2-Dichloroethene	µg/L	0.46	NA	0.32	0.25	0.25	0.25	NA	0.25	0.25
Diethyl Ether	µg/L	NA	NA	0.8	NA	NA	NA	NA	NA	NA
Ethylbenzene	µg/L	0.44	NA	0.68	0.35	0.36	0.25	NA	0.28	1.4
Isopropylbenzene	µg/L	NA	NA	0.54	NA	NA	NA	NA	NA	NA
Methyl tert-butyl ether	µg/L	0.67	NA	0.32	0.43	0.41	0.43	NA	0.25	0.58
Naphthalene	µg/L	7.4	NA	1.1	4.8	4.9	4.1	NA	7.7	17
n-Propylbenzene	µg/L	NA	NA	0.35	NA	NA	NA	NA	NA	NA
Propylene	µg/L	NA	NA	3.4	NA	NA	NA	NA	NA	NA
Tetrahydrofuran	µg/L	170	NA	60	110	210	160	NA	160	200
Toluene	µg/L	0.85	NA	0.36	0.7	0.57	0.46	NA	0.49	0.82
Xylenes, o	µg/L	0.43	NA	0.38	0.40	0.28	0.43	NA	0.64	1.0
Xylenes, p+m	µg/L	0.60	NA	0.60	0.63	0.50	0.50	NA	0.50	0.70
<b>SEMIVOLITILE ORGANIC COMPOUNDS (8270):</b>										
bis(2-Ethylhexyl)phthalate	µg/L	33	33	32	17	4.4	4.0	NA	4.0	10
Di-n-butyl phthalate	µg/L	38	NA	5.8	3	2.2	2.0	NA	2.0	2.2
Di-n-octyl phthalate	µg/L	95	NA	10	2	4.4	4.0	NA	24.0	4.4
1,2-Dichlorobenzene	µg/L	5.3	NA	12	6.8	2.9	1.5	NA	2.4	4.2
1,4-Dichlorobenzene	µg/L	4.6	NA	15	8.2	5.4	4.1	NA	2.4	6.9
1,4-Dioxane	µg/L	140	NA	130	110	190	120	NA	120	150
Naphthalene	µg/L	6.1	NA	1.9	2	3.1	3.6	NA	5.9	10
<b>ORGANOPHOSPHOROUS COMPOUNDS (8141): None Detected</b>										
<b>CHLORINATED HERBICIDES (8151A): None Detected</b>										
<b>ORGANOCHLORINE PESTICIDES (8081A):</b>										
EndoSulfan I	µg/L	ND	ND	ND	ND	ND	0.079	0.019	0.022	0.020
<b>POLYCHLORINATED BIPHENYLS (8082): None Detected</b>										



SUNSHINE CANYON SANITARY LANDFILL  
HISTORICAL LEACHATE DATA: CA-L

ANALYTE	UNITS	Oct 2008	Jul 2009	Oct 2009	Nov 2010	Oct 2011	Apr 2012	Nov 2012	Apr 2013	Oct 2013	Apr 2014	Oct 2014	Oct 2015	Oct 2016	Oct 2017
<b>General Chemistry Parameters:</b>															
Alkalinity, total	mg/L	1200	NA	NA	NA	2300	NA	3000	NA	2900	NA	NA	NA	NA	NA
Alkalinity, bicarbonate	mg/L	1200	NA	680	NA	2300	NA	3000	NA	2900	NA	NA	NA	NA	NA
Ammonia-Nitrogen	mg/L	7.8	NA	3.7	NA	97	NA	320	NA	240	NA	NA	NA	NA	NA
Bromide	mg/L	2.8	NA	NA	NA	11	NA	16	NA	15	NA	NA	NA	NA	NA
Carbon Dioxide, Free	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	320	NA	NA	NA	NA	NA
Chemical Oxygen Demand	mg/L	100	NA	68	NA	600	NA	830	NA	810	NA	NA	NA	NA	NA
Chloride	mg/L	400	NA	50	NA	1800	NA	2300	NA	2300	NA	NA	NA	NA	NA
Cyanide	mg/L	0.0032	NA	0.0073	0.017	NA	NA	NA	NA	0.017	NA	NA	NA	NA	NA
Fluoride	mg/L	NA	NA	NA	NA	3.0	NA	3.5	NA	5.0	NA	NA	NA	NA	NA
Nitrate+Nitrite	mg/L	0.05	NA	0.01	NA	0.02	NA	0.02	NA	0.043*	NA	NA	NA	NA	NA
Sulfate	mg/L	1200	NA	1300	NA	1200	NA	1000	NA	1400	NA	NA	NA	NA	NA
Sulfide	mg/L	0.05	NA	0.05	0.02	NA	NA	NA	NA	0.22	NA	NA	NA	NA	NA
Total Dissolved Solids	mg/L	3300	NA	2600	NA	7200	NA	8100	NA	8100	NA	NA	NA	NA	NA
Total Organic Carbon	mg/L	30	NA	21	NA	180	NA	250	NA	250	NA	NA	NA	NA	NA
<b>Metals:</b>															
Antimony	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.012	0.006	NA
Arsenic	mg/L	0.017	NA	0.024	0.018	0.044	NA	0.014	NA	NA	NA	NA	NA	0.005	NA
Barium	mg/L	0.084	NA	0.04	0.078	0.11	NA	0.27	NA	NA	NA	NA	NA	NA	NA
Beryllium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0020	0.0020	NA
Boron	mg/L	0.71	NA	1.000	NA	4.8	NA	8.7	NA	6.4	NA	NA	NA	NA	NA
Cadmium	mg/L	0.00011	NA	0.00012	0.002	0.004	NA	0.004	NA	NA	NA	0.0020	0.0040	0.0040	NA
Calcium	mg/L	340	NA	460	NA	470	NA	350	NA	240	NA	NA	NA	NA	NA
Chromium	mg/L	0.0016	NA	0.00064	0.0042	0.018	NA	0.028	NA	NA	NA	NA	NA	NA	NA
Cobalt	mg/L	0.0013	NA	0.00082	0.002	0.0056	NA	0.0074	NA	NA	NA	NA	NA	NA	NA
Copper	mg/L	0.0026	NA	0.0052	0.003	0.006	NA	0.033	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	25	NA	4.1	NA	12	NA	2.3	NA	1.5	NA	NA	NA	NA	NA
Lead	mg/L	0.00063	NA	0.0012	0.004	0.008	NA	0.008	NA	NA	NA	NA	NA	NA	NA
Magnesium	mg/L	270	NA	170	NA	490	NA	680	NA	550	NA	NA	NA	NA	NA
Manganese	mg/L	13	NA	10	NA	5.6	NA	1.9	NA	1.5	NA	NA	NA	NA	NA
Mercury	mg/L	0.000016	NA	0.000022	0.0001	0.0001	NA	0.0001	NA	NA	NA	0.00020	0.0010	0.0010	NA
Molybdenum	mg/L	NA	NA	NA	NA	0.0063	NA	0.004	NA	NA	NA	NA	NA	NA	NA
Nickel	mg/L	0.0094	NA	0.0067	0.018	0.047	NA	0.19	NA	NA	NA	0.051	NA	NA	NA
Potassium	mg/L	25	NA	19	46	120	NA	190	NA	200	NA	NA	NA	NA	NA
Selenium	mg/L	0.0034	NA	0.0011	0.008	0.016	NA	0.018	NA	NA	NA	NA	NA	NA	NA
Silicon	mg/L	NA	NA	39	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.010	NA	NA
Sodium	mg/L	390	NA	160	NA	1300	NA	1500	NA	1600	NA	NA	NA	NA	NA
Thallium	mg/L	0.00054	NA	0.00017	0.007	0.019	NA	0.014	NA	0.016	NA	NA	0.017	0.005	NA
Tin	mg/L	0.000041	NA	0.00034	0.012	NA	NA	0.024	NA	NA	NA	0.012	0.024	0.012	NA
Titanium	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.022	NA	NA	NA
Vanadium	mg/L	0.0024	NA	0.0026	0.0052	0.023	NA	0.048	NA	NA	NA	0.048	NA	NA	NA
Zinc	mg/L	0.0085	NA	0.015	0.006	0.014	NA	0.17	NA	NA	NA	0.013	NA	NA	NA

SUNSHINE CANYON SANITARY LANDFILL  
HISTORICAL LEACHATE DATA: CA-L

ANALYTE	UNITS	Oct 2008	Jul 2009	Oct 2009	Nov 2010	Oct 2011	Apr 2012	Nov 2012	Apr 2013	Oct 2013	Apr 2014	Oct 2014	Oct 2015	Oct 2016	Oct 2017
<b>Volatile Organic Compounds (8260B):</b>															
Acetone	µg/L	18	7.4	8.2	6.2	21	NA	19	NA	18.0	NA	140	17	44	24
Acrylonitrile	µg/L														5.6
Benzene	µg/L	14	0.18	2.7	11	6.8	NA	5.7	NA	5.9	NA	8.9	3.8	2.9	4.8
t-Butanol	µg/L	640	38	35	1000	1200	NA	1500	NA	1300	NA	1200	1200	1400	1400
Carbon disulfide	µg/L	0.40	0.40	0.35	0.48	0.48	NA	0.96	NA	1.0	NA	1.3	0.99	0.50	1.6
Chlorobenzene	µg/L	0.14	0.13	0.21	0.36	0.36	NA	0.72	NA	1.0	NA	1.3	0.32	0.38	0.43
Chloroethane	µg/L	0.83	0.25	0.11	0.43	0.40	NA	0.40	NA	1.0	NA	1.3	0.40	0.40	
1,4-Dichlorobenzene	µg/L	2.1	0.16	2.1	6.7	3.8	NA	6.3	NA	7.3	NA	19	5.4	6.7	8.2
Dichlorodifluoromethane	µg/L	0.45	0.21	0.11	0.26	0.26	NA	0.52	NA	1.0	NA	1.3	0.25	0.25	0.25
1,1-Dichloroethane	µg/L	2.7	0.32	0.27	1.0	0.58	NA	0.8	NA	1.0	NA	1.3	0.25	0.25	0.25
1,2-Dichloroethane	µg/L	26	2.2	1.7	12	8	NA	2.6	NA	2.3	NA	5.0	1.1	0.70	0.65
1,1-Dichloroethene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.42	0.25
cis-1,2-Dichloroethene	µg/L	16	0.77	2.7	8.1	6.3	NA	2.1	NA	2.6	NA	2.30	1.5	1.6	2.0
1,2-Dichloropropane	µg/L	2	0.16	0.31	0.35	1.2	NA	0.70	NA	1.0	NA	1.3	0.46	0.26	0.32
Diethylether	µg/L	NA	NA	3.1	NA	NA	NA	3.3	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	µg/L	0.76	0.14	1.1	0.25	0.25	NA	0.50	NA	4.0	NA	19	0.25	0.25	0.25
2-Hexanone	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.4	2.5	NA
Methyl ethyl ketone	µg/L	13	2.4	2.5	4.7	4.7	NA	9.4	NA	10	NA	220	12	24	2.5
4-Methyl-2-pentanone	µg/L	NA	NA	NA	NA	NA	NA	1.5	NA	10	NA	NA	2.5	2.5	2.5
Methyl tert-butyl ether	µg/L	9.8	1.9	1.4	5.4	4.0	NA	1.5	NA	1.5	NA	1.3	1.1	0.76	0.81
Naphthalene	µg/L	0.3	0.3	0.36	0.41	0.41	NA	0.82	NA	1.0	NA	2.0	0.40	0.40	0.40
Propylene	µg/L	NA	NA	NA	NA	NA	NA	0.91	NA	NA	NA	NA	NA	NA	NA
Styrene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	12	0.25	0.25	0.25
Tetrahydrofuran	µg/L	13	11	5.2	18	13	NA	8.9	NA	5.0	NA	28	8.1	10	13
Toluene	µg/L	0.26	0.12	0.11	0.86	0.36	NA	0.72	NA	1.0	NA	36	0.25	0.25	0.44
Tetrachloroethene	µg/L	1.3	0.32	0.37	0.26	0.26	NA	0.52	NA	1.0	NA	1.4	0.25	0.25	0.25
Trichloroethene	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.27	0.25	0.37
Vinyl Chloride	µg/L	0.2	0.16	0.14	1.5	2.1	NA	0.80	NA	1.0	NA	1.3	0.37	0.25	0.25
m+p-Xylenes	µg/L	0.42	0.42	0.19	0.6	0.6	NA	1.2	NA	2.0	NA	34	0.50	0.50	0.50
o-Xylene	µg/L	0.22	0.12	0.42	0.3	0.3	NA	0.6	NA	1.0	NA	17	0.25	0.25	0.25
<b>Semivolatle Organic Compounds (8270):</b>															
Benzoic acid	µg/L	NA	NA	NA	NA	NA	15	28	NA	37	23	23	3.8	250	20
bis(2-Ethylhexyl) phthalate	µg/L	1.1	NA	1.8	3.11	16	3.2	16	NA	8.3	NA	23	3.8	3.8	20
Diethyl phthalate	µg/L	0.85	NA	0.33	2.64	0.95	0.44	0.95	NA	0.49	NA	5.7	0.96	0.96	5.1
1,4-Dichlorobenzene	µg/L	NA	NA	NA	4.42	3.2	4.6	4.7	NA	4.2	NA	14	4.1	2.0	5.1
Di-n-butyl phthalate	µg/L	0.74	NA	0.39	3.02	2.5	0.57	2.8	NA	1.5	NA	11	1.9	1.9	10
1,4-Dioxane	µg/L	NA	NA	0.32	NA	77	NA	110	NA	89	NA	110*	86	97	130
3-methylphenol+4methylphenol	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	97	20
Phenol	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	17	5.1
<b>Organophosphorus Compounds (8141): None Detected</b>															
<b>Chlorinated Herbicides (8151A):</b>															
2,4-D	µg/L	NA	NA	NA	NA	NA	NA	ND	ND	ND	ND	ND	0.68	0.45	0.71
MCPP	µg/L	NA	NA	NA	NA	NA	NA	44	52	45	NA	46	44	44	280
Silvex (2,4,5-TP)	µg/L	0.16	NA	0.016	0.2	NA	NA	0.15	0.10	0.1	NA	0.11	0.10	0.77	0.24
<b>Organochlorine Pesticides and Polychlorinated Biphenyls (8081A/8082): None Detected</b>															

SUNSHINE CANYON SANITARY LANDFILL  
HISTORICAL LEACHATE DATA: LEACHATE

Analyte	Units	Oct 2008	Oct 2009	Nov 2010	Jan 2012	Apr 2012	Jan 2013	Apr 2013	Oct 2013	Apr 2014	Oct 2014	Apr 2015	Oct 2015	Apr 2016	Oct 2016
<b>General Chemistry Parameters:</b>															
Alkalinity, total	mg/L	2400	2200	NA	18000	NA	19000	NA	1300	NA	NA	NA	NA	NA	NA
Alkalinity, bicarbonate	mg/L	2400	2200	NA	18000	NA	19000	NA	1300	NA	NA	NA	NA	NA	NA
Ammonia-Nitrogen	mg/L	170	55	NA	2250	NA	3700	NA	46	NA	NA	NA	NA	NA	NA
Bromide	mg/L	18	10	NA	180	NA	65	NA	7.4	NA	NA	NA	NA	NA	NA
Carbon Dioxide, Free	mg/L	NA	NA	NA	NA	NA	NA	NA	140	NA	NA	NA	NA	NA	NA
Chemical Oxygen Demand	mg/L	1200	820	NA	100000	NA	23000	NA	340	NA	NA	NA	NA	NA	NA
Chloride	mg/L	2200	2400	NA	3000	NA	4200	NA	600	NA	NA	NA	NA	NA	NA
Cyanide	mg/L	0.005	0.0059	NA	0.035	NA	NA	NA	0.170	NA	NA	NA	NA	NA	NA
Fluoride	mg/L	2.7	1.6	NA	75	NA	18	NA	5.0	NA	NA	NA	NA	NA	NA
Nitrate+Nitrite	mg/L	0.050	0.015	NA	0.02	NA	0.020	NA	0.034*	NA	NA	NA	NA	NA	NA
Sulfate	mg/L	1300	1900	NA	2100	NA	240	NA	3700	NA	NA	NA	NA	NA	NA
Sulfide	mg/L	0.33	0.05	0.026	1	NA	240	NA	0.1	NA	NA	NA	NA	NA	NA
Total Dissolved Solids	mg/L	7900	8600	NA	50000	NA	24000	NA	7000	NA	NA	NA	NA	NA	NA
Total Organic Carbon	mg/L	280	230	NA	57000	NA	7400	NA	130	NA	NA	NA	NA	NA	NA
<b>Metals:</b>															
Antimony	mg/L	0.00032	NA	0.0088	0.14	NA	NA	NA	NA	NA	0.030	NA	0.030	NA	0.006
Arsenic	mg/L	0.0093	NA	0.013	0.21	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0052
Barium	mg/L	0.29	NA	0.14	1.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Beryllium	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0050	NA	0.001
Boron	mg/L	0.0024	5	NA	26	NA	27	NA	10	NA	NA	NA	NA	NA	NA
Cadmium	mg/L	0.000097	NA	0.002	0.04	NA	NA	NA	NA	NA	0.010	NA	0.010	NA	0.002
Calcium	mg/L	190	440	NA	4100	NA	83	NA	240	NA	NA	NA	NA	NA	NA
Chromium	mg/L	0.017	NA	0.0049	0.46	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Cobalt	mg/L	0.0083	NA	0.0057	0.24	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Copper	mg/L	0.0032	NA	0.0051	0.067	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Iron	mg/L	1.3	7.1	NA	1200	NA	35	NA	39	NA	NA	NA	NA	NA	NA
Lead	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.013	NA	0.0025
Magnesium	mg/L	230	570	NA	980	NA	250	NA	670	NA	NA	NA	NA	NA	NA
Manganese	mg/L	0.0044	2.9	NA	40	NA	0.35	NA	0.14	NA	NA	NA	NA	NA	NA
Mercury	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.0010	NA	0.001
Nickel	mg/L	0.059	NA	0.042	1.1	NA	NA	NA	NA	NA	0.13	NA	NA	NA	NA
Potassium	mg/L	65	140	140	2400	NA	2100	NA	100	NA	NA	NA	NA	NA	NA
Selenium	mg/L	0.025	NA	0.008	0.52	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Silver	mg/L	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.025	NA	NA
Sodium	mg/L	640	1700	NA	3900	NA	4400	NA	1100	NA	NA	NA	NA	NA	NA
Thallium	mg/L	0.054	NA	0.007	0.33	NA	NA	NA	0.016	NA	NA	NA	NA	NA	NA
Tin	mg/L	0.00062	NA	0.016	0.24	NA	NA	NA	NA	NA	0.060	NA	0.060	NA	0.012
Titanium	mg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.15	NA	0.025	NA	NA
Vanadium	mg/L	0.028	NA	0.0087	0.1	NA	NA	NA	NA	NA	0.078	NA	NA	NA	NA
Zinc	mg/L	0.012	NA	0.006	12	NA	NA	NA	NA	NA	0.39	NA	NA	NA	NA

SUNSHINE CANYON SANITARY LANDFILL  
HISTORICAL LEACHATE DATA: LEACHATE

Analyte	Units	Oct 2008	Oct 2009	Nov 2010	Jan 2012	Apr 2012	Jan 2013	Apr 2013	Oct 2013	Apr 2014	Oct 2014	Apr 2015	Oct 2015	Apr 2016	Oct 2016
<b>Volatile Organic Compounds (8260B):</b>															
Acetone	µg/L	8.3	10	7.9	6800	NA	15000	NA	14	NA	51000	NA	31000	NA	250
Acetonitrile	µg/L	5.2	6.3	9	1400	180	210	NA	10	NA	25	NA	1000	NA	250
Benzene	µg/L	3.8	5.8	4.1	33	NA	3.7	NA	3.3	NA	10	NA	25	NA	6.3
t-Butanol	µg/L	1700	1500	1500	1200	NA	1100	NA	620	NA	1200	NA	660	NA	980
Carbon disulfide	µg/L	0.4	0.57	0.48	48	NA	2.7	NA	0.25	NA	10	NA	50	NA	13
Chlorobenzene	µg/L	0.65	0.47	0.36	36	NA	1.8	NA	0.25	NA	10	NA	25	NA	6.3
1,2-Dichlorobenzene	µg/L	0.33	0.15	0.32	32	NA	1.6	NA	0.25	NA	20	NA	25	NA	6.3
1,4-Dichlorobenzene	µg/L	13	7	5.3	37	NA	5.0	NA	3.3	NA	10	NA	25	NA	6.3
1,1-Dichloroethane	µg/L	0.73	0.54	0.4	40	NA	NA	NA	0.25	NA	10	NA	25	NA	6.3
1,2-Dichloroethane	µg/L	0.5	0.65	0.68	28	NA	1.8	NA	0.94	NA	10	NA	25	NA	6.3
cis-1,2-Dichloroethene	µg/L	1.1	0.49	2.5	32	NA	1.6	NA	1.4	NA	10	NA	25	NA	6.3
1,2-Dichloropropane	µg/L	0.2	0.21	0.35	35	NA	ND	NA	0.25	NA	10	NA	25	NA	6.3
Diethyl ether	µg/L	NA	7.4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
Ethylbenzene	µg/L	0.33	0.14	0.25	25	NA	4.6	NA	0.73	NA	10	NA	25	NA	6.3
2-Hexanone	µg/L	2.5	2.9	2.9	260	NA	57	NA	2.5	NA	100	NA	NA	NA	63
Isobutyl Alcohol	µg/L	13	13	7	21000	NA	NA	NA	10	NA	400	NA	1300	NA	2400
Methyl ethyl ketone	µg/L	2.4	2.4	4.7	5200	NA	14000	NA	2.5	NA	34000	NA	17000	NA	2600
Methyl isobutyl ketone	µg/L	3.4	3.4	3.5	350	NA	240	NA	2.5	NA	160	NA	250	NA	66
Methyl tert-butyl ether	µg/L	11	7.2	5.7	32	NA	1.6	NA	0.82	NA	10	NA	25	NA	6.3
Naphthalene	µg/L	0.39	0.3	0.41	41	NA	2.1	NA	27	NA	16	NA	40	NA	10
Propionitrile	µg/L	13	7	700	NA	NA	52	NA	10	NA	400	NA	1000	NA	250
Styrene	µg/L	0.18	0.18	0.2	24	NA	2	NA	0.25	NA	10	NA	25	NA	6.3
Tetrahydrofuran	µg/L	25	14	18	1200	NA	610	NA	0.25	NA	580	NA	500	NA	520
Toluene	µg/L	0.12	0.15	0.36	120	NA	32	NA	0.25	NA	22	NA	25	NA	21
Xylenes, o	µg/L	0.14	0.12	0.3	30	NA	4.2	NA	0.25	NA	10	NA	NA	NA	6.3
Xylenes, p+m	µg/L	0.42	0.42	0.6	60	NA	8.5	NA	0.5	NA	20	NA	NA	NA	13
Vinyl Chloride	µg/L	2.4	2.2	1.4	40	NA	ND	NA	0.25	NA	10	NA	25	NA	6.3
<b>Semivolatile Organic Compounds (8270):</b>															
Benzoic acid	µg/L	NA	NA	NA	NA	NA	2000	NA	14	5500	67000	NA	7700	NA	14000
Butyl benzyl phthalate	µg/L	NA	4.7	3.52	32000	1700	ND	NA	1.4	NA	5000	NA	7700	NA	4500
Di-n-butyl phthalate	µg/L	NA	4.7	3.05	5100	NA	NA	NA	0.2	NA	2500	NA	7700	NA	2200
1,4-Dichlorobenzene	µg/L	NA	NA	3.88	5100	NA	NA	NA	1.7	NA	500	NA	770	NA	450
1,4-Dioxane	µg/L	140	NA	NA	3	NA	150	NA	14	NA	130	NA	120	NA	59
3-Methylphenol + 4-Methylphenol	µg/L	NA	16	2.19	15000	ND	ND	ND	ND	ND	25000	22000	40000	NA	4500
Phenol	µg/L	NA	2	1.62	15000	NA	670	NA	0.61	NA	33000	NA	59000	56000	8000
<b>Organophosphorus Compounds (8141):</b>															
Demeton-S	µg/L	NA	NA	NA	NA	NA	0.069	0.08	0.068	NA	0.16	NA	0.079	NA	NA
Disulfoton	µg/L	NA	NA	NA	NA	NA	0.13	0.098	0.097	NA	0.10	NA	0.097	NA	0.091
Fenthion	µg/L	NA	NA	NA	NA	NA	0.1	0.36	0.081	NA	0.085	NA	0.11	NA	NA
Mevinphos	µg/L	NA	NA	NA	NA	NA	0.095	0.11	0.094	NA	0.098	NA	0.094	NA	NA
Mocap	µg/L	NA	NA	NA	NA	NA	0.19	0.098	0.097	NA	0.10	NA	0.097	NA	NA
Stirophos	µg/L	NA	NA	NA	NA	NA	0.14	0.093	0.092	NA	0.096	NA	0.092	NA	NA
Sulfotepp	µg/L	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.14	NA	0.091	NA	NA
Tokuthion	µg/L	NA	NA	NA	NA	NA	0.091	0.35	0.09	NA	0.094	NA	0.090	NA	NA
<b>Chlorinated Herbicides (8151A):</b>															
2,4-D	µg/L	NA	NA	0.41	9	NA	2.1	0.44	0.45	NA	0.45	NA	0.45	NA	0.45
Dicamba	µg/L	NA	NA	NA	NA	NA	0.89	1.7	0.26	NA	0.26	NA	0.26	NA	NA
Dichlorprop	µg/L	NA	NA	NA	NA	NA	7.0	1.9	0.53	NA	0.54	NA	0.53	NA	NA
Dimoseb	µg/L	NA	NA	NA	NA	NA	6.2	0.24	0.13	NA	0.13	NA	0.13	NA	NA
MCPA	µg/L	NA	NA	NA	NA	NA	440	49	51	NA	8100	NA	51	NA	NA
MCPP	µg/L	NA	NA	NA	NA	NA	44	44	45	NA	46	NA	45	NA	NA
Pentachlorophenol	µg/L	NA	7.9	2.48	2600	NA	0.1	0.19	0.077	NA	0.15	NA	0.077	NA	2.4
Silvex (2,4,5-TP)	µg/L	0.016	0.16	0.2	0.78	NA	0.9	0.10	0.11	NA	1.1	ND	0.11	NA	0.11
<b>Organochlorine Pesticides (8081A):</b>															
Endosulfan I	µg/L	0.0016	0.0016	0.029	0.2	NA	ND	NA	0.57	0.019	0.50	NA	0.050	NA	0.022
<b>Polychlorinated Biphenyls (8082): None Detected</b>															