August 14, 2017

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 first semiannual 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 January 1, 2017, to June 30, 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 Ms. Patti Costa at (818) 362-2075 or email her at PCosta@RepublicServices.com.

Sincerely,

Rob Sherman
General Manager
Sunshine Canyon Landfill

SEMI-ANNUAL MONITORING REPORT
FIRST SEMIANNUAL 2017

SUNSHINE CANYON LANDFILL
FACILITY WDID #L10006014618

AUGUST 2017
PROJECT NO. 2016.0030

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

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EXECUTIVE SUMMARY

This document presents the results of environmental monitoring activities conducted at the Sunshine Canyon City/County Landfill (SCLF) during the first 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 first semiannual 2017 monitoring period, routine environmental monitoring was conducted on a quarterly basis in March (first quarter) and June (second quarter). Monitoring activities 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 first and second quarter 2017 monitoring events:

WELL	ANALYTE	QUARTER(S) OF WQPS EXCEEDANCE	RETEST RESULTS
MW-1	1,4-Dioxane	1st and 2nd	Not Applicable
	t-Butanol	1st and 2nd	Not Applicable
MW-5	1,4-Dioxane	1st and 2nd	Not Applicable
	Ammonia-Nitrogen	1st	Below WQPS
	Alkalinity	2nd	Results Pending
MW-6	Chemical Oxygen Demand	2nd	Not Applicable
	Total Dissolved Solids	2nd	Results Pending
MW-13R	1,4-Dioxane	1st and 2nd	Not Applicable
MW-14	Alkalinity	1st and 2nd	*Exceeded WQPS*
	Total Dissolved Solids	1st and 2nd	*Exceeded WQPS*
DW-1	Chemical Oxygen Demand	2nd	Results Pending
DW-2	Alkalinity	2nd	Results Pending
DW-3	Alkalinity	1st and 2nd	Not Applicable
	Chemical Oxygen Demand	2nd	Results Pending
	Chloroform	1st	Below WQPS
	Chloromethane	1st	Below WQPS
DW-5	Allyl Chloride	2nd	Not Applicable
PZ-2	Ammonia-Nitrogen	1st	Below WQPS
	Chemical Oxygen Demand	2nd	Results Pending
PZ-4	Alkalinity	1st and 2nd	Not Applicable
	Chloromethane	2nd	Automatically placed in tracking mode*

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 fourth quarter 2016 WQPS exceedances were measured at concentrations below respective WQPS. Retest results for samples collected following first quarter 2017 WQPS exceedances confirm elevated concentrations of alkalinity and total dissolved solids (TDS) at well MW-14. Accordingly these constituents at well MW-14 were placed in tracking mode during the monitoring period. Results are currently pending for the second quarter 2017 WQPS exceedance of the following:

- 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.

Retest results will be presented in the Second Semiannual 2017 Water Quality Monitoring Report.

During the first semiannual 2017 monitoring period, several volatile organic compounds (VOCs) were detected in the first and second 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 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 first half of 2017. Accordingly, no samples were collected from these monitoring locations.

Annual leachate sampling was performed in October 2016. Based on the results obtained, no resampling was required for April 2017.

During the first semiannual 2017 monitoring period, methane concentrations at all perimeter gas probes were below five percent by volume.

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 the water treatment system to remove VOCs prior to onsite reuse for dust suppression. Combined with other liquids managed by the site, approximately 22,040,817 gallons of liquid were collected and treated at the site during the first 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 first 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 first and second 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-3A, Part 2 and Cell CC-3B. In addition, disposal in Cell CC-4, Part 1 commenced on March 24, 2017. Construction of Cell CC-4, Part 2 began on April 11, 2017.

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 first 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 first semiannual 2017 monitoring period, groundwater monitoring was conducted between March 13 and 16, 2017 (first quarter) and between June 12 and 15, 2017 (second 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 first and second 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 first quarter 2017 monitoring period, samples were analyzed for the indicator parameters. During the second 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 first 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:

<u>First Quarter 2017 Monitoring Event</u>

- 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 with one exception, which indicates good agreement. Ammonia (as N) had an RPD of 40 percent between primary and duplicate sample results.

<u>Second Quarter 2017 Monitoring Event</u>

- With the exception of sulfide, which exceeded the hold time at the following monitoring points: Subdrain N, Combined Subdrains, CM-9R3, MW-10R, MW-5, and the duplicate sample, all analyses were completed within the holding times prescribed by the respective analytical method. Sulfide results with a holding time exceedance are flagged in applicable Tables.
- As indicated on Table 3B, no VOCs were detected in QCTB and QCAB, and no constituents were detected in method blank samples.
- The RPD between primary and duplicate samples was 12 percent or less for quantifiable results, which indicates good agreement.

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

3.4 Groundwater Elevations and Flow Conditions

During the first semiannual 2017 monitoring period, quarterly depth to groundwater measurements were measured on September 19 and December 19, 2016. Between September 19, 2016 and March 13, 2017, the following changes in the groundwater elevation were measured:

WELL/PIEZOMETER	CHANGE IN GROUNDWATER ELEVATION (FEET)
MW-1	+2.30
MW-2A	+1.86
MW-2B	+2.41
MW-5	+2.43
MW-6	+0.45
MW-8	+0.76
MW-9	+1.50
MW-13R	+1.98
MW-14	+0.43
PZ-1	-0.38
PZ-2	-0.03
PZ-3	-0.64
PZ-4	-0.17

WELL/PIEZOMETER	CHANGE IN GROUNDWATER ELEVATION (FEET)
DW-1	No Change
DW-2	+12.02
DW-3	-0.44
DW-4	+11.03
DW-5	+0.16
CM-9R3	+9.84
CM-10R	+5.16
CM-11R	+15.16
CM-5R	-2.45

Between December 19, 2016 and June 12, 2017, the following changes in the groundwater elevation were measured:

WELL/PIEZOMETER	CHANGE IN GROUNDWATER ELEVATION (FEET)
MW-1	+1.53
MW-2A	+0.49
MW-2B	+2.38
MW-5	+1.24
MW-6	+0.80
MW-8	+1.57
MW-9	+2.20
MW-13R	+1.84
MW-14	+0.03
PZ-1	-0.07
PZ-2	+0.24
PZ-3	-0.50
PZ-4	+0.32

WELL/PIEZOMETER	CHANGE IN GROUNDWATER ELEVATION (FEET)
DW-1	No Change
DW-2	+11.72
DW-3	+0.35
DW-4	+12.71
DW-5	+0.44
CM-9R3	+9.36
CM-10R	+3.43
CM-11R	+12.56
CM-5R	-2.30

Groundwater equipotential surface contours were developed using the first and second 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 first quarter 2017 monitoring period and for indicator and supplemental parameters during the second 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 Fourth Quarter 2016 Retest Groundwater Chemistry Results

During the previous monitoring period (fourth quarter 2016), the following results were measured above the water quality protection standards (WQPS):

- TOC at well MW-1;
- ammonia (as N) at wells MW-5, MW-6, and DW-3;
- chemical oxygen demand (COD) at well DW-3;
- t-butanol and naphthalene at well DW-5.

Accordingly, retest samples were collected on February 21, 2017. All retest samples were measured at concentrations below respective WQPS. Accordingly, these constituent/well pairs will remain in detection mode.

3.5.2 First Quarter 2017 Groundwater Chemistry Results

During the first 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 first 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	3RD QUARTER 2016 RESULT	RETEST RESULT (1)	RETEST RESULT (2)
MW-1	1,4-Dioxane	µg/L	0.99 (PQL)	12	TM	TM
	t-Butanol	µg/L	10 (PQL)	10	TM	TM
MW-5	1,4-Dioxane	µg/L	0.99 (PQL)	11	TM	TM
	Ammonia-N	mg/L	5.714	6.0	4.2	4.6
MW-13R	1,4-Dioxane	µg/L	0.94 (PQL)	5.8	TM	TM
MW-14	Alkalinity	mg/L	587.83	650	670	650
	Total Dissolved Solids	mg/L	5128.5	6900	6500	6400
DW-3	Alkalinity	mg/L	162.81	170	TM	TM
	Chloroform	µg/L	0.5 (PQL)	0.54	ND	ND
	Chloromethane	µg/L	0.5 (PQL)	1.9	ND	ND
DW-5	Allyl Chloride	µg/L	1.0 (PQL)	2.3	TM	TM
PZ-2	Ammonia-N	mg/L	3.598	3.6	3.1	3.2
PZ-4	Alkalinity	mg/L	341.13	350	TM	TM
	Chloromethane	µg/L	0.5 (PQL)	0.72	NS	NS

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.
ND – Not Detected.
NS – Not Sampled.

Retest samples were collected on April 18, 2017 for analyses of the following:

- Ammonia (as N) at wells MW-5 and PZ-2;
- TDS and alkalinity at well MW-14;
- Chloroform and chloromethane at well DW-3.

Retest results confirm elevated alkalinity and TDS at well MW-14. Accordingly, alkalinity and TDS at well MW-14 have been placed in tracking mode. Retest sampling was inadvertently not conducted for chloromethane at well PZ-4. Accordingly, this well/constituent pair will be placed in tracking mode. All other retest results were measured at concentrations below respective WQPS and these well/constituent pairs will remain in detection monitoring mode. 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 t-butanol and methylene chloride were

measured in the samples from wells MW-13R and DW-1 (respectively). With respect to corrective action evaluation monitoring wells, six VOCs were detected in the sample from well MW-9, and one VOC was detected in each of the samples from wells MW-2A, MW-2B, and DW-4 (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 first quarter 2017 monitoring period exceeded a State of California drinking water standard or Federal Maximum Contaminant Level (Table 6A).

3.5.3 Second Quarter 2017 Groundwater Chemistry Results

During the second 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	2ND QUARTER 2017 RESULT
MW-1	1,4-Dioxane	µg/L	0.94 (PQL)	18
	t-Butanol	µg/L	10	19
MW-5	1,4-Dioxane	µg/L	0.94(PQL)	15
	Alkalinity	mg/L	727.34	740
MW-6	Chemical Oxygen Demand	mg/L	75.338	180
	Total Dissolved Solids	mg/L	4486.5	4500
MW-13R	1,4-Dioxane	µg/L	0.95 (PQL)	7.2
MW-14	Alkalinity	mg/L	587.83	660
	Total Dissolved Solids	mg/L	5128.5	6400
DW-1	Chemical Oxygen Demand	mg/L	49.801	220
DW-2	Alkalinity	mg/L	410.47	430
DW-3	Alkalinity	mg/L	162.81	170
	Chemical Oxygen Demand	mg/L	15.206	29
PZ-2	Chemical Oxygen Demand	mg/L	26.386	31
PZ-4	Alkalinity	mg/L	341.13	380

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:

- 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.

Retest results will be presented in the Second Semiannual 2017 Monitoring Report.

In addition to quantifiable VOCs measured in samples from the detection monitoring wells shown in the table above, a trace concentration of t-butanol was measured in the sample from well MW-13R. With respect to corrective action evaluation monitoring wells, six 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 alkalinity and TDS that exceed the WQPS at well MW-14. Accordingly, this constituent/well pair has been placed in “tracking mode”. In addition, chloromethane at well PZ-4 will be added to “tracking mode” since retest samples were inadvertently not collected following first quarter 2017 exceedance of the WQPS. 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	Alkalinity	Retest for Alkalinity; Continue Quarterly Monitoring
MW-6	Chemical Oxygen Demand	Chemical Oxygen Demand	TDS	Retest for TDS; Continue Quarterly Monitoring
MW-13R	1,4-Dioxane	1,4-Dioxane	None	Continue Quarterly Monitoring
MW-14	Vinyl Chloride Alkalinity TDS	Alkalinity TDS	None	Continue Quarterly Monitoring
DW-1	Chloride	None	Chemical Oxygen Demand	Retest for COD; Continue Quarterly Monitoring
DW-3	Alkalinity, Ammonia-N	Alkalinity	Chemical Oxygen Demand	Retest for COD; Continue Quarterly Monitoring
DW-5	Ammonia-N, Allyl Chloride	Allyl Chloride	None	Continue Quarterly Monitoring
PZ-4	Alkalinity Chloromethane	Alkalinity	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	1ST QUARTER RESULTS	2ND QUARTER RESULTS	HISTORICAL TRENDS AND OBSERVATIONS
MW-1: 1,4-Dioxane	PQL	**12**	**18**	Variable concentrations. Concentrations between 10 µg/L and 20 µg/L during the last seven sampling events.
MW-1: t-Butanol	PQL	**10**	**19**	Variable concentrations typically between 8 µg/L and 20 µg/L.
MW-5: 1,4-Dioxane	PQL	**11**	**15**	Variable concentrations; consistently measured above the PQL.
MW-5: t-Butanol	PQL	ND	ND	Only one observation exceeding the WQPS. Not detected during past five monitoring events.
MW-6: Chemical Oxygen Demand	75.338 mg/L	ND	180	Two sporadic results measured over the concentration limit.
MW-13R: 1,4-Dioxane	PQL	**5.8**	**7.2**	Variable concentrations.
MW-14: Vinyl Chloride	PQL	ND	ND	Intermittent detections, generally below the WQPS. Non-detect during last five sampling events.
MW-14: Alkalinity	587.83	**650**	**660**	First two measurements above the WQPS during the current monitoring period. Results may be associated with elevated rainfall and runoff during the first quarter 2017.
MW-14: TDS	5128.5	**6900**	**6400**	First two measurements above the WQPS during the current monitoring period. Results may be associated with elevated rainfall and runoff during the first quarter 2017.
DW-1: Chloride	17.737 mg/L	14	13	One anomalous result over the concentration limit. Below WQPS during last seven sampling events.
DW-3: Alkalinity	162.81 mg/L	**170**	**170**	Static trend during the last year. All results were 170 mg/L during last four sampling events.
DW-3: Ammonia as N	0.7564 mg/L	0.53	0.58	Few detections above the WQPS between 2012-2016.
DW-5: Ammonia as N	0.3918 mg/L	0.39	0.37j	Slight decreasing trend.
DW-5: Allyl Chloride	PQL	**2.3**	ND	Intermittent detections.
PZ-4: Alkalinity, total	341.13 mg/L	**350**	**350**	Concentrations are generally below or slightly above the WQPS.
PZ-4: Chloromethane	PQL	**0.72**	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 of the subdrains beneath composite liner systems at the site as well as 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 for 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 First Quarter 2017 Subdrain Monitoring Results

During the first quarter 2017 monitoring event, samples from each subdrain monitoring point were collected on March 13, 2017. Samples were delivered to TestAmerica Labs for the indicator parameters.

As shown on Table 8A, the sample from Subdrain N contained five VOCs with a total concentration of 34.63 µg/L. The sample from Combined subdrains contained two VOCs with a total concentration of 6.02 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 and the field-measured pH value in both Subdrain samples exceeded the state secondary drinking water standard.

4.1.3 Second Quarter 2017 Subdrain Monitoring Results

During the second quarter 2017 monitoring event, samples from subdrain monitoring points were collected on June 12, 2017. Samples were delivered to TestAmerica Labs for the analysis of indicator and supplemental parameters.

As shown on Table 8B, six VOCs were detected in the sample from Subdrain N, and five VOCs were detected in the sample from Combined Subdrains, with total VOC concentrations of 34.78 µg/L and 22.08 µg/L (respectively). Samples from Combined Subdrains have historically contained numerous VOCs at concentrations similar to those measured during the second quarter 2017. All VOC concentrations were measured below State and federal drinking water standards.

Concentrations of sulfate, total dissolved solids (TDS), iron, and manganese exceeded State of California secondary drinking water standards in both second quarter 2017 subdrain samples.

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 First Quarter 2017 Lysimeter Monitoring Results

During the first quarter 2017 monitoring event, sampling of lysimeters was attempted on March 13 and 14; however, the pump for lysimeter LY-7 was not working and lysimeter LY-6 was dry at this time. Samples were delivered to TestAmerica Labs for the required analysis.

4.2.3 Second 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 June 13, 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 first semiannual 2017 monitoring period, screening of the permanent vadose zone monitoring locations (monthly) was conducted during the following dates: January 26-31, February 21-23, March 16-23, April 18-20, May 23-25, and June 27-29. Monitoring results are presented on Table 9. As shown therein, the highest methane concentration in a perimeter gas probe was measured at 2.5 %V in probe P-205R during the May and June monitoring events. Methane was detected monthly at probes P-205R and P-240, from February through June at

probe P-244, monthly during the first three months of 2017 in probe P-207, and once in January at probe P-227. Methane was not detected at any of the other probes during the first semiannual 2017 monitoring period. During January through July 2017 monitoring, methane was not detected in subdrains.

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 first 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. Storm water sampling was performed on January 5 and February 3 and 17, 2017. The results of storm water analyses are presented in Table 10.

6.2 Stream Diversion Monitoring

During the first 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", "Leachate", and "LR-2R" on October 26, 2016. Based on the results obtained, no conformation retesting was required for 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 first semiannual 2017 monitoring period, approximately 22,040,817 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 12). In order to supplement the needs for dust suppression, the site purchased approximately 14,830,596 gallons of water from the City of Los Angeles Department of Water and Power (LADWP). The monthly volumes of water purchased from the LACDWP are also summarized on Table 12.

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 first 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 first 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 first semiannual 2017 monitoring period, the required standard observations were made by site personnel. The site's NPDES certification of completion for the first semiannual 2017 monitoring period is included in Appendix D.

10.0 WASTE DISPOSAL MONITORING

During the first 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	154,129.03	208,282.47
February	130,758.11	176,700.15
March	174,642.55	236,003.45
April	161,393.54	218,099.38
May	181,636.75	245,455.07
June	176,251.88	238,178.22
January – June 2017 Totals:	**978,811.86**	**1,322,718.73**

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

As summarized in the preceding table, during the first semiannual 2017 monitoring period, approximately 978,811.86 tons of waste were disposed at the SCLF. As of June 30, 2017, the remaining capacity at the SCL is estimated at approximately 81,506,450 cubic yards. Based on the currently approved maximum tonnage acceptance rate, the site has a remaining life of approximately 28.3 years.

Waste placement during the first semiannual 2017 monitoring period was surveyed by Vertex Survey, Inc. The location of waste placement during the monitoring period is presented on a map in Appendix E.

During the first 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 through 17.

11.1 First 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 CHHSL levels may be accepted if the analyte concentrations do not exceed the respective State of California Hazardous Waste levels (as listed in Title 22 of the California Code of Regulations Section 66261.24) and Total Designated Levels (as calculated following the guidelines in Section C.3 of the Amended WDRs), whichever is lower. When comparing analyte concentrations to California hazardous waste

levels, the total analyte concentration must be below its respective Total Threshold Limit Concentration (TTLC) and it must be below ten times the Soluble Threshold Limit Concentration (STLC). If a total analyte concentration is more than ten times the STLC value, then the sample must be submitted for a Waste Extraction Test to determine its soluble analyte concentration. To be considered acceptable, the soluble analyte concentration must also be below its respective STLC value.

Tables 15 through 17 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 TTLCs, 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 first 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 SUMMARY

During the first semiannual 2017 monitoring period, 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. Concentration limits were exceeded during the first semiannual 2017 monitoring period for VOCs at three of the five shallow, alluvial monitoring wells and at three of the six deep, bedrock wells. Additionally, concentration limits were exceeded for inorganic constituents at five deep, bedrock monitoring wells and three of the shallow, alluvial monitoring wells. With the exception of alkalinity and TDS at well MW-14 and chloromethane at well PZ-4, which were 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. Of note, chloromethane was not confirmed at well PZ-4, but rather retesting was inadvertently not performed for chloromethane at well PZ-4, and the constituent well pair was automatically placed in tracking mode. Chloromethane was not detected in the second quarter 2017 sample from well PZ-4 (initial detection was during the first quarter 2017).

During the first semiannual 2017 monitoring period, methane concentrations did not exceed 5%V at any landfill gas monitoring probe.

No new seeps were identified during the first semiannual 2017 monitoring period.

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 first semiannual 2017 monitoring period are shown in Table 12.

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

- Cell CC-4 Part 1 construction was completed and disposal operations began within the cell.
- Excavation of cell CC-4 Part 2 commenced and liner activities are currently being completed.
- High voltage power lines running through the center of the landfill were relocated to the perimeter.
- Grading of the pad for future flare 11 was completed.
- The above ground leachate collection system was upgraded.

Regular maintenance and adjustments to the gas collection system was performed by the facility during the monitoring period. The following modifications and upgrades to the facility's landfill gas collection were made during the first semiannual 2017 monitoring period:

- Continued operation of a Gas to Energy Plant: Landfill gas is now being converted into electricity; approximately 8,000 scfm of gas is converted into about 22 MW of electricity of which 18.5 MW is returned to the grid.
- 153 new or replacement vertical gas wells were constructed and placed into service.
- Additional liquid extraction pumps were installed in vertical gas wells (253 dewatering pumps total).
- A liquid handling system was constructed to accommodate increased volumes of liquids being generated as a result of the installation of additional dewatering pumps in gas extraction wells.
- The facility received the permit to construct/operate Flare 11.

13.0 REFERENCES

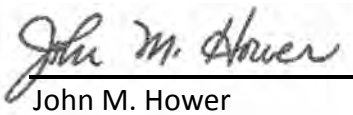
California Regional Water Quality Control Board, Los Angeles Region, 2008, "Order No. R4-2008-0088 – Corrective Action Program Waste Discharge Requirements for Browning-Ferris Industries of California, Inc. (Sunshine Canyon City/County Landfill), File No. 58-076," October 2, 2008.

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.



August 8, 2017

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
	Groundawter Monitoring	Section 3
	Water Quality Protection Standards	Section 3.5, Tables 7A, 7B
	Statistical and Non-Statistical Data Analysis	Section 3.5, Tables 7A, 7B
	Groundwater Flow Monitoring	Section 3.4
	Leachate Monitoring	Section 7.0
	Vadose Zone Liquid Monitoring	Section 4.0
	Vadose Zone Gas Monitoring	Section 5.0
	Surface Water Monitoring	Section 6.0
	On-Site Water Use Monitoring	Section 8.0
	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 permittied boundary.	Republic Transmittal Letter
I.A.8.d	Description and estimated flow rate of seeps and springs.	Appendix D
I.A.8.e	Estimated amount of water used for landscape irrigation, dust suppression, and operations.	Table 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

Geo-Logic ASSOCIATES

TABLE 2
ANALYTICAL PARAMETERS AND METHODS
SUNSHINE CANYON LANDFILL

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

Geo-Logic ASSOCIATES

TABLE 3A
SUMMARY OF BLANK SAMPLE RESULTS - FIRST QUARTER 2017
SUNSHINE CANYON LANDFILL

Primary Sampling Date	Blank Sampling Date	Blank Sample Collection Type	Reported Analytes
3/13/17	3/13/17	QCAB	None Detected
	3/13/17	QCTB	None Detected
	3/13/17	Method Blanks	None Detected
3/14/17	3/14/17	QCAB	None Detected
	3/14/17	QCTB	None Detected
	3/14/17	Method Blanks	None Detected
3/15/17	3/15/17	QCAB	None Detected
	3/15/17	QCTB	None Detected
	3/15/17	Method Blanks	None Detected
3/16/17	3/16/17	QCAB	None Detected
	3/16/17	QCTB	None Detected
	3/16/17	Method Blanks	None Detected

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

Primary Sampling Date	Blank Sampling Date	Blank Sample Collection Type	Reported Analytes
6/12/17	6/12/17	QCAB	None Detected
	6/12/17	QCTB	None Detected
	6/12/17	Method Blank	None Detected
6/13/17	6/13/17	QCAB	None Detected
	6/13/17	QCTB	None Detected
	6/13/17	Method Blanks	None Detected
6/14/17	6/14/17	QCAB	None Detected
	6/14/17	QCTB	None Detected
	6/14/17	Method Blanks	None Detected
6/15/17	6/15/17	QCAB	None Detected
	6/15/17	QCTB	None Detected
	6/15/17	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 - FIRST QUARTER 2017
SUNSHINE CANYON LANDFILL

ANALYTE	DW-5 3-14-17	Duplicate 3-14-17	RELATIVE PERCENT DIFFERENCE
GENERAL CHEMISTRY CONSTITUENTS (mg/L):			
Alkalinity, total	980	970	1
Ammonia (as N)	0.39	0.26	40
Chemical Oxygen Demand	10	10	NC
Chloride	19	20	5
Total Dissolved Solids	1100	1100	0
Total Organic Compound	6.2	6.3	2
METALS (mg/L):			
Potassium	0.75	0.69	8
VOLATILE ORGANIC COMPOUNDS (µg/L):			
Ally Chloride	2.3	2.5	8

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

ANALYTE	CM-10R 6-12-17	DUPLICATE 6-12-17	RELATIVE PERCENT DIFFERENCE
GENERAL CHEMISTRY CONSTITUENTS (mg/L):			
Alkalinity, total	550	560	2
Ammonia (as N)	9.4	9.4	0
Bicarbonate alkalinity	550	560	2
Bromide	0.50	0.50	NC
Carbon Dioxide	100	110	10
Chemical Oxygen Demand	32	36	12
Chloride	9.4	10	6
Fluoride	1.8	1.8	0
Nitrate (as N)	0.11	0.11	NC
Sulfate	1700	1600	6
Sulfide, total	4.8[H]	4.5[H]	NC
Total Dissolved Solids	2700	2600	4
Total Organic Carbon	4.3	4.2	2
METALS (mg/L):			
Boron	0.88	0.89	1
Calcium	250	260	4
Iron	0.25	0.26	4
Magnesium	220	210	5
Manganese	0.39	0.39	0
Potassium	12	12	0
Sodium	200	200	0
VOLATILE AND SEMIVOLATILE ORGANIC COMPOUNDS (µg/L): Not Detected			

Notes:
Right-justified value, non-shaded box indicates a quantified concentration (above the Practica Quanitation 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.
** - Sampled on 7/19/16 or 7/20/16.

Geo-Logic ASSOCIATES

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
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

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.

Geo-Logic ASSOCIATES

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
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

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

Geo-Logic ASSOCIATES

TABLE 6A
SUMMARY OF ANALYTICAL RESULTS - FIRST 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	
		3/13/2017	3/14/2017	3/13/2017	3/16/2017	3/15/2017	3/13/2017	3/13/2017	3/14/2017	3/16/2017	3/13/2017	3/14/2017	3/15/2017	3/15/2017	3/15/2017	3/14/2017	3/15/2017	3/13/2017	3/15/2017	
Alkalinity	mg/L	9.8	10	370	640	260	620	480	860	740	650	540	400	170	370	980	350	370	350	NV
Ammonia-Nitrogen	mg/L	2.0	0.15j	13	2.7	0.10	6.0	1.1	9.0	6.6	0.10	2.2	3.0	0.53	3.8	0.39	3.3	3.6	2.2	NV
Chemical Oxygen Demand	mg/L	10	10	10	95	20	86	10	200	280	10	10	10	10	10	10	10	10	10	NV
Chloride	mg/L	22	13	11	290	200	160	36	370	110	84	14	10	13	14	19	13	11	7.8	500(2)
Potassium, total	mg/L	14	11	13	30	9.3	28	5.6	23	27	12	1.2	3.8	8.9	4.7	0.75	4.8	2.5	4.5	NV
Total Dissolved Solids	mg/L	**5200**	**4100**	**3000**	**3600**	**2200**	**3300**	**3800**	**3700**	**1500**	**6900**	**3200**	**1800**	**1800**	**2900**	**1100**	**2600**	**4200**	**1200**	1000(2)
Total Organic Carbon	mg/L	10	4.9	3.5	33	6.9	29	6.0	78	24	13	3.1	1.6	0.38	1.7	6.2	1.7	2.4	1.1	NV
Acetone	µg/L	10	10	10	10	10	10	10	13j	10	10	10	10	10	10	10	10	10	10	NV
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	2.3	0.50	0.50	0.50	NV
t-Butanol	µg/L	5.0	5.0	5.0	10	5.0	5.0	5.0	55	5.1j	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	NV
Chloroform	µg/L	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	0.25	0.25	80(1,3)
Chloromethane	µg/L	0.25	0.25	0.25	0.25	0.66	0.25	0.25	0.25	0.25	0.25	0.25	0.25	1.9	0.37j	0.25	0.51	0.25	0.72	NV
cis-1,2-Dichloroethene	µg/L	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.55	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	0.25	0.26	0.24	12	0.25	11	0.25	29	5.8	0.25	0.26	0.25	0.25	0.27	0.25	0.27	0.25	0.25	NV
Methylene Chloride	µg/L	0.88	1.4j	0.88	0.88	0.88	0.88	0.88	1.4j	0.88	0.88	1.3j	0.88	0.88	0.88	0.88	0.88	0.88	0.88	5(1,3)
Tetrahydrofuran	µg/L	5.0	5.0	5.0	5.0	5.0	5.0	5.0	9.4j	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.
* - 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.

Geo-Logic ASSOCIATES

TABLE 6B
SUMMARY OF ANALYTICAL RESULTS -SECOND 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	
		6/12/17	6/13/17	6/12/17	6/14/2017	6/15/17	6/12/2017	6/13/2017	6/14/2017	6/14/2017	6/13/2017	6/13/2017	6/13/2017	6/13/2017	6/15/2017	6/14/2017	6/15/2017	6/13/2017	6/14/2017	
Inorganic Monitoring Parameters:																				
Alkalinity, total	mg/L	42	4.0	550	700	350	740	520	850	820	660	580	430	170	360	1000	360	400	350	NV
Alkalinity, bicarbonate	mg/L	42	4.0	550	700	350	740	520	850	780	660	470	430	170	360	950	360	370	350	NV
Ammonia-Nitrogen	mg/L	3.6	0.48j	9.4	3.6	1.8	4.9	0.80	9.6	7.6	0.14j	1.9	2.6	0.58	3.8	0.37j	3.4	2.9	2.6	NV
Bromide	mg/L	2.5	1.3	0.50	4.9j	0.58j	3.4	1.7j	5.5	2.0	3.8j	1.3	0.50	0.25	0.50	0.52	0.50	2.5	0.25	NV
Carbon Dioxide, free	mg/L	160	69	100	350	44	230	97	360	110	150	2.0	23	21	37	12	39	2.0	60	NV
Chemical Oxygen Demand	mg/L	160	27	32	130	10	110	180	190	280	52	220	35	29	10	33	10	31	23	NV
Chloride	mg/L	19	12	9.4	280	19	260	42	250	120	86	13	9.3	14	13	17	13	10	8.4	500(2)
Fluoride	mg/L	**5.0**	**3.8**	1.8	**4.1j**	1.3	**2.7**	**2.5**	**4.2j**	0.55	**4.3j**	**3.2**	1.0	0.64	0.78j	**3.4**	1.0	**3.0j**	1.2	2(1)-4(3)
Nitrate-Nitrogen	mg/L	0.55	0.28	0.11	0.55	0.18j	0.28	0.28	0.55	0.055	0.55	0.28	0.11	0.055	0.11	0.055	0.11	0.55	0.055	10(1,3)
Sulfate	mg/L	**3500**	**2800**	**1700**	**1700**	**1500**	**1700**	**2400**	**1600**	330	**3600**	**1800**	**900**	**1200**	**1800**	0.25	**1600**	**2500**	**550**	500(2)
Sulfide, total	mg/L	0.027[H]	0.027	4.8[H]	0.027	0.027	0.027[H]	2.9	0.027	44	0.027	0.49	0.027	0.027	0.027	0.027	0.027	0.027	0.027	NV
Total Dissolved Solids	mg/L	**5100**	**4100**	**2700**	**3500**	**2600**	**3600**	**4500**	**3600**	**1500**	**6400**	**3100**	**1800**	**1900**	**2800**	**1100**	**2600**	**4100**	**1100**	1000(2)
Total Organic Carbon	mg/L	8.2	5.4	4.3	51	3.0	34	6.6	62	29	12	3.2	1.4	0.36	1.9	6.6	1.9	2.5	1.1	NV
Metals:																				
Boron	mg/L	2.0	1.1	0.88	1.1	0.55	1.0	0.76	1.5	0.78	0.71	2.1	0.73	0.061	0.62	2.7	0.56	1.4	0.19	NV
Calcium	mg/L	420	340	250	480	230	480	460	450	110	590	3.0	47	310	220	5.6	190	13	120	NV
Iron	mg/L	**9.6**	0.050	0.25	**60**	**0.37**	**21**	**1.1**	**70**	0.050	0.080j	0.050	**0.37**	**0.68**	**2.4**	0.12	**2.1**	0.050	**0.78**	0.3(2)
Magnesium	mg/L	310	210	220	210	120	200	220	220	120	350	1.6	33	110	140	0.96	110	11	71	NV
Manganese	mg/L	**5.9**	**4.2**	**0.39**	**3.2**	**0.46**	**4.9**	**1.2**	**3.9**	0.010	**4.3**	0.010	**0.061**	0.080	**0.12**	**0.096**	**0.12**	0.025	**0.11**	0.05(2)
Potassium, total	mg/L	16	12	12	30	5.4	29	6.4	29	25	9.5	1.5	3.3	9.1	4.5	0.88	4.3	2.8	4.1	NV
Sodium	mg/L	530	480	200	350	430	300	390	460	210	630	1100	510	71	550	460	490	1400	100	NV
Volatile and Semivolatile Organic Compounds:																				
Acetone	µg/L	10	10	10	10	10	10	10	12j	10	10	10	10	10	10	10	10	10	10	NV
t-Butanol	µg/L	5.0	5.0	5.0	19	5.0	5.0	5.0	37	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	0.94	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	0.24	0.28	0.26	18	0.25	15	0.26	11	7.2	0.24	0.25	0.25	0.27	0.25	0.26	0.24	0.26	0.26	NV
Methyl tert-butyl ether	µg/L	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.61	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	13(1)/5(2)
Tetrahydrofuran	µg/L	5.0	5.0	5.0	5.0	5.0	5.0	5.0	6.4j	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.
[H] - 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.

Geo-Logic ASSOCIATES

TABLE 7A
COMPARISON OF INTRAWELL WATER QUALITY PROTECTION STANDARDS TO ANALYTICAL RESULTS - FIRST 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	640	844.76	620	727.34	480	571.59	740	972.24	**650**	587.83	540	658.76	400	410.47	**170**	162.81	980	1009.98	370	411.93	**350**	341.13
Ammonia-Nitrogen	mg/L	2.7	10.634	**6.0**	5.714	1.1	1.337	6.6	7.732	0.10	0.5703	2.2	2.4	3.0	4.308	0.53	0.7564	0.39	0.3918	**3.6**	3.598	2.2	2.976
Chemical Oxygen Demand	mg/L	95	202.056	86	135.7	10	75.338	280	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	290	408.469	160	469.603	36	70.829	110	213.802	84	88.987	14	17.737	10	15.462	13	17.534	19	101.838	11	16.398	7.8	11.706
Potassium, total	mg/L	30	54.763	28	34.393	5.6	10.679	27	27.224	12	12.508	1.2	3.838	3.8	6.183	8.9	12.357	0.75	5.262	2.5	4.693	4.5	5.643
Total Dissolved Solids	mg/L	3600	4495	3300	4614.2	3800	4486.5	1500	3450.9	**6900**	5128.5	3200	3600.2	1800	2178.3	1800	2313.1	1100	1417.3	4200	4403.2	1200	1529.5
Total Organic Carbon	mg/L	33	75.928	29	50.696	6.0	15.408	24	54.233	13	13.006	3.1	9.947	1.6	3.499	0.38	2.115	6.2	11.745	2.4	2.887	1.1	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	**2.3**	1.0	0.50	1.0	0.50	1.0
Chloroform	µg/L	0.25	0.5	0.25	0.5	0.25	0.5	0.25	0.5	0.25	0.5	0.25	0.5	0.25	0.5	**0.54**	0.5	0.25	0.5	0.25	0.5	0.25	0.5
Chloromethane	µg/L	0.25	0.5	0.25	0.5	0.25	0.5	0.25	0.5	0.25	0.5	0.25	0.5	0.25	0.5	**1.9**	0.5	0.25	0.5	0.25	0.5	**0.72**	0.5
t-Butanol	µg/L	**10**	10	5.0	10	5.0	10	5.1j	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	**12**	0.99	**11**	0.99	0.25	1.0	**5.8**	0.94	0.25	0.95	0.26	10	0.25	0.99	0.25	0.94	0.25	0.95	0.25	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	0.25	0.50	0.25	0.50	0.25	0.50	0.25	0.50	0.25	0.50	0.25	0.50
Methylene Chloride	µg/L	0.88	2.0	0.88	2.0	0.88	2.0	0.88	2.0	0.88	2.0	1.3j	2.0	0.88	2.0	0.88	2.0	0.88	2.0	0.88	2.0	0.88	2.0

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.

Geo-Logic ASSOCIATES

TABLE 7B
COMPARISON OF INTRAWELL WATER QUALITY PROTECTION STANDARDS TO ANALYTICAL RESULTS - SECOND 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	
		6/14/2017	WQPS	6/12/2017	WQPS	6/13/2017	WQPS	6/14/2017	WQPS	6/13/2017	WQPS	6/13/2017	WQPS	6/13/2017	WQPS	6/13/2017	WQPS	6/14/2017	WQPS	6/13/2017	WQPS	6/14/2017	WQPS
Alkalinity	mg/L	700	844.76	**740**	727.34	520	571.59	820	972.24	**660**	587.83	580	658.76	**430**	410.47	**170**	162.81	1000	1009.98	400	411.93	**350**	341.13
Ammonia-Nitrogen	mg/L	3.6	10.634	4.9	5.714	0.80	1.337	7.6	7.732	0.14j	0.5703	1.9	2.4	2.6	4.308	0.58	0.7564	0.37j	0.3918	2.9	3.598	2.6	2.976
Chemical Oxygen Demand	mg/L	130	202.056	110	135.7	**180**	75.338	280	407.58	52	54.674	**220**	49.801	35	52.743	**29**	15.206	33	76.47	**31**	26.386	23	24.85
Chloride	mg/L	280	408.469	260	469.603	42	70.829	120	213.802	86	88.987	13	17.737	9.3	15.462	14	17.534	17	101.838	10	16.398	8.4	11.706
Potassium, total	mg/L	30	54.763	29	34.393	6.4	10.679	25	27.224	9.5	12.508	1.5	3.838	3.3	6.183	9.1	12.357	0.88	5.262	2.8	4.693	4.1	5.643
Total Dissolved Solids	mg/L	3500	4495	3600	4614.2	**4500**	4486.5	1500	3450.9	**6400**	5128.5	3100	3600.2	1800	2178.3	1900	2313.1	1100	1417.3	4100	4403.2	1100	1529.5
Total Organic Carbon	mg/L	51	75.928	34	50.696	6.6	15.408	29	54.233	12.0	13.006	3.2	9.947	1.4	3.499	0.36	2.115	6.6	11.745	2.5	2.887	1.1	2.085
Volatile Organic Compounds: (The WQPS is the PQL for any single VOC detected.)																							
t-Butanol	µg/L	**19**	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	**18**	0.94	**15**	0.94	0.26	0.99	**7.2**	0.95	0.24	1.0	0.25	0.94	0.25	0.94	0.27	1.0	0.26	0.98	0.26	1.0	0.26	0.96

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
FIRST QUARTER 2017
SUNSHINE CANYON LANDFILL

Analyte	Units	SUBDRAIN MONITORING POINTS		LYSIMETERS		ARAR
		Subdrain N	Combined Subdrains	LY-6	LY-7	
		3/13/2017	3/13/2017	3/14/2017	3/13/2017	
Field Parameters:						
Electrical Conductivity	mS/cm	3710	3850	Dry	NS	NV
Oxidation Reduction Potential	mV	-31	-18	Dry	NS	NV
Oxygen, dissolved	mg/L	3.07	3.32	Dry	NS	NV
pH	Units	**6.01**	**6.32**	Dry	NS	6.5-8.5(2)
Temperature	°C	26.46	27.32	Dry	NS	NV
Turbidity	NTU	0.6	**47.7**	Dry	NS	5(2)
General Chemistry Parameters:						
Alkalinity, total	mg/L	420	210	Dry	NS	NV
Ammonia-Nitrogen	mg/L	5.3	2.5	Dry	NS	NV
Chemical Oxygen Demand	mg/L	81	28	Dry	NS	NV
Chloride	mg/L	110	44	Dry	NS	500(2)
Total Dissolved Solids	mg/L	**2900**	**3100**	Dry	NS	1000(2)
Total Organic Carbon	mg/L	29	9.9	Dry	NS	NV
Metals:						
Potassium	mg/L	9.8	11	Dry	NS	NV
Volatile and Semivolatile Organic Compounds:						
Benzene	µg/L	0.43J	0.25	Dry	NS	1(1)-5(3)
t-Butanol	µg/L	19	5.0	Dry	NS	NV
cis-1,2-Dichloroethene	µg/L	1.1	0.52	Dry	NS	6(1)-70(3)
1,4-Dichlorobenzene	µg/L	1.1	0.25	Dry	NS	5(1)-75(3)
1,4-Dioxane	µg/L	13	5.5	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.

Geo-Logic ASSOCIATES

TABLE 8B
SUMMARY OF ANALYTICAL RESULTS FOR VADOSE ZONE LIQUID MONITORING POINTS
SECOND QUARTER 2017
SUNSHINE CANYON LANDFILL

Analyte	Units	SUBDRAIN MONITORING POINTS		LYSIMETERS		ARAR
		Subdrain N	Combined Subdrains	LY-6	LY-7	
		6/12/2017	6/12/2017	6/13/2017	6/13/2017	
Field Parameters:						
Electrical Conductivity	mS/cm	5170	4690	Dry	NS	NV
Oxidation Reduction Potential	mV	33	94	Dry	NS	NV
Oxygen, dissolved	mg/L	3.31	2.62	Dry	NS	NV
pH	Units	7.18	7.43	Dry	NS	6.5-8.5(2)
Temperature	°C	25.39	28.85	Dry	NS	NV
Turbidity	NTU	0.2	75.9	Dry	NS	5(2)
General Chemistry Parameters:						
Alkalinity, total	mg/L	640	450	Dry	NS	NV
Alkalinity, bicarbonate	mg/L	640	450	Dry	NS	NV
Ammonia-Nitrogen	mg/L	3.2	1.8	Dry	NS	NV
Bromide	mg/L	2.0	1.3	Dry	NS	NV
Carbon dioxide	mg/L	350	190	Dry	NS	NV
Chemical Oxygen Demand	mg/L	120	75	Dry	NS	NV
Chloride	mg/L	120	100	Dry	NS	500(2)
Fluoride	mg/L	1.8	1.9	Dry	NS	2(1)-4(3)
Nitrate as Nitrogen	mg/L	0.11	1.9	Dry	NS	10(1,3)
Sulfate	mg/L	1700	1700	Dry	NS	500(2)
Total Dissolved Solids	mg/L	3100	2900	Dry	NS	1000(2)
Total Organic Carbon	mg/L	37	17	Dry	NS	NV
Metals						
Boron	mg/L	0.83	0.54	Dry	NS	NV
Calcium	mg/L	350	330	Dry	NS	NV
Iron	mg/L	34	14	Dry	NS	0.3(2)
Magnesium	mg/L	180	200	Dry	NS	NV
Manganese	mg/L	6.4	3.7	Dry	NS	0.05(2)
Potassium	mg/L	13	10	Dry	NS	NV
Sodium	mg/L	290	190	Dry	NS	NV
Volatile and Semivolatile Organic Compounds:						
Benzene	µg/L	0.58	0.25	Dry	NS	1(1)-5(3)
t-Butanol	µg/L	18	12	Dry	NS	NV
cis-1,2-Dichloroethene	µg/L	1.5	1.1	Dry	NS	6(1)-70(3)
1,4-Dichlorobenzene	µg/L	3.6	0.88	Dry	NS	5(1)-75(3)
1,4-Dioxane	µg/L	10	7.8	Dry	NS	NV
Methyl tert-butyl ether	µg/L	1.1	0.30j	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.

Geo-Logic ASSOCIATES

TABLE 9
SUMMARY OF VADOSE ZONE GAS MONITORING - FIRST SEMIANNUAL 2017 MONITORING PERIOD
SUNSHINE CANYON LANDFILL

Probe ID	Interval	Depth (ft bgs)	1/26-31/2017	2/21-23-17	3/16-23/17	4/18-20/17	5/23-25/17	6/27-29/17
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	0.3	0.3	0.5	1.5	1.2	0.0
	C	33-38	1.4	1.2	1.2	1.4	1.6	1.6
	D	48-53	2.1	2.1	1.6	2.2	2.5	2.5
	E	62-67	0.6	0.8	1.9	2.3	1.9	2.1
P-206	A	10-15	0.0	0.0	0.0	0.0	0.0	0.0
	B	25-30	0.0	0.0	0.0	0.0	0.0	0.0
	C	40-45	0.0	0.0	0.0	0.0	0.0	0.0
P-207	A	10-15	0.0	0.0	0.0	0.0	0.0	0.0
	B	25-30	0.2	0.6	0.5	0.0	0.0	0.0
	C	40-45	0.0	0.0	0.0	0.0	0.0	0.0
P-208	A	10-15	0.0	0.0	0.0	0.0	0.0	0.0
	B	25-30	0.0	0.0	0.0	0.0	0.0	0.0
	C	40-45	0.0	0.0	0.0	0.0	0.0	0.0
P-210	A	10-15	0.0	0.0	0.0	0.0	0.0	0.0
	B	25-30	0.0	0.0	0.0	0.0	0.0	0.0
	C	40-45	0.0	0.0	0.0	0.0	0.0	0.0
P-213	A	7-15	0.0	0.0	0.0	0.0	0.0	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.

Geo-Logic ASSOCIATES

TABLE 9, CONTINUED
SUMMARY OF VADOSE ZONE GAS MONITORING - FIRST SEMIANNUAL 2017 MONITORING PERIOD
SUNSHINE CANYON LANDFILL

Probe ID	Interval	Depth (ft bgs)	1/31/2017	2/21-23/17	3/16-23/17	4/18-20/17	5/23-25/17	6/27-29/17
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 - FIRST SEMIANNUAL 2017 MONITORING PERIOD
SUNSHINE CANYON LANDFILL

Probe ID	Interval	Depth (ft bgs)	1/26-31/17	2/21-23/17	3/16-23/17	4/18-20/17	5/23-25/17	6/27-29/17
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	0.1	0.0	0.0	0.0	0.0	0.0
	E	164-172	0.0	0.0	0.0	0.0	0.0	0.0
P-228	A	7-14	0.0	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	0.0	0.0
P-240	A	10-15	0.0	0.0	0.0	0.0	0.0	0.0
	B	69-74	0.0	0.0	0.0	0.0	0.0	0.0
	C	133-138	0.0	0.0	0.0	0.0	0.0	0.0
	D	206-211	0.0	0.0	0.0	0.0	0.0	0.0
	E	268-273	0.3	0.8	0.9	0.9	0.8	0.5
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	0.1	0.0	0.0	0.0	0.0
	B	21-26	0.0	0.2	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 - FIRST SEMIANNUAL 2017 MONITORING PERIOD
SUNSHINE CANYON LANDFILL

Probe ID	Interval	Depth (ft bgs)	1/26-31/17	2/21-23/17	3/16-23/17	4/18-20/17	5/23-25/17	6/27-29/17
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
FIRST SEMIANNUAL 2017 MONITORING PERIOD
SUNSHINE CANYON LANDFILL

Analyte	Units	SW-3	SW-4	SW-4
		1/5/2017	2/3/2017	2/17/2017
General Chemistry Parameters:				
Ammonia-Nitrogen	mg/L	1.2	0.92	0.47j
Biochemical Oxygen Demand	mg/L	8.2	7.4	16
Chemical Oxygen Demand	mg/L	140	23	360
Chloride	mg/L	28	27	7
Fluoride	mg/L	1.5	1.1	0.31j
Nitrate as N	mg/L	1.4	1.6	0.76
Nitrite as N	mg/L	0.07	0.07	0.10j
Nitrate+Nitrite as N	mg/L	1.4	1.6	0.86
Oil & Grease (HEM)	mg/L	1.4	1.5	1.5j
Total Suspended Solids	mg/L	430	200	2700
Metals:				
Aluminum	mg/L	12	4.4	31
Antimony	mg/L	0.0025	0.00061j	0.0015j
Arsenic	mg/L	0.0043j	0.0031	0.012
Beryllium	mg/L	0.00013	0.00025	0.0013
Cadmium	mg/L	0.0032j	0.0033	0.0055
Copper	mg/L	0.036	0.0095	0.058
Iron	mg/L	23	8.4	40
Lead	mg/L	0.0070	0.0020	0.025
Manganese	mg/L	2.7	4.2	1.2
Mercury	mg/L	0.00010	0.00010	0.00014j
Nickel	mg/L	0.12	0.15	0.097
Phosphorus	mg/L	0.53	0.25	1.7
Selenium	mg/L	0.0059j	0.003	0.0035
Silver	mg/L	0.0025	0.0050	0.0050
Zinc	mg/L	0.12	0.062	0.40
Volatile Organic Compounds (8260): None Detected				
Alpha-Terpineol	µg/L	3.0	16	5.4j
Semivolatile Organic Compounds (8270C): None Detected				
Benzoic Acid	µg/L	10	9.9	21j
Polychlorinated Biphenyls (8082): None detected.				

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.

NA Analyte was not analyzed.

173 Analyte was detected. Value reported by laboratory.

Geo-Logic ASSOCIATES

TABLE 11
SUMMARY OF ANALYTICAL RESULTS FOR LEACHATE MONITORING POINTS - APRIL 2017 RETEST
SUNSHINE CANYON LANDFILL

Analyte	Units	LEACHATE MONITORING POINTS		
		LR-2R	CA-L	LEACHATE
		No Sampling Required	No Sampling Required	No Sampling Required

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.

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

TABLE 12
SUMMARY OF COLLECTED WATER SOURCES - FIRST SEMIANNUAL 2017 MONITORING PERIOD
SUNSHINE CANYON LANDFILL

Month	Total Purchase Water	Subdrains	Landfill Leachate	Landfill Gas Condensate	Extraction Trench & Seep Collectors	MONTHLY TOTALS
January	891,616	218,121	2,025,757	93,354	1,099,353	4,328,201
February	1,074,876	157,835	2,365,655	156,887	1,150,836	4,906,089
March	949,212	292,157	1,790,785	121,063	999,264	4,152,481
April	2,484,856	332,503	1,725,475	1,208,837	914,177	6,665,848
May	4,657,796	584,422	1,061,411	416,574	1,400,496	8,120,699
June	4,772,240	730,864	748,540	1,066,724	1,379,727	8,698,095
TOTAL:	**14,830,596**	**2,315,902**	**9,717,623**	**3,063,439**	**6,943,853**	**36,871,413**

Notes:

Geo-Logic ASSOCIATES

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

Analyte	Units	T-402	T-101	T-102	PW-DWP	Treated Leachate	ARAR
		Samples collected on January 18, 2017					
Volatile Organic Compounds (8260):							
Acetone	µg/L	9.0	0.5	6.0	-	5.0	NV
Benzene	µg/L	0.7	0.6	0.5	-	0.9	1(1)-5(3)
Bromodichloromethane	µg/L	0.5	0.5	2.0	-	0.5	80 (1,3)
Bromoform	µg/L	0.5	0.5	9.0	-	0.5	80 (1,3)
Chloroform	µg/L	0.6	0.7	1.7	-	0.5	80 (1,3)
Dibromochloromethane	µg/L	0.5	0.5	5.0	-	0.5	80 (1,3)

Notes:

(1) State of California Primary Drinking Water Standard

(2) State of California Secondary Drinking Water Standard

(3) Federal Maximum Contaminant Level

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

NV: No ARAR value.

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

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

173 Analyte was detected.

2500 Analyte concentration exceeds ARAR value.

Geo-Logic ASSOCIATES

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

Analyte	Units	T-402	T-101	T-102	PW-DWP	Treated Leachate	ARAR
		Samples collected on February 16, 2017					
General Chemistry Parameters:							
Nitrate (as N)	mg/L	0.11	0.58	0.31	0.055	0.11	10(1,3)
Nitrite (as N)	mg/L	0.14	0.14	0.07	0.07	0.14	1(1,3)
pH	Units	6.60	7.20	8.00	7.70	6.80	6.0-9.0(2)
Silica	mg/L	44	34	13	2.6	42	NV
Metals:							
Aluminum	mg/L	0.09	0.007	0.008	0.005	0.066	1(1)
Antimony	mg/L	0.0005	0.0005	0.001	0.0005	0.0005	0.006(1,3)
Arsenic	mg/L	0.002	0.001	0.003	0.0005	0.006	0.01(1)
Barium	mg/L	0.022	0.025	0.020	0.040	0.055	1(1)-2(3)
Beryllium	mg/L	0.0003	0.0003	0.0003	0.0003	0.0003	0.004(1,3)
Boron	mg/L	0.5	0.75	0.62	0.2	1.2	NV
Cadmium	mg/L	0.0003	0.0003	0.0003	0.0003	0.0003	0.005(1,3)
Calcium	mg/L	290	260	29	20	420	NV
Chromium, total	mg/L	0.0007	0.001	0.0005	0.0005	0.0013	0.05(1)-0.1(3)
Cobalt	mg/L	0.035	0.0095	0.0005	0.0005	0.005	NV
Copper	mg/L	0.0012	0.0011	0.012	0.017	0.0005	1.3(1)
Iron	mg/L	**19**	**0.6**	**0.41**	**3.6**	**46**	0.3(2)
Lead	mg/L	0.0005	0.0005	0.003	0.0011	0.0005	0.015(1,3)
Magnesium	mg/L	190	170	10	10	210	NV
Manganese	mg/L	**3.4**	**2.5**	0.019	**0.16**	**4.3**	0.05(2)
Mercury	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.002(1,3)
Nickel	mg/L	0.089	0.027	0.001	0.0014	0.014	0.1(1)
Potassium	mg/L	9	16	5.6	5	29	NV
Selenium	mg/L	0.0005	0.0006	0.0005	0.0005	0.0007	0.05(1,3)
Silver	mg/L	0.0005	0.0005	0.0005	0.0005	0.0005	0.1(2)
Sodium	mg/L	260	260	55	59	380	NV
Thallium	mg/L	0.0005	0.0005	0.0005	0.0005	0.0005	0.002(1,3)
Tin	mg/L	0.005	0.005	0.005	0.005	0.005	NV
Vanadium	mg/L	0.001	0.001	0.002	0.001	0.004	NV
Zinc	mg/L	0.010	0.006	0.04	0.051	0.003	5(2)
Volatile Organic Compounds (8260):							
Bromochloromethane	µg/L	0.5	0.7	2.3	1.3	0.5	NV
Bromoform	µg/L	0.5	0.6	0.8	0.5	0.5	80 (1,3)
Chloroform	µg/L	1.3	0.7	1.5	3.7	0.7	80 (1,3)
Dibromochloromethane	µg/L	0.5	1.3	2.7	1.0	0.5	80 (1,3)

Notes:

(1) State of California Primary Drinking Water Standard

(2) State of California Secondary Drinking Water Standard

(3) Federal Maximum Contaminant Level

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

NV: No ARAR value.

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

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

173 Analyte was detected.

2500 Analyte concentration exceeds ARAR value.

Geo-Logic ASSOCIATES

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

Analyte	Units	T-402	T-101	T-102	PW-DWP	Treated Leachate	ARAR
		Samples collected on March 14, 2017					
Volatile Organic Compounds (8260):							
1,2-Dibromoethane	µg/L	0.5	0.5	0.5	-	**0.5**	0.05 (1,3)
Acetone	µg/L	5.0	18.0	5.0	-	12.0	NV
Bromodichloromethane	µg/L	0.5	0.5	8.9	-	0.5	80 (1,3)
Chloroform	µg/L	0.5	0.9	8.3	-	0.5	80 (1,3)
Dibromochloromethane	µg/L	0.5	0.5	5.9	-	0.5	80 (1,3)
Naphthalene	µg/L	0.5	0.5	0.5	-	0.5	NV
Tetrahydrofuran	µg/L	5.0	5.0	5.0	-	6.0	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.

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

173 Analyte was detected.

2500 Analyte concentration exceeds ARAR value.

Geo-Logic ASSOCIATES

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

Analyte	Units	T-402	T-101	T-102	PW-DWP	Treated Leachate	ARAR
		Samples collected on April 12, 2017					
Volatile Organic Compounds (8260):							
Acetone	µg/L	5.0	6.0	5.0	-	5.0	NV
Bromodichloromethane	µg/L	0.5	0.5	4.7	-	0.5	80 (1,3)
Chloroform	µg/L	0.5	0.5	6.0	-	0.5	80 (1,3)
Dibromochloromethane	µg/L	0.5	0.5	2.6	-	0.5	80 (1,3)

Notes:

(1) State of California Primary Drinking Water Standard

(2) State of California Secondary Drinking Water Standard

(3) Federal Maximum Contaminant Level

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

NV: No ARAR value.

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

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

173 Analyte was detected.

2500 Analyte concentration exceeds ARAR value.

Geo-Logic ASSOCIATES

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

Analyte	Units	T-402	T-101	T-102	PW-DWP	Treated Leachate	ARAR
		Samples collected on May 5, 2016					
General Chemistry Parameters:							
Nitrate (as N)	mg/L	0.6	0.16	0.3	0.06	1.10	10(1,3)
Nitrite (as N)	mg/L	0.70	0.14	0.07	0.07	1.40	1(1,3)
pH	Units	6.90	7.90	7.20	7.40	7.10	6.0-9.0(2)
Silica	mg/L	55	44	19	6	66	NV
Metals:							
Aluminum	mg/L	0.045	0.02	0.008	0.011	0.042	1(1)
Antimony	mg/L	0.0005	0.0008	0.0013	0.0005	0.001	0.006(1,3)
Arsenic	mg/L	0.004	0.002	0.003	0.0067	0.005	0.01(1)
Barium	mg/L	0.054	0.035	0.012	0.017	0.120	1(1)-2(3)
Beryllium	mg/L	0.0003	0.0003	0.0003	0.0003	0.0003	0.004(1,3)
Boron	mg/L	2.10	1.6	0.74	0.6	4.5	NV
Cadmium	mg/L	0.0003	0.0003	0.0003	0.0003	0.0003	0.005(1,3)
Calcium	mg/L	400	320	26	20	400	NV
Chromium, total	mg/L	0.005	0.004	0.0005	0.0012	0.019	0.05(1)-0.1(3)
Cobalt	mg/L	0.015	0.014	0.0005	0.0005	0.008	NV
Copper	mg/L	0.0016	0.003	0.01	0.028	0.0022	1.3(1)
Iron	mg/L	**24**	**9.4**	**0.09**	**6**	**5**	0.3(2)
Lead	mg/L	0.001	0.001	0.0007	0.0005	0.0005	0.015(1,3)
Magnesium	mg/L	350	230	8	6	570	NV
Manganese	mg/L	**5.3**	**4.3**	0.006	**0.16**	**6.7**	0.05(2)
Mercury	mg/L	0.0001	0.0001	0.0001	0.0001	0.0001	0.002(1,3)
Nickel	mg/L	0.052	0.046	0.001	0.0011	0.053	0.1(1)
Potassium	mg/L	55	36	6	6	120	NV
Selenium	mg/L	0.002	0.0014	0.0005	0.0005	0.01	0.05(1,3)
Silver	mg/L	0.0005	0.0005	0.0005	0.0005	0.0005	0.1(2)
Sodium	mg/L	730	450	62	61	1500	NV
Thallium	mg/L	0.0005	0.0005	0.0005	0.0005	0.0005	0.002(1,3)
Tin	mg/L	0.005	0.005	0.005	0.005	0.005	NV
Vanadium	mg/L	0.008	0.003	0.001	0.001	0.031	NV
Zinc	mg/L	0.015	0.016	0.02	0.030	0.007	5(2)
Volatile Organic Compounds (8260):							
1,2-Dibromoethane	µg/L	0.5	0.5	0.5	0.5	**0.6**	0.05 (1,3)
cis-1,2-Dichloroethene	µg/L	0.5	0.5	0.5	0.5	0.6	6 (1) / 70 (3)
Acetone	µg/L	5.0	5.0	5.0	5.0	14.0	NV
Benzene	µg/L	5.0	5.0	5.0	5.0	0.5	1(1)-5(3)
Bromodichloromethane	µg/L	0.5	0.5	0.5	2.3	0.5	80 (1,3)
Bromoform	µg/L	0.5	0.5	2.8	0.5	0.5	80 (1,3)
Chloroform	µg/L	1.3	1.8	3.6	7.1	0.7	80 (1,3)
Dibromochloromethane	µg/L	0.5	0.8	7.2	1.0	0.5	80 (1,3)

Notes:

(1) State of California Primary Drinking Water Standard

(2) State of California Secondary Drinking Water Standard

(3) Federal Maximum Contaminant Level

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

NV: No ARAR value.

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

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

173 Analyte was detected.

2500 Analyte concentration exceeds ARAR value.

Geo-Logic ASSOCIATES

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

Analyte	Units	T-402	T-101	T-102	PW-DWP	Treated Leachate	ARAR
		Samples collected on June 13, 2017					
Volatile Organic Compounds (8260):							
Acetone	µg/L	5.0	5.0	5.0	-	9.0	NV
Bromodichloromethane	µg/L	0.5	0.5	3.5	-	0.5	80 (1,3)
Chloroform	µg/L	0.6	2.7	6.2	-	0.7	80 (1,3)
Dibromochloromethane	µg/L	0.5	0.5	1.4	-	0.5	80 (1,3)
Tetrahydrofuran	µg/L	5.0	5.0	5.0	-	6.0	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.

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

173 Analyte was detected.

2500 Analyte concentration exceeds ARAR value.

Geo-Logic ASSOCIATES

TABLE 14
SUNSHINE CANYON LANDFILL
IMPORTED SOIL SAMPLING SUMMARY - SECOND SEMIANNUAL 2016 MONITORING PERIOD

GENERATOR	SAMPLER	WASTE TYPE	QUANTITY	CONSTITUENTS ANALYZED
City of Los Angeles Police Department, Propert Division	No Samples Taken	Narcotics	20,000 Pounds	No Samples Taken
Southern California Edison Pomona TSD	Peter Lee	Non Hazardous Soil	3 Cubic Yards (6000 Pounds)	Metals, TPH, PCBs
Jag World Wide Imports	No Samples Taken	Food Waste	1 Tons	No Samples Taken
Greenfield Produce Imports	No Samples Taken	Food Products	612 Pounds	No Samples Taken
Union Pacific Railroad	Sean Thomas	Crushed Concrete and Asphalt	100,000 Tons	Metals, TPH, PCBs, VOCs, SVOCs, Pesticides
La Specialty	No Samples Taken	Food Products	153 Pounds	No Samples Taken
VSE Corp	No Samples Taken	Cigarettes	13 Cubic Yards (9100 Pounds)	No Samples Taken
Green Island Produse Inc.	No Samples Taken	Food Products	390 Pounds	No Samples Taken
Northrop Grumman	James Smith	Excavated Diesel Contaminated Soil	30 Tons	Metals, TPH, PCBs, VOCs, SVOCs
Hawaiin Host	No Samples Taken	Food Products	100 Pounds	No Samples Taken
Department of Transportation	No Samples Taken	Weathered Wood	60 Tons	No Samples Taken
Steve Mermell	No Samples Taken	Weathered Wood	4 Tons	No Samples Taken
Shapiro Gilman Shandler Co.	No Samples Taken	Food Products	4,300 Pounds	No Samples Taken
Mecca Prodce Distributors	No Samples Taken	Food Products	700 Pounds	No Samples Taken
Amex Farm LLC	No Samples Taken	Food Products	360 Pounds	No Samples Taken
Matt Salisian	No Samples Taken	Weathered Wood	1 Tons	No Samples Taken
Grifols Biologics Inc.	No Samples Taken	Filter Press Waste	150 Tons	No Samples Taken
Walsh Shae Corridor Constructors	No Samples Taken	Treated Wood Waste for New Construction	70 Tons	No Samples Taken
Sea Snack Cold Storage	No Samples Taken	Food Products	72,000 Pounds	No Samples Taken

Notes:
VOC: Volatile Organic Compound
PCB: Polychlorinated Biphenyls
PNA: Polynuclear Aromatic Hydrocarbons
TPH: Total Petroleum Hydrocarbons
SVOC: Semivolatile Organic Compound
MSDS: Material Safety Data Sheet
*No Samples Taken: Waste previously characterized, or no characterization required (e.g. cured alphalt, treated wood, etc). Special waste decision changed/recertified to 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

TABLE 15
SUNSHINE CANYON LANDFILL
GENERATOR: SOUTHERN CALIFORNIA EDISON POMONA TSD
WASTE DISCHARGE SAMPLING
ESTIMATED ANNUAL QUANTITY: 3 CUBIC YARDS

SAMPLE	Non Hazardous Soil - S1	Non Hazardous Soil - S2	Hazardous Level TTLC (mg/kg)	Lined Cell Limit (mg/kg)	Unrestricted Limit (mg/kg)
DATE SAMPLED	11/15/16	11/15/16			
TIME SAMPLED	11:08	11:20			
SAMPLED BY	Peter Lee	Peter Lee			
DATE ANALYZED	11/17/16	11/17/16			
GENERAL CHEMISTRY (mg/kg): NA					
METALS (mg/kg) METHOD 6010B/7471A:					
Antimony	2.0	2.0	500	380	30
Arsenic	4.8	1.5	500	500	12
Barium	52	65	10,000	10,000	5,200
Beryllium	1.0	1.0	75	75	16
Cadmium	1.0	1.0	100	100	1.7
Chromium	12	5.4	2,500	2,500	45
Cobalt	5.6	4.7	8,000	350	23
Copper	17	12	2,500	2,500	2,500
Lead	20	3.6	1,000	350	80
Mercury	0.10	0.10	20	20	9.4
Molybdenum	1.0	1.0	3,500	3,500	380
Nickel	15	11	2,000	2,000	1,500
Selenium	1.0	1.0	100	100	100
Silver	1.0	1.0	500	500	380
Thallium	1.0	1.0	700	111	0.78
Vanadium	18	19	2,400	2,400	390
Zinc	72	710	5,000	5,000	5,000
GASOLINE RANGE ORGANICS (mg/kg) EPA 8015B (Modified)					
C4	1.0	1.0	NS	1,000 (C4-C12)	10 (C4-C12)
C5	1.0	1.0	NS	1,000 (C4-C12)	10 (C4-C12)
C6	1.0	1.0	NS	1,000 (C4-C12)	10 (C4-C12)
C7	1.0	1.0	NS	1,000 (C4-C12)	10 (C4-C12)
HYDROCARBON CHAIN DISTRIBUTION (mg/kg) EPA 8015B (Modified)					
C8	1.0	1.0	NS	1,000 (C4-C12)	10 (C4-C12)
C9-C10	1.0	1.0	NS	1,000 (C4-C12)	10 (C4-C12)
C11-C12	1.0	1.0	NS	1,000 (C4-C12)/ 10,000 (C11-C22)	10 (C4-C12)/ (C11-C22)
C13-C14	1.0	1.0	NS	10,000 (C11-C22)	10 (C12-C22)
C15-C16	1.0	1.0	NS	10,000 (C11-C22)	10 (C12-C22)
C17-C18	370	430	NS	10,000 (C11-C22)	10 (C12-C22)
C19-C20	480	670	NS	10,000 (C11-C22)	10 (C12-C22)
C21-C22	680	910	NS	10,000 (C11-C22)	10 (C12-C22)
C23-C24	760	930	NS	NS	500 (≥C23)
C25-C28	2300	2800	NS	NS	500 (≥C23)
C29-C32	3200	4100	NS	NS	500 (≥C23)
C33-C36	3300	4500	NS	NS	500 (≥C23)
C37-C40	3500	4800	NS	NS	500 (≥C23)
TOTAL HYDROCARBONS (mg/kg) by Calculation					
C4-C40	15000	19000	NS	NS	500 (≥C23)
POLYCHLORINATED BIPHENYLS (PCBs) (mg/kg) METHOD 8082: ND					

Notes:

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

Geo-Logic ASSOCIATES

TABLE 16
SUNSHINE CANYON LANDFILL
GENERATOR: UNION PACIFIC RAILROAD
WASTE DISCHARGE SAMPLING
ESTIMATED ANNUAL QUANTITY: 100,000 TONS

SAMPLE	Crushed Concrete and Asphalt W-1	Crushed Concrete and Asphalt W-2	Hazardous Level TTLC (mg/kg)	Lined Cell Limit (mg/kg)	Unrestricted Limit (mg/kg)
DATE SAMPLED	**02/08/17**	**02/08/17**			
TIME SAMPLED	**14:15**	**14:45**			
SAMPLED BY	**Sean Thomas**	**Sean Thomas**			
DATE ANALYZED	**02/09/17**	**02/09/17**			
GENERAL CHEMISTRY (mg/kg): NA					
METALS (mg/kg) METHOD 6010B/7471A:					
Antimony	0.19	0.33j	500	380	30
Arsenic	4.3	5.1	500	500	12
Barium	79.5	102	10,000	10,000	5,200
Beryllium	0.18j	0.21j	75	75	16
Cadmium	0.18	0.20	100	100	1.7
Chromium	9.8	10.4	2,500	2,500	45
Cobalt	3.4	4.3	8,000	350	23
Copper	13.6	19.6	2,500	2,500	2,500
Lead	24.4	30.0	1,000	350	80
Mercury	0.039	0.047	20	20	9.4
Molybdenum	0.66j	0.70j	3,500	3,500	380
Nickel	7.6	8.4	2,000	2,000	1,500
Selenium	0.38j	0.28	100	100	100
Silver	0.77	0.78	500	500	380
Thallium	0.16	0.17	700	111	0.78
Vanadium	21.4	24.6	2,400	2,400	390
Zinc	56.4	57.4	5,000	5,000	5,000
METALS WET (mg/L) METHOD 6010:					
Lead (WET)	0.58	0.52	5.0 (mg/L)	NS	NS
VOLATILE ORGANIC COMPOUNDS (mg/kg) METHOD 8260B: ND					
Acetone	0.218	0.047	NS	670,000	61,000
POLYCYCLIC AROMATIC HYDROCARBONS (mg/kg) METHOD 8270:					
Acenaphthene	0.0257j	0.0379j	NS	45,000	3,500
Anthracene	0.0542	0.0817	NS	230,000	17,000
Benzo(a)anthracene	0.110	0.167	NS	2.9	0.15
Benzo(a)pyrene	0.105	0.143	NS	11	0.020
Benzo(b)fluoranthene	0.126	0.180	NS	1.8	0.41
Benzo(g,h,i)perylene	0.0819	0.103	NS	NS	NS
Benzo(k)fluoranthene	0.0772	0.0886	NS	29	1.5
Chrysene	0.161	0.228	NS	290	15
Fluoranthene	0.313	0.441	NS	30,000	2,300
Fluorene	0.0242j	0.0304j	NS	30,000	2,300
Indeno(1,2,3-cd)pyrene	0.0628	0.0820	NS	2.9	0.15
Phenanthrene	0.266	0.367	NS	NS	NS
Pyrene	0.258	0.351	NS	23,000	17,000
GCS THC-Diesel (mg/kg) METHOED 8015					
Motor Oil Range (C24-C36)	1550	1580	NS	NS (≥C23)	500 (≥C23)
TPH-DRO (C10-C28)	295	270	NS	1,000 (C4-C12)/ 10,000 (C12-C22)/ NS (≥C23)	10 (C4-C12)/ 10 (C12-C22)/ 500 (≥C23)
GCV GRO (mg/kg) METHOED 8015: ND					
GCS PESTICIDES (ug/kg) METHOD 8081: ND					
GCS PESTICIDES TCLP (ug/L) METHOD 8081A: ND					
POLYCHLORINATED BIPHENYLS (PCBs) (ug/kg) METHOD 8082: ND					

Notes:

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

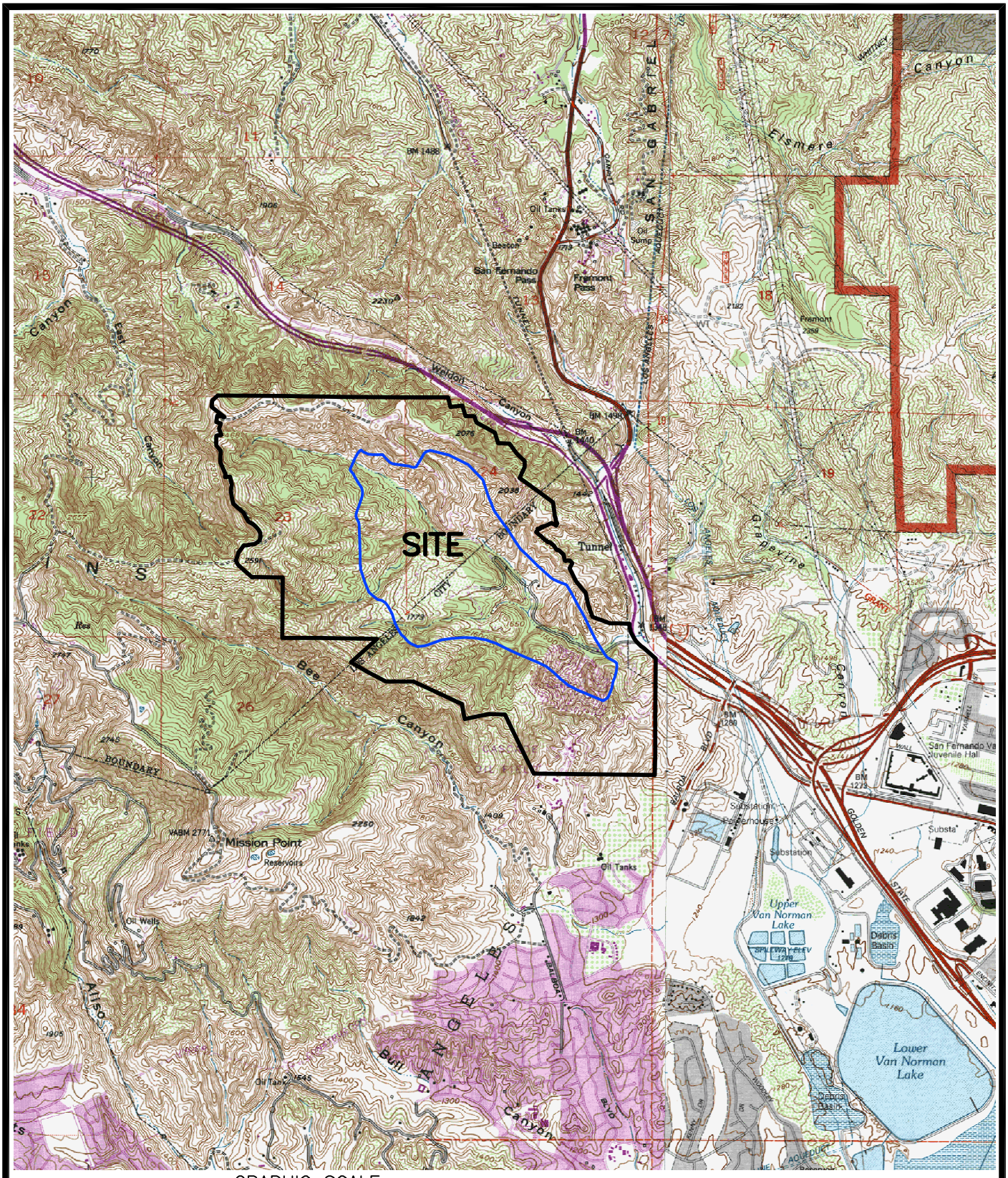
TABLE 17
SUNSHINE CANYON LANDFILL
GENERATOR: NORTHROP GRUMMAN
WASTE DISCHARGE SAMPLING
ESTIMATED ANNUAL QUANTITY: 30 TONS

SAMPLE	01-JRS-149ABD	02-JRS-149C	Hazardous Level TTLC (mg/kg)	Lined Cell Limit (mg/kg)	Unrestricted Limit (mg/kg)
DATE SAMPLED	09/21/16	09/21/16			
TIME SAMPLED	7:10	7:15			
SAMPLED BY	James Smith	James Smith			
DATE ANALYZED	09/21/16	09/21/16			
GENERAL CHEMISTRY (mg/kg): NA					
METALS (mg/kg) METHOD 6010B/7471A:					
Antimony	0.718	0.781	500	380	30
Arsenic	0.718	0.803	500	500	12
Barium	37.9	38	10,000	10,000	5,200
Beryllium	0.239	0.260	75	75	16
Cadmium	0.478	0.521	100	100	1.7
Chromium	9.99	9.01	2,500	2,500	45
Cobalt	3.25	3.39	8,000	350	23
Copper	5.46	5.35	2,500	2,500	2,500
Lead	40.9	18.9	1,000	350	80
Mercury	0.0862	0.921	20	20	9.4
Molybdenum	0.239	0.260	3,500	3,500	380
Nickel	5.00	5.00	2,000	2,000	1,500
Selenium	0.718	0.781	100	100	100
Silver	0.239	0.260	500	500	380
Thallium	0.718	0.781	700	111	0.78
Vanadium	13.4	13.0	2,400	2,400	390
Zinc	24.2	23.6	5,000	5,000	5,000
PETROLEUM HYDROCARBONS (mg/kg) METHOD 8015B:					
Diesel Range Organics	86.0	130.0	NS	10,000	10
Gasoline Range Organics	0.5	0.5	NS	1,000	10
VOLATILE ORGANIC COMPOUNDS (mg/Kg) METHOD 8260B: ND					
SEMI VOLATILE ORGANIC COMPOUNDS (mg/Kg) METHOD 8270C: ND					
POLYCHLORINATED BIPHENYLS (PCBs) (mg/kg) METHOD 8082: ND					

Notes:

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

FIGURES



GRAPHIC SCALE

1500 0 750 1500 3000

(in feet)

FIGURE 1

SITE LOCATION MAP

FIRST SEMIANNUAL 2017 MONITORING REPORT
SUNSHINE CANYON LANDFILL
LOS ANGELES, CALIFORNIA

Geo-Logic ASSOCIATES

DRAWN BY:	DATE:	JOB NO.
VL	AUGUST 2017	SO17.1047

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

GRAPHIC SCALE
350 0 175 350 700
(in feet)

N

EXPLANATION:

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

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

SCALE: 1"=100'

MW-6
S-AR
MW-13R
1335
MW-1
DW-5

SCALE: 1"=100'

DW-4
MW-2A
1420
1400
1380
SUBDRAIN-N
S-B

BASE TOPOGRAPHY DATED 2/24/2016.

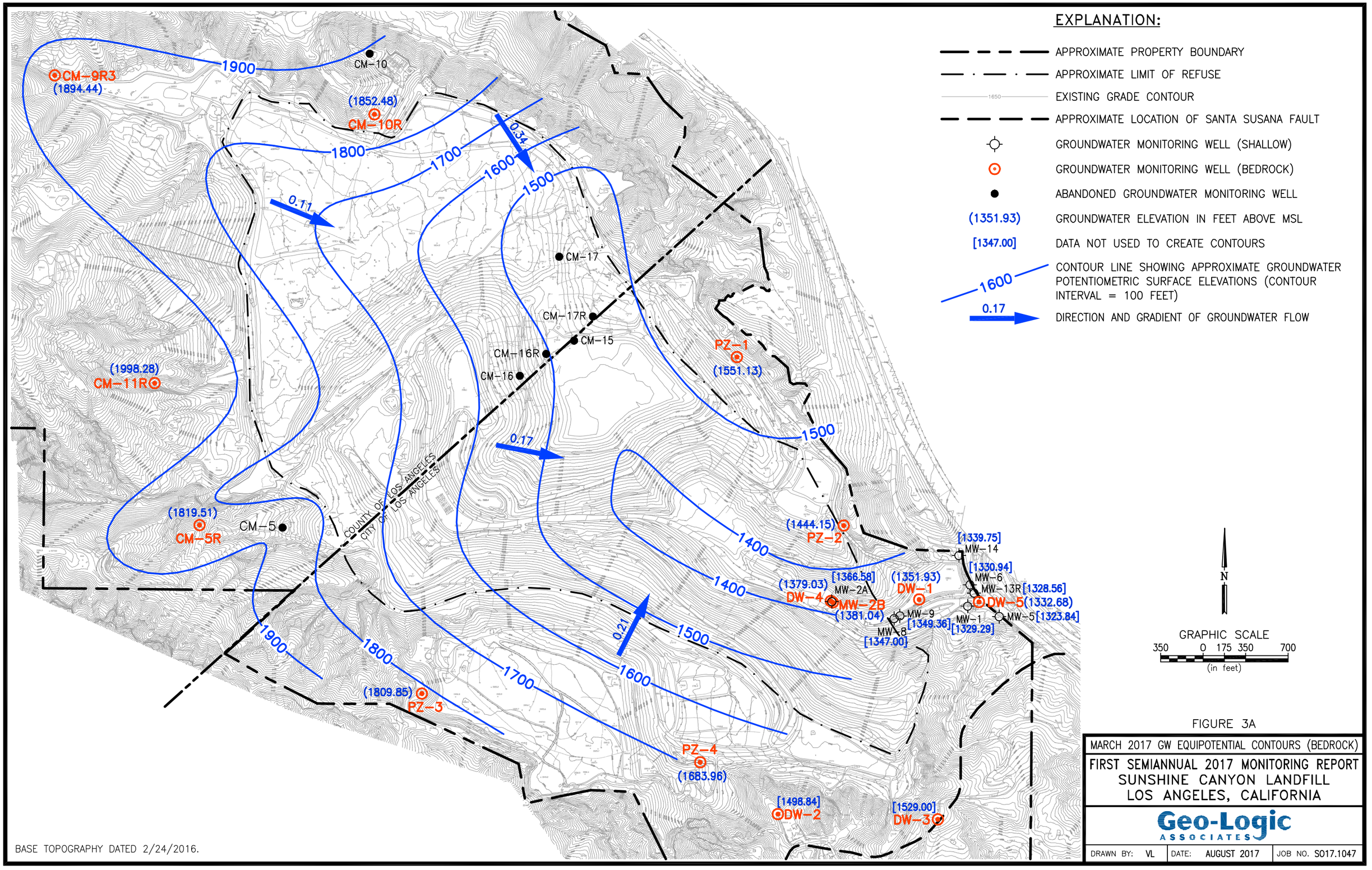
FIGURE 2

SITE MONITORING POINTS LOCATION MAP

FIRST SEMIANNUAL 2017 MONITORING REPORT
SUNSHINE CANYON LANDFILL
LOS ANGELES, CALIFORNIA

Geo-Logic ASSOCIATES

DRAWN BY: VL	DATE: AUGUST 2017	JOB NO. S017.1047



EXPLANATION:

- APPROXIMATE PROPERTY BOUNDARY
- APPROXIMATE LIMIT OF REFUSE
- 1650 EXISTING GRADE CONTOUR
- APPROXIMATE LOCATION OF SANTA SUSANA FAULT
- GROUNDWATER MONITORING WELL (SHALLOW)
- GROUNDWATER MONITORING WELL (BEDROCK)
- ABANDONED GROUNDWATER MONITORING WELL
- (1351.93) GROUNDWATER ELEVATION IN FEET ABOVE MSL
- [1347.00] DATA NOT USED TO CREATE CONTOURS
- 1600 CONTOUR LINE SHOWING APPROXIMATE GROUNDWATER POTENTIOMETRIC SURFACE ELEVATIONS (CONTOUR INTERVAL = 100 FEET)
- 0.17 DIRECTION AND GRADIENT OF GROUNDWATER FLOW

BASE TOPOGRAPHY DATED 2/24/2016.

FIGURE 3A

MARCH 2017 GW EQUIPOTENTIAL CONTOURS (BEDROCK)

FIRST SEMIANNUAL 2017 MONITORING REPORT
SUNSHINE CANYON LANDFILL
LOS ANGELES, CALIFORNIA

Geo-Logic ASSOCIATES

DRAWN BY:	VL	DATE:	AUGUST 2017	JOB NO.	SO17.1047

EXPLANATION:

- APPROXIMATE PROPERTY BOUNDARY
- APPROXIMATE LIMIT OF REFUSE
- 1650 — EXISTING GRADE CONTOUR
- APPROXIMATE LOCATION OF SANTA SUSANA FAULT
- GROUNDWATER MONITORING WELL (SHALLOW)
- GROUNDWATER MONITORING WELL (BEDROCK)
- ABANDONED GROUNDWATER MONITORING WELL
- (1351.93) GROUNDWATER ELEVATION IN FEET ABOVE MSL
- [1347.91] DATA NOT USED TO CREATE CONTOURS
- 1600 CONTOUR LINE SHOWING APPROXIMATE GROUNDWATER POTENTIOMETRIC SURFACE ELEVATIONS (CONTOUR INTERVAL = 100 FEET)
- 0.17 DIRECTION AND GRADIENT OF GROUNDWATER FLOW

CM-9R3 (1891.85)
CM-10
(1851.69) CM-10R
CM-17
CM-17R
CM-15
CM-16R
CM-16
PZ-1 (1551.30)
(1994.43) CM-11R
(1818.34) CM-5R
CM-5
(1809.56) PZ-3
PZ-4 (1684.16)
(1444.15) PZ-2
(1378.88) DW-4
[1366.17] MW-2A
MW-2B (1381.57)
(1351.93) DW-1
[1339.61] MW-14
[1330.79] MW-6
MW-13R [1328.36]
DW-5 (1332.92)
MW-9 [1350.37]
MW-8 [1347.91]
MW-1 [1328.89]
MW-5 [1322.81]
[1498.36] DW-2
[1529.33] DW-3
1900
1800
1700
1600
1500
1400
0.11
0.34
0.17
0.21
COUNTY OF LOS ANGELES
CITY OF LOS ANGELES

BASE TOPOGRAPHY DATED 2/24/2016.

N

GRAPHIC SCALE
350 0 175 350 700
(in feet)

FIGURE 3B

JUNE 2017 GW EQUIPOTENTIAL CONTOURS (BEDROCK)

FIRST SEMIANNUAL 2017 MONITORING REPORT
SUNSHINE CANYON LANDFILL
LOS ANGELES, CALIFORNIA

Geo-Logic ASSOCIATES

DRAWN BY:	DATE:	JOB NO.
VL	AUGUST 2017	SO17.1047

P-207
PCW207
P-208
P-244
P-209
PCW211
P-210
PCW210
P-242
P-206
P-239
P-205R
P-240
PCW241D
P-241
1679.7
PCW601
PCW602
PCW-603
PCW-604
PCW-605
1675.5
PCW241A/B/C
PCW203
P-204
P-203D
P-245
P-213
PCW213
P-211D
P-203ABC
P-202
PCW214B
P-214
PCW214A
P-215
P-212D
P-216
COUNTY OF LOS ANGELES
CITY OF LOS ANGELES
PCW231SD
P-231
PCW113
P-217R
PCW112
P-217A
PCW111
P-230
PCW229SD
P-229
P-218
P-219
P-228
PCW43
P-227
PCW46
PCW226SD
P-226
PCW11
PCW10
P-223
PCW56
PCW57
P-224
PCW224
P-222
P-221
P-220A
PCW225SD
P-225
P-220B

SCALE: 1"=100'

EXPLANATION:

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

N

GRAPHIC SCALE
350 0 175 350 700
(in feet)

BASE TOPOGRAPHY DATED 2/24/2016.

FIGURE 4

VADOSE ZONE GAS MONITORING POINT LOCATION MAP

FIRST SEMIANNUAL 2017 MONITORING REPORT
SUNSHINE CANYON LANDFILL
LOS ANGELES, CALIFORNIA

Geo-Logic ASSOCIATES

DRAWN BY: VL	DATE: AUGUST 2017	JOB NO. S017.1047

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 4ºC) until delivery.

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

LYSIMETER SAMPLING

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

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

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

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

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

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

SUBDRAIN AND EXTRACTION TRENCH SAMPLING

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

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

LEACHATE SAMPLING

Leachate at the SCLF is monitored at 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

Geo-Logic
ASSOCIATES

Geo-Logic
ASSOCIATES
Geologists, Hydrogeologists, and Engineers

GROUNDWATER MONITORING PROGRAM
WATER LEVEL SURVEY RECORD SHEET

Site: Sunshine Canyon

Project No.: 2016.0030

Date: 2-21-17

Field Personnel: A. Shaw N. Reason

WELL I.D.	CONSTRUCTED TOTAL DEPTH (TD)	ACTUAL TOTAL DEPTH (TD)	DEPTH TO WATER (DTW)	COMMENTS
DW-3			153.61	
DW-5			15.29	
MW-1			15.38	
MW-5			17.88	
MW-6			14.87	

REMARKS:

Name: Nicholas Reason

Signature:

Geo-Logic ASSOCIATES

Geologists • Hydrogeologists • Engineers

RETEST DW-3-A & DW-3-B

GROUNDWATER MONITORING PROGRAM
WELL DATA SHEET

Site Name:	Sunshine Canyon	Project No.:	2016.0030
Well I.D.:	DW-3	Sampling Date:	2-21-17
Collected By:	NR	Purge start Time:	1152
Casing Diameter (inches):	4	Purge Stop time:	1212
Starting Water Level:	153.61	Sampling (Well Recovery) Time:	1220
Total Depth (feet):	256.60	Ending Water Level (feet):	157.05
Water column (feet):	102.99	Total Purged (gallons):	2¼+
Screen Length (feet):	–	Duplicate Sample:	YES (NO)
Sample Method:	(Micro Purge) Low Flow		
Horiba Model S/N:	U-521 DLLCY006		

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
1201	1	155.33	7.35	2.30	0.0	7.82	20.01	-162
1205	1½	155.92	7.30	2.29	0.0	7.08	20.02	-163
1208	1¾	156.46	7.29	2.29	0.0	6.54	20.03	-165
1210	2	156.80	7.28	2.29	0.0	6.51	20.04	-169
1212	2¼	157.05	7.28	2.28	0.0	6.47	20.06	-171

Purge Sampling Rates: 100 PSI REFILL (35.0) Discharge (22.0)

Well condition: OK, WATER CLEAR with no odor

Additional Info/Comments: Cloudy, cool

Name: Nicholas Reason Signature:

GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Canyon Well ID: DW-3 Date: 2-21-17

Access:

Accessibility: Good: X Fair: _____ Poor: _____

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

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

Remarks:

Concrete Pad:

Integrity: Good: X Inadequate: _____

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

Remarks:

Protective Outer Casing: Material: METAL

Condition of Protective Casing: Good: X Damaged: _____

Condition of Locking Cap: Good: X Damaged: _____

Condition of Lock: Good: X Damaged: _____

Condition of Weepholes: Good: X Damaged: _____

Remarks:

Well Riser: Material: PVC

Condition of Riser: Good: X Damaged: _____

Condition of Riser Cap: Good: X Damaged: _____

Measurment reference point: Yes: X No: _____

Remarks:

Dedicated Pump: Type: Bladder

Condition: Good: X Damaged: _____ Missing: _____

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

Remarks:

Field Certification: [signature] Signed — Field Tech Title — 2-21-17 Date

Geo-Logic ASSOCIATES

Geologists • Hydrogeologists • Engineers

Retest DW-5-A and DW-5-B

GROUNDWATER MONITORING PROGRAM
WELL DATA SHEET

Site Name:	Sunshine Cyn	**Project No.:**	2016.0030
Well I.D.:	DW-5	**Sampling Date:**	2-21-17
Collected By:	AS	**Purge start Time:**	1008
Casing Diameter (inches):	4	**Purge Stop time:**	1033
Starting Water Level:	15.29	**Sampling (Well Recovery) Time:**	1040
Total Depth (feet):	101.00	**Ending Water Level (feet):**	18.39
Water column (feet):	85.71	**Total Purged (gallons):**	2.0+
Screen Length (feet):	—	**Duplicate Sample:**	(YES) NO
Sample Method:	(Micro Purge) Low Flow	* Retest DW-5-A & DW-5-B Collected.	
Horiba Model S/N:	U-52 | WQ-P8CR5		

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
1015	0.50	16.21	8.65	2.37	17.1	1.14	20.23	-76
1021	1.00	16.99	8.73	2.33	7.0	0.90	20.31	-125
1024	1.25	17.30	8.75	2.35	5.2	0.82	20.37	-158
1027	1.50	17.62	8.76	2.35	4.3	0.82	20.39	-162
1030	1.75	18.04	8.76	2.35	3.9	0.81	20.37	-166
1033	2.00	18.39	8.76	2.34	3.7	0.79	20.38	-170

Purge Sampling Rates: 60 PSI ; Refill (35.0), Discharge (21.0).
Sample water is visually clear w/ strong odor. Has lots of Effervescence

Well condition: O.K.

Additional Info/Comments: Cloudy, Cool

Name: Adam Shaw **Signature:** A.C.S.

GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Cyn Well ID: MW-5 Date: 2.21.17

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: Broken concrete/debris around well monument

Concrete Pad:

Integrity: 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: _____

Measurment reference point: Yes: ✓ No: _____

Remarks:

Dedicated Pump: Type: Bladder

Condition: Good: ✓ Damaged: _____ Missing: _____

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

Remarks:

Field Certification: A.C. Signed Field Tech Title 2.21.17 Date

Geo-Logic ASSOCIATES

Geologists • Hydrogeologists • Engineers

ReTest MW-1-A and MW-1-B

GROUNDWATER MONITORING PROGRAM
WELL DATA SHEET

Site Name: Sunshine Cyn

Well I.D.: MW-1

Collected By: AS

Casing Diameter (inches): 4

Starting Water Level: 15.38

Total Depth (feet): 29.60

Water column (feet):

Screen Length (feet): —

Sample Method: (Micro Purge) Low Flow

Horiba Model S/N: U-52/WGLP8GR5

Project No.: 2016.0030

Sampling Date: 2.21.17

Purge start Time: 1058

Purge Stop time: 1115

Sampling (Well Recovery) Time: 1120

Ending Water Level (feet): 15.42

Total Purged (gallons): 2.0+

Duplicate Sample: (YES) NO

*Retest MW-1-A and MW-1-B Collected.

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
1102	0.50	15.42	7.01	5.86	66.6	5.96	21.66	-70
1106	1.00	"	6.99	5.85	41.4	4.09	21.77	-77
1108	1.25	"	6.99	5.84	55.9	3.75	21.84	-76
1111	1.50	"	6.99	5.84	56.0	4.12	21.84	-76
1113	1.75	"	6.98	5.84	56.2	4.10	21.86	-76
1115	2.00	"	6.98	5.84	55.9	4.06	21.87	-76

Purge Sampling Rates: 20 PSI, Refill (30.0), Discharge (11.0). Slight yellow color w/ Strong odor.

Well condition: O.K.

Additional Info/Comments: Cloudy, Cool

Name: Adam Shaw

Signature: [signature]

GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Gym Well ID: MW-1 Date: 2.21.17

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: 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: _____

Measurment reference point: Yes: ✓ No: _____

Remarks:

Dedicated Pump: Type: Bladder

Condition: Good: ✓ Damaged: _____ Missing: _____

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

Remarks:

Field Certification: QC M Field Tech 2.21.17

Signed Title Date

Geo-Logic ASSOCIATES

Geologists • Hydrogeologists • Engineers

Retest MW-5-A and MW-5-B

GROUNDWATER MONITORING PROGRAM
WELL DATA SHEET

Site Name:	Sunshine Cyn	**Project No.:**	2016.003D
Well I.D.:	MW-5	**Sampling Date:**	2.21.17
Collected By:	AS	**Purge start Time:**	1203
Casing Diameter (inches):	2	**Purge Stop time:**	1226
Starting Water Level:	17.88	**Sampling (Well Recovery) Time:**	1230
Total Depth (feet):	26.20	**Ending Water Level (feet):**	18.32
Water column (feet):	8.32	**Total Purged (gallons):**	2.0+
Screen Length (feet):	-	**Duplicate Sample:** Retest (YES) NO	
Sample Method:	(Micro Purge) Low Flow	* MW-5-A and MW-5-B Collected	
Horiba Model S/N:	U-52 WQCP8CR5		

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
1208	0.50	18.32	7.11	5.54	133	2.77	21.05	30
1214	1.00	"	7.03	5.39	14.6	2.05	21.26	-38
1217	1.25	"	7.02	5.37	13.8	2.04	21.28	-39
1220	1.50	"	7.02	5.35	14.0	2.00	21.29	-43
1223	1.75	"	7.02	5.34	13.4	1.98	21.31	-44
1226	2.00	"	7.01	5.34	13.1	1.95	21.29	-45

Purge Sampling Rates: 20 PSI ; Refill (30.0), Discharge (10.0)

Well condition: OK

Additional Info/Comments: Cloudy, Cool

Name: Adam Shaw **Signature:** AC SM

GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Gym Well ID: MW-5 Date: 2-21-17

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: Large area of ponding water from past rains

Concrete Pad:

Integrity: Good: _____ Inadequate: _____

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

Remarks: Concrete pad is buried.

Protective Outer Casing: Material: Metal

Condition of Protective Casing: Good: ✓ Damaged: _____

Condition of Locking Cap: Good: ✓ Damaged: _____

Condition of Lock: Good: ✓ Damaged: _____

Condition of Weepholes: Good: ✓ Damaged: _____

Remarks:

Well Riser: Material: PVC

Condition of Riser: Good: ✓ Damaged: _____

Condition of Riser Cap: Good: ✓ Damaged: _____

Measurment reference point: Yes: ✓ No: _____

Remarks:

Dedicated Pump: Type: Bladder

Condition: Good: ✓ Damaged: _____ Missing: _____

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

Remarks:

Field Certification: AC-SM Field Tech 2.21.17

Signed Title Date

Geo-Logic ASSOCIATES

Geologists • Hydrogeologists • Engineers

Retest MW-6-A and MW-6-B

GROUNDWATER MONITORING PROGRAM
WELL DATA SHEET

Site Name:	Sunshine Canyon	Project No.:	2016-0030
Well I.D.:	MW-6	Sampling Date:	2-21-17
Collected By:	NR	Purge start Time:	1004
Casing Diameter (inches):	2	Purge Stop time:	1052
Starting Water Level:	14.87	Sampling (Well Recovery) Time:	1105
Total Depth (feet):	23.50	Ending Water Level (feet):	15.70
Water column (feet):	8.63	Total Purged (gallons):	1 3/4
Screen Length (feet):	-	Duplicate Sample:	YES (NO)
Sample Method:	(Micro Purge) Low Flow		
Horiba Model S/N:	U-52 10LLCYV06		

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
1017	1/2	15.44	6.95	3.74	10.6	0.00	20.35	-423
1028	3/4	15.61	7.01	3.17	6.0	0.00	20.35	-361
1034	1	15.63	6.95	2.44	1.9	0.16	20.12	-345
1040	1 1/4	15.67	6.92	2.31	0.8	0.13	20.14	-274
1046	1 1/2	15.69	6.91	2.33	0.7	0.12	20.19	-265
1052	1 3/4	15.70	6.91	2.35	0.7	0.12	20.24	-265

Purge Sampling Rates: 20 PSI Refill(30.0) Discharge(6.0)

Well condition: OK, WATER STARTS CLEAR AND TURNED BLACK Through purge. Water has strong odor, HAD TO CARRY equipment to well

Additional Info/Comments: Cloudy, cool

Pump Depth: 19.7 ft

Name: Nicholas Peeson Signature:

GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Canyon Well ID: MW-6 Date: 2-21-17

Access:

Accessibility: Good: + Fair: _____ Poor: _____

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

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

Remarks: Required sampling equipment and bottles to be carried along trail 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: X Damaged: _____

Condition of Locking Cap: Good: X Damaged: _____

Condition of Lock: Good: X Damaged: _____

Condition of Weepholes: Good: X Damaged: _____

Remarks:

Well Riser: Material: PVC

Condition of Riser: Good: X Damaged: _____

Condition of Riser Cap: Good: X Damaged: _____

Measurment reference point: Yes: X No: _____

Remarks:

Dedicated Pump: Type: Bladder

Condition: Good: X Damaged: _____ Missing: _____

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

Remarks:

Field Certification: _____ Field Tech 2-21-17

Signed Title Date

Geo-Logic ASSOCIATES

FIELD CALIBRATION DOCUMENTATION FORM

LOCATION (Site/Facility Name) Sunshine Cyn **PROJECT NAME / NUMBER** 2016.0030

Instrument Make/Model # Horiba U-52 S/N GWGUP8GRS						
Date/Time 2.21.17 0832	**pH**	**Electrical Conductivity (µMhos/cm)**	**Turbidity (NTU)**	**DO (mg/L or %)**	**Guidance Remarks**	**Comments**
Pre. Cal	4.04	4.50	0	10.09		
Calibration	4.00	4.49	0	10.02		
Calibration Successful? (Y/N)	Y				enter YES or NO	
Satifies Protocol?	Y				Did calibration meet criteria in the sampling protocol? (Y or N)	
Calibration by	AS				Signature or initials	AC SL
Physical Condition of Unit		→ Good				

Geo-Logic ASSOCIATES

FIELD CALIBRATION DOCUMENTATION FORM

LOCATION (Site/Facility Name) Sunshine Canyon PROJECT NAME / NUMBER 2016.0030

Instrument Make/Model #	Horiba U-52 (Dedicated)					
Date/Time 2-21-17 0930	pH	Electrical Conductivity (µMhos/cm)	Turbidity (NTU)	DO (mg/L or %)	Guidance Remarks	Comments
Pre. Cal	3.80	4.48	0.2	9.97		
Calibration	4.00	4.49	0.0	10.83		
Calibration Successful? (Y/N)	Y				enter YES or NO	
Satifies Protocol?	Y				Did calibration meet criteria in the sampling protocol? (Y or N)	
Calibration by	NR				Signature or initials	
Physical Condition of Unit	Good					

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: 440-177556-1
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:
3/10/2017 12:31:03 PM

Rossina Tomova, Project Manager I
(949)261-1022
rossina.tomova@testamericainc.com

Table of Contents

Sample Summary

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

TestAmerica Job ID: 440-177556-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-177556-1	MW-1-A	Water	02/21/17 11:20	02/21/17 17:45
440-177556-2	MW-1-B	Water	02/21/17 11:20	02/21/17 17:45
440-177556-3	MW-5-A	Water	02/21/17 12:30	02/21/17 17:45
440-177556-4	MW-5-B	Water	02/21/17 12:30	02/21/17 17:45
440-177556-5	MW-6-A	Water	02/21/17 11:05	02/21/17 17:45
440-177556-6	MW-6-B	Water	02/21/17 11:05	02/21/17 17:45
440-177556-7	DW-3-A	Water	02/21/17 12:20	02/21/17 17:45
440-177556-8	DW-3-B	Water	02/21/17 12:20	02/21/17 17:45
440-177556-9	DW-5-A	Water	02/21/17 10:40	02/21/17 17:45
440-177556-10	DW-5-B	Water	02/21/17 10:40	02/21/17 17:45
440-177556-11	QCTB	Water	02/21/17 00:01	02/21/17 17:45

Job ID: 440-177556-1

Laboratory: TestAmerica Irvine

Narrative

Job Narrative
440-177556-1

Comments
No additional comments.

Receipt
The samples were received on 2/21/2017 5:45 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.2º C.

GC/MS VOA
Method(s) 8260B: Sample: QCTB (440-177556-11) contained Acetone above the method detection limit (MDL). The sample was re-analyzed with concurring result. The re-analysis has been reported.

Method(s) 8260B: The following volatile sample was received and analyzed with significant headspace in the sample vial(s): DW-5-B (440-177556-10). 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.

General Chemistry
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 ID: MW-1-A
Lab Sample ID: 440-177556-1
Date Collected: 02/21/17 11:20
Matrix: Water
Date Received: 02/21/17 17:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	35		1.0	0.50	mg/L			03/02/17 06:59	10

Client Sample ID: MW-1-B
Lab Sample ID: 440-177556-2
Date Collected: 02/21/17 11:20
Matrix: Water
Date Received: 02/21/17 17:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	34		1.0	0.50	mg/L			03/02/17 07:12	10

Client Sample ID: MW-5-A
Lab Sample ID: 440-177556-3
Date Collected: 02/21/17 12:30
Matrix: Water
Date Received: 02/21/17 17:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	4.7		0.50	0.10	mg/L		02/22/17 04:00	02/22/17 06:30	1

Client Sample ID: MW-5-B
Lab Sample ID: 440-177556-4
Date Collected: 02/21/17 12:30
Matrix: Water
Date Received: 02/21/17 17:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	4.7		0.50	0.10	mg/L		02/22/17 04:00	02/22/17 06:30	1

Client Sample ID: MW-6-A
Lab Sample ID: 440-177556-5
Date Collected: 02/21/17 11:05
Matrix: Water
Date Received: 02/21/17 17:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	0.45	J	0.50	0.10	mg/L		02/22/17 04:00	02/22/17 06:30	1

Client Sample ID: MW-6-B
Lab Sample ID: 440-177556-6
Date Collected: 02/21/17 11:05
Matrix: Water
Date Received: 02/21/17 17:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	0.36	J	0.50	0.10	mg/L		02/22/17 04:00	02/22/17 06:30	1

Client Sample ID: DW-3-A
Lab Sample ID: 440-177556-7
Date Collected: 02/21/17 12:20
Matrix: Water
Date Received: 02/21/17 17:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		20	10	mg/L			03/03/17 15:30	1
Ammonia (as N)	0.63		0.50	0.10	mg/L		02/22/17 04:00	02/22/17 06:30	1

Client Sample ID: DW-3-B

Date Collected: 02/21/17 12:20
Date Received: 02/21/17 17:45

Lab Sample ID: 440-177556-8
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	14	J	20	10	mg/L			03/03/17 15:30	1
Ammonia (as N)	0.60		0.50	0.10	mg/L		02/22/17 04:00	02/22/17 06:30	1

Client Sample ID: DW-5-A

Date Collected: 02/21/17 10:40
Date Received: 02/21/17 17:45

Lab Sample ID: 440-177556-9
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			03/03/17 01:58	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			03/03/17 01:58	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			03/03/17 01:58	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			03/03/17 01:58	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			03/03/17 01:58	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			03/03/17 01:58	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			03/03/17 01:58	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			03/03/17 01:58	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			03/03/17 01:58	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			03/03/17 01:58	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			03/03/17 01:58	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			03/03/17 01:58	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			03/03/17 01:58	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			03/03/17 01:58	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			03/03/17 01:58	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			03/03/17 01:58	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			03/03/17 01:58	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			03/03/17 01:58	1
2-Hexanone	ND		5.0	2.5	ug/L			03/03/17 01:58	1
Acetone	ND		20	10	ug/L			03/03/17 01:58	1
Acetonitrile	ND		20	10	ug/L			03/03/17 01:58	1
Acrolein	ND		5.0	2.5	ug/L			03/03/17 01:58	1
Acrylonitrile	ND		2.0	1.0	ug/L			03/03/17 01:58	1
Benzene	ND		0.50	0.25	ug/L			03/03/17 01:58	1
Allyl chloride	ND		1.0	0.50	ug/L			03/03/17 01:58	1
Bromoform	ND		1.0	0.40	ug/L			03/03/17 01:58	1
Bromomethane	ND		0.50	0.25	ug/L			03/03/17 01:58	1
Carbon disulfide	ND		1.0	0.50	ug/L			03/03/17 01:58	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			03/03/17 01:58	1
Chlorobenzene	ND		0.50	0.25	ug/L			03/03/17 01:58	1
Bromochloromethane	ND		0.50	0.25	ug/L			03/03/17 01:58	1
Chloroethane	ND		1.0	0.40	ug/L			03/03/17 01:58	1
Chloroform	ND		0.50	0.25	ug/L			03/03/17 01:58	1
Chloromethane	ND		0.50	0.25	ug/L			03/03/17 01:58	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/03/17 01:58	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/03/17 01:58	1
Dibromochloromethane	ND		0.50	0.25	ug/L			03/03/17 01:58	1
Dibromomethane	ND		0.50	0.25	ug/L			03/03/17 01:58	1
Bromodichloromethane	ND		0.50	0.25	ug/L			03/03/17 01:58	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			03/03/17 01:58	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			03/03/17 01:58	1

Client Sample ID: DW-5-A
Date Collected: 02/21/17 10:40
Date Received: 02/21/17 17:45

Lab Sample ID: 440-177556-9
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		0.50	0.25	ug/L			03/03/17 01:58	1
Iodomethane	ND		2.0	1.0	ug/L			03/03/17 01:58	1
Isobutyl alcohol	ND		25	13	ug/L			03/03/17 01:58	1
m,p-Xylene	ND		1.0	0.50	ug/L			03/03/17 01:58	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			03/03/17 01:58	1
Methyl methacrylate	ND		2.0	1.0	ug/L			03/03/17 01:58	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			03/03/17 01:58	1
o-Xylene	ND		0.50	0.25	ug/L			03/03/17 01:58	1
Propionitrile	ND		20	10	ug/L			03/03/17 01:58	1
Styrene	ND		0.50	0.25	ug/L			03/03/17 01:58	1
t-Butanol	**5.4**	**J ID**	10	5.0	ug/L			03/03/17 01:58	1
Tetrachloroethene	ND		0.50	0.25	ug/L			03/03/17 01:58	1
Tetrahydrofuran	ND		10	5.0	ug/L			03/03/17 01:58	1
Toluene	ND		0.50	0.25	ug/L			03/03/17 01:58	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/03/17 01:58	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/03/17 01:58	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			03/03/17 01:58	1
Trichloroethene	ND		0.50	0.25	ug/L			03/03/17 01:58	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			03/03/17 01:58	1
Vinyl acetate	ND		4.0	2.0	ug/L			03/03/17 01:58	1
Vinyl chloride	ND		0.50	0.25	ug/L			03/03/17 01:58	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			03/03/17 01:58	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			03/03/17 01:58	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			03/03/17 01:58	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Butane, 2,3-dimethyl-	*14*	*T J N*	*ug/L*		*5.94*	*79-29-8*		*03/03/17 01:58*	*1*
Unknown	*11*	*T J*	*ug/L*		*7.34*			*03/03/17 01:58*	*1*
Benzene, (2-methylpropyl)-	*12*	*T J N*	*ug/L*		*13.10*	*538-93-2*		*03/03/17 01:58*	*1*
Benzene, 1-ethyl-3-(1-methylethyl)-	*11*	*T J N*	*ug/L*		*14.06*	*4920-99-4*		*03/03/17 01:58*	*1*
1H-Indene,2,3-dihydro-2,2-dimethyl-	*9.1*	*T J N*	*ug/L*		*14.18*	*20836-11-7*		*03/03/17 01:58*	*1*
1H-Indene, 2,3-dihydro-1,1-dimethyl-	*9.9*	*T J N*	*ug/L*		*14.26*	*4912-92-9*		*03/03/17 01:58*	*1*
Benzene, 1,2,3,4-tetramethyl-	*32*	*T J N*	*ug/L*		*14.41*	*488-23-3*		*03/03/17 01:58*	*1*
Unknown	*17*	*T J*	*ug/L*		*15.17*			*03/03/17 01:58*	*1*
Benzene, 1,3-dimethyl-5-(1-methylethyl)-	*11*	*T J N*	*ug/L*		*15.64*	*4706-90-5*		*03/03/17 01:58*	*1*
1H-Indene, 2,3-dihydro-4,6-dimethyl-	*11*	*T J N*	*ug/L*		*16.04*	*1685-82-1*		*03/03/17 01:58*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*107*		*80 - 128*		*03/03/17 01:58*	*1*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*		*03/03/17 01:58*	*1*
Dibromofluoromethane (Surr)	*99*		*76 - 132*		*03/03/17 01:58*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	ND		2.0	0.88	ug/L			03/03/17 15:50	1
Naphthalene	ND		1.0	0.40	ug/L			03/03/17 15:50	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Butane, 2,3-dimethyl-	*7.9*	*T J N*	*ug/L*		*4.90*	*79-29-8*		*03/03/17 15:50*	*1*
Unknown	*9.8*	*T J*	*ug/L*		*6.29*			*03/03/17 15:50*	*1*

Client Sample ID: DW-5-A

Date Collected: 02/21/17 10:40
Date Received: 02/21/17 17:45

Lab Sample ID: 440-177556-9
Matrix: Water

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

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Benzene, (2-methylpropyl)-	10	T J N	ug/L		11.92	538-93-2		03/03/17 15:50	1
1H-Indene, 2,3-dihydro-1,6-dimethyl-	9.6	T J N	ug/L		13.25	17059-48-2		03/03/17 15:50	1
Benzene, 1,2,3,4-tetramethyl-	30	T J N	ug/L		13.43	488-23-3		03/03/17 15:50	1
Benzene, pentamethyl-	12	T J N	ug/L		14.14	700-12-9		03/03/17 15:50	1
Benzene, pentamethyl-	7.4	T J N	ug/L		14.23	700-12-9		03/03/17 15:50	1
Naphthalene, 1,2,3,4-tetrahydro-1,8-dimethyl-	8.4	T J N	ug/L		14.30	25419-33-4		03/03/17 15:50	1
1H-Indene, 2,3-dihydro-4,6-dimethyl-	8.9	T J N	ug/L		14.85	1685-82-1		03/03/17 15:50	1
Unknown	6.5	T J	ug/L		15.04			03/03/17 15:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	104		80 - 128		03/03/17 15:50	1
4-Bromofluorobenzene (Surr)	100		80 - 120		03/03/17 15:50	1
Dibromofluoromethane (Surr)	108		76 - 132		03/03/17 15:50	1

Client Sample ID: DW-5-B

Date Collected: 02/21/17 10:40
Date Received: 02/21/17 17:45

Lab Sample ID: 440-177556-10
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			03/03/17 02:24	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			03/03/17 02:24	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			03/03/17 02:24	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			03/03/17 02:24	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			03/03/17 02:24	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			03/03/17 02:24	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			03/03/17 02:24	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			03/03/17 02:24	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			03/03/17 02:24	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			03/03/17 02:24	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			03/03/17 02:24	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			03/03/17 02:24	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			03/03/17 02:24	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			03/03/17 02:24	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			03/03/17 02:24	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			03/03/17 02:24	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			03/03/17 02:24	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			03/03/17 02:24	1
2-Hexanone	ND		5.0	2.5	ug/L			03/03/17 02:24	1
Acetone	ND		20	10	ug/L			03/03/17 02:24	1
Acetonitrile	ND		20	10	ug/L			03/03/17 02:24	1
Acrolein	ND		5.0	2.5	ug/L			03/03/17 02:24	1
Acrylonitrile	ND		2.0	1.0	ug/L			03/03/17 02:24	1
Benzene	ND		0.50	0.25	ug/L			03/03/17 02:24	1
Allyl chloride	ND		1.0	0.50	ug/L			03/03/17 02:24	1
Bromoform	ND		1.0	0.40	ug/L			03/03/17 02:24	1
Bromomethane	ND		0.50	0.25	ug/L			03/03/17 02:24	1
Carbon disulfide	ND		1.0	0.50	ug/L			03/03/17 02:24	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			03/03/17 02:24	1

Client Sample ID: DW-5-B
Date Collected: 02/21/17 10:40
Date Received: 02/21/17 17:45

Lab Sample ID: 440-177556-10
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	ND		0.50	0.25	ug/L			03/03/17 02:24	1
Bromochloromethane	ND		0.50	0.25	ug/L			03/03/17 02:24	1
Chloroethane	ND		1.0	0.40	ug/L			03/03/17 02:24	1
Chloroform	ND		0.50	0.25	ug/L			03/03/17 02:24	1
Chloromethane	ND		0.50	0.25	ug/L			03/03/17 02:24	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/03/17 02:24	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/03/17 02:24	1
Dibromochloromethane	ND		0.50	0.25	ug/L			03/03/17 02:24	1
Dibromomethane	ND		0.50	0.25	ug/L			03/03/17 02:24	1
Bromodichloromethane	ND		0.50	0.25	ug/L			03/03/17 02:24	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			03/03/17 02:24	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			03/03/17 02:24	1
Ethylbenzene	ND		0.50	0.25	ug/L			03/03/17 02:24	1
Iodomethane	ND		2.0	1.0	ug/L			03/03/17 02:24	1
Isobutyl alcohol	ND		25	13	ug/L			03/03/17 02:24	1
m,p-Xylene	ND		1.0	0.50	ug/L			03/03/17 02:24	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			03/03/17 02:24	1
Methyl methacrylate	ND		2.0	1.0	ug/L			03/03/17 02:24	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			03/03/17 02:24	1
o-Xylene	ND		0.50	0.25	ug/L			03/03/17 02:24	1
Propionitrile	ND		20	10	ug/L			03/03/17 02:24	1
Styrene	ND		0.50	0.25	ug/L			03/03/17 02:24	1
t-Butanol	ND		10	5.0	ug/L			03/03/17 02:24	1
Tetrachloroethene	ND		0.50	0.25	ug/L			03/03/17 02:24	1
Tetrahydrofuran	ND		10	5.0	ug/L			03/03/17 02:24	1
Toluene	ND		0.50	0.25	ug/L			03/03/17 02:24	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/03/17 02:24	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/03/17 02:24	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			03/03/17 02:24	1
Trichloroethene	ND		0.50	0.25	ug/L			03/03/17 02:24	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			03/03/17 02:24	1
Vinyl acetate	ND		4.0	2.0	ug/L			03/03/17 02:24	1
Vinyl chloride	ND		0.50	0.25	ug/L			03/03/17 02:24	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			03/03/17 02:24	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			03/03/17 02:24	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			03/03/17 02:24	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Butane, 2,3-dimethyl-	*14*	*T J N*	*ug/L*		*5.94*	*79-29-8*		*03/03/17 02:24*	*1*
Unknown	*11*	*T J*	*ug/L*		*7.34*			*03/03/17 02:24*	*1*
Benzene, (2-methylpropyl)-	*12*	*T J N*	*ug/L*		*13.10*	*538-93-2*		*03/03/17 02:24*	*1*
Benzene, 1-ethyl-4-(1-methylethyl)-	*9.0*	*T J N*	*ug/L*		*14.06*	*4218-48-8*		*03/03/17 02:24*	*1*
1H-Indene,2,3-dihydro-2,2-dimethyl-	*9.7*	*T J N*	*ug/L*		*14.18*	*20836-11-7*		*03/03/17 02:24*	*1*
1H-Indene, 2,3-dihydro-1,1-dimethyl-	*10*	*T J N*	*ug/L*		*14.26*	*4912-92-9*		*03/03/17 02:24*	*1*
Benzene, 1,2,3,5-tetramethyl-	*33*	*T J N*	*ug/L*		*14.41*	*527-53-7*		*03/03/17 02:24*	*1*
Unknown	*17*	*T J*	*ug/L*		*15.17*			*03/03/17 02:24*	*1*
Benzene, 1-ethyl-2,4,5-trimethyl-	*11*	*T J N*	*ug/L*		*15.64*	*17851-27-3*		*03/03/17 02:24*	*1*
1H-Indene, 2,3-dihydro-1,2-dimethyl-	*11*	*T J N*	*ug/L*		*16.04*	*17057-82-8*		*03/03/17 02:24*	*1*

Client Sample ID: DW-5-B

Date Collected: 02/21/17 10:40
Date Received: 02/21/17 17:45

Lab Sample ID: 440-177556-10
Matrix: Water

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*111*		*80 - 128*		*03/03/17 02:24*	*1*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*		*03/03/17 02:24*	*1*
Dibromofluoromethane (Surr)	*101*		*76 - 132*		*03/03/17 02:24*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	ND		2.0	0.88	ug/L			03/03/17 16:19	1
Naphthalene	ND		1.0	0.40	ug/L			03/03/17 16:19	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*9.0*	*T J*	*ug/L*		*4.90*			*03/03/17 16:19*	*1*
Unknown	*9.1*	*T J*	*ug/L*		*6.29*			*03/03/17 16:19*	*1*
Benzene, (2-methylpropyl)-	*12*	*T J N*	*ug/L*		*11.92*	*538-93-2*		*03/03/17 16:19*	*1*
1H-Indene, 2,3-dihydro-1,6-dimethyl-	*10*	*T J N*	*ug/L*		*13.25*	*17059-48-2*		*03/03/17 16:19*	*1*
Benzene, 1,2,3,5-tetramethyl-	*30*	*T J N*	*ug/L*		*13.43*	*527-53-7*		*03/03/17 16:19*	*1*
Unknown	*13*	*T J*	*ug/L*		*14.13*			*03/03/17 16:19*	*1*
Benzene, pentamethyl-	*8.3*	*T J N*	*ug/L*		*14.23*	*700-12-9*		*03/03/17 16:19*	*1*
Naphthalene, 1,2,3,4-tetrahydro-1,8-dimethyl-	*8.9*	*T J N*	*ug/L*		*14.30*	*25419-33-4*		*03/03/17 16:19*	*1*
Naphthalene, 1,2,3,4-tetrahydro-1,4-dimethyl-	*7.1*	*T J N*	*ug/L*		*14.55*	*4175-54-6*		*03/03/17 16:19*	*1*
1H-Indene, 2,3-dihydro-4,7-dimethyl-	*9.4*	*T J N*	*ug/L*		*14.85*	*6682-71-9*		*03/03/17 16:19*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*104*		*80 - 128*		*03/03/17 16:19*	*1*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*		*03/03/17 16:19*	*1*
Dibromofluoromethane (Surr)	*107*		*76 - 132*		*03/03/17 16:19*	*1*

Client Sample ID: QCTB

Date Collected: 02/21/17 00:01
Date Received: 02/21/17 17:45

Lab Sample ID: 440-177556-11
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			03/03/17 02:50	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			03/03/17 02:50	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			03/03/17 02:50	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			03/03/17 02:50	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			03/03/17 02:50	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			03/03/17 02:50	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			03/03/17 02:50	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			03/03/17 02:50	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			03/03/17 02:50	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			03/03/17 02:50	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			03/03/17 02:50	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			03/03/17 02:50	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			03/03/17 02:50	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			03/03/17 02:50	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			03/03/17 02:50	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			03/03/17 02:50	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			03/03/17 02:50	1

Client Sample ID: QCTB
Date Collected: 02/21/17 00:01
Date Received: 02/21/17 17:45

Lab Sample ID: 440-177556-11
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			03/03/17 02:50	1
2-Hexanone	ND		5.0	2.5	ug/L			03/03/17 02:50	1
Acetonitrile	ND		20	10	ug/L			03/03/17 02:50	1
Acrolein	ND		5.0	2.5	ug/L			03/03/17 02:50	1
Acrylonitrile	ND		2.0	1.0	ug/L			03/03/17 02:50	1
Benzene	ND		0.50	0.25	ug/L			03/03/17 02:50	1
Allyl chloride	ND		1.0	0.50	ug/L			03/03/17 02:50	1
Bromoform	ND		1.0	0.40	ug/L			03/03/17 02:50	1
Bromomethane	ND		0.50	0.25	ug/L			03/03/17 02:50	1
Carbon disulfide	ND		1.0	0.50	ug/L			03/03/17 02:50	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			03/03/17 02:50	1
Chlorobenzene	ND		0.50	0.25	ug/L			03/03/17 02:50	1
Bromochloromethane	ND		0.50	0.25	ug/L			03/03/17 02:50	1
Chloroethane	ND		1.0	0.40	ug/L			03/03/17 02:50	1
Chloroform	ND		0.50	0.25	ug/L			03/03/17 02:50	1
Chloromethane	ND		0.50	0.25	ug/L			03/03/17 02:50	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/03/17 02:50	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/03/17 02:50	1
Dibromochloromethane	ND		0.50	0.25	ug/L			03/03/17 02:50	1
Dibromomethane	ND		0.50	0.25	ug/L			03/03/17 02:50	1
Bromodichloromethane	ND		0.50	0.25	ug/L			03/03/17 02:50	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			03/03/17 02:50	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			03/03/17 02:50	1
Ethylbenzene	ND		0.50	0.25	ug/L			03/03/17 02:50	1
Iodomethane	ND		2.0	1.0	ug/L			03/03/17 02:50	1
Isobutyl alcohol	ND		25	13	ug/L			03/03/17 02:50	1
m,p-Xylene	ND		1.0	0.50	ug/L			03/03/17 02:50	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			03/03/17 02:50	1
Methyl methacrylate	ND		2.0	1.0	ug/L			03/03/17 02:50	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			03/03/17 02:50	1
Naphthalene	ND		1.0	0.40	ug/L			03/03/17 02:50	1
o-Xylene	ND		0.50	0.25	ug/L			03/03/17 02:50	1
Propionitrile	ND		20	10	ug/L			03/03/17 02:50	1
Styrene	ND		0.50	0.25	ug/L			03/03/17 02:50	1
t-Butanol	ND		10	5.0	ug/L			03/03/17 02:50	1
Tetrachloroethene	ND		0.50	0.25	ug/L			03/03/17 02:50	1
Tetrahydrofuran	ND		10	5.0	ug/L			03/03/17 02:50	1
Toluene	ND		0.50	0.25	ug/L			03/03/17 02:50	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/03/17 02:50	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/03/17 02:50	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			03/03/17 02:50	1
Trichloroethene	ND		0.50	0.25	ug/L			03/03/17 02:50	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			03/03/17 02:50	1
Vinyl acetate	ND		4.0	2.0	ug/L			03/03/17 02:50	1
Vinyl chloride	ND		0.50	0.25	ug/L			03/03/17 02:50	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			03/03/17 02:50	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			03/03/17 02:50	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			03/03/17 02:50	1

Client Sample ID: QCTB
Date Collected: 02/21/17 00:01
Date Received: 02/21/17 17:45

Lab Sample ID: 440-177556-11
Matrix: Water

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*2.9*	*T J*	*ug/L*		*3.36*			*03/03/17 02:50*	*1*
Unknown	*10*	*T J*	*ug/L*		*7.34*			*03/03/17 02:50*	*1*
Unknown	*16*	*T J*	*ug/L*		*17.35*			*03/03/17 02:50*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*107*		*80 - 128*		*03/03/17 02:50*	*1*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*		*03/03/17 02:50*	*1*
Dibromofluoromethane (Surr)	*103*		*76 - 132*		*03/03/17 02:50*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	**14**	**J**	20	10	ug/L			03/03/17 16:47	1
Methylene Chloride	ND		2.0	0.88	ug/L			03/03/17 16:47	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*9.5*	*T J*	*ug/L*		*6.29*			*03/03/17 16:47*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*101*		*80 - 128*		*03/03/17 16:47*	*1*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*		*03/03/17 16:47*	*1*
Dibromofluoromethane (Surr)	*107*		*76 - 132*		*03/03/17 16:47*	*1*

Method Summary

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

TestAmerica Job ID: 440-177556-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL IRV
410.4	COD	MCAWW	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: 440-177556-1

Client Sample ID: MW-1-A
Date Collected: 02/21/17 11:20
Date Received: 02/21/17 17:45

Lab Sample ID: 440-177556-1
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 5310C		10	100 mL	100 mL	391553	03/02/17 06:59	YZ	TAL IRV

Client Sample ID: MW-1-B
Date Collected: 02/21/17 11:20
Date Received: 02/21/17 17:45

Lab Sample ID: 440-177556-2
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 5310C		10	100 mL	100 mL	391553	03/02/17 07:12	YZ	TAL IRV

Client Sample ID: MW-5-A
Date Collected: 02/21/17 12:30
Date Received: 02/21/17 17:45

Lab Sample ID: 440-177556-3
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SM 4500 NH3 B			50 mL	50 mL	389736	02/22/17 04:00	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			389758	02/22/17 06:30	YZ	TAL IRV

Client Sample ID: MW-5-B
Date Collected: 02/21/17 12:30
Date Received: 02/21/17 17:45

Lab Sample ID: 440-177556-4
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SM 4500 NH3 B			50 mL	50 mL	389736	02/22/17 04:00	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			389758	02/22/17 06:30	YZ	TAL IRV

Client Sample ID: MW-6-A
Date Collected: 02/21/17 11:05
Date Received: 02/21/17 17:45

Lab Sample ID: 440-177556-5
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SM 4500 NH3 B			50 mL	50 mL	389736	02/22/17 04:00	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			389758	02/22/17 06:30	YZ	TAL IRV

Client Sample ID: MW-6-B
Date Collected: 02/21/17 11:05
Date Received: 02/21/17 17:45

Lab Sample ID: 440-177556-6
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	SM 4500 NH3 B			50 mL	50 mL	389736	02/22/17 04:00	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			389758	02/22/17 06:30	YZ	TAL IRV

Lab Chronicle

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

TestAmerica Job ID: 440-177556-1

Client Sample ID: DW-3-A
Date Collected: 02/21/17 12:20
Date Received: 02/21/17 17:45

Lab Sample ID: 440-177556-7
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	410.4		1	0.625 mL	2.5 mL	391926	03/03/17 15:30	KYP	TAL IRV
Total/NA	Prep	SM 4500 NH3 B			50 mL	50 mL	389736	02/22/17 04:00	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			389758	02/22/17 06:30	YZ	TAL IRV

Client Sample ID: DW-3-B
Date Collected: 02/21/17 12:20
Date Received: 02/21/17 17:45

Lab Sample ID: 440-177556-8
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	410.4		1	0.625 mL	2.5 mL	391926	03/03/17 15:30	KYP	TAL IRV
Total/NA	Prep	SM 4500 NH3 B			50 mL	50 mL	389736	02/22/17 04:00	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			389758	02/22/17 06:30	YZ	TAL IRV

Client Sample ID: DW-5-A
Date Collected: 02/21/17 10:40
Date Received: 02/21/17 17:45

Lab Sample ID: 440-177556-9
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	391683	03/03/17 01:58	WK	TAL IRV
Total/NA	Analysis	8260B	RA	1	10 mL	10 mL	391799	03/03/17 15:50	RM	TAL IRV

Client Sample ID: DW-5-B
Date Collected: 02/21/17 10:40
Date Received: 02/21/17 17:45

Lab Sample ID: 440-177556-10
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	391683	03/03/17 02:24	WK	TAL IRV
Total/NA	Analysis	8260B	RA	1	10 mL	10 mL	391799	03/03/17 16:19	RM	TAL IRV

Client Sample ID: QCTB
Date Collected: 02/21/17 00:01
Date Received: 02/21/17 17:45

Lab Sample ID: 440-177556-11
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	8260B		1	10 mL	10 mL	391683	03/03/17 02:50	WK	TAL IRV
Total/NA	Analysis	8260B	RA	1	10 mL	10 mL	391799	03/03/17 16:47	RM	TAL IRV

Laboratory References:

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

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

TestAmerica Job ID: 440-177556-1

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

Lab Sample ID: MB 440-391683/4
Matrix: Water
Analysis Batch: 391683

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			03/02/17 20:16	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			03/02/17 20:16	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			03/02/17 20:16	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			03/02/17 20:16	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			03/02/17 20:16	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			03/02/17 20:16	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			03/02/17 20:16	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			03/02/17 20:16	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			03/02/17 20:16	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			03/02/17 20:16	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			03/02/17 20:16	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			03/02/17 20:16	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			03/02/17 20:16	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			03/02/17 20:16	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			03/02/17 20:16	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			03/02/17 20:16	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			03/02/17 20:16	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			03/02/17 20:16	1
2-Hexanone	ND		5.0	2.5	ug/L			03/02/17 20:16	1
Acetone	ND		20	10	ug/L			03/02/17 20:16	1
Acetonitrile	ND		20	10	ug/L			03/02/17 20:16	1
Acrolein	ND		5.0	2.5	ug/L			03/02/17 20:16	1
Acrylonitrile	ND		2.0	1.0	ug/L			03/02/17 20:16	1
Benzene	ND		0.50	0.25	ug/L			03/02/17 20:16	1
Allyl chloride	ND		1.0	0.50	ug/L			03/02/17 20:16	1
Bromoform	ND		1.0	0.40	ug/L			03/02/17 20:16	1
Bromomethane	ND		0.50	0.25	ug/L			03/02/17 20:16	1
Carbon disulfide	ND		1.0	0.50	ug/L			03/02/17 20:16	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			03/02/17 20:16	1
Chlorobenzene	ND		0.50	0.25	ug/L			03/02/17 20:16	1
Bromochloromethane	ND		0.50	0.25	ug/L			03/02/17 20:16	1
Chloroethane	ND		1.0	0.40	ug/L			03/02/17 20:16	1
Chloroform	ND		0.50	0.25	ug/L			03/02/17 20:16	1
Chloromethane	ND		0.50	0.25	ug/L			03/02/17 20:16	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/02/17 20:16	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/02/17 20:16	1
Dibromochloromethane	ND		0.50	0.25	ug/L			03/02/17 20:16	1
Dibromomethane	ND		0.50	0.25	ug/L			03/02/17 20:16	1
Bromodichloromethane	ND		0.50	0.25	ug/L			03/02/17 20:16	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			03/02/17 20:16	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			03/02/17 20:16	1
Ethylbenzene	ND		0.50	0.25	ug/L			03/02/17 20:16	1
Iodomethane	ND		2.0	1.0	ug/L			03/02/17 20:16	1
Isobutyl alcohol	ND		25	13	ug/L			03/02/17 20:16	1
m,p-Xylene	ND		1.0	0.50	ug/L			03/02/17 20:16	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			03/02/17 20:16	1
Methyl methacrylate	ND		2.0	1.0	ug/L			03/02/17 20:16	1
Methylene Chloride	1.85	J	2.0	0.88	ug/L			03/02/17 20:16	1

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

Lab Sample ID: MB 440-391683/4
Matrix: Water
Analysis Batch: 391683

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			03/02/17 20:16	1
Naphthalene	ND		1.0	0.40	ug/L			03/02/17 20:16	1
o-Xylene	ND		0.50	0.25	ug/L			03/02/17 20:16	1
Propionitrile	ND		20	10	ug/L			03/02/17 20:16	1
Styrene	ND		0.50	0.25	ug/L			03/02/17 20:16	1
t-Butanol	ND		10	5.0	ug/L			03/02/17 20:16	1
Tetrachloroethene	ND		0.50	0.25	ug/L			03/02/17 20:16	1
Tetrahydrofuran	ND		10	5.0	ug/L			03/02/17 20:16	1
Toluene	ND		0.50	0.25	ug/L			03/02/17 20:16	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/02/17 20:16	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/02/17 20:16	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			03/02/17 20:16	1
Trichloroethene	ND		0.50	0.25	ug/L			03/02/17 20:16	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			03/02/17 20:16	1
Vinyl acetate	ND		4.0	2.0	ug/L			03/02/17 20:16	1
Vinyl chloride	ND		0.50	0.25	ug/L			03/02/17 20:16	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			03/02/17 20:16	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			03/02/17 20:16	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			03/02/17 20:16	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*03/02/17 20:16*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*106*		*80 - 128*		*03/02/17 20:16*	*1*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*		*03/02/17 20:16*	*1*
Dibromofluoromethane (Surr)	*100*		*76 - 132*		*03/02/17 20:16*	*1*

Lab Sample ID: LCS 440-391683/5
Matrix: Water
Analysis Batch: 391683

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	28.2		ug/L		113	63 - 130
1,1,1,2-Tetrachloroethane	25.0	28.1		ug/L		112	60 - 141
1,1,1-Trichloroethane	25.0	25.2		ug/L		101	70 - 130
1,1,2,2-Tetrachloroethane	25.0	27.0		ug/L		108	63 - 130
1,1,2-Trichloroethane	25.0	28.7		ug/L		115	70 - 130
1,1-Dichloroethane	25.0	26.6		ug/L		106	64 - 130
1,1-Dichloroethene	25.0	23.5		ug/L		94	70 - 130
1,1-Dichloropropene	25.0	26.9		ug/L		108	70 - 130
1,2,4-Trichlorobenzene	25.0	26.3		ug/L		105	60 - 140
1,2-Dibromo-3-Chloropropane	25.0	26.0		ug/L		104	52 - 140
1,2-Dichlorobenzene	25.0	28.0		ug/L		112	70 - 130
1,2-Dichloroethane	25.0	25.6		ug/L		102	57 - 138
1,2-Dichloropropane	25.0	26.9		ug/L		108	67 - 130
1,3-Dichlorobenzene	25.0	27.3		ug/L		109	70 - 130

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

Lab Sample ID: LCS 440-391683/5
Matrix: Water
Analysis Batch: 391683

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	27.5		ug/L		110	70 - 130
1,4-Dichlorobenzene	25.0	27.6		ug/L		110	70 - 130
2,2-Dichloropropane	25.0	24.8		ug/L		99	68 - 141
2-Hexanone	25.0	28.3		ug/L		113	10 - 150
Acetone	25.0	24.7		ug/L		99	10 - 150
Acetonitrile	250	243		ug/L		97	49 - 142
Acrolein	25.0	23.0		ug/L		92	10 - 145
Benzene	25.0	26.0		ug/L		104	68 - 130
Bromoform	25.0	25.8		ug/L		103	60 - 148
Bromomethane	25.0	25.8		ug/L		103	64 - 139
Carbon disulfide	25.0	24.2		ug/L		97	52 - 136
Carbon tetrachloride	25.0	25.0		ug/L		100	60 - 150
Chlorobenzene	25.0	27.5		ug/L		110	70 - 130
Bromochloromethane	25.0	26.4		ug/L		105	70 - 130
Chloroethane	25.0	27.2		ug/L		109	64 - 135
Chloroform	25.0	26.1		ug/L		104	70 - 130
Chloromethane	25.0	29.5		ug/L		118	47 - 140
cis-1,2-Dichloroethene	25.0	25.7		ug/L		103	70 - 133
cis-1,3-Dichloropropene	25.0	26.8		ug/L		107	70 - 133
Dibromochloromethane	25.0	27.1		ug/L		108	69 - 145
Dibromomethane	25.0	25.4		ug/L		102	70 - 130
Bromodichloromethane	25.0	26.3		ug/L		105	70 - 132
Dichlorodifluoromethane	25.0	26.2		ug/L		105	29 - 150
Ethylbenzene	25.0	27.4		ug/L		110	70 - 130
m,p-Xylene	25.0	27.4		ug/L		110	70 - 130
Methylene Chloride	25.0	27.1		ug/L		108	52 - 130
Methyl tert-butyl ether	25.0	27.1		ug/L		109	63 - 131
Naphthalene	25.0	26.2		ug/L		105	60 - 140
o-Xylene	25.0	28.8		ug/L		115	70 - 130
Styrene	25.0	26.4		ug/L		106	70 - 134
t-Butanol	250	301		ug/L		121	70 - 130
Tetrachloroethene	25.0	27.5		ug/L		110	70 - 130
Toluene	25.0	27.8		ug/L		111	70 - 130
trans-1,2-Dichloroethene	25.0	26.2		ug/L		105	70 - 130
trans-1,3-Dichloropropene	25.0	26.0		ug/L		104	70 - 132
Trichloroethene	25.0	26.0		ug/L		104	70 - 130
Trichlorofluoromethane	25.0	25.3		ug/L		101	60 - 150
Vinyl acetate	25.0	27.0		ug/L		108	48 - 140
Vinyl chloride	25.0	27.6		ug/L		110	59 - 133
1,2-Dibromoethane (EDB)	25.0	27.6		ug/L		110	70 - 130
2-Butanone (MEK)	25.0	24.4		ug/L		98	44 - 150
4-Methyl-2-pentanone (MIBK)	25.0	28.6		ug/L		115	59 - 149

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*109*		*80 - 128*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*
Dibromofluoromethane (Surr)	*100*		*76 - 132*

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

Lab Sample ID: 440-177847-B-1 MS
Matrix: Water
Analysis Batch: 391683

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	ND		25.0	25.6		ug/L		103	70 - 130
1,1,2,2-Tetrachloroethane	ND		25.0	27.2		ug/L		109	63 - 130
1,1,2-Trichloroethane	ND		25.0	28.3		ug/L		113	70 - 130
1,1-Dichloroethane	ND		25.0	26.8		ug/L		107	65 - 130
1,1-Dichloroethene	ND		25.0	23.5		ug/L		94	70 - 130
1,1-Dichloropropene	ND		25.0	27.1		ug/L		109	64 - 130
1,2,4-Trichlorobenzene	ND		25.0	26.0		ug/L		104	60 - 140
1,2-Dibromo-3-Chloropropane	ND		25.0	25.3		ug/L		101	48 - 140
1,2-Dichlorobenzene	ND		25.0	28.1		ug/L		112	70 - 130
1,2-Dichloroethane	ND		25.0	25.9		ug/L		104	56 - 146
1,2-Dichloropropane	ND		25.0	27.1		ug/L		109	69 - 130
1,3-Dichlorobenzene	ND		25.0	27.2		ug/L		109	70 - 130
1,3-Dichloropropane	ND		25.0	27.6		ug/L		110	70 - 130
1,4-Dichlorobenzene	ND		25.0	28.4		ug/L		114	70 - 130
2,2-Dichloropropane	ND		25.0	25.0		ug/L		100	69 - 138
2-Hexanone	ND		25.0	27.6		ug/L		110	10 - 150
Acetone	ND		25.0	27.5		ug/L		110	10 - 150
Acetonitrile	ND		250	253		ug/L		101	37 - 140
Acrolein	ND		25.0	23.6		ug/L		94	10 - 147
Benzene	ND		25.0	26.0		ug/L		104	66 - 130
Bromoform	ND		25.0	24.0		ug/L		96	59 - 150
Bromomethane	ND		25.0	25.5		ug/L		102	62 - 131
Carbon disulfide	ND		25.0	24.2		ug/L		97	49 - 140
Carbon tetrachloride	ND		25.0	25.3		ug/L		101	60 - 150
Chlorobenzene	ND		25.0	26.4		ug/L		105	70 - 130
Bromochloromethane	ND		25.0	26.9		ug/L		108	70 - 130
Chloroethane	ND		25.0	27.3		ug/L		109	68 - 130
Chloroform	ND		25.0	26.2		ug/L		105	70 - 130
Chloromethane	ND		25.0	30.7		ug/L		123	39 - 144
cis-1,2-Dichloroethene	ND		25.0	25.6		ug/L		103	70 - 130
cis-1,3-Dichloropropene	ND		25.0	25.8		ug/L		103	70 - 133
Dibromochloromethane	ND		25.0	26.2		ug/L		105	70 - 148
Dibromomethane	ND		25.0	26.0		ug/L		104	70 - 130
Bromodichloromethane	ND		25.0	26.0		ug/L		104	70 - 138
Dichlorodifluoromethane	ND		25.0	27.3		ug/L		109	25 - 142
Ethylbenzene	ND		25.0	26.0		ug/L		104	70 - 130
m,p-Xylene	ND		25.0	26.5		ug/L		106	70 - 133
Methylene Chloride	2.6	B	25.0	27.9		ug/L		101	52 - 130
Methyl tert-butyl ether	ND		25.0	27.2		ug/L		109	70 - 130
Naphthalene	ND		25.0	26.5		ug/L		106	60 - 140
o-Xylene	ND		25.0	27.0		ug/L		108	70 - 133
Styrene	ND		25.0	25.1		ug/L		101	29 - 150
t-Butanol	ND		250	299		ug/L		120	70 - 130
Tetrachloroethene	ND		25.0	26.9		ug/L		108	70 - 137
Toluene	ND		25.0	27.4		ug/L		110	70 - 130
trans-1,2-Dichloroethene	ND		25.0	26.2		ug/L		105	70 - 130

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

Lab Sample ID: 440-177847-B-1 MS
Matrix: Water
Analysis Batch: 391683

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	25.7		ug/L		103	70 - 138
Trichloroethene	ND		25.0	26.2		ug/L		105	70 - 130
Trichlorofluoromethane	ND		25.0	25.2		ug/L		101	60 - 150
Vinyl acetate	ND		25.0	27.3		ug/L		109	23 - 150
Vinyl chloride	ND		25.0	27.6		ug/L		110	50 - 137
1,2-Dibromoethane (EDB)	ND		25.0	26.8		ug/L		107	70 - 131
2-Butanone (MEK)	ND		25.0	24.4		ug/L		97	48 - 140
4-Methyl-2-pentanone (MIBK)	ND		25.0	28.5		ug/L		114	52 - 150

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Toluene-d8 (Surr)	*106*		*80 - 128*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*
Dibromofluoromethane (Surr)	*100*		*76 - 132*

Lab Sample ID: 440-177847-B-1 MSD
Matrix: Water
Analysis Batch: 391683

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	29.2		ug/L		117	60 - 130	6	30
1,1,1,2-Tetrachloroethane	ND		25.0	26.7		ug/L		107	60 - 149	1	20
1,1,1-Trichloroethane	ND		25.0	25.6		ug/L		102	70 - 130	0	20
1,1,2,2-Tetrachloroethane	ND		25.0	28.5		ug/L		114	63 - 130	5	30
1,1,2-Trichloroethane	ND		25.0	29.1		ug/L		116	70 - 130	3	25
1,1-Dichloroethane	ND		25.0	26.9		ug/L		108	65 - 130	1	20
1,1-Dichloroethene	ND		25.0	24.1		ug/L		96	70 - 130	3	20
1,1-Dichloropropene	ND		25.0	27.3		ug/L		109	64 - 130	1	20
1,2,4-Trichlorobenzene	ND		25.0	27.7		ug/L		111	60 - 140	6	20
1,2-Dibromo-3-Chloropropane	ND		25.0	27.4		ug/L		110	48 - 140	8	30
1,2-Dichlorobenzene	ND		25.0	28.1		ug/L		112	70 - 130	0	20
1,2-Dichloroethane	ND		25.0	26.6		ug/L		107	56 - 146	3	20
1,2-Dichloropropane	ND		25.0	27.8		ug/L		111	69 - 130	2	20
1,3-Dichlorobenzene	ND		25.0	27.9		ug/L		112	70 - 130	3	20
1,3-Dichloropropane	ND		25.0	28.2		ug/L		113	70 - 130	2	25
1,4-Dichlorobenzene	ND		25.0	28.6		ug/L		115	70 - 130	1	20
2,2-Dichloropropane	ND		25.0	25.4		ug/L		102	69 - 138	2	25
2-Hexanone	ND		25.0	28.9		ug/L		116	10 - 150	5	35
Acetone	ND		25.0	28.3		ug/L		113	10 - 150	3	35
Acetonitrile	ND		250	261		ug/L		104	37 - 140	3	40
Acrolein	ND		25.0	23.9		ug/L		96	10 - 147	1	40
Benzene	ND		25.0	26.3		ug/L		105	66 - 130	1	20
Bromoform	ND		25.0	25.4		ug/L		102	59 - 150	6	25
Bromomethane	ND		25.0	26.6		ug/L		107	62 - 131	4	25
Carbon disulfide	ND		25.0	24.7		ug/L		99	49 - 140	2	20
Carbon tetrachloride	ND		25.0	25.4		ug/L		102	60 - 150	1	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	2	25
Chloroethane	ND		25.0	27.9		ug/L		112	68 - 130	2	25

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

Lab Sample ID: 440-177847-B-1 MSD
Matrix: Water
Analysis Batch: 391683

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	26.6		ug/L		106	70 - 130	2	20
Chloromethane	ND		25.0	30.3		ug/L		121	39 - 144	1	25
cis-1,2-Dichloroethene	ND		25.0	26.3		ug/L		105	70 - 130	3	20
cis-1,3-Dichloropropene	ND		25.0	26.3		ug/L		105	70 - 133	2	20
Dibromochloromethane	ND		25.0	26.2		ug/L		105	70 - 148	0	25
Dibromomethane	ND		25.0	26.5		ug/L		106	70 - 130	2	25
Bromodichloromethane	ND		25.0	26.9		ug/L		107	70 - 138	3	20
Dichlorodifluoromethane	ND		25.0	27.4		ug/L		109	25 - 142	0	30
Ethylbenzene	ND		25.0	26.3		ug/L		105	70 - 130	1	20
m,p-Xylene	ND		25.0	26.3		ug/L		105	70 - 133	1	25
Methylene Chloride	2.6	B	25.0	28.1		ug/L		102	52 - 130	1	20
Methyl tert-butyl ether	ND		25.0	27.9		ug/L		111	70 - 130	3	25
Naphthalene	ND		25.0	28.6		ug/L		114	60 - 140	8	30
o-Xylene	ND		25.0	27.1		ug/L		109	70 - 133	1	20
Styrene	ND		25.0	25.1		ug/L		100	29 - 150	0	35
t-Butanol	ND		250	299		ug/L		120	70 - 130	0	25
Tetrachloroethene	ND		25.0	26.2		ug/L		105	70 - 137	3	20
Toluene	ND		25.0	27.9		ug/L		112	70 - 130	2	20
trans-1,2-Dichloroethene	ND		25.0	27.0		ug/L		108	70 - 130	3	20
trans-1,3-Dichloropropene	ND		25.0	26.7		ug/L		107	70 - 138	4	25
Trichloroethene	ND		25.0	26.4		ug/L		106	70 - 130	1	20
Trichlorofluoromethane	ND		25.0	25.9		ug/L		103	60 - 150	3	25
Vinyl acetate	ND		25.0	27.3		ug/L		109	23 - 150	0	30
Vinyl chloride	ND		25.0	28.2		ug/L		113	50 - 137	2	30
1,2-Dibromoethane (EDB)	ND		25.0	26.7		ug/L		107	70 - 131	0	25
2-Butanone (MEK)	ND		25.0	25.9		ug/L		104	48 - 140	6	40
4-Methyl-2-pentanone (MIBK)	ND		25.0	29.4		ug/L		118	52 - 150	3	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*108*		*80 - 128*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*
Dibromofluoromethane (Surr)	*102*		*76 - 132*

Lab Sample ID: MB 440-391799/4
Matrix: Water
Analysis Batch: 391799

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			03/03/17 09:05	1
Methylene Chloride	ND		2.0	0.88	ug/L			03/03/17 09:05	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*03/03/17 09:05*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*106*		*80 - 128*		*03/03/17 09:05*	*1*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*		*03/03/17 09:05*	*1*

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

Lab Sample ID: MB 440-391799/4
Matrix: Water
Analysis Batch: 391799

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

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	104		76 - 132		03/03/17 09:05	1

Lab Sample ID: LCS 440-391799/5
Matrix: Water
Analysis Batch: 391799

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	27.4		ug/L		110	10 - 150		
Methylene Chloride			25.0	24.4		ug/L		97	52 - 130		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	105		80 - 128
4-Bromofluorobenzene (Surr)	101		80 - 120
Dibromofluoromethane (Surr)	104		76 - 132

Lab Sample ID: 440-177920-A-2 MS
Matrix: Water
Analysis Batch: 391799

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		250	210		ug/L		84	10 - 150		
Methylene Chloride	ND		250	215		ug/L		86	52 - 130		

Surrogate	MS %Recovery	MS Qualifier	Limits
Toluene-d8 (Surr)	104		80 - 128
4-Bromofluorobenzene (Surr)	102		80 - 120
Dibromofluoromethane (Surr)	105		76 - 132

Lab Sample ID: 440-177920-A-2 MSD
Matrix: Water
Analysis Batch: 391799

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		250	232		ug/L		93	10 - 150	10	35
Methylene Chloride	ND		250	239		ug/L		96	52 - 130	10	20

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Toluene-d8 (Surr)	106		80 - 128
4-Bromofluorobenzene (Surr)	101		80 - 120
Dibromofluoromethane (Surr)	102		76 - 132

Method: 410.4 - COD

Lab Sample ID: MB 440-391926/3
Matrix: Water
Analysis Batch: 391926

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			03/03/17 15:29	1

Lab Sample ID: LCS 440-391926/4
Matrix: Water
Analysis Batch: 391926

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		99	90 - 110

Lab Sample ID: 440-177546-A-1 MS
Matrix: Water
Analysis Batch: 391926

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	25		200	189		mg/L		82	70 - 120

Lab Sample ID: 440-177546-A-1 MSD
Matrix: Water
Analysis Batch: 391926

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	25		200	191		mg/L		83	70 - 120	1	15

Method: SM 4500 NH3 D - Ammonia

Lab Sample ID: MB 440-389736/2-A
Matrix: Water
Analysis Batch: 389758

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 389736

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	ND		0.50	0.10	mg/L		02/22/17 04:00	02/22/17 06:30	1

Lab Sample ID: LCS 440-389736/1-A
Matrix: Water
Analysis Batch: 389758

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 389736

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	2.50	2.38		mg/L		95	85 - 115
Ammonia as NH3	3.04	2.89		mg/L		95	85 - 115

Lab Sample ID: 440-177353-U-1-B MS
Matrix: Water
Analysis Batch: 389758

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 389736

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	ND		2.50	2.48		mg/L		99	75 - 125
Ammonia as NH3	ND		3.04	3.01		mg/L		99	75 - 125

Method: SM 4500 NH3 D - Ammonia (Continued)

Lab Sample ID: 440-177353-U-1-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 389758 — **Prep Batch: 389736**

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	0	15
Ammonia as NH3	ND		3.04	3.01		mg/L		99	75 - 125	0	15

Lab Sample ID: 440-177353-U-1-D DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 389758 — **Prep Batch: 389736**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Ammonia (as N)	ND		ND		mg/L		NC	15

Method: SM 5310C - TOC

Lab Sample ID: MB 440-391553/7 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 391553

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		0.10	0.050	mg/L			03/02/17 04:49	1

Lab Sample ID: LCS 440-391553/6 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 391553

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	5.00	4.74		mg/L		95	90 - 110

Lab Sample ID: MRL 440-391553/5 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 391553

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	0.100	0.0675	J	mg/L		68	50 - 150

Lab Sample ID: 440-177884-B-3 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 391553

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	0.78		5.00	4.86		mg/L		82	80 - 120

Lab Sample ID: 440-177884-B-3 MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 391553

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon	0.78		5.00	4.88		mg/L		82	80 - 120	0	20

QC Association Summary

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

TestAmerica Job ID: 440-177556-1

GC/MS VOA

Analysis Batch: 391683

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-177556-9	DW-5-A	Total/NA	Water	8260B	
440-177556-10	DW-5-B	Total/NA	Water	8260B	
440-177556-11	QCTB	Total/NA	Water	8260B	
MB 440-391683/4	Method Blank	Total/NA	Water	8260B	
LCS 440-391683/5	Lab Control Sample	Total/NA	Water	8260B	
440-177847-B-1 MS	Matrix Spike	Total/NA	Water	8260B	
440-177847-B-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

Analysis Batch: 391799

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-177556-9 - RA	DW-5-A	Total/NA	Water	8260B	
440-177556-10 - RA	DW-5-B	Total/NA	Water	8260B	
440-177556-11 - RA	QCTB	Total/NA	Water	8260B	
MB 440-391799/4	Method Blank	Total/NA	Water	8260B	
LCS 440-391799/5	Lab Control Sample	Total/NA	Water	8260B	
440-177920-A-2 MS	Matrix Spike	Total/NA	Water	8260B	
440-177920-A-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

General Chemistry

Prep Batch: 389736

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-177556-3	MW-5-A	Total/NA	Water	SM 4500 NH3 B	
440-177556-4	MW-5-B	Total/NA	Water	SM 4500 NH3 B	
440-177556-5	MW-6-A	Total/NA	Water	SM 4500 NH3 B	
440-177556-6	MW-6-B	Total/NA	Water	SM 4500 NH3 B	
440-177556-7	DW-3-A	Total/NA	Water	SM 4500 NH3 B	
440-177556-8	DW-3-B	Total/NA	Water	SM 4500 NH3 B	
MB 440-389736/2-A	Method Blank	Total/NA	Water	SM 4500 NH3 B	
LCS 440-389736/1-A	Lab Control Sample	Total/NA	Water	SM 4500 NH3 B	
440-177353-U-1-B MS	Matrix Spike	Total/NA	Water	SM 4500 NH3 B	
440-177353-U-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 NH3 B	
440-177353-U-1-D DU	Duplicate	Total/NA	Water	SM 4500 NH3 B	

Analysis Batch: 389758

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-177556-3	MW-5-A	Total/NA	Water	SM 4500 NH3 D	389736
440-177556-4	MW-5-B	Total/NA	Water	SM 4500 NH3 D	389736
440-177556-5	MW-6-A	Total/NA	Water	SM 4500 NH3 D	389736
440-177556-6	MW-6-B	Total/NA	Water	SM 4500 NH3 D	389736
440-177556-7	DW-3-A	Total/NA	Water	SM 4500 NH3 D	389736
440-177556-8	DW-3-B	Total/NA	Water	SM 4500 NH3 D	389736
MB 440-389736/2-A	Method Blank	Total/NA	Water	SM 4500 NH3 D	389736
LCS 440-389736/1-A	Lab Control Sample	Total/NA	Water	SM 4500 NH3 D	389736
440-177353-U-1-B MS	Matrix Spike	Total/NA	Water	SM 4500 NH3 D	389736
440-177353-U-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 NH3 D	389736
440-177353-U-1-D DU	Duplicate	Total/NA	Water	SM 4500 NH3 D	389736

General Chemistry (Continued)

Analysis Batch: 391553

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-177556-1	MW-1-A	Total/NA	Water	SM 5310C	
440-177556-2	MW-1-B	Total/NA	Water	SM 5310C	
MB 440-391553/7	Method Blank	Total/NA	Water	SM 5310C	
LCS 440-391553/6	Lab Control Sample	Total/NA	Water	SM 5310C	
MRL 440-391553/5	Lab Control Sample	Total/NA	Water	SM 5310C	
440-177884-B-3 MS	Matrix Spike	Total/NA	Water	SM 5310C	
440-177884-B-3 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 5310C	

Analysis Batch: 391926

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-177556-7	DW-3-A	Total/NA	Water	410.4	
440-177556-8	DW-3-B	Total/NA	Water	410.4	
MB 440-391926/3	Method Blank	Total/NA	Water	410.4	
LCS 440-391926/4	Lab Control Sample	Total/NA	Water	410.4	
440-177546-A-1 MS	Matrix Spike	Total/NA	Water	410.4	
440-177546-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	410.4	

Definitions/Glossary

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

TestAmerica Job ID: 440-177556-1

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.
ID	Analyte identified by RT & presence of single mass ion

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.

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, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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)

Certification Summary

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

TestAmerica Job ID: 440-177556-1

Laboratory: TestAmerica Irvine

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska	State Program	10	CA01531	06-30-17
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. 16-001r	01-23-17 *
Hawaii	State Program	9	N/A	01-29-18
Kansas	NELAP Secondary AB	7	E-10420	07-31-17
Nevada	State Program	9	CA015312016-2	07-31-17
New Mexico	State Program	6	N/A	01-29-17 *
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

* Certification renewal pending - certification considered valid.

TestAmerica Irvine
17461 Derian Ave Suite 100
Irvine, CA 92614-5817
Phone (949) 261-1022 Fax (949) 260-3297

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information	Sampler: A. SHALV. N. REASON	Lab PM: Tomova, Rossina D	Carrier Tracking No(s):	COC No: 440-117513-20893.1
Client Contact: Kyle Welchans	Phone: 909-772-7805	E-Mail: rossina.tomova@testamericainc.com		Page: Page 1 of 1
Company: Geo-Logic Associates				Job #: 2016-0030
Address: 11415 West Bernardo Court Suite 200	Due Date Requested:			
City: San Diego	TAT Requested (days):			
State, Zip: CA, 92127				
Phone: 909-772-4099(Tel)	PO #: PO 5633225			
Email: kwelchans@geo-logic.com	WO #:			
Project Name: Republic Sunshine Canyon	Project #: 44007851			
Site: Sunshine Cyn Landfill	SSOW#:			

Analysis Requested

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SM4500NH3_D - Local Method	410.4 - Chemical Oxygen Demand	5310C - Total Organic Carbon	8260B_LL - (MOD) Appendix II +MTBE+TBA+TICS	Total Number of containers	Special Instructions/Note:
Preservation Code:					X	X	S	S		A	X	
MW-1-A	2/21/17	1120	G	Water	N	N			X			
MW-1-B		1120		Water					X			
MW-5-A		1230		Water			X					
MW-5-B		1230		Water			X					
MW-6-A		1105		Water			X					
MW-6-B		1105		Water			X					
DW-3-A		1220		Water			X	X				
DW-3-B		1220		Water			X	X				
DW-5-A		1040		Water						X		
DW-5-B		1040		Water						X		
QCTB				Water	V	V				X		LAB DID NOT DELIVER WATER FOR AMBIENT

440-177556 Chain of Custody

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - pH 4-5
L - EDA	Z - other (specify)

Other:

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☒ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:		Date:	Time:	Method of Shipment:	
Relinquished by:	Date/Time: 2-21-17 / 1305	Company GLA	Received by:	Date/Time: 2/21/17 1305	Company TAI
Relinquished by:	Date/Time: 2/21/17 1745	Company TAI	Received by:	Date/Time: 2/21/17 17:45	Company TAI
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

LB 2/21/17

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3/10/2017

Login Sample Receipt Checklist

Client: Geo-Logic Associates

Job Number: 440-177556-1

Login Number: 177556
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.	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.	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 Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614
Phone: 949.261.1022 Fax:

Chain of Custody Record

137081

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.

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

TAL-8210 (0713)

Client Contact	Project Manager: Kyle Walchan	Site Contact: Mel Eaton	Date: 3-13-17	COC No:
Company Name: GeoLogic Associates	Tel/Fax: 858-451-1156	Lab Contact: Rossine	Carrier: Test America	1 of 1 COCs
Address: 16415 W Bernardo Ct	Analysis Turnaround Time			Sampler: D. Asturc
City/State/Zip: San Diego, CA 92127	☐ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: 451-1156	TAT if different from Below ____			Walk-in Client:
Fax: 858-451-1087	☐ 2 weeks			Lab Sampling:
Project Name: Sunshine Cyn Republic	☐ 1 week			
Site: Sunshine Canyon	☐ 2 days			Job / SDG No.:
PO# 4910027851	☐ 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)	EPA 8260B - VOC	EPA 310.1 Total Alkalinity	EPA 358 & Ammonia N	EPA 410.4 - COD	EPA 300.0 - Chloride	EPA 6010B [illegible]	[illegible]	EPA [illegible]	EPA 8270 1,4 Dioxane	Sample Specific Notes:
Combined subdrains	3.13.17	1335	G	GW	12	N	N	X	X	X	X	X	X	X	X	X	
Subdrain N	↓	1225		"	12			X	X	X	X	X	X	X	X	X	
PZ-2		1255		GW	12			X	X	X	X	X	X	X	X	X	
MW-6		1140			12			X	X	X	X	X	X	X	X	X	
MW-14		1000			12			X	X	X	X	X	X	X	X	X	
CM-9R3		1220			12			X	X	X	X	X	X	X	X	X	
CM-10R		1100			12			X	X	X	X	X	X	X	X	X	
MW-5		1348		↓	12			X	X	X	X	X	X	X	X	X	
QC AB		—		[illegible]	4			X									
QC TB	↓	—	↓	"	4			X									

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

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

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

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

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

Special Instructions/QC Requirements & Comments:

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

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	Geo-Logic	3/13/17 1405	[signature]	TA	3/13/17 1405
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

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

Chain of Custody Record

069190

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.	Project Manager: [illegible]	Site Contact: [illegible]	Date: 3-14-17
Address: [illegible]	Tel/Fax: 858-451-1136	Lab Contact: [illegible]	Carrier: TA
City/State/Zip: S.D., CA 92127	Analysis Turnaround Time		
Phone: 858-451-1136	☐ CALENDAR DAYS ☐ WORKING DAYS		
Fax: 858-451-1087	TAT if different from Below ____		
Project Name: Republic Services	☐ 2 weeks		
Site: [illegible] Landfill	☐ 1 week ☐ 2 days		
PO# 44007851	☐ 1 day		

COC No: 1 of 1 COCs
Sampler:
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	EPA 8270 1,4-Dioxane	Total Alkalinity EPA 310.1	Ammonia 350.2	C.O.D. (410.1)	Chloride (300.0)	[illegible] (6010B)	EPA 160.1 T.D.S.	Total Organic Carbon (415.1)		Sample Specific Notes
MW-7	3/14/17	1135	G	GW	12			X	X	X	X	X	X	X	X	X	X	
CM-11R	↓	0915	↓	↓	12			X	X	X	X	X	X	X	X	X	X	
DW-1	↓	1130	↓	↓	12			X	X	X	X	X	X	X	X	X	X	
DW-5	↓	1400	↓	↓	12			X	X	X	X	X	X	X	X	X	X	
Dup.	↓	—	↓	GW	12			X	X	X	X	X	X	X	X	X	X	
Extraction Trench	↓	1055	↓	WW	12			X	X	X	X	X	X	X	X	X	X	
QCTB	↓	—	↓	LAB H2O	4			X										
QCAB	↓	—	↓	"	4			X										

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

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

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

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

Special Instructions/QC Requirements & Comments:

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

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	Geo-Logic	3/14/17/1430	[signature]	TA	3/14/17 1430
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

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

Chain of Custody Record

144503

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.

TAL-8210 (0713)

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

Client Contact	Project Manager: Kyle Welchans	Site Contact: P. Dickerson	Date: 3-15-17	COC No:
Company Name: Geo-Logic Associates	Tel/Fax: 858-451-1136	Lab Contact: K. Tomova	Carrier: T/A	1 of 1 COCs
Address: 11411 W. Bernardo Ct.	Analysis Turnaround Time			Sampler: DS, AS
City/State/Zip: S.D., CA 92127	☐ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: 858-451-1136	TAT if different from Below _____			Walk-in Client:
Fax: 858-451-1087	☐ 2 weeks			Lab Sampling:
Project Name: Republic Services	☐ 1 week			Job / SDG No.:
Site: Sunshine Cyn. Landfill	☐ 2 days			
PO# 4400785 1	☐ 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)	EPA 8260B - VOCs	EPA 8270 - 1,4 Dioxane	Total Alkalinity	Ammonia as N	COD, TDS	Chloride, TOC	Total Potassium	Sample Specific Notes:
DW-2	3/15/17	0940	G	GW	12			X	X	X	X	X	X	X	
DW-3		1058			12			X	X	X	X	X	X	X	
PZ-1		1244			12			X	X	X	X	X	X	X	
MW-2A		0910			12			X	X	X	X	X	X	X	
MW-2B		1035			12			X	X	X	X	X	X	X	
DW-1		1220		GW	12			X	X	X	X	X	X	X	
QCAB		—		(TB) SC	1			X							
QCTB		—		"	3			X							

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

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

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

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

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

Special Instructions/QC Requirements & Comments:

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

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	Geo-Logic	3/15/17 1245	[signature]	3/15/17 1500	[illegible]
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

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

Chain of Custody Record

141857

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

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

Client Contact
ompany Name: Republic / GLA
ddress: 11415 W. Bernardo Ct. #200
ty/State/Zip: San Diego CA 92127
hone: 858 - 415 - 1136
ax: 858 - 415 - 1087
roject Name: Republic Services
te: Sunshine Cyn landfill
O# 4400785
GLA Job# 2016.0030

Project Manager: Kyle Welchans
Tel/Fax: 619 - 540 - 5509
Site Contact: Matt Eaton
Lab Contact: Rossina
Date: 3.16.17
Carrier: TestAmerica
COC No: 1 of 1 COCs
Sampler: AS

Analysis Turnaround Time
☐ CALENDAR DAYS ☐ WORKING DAYS
TAT if different from Below ________
☐ 2 weeks
☐ 1 week
☐ 2 days
☐ 1 day

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 8260-VOC	Total Alkalinity 310.1	Ammonia (N) - 350.2	COD - 410.4	Chloride - 300.0	Total Potassium - 6010B	TDS - EPA 160.1	TOC - EPA 415.1	EPA 8270 - 1,4-Dioxane	Sample Specific Notes
MW-1	3/16/17	1015	G	GW	12	N	N	X	X	X	X	X	X	X	X	X	
MW-13R	↓	0845	↓	↓	12	↓	↓	X	X	X	X	X	X	X	X	X	
QCAB	↓	—	↓	LAB D.I.	4	↓	↓	X									
QCTB	↓	—	↓	↓	4	↓	↓	X									

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

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

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

pecial Instructions/QC Requirements & Comments:

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

elinquished by: [signature]	Company: Geo-Logic	Date/Time: 3/16/17/1040	Received by: [signature]	Company:	Date/Time: 3/16/17 @10:40
elinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
elinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Geo-Logic
ASSOCIATES
Geologists, Hydrogeologists, and Engineers

GROUNDWATER MONITORING PROGRAM
WATER LEVEL SURVEY RECORD SHEET

Site: Sunshine Cyn. L/F
Project No.: 2016.0030
Date: 3-13-17
Field Personnel: BS, MC, AS

WELL I.D.	CONSTRUCTED TOTAL DEPTH (TD)	ACTUAL TOTAL DEPTH (TD)	DEPTH TO WATER (DTW)	COMMENTS
MW-1			15.19	
MW-2A			30.43	
MW-2B			17.64	
MW-5			17.58	
MW-6			16.38	
MW-8			15.37	
MW-9			13.96	
MW-13R			17.22	
MW-14			14.44	
DW-1			TOC	
DW-2			23.08	
DW-3			153.54	
DW-4			21.79	
DW-5			14.86	
CM-5R			212.49	
CM-10R			48.72	
CM-11R			12.13	
CM-9R3			7.96	
PZ-1			92.63	
PZ-2			122.37	

REMARKS:

Name: B. Salinas Signature: Brent Salinas

Geo-Logic
ASSOCIATES
Geologists, Hydrogeologists, and Engineers

GROUNDWATER MONITORING PROGRAM
WATER LEVEL SURVEY RECORD SHEET

Site Sunshine Cyn. L/F
Project No.: 2016.0030
Date 3-13-17
Field Personnel BS, MC, AS

WELL I.D.	CONSTRUCTED TOTAL DEPTH (TD)	ACTUAL TOTAL DEPTH (TD)	DEPTH TO WATER (DTW)	COMMENTS
PZ-3			219.34	
PZ-4			111.89	
EW-2			13.10	
EW-3			18.55	
EW-4			18.27	
OM-3			15.16	

REMARKS:

Name: B. Salinas Signature: Brent Salinas

Geo-Logic ASSOCIATES

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GROUNDWATER MONITORING PROGRAM
WELL DATA SHEET

Site Name:	Sonshine Cyn	**Project No.:**	2016.0030
Well I.D.:	CM-9R3	**Sampling Date:**	3.13.17
Collected By:	AS	**Purge start Time:**	1151
Casing Diameter (inches):	4	**Purge Stop time:**	1210
Starting Water Level:	7.99	**Sampling (Well Recovery) Time:**	1220
Total Depth (feet):	29.00	**Ending Water Level (feet):**	9.42
Water column (feet):	21.01	**Total Purged (gallons):**	2.0+
Screen Length (feet):	—	**Duplicate Sample:**	YES (NO)
Sample Method:	(Micro Purge) Low Flow		
Horiba Model S/N:	U-52 / WGAP8GRS		

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
1156	0.50	8.60	5.72	7.12	225	2.01	19.16	198
1200	1.00	8.90	5.46	6.94	56.1	1.13	18.74	245
1203	1.25	9.00	5.40	6.94	39.4	1.05	18.67	259
1205	1.50	9.13	5.38	6.89	22.3	1.01	18.70	269
1207	1.75	9.28	5.36	6.91	22.0	1.00	18.68	270
1210	2.00	9.42	5.36	6.89	21.7	0.99	18.61	272

Purge Sampling Rates: 25 PSI ; Refill (20.0) ; Discharge (10.0) ;

Well condition: O.K - Water is Slightly Cloudy w/ no odor.

Additional Info/Comments: Sunny. Hot 90's * Pump Depth: 27.4 ft.

Name: Adam Shaw **Signature:** A C. S

GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Cyn Well ID: CM-9R3 Date: 3.13.17

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: No pad observed - Sediments around well from erosion out of canyon from past rains.

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 is cracked and can be lifted off w/out unlocking.

Well Riser: Material: PVC

Condition of Riser: Good: ✓ Damaged: _____

Condition of Riser Cap: Good: ✓ Damaged: _____

Measurment reference point: Yes: ✓ No: _____

Remarks:

Dedicated Pump: Type: Bladder

Condition: Good: ✓ Damaged: _____ Missing: _____

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

Remarks:

Field Certification: A.C. [signature] Signed — Field Tech Title — 3.13.17 Date

Geo-Logic ASSOCIATES

Geologists • Hydrogeologists • Engineers

GROUNDWATER MONITORING PROGRAM
WELL DATA SHEET

Site Name:	Sonshine Cyn	**Project No.:**	2016.0030
Well I.D.:	CM-10R	**Sampling Date:**	3.13.17
Collected By:	AS	**Purge start Time:**	1021
Casing Diameter (inches):	4	**Purge Stop time:**	(AS) ~~1032~~ 1049
Starting Water Level:	48.74	**Sampling (Well Recovery) Time:**	1100
Total Depth (feet):	110.90	**Ending Water Level (feet):**	48.94
Water column (feet):		**Total Purged (gallons):**	2.5+
Screen Length (feet):	—	**Duplicate Sample:**	YES (NO)
Sample Method:	(Micro Purge) Low Flow		
Horiba Model S/N:	U-52 / WGUP8GR5		

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
1032	1.00	48.94	7.03	4.82	0.2	2.06	22.24	-49
1037	1.50	"	7.04	4.82	0.1	1.78	22.16	-51
1040	1.75	"	7.05	4.82	0.0	1.69	22.14	-52
1043	2.00	"	7.05	4.83	0.0	1.70	22.18	-52
1046	2.25	"	7.05	4.83	0.0	1.68	22.19	-53
1049	2.50	"	7.06	4.82	0.0	1.65	22.17	-53

Purge Sampling Rates: 50 PSI ; Refill (45.0). Discharge (15.0).

Well condition: O.K. - Water is visually clear w/ strong odor.

Additional Info/Comments: Sunny, Warm * Pump Depth : 100 ft.

Name: Adam Shaw **Signature:** A. C. Shaw

GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Cyn Well ID: CM-1DR Date: 3.13.17

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: _____

Measurment reference point: Yes: ✓ No: _____

Remarks:

Dedicated Pump: Type: Bladder

Condition: Good: ✓ Damaged: _____ Missing: _____

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

Remarks:

Field Certification: [signature] Signed Field Tech Title 3.13.17 Date

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GROUNDWATER MONITORING PROGRAM
WELL DATA SHEET

Site Name:	Sunshine Cyn	**Project No.:**	2016.0030
Well I.D.:	MW-1	**Sampling Date:**	3.16.17
Collected By:	AS	**Purge start Time:**	0941
Casing Diameter (inches):	4	**Purge Stop time:**	1000
Starting Water Level:	15.19	**Sampling (Well Recovery) Time:**	1015
Total Depth (feet):	29.60	**Ending Water Level (feet):**	15.25
Water column (feet):	14.41	**Total Purged (gallons):**	2.0+
Screen Length (feet):	—	**Duplicate Sample:**	YES (NO)
Sample Method:	(Micro Purge) Low Flow		
Horiba Model S/N:	U-52 / WGAP8GRS		

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
0946	0.50	15.25	6.83	6.16	120	2.61	22.14	-61
0950	1.00	"	6.80	6.28	149	2.34	22.11	-62
0952	1.25	"	6.79	6.20	161	2.22	22.08	-64
0954	1.50	"	6.78	6.20	172	2.17	22.08	-64
0957	1.75	"	6.78	6.20	167	2.16	22.09	-64
1000	2.00	"	6.77	6.20	168	2.14	22.09	-64

Purge Sampling Rates: 20 PSI ; Refill (30.0), Discharge (11.0).

Water has slight yellowish tint w/ odor.

Well condition: O.K.

Additional Info/Comments: Clear, Mild, Breezy

* Blanks taken here.

Name: Adam Shaw **Signature:** A.C.S.

GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Gym Well ID: MW-1 Date: 3.16.17

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: 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: _____

Measurment reference point: Yes: ✓ No: _____

Remarks:

Dedicated Pump: Type: Bladder

Condition: Good: ✓ Damaged: _____ Missing: _____

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

Remarks:

Field Certification: CC. M 3.16.17 Field Tech

Signed Title Date

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GROUNDWATER MONITORING PROGRAM
WELL DATA SHEET

Site Name:	Sunshine Cyn	Project No.:	2016.0030
Well I.D.:	MW-2A	Sampling Date:	3.15.17
Collected By:	AS	Purge start Time:	0805
Casing Diameter (inches):	4	Purge Stop time:	0842
Starting Water Level:	30.43	Sampling (Well Recovery) Time:	0900
Total Depth (feet):	41.30	Ending Water Level (feet):	32.16
Water column (feet):	10.87	Total Purged (gallons):	1.5+
Screen Length (feet):	—	Duplicate Sample:	YES (NO)
Sample Method:	(Micro Purge) Low Flow		
Horiba Model S/N:	U-52 | WQCP8CR5		

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
0812	0.25	30.99	7.36	4.23	2.3	1.45	21.00	2
0818	0.50	31.19	7.43	4.18	1.9	1.25	21.07	8
0824	0.75	31.46	7.55	4.08	1.3	0.99	21.30	30
0830	1.00	31.71	7.55	4.08	1.2	0.98	21.29	31
0836	1.25	31.93	7.56	4.07	1.1	0.97	21.31	33
0842	1.50	32.16	7.57	4.08	1.0	0.96	21.32	34

Purge Sampling Rates: 25 PSI ; Refill (25.0), Discharge (6.0).

Water is visably clear w/ no odor. Took time to fill bottles due to low yield.

Well condition: O.K. - Requires hiking sampling equipment + bottles downslope to access. Heavy erosion around well - Casing/monument visable below concrete pad

Additional Info/Comments: Sunny, Warm * Pump Inlet: 39 ft.

Name: Adam Shaw Signature: AC. Sh

GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Cyn Well ID: MW-2A Date: 3.15.17

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. Heavy erosion around well - the casing/monument is visable below concrete pad.

Concrete Pad:

Integrity: Good: ✓ Inadequate: _____

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

Remarks: Heavy erosion - well casing/monument is visable below concrete pad.

Protective Outer Casing: Material: Metal

Condition of Protective Casing: Good: ✓ Damaged: _____

Condition of Locking Cap: Good: ✓ Damaged: _____

Condition of Lock: Good: ✓ Damaged: _____

Condition of Weepholes: Good: ✓ Damaged: _____

Remarks:

Well Riser: Material: PVC

Condition of Riser: Good: ✓ Damaged: _____

Condition of Riser Cap: Good: ✓ Damaged: _____

Measurment reference point: Yes: ✓ No: _____

Remarks:

Dedicated Pump: Type: Bladder.

Condition: Good: ✓ Damaged: _____ Missing: _____

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

Remarks:

Field Certification: AC. [signature] Field Tech 3.15.17

Signed Title Date

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GROUNDWATER MONITORING PROGRAM
WELL DATA SHEET

Site Name:	Sonshine Cyn	Project No.:	2016.0030
Well I.D.:	MW-2B	Sampling Date:	3.15.17
Collected By:	AS	Purge start Time:	0958
Casing Diameter (inches):	4	Purge Stop time:	1020
Starting Water Level:	17.64	Sampling (Well Recovery) Time:	1035
Total Depth (feet):	71.10	Ending Water Level (feet):	20.43
Water column (feet):	53.46	Total Purged (gallons):	2.0+
Screen Length (feet):	——	Duplicate Sample:	YES (NO)
Sample Method:	(Micro Purge) Low Flow		
Horiba Model S/N:	U-52 | WQCP8CR5		

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
1004	0.50	19.20	7.57	4.57	0.7	3.44	21.81	-115
1009	1.00	19.61	7.56	4.58	0.1	2.96	21.76	-113
1012	1.25	19.82	7.56	4.58	0.0	2.55	21.75	-112
1014	1.50	20.98	7.55	4.59	0.0	2.54	21.73	-112
1017	1.75	20.19	7.55	4.59	0.0	2.52	21.75	-111
1020	2.00	20.43	7.55	4.57	0.0	2.49	21.74	-111

Purge Sampling Rates: 40 PSI ; Refill |35.0|, Discharge |13.0|.
Water is visually clear w/ strong odor.

Well condition: O.K. - Requires hiking sampling equipment + bottles down slope to well. Heavy erosion around well from past rains.

Additional Info/Comments: Sunny, Warm * Pump Inlet: 68 ft.

Name: Adam Shaw Signature: AC. Sh

GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Cyn Well ID: MW-2B Date: 3.15.17

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. Heavy erosion around well. Monument/casing visible below concrete pad.

Concrete Pad:

Integrity: Good: ✓ Inadequate: _____

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

Remarks: Heavy erosion around well from past rains - Well casing/monument visible below concrete pad.

Protective Outer Casing: Material: Metal

Condition of Protective Casing: Good: ✓ Damaged: _____

Condition of Locking Cap: Good: ✓ Damaged: _____

Condition of Lock: Good: ✓ Damaged: _____

Condition of Weepholes: Good: ✓ Damaged: _____

Remarks:

Well Riser: Material: PVC

Condition of Riser: Good: ✓ Damaged: _____

Condition of Riser Cap: Good: ✓ Damaged: _____

Measurment reference point: Yes: ✓ No: _____

Remarks:

Dedicated Pump: Type: Bladder

Condition: Good: ✓ Damaged: _____ Missing: _____

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

Remarks:

*Pump Inlet: 68 ft.

Field Certification: [signature] Field Tech 3.15.17

Signed Title Date

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GROUNDWATER MONITORING PROGRAM
WELL DATA SHEET

Site Name:	Sonshine Cyn	Project No.:	2016.0030
Well I.D.:	DW-4	Sampling Date:	3.15.17
Collected By:	AS	Purge start Time:	1149
Casing Diameter (inches):	4	Purge Stop time:	1215
Starting Water Level:	21.79	Sampling (Well Recovery) Time:	1230
Total Depth (feet):	134.80	Ending Water Level (feet):	26.21
Water column (feet):	113.01	Total Purged (gallons):	2.5+
Screen Length (feet):	—	Duplicate Sample:	YES (NO)
Sample Method:	(Micro Purge) Low Flow		
Horiba Model S/N:	U-52 WXGP8GRS		

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
1154	0.50	22.72	7.80	4.86	0.3	11.48	22.44	-237
1158	1.00	23.83	7.72	4.88	10.9	9.75	21.98	-209
1203	1.50	24.35	7.71	4.89	9.1	8.72	21.92	-204
1206	1.75	24.89	7.70	4.89	5.6	8.54	21.91	-202
1209	2.00	25.45	7.69	4.87	5.5	8.52	21.86	-202
1212	2.25	25.88	7.69	4.89	6.0	8.48	21.84	-200
1215	2.50	26.21	7.68	4.91	5.3	8.44	21.83	-200

Purge Sampling Rates: 75 PSI ; Refill (30.0) ; Discharge (16.0) .

Water is blackish color , ten clearing as purge progresses - No odor.

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

Additional Info/Comments: Sunny, Warm * Pump Depth : 132 ft.

Name: Adam Shaw Signature: AC. Sh

GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Cyn Well ID: DW-4 Date: 3.15.17

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. Heavy erosion around well - Well visable below concrete pad.

Concrete Pad:

Integrity: Good: ✓ Inadequate: _____

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

Remarks: Heavy erosion around well from past rains - Well casing/monument visable below 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 Weephoies: Good: ✓ Damaged: _____

Remarks:

Well Riser: Material: PVC

Condition of Riser: Good: ✓ Damaged: _____

Condition of Riser Cap: Good: ✓ Damaged: _____

Measurment reference point: Yes: ✓ No: _____

Remarks:

Dedicated Pump: Type: Bladder

Condition: Good: ✓ Damaged: _____ Missing: _____

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

Remarks:

* Pump Inlet: 132 ft.

Field Certification: [signature] Field Tech 3.15.17

Signed Title Date

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GROUNDWATER MONITORING PROGRAM
WELL DATA SHEET

Site Name:	Sunshine Cyn	**Project No.:**	2016.003D
Well I.D.:	MW-5	**Sampling Date:**	3.13.17
Collected By:	AS	**Purge start Time:**	1309
Casing Diameter (inches):	2	**Purge Stop time:**	1333
Starting Water Level:	17.58	**Sampling (Well Recovery) Time:**	1348
Total Depth (feet):	26.20	**Ending Water Level (feet):**	18.12
Water column (feet):	8.62	**Total Purged (gallons):**	2.0 +
Screen Length (feet):	—	**Duplicate Sample:**	YES (NO)
Sample Method:	(Micro Purge) Low Flow		
Horiba Model S/N:	U-52 / WGGD8GRS		

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
1315	0.50	18.12	6.98	5.50	75.8	2.61	22.11	-29
1321	1.00	"	6.96	5.25	21.2	2.46	21.93	-65
1324	1.25	"	6.96	5.21	18.9	2.41	21.89	-69
1327	1.50	"	6.95	5.24	7.9	2.31	21.90	-72
1330	1.75	"	6.96	5.25	7.5	2.26	21.92	-75
1333	2.00	"	6.95	5.25	7.4	2.31	21.90	-76

Purge Sampling Rates: 20 PSI ; Refill (30.0), Discharge (10.0).

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

Additional Info/Comments: Sunny, Hot 90's

Name: Adam Shaw **Signature:** A.C. Shaw

GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Gyn Well ID: MW-5 Date: 3.13.17

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 visable.

Concrete Pad:

Integrity: Good: _____ Inadequate: _____

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

Remarks:

Protective Outer Casing: Material: Metal

Condition of Protective Casing: Good: ✓ Damaged: _____

Condition of Locking Cap: Good: ✓ Damaged: _____

Condition of Lock: Good: ✓ Damaged: _____

Condition of Weepholes: Good: ✓ Damaged: _____

Remarks:

Well Riser: Material: PVC

Condition of Riser: Good: ✓ Damaged: _____

Condition of Riser Cap: Good: ✓ Damaged: _____

Measurment reference point: Yes: ✓ No: _____

Remarks:

Dedicated Pump: Type: Bladder

Condition: Good: ✓ Damaged: _____ Missing: _____

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

Remarks:

Field Certification: A.C. [signature] Field Tech 3.13.17

Signed Title Date

Geo-Logic ASSOCIATES

FIELD CALIBRATION DOCUMENTATION FORM

LOCATION (Site/Facility Name) Sunshine Cyn **PROJECT NAME / NUMBER** 2016.0030

Instrument Make/Model # Horiba U-52 S/N WGAP8GR5						
Date/Time 3.13.17 0929	**pH**	**Electrical Conductivity (µMhos/cm)**	**Turbidity (NTU)**	**DO (mg/L or %)**	**Guidance Remarks**	**Comments**
Pre. Cal	3.93	4.50	0.2	9.77		
Calibration	4.00	4.49	0.0	10.28		
Calibration Successful? (Y/N)	Y	—			enter YES or NO	
Satifies Protocol?	Y	—			Did calibration meet criteria in the sampling protocol? (Y or N)	
Calibration by	AS				Signature or initials	AC.M
Physical Condition of Unit	→ Good					

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GROUNDWATER MONITORING PROGRAM
WELL DATA SHEET

Site Name:	Sunshine Cyn	Project No:	5017.1047 ~~2016.0036~~
Well I.D.:	P2-2	Sampling Date	3-13-17
Collected By:	MC	Purge start Time:	12:11
Casing Diameter (inches):	2	Purge Stop time:	12:41
Starting Water Level:	122.37	Sampling (Well Recovery) Time:	12:55
Total Depth (feet):	160.90	Ending Water Level (feet):	128.19
Water column (feet):	38.63	Total Purged (gallons):	2.0 f
Screen Length (feet):		Duplicate Sample:	YES (NO)
Sample Method:	(Micro Purge) Low Flow		
Horiba Model S/N:	U-52 / #541 #BDP		

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	DO mg/L	TEMPERATURE °C	ORP mV
12:19	.5	124.22	8.30	6.22	23.5	1.77	26.93	-169
12:27	1.0	125.72	8.39	6.20	5.3	1.36	26.97	-142
12:31	1.25	126.35	8.41	6.21	2.7	1.41	25.89	-133
12:34	1.50	126.98	8.41	6.21	0.7	1.51	25.84	-134
12:37	1.75	127.61	8.41	6.21	0.7	1.55	25.81	-130
12:41	2.0	128.19	8.42	6.22	0.0	1.59	25.77	-128

Purge Sampling Rates: 80 psi ref. 11 30 discharge 22
water is mostly clear with an odor

Well condition: OK

Additional Info/Comments: had to carry equipment across drainage channel
clear/ hot/ breeze

Name: Mike Campbell Signature: Mike Campbell

C-2

GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Cyn Well ID: PZ-2 Date: 3.13.17

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 and sample bottles across concrete drainage channel

Concrete Pad:

Integrity: NA Good: _____ Inadequate: _____

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

Remarks: No concrete pad

Protective Outer Casing: Material: Metal

Condition of Protective Casing: Good: ✓ Damaged: _____

Condition of Locking Cap: Good: ✓ Damaged: _____

Condition of Lock: Good: ✓ Damaged: _____

Condition of Weepholes: Good: ✓ Damaged: _____

Remarks:

Well Riser: Material: PVC

Condition of Riser: Good: ✓ Damaged: _____

Condition of Riser Cap: Good: ✓ Damaged: _____

Measurment reference point: Yes: ✓ No: _____

Remarks:

Dedicated Pump: Type: Bladder

Condition: Good: ✓ Damaged: _____ Missing: _____

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

Remarks:

Field Certification: [signature] Environmental Tech 3-13-17

Signed Title Date

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GROUNDWATER MONITORING PROGRAM
WELL DATA SHEET

Site Name:	Sunshine Cyn	Project No.:	2016.0030
Well I.D.:	DW-5	Sampling Date:	3.14.17
Collected By:	AS	Purge start Time:	1317
Casing Diameter (inches):	4	Purge Stop time:	1341
Starting Water Level:	14.89	Sampling (Well Recovery) Time:	1400
Total Depth (feet):	101.00	Ending Water Level (feet):	17.93
Water column (feet):	86.11	Total Purged (gallons):	2.0+
Screen Length (feet):	—	Duplicate Sample:	(YES) NO
Sample Method:	(Micro Purge) Low Flow		
Horiba Model S/N:	U-52 |WGGP8GRS|		

* Duplicate collected

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
1323	0.50	15.85	8.96	2.42	0	1.33	23.26	-33
1329	1.00	16.82	8.96	2.40	1.5	1.26	23.35	-80
1332	1.25	16.99	8.95	2.41	1.5	1.26	21.96	-101
1335	1.50	17.14	8.95	2.42	21.0	1.25	21.91	-105
1338	1.75	17.59	8.95	2.41	21.8	1.22	21.72	-113
1341	2.0+	17.93	8.94	2.40	22.1	1.19	21.82	-119

Purge Sampling Rates: 60 PSI ; Refill |35.0| , Discharge |21.0| .
Water has yellow tint w/ strong odor.

Well condition: O.K.

Additional Info/Comments: Sunny, Warm

Name: Adam Shaw Signature: AS

GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Cyn Well ID: DW-5 Date: 3.14.17

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: Broken concrete + debris around well.

Concrete Pad:

Integrity: 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: _____

Measurment reference point: Yes: ✓ No: _____

Remarks:

Dedicated Pump: Type: Bladder

Condition: Good: ✓ Damaged: _____ Missing: _____

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

Remarks:

Field Certification: [signature] Field Tech 3.14.17

Signed Title Date

Geo-Logic
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GROUNDWATER MONITORING PROGRAM
WELL DATA SHEET

Site Name:	Sunshine Cyn	Project No:	S017.1047 ~~2016-0036~~
Well I.D.:	MW-6	Sampling Date:	3-13-17
Collected By:	MC	Purge start Time:	10:21
Casing Diameter (inches):	2	Purge Stop time:	11:21
Starting Water Level:	16.38	Sampling (Well Recovery) Time:	11:40
Total Depth (feet):	23.50	Ending Water Level (feet):	17.15
Water column (feet):	7.12	Total Purged (gallons):	1.75 +
Screen Length (feet):		Duplicate Sample:	YES (NO)
Sample Method:	(Micro Purge) Low Flow		
Horiba Model S/N:	U-52/W541WBDP		

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D O mg/L	TEMPERATURE °C	O R P mV
10:38	.5	16.90	6.83	403	3.9	1.09	23.71	-246
10:47	.75	16.99	6.81	4.09	3.5	.90	23.78	-266
10:56	1.0	17.05	6.80	4.10	2.9	.86	23.90	-274
11:04	1.25	17.09	6.79	4.13	2.2	.82	23.91	-276
11:13	1.50	17:12	6.79	4.12	1.9	.80	2392	-276
11:21	1.75	17:15	6.78	4.12	1.6	.78	23.96	-278

Purge Sampling Rates: 20 psi ref. 11 30 discharged 5

Well condition: water is mostly clear with a strong odor Blackish tint increased as purging progressed very low yield Okay

Additional Info/Comments: Hiked equipment down slope through vegetation to well clear, hot, breezy

Pump depth 19.7 ft

Name: Mike Campbell Signature: Mike Campbell

C-2

GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Cyn Well ID: MW-6 Date: 3-13-17

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 and sample containers down a slope and through vegetation (high grass) along path 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: _____

Measurment reference point: Yes: ✓ No: _____

Remarks:

Dedicated Pump: Type: Bladder

Condition: Good: ✓ Damaged: _____ Missing: _____

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

Remarks:

Field Certification: Luke Caylor (Signed) Field Tech (Title) 3-13-17 (Date)

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GROUNDWATER MONITORING PROGRAM
WELL DATA SHEET

Site Name:	Sunshine C14	**Project No.:**	2016.0030
Well I.D.:	MW-13R	**Sampling Date:**	3.16.17
Collected By:	AS	**Purge start Time:**	0758
Casing Diameter (inches):	4	**Purge Stop time:**	0826
Starting Water Level:	17.22	**Sampling (Well Recovery) Time:**	0845
Total Depth (feet):	27.80	**Ending Water Level (feet):**	17.60
Water column (feet):		**Total Purged (gallons):**	1.5+
Screen Length (feet):	—	**Duplicate Sample:**	YES (NO)
Sample Method:	(Micro Purge) Low Flow		
Horiba Model S/N:	U-52 | WGAP8GRS		

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
0809	0.50	17.43	7.62	3.28	47.8	7.76	21.84	-333
0814	0.75	17.50	7.63	3.27	4.4	6.42	22.24	-328
0818	1.00	17.53	7.64	3.26	4.0	6.18	22.43	-326
0822	1.25	17.56	7.63	3.25	3.9	6.18	22.48	-325
0826	1.50	17.60	7.63	3.22	3.7	6.13	22.53	-325

Purge Sampling Rates: 30 PSI ; Refill \| 25.0 \|, Discharge \| 5.0 \|.

Water is mostly clear w/ blackish tint and strong odor.

Well condition: O.K. - Well monument is heavily corroded.

Additional Info/Comments: Clear, Cool, Windy * Pump Depth: 26.4 ft.

Name: Adam Shaw **Signature:** AC.M

GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sonshine Cyn Well ID: MW-13R Date: 3.16.17

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 accoss 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: _____

Measurment reference point: Yes: ✓ No: _____

Remarks:

Dedicated Pump: Type: Bladder

Condition: Good: ✓ Damaged: _____ Missing: _____

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

Remarks:

Field Certification: [signature] Signed — FieldTech Title — 3.16.17 Date

Geo-Logic ASSOCIATES

FIELD CALIBRATION DOCUMENTATION FORM

LOCATION (Site/Facility Name) Sunshine Cyn **PROJECT NAME / NUMBER** 2016.0030

Instrument Make/Model # Horiba U-52 S/N WGGP8GRS						
Date/Time 3.16.17 0654	**pH**	**Electrical Conductivity (µMhos/cm)**	**Turbidity (NTU)**	**DO (mg/L or %)**	**Guidance Remarks**	**Comments**
Pre. Cal	4.24	4.57	0.2	11.48		
Calibration	4.00	4.49	0.0	9.20		
Calibration Successful? (Y/N)	Y				enter YES or NO	
Satifies Protocol?	Y				Did calibration meet criteria in the sampling protocol? (Y or N)	
Calibration by	AS				Signature or initials	AC. SL
Physical Condition of Unit		→ Good				

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GROUNDWATER MONITORING PROGRAM
WELL DATA SHEET

Site Name: Sunshine Cyn
Well I.D.: MW. 14
Collected By: MC
Casing Diameter (inches): 4
Starting Water Level: 14.44
Total Depth (feet): 28.16
Water column (feet): 13.66
Screen Length (feet):
Sample Method: (Micro Purge) Low Flow
Horiba Model S/N: U52/W541N B00

Project No.: ~~2016-0036~~ 5017.1047
Sampling Date: 3.13.16
Purge start Time: 9:29
Purge Stop time: 9:45
Sampling (Well Recovery) Time: 10:00
Ending Water Level (feet): 14.82
Total Purged (gallons): 2.0
Duplicate Sample: YES (NO)

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O mg/L	TEMPERATURE °C	O.R.P mV
9:37	1.0	14.76	6.37	7.26	0.3	1.39	21.86	200
9:39	1.25	14.79	6.43	7.28	0.0	.87	21.85	198
9:41	1.5	14.81	6.46	7.29	0.0	.81	21.83	195
9:43	1.75	14.81	6.47	7.28	0.0	.74	21.83	195
9:45	2.0	14.82	6.47	7.28	0.0	.71	21.83	194

Purge Sampling Rates: 20 psi refill 20 discharge 10
water is clear with no odor
roots on sounder difficult to gauge

Well condition: OK heavy vegetation around well
Hiked equipment down slope to get to well

Additional Info/Comments: clear, hot breezy, some strong gusts

Name: Mike Campbell

Signature: Mike Camp

C-2

GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Cyn Well ID: MW-14 Date: 3-13-17

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 equipment and sample containers down a slope to well. Weeds around well concrete pad

Concrete Pad:

Integrity: Good: ✓ Inadequate: _____

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

Remarks:

Protective Outer Casing: Material: Metal

Condition of Protective Casing: Good: ✓ Damaged: _____

Condition of Locking Cap: Good: ✓ Damaged: _____

Condition of Lock: Good: ✓ Damaged: _____

Condition of Weepholes: Good: ✓ Damaged: _____

Remarks:

Well Riser: Material: PVC

Condition of Riser: Good: ✓ Damaged: _____

Condition of Riser Cap: Good: ✓ Damaged: _____

Measurment reference point: Yes: ✓ No: _____

Remarks:

Dedicated Pump: Type: Bladder

Condition: Good: ✓ Damaged: _____ Missing: _____

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

Remarks:

Field Certification: McCaffill Field Tech 3-13-17

Signed Title Date

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GROUNDWATER MONITORING PROGRAM
WELL DATA SHEET

Site Name.: Sunshine Cyn.
Well I.D.: DW-1
Collected By: DTS
Casing Diameter (inches): 4
Starting Water Level: TOC
Total Depth (feet):
Water column (feet):
Screen Length (feet):
Purge Volume (gallons):
Horiba Model S/N: R8554944H

Project No.: 2018.0030
Sampling Date: 3-14-17
Purge start Time: /
Purge Stop time:
Sampling Time: 1130
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
Grab	—	8.60	4.91	1.9	4.33	21.31	-117

Purge Sampling Rates: Collect samples from the drop tube, clear water with a strong odor.

Well condition: OK - The entire area filled with sediment. It looks like well was under storm water.

Additional Info/Comments: Sunny, cool

GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Well ID: DW-1 Date: 3-14-17

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: Looks like the entire area was under water due to recent rains.

Protective Outer Casing: Material: Metal

Condition of Protective Casing: Good: _____ Damaged: _____

Condition of Locking Cap: Good: ✓ Damaged: _____

Condition of Lock: Good: ✓ Damaged: _____

Condition of Weephoies: Good: ✓ Damaged: _____

Remarks: Casing is deteriorating.

Well Riser: Material: PVC

Condition of Riser: Good: ✓ Damaged: _____

Condition of Riser Cap: Good: ✓ Damaged: _____

Measurment reference point: Yes: ✓ No: _____

Remarks:

Dedicated Pump: Type: Drop tube

Condition: Good: ✓ Damaged: _____ Missing: _____

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

Remarks:

Field Certification: [signature] Supervising Tech 3-14-17

Signed Title Date

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GROUNDWATER MONITORING PROGRAM
WELL DATA SHEET

Site Name:	Sunshine Cyn.	**Project No.:**	2016.0030
Well I.D.:	PZ-4	**Sampling Date:**	3-15-17
Collected By:	BS	**Purge start Time:**	1211
Casing Diameter (inches):	2	**Purge Stop time:**	1234
Starting Water Level:	111.92	**Sampling (Well Recovery) Time:**	1244
Total Depth (feet):	125.15	**Ending Water Level (feet):**	113.28
Water column (feet):	13.23	**Total Purged (gallons):**	2.25
Screen Length (feet):	—	**Duplicate Sample:**	YES (NO)
Sample Method:	(Micro Purge) Low Flow		
Horiba Model S/N:	K8TS494H		

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
1217	1/2	112.33	7.02	1.71	535	2.45	26.28	-25
1221	3/4	112.81	6.94	1.75	49.0	1.08	25.23	-68
1224	1	112.91	6.98	1.74	35.6	0.96	24.93	-62
1227	1 1/2	113.18	6.99	1.75	21.3	0.92	24.08	-63
1231	2	113.44	7.01	1.76	20.8	0.88	24.12	-59
1234	2 1/4	113.65	7.02	1.76	21.4	0.83	24.23	-62

Purge Sampling Rates: PS# 80, P:30/D:15

Water is turbid

Well condition: OK

Additional Info/Comments: Sunny, warm

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

GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Cnv Well ID: PZ-4 Date: 3-15-17

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: Flush box

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: _____

Measurment reference point: Yes: ✓ No: _____

Remarks:

Dedicated Pump: Type: Bladder

Condition: Good: ✓ Damaged: _____ Missing: _____

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

Remarks:

Field Certification: Brent Jaline G.W. Manager 3-15-17

Signed Title Date

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GROUNDWATER MONITORING PROGRAM
WELL DATA SHEET

Site Name: Sunshine Cyn, Project No.: 2016.0030

Well I.D.: DW-3 Sampling Date: 3-15-17

Collected By: BRS Purge start Time: 1028

Casing Diameter (inches): 4 Purge Stop time: 1051

Starting Water Level: 153.52 Sampling (Well Recovery) Time: 1058

Total Depth (feet): 256.60 Ending Water Level (feet): 155.22

Water column (feet): 103.08 Total Purged (gallons): 2 1/2

Screen Length (feet): — Duplicate Sample: YES (NO)

Sample Method: (Micro Purge) Low Flow

Horiba Model S/N: R8JS4944

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
1033	1/2	154.07	7.17	2.40	←	7.18	22.58	153
1036	3/4	154.58	7.20	2.39	←	2.32	22.26	11
1039	1	154.71	7.21	2.39	←	1.46	22.43	-55
1043	1 1/2	154.98	7.19	2.39	←	1.33	22.57	-62
1047	2	155.22	7.19	2.38	←	1.28	22.60	-64
1051	2 1/2	155.54	7.19	2.38	←	1.24	22.58	-64

Purge Sampling Rates: PSI 100, R:35/D:20
Clear water with no color.

Well condition: OK

GCAB Talcon

Additional Info/Comments: Sunny, Warm

Name: B. Salinas Signature: [signature]

GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Cyn. Well ID: DW-3 Date: 3-15-17

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: _____

Measurment reference point: Yes: ✓ No: _____

Remarks:

Dedicated Pump: Type: Bladder

Condition: Good: ✓ Damaged: _____ Missing: _____

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

Remarks:

Field Certification: Bart Mullins Grd. Manager 3-15-17

Signed Title Date

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GROUNDWATER MONITORING PROGRAM
WELL DATA SHEET

Site Name:	Sunshine Cyn.	Project No.:	2016.0030
Well I.D.:	DW-2	Sampling Date:	3-15-17
Collected By:	BS	Purge start Time:	0912
Casing Diameter (inches):	4	Purge Stop time:	0931
Starting Water Level:	23.08	Sampling (Well Recovery) Time:	0940
Total Depth (feet):	71.00	Ending Water Level (feet):	37.46
Water column (feet):	47.92	Total Purged (gallons):	2.75
Screen Length (feet):	—	Duplicate Sample:	YES (NO)
Sample Method:	(Micro Purge) Low Flow		
Horiba Model S/N:	K8JS494H		

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
0918	1		7.08	2.96	2.0	1.70	19.95	-106
0922	1 1/2		7.09	2.96	1.9	1.50	19.84	-111
0926	2		7.15	2.96	1.9	1.47	19.88	-113
0929	2 1/2		7.17	2.95	2.01	1.39	19.86	-113
0931	2 3/4		7.13	2.94	2.03	1.35	19.89	-116

Purge Sampling Rates: PSR 45, R:35/D:17

Clear water with no odor

Well condition: OK

Additional Info/Comments: Sunny, cool

Name: B. Salinas Signature: [signature]

GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Well ID: DW-2 Date: 3-15-17

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: _____

Measurment reference point: Yes: ✓ No: _____

Remarks:

Dedicated Pump: Type: Bladder

Condition: Good: ✓ Damaged: _____ Missing: _____

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

Remarks:

Field Certification: [signature] Plant Manager 3-15-17

Signed Title Date

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GROUNDWATER MONITORING PROGRAM
LEACHATE DATA SHEET

Site: Sunshine Cyn.

Project No.: 2016.0030

Station I.D.: Combined Subdrains

Sampling Date: 3-13-17

Collected By: BS

Sampling Time: 1335

Horiba Model S/N: R855U94H

Duplicate Sample: YES (NO)

COLOR	ODOR	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
Tinted yellow	Yes	6.32	3.85	47.7	3.32	27.32	-18

Leachate sampling station conditions: Collect Samples @ outlet side to the filters.

Additional Info/Comments: Sunny, Hot

Bart Salins

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GROUNDWATER MONITORING PROGRAM
~~LEACHATE~~ DATA SHEET

Site: Sunshine Cyn. Project No.: 2016.0030

Station I.D.: Subdrain N
Collected By: RS
Horiba Model S/N: R8JS494H

Sampling Date: 3-13-17
Sampling Time: 1225
Duplicate Sample: YES NO (circled: NO)

COLOR	ODOR	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
light yellowish	yes	6.01	3.71	0.6	3.07	26.46	-31

Leachate sampling station conditions: Samples were collected @ Inlet side to BAC tanks

Additional Info/Comments: Sunny, warm

12 cans filled.

[signature]

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GROUNDWATER MONITORING PROGRAM
WELL DATA SHEET

Site Name.: Sunshine Cyn.
Well I.D.: LY-7
Collected By: RBS
Casing Diameter (inches):
Starting Water Level:
Total Depth (feet):
Water column (feet):
Screen Length (feet):
Purge Volume (gallons):
Horiba Model S/N:

Project No.: 2016.0030
Sampling Date: 3-13-17
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	O.R.P. mV

Purge Sampling Rates: Made an attempt to collect a sample with the Daryl w/Peristaltic. But pump appears to be bad.

Well condition: OK but looks like the entire area was under water recently. Not able to collect the samples.

Additional Info/Comments: Sunny, warm.

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GROUNDWATER MONITORING PROGRAM
WELL DATA SHEET

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

Project No.: 2016.0030
Sampling Date:
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	O.R.P. mV

DRY

Purge Sampling Rates: Cysimeter is dry, two samples collected.

Well condition: OK

Additional Info/Comments: Clear, Sunny, warm

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ASSOCIATES

FIELD CALIBRATION DOCUMENTATION FORM

LOCATION (Site/Facility Name) Sunshine 4/ **PROJECT NAME / NUMBER** 2016.0030

Instrument Make/Model # R8 J549414						
Date/Time 3-17-17 0848	**pH**	**Electrical Conductivity (µMhos/cm)**	**Turbidity (NTU)**	**DO (mg/L or %)**	**Guidance Remarks**	**Comments**
Pre. Cal	7.92	4.54	0.6	12.32		
Calibration	4.00	4.49	6	8.61		
Calibration Successful? (Y/N)	Yes	→	→	→	enter YES or NO	
Satifies Protocol?	Yes	→	→	→	Did calibration meet criteria in the sampling protocol? (Y or N)	
Calibration by					Signature or initials	
Physical Condition of Unit		Bart Adams / Good				

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GROUNDWATER MONITORING PROGRAM
WELL DATA SHEET

Site Name:	Sunshine Cyn	**Project No.:**	2016.0030
Well I.D.:	MW-9	**Sampling Date:**	3.14.17
Collected By:	AS	**Purge start Time:**	1047
Casing Diameter (inches):	4	**Purge Stop time:**	1121
Starting Water Level:	13.98	**Sampling (Well Recovery) Time:**	1135
Total Depth (feet):	26.70	**Ending Water Level (feet):**	14.02
Water column (feet):	12.72	**Total Purged (gallons):**	2.0 +
Screen Length (feet):	—	**Duplicate Sample:**	YES (NO)
Sample Method:	(Micro Purge) Low Flow		
Horiba Model S/N:	U-52 | WGGP8GR5		

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
1057	0.50	14.02	6.99	6.68	1.8	2.74	22.66	-87
1105	1.00	"	7.01	6.67	0.8	2.59	22.72	-92
1109	1.25	"	7.01	6.67	3.3	2.53	22.76	-94
1113	1.50	"	7.02	6.66	1.0	2.49	22.83	-96
1117	1.75	"	7.02	6.66	1.3	2.53	22.84	-96
1121	2.00	"	7.02	6.66	1.1	2.51	22.79	-96

Purge Sampling Rates: 25 psi . Refill (20.0) . Discharge (5.0) .
Water has yellowish tint w/ no odor.

Well condition: O.K. - Ran air hose through Screen and carried equipment around to sample well.

Additional Info/Comments: Sunny, Warm

Name: Adam Shaw **Signature:** AC. AS

GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Cyn Well ID: MW-9 Date: 3.14.17

Access:

Accessibility: Good: (AS) ✓ 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: _____

Measurment 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: [signature] Field Tech 3.14.17

Signed Title Date

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GROUNDWATER MONITORING PROGRAM
WELL DATA SHEET

Site Name:	Sunshine Cyn	**Project No.:**	2016.0030
Well I.D.:	CM-11R	**Sampling Date:**	3.14.17
Collected By:	AS	**Purge start Time:**	0816
Casing Diameter (inches):	4	**Purge Stop time:**	0900
Starting Water Level:	12.11	**Sampling (Well Recovery) Time:**	0915
Total Depth (feet):	31.00	**Ending Water Level (feet):**	12.97
Water column (feet):	18.89	**Total Purged (gallons):**	1.5 +
Screen Length (feet):	—	**Duplicate Sample:**	YES (NO)
Sample Method:	(Micro Purge) Low Flow		
Horiba Model S/N:	U-52 |WGGP8GR5|		

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
0824	0.25	12.40	5.80	6.69	1.6	1.68	17.34	331
0831	0.50	12.59	5.73	6.65	1.3	1.36	17.37	330
0839	0.75	12.67	5.68	6.63	1.0	1.26	17.38	331
0847	1.00	12.76	5.68	6.62	1.1	1.24	17.38	331
0854	1.25	12.85	5.67	6.61	0.8	1.22	17.39	332
0900	1.50	12.97	5.66	6.61	1.0	1.18	17.38	333

Purge Sampling Rates: 30 PSI ; Refill |25.0|, Discharge |5.0| · Low yield

Well condition: O.K. - Water is clear w/ no odor.

Additional Info/Comments: Sunny. Mild A.M. * Pump Depth: 29.8 ft.

Name: Adam Shaw **Signature:** A.C.S.

GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sonshine Cyn Well ID: CM-11R Date: 3.14.17

Access:

Accessibility: Good: _____ Fair: _____ Poor: ✓

Vicinity of well clear of weeds and/or debris: Fallen tree branches. Yes: _____ No: ✓

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

Remarks: Concrete channel is blocked by landslide debris from adjacent slope. Difficult to access.

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 Weephoies: Good: ✓ Damaged: _____

Remarks:

Well Riser: Material: PVC

Condition of Riser: Good: ✓ Damaged: _____

Condition of Riser Cap: Good: ✓ Damaged: _____

Measurment reference point: Yes: ✓ No: _____

Remarks:

Dedicated Pump: Type: Bladders

Condition: Good: ✓ Damaged: _____ Missing: _____

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

Remarks:

*Pump Depth: 29.8 ft.

Field Certification: [signature] Signed — Field Tech Title — 3.14.17 Date

Geo-Logic ASSOCIATES

FIELD CALIBRATION DOCUMENTATION FORM

LOCATION (Site/Facility Name) Sonshine Cyn **PROJECT NAME / NUMBER** 2014.0030

Instrument Make/Model # Horiba U-52 S/N WGGP8GR5						
Date/Time 3.14.17 0700	**pH**	**Electrical Conductivity (µMhos/cm)**	**Turbidity (NTU)**	**DO (mg/L or %)**	**Guidance Remarks**	**Comments**
Pre. Cal	3.96	4.60	2.7	9.59		
Calibration	4.00	4.49	0.0	9.10		
Calibration Successful? (Y/N)	Y	→	→	→	enter YES or NO	
Satifies Protocol?	Y	→	→	→	Did calibration meet criteria in the sampling protocol? (Y or N)	
Calibration by	AS				Signature or initials	AC. A
Physical Condition of Unit	→	Good				

Geo-Logic
ASSOCIATES
Geologists, Hydrogeologists, and Engineers

GROUNDWATER MONITORING PROGRAM
LEACHATE DATA SHEET

Site: Sunshine

Project No.: 2016.0030

Station I.D.: Extraction Trench

Collected By: BS

Horiba Model S/N: 28JSU94H

Sampling Date: 3-14-17

Sampling Time: 1058

Duplicate Sample: YES (NO)

COLOR	ODOR	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
Yellowish	YES	6.65	5.12	34.7	3.02	22.54	-76

Leachate sampling station conditions: Samples taken @ Inlet side of filters.

Additional Info/Comments: Clear, Sunny, Warm

Name: Brent Salinas

Signature: Brent Salinas

Geo-Logic ASSOCIATES

FIELD CALIBRATION DOCUMENTATION FORM

LOCATION (Site/Facility Name) Sunshine Cyn PROJECT NAME / NUMBER 2016.0030

Instrument Make/Model # R8554944

Date/Time 3-14-17 0750	pH	Electrical Conductivity (µMhos/cm)	Turbidity (NTU)	DO (mg/L or %)	Guidance Remarks	Comments
Pre. Cal	4.08	4.56	0.4	13.12		
Calibration	4.01	4.49	←	8.66		
Calibration Successful? (Y/N)	Yes	→			enter YES or NO	
Satifies Protocol?	Yes	→			Did calibration meet criteria in the sampling protocol? (Y or N)	
Calibration by	[signature]				Signature or initials	

Physical Condition of Unit	Good

Geo-Logic ASSOCIATES

FIELD CALIBRATION DOCUMENTATION FORM

LOCATION (Site/Facility Name) Sunshine Cyr **PROJECT NAME / NUMBER** 2016-0030

Instrument Make/Model # U-52/U-54/U-BDT						
Date/Time 3-13-17 7:00	**pH**	**Electrical Conductivity (µMhos/cm)**	**Turbidity (NTU)**	**DO (mg/L or %)**	**Guidance Remarks**	**Comments**
Pre. Cal	4.00	4.49	0.0	10.25		
Calibration	4.00	4.49	0.0	8.03		
Calibration Successful? (Y/N)	yes				enter YES or NO	
Satifies Protocol?	yes				Did calibration meet criteria in the sampling protocol? (Y or N)	
Calibration by	—				Signature or initials	Michael Cart
Physical Condition of Unit	Good					

Geo-Logic ASSOCIATES

FIELD CALIBRATION DOCUMENTATION FORM

LOCATION (Site/Facility Name) Sunshine **PROJECT NAME / NUMBER** 2016.0030

Instrument Make/Model # 28J5494H						
Date/Time	**pH**	**Electrical Conductivity (µMhos/cm)**	**Turbidity (NTU)**	**DO (mg/L or %)**	**Guidance Remarks**	**Comments**
Pre. Cal	3.87	4.64	0.3	11.72		
Calibration	3.99	4.49	0	8.62		
Calibration Successful? (Y/N)	Yes	→	→	→	enter YES or NO	
Satifies Protocol?	Yes	→	→	→	Did calibration meet criteria in the sampling protocol? (Y or N)	
Calibration by	[illegible]	[illegible]	[illegible]		Signature or initials	
Physical Condition of Unit	Good					

Geo-Logic ASSOCIATES

FIELD CALIBRATION DOCUMENTATION FORM

LOCATION (Site/Facility Name) Sunshine Cyn **PROJECT NAME / NUMBER** 2016.0030

Instrument Make/Model # Horiba U-52 S/N WAUP8CR5						
Date/Time 3.15.17 0658	**pH**	**Electrical Conductivity (µMhos/cm)**	**Turbidity (NTU)**	**DO (mg/L or %)**	**Guidance Remarks**	**Comments**
Pre. Cal	4.14	4.55	Ø	10.13		
Calibration	4.00	4.49	Ø	8.61		
Calibration Successful? (Y/N)	Y	→	→	→	enter YES or NO	
Satifies Protocol?	Y	→	→	→	Did calibration meet criteria in the sampling protocol? (Y or N)	
Calibration by	AS				Signature or initials	AC-SM
Physical Condition of Unit	→	Good				

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: 440-179494-1
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:
3/27/2017 10:48:38 AM

Rossina Tomova, Project Manager I
(949)261-1022
rossina.tomova@testamericainc.com

Table of Contents

Sample Summary

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

TestAmerica Job ID: 440-179494-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-179494-1	Combined Subdrains	Water	03/13/17 13:35	03/13/17 18:15
440-179494-2	Subdrain N	Water	03/13/17 12:25	03/13/17 18:15
440-179494-3	PZ-2	Water	03/13/17 12:55	03/13/17 18:15
440-179494-4	MW-6	Water	03/13/17 11:40	03/13/17 18:15
440-179494-5	MW-14	Water	03/13/17 10:00	03/13/17 18:15
440-179494-6	CM-9R3	Water	03/13/17 12:20	03/13/17 18:15
440-179494-7	CM-10R	Water	03/13/17 11:00	03/13/17 18:15
440-179494-8	MW-5	Water	03/13/17 13:48	03/13/17 18:15
440-179494-9	QCAB	Water	03/13/17 00:01	03/13/17 18:15
440-179494-10	QCTB	Water	03/13/17 00:01	03/13/17 18:15

Job ID: 440-179494-1

Laboratory: TestAmerica Irvine

Narrative

Job Narrative
440-179494-1

Comments
No additional comments.

Receipt
The samples were received on 3/13/2017 6:15 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 3.4º C, 3.6º C and 4.6º C.

GC/MS VOA
Method(s) 8260B: The laboratory control sample (LCS) for analytical batch 440-395597 recovered outside control limits for the following analyte: 1,1,2,2-Tetrachloroethane. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported.

Method(s) 8260B: The continuing calibration verification (CCV) associated with batch 440-395597 recovered above the upper control limit for 1,1,2,2-Tetrachloroethane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

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 440-394346 and analytical batch 440-394854. 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
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
Method(s) 350.1: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 440-394275 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.

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 ID: Combined Subdrains

Date Collected: 03/13/17 13:35
Date Received: 03/13/17 18:15

Lab Sample ID: 440-179494-1
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			03/23/17 01:36	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			03/23/17 01:36	1
Acrolein	ND		50	2.5	ug/L			03/18/17 13:21	1
Acrylonitrile	ND		50	1.0	ug/L			03/18/17 13:21	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			03/23/17 01:36	1
1,1,2,2-Tetrachloroethane	ND	*	0.50	0.25	ug/L			03/23/17 01:36	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			03/23/17 01:36	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			03/23/17 01:36	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			03/23/17 01:36	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			03/23/17 01:36	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			03/23/17 01:36	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			03/23/17 01:36	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			03/23/17 01:36	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			03/23/17 01:36	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			03/23/17 01:36	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			03/23/17 01:36	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			03/23/17 01:36	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			03/23/17 01:36	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			03/23/17 01:36	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			03/23/17 01:36	1
2-Hexanone	ND		5.0	2.5	ug/L			03/23/17 01:36	1
Acetone	ND		20	10	ug/L			03/23/17 01:36	1
Acetonitrile	ND		20	10	ug/L			03/23/17 01:36	1
Acrolein	ND		5.0	2.5	ug/L			03/23/17 01:36	1
Acrylonitrile	ND		2.0	1.0	ug/L			03/23/17 01:36	1
Benzene	ND		0.50	0.25	ug/L			03/23/17 01:36	1
Allyl chloride	ND		1.0	0.50	ug/L			03/23/17 01:36	1
Bromoform	ND		1.0	0.40	ug/L			03/23/17 01:36	1
Bromomethane	ND		0.50	0.25	ug/L			03/23/17 01:36	1
Carbon disulfide	ND		1.0	0.50	ug/L			03/23/17 01:36	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			03/23/17 01:36	1
Chlorobenzene	ND		0.50	0.25	ug/L			03/23/17 01:36	1
Bromochloromethane	ND		0.50	0.25	ug/L			03/23/17 01:36	1
Chloroethane	ND		1.0	0.40	ug/L			03/23/17 01:36	1
Chloroform	ND		0.50	0.25	ug/L			03/23/17 01:36	1
Chloromethane	ND		0.50	0.25	ug/L			03/23/17 01:36	1
cis-1,2-Dichloroethene	**0.52**		0.50	0.25	ug/L			03/23/17 01:36	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/23/17 01:36	1
Dibromochloromethane	ND		0.50	0.25	ug/L			03/23/17 01:36	1
Dibromomethane	ND		0.50	0.25	ug/L			03/23/17 01:36	1
Bromodichloromethane	ND		0.50	0.25	ug/L			03/23/17 01:36	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			03/23/17 01:36	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			03/23/17 01:36	1
Ethylbenzene	ND		0.50	0.25	ug/L			03/23/17 01:36	1
Iodomethane	ND		2.0	1.0	ug/L			03/23/17 01:36	1
Isobutyl alcohol	ND		25	13	ug/L			03/23/17 01:36	1
m,p-Xylene	ND		1.0	0.50	ug/L			03/23/17 01:36	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			03/23/17 01:36	1
Methyl methacrylate	ND		2.0	1.0	ug/L			03/23/17 01:36	1

Client Sample ID: Combined Subdrains

Date Collected: 03/13/17 13:35
Date Received: 03/13/17 18:15

Lab Sample ID: 440-179494-1
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			03/23/17 01:36	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			03/23/17 01:36	1
Naphthalene	ND		1.0	0.40	ug/L			03/23/17 01:36	1
o-Xylene	ND		0.50	0.25	ug/L			03/23/17 01:36	1
Propionitrile	ND		20	10	ug/L			03/23/17 01:36	1
Styrene	ND		0.50	0.25	ug/L			03/23/17 01:36	1
t-Butanol	ND		10	5.0	ug/L			03/23/17 01:36	1
Tetrachloroethene	ND		0.50	0.25	ug/L			03/23/17 01:36	1
Tetrahydrofuran	ND		10	5.0	ug/L			03/23/17 01:36	1
Toluene	ND		0.50	0.25	ug/L			03/23/17 01:36	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/23/17 01:36	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/23/17 01:36	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			03/23/17 01:36	1
Trichloroethene	ND		0.50	0.25	ug/L			03/23/17 01:36	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			03/23/17 01:36	1
Vinyl acetate	ND		4.0	2.0	ug/L			03/23/17 01:36	1
Vinyl chloride	ND		0.50	0.25	ug/L			03/23/17 01:36	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			03/23/17 01:36	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			03/23/17 01:36	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			03/23/17 01:36	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*8.2*	*T J*	*ug/L*		*3.36*			*03/23/17 01:36*	*1*
Unknown	*6.6*	*T J*	*ug/L*		*6.99*			*03/23/17 01:36*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*110*		*80 - 128*		*03/18/17 13:21*	*1*
4-Bromofluorobenzene (Surr)	*90*		*80 - 120*		*03/18/17 13:21*	*1*
Toluene-d8 (Surr)	*102*		*80 - 128*		*03/23/17 01:36*	*1*
4-Bromofluorobenzene (Surr)	*90*		*80 - 120*		*03/23/17 01:36*	*1*
Dibromofluoromethane (Surr)	*122*		*76 - 132*		*03/18/17 13:21*	*1*
Dibromofluoromethane (Surr)	*106*		*76 - 132*		*03/23/17 01:36*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**5.5**		0.99	0.25	ug/L		03/16/17 09:48	03/19/17 13:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*70*		*30 - 120*	*03/16/17 09:48*	*03/19/17 13:30*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**44**		10	5.0	mg/L			03/14/17 18:49	20

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		03/16/17 11:42	03/20/17 10:40	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**2.5**	**F1**	0.20	0.10	mg/L			03/15/17 20:24	1

Client Sample ID: Combined Subdrains

Lab Sample ID: 440-179494-1

Date Collected: 03/13/17 13:35

Matrix: Water

Date Received: 03/13/17 18:15

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	**28**		20	10	mg/L			03/24/17 12:10	1
Total Dissolved Solids	**3100**		20	10	mg/L			03/16/17 17:32	1
Total Organic Carbon	**9.9**		0.10	0.050	mg/L			03/18/17 15:04	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	**210**		4.0	4.0	mg/L			03/15/17 06:34	1

Client Sample ID: Subdrain N

Lab Sample ID: 440-179494-2

Date Collected: 03/13/17 12:25

Matrix: Water

Date Received: 03/13/17 18:15

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			03/23/17 02:05	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			03/23/17 02:05	1
Acrolein	ND		50	2.5	ug/L			03/18/17 13:50	1
Acrylonitrile	ND		50	1.0	ug/L			03/18/17 13:50	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			03/23/17 02:05	1
1,1,2,2-Tetrachloroethane	ND	*	0.50	0.25	ug/L			03/23/17 02:05	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			03/23/17 02:05	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			03/23/17 02:05	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			03/23/17 02:05	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			03/23/17 02:05	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			03/23/17 02:05	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			03/23/17 02:05	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			03/23/17 02:05	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			03/23/17 02:05	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			03/23/17 02:05	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			03/23/17 02:05	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			03/23/17 02:05	1
1,4-Dichlorobenzene	**1.1**		0.50	0.25	ug/L			03/23/17 02:05	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			03/23/17 02:05	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			03/23/17 02:05	1
2-Hexanone	ND		5.0	2.5	ug/L			03/23/17 02:05	1
Acetone	ND		20	10	ug/L			03/23/17 02:05	1
Acetonitrile	ND		20	10	ug/L			03/23/17 02:05	1
Acrolein	ND		5.0	2.5	ug/L			03/23/17 02:05	1
Acrylonitrile	ND		2.0	1.0	ug/L			03/23/17 02:05	1
Benzene	**0.43**	**J**	0.50	0.25	ug/L			03/23/17 02:05	1
Allyl chloride	ND		1.0	0.50	ug/L			03/23/17 02:05	1
Bromoform	ND		1.0	0.40	ug/L			03/23/17 02:05	1
Bromomethane	ND		0.50	0.25	ug/L			03/23/17 02:05	1
Carbon disulfide	ND		1.0	0.50	ug/L			03/23/17 02:05	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			03/23/17 02:05	1
Chlorobenzene	ND		0.50	0.25	ug/L			03/23/17 02:05	1
Bromochloromethane	ND		0.50	0.25	ug/L			03/23/17 02:05	1
Chloroethane	ND		1.0	0.40	ug/L			03/23/17 02:05	1
Chloroform	ND		0.50	0.25	ug/L			03/23/17 02:05	1
Chloromethane	ND		0.50	0.25	ug/L			03/23/17 02:05	1
cis-1,2-Dichloroethene	**1.1**		0.50	0.25	ug/L			03/23/17 02:05	1

Client Sample ID: Subdrain N
Date Collected: 03/13/17 12:25
Date Received: 03/13/17 18:15

Lab Sample ID: 440-179494-2
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			03/23/17 02:05	1
Dibromochloromethane	ND		0.50	0.25	ug/L			03/23/17 02:05	1
Dibromomethane	ND		0.50	0.25	ug/L			03/23/17 02:05	1
Bromodichloromethane	ND		0.50	0.25	ug/L			03/23/17 02:05	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			03/23/17 02:05	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			03/23/17 02:05	1
Ethylbenzene	ND		0.50	0.25	ug/L			03/23/17 02:05	1
Iodomethane	ND		2.0	1.0	ug/L			03/23/17 02:05	1
Isobutyl alcohol	ND		25	13	ug/L			03/23/17 02:05	1
m,p-Xylene	ND		1.0	0.50	ug/L			03/23/17 02:05	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			03/23/17 02:05	1
Methyl methacrylate	ND		2.0	1.0	ug/L			03/23/17 02:05	1
Methylene Chloride	ND		2.0	0.88	ug/L			03/23/17 02:05	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			03/23/17 02:05	1
Naphthalene	ND		1.0	0.40	ug/L			03/23/17 02:05	1
o-Xylene	ND		0.50	0.25	ug/L			03/23/17 02:05	1
Propionitrile	ND		20	10	ug/L			03/23/17 02:05	1
Styrene	ND		0.50	0.25	ug/L			03/23/17 02:05	1
t-Butanol	**19**	**ID**	10	5.0	ug/L			03/23/17 02:05	1
Tetrachloroethene	ND		0.50	0.25	ug/L			03/23/17 02:05	1
Tetrahydrofuran	ND		10	5.0	ug/L			03/23/17 02:05	1
Toluene	ND		0.50	0.25	ug/L			03/23/17 02:05	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/23/17 02:05	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/23/17 02:05	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			03/23/17 02:05	1
Trichloroethene	ND		0.50	0.25	ug/L			03/23/17 02:05	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			03/23/17 02:05	1
Vinyl acetate	ND		4.0	2.0	ug/L			03/23/17 02:05	1
Vinyl chloride	ND		0.50	0.25	ug/L			03/23/17 02:05	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			03/23/17 02:05	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			03/23/17 02:05	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			03/23/17 02:05	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*10*	*T J*	*ug/L*		*3.36*			*03/23/17 02:05*	*1*
Unknown	*2.9*	*T J*	*ug/L*		*5.53*			*03/23/17 02:05*	*1*
Unknown	*6.4*	*T J*	*ug/L*		*6.99*			*03/23/17 02:05*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*109*		*80 - 128*		*03/18/17 13:50*	*1*
4-Bromofluorobenzene (Surr)	*89*		*80 - 120*		*03/18/17 13:50*	*1*
Toluene-d8 (Surr)	*102*		*80 - 128*		*03/23/17 02:05*	*1*
4-Bromofluorobenzene (Surr)	*89*		*80 - 120*		*03/23/17 02:05*	*1*
Dibromofluoromethane (Surr)	*118*		*76 - 132*		*03/18/17 13:50*	*1*
Dibromofluoromethane (Surr)	*103*		*76 - 132*		*03/23/17 02:05*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**13**		0.98	0.25	ug/L		03/16/17 09:48	03/19/17 13:51	1

Client Sample ID: Subdrain N

Lab Sample ID: 440-179494-2

Date Collected: 03/13/17 12:25

Matrix: Water

Date Received: 03/13/17 18:15

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	57		30 - 120	03/16/17 09:48	03/19/17 13:51	1

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	110		10	5.0	mg/L			03/14/17 19:05	20

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	9.8		0.50	0.25	mg/L		03/16/17 11:42	03/20/17 10:48	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	5.3		0.20	0.10	mg/L			03/15/17 20:40	1
Chemical Oxygen Demand	81		20	10	mg/L			03/24/17 12:10	1
Total Dissolved Solids	2900		20	10	mg/L			03/16/17 17:32	1
Total Organic Carbon	29		0.50	0.25	mg/L			03/21/17 08:15	5

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	420		4.0	4.0	mg/L			03/15/17 06:43	1

Client Sample ID: PZ-2

Lab Sample ID: 440-179494-3

Date Collected: 03/13/17 12:55

Matrix: Water

Date Received: 03/13/17 18:15

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			03/23/17 02:35	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			03/23/17 02:35	1
Acrolein	ND		50	2.5	ug/L			03/18/17 14:20	1
Acrylonitrile	ND		50	1.0	ug/L			03/18/17 14:20	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			03/23/17 02:35	1
1,1,2,2-Tetrachloroethane	ND	*	0.50	0.25	ug/L			03/23/17 02:35	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			03/23/17 02:35	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			03/23/17 02:35	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			03/23/17 02:35	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			03/23/17 02:35	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			03/23/17 02:35	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			03/23/17 02:35	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			03/23/17 02:35	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			03/23/17 02:35	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			03/23/17 02:35	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			03/23/17 02:35	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			03/23/17 02:35	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			03/23/17 02:35	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			03/23/17 02:35	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			03/23/17 02:35	1
2-Hexanone	ND		5.0	2.5	ug/L			03/23/17 02:35	1
Acetone	ND		20	10	ug/L			03/23/17 02:35	1
Acetonitrile	ND		20	10	ug/L			03/23/17 02:35	1
Acrolein	ND		5.0	2.5	ug/L			03/23/17 02:35	1
Acrylonitrile	ND		2.0	1.0	ug/L			03/23/17 02:35	1
Benzene	ND		0.50	0.25	ug/L			03/23/17 02:35	1

Client Sample ID: PZ-2
Date Collected: 03/13/17 12:55
Date Received: 03/13/17 18:15

Lab Sample ID: 440-179494-3
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			03/23/17 02:35	1
Bromoform	ND		1.0	0.40	ug/L			03/23/17 02:35	1
Bromomethane	ND		0.50	0.25	ug/L			03/23/17 02:35	1
Carbon disulfide	ND		1.0	0.50	ug/L			03/23/17 02:35	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			03/23/17 02:35	1
Chlorobenzene	ND		0.50	0.25	ug/L			03/23/17 02:35	1
Bromochloromethane	ND		0.50	0.25	ug/L			03/23/17 02:35	1
Chloroethane	ND		1.0	0.40	ug/L			03/23/17 02:35	1
Chloroform	ND		0.50	0.25	ug/L			03/23/17 02:35	1
Chloromethane	ND		0.50	0.25	ug/L			03/23/17 02:35	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/23/17 02:35	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/23/17 02:35	1
Dibromochloromethane	ND		0.50	0.25	ug/L			03/23/17 02:35	1
Dibromomethane	ND		0.50	0.25	ug/L			03/23/17 02:35	1
Bromodichloromethane	ND		0.50	0.25	ug/L			03/23/17 02:35	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			03/23/17 02:35	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			03/23/17 02:35	1
Ethylbenzene	ND		0.50	0.25	ug/L			03/23/17 02:35	1
Iodomethane	ND		2.0	1.0	ug/L			03/23/17 02:35	1
Isobutyl alcohol	ND		25	13	ug/L			03/23/17 02:35	1
m,p-Xylene	ND		1.0	0.50	ug/L			03/23/17 02:35	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			03/23/17 02:35	1
Methyl methacrylate	ND		2.0	1.0	ug/L			03/23/17 02:35	1
Methylene Chloride	ND		2.0	0.88	ug/L			03/23/17 02:35	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			03/23/17 02:35	1
Naphthalene	ND		1.0	0.40	ug/L			03/23/17 02:35	1
o-Xylene	ND		0.50	0.25	ug/L			03/23/17 02:35	1
Propionitrile	ND		20	10	ug/L			03/23/17 02:35	1
Styrene	ND		0.50	0.25	ug/L			03/23/17 02:35	1
t-Butanol	ND		10	5.0	ug/L			03/23/17 02:35	1
Tetrachloroethene	ND		0.50	0.25	ug/L			03/23/17 02:35	1
Tetrahydrofuran	ND		10	5.0	ug/L			03/23/17 02:35	1
Toluene	ND		0.50	0.25	ug/L			03/23/17 02:35	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/23/17 02:35	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/23/17 02:35	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			03/23/17 02:35	1
Trichloroethene	ND		0.50	0.25	ug/L			03/23/17 02:35	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			03/23/17 02:35	1
Vinyl acetate	ND		4.0	2.0	ug/L			03/23/17 02:35	1
Vinyl chloride	ND		0.50	0.25	ug/L			03/23/17 02:35	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			03/23/17 02:35	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			03/23/17 02:35	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			03/23/17 02:35	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*3.8*	*T J*	*ug/L*		*3.70*			*03/23/17 02:35*	*1*
Unknown	*6.6*	*T J*	*ug/L*		*6.99*			*03/23/17 02:35*	*1*
Unknown	*2.7*	*T J*	*ug/L*		*16.13*			*03/23/17 02:35*	*1*

Client Sample ID: PZ-2

Lab Sample ID: 440-179494-3

Date Collected: 03/13/17 12:55

Matrix: Water

Date Received: 03/13/17 18:15

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*111*		*80 - 128*		*03/18/17 14:20*	*1*
4-Bromofluorobenzene (Surr)	*90*		*80 - 120*		*03/18/17 14:20*	*1*
Toluene-d8 (Surr)	*103*		*80 - 128*		*03/23/17 02:35*	*1*
4-Bromofluorobenzene (Surr)	*89*		*80 - 120*		*03/23/17 02:35*	*1*
Dibromofluoromethane (Surr)	*125*		*76 - 132*		*03/18/17 14:20*	*1*
Dibromofluoromethane (Surr)	*101*		*76 - 132*		*03/23/17 02:35*	*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		03/16/17 09:48	03/19/17 14:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*65*		*30 - 120*	*03/16/17 09:48*	*03/19/17 14:14*	*1*

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			03/14/17 19:22	10

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	**2.5**		0.50	0.25	mg/L		03/16/17 11:42	03/20/17 10:50	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**3.6**		0.20	0.10	mg/L			03/15/17 20:45	1
Chemical Oxygen Demand	ND		20	10	mg/L			03/24/17 12:10	1
Total Dissolved Solids	**4200**		100	50	mg/L			03/16/17 17:32	1
Total Organic Carbon	**2.4**		0.10	0.050	mg/L			03/18/17 15:33	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	**370**		4.0	4.0	mg/L			03/15/17 06:53	1

Client Sample ID: MW-6

Lab Sample ID: 440-179494-4

Date Collected: 03/13/17 11:40

Matrix: Water

Date Received: 03/13/17 18:15

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			03/23/17 03:05	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			03/23/17 03:05	1
Acrolein	ND		50	2.5	ug/L			03/18/17 14:50	1
Acrylonitrile	ND		50	1.0	ug/L			03/18/17 14:50	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			03/23/17 03:05	1
1,1,2,2-Tetrachloroethane	ND	*	0.50	0.25	ug/L			03/23/17 03:05	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			03/23/17 03:05	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			03/23/17 03:05	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			03/23/17 03:05	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			03/23/17 03:05	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			03/23/17 03:05	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			03/23/17 03:05	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			03/23/17 03:05	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			03/23/17 03:05	1

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

TestAmerica Job ID: 440-179494-1

Client Sample ID: MW-6
Date Collected: 03/13/17 11:40
Date Received: 03/13/17 18:15

Lab Sample ID: 440-179494-4
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloropropane	ND		0.50	0.25	ug/L			03/23/17 03:05	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			03/23/17 03:05	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			03/23/17 03:05	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			03/23/17 03:05	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			03/23/17 03:05	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			03/23/17 03:05	1
2-Hexanone	ND		5.0	2.5	ug/L			03/23/17 03:05	1
Acetone	ND		20	10	ug/L			03/23/17 03:05	1
Acetonitrile	ND		20	10	ug/L			03/23/17 03:05	1
Acrolein	ND		5.0	2.5	ug/L			03/23/17 03:05	1
Acrylonitrile	ND		2.0	1.0	ug/L			03/23/17 03:05	1
Benzene	ND		0.50	0.25	ug/L			03/23/17 03:05	1
Allyl chloride	ND		1.0	0.50	ug/L			03/23/17 03:05	1
Bromoform	ND		1.0	0.40	ug/L			03/23/17 03:05	1
Bromomethane	ND		0.50	0.25	ug/L			03/23/17 03:05	1
Carbon disulfide	ND		1.0	0.50	ug/L			03/23/17 03:05	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			03/23/17 03:05	1
Chlorobenzene	ND		0.50	0.25	ug/L			03/23/17 03:05	1
Bromochloromethane	ND		0.50	0.25	ug/L			03/23/17 03:05	1
Chloroethane	ND		1.0	0.40	ug/L			03/23/17 03:05	1
Chloroform	ND		0.50	0.25	ug/L			03/23/17 03:05	1
Chloromethane	ND		0.50	0.25	ug/L			03/23/17 03:05	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/23/17 03:05	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/23/17 03:05	1
Dibromochloromethane	ND		0.50	0.25	ug/L			03/23/17 03:05	1
Dibromomethane	ND		0.50	0.25	ug/L			03/23/17 03:05	1
Bromodichloromethane	ND		0.50	0.25	ug/L			03/23/17 03:05	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			03/23/17 03:05	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			03/23/17 03:05	1
Ethylbenzene	ND		0.50	0.25	ug/L			03/23/17 03:05	1
Iodomethane	ND		2.0	1.0	ug/L			03/23/17 03:05	1
Isobutyl alcohol	ND		25	13	ug/L			03/23/17 03:05	1
m,p-Xylene	ND		1.0	0.50	ug/L			03/23/17 03:05	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			03/23/17 03:05	1
Methyl methacrylate	ND		2.0	1.0	ug/L			03/23/17 03:05	1
Methylene Chloride	ND		2.0	0.88	ug/L			03/23/17 03:05	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			03/23/17 03:05	1
Naphthalene	ND		1.0	0.40	ug/L			03/23/17 03:05	1
o-Xylene	ND		0.50	0.25	ug/L			03/23/17 03:05	1
Propionitrile	ND		20	10	ug/L			03/23/17 03:05	1
Styrene	ND		0.50	0.25	ug/L			03/23/17 03:05	1
t-Butanol	ND		10	5.0	ug/L			03/23/17 03:05	1
Tetrachloroethene	ND		0.50	0.25	ug/L			03/23/17 03:05	1
Tetrahydrofuran	ND		10	5.0	ug/L			03/23/17 03:05	1
Toluene	ND		0.50	0.25	ug/L			03/23/17 03:05	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/23/17 03:05	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/23/17 03:05	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			03/23/17 03:05	1
Trichloroethene	ND		0.50	0.25	ug/L			03/23/17 03:05	1

Client Sample ID: MW-6
Date Collected: 03/13/17 11:40
Date Received: 03/13/17 18:15

Lab Sample ID: 440-179494-4
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	ND		0.50	0.25	ug/L			03/23/17 03:05	1
Vinyl acetate	ND		4.0	2.0	ug/L			03/23/17 03:05	1
Vinyl chloride	ND		0.50	0.25	ug/L			03/23/17 03:05	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			03/23/17 03:05	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			03/23/17 03:05	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			03/23/17 03:05	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*150*	*T J*	*ug/L*		*2.61*			*03/23/17 03:05*	*1*
Unknown	*6.7*	*T J*	*ug/L*		*3.46*			*03/23/17 03:05*	*1*
Unknown	*6.6*	*T J*	*ug/L*		*6.99*			*03/23/17 03:05*	*1*
Unknown	*3.2*	*T J*	*ug/L*		*16.39*			*03/23/17 03:05*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*112*		*80 - 128*		*03/18/17 14:50*	*1*
4-Bromofluorobenzene (Surr)	*85*		*80 - 120*		*03/18/17 14:50*	*1*
Toluene-d8 (Surr)	*102*		*80 - 128*		*03/23/17 03:05*	*1*
4-Bromofluorobenzene (Surr)	*91*		*80 - 120*		*03/23/17 03:05*	*1*
Dibromofluoromethane (Surr)	*121*		*76 - 132*		*03/18/17 14:50*	*1*
Dibromofluoromethane (Surr)	*103*		*76 - 132*		*03/23/17 03:05*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		1.0	0.25	ug/L		03/16/17 09:48	03/19/17 14:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*69*		*30 - 120*	*03/16/17 09:48*	*03/19/17 14:36*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**36**		10	5.0	mg/L			03/14/17 19:40	20

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	**5.6**		0.50	0.25	mg/L		03/16/17 11:42	03/20/17 10:53	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**1.1**		0.20	0.10	mg/L			03/15/17 20:51	1
Chemical Oxygen Demand	ND		20	10	mg/L			03/24/17 12:10	1
Total Dissolved Solids	**3800**		20	10	mg/L			03/16/17 17:32	1
Total Organic Carbon	**6.0**		0.10	0.050	mg/L			03/18/17 15:48	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	**480**		4.0	4.0	mg/L			03/15/17 07:03	1

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

TestAmerica Job ID: 440-179494-1

Client Sample ID: MW-14
Date Collected: 03/13/17 10:00
Date Received: 03/13/17 18:15

Lab Sample ID: 440-179494-5
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			03/23/17 03:33	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			03/23/17 03:33	1
Acrolein	ND		50	2.5	ug/L			03/18/17 15:19	1
Acrylonitrile	ND		50	1.0	ug/L			03/18/17 15:19	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			03/23/17 03:33	1
1,1,2,2-Tetrachloroethane	ND	*	0.50	0.25	ug/L			03/23/17 03:33	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			03/23/17 03:33	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			03/23/17 03:33	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			03/23/17 03:33	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			03/23/17 03:33	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			03/23/17 03:33	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			03/23/17 03:33	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			03/23/17 03:33	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			03/23/17 03:33	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			03/23/17 03:33	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			03/23/17 03:33	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			03/23/17 03:33	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			03/23/17 03:33	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			03/23/17 03:33	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			03/23/17 03:33	1
2-Hexanone	ND		5.0	2.5	ug/L			03/23/17 03:33	1
Acetone	ND		20	10	ug/L			03/23/17 03:33	1
Acetonitrile	ND		20	10	ug/L			03/23/17 03:33	1
Acrolein	ND		5.0	2.5	ug/L			03/23/17 03:33	1
Acrylonitrile	ND		2.0	1.0	ug/L			03/23/17 03:33	1
Benzene	ND		0.50	0.25	ug/L			03/23/17 03:33	1
Allyl chloride	ND		1.0	0.50	ug/L			03/23/17 03:33	1
Bromoform	ND		1.0	0.40	ug/L			03/23/17 03:33	1
Bromomethane	ND		0.50	0.25	ug/L			03/23/17 03:33	1
Carbon disulfide	ND		1.0	0.50	ug/L			03/23/17 03:33	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			03/23/17 03:33	1
Chlorobenzene	ND		0.50	0.25	ug/L			03/23/17 03:33	1
Bromochloromethane	ND		0.50	0.25	ug/L			03/23/17 03:33	1
Chloroethane	ND		1.0	0.40	ug/L			03/23/17 03:33	1
Chloroform	ND		0.50	0.25	ug/L			03/23/17 03:33	1
Chloromethane	ND		0.50	0.25	ug/L			03/23/17 03:33	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/23/17 03:33	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/23/17 03:33	1
Dibromochloromethane	ND		0.50	0.25	ug/L			03/23/17 03:33	1
Dibromomethane	ND		0.50	0.25	ug/L			03/23/17 03:33	1
Bromodichloromethane	ND		0.50	0.25	ug/L			03/23/17 03:33	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			03/23/17 03:33	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			03/23/17 03:33	1
Ethylbenzene	ND		0.50	0.25	ug/L			03/23/17 03:33	1
Iodomethane	ND		2.0	1.0	ug/L			03/23/17 03:33	1
Isobutyl alcohol	ND		25	13	ug/L			03/23/17 03:33	1
m,p-Xylene	ND		1.0	0.50	ug/L			03/23/17 03:33	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			03/23/17 03:33	1
Methyl methacrylate	ND		2.0	1.0	ug/L			03/23/17 03:33	1

Client Sample ID: MW-14
Date Collected: 03/13/17 10:00
Date Received: 03/13/17 18:15

Lab Sample ID: 440-179494-5
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			03/23/17 03:33	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			03/23/17 03:33	1
Naphthalene	ND		1.0	0.40	ug/L			03/23/17 03:33	1
o-Xylene	ND		0.50	0.25	ug/L			03/23/17 03:33	1
Propionitrile	ND		20	10	ug/L			03/23/17 03:33	1
Styrene	ND		0.50	0.25	ug/L			03/23/17 03:33	1
t-Butanol	ND		10	5.0	ug/L			03/23/17 03:33	1
Tetrachloroethene	ND		0.50	0.25	ug/L			03/23/17 03:33	1
Tetrahydrofuran	ND		10	5.0	ug/L			03/23/17 03:33	1
Toluene	ND		0.50	0.25	ug/L			03/23/17 03:33	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/23/17 03:33	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/23/17 03:33	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			03/23/17 03:33	1
Trichloroethene	ND		0.50	0.25	ug/L			03/23/17 03:33	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			03/23/17 03:33	1
Vinyl acetate	ND		4.0	2.0	ug/L			03/23/17 03:33	1
Vinyl chloride	ND		0.50	0.25	ug/L			03/23/17 03:33	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			03/23/17 03:33	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			03/23/17 03:33	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			03/23/17 03:33	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*9.4*	*T J*	*ug/L*		*3.36*			*03/23/17 03:33*	*1*
Unknown	*6.8*	*T J*	*ug/L*		*6.99*			*03/23/17 03:33*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*107*		*80 - 128*		*03/18/17 15:19*	*1*
4-Bromofluorobenzene (Surr)	*92*		*80 - 120*		*03/18/17 15:19*	*1*
Toluene-d8 (Surr)	*100*		*80 - 128*		*03/23/17 03:33*	*1*
4-Bromofluorobenzene (Surr)	*93*		*80 - 120*		*03/23/17 03:33*	*1*
Dibromofluoromethane (Surr)	*123*		*76 - 132*		*03/18/17 15:19*	*1*
Dibromofluoromethane (Surr)	*105*		*76 - 132*		*03/23/17 03:33*	*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		03/16/17 09:48	03/19/17 14:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*67*		*30 - 120*	*03/16/17 09:48*	*03/19/17 14:57*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**84**		25	13	mg/L			03/14/17 19:57	50

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		03/16/17 11:42	03/20/17 11:03	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	ND		0.20	0.10	mg/L			03/15/17 20:56	1

Client Sample ID: MW-14

Date Collected: 03/13/17 10:00
Date Received: 03/13/17 18:15

Lab Sample ID: 440-179494-5
Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		20	10	mg/L			03/24/17 12:11	1
Total Dissolved Solids	**6900**		100	50	mg/L			03/16/17 17:32	1
Total Organic Carbon	**13**		0.50	0.25	mg/L			03/21/17 08:28	5

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	**650**		4.0	4.0	mg/L			03/15/17 07:15	1

Client Sample ID: CM-9R3

Date Collected: 03/13/17 12:20
Date Received: 03/13/17 18:15

Lab Sample ID: 440-179494-6
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			03/23/17 04:03	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			03/23/17 04:03	1
Acrolein	ND		50	2.5	ug/L			03/18/17 15:49	1
Acrylonitrile	ND		50	1.0	ug/L			03/18/17 15:49	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			03/23/17 04:03	1
1,1,2,2-Tetrachloroethane	ND	*	0.50	0.25	ug/L			03/23/17 04:03	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			03/23/17 04:03	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			03/23/17 04:03	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			03/23/17 04:03	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			03/23/17 04:03	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			03/23/17 04:03	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			03/23/17 04:03	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			03/23/17 04:03	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			03/23/17 04:03	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			03/23/17 04:03	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			03/23/17 04:03	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			03/23/17 04:03	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			03/23/17 04:03	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			03/23/17 04:03	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			03/23/17 04:03	1
2-Hexanone	ND		5.0	2.5	ug/L			03/23/17 04:03	1
Acetone	ND		20	10	ug/L			03/23/17 04:03	1
Acetonitrile	ND		20	10	ug/L			03/23/17 04:03	1
Acrolein	ND		5.0	2.5	ug/L			03/23/17 04:03	1
Acrylonitrile	ND		2.0	1.0	ug/L			03/23/17 04:03	1
Benzene	ND		0.50	0.25	ug/L			03/23/17 04:03	1
Allyl chloride	ND		1.0	0.50	ug/L			03/23/17 04:03	1
Bromoform	ND		1.0	0.40	ug/L			03/23/17 04:03	1
Bromomethane	ND		0.50	0.25	ug/L			03/23/17 04:03	1
Carbon disulfide	ND		1.0	0.50	ug/L			03/23/17 04:03	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			03/23/17 04:03	1
Chlorobenzene	ND		0.50	0.25	ug/L			03/23/17 04:03	1
Bromochloromethane	ND		0.50	0.25	ug/L			03/23/17 04:03	1
Chloroethane	ND		1.0	0.40	ug/L			03/23/17 04:03	1
Chloroform	ND		0.50	0.25	ug/L			03/23/17 04:03	1
Chloromethane	ND		0.50	0.25	ug/L			03/23/17 04:03	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/23/17 04:03	1

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

TestAmerica Job ID: 440-179494-1

Client Sample ID: CM-9R3
Date Collected: 03/13/17 12:20
Date Received: 03/13/17 18:15

Lab Sample ID: 440-179494-6
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			03/23/17 04:03	1
Dibromochloromethane	ND		0.50	0.25	ug/L			03/23/17 04:03	1
Dibromomethane	ND		0.50	0.25	ug/L			03/23/17 04:03	1
Bromodichloromethane	ND		0.50	0.25	ug/L			03/23/17 04:03	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			03/23/17 04:03	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			03/23/17 04:03	1
Ethylbenzene	ND		0.50	0.25	ug/L			03/23/17 04:03	1
Iodomethane	ND		2.0	1.0	ug/L			03/23/17 04:03	1
Isobutyl alcohol	ND		25	13	ug/L			03/23/17 04:03	1
m,p-Xylene	ND		1.0	0.50	ug/L			03/23/17 04:03	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			03/23/17 04:03	1
Methyl methacrylate	ND		2.0	1.0	ug/L			03/23/17 04:03	1
Methylene Chloride	ND		2.0	0.88	ug/L			03/23/17 04:03	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			03/23/17 04:03	1
Naphthalene	ND		1.0	0.40	ug/L			03/23/17 04:03	1
o-Xylene	ND		0.50	0.25	ug/L			03/23/17 04:03	1
Propionitrile	ND		20	10	ug/L			03/23/17 04:03	1
Styrene	ND		0.50	0.25	ug/L			03/23/17 04:03	1
t-Butanol	ND		10	5.0	ug/L			03/23/17 04:03	1
Tetrachloroethene	ND		0.50	0.25	ug/L			03/23/17 04:03	1
Tetrahydrofuran	ND		10	5.0	ug/L			03/23/17 04:03	1
Toluene	ND		0.50	0.25	ug/L			03/23/17 04:03	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/23/17 04:03	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/23/17 04:03	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			03/23/17 04:03	1
Trichloroethene	ND		0.50	0.25	ug/L			03/23/17 04:03	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			03/23/17 04:03	1
Vinyl acetate	ND		4.0	2.0	ug/L			03/23/17 04:03	1
Vinyl chloride	ND		0.50	0.25	ug/L			03/23/17 04:03	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			03/23/17 04:03	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			03/23/17 04:03	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			03/23/17 04:03	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*5.0*	*T J*	*ug/L*		*3.36*			*03/23/17 04:03*	*1*
Unknown	*6.3*	*T J*	*ug/L*		*6.99*			*03/23/17 04:03*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*112*		*80 - 128*		*03/18/17 15:49*	*1*
4-Bromofluorobenzene (Surr)	*90*		*80 - 120*		*03/18/17 15:49*	*1*
Toluene-d8 (Surr)	*102*		*80 - 128*		*03/23/17 04:03*	*1*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*		*03/23/17 04:03*	*1*
Dibromofluoromethane (Surr)	*126*		*76 - 132*		*03/18/17 15:49*	*1*
Dibromofluoromethane (Surr)	*103*		*76 - 132*		*03/23/17 04:03*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.99	0.25	ug/L		03/16/17 09:48	03/19/17 15:19	1

Client Sample ID: CM-9R3

Date Collected: 03/13/17 12:20
Date Received: 03/13/17 18:15

Lab Sample ID: 440-179494-6
Matrix: Water

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*67*		*30 - 120*	*03/16/17 09:48*	*03/19/17 15:19*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**22**		10	5.0	mg/L			03/14/17 20:14	20

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		03/16/17 11:42	03/20/17 11:06	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**2.0**		0.20	0.10	mg/L			03/15/17 21:11	1
Chemical Oxygen Demand	ND		20	10	mg/L			03/24/17 12:11	1
Total Dissolved Solids	**5200**		50	25	mg/L			03/16/17 17:32	1
Total Organic Carbon	**10**		0.10	0.050	mg/L			03/18/17 16:22	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	**9.8**		4.0	4.0	mg/L			03/15/17 07:21	1

Client Sample ID: CM-10R

Date Collected: 03/13/17 11:00
Date Received: 03/13/17 18:15

Lab Sample ID: 440-179494-7
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			03/23/17 04:33	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			03/23/17 04:33	1
Acrolein	ND		50	2.5	ug/L			03/18/17 16:19	1
Acrylonitrile	ND		50	1.0	ug/L			03/18/17 16:19	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			03/23/17 04:33	1
1,1,2,2-Tetrachloroethane	ND	*	0.50	0.25	ug/L			03/23/17 04:33	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			03/23/17 04:33	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			03/23/17 04:33	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			03/23/17 04:33	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			03/23/17 04:33	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			03/23/17 04:33	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			03/23/17 04:33	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			03/23/17 04:33	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			03/23/17 04:33	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			03/23/17 04:33	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			03/23/17 04:33	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			03/23/17 04:33	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			03/23/17 04:33	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			03/23/17 04:33	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			03/23/17 04:33	1
2-Hexanone	ND		5.0	2.5	ug/L			03/23/17 04:33	1
Acetone	ND		20	10	ug/L			03/23/17 04:33	1
Acetonitrile	ND		20	10	ug/L			03/23/17 04:33	1
Acrolein	ND		5.0	2.5	ug/L			03/23/17 04:33	1
Acrylonitrile	ND		2.0	1.0	ug/L			03/23/17 04:33	1
Benzene	ND		0.50	0.25	ug/L			03/23/17 04:33	1

Client Sample ID: CM-10R
Date Collected: 03/13/17 11:00
Date Received: 03/13/17 18:15

Lab Sample ID: 440-179494-7
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			03/23/17 04:33	1
Bromoform	ND		1.0	0.40	ug/L			03/23/17 04:33	1
Bromomethane	ND		0.50	0.25	ug/L			03/23/17 04:33	1
Carbon disulfide	ND		1.0	0.50	ug/L			03/23/17 04:33	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			03/23/17 04:33	1
Chlorobenzene	ND		0.50	0.25	ug/L			03/23/17 04:33	1
Bromochloromethane	ND		0.50	0.25	ug/L			03/23/17 04:33	1
Chloroethane	ND		1.0	0.40	ug/L			03/23/17 04:33	1
Chloroform	ND		0.50	0.25	ug/L			03/23/17 04:33	1
Chloromethane	ND		0.50	0.25	ug/L			03/23/17 04:33	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/23/17 04:33	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/23/17 04:33	1
Dibromochloromethane	ND		0.50	0.25	ug/L			03/23/17 04:33	1
Dibromomethane	ND		0.50	0.25	ug/L			03/23/17 04:33	1
Bromodichloromethane	ND		0.50	0.25	ug/L			03/23/17 04:33	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			03/23/17 04:33	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			03/23/17 04:33	1
Ethylbenzene	ND		0.50	0.25	ug/L			03/23/17 04:33	1
Iodomethane	ND		2.0	1.0	ug/L			03/23/17 04:33	1
Isobutyl alcohol	ND		25	13	ug/L			03/23/17 04:33	1
m,p-Xylene	ND		1.0	0.50	ug/L			03/23/17 04:33	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			03/23/17 04:33	1
Methyl methacrylate	ND		2.0	1.0	ug/L			03/23/17 04:33	1
Methylene Chloride	ND		2.0	0.88	ug/L			03/23/17 04:33	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			03/23/17 04:33	1
Naphthalene	ND		1.0	0.40	ug/L			03/23/17 04:33	1
o-Xylene	ND		0.50	0.25	ug/L			03/23/17 04:33	1
Propionitrile	ND		20	10	ug/L			03/23/17 04:33	1
Styrene	ND		0.50	0.25	ug/L			03/23/17 04:33	1
t-Butanol	ND		10	5.0	ug/L			03/23/17 04:33	1
Tetrachloroethene	ND		0.50	0.25	ug/L			03/23/17 04:33	1
Tetrahydrofuran	ND		10	5.0	ug/L			03/23/17 04:33	1
Toluene	ND		0.50	0.25	ug/L			03/23/17 04:33	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/23/17 04:33	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/23/17 04:33	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			03/23/17 04:33	1
Trichloroethene	ND		0.50	0.25	ug/L			03/23/17 04:33	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			03/23/17 04:33	1
Vinyl acetate	ND		4.0	2.0	ug/L			03/23/17 04:33	1
Vinyl chloride	ND		0.50	0.25	ug/L			03/23/17 04:33	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			03/23/17 04:33	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			03/23/17 04:33	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			03/23/17 04:33	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*6.6*	*T J*	*ug/L*		*6.99*			*03/23/17 04:33*	*1*
Unknown	*4.4*	*T J*	*ug/L*		*16.11*			*03/23/17 04:33*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*107*		*80 - 128*		*03/18/17 16:19*	*1*

Client Sample ID: CM-10R

Date Collected: 03/13/17 11:00
Date Received: 03/13/17 18:15

Lab Sample ID: 440-179494-7

Matrix: Water

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*88*		*80 - 120*		*03/18/17 16:19*	*1*
Toluene-d8 (Surr)	*103*		*80 - 128*		*03/23/17 04:33*	*1*
4-Bromofluorobenzene (Surr)	*92*		*80 - 120*		*03/23/17 04:33*	*1*
Dibromofluoromethane (Surr)	*132*		*76 - 132*		*03/18/17 16:19*	*1*
Dibromofluoromethane (Surr)	*104*		*76 - 132*		*03/23/17 04:33*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.97	0.24	ug/L		03/16/17 09:48	03/19/17 15:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*67*		*30 - 120*	*03/16/17 09:48*	*03/19/17 15:41*	*1*

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			03/14/17 20:31	10

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	**13**		0.50	0.25	mg/L		03/16/17 11:42	03/20/17 11:08	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**13**		0.40	0.20	mg/L			03/15/17 22:18	2
Chemical Oxygen Demand	ND		20	10	mg/L			03/24/17 12:11	1
Total Dissolved Solids	**3000**		20	10	mg/L			03/16/17 17:32	1
Total Organic Carbon	**3.5**		0.10	0.050	mg/L			03/18/17 16:35	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	**370**		4.0	4.0	mg/L			03/15/17 07:29	1

Client Sample ID: MW-5

Date Collected: 03/13/17 13:48
Date Received: 03/13/17 18:15

Lab Sample ID: 440-179494-8

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			03/23/17 05:03	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			03/23/17 05:03	1
Acrolein	ND		50	2.5	ug/L			03/18/17 16:48	1
Acrylonitrile	ND		50	1.0	ug/L			03/18/17 16:48	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			03/23/17 05:03	1
1,1,2,2-Tetrachloroethane	ND	*	0.50	0.25	ug/L			03/23/17 05:03	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			03/23/17 05:03	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			03/23/17 05:03	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			03/23/17 05:03	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			03/23/17 05:03	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			03/23/17 05:03	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			03/23/17 05:03	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			03/23/17 05:03	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			03/23/17 05:03	1

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

TestAmerica Job ID: 440-179494-1

Client Sample ID: MW-5
Date Collected: 03/13/17 13:48
Date Received: 03/13/17 18:15

Lab Sample ID: 440-179494-8
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloropropane	ND		0.50	0.25	ug/L			03/23/17 05:03	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			03/23/17 05:03	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			03/23/17 05:03	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			03/23/17 05:03	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			03/23/17 05:03	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			03/23/17 05:03	1
2-Hexanone	ND		5.0	2.5	ug/L			03/23/17 05:03	1
Acetone	ND		20	10	ug/L			03/23/17 05:03	1
Acetonitrile	ND		20	10	ug/L			03/23/17 05:03	1
Acrolein	ND		5.0	2.5	ug/L			03/23/17 05:03	1
Acrylonitrile	ND		2.0	1.0	ug/L			03/23/17 05:03	1
Benzene	ND		0.50	0.25	ug/L			03/23/17 05:03	1
Allyl chloride	ND		1.0	0.50	ug/L			03/23/17 05:03	1
Bromoform	ND		1.0	0.40	ug/L			03/23/17 05:03	1
Bromomethane	ND		0.50	0.25	ug/L			03/23/17 05:03	1
Carbon disulfide	ND		1.0	0.50	ug/L			03/23/17 05:03	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			03/23/17 05:03	1
Chlorobenzene	ND		0.50	0.25	ug/L			03/23/17 05:03	1
Bromochloromethane	ND		0.50	0.25	ug/L			03/23/17 05:03	1
Chloroethane	ND		1.0	0.40	ug/L			03/23/17 05:03	1
Chloroform	ND		0.50	0.25	ug/L			03/23/17 05:03	1
Chloromethane	ND		0.50	0.25	ug/L			03/23/17 05:03	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/23/17 05:03	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/23/17 05:03	1
Dibromochloromethane	ND		0.50	0.25	ug/L			03/23/17 05:03	1
Dibromomethane	ND		0.50	0.25	ug/L			03/23/17 05:03	1
Bromodichloromethane	ND		0.50	0.25	ug/L			03/23/17 05:03	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			03/23/17 05:03	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			03/23/17 05:03	1
Ethylbenzene	ND		0.50	0.25	ug/L			03/23/17 05:03	1
Iodomethane	ND		2.0	1.0	ug/L			03/23/17 05:03	1
Isobutyl alcohol	ND		25	13	ug/L			03/23/17 05:03	1
m,p-Xylene	ND		1.0	0.50	ug/L			03/23/17 05:03	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			03/23/17 05:03	1
Methyl methacrylate	ND		2.0	1.0	ug/L			03/23/17 05:03	1
Methylene Chloride	ND		2.0	0.88	ug/L			03/23/17 05:03	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			03/23/17 05:03	1
Naphthalene	ND		1.0	0.40	ug/L			03/23/17 05:03	1
o-Xylene	ND		0.50	0.25	ug/L			03/23/17 05:03	1
Propionitrile	ND		20	10	ug/L			03/23/17 05:03	1
Styrene	ND		0.50	0.25	ug/L			03/23/17 05:03	1
t-Butanol	ND		10	5.0	ug/L			03/23/17 05:03	1
Tetrachloroethene	ND		0.50	0.25	ug/L			03/23/17 05:03	1
Tetrahydrofuran	ND		10	5.0	ug/L			03/23/17 05:03	1
Toluene	ND		0.50	0.25	ug/L			03/23/17 05:03	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/23/17 05:03	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/23/17 05:03	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			03/23/17 05:03	1
Trichloroethene	ND		0.50	0.25	ug/L			03/23/17 05:03	1

Client Sample ID: MW-5

Date Collected: 03/13/17 13:48
Date Received: 03/13/17 18:15

Lab Sample ID: 440-179494-8
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	ND		0.50	0.25	ug/L			03/23/17 05:03	1
Vinyl acetate	ND		4.0	2.0	ug/L			03/23/17 05:03	1
Vinyl chloride	ND		0.50	0.25	ug/L			03/23/17 05:03	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			03/23/17 05:03	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			03/23/17 05:03	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			03/23/17 05:03	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*8.5*	*T J*	*ug/L*		*3.46*			*03/23/17 05:03*	*1*
Unknown	*6.6*	*T J*	*ug/L*		*6.99*			*03/23/17 05:03*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*106*		*80 - 128*		*03/18/17 16:48*	*1*
4-Bromofluorobenzene (Surr)	*90*		*80 - 120*		*03/18/17 16:48*	*1*
Toluene-d8 (Surr)	*101*		*80 - 128*		*03/23/17 05:03*	*1*
4-Bromofluorobenzene (Surr)	*93*		*80 - 120*		*03/23/17 05:03*	*1*
Dibromofluoromethane (Surr)	*124*		*76 - 132*		*03/18/17 16:48*	*1*
Dibromofluoromethane (Surr)	*104*		*76 - 132*		*03/23/17 05:03*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**11**		0.99	0.25	ug/L		03/16/17 09:48	03/19/17 16:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*54*		*30 - 120*	*03/16/17 09:48*	*03/19/17 16:03*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**160**		25	13	mg/L			03/14/17 20:48	50

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		03/16/17 11:42	03/20/17 11:09	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**6.0**		0.20	0.10	mg/L			03/15/17 21:21	1
Chemical Oxygen Demand	**86**		20	10	mg/L			03/24/17 13:55	1
Total Dissolved Solids	**3300**		20	10	mg/L			03/16/17 17:32	1
Total Organic Carbon	**29**		1.0	0.50	mg/L			03/21/17 08:41	10

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	**620**		4.0	4.0	mg/L			03/15/17 07:42	1

Client Sample ID: QCAB

Date Collected: 03/13/17 00:01
Date Received: 03/13/17 18:15

Lab Sample ID: 440-179494-9
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			03/23/17 05:33	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			03/23/17 05:33	1

Client Sample ID: QCAB
Date Collected: 03/13/17 00:01
Date Received: 03/13/17 18:15

Lab Sample ID: 440-179494-9
Matrix: Water

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			03/18/17 17:18	1
Acrylonitrile	ND		50	1.0	ug/L			03/18/17 17:18	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			03/23/17 05:33	1
1,1,2,2-Tetrachloroethane	ND	*	0.50	0.25	ug/L			03/23/17 05:33	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			03/23/17 05:33	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			03/23/17 05:33	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			03/23/17 05:33	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			03/23/17 05:33	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			03/23/17 05:33	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			03/23/17 05:33	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			03/23/17 05:33	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			03/23/17 05:33	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			03/23/17 05:33	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			03/23/17 05:33	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			03/23/17 05:33	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			03/23/17 05:33	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			03/23/17 05:33	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			03/23/17 05:33	1
2-Hexanone	ND		5.0	2.5	ug/L			03/23/17 05:33	1
Acetone	ND		20	10	ug/L			03/23/17 05:33	1
Acetonitrile	ND		20	10	ug/L			03/23/17 05:33	1
Acrolein	ND		5.0	2.5	ug/L			03/23/17 05:33	1
Acrylonitrile	ND		2.0	1.0	ug/L			03/23/17 05:33	1
Benzene	ND		0.50	0.25	ug/L			03/23/17 05:33	1
Allyl chloride	ND		1.0	0.50	ug/L			03/23/17 05:33	1
Bromoform	ND		1.0	0.40	ug/L			03/23/17 05:33	1
Bromomethane	ND		0.50	0.25	ug/L			03/23/17 05:33	1
Carbon disulfide	ND		1.0	0.50	ug/L			03/23/17 05:33	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			03/23/17 05:33	1
Chlorobenzene	ND		0.50	0.25	ug/L			03/23/17 05:33	1
Bromochloromethane	ND		0.50	0.25	ug/L			03/23/17 05:33	1
Chloroethane	ND		1.0	0.40	ug/L			03/23/17 05:33	1
Chloroform	ND		0.50	0.25	ug/L			03/23/17 05:33	1
Chloromethane	ND		0.50	0.25	ug/L			03/23/17 05:33	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/23/17 05:33	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/23/17 05:33	1
Dibromochloromethane	ND		0.50	0.25	ug/L			03/23/17 05:33	1
Dibromomethane	ND		0.50	0.25	ug/L			03/23/17 05:33	1
Bromodichloromethane	ND		0.50	0.25	ug/L			03/23/17 05:33	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			03/23/17 05:33	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			03/23/17 05:33	1
Ethylbenzene	ND		0.50	0.25	ug/L			03/23/17 05:33	1
Iodomethane	ND		2.0	1.0	ug/L			03/23/17 05:33	1
Isobutyl alcohol	ND		25	13	ug/L			03/23/17 05:33	1
m,p-Xylene	ND		1.0	0.50	ug/L			03/23/17 05:33	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			03/23/17 05:33	1
Methyl methacrylate	ND		2.0	1.0	ug/L			03/23/17 05:33	1
Methylene Chloride	ND		2.0	0.88	ug/L			03/23/17 05:33	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			03/23/17 05:33	1

Client Sample ID: QCAB

Date Collected: 03/13/17 00:01
Date Received: 03/13/17 18:15

Lab Sample ID: 440-179494-9
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			03/23/17 05:33	1
o-Xylene	ND		0.50	0.25	ug/L			03/23/17 05:33	1
Propionitrile	ND		20	10	ug/L			03/23/17 05:33	1
Styrene	ND		0.50	0.25	ug/L			03/23/17 05:33	1
t-Butanol	ND		10	5.0	ug/L			03/23/17 05:33	1
Tetrachloroethene	ND		0.50	0.25	ug/L			03/23/17 05:33	1
Tetrahydrofuran	ND		10	5.0	ug/L			03/23/17 05:33	1
Toluene	ND		0.50	0.25	ug/L			03/23/17 05:33	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/23/17 05:33	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/23/17 05:33	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			03/23/17 05:33	1
Trichloroethene	ND		0.50	0.25	ug/L			03/23/17 05:33	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			03/23/17 05:33	1
Vinyl acetate	ND		4.0	2.0	ug/L			03/23/17 05:33	1
Vinyl chloride	ND		0.50	0.25	ug/L			03/23/17 05:33	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			03/23/17 05:33	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			03/23/17 05:33	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			03/23/17 05:33	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*6.5*	*T J*	*ug/L*		*6.99*			*03/23/17 05:33*	*1*
Unknown	*2.7*	*T J*	*ug/L*		*15.44*			*03/23/17 05:33*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*113*		*80 - 128*		*03/18/17 17:18*	*1*
4-Bromofluorobenzene (Surr)	*90*		*80 - 120*		*03/18/17 17:18*	*1*
Toluene-d8 (Surr)	*104*		*80 - 128*		*03/23/17 05:33*	*1*
4-Bromofluorobenzene (Surr)	*93*		*80 - 120*		*03/23/17 05:33*	*1*
Dibromofluoromethane (Surr)	*125*		*76 - 132*		*03/18/17 17:18*	*1*
Dibromofluoromethane (Surr)	*102*		*76 - 132*		*03/23/17 05:33*	*1*

Client Sample ID: QCTB

Date Collected: 03/13/17 00:01
Date Received: 03/13/17 18:15

Lab Sample ID: 440-179494-10
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			03/23/17 06:02	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			03/23/17 06:02	1
Acrolein	ND		50	2.5	ug/L			03/18/17 17:47	1
Acrylonitrile	ND		50	1.0	ug/L			03/18/17 17:47	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			03/23/17 06:02	1
1,1,2,2-Tetrachloroethane	ND	*	0.50	0.25	ug/L			03/23/17 06:02	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			03/23/17 06:02	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			03/23/17 06:02	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			03/23/17 06:02	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			03/23/17 06:02	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			03/23/17 06:02	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			03/23/17 06:02	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			03/23/17 06:02	1

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

TestAmerica Job ID: 440-179494-1

Client Sample ID: QCTB
Date Collected: 03/13/17 00:01
Date Received: 03/13/17 18:15

Lab Sample ID: 440-179494-10
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane	ND		0.50	0.25	ug/L			03/23/17 06:02	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			03/23/17 06:02	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			03/23/17 06:02	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			03/23/17 06:02	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			03/23/17 06:02	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			03/23/17 06:02	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			03/23/17 06:02	1
2-Hexanone	ND		5.0	2.5	ug/L			03/23/17 06:02	1
Acetone	ND		20	10	ug/L			03/23/17 06:02	1
Acetonitrile	ND		20	10	ug/L			03/23/17 06:02	1
Acrolein	ND		5.0	2.5	ug/L			03/23/17 06:02	1
Acrylonitrile	ND		2.0	1.0	ug/L			03/23/17 06:02	1
Benzene	ND		0.50	0.25	ug/L			03/23/17 06:02	1
Allyl chloride	ND		1.0	0.50	ug/L			03/23/17 06:02	1
Bromoform	ND		1.0	0.40	ug/L			03/23/17 06:02	1
Bromomethane	ND		0.50	0.25	ug/L			03/23/17 06:02	1
Carbon disulfide	ND		1.0	0.50	ug/L			03/23/17 06:02	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			03/23/17 06:02	1
Chlorobenzene	ND		0.50	0.25	ug/L			03/23/17 06:02	1
Bromochloromethane	ND		0.50	0.25	ug/L			03/23/17 06:02	1
Chloroethane	ND		1.0	0.40	ug/L			03/23/17 06:02	1
Chloroform	ND		0.50	0.25	ug/L			03/23/17 06:02	1
Chloromethane	ND		0.50	0.25	ug/L			03/23/17 06:02	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/23/17 06:02	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/23/17 06:02	1
Dibromochloromethane	ND		0.50	0.25	ug/L			03/23/17 06:02	1
Dibromomethane	ND		0.50	0.25	ug/L			03/23/17 06:02	1
Bromodichloromethane	ND		0.50	0.25	ug/L			03/23/17 06:02	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			03/23/17 06:02	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			03/23/17 06:02	1
Ethylbenzene	ND		0.50	0.25	ug/L			03/23/17 06:02	1
Iodomethane	ND		2.0	1.0	ug/L			03/23/17 06:02	1
Isobutyl alcohol	ND		25	13	ug/L			03/23/17 06:02	1
m,p-Xylene	ND		1.0	0.50	ug/L			03/23/17 06:02	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			03/23/17 06:02	1
Methyl methacrylate	ND		2.0	1.0	ug/L			03/23/17 06:02	1
Methylene Chloride	ND		2.0	0.88	ug/L			03/23/17 06:02	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			03/23/17 06:02	1
Naphthalene	ND		1.0	0.40	ug/L			03/23/17 06:02	1
o-Xylene	ND		0.50	0.25	ug/L			03/23/17 06:02	1
Propionitrile	ND		20	10	ug/L			03/23/17 06:02	1
Styrene	ND		0.50	0.25	ug/L			03/23/17 06:02	1
t-Butanol	ND		10	5.0	ug/L			03/23/17 06:02	1
Tetrachloroethene	ND		0.50	0.25	ug/L			03/23/17 06:02	1
Tetrahydrofuran	ND		10	5.0	ug/L			03/23/17 06:02	1
Toluene	ND		0.50	0.25	ug/L			03/23/17 06:02	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/23/17 06:02	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/23/17 06:02	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			03/23/17 06:02	1

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

TestAmerica Job ID: 440-179494-1

Client Sample ID: QCTB
Date Collected: 03/13/17 00:01
Date Received: 03/13/17 18:15

Lab Sample ID: 440-179494-10
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichloroethene	ND		0.50	0.25	ug/L			03/23/17 06:02	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			03/23/17 06:02	1
Vinyl acetate	ND		4.0	2.0	ug/L			03/23/17 06:02	1
Vinyl chloride	ND		0.50	0.25	ug/L			03/23/17 06:02	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			03/23/17 06:02	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			03/23/17 06:02	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			03/23/17 06:02	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*6.5*	*T J*	*ug/L*		*6.99*			*03/23/17 06:02*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*109*		*80 - 128*		*03/18/17 17:47*	*1*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*		*03/18/17 17:47*	*1*
Toluene-d8 (Surr)	*104*		*80 - 128*		*03/23/17 06:02*	*1*
4-Bromofluorobenzene (Surr)	*92*		*80 - 120*		*03/23/17 06:02*	*1*
Dibromofluoromethane (Surr)	*124*		*76 - 132*		*03/18/17 17:47*	*1*
Dibromofluoromethane (Surr)	*101*		*76 - 132*		*03/23/17 06:02*	*1*

Method Summary

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

TestAmerica Job ID: 440-179494-1

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 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: 440-179494-1

Client Sample ID: Combined Subdrains

Lab Sample ID: 440-179494-1
Matrix: Water
Date Collected: 03/13/17 13:35
Date Received: 03/13/17 18:15

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	394787	03/18/17 13:21	WC	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	395597	03/23/17 01:36	WK	TAL IRV
Total/NA	Prep	3520C			1015 mL	1.0 mL	394346	03/16/17 09:48	JS1	TAL IRV
Total/NA	Analysis	8270C		1			394854	03/19/17 13:30	HN	TAL IRV
Total/NA	Analysis	300.0		20			393859	03/14/17 18:49	NTN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	394367	03/16/17 11:42	Q1N	TAL IRV
Total Recoverable	Analysis	6010B		1			394981	03/20/17 10:40	EN	TAL IRV
Total/NA	Analysis	350.1		1	0.8 mL	8 mL	394275	03/15/17 20:24	EN	TAL IRV
Total/NA	Analysis	410.4		1	0.625 mL	2.5 mL	395979	03/24/17 12:10	HTL	TAL IRV
Total/NA	Analysis	SM 2320B		1			394148	03/15/17 06:34	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	394477	03/16/17 17:32	MMH	TAL IRV
Total/NA	Analysis	SM 5310C		1	100 mL	100 mL	394834	03/18/17 15:04	YZ	TAL IRV

Client Sample ID: Subdrain N

Lab Sample ID: 440-179494-2
Matrix: Water
Date Collected: 03/13/17 12:25
Date Received: 03/13/17 18:15

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	394787	03/18/17 13:50	WC	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	395597	03/23/17 02:05	WK	TAL IRV
Total/NA	Prep	3520C			1020 mL	1.0 mL	394346	03/16/17 09:48	JS1	TAL IRV
Total/NA	Analysis	8270C		1			394854	03/19/17 13:51	HN	TAL IRV
Total/NA	Analysis	300.0		20			393859	03/14/17 19:05	NTN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	394367	03/16/17 11:42	Q1N	TAL IRV
Total Recoverable	Analysis	6010B		1			394981	03/20/17 10:48	EN	TAL IRV
Total/NA	Analysis	350.1		1	0.8 mL	8 mL	394275	03/15/17 20:40	EN	TAL IRV
Total/NA	Analysis	410.4		1	0.625 mL	2.5 mL	395979	03/24/17 12:10	HTL	TAL IRV
Total/NA	Analysis	SM 2320B		1			394148	03/15/17 06:43	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	394477	03/16/17 17:32	MMH	TAL IRV
Total/NA	Analysis	SM 5310C		5	100 mL	100 mL	395236	03/21/17 08:15	YZ	TAL IRV

Client Sample ID: PZ-2

Lab Sample ID: 440-179494-3
Matrix: Water
Date Collected: 03/13/17 12:55
Date Received: 03/13/17 18:15

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	394787	03/18/17 14:20	WC	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	395597	03/23/17 02:35	WK	TAL IRV
Total/NA	Prep	3520C			1020 mL	1.0 mL	394346	03/16/17 09:48	JS1	TAL IRV
Total/NA	Analysis	8270C		1			394854	03/19/17 14:14	HN	TAL IRV
Total/NA	Analysis	300.0		10			393859	03/14/17 19:22	NTN	TAL IRV

Lab Chronicle

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

TestAmerica Job ID: 440-179494-1

Client Sample ID: PZ-2

Date Collected: 03/13/17 12:55
Date Received: 03/13/17 18:15

Lab Sample ID: 440-179494-3

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	394367	03/16/17 11:42	Q1N	TAL IRV
Total Recoverable	Analysis	6010B		1			394981	03/20/17 10:50	EN	TAL IRV
Total/NA	Analysis	350.1		1	0.8 mL	8 mL	394275	03/15/17 20:45	EN	TAL IRV
Total/NA	Analysis	410.4		1	0.625 mL	2.5 mL	395979	03/24/17 12:10	HTL	TAL IRV
Total/NA	Analysis	SM 2320B		1			394148	03/15/17 06:53	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	394477	03/16/17 17:32	MMH	TAL IRV
Total/NA	Analysis	SM 5310C		1	100 mL	100 mL	394834	03/18/17 15:33	YZ	TAL IRV

Client Sample ID: MW-6

Date Collected: 03/13/17 11:40
Date Received: 03/13/17 18:15

Lab Sample ID: 440-179494-4

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	394787	03/18/17 14:50	WC	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	395597	03/23/17 03:05	WK	TAL IRV
Total/NA	Prep	3520C			1005 mL	1.0 mL	394346	03/16/17 09:48	JS1	TAL IRV
Total/NA	Analysis	8270C		1			394854	03/19/17 14:36	HN	TAL IRV
Total/NA	Analysis	300.0		20			393859	03/14/17 19:40	NTN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	394367	03/16/17 11:42	Q1N	TAL IRV
Total Recoverable	Analysis	6010B		1			394981	03/20/17 10:53	EN	TAL IRV
Total/NA	Analysis	350.1		1	0.8 mL	8 mL	394275	03/15/17 20:51	EN	TAL IRV
Total/NA	Analysis	410.4		1	0.625 mL	2.5 mL	395979	03/24/17 12:10	HTL	TAL IRV
Total/NA	Analysis	SM 2320B		1			394148	03/15/17 07:03	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	394477	03/16/17 17:32	MMH	TAL IRV
Total/NA	Analysis	SM 5310C		1	100 mL	100 mL	394834	03/18/17 15:48	YZ	TAL IRV

Client Sample ID: MW-14

Date Collected: 03/13/17 10:00
Date Received: 03/13/17 18:15

Lab Sample ID: 440-179494-5

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	394787	03/18/17 15:19	WC	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	395597	03/23/17 03:33	WK	TAL IRV
Total/NA	Prep	3520C			1015 mL	1.0 mL	394346	03/16/17 09:48	JS1	TAL IRV
Total/NA	Analysis	8270C		1			394854	03/19/17 14:57	HN	TAL IRV
Total/NA	Analysis	300.0		50			393859	03/14/17 19:57	NTN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	394367	03/16/17 11:42	Q1N	TAL IRV
Total Recoverable	Analysis	6010B		1			394981	03/20/17 11:03	EN	TAL IRV
Total/NA	Analysis	350.1		1	0.8 mL	8 mL	394275	03/15/17 20:56	EN	TAL IRV
Total/NA	Analysis	410.4		1	0.625 mL	2.5 mL	395979	03/24/17 12:11	HTL	TAL IRV
Total/NA	Analysis	SM 2320B		1			394148	03/15/17 07:15	YZ	TAL IRV

Lab Chronicle

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

TestAmerica Job ID: 440-179494-1

Client Sample ID: MW-14

Date Collected: 03/13/17 10:00
Date Received: 03/13/17 18:15

Lab Sample ID: 440-179494-5

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	SM 2540C		1	10 mL	100 mL	394477	03/16/17 17:32	MMH	TAL IRV
Total/NA	Analysis	SM 5310C		5	100 mL	100 mL	395236	03/21/17 08:28	YZ	TAL IRV

Client Sample ID: CM-9R3

Date Collected: 03/13/17 12:20
Date Received: 03/13/17 18:15

Lab Sample ID: 440-179494-6

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	394787	03/18/17 15:49	WC	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	395597	03/23/17 04:03	WK	TAL IRV
Total/NA	Prep	3520C			1015 mL	1.0 mL	394346	03/16/17 09:48	JS1	TAL IRV
Total/NA	Analysis	8270C		1			394854	03/19/17 15:19	HN	TAL IRV
Total/NA	Analysis	300.0		20			393859	03/14/17 20:14	NTN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	394367	03/16/17 11:42	Q1N	TAL IRV
Total Recoverable	Analysis	6010B		1			394981	03/20/17 11:06	EN	TAL IRV
Total/NA	Analysis	350.1		1	0.8 mL	8 mL	394275	03/15/17 21:11	EN	TAL IRV
Total/NA	Analysis	410.4		1	0.625 mL	2.5 mL	395979	03/24/17 12:11	HTL	TAL IRV
Total/NA	Analysis	SM 2320B		1			394148	03/15/17 07:21	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	20 mL	100 mL	394477	03/16/17 17:32	MMH	TAL IRV
Total/NA	Analysis	SM 5310C		1	100 mL	100 mL	394834	03/18/17 16:22	YZ	TAL IRV

Client Sample ID: CM-10R

Date Collected: 03/13/17 11:00
Date Received: 03/13/17 18:15

Lab Sample ID: 440-179494-7

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	394787	03/18/17 16:19	WC	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	395597	03/23/17 04:33	WK	TAL IRV
Total/NA	Prep	3520C			1030 mL	1.0 mL	394346	03/16/17 09:48	JS1	TAL IRV
Total/NA	Analysis	8270C		1			394854	03/19/17 15:41	HN	TAL IRV
Total/NA	Analysis	300.0		10			393859	03/14/17 20:31	NTN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	394367	03/16/17 11:42	Q1N	TAL IRV
Total Recoverable	Analysis	6010B		1			394981	03/20/17 11:08	EN	TAL IRV
Total/NA	Analysis	350.1		2	0.8 mL	8 mL	394275	03/15/17 22:18	EN	TAL IRV
Total/NA	Analysis	410.4		1	0.625 mL	2.5 mL	395979	03/24/17 12:11	HTL	TAL IRV
Total/NA	Analysis	SM 2320B		1			394148	03/15/17 07:29	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	394477	03/16/17 17:32	MMH	TAL IRV
Total/NA	Analysis	SM 5310C		1	100 mL	100 mL	394834	03/18/17 16:35	YZ	TAL IRV

Lab Chronicle

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

TestAmerica Job ID: 440-179494-1

Client Sample ID: MW-5

Date Collected: 03/13/17 13:48
Date Received: 03/13/17 18:15

Lab Sample ID: 440-179494-8

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	394787	03/18/17 16:48	WC	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	395597	03/23/17 05:03	WK	TAL IRV
Total/NA	Prep	3520C			1015 mL	1.0 mL	394346	03/16/17 09:48	JS1	TAL IRV
Total/NA	Analysis	8270C		1			394854	03/19/17 16:03	HN	TAL IRV
Total/NA	Analysis	300.0		50			393859	03/14/17 20:48	NTN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	394367	03/16/17 11:42	Q1N	TAL IRV
Total Recoverable	Analysis	6010B		1			394981	03/20/17 11:09	EN	TAL IRV
Total/NA	Analysis	350.1		1	0.8 mL	8 mL	394275	03/15/17 21:21	EN	TAL IRV
Total/NA	Analysis	410.4		1	0.625 mL	2.5 mL	396001	03/24/17 13:55	HTL	TAL IRV
Total/NA	Analysis	SM 2320B		1			394148	03/15/17 07:42	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	394477	03/16/17 17:32	MMH	TAL IRV
Total/NA	Analysis	SM 5310C		10	100 mL	100 mL	395236	03/21/17 08:41	YZ	TAL IRV

Client Sample ID: QCAB

Date Collected: 03/13/17 00:01
Date Received: 03/13/17 18:15

Lab Sample ID: 440-179494-9

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	394787	03/18/17 17:18	WC	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	395597	03/23/17 05:33	WK	TAL IRV

Client Sample ID: QCTB

Date Collected: 03/13/17 00:01
Date Received: 03/13/17 18:15

Lab Sample ID: 440-179494-10

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	394787	03/18/17 17:47	WC	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	395597	03/23/17 06:02	WK	TAL IRV

Laboratory References:

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

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

Lab Sample ID: MB 440-394787/3
Matrix: Water
Analysis Batch: 394787

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			03/18/17 10:23	1
Acrylonitrile	ND		50	1.0	ug/L			03/18/17 10:23	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*108*		*80 - 128*		*03/18/17 10:23*	*1*
4-Bromofluorobenzene (Surr)	*87*		*80 - 120*		*03/18/17 10:23*	*1*
Dibromofluoromethane (Surr)	*119*		*76 - 132*		*03/18/17 10:23*	*1*

Lab Sample ID: LCS 440-394787/4
Matrix: Water
Analysis Batch: 394787

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	16.2	J	ug/L		65	10 - 145		
Acrylonitrile			250	220		ug/L		88	48 - 140		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*110*		*80 - 128*
4-Bromofluorobenzene (Surr)	*85*		*80 - 120*
Dibromofluoromethane (Surr)	*113*		*76 - 132*

Lab Sample ID: LCSD 440-394787/5
Matrix: Water
Analysis Batch: 394787

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
Acrolein			25.0	18.5	J	ug/L		74	10 - 145	13	30
Acrylonitrile			250	228		ug/L		91	48 - 140	3	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*114*		*80 - 128*
4-Bromofluorobenzene (Surr)	*89*		*80 - 120*
Dibromofluoromethane (Surr)	*117*		*76 - 132*

Lab Sample ID: 550-79280-D-1 MS
Matrix: Water
Analysis Batch: 394787

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	10.9	J	ug/L		43	10 - 147		
Acrylonitrile	ND		250	199		ug/L		80	38 - 144		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Toluene-d8 (Surr)	*109*		*80 - 128*
4-Bromofluorobenzene (Surr)	*89*		*80 - 120*
Dibromofluoromethane (Surr)	*121*		*76 - 132*

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

Lab Sample ID: 550-79280-D-1 MSD
Matrix: Water
Analysis Batch: 394787

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	9.19	J	ug/L		37	10 - 147	17	40
Acrylonitrile	ND		250	209		ug/L		84	38 - 144	5	40

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*110*		*80 - 128*
4-Bromofluorobenzene (Surr)	*86*		*80 - 120*
Dibromofluoromethane (Surr)	*118*		*76 - 132*

Lab Sample ID: MB 440-395597/4
Matrix: Water
Analysis Batch: 395597

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			03/22/17 21:09	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			03/22/17 21:09	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			03/22/17 21:09	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			03/22/17 21:09	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			03/22/17 21:09	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			03/22/17 21:09	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			03/22/17 21:09	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			03/22/17 21:09	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			03/22/17 21:09	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			03/22/17 21:09	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			03/22/17 21:09	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			03/22/17 21:09	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			03/22/17 21:09	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			03/22/17 21:09	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			03/22/17 21:09	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			03/22/17 21:09	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			03/22/17 21:09	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			03/22/17 21:09	1
2-Hexanone	ND		5.0	2.5	ug/L			03/22/17 21:09	1
Acetone	ND		20	10	ug/L			03/22/17 21:09	1
Acetonitrile	ND		20	10	ug/L			03/22/17 21:09	1
Acrolein	ND		5.0	2.5	ug/L			03/22/17 21:09	1
Acrylonitrile	ND		2.0	1.0	ug/L			03/22/17 21:09	1
Benzene	ND		0.50	0.25	ug/L			03/22/17 21:09	1
Allyl chloride	ND		1.0	0.50	ug/L			03/22/17 21:09	1
Bromoform	ND		1.0	0.40	ug/L			03/22/17 21:09	1
Bromomethane	ND		0.50	0.25	ug/L			03/22/17 21:09	1
Carbon disulfide	ND		1.0	0.50	ug/L			03/22/17 21:09	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			03/22/17 21:09	1
Chlorobenzene	ND		0.50	0.25	ug/L			03/22/17 21:09	1
Bromochloromethane	ND		0.50	0.25	ug/L			03/22/17 21:09	1
Chloroethane	ND		1.0	0.40	ug/L			03/22/17 21:09	1
Chloroform	ND		0.50	0.25	ug/L			03/22/17 21:09	1
Chloromethane	ND		0.50	0.25	ug/L			03/22/17 21:09	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/22/17 21:09	1

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

Lab Sample ID: MB 440-395597/4
Matrix: Water
Analysis Batch: 395597

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			03/22/17 21:09	1
Dibromochloromethane	ND		0.50	0.25	ug/L			03/22/17 21:09	1
Dibromomethane	ND		0.50	0.25	ug/L			03/22/17 21:09	1
Bromodichloromethane	ND		0.50	0.25	ug/L			03/22/17 21:09	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			03/22/17 21:09	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			03/22/17 21:09	1
Ethylbenzene	ND		0.50	0.25	ug/L			03/22/17 21:09	1
Iodomethane	ND		2.0	1.0	ug/L			03/22/17 21:09	1
Isobutyl alcohol	ND		25	13	ug/L			03/22/17 21:09	1
m,p-Xylene	ND		1.0	0.50	ug/L			03/22/17 21:09	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			03/22/17 21:09	1
Methyl methacrylate	ND		2.0	1.0	ug/L			03/22/17 21:09	1
Methylene Chloride	ND		2.0	0.88	ug/L			03/22/17 21:09	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			03/22/17 21:09	1
Naphthalene	ND		1.0	0.40	ug/L			03/22/17 21:09	1
o-Xylene	ND		0.50	0.25	ug/L			03/22/17 21:09	1
Propionitrile	ND		20	10	ug/L			03/22/17 21:09	1
Styrene	ND		0.50	0.25	ug/L			03/22/17 21:09	1
t-Butanol	ND		10	5.0	ug/L			03/22/17 21:09	1
Tetrachloroethene	ND		0.50	0.25	ug/L			03/22/17 21:09	1
Tetrahydrofuran	ND		10	5.0	ug/L			03/22/17 21:09	1
Toluene	ND		0.50	0.25	ug/L			03/22/17 21:09	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/22/17 21:09	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/22/17 21:09	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			03/22/17 21:09	1
Trichloroethene	ND		0.50	0.25	ug/L			03/22/17 21:09	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			03/22/17 21:09	1
Vinyl acetate	ND		4.0	2.0	ug/L			03/22/17 21:09	1
Vinyl chloride	ND		0.50	0.25	ug/L			03/22/17 21:09	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			03/22/17 21:09	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			03/22/17 21:09	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			03/22/17 21:09	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*03/22/17 21:09*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*103*		*80 - 128*		*03/22/17 21:09*	*1*
4-Bromofluorobenzene (Surr)	*91*		*80 - 120*		*03/22/17 21:09*	*1*
Dibromofluoromethane (Surr)	*101*		*76 - 132*		*03/22/17 21:09*	*1*

Lab Sample ID: LCS 440-395597/5
Matrix: Water
Analysis Batch: 395597

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	27.8		ug/L		111	63 - 130

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

Lab Sample ID: LCS 440-395597/5
Matrix: Water
Analysis Batch: 395597

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	25.0	29.7		ug/L		119	60 - 141
1,1,1-Trichloroethane	25.0	25.6		ug/L		103	70 - 130
1,1,2,2-Tetrachloroethane	25.0	35.5	*	ug/L		142	63 - 130
1,1,2-Trichloroethane	25.0	27.9		ug/L		112	70 - 130
1,1-Dichloroethane	25.0	26.5		ug/L		106	64 - 130
1,1-Dichloroethene	25.0	25.6		ug/L		103	70 - 130
1,1-Dichloropropene	25.0	26.0		ug/L		104	70 - 130
1,2,4-Trichlorobenzene	25.0	28.3		ug/L		113	60 - 140
1,2-Dibromo-3-Chloropropane	25.0	33.6		ug/L		134	52 - 140
1,2-Dichlorobenzene	25.0	27.3		ug/L		109	70 - 130
1,2-Dichloroethane	25.0	25.6		ug/L		102	57 - 138
1,2-Dichloropropane	25.0	26.2		ug/L		105	67 - 130
1,3-Dichlorobenzene	25.0	27.2		ug/L		109	70 - 130
1,3-Dichloropropane	25.0	26.2		ug/L		105	70 - 130
1,4-Dichlorobenzene	25.0	27.8		ug/L		111	70 - 130
2,2-Dichloropropane	25.0	24.5		ug/L		98	68 - 141
2-Hexanone	25.0	26.9		ug/L		107	10 - 150
Acetone	25.0	23.7		ug/L		95	10 - 150
Acetonitrile	250	252		ug/L		101	49 - 142
Acrolein	25.0	21.1		ug/L		84	10 - 145
Benzene	25.0	24.2		ug/L		97	68 - 130
Bromoform	25.0	29.6		ug/L		118	60 - 148
Bromomethane	25.0	27.0		ug/L		108	64 - 139
Carbon disulfide	25.0	25.8		ug/L		103	52 - 136
Carbon tetrachloride	25.0	26.8		ug/L		107	60 - 150
Chlorobenzene	25.0	26.9		ug/L		108	70 - 130
Bromochloromethane	25.0	27.6		ug/L		111	70 - 130
Chloroethane	25.0	28.6		ug/L		115	64 - 135
Chloroform	25.0	25.1		ug/L		101	70 - 130
Chloromethane	25.0	31.4		ug/L		126	47 - 140
cis-1,2-Dichloroethene	25.0	25.7		ug/L		103	70 - 133
cis-1,3-Dichloropropene	25.0	25.9		ug/L		104	70 - 133
Dibromochloromethane	25.0	28.6		ug/L		115	69 - 145
Dibromomethane	25.0	25.5		ug/L		102	70 - 130
Bromodichloromethane	25.0	25.4		ug/L		102	70 - 132
Dichlorodifluoromethane	25.0	28.8		ug/L		115	29 - 150
Ethylbenzene	25.0	25.2		ug/L		101	70 - 130
m,p-Xylene	25.0	27.4		ug/L		110	70 - 130
Methylene Chloride	25.0	27.5		ug/L		110	52 - 130
Methyl tert-butyl ether	25.0	24.2		ug/L		97	63 - 131
Naphthalene	25.0	27.1		ug/L		108	60 - 140
o-Xylene	25.0	26.3		ug/L		105	70 - 130
Styrene	25.0	25.3		ug/L		101	70 - 134
t-Butanol	250	305		ug/L		122	70 - 130
Tetrachloroethene	25.0	28.5		ug/L		114	70 - 130
Toluene	25.0	24.9		ug/L		100	70 - 130
trans-1,2-Dichloroethene	25.0	27.3		ug/L		109	70 - 130
trans-1,3-Dichloropropene	25.0	24.5		ug/L		98	70 - 132

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

Lab Sample ID: LCS 440-395597/5
Matrix: Water
Analysis Batch: 395597

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Trichloroethene	25.0	23.4		ug/L		94	70 - 130
Trichlorofluoromethane	25.0	28.9		ug/L		116	60 - 150
Vinyl acetate	25.0	26.8		ug/L		107	48 - 140
Vinyl chloride	25.0	29.5		ug/L		118	59 - 133
1,2-Dibromoethane (EDB)	25.0	28.3		ug/L		113	70 - 130
2-Butanone (MEK)	25.0	22.8		ug/L		91	44 - 150
4-Methyl-2-pentanone (MIBK)	25.0	27.8		ug/L		111	59 - 149

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*100*		*80 - 128*
4-Bromofluorobenzene (Surr)	*90*		*80 - 120*
Dibromofluoromethane (Surr)	*101*		*76 - 132*

Lab Sample ID: 440-179920-B-22 MS
Matrix: Water
Analysis Batch: 395597

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	26.9		ug/L		108	60 - 130
1,1,1,2-Tetrachloroethane	ND		25.0	29.5		ug/L		118	60 - 149
1,1,1-Trichloroethane	ND		25.0	25.5		ug/L		102	70 - 130
1,1,2,2-Tetrachloroethane	ND	F1 *	25.0	34.4	F1	ug/L		138	63 - 130
1,1,2-Trichloroethane	ND		25.0	28.0		ug/L		112	70 - 130
1,1-Dichloroethane	0.75		25.0	27.3		ug/L		106	65 - 130
1,1-Dichloroethene	1.3		25.0	26.4		ug/L		100	70 - 130
1,1-Dichloropropene	ND		25.0	25.9		ug/L		104	64 - 130
1,2,4-Trichlorobenzene	ND		25.0	29.7		ug/L		119	60 - 140
1,2-Dibromo-3-Chloropropane	ND		25.0	32.7		ug/L		131	48 - 140
1,2-Dichlorobenzene	ND		25.0	28.0		ug/L		112	70 - 130
1,2-Dichloroethane	ND		25.0	25.5		ug/L		102	56 - 146
1,2-Dichloropropane	ND		25.0	26.9		ug/L		108	69 - 130
1,3-Dichlorobenzene	ND		25.0	27.7		ug/L		111	70 - 130
1,3-Dichloropropane	ND		25.0	25.8		ug/L		103	70 - 130
1,4-Dichlorobenzene	ND		25.0	28.5		ug/L		114	70 - 130
2,2-Dichloropropane	ND		25.0	24.8		ug/L		99	69 - 138
2-Hexanone	ND		25.0	24.7		ug/L		99	10 - 150
Acetone	ND		25.0	23.5		ug/L		94	10 - 150
Acetonitrile	ND		250	242		ug/L		97	37 - 140
Acrolein	ND		25.0	20.2		ug/L		81	10 - 147
Benzene	ND		25.0	24.4		ug/L		97	66 - 130
Bromoform	ND		25.0	28.8		ug/L		115	59 - 150
Bromomethane	ND		25.0	27.5		ug/L		110	62 - 131
Carbon disulfide	ND		25.0	25.7		ug/L		103	49 - 140
Carbon tetrachloride	ND		25.0	26.6		ug/L		106	60 - 150
Chlorobenzene	ND		25.0	27.0		ug/L		108	70 - 130
Bromochloromethane	ND		25.0	27.3		ug/L		109	70 - 130
Chloroethane	ND		25.0	29.3		ug/L		117	68 - 130
Chloroform	1.4		25.0	26.7		ug/L		101	70 - 130

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

Lab Sample ID: 440-179920-B-22 MS
Matrix: Water
Analysis Batch: 395597

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
Chloromethane	ND		25.0	30.9		ug/L		124	39 - 144
cis-1,2-Dichloroethene	ND		25.0	26.1		ug/L		104	70 - 130
cis-1,3-Dichloropropene	ND		25.0	26.0		ug/L		104	70 - 133
Dibromochloromethane	ND		25.0	28.4		ug/L		113	70 - 148
Dibromomethane	ND		25.0	24.9		ug/L		99	70 - 130
Bromodichloromethane	0.53		25.0	26.4		ug/L		103	70 - 138
Dichlorodifluoromethane	ND		25.0	27.9		ug/L		112	25 - 142
Ethylbenzene	ND		25.0	25.1		ug/L		100	70 - 130
m,p-Xylene	ND		25.0	27.3		ug/L		109	70 - 133
Methylene Chloride	ND		25.0	27.3		ug/L		109	52 - 130
Methyl tert-butyl ether	ND		25.0	23.6		ug/L		94	70 - 130
Naphthalene	ND		25.0	26.6		ug/L		106	60 - 140
o-Xylene	ND		25.0	26.7		ug/L		107	70 - 133
Styrene	ND		25.0	25.9		ug/L		104	29 - 150
t-Butanol	ND	F1	250	327	F1	ug/L		131	70 - 130
Tetrachloroethene	0.50		25.0	28.7		ug/L		113	70 - 137
Toluene	ND		25.0	25.3		ug/L		101	70 - 130
trans-1,2-Dichloroethene	ND		25.0	27.3		ug/L		109	70 - 130
trans-1,3-Dichloropropene	ND		25.0	25.3		ug/L		101	70 - 138
Trichloroethene	0.79		25.0	24.4		ug/L		94	70 - 130
Trichlorofluoromethane	ND		25.0	28.6		ug/L		114	60 - 150
Vinyl acetate	ND		25.0	26.7		ug/L		107	23 - 150
Vinyl chloride	ND		25.0	30.0		ug/L		120	50 - 137
1,2-Dibromoethane (EDB)	ND		25.0	27.4		ug/L		110	70 - 131
2-Butanone (MEK)	ND		25.0	22.7		ug/L		91	48 - 140
4-Methyl-2-pentanone (MIBK)	ND		25.0	25.7		ug/L		103	52 - 150

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Toluene-d8 (Surr)	*100*		*80 - 128*
4-Bromofluorobenzene (Surr)	*92*		*80 - 120*
Dibromofluoromethane (Surr)	*102*		*76 - 132*

Lab Sample ID: 440-179920-B-22 MSD
Matrix: Water
Analysis Batch: 395597

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	28.3		ug/L		113	60 - 130	5	30
1,1,1,2-Tetrachloroethane	ND		25.0	29.5		ug/L		118	60 - 149	0	20
1,1,1-Trichloroethane	ND		25.0	25.1		ug/L		100	70 - 130	2	20
1,1,2,2-Tetrachloroethane	ND	F1 *	25.0	36.0	F1	ug/L		144	63 - 130	5	30
1,1,2-Trichloroethane	ND		25.0	28.2		ug/L		113	70 - 130	1	25
1,1-Dichloroethane	0.75		25.0	27.0		ug/L		105	65 - 130	1	20
1,1-Dichloroethene	1.3		25.0	26.4		ug/L		101	70 - 130	0	20
1,1-Dichloropropene	ND		25.0	25.6		ug/L		102	64 - 130	1	20
1,2,4-Trichlorobenzene	ND		25.0	30.1		ug/L		121	60 - 140	1	20
1,2-Dibromo-3-Chloropropane	ND		25.0	34.4		ug/L		138	48 - 140	5	30
1,2-Dichlorobenzene	ND		25.0	28.1		ug/L		112	70 - 130	1	20

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

Lab Sample ID: 440-179920-B-22 MSD
Matrix: Water
Analysis Batch: 395597

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-Dichloroethane	ND		25.0	25.6		ug/L		103	56 - 146	0	20
1,2-Dichloropropane	ND		25.0	26.4		ug/L		105	69 - 130	2	20
1,3-Dichlorobenzene	ND		25.0	28.0		ug/L		112	70 - 130	1	20
1,3-Dichloropropane	ND		25.0	26.0		ug/L		104	70 - 130	1	25
1,4-Dichlorobenzene	ND		25.0	28.3		ug/L		113	70 - 130	1	20
2,2-Dichloropropane	ND		25.0	24.7		ug/L		99	69 - 138	0	25
2-Hexanone	ND		25.0	26.7		ug/L		107	10 - 150	8	35
Acetone	ND		25.0	24.6		ug/L		99	10 - 150	5	35
Acetonitrile	ND		250	253		ug/L		101	37 - 140	5	40
Acrolein	ND		25.0	20.4		ug/L		82	10 - 147	1	40
Benzene	ND		25.0	24.0		ug/L		96	66 - 130	1	20
Bromoform	ND		25.0	29.5		ug/L		118	59 - 150	3	25
Bromomethane	ND		25.0	26.8		ug/L		107	62 - 131	2	25
Carbon disulfide	ND		25.0	25.2		ug/L		101	49 - 140	2	20
Carbon tetrachloride	ND		25.0	26.6		ug/L		106	60 - 150	0	25
Chlorobenzene	ND		25.0	26.9		ug/L		108	70 - 130	0	20
Bromochloromethane	ND		25.0	27.8		ug/L		111	70 - 130	2	25
Chloroethane	ND		25.0	28.4		ug/L		114	68 - 130	3	25
Chloroform	1.4		25.0	26.3		ug/L		100	70 - 130	1	20
Chloromethane	ND		25.0	31.0		ug/L		124	39 - 144	0	25
cis-1,2-Dichloroethene	ND		25.0	26.0		ug/L		104	70 - 130	0	20
cis-1,3-Dichloropropene	ND		25.0	25.9		ug/L		104	70 - 133	0	20
Dibromochloromethane	ND		25.0	28.5		ug/L		114	70 - 148	1	25
Dibromomethane	ND		25.0	25.3		ug/L		101	70 - 130	2	25
Bromodichloromethane	0.53		25.0	26.6		ug/L		104	70 - 138	1	20
Dichlorodifluoromethane	ND		25.0	28.2		ug/L		113	25 - 142	1	30
Ethylbenzene	ND		25.0	25.0		ug/L		100	70 - 130	0	20
m,p-Xylene	ND		25.0	26.8		ug/L		107	70 - 133	2	25
Methylene Chloride	ND		25.0	26.9		ug/L		108	52 - 130	2	20
Methyl tert-butyl ether	ND		25.0	23.9		ug/L		96	70 - 130	1	25
Naphthalene	ND		25.0	27.6		ug/L		110	60 - 140	4	30
o-Xylene	ND		25.0	26.5		ug/L		106	70 - 133	1	20
Styrene	ND		25.0	25.9		ug/L		104	29 - 150	0	35
t-Butanol	ND	F1	250	312		ug/L		125	70 - 130	5	25
Tetrachloroethene	0.50		25.0	28.3		ug/L		111	70 - 137	1	20
Toluene	ND		25.0	24.7		ug/L		99	70 - 130	2	20
trans-1,2-Dichloroethene	ND		25.0	26.9		ug/L		108	70 - 130	1	20
trans-1,3-Dichloropropene	ND		25.0	24.8		ug/L		99	70 - 138	2	25
Trichloroethene	0.79		25.0	24.0		ug/L		93	70 - 130	2	20
Trichlorofluoromethane	ND		25.0	28.0		ug/L		112	60 - 150	2	25
Vinyl acetate	ND		25.0	27.2		ug/L		109	23 - 150	2	30
Vinyl chloride	ND		25.0	29.5		ug/L		118	50 - 137	2	30
1,2-Dibromoethane (EDB)	ND		25.0	27.7		ug/L		111	70 - 131	1	25
2-Butanone (MEK)	ND		25.0	22.2		ug/L		89	48 - 140	2	40
4-Methyl-2-pentanone (MIBK)	ND		25.0	27.6		ug/L		111	52 - 150	7	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*99*		*80 - 128*

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

Lab Sample ID: 440-179920-B-22 MSD
Matrix: Water
Analysis Batch: 395597

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

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*93*		*80 - 120*
Dibromofluoromethane (Surr)	*101*		*76 - 132*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 440-394346/1-A
Matrix: Water
Analysis Batch: 394854

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 394346

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		1.0	0.25	ug/L		03/16/17 09:48	03/19/17 12:24	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*68*		*30 - 120*	*03/16/17 09:48*	*03/19/17 12:24*	*1*

Lab Sample ID: LCS 440-394346/2-A
Matrix: Water
Analysis Batch: 394854

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 394346

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,4-Dioxane			2.00	1.47		ug/L		74	35 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,4-Dioxane-d8 (Surr)	*67*		*30 - 120*

Lab Sample ID: LCSD 440-394346/3-A
Matrix: Water
Analysis Batch: 394854

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 394346

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dioxane			2.00	1.47		ug/L		73	35 - 120	0	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,4-Dioxane-d8 (Surr)	*67*		*30 - 120*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 440-393859/5
Matrix: Water
Analysis Batch: 393859

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			03/14/17 16:06	1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 440-393859/4
Matrix: Water
Analysis Batch: 393859

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	4.59		mg/L		92	90 - 110

Lab Sample ID: 440-179494-8 MS
Matrix: Water
Analysis Batch: 393859

Client Sample ID: MW-5
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	160		250	392		mg/L		91	80 - 120

Lab Sample ID: 440-179494-8 MSD
Matrix: Water
Analysis Batch: 393859

Client Sample ID: MW-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	160		250	396		mg/L		93	80 - 120	1	20

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 440-394367/1-A
Matrix: Water
Analysis Batch: 394981

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 394367

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	ND		0.50	0.25	mg/L		03/16/17 11:42	03/20/17 10:35	1

Lab Sample ID: LCS 440-394367/2-A
Matrix: Water
Analysis Batch: 394981

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 394367

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Potassium	10.0	9.58		mg/L		96	80 - 120

Lab Sample ID: 440-179494-1 MS
Matrix: Water
Analysis Batch: 394981

Client Sample ID: Combined Subdrains
Prep Type: Total Recoverable
Prep Batch: 394367

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Potassium	11		10.0	21.6		mg/L		111	75 - 125

Lab Sample ID: 440-179494-1 MSD
Matrix: Water
Analysis Batch: 394981

Client Sample ID: Combined Subdrains
Prep Type: Total Recoverable
Prep Batch: 394367

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Potassium	11		10.0	21.4		mg/L		108	75 - 125	1	20

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 440-394275/12
Matrix: Water
Analysis Batch: 394275

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			03/15/17 20:13	1

Lab Sample ID: LCS 440-394275/13
Matrix: Water
Analysis Batch: 394275

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	5.45		mg/L		109	90 - 110

Lab Sample ID: MRL 440-394275/11
Matrix: Water
Analysis Batch: 394275

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	0.264		mg/L		132	10 - 200

Lab Sample ID: 440-179494-1 MS
Matrix: Water
Analysis Batch: 394275

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
Ammonia (as N)	2.5	F1	5.00	8.04	F1	mg/L		111	90 - 110

Lab Sample ID: 440-179494-1 MSD
Matrix: Water
Analysis Batch: 394275

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
Ammonia (as N)	2.5	F1	5.00	8.12	F1	mg/L		113	90 - 110	1	15

Method: 410.4 - COD

Lab Sample ID: MB 440-395979/3
Matrix: Water
Analysis Batch: 395979

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			03/24/17 12:10	1

Lab Sample ID: LCS 440-395979/4
Matrix: Water
Analysis Batch: 395979

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	185		mg/L		93	90 - 110

Method: 410.4 - COD (Continued)

Lab Sample ID: 440-179494-1 MS
Matrix: Water
Analysis Batch: 395979

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		
Chemical Oxygen Demand	23		200	204		mg/L		90	70 - 120		

Lab Sample ID: 440-179494-1 MSD
Matrix: Water
Analysis Batch: 395979

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
Chemical Oxygen Demand	23		200	196		mg/L		87	70 - 120	4	15

Lab Sample ID: 440-179696-B-1 DU
Matrix: Water
Analysis Batch: 395979

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	490		491		mg/L		1	15

Lab Sample ID: MB 440-396001/3
Matrix: Water
Analysis Batch: 396001

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			03/24/17 13:55	1

Lab Sample ID: LCS 440-396001/4
Matrix: Water
Analysis Batch: 396001

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	190		mg/L		95	90 - 110		

Lab Sample ID: 440-180342-A-1 MS
Matrix: Water
Analysis Batch: 396001

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	121		200	307		mg/L		93	70 - 120		

Lab Sample ID: 440-180342-A-1 MSD
Matrix: Water
Analysis Batch: 396001

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	121		200	301		mg/L		90	70 - 120	2	15

Lab Sample ID: 440-180342-A-1 DU
Matrix: Water
Analysis Batch: 396001

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	121		125		mg/L		3	15

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 440-394148/3
Matrix: Water
Analysis Batch: 394148

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			03/15/17 04:53	1

Lab Sample ID: LCS 440-394148/2
Matrix: Water
Analysis Batch: 394148

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	34.3		mg/L		102	80 - 120

Lab Sample ID: 440-179504-K-14 DU
Matrix: Water
Analysis Batch: 394148

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	500		509		mg/L		2	20

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

Lab Sample ID: MB 440-394477/1
Matrix: Water
Analysis Batch: 394477

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			03/16/17 17:32	1

Lab Sample ID: LCS 440-394477/2
Matrix: Water
Analysis Batch: 394477

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	964		mg/L		96	90 - 110

Lab Sample ID: 440-179523-B-1 DU
Matrix: Water
Analysis Batch: 394477

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	310		299		mg/L		3	5

Method: SM 5310C - TOC

Lab Sample ID: MB 440-394834/7
Matrix: Water
Analysis Batch: 394834

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			03/18/17 10:27	1

Method: SM 5310C - TOC (Continued)

Lab Sample ID: LCS 440-394834/6
Matrix: Water
Analysis Batch: 394834

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	5.00	5.10		mg/L		102	90 - 110

Lab Sample ID: MRL 440-394834/5
Matrix: Water
Analysis Batch: 394834

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	0.0739	J	mg/L		74	50 - 150

Lab Sample ID: 440-179819-A-3 MS
Matrix: Water
Analysis Batch: 394834

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	0.50		5.00	5.60		mg/L		102	80 - 120

Lab Sample ID: 440-179819-A-3 MSD
Matrix: Water
Analysis Batch: 394834

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	0.50		5.00	5.59		mg/L		102	80 - 120	0	20

Lab Sample ID: MB 440-395236/8
Matrix: Water
Analysis Batch: 395236

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			03/21/17 05:59	1

Lab Sample ID: LCS 440-395236/6
Matrix: Water
Analysis Batch: 395236

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	5.00	4.75		mg/L		95	90 - 110

Lab Sample ID: LCSD 440-395236/7
Matrix: Water
Analysis Batch: 395236

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 Organic Carbon	5.00	4.51		mg/L		90	90 - 110	5	20

Lab Sample ID: MRL 440-395236/5
Matrix: Water
Analysis Batch: 395236

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	0.0983	J	mg/L		98	50 - 150

QC Association Summary

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

TestAmerica Job ID: 440-179494-1

GC/MS VOA

Analysis Batch: 394787

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-179494-1	Combined Subdrains	Total/NA	Water	8260B	
440-179494-2	Subdrain N	Total/NA	Water	8260B	
440-179494-3	PZ-2	Total/NA	Water	8260B	
440-179494-4	MW-6	Total/NA	Water	8260B	
440-179494-5	MW-14	Total/NA	Water	8260B	
440-179494-6	CM-9R3	Total/NA	Water	8260B	
440-179494-7	CM-10R	Total/NA	Water	8260B	
440-179494-8	MW-5	Total/NA	Water	8260B	
440-179494-9	QCAB	Total/NA	Water	8260B	
440-179494-10	QCTB	Total/NA	Water	8260B	
MB 440-394787/3	Method Blank	Total/NA	Water	8260B	
LCS 440-394787/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 440-394787/5	Lab Control Sample Dup	Total/NA	Water	8260B	
550-79280-D-1 MS	Matrix Spike	Total/NA	Water	8260B	
550-79280-D-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

Analysis Batch: 395597

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-179494-1	Combined Subdrains	Total/NA	Water	8260B	
440-179494-2	Subdrain N	Total/NA	Water	8260B	
440-179494-3	PZ-2	Total/NA	Water	8260B	
440-179494-4	MW-6	Total/NA	Water	8260B	
440-179494-5	MW-14	Total/NA	Water	8260B	
440-179494-6	CM-9R3	Total/NA	Water	8260B	
440-179494-7	CM-10R	Total/NA	Water	8260B	
440-179494-8	MW-5	Total/NA	Water	8260B	
440-179494-9	QCAB	Total/NA	Water	8260B	
440-179494-10	QCTB	Total/NA	Water	8260B	
MB 440-395597/4	Method Blank	Total/NA	Water	8260B	
LCS 440-395597/5	Lab Control Sample	Total/NA	Water	8260B	
440-179920-B-22 MS	Matrix Spike	Total/NA	Water	8260B	
440-179920-B-22 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 394346

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-179494-1	Combined Subdrains	Total/NA	Water	3520C	
440-179494-2	Subdrain N	Total/NA	Water	3520C	
440-179494-3	PZ-2	Total/NA	Water	3520C	
440-179494-4	MW-6	Total/NA	Water	3520C	
440-179494-5	MW-14	Total/NA	Water	3520C	
440-179494-6	CM-9R3	Total/NA	Water	3520C	
440-179494-7	CM-10R	Total/NA	Water	3520C	
440-179494-8	MW-5	Total/NA	Water	3520C	
MB 440-394346/1-A	Method Blank	Total/NA	Water	3520C	
LCS 440-394346/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 440-394346/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	

GC/MS Semi VOA (Continued)

Analysis Batch: 394854

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-179494-1	Combined Subdrains	Total/NA	Water	8270C	394346
440-179494-2	Subdrain N	Total/NA	Water	8270C	394346
440-179494-3	PZ-2	Total/NA	Water	8270C	394346
440-179494-4	MW-6	Total/NA	Water	8270C	394346
440-179494-5	MW-14	Total/NA	Water	8270C	394346
440-179494-6	CM-9R3	Total/NA	Water	8270C	394346
440-179494-7	CM-10R	Total/NA	Water	8270C	394346
440-179494-8	MW-5	Total/NA	Water	8270C	394346
MB 440-394346/1-A	Method Blank	Total/NA	Water	8270C	394346
LCS 440-394346/2-A	Lab Control Sample	Total/NA	Water	8270C	394346
LCSD 440-394346/3-A	Lab Control Sample Dup	Total/NA	Water	8270C	394346

HPLC/IC

Analysis Batch: 393859

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-179494-1	Combined Subdrains	Total/NA	Water	300.0	
440-179494-2	Subdrain N	Total/NA	Water	300.0	
440-179494-3	PZ-2	Total/NA	Water	300.0	
440-179494-4	MW-6	Total/NA	Water	300.0	
440-179494-5	MW-14	Total/NA	Water	300.0	
440-179494-6	CM-9R3	Total/NA	Water	300.0	
440-179494-7	CM-10R	Total/NA	Water	300.0	
440-179494-8	MW-5	Total/NA	Water	300.0	
MB 440-393859/5	Method Blank	Total/NA	Water	300.0	
LCS 440-393859/4	Lab Control Sample	Total/NA	Water	300.0	
440-179494-8 MS	MW-5	Total/NA	Water	300.0	
440-179494-8 MSD	MW-5	Total/NA	Water	300.0	

Metals

Prep Batch: 394367

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-179494-1	Combined Subdrains	Total Recoverable	Water	3005A	
440-179494-2	Subdrain N	Total Recoverable	Water	3005A	
440-179494-3	PZ-2	Total Recoverable	Water	3005A	
440-179494-4	MW-6	Total Recoverable	Water	3005A	
440-179494-5	MW-14	Total Recoverable	Water	3005A	
440-179494-6	CM-9R3	Total Recoverable	Water	3005A	
440-179494-7	CM-10R	Total Recoverable	Water	3005A	
440-179494-8	MW-5	Total Recoverable	Water	3005A	
MB 440-394367/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 440-394367/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
440-179494-1 MS	Combined Subdrains	Total Recoverable	Water	3005A	
440-179494-1 MSD	Combined Subdrains	Total Recoverable	Water	3005A	

Analysis Batch: 394981

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-179494-1	Combined Subdrains	Total Recoverable	Water	6010B	394367
440-179494-2	Subdrain N	Total Recoverable	Water	6010B	394367

Metals (Continued)

Analysis Batch: 394981 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-179494-3	PZ-2	Total Recoverable	Water	6010B	394367
440-179494-4	MW-6	Total Recoverable	Water	6010B	394367
440-179494-5	MW-14	Total Recoverable	Water	6010B	394367
440-179494-6	CM-9R3	Total Recoverable	Water	6010B	394367
440-179494-7	CM-10R	Total Recoverable	Water	6010B	394367
440-179494-8	MW-5	Total Recoverable	Water	6010B	394367
MB 440-394367/1-A	Method Blank	Total Recoverable	Water	6010B	394367
LCS 440-394367/2-A	Lab Control Sample	Total Recoverable	Water	6010B	394367
440-179494-1 MS	Combined Subdrains	Total Recoverable	Water	6010B	394367
440-179494-1 MSD	Combined Subdrains	Total Recoverable	Water	6010B	394367

General Chemistry

Analysis Batch: 394148

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-179494-1	Combined Subdrains	Total/NA	Water	SM 2320B	
440-179494-2	Subdrain N	Total/NA	Water	SM 2320B	
440-179494-3	PZ-2	Total/NA	Water	SM 2320B	
440-179494-4	MW-6	Total/NA	Water	SM 2320B	
440-179494-5	MW-14	Total/NA	Water	SM 2320B	
440-179494-6	CM-9R3	Total/NA	Water	SM 2320B	
440-179494-7	CM-10R	Total/NA	Water	SM 2320B	
440-179494-8	MW-5	Total/NA	Water	SM 2320B	
MB 440-394148/3	Method Blank	Total/NA	Water	SM 2320B	
LCS 440-394148/2	Lab Control Sample	Total/NA	Water	SM 2320B	
440-179504-K-14 DU	Duplicate	Total/NA	Water	SM 2320B	

Analysis Batch: 394275

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-179494-1	Combined Subdrains	Total/NA	Water	350.1	
440-179494-2	Subdrain N	Total/NA	Water	350.1	
440-179494-3	PZ-2	Total/NA	Water	350.1	
440-179494-4	MW-6	Total/NA	Water	350.1	
440-179494-5	MW-14	Total/NA	Water	350.1	
440-179494-6	CM-9R3	Total/NA	Water	350.1	
440-179494-7	CM-10R	Total/NA	Water	350.1	
440-179494-8	MW-5	Total/NA	Water	350.1	
MB 440-394275/12	Method Blank	Total/NA	Water	350.1	
LCS 440-394275/13	Lab Control Sample	Total/NA	Water	350.1	
MRL 440-394275/11	Lab Control Sample	Total/NA	Water	350.1	
440-179494-1 MS	Combined Subdrains	Total/NA	Water	350.1	
440-179494-1 MSD	Combined Subdrains	Total/NA	Water	350.1	

Analysis Batch: 394477

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-179494-1	Combined Subdrains	Total/NA	Water	SM 2540C	
440-179494-2	Subdrain N	Total/NA	Water	SM 2540C	
440-179494-3	PZ-2	Total/NA	Water	SM 2540C	
440-179494-4	MW-6	Total/NA	Water	SM 2540C	
440-179494-5	MW-14	Total/NA	Water	SM 2540C	

General Chemistry (Continued)

Analysis Batch: 394477 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-179494-6	CM-9R3	Total/NA	Water	SM 2540C	
440-179494-7	CM-10R	Total/NA	Water	SM 2540C	
440-179494-8	MW-5	Total/NA	Water	SM 2540C	
MB 440-394477/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 440-394477/2	Lab Control Sample	Total/NA	Water	SM 2540C	
440-179523-B-1 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 394834

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-179494-1	Combined Subdrains	Total/NA	Water	SM 5310C	
440-179494-3	PZ-2	Total/NA	Water	SM 5310C	
440-179494-4	MW-6	Total/NA	Water	SM 5310C	
440-179494-6	CM-9R3	Total/NA	Water	SM 5310C	
440-179494-7	CM-10R	Total/NA	Water	SM 5310C	
MB 440-394834/7	Method Blank	Total/NA	Water	SM 5310C	
LCS 440-394834/6	Lab Control Sample	Total/NA	Water	SM 5310C	
MRL 440-394834/5	Lab Control Sample	Total/NA	Water	SM 5310C	
440-179819-A-3 MS	Matrix Spike	Total/NA	Water	SM 5310C	
440-179819-A-3 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 5310C	

Analysis Batch: 395236

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-179494-2	Subdrain N	Total/NA	Water	SM 5310C	
440-179494-5	MW-14	Total/NA	Water	SM 5310C	
440-179494-8	MW-5	Total/NA	Water	SM 5310C	
MB 440-395236/8	Method Blank	Total/NA	Water	SM 5310C	
LCS 440-395236/6	Lab Control Sample	Total/NA	Water	SM 5310C	
LCSD 440-395236/7	Lab Control Sample Dup	Total/NA	Water	SM 5310C	
MRL 440-395236/5	Lab Control Sample	Total/NA	Water	SM 5310C	
440-180033-K-1 MS	Matrix Spike	Total/NA	Water	SM 5310C	
440-180033-K-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 5310C	

Analysis Batch: 395979

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-179494-1	Combined Subdrains	Total/NA	Water	410.4	
440-179494-2	Subdrain N	Total/NA	Water	410.4	
440-179494-3	PZ-2	Total/NA	Water	410.4	
440-179494-4	MW-6	Total/NA	Water	410.4	
440-179494-5	MW-14	Total/NA	Water	410.4	
440-179494-6	CM-9R3	Total/NA	Water	410.4	
440-179494-7	CM-10R	Total/NA	Water	410.4	
MB 440-395979/3	Method Blank	Total/NA	Water	410.4	
LCS 440-395979/4	Lab Control Sample	Total/NA	Water	410.4	
440-179494-1 MS	Combined Subdrains	Total/NA	Water	410.4	
440-179494-1 MSD	Combined Subdrains	Total/NA	Water	410.4	
440-179696-B-1 DU	Duplicate	Total/NA	Water	410.4	

Analysis Batch: 396001

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-179494-8	MW-5	Total/NA	Water	410.4	
MB 440-396001/3	Method Blank	Total/NA	Water	410.4	

General Chemistry (Continued)

Analysis Batch: 396001 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 440-396001/4	Lab Control Sample	Total/NA	Water	410.4	
440-180342-A-1 MS	Matrix Spike	Total/NA	Water	410.4	
440-180342-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	410.4	
440-180342-A-1 DU	Duplicate	Total/NA	Water	410.4	

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD 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
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
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.

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, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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)

Certification Summary

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

TestAmerica Job ID: 440-179494-1

Laboratory: TestAmerica Irvine

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska	State Program	10	CA01531	06-30-17
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	CA015312016-2	07-31-17
New Mexico	State Program	6	N/A	01-29-17 *
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

* Certification renewal pending - certification considered valid.

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

Chain of Custody Record

137081

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

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

Client Contact	Project Manager: Kyle Welchan	Site Contact: Matt Eaton	Date: 3-13-17	COC No:
Company Name: GeoLogic Associates	Tel/Fax: 858-451-1136	Lab Contact: Rossinc	Carrier: TestAmerica	1 of 1 COCs
Address: 11415 W. Bernardo Ct	Analysis Turnaround Time			Sampler: BS, AS, MC
City/State/Zip: San Diego, Ca 92127	☐ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: 858-451-1136	TAT if different from Below			Walk-in Client:
Fax: 858-451-1087	☐ 2 weeks			Lab Sampling:
Project Name: Sunshine Gyn. Republic	☐ 1 week			
Site: Sunshine Canyon	☐ 2 days			Job / SDG No.:
PO# 4500778851	☐ 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)	EPA 8260B - VOCs	EPA 310.1 - Total Alkalinity	EPA 350.2 Ammonia as N	EPA 410.4 - COD	EPA 300.0 - Chloride	EPA 6010B Potassium	EPA-160.1 Total Dissolved Solids	EPA-415.1 Total Organic Carbon	EPA 8270 1,4-Dioxane	Sample Specific Notes:
Combined Subchains	3.13.17	1335	G	GW	12	N	N	X	X	X	X	X	X	X	X	X	
Subchain N		1225		"	12			X	X	X	X	X	X	X	X	X	
PZ-2		1255		GW	12			X	X	X	X	X	X	X	X	X	
MW-6		1140			12			X	X	X	X	X	X	X	X	X	
MW-14		1000			12			X	X	X	X	X	X	X	X	X	
CM-9R3		1220			12			X	X	X	X	X	X	X	X	X	
CM-10R		1100			12			X	X	X	X	X	X	X	X	X	
MW-5		1348		↓	12			X	X	X	X	X	X	X	X	X	
QCAB		—		GW DS	4			X									
QCTB	↓	—	↓	"	4			X									

3/13/17

440-179494 Chain of Custody

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

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

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

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

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

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temp. (°C): Obs'd:_____ Corr'd:_____		Therm ID No.:_____
Relinquished by:	Company: Geo-Logic	Date/Time: 3/13/17 1405	Received by:	Company: TA	Date/Time: 3/13/17 1405
Relinquished by:	Company: TA 3/13/17	Date/Time: 1815	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company: TAL	Date/Time: 3/13/17 18:15

VTSR

3.1/3.6 4.1/4.6 2.9/3.4 1285

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3/27/2017

Login Sample Receipt Checklist

Client: Geo-Logic Associates

Job Number: 440-179494-1

Login Number: 179494
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.	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.	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: 440-179579-1
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:
3/28/2017 1:46:27 PM

Rossina Tomova, Project Manager I
(949)261-1022
rossina.tomova@testamericainc.com

Table of Contents

Sample Summary

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

TestAmerica Job ID: 440-179579-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-179579-1	MW-9	Water	03/14/17 11:35	03/14/17 18:45
440-179579-2	CM-11R	Water	03/14/17 09:15	03/14/17 18:45
440-179579-3	DW-1	Water	03/14/17 11:30	03/14/17 18:45
440-179579-4	DW-5	Water	03/14/17 14:00	03/14/17 18:45
440-179579-5	Dup.	Water	03/14/17 00:01	03/14/17 18:45
440-179579-6	Extraction Trench	Water	03/14/17 10:58	03/14/17 18:45
440-179579-7	QCTB	Water	03/14/17 00:01	03/14/17 18:45
440-179579-8	QCAB	Water	03/14/17 00:01	03/14/17 18:45

Job ID: 440-179579-1

Laboratory: TestAmerica Irvine

Narrative

Job Narrative
440-179579-1

Comments
No additional comments.

Receipt
The samples were received on 3/14/2017 6:45 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.3º C.

GC/MS VOA
Method(s) 8260B: The laboratory control sample (LCS) for analytical batch 440-394707 recovered outside control limits for the following analyte: Acrylonitrile. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data have been reported.

Method(s) 8260B: Internal standard (ISTD) response for 1,4-Dichlorobenzene-d4 for the following sample was outside acceptance criteria: MW-9 (440-179579-1). This ISTD does not correspond to any of the requested target compounds; therefore, the data have been reported.

Method(s) 8260B: The continuing calibration verification (CCV) associated with batch 440-395302 recovered above the upper control limit for 1,1,2,2-Tetrachloroethane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

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 440-394346 and analytical batch 440-394854. 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 440-393859 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
Method(s) 350.1: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 440-394275 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.

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

TestAmerica Job ID: 440-179579-1

Client Sample ID: MW-9
Date Collected: 03/14/17 11:35
Date Received: 03/14/17 18:45

Lab Sample ID: 440-179579-1
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			03/21/17 16:52	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			03/21/17 16:52	1
Acrolein	ND		50	2.5	ug/L			03/17/17 16:32	1
Acrylonitrile	ND		50	1.0	ug/L			03/17/17 16:32	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			03/21/17 16:52	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			03/21/17 16:52	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			03/21/17 16:52	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			03/21/17 16:52	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			03/21/17 16:52	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			03/21/17 16:52	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			03/21/17 16:52	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			03/21/17 16:52	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			03/21/17 16:52	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			03/21/17 16:52	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			03/21/17 16:52	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			03/21/17 16:52	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			03/21/17 16:52	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			03/21/17 16:52	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			03/21/17 16:52	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			03/21/17 16:52	1
2-Hexanone	ND		5.0	2.5	ug/L			03/21/17 16:52	1
Acetone	**13**	**J**	20	10	ug/L			03/21/17 16:52	1
Acetonitrile	ND		20	10	ug/L			03/21/17 16:52	1
Acrolein	ND		5.0	2.5	ug/L			03/21/17 16:52	1
Acrylonitrile	ND		2.0	1.0	ug/L			03/21/17 16:52	1
Benzene	ND		0.50	0.25	ug/L			03/21/17 16:52	1
Allyl chloride	ND		1.0	0.50	ug/L			03/21/17 16:52	1
Bromoform	ND		1.0	0.40	ug/L			03/21/17 16:52	1
Bromomethane	ND		0.50	0.25	ug/L			03/21/17 16:52	1
Carbon disulfide	ND		1.0	0.50	ug/L			03/21/17 16:52	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			03/21/17 16:52	1
Chlorobenzene	ND		0.50	0.25	ug/L			03/21/17 16:52	1
Bromochloromethane	ND		0.50	0.25	ug/L			03/21/17 16:52	1
Chloroethane	ND		1.0	0.40	ug/L			03/21/17 16:52	1
Chloroform	ND		0.50	0.25	ug/L			03/21/17 16:52	1
Chloromethane	ND		0.50	0.25	ug/L			03/21/17 16:52	1
cis-1,2-Dichloroethene	**0.55**		0.50	0.25	ug/L			03/21/17 16:52	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/21/17 16:52	1
Dibromochloromethane	ND		0.50	0.25	ug/L			03/21/17 16:52	1
Dibromomethane	ND		0.50	0.25	ug/L			03/21/17 16:52	1
Bromodichloromethane	ND		0.50	0.25	ug/L			03/21/17 16:52	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			03/21/17 16:52	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			03/21/17 16:52	1
Ethylbenzene	ND		0.50	0.25	ug/L			03/21/17 16:52	1
Iodomethane	ND		2.0	1.0	ug/L			03/21/17 16:52	1
Isobutyl alcohol	ND		25	13	ug/L			03/21/17 16:52	1
m,p-Xylene	ND		1.0	0.50	ug/L			03/21/17 16:52	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			03/21/17 16:52	1
Methyl methacrylate	ND		2.0	1.0	ug/L			03/21/17 16:52	1

Client Sample ID: MW-9
Date Collected: 03/14/17 11:35
Date Received: 03/14/17 18:45

Lab Sample ID: 440-179579-1
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Methylene Chloride	**1.4**	**J**	2.0	0.88	ug/L			03/21/17 16:52	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			03/21/17 16:52	1
Naphthalene	ND		1.0	0.40	ug/L			03/21/17 16:52	1
o-Xylene	ND		0.50	0.25	ug/L			03/21/17 16:52	1
Propionitrile	ND		20	10	ug/L			03/21/17 16:52	1
Styrene	ND		0.50	0.25	ug/L			03/21/17 16:52	1
t-Butanol	**55**		10	5.0	ug/L			03/21/17 16:52	1
Tetrachloroethene	ND		0.50	0.25	ug/L			03/21/17 16:52	1
Tetrahydrofuran	**9.4**	**J**	10	5.0	ug/L			03/21/17 16:52	1
Toluene	ND		0.50	0.25	ug/L			03/21/17 16:52	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/21/17 16:52	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/21/17 16:52	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			03/21/17 16:52	1
Trichloroethene	ND		0.50	0.25	ug/L			03/21/17 16:52	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			03/21/17 16:52	1
Vinyl acetate	ND		4.0	2.0	ug/L			03/21/17 16:52	1
Vinyl chloride	ND		0.50	0.25	ug/L			03/21/17 16:52	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			03/21/17 16:52	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			03/21/17 16:52	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			03/21/17 16:52	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*4.8*	*T J*	*ug/L*		*3.32*			*03/21/17 16:52*	*1*
Unknown	*6.9*	*T J*	*ug/L*		*5.85*			*03/21/17 16:52*	*1*
Unknown	*9.8*	*T J*	*ug/L*		*7.34*			*03/21/17 16:52*	*1*
Unknown	*14*	*T J*	*ug/L*		*17.48*			*03/21/17 16:52*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*115*		*80 - 128*		*03/17/17 16:32*	*1*
4-Bromofluorobenzene (Surr)	*103*	*	*80 - 120*		*03/17/17 16:32*	*1*
Toluene-d8 (Surr)	*113*		*80 - 128*		*03/21/17 16:52*	*1*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*		*03/21/17 16:52*	*1*
Dibromofluoromethane (Surr)	*97*		*76 - 132*		*03/17/17 16:32*	*1*
Dibromofluoromethane (Surr)	*100*		*76 - 132*		*03/21/17 16:52*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**29**		1.1	0.27	ug/L		03/16/17 09:48	03/19/17 16:25	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*54*		*30 - 120*	*03/16/17 09:48*	*03/19/17 16:25*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**370**		100	50	mg/L			03/14/17 23:51	200

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	**23**		0.50	0.25	mg/L		03/17/17 09:33	03/17/17 17:45	1

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

TestAmerica Job ID: 440-179579-1

Client Sample ID: MW-9

Lab Sample ID: 440-179579-1

Date Collected: 03/14/17 11:35

Matrix: Water

Date Received: 03/14/17 18:45

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	9.0		0.20	0.10	mg/L			03/15/17 21:27	1
Chemical Oxygen Demand	200		20	10	mg/L			03/22/17 16:13	1
Total Dissolved Solids	3700		50	25	mg/L			03/17/17 13:29	1
Total Organic Carbon	78		1.0	0.50	mg/L			03/21/17 07:23	10

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	860		4.0	4.0	mg/L			03/15/17 11:11	1

Client Sample ID: CM-11R

Lab Sample ID: 440-179579-2

Date Collected: 03/14/17 09:15

Matrix: Water

Date Received: 03/14/17 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			03/21/17 17:18	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			03/21/17 17:18	1
Acrolein	ND		50	2.5	ug/L			03/17/17 17:02	1
Acrylonitrile	ND		50	1.0	ug/L			03/17/17 17:02	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			03/21/17 17:18	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			03/21/17 17:18	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			03/21/17 17:18	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			03/21/17 17:18	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			03/21/17 17:18	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			03/21/17 17:18	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			03/21/17 17:18	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			03/21/17 17:18	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			03/21/17 17:18	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			03/21/17 17:18	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			03/21/17 17:18	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			03/21/17 17:18	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			03/21/17 17:18	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			03/21/17 17:18	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			03/21/17 17:18	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			03/21/17 17:18	1
2-Hexanone	ND		5.0	2.5	ug/L			03/21/17 17:18	1
Acetone	ND		20	10	ug/L			03/21/17 17:18	1
Acetonitrile	ND		20	10	ug/L			03/21/17 17:18	1
Acrolein	ND		5.0	2.5	ug/L			03/21/17 17:18	1
Acrylonitrile	ND		2.0	1.0	ug/L			03/21/17 17:18	1
Benzene	ND		0.50	0.25	ug/L			03/21/17 17:18	1
Allyl chloride	ND		1.0	0.50	ug/L			03/21/17 17:18	1
Bromoform	ND		1.0	0.40	ug/L			03/21/17 17:18	1
Bromomethane	ND		0.50	0.25	ug/L			03/21/17 17:18	1
Carbon disulfide	ND		1.0	0.50	ug/L			03/21/17 17:18	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			03/21/17 17:18	1
Chlorobenzene	ND		0.50	0.25	ug/L			03/21/17 17:18	1
Bromochloromethane	ND		0.50	0.25	ug/L			03/21/17 17:18	1
Chloroethane	ND		1.0	0.40	ug/L			03/21/17 17:18	1
Chloroform	ND		0.50	0.25	ug/L			03/21/17 17:18	1
Chloromethane	ND		0.50	0.25	ug/L			03/21/17 17:18	1

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

TestAmerica Job ID: 440-179579-1

Client Sample ID: CM-11R
Date Collected: 03/14/17 09:15
Date Received: 03/14/17 18:45

Lab Sample ID: 440-179579-2
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/21/17 17:18	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/21/17 17:18	1
Dibromochloromethane	ND		0.50	0.25	ug/L			03/21/17 17:18	1
Dibromomethane	ND		0.50	0.25	ug/L			03/21/17 17:18	1
Bromodichloromethane	ND		0.50	0.25	ug/L			03/21/17 17:18	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			03/21/17 17:18	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			03/21/17 17:18	1
Ethylbenzene	ND		0.50	0.25	ug/L			03/21/17 17:18	1
Iodomethane	ND		2.0	1.0	ug/L			03/21/17 17:18	1
Isobutyl alcohol	ND		25	13	ug/L			03/21/17 17:18	1
m,p-Xylene	ND		1.0	0.50	ug/L			03/21/17 17:18	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			03/21/17 17:18	1
Methyl methacrylate	ND		2.0	1.0	ug/L			03/21/17 17:18	1
Methylene Chloride	**1.4**	**J**	2.0	0.88	ug/L			03/21/17 17:18	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			03/21/17 17:18	1
Naphthalene	ND		1.0	0.40	ug/L			03/21/17 17:18	1
o-Xylene	ND		0.50	0.25	ug/L			03/21/17 17:18	1
Propionitrile	ND		20	10	ug/L			03/21/17 17:18	1
Styrene	ND		0.50	0.25	ug/L			03/21/17 17:18	1
t-Butanol	ND		10	5.0	ug/L			03/21/17 17:18	1
Tetrachloroethene	ND		0.50	0.25	ug/L			03/21/17 17:18	1
Tetrahydrofuran	ND		10	5.0	ug/L			03/21/17 17:18	1
Toluene	ND		0.50	0.25	ug/L			03/21/17 17:18	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/21/17 17:18	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/21/17 17:18	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			03/21/17 17:18	1
Trichloroethene	ND		0.50	0.25	ug/L			03/21/17 17:18	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			03/21/17 17:18	1
Vinyl acetate	ND		4.0	2.0	ug/L			03/21/17 17:18	1
Vinyl chloride	ND		0.50	0.25	ug/L			03/21/17 17:18	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			03/21/17 17:18	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			03/21/17 17:18	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			03/21/17 17:18	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*9.9*	*T J*	*ug/L*		*7.34*			*03/21/17 17:18*	*1*
Unknown	*11*	*T J*	*ug/L*		*17.73*			*03/21/17 17:18*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*114*		*80 - 128*		*03/17/17 17:02*	*1*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*		*03/17/17 17:02*	*1*
Toluene-d8 (Surr)	*111*		*80 - 128*		*03/21/17 17:18*	*1*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*		*03/21/17 17:18*	*1*
Dibromofluoromethane (Surr)	*95*		*76 - 132*		*03/17/17 17:02*	*1*
Dibromofluoromethane (Surr)	*102*		*76 - 132*		*03/21/17 17:18*	*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	0.26	ug/L		03/16/17 09:48	03/19/17 16:47	1

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

TestAmerica Job ID: 440-179579-1

Client Sample ID: CM-11R

Lab Sample ID: 440-179579-2

Date Collected: 03/14/17 09:15
Date Received: 03/14/17 18:45

Matrix: Water

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*64*		*30 - 120*	*03/16/17 09:48*	*03/19/17 16:47*	*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			03/15/17 16:06	10

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		03/17/17 09:33	03/17/17 17:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**0.15**	**J**	0.20	0.10	mg/L			03/15/17 21:32	1
Chemical Oxygen Demand	ND		20	10	mg/L			03/22/17 16:13	1
Total Dissolved Solids	**4100**		50	25	mg/L			03/17/17 13:29	1
Total Organic Carbon	**4.9**		0.10	0.050	mg/L			03/18/17 18:41	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	**10**		4.0	4.0	mg/L			03/15/17 11:17	1

Client Sample ID: DW-1

Lab Sample ID: 440-179579-3

Date Collected: 03/14/17 11:30
Date Received: 03/14/17 18:45

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			03/21/17 17:44	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			03/21/17 17:44	1
Acrolein	ND		50	2.5	ug/L			03/17/17 17:31	1
Acrylonitrile	ND		50	1.0	ug/L			03/17/17 17:31	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			03/21/17 17:44	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			03/21/17 17:44	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			03/21/17 17:44	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			03/21/17 17:44	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			03/21/17 17:44	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			03/21/17 17:44	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			03/21/17 17:44	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			03/21/17 17:44	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			03/21/17 17:44	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			03/21/17 17:44	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			03/21/17 17:44	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			03/21/17 17:44	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			03/21/17 17:44	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			03/21/17 17:44	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			03/21/17 17:44	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			03/21/17 17:44	1
2-Hexanone	ND		5.0	2.5	ug/L			03/21/17 17:44	1
Acetone	ND		20	10	ug/L			03/21/17 17:44	1
Acetonitrile	ND		20	10	ug/L			03/21/17 17:44	1
Acrolein	ND		5.0	2.5	ug/L			03/21/17 17:44	1
Acrylonitrile	ND		2.0	1.0	ug/L			03/21/17 17:44	1
Benzene	ND		0.50	0.25	ug/L			03/21/17 17:44	1

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

TestAmerica Job ID: 440-179579-1

Client Sample ID: DW-1
Date Collected: 03/14/17 11:30
Date Received: 03/14/17 18:45

Lab Sample ID: 440-179579-3
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			03/21/17 17:44	1
Bromoform	ND		1.0	0.40	ug/L			03/21/17 17:44	1
Bromomethane	ND		0.50	0.25	ug/L			03/21/17 17:44	1
Carbon disulfide	ND		1.0	0.50	ug/L			03/21/17 17:44	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			03/21/17 17:44	1
Chlorobenzene	ND		0.50	0.25	ug/L			03/21/17 17:44	1
Bromochloromethane	ND		0.50	0.25	ug/L			03/21/17 17:44	1
Chloroethane	ND		1.0	0.40	ug/L			03/21/17 17:44	1
Chloroform	ND		0.50	0.25	ug/L			03/21/17 17:44	1
Chloromethane	ND		0.50	0.25	ug/L			03/21/17 17:44	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/21/17 17:44	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/21/17 17:44	1
Dibromochloromethane	ND		0.50	0.25	ug/L			03/21/17 17:44	1
Dibromomethane	ND		0.50	0.25	ug/L			03/21/17 17:44	1
Bromodichloromethane	ND		0.50	0.25	ug/L			03/21/17 17:44	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			03/21/17 17:44	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			03/21/17 17:44	1
Ethylbenzene	ND		0.50	0.25	ug/L			03/21/17 17:44	1
Iodomethane	ND		2.0	1.0	ug/L			03/21/17 17:44	1
Isobutyl alcohol	ND		25	13	ug/L			03/21/17 17:44	1
m,p-Xylene	ND		1.0	0.50	ug/L			03/21/17 17:44	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			03/21/17 17:44	1
Methyl methacrylate	ND		2.0	1.0	ug/L			03/21/17 17:44	1
Methylene Chloride	**1.3**	**J**	2.0	0.88	ug/L			03/21/17 17:44	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			03/21/17 17:44	1
Naphthalene	ND		1.0	0.40	ug/L			03/21/17 17:44	1
o-Xylene	ND		0.50	0.25	ug/L			03/21/17 17:44	1
Propionitrile	ND		20	10	ug/L			03/21/17 17:44	1
Styrene	ND		0.50	0.25	ug/L			03/21/17 17:44	1
t-Butanol	ND		10	5.0	ug/L			03/21/17 17:44	1
Tetrachloroethene	ND		0.50	0.25	ug/L			03/21/17 17:44	1
Tetrahydrofuran	ND		10	5.0	ug/L			03/21/17 17:44	1
Toluene	ND		0.50	0.25	ug/L			03/21/17 17:44	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/21/17 17:44	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/21/17 17:44	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			03/21/17 17:44	1
Trichloroethene	ND		0.50	0.25	ug/L			03/21/17 17:44	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			03/21/17 17:44	1
Vinyl acetate	ND		4.0	2.0	ug/L			03/21/17 17:44	1
Vinyl chloride	ND		0.50	0.25	ug/L			03/21/17 17:44	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			03/21/17 17:44	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			03/21/17 17:44	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			03/21/17 17:44	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Cyclopropane	*6.1*	*T J N*	*ug/L*		*3.13*	*75-19-4*		*03/21/17 17:44*	*1*
Unknown	*2.9*	*T J*	*ug/L*		*4.67*			*03/21/17 17:44*	*1*
Unknown	*5.7*	*T J*	*ug/L*		*5.85*			*03/21/17 17:44*	*1*
Unknown	*10*	*T J*	*ug/L*		*7.34*			*03/21/17 17:44*	*1*
Unknown	*22*	*T J*	*ug/L*		*17.71*			*03/21/17 17:44*	*1*

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	*115*		*80 - 128*		*03/17/17 17:31*	*1*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*		*03/17/17 17:31*	*1*
Toluene-d8 (Surr)	*111*		*80 - 128*		*03/21/17 17:44*	*1*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*		*03/21/17 17:44*	*1*
Dibromofluoromethane (Surr)	*94*		*76 - 132*		*03/17/17 17:31*	*1*
Dibromofluoromethane (Surr)	*103*		*76 - 132*		*03/21/17 17:44*	*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	0.26	ug/L		03/16/17 09:48	03/19/17 17:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	*66*		*30 - 120*	*03/16/17 09:48*	*03/19/17 17:09*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**14**		5.0	2.5	mg/L			03/15/17 16:19	10

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	**1.2**		0.50	0.25	mg/L		03/17/17 09:33	03/17/17 18:15	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**2.2**		0.20	0.10	mg/L			03/15/17 21:37	1
Chemical Oxygen Demand	ND		20	10	mg/L			03/22/17 16:14	1
Total Dissolved Solids	**3200**		50	25	mg/L			03/17/17 13:29	1
Total Organic Carbon	**3.1**		0.10	0.050	mg/L			03/18/17 18:53	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	**540**		4.0	4.0	mg/L			03/15/17 11:27	1

Client Sample ID: DW-5

Date Collected: 03/14/17 14:00
Date Received: 03/14/17 18:45

Lab Sample ID: 440-179579-4
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			03/22/17 02:37	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			03/22/17 02:37	1
Acrolein	ND		50	2.5	ug/L			03/17/17 18:01	1
Acrylonitrile	ND		50	1.0	ug/L			03/17/17 18:01	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			03/22/17 02:37	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			03/22/17 02:37	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			03/22/17 02:37	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			03/22/17 02:37	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			03/22/17 02:37	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			03/22/17 02:37	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			03/22/17 02:37	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			03/22/17 02:37	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			03/22/17 02:37	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			03/22/17 02:37	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			03/22/17 02:37	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			03/22/17 02:37	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			03/22/17 02:37	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			03/22/17 02:37	1

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

TestAmerica Job ID: 440-179579-1

Client Sample ID: DW-5
Date Collected: 03/14/17 14:00
Date Received: 03/14/17 18:45

Lab Sample ID: 440-179579-4
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			03/22/17 02:37	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			03/22/17 02:37	1
2-Hexanone	ND		5.0	2.5	ug/L			03/22/17 02:37	1
Acetone	ND		20	10	ug/L			03/22/17 02:37	1
Acetonitrile	ND		20	10	ug/L			03/22/17 02:37	1
Acrolein	ND		5.0	2.5	ug/L			03/22/17 02:37	1
Acrylonitrile	ND		2.0	1.0	ug/L			03/22/17 02:37	1
Benzene	ND		0.50	0.25	ug/L			03/22/17 02:37	1
Allyl chloride	**2.3**		1.0	0.50	ug/L			03/22/17 02:37	1
Bromoform	ND		1.0	0.40	ug/L			03/22/17 02:37	1
Bromomethane	ND		0.50	0.25	ug/L			03/22/17 02:37	1
Carbon disulfide	ND		1.0	0.50	ug/L			03/22/17 02:37	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			03/22/17 02:37	1
Chlorobenzene	ND		0.50	0.25	ug/L			03/22/17 02:37	1
Bromochloromethane	ND		0.50	0.25	ug/L			03/22/17 02:37	1
Chloroethane	ND		1.0	0.40	ug/L			03/22/17 02:37	1
Chloroform	ND		0.50	0.25	ug/L			03/22/17 02:37	1
Chloromethane	ND		0.50	0.25	ug/L			03/22/17 02:37	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/22/17 02:37	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/22/17 02:37	1
Dibromochloromethane	ND		0.50	0.25	ug/L			03/22/17 02:37	1
Dibromomethane	ND		0.50	0.25	ug/L			03/22/17 02:37	1
Bromodichloromethane	ND		0.50	0.25	ug/L			03/22/17 02:37	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			03/22/17 02:37	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			03/22/17 02:37	1
Ethylbenzene	ND		0.50	0.25	ug/L			03/22/17 02:37	1
Iodomethane	ND		2.0	1.0	ug/L			03/22/17 02:37	1
Isobutyl alcohol	ND		25	13	ug/L			03/22/17 02:37	1
m,p-Xylene	ND		1.0	0.50	ug/L			03/22/17 02:37	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			03/22/17 02:37	1
Methyl methacrylate	ND		2.0	1.0	ug/L			03/22/17 02:37	1
Methylene Chloride	ND		2.0	0.88	ug/L			03/22/17 02:37	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			03/22/17 02:37	1
Naphthalene	ND		1.0	0.40	ug/L			03/22/17 02:37	1
o-Xylene	ND		0.50	0.25	ug/L			03/22/17 02:37	1
Propionitrile	ND		20	10	ug/L			03/22/17 02:37	1
Styrene	ND		0.50	0.25	ug/L			03/22/17 02:37	1
t-Butanol	ND		10	5.0	ug/L			03/22/17 02:37	1
Tetrachloroethene	ND		0.50	0.25	ug/L			03/22/17 02:37	1
Tetrahydrofuran	ND		10	5.0	ug/L			03/22/17 02:37	1
Toluene	ND		0.50	0.25	ug/L			03/22/17 02:37	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/22/17 02:37	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/22/17 02:37	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			03/22/17 02:37	1
Trichloroethene	ND		0.50	0.25	ug/L			03/22/17 02:37	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			03/22/17 02:37	1
Vinyl acetate	ND		4.0	2.0	ug/L			03/22/17 02:37	1
Vinyl chloride	ND		0.50	0.25	ug/L			03/22/17 02:37	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			03/22/17 02:37	1

Client Sample ID: DW-5
Date Collected: 03/14/17 14:00
Date Received: 03/14/17 18:45

Lab Sample ID: 440-179579-4
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			03/22/17 02:37	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			03/22/17 02:37	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*8.7*	*T J*	*ug/L*		*3.31*			*03/22/17 02:37*	*1*
Butane, 2,3-dimethyl-	*11*	*T J N*	*ug/L*		*5.57*	*79-29-8*		*03/22/17 02:37*	*1*
Benzene, (2-methylpropyl)-	*9.7*	*T J N*	*ug/L*		*12.73*	*538-93-2*		*03/22/17 02:37*	*1*
1H-Indene,2,3-dihydro-2,2-dimethyl-	*7.5*	*T J N*	*ug/L*		*13.86*	*20836-11-7*		*03/22/17 02:37*	*1*
1H-Indene, 2,3-dihydro-1,6-dimethyl-	*7.8*	*T J N*	*ug/L*		*13.93*	*17059-48-2*		*03/22/17 02:37*	*1*
Benzene, 1,2,4,5-tetramethyl-	*26*	*T J N*	*ug/L*		*14.09*	*95-93-2*		*03/22/17 02:37*	*1*
Unknown	*15*	*T J*	*ug/L*		*14.82*			*03/22/17 02:37*	*1*
Unknown	*8.6*	*T J*	*ug/L*		*15.25*			*03/22/17 02:37*	*1*
1H-Indene, 2,3-dihydro-4,7-dimethyl-	*9.0*	*T J N*	*ug/L*		*15.64*	*6682-71-9*		*03/22/17 02:37*	*1*
Unknown	*7.0*	*T J*	*ug/L*		*15.85*			*03/22/17 02:37*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*116*		*80 - 128*		*03/17/17 18:01*	*1*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*		*03/17/17 18:01*	*1*
Toluene-d8 (Surr)	*102*		*80 - 128*		*03/22/17 02:37*	*1*
4-Bromofluorobenzene (Surr)	*93*		*80 - 120*		*03/22/17 02:37*	*1*
Dibromofluoromethane (Surr)	*95*		*76 - 132*		*03/17/17 18:01*	*1*
Dibromofluoromethane (Surr)	*101*		*76 - 132*		*03/22/17 02:37*	*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		03/16/17 09:48	03/19/17 17:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*53*		*30 - 120*	*03/16/17 09:48*	*03/19/17 17:31*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**19**		2.5	1.3	mg/L			03/15/17 16:32	5

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	**0.75**		0.50	0.25	mg/L		03/17/17 09:33	03/17/17 18:18	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**0.39**		0.20	0.10	mg/L			03/15/17 21:43	1
Chemical Oxygen Demand	ND		20	10	mg/L			03/23/17 11:13	1
Total Dissolved Solids	**1100**		10	5.0	mg/L			03/17/17 13:29	1
Total Organic Carbon	**6.2**		0.10	0.050	mg/L			03/18/17 19:59	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	**980**		4.0	4.0	mg/L			03/15/17 11:42	1

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

TestAmerica Job ID: 440-179579-1

Client Sample ID: Dup.
Date Collected: 03/14/17 00:01
Date Received: 03/14/17 18:45

Lab Sample ID: 440-179579-5
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			03/22/17 03:07	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			03/22/17 03:07	1
Acrolein	ND		50	2.5	ug/L			03/18/17 02:04	1
Acrylonitrile	ND	*	50	1.0	ug/L			03/18/17 02:04	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			03/22/17 03:07	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			03/22/17 03:07	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			03/22/17 03:07	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			03/22/17 03:07	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			03/22/17 03:07	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			03/22/17 03:07	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			03/22/17 03:07	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			03/22/17 03:07	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			03/22/17 03:07	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			03/22/17 03:07	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			03/22/17 03:07	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			03/22/17 03:07	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			03/22/17 03:07	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			03/22/17 03:07	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			03/22/17 03:07	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			03/22/17 03:07	1
2-Hexanone	ND		5.0	2.5	ug/L			03/22/17 03:07	1
Acetone	ND		20	10	ug/L			03/22/17 03:07	1
Acetonitrile	ND		20	10	ug/L			03/22/17 03:07	1
Acrolein	ND		5.0	2.5	ug/L			03/22/17 03:07	1
Acrylonitrile	ND		2.0	1.0	ug/L			03/22/17 03:07	1
Benzene	ND		0.50	0.25	ug/L			03/22/17 03:07	1
Allyl chloride	**2.5**		1.0	0.50	ug/L			03/22/17 03:07	1
Bromoform	ND		1.0	0.40	ug/L			03/22/17 03:07	1
Bromomethane	ND		0.50	0.25	ug/L			03/22/17 03:07	1
Carbon disulfide	ND		1.0	0.50	ug/L			03/22/17 03:07	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			03/22/17 03:07	1
Chlorobenzene	ND		0.50	0.25	ug/L			03/22/17 03:07	1
Bromochloromethane	ND		0.50	0.25	ug/L			03/22/17 03:07	1
Chloroethane	ND		1.0	0.40	ug/L			03/22/17 03:07	1
Chloroform	ND		0.50	0.25	ug/L			03/22/17 03:07	1
Chloromethane	ND		0.50	0.25	ug/L			03/22/17 03:07	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/22/17 03:07	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/22/17 03:07	1
Dibromochloromethane	ND		0.50	0.25	ug/L			03/22/17 03:07	1
Dibromomethane	ND		0.50	0.25	ug/L			03/22/17 03:07	1
Bromodichloromethane	ND		0.50	0.25	ug/L			03/22/17 03:07	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			03/22/17 03:07	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			03/22/17 03:07	1
Ethylbenzene	ND		0.50	0.25	ug/L			03/22/17 03:07	1
Iodomethane	ND		2.0	1.0	ug/L			03/22/17 03:07	1
Isobutyl alcohol	ND		25	13	ug/L			03/22/17 03:07	1
m,p-Xylene	ND		1.0	0.50	ug/L			03/22/17 03:07	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			03/22/17 03:07	1
Methyl methacrylate	ND		2.0	1.0	ug/L			03/22/17 03:07	1

Client Sample ID: Dup.
Date Collected: 03/14/17 00:01
Date Received: 03/14/17 18:45

Lab Sample ID: 440-179579-5
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			03/22/17 03:07	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			03/22/17 03:07	1
Naphthalene	ND		1.0	0.40	ug/L			03/22/17 03:07	1
o-Xylene	ND		0.50	0.25	ug/L			03/22/17 03:07	1
Propionitrile	ND		20	10	ug/L			03/22/17 03:07	1
Styrene	ND		0.50	0.25	ug/L			03/22/17 03:07	1
t-Butanol	ND		10	5.0	ug/L			03/22/17 03:07	1
Tetrachloroethene	ND		0.50	0.25	ug/L			03/22/17 03:07	1
Tetrahydrofuran	ND		10	5.0	ug/L			03/22/17 03:07	1
Toluene	ND		0.50	0.25	ug/L			03/22/17 03:07	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/22/17 03:07	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/22/17 03:07	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			03/22/17 03:07	1
Trichloroethene	ND		0.50	0.25	ug/L			03/22/17 03:07	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			03/22/17 03:07	1
Vinyl acetate	ND		4.0	2.0	ug/L			03/22/17 03:07	1
Vinyl chloride	ND		0.50	0.25	ug/L			03/22/17 03:07	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			03/22/17 03:07	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			03/22/17 03:07	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			03/22/17 03:07	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*17*	*T J*	*ug/L*		*3.31*			*03/22/17 03:07*	*1*
Butane, 2,3-dimethyl-	*11*	*T J N*	*ug/L*		*5.58*	*79-29-8*		*03/22/17 03:07*	*1*
Benzene, (2-methylpropyl)-	*9.9*	*T J N*	*ug/L*		*12.74*	*538-93-2*		*03/22/17 03:07*	*1*
Benzene, 1-ethyl-4-(1-methylethyl)-	*6.8*	*T J N*	*ug/L*		*13.75*	*4218-48-8*		*03/22/17 03:07*	*1*
1H-Indene,2,3-dihydro-2,2-dimethyl-	*7.7*	*T J N*	*ug/L*		*13.85*	*20836-11-7*		*03/22/17 03:07*	*1*
1H-Indene, 2,3-dihydro-1,1-dimethyl-	*8.1*	*T J N*	*ug/L*		*13.93*	*4912-92-9*		*03/22/17 03:07*	*1*
Benzene, 1,2,4,5-tetramethyl-	*25*	*T J N*	*ug/L*		*14.08*	*95-93-2*		*03/22/17 03:07*	*1*
Unknown	*14*	*T J*	*ug/L*		*14.81*			*03/22/17 03:07*	*1*
Unknown	*8.3*	*T J*	*ug/L*		*15.26*			*03/22/17 03:07*	*1*
1H-Indene, 2,3-dihydro-4,7-dimethyl-	*8.7*	*T J N*	*ug/L*		*15.64*	*6682-71-9*		*03/22/17 03:07*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*100*		*80 - 128*		*03/18/17 02:04*	*1*
4-Bromofluorobenzene (Surr)	*93*		*80 - 120*		*03/18/17 02:04*	*1*
Toluene-d8 (Surr)	*103*		*80 - 128*		*03/22/17 03:07*	*1*
4-Bromofluorobenzene (Surr)	*91*		*80 - 120*		*03/22/17 03:07*	*1*
Dibromofluoromethane (Surr)	*115*		*76 - 132*		*03/18/17 02:04*	*1*
Dibromofluoromethane (Surr)	*103*		*76 - 132*		*03/22/17 03:07*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.98	0.25	ug/L		03/16/17 09:48	03/19/17 17:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*60*		*30 - 120*	*03/16/17 09:48*	*03/19/17 17:53*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**20**		2.5	1.3	mg/L			03/15/17 16:45	5

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	**0.69**		0.50	0.25	mg/L		03/17/17 09:33	03/17/17 18:20	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**0.26**		0.20	0.10	mg/L			03/15/17 21:48	1
Chemical Oxygen Demand	ND		20	10	mg/L			03/23/17 11:13	1
Total Dissolved Solids	**1100**		10	5.0	mg/L			03/17/17 13:29	1
Total Organic Carbon	**6.3**		0.10	0.050	mg/L			03/18/17 20:14	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	**970**		4.0	4.0	mg/L			03/15/17 11:56	1

Client Sample ID: Extraction Trench

Lab Sample ID: 440-179579-6

Date Collected: 03/14/17 10:58

Matrix: Water

Date Received: 03/14/17 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			03/22/17 03:37	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			03/22/17 03:37	1
Acrolein	ND		50	2.5	ug/L			03/18/17 02:32	1
Acrylonitrile	ND	*	50	1.0	ug/L			03/18/17 02:32	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			03/22/17 03:37	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			03/22/17 03:37	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			03/22/17 03:37	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			03/22/17 03:37	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			03/22/17 03:37	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			03/22/17 03:37	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			03/22/17 03:37	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			03/22/17 03:37	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			03/22/17 03:37	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			03/22/17 03:37	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			03/22/17 03:37	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			03/22/17 03:37	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			03/22/17 03:37	1
1,4-Dichlorobenzene	**0.64**		0.50	0.25	ug/L			03/22/17 03:37	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			03/22/17 03:37	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			03/22/17 03:37	1
2-Hexanone	ND		5.0	2.5	ug/L			03/22/17 03:37	1
Acetone	ND		20	10	ug/L			03/22/17 03:37	1
Acetonitrile	ND		20	10	ug/L			03/22/17 03:37	1
Acrolein	ND		5.0	2.5	ug/L			03/22/17 03:37	1
Acrylonitrile	ND		2.0	1.0	ug/L			03/22/17 03:37	1
Benzene	ND		0.50	0.25	ug/L			03/22/17 03:37	1
Allyl chloride	ND		1.0	0.50	ug/L			03/22/17 03:37	1
Bromoform	ND		1.0	0.40	ug/L			03/22/17 03:37	1
Bromomethane	ND		0.50	0.25	ug/L			03/22/17 03:37	1
Carbon disulfide	ND		1.0	0.50	ug/L			03/22/17 03:37	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			03/22/17 03:37	1
Chlorobenzene	ND		0.50	0.25	ug/L			03/22/17 03:37	1
Bromochloromethane	ND		0.50	0.25	ug/L			03/22/17 03:37	1
Chloroethane	ND		1.0	0.40	ug/L			03/22/17 03:37	1
Chloroform	ND		0.50	0.25	ug/L			03/22/17 03:37	1
Chloromethane	ND		0.50	0.25	ug/L			03/22/17 03:37	1

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

TestAmerica Job ID: 440-179579-1

Client Sample ID: Extraction Trench
Date Collected: 03/14/17 10:58
Date Received: 03/14/17 18:45

Lab Sample ID: 440-179579-6
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	**1.5**		0.50	0.25	ug/L			03/22/17 03:37	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/22/17 03:37	1
Dibromochloromethane	ND		0.50	0.25	ug/L			03/22/17 03:37	1
Dibromomethane	ND		0.50	0.25	ug/L			03/22/17 03:37	1
Bromodichloromethane	ND		0.50	0.25	ug/L			03/22/17 03:37	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			03/22/17 03:37	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			03/22/17 03:37	1
Ethylbenzene	ND		0.50	0.25	ug/L			03/22/17 03:37	1
Iodomethane	ND		2.0	1.0	ug/L			03/22/17 03:37	1
Isobutyl alcohol	ND		25	13	ug/L			03/22/17 03:37	1
m,p-Xylene	ND		1.0	0.50	ug/L			03/22/17 03:37	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			03/22/17 03:37	1
Methyl methacrylate	ND		2.0	1.0	ug/L			03/22/17 03:37	1
Methylene Chloride	ND		2.0	0.88	ug/L			03/22/17 03:37	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			03/22/17 03:37	1
Naphthalene	ND		1.0	0.40	ug/L			03/22/17 03:37	1
o-Xylene	ND		0.50	0.25	ug/L			03/22/17 03:37	1
Propionitrile	ND		20	10	ug/L			03/22/17 03:37	1
Styrene	ND		0.50	0.25	ug/L			03/22/17 03:37	1
t-Butanol	**41**		10	5.0	ug/L			03/22/17 03:37	1
Tetrachloroethene	ND		0.50	0.25	ug/L			03/22/17 03:37	1
Tetrahydrofuran	**6.0**	**J**	10	5.0	ug/L			03/22/17 03:37	1
Toluene	ND		0.50	0.25	ug/L			03/22/17 03:37	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/22/17 03:37	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/22/17 03:37	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			03/22/17 03:37	1
Trichloroethene	ND		0.50	0.25	ug/L			03/22/17 03:37	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			03/22/17 03:37	1
Vinyl acetate	ND		4.0	2.0	ug/L			03/22/17 03:37	1
Vinyl chloride	ND		0.50	0.25	ug/L			03/22/17 03:37	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			03/22/17 03:37	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			03/22/17 03:37	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			03/22/17 03:37	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*12*	*T J*	*ug/L*		*3.36*			*03/22/17 03:37*	*1*
Unknown	*3.8*	*T J*	*ug/L*		*5.52*			*03/22/17 03:37*	*1*
Unknown	*6.3*	*T J*	*ug/L*		*6.99*			*03/22/17 03:37*	*1*
Unknown	*5.0*	*T J*	*ug/L*		*16.19*			*03/22/17 03:37*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*100*		*80 - 128*		*03/18/17 02:32*	*1*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*		*03/18/17 02:32*	*1*
Toluene-d8 (Surr)	*101*		*80 - 128*		*03/22/17 03:37*	*1*
4-Bromofluorobenzene (Surr)	*91*		*80 - 120*		*03/22/17 03:37*	*1*
Dibromofluoromethane (Surr)	*113*		*76 - 132*		*03/18/17 02:32*	*1*
Dibromofluoromethane (Surr)	*99*		*76 - 132*		*03/22/17 03:37*	*1*

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

TestAmerica Job ID: 440-179579-1

Client Sample ID: Extraction Trench

Lab Sample ID: 440-179579-6

Date Collected: 03/14/17 10:58
Matrix: Water
Date Received: 03/14/17 18:45

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	21		0.99	0.25	ug/L		03/16/17 09:48	03/19/17 18:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*44*		*30 - 120*	*03/16/17 09:48*	*03/19/17 18:15*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	210		100	50	mg/L			03/15/17 01:17	200

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		03/17/17 09:33	03/17/17 18:23	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	9.5		0.20	0.10	mg/L			03/15/17 21:53	1
Chemical Oxygen Demand	130		20	10	mg/L			03/23/17 11:14	1
Total Dissolved Solids	3700		50	25	mg/L			03/17/17 13:29	1
Total Organic Carbon	52		1.0	0.50	mg/L			03/21/17 07:37	10

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	760		4.0	4.0	mg/L			03/15/17 12:11	1

Client Sample ID: QCTB

Lab Sample ID: 440-179579-7

Date Collected: 03/14/17 00:01
Matrix: Water
Date Received: 03/14/17 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			03/22/17 04:06	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			03/22/17 04:06	1
Acrolein	ND		50	2.5	ug/L			03/18/17 03:00	1
Acrylonitrile	ND	*	50	1.0	ug/L			03/18/17 03:00	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			03/22/17 04:06	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			03/22/17 04:06	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			03/22/17 04:06	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			03/22/17 04:06	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			03/22/17 04:06	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			03/22/17 04:06	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			03/22/17 04:06	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			03/22/17 04:06	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			03/22/17 04:06	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			03/22/17 04:06	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			03/22/17 04:06	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			03/22/17 04:06	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			03/22/17 04:06	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			03/22/17 04:06	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			03/22/17 04:06	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			03/22/17 04:06	1
2-Hexanone	ND		5.0	2.5	ug/L			03/22/17 04:06	1
Acetone	ND		20	10	ug/L			03/22/17 04:06	1

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

TestAmerica Job ID: 440-179579-1

Client Sample ID: QCTB
Date Collected: 03/14/17 00:01
Date Received: 03/14/17 18:45

Lab Sample ID: 440-179579-7
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetonitrile	ND		20	10	ug/L			03/22/17 04:06	1
Acrolein	ND		5.0	2.5	ug/L			03/22/17 04:06	1
Acrylonitrile	ND		2.0	1.0	ug/L			03/22/17 04:06	1
Benzene	ND		0.50	0.25	ug/L			03/22/17 04:06	1
Allyl chloride	ND		1.0	0.50	ug/L			03/22/17 04:06	1
Bromoform	ND		1.0	0.40	ug/L			03/22/17 04:06	1
Bromomethane	ND		0.50	0.25	ug/L			03/22/17 04:06	1
Carbon disulfide	ND		1.0	0.50	ug/L			03/22/17 04:06	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			03/22/17 04:06	1
Chlorobenzene	ND		0.50	0.25	ug/L			03/22/17 04:06	1
Bromochloromethane	ND		0.50	0.25	ug/L			03/22/17 04:06	1
Chloroethane	ND		1.0	0.40	ug/L			03/22/17 04:06	1
Chloroform	ND		0.50	0.25	ug/L			03/22/17 04:06	1
Chloromethane	ND		0.50	0.25	ug/L			03/22/17 04:06	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/22/17 04:06	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/22/17 04:06	1
Dibromochloromethane	ND		0.50	0.25	ug/L			03/22/17 04:06	1
Dibromomethane	ND		0.50	0.25	ug/L			03/22/17 04:06	1
Bromodichloromethane	ND		0.50	0.25	ug/L			03/22/17 04:06	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			03/22/17 04:06	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			03/22/17 04:06	1
Ethylbenzene	ND		0.50	0.25	ug/L			03/22/17 04:06	1
Iodomethane	ND		2.0	1.0	ug/L			03/22/17 04:06	1
Isobutyl alcohol	ND		25	13	ug/L			03/22/17 04:06	1
m,p-Xylene	ND		1.0	0.50	ug/L			03/22/17 04:06	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			03/22/17 04:06	1
Methyl methacrylate	ND		2.0	1.0	ug/L			03/22/17 04:06	1
Methylene Chloride	ND		2.0	0.88	ug/L			03/22/17 04:06	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			03/22/17 04:06	1
Naphthalene	ND		1.0	0.40	ug/L			03/22/17 04:06	1
o-Xylene	ND		0.50	0.25	ug/L			03/22/17 04:06	1
Propionitrile	ND		20	10	ug/L			03/22/17 04:06	1
Styrene	ND		0.50	0.25	ug/L			03/22/17 04:06	1
t-Butanol	ND		10	5.0	ug/L			03/22/17 04:06	1
Tetrachloroethene	ND		0.50	0.25	ug/L			03/22/17 04:06	1
Tetrahydrofuran	ND		10	5.0	ug/L			03/22/17 04:06	1
Toluene	ND		0.50	0.25	ug/L			03/22/17 04:06	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/22/17 04:06	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/22/17 04:06	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			03/22/17 04:06	1
Trichloroethene	ND		0.50	0.25	ug/L			03/22/17 04:06	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			03/22/17 04:06	1
Vinyl acetate	ND		4.0	2.0	ug/L			03/22/17 04:06	1
Vinyl chloride	ND		0.50	0.25	ug/L			03/22/17 04:06	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			03/22/17 04:06	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			03/22/17 04:06	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			03/22/17 04:06	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*6.2*	*T J*	*ug/L*		*6.99*			*03/22/17 04:06*	*1*

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

TestAmerica Job ID: 440-179579-1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	101		80 - 128		03/18/17 03:00	1
4-Bromofluorobenzene (Surr)	95		80 - 120		03/18/17 03:00	1
Toluene-d8 (Surr)	104		80 - 128		03/22/17 04:06	1
4-Bromofluorobenzene (Surr)	92		80 - 120		03/22/17 04:06	1
Dibromofluoromethane (Surr)	115		76 - 132		03/18/17 03:00	1
Dibromofluoromethane (Surr)	100		76 - 132		03/22/17 04:06	1

Client Sample ID: QCAB

Lab Sample ID: 440-179579-8

Date Collected: 03/14/17 00:01

Matrix: Water

Date Received: 03/14/17 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			03/22/17 04:36	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			03/22/17 04:36	1
Acrolein	ND		50	2.5	ug/L			03/18/17 03:28	1
Acrylonitrile	ND	*	50	1.0	ug/L			03/18/17 03:28	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			03/22/17 04:36	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			03/22/17 04:36	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			03/22/17 04:36	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			03/22/17 04:36	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			03/22/17 04:36	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			03/22/17 04:36	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			03/22/17 04:36	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			03/22/17 04:36	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			03/22/17 04:36	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			03/22/17 04:36	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			03/22/17 04:36	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			03/22/17 04:36	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			03/22/17 04:36	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			03/22/17 04:36	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			03/22/17 04:36	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			03/22/17 04:36	1
2-Hexanone	ND		5.0	2.5	ug/L			03/22/17 04:36	1
Acetone	ND		20	10	ug/L			03/22/17 04:36	1
Acetonitrile	ND		20	10	ug/L			03/22/17 04:36	1
Acrolein	ND		5.0	2.5	ug/L			03/22/17 04:36	1
Acrylonitrile	ND		2.0	1.0	ug/L			03/22/17 04:36	1
Benzene	ND		0.50	0.25	ug/L			03/22/17 04:36	1
Allyl chloride	ND		1.0	0.50	ug/L			03/22/17 04:36	1
Bromoform	ND		1.0	0.40	ug/L			03/22/17 04:36	1
Bromomethane	ND		0.50	0.25	ug/L			03/22/17 04:36	1
Carbon disulfide	ND		1.0	0.50	ug/L			03/22/17 04:36	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			03/22/17 04:36	1
Chlorobenzene	ND		0.50	0.25	ug/L			03/22/17 04:36	1
Bromochloromethane	ND		0.50	0.25	ug/L			03/22/17 04:36	1
Chloroethane	ND		1.0	0.40	ug/L			03/22/17 04:36	1
Chloroform	ND		0.50	0.25	ug/L			03/22/17 04:36	1
Chloromethane	ND		0.50	0.25	ug/L			03/22/17 04:36	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/22/17 04:36	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/22/17 04:36	1
Dibromochloromethane	ND		0.50	0.25	ug/L			03/22/17 04:36	1
Dibromomethane	ND		0.50	0.25	ug/L			03/22/17 04:36	1
Bromodichloromethane	ND		0.50	0.25	ug/L			03/22/17 04:36	1

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

TestAmerica Job ID: 440-179579-1

Client Sample ID: QCAB
Date Collected: 03/14/17 00:01
Date Received: 03/14/17 18:45

Lab Sample ID: 440-179579-8
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			03/22/17 04:36	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			03/22/17 04:36	1
Ethylbenzene	ND		0.50	0.25	ug/L			03/22/17 04:36	1
Iodomethane	ND		2.0	1.0	ug/L			03/22/17 04:36	1
Isobutyl alcohol	ND		25	13	ug/L			03/22/17 04:36	1
m,p-Xylene	ND		1.0	0.50	ug/L			03/22/17 04:36	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			03/22/17 04:36	1
Methyl methacrylate	ND		2.0	1.0	ug/L			03/22/17 04:36	1
Methylene Chloride	ND		2.0	0.88	ug/L			03/22/17 04:36	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			03/22/17 04:36	1
Naphthalene	ND		1.0	0.40	ug/L			03/22/17 04:36	1
o-Xylene	ND		0.50	0.25	ug/L			03/22/17 04:36	1
Propionitrile	ND		20	10	ug/L			03/22/17 04:36	1
Styrene	ND		0.50	0.25	ug/L			03/22/17 04:36	1
t-Butanol	ND		10	5.0	ug/L			03/22/17 04:36	1
Tetrachloroethene	ND		0.50	0.25	ug/L			03/22/17 04:36	1
Tetrahydrofuran	ND		10	5.0	ug/L			03/22/17 04:36	1
Toluene	ND		0.50	0.25	ug/L			03/22/17 04:36	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/22/17 04:36	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/22/17 04:36	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			03/22/17 04:36	1
Trichloroethene	ND		0.50	0.25	ug/L			03/22/17 04:36	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			03/22/17 04:36	1
Vinyl acetate	ND		4.0	2.0	ug/L			03/22/17 04:36	1
Vinyl chloride	ND		0.50	0.25	ug/L			03/22/17 04:36	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			03/22/17 04:36	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			03/22/17 04:36	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			03/22/17 04:36	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*6.2*	*T J*	*ug/L*		*6.99*			*03/22/17 04:36*	*1*
Unknown	*4.5*	*T J*	*ug/L*		*15.92*			*03/22/17 04:36*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*102*		*80 - 128*		*03/18/17 03:28*	*1*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*		*03/18/17 03:28*	*1*
Toluene-d8 (Surr)	*106*		*80 - 128*		*03/22/17 04:36*	*1*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*		*03/22/17 04:36*	*1*
Dibromofluoromethane (Surr)	*119*		*76 - 132*		*03/18/17 03:28*	*1*
Dibromofluoromethane (Surr)	*98*		*76 - 132*		*03/22/17 04:36*	*1*

Method Summary

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

TestAmerica Job ID: 440-179579-1

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 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

Client Sample ID: MW-9

Lab Sample ID: 440-179579-1

Date Collected: 03/14/17 11:35

Matrix: Water

Date Received: 03/14/17 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	395145	03/21/17 16:52	RM	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	394556	03/17/17 16:32	WC	TAL IRV
Total/NA	Prep	3520C			915 mL	1.0 mL	394346	03/16/17 09:48	JS1	TAL IRV
Total/NA	Analysis	8270C		1			394854	03/19/17 16:25	HN	TAL IRV
Total/NA	Analysis	300.0		200			393859	03/14/17 23:51	NTN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	394605	03/17/17 09:33	Q1N	TAL IRV
Total Recoverable	Analysis	6010B		1			394741	03/17/17 17:45	B1H	TAL IRV
Total/NA	Analysis	350.1		1	0.8 mL	8 mL	394275	03/15/17 21:27	EN	TAL IRV
Total/NA	Analysis	410.4		1	0.625 mL	2.5 mL	395563	03/22/17 16:13	RW	TAL IRV
Total/NA	Analysis	SM 2320B		1			394148	03/15/17 11:11	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	20 mL	100 mL	394678	03/17/17 13:29	MMH	TAL IRV
Total/NA	Analysis	SM 5310C		10	100 mL	100 mL	395236	03/21/17 07:23	YZ	TAL IRV

Client Sample ID: CM-11R

Lab Sample ID: 440-179579-2

Date Collected: 03/14/17 09:15

Matrix: Water

Date Received: 03/14/17 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	395145	03/21/17 17:18	RM	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	394556	03/17/17 17:02	WC	TAL IRV
Total/NA	Prep	3520C			975 mL	1.0 mL	394346	03/16/17 09:48	JS1	TAL IRV
Total/NA	Analysis	8270C		1			394854	03/19/17 16:47	HN	TAL IRV
Total/NA	Analysis	300.0		10			394117	03/15/17 16:06	NTN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	394605	03/17/17 09:33	Q1N	TAL IRV
Total Recoverable	Analysis	6010B		1			394741	03/17/17 17:54	B1H	TAL IRV
Total/NA	Analysis	350.1		1	0.8 mL	8 mL	394275	03/15/17 21:32	EN	TAL IRV
Total/NA	Analysis	410.4		1	0.625 mL	2.5 mL	395563	03/22/17 16:13	RW	TAL IRV
Total/NA	Analysis	SM 2320B		1			394148	03/15/17 11:17	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	20 mL	100 mL	394678	03/17/17 13:29	MMH	TAL IRV
Total/NA	Analysis	SM 5310C		1	100 mL	100 mL	394835	03/18/17 18:41	YZ	TAL IRV

Client Sample ID: DW-1

Lab Sample ID: 440-179579-3

Date Collected: 03/14/17 11:30

Matrix: Water

Date Received: 03/14/17 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	395145	03/21/17 17:44	RM	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	394556	03/17/17 17:31	WC	TAL IRV
Total/NA	Prep	3520C			955 mL	1.0 mL	394346	03/16/17 09:48	JS1	TAL IRV
Total/NA	Analysis	8270C		1			394854	03/19/17 17:09	HN	TAL IRV
Total/NA	Analysis	300.0		10			394117	03/15/17 16:19	NTN	TAL IRV

Client Sample ID: DW-1

Lab Sample ID: 440-179579-3

Date Collected: 03/14/17 11:30

Matrix: Water

Date Received: 03/14/17 18:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Prep	3005A			25 mL	25 mL	394605	03/17/17 09:33	Q1N	TAL IRV
Total Recoverable	Analysis	6010B		1			394741	03/17/17 18:15	B1H	TAL IRV
Total/NA	Analysis	350.1		1	0.8 mL	8 mL	394275	03/15/17 21:37	EN	TAL IRV
Total/NA	Analysis	410.4		1	0.625 mL	2.5 mL	395563	03/22/17 16:14	RW	TAL IRV
Total/NA	Analysis	SM 2320B		1			394148	03/15/17 11:27	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	20 mL	100 mL	394678	03/17/17 13:29	MMH	TAL IRV
Total/NA	Analysis	SM 5310C		1	100 mL	100 mL	394835	03/18/17 18:53	YZ	TAL IRV

Client Sample ID: DW-5

Lab Sample ID: 440-179579-4

Date Collected: 03/14/17 14:00

Matrix: Water

Date Received: 03/14/17 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	394556	03/17/17 18:01	WC	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	395302	03/22/17 02:37	WK	TAL IRV
Total/NA	Prep	3520C			1010 mL	1.0 mL	394346	03/16/17 09:48	JS1	TAL IRV
Total/NA	Analysis	8270C		1			394854	03/19/17 17:31	HN	TAL IRV
Total/NA	Analysis	300.0		5			394117	03/15/17 16:32	NTN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	394605	03/17/17 09:33	Q1N	TAL IRV
Total Recoverable	Analysis	6010B		1			394741	03/17/17 18:18	B1H	TAL IRV
Total/NA	Analysis	350.1		1	0.8 mL	8 mL	394275	03/15/17 21:43	EN	TAL IRV
Total/NA	Analysis	410.4		1	0.625 mL	2.5 mL	395727	03/23/17 11:13	HTL	TAL IRV
Total/NA	Analysis	SM 2320B		1			394148	03/15/17 11:42	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	394678	03/17/17 13:29	MMH	TAL IRV
Total/NA	Analysis	SM 5310C		1	100 mL	100 mL	394835	03/18/17 19:59	YZ	TAL IRV

Client Sample ID: Dup.

Lab Sample ID: 440-179579-5

Date Collected: 03/14/17 00:01

Matrix: Water

Date Received: 03/14/17 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	394707	03/18/17 02:04	WK	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	395302	03/22/17 03:07	WK	TAL IRV
Total/NA	Prep	3520C			1020 mL	1.0 mL	394346	03/16/17 09:48	JS1	TAL IRV
Total/NA	Analysis	8270C		1			394854	03/19/17 17:53	HN	TAL IRV
Total/NA	Analysis	300.0		5			394117	03/15/17 16:45	NTN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	394605	03/17/17 09:33	Q1N	TAL IRV
Total Recoverable	Analysis	6010B		1			394741	03/17/17 18:20	B1H	TAL IRV
Total/NA	Analysis	350.1		1	0.8 mL	8 mL	394275	03/15/17 21:48	EN	TAL IRV
Total/NA	Analysis	410.4		1	0.625 mL	2.5 mL	395727	03/23/17 11:13	HTL	TAL IRV
Total/NA	Analysis	SM 2320B		1			394148	03/15/17 11:56	YZ	TAL IRV

Lab Chronicle

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

TestAmerica Job ID: 440-179579-1

Client Sample ID: Dup.

Lab Sample ID: 440-179579-5

Date Collected: 03/14/17 00:01
Date Received: 03/14/17 18:45

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	100 mL	100 mL	394678	03/17/17 13:29	MMH	TAL IRV
Total/NA	Analysis	SM 5310C		1	100 mL	100 mL	394835	03/18/17 20:14	YZ	TAL IRV

Client Sample ID: Extraction Trench

Lab Sample ID: 440-179579-6

Date Collected: 03/14/17 10:58
Date Received: 03/14/17 18:45

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	394707	03/18/17 02:32	WK	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	395302	03/22/17 03:37	WK	TAL IRV
Total/NA	Prep	3520C			1010 mL	1.0 mL	394346	03/16/17 09:48	JS1	TAL IRV
Total/NA	Analysis	8270C		1			394854	03/19/17 18:15	HN	TAL IRV
Total/NA	Analysis	300.0		200			393859	03/15/17 01:17	NTN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	394605	03/17/17 09:33	Q1N	TAL IRV
Total Recoverable	Analysis	6010B		1			394741	03/17/17 18:23	B1H	TAL IRV
Total/NA	Analysis	350.1		1	0.8 mL	8 mL	394275	03/15/17 21:53	EN	TAL IRV
Total/NA	Analysis	410.4		1	0.625 mL	2.5 mL	395727	03/23/17 11:14	HTL	TAL IRV
Total/NA	Analysis	SM 2320B		1			394148	03/15/17 12:11	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	20 mL	100 mL	394678	03/17/17 13:29	MMH	TAL IRV
Total/NA	Analysis	SM 5310C		10	100 mL	100 mL	395236	03/21/17 07:37	YZ	TAL IRV

Client Sample ID: QCTB

Lab Sample ID: 440-179579-7

Date Collected: 03/14/17 00:01
Date Received: 03/14/17 18:45

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	394707	03/18/17 03:00	WK	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	395302	03/22/17 04:06	WK	TAL IRV

Client Sample ID: QCAB

Lab Sample ID: 440-179579-8

Date Collected: 03/14/17 00:01
Date Received: 03/14/17 18:45

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	394707	03/18/17 03:28	WK	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	395302	03/22/17 04:36	WK	TAL IRV

Laboratory References:

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

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

Lab Sample ID: MB 440-394556/3
Matrix: Water
Analysis Batch: 394556

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			03/17/17 07:18	1
Acrylonitrile	ND		50	1.0	ug/L			03/17/17 07:18	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*113*		*80 - 128*		*03/17/17 07:18*	*1*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*		*03/17/17 07:18*	*1*
Dibromofluoromethane (Surr)	*93*		*76 - 132*		*03/17/17 07:18*	*1*

Lab Sample ID: LCS 440-394556/4
Matrix: Water
Analysis Batch: 394556

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	22.3	J	ug/L		89	10 - 145		
Acrylonitrile			250	246		ug/L		98	48 - 140		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*107*		*80 - 128*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*
Dibromofluoromethane (Surr)	*95*		*76 - 132*

Lab Sample ID: 440-179047-F-2 MS
Matrix: Water
Analysis Batch: 394556

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	25.7	J	ug/L		103	10 - 147		
Acrylonitrile	ND		250	281		ug/L		113	38 - 144		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Toluene-d8 (Surr)	*111*		*80 - 128*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*
Dibromofluoromethane (Surr)	*95*		*76 - 132*

Lab Sample ID: 440-179047-F-2 MSD
Matrix: Water
Analysis Batch: 394556

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	25.4	J	ug/L		102	10 - 147	1	40
Acrylonitrile	ND		250	275		ug/L		110	38 - 144	2	40

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*109*		*80 - 128*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*
Dibromofluoromethane (Surr)	*94*		*76 - 132*

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

Lab Sample ID: MB 440-394707/4
Matrix: Water
Analysis Batch: 394707

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			03/17/17 19:09	1
Acrylonitrile	ND		50	1.0	ug/L			03/17/17 19:09	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*101*		*80 - 128*		*03/17/17 19:09*	*1*
4-Bromofluorobenzene (Surr)	*93*		*80 - 120*		*03/17/17 19:09*	*1*
Dibromofluoromethane (Surr)	*108*		*76 - 132*		*03/17/17 19:09*	*1*

Lab Sample ID: LCS 440-394707/5
Matrix: Water
Analysis Batch: 394707

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	27.1	J	ug/L		108	10 - 145		
Acrylonitrile			250	354	*	ug/L		142	48 - 140		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*96*		*80 - 128*
4-Bromofluorobenzene (Surr)	*89*		*80 - 120*
Dibromofluoromethane (Surr)	*106*		*76 - 132*

Lab Sample ID: 440-179131-A-4 MS
Matrix: Water
Analysis Batch: 394707

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	27.9	J	ug/L		112	10 - 147		
Acrylonitrile	ND	*	250	359		ug/L		143	38 - 144		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Toluene-d8 (Surr)	*95*		*80 - 128*
4-Bromofluorobenzene (Surr)	*89*		*80 - 120*
Dibromofluoromethane (Surr)	*105*		*76 - 132*

Lab Sample ID: 440-179131-A-4 MSD
Matrix: Water
Analysis Batch: 394707

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	26.7	J	ug/L		107	10 - 147	5	40
Acrylonitrile	ND	*	250	337		ug/L		135	38 - 144	6	40

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*97*		*80 - 128*
4-Bromofluorobenzene (Surr)	*89*		*80 - 120*
Dibromofluoromethane (Surr)	*103*		*76 - 132*

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

Lab Sample ID: MB 440-395145/5
Matrix: Water
Analysis Batch: 395145

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			03/21/17 09:22	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			03/21/17 09:22	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			03/21/17 09:22	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			03/21/17 09:22	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			03/21/17 09:22	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			03/21/17 09:22	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			03/21/17 09:22	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			03/21/17 09:22	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			03/21/17 09:22	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			03/21/17 09:22	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			03/21/17 09:22	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			03/21/17 09:22	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			03/21/17 09:22	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			03/21/17 09:22	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			03/21/17 09:22	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			03/21/17 09:22	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			03/21/17 09:22	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			03/21/17 09:22	1
2-Hexanone	ND		5.0	2.5	ug/L			03/21/17 09:22	1
Acetone	ND		20	10	ug/L			03/21/17 09:22	1
Acetonitrile	ND		20	10	ug/L			03/21/17 09:22	1
Acrolein	ND		5.0	2.5	ug/L			03/21/17 09:22	1
Acrylonitrile	ND		2.0	1.0	ug/L			03/21/17 09:22	1
Benzene	ND		0.50	0.25	ug/L			03/21/17 09:22	1
Allyl chloride	ND		1.0	0.50	ug/L			03/21/17 09:22	1
Bromoform	ND		1.0	0.40	ug/L			03/21/17 09:22	1
Bromomethane	ND		0.50	0.25	ug/L			03/21/17 09:22	1
Carbon disulfide	ND		1.0	0.50	ug/L			03/21/17 09:22	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			03/21/17 09:22	1
Chlorobenzene	ND		0.50	0.25	ug/L			03/21/17 09:22	1
Bromochloromethane	ND		0.50	0.25	ug/L			03/21/17 09:22	1
Chloroethane	ND		1.0	0.40	ug/L			03/21/17 09:22	1
Chloroform	ND		0.50	0.25	ug/L			03/21/17 09:22	1
Chloromethane	ND		0.50	0.25	ug/L			03/21/17 09:22	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/21/17 09:22	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/21/17 09:22	1
Dibromochloromethane	ND		0.50	0.25	ug/L			03/21/17 09:22	1
Dibromomethane	ND		0.50	0.25	ug/L			03/21/17 09:22	1
Bromodichloromethane	ND		0.50	0.25	ug/L			03/21/17 09:22	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			03/21/17 09:22	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			03/21/17 09:22	1
Ethylbenzene	ND		0.50	0.25	ug/L			03/21/17 09:22	1
Iodomethane	ND		2.0	1.0	ug/L			03/21/17 09:22	1
Isobutyl alcohol	ND		25	13	ug/L			03/21/17 09:22	1
m,p-Xylene	ND		1.0	0.50	ug/L			03/21/17 09:22	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			03/21/17 09:22	1
Methyl methacrylate	ND		2.0	1.0	ug/L			03/21/17 09:22	1
Methylene Chloride	ND		2.0	0.88	ug/L			03/21/17 09:22	1

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

Lab Sample ID: MB 440-395145/5
Matrix: Water
Analysis Batch: 395145

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			03/21/17 09:22	1
Naphthalene	ND		1.0	0.40	ug/L			03/21/17 09:22	1
o-Xylene	ND		0.50	0.25	ug/L			03/21/17 09:22	1
Propionitrile	ND		20	10	ug/L			03/21/17 09:22	1
Styrene	ND		0.50	0.25	ug/L			03/21/17 09:22	1
t-Butanol	ND		10	5.0	ug/L			03/21/17 09:22	1
Tetrachloroethene	ND		0.50	0.25	ug/L			03/21/17 09:22	1
Tetrahydrofuran	ND		10	5.0	ug/L			03/21/17 09:22	1
Toluene	ND		0.50	0.25	ug/L			03/21/17 09:22	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/21/17 09:22	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/21/17 09:22	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			03/21/17 09:22	1
Trichloroethene	ND		0.50	0.25	ug/L			03/21/17 09:22	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			03/21/17 09:22	1
Vinyl acetate	ND		4.0	2.0	ug/L			03/21/17 09:22	1
Vinyl chloride	ND		0.50	0.25	ug/L			03/21/17 09:22	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			03/21/17 09:22	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			03/21/17 09:22	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			03/21/17 09:22	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*03/21/17 09:22*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*111*		*80 - 128*		*03/21/17 09:22*	*1*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*		*03/21/17 09:22*	*1*
Dibromofluoromethane (Surr)	*101*		*76 - 132*		*03/21/17 09:22*	*1*

Lab Sample ID: LCS 440-395145/6
Matrix: Water
Analysis Batch: 395145

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	27.4		ug/L		110	63 - 130
1,1,1,2-Tetrachloroethane	25.0	26.0		ug/L		104	60 - 141
1,1,1-Trichloroethane	25.0	24.4		ug/L		97	70 - 130
1,1,2,2-Tetrachloroethane	25.0	26.3		ug/L		105	63 - 130
1,1,2-Trichloroethane	25.0	26.8		ug/L		107	70 - 130
1,1-Dichloroethane	25.0	25.5		ug/L		102	64 - 130
1,1-Dichloroethene	25.0	23.6		ug/L		94	70 - 130
1,1-Dichloropropene	25.0	25.6		ug/L		103	70 - 130
1,2,4-Trichlorobenzene	25.0	25.5		ug/L		102	60 - 140
1,2-Dibromo-3-Chloropropane	25.0	23.8		ug/L		95	52 - 140
1,2-Dichlorobenzene	25.0	26.7		ug/L		107	70 - 130
1,2-Dichloroethane	25.0	24.8		ug/L		99	57 - 138
1,2-Dichloropropane	25.0	26.0		ug/L		104	67 - 130
1,3-Dichlorobenzene	25.0	26.2		ug/L		105	70 - 130

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

Lab Sample ID: LCS 440-395145/6
Matrix: Water
Analysis Batch: 395145

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	25.4		ug/L		102	70 - 130
1,4-Dichlorobenzene	25.0	27.0		ug/L		108	70 - 130
2,2-Dichloropropane	25.0	25.1		ug/L		100	68 - 141
2-Hexanone	25.0	26.5		ug/L		106	10 - 150
Acetone	25.0	23.1		ug/L		93	10 - 150
Acrolein	25.0	21.0		ug/L		84	10 - 145
Acrylonitrile	250	262		ug/L		105	48 - 140
Benzene	25.0	25.2		ug/L		101	68 - 130
Bromoform	25.0	26.1		ug/L		104	60 - 148
Bromomethane	25.0	26.0		ug/L		104	64 - 139
Carbon disulfide	25.0	24.2		ug/L		97	52 - 136
Carbon tetrachloride	25.0	24.0		ug/L		96	60 - 150
Chlorobenzene	25.0	25.8		ug/L		103	70 - 130
Bromochloromethane	25.0	26.0		ug/L		104	70 - 130
Chloroethane	25.0	26.9		ug/L		108	64 - 135
Chloroform	25.0	25.0		ug/L		100	70 - 130
Chloromethane	25.0	30.5		ug/L		122	47 - 140
cis-1,2-Dichloroethene	25.0	25.0		ug/L		100	70 - 133
cis-1,3-Dichloropropene	25.0	25.9		ug/L		104	70 - 133
Dibromochloromethane	25.0	25.8		ug/L		103	69 - 145
Dibromomethane	25.0	25.3		ug/L		101	70 - 130
Bromodichloromethane	25.0	25.2		ug/L		101	70 - 132
Dichlorodifluoromethane	25.0	28.0		ug/L		112	29 - 150
Ethylbenzene	25.0	25.5		ug/L		102	70 - 130
m,p-Xylene	25.0	25.3		ug/L		101	70 - 130
Methylene Chloride	25.0	25.8		ug/L		103	52 - 130
Methyl tert-butyl ether	25.0	26.0		ug/L		104	63 - 131
Naphthalene	25.0	25.6		ug/L		102	60 - 140
o-Xylene	25.0	26.1		ug/L		104	70 - 130
Styrene	25.0	24.7		ug/L		99	70 - 134
t-Butanol	250	285		ug/L		114	70 - 130
Tetrachloroethene	25.0	25.8		ug/L		103	70 - 130
Toluene	25.0	25.8		ug/L		103	70 - 130
trans-1,2-Dichloroethene	25.0	25.7		ug/L		103	70 - 130
trans-1,3-Dichloropropene	25.0	25.1		ug/L		100	70 - 132
Trichloroethene	25.0	25.0		ug/L		100	70 - 130
Trichlorofluoromethane	25.0	24.6		ug/L		98	60 - 150
Vinyl acetate	25.0	25.4		ug/L		102	48 - 140
Vinyl chloride	25.0	28.6		ug/L		114	59 - 133
1,2-Dibromoethane (EDB)	25.0	25.6		ug/L		102	70 - 130
2-Butanone (MEK)	25.0	23.1		ug/L		92	44 - 150
4-Methyl-2-pentanone (MIBK)	25.0	26.6		ug/L		106	59 - 149

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*106*		*80 - 128*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*
Dibromofluoromethane (Surr)	*102*		*76 - 132*

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

Lab Sample ID: 440-180040-B-1 MS
Matrix: Water
Analysis Batch: 395145

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		25000	27100		ug/L		108	60 - 130
1,1,1,2-Tetrachloroethane	ND		25000	25000		ug/L		100	60 - 149
1,1,1-Trichloroethane	ND		25000	24100		ug/L		97	70 - 130
1,1,2,2-Tetrachloroethane	ND		25000	26500		ug/L		106	63 - 130
1,1,2-Trichloroethane	ND		25000	26000		ug/L		104	70 - 130
1,1-Dichloroethane	ND		25000	25300		ug/L		101	65 - 130
1,1-Dichloroethene	630		25000	23900		ug/L		93	70 - 130
1,1-Dichloropropene	ND		25000	25500		ug/L		102	64 - 130
1,2,4-Trichlorobenzene	ND		25000	25400		ug/L		102	60 - 140
1,2-Dibromo-3-Chloropropane	ND		25000	23800		ug/L		95	48 - 140
1,2-Dichlorobenzene	ND		25000	26000		ug/L		104	70 - 130
1,2-Dichloroethane	39000		25000	61900		ug/L		91	56 - 146
1,2-Dichloropropane	ND		25000	25900		ug/L		104	69 - 130
1,3-Dichlorobenzene	ND		25000	26400		ug/L		106	70 - 130
1,3-Dichloropropane	ND		25000	24900		ug/L		100	70 - 130
1,4-Dichlorobenzene	ND		25000	26500		ug/L		106	70 - 130
2,2-Dichloropropane	ND		25000	27100		ug/L		109	69 - 138
2-Hexanone	ND		25000	25200		ug/L		101	10 - 150
Acetone	ND		25000	21800		ug/L		87	10 - 150
Acrolein	ND		25000	22000		ug/L		88	10 - 147
Acrylonitrile	ND		250000	260000		ug/L		104	38 - 144
Benzene	ND		25000	24500		ug/L		98	66 - 130
Bromoform	ND		25000	24400		ug/L		98	59 - 150
Bromomethane	ND		25000	25000		ug/L		100	62 - 131
Carbon disulfide	ND		25000	23800		ug/L		95	49 - 140
Carbon tetrachloride	ND		25000	23500		ug/L		94	60 - 150
Chlorobenzene	ND		25000	24500		ug/L		98	70 - 130
Bromochloromethane	ND		25000	24800		ug/L		99	70 - 130
Chloroethane	ND		25000	26300		ug/L		105	68 - 130
Chloroform	ND		25000	24700		ug/L		99	70 - 130
Chloromethane	ND		25000	30100		ug/L		120	39 - 144
cis-1,2-Dichloroethene	ND		25000	24700		ug/L		99	70 - 130
cis-1,3-Dichloropropene	ND		25000	24300		ug/L		97	70 - 133
Dibromochloromethane	ND		25000	24300		ug/L		97	70 - 148
Dibromomethane	ND		25000	23800		ug/L		95	70 - 130
Bromodichloromethane	ND		25000	26000		ug/L		104	70 - 138
Dichlorodifluoromethane	ND		25000	28100		ug/L		112	25 - 142
Ethylbenzene	ND		25000	24700		ug/L		99	70 - 130
m,p-Xylene	ND		25000	24600		ug/L		98	70 - 133
Methylene Chloride	ND		25000	24200		ug/L		97	52 - 130
Methyl tert-butyl ether	ND		25000	24700		ug/L		99	70 - 130
Naphthalene	ND		25000	25200		ug/L		101	60 - 140
o-Xylene	ND		25000	25500		ug/L		102	70 - 133
Styrene	ND		25000	23600		ug/L		94	29 - 150
t-Butanol	ND		250000	275000		ug/L		110	70 - 130
Tetrachloroethene	330	J	25000	25800		ug/L		102	70 - 137
Toluene	ND		25000	25000		ug/L		100	70 - 130
trans-1,2-Dichloroethene	ND		25000	25300		ug/L		101	70 - 130

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

Lab Sample ID: 440-180040-B-1 MS
Matrix: Water
Analysis Batch: 395145

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		25000	24000		ug/L		96	70 - 138
Trichloroethene	140000		25000	165000	4	ug/L		92	70 - 130
Trichlorofluoromethane	ND		25000	24600		ug/L		98	60 - 150
Vinyl acetate	ND		25000	25600		ug/L		102	23 - 150
Vinyl chloride	ND		25000	28500		ug/L		114	50 - 137
1,2-Dibromoethane (EDB)	ND		25000	24400		ug/L		98	70 - 131
2-Butanone (MEK)	ND		25000	22900		ug/L		91	48 - 140
4-Methyl-2-pentanone (MIBK)	ND		25000	26100		ug/L		104	52 - 150

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Toluene-d8 (Surr)	*106*		*80 - 128*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*
Dibromofluoromethane (Surr)	*100*		*76 - 132*

Lab Sample ID: 440-180040-B-1 MSD
Matrix: Water
Analysis Batch: 395145

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		25000	27000		ug/L		108	60 - 130	0	30
1,1,1,2-Tetrachloroethane	ND		25000	25200		ug/L		101	60 - 149	1	20
1,1,1-Trichloroethane	ND		25000	24600		ug/L		98	70 - 130	2	20
1,1,2,2-Tetrachloroethane	ND		25000	25800		ug/L		103	63 - 130	3	30
1,1,2-Trichloroethane	ND		25000	26000		ug/L		104	70 - 130	0	25
1,1-Dichloroethane	ND		25000	25600		ug/L		103	65 - 130	1	20
1,1-Dichloroethene	630		25000	24200		ug/L		94	70 - 130	2	20
1,1-Dichloropropene	ND		25000	26200		ug/L		105	64 - 130	3	20
1,2,4-Trichlorobenzene	ND		25000	25500		ug/L		102	60 - 140	0	20
1,2-Dibromo-3-Chloropropane	ND		25000	24300		ug/L		97	48 - 140	2	30
1,2-Dichlorobenzene	ND		25000	26200		ug/L		105	70 - 130	1	20
1,2-Dichloroethane	39000		25000	62300		ug/L		92	56 - 146	1	20
1,2-Dichloropropane	ND		25000	26300		ug/L		105	69 - 130	1	20
1,3-Dichlorobenzene	ND		25000	25900		ug/L		103	70 - 130	2	20
1,3-Dichloropropane	ND		25000	25100		ug/L		101	70 - 130	1	25
1,4-Dichlorobenzene	ND		25000	26500		ug/L		106	70 - 130	0	20
2,2-Dichloropropane	ND		25000	26200		ug/L		105	69 - 138	4	25
2-Hexanone	ND		25000	25400		ug/L		102	10 - 150	1	35
Acetone	ND		25000	22200		ug/L		89	10 - 150	1	35
Acrolein	ND		25000	21300		ug/L		85	10 - 147	3	40
Acrylonitrile	ND		250000	260000		ug/L		104	38 - 144	0	40
Benzene	ND		25000	24900		ug/L		99	66 - 130	1	20
Bromoform	ND		25000	24900		ug/L		100	59 - 150	2	25
Bromomethane	ND		25000	25200		ug/L		101	62 - 131	1	25
Carbon disulfide	ND		25000	24300		ug/L		97	49 - 140	2	20
Carbon tetrachloride	ND		25000	24200		ug/L		97	60 - 150	3	25
Chlorobenzene	ND		25000	24900		ug/L		99	70 - 130	2	20
Bromochloromethane	ND		25000	25200		ug/L		101	70 - 130	1	25
Chloroethane	ND		25000	26300		ug/L		105	68 - 130	0	25

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

Lab Sample ID: 440-180040-B-1 MSD
Matrix: Water
Analysis Batch: 395145

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		25000	25000		ug/L		100	70 - 130	1	20
Chloromethane	ND		25000	30200		ug/L		121	39 - 144	0	25
cis-1,2-Dichloroethene	ND		25000	24600		ug/L		98	70 - 130	0	20
cis-1,3-Dichloropropene	ND		25000	24900		ug/L		100	70 - 133	3	20
Dibromochloromethane	ND		25000	24400		ug/L		98	70 - 148	0	25
Dibromomethane	ND		25000	24000		ug/L		96	70 - 130	1	25
Bromodichloromethane	ND		25000	26600		ug/L		107	70 - 138	2	20
Dichlorodifluoromethane	ND		25000	28300		ug/L		113	25 - 142	1	30
Ethylbenzene	ND		25000	25100		ug/L		100	70 - 130	1	20
m,p-Xylene	ND		25000	25000		ug/L		100	70 - 133	2	25
Methylene Chloride	ND		25000	24500		ug/L		98	52 - 130	1	20
Methyl tert-butyl ether	ND		25000	25200		ug/L		101	70 - 130	2	25
Naphthalene	ND		25000	25400		ug/L		101	60 - 140	1	30
o-Xylene	ND		25000	25100		ug/L		100	70 - 133	1	20
Styrene	ND		25000	23500		ug/L		94	29 - 150	0	35
t-Butanol	ND		250000	287000		ug/L		115	70 - 130	4	25
Tetrachloroethene	330	J	25000	26100		ug/L		103	70 - 137	1	20
Toluene	ND		25000	25600		ug/L		102	70 - 130	2	20
trans-1,2-Dichloroethene	ND		25000	25500		ug/L		102	70 - 130	1	20
trans-1,3-Dichloropropene	ND		25000	24100		ug/L		97	70 - 138	1	25
Trichloroethene	140000		25000	166000	4	ug/L		96	70 - 130	1	20
Trichlorofluoromethane	ND		25000	24900		ug/L		100	60 - 150	1	25
Vinyl acetate	ND		25000	26200		ug/L		105	23 - 150	2	30
Vinyl chloride	ND		25000	28200		ug/L		113	50 - 137	1	30
1,2-Dibromoethane (EDB)	ND		25000	24800		ug/L		99	70 - 131	1	25
2-Butanone (MEK)	ND		25000	22900		ug/L		92	48 - 140	0	40
4-Methyl-2-pentanone (MIBK)	ND		25000	26600		ug/L		106	52 - 150	2	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*107*		*80 - 128*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*
Dibromofluoromethane (Surr)	*100*		*76 - 132*

Lab Sample ID: MB 440-395302/4
Matrix: Water
Analysis Batch: 395302

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			03/21/17 22:09	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			03/21/17 22:09	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			03/21/17 22:09	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			03/21/17 22:09	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			03/21/17 22:09	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			03/21/17 22:09	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			03/21/17 22:09	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			03/21/17 22:09	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			03/21/17 22:09	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			03/21/17 22:09	1

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

Lab Sample ID: MB 440-395302/4
Matrix: Water
Analysis Batch: 395302

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			03/21/17 22:09	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			03/21/17 22:09	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			03/21/17 22:09	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			03/21/17 22:09	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			03/21/17 22:09	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			03/21/17 22:09	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			03/21/17 22:09	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			03/21/17 22:09	1
2-Hexanone	ND		5.0	2.5	ug/L			03/21/17 22:09	1
Acetone	ND		20	10	ug/L			03/21/17 22:09	1
Acetonitrile	ND		20	10	ug/L			03/21/17 22:09	1
Acrolein	ND		5.0	2.5	ug/L			03/21/17 22:09	1
Acrylonitrile	ND		2.0	1.0	ug/L			03/21/17 22:09	1
Benzene	ND		0.50	0.25	ug/L			03/21/17 22:09	1
Allyl chloride	ND		1.0	0.50	ug/L			03/21/17 22:09	1
Bromoform	ND		1.0	0.40	ug/L			03/21/17 22:09	1
Bromomethane	ND		0.50	0.25	ug/L			03/21/17 22:09	1
Carbon disulfide	ND		1.0	0.50	ug/L			03/21/17 22:09	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			03/21/17 22:09	1
Chlorobenzene	ND		0.50	0.25	ug/L			03/21/17 22:09	1
Bromochloromethane	ND		0.50	0.25	ug/L			03/21/17 22:09	1
Chloroethane	ND		1.0	0.40	ug/L			03/21/17 22:09	1
Chloroform	ND		0.50	0.25	ug/L			03/21/17 22:09	1
Chloromethane	ND		0.50	0.25	ug/L			03/21/17 22:09	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/21/17 22:09	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/21/17 22:09	1
Dibromochloromethane	ND		0.50	0.25	ug/L			03/21/17 22:09	1
Dibromomethane	ND		0.50	0.25	ug/L			03/21/17 22:09	1
Bromodichloromethane	ND		0.50	0.25	ug/L			03/21/17 22:09	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			03/21/17 22:09	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			03/21/17 22:09	1
Ethylbenzene	ND		0.50	0.25	ug/L			03/21/17 22:09	1
Iodomethane	ND		2.0	1.0	ug/L			03/21/17 22:09	1
Isobutyl alcohol	ND		25	13	ug/L			03/21/17 22:09	1
m,p-Xylene	ND		1.0	0.50	ug/L			03/21/17 22:09	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			03/21/17 22:09	1
Methyl methacrylate	ND		2.0	1.0	ug/L			03/21/17 22:09	1
Methylene Chloride	ND		2.0	0.88	ug/L			03/21/17 22:09	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			03/21/17 22:09	1
Naphthalene	ND		1.0	0.40	ug/L			03/21/17 22:09	1
o-Xylene	ND		0.50	0.25	ug/L			03/21/17 22:09	1
Propionitrile	ND		20	10	ug/L			03/21/17 22:09	1
Styrene	ND		0.50	0.25	ug/L			03/21/17 22:09	1
t-Butanol	ND		10	5.0	ug/L			03/21/17 22:09	1
Tetrachloroethene	ND		0.50	0.25	ug/L			03/21/17 22:09	1
Tetrahydrofuran	ND		10	5.0	ug/L			03/21/17 22:09	1
Toluene	ND		0.50	0.25	ug/L			03/21/17 22:09	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/21/17 22:09	1

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

Lab Sample ID: MB 440-395302/4
Matrix: Water
Analysis Batch: 395302

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			03/21/17 22:09	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			03/21/17 22:09	1
Trichloroethene	ND		0.50	0.25	ug/L			03/21/17 22:09	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			03/21/17 22:09	1
Vinyl acetate	ND		4.0	2.0	ug/L			03/21/17 22:09	1
Vinyl chloride	ND		0.50	0.25	ug/L			03/21/17 22:09	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			03/21/17 22:09	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			03/21/17 22:09	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			03/21/17 22:09	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*03/21/17 22:09*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*104*		*80 - 128*		*03/21/17 22:09*	*1*
4-Bromofluorobenzene (Surr)	*92*		*80 - 120*		*03/21/17 22:09*	*1*
Dibromofluoromethane (Surr)	*99*		*76 - 132*		*03/21/17 22:09*	*1*

Lab Sample ID: LCS 440-395302/5
Matrix: Water
Analysis Batch: 395302

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	25.3		ug/L		101	63 - 130
1,1,1,2-Tetrachloroethane	25.0	29.4		ug/L		117	60 - 141
1,1,1-Trichloroethane	25.0	25.0		ug/L		100	70 - 130
1,1,2,2-Tetrachloroethane	25.0	32.6		ug/L		130	63 - 130
1,1,2-Trichloroethane	25.0	27.7		ug/L		111	70 - 130
1,1-Dichloroethane	25.0	25.4		ug/L		101	64 - 130
1,1-Dichloroethene	25.0	24.7		ug/L		99	70 - 130
1,1-Dichloropropene	25.0	25.4		ug/L		102	70 - 130
1,2,4-Trichlorobenzene	25.0	28.5		ug/L		114	60 - 140
1,2-Dibromo-3-Chloropropane	25.0	29.5		ug/L		118	52 - 140
1,2-Dichlorobenzene	25.0	27.1		ug/L		108	70 - 130
1,2-Dichloroethane	25.0	24.7		ug/L		99	57 - 138
1,2-Dichloropropane	25.0	25.5		ug/L		102	67 - 130
1,3-Dichlorobenzene	25.0	27.1		ug/L		108	70 - 130
1,3-Dichloropropane	25.0	24.9		ug/L		100	70 - 130
1,4-Dichlorobenzene	25.0	27.9		ug/L		112	70 - 130
2,2-Dichloropropane	25.0	22.8		ug/L		91	68 - 141
2-Hexanone	25.0	22.5		ug/L		90	10 - 150
Acetone	25.0	23.0		ug/L		92	10 - 150
Acrolein	25.0	15.2		ug/L		61	10 - 145
Acrylonitrile	250	240		ug/L		96	48 - 140
Benzene	25.0	23.8		ug/L		95	68 - 130
Bromoform	25.0	27.0		ug/L		108	60 - 148
Bromomethane	25.0	25.9		ug/L		103	64 - 139

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

Lab Sample ID: LCS 440-395302/5
Matrix: Water
Analysis Batch: 395302

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	24.7		ug/L		99	52 - 136
Carbon tetrachloride	25.0	26.0		ug/L		104	60 - 150
Chlorobenzene	25.0	26.6		ug/L		107	70 - 130
Bromochloromethane	25.0	26.0		ug/L		104	70 - 130
Chloroethane	25.0	27.7		ug/L		111	64 - 135
Chloroform	25.0	24.4		ug/L		98	70 - 130
Chloromethane	25.0	28.6		ug/L		114	47 - 140
cis-1,2-Dichloroethene	25.0	25.2		ug/L		101	70 - 133
cis-1,3-Dichloropropene	25.0	25.4		ug/L		102	70 - 133
Dibromochloromethane	25.0	27.1		ug/L		109	69 - 145
Dibromomethane	25.0	23.0		ug/L		92	70 - 130
Bromodichloromethane	25.0	24.9		ug/L		100	70 - 132
Dichlorodifluoromethane	25.0	26.8		ug/L		107	29 - 150
Ethylbenzene	25.0	25.2		ug/L		101	70 - 130
m,p-Xylene	25.0	27.3		ug/L		109	70 - 130
Methylene Chloride	25.0	23.3		ug/L		93	52 - 130
Methyl tert-butyl ether	25.0	22.2		ug/L		89	63 - 131
Naphthalene	25.0	25.5		ug/L		102	60 - 140
o-Xylene	25.0	26.3		ug/L		105	70 - 130
Styrene	25.0	25.6		ug/L		102	70 - 134
t-Butanol	250	312		ug/L		125	70 - 130
Tetrachloroethene	25.0	28.4		ug/L		113	70 - 130
Toluene	25.0	25.3		ug/L		101	70 - 130
trans-1,2-Dichloroethene	25.0	26.4		ug/L		106	70 - 130
trans-1,3-Dichloropropene	25.0	24.0		ug/L		96	70 - 132
Trichloroethene	25.0	23.6		ug/L		94	70 - 130
Trichlorofluoromethane	25.0	27.4		ug/L		110	60 - 150
Vinyl acetate	25.0	22.5		ug/L		90	48 - 140
Vinyl chloride	25.0	28.0		ug/L		112	59 - 133
1,2-Dibromoethane (EDB)	25.0	26.3		ug/L		105	70 - 130
2-Butanone (MEK)	25.0	19.1		ug/L		77	44 - 150
4-Methyl-2-pentanone (MIBK)	25.0	23.3		ug/L		93	59 - 149

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*103*		*80 - 128*
4-Bromofluorobenzene (Surr)	*92*		*80 - 120*
Dibromofluoromethane (Surr)	*99*		*76 - 132*

Lab Sample ID: 440-179920-B-1 MS
Matrix: Water
Analysis Batch: 395302

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	28.1		ug/L		112	60 - 130
1,1,1,2-Tetrachloroethane	ND		25.0	30.0		ug/L		120	60 - 149
1,1,1-Trichloroethane	ND		25.0	25.2		ug/L		101	70 - 130
1,1,2,2-Tetrachloroethane	ND	F1	25.0	36.1	F1	ug/L		144	63 - 130
1,1,2-Trichloroethane	ND		25.0	28.1		ug/L		113	70 - 130

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

Lab Sample ID: 440-179920-B-1 MS
Matrix: Water
Analysis Batch: 395302

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	ND		25.0	26.0		ug/L		104	65 - 130
1,1-Dichloroethene	ND		25.0	24.9		ug/L		100	70 - 130
1,1-Dichloropropene	ND		25.0	25.5		ug/L		102	64 - 130
1,2,4-Trichlorobenzene	ND		25.0	29.4		ug/L		118	60 - 140
1,2-Dibromo-3-Chloropropane	ND		25.0	33.0		ug/L		132	48 - 140
1,2-Dichlorobenzene	ND		25.0	28.2		ug/L		113	70 - 130
1,2-Dichloroethane	ND		25.0	25.6		ug/L		102	56 - 146
1,2-Dichloropropane	ND		25.0	26.9		ug/L		108	69 - 130
1,3-Dichlorobenzene	ND		25.0	28.2		ug/L		113	70 - 130
1,3-Dichloropropane	ND		25.0	26.4		ug/L		105	70 - 130
1,4-Dichlorobenzene	ND		25.0	28.3		ug/L		113	70 - 130
2,2-Dichloropropane	ND		25.0	23.1		ug/L		92	69 - 138
2-Hexanone	ND		25.0	25.3		ug/L		101	10 - 150
Acetone	ND		25.0	26.1		ug/L		104	10 - 150
Acrolein	ND		25.0	18.0		ug/L		72	10 - 147
Acrylonitrile	ND		250	269		ug/L		108	38 - 144
Benzene	ND		25.0	24.3		ug/L		97	66 - 130
Bromoform	ND		25.0	29.7		ug/L		119	59 - 150
Bromomethane	ND		25.0	25.9		ug/L		103	62 - 131
Carbon disulfide	ND		25.0	25.2		ug/L		101	49 - 140
Carbon tetrachloride	ND		25.0	25.8		ug/L		103	60 - 150
Chlorobenzene	ND		25.0	27.2		ug/L		109	70 - 130
Bromochloromethane	ND		25.0	27.2		ug/L		109	70 - 130
Chloroethane	ND		25.0	28.0		ug/L		112	68 - 130
Chloroform	ND		25.0	24.9		ug/L		100	70 - 130
Chloromethane	ND		25.0	29.3		ug/L		117	39 - 144
cis-1,2-Dichloroethene	ND		25.0	26.0		ug/L		104	70 - 130
cis-1,3-Dichloropropene	ND		25.0	26.6		ug/L		106	70 - 133
Dibromochloromethane	ND		25.0	28.3		ug/L		113	70 - 148
Dibromomethane	ND		25.0	24.9		ug/L		100	70 - 130
Bromodichloromethane	ND		25.0	26.1		ug/L		104	70 - 138
Dichlorodifluoromethane	ND		25.0	26.6		ug/L		106	25 - 142
Ethylbenzene	ND		25.0	25.5		ug/L		102	70 - 130
m,p-Xylene	ND		25.0	27.5		ug/L		110	70 - 133
Methylene Chloride	ND		25.0	23.7		ug/L		95	52 - 130
Methyl tert-butyl ether	ND		25.0	23.2		ug/L		93	70 - 130
Naphthalene	ND		25.0	27.0		ug/L		108	60 - 140
o-Xylene	ND		25.0	26.3		ug/L		105	70 - 133
Styrene	ND		25.0	25.9		ug/L		104	29 - 150
t-Butanol	ND	F1	250	330	F1	ug/L		132	70 - 130
Tetrachloroethene	ND		25.0	28.6		ug/L		115	70 - 137
Toluene	ND		25.0	25.7		ug/L		103	70 - 130
trans-1,2-Dichloroethene	ND		25.0	26.4		ug/L		106	70 - 130
trans-1,3-Dichloropropene	ND		25.0	24.9		ug/L		100	70 - 138
Trichloroethene	ND		25.0	23.4		ug/L		94	70 - 130
Trichlorofluoromethane	ND		25.0	27.1		ug/L		108	60 - 150
Vinyl acetate	ND		25.0	25.8		ug/L		103	23 - 150
Vinyl chloride	ND		25.0	28.2		ug/L		113	50 - 137

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

Lab Sample ID: 440-179920-B-1 MS
Matrix: Water
Analysis Batch: 395302

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	27.2		ug/L		109	70 - 131
2-Butanone (MEK)	ND		25.0	20.3		ug/L		81	48 - 140
4-Methyl-2-pentanone (MIBK)	ND		25.0	26.0		ug/L		104	52 - 150

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Toluene-d8 (Surr)	*101*		*80 - 128*
4-Bromofluorobenzene (Surr)	*92*		*80 - 120*
Dibromofluoromethane (Surr)	*98*		*76 - 132*

Lab Sample ID: 440-179920-B-1 MSD
Matrix: Water
Analysis Batch: 395302

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	26.7		ug/L		107	60 - 130	5	30
1,1,1,2-Tetrachloroethane	ND		25.0	29.1		ug/L		117	60 - 149	3	20
1,1,1-Trichloroethane	ND		25.0	25.4		ug/L		102	70 - 130	1	20
1,1,2,2-Tetrachloroethane	ND	F1	25.0	34.1	F1	ug/L		137	63 - 130	6	30
1,1,2-Trichloroethane	ND		25.0	27.2		ug/L		109	70 - 130	3	25
1,1-Dichloroethane	ND		25.0	26.2		ug/L		105	65 - 130	1	20
1,1-Dichloroethene	ND		25.0	25.1		ug/L		101	70 - 130	1	20
1,1-Dichloropropene	ND		25.0	25.9		ug/L		103	64 - 130	2	20
1,2,4-Trichlorobenzene	ND		25.0	29.2		ug/L		117	60 - 140	1	20
1,2-Dibromo-3-Chloropropane	ND		25.0	31.2		ug/L		125	48 - 140	6	30
1,2-Dichlorobenzene	ND		25.0	27.6		ug/L		110	70 - 130	2	20
1,2-Dichloroethane	ND		25.0	24.4		ug/L		97	56 - 146	5	20
1,2-Dichloropropane	ND		25.0	26.5		ug/L		106	69 - 130	2	20
1,3-Dichlorobenzene	ND		25.0	27.6		ug/L		110	70 - 130	2	20
1,3-Dichloropropane	ND		25.0	25.3		ug/L		101	70 - 130	4	25
1,4-Dichlorobenzene	ND		25.0	28.1		ug/L		112	70 - 130	1	20
2,2-Dichloropropane	ND		25.0	23.3		ug/L		93	69 - 138	1	25
2-Hexanone	ND		25.0	23.4		ug/L		94	10 - 150	8	35
Acetone	ND		25.0	23.8		ug/L		95	10 - 150	9	35
Acrolein	ND		25.0	16.8		ug/L		67	10 - 147	7	40
Acrylonitrile	ND		250	258		ug/L		103	38 - 144	4	40
Benzene	ND		25.0	24.1		ug/L		96	66 - 130	1	20
Bromoform	ND		25.0	27.5		ug/L		110	59 - 150	8	25
Bromomethane	ND		25.0	26.1		ug/L		104	62 - 131	1	25
Carbon disulfide	ND		25.0	25.2		ug/L		101	49 - 140	0	20
Carbon tetrachloride	ND		25.0	26.4		ug/L		105	60 - 150	2	25
Chlorobenzene	ND		25.0	26.5		ug/L		106	70 - 130	3	20
Bromochloromethane	ND		25.0	26.7		ug/L		107	70 - 130	2	25
Chloroethane	ND		25.0	28.4		ug/L		114	68 - 130	1	25
Chloroform	ND		25.0	25.0		ug/L		100	70 - 130	1	20
Chloromethane	ND		25.0	29.6		ug/L		119	39 - 144	1	25
cis-1,2-Dichloroethene	ND		25.0	25.9		ug/L		104	70 - 130	0	20
cis-1,3-Dichloropropene	ND		25.0	25.1		ug/L		100	70 - 133	6	20
Dibromochloromethane	ND		25.0	26.8		ug/L		107	70 - 148	5	25

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

Lab Sample ID: 440-179920-B-1 MSD
Matrix: Water
Analysis Batch: 395302

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	24.3		ug/L		97	70 - 130	3	25
Bromodichloromethane	ND		25.0	25.5		ug/L		102	70 - 138	2	20
Dichlorodifluoromethane	ND		25.0	27.1		ug/L		109	25 - 142	2	30
Ethylbenzene	ND		25.0	24.8		ug/L		99	70 - 130	3	20
m,p-Xylene	ND		25.0	26.8		ug/L		107	70 - 133	3	25
Methylene Chloride	ND		25.0	26.7		ug/L		107	52 - 130	12	20
Methyl tert-butyl ether	ND		25.0	23.1		ug/L		92	70 - 130	1	25
Naphthalene	ND		25.0	26.2		ug/L		105	60 - 140	3	30
o-Xylene	ND		25.0	25.8		ug/L		103	70 - 133	2	20
Styrene	ND		25.0	25.2		ug/L		101	29 - 150	3	35
t-Butanol	ND	F1	250	320		ug/L		128	70 - 130	3	25
Tetrachloroethene	ND		25.0	27.6		ug/L		111	70 - 137	4	20
Toluene	ND		25.0	25.0		ug/L		100	70 - 130	3	20
trans-1,2-Dichloroethene	ND		25.0	26.6		ug/L		106	70 - 130	1	20
trans-1,3-Dichloropropene	ND		25.0	24.0		ug/L		96	70 - 138	3	25
Trichloroethene	ND		25.0	23.2		ug/L		93	70 - 130	1	20
Trichlorofluoromethane	ND		25.0	27.5		ug/L		110	60 - 150	1	25
Vinyl acetate	ND		25.0	25.2		ug/L		101	23 - 150	2	30
Vinyl chloride	ND		25.0	28.7		ug/L		115	50 - 137	2	30
1,2-Dibromoethane (EDB)	ND		25.0	25.9		ug/L		104	70 - 131	5	25
2-Butanone (MEK)	ND		25.0	18.0		ug/L		72	48 - 140	12	40
4-Methyl-2-pentanone (MIBK)	ND		25.0	24.2		ug/L		97	52 - 150	7	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*98*		*80 - 128*
4-Bromofluorobenzene (Surr)	*92*		*80 - 120*
Dibromofluoromethane (Surr)	*99*		*76 - 132*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 440-394346/1-A
Matrix: Water
Analysis Batch: 394854

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 394346

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		1.0	0.25	ug/L		03/16/17 09:48	03/19/17 12:24	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*68*		*30 - 120*	*03/16/17 09:48*	*03/19/17 12:24*	*1*

Lab Sample ID: LCS 440-394346/2-A
Matrix: Water
Analysis Batch: 394854

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 394346

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,4-Dioxane			2.00	1.47		ug/L		74	35 - 120		

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 440-394346/2-A
Matrix: Water
Analysis Batch: 394854

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 394346

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,4-Dioxane-d8 (Surr)	*67*		*30 - 120*

Lab Sample ID: LCSD 440-394346/3-A
Matrix: Water
Analysis Batch: 394854

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 394346

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dioxane			2.00	1.47		ug/L		73	35 - 120	0	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,4-Dioxane-d8 (Surr)	*67*		*30 - 120*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 440-393859/5
Matrix: Water
Analysis Batch: 393859

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			03/14/17 16:06	1

Lab Sample ID: LCS 440-393859/4
Matrix: Water
Analysis Batch: 393859

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	4.59		mg/L		92	90 - 110		

Lab Sample ID: MB 440-394117/4
Matrix: Water
Analysis Batch: 394117

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			03/15/17 12:17	1

Lab Sample ID: LCS 440-394117/2
Matrix: Water
Analysis Batch: 394117

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	4.92		mg/L		98	90 - 110		

Lab Sample ID: 440-179579-5 MS
Matrix: Water
Analysis Batch: 394117

Client Sample ID: Dup.
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	20		25.0	44.0		mg/L		98	80 - 120		

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 440-179579-5 MSD — **Client Sample ID: Dup.**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 394117

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	20		25.0	44.2		mg/L		98	80 - 120	1	20

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 440-394605/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 394741 — **Prep Batch: 394605**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	ND		0.50	0.25	mg/L		03/17/17 09:33	03/17/17 17:40	1

Lab Sample ID: LCS 440-394605/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 394741 — **Prep Batch: 394605**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Potassium	10.0	10.0		mg/L		100	80 - 120

Lab Sample ID: 440-179579-1 MS — **Client Sample ID: MW-9**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 394741 — **Prep Batch: 394605**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Potassium	23		10.0	33.5		mg/L		103	75 - 125

Lab Sample ID: 440-179579-1 MSD — **Client Sample ID: MW-9**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 394741 — **Prep Batch: 394605**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Potassium	23		10.0	35.3		mg/L		122	75 - 125	5	20

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 440-394275/12 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 394275

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	ND		0.20	0.10	mg/L			03/15/17 20:13	1

Lab Sample ID: LCS 440-394275/13 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 394275

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	5.00	5.45		mg/L		109	90 - 110

Method: 350.1 - Nitrogen, Ammonia (Continued)

Lab Sample ID: MRL 440-394275/11
Matrix: Water
Analysis Batch: 394275

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	0.264		mg/L		132	10 - 200

Lab Sample ID: 440-179494-H-1 MS
Matrix: Water
Analysis Batch: 394275

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)	2.5	F1	5.00	8.04	F1	mg/L		111	90 - 110

Lab Sample ID: 440-179494-H-1 MSD
Matrix: Water
Analysis Batch: 394275

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)	2.5	F1	5.00	8.12	F1	mg/L		113	90 - 110	1	15

Method: 410.4 - COD

Lab Sample ID: MB 440-395563/3
Matrix: Water
Analysis Batch: 395563

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			03/22/17 16:12	1

Lab Sample ID: LCS 440-395563/4
Matrix: Water
Analysis Batch: 395563

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	191		mg/L		96	90 - 110

Lab Sample ID: 440-179722-D-1 MS
Matrix: Water
Analysis Batch: 395563

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	168		mg/L		84	70 - 120

Lab Sample ID: 440-179722-D-1 MSD
Matrix: Water
Analysis Batch: 395563

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	169		mg/L		85	70 - 120	0	15

Method: 410.4 - COD (Continued)

Lab Sample ID: MB 440-395727/3
Matrix: Water
Analysis Batch: 395727

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			03/23/17 11:13	1

Lab Sample ID: LCS 440-395727/4
Matrix: Water
Analysis Batch: 395727

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: 440-179581-B-1 MS
Matrix: Water
Analysis Batch: 395727

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	178		mg/L		89	70 - 120

Lab Sample ID: 440-179581-B-1 MSD
Matrix: Water
Analysis Batch: 395727

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	181		mg/L		90	70 - 120	1	15

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 440-394148/30
Matrix: Water
Analysis Batch: 394148

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			03/15/17 08:41	1

Lab Sample ID: LCS 440-394148/29
Matrix: Water
Analysis Batch: 394148

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	34.7		mg/L		103	80 - 120

Lab Sample ID: 440-179579-6 DU
Matrix: Water
Analysis Batch: 394148

Client Sample ID: Extraction Trench
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Alkalinity as CaCO3	760		771		mg/L		1	20

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

Lab Sample ID: MB 440-394678/1
Matrix: Water
Analysis Batch: 394678

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			03/17/17 13:29	1

Lab Sample ID: LCS 440-394678/2
Matrix: Water
Analysis Batch: 394678

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	964		mg/L		96	90 - 110

Lab Sample ID: 440-179529-C-1 DU
Matrix: Water
Analysis Batch: 394678

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	790		772		mg/L		2	5

Method: SM 5310C - TOC

Lab Sample ID: MB 440-394835/9
Matrix: Water
Analysis Batch: 394835

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			03/18/17 17:38	1

Lab Sample ID: LCS 440-394835/8
Matrix: Water
Analysis Batch: 394835

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	5.00	4.80		mg/L		96	90 - 110

Lab Sample ID: MRL 440-394835/5
Matrix: Water
Analysis Batch: 394835

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	0.0739	J	mg/L		74	50 - 150

Lab Sample ID: 440-179579-2 MS
Matrix: Water
Analysis Batch: 394835

Client Sample ID: CM-11R
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Organic Carbon	4.9		5.00	9.47		mg/L		92	80 - 120

Method: SM 5310C - TOC (Continued)

Lab Sample ID: 440-179579-2 MSD
Matrix: Water
Analysis Batch: 394835

Client Sample ID: CM-11R
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	4.9		5.00	9.99		mg/L		102	80 - 120	5	20

Lab Sample ID: MB 440-395236/8
Matrix: Water
Analysis Batch: 395236

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			03/21/17 05:59	1

Lab Sample ID: LCS 440-395236/6
Matrix: Water
Analysis Batch: 395236

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	5.00	4.75		mg/L		95	90 - 110

Lab Sample ID: LCSD 440-395236/7
Matrix: Water
Analysis Batch: 395236

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 Organic Carbon	5.00	4.51		mg/L		90	90 - 110	5	20

Lab Sample ID: MRL 440-395236/5
Matrix: Water
Analysis Batch: 395236

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	0.0983	J	mg/L		98	50 - 150

GC/MS VOA

Analysis Batch: 394556

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-179579-1	MW-9	Total/NA	Water	8260B	
440-179579-2	CM-11R	Total/NA	Water	8260B	
440-179579-3	DW-1	Total/NA	Water	8260B	
440-179579-4	DW-5	Total/NA	Water	8260B	
MB 440-394556/3	Method Blank	Total/NA	Water	8260B	
LCS 440-394556/4	Lab Control Sample	Total/NA	Water	8260B	
440-179047-F-2 MS	Matrix Spike	Total/NA	Water	8260B	
440-179047-F-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

Analysis Batch: 394707

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-179579-5	Dup.	Total/NA	Water	8260B	
440-179579-6	Extraction Trench	Total/NA	Water	8260B	
440-179579-7	QCTB	Total/NA	Water	8260B	
440-179579-8	QCAB	Total/NA	Water	8260B	
MB 440-394707/4	Method Blank	Total/NA	Water	8260B	
LCS 440-394707/5	Lab Control Sample	Total/NA	Water	8260B	
440-179131-A-4 MS	Matrix Spike	Total/NA	Water	8260B	
440-179131-A-4 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

Analysis Batch: 395145

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-179579-1	MW-9	Total/NA	Water	8260B	
440-179579-2	CM-11R	Total/NA	Water	8260B	
440-179579-3	DW-1	Total/NA	Water	8260B	
MB 440-395145/5	Method Blank	Total/NA	Water	8260B	
LCS 440-395145/6	Lab Control Sample	Total/NA	Water	8260B	
440-180040-B-1 MS	Matrix Spike	Total/NA	Water	8260B	
440-180040-B-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

Analysis Batch: 395302

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-179579-4	DW-5	Total/NA	Water	8260B	
440-179579-5	Dup.	Total/NA	Water	8260B	
440-179579-6	Extraction Trench	Total/NA	Water	8260B	
440-179579-7	QCTB	Total/NA	Water	8260B	
440-179579-8	QCAB	Total/NA	Water	8260B	
MB 440-395302/4	Method Blank	Total/NA	Water	8260B	
LCS 440-395302/5	Lab Control Sample	Total/NA	Water	8260B	
440-179920-B-1 MS	Matrix Spike	Total/NA	Water	8260B	
440-179920-B-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 394346

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-179579-1	MW-9	Total/NA	Water	3520C	
440-179579-2	CM-11R	Total/NA	Water	3520C	
440-179579-3	DW-1	Total/NA	Water	3520C	
440-179579-4	DW-5	Total/NA	Water	3520C	

GC/MS Semi VOA (Continued)

Prep Batch: 394346 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-179579-5	Dup.	Total/NA	Water	3520C	
440-179579-6	Extraction Trench	Total/NA	Water	3520C	
MB 440-394346/1-A	Method Blank	Total/NA	Water	3520C	
LCS 440-394346/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 440-394346/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	

Analysis Batch: 394854

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-179579-1	MW-9	Total/NA	Water	8270C	394346
440-179579-2	CM-11R	Total/NA	Water	8270C	394346
440-179579-3	DW-1	Total/NA	Water	8270C	394346
440-179579-4	DW-5	Total/NA	Water	8270C	394346
440-179579-5	Dup.	Total/NA	Water	8270C	394346
440-179579-6	Extraction Trench	Total/NA	Water	8270C	394346
MB 440-394346/1-A	Method Blank	Total/NA	Water	8270C	394346
LCS 440-394346/2-A	Lab Control Sample	Total/NA	Water	8270C	394346
LCSD 440-394346/3-A	Lab Control Sample Dup	Total/NA	Water	8270C	394346

HPLC/IC

Analysis Batch: 393859

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-179579-1	MW-9	Total/NA	Water	300.0	
440-179579-6	Extraction Trench	Total/NA	Water	300.0	
MB 440-393859/5	Method Blank	Total/NA	Water	300.0	
LCS 440-393859/4	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 394117

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-179579-2	CM-11R	Total/NA	Water	300.0	
440-179579-3	DW-1	Total/NA	Water	300.0	
440-179579-4	DW-5	Total/NA	Water	300.0	
440-179579-5	Dup.	Total/NA	Water	300.0	
MB 440-394117/4	Method Blank	Total/NA	Water	300.0	
LCS 440-394117/2	Lab Control Sample	Total/NA	Water	300.0	
440-179579-5 MS	Dup.	Total/NA	Water	300.0	
440-179579-5 MSD	Dup.	Total/NA	Water	300.0	

Metals

Prep Batch: 394605

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-179579-1	MW-9	Total Recoverable	Water	3005A	
440-179579-2	CM-11R	Total Recoverable	Water	3005A	
440-179579-3	DW-1	Total Recoverable	Water	3005A	
440-179579-4	DW-5	Total Recoverable	Water	3005A	
440-179579-5	Dup.	Total Recoverable	Water	3005A	
440-179579-6	Extraction Trench	Total Recoverable	Water	3005A	
MB 440-394605/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 440-394605/2-A	Lab Control Sample	Total Recoverable	Water	3005A	

Metals (Continued)

Prep Batch: 394605 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-179579-1 MS	MW-9	Total Recoverable	Water	3005A	
440-179579-1 MSD	MW-9	Total Recoverable	Water	3005A	

Analysis Batch: 394741

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-179579-1	MW-9	Total Recoverable	Water	6010B	394605
440-179579-2	CM-11R	Total Recoverable	Water	6010B	394605
440-179579-3	DW-1	Total Recoverable	Water	6010B	394605
440-179579-4	DW-5	Total Recoverable	Water	6010B	394605
440-179579-5	Dup.	Total Recoverable	Water	6010B	394605
440-179579-6	Extraction Trench	Total Recoverable	Water	6010B	394605
MB 440-394605/1-A	Method Blank	Total Recoverable	Water	6010B	394605
LCS 440-394605/2-A	Lab Control Sample	Total Recoverable	Water	6010B	394605
440-179579-1 MS	MW-9	Total Recoverable	Water	6010B	394605
440-179579-1 MSD	MW-9	Total Recoverable	Water	6010B	394605

General Chemistry

Analysis Batch: 394148

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-179579-1	MW-9	Total/NA	Water	SM 2320B	
440-179579-2	CM-11R	Total/NA	Water	SM 2320B	
440-179579-3	DW-1	Total/NA	Water	SM 2320B	
440-179579-4	DW-5	Total/NA	Water	SM 2320B	
440-179579-5	Dup.	Total/NA	Water	SM 2320B	
440-179579-6	Extraction Trench	Total/NA	Water	SM 2320B	
MB 440-394148/30	Method Blank	Total/NA	Water	SM 2320B	
LCS 440-394148/29	Lab Control Sample	Total/NA	Water	SM 2320B	
440-179579-6 DU	Extraction Trench	Total/NA	Water	SM 2320B	

Analysis Batch: 394275

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-179579-1	MW-9	Total/NA	Water	350.1	
440-179579-2	CM-11R	Total/NA	Water	350.1	
440-179579-3	DW-1	Total/NA	Water	350.1	
440-179579-4	DW-5	Total/NA	Water	350.1	
440-179579-5	Dup.	Total/NA	Water	350.1	
440-179579-6	Extraction Trench	Total/NA	Water	350.1	
MB 440-394275/12	Method Blank	Total/NA	Water	350.1	
LCS 440-394275/13	Lab Control Sample	Total/NA	Water	350.1	
MRL 440-394275/11	Lab Control Sample	Total/NA	Water	350.1	
440-179494-H-1 MS	Matrix Spike	Total/NA	Water	350.1	
440-179494-H-1 MSD	Matrix Spike Duplicate	Total/NA	Water	350.1	

Analysis Batch: 394678

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-179579-1	MW-9	Total/NA	Water	SM 2540C	
440-179579-2	CM-11R	Total/NA	Water	SM 2540C	
440-179579-3	DW-1	Total/NA	Water	SM 2540C	
440-179579-4	DW-5	Total/NA	Water	SM 2540C	

General Chemistry (Continued)

Analysis Batch: 394678 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-179579-5	Dup.	Total/NA	Water	SM 2540C	
440-179579-6	Extraction Trench	Total/NA	Water	SM 2540C	
MB 440-394678/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 440-394678/2	Lab Control Sample	Total/NA	Water	SM 2540C	
440-179529-C-1 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 394835

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-179579-2	CM-11R	Total/NA	Water	SM 5310C	
440-179579-3	DW-1	Total/NA	Water	SM 5310C	
440-179579-4	DW-5	Total/NA	Water	SM 5310C	
440-179579-5	Dup.	Total/NA	Water	SM 5310C	
MB 440-394835/9	Method Blank	Total/NA	Water	SM 5310C	
LCS 440-394835/8	Lab Control Sample	Total/NA	Water	SM 5310C	
MRL 440-394835/5	Lab Control Sample	Total/NA	Water	SM 5310C	
440-179579-2 MS	CM-11R	Total/NA	Water	SM 5310C	
440-179579-2 MSD	CM-11R	Total/NA	Water	SM 5310C	

Analysis Batch: 395236

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-179579-1	MW-9	Total/NA	Water	SM 5310C	
440-179579-6	Extraction Trench	Total/NA	Water	SM 5310C	
MB 440-395236/8	Method Blank	Total/NA	Water	SM 5310C	
LCS 440-395236/6	Lab Control Sample	Total/NA	Water	SM 5310C	
LCSD 440-395236/7	Lab Control Sample Dup	Total/NA	Water	SM 5310C	
MRL 440-395236/5	Lab Control Sample	Total/NA	Water	SM 5310C	
440-180033-K-1 MS	Matrix Spike	Total/NA	Water	SM 5310C	
440-180033-K-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 5310C	

Analysis Batch: 395563

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-179579-1	MW-9	Total/NA	Water	410.4	
440-179579-2	CM-11R	Total/NA	Water	410.4	
440-179579-3	DW-1	Total/NA	Water	410.4	
MB 440-395563/3	Method Blank	Total/NA	Water	410.4	
LCS 440-395563/4	Lab Control Sample	Total/NA	Water	410.4	
440-179722-D-1 MS	Matrix Spike	Total/NA	Water	410.4	
440-179722-D-1 MSD	Matrix Spike Duplicate	Total/NA	Water	410.4	

Analysis Batch: 395727

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-179579-4	DW-5	Total/NA	Water	410.4	
440-179579-5	Dup.	Total/NA	Water	410.4	
440-179579-6	Extraction Trench	Total/NA	Water	410.4	
MB 440-395727/3	Method Blank	Total/NA	Water	410.4	
LCS 440-395727/4	Lab Control Sample	Total/NA	Water	410.4	
440-179581-B-1 MS	Matrix Spike	Total/NA	Water	410.4	
440-179581-B-1 MSD	Matrix Spike Duplicate	Total/NA	Water	410.4	

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.
*	ISTD response or retention time outside acceptable limits
*	LCS or LCSD is outside acceptance limits.
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.

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.

General Chemistry

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.

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, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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)

Certification Summary

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

TestAmerica Job ID: 440-179579-1

Laboratory: TestAmerica Irvine

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska	State Program	10	CA01531	06-30-17
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	CA015312016-2	07-31-17
New Mexico	State Program	6	N/A	01-29-17 *
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

* Certification renewal pending - certification considered valid.

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

Chain of Custody Record

069190

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

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

Client Contact	Project Manager: Kyle Williams	Site Contact: P. Dickerson	Date: 3-14-17	COC No:
Company Name: Geo-Logic Assoc.	Tel/Fax: 858-451-1136	Lab Contact: R. Tamura	Carrier: T/A	1 of 1 COCs
Address: 11145 W. Bernardo Ct.	Analysis Turnaround Time			Sampler:
City/State/Zip: S.D., CA 92127	☐ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: 858-451-1136	TAT if different from Below			Walk-in Client:
Fax: 858-451-1087	☐ 2 weeks			Lab Sampling:
Project Name: Republic Services	☐ 1 week			Job / SDG No.:
Site: Sunshine Cyn. Landfill	☐ 2 days			
PO # 4400785	☐ 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)	EPA 8260B - VOCs	EPA 8270 1,4-Dioxane	Alkalinity EPA 310.1	Ammonia as N EPA 350.1	C.O.D. (410.4)	Chloride (EPA 300.0)	Total Potassium (6010B)	EPA 160.1 T.D.S.	Total Organic Carbon (415.1)	Sample Specific Notes:
MW-9	3/14/17	1135	G	GW	12			X	X	X	X	X	X	X	X	X	
CM-11R		0915			12			X	X	X	X	X	X	X	X	X	
DW-1		1130			12			X	X	X	X	X	X	X	X	X	
DW-5		1400			12			X	X	X	X	X	X	X	X	X	
Dup.		—		GW	12			X	X	X	X	X	X	X	X	X	
Extraction Trench		1058		WW	12			X	X	X	X	X	X	X	X	X	
QCTB		—		LAB DI	4			X									
QCAB		—		"	4			X									

440-179579 Chain of Custody

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

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

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

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

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

Special Instructions/QC Requirements & Comments:

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

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	Geo-Logic	3/14/17/1430	[signature]	T/A	3/14/17 1430
Relinquished by: [signature]	Company: T/A	Date/Time: 3/14/17 1845	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by: [signature]	Company:	Date/Time: 3/14/17 1845

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3/28/2017

10/13 IR-5

Login Sample Receipt Checklist

Client: Geo-Logic Associates

Job Number: 440-179579-1

Login Number: 179579

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.	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.	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: 440-179681-1
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:
3/28/2017 2:22:08 PM

Rossina Tomova, Project Manager I
(949)261-1022
rossina.tomova@testamericainc.com

Table of Contents

Sample Summary

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

TestAmerica Job ID: 440-179681-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-179681-1	DW-2	Water	03/15/17 09:40	03/15/17 20:30
440-179681-2	DW-3	Water	03/15/17 10:58	03/15/17 20:30
440-179681-3	PZ-4	Water	03/15/17 12:44	03/15/17 20:30
440-179681-4	MW-2A	Water	03/15/17 09:00	03/15/17 20:30
440-179681-5	MW-2B	Water	03/15/17 10:35	03/15/17 20:30
440-179681-6	DW-4	Water	03/15/17 12:30	03/15/17 20:30
440-179681-7	QCAB	Water	03/15/17 00:01	03/15/17 20:30
440-179681-8	QCTB	Water	03/15/17 00:01	03/15/17 20:30

Job ID: 440-179681-1

Laboratory: TestAmerica Irvine

Narrative

Job Narrative
440-179681-1

Comments
No additional comments.

Receipt
The samples were received on 3/15/2017 8:30 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.1º C.

GC/MS VOA
Method(s) 8260B: Surrogate recovery for Dibromofluoromethane for the following sample was outside the upper control limit: DW-4 (440-179681-6). This sample did not contain any target analytes; therefore, re-extraction and/or re-analysis was not performed.

Method(s) 8260B: The continuing calibration verification (CCV) associated with batch 440-394847 recovered above the upper control limit for Carbon tetrachloride, Dichlorodifluoromethane, Tetrachloroethene, 1,1,1-Trichloroethane, 2,2-Dichloropropane and Trichlorofluoromethane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: QCAB (440-179681-7), QCTB (440-179681-8) and (CCVIS 440-394847/2).

Method(s) 8260B: The laboratory control sample (LCS) for analytical batch 440-394847 recovered outside control limits for the following analytes: Carbon tetrachloride, Dichlorodifluoromethane, 1,1,1-Trichloroethane, 2,2-Dichloropropane and Trichlorofluoromethane. 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 laboratory control sample (LCS) for analytical batch 440-395656 recovered outside control limits for the following analytes: 1,1,2,2-Tetrachloroethane. 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 440-395656 recovered above the upper control limit for 1,1,2,2-Tetrachloroethane. 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-2 (440-179681-1), DW-3 (440-179681-2), PZ-4 (440-179681-3), MW-2A (440-179681-4), MW-2B (440-179681-5), DW-4 (440-179681-6) and (CCVIS 440-395656/2).

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 440-395160 and analytical batch 440-395495. 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
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
Method(s) SM 2320B: These samples are associated with these Method Blank and LCS: DW-2 (440-179681-1), DW-3 (440-179681-2), PZ-4 (440-179681-3), MW-2A (440-179681-4), MW-2B (440-179681-5), DW-4 (440-179681-6), (LCS 440-394543/38), (MB 440-394543/39) and (440-179681-J-1 DU)

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

Organic Prep

Job ID: 440-179681-1 (Continued)

Laboratory: TestAmerica Irvine (Continued)

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

TestAmerica Job ID: 440-179681-1

Client Sample ID: DW-2
Date Collected: 03/15/17 09:40
Date Received: 03/15/17 20:30

Lab Sample ID: 440-179681-1
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			03/23/17 10:37	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			03/23/17 10:37	1
Acrolein	ND		50	2.5	ug/L			03/18/17 18:17	1
Acrylonitrile	ND		50	1.0	ug/L			03/18/17 18:17	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			03/23/17 10:37	1
1,1,2,2-Tetrachloroethane	ND	F1 *	0.50	0.25	ug/L			03/23/17 10:37	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			03/23/17 10:37	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			03/23/17 10:37	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			03/23/17 10:37	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			03/23/17 10:37	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			03/23/17 10:37	1
1,2-Dibromo-3-Chloropropane	ND	F1	1.0	0.50	ug/L			03/23/17 10:37	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			03/23/17 10:37	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			03/23/17 10:37	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			03/23/17 10:37	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			03/23/17 10:37	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			03/23/17 10:37	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			03/23/17 10:37	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			03/23/17 10:37	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			03/23/17 10:37	1
2-Hexanone	ND		5.0	2.5	ug/L			03/23/17 10:37	1
Acetone	ND		20	10	ug/L			03/23/17 10:37	1
Acetonitrile	ND		20	10	ug/L			03/23/17 10:37	1
Acrolein	ND		5.0	2.5	ug/L			03/23/17 10:37	1
Acrylonitrile	ND		2.0	1.0	ug/L			03/23/17 10:37	1
Benzene	ND		0.50	0.25	ug/L			03/23/17 10:37	1
Allyl chloride	ND		1.0	0.50	ug/L			03/23/17 10:37	1
Bromoform	ND		1.0	0.40	ug/L			03/23/17 10:37	1
Bromomethane	ND		0.50	0.25	ug/L			03/23/17 10:37	1
Carbon disulfide	ND		1.0	0.50	ug/L			03/23/17 10:37	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			03/23/17 10:37	1
Chlorobenzene	ND		0.50	0.25	ug/L			03/23/17 10:37	1
Bromochloromethane	ND		0.50	0.25	ug/L			03/23/17 10:37	1
Chloroethane	ND		1.0	0.40	ug/L			03/23/17 10:37	1
Chloroform	ND		0.50	0.25	ug/L			03/23/17 10:37	1
Chloromethane	ND		0.50	0.25	ug/L			03/23/17 10:37	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/23/17 10:37	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/23/17 10:37	1
Dibromochloromethane	ND		0.50	0.25	ug/L			03/23/17 10:37	1
Dibromomethane	ND		0.50	0.25	ug/L			03/23/17 10:37	1
Bromodichloromethane	ND		0.50	0.25	ug/L			03/23/17 10:37	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			03/23/17 10:37	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			03/23/17 10:37	1
Ethylbenzene	ND		0.50	0.25	ug/L			03/23/17 10:37	1
Iodomethane	ND		2.0	1.0	ug/L			03/23/17 10:37	1
Isobutyl alcohol	ND		25	13	ug/L			03/23/17 10:37	1
m,p-Xylene	ND		1.0	0.50	ug/L			03/23/17 10:37	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			03/23/17 10:37	1
Methyl methacrylate	ND		2.0	1.0	ug/L			03/23/17 10:37	1

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

TestAmerica Job ID: 440-179681-1

Client Sample ID: DW-2
Date Collected: 03/15/17 09:40
Date Received: 03/15/17 20:30

Lab Sample ID: 440-179681-1
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			03/23/17 10:37	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			03/23/17 10:37	1
Naphthalene	ND		1.0	0.40	ug/L			03/23/17 10:37	1
o-Xylene	ND		0.50	0.25	ug/L			03/23/17 10:37	1
Propionitrile	ND		20	10	ug/L			03/23/17 10:37	1
Styrene	ND		0.50	0.25	ug/L			03/23/17 10:37	1
t-Butanol	ND		10	5.0	ug/L			03/23/17 10:37	1
Tetrachloroethene	ND		0.50	0.25	ug/L			03/23/17 10:37	1
Tetrahydrofuran	ND		10	5.0	ug/L			03/23/17 10:37	1
Toluene	ND		0.50	0.25	ug/L			03/23/17 10:37	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/23/17 10:37	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/23/17 10:37	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			03/23/17 10:37	1
Trichloroethene	ND		0.50	0.25	ug/L			03/23/17 10:37	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			03/23/17 10:37	1
Vinyl acetate	ND		4.0	2.0	ug/L			03/23/17 10:37	1
Vinyl chloride	ND		0.50	0.25	ug/L			03/23/17 10:37	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			03/23/17 10:37	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			03/23/17 10:37	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			03/23/17 10:37	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*03/23/17 10:37*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*113*		*80 - 128*		*03/18/17 18:17*	*1*
4-Bromofluorobenzene (Surr)	*93*		*80 - 120*		*03/18/17 18:17*	*1*
Toluene-d8 (Surr)	*103*		*80 - 128*		*03/23/17 10:37*	*1*
4-Bromofluorobenzene (Surr)	*93*		*80 - 120*		*03/23/17 10:37*	*1*
Dibromofluoromethane (Surr)	*122*		*76 - 132*		*03/18/17 18:17*	*1*
Dibromofluoromethane (Surr)	*104*		*76 - 132*		*03/23/17 10:37*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.98	0.25	ug/L		03/21/17 07:40	03/22/17 17:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*61*		*30 - 120*	*03/21/17 07:40*	*03/22/17 17:44*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**10**		2.5	1.3	mg/L			03/16/17 14:29	5

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		03/20/17 14:21	03/21/17 09:11	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**3.0**		0.20	0.10	mg/L			03/16/17 19:10	1
Chemical Oxygen Demand	ND		20	10	mg/L			03/24/17 12:11	1

Client Sample ID: DW-2

Lab Sample ID: 440-179681-1

Date Collected: 03/15/17 09:40

Matrix: Water

Date Received: 03/15/17 20:30

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**1800**		20	10	mg/L			03/22/17 08:58	1
Total Organic Carbon	**1.6**		0.10	0.050	mg/L			03/18/17 21:27	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	**400**		4.0	4.0	mg/L			03/16/17 14:34	1

Client Sample ID: DW-3

Lab Sample ID: 440-179681-2

Date Collected: 03/15/17 10:58

Matrix: Water

Date Received: 03/15/17 20:30

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			03/23/17 15:05	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			03/23/17 15:05	1
Acrolein	ND		50	2.5	ug/L			03/18/17 18:47	1
Acrylonitrile	ND		50	1.0	ug/L			03/18/17 18:47	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			03/23/17 15:05	1
1,1,2,2-Tetrachloroethane	ND	*	0.50	0.25	ug/L			03/23/17 15:05	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			03/23/17 15:05	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			03/23/17 15:05	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			03/23/17 15:05	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			03/23/17 15:05	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			03/23/17 15:05	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			03/23/17 15:05	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			03/23/17 15:05	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			03/23/17 15:05	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			03/23/17 15:05	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			03/23/17 15:05	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			03/23/17 15:05	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			03/23/17 15:05	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			03/23/17 15:05	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			03/23/17 15:05	1
2-Hexanone	ND		5.0	2.5	ug/L			03/23/17 15:05	1
Acetone	ND		20	10	ug/L			03/23/17 15:05	1
Acetonitrile	ND		20	10	ug/L			03/23/17 15:05	1
Acrolein	ND		5.0	2.5	ug/L			03/23/17 15:05	1
Acrylonitrile	ND		2.0	1.0	ug/L			03/23/17 15:05	1
Benzene	ND		0.50	0.25	ug/L			03/23/17 15:05	1
Allyl chloride	ND		1.0	0.50	ug/L			03/23/17 15:05	1
Bromoform	ND		1.0	0.40	ug/L			03/23/17 15:05	1
Bromomethane	ND		0.50	0.25	ug/L			03/23/17 15:05	1
Carbon disulfide	ND		1.0	0.50	ug/L			03/23/17 15:05	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			03/23/17 15:05	1
Chlorobenzene	ND		0.50	0.25	ug/L			03/23/17 15:05	1
Bromochloromethane	ND		0.50	0.25	ug/L			03/23/17 15:05	1
Chloroethane	ND		1.0	0.40	ug/L			03/23/17 15:05	1
Chloroform	**0.54**		0.50	0.25	ug/L			03/23/17 15:05	1
Chloromethane	**1.9**		0.50	0.25	ug/L			03/23/17 15:05	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/23/17 15:05	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/23/17 15:05	1

Client Sample ID: DW-3
Date Collected: 03/15/17 10:58
Date Received: 03/15/17 20:30

Lab Sample ID: 440-179681-2
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			03/23/17 15:05	1
Dibromomethane	ND		0.50	0.25	ug/L			03/23/17 15:05	1
Bromodichloromethane	ND		0.50	0.25	ug/L			03/23/17 15:05	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			03/23/17 15:05	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			03/23/17 15:05	1
Ethylbenzene	ND		0.50	0.25	ug/L			03/23/17 15:05	1
Iodomethane	ND		2.0	1.0	ug/L			03/23/17 15:05	1
Isobutyl alcohol	ND		25	13	ug/L			03/23/17 15:05	1
m,p-Xylene	ND		1.0	0.50	ug/L			03/23/17 15:05	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			03/23/17 15:05	1
Methyl methacrylate	ND		2.0	1.0	ug/L			03/23/17 15:05	1
Methylene Chloride	ND		2.0	0.88	ug/L			03/23/17 15:05	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			03/23/17 15:05	1
Naphthalene	ND		1.0	0.40	ug/L			03/23/17 15:05	1
o-Xylene	ND		0.50	0.25	ug/L			03/23/17 15:05	1
Propionitrile	ND		20	10	ug/L			03/23/17 15:05	1
Styrene	ND		0.50	0.25	ug/L			03/23/17 15:05	1
t-Butanol	ND		10	5.0	ug/L			03/23/17 15:05	1
Tetrachloroethene	ND		0.50	0.25	ug/L			03/23/17 15:05	1
Tetrahydrofuran	ND		10	5.0	ug/L			03/23/17 15:05	1
Toluene	ND		0.50	0.25	ug/L			03/23/17 15:05	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/23/17 15:05	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/23/17 15:05	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			03/23/17 15:05	1
Trichloroethene	ND		0.50	0.25	ug/L			03/23/17 15:05	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			03/23/17 15:05	1
Vinyl acetate	ND		4.0	2.0	ug/L			03/23/17 15:05	1
Vinyl chloride	ND		0.50	0.25	ug/L			03/23/17 15:05	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			03/23/17 15:05	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			03/23/17 15:05	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			03/23/17 15:05	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*7.7*	*T J*	*ug/L*		*4.34*			*03/23/17 15:05*	*1*
Unknown	*6.6*	*T J*	*ug/L*		*6.99*			*03/23/17 15:05*	*1*
Unknown	*3.0*	*T J*	*ug/L*		*9.31*			*03/23/17 15:05*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*107*		*80 - 128*		*03/18/17 18:47*	*1*
4-Bromofluorobenzene (Surr)	*93*		*80 - 120*		*03/18/17 18:47*	*1*
Toluene-d8 (Surr)	*104*		*80 - 128*		*03/23/17 15:05*	*1*
4-Bromofluorobenzene (Surr)	*92*		*80 - 120*		*03/23/17 15:05*	*1*
Dibromofluoromethane (Surr)	*126*		*76 - 132*		*03/18/17 18:47*	*1*
Dibromofluoromethane (Surr)	*104*		*76 - 132*		*03/23/17 15:05*	*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		03/21/17 07:40	03/22/17 18:06	1

Client Sample ID: DW-3

Lab Sample ID: 440-179681-2

Date Collected: 03/15/17 10:58

Matrix: Water

Date Received: 03/15/17 20:30

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*61*		*30 - 120*	*03/21/17 07:40*	*03/22/17 18:06*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**13**		2.5	1.3	mg/L			03/16/17 22:01	5

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	**8.9**		0.50	0.25	mg/L		03/20/17 14:21	03/21/17 09:21	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**0.53**		0.20	0.10	mg/L			03/16/17 19:15	1
Chemical Oxygen Demand	ND		20	10	mg/L			03/24/17 12:11	1
Total Dissolved Solids	**1800**		10	5.0	mg/L			03/22/17 08:58	1
Total Organic Carbon	**0.38**		0.10	0.050	mg/L			03/18/17 21:38	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	**170**		4.0	4.0	mg/L			03/16/17 14:50	1

Client Sample ID: PZ-4

Lab Sample ID: 440-179681-3

Date Collected: 03/15/17 12:44

Matrix: Water

Date Received: 03/15/17 20:30

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			03/23/17 16:11	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			03/23/17 16:11	1
Acrolein	ND		50	2.5	ug/L			03/18/17 19:16	1
Acrylonitrile	ND		50	1.0	ug/L			03/18/17 19:16	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			03/23/17 16:11	1
1,1,2,2-Tetrachloroethane	ND	*	0.50	0.25	ug/L			03/23/17 16:11	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			03/23/17 16:11	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			03/23/17 16:11	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			03/23/17 16:11	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			03/23/17 16:11	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			03/23/17 16:11	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			03/23/17 16:11	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			03/23/17 16:11	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			03/23/17 16:11	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			03/23/17 16:11	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			03/23/17 16:11	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			03/23/17 16:11	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			03/23/17 16:11	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			03/23/17 16:11	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			03/23/17 16:11	1
2-Hexanone	ND		5.0	2.5	ug/L			03/23/17 16:11	1
Acetone	ND		20	10	ug/L			03/23/17 16:11	1
Acetonitrile	ND		20	10	ug/L			03/23/17 16:11	1
Acrolein	ND		5.0	2.5	ug/L			03/23/17 16:11	1
Acrylonitrile	ND		2.0	1.0	ug/L			03/23/17 16:11	1
Benzene	ND		0.50	0.25	ug/L			03/23/17 16:11	1

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

TestAmerica Job ID: 440-179681-1

Client Sample ID: PZ-4
Date Collected: 03/15/17 12:44
Date Received: 03/15/17 20:30

Lab Sample ID: 440-179681-3
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			03/23/17 16:11	1
Bromoform	ND		1.0	0.40	ug/L			03/23/17 16:11	1
Bromomethane	ND		0.50	0.25	ug/L			03/23/17 16:11	1
Carbon disulfide	ND		1.0	0.50	ug/L			03/23/17 16:11	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			03/23/17 16:11	1
Chlorobenzene	ND		0.50	0.25	ug/L			03/23/17 16:11	1
Bromochloromethane	ND		0.50	0.25	ug/L			03/23/17 16:11	1
Chloroethane	ND		1.0	0.40	ug/L			03/23/17 16:11	1
Chloroform	ND		0.50	0.25	ug/L			03/23/17 16:11	1
Chloromethane	**0.72**		0.50	0.25	ug/L			03/23/17 16:11	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/23/17 16:11	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/23/17 16:11	1
Dibromochloromethane	ND		0.50	0.25	ug/L			03/23/17 16:11	1
Dibromomethane	ND		0.50	0.25	ug/L			03/23/17 16:11	1
Bromodichloromethane	ND		0.50	0.25	ug/L			03/23/17 16:11	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			03/23/17 16:11	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			03/23/17 16:11	1
Ethylbenzene	ND		0.50	0.25	ug/L			03/23/17 16:11	1
Iodomethane	ND		2.0	1.0	ug/L			03/23/17 16:11	1
Isobutyl alcohol	ND		25	13	ug/L			03/23/17 16:11	1
m,p-Xylene	ND		1.0	0.50	ug/L			03/23/17 16:11	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			03/23/17 16:11	1
Methyl methacrylate	ND		2.0	1.0	ug/L			03/23/17 16:11	1
Methylene Chloride	ND		2.0	0.88	ug/L			03/23/17 16:11	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			03/23/17 16:11	1
Naphthalene	ND		1.0	0.40	ug/L			03/23/17 16:11	1
o-Xylene	ND		0.50	0.25	ug/L			03/23/17 16:11	1
Propionitrile	ND		20	10	ug/L			03/23/17 16:11	1
Styrene	ND		0.50	0.25	ug/L			03/23/17 16:11	1
t-Butanol	ND		10	5.0	ug/L			03/23/17 16:11	1
Tetrachloroethene	ND		0.50	0.25	ug/L			03/23/17 16:11	1
Tetrahydrofuran	ND		10	5.0	ug/L			03/23/17 16:11	1
Toluene	ND		0.50	0.25	ug/L			03/23/17 16:11	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/23/17 16:11	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/23/17 16:11	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			03/23/17 16:11	1
Trichloroethene	ND		0.50	0.25	ug/L			03/23/17 16:11	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			03/23/17 16:11	1
Vinyl acetate	ND		4.0	2.0	ug/L			03/23/17 16:11	1
Vinyl chloride	ND		0.50	0.25	ug/L			03/23/17 16:11	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			03/23/17 16:11	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			03/23/17 16:11	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			03/23/17 16:11	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*21*	*T J*	*ug/L*		*3.83*			*03/23/17 16:11*	*1*
Unknown	*6.6*	*T J*	*ug/L*		*6.99*			*03/23/17 16:11*	*1*
Unknown	*3.1*	*T J*	*ug/L*		*15.45*			*03/23/17 16:11*	*1*

Client Sample ID: PZ-4

Date Collected: 03/15/17 12:44
Date Received: 03/15/17 20:30

Lab Sample ID: 440-179681-3

Matrix: Water

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*103*		*80 - 128*		*03/18/17 19:16*	*1*
4-Bromofluorobenzene (Surr)	*90*		*80 - 120*		*03/18/17 19:16*	*1*
Toluene-d8 (Surr)	*105*		*80 - 128*		*03/23/17 16:11*	*1*
4-Bromofluorobenzene (Surr)	*93*		*80 - 120*		*03/23/17 16:11*	*1*
Dibromofluoromethane (Surr)	*131*		*76 - 132*		*03/18/17 19:16*	*1*
Dibromofluoromethane (Surr)	*102*		*76 - 132*		*03/23/17 16:11*	*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		03/21/17 07:40	03/22/17 18:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*75*		*30 - 120*	*03/21/17 07:40*	*03/22/17 18:28*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**7.8**		2.5	1.3	mg/L			03/16/17 23:12	5

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		03/20/17 14:21	03/21/17 09:23	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**2.2**		0.20	0.10	mg/L			03/16/17 19:21	1
Chemical Oxygen Demand	ND		20	10	mg/L			03/24/17 12:12	1
Total Dissolved Solids	**1200**		10	5.0	mg/L			03/22/17 08:58	1
Total Organic Carbon	**1.1**		0.10	0.050	mg/L			03/18/17 21:50	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	**350**		4.0	4.0	mg/L			03/16/17 14:59	1

Client Sample ID: MW-2A

Date Collected: 03/15/17 09:00
Date Received: 03/15/17 20:30

Lab Sample ID: 440-179681-4

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			03/23/17 16:40	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			03/23/17 16:40	1
Acrolein	ND		50	2.5	ug/L			03/18/17 19:46	1
Acrylonitrile	ND		50	1.0	ug/L			03/18/17 19:46	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			03/23/17 16:40	1
1,1,2,2-Tetrachloroethane	ND	*	0.50	0.25	ug/L			03/23/17 16:40	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			03/23/17 16:40	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			03/23/17 16:40	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			03/23/17 16:40	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			03/23/17 16:40	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			03/23/17 16:40	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			03/23/17 16:40	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			03/23/17 16:40	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			03/23/17 16:40	1

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

TestAmerica Job ID: 440-179681-1

Client Sample ID: MW-2A
Date Collected: 03/15/17 09:00
Date Received: 03/15/17 20:30

Lab Sample ID: 440-179681-4
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloropropane	ND		0.50	0.25	ug/L			03/23/17 16:40	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			03/23/17 16:40	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			03/23/17 16:40	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			03/23/17 16:40	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			03/23/17 16:40	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			03/23/17 16:40	1
2-Hexanone	ND		5.0	2.5	ug/L			03/23/17 16:40	1
Acetone	ND		20	10	ug/L			03/23/17 16:40	1
Acetonitrile	ND		20	10	ug/L			03/23/17 16:40	1
Acrolein	ND		5.0	2.5	ug/L			03/23/17 16:40	1
Acrylonitrile	ND		2.0	1.0	ug/L			03/23/17 16:40	1
Benzene	ND		0.50	0.25	ug/L			03/23/17 16:40	1
Allyl chloride	ND		1.0	0.50	ug/L			03/23/17 16:40	1
Bromoform	ND		1.0	0.40	ug/L			03/23/17 16:40	1
Bromomethane	ND		0.50	0.25	ug/L			03/23/17 16:40	1
Carbon disulfide	ND		1.0	0.50	ug/L			03/23/17 16:40	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			03/23/17 16:40	1
Chlorobenzene	ND		0.50	0.25	ug/L			03/23/17 16:40	1
Bromochloromethane	ND		0.50	0.25	ug/L			03/23/17 16:40	1
Chloroethane	ND		1.0	0.40	ug/L			03/23/17 16:40	1
Chloroform	ND		0.50	0.25	ug/L			03/23/17 16:40	1
Chloromethane	**0.66**		0.50	0.25	ug/L			03/23/17 16:40	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/23/17 16:40	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/23/17 16:40	1
Dibromochloromethane	ND		0.50	0.25	ug/L			03/23/17 16:40	1
Dibromomethane	ND		0.50	0.25	ug/L			03/23/17 16:40	1
Bromodichloromethane	ND		0.50	0.25	ug/L			03/23/17 16:40	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			03/23/17 16:40	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			03/23/17 16:40	1
Ethylbenzene	ND		0.50	0.25	ug/L			03/23/17 16:40	1
Iodomethane	ND		2.0	1.0	ug/L			03/23/17 16:40	1
Isobutyl alcohol	ND		25	13	ug/L			03/23/17 16:40	1
m,p-Xylene	ND		1.0	0.50	ug/L			03/23/17 16:40	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			03/23/17 16:40	1
Methyl methacrylate	ND		2.0	1.0	ug/L			03/23/17 16:40	1
Methylene Chloride	ND		2.0	0.88	ug/L			03/23/17 16:40	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			03/23/17 16:40	1
Naphthalene	ND		1.0	0.40	ug/L			03/23/17 16:40	1
o-Xylene	ND		0.50	0.25	ug/L			03/23/17 16:40	1
Propionitrile	ND		20	10	ug/L			03/23/17 16:40	1
Styrene	ND		0.50	0.25	ug/L			03/23/17 16:40	1
t-Butanol	ND		10	5.0	ug/L			03/23/17 16:40	1
Tetrachloroethene	ND		0.50	0.25	ug/L			03/23/17 16:40	1
Tetrahydrofuran	ND		10	5.0	ug/L			03/23/17 16:40	1
Toluene	ND		0.50	0.25	ug/L			03/23/17 16:40	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/23/17 16:40	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/23/17 16:40	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			03/23/17 16:40	1
Trichloroethene	ND		0.50	0.25	ug/L			03/23/17 16:40	1

Client Sample ID: MW-2A

Lab Sample ID: 440-179681-4

Date Collected: 03/15/17 09:00

Matrix: Water

Date Received: 03/15/17 20:30

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	ND		0.50	0.25	ug/L			03/23/17 16:40	1
Vinyl acetate	ND		4.0	2.0	ug/L			03/23/17 16:40	1
Vinyl chloride	ND		0.50	0.25	ug/L			03/23/17 16:40	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			03/23/17 16:40	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			03/23/17 16:40	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			03/23/17 16:40	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*6.7*	*T J*	*ug/L*		*6.99*			*03/23/17 16:40*	*1*
Unknown	*3.2*	*T J*	*ug/L*		*16.31*			*03/23/17 16:40*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*109*		*80 - 128*		*03/18/17 19:46*	*1*
4-Bromofluorobenzene (Surr)	*92*		*80 - 120*		*03/18/17 19:46*	*1*
Toluene-d8 (Surr)	*104*		*80 - 128*		*03/23/17 16:40*	*1*
4-Bromofluorobenzene (Surr)	*90*		*80 - 120*		*03/23/17 16:40*	*1*
Dibromofluoromethane (Surr)	*130*		*76 - 132*		*03/18/17 19:46*	*1*
Dibromofluoromethane (Surr)	*104*		*76 - 132*		*03/23/17 16:40*	*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		03/21/17 07:40	03/22/17 18:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*67*		*30 - 120*	*03/21/17 07:40*	*03/22/17 18:50*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**200**		50	25	mg/L			03/16/17 13:29	100

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	**9.3**		0.50	0.25	mg/L		03/20/17 14:21	03/21/17 09:26	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	ND		0.20	0.10	mg/L			03/16/17 19:26	1
Chemical Oxygen Demand	**20**		20	10	mg/L			03/24/17 12:12	1
Total Dissolved Solids	**2200**		20	10	mg/L			03/22/17 08:58	1
Total Organic Carbon	**6.9**		0.10	0.050	mg/L			03/18/17 22:07	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	**260**		4.0	4.0	mg/L			03/16/17 15:07	1

Client Sample ID: MW-2B

Lab Sample ID: 440-179681-5

Date Collected: 03/15/17 10:35

Matrix: Water

Date Received: 03/15/17 20:30

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			03/23/17 17:10	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			03/23/17 17:10	1

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

TestAmerica Job ID: 440-179681-1

Client Sample ID: MW-2B
Date Collected: 03/15/17 10:35
Date Received: 03/15/17 20:30

Lab Sample ID: 440-179681-5
Matrix: Water

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			03/18/17 20:15	1
Acrylonitrile	ND		50	1.0	ug/L			03/18/17 20:15	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			03/23/17 17:10	1
1,1,2,2-Tetrachloroethane	ND	*	0.50	0.25	ug/L			03/23/17 17:10	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			03/23/17 17:10	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			03/23/17 17:10	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			03/23/17 17:10	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			03/23/17 17:10	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			03/23/17 17:10	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			03/23/17 17:10	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			03/23/17 17:10	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			03/23/17 17:10	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			03/23/17 17:10	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			03/23/17 17:10	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			03/23/17 17:10	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			03/23/17 17:10	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			03/23/17 17:10	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			03/23/17 17:10	1
2-Hexanone	ND		5.0	2.5	ug/L			03/23/17 17:10	1
Acetone	ND		20	10	ug/L			03/23/17 17:10	1
Acetonitrile	ND		20	10	ug/L			03/23/17 17:10	1
Acrolein	ND		5.0	2.5	ug/L			03/23/17 17:10	1
Acrylonitrile	ND		2.0	1.0	ug/L			03/23/17 17:10	1
Benzene	ND		0.50	0.25	ug/L			03/23/17 17:10	1
Allyl chloride	ND		1.0	0.50	ug/L			03/23/17 17:10	1
Bromoform	ND		1.0	0.40	ug/L			03/23/17 17:10	1
Bromomethane	ND		0.50	0.25	ug/L			03/23/17 17:10	1
Carbon disulfide	ND		1.0	0.50	ug/L			03/23/17 17:10	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			03/23/17 17:10	1
Chlorobenzene	ND		0.50	0.25	ug/L			03/23/17 17:10	1
Bromochloromethane	ND		0.50	0.25	ug/L			03/23/17 17:10	1
Chloroethane	ND		1.0	0.40	ug/L			03/23/17 17:10	1
Chloroform	ND		0.50	0.25	ug/L			03/23/17 17:10	1
Chloromethane	**0.51**		0.50	0.25	ug/L			03/23/17 17:10	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/23/17 17:10	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/23/17 17:10	1
Dibromochloromethane	ND		0.50	0.25	ug/L			03/23/17 17:10	1
Dibromomethane	ND		0.50	0.25	ug/L			03/23/17 17:10	1
Bromodichloromethane	ND		0.50	0.25	ug/L			03/23/17 17:10	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			03/23/17 17:10	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			03/23/17 17:10	1
Ethylbenzene	ND		0.50	0.25	ug/L			03/23/17 17:10	1
Iodomethane	ND		2.0	1.0	ug/L			03/23/17 17:10	1
Isobutyl alcohol	ND		25	13	ug/L			03/23/17 17:10	1
m,p-Xylene	ND		1.0	0.50	ug/L			03/23/17 17:10	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			03/23/17 17:10	1
Methyl methacrylate	ND		2.0	1.0	ug/L			03/23/17 17:10	1
Methylene Chloride	ND		2.0	0.88	ug/L			03/23/17 17:10	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			03/23/17 17:10	1

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

TestAmerica Job ID: 440-179681-1

Client Sample ID: MW-2B
Date Collected: 03/15/17 10:35
Date Received: 03/15/17 20:30

Lab Sample ID: 440-179681-5
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			03/23/17 17:10	1
o-Xylene	ND		0.50	0.25	ug/L			03/23/17 17:10	1
Propionitrile	ND		20	10	ug/L			03/23/17 17:10	1
Styrene	ND		0.50	0.25	ug/L			03/23/17 17:10	1
t-Butanol	ND		10	5.0	ug/L			03/23/17 17:10	1
Tetrachloroethene	ND		0.50	0.25	ug/L			03/23/17 17:10	1
Tetrahydrofuran	ND		10	5.0	ug/L			03/23/17 17:10	1
Toluene	ND		0.50	0.25	ug/L			03/23/17 17:10	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/23/17 17:10	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/23/17 17:10	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			03/23/17 17:10	1
Trichloroethene	ND		0.50	0.25	ug/L			03/23/17 17:10	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			03/23/17 17:10	1
Vinyl acetate	ND		4.0	2.0	ug/L			03/23/17 17:10	1
Vinyl chloride	ND		0.50	0.25	ug/L			03/23/17 17:10	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			03/23/17 17:10	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			03/23/17 17:10	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			03/23/17 17:10	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*3.4*	*T J*	*ug/L*		*3.73*			*03/23/17 17:10*	*1*
Unknown	*3.6*	*T J*	*ug/L*		*4.34*			*03/23/17 17:10*	*1*
Unknown	*6.9*	*T J*	*ug/L*		*6.99*			*03/23/17 17:10*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*105*		*80 - 128*		*03/18/17 20:15*	*1*
4-Bromofluorobenzene (Surr)	*90*		*80 - 120*		*03/18/17 20:15*	*1*
Toluene-d8 (Surr)	*104*		*80 - 128*		*03/23/17 17:10*	*1*
4-Bromofluorobenzene (Surr)	*91*		*80 - 120*		*03/23/17 17:10*	*1*
Dibromofluoromethane (Surr)	*129*		*76 - 132*		*03/18/17 20:15*	*1*
Dibromofluoromethane (Surr)	*104*		*76 - 132*		*03/23/17 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		1.1	0.27	ug/L		03/21/17 07:40	03/22/17 19:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*73*		*30 - 120*	*03/21/17 07:40*	*03/22/17 19:13*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**13**		2.5	1.3	mg/L			03/16/17 22:49	5

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	**4.8**		0.50	0.25	mg/L		03/20/17 14:21	03/21/17 09:37	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	**3.3**		0.20	0.10	mg/L			03/16/17 19:31	1
Chemical Oxygen Demand	ND		20	10	mg/L			03/24/17 12:12	1

Client Sample ID: MW-2B

Lab Sample ID: 440-179681-5

Date Collected: 03/15/17 10:35

Matrix: Water

Date Received: 03/15/17 20:30

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	**2600**		20	10	mg/L			03/22/17 08:58	1
Total Organic Carbon	**1.7**		0.10	0.050	mg/L			03/18/17 22:43	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	**350**		4.0	4.0	mg/L			03/16/17 15:17	1

Client Sample ID: DW-4

Lab Sample ID: 440-179681-6

Date Collected: 03/15/17 12:30

Matrix: Water

Date Received: 03/15/17 20:30

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			03/23/17 17:40	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			03/23/17 17:40	1
Acrolein	ND		50	2.5	ug/L			03/18/17 20:45	1
Acrylonitrile	ND		50	1.0	ug/L			03/18/17 20:45	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			03/23/17 17:40	1
1,1,2,2-Tetrachloroethane	ND	*	0.50	0.25	ug/L			03/23/17 17:40	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			03/23/17 17:40	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			03/23/17 17:40	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			03/23/17 17:40	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			03/23/17 17:40	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			03/23/17 17:40	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			03/23/17 17:40	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			03/23/17 17:40	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			03/23/17 17:40	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			03/23/17 17:40	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			03/23/17 17:40	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			03/23/17 17:40	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			03/23/17 17:40	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			03/23/17 17:40	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			03/23/17 17:40	1
2-Hexanone	ND		5.0	2.5	ug/L			03/23/17 17:40	1
Acetone	ND		20	10	ug/L			03/23/17 17:40	1
Acetonitrile	ND		20	10	ug/L			03/23/17 17:40	1
Acrolein	ND		5.0	2.5	ug/L			03/23/17 17:40	1
Acrylonitrile	ND		2.0	1.0	ug/L			03/23/17 17:40	1
Benzene	ND		0.50	0.25	ug/L			03/23/17 17:40	1
Allyl chloride	ND		1.0	0.50	ug/L			03/23/17 17:40	1
Bromoform	ND		1.0	0.40	ug/L			03/23/17 17:40	1
Bromomethane	ND		0.50	0.25	ug/L			03/23/17 17:40	1
Carbon disulfide	ND		1.0	0.50	ug/L			03/23/17 17:40	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			03/23/17 17:40	1
Chlorobenzene	ND		0.50	0.25	ug/L			03/23/17 17:40	1
Bromochloromethane	ND		0.50	0.25	ug/L			03/23/17 17:40	1
Chloroethane	ND		1.0	0.40	ug/L			03/23/17 17:40	1
Chloroform	ND		0.50	0.25	ug/L			03/23/17 17:40	1
Chloromethane	**0.37**	**J**	0.50	0.25	ug/L			03/23/17 17:40	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/23/17 17:40	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/23/17 17:40	1

Client Sample ID: DW-4
Date Collected: 03/15/17 12:30
Date Received: 03/15/17 20:30

Lab Sample ID: 440-179681-6
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			03/23/17 17:40	1
Dibromomethane	ND		0.50	0.25	ug/L			03/23/17 17:40	1
Bromodichloromethane	ND		0.50	0.25	ug/L			03/23/17 17:40	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			03/23/17 17:40	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			03/23/17 17:40	1
Ethylbenzene	ND		0.50	0.25	ug/L			03/23/17 17:40	1
Iodomethane	ND		2.0	1.0	ug/L			03/23/17 17:40	1
Isobutyl alcohol	ND		25	13	ug/L			03/23/17 17:40	1
m,p-Xylene	ND		1.0	0.50	ug/L			03/23/17 17:40	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			03/23/17 17:40	1
Methyl methacrylate	ND		2.0	1.0	ug/L			03/23/17 17:40	1
Methylene Chloride	ND		2.0	0.88	ug/L			03/23/17 17:40	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			03/23/17 17:40	1
Naphthalene	ND		1.0	0.40	ug/L			03/23/17 17:40	1
o-Xylene	ND		0.50	0.25	ug/L			03/23/17 17:40	1
Propionitrile	ND		20	10	ug/L			03/23/17 17:40	1
Styrene	ND		0.50	0.25	ug/L			03/23/17 17:40	1
t-Butanol	ND		10	5.0	ug/L			03/23/17 17:40	1
Tetrachloroethene	ND		0.50	0.25	ug/L			03/23/17 17:40	1
Tetrahydrofuran	ND		10	5.0	ug/L			03/23/17 17:40	1
Toluene	ND		0.50	0.25	ug/L			03/23/17 17:40	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/23/17 17:40	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/23/17 17:40	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			03/23/17 17:40	1
Trichloroethene	ND		0.50	0.25	ug/L			03/23/17 17:40	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			03/23/17 17:40	1
Vinyl acetate	ND		4.0	2.0	ug/L			03/23/17 17:40	1
Vinyl chloride	ND		0.50	0.25	ug/L			03/23/17 17:40	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			03/23/17 17:40	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			03/23/17 17:40	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			03/23/17 17:40	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*6.8*	*T J*	*ug/L*		*6.99*			*03/23/17 17:40*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*111*		*80 - 128*		*03/18/17 20:45*	*1*
4-Bromofluorobenzene (Surr)	*89*		*80 - 120*		*03/18/17 20:45*	*1*
Toluene-d8 (Surr)	*105*		*80 - 128*		*03/23/17 17:40*	*1*
4-Bromofluorobenzene (Surr)	*92*		*80 - 120*		*03/23/17 17:40*	*1*
Dibromofluoromethane (Surr)	*134*	*X*	*76 - 132*		*03/18/17 20:45*	*1*
Dibromofluoromethane (Surr)	*104*		*76 - 132*		*03/23/17 17:40*	*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		03/21/17 07:40	03/22/17 19:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*67*		*30 - 120*	*03/21/17 07:40*	*03/22/17 19:35*	*1*

Client Sample ID: DW-4

Lab Sample ID: 440-179681-6

Date Collected: 03/15/17 12:30

Matrix: Water

Date Received: 03/15/17 20:30

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	14		5.0	2.5	mg/L			03/16/17 23:00	10

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	4.7		0.50	0.25	mg/L		03/20/17 14:21	03/21/17 09:39	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	3.8		0.20	0.10	mg/L			03/16/17 19:37	1
Chemical Oxygen Demand	ND		20	10	mg/L			03/24/17 12:12	1
Total Dissolved Solids	2900		20	10	mg/L			03/22/17 08:58	1
Total Organic Carbon	1.7		0.10	0.050	mg/L			03/18/17 22:55	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	370		4.0	4.0	mg/L			03/16/17 15:26	1

Client Sample ID: QCAB

Lab Sample ID: 440-179681-7

Date Collected: 03/15/17 00:01

Matrix: Water

Date Received: 03/15/17 20:30

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			03/19/17 16:12	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			03/19/17 16:12	1
Acrolein	ND		50	2.5	ug/L			03/21/17 14:38	1
Acrylonitrile	ND		50	1.0	ug/L			03/21/17 14:38	1
1,1,1-Trichloroethane	ND	*	0.50	0.25	ug/L			03/19/17 16:12	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			03/19/17 16:12	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			03/19/17 16:12	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			03/19/17 16:12	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			03/19/17 16:12	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			03/19/17 16:12	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			03/19/17 16:12	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			03/19/17 16:12	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			03/19/17 16:12	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			03/19/17 16:12	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			03/19/17 16:12	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			03/19/17 16:12	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			03/19/17 16:12	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			03/19/17 16:12	1
2,2-Dichloropropane	ND	*	1.0	0.40	ug/L			03/19/17 16:12	1
2-Hexanone	ND		5.0	2.5	ug/L			03/19/17 16:12	1
Acetone	ND		20	10	ug/L			03/19/17 16:12	1
Acetonitrile	ND		20	10	ug/L			03/19/17 16:12	1
Acrolein	ND		5.0	2.5	ug/L			03/19/17 16:12	1
Acrylonitrile	ND		2.0	1.0	ug/L			03/19/17 16:12	1
Benzene	ND		0.50	0.25	ug/L			03/19/17 16:12	1
Allyl chloride	ND		1.0	0.50	ug/L			03/19/17 16:12	1
Bromoform	ND		1.0	0.40	ug/L			03/19/17 16:12	1
Bromomethane	ND		0.50	0.25	ug/L			03/19/17 16:12	1
Carbon disulfide	ND		1.0	0.50	ug/L			03/19/17 16:12	1

Client Sample ID: QCAB
Date Collected: 03/15/17 00:01
Date Received: 03/15/17 20:30

Lab Sample ID: 440-179681-7
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			03/19/17 16:12	1
Chlorobenzene	ND		0.50	0.25	ug/L			03/19/17 16:12	1
Bromochloromethane	ND		0.50	0.25	ug/L			03/19/17 16:12	1
Chloroethane	ND		1.0	0.40	ug/L			03/19/17 16:12	1
Chloroform	ND		0.50	0.25	ug/L			03/19/17 16:12	1
Chloromethane	ND		0.50	0.25	ug/L			03/19/17 16:12	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/19/17 16:12	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/19/17 16:12	1
Dibromochloromethane	ND		0.50	0.25	ug/L			03/19/17 16:12	1
Dibromomethane	ND		0.50	0.25	ug/L			03/19/17 16:12	1
Bromodichloromethane	ND		0.50	0.25	ug/L			03/19/17 16:12	1
Dichlorodifluoromethane	ND	*	1.0	0.40	ug/L			03/19/17 16:12	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			03/19/17 16:12	1
Ethylbenzene	ND		0.50	0.25	ug/L			03/19/17 16:12	1
Iodomethane	ND		2.0	1.0	ug/L			03/19/17 16:12	1
Isobutyl alcohol	ND		25	13	ug/L			03/19/17 16:12	1
m,p-Xylene	ND		1.0	0.50	ug/L			03/19/17 16:12	1
Methylene Chloride	ND		2.0	0.88	ug/L			03/19/17 16:12	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			03/19/17 16:12	1
Naphthalene	ND		1.0	0.40	ug/L			03/19/17 16:12	1
o-Xylene	ND		0.50	0.25	ug/L			03/19/17 16:12	1
Propionitrile	ND		20	10	ug/L			03/19/17 16:12	1
Styrene	ND		0.50	0.25	ug/L			03/19/17 16:12	1
t-Butanol	ND		10	5.0	ug/L			03/19/17 16:12	1
Tetrachloroethene	ND		0.50	0.25	ug/L			03/19/17 16:12	1
Tetrahydrofuran	ND		10	5.0	ug/L			03/19/17 16:12	1
Toluene	ND		0.50	0.25	ug/L			03/19/17 16:12	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/19/17 16:12	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/19/17 16:12	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			03/19/17 16:12	1
Trichloroethene	ND		0.50	0.25	ug/L			03/19/17 16:12	1
Trichlorofluoromethane	ND	*	0.50	0.25	ug/L			03/19/17 16:12	1
Vinyl acetate	ND		4.0	2.0	ug/L			03/19/17 16:12	1
Vinyl chloride	ND		0.50	0.25	ug/L			03/19/17 16:12	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			03/19/17 16:12	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			03/19/17 16:12	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			03/19/17 16:12	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*3.6*	*T J*	*ug/L*		*2.73*			*03/19/17 16:12*	*1*
Unknown	*11*	*T J*	*ug/L*		*7.00*			*03/19/17 16:12*	*1*
Unknown	*34*	*T J*	*ug/L*		*16.06*			*03/19/17 16:12*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*100*		*80 - 128*		*03/21/17 14:38*	*1*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*		*03/21/17 14:38*	*1*
Toluene-d8 (Surr)	*107*		*80 - 128*		*03/19/17 16:12*	*1*
4-Bromofluorobenzene (Surr)	*90*		*80 - 120*		*03/19/17 16:12*	*1*
Dibromofluoromethane (Surr)	*115*		*76 - 132*		*03/21/17 14:38*	*1*
Dibromofluoromethane (Surr)	*127*		*76 - 132*		*03/19/17 16:12*	*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			03/23/17 18:10	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			03/23/17 18:10	1
Methyl methacrylate	ND		2.0	1.0	ug/L			03/23/17 18:10	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*2.5*	*T J*	*ug/L*		*3.53*			*03/23/17 18:10*	*1*
Unknown	*6.6*	*T J*	*ug/L*		*6.99*			*03/23/17 18:10*	*1*
Unknown	*3.2*	*T J*	*ug/L*		*15.44*			*03/23/17 18:10*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*107*		*80 - 128*		*03/23/17 18:10*	*1*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*		*03/23/17 18:10*	*1*
Dibromofluoromethane (Surr)	*102*		*76 - 132*		*03/23/17 18:10*	*1*

Client Sample ID: QCTB

Lab Sample ID: 440-179681-8

Date Collected: 03/15/17 00:01

Matrix: Water

Date Received: 03/15/17 20:30

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			03/19/17 16:42	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			03/19/17 16:42	1
Acrolein	ND		50	2.5	ug/L			03/21/17 15:06	1
Acrylonitrile	ND		50	1.0	ug/L			03/21/17 15:06	1
1,1,1-Trichloroethane	ND	*	0.50	0.25	ug/L			03/19/17 16:42	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			03/19/17 16:42	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			03/19/17 16:42	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			03/19/17 16:42	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			03/19/17 16:42	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			03/19/17 16:42	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			03/19/17 16:42	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			03/19/17 16:42	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			03/19/17 16:42	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			03/19/17 16:42	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			03/19/17 16:42	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			03/19/17 16:42	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			03/19/17 16:42	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			03/19/17 16:42	1
2,2-Dichloropropane	ND	*	1.0	0.40	ug/L			03/19/17 16:42	1
2-Hexanone	ND		5.0	2.5	ug/L			03/19/17 16:42	1
Acetone	ND		20	10	ug/L			03/19/17 16:42	1
Acetonitrile	ND		20	10	ug/L			03/19/17 16:42	1
Acrolein	ND		5.0	2.5	ug/L			03/19/17 16:42	1
Acrylonitrile	ND		2.0	1.0	ug/L			03/19/17 16:42	1
Benzene	ND		0.50	0.25	ug/L			03/19/17 16:42	1
Allyl chloride	ND		1.0	0.50	ug/L			03/19/17 16:42	1
Bromoform	ND		1.0	0.40	ug/L			03/19/17 16:42	1
Bromomethane	ND		0.50	0.25	ug/L			03/19/17 16:42	1
Carbon disulfide	ND		1.0	0.50	ug/L			03/19/17 16:42	1
Carbon tetrachloride	ND	*	0.50	0.25	ug/L			03/19/17 16:42	1
Chlorobenzene	ND		0.50	0.25	ug/L			03/19/17 16:42	1
Bromochloromethane	ND		0.50	0.25	ug/L			03/19/17 16:42	1
Chloroethane	ND		1.0	0.40	ug/L			03/19/17 16:42	1
Chloroform	ND		0.50	0.25	ug/L			03/19/17 16:42	1

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

TestAmerica Job ID: 440-179681-1

Client Sample ID: QCTB
Date Collected: 03/15/17 00:01
Date Received: 03/15/17 20:30

Lab Sample ID: 440-179681-8
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		0.50	0.25	ug/L			03/19/17 16:42	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/19/17 16:42	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/19/17 16:42	1
Dibromochloromethane	ND		0.50	0.25	ug/L			03/19/17 16:42	1
Dibromomethane	ND		0.50	0.25	ug/L			03/19/17 16:42	1
Bromodichloromethane	ND		0.50	0.25	ug/L			03/19/17 16:42	1
Dichlorodifluoromethane	ND	*	1.0	0.40	ug/L			03/19/17 16:42	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			03/19/17 16:42	1
Ethylbenzene	ND		0.50	0.25	ug/L			03/19/17 16:42	1
Iodomethane	ND		2.0	1.0	ug/L			03/19/17 16:42	1
Isobutyl alcohol	ND		25	13	ug/L			03/19/17 16:42	1
m,p-Xylene	ND		1.0	0.50	ug/L			03/19/17 16:42	1
Methylene Chloride	ND		2.0	0.88	ug/L			03/19/17 16:42	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			03/19/17 16:42	1
Naphthalene	ND		1.0	0.40	ug/L			03/19/17 16:42	1
o-Xylene	ND		0.50	0.25	ug/L			03/19/17 16:42	1
Propionitrile	ND		20	10	ug/L			03/19/17 16:42	1
Styrene	ND		0.50	0.25	ug/L			03/19/17 16:42	1
t-Butanol	ND		10	5.0	ug/L			03/19/17 16:42	1
Tetrachloroethene	ND		0.50	0.25	ug/L			03/19/17 16:42	1
Tetrahydrofuran	ND		10	5.0	ug/L			03/19/17 16:42	1
Toluene	ND		0.50	0.25	ug/L			03/19/17 16:42	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/19/17 16:42	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/19/17 16:42	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			03/19/17 16:42	1
Trichloroethene	ND		0.50	0.25	ug/L			03/19/17 16:42	1
Trichlorofluoromethane	ND	*	0.50	0.25	ug/L			03/19/17 16:42	1
Vinyl acetate	ND		4.0	2.0	ug/L			03/19/17 16:42	1
Vinyl chloride	ND		0.50	0.25	ug/L			03/19/17 16:42	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			03/19/17 16:42	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			03/19/17 16:42	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			03/19/17 16:42	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*11*	*T J*	*ug/L*		*6.99*			*03/19/17 16:42*	*1*
Unknown	*41*	*T J*	*ug/L*		*16.45*			*03/19/17 16:42*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*101*		*80 - 128*		*03/21/17 15:06*	*1*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*		*03/21/17 15:06*	*1*
Toluene-d8 (Surr)	*112*		*80 - 128*		*03/19/17 16:42*	*1*
4-Bromofluorobenzene (Surr)	*92*		*80 - 120*		*03/19/17 16:42*	*1*
Dibromofluoromethane (Surr)	*115*		*76 - 132*		*03/21/17 15:06*	*1*
Dibromofluoromethane (Surr)	*122*		*76 - 132*		*03/19/17 16:42*	*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			03/23/17 18:39	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			03/23/17 18:39	1
Methyl methacrylate	ND		2.0	1.0	ug/L			03/23/17 18:39	1

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

TestAmerica Job ID: 440-179681-1

Client Sample ID: QCTB
Date Collected: 03/15/17 00:01
Date Received: 03/15/17 20:30

Lab Sample ID: 440-179681-8
Matrix: Water

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	6.8	T J	ug/L		6.99			03/23/17 18:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	103		80 - 128		03/23/17 18:39	1
4-Bromofluorobenzene (Surr)	93		80 - 120		03/23/17 18:39	1
Dibromofluoromethane (Surr)	105		76 - 132		03/23/17 18:39	1

Method Summary

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

TestAmerica Job ID: 440-179681-1

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 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

Client Sample ID: DW-2

Lab Sample ID: 440-179681-1

Date Collected: 03/15/17 09:40

Matrix: Water

Date Received: 03/15/17 20:30

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	394787	03/18/17 18:17	WC	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	395656	03/23/17 10:37	RM	TAL IRV
Total/NA	Prep	3520C			1020 mL	1.0 mL	395160	03/21/17 07:40	JC1	TAL IRV
Total/NA	Analysis	8270C		1			395495	03/22/17 17:44	HN	TAL IRV
Total/NA	Analysis	300.0		5			394324	03/16/17 14:29	NTN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	395037	03/20/17 14:21	K1E	TAL IRV
Total Recoverable	Analysis	6010B		1			395213	03/21/17 09:11	EN	TAL IRV
Total/NA	Analysis	350.1		1	0.8 mL	8 mL	394518	03/16/17 19:10	EN	TAL IRV
Total/NA	Analysis	410.4		1	0.625 mL	2.5 mL	395979	03/24/17 12:11	HTL	TAL IRV
Total/NA	Analysis	SM 2320B		1			394543	03/16/17 14:34	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	395418	03/22/17 08:58	XL	TAL IRV
Total/NA	Analysis	SM 5310C		1	100 mL	100 mL	394835	03/18/17 21:27	YZ	TAL IRV

Client Sample ID: DW-3

Lab Sample ID: 440-179681-2

Date Collected: 03/15/17 10:58

Matrix: Water

Date Received: 03/15/17 20:30

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	394787	03/18/17 18:47	WC	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	395656	03/23/17 15:05	RM	TAL IRV
Total/NA	Prep	3520C			1015 mL	1.0 mL	395160	03/21/17 07:40	JC1	TAL IRV
Total/NA	Analysis	8270C		1			395495	03/22/17 18:06	HN	TAL IRV
Total/NA	Analysis	300.0		5			394324	03/16/17 22:01	NTN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	395037	03/20/17 14:21	K1E	TAL IRV
Total Recoverable	Analysis	6010B		1			395213	03/21/17 09:21	EN	TAL IRV
Total/NA	Analysis	350.1		1	0.8 mL	8 mL	394518	03/16/17 19:15	EN	TAL IRV
Total/NA	Analysis	410.4		1	0.625 mL	2.5 mL	395979	03/24/17 12:11	HTL	TAL IRV
Total/NA	Analysis	SM 2320B		1			394543	03/16/17 14:50	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	395418	03/22/17 08:58	XL	TAL IRV
Total/NA	Analysis	SM 5310C		1	100 mL	100 mL	394835	03/18/17 21:38	YZ	TAL IRV

Client Sample ID: PZ-4

Lab Sample ID: 440-179681-3

Date Collected: 03/15/17 12:44

Matrix: Water

Date Received: 03/15/17 20:30

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	394787	03/18/17 19:16	WC	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	395656	03/23/17 16:11	RM	TAL IRV
Total/NA	Prep	3520C			1005 mL	1.0 mL	395160	03/21/17 07:40	JC1	TAL IRV
Total/NA	Analysis	8270C		1			395495	03/22/17 18:28	HN	TAL IRV
Total/NA	Analysis	300.0		5			394324	03/16/17 23:12	NTN	TAL IRV

Client Sample ID: PZ-4

Lab Sample ID: 440-179681-3

Date Collected: 03/15/17 12:44

Matrix: Water

Date Received: 03/15/17 20:30

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	395037	03/20/17 14:21	K1E	TAL IRV
Total Recoverable	Analysis	6010B		1			395213	03/21/17 09:23	EN	TAL IRV
Total/NA	Analysis	350.1		1	0.8 mL	8 mL	394518	03/16/17 19:21	EN	TAL IRV
Total/NA	Analysis	410.4		1	0.625 mL	2.5 mL	395979	03/24/17 12:12	HTL	TAL IRV
Total/NA	Analysis	SM 2320B		1			394543	03/16/17 14:59	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	395418	03/22/17 08:58	XL	TAL IRV
Total/NA	Analysis	SM 5310C		1	100 mL	100 mL	394835	03/18/17 21:50	YZ	TAL IRV

Client Sample ID: MW-2A

Lab Sample ID: 440-179681-4

Date Collected: 03/15/17 09:00

Matrix: Water

Date Received: 03/15/17 20:30

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	394787	03/18/17 19:46	WC	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	395656	03/23/17 16:40	RM	TAL IRV
Total/NA	Prep	3520C			1020 mL	1.0 mL	395160	03/21/17 07:40	JC1	TAL IRV
Total/NA	Analysis	8270C		1			395495	03/22/17 18:50	HN	TAL IRV
Total/NA	Analysis	300.0		100			394324	03/16/17 13:29	NTN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	395037	03/20/17 14:21	K1E	TAL IRV
Total Recoverable	Analysis	6010B		1			395213	03/21/17 09:26	EN	TAL IRV
Total/NA	Analysis	350.1		1	0.8 mL	8 mL	394518	03/16/17 19:26	EN	TAL IRV
Total/NA	Analysis	410.4		1	0.625 mL	2.5 mL	395979	03/24/17 12:12	HTL	TAL IRV
Total/NA	Analysis	SM 2320B		1			394543	03/16/17 15:07	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	395418	03/22/17 08:58	XL	TAL IRV
Total/NA	Analysis	SM 5310C		1	100 mL	100 mL	394835	03/18/17 22:07	YZ	TAL IRV

Client Sample ID: MW-2B

Lab Sample ID: 440-179681-5

Date Collected: 03/15/17 10:35

Matrix: Water

Date Received: 03/15/17 20:30

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	394787	03/18/17 20:15	WC	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	395656	03/23/17 17:10	RM	TAL IRV
Total/NA	Prep	3520C			930 mL	1.0 mL	395160	03/21/17 07:40	JC1	TAL IRV
Total/NA	Analysis	8270C		1			395495	03/22/17 19:13	HN	TAL IRV
Total/NA	Analysis	300.0		5			394324	03/16/17 22:49	NTN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	395037	03/20/17 14:21	K1E	TAL IRV
Total Recoverable	Analysis	6010B		1			395213	03/21/17 09:37	EN	TAL IRV
Total/NA	Analysis	350.1		1	0.8 mL	8 mL	394518	03/16/17 19:31	EN	TAL IRV
Total/NA	Analysis	410.4		1	0.625 mL	2.5 mL	395979	03/24/17 12:12	HTL	TAL IRV
Total/NA	Analysis	SM 2320B		1			394543	03/16/17 15:17	YZ	TAL IRV

Client Sample ID: MW-2B

Lab Sample ID: 440-179681-5

Date Collected: 03/15/17 10:35

Matrix: Water

Date Received: 03/15/17 20:30

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	395418	03/22/17 08:58	XL	TAL IRV
Total/NA	Analysis	SM 5310C		1	100 mL	100 mL	394835	03/18/17 22:43	YZ	TAL IRV

Client Sample ID: DW-4

Lab Sample ID: 440-179681-6

Date Collected: 03/15/17 12:30

Matrix: Water

Date Received: 03/15/17 20:30

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	394787	03/18/17 20:45	WC	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	395656	03/23/17 17:40	RM	TAL IRV
Total/NA	Prep	3520C			930 mL	1.0 mL	395160	03/21/17 07:40	JC1	TAL IRV
Total/NA	Analysis	8270C		1			395495	03/22/17 19:35	HN	TAL IRV
Total/NA	Analysis	300.0		200			394324	03/16/17 13:53	NTN	TAL IRV
Total/NA	Analysis	300.0		10			394324	03/16/17 23:00	NTN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	395037	03/20/17 14:21	K1E	TAL IRV
Total Recoverable	Analysis	6010B		1			395213	03/21/17 09:39	EN	TAL IRV
Total/NA	Analysis	350.1		1	0.8 mL	8 mL	394518	03/16/17 19:37	EN	TAL IRV
Total/NA	Analysis	410.4		1	0.625 mL	2.5 mL	395979	03/24/17 12:12	HTL	TAL IRV
Total/NA	Analysis	SM 2320B		1			394543	03/16/17 15:26	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	395418	03/22/17 08:58	XL	TAL IRV
Total/NA	Analysis	SM 5310C		1	100 mL	100 mL	394835	03/18/17 22:55	YZ	TAL IRV

Client Sample ID: QCAB

Lab Sample ID: 440-179681-7

Date Collected: 03/15/17 00:01

Matrix: Water

Date Received: 03/15/17 20:30

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	395144	03/21/17 14:38	WC	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	394847	03/19/17 16:12	WC	TAL IRV
Total/NA	Analysis	8260B	RA	1	10 mL	10 mL	395656	03/23/17 18:10	RM	TAL IRV

Client Sample ID: QCTB

Lab Sample ID: 440-179681-8

Date Collected: 03/15/17 00:01

Matrix: Water

Date Received: 03/15/17 20:30

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	395144	03/21/17 15:06	WC	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	394847	03/19/17 16:42	WC	TAL IRV
Total/NA	Analysis	8260B	RA	1	10 mL	10 mL	395656	03/23/17 18:39	RM	TAL IRV

Laboratory References:

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

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

Lab Sample ID: MB 440-394787/3
Matrix: Water
Analysis Batch: 394787

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			03/18/17 10:23	1
Acrylonitrile	ND		50	1.0	ug/L			03/18/17 10:23	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*108*		*80 - 128*		*03/18/17 10:23*	*1*
4-Bromofluorobenzene (Surr)	*87*		*80 - 120*		*03/18/17 10:23*	*1*
Dibromofluoromethane (Surr)	*119*		*76 - 132*		*03/18/17 10:23*	*1*

Lab Sample ID: LCS 440-394787/4
Matrix: Water
Analysis Batch: 394787

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	16.2	J	ug/L		65	10 - 145		
Acrylonitrile			250	220		ug/L		88	48 - 140		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*110*		*80 - 128*
4-Bromofluorobenzene (Surr)	*85*		*80 - 120*
Dibromofluoromethane (Surr)	*113*		*76 - 132*

Lab Sample ID: LCSD 440-394787/5
Matrix: Water
Analysis Batch: 394787

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
Acrolein			25.0	18.5	J	ug/L		74	10 - 145	13	30
Acrylonitrile			250	228		ug/L		91	48 - 140	3	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*114*		*80 - 128*
4-Bromofluorobenzene (Surr)	*89*		*80 - 120*
Dibromofluoromethane (Surr)	*117*		*76 - 132*

Lab Sample ID: 550-79280-D-1 MS
Matrix: Water
Analysis Batch: 394787

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	10.9	J	ug/L		43	10 - 147		
Acrylonitrile	ND		250	199		ug/L		80	38 - 144		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Toluene-d8 (Surr)	*109*		*80 - 128*
4-Bromofluorobenzene (Surr)	*89*		*80 - 120*
Dibromofluoromethane (Surr)	*121*		*76 - 132*

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

Lab Sample ID: 550-79280-D-1 MSD
Matrix: Water
Analysis Batch: 394787

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	9.19	J	ug/L		37	10 - 147	17	40
Acrylonitrile	ND		250	209		ug/L		84	38 - 144	5	40

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*110*		*80 - 128*
4-Bromofluorobenzene (Surr)	*86*		*80 - 120*
Dibromofluoromethane (Surr)	*118*		*76 - 132*

Lab Sample ID: MB 440-394847/3
Matrix: Water
Analysis Batch: 394847

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			03/19/17 10:53	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			03/19/17 10:53	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			03/19/17 10:53	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			03/19/17 10:53	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			03/19/17 10:53	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			03/19/17 10:53	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			03/19/17 10:53	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			03/19/17 10:53	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			03/19/17 10:53	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			03/19/17 10:53	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			03/19/17 10:53	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			03/19/17 10:53	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			03/19/17 10:53	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			03/19/17 10:53	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			03/19/17 10:53	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			03/19/17 10:53	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			03/19/17 10:53	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			03/19/17 10:53	1
2-Hexanone	ND		5.0	2.5	ug/L			03/19/17 10:53	1
Acetone	ND		20	10	ug/L			03/19/17 10:53	1
Acetonitrile	ND		20	10	ug/L			03/19/17 10:53	1
Acrolein	ND		5.0	2.5	ug/L			03/19/17 10:53	1
Acrylonitrile	ND		2.0	1.0	ug/L			03/19/17 10:53	1
Benzene	ND		0.50	0.25	ug/L			03/19/17 10:53	1
Allyl chloride	ND		1.0	0.50	ug/L			03/19/17 10:53	1
Bromoform	ND		1.0	0.40	ug/L			03/19/17 10:53	1
Bromomethane	ND		0.50	0.25	ug/L			03/19/17 10:53	1
Carbon disulfide	ND		1.0	0.50	ug/L			03/19/17 10:53	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			03/19/17 10:53	1
Chlorobenzene	ND		0.50	0.25	ug/L			03/19/17 10:53	1
Bromochloromethane	ND		0.50	0.25	ug/L			03/19/17 10:53	1
Chloroethane	ND		1.0	0.40	ug/L			03/19/17 10:53	1
Chloroform	ND		0.50	0.25	ug/L			03/19/17 10:53	1
Chloromethane	ND		0.50	0.25	ug/L			03/19/17 10:53	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/19/17 10:53	1

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

Lab Sample ID: MB 440-394847/3
Matrix: Water
Analysis Batch: 394847

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			03/19/17 10:53	1
Dibromochloromethane	ND		0.50	0.25	ug/L			03/19/17 10:53	1
Dibromomethane	ND		0.50	0.25	ug/L			03/19/17 10:53	1
Bromodichloromethane	ND		0.50	0.25	ug/L			03/19/17 10:53	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			03/19/17 10:53	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			03/19/17 10:53	1
Ethylbenzene	ND		0.50	0.25	ug/L			03/19/17 10:53	1
Iodomethane	ND		2.0	1.0	ug/L			03/19/17 10:53	1
Isobutyl alcohol	ND		25	13	ug/L			03/19/17 10:53	1
m,p-Xylene	ND		1.0	0.50	ug/L			03/19/17 10:53	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			03/19/17 10:53	1
Methyl methacrylate	ND		2.0	1.0	ug/L			03/19/17 10:53	1
Methylene Chloride	ND		2.0	0.88	ug/L			03/19/17 10:53	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			03/19/17 10:53	1
Naphthalene	ND		1.0	0.40	ug/L			03/19/17 10:53	1
o-Xylene	ND		0.50	0.25	ug/L			03/19/17 10:53	1
Propionitrile	ND		20	10	ug/L			03/19/17 10:53	1
Styrene	ND		0.50	0.25	ug/L			03/19/17 10:53	1
t-Butanol	ND		10	5.0	ug/L			03/19/17 10:53	1
Tetrachloroethene	ND		0.50	0.25	ug/L			03/19/17 10:53	1
Tetrahydrofuran	ND		10	5.0	ug/L			03/19/17 10:53	1
Toluene	ND		0.50	0.25	ug/L			03/19/17 10:53	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/19/17 10:53	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/19/17 10:53	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			03/19/17 10:53	1
Trichloroethene	ND		0.50	0.25	ug/L			03/19/17 10:53	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			03/19/17 10:53	1
Vinyl acetate	ND		4.0	2.0	ug/L			03/19/17 10:53	1
Vinyl chloride	ND		0.50	0.25	ug/L			03/19/17 10:53	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			03/19/17 10:53	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			03/19/17 10:53	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			03/19/17 10:53	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*44.1*	*T J*	*ug/L*		*16.24*			*03/19/17 10:53*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*113*		*80 - 128*		*03/19/17 10:53*	*1*
4-Bromofluorobenzene (Surr)	*93*		*80 - 120*		*03/19/17 10:53*	*1*
Dibromofluoromethane (Surr)	*121*		*76 - 132*		*03/19/17 10:53*	*1*

Lab Sample ID: LCS 440-394847/4
Matrix: Water
Analysis Batch: 394847

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	26.9		ug/L		108	63 - 130

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

Lab Sample ID: LCS 440-394847/4
Matrix: Water
Analysis Batch: 394847

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	25.0	29.4		ug/L		118	60 - 141
1,1,1-Trichloroethane	25.0	35.8	*	ug/L		143	70 - 130
1,1,2,2-Tetrachloroethane	25.0	20.8		ug/L		83	63 - 130
1,1,2-Trichloroethane	25.0	22.8		ug/L		91	70 - 130
1,1-Dichloroethane	25.0	26.4		ug/L		105	64 - 130
1,1-Dichloroethene	25.0	25.8		ug/L		103	70 - 130
1,1-Dichloropropene	25.0	28.3		ug/L		113	70 - 130
1,2,4-Trichlorobenzene	25.0	25.7		ug/L		103	60 - 140
1,2-Dibromo-3-Chloropropane	25.0	28.8		ug/L		115	52 - 140
1,2-Dichlorobenzene	25.0	26.3		ug/L		105	70 - 130
1,2-Dichloroethane	25.0	32.1		ug/L		128	57 - 138
1,2-Dichloropropane	25.0	22.9		ug/L		92	67 - 130
1,3-Dichlorobenzene	25.0	25.5		ug/L		102	70 - 130
1,3-Dichloropropane	25.0	21.5		ug/L		86	70 - 130
1,4-Dichlorobenzene	25.0	26.5		ug/L		106	70 - 130
2,2-Dichloropropane	25.0	38.8	*	ug/L		155	68 - 141
2-Hexanone	25.0	25.6		ug/L		102	10 - 150
Acetone	25.0	33.0		ug/L		132	10 - 150
Acrolein	25.0	16.9		ug/L		67	10 - 145
Acrylonitrile	250	232		ug/L		93	48 - 140
Benzene	25.0	23.4		ug/L		94	68 - 130
Bromoform	25.0	29.7		ug/L		119	60 - 148
Bromomethane	25.0	27.6		ug/L		111	64 - 139
Carbon disulfide	25.0	22.7		ug/L		91	52 - 136
Carbon tetrachloride	25.0	40.1	*	ug/L		160	60 - 150
Chlorobenzene	25.0	23.5		ug/L		94	70 - 130
Bromochloromethane	25.0	29.3		ug/L		117	70 - 130
Chloroethane	25.0	23.3		ug/L		93	64 - 135
Chloroform	25.0	29.6		ug/L		118	70 - 130
Chloromethane	25.0	25.0		ug/L		100	47 - 140
cis-1,2-Dichloroethene	25.0	25.5		ug/L		102	70 - 133
cis-1,3-Dichloropropene	25.0	21.3		ug/L		85	70 - 133
Dibromochloromethane	25.0	28.9		ug/L		116	69 - 145
Dibromomethane	25.0	27.0		ug/L		108	70 - 130
Bromodichloromethane	25.0	30.0		ug/L		120	70 - 132
Dichlorodifluoromethane	25.0	40.6	*	ug/L		162	29 - 150
Ethylbenzene	25.0	23.9		ug/L		96	70 - 130
m,p-Xylene	25.0	24.7		ug/L		99	70 - 130
Methylene Chloride	25.0	22.1		ug/L		88	52 - 130
Methyl tert-butyl ether	25.0	22.9		ug/L		92	63 - 131
Naphthalene	25.0	23.5		ug/L		94	60 - 140
o-Xylene	25.0	24.0		ug/L		96	70 - 130
Styrene	25.0	22.7		ug/L		91	70 - 134
t-Butanol	250	283		ug/L		113	70 - 130
Tetrachloroethene	25.0	29.3		ug/L		117	70 - 130
Toluene	25.0	22.7		ug/L		91	70 - 130
trans-1,2-Dichloroethene	25.0	26.3		ug/L		105	70 - 130
trans-1,3-Dichloropropene	25.0	22.9		ug/L		92	70 - 132

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

Lab Sample ID: LCS 440-394847/4
Matrix: Water
Analysis Batch: 394847

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Trichloroethene	25.0	30.9		ug/L		124	70 - 130
Trichlorofluoromethane	25.0	42.3	*	ug/L		169	60 - 150
Vinyl acetate	25.0	23.5		ug/L		94	48 - 140
Vinyl chloride	25.0	25.2		ug/L		101	59 - 133
1,2-Dibromoethane (EDB)	25.0	23.9		ug/L		96	70 - 130
2-Butanone (MEK)	25.0	24.1		ug/L		97	44 - 150
4-Methyl-2-pentanone (MIBK)	25.0	25.1		ug/L		100	59 - 149

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*100*		*80 - 128*
4-Bromofluorobenzene (Surr)	*89*		*80 - 120*
Dibromofluoromethane (Surr)	*120*		*76 - 132*

Lab Sample ID: 440-179254-B-1 MS
Matrix: Water
Analysis Batch: 394847

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	26.4		ug/L		105	60 - 130
1,1,1,2-Tetrachloroethane	ND		25.0	31.7		ug/L		127	60 - 149
1,1,1-Trichloroethane	ND	F1 *	25.0	33.5	F1	ug/L		134	70 - 130
1,1,2,2-Tetrachloroethane	ND		25.0	20.0		ug/L		80	63 - 130
1,1,2-Trichloroethane	ND		25.0	24.2		ug/L		97	70 - 130
1,1-Dichloroethane	ND		25.0	24.9		ug/L		100	65 - 130
1,1-Dichloroethene	ND		25.0	21.2		ug/L		85	70 - 130
1,1-Dichloropropene	ND		25.0	26.9		ug/L		107	64 - 130
1,2,4-Trichlorobenzene	ND		25.0	24.8		ug/L		99	60 - 140
1,2-Dibromo-3-Chloropropane	ND		25.0	27.2		ug/L		109	48 - 140
1,2-Dichlorobenzene	ND		25.0	25.6		ug/L		103	70 - 130
1,2-Dichloroethane	ND		25.0	30.6		ug/L		122	56 - 146
1,2-Dichloropropane	ND		25.0	22.6		ug/L		90	69 - 130
1,3-Dichlorobenzene	ND		25.0	25.2		ug/L		101	70 - 130
1,3-Dichloropropane	ND		25.0	23.9		ug/L		96	70 - 130
1,4-Dichlorobenzene	ND		25.0	24.9		ug/L		100	70 - 130
2,2-Dichloropropane	ND	F1 *	25.0	35.1	F1	ug/L		140	69 - 138
2-Hexanone	ND		25.0	27.0		ug/L		108	10 - 150
Acetone	ND		25.0	28.5		ug/L		114	10 - 150
Acrolein	ND		25.0	16.7		ug/L		67	10 - 147
Acrylonitrile	ND		250	211		ug/L		85	38 - 144
Benzene	ND		25.0	21.6		ug/L		86	66 - 130
Bromoform	ND		25.0	33.8		ug/L		135	59 - 150
Bromomethane	ND		25.0	24.2		ug/L		97	62 - 131
Carbon disulfide	ND		25.0	21.1		ug/L		84	49 - 140
Carbon tetrachloride	ND	*	25.0	37.3		ug/L		149	60 - 150
Chlorobenzene	ND		25.0	24.9		ug/L		100	70 - 130
Bromochloromethane	ND		25.0	28.1		ug/L		113	70 - 130
Chloroethane	ND		25.0	20.8		ug/L		83	68 - 130
Chloroform	ND		25.0	28.1		ug/L		112	70 - 130

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

Lab Sample ID: 440-179254-B-1 MS
Matrix: Water
Analysis Batch: 394847

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
Chloromethane	ND		25.0	22.4		ug/L		89	39 - 144
cis-1,2-Dichloroethene	ND		25.0	25.7		ug/L		103	70 - 130
cis-1,3-Dichloropropene	ND		25.0	22.8		ug/L		91	70 - 133
Dibromochloromethane	ND		25.0	31.7		ug/L		127	70 - 148
Dibromomethane	ND		25.0	27.0		ug/L		108	70 - 130
Bromodichloromethane	ND		25.0	28.5		ug/L		114	70 - 138
Dichlorodifluoromethane	ND	F1 *	25.0	39.3	F1	ug/L		157	25 - 142
Ethylbenzene	ND		25.0	25.0		ug/L		100	70 - 130
m,p-Xylene	ND		25.0	25.8		ug/L		103	70 - 133
Methylene Chloride	ND		25.0	21.0		ug/L		84	52 - 130
Methyl tert-butyl ether	ND		25.0	23.2		ug/L		93	70 - 130
Naphthalene	ND		25.0	22.8		ug/L		91	60 - 140
o-Xylene	ND		25.0	26.4		ug/L		106	70 - 133
Styrene	ND		25.0	24.6		ug/L		99	29 - 150
t-Butanol	ND		250	283		ug/L		113	70 - 130
Tetrachloroethene	0.33	J	25.0	32.7		ug/L		129	70 - 137
Toluene	ND		25.0	24.6		ug/L		98	70 - 130
trans-1,2-Dichloroethene	ND		25.0	25.5		ug/L		102	70 - 130
trans-1,3-Dichloropropene	ND		25.0	25.6		ug/L		103	70 - 138
Trichloroethene	ND		25.0	29.4		ug/L		118	70 - 130
Trichlorofluoromethane	ND	F1 *	25.0	40.0	F1	ug/L		160	60 - 150
Vinyl acetate	ND		25.0	22.4		ug/L		90	23 - 150
Vinyl chloride	ND		25.0	23.0		ug/L		92	50 - 137
1,2-Dibromoethane (EDB)	ND		25.0	27.1		ug/L		108	70 - 131
2-Butanone (MEK)	ND		25.0	21.6		ug/L		86	48 - 140
4-Methyl-2-pentanone (MIBK)	ND		25.0	26.7		ug/L		107	52 - 150

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Toluene-d8 (Surr)	*108*		*80 - 128*
4-Bromofluorobenzene (Surr)	*88*		*80 - 120*
Dibromofluoromethane (Surr)	*116*		*76 - 132*

Lab Sample ID: 440-179254-B-1 MSD
Matrix: Water
Analysis Batch: 394847

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	26.8		ug/L		107	60 - 130	2	30
1,1,1,2-Tetrachloroethane	ND		25.0	31.6		ug/L		126	60 - 149	0	20
1,1,1-Trichloroethane	ND	F1 *	25.0	33.9	F1	ug/L		136	70 - 130	1	20
1,1,2,2-Tetrachloroethane	ND		25.0	20.4		ug/L		82	63 - 130	2	30
1,1,2-Trichloroethane	ND		25.0	24.5		ug/L		98	70 - 130	1	25
1,1-Dichloroethane	ND		25.0	23.8		ug/L		95	65 - 130	5	20
1,1-Dichloroethene	ND		25.0	24.5		ug/L		98	70 - 130	14	20
1,1-Dichloropropene	ND		25.0	26.8		ug/L		107	64 - 130	0	20
1,2,4-Trichlorobenzene	ND		25.0	25.5		ug/L		102	60 - 140	3	20
1,2-Dibromo-3-Chloropropane	ND		25.0	26.4		ug/L		106	48 - 140	3	30
1,2-Dichlorobenzene	ND		25.0	25.0		ug/L		100	70 - 130	3	20

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

Lab Sample ID: 440-179254-B-1 MSD
Matrix: Water
Analysis Batch: 394847

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-Dichloroethane	ND		25.0	31.5		ug/L		126	56 - 146	3	20
1,2-Dichloropropane	ND		25.0	22.6		ug/L		91	69 - 130	0	20
1,3-Dichlorobenzene	ND		25.0	24.9		ug/L		99	70 - 130	1	20
1,3-Dichloropropane	ND		25.0	23.6		ug/L		94	70 - 130	2	25
1,4-Dichlorobenzene	ND		25.0	25.3		ug/L		101	70 - 130	2	20
2,2-Dichloropropane	ND	F1 *	25.0	34.2		ug/L		137	69 - 138	2	25
2-Hexanone	ND		25.0	26.9		ug/L		108	10 - 150	0	35
Acetone	ND		25.0	29.8		ug/L		119	10 - 150	5	35
Acrolein	ND		25.0	18.3		ug/L		73	10 - 147	9	40
Acrylonitrile	ND		250	222		ug/L		89	38 - 144	5	40
Benzene	ND		25.0	23.0		ug/L		92	66 - 130	6	20
Bromoform	ND		25.0	33.0		ug/L		132	59 - 150	2	25
Bromomethane	ND		25.0	25.9		ug/L		104	62 - 131	7	25
Carbon disulfide	ND		25.0	21.3		ug/L		85	49 - 140	1	20
Carbon tetrachloride	ND	*	25.0	36.6		ug/L		146	60 - 150	2	25
Chlorobenzene	ND		25.0	24.5		ug/L		98	70 - 130	2	20
Bromochloromethane	ND		25.0	27.7		ug/L		111	70 - 130	1	25
Chloroethane	ND		25.0	22.6		ug/L		90	68 - 130	8	25
Chloroform	ND		25.0	28.7		ug/L		115	70 - 130	2	20
Chloromethane	ND		25.0	23.7		ug/L		95	39 - 144	6	25
cis-1,2-Dichloroethene	ND		25.0	25.8		ug/L		103	70 - 130	0	20
cis-1,3-Dichloropropene	ND		25.0	23.7		ug/L		95	70 - 133	4	20
Dibromochloromethane	ND		25.0	31.1		ug/L		124	70 - 148	2	25
Dibromomethane	ND		25.0	26.7		ug/L		107	70 - 130	1	25
Bromodichloromethane	ND		25.0	29.3		ug/L		117	70 - 138	3	20
Dichlorodifluoromethane	ND	F1 *	25.0	39.6	F1	ug/L		159	25 - 142	1	30
Ethylbenzene	ND		25.0	24.2		ug/L		97	70 - 130	3	20
m,p-Xylene	ND		25.0	25.9		ug/L		103	70 - 133	0	25
Methylene Chloride	ND		25.0	21.5		ug/L		86	52 - 130	2	20
Methyl tert-butyl ether	ND		25.0	23.8		ug/L		95	70 - 130	3	25
Naphthalene	ND		25.0	24.3		ug/L		97	60 - 140	7	30
o-Xylene	ND		25.0	25.5		ug/L		102	70 - 133	4	20
Styrene	ND		25.0	24.2		ug/L		97	29 - 150	2	35
t-Butanol	ND		250	283		ug/L		113	70 - 130	0	25
Tetrachloroethene	0.33	J	25.0	32.0		ug/L		127	70 - 137	2	20
Toluene	ND		25.0	24.7		ug/L		99	70 - 130	1	20
trans-1,2-Dichloroethene	ND		25.0	25.2		ug/L		101	70 - 130	1	20
trans-1,3-Dichloropropene	ND		25.0	25.1		ug/L		101	70 - 138	2	25
Trichloroethene	ND		25.0	29.8		ug/L		119	70 - 130	1	20
Trichlorofluoromethane	ND	F1 *	25.0	39.5	F1	ug/L		158	60 - 150	1	25
Vinyl acetate	ND		25.0	23.9		ug/L		96	23 - 150	6	30
Vinyl chloride	ND		25.0	24.0		ug/L		96	50 - 137	4	30
1,2-Dibromoethane (EDB)	ND		25.0	26.5		ug/L		106	70 - 131	2	25
2-Butanone (MEK)	ND		25.0	24.8		ug/L		99	48 - 140	14	40
4-Methyl-2-pentanone (MIBK)	ND		25.0	26.8		ug/L		107	52 - 150	0	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*110*		*80 - 128*

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

Lab Sample ID: 440-179254-B-1 MSD
Matrix: Water
Analysis Batch: 394847

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

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	87		80 - 120
Dibromofluoromethane (Surr)	116		76 - 132

Lab Sample ID: MB 440-395144/4
Matrix: Water
Analysis Batch: 395144

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			03/21/17 08:39	1
Acrylonitrile	ND		50	1.0	ug/L			03/21/17 08:39	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	100		80 - 128		03/21/17 08:39	1
4-Bromofluorobenzene (Surr)	91		80 - 120		03/21/17 08:39	1
Dibromofluoromethane (Surr)	104		76 - 132		03/21/17 08:39	1

Lab Sample ID: LCS 440-395144/5
Matrix: Water
Analysis Batch: 395144

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	24.8	J	ug/L		99	10 - 145		
Acrylonitrile			250	337		ug/L		135	48 - 140		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	98		80 - 128
4-Bromofluorobenzene (Surr)	88		80 - 120
Dibromofluoromethane (Surr)	104		76 - 132

Lab Sample ID: 440-179775-D-1 MS
Matrix: Water
Analysis Batch: 395144

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	16.6	J	ug/L		66	10 - 147		
Acrylonitrile	ND		250	357		ug/L		143	38 - 144		

Surrogate	MS %Recovery	MS Qualifier	Limits
Toluene-d8 (Surr)	95		80 - 128
4-Bromofluorobenzene (Surr)	88		80 - 120
Dibromofluoromethane (Surr)	105		76 - 132

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

Lab Sample ID: 440-179775-D-1 MSD
Matrix: Water
Analysis Batch: 395144

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	12.3	J	ug/L		49	10 - 147	30	40
Acrylonitrile	ND		250	350		ug/L		140	38 - 144	2	40

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*95*		*80 - 128*
4-Bromofluorobenzene (Surr)	*89*		*80 - 120*
Dibromofluoromethane (Surr)	*103*		*76 - 132*

Lab Sample ID: MB 440-395656/5
Matrix: Water
Analysis Batch: 395656

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			03/23/17 09:07	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			03/23/17 09:07	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			03/23/17 09:07	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			03/23/17 09:07	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			03/23/17 09:07	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			03/23/17 09:07	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			03/23/17 09:07	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			03/23/17 09:07	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			03/23/17 09:07	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			03/23/17 09:07	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			03/23/17 09:07	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			03/23/17 09:07	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			03/23/17 09:07	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			03/23/17 09:07	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			03/23/17 09:07	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			03/23/17 09:07	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			03/23/17 09:07	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			03/23/17 09:07	1
2-Hexanone	ND		5.0	2.5	ug/L			03/23/17 09:07	1
Acetone	ND		20	10	ug/L			03/23/17 09:07	1
Acetonitrile	ND		20	10	ug/L			03/23/17 09:07	1
Acrolein	ND		5.0	2.5	ug/L			03/23/17 09:07	1
Acrylonitrile	ND		2.0	1.0	ug/L			03/23/17 09:07	1
Benzene	ND		0.50	0.25	ug/L			03/23/17 09:07	1
Allyl chloride	ND		1.0	0.50	ug/L			03/23/17 09:07	1
Bromoform	ND		1.0	0.40	ug/L			03/23/17 09:07	1
Bromomethane	ND		0.50	0.25	ug/L			03/23/17 09:07	1
Carbon disulfide	ND		1.0	0.50	ug/L			03/23/17 09:07	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			03/23/17 09:07	1
Chlorobenzene	ND		0.50	0.25	ug/L			03/23/17 09:07	1
Bromochloromethane	ND		0.50	0.25	ug/L			03/23/17 09:07	1
Chloroethane	ND		1.0	0.40	ug/L			03/23/17 09:07	1
Chloroform	ND		0.50	0.25	ug/L			03/23/17 09:07	1
Chloromethane	ND		0.50	0.25	ug/L			03/23/17 09:07	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/23/17 09:07	1

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

Lab Sample ID: MB 440-395656/5
Matrix: Water
Analysis Batch: 395656

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			03/23/17 09:07	1
Dibromochloromethane	ND		0.50	0.25	ug/L			03/23/17 09:07	1
Dibromomethane	ND		0.50	0.25	ug/L			03/23/17 09:07	1
Bromodichloromethane	ND		0.50	0.25	ug/L			03/23/17 09:07	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			03/23/17 09:07	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			03/23/17 09:07	1
Ethylbenzene	ND		0.50	0.25	ug/L			03/23/17 09:07	1
Iodomethane	ND		2.0	1.0	ug/L			03/23/17 09:07	1
Isobutyl alcohol	ND		25	13	ug/L			03/23/17 09:07	1
m,p-Xylene	ND		1.0	0.50	ug/L			03/23/17 09:07	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			03/23/17 09:07	1
Methyl methacrylate	ND		2.0	1.0	ug/L			03/23/17 09:07	1
Methylene Chloride	ND		2.0	0.88	ug/L			03/23/17 09:07	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			03/23/17 09:07	1
Naphthalene	ND		1.0	0.40	ug/L			03/23/17 09:07	1
o-Xylene	ND		0.50	0.25	ug/L			03/23/17 09:07	1
Propionitrile	ND		20	10	ug/L			03/23/17 09:07	1
Styrene	ND		0.50	0.25	ug/L			03/23/17 09:07	1
t-Butanol	ND		10	5.0	ug/L			03/23/17 09:07	1
Tetrachloroethene	ND		0.50	0.25	ug/L			03/23/17 09:07	1
Tetrahydrofuran	ND		10	5.0	ug/L			03/23/17 09:07	1
Toluene	ND		0.50	0.25	ug/L			03/23/17 09:07	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/23/17 09:07	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/23/17 09:07	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			03/23/17 09:07	1
Trichloroethene	ND		0.50	0.25	ug/L			03/23/17 09:07	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			03/23/17 09:07	1
Vinyl acetate	ND		4.0	2.0	ug/L			03/23/17 09:07	1
Vinyl chloride	ND		0.50	0.25	ug/L			03/23/17 09:07	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			03/23/17 09:07	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			03/23/17 09:07	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			03/23/17 09:07	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*7.58*	*T J*	*ug/L*		*16.11*			*03/23/17 09:07*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*103*		*80 - 128*		*03/23/17 09:07*	*1*
4-Bromofluorobenzene (Surr)	*92*		*80 - 120*		*03/23/17 09:07*	*1*
Dibromofluoromethane (Surr)	*103*		*76 - 132*		*03/23/17 09:07*	*1*

Lab Sample ID: LCS 440-395656/6
Matrix: Water
Analysis Batch: 395656

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	26.4		ug/L		106	63 - 130

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

Lab Sample ID: LCS 440-395656/6
Matrix: Water
Analysis Batch: 395656

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	25.0	27.9		ug/L		112	60 - 141
1,1,1-Trichloroethane	25.0	24.6		ug/L		98	70 - 130
1,1,2,2-Tetrachloroethane	25.0	34.9	*	ug/L		139	63 - 130
1,1,2-Trichloroethane	25.0	26.6		ug/L		106	70 - 130
1,1-Dichloroethane	25.0	25.8		ug/L		103	64 - 130
1,1-Dichloroethene	25.0	24.9		ug/L		99	70 - 130
1,1-Dichloropropene	25.0	24.9		ug/L		100	70 - 130
1,2,4-Trichlorobenzene	25.0	28.3		ug/L		113	60 - 140
1,2-Dibromo-3-Chloropropane	25.0	33.0		ug/L		132	52 - 140
1,2-Dichlorobenzene	25.0	26.8		ug/L		107	70 - 130
1,2-Dichloroethane	25.0	25.3		ug/L		101	57 - 138
1,2-Dichloropropane	25.0	25.6		ug/L		102	67 - 130
1,3-Dichlorobenzene	25.0	26.6		ug/L		107	70 - 130
1,3-Dichloropropane	25.0	24.4		ug/L		98	70 - 130
1,4-Dichlorobenzene	25.0	27.3		ug/L		109	70 - 130
2,2-Dichloropropane	25.0	24.1		ug/L		96	68 - 141
2-Hexanone	25.0	25.0		ug/L		100	10 - 150
Acetone	25.0	22.7		ug/L		91	10 - 150
Acrolein	25.0	18.2		ug/L		73	10 - 145
Acrylonitrile	250	280		ug/L		112	48 - 140
Benzene	25.0	23.2		ug/L		93	68 - 130
Bromoform	25.0	27.1		ug/L		109	60 - 148
Bromomethane	25.0	26.7		ug/L		107	64 - 139
Carbon disulfide	25.0	25.0		ug/L		100	52 - 136
Carbon tetrachloride	25.0	25.6		ug/L		102	60 - 150
Chlorobenzene	25.0	25.0		ug/L		100	70 - 130
Bromochloromethane	25.0	26.6		ug/L		107	70 - 130
Chloroethane	25.0	28.7		ug/L		115	64 - 135
Chloroform	25.0	24.4		ug/L		98	70 - 130
Chloromethane	25.0	27.7		ug/L		111	47 - 140
cis-1,2-Dichloroethene	25.0	25.3		ug/L		101	70 - 133
cis-1,3-Dichloropropene	25.0	24.2		ug/L		97	70 - 133
Dibromochloromethane	25.0	26.3		ug/L		105	69 - 145
Dibromomethane	25.0	24.6		ug/L		98	70 - 130
Bromodichloromethane	25.0	24.7		ug/L		99	70 - 132
Dichlorodifluoromethane	25.0	28.3		ug/L		113	29 - 150
Ethylbenzene	25.0	23.6		ug/L		94	70 - 130
m,p-Xylene	25.0	25.8		ug/L		103	70 - 130
Methylene Chloride	25.0	23.6		ug/L		95	52 - 130
Methyl tert-butyl ether	25.0	22.8		ug/L		91	63 - 131
Naphthalene	25.0	26.3		ug/L		105	60 - 140
o-Xylene	25.0	25.0		ug/L		100	70 - 130
Styrene	25.0	23.9		ug/L		96	70 - 134
t-Butanol	250	298		ug/L		119	70 - 130
Tetrachloroethene	25.0	26.5		ug/L		106	70 - 130
Toluene	25.0	23.5		ug/L		94	70 - 130
trans-1,2-Dichloroethene	25.0	26.2		ug/L		105	70 - 130
trans-1,3-Dichloropropene	25.0	23.2		ug/L		93	70 - 132

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

Lab Sample ID: LCS 440-395656/6
Matrix: Water
Analysis Batch: 395656

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Trichloroethene	25.0	22.9		ug/L		92	70 - 130
Trichlorofluoromethane	25.0	28.0		ug/L		112	60 - 150
Vinyl acetate	25.0	26.3		ug/L		105	48 - 140
Vinyl chloride	25.0	28.5		ug/L		114	59 - 133
1,2-Dibromoethane (EDB)	25.0	25.8		ug/L		103	70 - 130
2-Butanone (MEK)	25.0	23.2		ug/L		93	44 - 150
4-Methyl-2-pentanone (MIBK)	25.0	25.6		ug/L		102	59 - 149

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*97*		*80 - 128*
4-Bromofluorobenzene (Surr)	*92*		*80 - 120*
Dibromofluoromethane (Surr)	*102*		*76 - 132*

Lab Sample ID: 440-179681-1 MS
Matrix: Water
Analysis Batch: 395656

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	27.3		ug/L		109	60 - 130
1,1,1,2-Tetrachloroethane	ND		25.0	29.5		ug/L		118	60 - 149
1,1,1-Trichloroethane	ND		25.0	24.7		ug/L		99	70 - 130
1,1,2,2-Tetrachloroethane	ND	F1 *	25.0	34.2	F1	ug/L		137	63 - 130
1,1,2-Trichloroethane	ND		25.0	28.1		ug/L		112	70 - 130
1,1-Dichloroethane	ND		25.0	25.9		ug/L		104	65 - 130
1,1-Dichloroethene	ND		25.0	24.7		ug/L		99	70 - 130
1,1-Dichloropropene	ND		25.0	25.1		ug/L		100	64 - 130
1,2,4-Trichlorobenzene	ND		25.0	30.1		ug/L		120	60 - 140
1,2-Dibromo-3-Chloropropane	ND	F1	25.0	33.8		ug/L		135	48 - 140
1,2-Dichlorobenzene	ND		25.0	27.3		ug/L		109	70 - 130
1,2-Dichloroethane	ND		25.0	25.5		ug/L		102	56 - 146
1,2-Dichloropropane	ND		25.0	26.0		ug/L		104	69 - 130
1,3-Dichlorobenzene	ND		25.0	26.5		ug/L		106	70 - 130
1,3-Dichloropropane	ND		25.0	25.5		ug/L		102	70 - 130
1,4-Dichlorobenzene	ND		25.0	27.7		ug/L		111	70 - 130
2,2-Dichloropropane	ND		25.0	24.9		ug/L		99	69 - 138
2-Hexanone	ND		25.0	26.1		ug/L		104	10 - 150
Acetone	ND		25.0	22.2		ug/L		89	10 - 150
Acrolein	ND		25.0	19.0		ug/L		76	10 - 147
Acrylonitrile	ND		250	288		ug/L		115	38 - 144
Benzene	ND		25.0	23.5		ug/L		94	66 - 130
Bromoform	ND		25.0	29.1		ug/L		117	59 - 150
Bromomethane	ND		25.0	25.2		ug/L		101	62 - 131
Carbon disulfide	ND		25.0	25.0		ug/L		100	49 - 140
Carbon tetrachloride	ND		25.0	25.8		ug/L		103	60 - 150
Chlorobenzene	ND		25.0	26.6		ug/L		107	70 - 130
Bromochloromethane	ND		25.0	27.0		ug/L		108	70 - 130
Chloroethane	ND		25.0	28.3		ug/L		113	68 - 130
Chloroform	ND		25.0	24.7		ug/L		99	70 - 130

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

Lab Sample ID: 440-179681-1 MS
Matrix: Water
Analysis Batch: 395656

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
Chloromethane	ND		25.0	30.0		ug/L		120	39 - 144
cis-1,2-Dichloroethene	ND		25.0	25.7		ug/L		103	70 - 130
cis-1,3-Dichloropropene	ND		25.0	26.1		ug/L		105	70 - 133
Dibromochloromethane	ND		25.0	27.8		ug/L		111	70 - 148
Dibromomethane	ND		25.0	25.0		ug/L		100	70 - 130
Bromodichloromethane	ND		25.0	25.7		ug/L		103	70 - 138
Dichlorodifluoromethane	ND		25.0	27.4		ug/L		110	25 - 142
Ethylbenzene	ND		25.0	24.6		ug/L		99	70 - 130
m,p-Xylene	ND		25.0	26.7		ug/L		107	70 - 133
Methylene Chloride	ND		25.0	27.0		ug/L		108	52 - 130
Methyl tert-butyl ether	ND		25.0	23.2		ug/L		93	70 - 130
Naphthalene	ND		25.0	27.7		ug/L		111	60 - 140
o-Xylene	ND		25.0	26.1		ug/L		104	70 - 133
Styrene	ND		25.0	24.9		ug/L		99	29 - 150
t-Butanol	ND		250	308		ug/L		123	70 - 130
Tetrachloroethene	ND		25.0	27.9		ug/L		112	70 - 137
Toluene	ND		25.0	24.7		ug/L		99	70 - 130
trans-1,2-Dichloroethene	ND		25.0	26.4		ug/L		106	70 - 130
trans-1,3-Dichloropropene	ND		25.0	24.9		ug/L		100	70 - 138
Trichloroethene	ND		25.0	23.1		ug/L		92	70 - 130
Trichlorofluoromethane	ND		25.0	27.8		ug/L		111	60 - 150
Vinyl acetate	ND		25.0	27.7		ug/L		111	23 - 150
Vinyl chloride	ND		25.0	29.0		ug/L		116	50 - 137
1,2-Dibromoethane (EDB)	ND		25.0	27.5		ug/L		110	70 - 131
2-Butanone (MEK)	ND		25.0	23.6		ug/L		95	48 - 140
4-Methyl-2-pentanone (MIBK)	ND		25.0	27.2		ug/L		109	52 - 150

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Toluene-d8 (Surr)	*102*		*80 - 128*
4-Bromofluorobenzene (Surr)	*90*		*80 - 120*
Dibromofluoromethane (Surr)	*101*		*76 - 132*

Lab Sample ID: 440-179681-1 MSD
Matrix: Water
Analysis Batch: 395656

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	28.4		ug/L		114	60 - 130	4	30
1,1,1,2-Tetrachloroethane	ND		25.0	29.6		ug/L		119	60 - 149	0	20
1,1,1-Trichloroethane	ND		25.0	24.4		ug/L		97	70 - 130	1	20
1,1,2,2-Tetrachloroethane	ND	F1 *	25.0	36.7	F1	ug/L		147	63 - 130	7	30
1,1,2-Trichloroethane	ND		25.0	29.0		ug/L		116	70 - 130	3	25
1,1-Dichloroethane	ND		25.0	25.6		ug/L		102	65 - 130	1	20
1,1-Dichloroethene	ND		25.0	24.3		ug/L		97	70 - 130	2	20
1,1-Dichloropropene	ND		25.0	25.0		ug/L		100	64 - 130	1	20
1,2,4-Trichlorobenzene	ND		25.0	29.7		ug/L		119	60 - 140	1	20
1,2-Dibromo-3-Chloropropane	ND	F1	25.0	36.1	F1	ug/L		144	48 - 140	7	30
1,2-Dichlorobenzene	ND		25.0	27.6		ug/L		110	70 - 130	1	20

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

Lab Sample ID: 440-179681-1 MSD
Matrix: Water
Analysis Batch: 395656

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-Dichloroethane	ND		25.0	25.6		ug/L		102	56 - 146	0	20
1,2-Dichloropropane	ND		25.0	26.1		ug/L		105	69 - 130	0	20
1,3-Dichlorobenzene	ND		25.0	26.3		ug/L		105	70 - 130	1	20
1,3-Dichloropropane	ND		25.0	26.7		ug/L		107	70 - 130	5	25
1,4-Dichlorobenzene	ND		25.0	27.7		ug/L		111	70 - 130	0	20
2,2-Dichloropropane	ND		25.0	24.5		ug/L		98	69 - 138	1	25
2-Hexanone	ND		25.0	27.6		ug/L		110	10 - 150	6	35
Acetone	ND		25.0	24.3		ug/L		97	10 - 150	9	35
Acrolein	ND		25.0	21.3		ug/L		85	10 - 147	12	40
Acrylonitrile	ND		250	295		ug/L		118	38 - 144	2	40
Benzene	ND		25.0	23.3		ug/L		93	66 - 130	1	20
Bromoform	ND		25.0	30.1		ug/L		120	59 - 150	3	25
Bromomethane	ND		25.0	25.4		ug/L		102	62 - 131	1	25
Carbon disulfide	ND		25.0	24.5		ug/L		98	49 - 140	2	20
Carbon tetrachloride	ND		25.0	25.7		ug/L		103	60 - 150	0	25
Chlorobenzene	ND		25.0	26.6		ug/L		107	70 - 130	0	20
Bromochloromethane	ND		25.0	27.7		ug/L		111	70 - 130	2	25
Chloroethane	ND		25.0	27.3		ug/L		109	68 - 130	4	25
Chloroform	ND		25.0	24.6		ug/L		98	70 - 130	0	20
Chloromethane	ND		25.0	29.7		ug/L		119	39 - 144	1	25
cis-1,2-Dichloroethene	ND		25.0	25.5		ug/L		102	70 - 130	1	20
cis-1,3-Dichloropropene	ND		25.0	25.6		ug/L		102	70 - 133	2	20
Dibromochloromethane	ND		25.0	28.6		ug/L		114	70 - 148	3	25
Dibromomethane	ND		25.0	25.9		ug/L		104	70 - 130	4	25
Bromodichloromethane	ND		25.0	25.4		ug/L		102	70 - 138	1	20
Dichlorodifluoromethane	ND		25.0	27.8		ug/L		111	25 - 142	2	30
Ethylbenzene	ND		25.0	24.5		ug/L		98	70 - 130	1	20
m,p-Xylene	ND		25.0	26.7		ug/L		107	70 - 133	0	25
Methylene Chloride	ND		25.0	26.6		ug/L		106	52 - 130	2	20
Methyl tert-butyl ether	ND		25.0	23.9		ug/L		95	70 - 130	3	25
Naphthalene	ND		25.0	28.7		ug/L		115	60 - 140	4	30
o-Xylene	ND		25.0	26.4		ug/L		106	70 - 133	1	20
Styrene	ND		25.0	24.8		ug/L		99	29 - 150	0	35
t-Butanol	ND		250	302		ug/L		121	70 - 130	2	25
Tetrachloroethene	ND		25.0	27.8		ug/L		111	70 - 137	0	20
Toluene	ND		25.0	24.7		ug/L		99	70 - 130	0	20
trans-1,2-Dichloroethene	ND		25.0	25.9		ug/L		103	70 - 130	2	20
trans-1,3-Dichloropropene	ND		25.0	25.5		ug/L		102	70 - 138	2	25
Trichloroethene	ND		25.0	22.6		ug/L		90	70 - 130	2	20
Trichlorofluoromethane	ND		25.0	27.0		ug/L		108	60 - 150	3	25
Vinyl acetate	ND		25.0	28.3		ug/L		113	23 - 150	2	30
Vinyl chloride	ND		25.0	28.5		ug/L		114	50 - 137	2	30
1,2-Dibromoethane (EDB)	ND		25.0	28.7		ug/L		115	70 - 131	4	25
2-Butanone (MEK)	ND		25.0	22.1		ug/L		88	48 - 140	7	40
4-Methyl-2-pentanone (MIBK)	ND		25.0	29.0		ug/L		116	52 - 150	6	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*103*		*80 - 128*

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

Lab Sample ID: 440-179681-1 MSD
Matrix: Water
Analysis Batch: 395656

Client Sample ID: DW-2
Prep Type: Total/NA

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	*90*		*80 - 120*
Dibromofluoromethane (Surr)	*101*		*76 - 132*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 440-395160/1-A
Matrix: Water
Analysis Batch: 395495

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 395160

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		1.0	0.25	ug/L		03/21/17 07:40	03/22/17 16:37	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	*68*		*30 - 120*	*03/21/17 07:40*	*03/22/17 16:37*	*1*

Lab Sample ID: LCS 440-395160/2-A
Matrix: Water
Analysis Batch: 395495

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 395160

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,4-Dioxane			2.00	1.56		ug/L		78	35 - 120		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,4-Dioxane-d8 (Surr)	*71*		*30 - 120*

Lab Sample ID: LCSD 440-395160/3-A
Matrix: Water
Analysis Batch: 395495

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 395160

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dioxane			2.00	1.57		ug/L		79	35 - 120	1	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,4-Dioxane-d8 (Surr)	*70*		*30 - 120*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 440-394324/4
Matrix: Water
Analysis Batch: 394324

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			03/16/17 10:51	1

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 440-394324/2
Matrix: Water
Analysis Batch: 394324

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	4.51		mg/L		90	90 - 110

Lab Sample ID: 440-179681-6 MS
Matrix: Water
Analysis Batch: 394324

Client Sample ID: DW-4
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	ND		1000	888		mg/L		89	80 - 120

Lab Sample ID: 440-179681-6 MSD
Matrix: Water
Analysis Batch: 394324

Client Sample ID: DW-4
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	ND		1000	891		mg/L		89	80 - 120	0	20

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 440-395037/1-A
Matrix: Water
Analysis Batch: 395213

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 395037

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	ND		0.50	0.25	mg/L		03/20/17 14:21	03/21/17 09:06	1

Lab Sample ID: LCS 440-395037/2-A
Matrix: Water
Analysis Batch: 395213

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 395037

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Potassium	10.0	9.53		mg/L		95	80 - 120

Lab Sample ID: 440-179681-1 MS
Matrix: Water
Analysis Batch: 395213

Client Sample ID: DW-2
Prep Type: Total Recoverable
Prep Batch: 395037

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Potassium	3.8		10.0	13.8		mg/L		100	75 - 125

Lab Sample ID: 440-179681-1 MSD
Matrix: Water
Analysis Batch: 395213

Client Sample ID: DW-2
Prep Type: Total Recoverable
Prep Batch: 395037

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Potassium	3.8		10.0	13.9		mg/L		101	75 - 125	0	20

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

TestAmerica Job ID: 440-179681-1

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 440-394518/10
Matrix: Water
Analysis Batch: 394518

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			03/16/17 17:36	1

Lab Sample ID: LCS 440-394518/11
Matrix: Water
Analysis Batch: 394518

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	4.84		mg/L		97	90 - 110

Lab Sample ID: MRL 440-394518/9
Matrix: Water
Analysis Batch: 394518

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	0.222		mg/L		111	10 - 200

Lab Sample ID: 440-179529-B-1 MS
Matrix: Water
Analysis Batch: 394518

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)	ND		5.00	4.63		mg/L		93	90 - 110

Lab Sample ID: 440-179529-B-1 MSD
Matrix: Water
Analysis Batch: 394518

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)	ND		5.00	4.91		mg/L		98	90 - 110	6	15

Method: 410.4 - COD

Lab Sample ID: MB 440-395979/3
Matrix: Water
Analysis Batch: 395979

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			03/24/17 12:10	1

Lab Sample ID: LCS 440-395979/4
Matrix: Water
Analysis Batch: 395979

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	185		mg/L		93	90 - 110

Method: 410.4 - COD (Continued)

Lab Sample ID: 440-179681-1 MS
Matrix: Water
Analysis Batch: 395979

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
Chemical Oxygen Demand	ND		200	193		mg/L		97	70 - 120

Lab Sample ID: 440-179681-1 MSD
Matrix: Water
Analysis Batch: 395979

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
Chemical Oxygen Demand	ND		200	196		mg/L		98	70 - 120	2	15

Lab Sample ID: 440-179696-B-1 DU
Matrix: Water
Analysis Batch: 395979

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	490		491		mg/L		1	15

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 440-394543/39
Matrix: Water
Analysis Batch: 394543

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			03/16/17 13:59	1

Lab Sample ID: LCS 440-394543/38
Matrix: Water
Analysis Batch: 394543

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	34.5		mg/L		102	80 - 120

Lab Sample ID: 440-179681-1 DU
Matrix: Water
Analysis Batch: 394543

Client Sample ID: DW-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Alkalinity as CaCO3	400		385		mg/L		3	20

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

Lab Sample ID: MB 440-395418/1
Matrix: Water
Analysis Batch: 395418

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			03/22/17 08:58	1

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

Lab Sample ID: LCS 440-395418/2
Matrix: Water
Analysis Batch: 395418

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	972		mg/L		97	90 - 110		

Lab Sample ID: 440-179681-1 DU
Matrix: Water
Analysis Batch: 395418

Client Sample ID: DW-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Dissolved Solids	1800			1810		mg/L				1	5

Method: SM 5310C - TOC

Lab Sample ID: MB 440-394835/9
Matrix: Water
Analysis Batch: 394835

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			03/18/17 17:38	1

Lab Sample ID: LCS 440-394835/8
Matrix: Water
Analysis Batch: 394835

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			5.00	4.80		mg/L		96	90 - 110		

Lab Sample ID: MRL 440-394835/5
Matrix: Water
Analysis Batch: 394835

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	0.0739	J	mg/L		74	50 - 150		

Lab Sample ID: 440-179579-G-2 MS
Matrix: Water
Analysis Batch: 394835

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	4.9		5.00	9.47		mg/L		92	80 - 120		

Lab Sample ID: 440-179579-G-2 MSD
Matrix: Water
Analysis Batch: 394835

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	4.9		5.00	9.99		mg/L		102	80 - 120	5	20

GC/MS VOA

Analysis Batch: 394787

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-179681-1	DW-2	Total/NA	Water	8260B	
440-179681-2	DW-3	Total/NA	Water	8260B	
440-179681-3	PZ-4	Total/NA	Water	8260B	
440-179681-4	MW-2A	Total/NA	Water	8260B	
440-179681-5	MW-2B	Total/NA	Water	8260B	
440-179681-6	DW-4	Total/NA	Water	8260B	
MB 440-394787/3	Method Blank	Total/NA	Water	8260B	
LCS 440-394787/4	Lab Control Sample	Total/NA	Water	8260B	
LCSD 440-394787/5	Lab Control Sample Dup	Total/NA	Water	8260B	
550-79280-D-1 MS	Matrix Spike	Total/NA	Water	8260B	
550-79280-D-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

Analysis Batch: 394847

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-179681-7	QCAB	Total/NA	Water	8260B	
440-179681-8	QCTB	Total/NA	Water	8260B	
MB 440-394847/3	Method Blank	Total/NA	Water	8260B	
LCS 440-394847/4	Lab Control Sample	Total/NA	Water	8260B	
440-179254-B-1 MS	Matrix Spike	Total/NA	Water	8260B	
440-179254-B-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

Analysis Batch: 395144

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-179681-7	QCAB	Total/NA	Water	8260B	
440-179681-8	QCTB	Total/NA	Water	8260B	
MB 440-395144/4	Method Blank	Total/NA	Water	8260B	
LCS 440-395144/5	Lab Control Sample	Total/NA	Water	8260B	
440-179775-D-1 MS	Matrix Spike	Total/NA	Water	8260B	
440-179775-D-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

Analysis Batch: 395656

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-179681-1	DW-2	Total/NA	Water	8260B	
440-179681-2	DW-3	Total/NA	Water	8260B	
440-179681-3	PZ-4	Total/NA	Water	8260B	
440-179681-4	MW-2A	Total/NA	Water	8260B	
440-179681-5	MW-2B	Total/NA	Water	8260B	
440-179681-6	DW-4	Total/NA	Water	8260B	
440-179681-7 - RA	QCAB	Total/NA	Water	8260B	
440-179681-8 - RA	QCTB	Total/NA	Water	8260B	
MB 440-395656/5	Method Blank	Total/NA	Water	8260B	
LCS 440-395656/6	Lab Control Sample	Total/NA	Water	8260B	
440-179681-1 MS	DW-2	Total/NA	Water	8260B	
440-179681-1 MSD	DW-2	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 395160

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-179681-1	DW-2	Total/NA	Water	3520C	

GC/MS Semi VOA (Continued)

Prep Batch: 395160 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-179681-2	DW-3	Total/NA	Water	3520C	
440-179681-3	PZ-4	Total/NA	Water	3520C	
440-179681-4	MW-2A	Total/NA	Water	3520C	
440-179681-5	MW-2B	Total/NA	Water	3520C	
440-179681-6	DW-4	Total/NA	Water	3520C	
MB 440-395160/1-A	Method Blank	Total/NA	Water	3520C	
LCS 440-395160/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 440-395160/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	

Analysis Batch: 395495

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-179681-1	DW-2	Total/NA	Water	8270C	395160
440-179681-2	DW-3	Total/NA	Water	8270C	395160
440-179681-3	PZ-4	Total/NA	Water	8270C	395160
440-179681-4	MW-2A	Total/NA	Water	8270C	395160
440-179681-5	MW-2B	Total/NA	Water	8270C	395160
440-179681-6	DW-4	Total/NA	Water	8270C	395160
MB 440-395160/1-A	Method Blank	Total/NA	Water	8270C	395160
LCS 440-395160/2-A	Lab Control Sample	Total/NA	Water	8270C	395160
LCSD 440-395160/3-A	Lab Control Sample Dup	Total/NA	Water	8270C	395160

HPLC/IC

Analysis Batch: 394324

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-179681-1	DW-2	Total/NA	Water	300.0	
440-179681-2	DW-3	Total/NA	Water	300.0	
440-179681-3	PZ-4	Total/NA	Water	300.0	
440-179681-4	MW-2A	Total/NA	Water	300.0	
440-179681-5	MW-2B	Total/NA	Water	300.0	
440-179681-6	DW-4	Total/NA	Water	300.0	
440-179681-6	DW-4	Total/NA	Water	300.0	
MB 440-394324/4	Method Blank	Total/NA	Water	300.0	
LCS 440-394324/2	Lab Control Sample	Total/NA	Water	300.0	
440-179681-6 MS	DW-4	Total/NA	Water	300.0	
440-179681-6 MSD	DW-4	Total/NA	Water	300.0	

Metals

Prep Batch: 395037

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-179681-1	DW-2	Total Recoverable	Water	3005A	
440-179681-2	DW-3	Total Recoverable	Water	3005A	
440-179681-3	PZ-4	Total Recoverable	Water	3005A	
440-179681-4	MW-2A	Total Recoverable	Water	3005A	
440-179681-5	MW-2B	Total Recoverable	Water	3005A	
440-179681-6	DW-4	Total Recoverable	Water	3005A	
MB 440-395037/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 440-395037/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
440-179681-1 MS	DW-2	Total Recoverable	Water	3005A	

Metals (Continued)

Prep Batch: 395037 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-179681-1 MSD	DW-2	Total Recoverable	Water	3005A	

Analysis Batch: 395213

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-179681-1	DW-2	Total Recoverable	Water	6010B	395037
440-179681-2	DW-3	Total Recoverable	Water	6010B	395037
440-179681-3	PZ-4	Total Recoverable	Water	6010B	395037
440-179681-4	MW-2A	Total Recoverable	Water	6010B	395037
440-179681-5	MW-2B	Total Recoverable	Water	6010B	395037
440-179681-6	DW-4	Total Recoverable	Water	6010B	395037
MB 440-395037/1-A	Method Blank	Total Recoverable	Water	6010B	395037
LCS 440-395037/2-A	Lab Control Sample	Total Recoverable	Water	6010B	395037
440-179681-1 MS	DW-2	Total Recoverable	Water	6010B	395037
440-179681-1 MSD	DW-2	Total Recoverable	Water	6010B	395037

General Chemistry

Analysis Batch: 394518

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-179681-1	DW-2	Total/NA	Water	350.1	
440-179681-2	DW-3	Total/NA	Water	350.1	
440-179681-3	PZ-4	Total/NA	Water	350.1	
440-179681-4	MW-2A	Total/NA	Water	350.1	
440-179681-5	MW-2B	Total/NA	Water	350.1	
440-179681-6	DW-4	Total/NA	Water	350.1	
MB 440-394518/10	Method Blank	Total/NA	Water	350.1	
LCS 440-394518/11	Lab Control Sample	Total/NA	Water	350.1	
MRL 440-394518/9	Lab Control Sample	Total/NA	Water	350.1	
440-179529-B-1 MS	Matrix Spike	Total/NA	Water	350.1	
440-179529-B-1 MSD	Matrix Spike Duplicate	Total/NA	Water	350.1	

Analysis Batch: 394543

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-179681-1	DW-2	Total/NA	Water	SM 2320B	
440-179681-2	DW-3	Total/NA	Water	SM 2320B	
440-179681-3	PZ-4	Total/NA	Water	SM 2320B	
440-179681-4	MW-2A	Total/NA	Water	SM 2320B	
440-179681-5	MW-2B	Total/NA	Water	SM 2320B	
440-179681-6	DW-4	Total/NA	Water	SM 2320B	
MB 440-394543/39	Method Blank	Total/NA	Water	SM 2320B	
LCS 440-394543/38	Lab Control Sample	Total/NA	Water	SM 2320B	
440-179681-1 DU	DW-2	Total/NA	Water	SM 2320B	

Analysis Batch: 394835

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-179681-1	DW-2	Total/NA	Water	SM 5310C	
440-179681-2	DW-3	Total/NA	Water	SM 5310C	
440-179681-3	PZ-4	Total/NA	Water	SM 5310C	
440-179681-4	MW-2A	Total/NA	Water	SM 5310C	
440-179681-5	MW-2B	Total/NA	Water	SM 5310C	

General Chemistry (Continued)

Analysis Batch: 394835 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-179681-6	DW-4	Total/NA	Water	SM 5310C	
MB 440-394835/9	Method Blank	Total/NA	Water	SM 5310C	
LCS 440-394835/8	Lab Control Sample	Total/NA	Water	SM 5310C	
MRL 440-394835/5	Lab Control Sample	Total/NA	Water	SM 5310C	
440-179579-G-2 MS	Matrix Spike	Total/NA	Water	SM 5310C	
440-179579-G-2 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 5310C	

Analysis Batch: 395418

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-179681-1	DW-2	Total/NA	Water	SM 2540C	
440-179681-2	DW-3	Total/NA	Water	SM 2540C	
440-179681-3	PZ-4	Total/NA	Water	SM 2540C	
440-179681-4	MW-2A	Total/NA	Water	SM 2540C	
440-179681-5	MW-2B	Total/NA	Water	SM 2540C	
440-179681-6	DW-4	Total/NA	Water	SM 2540C	
MB 440-395418/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 440-395418/2	Lab Control Sample	Total/NA	Water	SM 2540C	
440-179681-1 DU	DW-2	Total/NA	Water	SM 2540C	

Analysis Batch: 395979

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-179681-1	DW-2	Total/NA	Water	410.4	
440-179681-2	DW-3	Total/NA	Water	410.4	
440-179681-3	PZ-4	Total/NA	Water	410.4	
440-179681-4	MW-2A	Total/NA	Water	410.4	
440-179681-5	MW-2B	Total/NA	Water	410.4	
440-179681-6	DW-4	Total/NA	Water	410.4	
MB 440-395979/3	Method Blank	Total/NA	Water	410.4	
LCS 440-395979/4	Lab Control Sample	Total/NA	Water	410.4	
440-179681-1 MS	DW-2	Total/NA	Water	410.4	
440-179681-1 MSD	DW-2	Total/NA	Water	410.4	
440-179696-B-1 DU	Duplicate	Total/NA	Water	410.4	

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
*	LCS or LCSD is outside acceptance limits.
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.

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, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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)

Certification Summary

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

TestAmerica Job ID: 440-179681-1

Laboratory: TestAmerica Irvine

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska	State Program	10	CA01531	06-30-17
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	CA015312016-2	07-31-17
New Mexico	State Program	6	N/A	01-29-17 *
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

* Certification renewal pending - certification considered valid.

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

Chain of Custody Record

144509

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

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

Client Contact	Project Manager: Kyle Welchans	Site Contact: P. Dzelcasey	Date: 3-15-17	COC No:
Company Name: Geo-Logic Associates	Tel/Fax: 858-451-1136	Lab Contact: R. Tomova	Carrier: T/A	1 of 1 COCs
Address: 11415 W. Bernardo Ct.	Analysis Turnaround Time			Sampler: BS, AS
City/State/Zip: S.D., CA 92127	☐ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: 858-451-1136	TAT if different from Below _____			Walk-in Client:
Fax: 858-451-1087	☐ 2 weeks			Lab Sampling:
Project Name: Republic Services	☐ 1 week			Job / SDG No.:
Site: Sunshine Cyn. Landfill	☐ 2 days			
P O # 4400078511	☐ 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)	EPA 8260B-VOCs	EPA 8270 1,4 Dioxane	Total Alkalinity	Ammonia as	COD, TDS	Chloride, TOC	Total Potassium	Sample Specific Notes:
DW-2	3/15/17	0940	G	GW	12			X	X	X	X	X	X	X	
DW-3		1058			12			X	X	X	X	X	X	X	
PZ-4		1244			12			X	X	X	X	X	X	X	
MW-2A		0900			12			X	X	X	X	X	X	X	
MW-2B		1035			12			X	X	X	X	X	X	X	
DW-4		1230		GW	12			X	X	X	X	X	X	X	
QCAB		—		LRB DW	4			X							
QCTB	↓	—	↓	"	3			X							

440-179681 Chain of Custody

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

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

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

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

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

Special Instructions/QC Requirements & Comments:

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

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Ben Jelins	Geo-Logic	3/15/17 1345		3/15/17 1345	
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	T/A	3/15/17 2030			
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:
				3/16/17	2030

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3/8/2017

2-613.1 112-85

Login Sample Receipt Checklist

Client: Geo-Logic Associates

Job Number: 440-179681-1

Login Number: 179681

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.	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.	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: 440-179756-1
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:
3/28/2017 2:29:21 PM

Rossina Tomova, Project Manager I
(949)261-1022
rossina.tomova@testamericainc.com

Table of Contents

Sample Summary

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

TestAmerica Job ID: 440-179756-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-179756-1	MW-1	Water	03/16/17 10:15	03/16/17 16:40
440-179756-2	MW-13R	Water	03/16/17 08:45	03/16/17 16:40
440-179756-3	QCAB	Water	03/16/17 00:01	03/16/17 16:40
440-179756-4	QCTB	Water	03/16/17 00:01	03/16/17 16:40

Job ID: 440-179756-1

Laboratory: TestAmerica Irvine

Narrative

Job Narrative
440-179756-1

Comments
No additional comments.

Receipt
The samples were received on 3/16/2017 4:40 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.5º 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 440-395427 and analytical batch 440-395822. 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
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
Method(s) SM 2320B: All samples associated with these Method Blank and LCS: MW-1 (440-179756-1), MW-13R (440-179756-2), (LCS 440-394645/29), (MB 440-394645/30), (440-179769-B-14) and (440-179769-B-14 DU)

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 ID: MW-1
Date Collected: 03/16/17 10:15
Date Received: 03/16/17 16:40

Lab Sample ID: 440-179756-1
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			03/25/17 04:24	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			03/25/17 04:24	1
Acrolein	ND		50	2.5	ug/L			03/21/17 16:56	1
Acrylonitrile	ND		50	1.0	ug/L			03/21/17 16:56	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			03/25/17 04:24	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			03/25/17 04:24	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			03/25/17 04:24	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			03/25/17 04:24	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			03/25/17 04:24	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			03/25/17 04:24	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			03/25/17 04:24	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			03/25/17 04:24	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			03/25/17 04:24	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			03/25/17 04:24	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			03/25/17 04:24	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			03/25/17 04:24	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			03/25/17 04:24	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			03/25/17 04:24	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			03/25/17 04:24	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			03/25/17 04:24	1
2-Hexanone	ND		5.0	2.5	ug/L			03/25/17 04:24	1
Acetone	ND		20	10	ug/L			03/25/17 04:24	1
Acetonitrile	ND		20	10	ug/L			03/25/17 04:24	1
Acrolein	ND		5.0	2.5	ug/L			03/25/17 04:24	1
Acrylonitrile	ND		2.0	1.0	ug/L			03/25/17 04:24	1
Benzene	ND		0.50	0.25	ug/L			03/25/17 04:24	1
Allyl chloride	ND		1.0	0.50	ug/L			03/25/17 04:24	1
Bromoform	ND		1.0	0.40	ug/L			03/25/17 04:24	1
Bromomethane	ND		0.50	0.25	ug/L			03/25/17 04:24	1
Carbon disulfide	ND		1.0	0.50	ug/L			03/25/17 04:24	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			03/25/17 04:24	1
Chlorobenzene	ND		0.50	0.25	ug/L			03/25/17 04:24	1
Bromochloromethane	ND		0.50	0.25	ug/L			03/25/17 04:24	1
Chloroethane	ND		1.0	0.40	ug/L			03/25/17 04:24	1
Chloroform	ND		0.50	0.25	ug/L			03/25/17 04:24	1
Chloromethane	ND		0.50	0.25	ug/L			03/25/17 04:24	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/25/17 04:24	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/25/17 04:24	1
Dibromochloromethane	ND		0.50	0.25	ug/L			03/25/17 04:24	1
Dibromomethane	ND		0.50	0.25	ug/L			03/25/17 04:24	1
Bromodichloromethane	ND		0.50	0.25	ug/L			03/25/17 04:24	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			03/25/17 04:24	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			03/25/17 04:24	1
Ethylbenzene	ND		0.50	0.25	ug/L			03/25/17 04:24	1
Iodomethane	ND		2.0	1.0	ug/L			03/25/17 04:24	1
Isobutyl alcohol	ND		25	13	ug/L			03/25/17 04:24	1
m,p-Xylene	ND		1.0	0.50	ug/L			03/25/17 04:24	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			03/25/17 04:24	1
Methyl methacrylate	ND		2.0	1.0	ug/L			03/25/17 04:24	1

Client Sample ID: MW-1
Date Collected: 03/16/17 10:15
Date Received: 03/16/17 16:40

Lab Sample ID: 440-179756-1
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			03/25/17 04:24	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			03/25/17 04:24	1
Naphthalene	ND		1.0	0.40	ug/L			03/25/17 04:24	1
o-Xylene	ND		0.50	0.25	ug/L			03/25/17 04:24	1
Propionitrile	ND		20	10	ug/L			03/25/17 04:24	1
Styrene	ND		0.50	0.25	ug/L			03/25/17 04:24	1
t-Butanol	**10**	**ID**	10	5.0	ug/L			03/25/17 04:24	1
Tetrachloroethene	ND		0.50	0.25	ug/L			03/25/17 04:24	1
Tetrahydrofuran	ND		10	5.0	ug/L			03/25/17 04:24	1
Toluene	ND		0.50	0.25	ug/L			03/25/17 04:24	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/25/17 04:24	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/25/17 04:24	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			03/25/17 04:24	1
Trichloroethene	ND		0.50	0.25	ug/L			03/25/17 04:24	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			03/25/17 04:24	1
Vinyl acetate	ND		4.0	2.0	ug/L			03/25/17 04:24	1
Vinyl chloride	ND		0.50	0.25	ug/L			03/25/17 04:24	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			03/25/17 04:24	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			03/25/17 04:24	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			03/25/17 04:24	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*2.8*	*T J*	*ug/L*		*5.85*			*03/25/17 04:24*	*1*
Unknown	*9.8*	*T J*	*ug/L*		*7.34*			*03/25/17 04:24*	*1*
Unknown	*13*	*T J*	*ug/L*		*17.44*			*03/25/17 04:24*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*101*		*80 - 128*		*03/21/17 16:56*	*1*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*		*03/21/17 16:56*	*1*
Toluene-d8 (Surr)	*112*		*80 - 128*		*03/25/17 04:24*	*1*
4-Bromofluorobenzene (Surr)	*106*		*80 - 120*		*03/25/17 04:24*	*1*
Dibromofluoromethane (Surr)	*118*		*76 - 132*		*03/21/17 16:56*	*1*
Dibromofluoromethane (Surr)	*106*		*76 - 132*		*03/25/17 04:24*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**12**		0.99	0.25	ug/L		03/22/17 09:28	03/23/17 18:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*52*		*30 - 120*	*03/22/17 09:28*	*03/23/17 18:40*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**290**		100	50	mg/L			03/16/17 20:43	200

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		03/20/17 14:21	03/21/17 09:41	1

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

TestAmerica Job ID: 440-179756-1

Client Sample ID: MW-1

Lab Sample ID: 440-179756-1

Date Collected: 03/16/17 10:15

Matrix: Water

Date Received: 03/16/17 16:40

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	2.7		0.20	0.10	mg/L			03/17/17 20:40	1
Chemical Oxygen Demand	95		20	10	mg/L			03/27/17 16:50	1
Total Dissolved Solids	3600		50	25	mg/L			03/23/17 07:15	1
Total Organic Carbon	33		1.0	0.50	mg/L			03/21/17 08:55	10

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	640		4.0	4.0	mg/L			03/17/17 08:00	1

Client Sample ID: MW-13R

Lab Sample ID: 440-179756-2

Date Collected: 03/16/17 08:45

Matrix: Water

Date Received: 03/16/17 16:40

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			03/25/17 04:50	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			03/25/17 04:50	1
Acrolein	ND		50	2.5	ug/L			03/21/17 17:24	1
Acrylonitrile	ND		50	1.0	ug/L			03/21/17 17:24	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			03/25/17 04:50	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			03/25/17 04:50	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			03/25/17 04:50	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			03/25/17 04:50	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			03/25/17 04:50	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			03/25/17 04:50	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			03/25/17 04:50	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			03/25/17 04:50	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			03/25/17 04:50	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			03/25/17 04:50	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			03/25/17 04:50	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			03/25/17 04:50	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			03/25/17 04:50	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			03/25/17 04:50	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			03/25/17 04:50	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			03/25/17 04:50	1
2-Hexanone	ND		5.0	2.5	ug/L			03/25/17 04:50	1
Acetone	ND		20	10	ug/L			03/25/17 04:50	1
Acetonitrile	ND		20	10	ug/L			03/25/17 04:50	1
Acrolein	ND		5.0	2.5	ug/L			03/25/17 04:50	1
Acrylonitrile	ND		2.0	1.0	ug/L			03/25/17 04:50	1
Benzene	ND		0.50	0.25	ug/L			03/25/17 04:50	1
Allyl chloride	ND		1.0	0.50	ug/L			03/25/17 04:50	1
Bromoform	ND		1.0	0.40	ug/L			03/25/17 04:50	1
Bromomethane	ND		0.50	0.25	ug/L			03/25/17 04:50	1
Carbon disulfide	ND		1.0	0.50	ug/L			03/25/17 04:50	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			03/25/17 04:50	1
Chlorobenzene	ND		0.50	0.25	ug/L			03/25/17 04:50	1
Bromochloromethane	ND		0.50	0.25	ug/L			03/25/17 04:50	1
Chloroethane	ND		1.0	0.40	ug/L			03/25/17 04:50	1
Chloroform	ND		0.50	0.25	ug/L			03/25/17 04:50	1
Chloromethane	ND		0.50	0.25	ug/L			03/25/17 04:50	1

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

TestAmerica Job ID: 440-179756-1

Client Sample ID: MW-13R
Date Collected: 03/16/17 08:45
Date Received: 03/16/17 16:40

Lab Sample ID: 440-179756-2
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/25/17 04:50	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/25/17 04:50	1
Dibromochloromethane	ND		0.50	0.25	ug/L			03/25/17 04:50	1
Dibromomethane	ND		0.50	0.25	ug/L			03/25/17 04:50	1
Bromodichloromethane	ND		0.50	0.25	ug/L			03/25/17 04:50	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			03/25/17 04:50	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			03/25/17 04:50	1
Ethylbenzene	ND		0.50	0.25	ug/L			03/25/17 04:50	1
Iodomethane	ND		2.0	1.0	ug/L			03/25/17 04:50	1
Isobutyl alcohol	ND		25	13	ug/L			03/25/17 04:50	1
m,p-Xylene	ND		1.0	0.50	ug/L			03/25/17 04:50	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			03/25/17 04:50	1
Methyl methacrylate	ND		2.0	1.0	ug/L			03/25/17 04:50	1
Methylene Chloride	ND		2.0	0.88	ug/L			03/25/17 04:50	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			03/25/17 04:50	1
Naphthalene	ND		1.0	0.40	ug/L			03/25/17 04:50	1
o-Xylene	ND		0.50	0.25	ug/L			03/25/17 04:50	1
Propionitrile	ND		20	10	ug/L			03/25/17 04:50	1
Styrene	ND		0.50	0.25	ug/L			03/25/17 04:50	1
t-Butanol	**5.1**	**J ID**	10	5.0	ug/L			03/25/17 04:50	1
Tetrachloroethene	ND		0.50	0.25	ug/L			03/25/17 04:50	1
Tetrahydrofuran	ND		10	5.0	ug/L			03/25/17 04:50	1
Toluene	ND		0.50	0.25	ug/L			03/25/17 04:50	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/25/17 04:50	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/25/17 04:50	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			03/25/17 04:50	1
Trichloroethene	ND		0.50	0.25	ug/L			03/25/17 04:50	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			03/25/17 04:50	1
Vinyl acetate	ND		4.0	2.0	ug/L			03/25/17 04:50	1
Vinyl chloride	ND		0.50	0.25	ug/L			03/25/17 04:50	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			03/25/17 04:50	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			03/25/17 04:50	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			03/25/17 04:50	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Methanethiol	*6.4*	*T J N*	*ug/L*		*3.68*	*74-93-1*		*03/25/17 04:50*	*1*
Unknown	*3.6*	*T J*	*ug/L*		*5.85*			*03/25/17 04:50*	*1*
Unknown	*9.9*	*T J*	*ug/L*		*7.34*			*03/25/17 04:50*	*1*
Unknown	*2.6*	*T J*	*ug/L*		*17.52*			*03/25/17 04:50*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*101*		*80 - 128*		*03/21/17 17:24*	*1*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*		*03/21/17 17:24*	*1*
Toluene-d8 (Surr)	*114*		*80 - 128*		*03/25/17 04:50*	*1*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*		*03/25/17 04:50*	*1*
Dibromofluoromethane (Surr)	*121*		*76 - 132*		*03/21/17 17:24*	*1*
Dibromofluoromethane (Surr)	*108*		*76 - 132*		*03/25/17 04:50*	*1*

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

TestAmerica Job ID: 440-179756-1

Client Sample ID: MW-13R

Lab Sample ID: 440-179756-2

Date Collected: 03/16/17 08:45

Matrix: Water

Date Received: 03/16/17 16:40

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	5.8		1.1	0.26	ug/L		03/22/17 09:28	03/23/17 19:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*47*		*30 - 120*	*03/22/17 09:28*	*03/23/17 19:01*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	110		25	13	mg/L			03/16/17 20:56	50

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	27		0.50	0.25	mg/L		03/20/17 14:21	03/21/17 09:43	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	6.6		0.20	0.10	mg/L			03/17/17 20:46	1
Chemical Oxygen Demand	280		100	50	mg/L			03/27/17 16:50	5
Total Dissolved Solids	1500		10	5.0	mg/L			03/23/17 07:15	1
Total Organic Carbon	24		1.0	0.50	mg/L			03/21/17 09:08	10

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	740		4.0	4.0	mg/L			03/17/17 08:13	1

Client Sample ID: QCAB

Lab Sample ID: 440-179756-3

Date Collected: 03/16/17 00:01

Matrix: Water

Date Received: 03/16/17 16:40

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			03/25/17 05:16	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			03/25/17 05:16	1
Acrolein	ND		50	2.5	ug/L			03/21/17 17:52	1
Acrylonitrile	ND		50	1.0	ug/L			03/21/17 17:52	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			03/25/17 05:16	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			03/25/17 05:16	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			03/25/17 05:16	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			03/25/17 05:16	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			03/25/17 05:16	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			03/25/17 05:16	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			03/25/17 05:16	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			03/25/17 05:16	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			03/25/17 05:16	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			03/25/17 05:16	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			03/25/17 05:16	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			03/25/17 05:16	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			03/25/17 05:16	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			03/25/17 05:16	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			03/25/17 05:16	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			03/25/17 05:16	1
2-Hexanone	ND		5.0	2.5	ug/L			03/25/17 05:16	1
Acetone	ND		20	10	ug/L			03/25/17 05:16	1

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

TestAmerica Job ID: 440-179756-1

Client Sample ID: QCAB
Date Collected: 03/16/17 00:01
Date Received: 03/16/17 16:40

Lab Sample ID: 440-179756-3
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetonitrile	ND		20	10	ug/L			03/25/17 05:16	1
Acrolein	ND		5.0	2.5	ug/L			03/25/17 05:16	1
Acrylonitrile	ND		2.0	1.0	ug/L			03/25/17 05:16	1
Benzene	ND		0.50	0.25	ug/L			03/25/17 05:16	1
Allyl chloride	ND		1.0	0.50	ug/L			03/25/17 05:16	1
Bromoform	ND		1.0	0.40	ug/L			03/25/17 05:16	1
Bromomethane	ND		0.50	0.25	ug/L			03/25/17 05:16	1
Carbon disulfide	ND		1.0	0.50	ug/L			03/25/17 05:16	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			03/25/17 05:16	1
Chlorobenzene	ND		0.50	0.25	ug/L			03/25/17 05:16	1
Bromochloromethane	ND		0.50	0.25	ug/L			03/25/17 05:16	1
Chloroethane	ND		1.0	0.40	ug/L			03/25/17 05:16	1
Chloroform	ND		0.50	0.25	ug/L			03/25/17 05:16	1
Chloromethane	ND		0.50	0.25	ug/L			03/25/17 05:16	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/25/17 05:16	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/25/17 05:16	1
Dibromochloromethane	ND		0.50	0.25	ug/L			03/25/17 05:16	1
Dibromomethane	ND		0.50	0.25	ug/L			03/25/17 05:16	1
Bromodichloromethane	ND		0.50	0.25	ug/L			03/25/17 05:16	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			03/25/17 05:16	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			03/25/17 05:16	1
Ethylbenzene	ND		0.50	0.25	ug/L			03/25/17 05:16	1
Iodomethane	ND		2.0	1.0	ug/L			03/25/17 05:16	1
Isobutyl alcohol	ND		25	13	ug/L			03/25/17 05:16	1
m,p-Xylene	ND		1.0	0.50	ug/L			03/25/17 05:16	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			03/25/17 05:16	1
Methyl methacrylate	ND		2.0	1.0	ug/L			03/25/17 05:16	1
Methylene Chloride	ND		2.0	0.88	ug/L			03/25/17 05:16	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			03/25/17 05:16	1
Naphthalene	ND		1.0	0.40	ug/L			03/25/17 05:16	1
o-Xylene	ND		0.50	0.25	ug/L			03/25/17 05:16	1
Propionitrile	ND		20	10	ug/L			03/25/17 05:16	1
Styrene	ND		0.50	0.25	ug/L			03/25/17 05:16	1
t-Butanol	ND		10	5.0	ug/L			03/25/17 05:16	1
Tetrachloroethene	ND		0.50	0.25	ug/L			03/25/17 05:16	1
Tetrahydrofuran	ND		10	5.0	ug/L			03/25/17 05:16	1
Toluene	ND		0.50	0.25	ug/L			03/25/17 05:16	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/25/17 05:16	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/25/17 05:16	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			03/25/17 05:16	1
Trichloroethene	ND		0.50	0.25	ug/L			03/25/17 05:16	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			03/25/17 05:16	1
Vinyl acetate	ND		4.0	2.0	ug/L			03/25/17 05:16	1
Vinyl chloride	ND		0.50	0.25	ug/L			03/25/17 05:16	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			03/25/17 05:16	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			03/25/17 05:16	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			03/25/17 05:16	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*3.2*	*T J*	*ug/L*		*3.34*			*03/25/17 05:16*	*1*

Client Sample ID: QCAB

Lab Sample ID: 440-179756-3

Date Collected: 03/16/17 00:01

Matrix: Water

Date Received: 03/16/17 16:40

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

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	3.5	T J	ug/L		4.66			03/25/17 05:16	1
Unknown	3.8	T J	ug/L		5.86			03/25/17 05:16	1
Unknown	9.9	T J	ug/L		7.34			03/25/17 05:16	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	102		80 - 128		03/21/17 17:52	1
4-Bromofluorobenzene (Surr)	94		80 - 120		03/21/17 17:52	1
Toluene-d8 (Surr)	110		80 - 128		03/25/17 05:16	1
4-Bromofluorobenzene (Surr)	105		80 - 120		03/25/17 05:16	1
Dibromofluoromethane (Surr)	119		76 - 132		03/21/17 17:52	1
Dibromofluoromethane (Surr)	109		76 - 132		03/25/17 05:16	1

Client Sample ID: QCTB

Lab Sample ID: 440-179756-4

Date Collected: 03/16/17 00:01

Matrix: Water

Date Received: 03/16/17 16:40

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			03/25/17 05:43	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			03/25/17 05:43	1
Acrolein	ND		50	2.5	ug/L			03/21/17 18:20	1
Acrylonitrile	ND		50	1.0	ug/L			03/21/17 18:20	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			03/25/17 05:43	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			03/25/17 05:43	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			03/25/17 05:43	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			03/25/17 05:43	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			03/25/17 05:43	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			03/25/17 05:43	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			03/25/17 05:43	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			03/25/17 05:43	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			03/25/17 05:43	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			03/25/17 05:43	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			03/25/17 05:43	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			03/25/17 05:43	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			03/25/17 05:43	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			03/25/17 05:43	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			03/25/17 05:43	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			03/25/17 05:43	1
2-Hexanone	ND		5.0	2.5	ug/L			03/25/17 05:43	1
Acetone	ND		20	10	ug/L			03/25/17 05:43	1
Acetonitrile	ND		20	10	ug/L			03/25/17 05:43	1
Acrolein	ND		5.0	2.5	ug/L			03/25/17 05:43	1
Acrylonitrile	ND		2.0	1.0	ug/L			03/25/17 05:43	1
Benzene	ND		0.50	0.25	ug/L			03/25/17 05:43	1
Allyl chloride	ND		1.0	0.50	ug/L			03/25/17 05:43	1
Bromoform	ND		1.0	0.40	ug/L			03/25/17 05:43	1
Bromomethane	ND		0.50	0.25	ug/L			03/25/17 05:43	1
Carbon disulfide	ND		1.0	0.50	ug/L			03/25/17 05:43	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			03/25/17 05:43	1

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

TestAmerica Job ID: 440-179756-1

Client Sample ID: QCTB
Date Collected: 03/16/17 00:01
Date Received: 03/16/17 16:40

Lab Sample ID: 440-179756-4
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chlorobenzene	ND		0.50	0.25	ug/L			03/25/17 05:43	1
Bromochloromethane	ND		0.50	0.25	ug/L			03/25/17 05:43	1
Chloroethane	ND		1.0	0.40	ug/L			03/25/17 05:43	1
Chloroform	ND		0.50	0.25	ug/L			03/25/17 05:43	1
Chloromethane	ND		0.50	0.25	ug/L			03/25/17 05:43	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/25/17 05:43	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/25/17 05:43	1
Dibromochloromethane	ND		0.50	0.25	ug/L			03/25/17 05:43	1
Dibromomethane	ND		0.50	0.25	ug/L			03/25/17 05:43	1
Bromodichloromethane	ND		0.50	0.25	ug/L			03/25/17 05:43	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			03/25/17 05:43	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			03/25/17 05:43	1
Ethylbenzene	ND		0.50	0.25	ug/L			03/25/17 05:43	1
Iodomethane	ND		2.0	1.0	ug/L			03/25/17 05:43	1
Isobutyl alcohol	ND		25	13	ug/L			03/25/17 05:43	1
m,p-Xylene	ND		1.0	0.50	ug/L			03/25/17 05:43	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			03/25/17 05:43	1
Methyl methacrylate	ND		2.0	1.0	ug/L			03/25/17 05:43	1
Methylene Chloride	ND		2.0	0.88	ug/L			03/25/17 05:43	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			03/25/17 05:43	1
Naphthalene	ND		1.0	0.40	ug/L			03/25/17 05:43	1
o-Xylene	ND		0.50	0.25	ug/L			03/25/17 05:43	1
Propionitrile	ND		20	10	ug/L			03/25/17 05:43	1
Styrene	ND		0.50	0.25	ug/L			03/25/17 05:43	1
t-Butanol	ND		10	5.0	ug/L			03/25/17 05:43	1
Tetrachloroethene	ND		0.50	0.25	ug/L			03/25/17 05:43	1
Tetrahydrofuran	ND		10	5.0	ug/L			03/25/17 05:43	1
Toluene	ND		0.50	0.25	ug/L			03/25/17 05:43	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/25/17 05:43	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/25/17 05:43	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			03/25/17 05:43	1
Trichloroethene	ND		0.50	0.25	ug/L			03/25/17 05:43	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			03/25/17 05:43	1
Vinyl acetate	ND		4.0	2.0	ug/L			03/25/17 05:43	1
Vinyl chloride	ND		0.50	0.25	ug/L			03/25/17 05:43	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			03/25/17 05:43	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			03/25/17 05:43	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			03/25/17 05:43	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*9.9*	*T J*	*ug/L*		*7.34*			*03/25/17 05:43*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*102*		*80 - 128*		*03/21/17 18:20*	*1*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*		*03/21/17 18:20*	*1*
Toluene-d8 (Surr)	*112*		*80 - 128*		*03/25/17 05:43*	*1*
4-Bromofluorobenzene (Surr)	*106*		*80 - 120*		*03/25/17 05:43*	*1*
Dibromofluoromethane (Surr)	*120*		*76 - 132*		*03/21/17 18:20*	*1*
Dibromofluoromethane (Surr)	*108*		*76 - 132*		*03/25/17 05:43*	*1*

Method Summary

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

TestAmerica Job ID: 440-179756-1

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 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: 440-179756-1

Client Sample ID: MW-1

Lab Sample ID: 440-179756-1

Date Collected: 03/16/17 10:15

Matrix: Water

Date Received: 03/16/17 16:40

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	396022	03/25/17 04:24	WK	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	395144	03/21/17 16:56	WC	TAL IRV
Total/NA	Prep	3520C			1010 mL	1.0 mL	395427	03/22/17 09:28	JS1	TAL IRV
Total/NA	Analysis	8270C		1			395822	03/23/17 18:40	AI	TAL IRV
Total/NA	Analysis	300.0		200			394333	03/16/17 20:43	NTN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	395037	03/20/17 14:21	K1E	TAL IRV
Total Recoverable	Analysis	6010B		1			395213	03/21/17 09:41	EN	TAL IRV
Total/NA	Analysis	350.1		1	0.8 mL	8 mL	394765	03/17/17 20:40	EN	TAL IRV
Total/NA	Analysis	410.4		1	0.625 mL	2.5 mL	396412	03/27/17 16:50	HTL	TAL IRV
Total/NA	Analysis	SM 2320B		1			394645	03/17/17 08:00	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	20 mL	100 mL	395665	03/23/17 07:15	XL	TAL IRV
Total/NA	Analysis	SM 5310C		10	100 mL	100 mL	395236	03/21/17 08:55	YZ	TAL IRV

Client Sample ID: MW-13R

Lab Sample ID: 440-179756-2

Date Collected: 03/16/17 08:45

Matrix: Water

Date Received: 03/16/17 16:40

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	396022	03/25/17 04:50	WK	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	395144	03/21/17 17:24	WC	TAL IRV
Total/NA	Prep	3520C			945 mL	1.0 mL	395427	03/22/17 09:28	JS1	TAL IRV
Total/NA	Analysis	8270C		1			395822	03/23/17 19:01	AI	TAL IRV
Total/NA	Analysis	300.0		50			394333	03/16/17 20:56	NTN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	395037	03/20/17 14:21	K1E	TAL IRV
Total Recoverable	Analysis	6010B		1			395213	03/21/17 09:43	EN	TAL IRV
Total/NA	Analysis	350.1		1	0.8 mL	8 mL	394765	03/17/17 20:46	EN	TAL IRV
Total/NA	Analysis	410.4		5	0.625 mL	2.5 mL	396412	03/27/17 16:50	HTL	TAL IRV
Total/NA	Analysis	SM 2320B		1			394645	03/17/17 08:13	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	395665	03/23/17 07:15	XL	TAL IRV
Total/NA	Analysis	SM 5310C		10	100 mL	100 mL	395236	03/21/17 09:08	YZ	TAL IRV

Client Sample ID: QCAB

Lab Sample ID: 440-179756-3

Date Collected: 03/16/17 00:01

Matrix: Water

Date Received: 03/16/17 16:40

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	396022	03/25/17 05:16	WK	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	395144	03/21/17 17:52	WC	TAL IRV

Lab Chronicle

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

TestAmerica Job ID: 440-179756-1

Client Sample ID: QCTB
Date Collected: 03/16/17 00:01
Date Received: 03/16/17 16:40

Lab Sample ID: 440-179756-4
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	396022	03/25/17 05:43	WK	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	395144	03/21/17 18:20	WC	TAL IRV

Laboratory References:

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

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

Lab Sample ID: MB 440-395144/4
Matrix: Water
Analysis Batch: 395144

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			03/21/17 08:39	1
Acrylonitrile	ND		50	1.0	ug/L			03/21/17 08:39	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*100*		*80 - 128*		*03/21/17 08:39*	*1*
4-Bromofluorobenzene (Surr)	*91*		*80 - 120*		*03/21/17 08:39*	*1*
Dibromofluoromethane (Surr)	*104*		*76 - 132*		*03/21/17 08:39*	*1*

Lab Sample ID: LCS 440-395144/5
Matrix: Water
Analysis Batch: 395144

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	24.8	J	ug/L		99	10 - 145		
Acrylonitrile			250	337		ug/L		135	48 - 140		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*98*		*80 - 128*
4-Bromofluorobenzene (Surr)	*88*		*80 - 120*
Dibromofluoromethane (Surr)	*104*		*76 - 132*

Lab Sample ID: 440-179775-D-1 MS
Matrix: Water
Analysis Batch: 395144

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	16.6	J	ug/L		66	10 - 147		
Acrylonitrile	ND		250	357		ug/L		143	38 - 144		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Toluene-d8 (Surr)	*95*		*80 - 128*
4-Bromofluorobenzene (Surr)	*88*		*80 - 120*
Dibromofluoromethane (Surr)	*105*		*76 - 132*

Lab Sample ID: 440-179775-D-1 MSD
Matrix: Water
Analysis Batch: 395144

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	12.3	J	ug/L		49	10 - 147	30	40
Acrylonitrile	ND		250	350		ug/L		140	38 - 144	2	40

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*95*		*80 - 128*
4-Bromofluorobenzene (Surr)	*89*		*80 - 120*
Dibromofluoromethane (Surr)	*103*		*76 - 132*

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

Lab Sample ID: MB 440-396022/4
Matrix: Water
Analysis Batch: 396022

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			03/24/17 19:38	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			03/24/17 19:38	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			03/24/17 19:38	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			03/24/17 19:38	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			03/24/17 19:38	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			03/24/17 19:38	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			03/24/17 19:38	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			03/24/17 19:38	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			03/24/17 19:38	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			03/24/17 19:38	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			03/24/17 19:38	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			03/24/17 19:38	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			03/24/17 19:38	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			03/24/17 19:38	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			03/24/17 19:38	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			03/24/17 19:38	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			03/24/17 19:38	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			03/24/17 19:38	1
2-Hexanone	ND		5.0	2.5	ug/L			03/24/17 19:38	1
Acetone	ND		20	10	ug/L			03/24/17 19:38	1
Acetonitrile	ND		20	10	ug/L			03/24/17 19:38	1
Acrolein	ND		5.0	2.5	ug/L			03/24/17 19:38	1
Acrylonitrile	ND		2.0	1.0	ug/L			03/24/17 19:38	1
Benzene	ND		0.50	0.25	ug/L			03/24/17 19:38	1
Allyl chloride	ND		1.0	0.50	ug/L			03/24/17 19:38	1
Bromoform	ND		1.0	0.40	ug/L			03/24/17 19:38	1
Bromomethane	ND		0.50	0.25	ug/L			03/24/17 19:38	1
Carbon disulfide	ND		1.0	0.50	ug/L			03/24/17 19:38	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			03/24/17 19:38	1
Chlorobenzene	ND		0.50	0.25	ug/L			03/24/17 19:38	1
Bromochloromethane	ND		0.50	0.25	ug/L			03/24/17 19:38	1
Chloroethane	ND		1.0	0.40	ug/L			03/24/17 19:38	1
Chloroform	ND		0.50	0.25	ug/L			03/24/17 19:38	1
Chloromethane	ND		0.50	0.25	ug/L			03/24/17 19:38	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/24/17 19:38	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/24/17 19:38	1
Dibromochloromethane	ND		0.50	0.25	ug/L			03/24/17 19:38	1
Dibromomethane	ND		0.50	0.25	ug/L			03/24/17 19:38	1
Bromodichloromethane	ND		0.50	0.25	ug/L			03/24/17 19:38	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			03/24/17 19:38	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			03/24/17 19:38	1
Ethylbenzene	ND		0.50	0.25	ug/L			03/24/17 19:38	1
Iodomethane	ND		2.0	1.0	ug/L			03/24/17 19:38	1
Isobutyl alcohol	ND		25	13	ug/L			03/24/17 19:38	1
m,p-Xylene	ND		1.0	0.50	ug/L			03/24/17 19:38	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			03/24/17 19:38	1
Methyl methacrylate	ND		2.0	1.0	ug/L			03/24/17 19:38	1
Methylene Chloride	ND		2.0	0.88	ug/L			03/24/17 19:38	1

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

Lab Sample ID: MB 440-396022/4
Matrix: Water
Analysis Batch: 396022

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			03/24/17 19:38	1
Naphthalene	ND		1.0	0.40	ug/L			03/24/17 19:38	1
o-Xylene	ND		0.50	0.25	ug/L			03/24/17 19:38	1
Propionitrile	ND		20	10	ug/L			03/24/17 19:38	1
Styrene	ND		0.50	0.25	ug/L			03/24/17 19:38	1
t-Butanol	ND		10	5.0	ug/L			03/24/17 19:38	1
Tetrachloroethene	ND		0.50	0.25	ug/L			03/24/17 19:38	1
Tetrahydrofuran	ND		10	5.0	ug/L			03/24/17 19:38	1
Toluene	ND		0.50	0.25	ug/L			03/24/17 19:38	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			03/24/17 19:38	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/24/17 19:38	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			03/24/17 19:38	1
Trichloroethene	ND		0.50	0.25	ug/L			03/24/17 19:38	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			03/24/17 19:38	1
Vinyl acetate	ND		4.0	2.0	ug/L			03/24/17 19:38	1
Vinyl chloride	ND		0.50	0.25	ug/L			03/24/17 19:38	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			03/24/17 19:38	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			03/24/17 19:38	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			03/24/17 19:38	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*03/24/17 19:38*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*110*		*80 - 128*		*03/24/17 19:38*	*1*
4-Bromofluorobenzene (Surr)	*106*		*80 - 120*		*03/24/17 19:38*	*1*
Dibromofluoromethane (Surr)	*107*		*76 - 132*		*03/24/17 19:38*	*1*

Lab Sample ID: LCS 440-396022/5
Matrix: Water
Analysis Batch: 396022

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	26.3		ug/L		105	63 - 130
1,1,1,2-Tetrachloroethane	25.0	26.8		ug/L		107	60 - 141
1,1,1-Trichloroethane	25.0	26.7		ug/L		107	70 - 130
1,1,2,2-Tetrachloroethane	25.0	25.6		ug/L		102	63 - 130
1,1,2-Trichloroethane	25.0	27.4		ug/L		110	70 - 130
1,1-Dichloroethane	25.0	26.9		ug/L		108	64 - 130
1,1-Dichloroethene	25.0	25.0		ug/L		100	70 - 130
1,1-Dichloropropene	25.0	27.8		ug/L		111	70 - 130
1,2,4-Trichlorobenzene	25.0	26.3		ug/L		105	60 - 140
1,2-Dibromo-3-Chloropropane	25.0	26.7		ug/L		107	52 - 140
1,2-Dichlorobenzene	25.0	27.3		ug/L		109	70 - 130
1,2-Dichloroethane	25.0	26.9		ug/L		107	57 - 138
1,2-Dichloropropane	25.0	27.3		ug/L		109	67 - 130
1,3-Dichlorobenzene	25.0	26.4		ug/L		105	70 - 130

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

Lab Sample ID: LCS 440-396022/5
Matrix: Water
Analysis Batch: 396022

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	25.6		ug/L		102	70 - 130
1,4-Dichlorobenzene	25.0	26.8		ug/L		107	70 - 130
2,2-Dichloropropane	25.0	28.4		ug/L		114	68 - 141
2-Hexanone	25.0	26.7		ug/L		107	10 - 150
Acetone	25.0	27.7		ug/L		111	10 - 150
Acetonitrile	250	284		ug/L		114	49 - 142
Acrolein	25.0	22.6		ug/L		91	10 - 145
Benzene	25.0	27.6		ug/L		110	68 - 130
Bromoform	25.0	26.7		ug/L		107	60 - 148
Bromomethane	25.0	25.0		ug/L		100	64 - 139
Carbon disulfide	25.0	25.5		ug/L		102	52 - 136
Carbon tetrachloride	25.0	26.3		ug/L		105	60 - 150
Chlorobenzene	25.0	25.6		ug/L		102	70 - 130
Bromochloromethane	25.0	27.4		ug/L		110	70 - 130
Chloroethane	25.0	26.6		ug/L		106	64 - 135
Chloroform	25.0	26.8		ug/L		107	70 - 130
Chloromethane	25.0	24.3		ug/L		97	47 - 140
cis-1,2-Dichloroethene	25.0	27.1		ug/L		109	70 - 133
cis-1,3-Dichloropropene	25.0	26.6		ug/L		107	70 - 133
Dibromochloromethane	25.0	26.1		ug/L		104	69 - 145
Dibromomethane	25.0	26.8		ug/L		107	70 - 130
Bromodichloromethane	25.0	27.7		ug/L		111	70 - 132
Dichlorodifluoromethane	25.0	22.2		ug/L		89	29 - 150
Ethylbenzene	25.0	25.1		ug/L		100	70 - 130
m,p-Xylene	25.0	26.1		ug/L		104	70 - 130
Methylene Chloride	25.0	26.5		ug/L		106	52 - 130
Methyl tert-butyl ether	25.0	27.0		ug/L		108	63 - 131
Naphthalene	25.0	27.3		ug/L		109	60 - 140
o-Xylene	25.0	26.0		ug/L		104	70 - 130
Styrene	25.0	26.0		ug/L		104	70 - 134
t-Butanol	250	259		ug/L		104	70 - 130
Tetrachloroethene	25.0	25.8		ug/L		103	70 - 130
Toluene	25.0	25.7		ug/L		103	70 - 130
trans-1,2-Dichloroethene	25.0	28.0		ug/L		112	70 - 130
trans-1,3-Dichloropropene	25.0	26.4		ug/L		106	70 - 132
Trichloroethene	25.0	27.0		ug/L		108	70 - 130
Trichlorofluoromethane	25.0	26.0		ug/L		104	60 - 150
Vinyl acetate	25.0	29.3		ug/L		117	48 - 140
Vinyl chloride	25.0	26.1		ug/L		104	59 - 133
1,2-Dibromoethane (EDB)	25.0	26.2		ug/L		105	70 - 130
2-Butanone (MEK)	25.0	24.5		ug/L		98	44 - 150
4-Methyl-2-pentanone (MIBK)	25.0	27.9		ug/L		111	59 - 149

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*105*		*80 - 128*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*
Dibromofluoromethane (Surr)	*106*		*76 - 132*

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

Lab Sample ID: 440-180031-A-1 MS
Matrix: Water
Analysis Batch: 396022

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	24.9		ug/L		100	60 - 130
1,1,1,2-Tetrachloroethane	ND		25.0	27.8		ug/L		111	60 - 149
1,1,1-Trichloroethane	ND		25.0	26.6		ug/L		106	70 - 130
1,1,2,2-Tetrachloroethane	ND		25.0	24.8		ug/L		99	63 - 130
1,1,2-Trichloroethane	0.30	J	25.0	28.0		ug/L		111	70 - 130
1,1-Dichloroethane	13		25.0	39.0		ug/L		105	65 - 130
1,1-Dichloroethene	110		25.0	125	4	ug/L		76	70 - 130
1,1-Dichloropropene	ND		25.0	27.6		ug/L		110	64 - 130
1,2,4-Trichlorobenzene	ND		25.0	26.9		ug/L		108	60 - 140
1,2-Dibromo-3-Chloropropane	ND		25.0	23.9		ug/L		96	48 - 140
1,2-Dichlorobenzene	ND		25.0	27.1		ug/L		108	70 - 130
1,2-Dichloroethane	0.38	J	25.0	27.1		ug/L		107	56 - 146
1,2-Dichloropropane	ND		25.0	27.9		ug/L		112	69 - 130
1,3-Dichlorobenzene	ND		25.0	26.5		ug/L		106	70 - 130
1,3-Dichloropropane	ND		25.0	26.9		ug/L		108	70 - 130
1,4-Dichlorobenzene	ND		25.0	26.3		ug/L		105	70 - 130
2,2-Dichloropropane	ND		25.0	27.9		ug/L		112	69 - 138
2-Hexanone	ND		25.0	26.8		ug/L		107	10 - 150
Acetone	ND		25.0	25.0		ug/L		100	10 - 150
Acetonitrile	ND		250	274		ug/L		110	37 - 140
Acrolein	ND		25.0	22.9		ug/L		92	10 - 147
Benzene	ND		25.0	27.4		ug/L		110	66 - 130
Bromoform	ND		25.0	27.1		ug/L		108	59 - 150
Bromomethane	ND		25.0	24.9		ug/L		99	62 - 131
Carbon disulfide	ND		25.0	25.5		ug/L		102	49 - 140
Carbon tetrachloride	ND		25.0	26.4		ug/L		105	60 - 150
Chlorobenzene	ND		25.0	26.6		ug/L		106	70 - 130
Bromochloromethane	ND		25.0	26.9		ug/L		108	70 - 130
Chloroethane	ND		25.0	26.4		ug/L		106	68 - 130
Chloroform	0.61		25.0	27.2		ug/L		106	70 - 130
Chloromethane	ND		25.0	24.6		ug/L		99	39 - 144
cis-1,2-Dichloroethene	15		25.0	41.1		ug/L		105	70 - 130
cis-1,3-Dichloropropene	ND		25.0	27.8		ug/L		111	70 - 133
Dibromochloromethane	ND		25.0	26.6		ug/L		106	70 - 148
Dibromomethane	ND		25.0	26.2		ug/L		105	70 - 130
Bromodichloromethane	ND		25.0	28.7		ug/L		115	70 - 138
Dichlorodifluoromethane	ND		25.0	22.3		ug/L		89	25 - 142
Ethylbenzene	ND		25.0	26.6		ug/L		106	70 - 130
m,p-Xylene	ND		25.0	27.5		ug/L		110	70 - 133
Methylene Chloride	ND		25.0	26.1		ug/L		105	52 - 130
Methyl tert-butyl ether	ND		25.0	26.7		ug/L		107	70 - 130
Naphthalene	ND		25.0	26.6		ug/L		106	60 - 140
o-Xylene	ND		25.0	27.6		ug/L		110	70 - 133
Styrene	ND		25.0	27.1		ug/L		108	29 - 150
t-Butanol	ND		250	320		ug/L		128	70 - 130
Tetrachloroethene	28		25.0	53.3		ug/L		101	70 - 137
Toluene	ND		25.0	26.8		ug/L		107	70 - 130
trans-1,2-Dichloroethene	0.37	J	25.0	28.0		ug/L		111	70 - 130

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

Lab Sample ID: 440-180031-A-1 MS
Matrix: Water
Analysis Batch: 396022

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	27.5		ug/L		110	70 - 138
Trichloroethene	140		25.0	162	4	ug/L		83	70 - 130
Trichlorofluoromethane	0.50		25.0	26.6		ug/L		104	60 - 150
Vinyl acetate	ND		25.0	29.6		ug/L		119	23 - 150
Vinyl chloride	ND		25.0	25.7		ug/L		103	50 - 137
1,2-Dibromoethane (EDB)	ND		25.0	27.1		ug/L		109	70 - 131
2-Butanone (MEK)	ND		25.0	22.7		ug/L		91	48 - 140
4-Methyl-2-pentanone (MIBK)	ND		25.0	27.1		ug/L		109	52 - 150

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Toluene-d8 (Surr)	*107*		*80 - 128*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*
Dibromofluoromethane (Surr)	*106*		*76 - 132*

Lab Sample ID: 440-180031-A-1 MSD
Matrix: Water
Analysis Batch: 396022

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	3	30
1,1,1,2-Tetrachloroethane	ND		25.0	27.8		ug/L		111	60 - 149	0	20
1,1,1-Trichloroethane	ND		25.0	26.9		ug/L		108	70 - 130	1	20
1,1,2,2-Tetrachloroethane	ND		25.0	25.5		ug/L		102	63 - 130	3	30
1,1,2-Trichloroethane	0.30	J	25.0	28.0		ug/L		111	70 - 130	0	25
1,1-Dichloroethane	13		25.0	38.8		ug/L		104	65 - 130	0	20
1,1-Dichloroethene	110		25.0	124	4	ug/L		74	70 - 130	0	20
1,1-Dichloropropene	ND		25.0	27.7		ug/L		111	64 - 130	0	20
1,2,4-Trichlorobenzene	ND		25.0	27.0		ug/L		108	60 - 140	0	20
1,2-Dibromo-3-Chloropropane	ND		25.0	27.2		ug/L		109	48 - 140	13	30
1,2-Dichlorobenzene	ND		25.0	26.8		ug/L		107	70 - 130	1	20
1,2-Dichloroethane	0.38	J	25.0	27.5		ug/L		108	56 - 146	1	20
1,2-Dichloropropane	ND		25.0	27.4		ug/L		109	69 - 130	2	20
1,3-Dichlorobenzene	ND		25.0	26.7		ug/L		107	70 - 130	1	20
1,3-Dichloropropane	ND		25.0	27.0		ug/L		108	70 - 130	0	25
1,4-Dichlorobenzene	ND		25.0	25.7		ug/L		103	70 - 130	3	20
2,2-Dichloropropane	ND		25.0	29.5		ug/L		118	69 - 138	6	25
2-Hexanone	ND		25.0	29.3		ug/L		117	10 - 150	9	35
Acetone	ND		25.0	26.9		ug/L		108	10 - 150	7	35
Acetonitrile	ND		250	291		ug/L		116	37 - 140	6	40
Acrolein	ND		25.0	23.5		ug/L		94	10 - 147	3	40
Benzene	ND		25.0	27.0		ug/L		108	66 - 130	2	20
Bromoform	ND		25.0	27.7		ug/L		111	59 - 150	2	25
Bromomethane	ND		25.0	25.0		ug/L		100	62 - 131	0	25
Carbon disulfide	ND		25.0	25.4		ug/L		101	49 - 140	0	20
Carbon tetrachloride	ND		25.0	26.5		ug/L		106	60 - 150	0	25
Chlorobenzene	ND		25.0	26.8		ug/L		107	70 - 130	1	20
Bromochloromethane	ND		25.0	26.0		ug/L		104	70 - 130	3	25
Chloroethane	ND		25.0	25.9		ug/L		103	68 - 130	2	25

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

Lab Sample ID: 440-180031-A-1 MSD
Matrix: Water
Analysis Batch: 396022

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	0.61		25.0	26.7		ug/L		104	70 - 130	2	20
Chloromethane	ND		25.0	24.5		ug/L		98	39 - 144	1	25
cis-1,2-Dichloroethene	15		25.0	40.5		ug/L		103	70 - 130	2	20
cis-1,3-Dichloropropene	ND		25.0	27.6		ug/L		111	70 - 133	1	20
Dibromochloromethane	ND		25.0	27.1		ug/L		108	70 - 148	2	25
Dibromomethane	ND		25.0	25.5		ug/L		102	70 - 130	3	25
Bromodichloromethane	ND		25.0	28.5		ug/L		114	70 - 138	0	20
Dichlorodifluoromethane	ND		25.0	22.2		ug/L		89	25 - 142	0	30
Ethylbenzene	ND		25.0	26.3		ug/L		105	70 - 130	1	20
m,p-Xylene	ND		25.0	27.2		ug/L		109	70 - 133	1	25
Methylene Chloride	ND		25.0	25.8		ug/L		103	52 - 130	1	20
Methyl tert-butyl ether	ND		25.0	27.1		ug/L		108	70 - 130	2	25
Naphthalene	ND		25.0	27.7		ug/L		111	60 - 140	4	30
o-Xylene	ND		25.0	27.0		ug/L		108	70 - 133	2	20
Styrene	ND		25.0	26.9		ug/L		108	29 - 150	1	35
t-Butanol	ND		250	309		ug/L		124	70 - 130	3	25
Tetrachloroethene	28		25.0	53.7		ug/L		103	70 - 137	1	20
Toluene	ND		25.0	26.7		ug/L		107	70 - 130	0	20
trans-1,2-Dichloroethene	0.37	J	25.0	27.7		ug/L		109	70 - 130	1	20
trans-1,3-Dichloropropene	ND		25.0	27.7		ug/L		111	70 - 138	1	25
Trichloroethene	140		25.0	160	4	ug/L		76	70 - 130	1	20
Trichlorofluoromethane	0.50		25.0	26.8		ug/L		105	60 - 150	1	25
Vinyl acetate	ND		25.0	30.9		ug/L		123	23 - 150	4	30
Vinyl chloride	ND		25.0	26.1		ug/L		104	50 - 137	1	30
1,2-Dibromoethane (EDB)	ND		25.0	27.4		ug/L		109	70 - 131	1	25
2-Butanone (MEK)	ND		25.0	24.8		ug/L		99	48 - 140	9	40
4-Methyl-2-pentanone (MIBK)	ND		25.0	29.6		ug/L		118	52 - 150	9	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*108*		*80 - 128*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*
Dibromofluoromethane (Surr)	*103*		*76 - 132*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 440-395427/1-A
Matrix: Water
Analysis Batch: 395822

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 395427

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		1.0	0.25	ug/L		03/22/17 09:28	03/23/17 17:34	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*68*		*30 - 120*	*03/22/17 09:28*	*03/23/17 17:34*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 440-395427/2-A
Matrix: Water
Analysis Batch: 395822

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 395427

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,4-Dioxane			2.00	1.76		ug/L		88	35 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,4-Dioxane-d8 (Surr)	*80*		*30 - 120*

Lab Sample ID: LCSD 440-395427/3-A
Matrix: Water
Analysis Batch: 395822

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 395427

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dioxane			2.00	1.70		ug/L		85	35 - 120	4	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,4-Dioxane-d8 (Surr)	*78*		*30 - 120*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 440-394333/5
Matrix: Water
Analysis Batch: 394333

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			03/16/17 11:31	1

Lab Sample ID: LCS 440-394333/2
Matrix: Water
Analysis Batch: 394333

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	4.77		mg/L		95	90 - 110		

Lab Sample ID: 440-179376-H-5 MS
Matrix: Water
Analysis Batch: 394333

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	43		100	140		mg/L		98	80 - 120		

Lab Sample ID: 440-179376-H-5 MSD
Matrix: Water
Analysis Batch: 394333

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	43		100	141		mg/L		98	80 - 120	0	20

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 440-395037/1-A
Matrix: Water
Analysis Batch: 395213

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 395037

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	ND		0.50	0.25	mg/L		03/20/17 14:21	03/21/17 09:06	1

Lab Sample ID: LCS 440-395037/2-A
Matrix: Water
Analysis Batch: 395213

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 395037

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Potassium	10.0	9.53		mg/L		95	80 - 120

Lab Sample ID: 440-179681-H-1-B MS
Matrix: Water
Analysis Batch: 395213

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 395037

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Potassium	3.8		10.0	13.8		mg/L		100	75 - 125

Lab Sample ID: 440-179681-H-1-C MSD
Matrix: Water
Analysis Batch: 395213

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 395037

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Potassium	3.8		10.0	13.9		mg/L		101	75 - 125	0	20

Method: 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 440-394765/10
Matrix: Water
Analysis Batch: 394765

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			03/17/17 20:08	1

Lab Sample ID: LCS 440-394765/11
Matrix: Water
Analysis Batch: 394765

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	5.05		mg/L		101	90 - 110

Lab Sample ID: MRL 440-394765/9
Matrix: Water
Analysis Batch: 394765

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	0.154	J	mg/L		77	10 - 200

Method: 350.1 - Nitrogen, Ammonia (Continued)

Lab Sample ID: 440-179777-B-1 MS
Matrix: Water
Analysis Batch: 394765

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)	ND		5.00	5.13		mg/L		103	90 - 110

Lab Sample ID: 440-179777-B-1 MSD
Matrix: Water
Analysis Batch: 394765

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)	ND		5.00	5.25		mg/L		105	90 - 110	2	15

Method: 410.4 - COD

Lab Sample ID: MB 440-396412/3
Matrix: Water
Analysis Batch: 396412

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			03/27/17 16:50	1

Lab Sample ID: LCS 440-396412/4
Matrix: Water
Analysis Batch: 396412

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: 440-179964-E-1 MS
Matrix: Water
Analysis Batch: 396412

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	12	J	200	206		mg/L		97	70 - 120

Lab Sample ID: 440-179964-E-1 MSD
Matrix: Water
Analysis Batch: 396412

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	12	J	200	199		mg/L		94	70 - 120	3	15

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 440-394645/30
Matrix: Water
Analysis Batch: 394645

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			03/17/17 07:31	1

Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: LCS 440-394645/29
Matrix: Water
Analysis Batch: 394645

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	34.5		mg/L		102	80 - 120

Lab Sample ID: 440-179769-B-14 DU
Matrix: Water
Analysis Batch: 394645

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	280		277		mg/L		0.3	20

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

Lab Sample ID: MB 440-395665/1
Matrix: Water
Analysis Batch: 395665

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			03/23/17 07:15	1

Lab Sample ID: LCS 440-395665/2
Matrix: Water
Analysis Batch: 395665

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

Lab Sample ID: 440-179756-1 DU
Matrix: Water
Analysis Batch: 395665

Client Sample ID: MW-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	3600		3580		mg/L		2	5

Method: SM 5310C - TOC

Lab Sample ID: MB 440-395236/8
Matrix: Water
Analysis Batch: 395236

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			03/21/17 05:59	1

Lab Sample ID: LCS 440-395236/6
Matrix: Water
Analysis Batch: 395236

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	5.00	4.75		mg/L		95	90 - 110

Method: SM 5310C - TOC (Continued)

Lab Sample ID: LCSD 440-395236/7
Matrix: Water
Analysis Batch: 395236

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 Organic Carbon	5.00	4.51		mg/L		90	90 - 110	5	20

Lab Sample ID: MRL 440-395236/5
Matrix: Water
Analysis Batch: 395236

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	0.0983	J	mg/L		98	50 - 150

GC/MS VOA

Analysis Batch: 395144

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-179756-1	MW-1	Total/NA	Water	8260B	
440-179756-2	MW-13R	Total/NA	Water	8260B	
440-179756-3	QCAB	Total/NA	Water	8260B	
440-179756-4	QCTB	Total/NA	Water	8260B	
MB 440-395144/4	Method Blank	Total/NA	Water	8260B	
LCS 440-395144/5	Lab Control Sample	Total/NA	Water	8260B	
440-179775-D-1 MS	Matrix Spike	Total/NA	Water	8260B	
440-179775-D-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

Analysis Batch: 396022

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-179756-1	MW-1	Total/NA	Water	8260B	
440-179756-2	MW-13R	Total/NA	Water	8260B	
440-179756-3	QCAB	Total/NA	Water	8260B	
440-179756-4	QCTB	Total/NA	Water	8260B	
MB 440-396022/4	Method Blank	Total/NA	Water	8260B	
LCS 440-396022/5	Lab Control Sample	Total/NA	Water	8260B	
440-180031-A-1 MS	Matrix Spike	Total/NA	Water	8260B	
440-180031-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 395427

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-179756-1	MW-1	Total/NA	Water	3520C	
440-179756-2	MW-13R	Total/NA	Water	3520C	
MB 440-395427/1-A	Method Blank	Total/NA	Water	3520C	
LCS 440-395427/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 440-395427/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	

Analysis Batch: 395822

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-179756-1	MW-1	Total/NA	Water	8270C	395427
440-179756-2	MW-13R	Total/NA	Water	8270C	395427
MB 440-395427/1-A	Method Blank	Total/NA	Water	8270C	395427
LCS 440-395427/2-A	Lab Control Sample	Total/NA	Water	8270C	395427
LCSD 440-395427/3-A	Lab Control Sample Dup	Total/NA	Water	8270C	395427

HPLC/IC

Analysis Batch: 394333

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-179756-1	MW-1	Total/NA	Water	300.0	
440-179756-2	MW-13R	Total/NA	Water	300.0	
MB 440-394333/5	Method Blank	Total/NA	Water	300.0	
LCS 440-394333/2	Lab Control Sample	Total/NA	Water	300.0	
440-179376-H-5 MS	Matrix Spike	Total/NA	Water	300.0	
440-179376-H-5 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Metals

Prep Batch: 395037

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-179756-1	MW-1	Total Recoverable	Water	3005A	
440-179756-2	MW-13R	Total Recoverable	Water	3005A	
MB 440-395037/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 440-395037/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
440-179681-H-1-B MS	Matrix Spike	Total Recoverable	Water	3005A	
440-179681-H-1-C MSD	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

Analysis Batch: 395213

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-179756-1	MW-1	Total Recoverable	Water	6010B	395037
440-179756-2	MW-13R	Total Recoverable	Water	6010B	395037
MB 440-395037/1-A	Method Blank	Total Recoverable	Water	6010B	395037
LCS 440-395037/2-A	Lab Control Sample	Total Recoverable	Water	6010B	395037
440-179681-H-1-B MS	Matrix Spike	Total Recoverable	Water	6010B	395037
440-179681-H-1-C MSD	Matrix Spike Duplicate	Total Recoverable	Water	6010B	395037

General Chemistry

Analysis Batch: 394645

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-179756-1	MW-1	Total/NA	Water	SM 2320B	
440-179756-2	MW-13R	Total/NA	Water	SM 2320B	
MB 440-394645/30	Method Blank	Total/NA	Water	SM 2320B	
LCS 440-394645/29	Lab Control Sample	Total/NA	Water	SM 2320B	
440-179769-B-14 DU	Duplicate	Total/NA	Water	SM 2320B	

Analysis Batch: 394765

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-179756-1	MW-1	Total/NA	Water	350.1	
440-179756-2	MW-13R	Total/NA	Water	350.1	
MB 440-394765/10	Method Blank	Total/NA	Water	350.1	
LCS 440-394765/11	Lab Control Sample	Total/NA	Water	350.1	
MRL 440-394765/9	Lab Control Sample	Total/NA	Water	350.1	
440-179777-B-1 MS	Matrix Spike	Total/NA	Water	350.1	
440-179777-B-1 MSD	Matrix Spike Duplicate	Total/NA	Water	350.1	

Analysis Batch: 395236

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-179756-1	MW-1	Total/NA	Water	SM 5310C	
440-179756-2	MW-13R	Total/NA	Water	SM 5310C	
MB 440-395236/8	Method Blank	Total/NA	Water	SM 5310C	
LCS 440-395236/6	Lab Control Sample	Total/NA	Water	SM 5310C	
LCSD 440-395236/7	Lab Control Sample Dup	Total/NA	Water	SM 5310C	
MRL 440-395236/5	Lab Control Sample	Total/NA	Water	SM 5310C	
440-180033-K-1 MS	Matrix Spike	Total/NA	Water	SM 5310C	
440-180033-K-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 5310C	

Analysis Batch: 395665

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-179756-1	MW-1	Total/NA	Water	SM 2540C	

General Chemistry (Continued)

Analysis Batch: 395665 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-179756-2	MW-13R	Total/NA	Water	SM 2540C	
MB 440-395665/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 440-395665/2	Lab Control Sample	Total/NA	Water	SM 2540C	
440-179756-1 DU	MW-1	Total/NA	Water	SM 2540C	

Analysis Batch: 396412

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-179756-1	MW-1	Total/NA	Water	410.4	
440-179756-2	MW-13R	Total/NA	Water	410.4	
MB 440-396412/3	Method Blank	Total/NA	Water	410.4	
LCS 440-396412/4	Lab Control Sample	Total/NA	Water	410.4	
440-179964-E-1 MS	Matrix Spike	Total/NA	Water	410.4	
440-179964-E-1 MSD	Matrix Spike Duplicate	Total/NA	Water	410.4	

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
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.
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.

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.

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, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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)

Certification Summary

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

TestAmerica Job ID: 440-179756-1

Laboratory: TestAmerica Irvine

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

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska	State Program	10	CA01531	06-30-17
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	CA015312016-2	07-31-17
New Mexico	State Program	6	N/A	01-29-17 *
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

* Certification renewal pending - certification considered valid.

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

Chain of Custody Record

141857

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

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

Client Contact	Project Manager: Kyle Welchans	Site Contact: Matt Eaton	Date: 3.16.17	COC No:
Company Name: Republic / GLA	Tel/Fax: 619-540-5509	Lab Contact: Rossina	Carrier: TestAmerica	1 of 1 COCs
Address: 11445 W. Bernardo Ct. #200	Analysis Turnaround Time			Sampler: AS
City/State/Zip: San Diego CA 92127	☐ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: 858-415-1136	TAT if different from Below _____			Walk-in Client:
Fax: 858-415-1087	☐ 2 weeks			Lab Sampling:
Project Name: Republic Services	☐ 1 week			Job / SDG No.:
Site: Sunshine Gn Landfill	☐ 2 days			
PO# 4400785 1	☐ 1 day			

GLA Job# 2016.0030

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 8260-VOCs	Total Alkalinity 310.1	Ammonia N - 350.2	COD - 410.4	Chloride - 300.0	Total Potassium - 6010B	TDS - EPA 160.1	TOC - EPA 415.1	EPA 8270 - 1,4-Dioxane	Sample Specific Notes:
MW-1	3/16/17	1015	G	GW	12	N	N	X	X	X	X	X	X	X	X	X	
MW-13R		0845			12			X	X	X	X	X	X	X	X	X	
QCAB		—			4			X									
DCTB		—			4			X									

440-179756 Chain of Custody

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

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

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

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

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

Special Instructions/QC Requirements & Comments:

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

	Company	Date/Time		Company	Date/Time
Relinquished by:	Geo-Logic	3/16/17 1040	Received by:		
Relinquished by:		3/16/17 1640	Received by:	Company:	Date/Time: 3/16/17 @10:40
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company: TAZ	Date/Time: 3/16/17 16:40

Temp 2.0/2.5°C IR #5

WS 3/16/17 17:33

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8/28/2017

Login Sample Receipt Checklist

Client: Geo-Logic Associates

Job Number: 440-179756-1

Login Number: 179756

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

Chain of Custody Record

027711

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

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

Client Contact			
Company Name: Geologic Associates	Project Manager: Kyle Weldhaus	Site Contact:	Date: 4-18-17
Address: 11415 W. Bernardo Ct.	Tel/Fax: 858-451-1136	Lab Contact: R. Tomova	Carrier: TestAmerica
City/State/Zip: San Diego, CA 92127	Analysis Turnaround Time: ☐ CALENDAR DAYS ☐ WORKING DAYS		COC No:
Phone: 858-451-1136	TAT if different from Below ______		1 of 1 COCs
Fax: 858-451-1087	☐ 2 weeks		Sampler: A. Shaw
Project Name: Republic Services	☐ 1 week		For Lab Use Only:
Site: Sunshine Cyn Landfill	☐ 2 days		Walk-in Client:
PO# 4400785	☐ 1 day		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)	Total Alkalinity - EPA 310.1	Ammonia as N - EPA 350.2	Total Dissolved Solids - EPA 160.1	8260 Chloroform and Chloromethane	Sample Specific Notes:
MW-5-A	4/18/17	1230	G	GW	1	N	N		X X			
MW-5-B	↓	1230	↓	↓	1	↓	↓		X X			
MW-14-A	↓	0910	↓	↓	2	↓	↓	X X		X X		
MW-14-B	↓	0910	↓	↓	2	↓	↓	X X		X X		
DW-3-A	↓	1125	↓	↓	3	↓	↓				X X	
DW-3-B	↓	1125	↓	↓	3	↓	↓				X X	
PZ-2-A	↓	1035	↓	↓	1	↓	↓		X X			
PZ-2-B	↓	1035	↓	↓	1	↓	↓		X X			
QCAB	↓	—	↓	↓	3	↓	↓				X X	
QCTB	↓	—	↓	↓	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 ☐ Poison B ☑ Unknown

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

☐ Return to Client ☑ Disposal by Lab ☐ Archive for ______ Months

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temp. (°C): Obs'd: ____ Corr'd: ____		Therm ID No.:
Relinquished by: [signature]	Company: GLA	Date/Time: 4/18/17 1400	Received by: [signature]	Company: TAI	Date/Time: 4/18/17 14:00
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Geo-Logic
ASSOCIATES
Geologists, Hydrogeologists, and Engineers

GROUNDWATER MONITORING PROGRAM
WATER LEVEL SURVEY RECORD SHEET

Site: Sunshine Cyn

Project No.: 3017.1017

Date: 4.18.17

Field Personnel: A. Shaw

* Retests

WELL I.D.	CONSTRUCTED TOTAL DEPTH (TD)	ACTUAL TOTAL DEPTH (TD)	DEPTH TO WATER (DTW)	COMMENTS
MW-5			18.14	
MW-14			14.75	
DW-3			153.58	
PZ-2			122.46	

REMARKS:

Name: Adam Shaw

Signature: AS

Geo-Logic ASSOCIATES

Geologists • Hydrogeologists • Engineers Retest: MW-5-A and MW-5-B Collected.

GROUNDWATER MONITORING PROGRAM
WELL DATA SHEET

Site Name:	Sunshine Cyn	Project No.:	8017.1047
Well I D :	MW-5	Sampling Date:	4.18.17
Collected By:	AS	Purge start Time:	1206
Casing Diameter (inches):	2	Purge Stop time:	1225
Starting Water Level:	18.14	Sampling (Well Recovery) Time:	1230
Total Depth (feet):	26.20	Ending Water Level (feet):	18.29
Water column (feet):		Total Purged (gallons):	2.0+
Screen Length (feet):	—	Duplicate Sample:	YES (NO)
Sample Method:	(Micro Purge) Low Flow		
Horiba Model S/N:	U-52 WQCP8CR5		

* Retest sample MW-5-A & MW-5-B

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P mV
1211	0.50	18.29	8.08	7.44	99.5	5.75	21.41	-16
1215	1.00	"	8.19	7.53	313	3.18	21.19	-47
1217	1.25	"	8.20	7.54	226	2.93	21.17	-56
1219	1.50	"	8.21	7.53	24.5	2.84	21.18	-66
1222	1.75	"	8.21	7.54	24.7	2.86	21.19	-70
1225	2.00	"	8.21	7.53	25.3	2.90	21.17	-74

Purge Sampling Rates: 20 PSI ; Refill (30.0), Discharge (10.0).

Well condition: O.K.

Additional Info/Comments: Mostly Cloudy, Mild

* Retest for EPA 350.2 Ammonia as N analysis.

Name: Adam Shaw Signature: AC. SH

Rates +

GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sonshine Gyn Well ID: MW-5 Date: 4-18-17

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 not visable / or buried.

Concrete Pad:

Integrity: 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 Weephoies: Good: ✓ Damaged: _____

Remarks:

Well Riser: Material: PVC

Condition of Riser: Good: ✓ Damaged: _____

Condition of Riser Cap: Good: ✓ Damaged: _____

Measurment reference point: Yes: ✓ No: _____

Remarks:

Dedicated Pump: Type: Bladder

Condition: Good: ✓ Damaged: _____ Missing: _____

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

Remarks:

Field Certification: AC. [signature] Field Tech 4-18-17

Signed Title Date

Geo-Logic ASSOCIATES
Geologists • Hydrogeologists • Engineers

Retest MW-14-A and MW-14-B Collected.

GROUNDWATER MONITORING PROGRAM
WELL DATA SHEET

Site Name:	Sunshine Gun	Project No.:	S017-1047
Well I D.:	MW-14	Sampling Date:	4.18.17
Collected By:	AS	Purge start Time:	0848
Casing Diameter (inches):	4	Purge Stop time:	0905
Starting Water Level:	14.75	Sampling (Well Recovery) Time:	0910
Total Depth (feet):	28.10	Ending Water Level (feet):	15.22
Water column (feet):	13.35	Total Purged (gallons):	2.0+
Screen Length (feet):	—	Duplicate Sample:	YES (NO)
Sample Method:	(Micro Purge) Low Flow		
Horiba Model S/N:	U-52 | WGLP8GRS		

*Retest Samples MW-14-A and MW-14-B

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P mV
0852	0.50	15.11	8.36	12.2	2.6	4.22	21.54	309
0856	1.00	15.22	8.42	12.2	1.0	2.80	21.58	295
0858	1.25	15.18	8.45	12.2	0.9	2.12	21.56	290
0900	1.50	15.21	8.46	12.2	0.7	1.65	21.54	283
0902	1.75	15.20	8.47	12.2	0.4	1.63	21.55	280
0905	2.00	15.24	8.48	12.2	0.9	1.61	21.54	275

Purge Sampling Rates: 20 PSI, Refill [20.0], Discharge [10.0].

Well condition: O.K. - Heavy veg. Hiked/Carried equipment down slope to well.

Additional Info/Comments: Partly Cloudy, Mild

* Retest for Total Alkalinity - 310.1 and TDS 160.1 analysis

Name: Adam Shaw Signature: AC

Retest

GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Cyn Well ID: MW-14 Date: 4-18-17

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: Requires hiking / carrying sampling equipment 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 Weephoies: Good: ✓ Damaged: ____

Remarks:

Well Riser: Material: PVC

Condition of Riser: Good: ✓ Damaged: ____

Condition of Riser Cap: Good: ✓ Damaged: ____

Measurment reference point: Yes: ✓ No: ____

Remarks:

Dedicated Pump: Type: Bladder

Condition: Good: ✓ Damaged: ____ Missing: ____

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

Remarks:

Field Certification: AC. M Field Tech 4.18.17

Signed Title Date

Geo-Logic ASSOCIATES

Geologists • Hydrogeologists • Engineers

Retest : DW-3-A and DW-3-B Collected

GROUNDWATER MONITORING PROGRAM
WELL DATA SHEET

Site Name: Sunshine Cyn

Well I.D.: DW-3

Collected By: AS

Casing Diameter (inches): 4

Starting Water Level: 153.58

Total Depth (feet): 256.60

Water column (feet):

Screen Length (feet): —

Sample Method: Micro Purge (circled) Low Flow

Horiba Model S/N: U52 [illegible]

Project No.: S017-1047

Sampling Date: 4.18.17

Purge start Time: 1056

Purge Stop time: 1120

Sampling (Well Recovery) Time: 1125

Ending Water Level (feet): 156.98

Total Purged (gallons): 2.5+

Duplicate Sample: YES NO (circled)

* Retest Samples DW-3-A and DW-3-B

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P mV
1102	0.50	154.71	9.19	3.94	0.2	6.47	21.74	105
1106	1.00	155.41	9.14	3.98	0.5	3.39	21.44	-60
1110	1.50	155.96	9.12	3.97	0.7	3.08	21.41	-65
1112	1.75	156.25	9.12	3.96	0.6	2.91	21.38	-67
1115	2.00	156.46	9.11	3.97	0.6	2.90	21.39	-68
1117	2.25	156.72	9.12	3.96	0.6	2.85	21.30	-68
1120	2.50	156.98	9.11	3.96	0.7	2.84	21.32	-69

Purge Sampling Rates: 100 PSI ; Refill (35.0), Discharge (20.0).

Well condition: O.K
QCAB Taken

Additional Info/Comments: Partly Cloudy, Mild

* Retest for Chloroform and Chloromethane (8260) analysis.

Name: Adam Shaw Signature: [signature]

Retest

GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Gym Well ID: DW-3 Date: 4.18.17

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: _____

Measurment reference point: Yes: ✓ No: _____

Remarks:

Dedicated Pump: Type: Bladder

Condition: Good: ✓ Damaged: _____ Missing: _____

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

Remarks:

Field Certification: [signature] Field Tech 4.18.17

Signed Title Date

Geo-Logic ASSOCIATES
Geologists • Hydrogeologists • Engineers

Retest: PZ-2-A and PZ-2-B collected

GROUNDWATER MONITORING PROGRAM
WELL DATA SHEET

Site Name:	Sunshine Cyn	Project No.:	5017.1047
Well I.D.:	PZ-2	Sampling Date:	4.18.17
Collected By:	AS	Purge start Time:	0958
Casing Diameter (inches):	2	Purge Stop time:	1030
Starting Water Level:	122.46	Sampling (Well Recovery) Time:	1035
Total Depth (feet):	160.90	Ending Water Level (feet):	128.88
Water column (feet):		Total Purged (gallons):	2.0+
Screen Length (feet):	—	Duplicate Sample:	YES (NO)
Sample Method:	(Micro Purge) Low Flow	* Retest Samples PZ-2-A and PZ-2-B	
Horiba Model S/N:	U-52 | WQCPZCR5 |		

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O R P mV
1006	0.50	124.38	10.32	10.8	77.7	7.87	24.87	-141
1014	1.00	126.09	10.48	~~5.7~~ 10.8 (AS)	5.7	4.55	24.64	-108
1018	1.25	126.78	10.48	10.8	3.7	5.24	24.65	-105
1022	1.50	127.52	10.48	10.8	3.3	8.23	24.64	-103
1026	1.75	128.19	10.49	10.8	2.9	2.19	24.67	-103
1030	2.00	128.88	10.48	10.8	2.5	2.15	24.67	-103

Purge Sampling Rates: 80 PSI ; Refill (30.0), Discharge (22.0).

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

Additional Info/Comments: Partly Cloudy. Mild

* Retest for EPA-350.2 Ammonia as N analysis.

Name: Adam Shaw Signature: AC. SM

Retest

GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Cyn Well ID: PZ-2 Date: 4.18.17

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: Had to carry sampling equipment across concrete channel to access

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: _____

Measurment reference point: Yes: ✓ No: _____

Remarks:

Dedicated Pump: Type: Bladder

Condition: Good: ✓ Damaged: _____ Missing: _____

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

Remarks:

Field Certification: [signature] Signed — Field Tech Title — 4.18.17 Date

Geo-Logic ASSOCIATES

FIELD CALIBRATION DOCUMENTATION FORM

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

Instrument Make/Model # Horiba U-52 S/N COGGP8GR5						
Date/Time 0752	**pH**	**Electrical Conductivity (µMhos/cm)**	**Turbidity (NTU)**	**DO (mg/L or %)**	**Guidance Remarks**	**Comments**
Pre. Cal	3.95	4.39	Ø	9.77		
Calibration	4.00	4.50	Ø	9.41		
Calibration Successful? (Y/N)	Y	———	———	———	enter YES or NO	
Satifies Protocol?	Y	———	———	———	Did calibration meet criteria in the sampling protocol? (Y or N)	
Calibration by	AS				Signature or initials	[signature]
Physical Condition of Unit ———	→ Good					

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: 440-182379-1
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:
5/2/2017 2:40:36 PM
Jannel Franklin, Project Manager I
(732)593-2551
jannel.franklin@testamericainc.com

Designee for

Rossina Tomova, Project Manager I
(949)261-1022
rossina.tomova@testamericainc.com

Table of Contents

Sample Summary

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

TestAmerica Job ID: 440-182379-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-182379-1	MW-5-A	Water	04/18/17 12:30	04/18/17 17:35
440-182379-2	MW-5-B	Water	04/18/17 12:30	04/18/17 17:35
440-182379-3	MW-14-A	Water	04/18/17 09:10	04/18/17 17:35
440-182379-4	MW-14-B	Water	04/18/17 09:10	04/18/17 17:35
440-182379-5	DW-3-A	Water	04/18/17 11:25	04/18/17 17:35
440-182379-6	DW-3-B	Water	04/18/17 11:25	04/18/17 17:35
440-182379-7	PZ-2-A	Water	04/18/17 10:35	04/18/17 17:35
440-182379-8	PZ-2-B	Water	04/18/17 10:35	04/18/17 17:35
440-182379-9	QCAB	Water	04/18/17 00:01	04/18/17 17:35
440-182379-10	QCTB	Water	04/18/17 00:01	04/18/17 17:35

Job ID: 440-182379-1

Laboratory: TestAmerica Irvine

Narrative

Job Narrative
440-182379-1

Comments
No additional comments.

Receipt
The samples were received on 4/18/2017 5:35 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.7º C.

Receipt Exceptions

The following sample was improperly preserved in the field: MW-14-A (440-182379-3) and MW-14-B (440-182379-4). The preservative used is not compatible with the analytes requested. Alkalinity test container sample preserved incorrect both samples received unpreserved

GC/MS VOA
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.

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

Client Sample ID: MW-5-A
Lab Sample ID: 440-182379-1
Date Collected: 04/18/17 12:30
Matrix: Water
Date Received: 04/18/17 17:35

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	4.2		2.5	0.50	mg/L		04/20/17 03:00	04/20/17 06:00	1

Client Sample ID: MW-5-B
Lab Sample ID: 440-182379-2
Date Collected: 04/18/17 12:30
Matrix: Water
Date Received: 04/18/17 17:35

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	4.6		2.5	0.50	mg/L		04/20/17 03:00	04/20/17 06:00	1

Client Sample ID: MW-14-A
Lab Sample ID: 440-182379-3
Date Collected: 04/18/17 09:10
Matrix: Water
Date Received: 04/18/17 17:35

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	6500		100	50	mg/L			04/25/17 08:21	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	670		4.0	4.0	mg/L			04/19/17 04:59	1
Bicarbonate Alkalinity as CaCO3	670		4.0	4.0	mg/L			04/19/17 04:59	1

Client Sample ID: MW-14-B
Lab Sample ID: 440-182379-4
Date Collected: 04/18/17 09:10
Matrix: Water
Date Received: 04/18/17 17:35

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	6400		100	50	mg/L			04/25/17 08:21	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	650		4.0	4.0	mg/L			04/19/17 05:13	1
Bicarbonate Alkalinity as CaCO3	650		4.0	4.0	mg/L			04/19/17 05:13	1

Client Sample ID: DW-3-A
Lab Sample ID: 440-182379-5
Date Collected: 04/18/17 11:25
Matrix: Water
Date Received: 04/18/17 17:35

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	ND		0.50	0.25	ug/L			04/28/17 21:37	1
Chloromethane	ND		0.50	0.25	ug/L			04/28/17 21:37	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/28/17 21:37*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*97*		*80 - 128*		*04/28/17 21:37*	*1*
4-Bromofluorobenzene (Surr)	*88*		*80 - 120*		*04/28/17 21:37*	*1*
Dibromofluoromethane (Surr)	*111*		*76 - 132*		*04/28/17 21:37*	*1*

Client Sample ID: DW-3-B

Lab Sample ID: 440-182379-6
Date Collected: 04/18/17 11:25
Matrix: Water
Date Received: 04/18/17 17:35

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	ND		0.50	0.25	ug/L			04/28/17 23:04	1
Chloromethane	ND		0.50	0.25	ug/L			04/28/17 23:04	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*8.6*	*T J*	*ug/L*		*6.14*			*04/28/17 23:04*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*96*		*80 - 128*		*04/28/17 23:04*	*1*
4-Bromofluorobenzene (Surr)	*87*		*80 - 120*		*04/28/17 23:04*	*1*
Dibromofluoromethane (Surr)	*109*		*76 - 132*		*04/28/17 23:04*	*1*

Client Sample ID: PZ-2-A

Lab Sample ID: 440-182379-7
Date Collected: 04/18/17 10:35
Matrix: Water
Date Received: 04/18/17 17:35

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	3.1		0.50	0.10	mg/L		04/20/17 03:00	04/20/17 06:00	1

Client Sample ID: PZ-2-B

Lab Sample ID: 440-182379-8
Date Collected: 04/18/17 10:35
Matrix: Water
Date Received: 04/18/17 17:35

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	3.2		0.50	0.10	mg/L		04/20/17 03:00	04/20/17 06:00	1

Client Sample ID: QCAB

Lab Sample ID: 440-182379-9
Date Collected: 04/18/17 00:01
Matrix: Water
Date Received: 04/18/17 17:35

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	ND		0.50	0.25	ug/L			04/28/17 23:33	1
Chloromethane	ND		0.50	0.25	ug/L			04/28/17 23:33	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*8.5*	*T J*	*ug/L*		*6.14*			*04/28/17 23:33*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*98*		*80 - 128*		*04/28/17 23:33*	*1*
4-Bromofluorobenzene (Surr)	*88*		*80 - 120*		*04/28/17 23:33*	*1*
Dibromofluoromethane (Surr)	*110*		*76 - 132*		*04/28/17 23:33*	*1*

Client Sample ID: QCTB

Lab Sample ID: 440-182379-10
Date Collected: 04/18/17 00:01
Matrix: Water
Date Received: 04/18/17 17:35

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	ND		0.50	0.25	ug/L			04/29/17 00:03	1

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

TestAmerica Job ID: 440-182379-1

Client Sample ID: QCTB
Date Collected: 04/18/17 00:01
Date Received: 04/18/17 17:35

Lab Sample ID: 440-182379-10
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		0.50	0.25	ug/L			04/29/17 00:03	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*7.7*	*T J*	*ug/L*		*4.72*			*04/29/17 00:03*	*1*
Unknown	*8.5*	*T J*	*ug/L*		*6.14*			*04/29/17 00:03*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*97*		*80 - 128*		*04/29/17 00:03*	*1*
4-Bromofluorobenzene (Surr)	*88*		*80 - 120*		*04/29/17 00:03*	*1*
Dibromofluoromethane (Surr)	*109*		*76 - 132*		*04/29/17 00:03*	*1*

Method Summary

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

TestAmerica Job ID: 440-182379-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	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

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

Lab Chronicle

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

TestAmerica Job ID: 440-182379-1

Client Sample ID: MW-5-A
Date Collected: 04/18/17 12:30
Date Received: 04/18/17 17:35

Lab Sample ID: 440-182379-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SM 4500 NH3 B			10.0 mL	50 mL	401226	04/20/17 03:00	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			401252	04/20/17 06:00	YZ	TAL IRV

Client Sample ID: MW-5-B
Date Collected: 04/18/17 12:30
Date Received: 04/18/17 17:35

Lab Sample ID: 440-182379-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SM 4500 NH3 B			10.0 mL	50 mL	401226	04/20/17 03:00	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			401252	04/20/17 06:00	YZ	TAL IRV

Client Sample ID: MW-14-A
Date Collected: 04/18/17 09:10
Date Received: 04/18/17 17:35

Lab Sample ID: 440-182379-3
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 2320B		1			400961	04/19/17 04:59	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	402248	04/25/17 08:21	XL	TAL IRV

Client Sample ID: MW-14-B
Date Collected: 04/18/17 09:10
Date Received: 04/18/17 17:35

Lab Sample ID: 440-182379-4
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 2320B		1			400961	04/19/17 05:13	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	402248	04/25/17 08:21	XL	TAL IRV

Client Sample ID: DW-3-A
Date Collected: 04/18/17 11:25
Date Received: 04/18/17 17:35

Lab Sample ID: 440-182379-5
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	403159	04/28/17 21:37	WK	TAL IRV

Client Sample ID: DW-3-B
Date Collected: 04/18/17 11:25
Date Received: 04/18/17 17:35

Lab Sample ID: 440-182379-6
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	403159	04/28/17 23:04	WK	TAL IRV

Lab Chronicle

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

TestAmerica Job ID: 440-182379-1

Client Sample ID: PZ-2-A
Date Collected: 04/18/17 10:35
Date Received: 04/18/17 17:35

Lab Sample ID: 440-182379-7
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SM 4500 NH3 B			50 mL	50 mL	401226	04/20/17 03:00	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			401252	04/20/17 06:00	YZ	TAL IRV

Client Sample ID: PZ-2-B
Date Collected: 04/18/17 10:35
Date Received: 04/18/17 17:35

Lab Sample ID: 440-182379-8
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	SM 4500 NH3 B			50 mL	50 mL	401226	04/20/17 03:00	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			401252	04/20/17 06:00	YZ	TAL IRV

Client Sample ID: QCAB
Date Collected: 04/18/17 00:01
Date Received: 04/18/17 17:35

Lab Sample ID: 440-182379-9
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	403159	04/28/17 23:33	WK	TAL IRV

Client Sample ID: QCTB
Date Collected: 04/18/17 00:01
Date Received: 04/18/17 17:35

Lab Sample ID: 440-182379-10
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	403159	04/29/17 00:03	WK	TAL IRV

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

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

Lab Sample ID: MB 440-403159/4
Matrix: Water
Analysis Batch: 403159

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloroform	ND		0.50	0.25	ug/L			04/28/17 20:37	1
Chloromethane	ND		0.50	0.25	ug/L			04/28/17 20:37	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*04/28/17 20:37*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*99*		*80 - 128*		*04/28/17 20:37*	*1*
4-Bromofluorobenzene (Surr)	*88*		*80 - 120*		*04/28/17 20:37*	*1*
Dibromofluoromethane (Surr)	*108*		*76 - 132*		*04/28/17 20:37*	*1*

Lab Sample ID: LCS 440-403159/5
Matrix: Water
Analysis Batch: 403159

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloroform	25.0	24.2		ug/L		97	70 - 130
Chloromethane	25.0	23.4		ug/L		93	47 - 140

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*94*		*80 - 128*
4-Bromofluorobenzene (Surr)	*85*		*80 - 120*
Dibromofluoromethane (Surr)	*104*		*76 - 132*

Lab Sample ID: 440-182379-5 MS
Matrix: Water
Analysis Batch: 403159

Client Sample ID: DW-3-A
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloroform	ND		25.0	24.1		ug/L		96	70 - 130
Chloromethane	ND		25.0	23.7		ug/L		95	39 - 144

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Toluene-d8 (Surr)	*95*		*80 - 128*
4-Bromofluorobenzene (Surr)	*84*		*80 - 120*
Dibromofluoromethane (Surr)	*104*		*76 - 132*

Lab Sample ID: 440-182379-5 MSD
Matrix: Water
Analysis Batch: 403159

Client Sample ID: DW-3-A
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	24.3		ug/L		97	70 - 130	1	20
Chloromethane	ND		25.0	24.4		ug/L		97	39 - 144	3	25

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

Lab Sample ID: 440-182379-5 MSD
Matrix: Water
Analysis Batch: 403159

Client Sample ID: DW-3-A
Prep Type: Total/NA

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*94*		*80 - 128*
4-Bromofluorobenzene (Surr)	*85*		*80 - 120*
Dibromofluoromethane (Surr)	*106*		*76 - 132*

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 440-400961/3
Matrix: Water
Analysis Batch: 400961

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			04/19/17 03:42	1
Bicarbonate Alkalinity as CaCO3	ND		4.0	4.0	mg/L			04/19/17 03:42	1

Lab Sample ID: LCS 440-400961/2
Matrix: Water
Analysis Batch: 400961

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	34.2		mg/L		101	80 - 120

Lab Sample ID: MRL 440-400961/4
Matrix: Water
Analysis Batch: 400961

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

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec. Limits
Alkalinity as CaCO3	4.00	ND		mg/L		95	50 - 150

Lab Sample ID: 440-182299-M-4 DU
Matrix: Water
Analysis Batch: 400961

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	470		466		mg/L		0	20
Bicarbonate Alkalinity as CaCO3	470		466		mg/L		0	20

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

Lab Sample ID: MB 440-402248/1
Matrix: Water
Analysis Batch: 402248

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			04/25/17 08:21	1

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

Lab Sample ID: LCS 440-402248/2
Matrix: Water
Analysis Batch: 402248

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	988		mg/L		99	90 - 110

Lab Sample ID: 440-182379-4 DU
Matrix: Water
Analysis Batch: 402248

Client Sample ID: MW-14-B
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	6400		6340		mg/L		1	5

Method: SM 4500 NH3 D - Ammonia

Lab Sample ID: MB 440-401226/2-A
Matrix: Water
Analysis Batch: 401252

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 401226

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	ND		0.50	0.10	mg/L		04/20/17 03:00	04/20/17 06:00	1

Lab Sample ID: LCS 440-401226/1-A
Matrix: Water
Analysis Batch: 401252

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 401226

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	2.50	2.39		mg/L		95	85 - 115

Lab Sample ID: 440-182516-A-1-C MS
Matrix: Water
Analysis Batch: 401252

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 401226

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	2.0		2.50	4.38		mg/L		95	75 - 125

Lab Sample ID: 440-182516-A-1-D MSD
Matrix: Water
Analysis Batch: 401252

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 401226

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	4.20		mg/L		88	75 - 125	4	15

Lab Sample ID: 440-182516-A-1-B DU
Matrix: Water
Analysis Batch: 401252

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 401226

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Ammonia (as N)	2.0		2.09		mg/L		4	15

QC Association Summary

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

TestAmerica Job ID: 440-182379-1

GC/MS VOA

Analysis Batch: 403159

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-182379-5	DW-3-A	Total/NA	Water	8260B	
440-182379-6	DW-3-B	Total/NA	Water	8260B	
440-182379-9	QCAB	Total/NA	Water	8260B	
440-182379-10	QCTB	Total/NA	Water	8260B	
MB 440-403159/4	Method Blank	Total/NA	Water	8260B	
LCS 440-403159/5	Lab Control Sample	Total/NA	Water	8260B	
440-182379-5 MS	DW-3-A	Total/NA	Water	8260B	
440-182379-5 MSD	DW-3-A	Total/NA	Water	8260B	

General Chemistry

Analysis Batch: 400961

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-182379-3	MW-14-A	Total/NA	Water	SM 2320B	
440-182379-4	MW-14-B	Total/NA	Water	SM 2320B	
MB 440-400961/3	Method Blank	Total/NA	Water	SM 2320B	
LCS 440-400961/2	Lab Control Sample	Total/NA	Water	SM 2320B	
MRL 440-400961/4	Lab Control Sample	Total/NA	Water	SM 2320B	
440-182299-M-4 DU	Duplicate	Total/NA	Water	SM 2320B	

Prep Batch: 401226

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-182379-1	MW-5-A	Total/NA	Water	SM 4500 NH3 B	
440-182379-2	MW-5-B	Total/NA	Water	SM 4500 NH3 B	
440-182379-7	PZ-2-A	Total/NA	Water	SM 4500 NH3 B	
440-182379-8	PZ-2-B	Total/NA	Water	SM 4500 NH3 B	
MB 440-401226/2-A	Method Blank	Total/NA	Water	SM 4500 NH3 B	
LCS 440-401226/1-A	Lab Control Sample	Total/NA	Water	SM 4500 NH3 B	
440-182516-A-1-C MS	Matrix Spike	Total/NA	Water	SM 4500 NH3 B	
440-182516-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 NH3 B	
440-182516-A-1-B DU	Duplicate	Total/NA	Water	SM 4500 NH3 B	

Analysis Batch: 401252

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-182379-1	MW-5-A	Total/NA	Water	SM 4500 NH3 D	401226
440-182379-2	MW-5-B	Total/NA	Water	SM 4500 NH3 D	401226
440-182379-7	PZ-2-A	Total/NA	Water	SM 4500 NH3 D	401226
440-182379-8	PZ-2-B	Total/NA	Water	SM 4500 NH3 D	401226
MB 440-401226/2-A	Method Blank	Total/NA	Water	SM 4500 NH3 D	401226
LCS 440-401226/1-A	Lab Control Sample	Total/NA	Water	SM 4500 NH3 D	401226
440-182516-A-1-C MS	Matrix Spike	Total/NA	Water	SM 4500 NH3 D	401226
440-182516-A-1-D MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 NH3 D	401226
440-182516-A-1-B DU	Duplicate	Total/NA	Water	SM 4500 NH3 D	401226

Analysis Batch: 402248

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-182379-3	MW-14-A	Total/NA	Water	SM 2540C	
440-182379-4	MW-14-B	Total/NA	Water	SM 2540C	
MB 440-402248/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 440-402248/2	Lab Control Sample	Total/NA	Water	SM 2540C	

General Chemistry (Continued)

Analysis Batch: 402248 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-182379-4 DU	MW-14-B	Total/NA	Water	SM 2540C	

Definitions/Glossary

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

TestAmerica Job ID: 440-182379-1

Qualifiers

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.

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, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
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
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: 440-182379-1

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	06-30-17
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	CA015312016-2	07-31-17
New Mexico	State Program	6	N/A	01-29-17 *
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

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

Chain of Custody Record

027711

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

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

Client Contact	Project Manager: Kyle Welchons	Site Contact:	Date: 4-18-17	COC No:
Company Name: Geologic Associates	Tel/Fax: 858-451-1134	Lab Contact: R. Tomova	Carrier: TestAmerica	1 of 1 COCs
Address: 11411 W. Bernardo Ct.	Analysis Turnaround Time			Sampler: A. Shaw
City/State/Zip: San Diego, CA 92127	☐ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: 858-451-1134	TAT if different from Below _____			Walk-in Client:
Fax: 858-451-1087	☐ 2 weeks			Lab Sampling:
Project Name: Republic Services	☐ 1 week			
Site: Sunshine Cyn Landfill	☐ 2 days			Job / SDG No.:
PO # 4400078551	☐ 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)	Total Alkalinity - EPA 310.1	Ammonia as N - EPA 350.2	Total Dissolved Solids - EPA 160.1	1820 Chlorosilanes and Chlorotoluenes	Sample Specific Notes:
MW-5-A	4/18/17	1230	G	GW	1	N	N		X	X		
MW-5-B		1230			1				X	X		
MW-14-A		0910			2			X		X		
MW-14-B		0910			2			X		X		
DW-3-A		1125			3						X	
DW-3-B		1125			3						X	
PZ-2-A		1035			1				X			
PZ-2-B		1035			1				X			
QCAB		—			3						X	
QCTB		—			1						X	

440-182379 Chain of Custody

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

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

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

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

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

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:	Cooler Temp. (°C): Obs'd: _____ Corr'd: _____	Therm ID No.: _____
Relinquished by:	Company: GLA	Date/Time: 4/18/17 1400	Received by:	Company: TAI	Date/Time: 4/18/17 14:00
Relinquished by:	Company:	Date/Time: 4/18/17 1735	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company: A	Date/Time: 4/18/17 1735

Temp 2.2/2.7°C 12-66

Page 18 of 19

9/2/2017

Login Sample Receipt Checklist

Client: Geo-Logic Associates

Job Number: 440-182379-1

Login Number: 182379
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.	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.	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 Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614
Phone: 949.261.1022 Fax: 5017.1047

Chain of Custody Record

145713

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

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

Client Contact	
Company Name:	Republic (GLA
Address:	1415 W. Bernardo Ct.
City/State/Zip:	San Diego, CA 92127
Phone:	858-451-1136
Fax:	858-451-1087
Project Name:	Sunshine Cyn. L/F
Site:	Sylmar
P O #	4400T851
Project Manager:	Kyle Welchan
Tel/Fax:	858-451-1136
Site Contact:	P. Bickasan
Lab Contact:	R. Tomova
Date:	6-14-17
Carrier:	TA
COC No:	
1 of 1 COCs	
Sampler:	BS, AS

Analysis Turnaround Time
☐ CALENDAR DAYS ☐ WORKING DAYS
TAT if different from Below ______
☐ 2 weeks
☐ 1 week
☐ 2 days
☐ 1 day

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	8270 1,4-Dioxane	Total Alkalinity Bicarbonate	Ammonia as N	EPA 410.4-COD	Chloride, Bromide	Nitrate-N, Sulfate	Total: B, Co, Fe,	Mg, Mn, K, Na	TDS (EPA 160.1)	TOC (EPA 415.1)	Fluoride, Sulfide	SM-4500-CO2C	Carbon Dioxide	Sample Specific Notes: 8260 40 CFR Part 258 Apdx. 1 Dichlorodifluoromethane 1,4-Dioxane
PZ-4	6/14/17	1103	G	GW	13			X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Extraction Trench	↓	0940	G	WW	13			X	X	X	X	X	X	X	X	X	X	X	X	X	X	
MW-1	↓	1010	↓	GW	13			X	X	X	X	X	X	X	X	X	X	X	X	X	X	
MW-13R	↓	1130	↓	↓	13			X	X	X	X	X	X	X	X	X	X	X	X	X	X	
DW-5	↓	0915	↓	↓	13			X	X	X	X	X	X	X	X	X	X	X	X	X	X	
MW-9	↓	0810	↓	↓	13			X	X	X	X	X	X	X	X	X	X	X	X	X	X	
QCATB	↓	—	↓	LAB D.I.	4			X														
QCTB	↓	—	↓	"	4			X														

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

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.
☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

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

Special Instructions/QC Requirements & Comments:

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

Relinquished by: Bart [signature]	Company: Geo-Logic	Date/Time: 6-14-17/1415	Received by: [signature]	Company: TA	Date/Time: 6/14/17 1415
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TAL-0013 (0513)

CHAIN OF CUSTODY FORM

17461 Derian Ave., #100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297

Client Name / Address: Republic / Geo-Logic Assoc. 11415 W. Bernardo Ct. San Diego CA 92127

Project / PO Number: 5017.1047 Sunshine Cyn. Landfill

Project Manager: Kyle Welchans

Phone Number: 858-451-1136

Sampler: BS, AS

Fax Number: 858-451-1087

Analysis Required

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	8260B-VOC, 1,2,3-TCP, [illegible], MTBE, 1,4-Dioxane	SM4500-CO2-C - Carbon Dioxide	EPA 8270 1,1,1-Dioxane	Total Alkalinity and Bicarbonate EPA 310.1	Ammonia as N, COD, Chloride, Bromide, Nitrate	Sulfate, TDS, TOC, Fluoride	Sulfide EPA 376.2	Total Metals: B, Ca, Fe, Mg, Mn, K, Na EPA 6010B			Special Instructions
DW-1	GW	PVC	13	6/13/17	0948	yes	X	X	X	X	X	X	X	X			
DW-2	↓	↓	13	↓	1028	↓	X	X	X	X	X	X	X	X			
DW-3	↓	↓	13	↓	1120	↓	X	X	X	X	X	X	X	X			
PZ-2	↓	↓	13	↓	1121	↓	X	X	X	X	X	X	X	X			
CM-11R	↓	↓	13	↓	1315	↓	X	X	X	X	X	X	X	X			
MW-X14	↓	↓	13	↓	0815	↓	X	X	X	X	X	X	X	X			
MW-6	↓	↓	13	↓	0945	↓	X	X	X	X	X	X	X	X			
QCAB	Lab DI	VOA's	4	↓	—	↓	X										
QCTB	"	VOA's	4	↓	—	↓	X										

Relinquished By:	Date / Time:	Received By:	Date / Time:	Turnaround Time: (Check)
[signature]	6-13-17 / 1355	[signature]	6-13-17 1355	same day ____ 72 hours ____
Relinquished By:	Date / Time:	Received By:	Date / Time:	24 hours ____ 5 days ____ / 48 hours ____ normal ____
Relinquished By:	Date / Time:	Received in Lab By:	Date / Time:	Sample Integrity: (Check) intact ____ on ice ____

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

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

Chain of Custody Record

145714

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

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

Client Contact		Project Manager: Kyle Welchel	Site Contact: P. Dickason	Date: 6-12-17	COC No:
Company Name:	SCA / Republic	Tel/Fax: 858-451-1136	Lab Contact: R. [illegible]	Carrier: T/A	1 of 1 COCs
Address:	11415 W. Bernardo Ct.	Analysis Turnaround Time			Sampler: BS, AS
City/State/Zip:	San Diego, CA 92127	☐ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone:	858-451-1136	TAT if different from Below ____			Walk-in Client:
Fax:	858-451-1087	☐ 2 weeks			Lab Sampling:
Project Name:	Sunshine Cyn. Landfill	☐ 1 week			
Site:	Sylmar	☐ 2 days			Job / SDG No.: 5017.1047
P O #	4400 7851	☐ 1 day			

Analyses (column headings): (1) EPA 8260B - VOCs; (2) 40 CFR Part 258 Appdx. I Metals; (3) Dialcohol/Fluoro- [?]; (4) Methylene [?] and 1,4-Dioxane; (5) EPA 8270 [?]; (6) Total Alkalinity and Bicarbonate; (7) Ammonia as N; (8) C.O.D. (410.4); (9) Chloride, Bromide; (10) Nitrate, Sulfate; (11) Total Metals: B, Ca, [?]; (12) Mg, Mn, K, Na; (13) T.D.S. (160.1); (14) TOC (415.1); (15) Fluoride, Sulfide; (16) SM-4500-CO2C; (17) Carbon Dioxide

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	Sample Specific Notes:
Subdrain N	6/12/17	1140	Grab	WW	13			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Combined Subdrains	↓	1215	Grab	WW	13			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
CM-9R3	↓	1333	↓	GW	13			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
CM-10R	↓	1235	↓	↓	13			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
MW-5	↓	1450	↓	↓	13			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Duplicate	↓	—	↓	↓	13			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
GCAB	↓	—	↓	Lab DI	4			X	X	X	X														
QCTB	↓	—	↓	"	4			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.
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

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

Special Instructions/QC Requirements & Comments:

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

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Bart [signature]	Geo-Logic	6/12/17 1455	[signature]	TA	6/12/17 1455
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

UTZ
RO

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

Chain of Custody Record

141848

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

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

Client Contact		
Company Name: Republic Grecorlic?	Project Manager: Kyle Watkins	Site Contact: R. Dickerson
Address: 11415 W. Bernardo Ct.	Tel/Fax: 858-451-1136	Lab Contact: K. Tumova?
City/State/Zip: S.D., CA 92127	Analysis Turnaround Time	Date: 6-15-17
Phone: 858-451-1136	☐ CALENDAR DAYS ☐ WORKING DAYS	Carrier: TA
Fax: 858-451-1087	TAT if different from Below ____	COC No:
Project Name: Sunshine Cyn. Landfill	☐ 2 weeks ☐ 1 week	1 of 1 COCs
Site: Sylmar, CA	☐ 2 days ☐ 1 day	Sampler: BS, MC
P O # 44007851		For Lab Use Only: Walk-in Client: Lab Sampling:
		Job / SDG No.:

Analyses (columns): Filtered Sample (Y / N); Perform MS / MSD (Y / N); 1 = EPA 8260B - VOCs; 2 = 8270 - 1,4-Dioxane; 3 = Total Alkalinity / Bicarbonate; 4 = Ammonia as N; 5 = COD (SM410D); 6 = Chloride / Bromide; 7 = Nitrate-N / Sulfate; 8 = Total: B, Co, Fe, Mn?; 9 = Mn, K, Na?; 10 = TDS (EPA 160.1); 11 = TOC (EPA 415.1); 12 = Fluoride (340.2); 13 = Sulfide (376.2); 14 = 3M Methane-CO2?; 15 = Carbon Dioxide

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered	MS/MSD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Sample Specific Notes
MW-2A	6/15/17	1020	G	GW	13			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	8260 40 CFR 258 Apdx. 1 VOCs, Dichlorodifluoromethane, MTBE, 1,4-Dioxane
MW-2B	↓	0855	↓	↓	13			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
DW-4	↓	0800	↓	↓	13			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
QCAB	↓	—	LAB	LAB	4			X															
QCTB	↓	—	↓	"	4			X															

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

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.
☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

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

Special Instructions/QC Requirements & Comments:

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:		Cooler Temp. (°C): Obs'd: ____ Corr'd: ____		Therm ID No.:
Relinquished by: [signature]	Company: GLA	Date/Time: 6-15-17 1215?	Received by: [signature]	Company: TA	Date/Time: 6/15/17 1215
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

Geo-Logic
ASSOCIATES
Geologists, Hydrogeologists, and Engineers

GROUNDWATER MONITORING PROGRAM
WATER LEVEL SURVEY RECORD SHEET

Site: Sunshine Cyn. 4/12
Project No.: 5017.1042
Date: 6-12-17
Field Personnel: RS, AS

Page 1 of 2

WELL I.D.	CONSTRUCTED TOTAL DEPTH (TD)	ACTUAL TOTAL DEPTH (TD)	DEPTH TO WATER (DTW)	COMMENTS
MW-1			15.59	
MW-2A			30.84	
MW-2B			17.11	
MW-5			18.61	
MW-6			16.53	
MW-8			14.46	
MW-9			12.95	
MW-13R			17.42	
MW-14			14.58	
DW-1			TOC	
DW-2			23.56	
DW-3			153.21	
DW-4			21.94	
DW-5			14.62	
CM-5R			213.66	
CM-10R			49.51	
CM-11R			15.98	
CM-9R3			10.55	
PZ-1			92.46	
PZ-2			122.37	

REMARKS:

Name: B. Salinas

Signature:

Geo-Logic
ASSOCIATES
Geologists, Hydrogeologists, and Engineers

GROUNDWATER MONITORING PROGRAM
WATER LEVEL SURVEY RECORD SHEET

Site Sunshine Cyn. LF

Project No.: 3017.1047

Date 6-12-17

Field Personnel BS, AS

WELL I.D.	CONSTRUCTED TOTAL DEPTH (TD)	ACTUAL TOTAL DEPTH (TD)	DEPTH TO WATER (DTW)	COMMENTS
PZ-3			219.63	
PZ-4			111.69	
EW-2			9.21	
EW-3			18.53	
EW-4			17.82	
OM-3			15.51	

REMARKS:

Name: Signature:

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GROUNDWATER MONITORING PROGRAM
WELL DATA SHEET

Site Name:	Sunshine Gym	**Project No.:**	5017.1047
Well I.D.:	MW-1	**Sampling Date:**	6.14.17
Collected By:	AS	**Purge start Time:**	0941
Casing Diameter (inches):	4	**Purge Stop time:**	1000
Starting Water Level:	15.56	**Sampling (Well Recovery) Time:**	1010
Total Depth (feet):	29.60	**Ending Water Level (feet):**	15.63
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 / LOGGERS		

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
0946	0.50	15.63	8.36	5.96	174	3.86	21.99	-64
0951	1.00	"	8.38	6.08	116	2.05	21.99	-91
0953	1.25	"	8.38	6.07	114	1.84	21.64	-92
0955	1.50	"	8.38	6.07	118	1.75	21.62	-93
0958	1.75	"	8.38	6.05	116	1.73	21.62	-93
1000	2.00	"	8.38	6.09	119	1.66	21.61	-94

Purge Sampling Rates: 20 PSI ; Refill 130.0 ; Discharge 11.0 .

Water has slight yellowish tint w/ no odor.

Well condition: O.K.

Additional Info/Comments: Sunny, Hot

Name: A. Shaw **Signature:** AC. SM

GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Cyn Well ID: MW-1 Date: 6.14.17

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: 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: _____

Measurment reference point: Yes: ✓ No: _____

Remarks:

Dedicated Pump: Type: Bladder

Condition: Good: ✓ Damaged: _____ Missing: _____

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

Remarks:

Field Certification: [signature] Field Tech 6.14.17

Signed Title Date

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GROUNDWATER MONITORING PROGRAM
WELL DATA SHEET

Site Name:	Sunshine Cyn	Project No.:	5017.1047
Well I.D.:	MW-2B	Sampling Date:	6.15.17
Collected By:	MC	Purge start Time:	8:21
Casing Diameter (inches):	4	Purge Stop time:	8:47
Starting Water Level:	17.06	Sampling (Well Recovery) Time:	8:55
Total Depth (feet):	71.10	Ending Water Level (feet):	20.57
Water column (feet):	54.04	Total Purged (gallons):	2.5
Screen Length (feet):		Duplicate Sample:	YES (NO)
Sample Method:	(Micro Purge) Low Flow		
Horiba Model S/N:	U-52/w54/wB00		

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
8:32	1.0	18.81	8.14	4.72	0.0	1.83	21.95	-169
8:37	1.5	19.39	8.13	4.70	0.0	1.03	21.92	-162
8:40	1.75	19.96	8.12	4.69	0.0	.88	21.91	-160
8:43	2.0	20.17	8.12	4.68	0.0	.83	21.90	-159
8:45	2.25	20.36	8.11	4.69	0.0	.79	21.93	-158
8:47	2.5	20.57	8.12	4.68	0.0	.76	21.91	-159

Purge Sampling Rates: 40psi refill 35 discharge ~~14~~ 16

Well condition: Heavy erosion around well concrete pad in the air, Had to carry equipment to well. Heavy vegetation around well

Additional Info/Comments: clear, hot, breezy

Pump depth 68.0 ft

Name: Mike Campbell Signature: Mike Campbell

GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Cyn Well ID: MW-2B Date: 6-15-17

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: Heavy vesedation around well. Also heavy erosion around well. Concrete pad suspended in air. Monument showing under pad. Hard to carry sampling equipment accross channel and up a slope

Concrete Pad:

Integrity: Good: ✓ Inadequate: _____

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

Remarks: Concrete pad suspended in air monument exposed under pad

Protective Outer Casing: Material: Metal

Condition of Protective Casing: Good: ✓ Damaged: _____

Condition of Locking Cap: Good: ✓ Damaged: _____

Condition of Lock: Good: ✓ Damaged: _____

Condition of Weepholes: Good: ✓ Damaged: _____

Remarks:

Well Riser: Material: PVC

Condition of Riser: Good: ✓ Damaged: _____

Condition of Riser Cap: Good: ✓ Damaged: _____

Measurment reference point: Yes: ✓ No: _____

Remarks:

Dedicated Pump: Type: Bladder

Condition: Good: ✓ Damaged: _____ Missing: _____

Pumping Rate (gpm): NA Current (Hz): NA (check if electrical problems suspected)

Remarks:

Field Certification: Mike Campbell Field Tech 6-15-17

Signed Title Date

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GROUNDWATER MONITORING PROGRAM
WELL DATA SHEET

Site Name:	Sunshine Cyn	**Project No.:**	5017.1047
Well I.D.:	MW-2A	**Sampling Date:**	6.15.17
Collected By:	MC	**Purge start Time:**	9:26
Casing Diameter (inches):	4	**Purge Stop time:**	10:07
Starting Water Level:	30.89	**Sampling (Well Recovery) Time:**	10:20
Total Depth (feet):	41.30	**Ending Water Level (feet):**	32.32
Water column (feet):	10.41	**Total Purged (gallons):**	1.5 +
Screen Length (feet):		**Duplicate Sample:**	YES (NO)
Sample Method:	(Micro Purge) Low Flow		
Horiba Model S/N:	U-52 / w541wB0D		

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
9:41	.5	31.58	8.01	4.60	0.0	1.32	23.0	-134
9:48	.75	31.86	8.00	4.58	0.0	.87	22.91	-110
9:54	1.0	31.99	7.99	4.58	0.0	.80	22.83	-102
10:01	1.25	32.16	7.99	4.58	0.0	.78	22.84	-99
10:07	1.50	32.32	7.99	4.58	0.0	.76	22.83	-98

Purge Sampling Rates: 25 psi ref. 11 25 discharge 6

Well condition: Heavy erosion concrete pad in the air had to carry equipment to the well. Heavy vegetation around well

Additional Info/Comments: Clear, hot, breezy

Pump depth 39.0 ft

Name: Mike Campbell **Signature:** Mike Campbell

GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Cyn Well ID: MW-2A Date: 6-15-17

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: Required carrying equipment and bottles over drainage channel and up a slope. Heavy vegetation around well. Heavy erosion around well concrete apron exposed and in air.

Concrete Pad:

Integrity: Good: ✓ Inadequate: _____

Presence of depressions or standing water around well: Yes: ✓ No: ✗ - MC

Remarks: Pad in air monument exposed under concrete pad

Protective Outer Casing: Material: Metal

Condition of Protective Casing: Good: ✓ Damaged: _____

Condition of Locking Cap: Good ✓ Damaged: _____

Condition of Lock: Good: ✓ Damaged: _____

Condition of Weepholes: Good: ✓ Damaged: _____

Remarks:

Well Riser: Material: PVC

Condition of Riser: Good: ✓ Damaged: _____

Condition of Riser Cap: Good: ✓ Damaged: _____

Measurment reference point: Yes: ✓ No: _____

Remarks:

Dedicated Pump: Type: Bladder

Condition: Good: ✓ Damaged: _____ Missing: _____

Pumping Rate (gpm): NA Current (Hz): NA (check if electrical problems suspected)

Remarks:

Field Certification: Mike Campbell Field Tech 6-15-17

Signed Title Date

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GROUNDWATER MONITORING PROGRAM
WELL DATA SHEET

Site Name:	Sunshine Cyn	Project No.:	3017.1047 ~~2016.0030~~ (AS)
Well I.D.:	MW-5	Sampling Date:	6.12.17
Collected By:	AS	Purge start Time:	1426
Casing Diameter (inches):	2	Purge Stop time:	1445
Starting Water Level:	18.61	Sampling (Well Recovery) Time:	1450
Total Depth (feet):	26.20	Ending Water Level (feet):	19.04
Water column (feet):	7.59	Total Purged (gallons):	2.0
Screen Length (feet):	—	Duplicate Sample:	YES (NO)
Sample Method:	(Micro Purge) Low Flow		
Horiba Model S/N:	U-52 | WAGP8G125 |		

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
1431	0.50	19.04	8.34	5.65	76.3	2.77	21.29	-18
1435	1.00	"	8.33	5.62	24.8	1.73	21.13	-30
1437	1.25	"	8.32	5.75	16.3	1.52	21.08	-33
1439	1.50	"	8.32	5.75	15.1	1.48	21.08	-34
1442	1.75	"	8.32	5.76	14.6	1.42	21.06	-35
1448	2.00	"	8.32	5.75	14.3	1.39	21.05	-38

Purge Sampling Rates: 20 psi ; Refill |30.0| ; Discharge |10.0|

Well condition: O.K. Water has yellowish tint w/ no odor

Additional Info/Comments:

Name: A. Shaw Signature: A.C. Shaw

GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Cgn Well ID: MW-5 Date: 6.12.17

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 visable

Concrete Pad:

Integrity: Good: _____ Inadequate: _____

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

Remarks: Concrete pad not visable.

Protective Outer Casing: Material: Metal

Condition of Protective Casing: Good: ✓ Damaged: _____

Condition of Locking Cap: Good: ✓ Damaged: _____

Condition of Lock: Good: ✓ Damaged: _____

Condition of Weepholes: Good: ✓ Damaged: _____

Remarks:

Well Riser: Material: PVC

Condition of Riser: Good: ✓ Damaged: _____

Condition of Riser Cap: Good: ✓ Damaged: _____

Measurment reference point: Yes: ✓ No: _____

Remarks:

Dedicated Pump: Type: Bladder

Condition: Good: ✓ Damaged: _____ Missing: _____

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

Remarks:

Field Certification: A.C. Signed Field Tech Title 6.12.17 Date

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GROUNDWATER MONITORING PROGRAM
WELL DATA SHEET

Site Name:	Sunshine Cyn	**Project No.:**	5017.1047
Well I.D.:	MW-6	**Sampling Date:**	6.13.17
Collected By:	AS	**Purge start Time:**	0859
Casing Diameter (inches):	2	**Purge Stop time:**	0930
Starting Water Level:	16.53	**Sampling (Well Recovery) Time:**	0945
Total Depth (feet):	23.50	**Ending Water Level (feet):**	17.40
Water column (feet):	6.97	**Total Purged (gallons):**	1.5+
Screen Length (feet):	—	**Duplicate Sample:**	YES (NO)
Sample Method:	(Micro Purge) Low Flow		
Horiba Model S/N:	U-52 | WGLP8GRS |		

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
0905	0.25	16.86	8.61	5.84	3.1	2.28	22.72	-145
0909	0.50	16.96	8.62	5.91	1.6	1.43	22.74	-189
0915	0.75	17.14	8.61	5.97	0.8	1.19	22.76	-230
0920	1.00	17.22	8.60	5.98	0.7	1.17	22.76	-233
0926	1.25	17.31	8.60	5.99	0.7	1.15	22.76	-235
0930	1.50	17.40	8.59	6.03	1.2	1.09	22.74	-242

Purge Sampling Rates: 20 PSI . Refill (25.0) . Discharge (5.0) .
Very low yield well - Water has bacteria tint w/ strong odor.

Well condition: O.K. - Had to carry equipment + bottles down slope over to well.

Additional Info/Comments: Sunny, Warm * Pump depth: 19.75 ft.

Name: A. Shaw **Signature:** AC. Sh

GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Cyn Well ID: MW-6 Date: 6.13.17

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 + sample containers down slope and over to access.

Concrete Pad:

Integrity: Good: ✓ Inadequate: _____

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

Remarks:

Protective Outer Casing: Material: Metal

Condition of Protective Casing: Good: ✓ Damaged: _____

Condition of Locking Cap: Good: ✓ Damaged: _____

Condition of Lock: Good: ✓ Damaged: _____

Condition of Weepholes: Good: ✓ Damaged: _____

Remarks:

Well Riser: Material: PVC

Condition of Riser: Good: ✓ Damaged: _____

Condition of Riser Cap: Good: ✓ Damaged: _____

Measurment reference point: Yes: ✓ No: _____

Remarks:

Dedicated Pump: Type: Bladder

Condition: Good: ✓ Damaged: _____ Missing: _____

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

Remarks: Low yield

Field Certification: [signature] Field Tech 6.13.17

Signed Title Date

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GROUNDWATER MONITORING PROGRAM
WELL DATA SHEET

Site Name:	Sunshine Cyn	**Project No.:**	SD17.1047
Well I.D.:	MW-9	**Sampling Date:**	6.14.17
Collected By:	AS	**Purge start Time:**	0729
Casing Diameter (inches):	4	**Purge Stop time:**	0802
Starting Water Level:	12.92	**Sampling (Well Recovery) Time:**	0810
Total Depth (feet):	26.70	**Ending Water Level (feet):**	12.95
Water column (feet):	13.78	**Total Purged (gallons):**	2.0+
Screen Length (feet):	—	**Duplicate Sample:**	YES (NO)
Sample Method:	(Micro Purge) Low Flow		
Horiba Model S/N:	U-52 (LOGGERS)		

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
0738	0.50	12.95	8.40	6.46	1.4	2.27	21.89	-90
0746	1.00	"	8.40	6.44	2.0	1.60	21.87	-96
0750	1.25	"	8.39	6.44	4.3	1.54	21.86	-97
0754	1.50	"	8.39	6.43	4.5	1.48	21.85	-97
0758	1.75	"	8.39	6.44	4.6	1.50	21.84	-97
0802	2.00	"	8.39	6.44	4.4	1.49	21.84	-98

Purge Sampling Rates: 25 PSI ; Refill (20.0), Discharge (5.0).
Water has yellow color w/ no odor.

Well condition: OK - Ran hair hose through fence, and carry equipment around to sample well.

Additional Info/Comments: Sunny, Warm

Name: A. Shaw **Signature:**

MW-8 14.46

GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Cyn Well ID: MW-9 Date: 6.14.17

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 + sample 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: _____

Measurment 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] Field Tech 6.14.17

Signed Title Date

Geo-Logic ASSOCIATES

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GROUNDWATER MONITORING PROGRAM
WELL DATA SHEET

Site Name:	Sonshine Cyn	**Project No.:**	
Well I.D.:	MW-13R	**Sampling Date:**	6.14.17
Collected By:	AS	**Purge start Time:**	1055
Casing Diameter (inches):	4	**Purge Stop time:**	1120
Starting Water Level:	17.46	**Sampling (Well Recovery) Time:**	1130
Total Depth (feet):	27.80	**Ending Water Level (feet):**	17.98
Water column (feet):		**Total Purged (gallons):**	1.5+
Screen Length (feet):	—	**Duplicate Sample:**	YES (NO)

Sample Method: (Micro Purge) Low Flow

Horiba Model S/N: U-52 | WQCP8CR5

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
1104	0.50	17.70	8.94	3.50	0.2	1.12	24.30	-360
1108	0.75	17.75	8.97	3.44	0.1	1.02	23.76	-359
1112	1.00	17.84	9.03	3.38	0.6	0.97	23.57	-363
1116	1.25	17.90	9.04	3.38	0.3	0.95	23.54	-363
1120	1.50	17.98	9.06	3.34	0.4	0.97	23.52	-363

Purge Sampling Rates: 30 PSI ; Refill ~~25.0~~ 20.0 (AS), Discharge 5.0 .

Water is mostly clear w/ blackish tint and strong odor.

Well condition: Well monument is heavily corroded

Carried equipment + bottles accross entrance road to well.

Additional Info/Comments: Sunny, Hot * Pump Depth = 26.4 ft.

Name: A. Shaw **Signature:** AC-SM

GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Cyn Well ID: MW-13R Date: 6.14.17

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 accross road at entrance.

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: ____

Measurment reference point: Yes: ✓ No: ____

Remarks:

Dedicated Pump: Type: Bladder

Condition: Good: ✓ Damaged: ____ Missing: ____

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

Remarks:

Field Certification: [signature] Field Tech 6.14.17

Signed Title Date

Geo-Logic ASSOCIATES

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GROUNDWATER MONITORING PROGRAM
WELL DATA SHEET

Site Name:	Sunshine Cyn	**Project No.:**	5017.1047
Well I.D.:	MW-14	**Sampling Date:**	6.13.16
Collected By:	AS	**Purge start Time:**	0753
Casing Diameter (inches):	4	**Purge Stop time:**	0810
Starting Water Level:	14.58	**Sampling (Well Recovery) Time:**	0815
Total Depth (feet):	28.10	**Ending Water Level (feet):**	14.93
Water column (feet):		**Total Purged (gallons):**	2.00
Screen Length (feet):	—	**Duplicate Sample:**	YES (NO)
Sample Method:	(Micro Purge) Low Flow		
Horiba Model S/N:	U-52 | WWKPBGRS |		

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
0757	0.50	14.75	8.49	8.68	0.6	5.12	21.42	208
0801	1.00	14.90	8.46	8.48	0.5	2.81	21.49	112
0803	1.25	14.91	8.46	8.40	0.1	2.30	21.46	102
0805	1.50	14.92	8.45	8.42	0.5	1.79	21.41	91
0807	1.75	14.92	8.45	8.42	0.2	1.78	21.41	89
0810	2.00	14.93	8.44	8.42	0.0	1.71	21.40	88

Purge Sampling Rates: 20 PSI ; Refill (25.0), Discharge (10.0).
Sample water is clear w/ no odor.

Well condition: O.K. Had to hike/carry sampling equipment + bottles down slope to well.

Additional Info/Comments: Clear, Cool, light winds A.M.

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

GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Cyn Well ID: MW-14 Date: 6.13.17

Access:

Accessibility: Good: _____ Fair: ✓ Poor: _____

Vicinity of well clear of weeds and/or debris: Yes: ✓ No: ~~X~~ (AS)

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

Remarks: Requires hiking / easy sampling equipment + Sample 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: _____

Measurment reference point: Yes: ✓ No: _____

Remarks:

Dedicated Pump: Type: Bladder

Condition: Good: ✓ Damaged: _____ Missing: _____

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

Remarks:

Field Certification: [signature] Field Tech 6.13.17

Signed Title Date

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GROUNDWATER MONITORING PROGRAM
WELL DATA SHEET

Site Name:	Sunshine Cyn.	**Project No.:**	5017.1017
Well I.D.:	DW-1	**Sampling Date:**	6-13-17
Collected By:	BS	**Purge start Time:**	/
Casing Diameter (inches):	4	**Purge Stop time:**	/
Starting Water Level:	TOC	**Sampling (Well Recovery) Time:**	0948
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:	RBJ5494U7		

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
—	Grab	—	8.62	6.32	3.9	2.78	21.40	-79

Purge Sampling Rates: Clear water with an odor

Well condition: OK

Additional Info/Comments: Sunny, cool

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

GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Well ID: DW-1 Date: 6-13-17

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: corrosion @ outer Metal monument.

Well Riser: Material: PVC

Condition of Riser: Good: ✓ Damaged: _____

Condition of Riser Cap: Good: ✓ Damaged: _____

Measurment reference point: Yes: ✓ No: _____

Remarks:

Dedicated Pump: Type: Drop Tube

Condition: Good: ✓ Damaged: _____ Missing: _____

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

Remarks:

Field Certification: [signature] Supervising Tech. 6/13/17

Signed Title Date

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GROUNDWATER MONITORING PROGRAM
WELL DATA SHEET

Site Name:	Sunshine Cyn	**Project No.:**	3017.1047
Well I.D.:	DW-2	**Sampling Date:**	6-13-17
Collected By:	BS	**Purge start Time:**	1002
Casing Diameter (inches):	4	**Purge Stop time:**	1025
Starting Water Level:	23.60	**Sampling (Well Recovery) Time:**	1028
Total Depth (feet):	71.00	**Ending Water Level (feet):**	27.13
Water column (feet):	47.40	**Total Purged (gallons):**	3
Screen Length (feet):	—	**Duplicate Sample:**	YES (NO)
Sample Method:	(Micro Purge) Low Flow		
Horiba Model S/N:	B605494LH		

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
1008	3/4	24.32	8.20	3.73	G	4.16	19.89	-21
1011	1	24.94	8.28	3.70	G	1.59	19.90	-19
1015	1 1/2	25.60	8.30	3.72	G	1.40	19.80	-20
1018	2	25.98	8.34	3.71	G	1.36	19.81	-23
1021	2 1/2	26.49	8.34	3.71	G	1.28	19.83	-24
1025	3	26.87	8.36	3.71	G	1.23	19.81	-23

Purge Sampling Rates: Pump 45, R:35 | D:17

Well condition: OK - needs weed abatement.

Additional Info/Comments: Sunny, warm

Name: B. Salinas **Signature:** [signature]

GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Well ID: DW-2 Date: 6-13-17

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: overgrown vegetation, weeds weed / brush, obstructions.

Concrete Pad:

Integrity: Good: ✓ Inadequate: _____

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

Remarks:

Protective Outer Casing: Material: Metal

Condition of Protective Casing: Good: ✓ Damaged: _____

Condition of Locking Cap: Good: ✓ Damaged: _____

Condition of Lock: Good: ✓ Damaged: _____

Condition of Weepholes: Good: ✓ Damaged: _____

Remarks:

Well Riser: Material: PVC

Condition of Riser: Good: ✓ Damaged: _____

Condition of Riser Cap: Good: ✓ Damaged: _____

Measurment reference point: Yes: ✓ No: _____

Remarks:

Dedicated Pump: Type: Bladder

Condition: Good: ✓ Damaged: _____ Missing: _____

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

Remarks:

Field Certification: Burt Solano Sup. Tech 6-13-17

Signed Title Date

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GROUNDWATER MONITORING PROGRAM
WELL DATA SHEET

Site Name:	Sunshine Cyn.	**Project No.:**	3017.1047
Well I.D.:	DW-3	**Sampling Date:**	6-13-17
Collected By:	BS	**Purge start Time:**	1052
Casing Diameter (inches):	4	**Purge Stop time:**	1114
Starting Water Level:	153.24	**Sampling (Well Recovery) Time:**	~~1120~~ 1120
Total Depth (feet):	256.60	**Ending Water Level (feet):**	~~1120~~ 158.44
Water column (feet):	103.36	**Total Purged (gallons):**	2 1/2
Screen Length (feet):	—	**Duplicate Sample:**	YES (NO)
Sample Method:	(Micro Purge) Low Flow		
Horiba Model S/N:	RSJS494H		

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
1057	1/2	154.62	8.08	3.06	2.9	3.31	21.45	60
1100	3/4	155.04	7.99	3.07	1.7	1.74	21.31	54
1103	1	155.81	7.97	3.07	0.6	1.31	21.36	53
1106	1 1/2	156.35	7.93	3.07	0.4	1.18	21.26	50
1110	2	156.90	7.94	3.06	0.3	1.14	21.29	49
1114	2 1/2	157.56	7.93	3.06	0.3	1.11	21.28	50

Purge Sampling Rates: ~~PSP~~ 100, R:35 / D:20

Clear water with no odor

Well condition: OK

Additional Info/Comments: Stinging worms

Name: B. Sullivan **Signature:** Brent Sullivan

GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Can. Well ID: DW-3 Date: 6-13-17

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: _____

Measurment reference point: Yes: ✓ No: _____

Remarks:

Dedicated Pump: Type: Bladder

Condition: Good: ✓ Damaged: _____ Missing: _____

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

Remarks:

Field Certification: B. Salyer Supt. Tech. 6-13-17

Signed Title Date

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GROUNDWATER MONITORING PROGRAM
WELL DATA SHEET

Site Name:	Sunshine Cyn	**Project No.:**	3017.1047
Well I.D.:	DW-4	**Sampling Date:**	6-15-17
Collected By:	MC	**Purge start Time:**	7:19
Casing Diameter (inches):	4	**Purge Stop time:**	7:45
Starting Water Level:	21.91	**Sampling (Well Recovery) Time:**	8:00
Total Depth (feet):	134.80	**Ending Water Level (feet):**	26.17
Water column (feet):	112.89	**Total Purged (gallons):**	2.5 +
Screen Length (feet):		**Duplicate Sample:**	YES (NO)
Sample Method:	(Micro Purge) Low Flow		
Horiba Model S/N:	U-52/W541mB00		

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
7:29	1.0	23.80	8.25	5.16	4.9	289	2221	-237
7:34	1.5	24.39	8.24	5.10	2.3	2.32	21.26	-223
7:37	1.75	24.94	8.23	5.15	0.9	2.26	21.22	-215
7:40	2.0	25.47	8.23	5.15	2.1	2.22	21.24	-214
7:42	2.25	25.85	8.22	5.16	2.8	2.20	21.23	-214
7:45	2.50	26.17	8.22	5.16	2.2	2.17	21.22	-213

Purge Sampling Rates: 75 psi ref.v 30 discharge 17

water is blackish brown with a strong odor

Well condition: OK heavy erosion around concrete pad Pad in air. Had to hike to well heavy vegetation around the we'

Additional Info/Comments: Clear hot/ breezy

Pump depth 132.0 ft

Name: Mike Campbell **Signature:** Mike Campbell

C-2

GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Cyn Well ID: DW-4 Date: 6-15-17

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: Heavy vegetation around well. Heavy erosion. Concrete pad is suspended in air exposing monument. Sampling equipment and bottles

Concrete Pad:

Integrity: Good: ✓ Inadequate: _____

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

Remarks: Concrete pad suspended in air. Monument exposed

Protective Outer Casing: Material: Metal

Condition of Protective Casing: Good: ✓ Damaged: _____

Condition of Locking Cap: Good: ✓ Damaged: _____

Condition of Lock: Good: ✓ Damaged: _____

Condition of Weepholes: Good: ✓ Damaged: _____

Remarks:

Well Riser: Material: PVC

Condition of Riser: Good: ✓ Damaged: _____

Condition of Riser Cap: Good: ✓ Damaged: _____

Measurment reference point: Yes: ✓ No: _____

Remarks:

Dedicated Pump: Type: Bladder

Condition: Good: ✓ Damaged: _____ Missing: _____

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

Remarks:

Field Certification: Mike Campbell (Signed) Field Tech (Title) 6-15-17 (Date)

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GROUNDWATER MONITORING PROGRAM
WELL DATA SHEET

Site Name:	Sunshine Gym	**Project No.:**	2017.1047
Well I.D.:	DW-5	**Sampling Date:**	6.14.17
Collected By:	AS	**Purge start Time:**	0841
Casing Diameter (inches):	4	**Purge Stop time:**	0905
Starting Water Level:	14.60	**Sampling (Well Recovery) Time:**	0915
Total Depth (feet):	101.00	**Ending Water Level (feet):**	17.38
Water column (feet):	86.30	**Total Purged (gallons):**	2.0+
Screen Length (feet):	—	**Duplicate Sample:**	YES (NO)
Sample Method:	(Micro Purge) Low Flow		
Horiba Model S/N:	U-52 [LXGGP8GR5]		

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
0847	0.50	15.43	10.13	2.30	24.0	1.83	21.65	-111
0853	1.00	16.14	10.12	2.29	16.2	1.58	21.48	-136
0856	1.25	16.45	10.12	2.27	23.3	1.46	21.32	-145
0859	1.50	16.82	10.12	2.26	24.9	1.40	21.32	-153
0902	1.75	17.15	10.12	2.27	24.5	1.39	21.31	-154
0905	2.00	17.38	10.12	2.25	24.1	1.36	21.32	-156

Purge Sampling Rates: 60 PSI. Refill [35.0], Discharge [21.0].
Water has yellow tint w/ strong odor.

Well condition: O.K

Additional Info/Comments: Sunny. Hot

Name: A. Shaw **Signature:** AC. SH

GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Cyn Well ID: DW-5 Date: 6.14.17

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 - Broken concrete + debris around well.

Protective Outer Casing: Material: Metal

Condition of Protective Casing: Good: ✓ Damaged: _____

Condition of Locking Cap: Good: ✓ Damaged: _____

Condition of Lock: Good: ✓ Damaged: _____

Condition of Weepholes: Good: ✓ Damaged: _____

Remarks:

Well Riser: Material: PVC

Condition of Riser: Good: ✓ Damaged: _____

Condition of Riser Cap: Good: ✓ Damaged: _____

Measurment reference point: Yes: ✓ No: _____

Remarks:

Dedicated Pump: Type: Bladder

Condition: Good: ✓ Damaged: _____ Missing: _____

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

Remarks:

Field Certification: [signature] Signed — Field Tech Title — 6.14.17 Date

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GROUNDWATER MONITORING PROGRAM
WELL DATA SHEET

Site Name:	Sunshine Cyn	**Project No.:**	S017.1047 ~~2016.0030~~ (AS)
Well I.D.:	CM-9R3	**Sampling Date:**	6.12.17
Collected By:	AS	**Purge start Time:**	1309
Casing Diameter (inches):	4	**Purge Stop time:**	1328
Starting Water Level:	10.55	**Sampling (Well Recovery) Time:**	1333
Total Depth (feet):	29.00	**Ending Water Level (feet):**	11.76
Water column (feet):	18.45	**Total Purged (gallons):**	2.0+
Screen Length (feet):	—	**Duplicate Sample:**	YES (NO)
Sample Method:	(Micro Purge) Low Flow		
Horiba Model S/N:	U-52 | WGGP8GRS |		

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
1314	0.50	11.00	7.33	7.31	216	3.55	18.92	59
1318	1.00	11.21	7.13	7.16	68.4	2.06	18.55	77
1321	1.25	11.38	7.12	7.14	55.3	1.97	18.46	84
1323	1.50	11.53	7.05	7.08	32.5	1.72	18.25	109
1325	1.75	11.69	7.04	7.09	33.6	1.73	18.27	114
1328	2.00	11.76	7.03	7.08	33.3	1.72	18.24	117

Purge Sampling Rates: 25 PSI ; Refill (20.0), Discharge (10.0).

Well condition: O.K. Gates has yellowish tint w/ no odor.

Additional Info/Comments: Sunny, Warm, Winds *Pump Depth: 27.4 ft.

Name: A. Shaw **Signature:** QC. AS

GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Cyn Well ID: CM-9R3 Date: 6.12.17

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: Thick vegetation.

Concrete Pad:

Integrity: Good: _____ Inadequate: _____

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

Remarks: No concrete pad observed - Sediments around well from erosion from Cyn.

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 is cracked and can be lifted off w/out unlocking

Well Riser: Material: PVC

Condition of Riser: Good: ✓ Damaged: _____

Condition of Riser Cap: Good: ✓ Damaged: _____

Measurment reference point: Yes: ✓ No: _____

Remarks:

Dedicated Pump: Type: Bladder

Condition: Good: ✓ Damaged: _____ Missing: _____

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

Remarks:

Field Certification: A.C. [signature] Field Tech 6.12.17

Signed Title Date

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GROUNDWATER MONITORING PROGRAM
WELL DATA SHEET

Site Name: Sunshine Cyn

Project No.: 5017.1047 ~~2016.0030~~ (AS)

Well I.D.: CM-10R

Sampling Date: 6.12.17

Collected By: AS

Purge start Time: 1201

Casing Diameter (inches): 4

Purge Stop time: 1225

Starting Water Level: 49.51

Sampling (Well Recovery) Time: 1235

Total Depth (feet): 110.90

Ending Water Level (feet): 49.70

Water column (feet):

Total Purged (gallons): 2.5+

Screen Length (feet): —

Duplicate Sample: (YES) NO

Sample Method: (Micro Purge) Low Flow

Horiba Model S/N: U-52 KWGCP8CRS

* Duplicate collected.

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
1210	1.00	49.70	8.63	4.27	Ø	5.43	22.07	-183
1215	1.50	"	8.62	4.29	Ø	5.48	21.97	-196
1218	1.75	"	8.61	4.30	Ø	5.37	21.99	-203
1220	2.00	"	8.61	4.30	Ø	5.41	22.00	-204
1222	2.25	"	8.60	4.33	Ø	5.39	21.99	-210
1225	2.50	"	8.60	4.33	Ø	5.38	21.99	-211

Purge Sampling Rates: 50 PSI ; Refill (45.0), Discharge (15.0).

Well condition: O.K. Water is visually clear w/ strong odor.

Additional Info/Comments: Sunny, Warm, Winds * Pump Depth: 100 ft.

Name: A. Shaw

Signature: [signature]

GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Cyn Well ID: CM-10R Date: 6.12.17

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: _____

Measurment 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: [signature] Signed — Field Tech Title — 6.12.17 Date

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GROUNDWATER MONITORING PROGRAM
WELL DATA SHEET

Site Name:	Sunshine Cyn	**Project No.:**	S017.1247
Well I.D.:	CM-11R	**Sampling Date:**	6.13.17
Collected By:	AS	**Purge start Time:**	1229
Casing Diameter (inches):	4	**Purge Stop time:**	1300
Starting Water Level:	15.98	**Sampling (Well Recovery) Time:**	1315
Total Depth (feet):	31.07	**Ending Water Level (feet):**	16.87
Water column (feet):	15.09	**Total Purged (gallons):**	1.5+
Screen Length (feet):	—	**Duplicate Sample:**	YES (NO)
Sample Method:	(Micro Purge) Low Flow		
Horiba Model S/N:	U-52 | D6KPBGRS		

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
1235	0.25	16.18	6.22	5.21	Ø	1.53	28.20	336
1240	0.50	16.31	6.22	5.21	Ø	1.33	26.85	345
1245	0.75	16.44	6.21	5.33	Ø	1.20	26.61	358
1250	1.00	16.61	6.21	5.36	Ø	1.17	26.00	361
1255	1.25	16.73	6.20	5.37	Ø	1.15	25.98	367
1300	1.50	16.87	6.20	5.39	Ø	1.13	25.92	366

Purge Sampling Rates: 30 psi ; Refill (25.0), Discharge (5.0)

Well condition: O.K.

Additional Info/Comments: Sunny, Hot, Breezy * Pump Depth: 29.8 ft.

Name: A. Shaw **Signature:** AC. Sh

GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Gyn Well ID: CM-11R Date: 6.13.17

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: Republic personnel cleaned-up slide debris blocking concrete channel to cap access.

Concrete Pad:

Integrity: Good: ✓ Inadequate: _____

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

Remarks:

Protective Outer Casing: Material: Metal

Condition of Protective Casing: Good: ✓ Damaged: _____

Condition of Locking Cap: Good: ✓ Damaged: _____

Condition of Lock: Good: ✓ Damaged: _____

Condition of Weepholes: Good: ✓ Damaged: _____

Remarks:

Well Riser: Material: PVC

Condition of Riser: Good: ✓ Damaged: _____

Condition of Riser Cap: Good: ✓ Damaged: _____

Measurment reference point: Yes: ✓ No: _____

Remarks:

Dedicated Pump: Type: Bladder

Condition: Good: ✓ Damaged: _____ Missing: _____

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

Remarks:

* Pump Depth: 29.8 ft.

Field Certification: [signature] Signed Field Tech Title 6.13.17 Date

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GROUNDWATER MONITORING PROGRAM
WELL DATA SHEET

Site Name:	Sunshine Cyn	Project No.:	S017.1047
Well I.D.:	PZ-2	Sampling Date:	6.13.17
Collected By:	AS	Purge start Time:	1046
Casing Diameter (inches):	2	Purge Stop time:	1111
Starting Water Level:	122.37	Sampling (Well Recovery) Time:	1121
Total Depth (feet):	160.90	Ending Water Level (feet):	128.22
Water column (feet):		Total Purged (gallons):	2.0+
Screen Length (feet):	—	Duplicate Sample:	YES / NO (circled: NO)
Sample Method:	Micro Purge (circled) / Low Flow		
Horiba Model S/N:	U-52 / WGGP8GRS		

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
1053	0.50	123.89	10.19	7.99	5.7	2.72	25.96	-157
1059	1.00	125.37	10.46	7.97	1.9	1.49	25.57	-134
1102	1.25	126.35	10.40	7.95	1.5	1.32	25.73	-130
1105	1.50	126.98	10.40	7.95	0.9	1.27	25.72	-129
1108	1.75	127.59	10.39	7.93	0.6	1.21	25.73	-128
1111	2.00	128.22	10.39	7.93	0.7	1.19	25.71	-128

Purge Sampling Rates: 80 psi, Refill (30.0), Discharge (22.0).
Purge water is mostly clear w/ no odor.

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

Additional Info/Comments: Sunny, Hot, Breezy

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

GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Cyn Well ID: PZ-2 Date: 6.13.17

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 carry/hiking equipment + bottles accross 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: _____

Measurment reference point: Yes: ✓ No: _____

Remarks:

Dedicated Pump: Type: Bladder

Condition: Good: ✓ Damaged: _____ Missing: _____

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

Remarks:

Field Certification: [signature] Field Tech 6.13.17

Signed Title Date

Geo-Logic
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GROUNDWATER MONITORING PROGRAM
WELL DATA SHEET

Site Name: Sunshine Can,

Project No.: S97.1047

Well I.D.: PZ-4

Sampling Date: 6-14-17

Collected By: BS

Purge start Time: 1034

Casing Diameter (inches): 2

Purge Stop time: 1056

Starting Water Level: 111.69

Sampling (Well Recovery) Time: 1103

Total Depth (feet): 125.15

Ending Water Level (feet): 113.66

Water column (feet):

Total Purged (gallons): 2

Screen Length (feet): —

Duplicate Sample: YES (NO) [NO circled]

Sample Method: ~~Micro Purge~~ Low Flow

Horiba Model S/N: R8J5U94H

TIME	GALLONS PURGED	WATER LEVEL	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
1041	1/2	111.91	7.82	2.14	14.2	3.34	24.55	54
1044	3/4	112.34	7.79	2.13	9.4	1.76	24.30	46
1047	1	112.62	7.80	2.13	9.8	1.49	24.20	45
1051	1 1/2	112.87	7.80	2.14	10.2	1.36	24.17	45
1053	1 3/4	113.02	7.83	2.18	10.6	1.28	24.16	48
1056	2	113.32	7.85	2.18	11.3	1.23	24.14	50

Purge Sampling Rates: PSR 80, R:30 | D:15

Clear water with no odor

OCAB taken

Well condition: OK

Additional Info/Comments: Sunny, hot

Name: B. Salinas

Signature: [signature]

GROUNDWATER MONITORING WELL INSPECTION REPORT

Facility: Sunshine Can. Well ID: PZ-4 Date: 6-14-17

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: Flush well box

Condition of Protective Casing: Good: ✓ Damaged: ____

Condition of Locking Cap: Good: NA Damaged: ____

Condition of Lock: Good: NA Damaged: ____

Condition of Weepholes: Good: NA Damaged: ____

Remarks:

Well Riser: Material: PVC

Condition of Riser: Good: ✓ Damaged: ____

Condition of Riser Cap: Good: ✓ Damaged: ____

Measurment reference point: Yes: ✓ No: ____

Remarks:

Dedicated Pump: Type: Bladder

Condition: Good: ✓ Damaged: ____ Missing: ____

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

Remarks:

Field Certification: [signature] Signed Sup. Tech. Title 6-14-17 Date

Geo-Logic
ASSOCIATES
Geologists, Hydrogeologists, and Engineers

GROUNDWATER MONITORING PROGRAM
~~SURFACE~~ Sunshine Combined WATER DATA SHEET

Site Name: ~~Subdrains~~ Combined

Project No.: S017

Station I.D.: Combined Subdrains

Sampling Date: 6-12-17

Collected By: BS

Sampling Time: 1215

Horiba Model S/N: P8JSU944H

Duplicate Sample: YES NO (circled: NO)

COLOR	ODOR	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
Tinted yellow	Yes	7.43	4.69	75.9	2.62	28.85	94

Surface water conditions (including stream flow rate, stream depth): Collect The Samples @ outlet side to the filters.

QCAB Taken here

Additional Info/Comments: Sunny, cool

Name: B. Sal[illegible]

Signature: [signature]

Geo-Logic
ASSOCIATES
Geologists, Hydrogeologists, and Engineers

GROUNDWATER MONITORING PROGRAM

~~CONDENSATE~~ WATER DATA SHEET

Site Name: Sunshine C/P

Project No.: 3017.1047

Station I.D.: Subdrain N

Collected By: BS

Horiba Model S/N: RAS5U9444

Sampling Date: 6-18-17

Sampling Time: 1140

Duplicate Sample: YES (NO)

COLOR	ODOR	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
Tint of yellow	yes	7.18	5.17	0.2	3.31	25.59	33

Condensate sampling station conditions: Collect Sample @ Filter Side TO P/C Tanks

Additional Info/Comments: Sunny, cool

Name: B. Salinas

Signature:

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GROUNDWATER MONITORING PROGRAM
SURFACE WATER DATA SHEET

Site Name: Sunshine Cyn Project No.: 3017.1047

Station I.D.: Extraction Trench Sampling Date: 6-14-17

Collected By: BS Sampling Time: 0940

Horiba Model S/N: R8J549414 Duplicate Sample: YES (NO)

COLOR	ODOR	pH	CONDUCTIVITY ms/cm	TURBIDITY NTU	D.O. mg/L	TEMPERATURE °C	O.R.P. mV
Clear	Yes	7.63	6.38	8.4	6.49	24.41	36

Surface water conditions (including stream flow rate, stream depth): Collect samples @ Inlet side to filters

Additional Info/Comments: Clear, warm

Name: B. Salinas Signature: [signature]

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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.: 3017.1047
Sampling Date: 6-13-17
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	O.R.P mV

Purge Sampling Rates: Lysimeter is dry, no Samples Collected,

Well condition: The electrical cord is cut and the 2" HDPE discharge pipe is pinched,

Additional Info/Comments: Sunny, warm.

Brent Sales

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GROUNDWATER MONITORING PROGRAM
WELL DATA SHEET

Site Name:	Sunshine Can.	**Project No.:**	5017.1017
Well I.D.:	MW-7	**Sampling Date:**	6-13-17
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

Purge Sampling Rates: Unable to Sample the lysimeter due to a bad pump.

Well condition:

Additional Info/Comments: Clear, warm

Name: B. Salinas **Signature:**

Geo-Logic ASSOCIATES

FIELD CALIBRATION DOCUMENTATION FORM

LOCATION (Site/Facility Name) Sunshine Cyn. **PROJECT NAME / NUMBER** 5017.1047

Instrument Make/Model # RSDS19411						
Date/Time 6-13-17 0650	**pH** (4.01)	**Electrical Conductivity (µMhos/cm)** (4.49 mg/Kg)	**Turbidity (NTU)** (0)	**DO (mg/L or %)** (8.59)	**Guidance Remarks**	**Comments**
Pre. Cal	3.94	4.53	0.3	9.71		
Calibration	4.01	4.49	G	8.62		
Calibration Successful? (Y/N)	Yes	→	→	→	enter YES or NO	
Satifies Protocol?	Yes	→	→	→	Did calibration meet criteria in the sampling protocol? (Y or N)	
Calibration by	[signature]	[signature]			Signature or initials	
Physical Condition of Unit	Good					

Geo-Logic ASSOCIATES

FIELD CALIBRATION DOCUMENTATION FORM

LOCATION (Site/Facility Name) Sunshine L/F **PROJECT NAME / NUMBER** 8017.1047

Instrument Make/Model # R803L9417

Date/Time	pH	Electrical Conductivity (µMhos/cm)	Turbidity (NTU)	DO (mg/L or %)	Guidance Remarks	Comments
Pre. Cal	4.05	4.00	0.4	9.63		
Calibration	4.01	4.49	8	9.52		
Calibration Successful? (Y/N)	Yes	→	→	→	enter YES or NO	
Satifies Protocol?	Yes	→	→	→	Did calibration meet criteria in the sampling protocol? (Y or N)	
Calibration by	[signature]		[signature]		Signature or initials	

Physical Condition of Unit	Good

Geo-Logic ASSOCIATES

FIELD CALIBRATION DOCUMENTATION FORM

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

Instrument Make/Model # Horiba U-52 S/N WGAD8CR5						
Date/Time 6.12.17 1015	**pH**	**Electrical Conductivity (µMhos/cm)**	**Turbidity (NTU)**	**DO (mg/L or %)**	**Guidance Remarks**	**Comments**
Pre. Cal	3.98	4.54	0.0	9.65		
Calibration	4.00	4.49	0.0	10.31		
Calibration Successful? (Y/N)	Y	→	→	→	enter YES or NO	
Satifies Protocol?	Y	→	→	→	Did calibration meet criteria in the sampling protocol? (Y or N)	
Calibration by	AS				Signature or initials	AC. M
Physical Condition of Unit	→	Good				

Geo-Logic ASSOCIATES

FIELD CALIBRATION DOCUMENTATION FORM

LOCATION (Site/Facility Name) Sunshine Cyn **PROJECT NAME / NUMBER** 5017.1047

Instrument Make/Model # Horiba U-52 SN - WGAP8CRS						
Date/Time 6.14.17 0655	**pH**	**Electrical Conductivity (µMhos/cm)**	**Turbidity (NTU)**	**DO (mg/L or %)**	**Guidance Remarks**	**Comments**
Pre. Cal	3.99	4.46	Ø	8.54		
Calibration	4.00	4.49	Ø	9.20		
Calibration Successful? (Y/N)	Y				enter YES or NO	
Satifies Protocol?	Y				Did calibration meet criteria in the sampling protocol? (Y or N)	
Calibration by	AS				Signature or initials	QC
Physical Condition of Unit →	Good					

Geo-Logic ASSOCIATES

FIELD CALIBRATION DOCUMENTATION FORM

LOCATION (Site/Facility Name) Sunshine Cyn **PROJECT NAME / NUMBER** 2016.003D

Instrument Make/Model # Horiba U-52 S/N WGLP8GRS						
Date/Time 6.13.17 0700	**pH**	**Electrical Conductivity (µMhos/cm)**	**Turbidity (NTU)**	**DO (mg/L or %)**	**Guidance Remarks**	**Comments**
Pre. Cal	4.02	4.50	0.6	9.71		
Calibration	4.00	4.49	0.0	9.23		
Calibration Successful? (Y/N)	Y	—	—	—	enter YES or NO	
Satifies Protocol?	Y	—	—	—	Did calibration meet criteria in the sampling protocol? (Y or N)	
Calibration by	AS				Signature or initials	AC.M
Physical Condition of Unit	→ Good					

Geo-Logic
ASSOCIATES

FIELD CALIBRATION DOCUMENTATION FORM

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

Instrument Make/Model # 4.52 / WS4 / WBDO						
Date/Time 6-15-17 6:45	pH	Electrical Conductivity (µMhos/cm)	Turbidity (NTU)	DO (mg/L or %)	Guidance Remarks	Comments
Pre. Cal	4.07	4.49	0.3	9.85		
Calibration	4.00	4.49	0.0	8.20		
Calibration Successful? (Y/N)	yes				enter YES or NO	
Satifies Protocol?	yes				Did calibration meet criteria in the sampling protocol? (Y or N)	
Calibration by	—				Signature or initials	Richard Cargill
Physical Condition of Unit	Good					

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: 440-186249-1
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:
6/28/2017 12:36:28 PM

Rossina Tomova, Project Manager I
(949)261-1022
rossina.tomova@testamericainc.com

Table of Contents

Sample Summary

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

TestAmerica Job ID: 440-186249-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-186249-1	Subdrain N	Water	06/12/17 11:40	06/12/17 18:10
440-186249-2	Combined Subdrains	Water	06/12/17 12:15	06/12/17 18:10
440-186249-3	CM-9R3	Water	06/12/17 13:33	06/12/17 18:10
440-186249-4	CM-10R	Water	06/12/17 12:35	06/12/17 18:10
440-186249-5	MW-5	Water	06/12/17 14:50	06/12/17 18:10
440-186249-6	Duplicate	Water	06/12/17 00:01	06/12/17 18:10
440-186249-7	QCAB	Water	06/12/17 00:01	06/12/17 18:10
440-186249-8	QCTB	Water	06/12/17 00:01	06/12/17 18:10

Job ID: 440-186249-1

Laboratory: TestAmerica Irvine

Narrative

Job Narrative
440-186249-1

Comments
No additional comments.

Receipt
The samples were received on 6/12/2017 6:10 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 0.6º C and 0.8º C.

GC/MS VOA
Method(s) 8260B: Surrogate Toluene-d8 recovery for the following samples were outside the lower control limit: (440-186491-A-2 MS) and (440-186491-A-2 MSD). Re-extraction and/or re-analysis was performed with concurring results. Matrix interference was confirmed.

Method(s) 8260B: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 440-412312 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.

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 440-411583 and analytical batch 440-412040. 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: The following samples were diluted for Bromide due to the nature of the sample matrix: CM-9R3 (440-186249-3), CM-10R (440-186249-4) and Duplicate (440-186249-6). Elevated reporting limits (RLs) are provided.

Method(s) 300.0: Due to the high concentration of Chloride and Sulfate, the matrix spike / matrix spike duplicate (MS/MSD) for analytical batch 440-411405 could not be evaluated for accuracy and precision. The associated laboratory control sample (LCS) met acceptance criteria.

Method(s) 300.0: Due to the high concentration of Nitrate as N, the matrix spike / matrix spike duplicate (MS/MSD) for analytical batch 440-411404 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 Nitrate as N due to the nature of the sample matrix: Subdrain N (440-186249-1), CM-9R3 (440-186249-3), CM-10R (440-186249-4), MW-5 (440-186249-5) and Duplicate (440-186249-6). 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
Method(s) SM 4500 S2 D: The following samples was analyzed outside of analytical holding time due to login error: Subdrain N (440-186249-1), Combined Subdrains (440-186249-2), CM-9R3 (440-186249-3), CM-10R (440-186249-4), MW-5 (440-186249-5) and Duplicate (440-186249-6).

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

Job ID: 440-186249-1 (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.

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

TestAmerica Job ID: 440-186249-1

Client Sample ID: Subdrain N
Date Collected: 06/12/17 11:40
Date Received: 06/12/17 18:10

Lab Sample ID: 440-186249-1
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			06/15/17 22:09	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/15/17 22:09	1
Acrolein	ND		50	2.5	ug/L			06/16/17 01:55	1
Acrylonitrile	ND		50	1.0	ug/L			06/16/17 01:55	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			06/15/17 22:09	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/15/17 22:09	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			06/15/17 22:09	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			06/15/17 22:09	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			06/15/17 22:09	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			06/15/17 22:09	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			06/15/17 22:09	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			06/15/17 22:09	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			06/15/17 22:09	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			06/15/17 22:09	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			06/15/17 22:09	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			06/15/17 22:09	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			06/15/17 22:09	1
1,4-Dichlorobenzene	**3.6**		0.50	0.25	ug/L			06/15/17 22:09	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			06/15/17 22:09	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			06/15/17 22:09	1
2-Hexanone	ND		5.0	2.5	ug/L			06/15/17 22:09	1
Acetone	ND		20	10	ug/L			06/15/17 22:09	1
Acetonitrile	ND		20	10	ug/L			06/15/17 22:09	1
Benzene	**0.58**		0.50	0.25	ug/L			06/15/17 22:09	1
Allyl chloride	ND		1.0	0.50	ug/L			06/15/17 22:09	1
Bromoform	ND		1.0	0.40	ug/L			06/15/17 22:09	1
Bromomethane	ND		0.50	0.25	ug/L			06/15/17 22:09	1
Carbon disulfide	ND		1.0	0.50	ug/L			06/15/17 22:09	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			06/15/17 22:09	1
Chlorobenzene	ND		0.50	0.25	ug/L			06/15/17 22:09	1
Bromochloromethane	ND		0.50	0.25	ug/L			06/15/17 22:09	1
Chloroethane	ND		1.0	0.40	ug/L			06/15/17 22:09	1
Chloroform	ND		0.50	0.25	ug/L			06/15/17 22:09	1
Chloromethane	ND		0.50	0.25	ug/L			06/15/17 22:09	1
cis-1,2-Dichloroethene	**1.5**		0.50	0.25	ug/L			06/15/17 22:09	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/15/17 22:09	1
Dibromochloromethane	ND		0.50	0.25	ug/L			06/15/17 22:09	1
Dibromomethane	ND		0.50	0.25	ug/L			06/15/17 22:09	1
Bromodichloromethane	ND		0.50	0.25	ug/L			06/15/17 22:09	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			06/15/17 22:09	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			06/15/17 22:09	1
Ethylbenzene	ND		0.50	0.25	ug/L			06/15/17 22:09	1
Iodomethane	ND		2.0	1.0	ug/L			06/15/17 22:09	1
Isobutyl alcohol	ND		25	13	ug/L			06/15/17 22:09	1
m,p-Xylene	ND		1.0	0.50	ug/L			06/15/17 22:09	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			06/15/17 22:09	1
Methyl methacrylate	ND		2.0	1.0	ug/L			06/15/17 22:09	1
Methylene Chloride	ND		2.0	0.88	ug/L			06/15/17 22:09	1
Methyl tert-butyl ether	**1.1**		0.50	0.25	ug/L			06/15/17 22:09	1

Client Sample ID: Subdrain N
Date Collected: 06/12/17 11:40
Date Received: 06/12/17 18:10

Lab Sample ID: 440-186249-1
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			06/15/17 22:09	1
o-Xylene	ND		0.50	0.25	ug/L			06/15/17 22:09	1
Propionitrile	ND		20	10	ug/L			06/15/17 22:09	1
Styrene	ND		0.50	0.25	ug/L			06/15/17 22:09	1
t-Butanol	**18**		10	5.0	ug/L			06/15/17 22:09	1
Tetrachloroethene	ND		0.50	0.25	ug/L			06/15/17 22:09	1
Tetrahydrofuran	ND		10	5.0	ug/L			06/15/17 22:09	1
Toluene	ND		0.50	0.25	ug/L			06/15/17 22:09	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			06/15/17 22:09	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/15/17 22:09	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			06/15/17 22:09	1
Trichloroethene	ND		0.50	0.25	ug/L			06/15/17 22:09	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			06/15/17 22:09	1
Vinyl acetate	ND		4.0	2.0	ug/L			06/15/17 22:09	1
Vinyl chloride	ND		0.50	0.25	ug/L			06/15/17 22:09	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			06/15/17 22:09	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			06/15/17 22:09	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			06/15/17 22:09	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*2.6*	*T J*	*ug/L*		*4.72*			*06/15/17 22:09*	*1*
Unknown	*8.4*	*T J*	*ug/L*		*6.13*			*06/15/17 22:09*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*106*		*80 - 128*		*06/16/17 01:55*	*1*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*		*06/16/17 01:55*	*1*
Toluene-d8 (Surr)	*102*		*80 - 128*		*06/15/17 22:09*	*1*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*		*06/15/17 22:09*	*1*
Dibromofluoromethane (Surr)	*105*		*76 - 132*		*06/16/17 01:55*	*1*
Dibromofluoromethane (Surr)	*97*		*76 - 132*		*06/15/17 22:09*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**10**		0.99	0.25	ug/L		06/13/17 06:25	06/15/17 14:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*54*		*30 - 120*	*06/13/17 06:25*	*06/15/17 14:48*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	**2.0**		1.0	0.50	mg/L			06/12/17 21:53	2
Nitrate as N	ND		0.22	0.11	mg/L			06/12/17 21:53	2
Chloride	**120**		50	25	mg/L			06/13/17 03:15	100
Fluoride	**1.8**		1.0	0.50	mg/L			06/12/17 21:53	2
Sulfate	**1700**		50	25	mg/L			06/13/17 03:15	100

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	**13**		0.50	0.25	mg/L		06/21/17 14:05	06/22/17 09:25	1
Manganese	**6.4**		0.020	0.010	mg/L		06/21/17 14:05	06/22/17 09:25	1
Magnesium	**180**		0.020	0.010	mg/L		06/21/17 14:05	06/22/17 09:25	1

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

TestAmerica Job ID: 440-186249-1

Client Sample ID: Subdrain N

Lab Sample ID: 440-186249-1

Date Collected: 06/12/17 11:40

Matrix: Water

Date Received: 06/12/17 18:10

Method: 6010B - Metals (ICP) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sodium	290		0.50	0.25	mg/L		06/21/17 14:05	06/22/17 09:25	1
Calcium	350		0.10	0.050	mg/L		06/21/17 14:05	06/22/17 09:25	1
Iron	34		0.10	0.050	mg/L		06/21/17 14:05	06/22/17 09:25	1
Boron	0.83		0.050	0.025	mg/L		06/21/17 14:05	06/22/17 09:25	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	120		20	10	mg/L			06/22/17 15:39	1
Total Dissolved Solids	3100		20	10	mg/L			06/15/17 11:52	1
Ammonia (as N)	3.2		0.50	0.10	mg/L		06/13/17 04:00	06/13/17 05:51	1
Total Sulfide	ND	H	0.050	0.027	mg/L			06/27/17 15:18	1
Total Organic Carbon	37		0.50	0.25	mg/L			06/14/17 13:00	5

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	640		4.0	4.0	mg/L			06/13/17 05:37	1
Bicarbonate Alkalinity as CaCO3	640		4.0	4.0	mg/L			06/13/17 05:37	1
Carbon Dioxide, Free	350		2.0	2.0	mg/L			06/14/17 15:56	1

Client Sample ID: Combined Subdrains

Lab Sample ID: 440-186249-2

Date Collected: 06/12/17 12:15

Matrix: Water

Date Received: 06/12/17 18:10

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			06/13/17 23:38	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/13/17 23:38	1
Acrolein	ND		50	2.5	ug/L			06/16/17 02:21	1
Acrylonitrile	ND		50	1.0	ug/L			06/16/17 02:21	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			06/13/17 23:38	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/13/17 23:38	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			06/13/17 23:38	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			06/13/17 23:38	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			06/13/17 23:38	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			06/13/17 23:38	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			06/13/17 23:38	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			06/13/17 23:38	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			06/13/17 23:38	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			06/13/17 23:38	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			06/13/17 23:38	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			06/13/17 23:38	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			06/13/17 23:38	1
1,4-Dichlorobenzene	0.88		0.50	0.25	ug/L			06/13/17 23:38	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			06/13/17 23:38	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			06/13/17 23:38	1
2-Hexanone	ND		5.0	2.5	ug/L			06/13/17 23:38	1
Acetone	ND		20	10	ug/L			06/13/17 23:38	1
Acetonitrile	ND		20	10	ug/L			06/13/17 23:38	1
Benzene	ND		0.50	0.25	ug/L			06/13/17 23:38	1
Allyl chloride	ND		1.0	0.50	ug/L			06/13/17 23:38	1
Bromoform	ND		1.0	0.40	ug/L			06/13/17 23:38	1
Bromomethane	ND		0.50	0.25	ug/L			06/13/17 23:38	1

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

TestAmerica Job ID: 440-186249-1

Client Sample ID: Combined Subdrains
Date Collected: 06/12/17 12:15
Date Received: 06/12/17 18:10

Lab Sample ID: 440-186249-2
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			06/13/17 23:38	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			06/13/17 23:38	1
Chlorobenzene	ND		0.50	0.25	ug/L			06/13/17 23:38	1
Bromochloromethane	ND		0.50	0.25	ug/L			06/13/17 23:38	1
Chloroethane	ND		1.0	0.40	ug/L			06/13/17 23:38	1
Chloroform	ND		0.50	0.25	ug/L			06/13/17 23:38	1
Chloromethane	ND		0.50	0.25	ug/L			06/13/17 23:38	1
cis-1,2-Dichloroethene	**1.1**		0.50	0.25	ug/L			06/13/17 23:38	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/13/17 23:38	1
Dibromochloromethane	ND		0.50	0.25	ug/L			06/13/17 23:38	1
Dibromomethane	ND		0.50	0.25	ug/L			06/13/17 23:38	1
Bromodichloromethane	ND		0.50	0.25	ug/L			06/13/17 23:38	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			06/13/17 23:38	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			06/13/17 23:38	1
Ethylbenzene	ND		0.50	0.25	ug/L			06/13/17 23:38	1
Iodomethane	ND		2.0	1.0	ug/L			06/13/17 23:38	1
Isobutyl alcohol	ND		25	13	ug/L			06/13/17 23:38	1
m,p-Xylene	ND		1.0	0.50	ug/L			06/13/17 23:38	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			06/13/17 23:38	1
Methyl methacrylate	ND		2.0	1.0	ug/L			06/13/17 23:38	1
Methylene Chloride	ND		2.0	0.88	ug/L			06/13/17 23:38	1
Methyl tert-butyl ether	**0.30**	**J**	0.50	0.25	ug/L			06/13/17 23:38	1
Naphthalene	ND		1.0	0.40	ug/L			06/13/17 23:38	1
o-Xylene	ND		0.50	0.25	ug/L			06/13/17 23:38	1
Propionitrile	ND		20	10	ug/L			06/13/17 23:38	1
Styrene	ND		0.50	0.25	ug/L			06/13/17 23:38	1
t-Butanol	**12**	**ID**	10	5.0	ug/L			06/13/17 23:38	1
Tetrachloroethene	ND		0.50	0.25	ug/L			06/13/17 23:38	1
Tetrahydrofuran	ND		10	5.0	ug/L			06/13/17 23:38	1
Toluene	ND		0.50	0.25	ug/L			06/13/17 23:38	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			06/13/17 23:38	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/13/17 23:38	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			06/13/17 23:38	1
Trichloroethene	ND		0.50	0.25	ug/L			06/13/17 23:38	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			06/13/17 23:38	1
Vinyl acetate	ND		4.0	2.0	ug/L			06/13/17 23:38	1
Vinyl chloride	ND		0.50	0.25	ug/L			06/13/17 23:38	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			06/13/17 23:38	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			06/13/17 23:38	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			06/13/17 23:38	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*4.3*	*T J*	*ug/L*		*5.84*			*06/13/17 23:38*	*1*
Unknown	*11*	*T J*	*ug/L*		*7.33*			*06/13/17 23:38*	*1*
Unknown	*37*	*T J*	*ug/L*		*17.82*			*06/13/17 23:38*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*107*		*80 - 128*		*06/16/17 02:21*	*1*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*		*06/16/17 02:21*	*1*
Toluene-d8 (Surr)	*106*		*80 - 128*		*06/13/17 23:38*	*1*

Client Sample ID: Combined Subdrains

Lab Sample ID: 440-186249-2

Date Collected: 06/12/17 12:15

Matrix: Water

Date Received: 06/12/17 18:10

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*		*06/13/17 23:38*	*1*
Dibromofluoromethane (Surr)	*106*		*76 - 132*		*06/16/17 02:21*	*1*
Dibromofluoromethane (Surr)	*103*		*76 - 132*		*06/13/17 23:38*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**7.8**		0.97	0.24	ug/L		06/13/17 06:25	06/15/17 15:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*60*		*30 - 120*	*06/13/17 06:25*	*06/15/17 15:10*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	**1.3**		1.0	0.50	mg/L			06/12/17 22:08	2
Nitrate as N	**1.9**		0.22	0.11	mg/L			06/12/17 22:08	2
Chloride	**100**		50	25	mg/L			06/13/17 03:30	100
Fluoride	**1.9**		1.0	0.50	mg/L			06/12/17 22:08	2
Sulfate	**1700**		50	25	mg/L			06/13/17 03:30	100

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		06/21/17 14:05	06/22/17 09:34	1
Manganese	**3.7**		0.020	0.010	mg/L		06/21/17 14:05	06/22/17 09:34	1
Magnesium	**200**		0.020	0.010	mg/L		06/21/17 14:05	06/22/17 09:34	1
Sodium	**190**		0.50	0.25	mg/L		06/21/17 14:05	06/22/17 09:34	1
Calcium	**330**		0.10	0.050	mg/L		06/21/17 14:05	06/22/17 09:34	1
Iron	**14**		0.10	0.050	mg/L		06/21/17 14:05	06/22/17 09:34	1
Boron	**0.54**		0.050	0.025	mg/L		06/21/17 14:05	06/22/17 09:34	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	**75**		20	10	mg/L			06/22/17 15:39	1
Total Dissolved Solids	**2900**		20	10	mg/L			06/15/17 11:52	1
Ammonia (as N)	**1.8**		0.50	0.10	mg/L		06/13/17 04:00	06/13/17 05:51	1
Total Sulfide	ND	H	0.050	0.027	mg/L			06/27/17 15:19	1
Total Organic Carbon	**17**		0.50	0.25	mg/L			06/14/17 15:49	5

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	**450**		4.0	4.0	mg/L			06/13/17 05:47	1
Bicarbonate Alkalinity as CaCO3	**450**		4.0	4.0	mg/L			06/13/17 05:47	1
Carbon Dioxide, Free	**190**		2.0	2.0	mg/L			06/14/17 15:56	1

Client Sample ID: CM-9R3

Lab Sample ID: 440-186249-3

Date Collected: 06/12/17 13:33

Matrix: Water

Date Received: 06/12/17 18:10

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			06/14/17 00:05	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/14/17 00:05	1
Acrolein	ND		50	2.5	ug/L			06/16/17 02:48	1

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

TestAmerica Job ID: 440-186249-1

Client Sample ID: CM-9R3
Date Collected: 06/12/17 13:33
Date Received: 06/12/17 18:10

Lab Sample ID: 440-186249-3
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			06/16/17 02:48	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			06/14/17 00:05	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/14/17 00:05	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			06/14/17 00:05	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			06/14/17 00:05	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			06/14/17 00:05	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			06/14/17 00:05	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			06/14/17 00:05	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			06/14/17 00:05	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			06/14/17 00:05	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			06/14/17 00:05	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			06/14/17 00:05	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			06/14/17 00:05	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			06/14/17 00:05	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			06/14/17 00:05	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			06/14/17 00:05	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			06/14/17 00:05	1
2-Hexanone	ND		5.0	2.5	ug/L			06/14/17 00:05	1
Acetone	ND		20	10	ug/L			06/14/17 00:05	1
Acetonitrile	ND		20	10	ug/L			06/14/17 00:05	1
Benzene	ND		0.50	0.25	ug/L			06/14/17 00:05	1
Allyl chloride	ND		1.0	0.50	ug/L			06/14/17 00:05	1
Bromoform	ND		1.0	0.40	ug/L			06/14/17 00:05	1
Bromomethane	ND		0.50	0.25	ug/L			06/14/17 00:05	1
Carbon disulfide	ND		1.0	0.50	ug/L			06/14/17 00:05	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			06/14/17 00:05	1
Chlorobenzene	ND		0.50	0.25	ug/L			06/14/17 00:05	1
Bromochloromethane	ND		0.50	0.25	ug/L			06/14/17 00:05	1
Chloroethane	ND		1.0	0.40	ug/L			06/14/17 00:05	1
Chloroform	ND		0.50	0.25	ug/L			06/14/17 00:05	1
Chloromethane	ND		0.50	0.25	ug/L			06/14/17 00:05	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			06/14/17 00:05	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/14/17 00:05	1
Dibromochloromethane	ND		0.50	0.25	ug/L			06/14/17 00:05	1
Dibromomethane	ND		0.50	0.25	ug/L			06/14/17 00:05	1
Bromodichloromethane	ND		0.50	0.25	ug/L			06/14/17 00:05	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			06/14/17 00:05	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			06/14/17 00:05	1
Ethylbenzene	ND		0.50	0.25	ug/L			06/14/17 00:05	1
Iodomethane	ND		2.0	1.0	ug/L			06/14/17 00:05	1
Isobutyl alcohol	ND		25	13	ug/L			06/14/17 00:05	1
m,p-Xylene	ND		1.0	0.50	ug/L			06/14/17 00:05	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			06/14/17 00:05	1
Methyl methacrylate	ND		2.0	1.0	ug/L			06/14/17 00:05	1
Methylene Chloride	ND		2.0	0.88	ug/L			06/14/17 00:05	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			06/14/17 00:05	1
Naphthalene	ND		1.0	0.40	ug/L			06/14/17 00:05	1
o-Xylene	ND		0.50	0.25	ug/L			06/14/17 00:05	1
Propionitrile	ND		20	10	ug/L			06/14/17 00:05	1

Client Sample ID: CM-9R3
Date Collected: 06/12/17 13:33
Date Received: 06/12/17 18:10

Lab Sample ID: 440-186249-3
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Styrene	ND		0.50	0.25	ug/L			06/14/17 00:05	1
t-Butanol	ND		10	5.0	ug/L			06/14/17 00:05	1
Tetrachloroethene	ND		0.50	0.25	ug/L			06/14/17 00:05	1
Tetrahydrofuran	ND		10	5.0	ug/L			06/14/17 00:05	1
Toluene	ND		0.50	0.25	ug/L			06/14/17 00:05	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			06/14/17 00:05	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/14/17 00:05	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			06/14/17 00:05	1
Trichloroethene	ND		0.50	0.25	ug/L			06/14/17 00:05	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			06/14/17 00:05	1
Vinyl acetate	ND		4.0	2.0	ug/L			06/14/17 00:05	1
Vinyl chloride	ND		0.50	0.25	ug/L			06/14/17 00:05	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			06/14/17 00:05	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			06/14/17 00:05	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			06/14/17 00:05	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*10*	*T J*	*ug/L*		*7.33*			*06/14/17 00:05*	*1*
Unknown	*26*	*T J*	*ug/L*		*17.81*			*06/14/17 00:05*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*107*		*80 - 128*		*06/16/17 02:48*	*1*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*		*06/16/17 02:48*	*1*
Toluene-d8 (Surr)	*107*		*80 - 128*		*06/14/17 00:05*	*1*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*		*06/14/17 00:05*	*1*
Dibromofluoromethane (Surr)	*107*		*76 - 132*		*06/16/17 02:48*	*1*
Dibromofluoromethane (Surr)	*103*		*76 - 132*		*06/14/17 00:05*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.96	0.24	ug/L		06/13/17 06:25	06/15/17 15:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*62*		*30 - 120*	*06/13/17 06:25*	*06/15/17 15:32*	*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			06/12/17 22:23	10
Nitrate as N	ND		1.1	0.55	mg/L			06/12/17 22:23	10
Chloride	**19**		5.0	2.5	mg/L			06/12/17 22:23	10
Fluoride	**5.0**		5.0	2.5	mg/L			06/12/17 22:23	10
Sulfate	**3500**		100	50	mg/L			06/13/17 03:46	200

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	**16**		0.50	0.25	mg/L		06/21/17 14:05	06/22/17 09:36	1
Manganese	**5.9**		0.020	0.010	mg/L		06/21/17 14:05	06/22/17 09:36	1
Magnesium	**310**		0.020	0.010	mg/L		06/21/17 14:05	06/22/17 09:36	1
Sodium	**530**		0.50	0.25	mg/L		06/21/17 14:05	06/22/17 09:36	1
Calcium	**420**		0.10	0.050	mg/L		06/21/17 14:05	06/22/17 09:36	1
Iron	**9.6**		0.10	0.050	mg/L		06/21/17 14:05	06/22/17 09:36	1

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

TestAmerica Job ID: 440-186249-1

Client Sample ID: CM-9R3

Lab Sample ID: 440-186249-3

Date Collected: 06/12/17 13:33

Matrix: Water

Date Received: 06/12/17 18:10

Method: 6010B - Metals (ICP) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	2.0		0.050	0.025	mg/L		06/21/17 14:05	06/22/17 09:36	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	37		20	10	mg/L			06/22/17 15:39	1
Total Dissolved Solids	5100		50	25	mg/L			06/15/17 11:52	1
Ammonia (as N)	3.6		0.50	0.10	mg/L		06/13/17 04:00	06/13/17 05:51	1
Total Sulfide	ND	H	0.050	0.027	mg/L			06/27/17 15:19	1
Total Organic Carbon	8.2		0.50	0.25	mg/L			06/14/17 13:12	5

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	42		4.0	4.0	mg/L			06/13/17 05:52	1
Bicarbonate Alkalinity as CaCO3	42		4.0	4.0	mg/L			06/13/17 05:52	1
Carbon Dioxide, Free	160		2.0	2.0	mg/L			06/14/17 15:56	1

Client Sample ID: CM-10R

Lab Sample ID: 440-186249-4

Date Collected: 06/12/17 12:35

Matrix: Water

Date Received: 06/12/17 18:10

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			06/14/17 00:31	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/14/17 00:31	1
Acrolein	ND		50	2.5	ug/L			06/16/17 18:35	1
Acrylonitrile	ND		50	1.0	ug/L			06/16/17 18:35	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			06/14/17 00:31	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/14/17 00:31	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			06/14/17 00:31	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			06/14/17 00:31	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			06/14/17 00:31	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			06/14/17 00:31	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			06/14/17 00:31	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			06/14/17 00:31	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			06/14/17 00:31	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			06/14/17 00:31	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			06/14/17 00:31	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			06/14/17 00:31	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			06/14/17 00:31	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			06/14/17 00:31	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			06/14/17 00:31	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			06/14/17 00:31	1
2-Hexanone	ND		5.0	2.5	ug/L			06/14/17 00:31	1
Acetone	ND		20	10	ug/L			06/14/17 00:31	1
Acetonitrile	ND		20	10	ug/L			06/14/17 00:31	1
Benzene	ND		0.50	0.25	ug/L			06/14/17 00:31	1
Allyl chloride	ND		1.0	0.50	ug/L			06/14/17 00:31	1
Bromoform	ND		1.0	0.40	ug/L			06/14/17 00:31	1
Bromomethane	ND		0.50	0.25	ug/L			06/14/17 00:31	1
Carbon disulfide	ND		1.0	0.50	ug/L			06/14/17 00:31	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			06/14/17 00:31	1
Chlorobenzene	ND		0.50	0.25	ug/L			06/14/17 00:31	1

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

TestAmerica Job ID: 440-186249-1

Client Sample ID: CM-10R
Date Collected: 06/12/17 12:35
Date Received: 06/12/17 18:10

Lab Sample ID: 440-186249-4
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromochloromethane	ND		0.50	0.25	ug/L			06/14/17 00:31	1
Chloroethane	ND		1.0	0.40	ug/L			06/14/17 00:31	1
Chloroform	ND		0.50	0.25	ug/L			06/14/17 00:31	1
Chloromethane	ND		0.50	0.25	ug/L			06/14/17 00:31	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			06/14/17 00:31	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/14/17 00:31	1
Dibromochloromethane	ND		0.50	0.25	ug/L			06/14/17 00:31	1
Dibromomethane	ND		0.50	0.25	ug/L			06/14/17 00:31	1
Bromodichloromethane	ND		0.50	0.25	ug/L			06/14/17 00:31	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			06/14/17 00:31	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			06/14/17 00:31	1
Ethylbenzene	ND		0.50	0.25	ug/L			06/14/17 00:31	1
Iodomethane	ND		2.0	1.0	ug/L			06/14/17 00:31	1
Isobutyl alcohol	ND		25	13	ug/L			06/14/17 00:31	1
m,p-Xylene	ND		1.0	0.50	ug/L			06/14/17 00:31	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			06/14/17 00:31	1
Methyl methacrylate	ND		2.0	1.0	ug/L			06/14/17 00:31	1
Methylene Chloride	ND		2.0	0.88	ug/L			06/14/17 00:31	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			06/14/17 00:31	1
Naphthalene	ND		1.0	0.40	ug/L			06/14/17 00:31	1
o-Xylene	ND		0.50	0.25	ug/L			06/14/17 00:31	1
Propionitrile	ND		20	10	ug/L			06/14/17 00:31	1
Styrene	ND		0.50	0.25	ug/L			06/14/17 00:31	1
t-Butanol	ND		10	5.0	ug/L			06/14/17 00:31	1
Tetrachloroethene	ND		0.50	0.25	ug/L			06/14/17 00:31	1
Tetrahydrofuran	ND		10	5.0	ug/L			06/14/17 00:31	1
Toluene	ND		0.50	0.25	ug/L			06/14/17 00:31	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			06/14/17 00:31	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/14/17 00:31	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			06/14/17 00:31	1
Trichloroethene	ND		0.50	0.25	ug/L			06/14/17 00:31	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			06/14/17 00:31	1
Vinyl acetate	ND		4.0	2.0	ug/L			06/14/17 00:31	1
Vinyl chloride	ND		0.50	0.25	ug/L			06/14/17 00:31	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			06/14/17 00:31	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			06/14/17 00:31	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			06/14/17 00:31	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*21*	*T J*	*ug/L*		*2.84*			*06/14/17 00:31*	*1*
Unknown	*2.8*	*T J*	*ug/L*		*3.33*			*06/14/17 00:31*	*1*
Unknown	*11*	*T J*	*ug/L*		*7.32*			*06/14/17 00:31*	*1*
Unknown	*5.3*	*T J*	*ug/L*		*17.29*			*06/14/17 00:31*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*104*		*80 - 128*		*06/16/17 18:35*	*1*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*		*06/16/17 18:35*	*1*
Toluene-d8 (Surr)	*107*		*80 - 128*		*06/14/17 00:31*	*1*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*		*06/14/17 00:31*	*1*
Dibromofluoromethane (Surr)	*109*		*76 - 132*		*06/16/17 18:35*	*1*

Client Sample ID: CM-10R

Date Collected: 06/12/17 12:35
Date Received: 06/12/17 18:10

Lab Sample ID: 440-186249-4
Matrix: Water

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*103*		*76 - 132*		*06/14/17 00:31*	*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		06/13/17 06:25	06/15/17 15:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*54*		*30 - 120*	*06/13/17 06:25*	*06/15/17 15:54*	*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			06/12/17 22:39	2
Nitrate as N	ND		0.22	0.11	mg/L			06/12/17 22:39	2
Chloride	**9.4**		1.0	0.50	mg/L			06/12/17 22:39	2
Fluoride	**1.8**		1.0	0.50	mg/L			06/12/17 22:39	2
Sulfate	**1700**		50	25	mg/L			06/13/17 04:01	100

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		06/21/17 14:05	06/22/17 09:38	1
Manganese	**0.39**		0.020	0.010	mg/L		06/21/17 14:05	06/22/17 09:38	1
Magnesium	**220**		0.020	0.010	mg/L		06/21/17 14:05	06/22/17 09:38	1
Sodium	**200**		0.50	0.25	mg/L		06/21/17 14:05	06/22/17 09:38	1
Calcium	**250**		0.10	0.050	mg/L		06/21/17 14:05	06/22/17 09:38	1
Iron	**0.25**		0.10	0.050	mg/L		06/21/17 14:05	06/22/17 09:38	1
Boron	**0.88**		0.050	0.025	mg/L		06/21/17 14:05	06/22/17 09:38	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	**32**		20	10	mg/L			06/22/17 15:39	1
Total Dissolved Solids	**2700**		20	10	mg/L			06/15/17 11:52	1
Ammonia (as N)	**9.4**		2.5	0.50	mg/L		06/13/17 04:00	06/13/17 05:51	5
Total Sulfide	**4.8**	**H**	0.25	0.14	mg/L			06/27/17 15:19	5
Total Organic Carbon	**4.3**		0.10	0.050	mg/L			06/14/17 16:13	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	**550**		4.0	4.0	mg/L			06/13/17 06:07	1
Bicarbonate Alkalinity as CaCO3	**550**		4.0	4.0	mg/L			06/13/17 06:07	1
Carbon Dioxide, Free	**100**		2.0	2.0	mg/L			06/14/17 15:56	1

Client Sample ID: MW-5

Date Collected: 06/12/17 14:50
Date Received: 06/12/17 18:10

Lab Sample ID: 440-186249-5
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			06/14/17 00:57	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/14/17 00:57	1
Acrolein	ND		50	2.5	ug/L			06/17/17 03:46	1
Acrylonitrile	ND		50	1.0	ug/L			06/17/17 03:46	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			06/14/17 00:57	1

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

TestAmerica Job ID: 440-186249-1

Client Sample ID: MW-5
Date Collected: 06/12/17 14:50
Date Received: 06/12/17 18:10

Lab Sample ID: 440-186249-5
Matrix: Water

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		0.50	0.25	ug/L			06/14/17 00:57	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			06/14/17 00:57	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			06/14/17 00:57	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			06/14/17 00:57	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			06/14/17 00:57	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			06/14/17 00:57	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			06/14/17 00:57	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			06/14/17 00:57	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			06/14/17 00:57	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			06/14/17 00:57	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			06/14/17 00:57	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			06/14/17 00:57	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			06/14/17 00:57	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			06/14/17 00:57	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			06/14/17 00:57	1
2-Hexanone	ND		5.0	2.5	ug/L			06/14/17 00:57	1
Acetone	ND		20	10	ug/L			06/14/17 00:57	1
Acetonitrile	ND		20	10	ug/L			06/14/17 00:57	1
Benzene	ND		0.50	0.25	ug/L			06/14/17 00:57	1
Allyl chloride	ND		1.0	0.50	ug/L			06/14/17 00:57	1
Bromoform	ND		1.0	0.40	ug/L			06/14/17 00:57	1
Bromomethane	ND		0.50	0.25	ug/L			06/14/17 00:57	1
Carbon disulfide	ND		1.0	0.50	ug/L			06/14/17 00:57	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			06/14/17 00:57	1
Chlorobenzene	ND		0.50	0.25	ug/L			06/14/17 00:57	1
Bromochloromethane	ND		0.50	0.25	ug/L			06/14/17 00:57	1
Chloroethane	ND		1.0	0.40	ug/L			06/14/17 00:57	1
Chloroform	ND		0.50	0.25	ug/L			06/14/17 00:57	1
Chloromethane	ND		0.50	0.25	ug/L			06/14/17 00:57	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			06/14/17 00:57	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/14/17 00:57	1
Dibromochloromethane	ND		0.50	0.25	ug/L			06/14/17 00:57	1
Dibromomethane	ND		0.50	0.25	ug/L			06/14/17 00:57	1
Bromodichloromethane	ND		0.50	0.25	ug/L			06/14/17 00:57	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			06/14/17 00:57	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			06/14/17 00:57	1
Ethylbenzene	ND		0.50	0.25	ug/L			06/14/17 00:57	1
Iodomethane	ND		2.0	1.0	ug/L			06/14/17 00:57	1
Isobutyl alcohol	ND		25	13	ug/L			06/14/17 00:57	1
m,p-Xylene	ND		1.0	0.50	ug/L			06/14/17 00:57	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			06/14/17 00:57	1
Methyl methacrylate	ND		2.0	1.0	ug/L			06/14/17 00:57	1
Methylene Chloride	ND		2.0	0.88	ug/L			06/14/17 00:57	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			06/14/17 00:57	1
Naphthalene	ND		1.0	0.40	ug/L			06/14/17 00:57	1
o-Xylene	ND		0.50	0.25	ug/L			06/14/17 00:57	1
Propionitrile	ND		20	10	ug/L			06/14/17 00:57	1
Styrene	ND		0.50	0.25	ug/L			06/14/17 00:57	1
t-Butanol	ND		10	5.0	ug/L			06/14/17 00:57	1

Client Sample ID: MW-5
Date Collected: 06/12/17 14:50
Date Received: 06/12/17 18:10

Lab Sample ID: 440-186249-5
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		0.50	0.25	ug/L			06/14/17 00:57	1
Tetrahydrofuran	ND		10	5.0	ug/L			06/14/17 00:57	1
Toluene	ND		0.50	0.25	ug/L			06/14/17 00:57	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			06/14/17 00:57	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/14/17 00:57	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			06/14/17 00:57	1
Trichloroethene	ND		0.50	0.25	ug/L			06/14/17 00:57	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			06/14/17 00:57	1
Vinyl acetate	ND		4.0	2.0	ug/L			06/14/17 00:57	1
Vinyl chloride	ND		0.50	0.25	ug/L			06/14/17 00:57	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			06/14/17 00:57	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			06/14/17 00:57	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			06/14/17 00:57	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*4.5*	*T J*	*ug/L*		*5.84*			*06/14/17 00:57*	*1*
Unknown	*10*	*T J*	*ug/L*		*7.33*			*06/14/17 00:57*	*1*
Unknown	*14*	*T J*	*ug/L*		*17.79*			*06/14/17 00:57*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*104*		*80 - 128*		*06/17/17 03:46*	*1*
4-Bromofluorobenzene (Surr)	*108*		*80 - 120*		*06/17/17 03:46*	*1*
Toluene-d8 (Surr)	*108*		*80 - 128*		*06/14/17 00:57*	*1*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*		*06/14/17 00:57*	*1*
Dibromofluoromethane (Surr)	*101*		*76 - 132*		*06/17/17 03:46*	*1*
Dibromofluoromethane (Surr)	*105*		*76 - 132*		*06/14/17 00:57*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**15**		0.98	0.25	ug/L		06/13/17 06:25	06/15/17 16:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*62*		*30 - 120*	*06/13/17 06:25*	*06/15/17 16:16*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	**3.4**		2.5	1.3	mg/L			06/12/17 22:54	5
Nitrate as N	ND		0.55	0.28	mg/L			06/12/17 22:54	5
Chloride	**260**		100	50	mg/L			06/13/17 04:16	200
Fluoride	**2.7**		2.5	1.3	mg/L			06/12/17 22:54	5
Sulfate	**1700**		100	50	mg/L			06/13/17 04:16	200

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		06/21/17 14:05	06/22/17 09:45	1
Manganese	**4.9**		0.020	0.010	mg/L		06/21/17 14:05	06/22/17 09:45	1
Magnesium	**200**		0.020	0.010	mg/L		06/21/17 14:05	06/22/17 09:45	1
Sodium	**300**		0.50	0.25	mg/L		06/21/17 14:05	06/22/17 09:45	1
Calcium	**480**		0.10	0.050	mg/L		06/21/17 14:05	06/22/17 09:45	1
Iron	**21**		0.10	0.050	mg/L		06/21/17 14:05	06/22/17 09:45	1
Boron	**1.0**		0.050	0.025	mg/L		06/21/17 14:05	06/22/17 09:45	1

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

TestAmerica Job ID: 440-186249-1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	110		20	10	mg/L			06/22/17 15:39	1
Total Dissolved Solids	3600		50	25	mg/L			06/15/17 11:52	1
Ammonia (as N)	4.9		2.5	0.50	mg/L		06/13/17 04:00	06/13/17 05:51	5
Total Sulfide	ND	H	0.050	0.027	mg/L			06/27/17 15:19	1
Total Organic Carbon	34		0.50	0.25	mg/L			06/14/17 13:27	5

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	740		4.0	4.0	mg/L			06/13/17 06:30	1
Bicarbonate Alkalinity as CaCO3	740		4.0	4.0	mg/L			06/13/17 06:30	1
Carbon Dioxide, Free	230		2.0	2.0	mg/L			06/14/17 15:56	1

Client Sample ID: Duplicate

Lab Sample ID: 440-186249-6

Date Collected: 06/12/17 00:01

Matrix: Water

Date Received: 06/12/17 18:10

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			06/14/17 01:24	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/14/17 01:24	1
Acrolein	ND		50	2.5	ug/L			06/17/17 04:15	1
Acrylonitrile	ND		50	1.0	ug/L			06/17/17 04:15	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			06/14/17 01:24	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/14/17 01:24	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			06/14/17 01:24	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			06/14/17 01:24	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			06/14/17 01:24	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			06/14/17 01:24	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			06/14/17 01:24	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			06/14/17 01:24	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			06/14/17 01:24	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			06/14/17 01:24	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			06/14/17 01:24	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			06/14/17 01:24	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			06/14/17 01:24	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			06/14/17 01:24	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			06/14/17 01:24	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			06/14/17 01:24	1
2-Hexanone	ND		5.0	2.5	ug/L			06/14/17 01:24	1
Acetone	ND		20	10	ug/L			06/14/17 01:24	1
Acetonitrile	ND		20	10	ug/L			06/14/17 01:24	1
Benzene	ND		0.50	0.25	ug/L			06/14/17 01:24	1
Allyl chloride	ND		1.0	0.50	ug/L			06/14/17 01:24	1
Bromoform	ND		1.0	0.40	ug/L			06/14/17 01:24	1
Bromomethane	ND		0.50	0.25	ug/L			06/14/17 01:24	1
Carbon disulfide	ND		1.0	0.50	ug/L			06/14/17 01:24	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			06/14/17 01:24	1
Chlorobenzene	ND		0.50	0.25	ug/L			06/14/17 01:24	1
Bromochloromethane	ND		0.50	0.25	ug/L			06/14/17 01:24	1
Chloroethane	ND		1.0	0.40	ug/L			06/14/17 01:24	1
Chloroform	ND		0.50	0.25	ug/L			06/14/17 01:24	1
Chloromethane	ND		0.50	0.25	ug/L			06/14/17 01:24	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			06/14/17 01:24	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/14/17 01:24	1
Dibromochloromethane	ND		0.50	0.25	ug/L			06/14/17 01:24	1

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

TestAmerica Job ID: 440-186249-1

Client Sample ID: Duplicate
Date Collected: 06/12/17 00:01
Date Received: 06/12/17 18:10

Lab Sample ID: 440-186249-6
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibromomethane	ND		0.50	0.25	ug/L			06/14/17 01:24	1
Bromodichloromethane	ND		0.50	0.25	ug/L			06/14/17 01:24	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			06/14/17 01:24	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			06/14/17 01:24	1
Ethylbenzene	ND		0.50	0.25	ug/L			06/14/17 01:24	1
Iodomethane	ND		2.0	1.0	ug/L			06/14/17 01:24	1
Isobutyl alcohol	ND		25	13	ug/L			06/14/17 01:24	1
m,p-Xylene	ND		1.0	0.50	ug/L			06/14/17 01:24	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			06/14/17 01:24	1
Methyl methacrylate	ND		2.0	1.0	ug/L			06/14/17 01:24	1
Methylene Chloride	ND		2.0	0.88	ug/L			06/14/17 01:24	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			06/14/17 01:24	1
Naphthalene	ND		1.0	0.40	ug/L			06/14/17 01:24	1
o-Xylene	ND		0.50	0.25	ug/L			06/14/17 01:24	1
Propionitrile	ND		20	10	ug/L			06/14/17 01:24	1
Styrene	ND		0.50	0.25	ug/L			06/14/17 01:24	1
t-Butanol	ND		10	5.0	ug/L			06/14/17 01:24	1
Tetrachloroethene	ND		0.50	0.25	ug/L			06/14/17 01:24	1
Tetrahydrofuran	ND		10	5.0	ug/L			06/14/17 01:24	1
Toluene	ND		0.50	0.25	ug/L			06/14/17 01:24	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			06/14/17 01:24	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/14/17 01:24	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			06/14/17 01:24	1
Trichloroethene	ND		0.50	0.25	ug/L			06/14/17 01:24	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			06/14/17 01:24	1
Vinyl acetate	ND		4.0	2.0	ug/L			06/14/17 01:24	1
Vinyl chloride	ND		0.50	0.25	ug/L			06/14/17 01:24	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			06/14/17 01:24	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			06/14/17 01:24	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			06/14/17 01:24	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*23*	*T J*	*ug/L*		*2.84*			*06/14/17 01:24*	*1*
Unknown	*2.8*	*T J*	*ug/L*		*3.33*			*06/14/17 01:24*	*1*
Unknown	*3.3*	*T J*	*ug/L*		*5.84*			*06/14/17 01:24*	*1*
Unknown	*10*	*T J*	*ug/L*		*7.33*			*06/14/17 01:24*	*1*
Unknown	*8.5*	*T J*	*ug/L*		*17.26*			*06/14/17 01:24*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*104*		*80 - 128*		*06/17/17 04:15*	*1*
4-Bromofluorobenzene (Surr)	*108*		*80 - 120*		*06/17/17 04:15*	*1*
Toluene-d8 (Surr)	*106*		*80 - 128*		*06/14/17 01:24*	*1*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*		*06/14/17 01:24*	*1*
Dibromofluoromethane (Surr)	*99*		*76 - 132*		*06/17/17 04:15*	*1*
Dibromofluoromethane (Surr)	*103*		*76 - 132*		*06/14/17 01:24*	*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		06/13/17 06:25	06/15/17 16:38	1

Client Sample ID: Duplicate

Lab Sample ID: 440-186249-6

Date Collected: 06/12/17 00:01

Matrix: Water

Date Received: 06/12/17 18:10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*58*		*30 - 120*	*06/13/17 06:25*	*06/15/17 16:38*	*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			06/12/17 23:40	2
Nitrate as N	ND		0.22	0.11	mg/L			06/12/17 23:40	2
Chloride	**10**		1.0	0.50	mg/L			06/12/17 23:40	2
Fluoride	**1.8**		1.0	0.50	mg/L			06/12/17 23:40	2
Sulfate	**1600**		50	25	mg/L			06/13/17 04:32	100

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		06/21/17 14:05	06/22/17 09:47	1
Manganese	**0.39**		0.020	0.010	mg/L		06/21/17 14:05	06/22/17 09:47	1
Magnesium	**210**		0.020	0.010	mg/L		06/21/17 14:05	06/22/17 09:47	1
Sodium	**200**		0.50	0.25	mg/L		06/21/17 14:05	06/22/17 09:47	1
Calcium	**260**		0.10	0.050	mg/L		06/21/17 14:05	06/22/17 09:47	1
Iron	**0.26**		0.10	0.050	mg/L		06/21/17 14:05	06/22/17 09:47	1
Boron	**0.89**		0.050	0.025	mg/L		06/21/17 14:05	06/22/17 09:47	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	**36**		20	10	mg/L			06/22/17 15:39	1
Total Dissolved Solids	**2600**		20	10	mg/L			06/15/17 11:52	1
Ammonia (as N)	**9.4**		2.5	0.50	mg/L		06/13/17 04:00	06/13/17 05:51	5
Total Sulfide	**4.5**	**H**	0.25	0.14	mg/L			06/27/17 15:19	5
Total Organic Carbon	**4.2**		0.10	0.050	mg/L			06/14/17 16:26	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	**560**		4.0	4.0	mg/L			06/13/17 06:41	1
Bicarbonate Alkalinity as CaCO3	**560**		4.0	4.0	mg/L			06/13/17 06:41	1
Carbon Dioxide, Free	**110**		2.0	2.0	mg/L			06/14/17 15:56	1

Client Sample ID: QCAB

Lab Sample ID: 440-186249-7

Date Collected: 06/12/17 00:01

Matrix: Water

Date Received: 06/12/17 18:10

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			06/14/17 01:50	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/14/17 01:50	1
Acrolein	ND		50	2.5	ug/L			06/14/17 01:50	1
Acrylonitrile	ND		50	1.0	ug/L			06/14/17 01:50	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			06/14/17 01:50	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/14/17 01:50	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			06/14/17 01:50	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			06/14/17 01:50	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			06/14/17 01:50	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			06/14/17 01:50	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			06/14/17 01:50	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			06/14/17 01:50	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			06/14/17 01:50	1

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

TestAmerica Job ID: 440-186249-1

Client Sample ID: QCAB
Date Collected: 06/12/17 00:01
Date Received: 06/12/17 18:10

Lab Sample ID: 440-186249-7
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane	ND		0.50	0.25	ug/L			06/14/17 01:50	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			06/14/17 01:50	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			06/14/17 01:50	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			06/14/17 01:50	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			06/14/17 01:50	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			06/14/17 01:50	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			06/14/17 01:50	1
2-Hexanone	ND		5.0	2.5	ug/L			06/14/17 01:50	1
Acetone	ND		20	10	ug/L			06/14/17 01:50	1
Acetonitrile	ND		20	10	ug/L			06/14/17 01:50	1
Benzene	ND		0.50	0.25	ug/L			06/14/17 01:50	1
Allyl chloride	ND		1.0	0.50	ug/L			06/14/17 01:50	1
Bromoform	ND		1.0	0.40	ug/L			06/14/17 01:50	1
Bromomethane	ND		0.50	0.25	ug/L			06/14/17 01:50	1
Carbon disulfide	ND		1.0	0.50	ug/L			06/14/17 01:50	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			06/14/17 01:50	1
Chlorobenzene	ND		0.50	0.25	ug/L			06/14/17 01:50	1
Bromochloromethane	ND		0.50	0.25	ug/L			06/14/17 01:50	1
Chloroethane	ND		1.0	0.40	ug/L			06/14/17 01:50	1
Chloroform	ND		0.50	0.25	ug/L			06/14/17 01:50	1
Chloromethane	ND		0.50	0.25	ug/L			06/14/17 01:50	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			06/14/17 01:50	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/14/17 01:50	1
Dibromochloromethane	ND		0.50	0.25	ug/L			06/14/17 01:50	1
Dibromomethane	ND		0.50	0.25	ug/L			06/14/17 01:50	1
Bromodichloromethane	ND		0.50	0.25	ug/L			06/14/17 01:50	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			06/14/17 01:50	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			06/14/17 01:50	1
Ethylbenzene	ND		0.50	0.25	ug/L			06/14/17 01:50	1
Iodomethane	ND		2.0	1.0	ug/L			06/14/17 01:50	1
Isobutyl alcohol	ND		25	13	ug/L			06/14/17 01:50	1
m,p-Xylene	ND		1.0	0.50	ug/L			06/14/17 01:50	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			06/14/17 01:50	1
Methyl methacrylate	ND		2.0	1.0	ug/L			06/14/17 01:50	1
Methylene Chloride	ND		2.0	0.88	ug/L			06/14/17 01:50	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			06/14/17 01:50	1
Naphthalene	ND		1.0	0.40	ug/L			06/14/17 01:50	1
o-Xylene	ND		0.50	0.25	ug/L			06/14/17 01:50	1
Propionitrile	ND		20	10	ug/L			06/14/17 01:50	1
Styrene	ND		0.50	0.25	ug/L			06/14/17 01:50	1
t-Butanol	ND		10	5.0	ug/L			06/14/17 01:50	1
Tetrachloroethene	ND		0.50	0.25	ug/L			06/14/17 01:50	1
Tetrahydrofuran	ND		10	5.0	ug/L			06/14/17 01:50	1
Toluene	ND		0.50	0.25	ug/L			06/14/17 01:50	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			06/14/17 01:50	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/14/17 01:50	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			06/14/17 01:50	1
Trichloroethene	ND		0.50	0.25	ug/L			06/14/17 01:50	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			06/14/17 01:50	1

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

TestAmerica Job ID: 440-186249-1

Client Sample ID: QCAB

Lab Sample ID: 440-186249-7

Date Collected: 06/12/17 00:01

Matrix: Water

Date Received: 06/12/17 18:10

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl acetate	ND		4.0	2.0	ug/L			06/14/17 01:50	1
Vinyl chloride	ND		0.50	0.25	ug/L			06/14/17 01:50	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			06/14/17 01:50	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			06/14/17 01:50	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			06/14/17 01:50	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*3.8*	*T J*	*ug/L*		*5.84*			*06/14/17 01:50*	*1*
Unknown	*11*	*T J*	*ug/L*		*7.33*			*06/14/17 01:50*	*1*
Unknown	*4.8*	*T J*	*ug/L*		*17.17*			*06/14/17 01:50*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*104*		*80 - 128*		*06/14/17 01:50*	*1*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*		*06/14/17 01:50*	*1*
Toluene-d8 (Surr)	*104*		*80 - 128*		*06/14/17 01:50*	*1*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*		*06/14/17 01:50*	*1*
Dibromofluoromethane (Surr)	*105*		*76 - 132*		*06/14/17 01:50*	*1*
Dibromofluoromethane (Surr)	*105*		*76 - 132*		*06/14/17 01:50*	*1*

Client Sample ID: QCTB

Lab Sample ID: 440-186249-8

Date Collected: 06/12/17 00:01

Matrix: Water

Date Received: 06/12/17 18:10

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			06/14/17 02:16	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/14/17 02:16	1
Acrolein	ND		50	2.5	ug/L			06/14/17 02:16	1
Acrylonitrile	ND		50	1.0	ug/L			06/14/17 02:16	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			06/14/17 02:16	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/14/17 02:16	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			06/14/17 02:16	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			06/14/17 02:16	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			06/14/17 02:16	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			06/14/17 02:16	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			06/14/17 02:16	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			06/14/17 02:16	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			06/14/17 02:16	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			06/14/17 02:16	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			06/14/17 02:16	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			06/14/17 02:16	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			06/14/17 02:16	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			06/14/17 02:16	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			06/14/17 02:16	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			06/14/17 02:16	1
2-Hexanone	ND		5.0	2.5	ug/L			06/14/17 02:16	1
Acetone	ND		20	10	ug/L			06/14/17 02:16	1
Acetonitrile	ND		20	10	ug/L			06/14/17 02:16	1
Benzene	ND		0.50	0.25	ug/L			06/14/17 02:16	1
Allyl chloride	ND		1.0	0.50	ug/L			06/14/17 02:16	1

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

TestAmerica Job ID: 440-186249-1

Client Sample ID: QCTB
Date Collected: 06/12/17 00:01
Date Received: 06/12/17 18:10

Lab Sample ID: 440-186249-8
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromoform	ND		1.0	0.40	ug/L			06/14/17 02:16	1
Bromomethane	ND		0.50	0.25	ug/L			06/14/17 02:16	1
Carbon disulfide	ND		1.0	0.50	ug/L			06/14/17 02:16	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			06/14/17 02:16	1
Chlorobenzene	ND		0.50	0.25	ug/L			06/14/17 02:16	1
Bromochloromethane	ND		0.50	0.25	ug/L			06/14/17 02:16	1
Chloroethane	ND		1.0	0.40	ug/L			06/14/17 02:16	1
Chloroform	ND		0.50	0.25	ug/L			06/14/17 02:16	1
Chloromethane	ND		0.50	0.25	ug/L			06/14/17 02:16	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			06/14/17 02:16	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/14/17 02:16	1
Dibromochloromethane	ND		0.50	0.25	ug/L			06/14/17 02:16	1
Dibromomethane	ND		0.50	0.25	ug/L			06/14/17 02:16	1
Bromodichloromethane	ND		0.50	0.25	ug/L			06/14/17 02:16	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			06/14/17 02:16	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			06/14/17 02:16	1
Ethylbenzene	ND		0.50	0.25	ug/L			06/14/17 02:16	1
Iodomethane	ND		2.0	1.0	ug/L			06/14/17 02:16	1
Isobutyl alcohol	ND		25	13	ug/L			06/14/17 02:16	1
m,p-Xylene	ND		1.0	0.50	ug/L			06/14/17 02:16	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			06/14/17 02:16	1
Methyl methacrylate	ND		2.0	1.0	ug/L			06/14/17 02:16	1
Methylene Chloride	ND		2.0	0.88	ug/L			06/14/17 02:16	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			06/14/17 02:16	1
Naphthalene	ND		1.0	0.40	ug/L			06/14/17 02:16	1
o-Xylene	ND		0.50	0.25	ug/L			06/14/17 02:16	1
Propionitrile	ND		20	10	ug/L			06/14/17 02:16	1
Styrene	ND		0.50	0.25	ug/L			06/14/17 02:16	1
t-Butanol	ND		10	5.0	ug/L			06/14/17 02:16	1
Tetrachloroethene	ND		0.50	0.25	ug/L			06/14/17 02:16	1
Tetrahydrofuran	ND		10	5.0	ug/L			06/14/17 02:16	1
Toluene	ND		0.50	0.25	ug/L			06/14/17 02:16	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			06/14/17 02:16	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/14/17 02:16	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			06/14/17 02:16	1
Trichloroethene	ND		0.50	0.25	ug/L			06/14/17 02:16	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			06/14/17 02:16	1
Vinyl acetate	ND		4.0	2.0	ug/L			06/14/17 02:16	1
Vinyl chloride	ND		0.50	0.25	ug/L			06/14/17 02:16	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			06/14/17 02:16	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			06/14/17 02:16	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			06/14/17 02:16	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*11*	*T J*	*ug/L*		*7.33*			*06/14/17 02:16*	*1*
Unknown	*4.6*	*T J*	*ug/L*		*17.81*			*06/14/17 02:16*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*105*		*80 - 128*		*06/14/17 02:16*	*1*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*		*06/14/17 02:16*	*1*

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

TestAmerica Job ID: 440-186249-1

Client Sample ID: QCTB
Date Collected: 06/12/17 00:01
Date Received: 06/12/17 18:10

Lab Sample ID: 440-186249-8
Matrix: Water

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	105		80 - 128		06/14/17 02:16	1
4-Bromofluorobenzene (Surr)	102		80 - 120		06/14/17 02:16	1
Dibromofluoromethane (Surr)	106		76 - 132		06/14/17 02:16	1
Dibromofluoromethane (Surr)	106		76 - 132		06/14/17 02:16	1

Method Summary

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

TestAmerica Job ID: 440-186249-1

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

Client Sample ID: Subdrain N

Lab Sample ID: 440-186249-1

Date Collected: 06/12/17 11:40

Matrix: Water

Date Received: 06/12/17 18:10

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	412316	06/16/17 01:55	JB	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	412312	06/15/17 22:09	WK	TAL IRV
Total/NA	Prep	3520C			1010 mL	1.0 mL	411583	06/13/17 06:25	BMN	TAL IRV
Total/NA	Analysis	8270C		1			412261	06/15/17 14:48	TL	TAL IRV
Total/NA	Analysis	300.0		2			411404	06/12/17 21:53	NN	TAL IRV
Total/NA	Analysis	300.0		2			411405	06/12/17 21:53	NN	TAL IRV
Total/NA	Analysis	300.0		100			411405	06/13/17 03:15	NN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	413388	06/21/17 14:05	JL	TAL IRV
Total Recoverable	Analysis	6010B		1			413582	06/22/17 09:25	EN	TAL IRV
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	413661	06/22/17 15:39	KYP	TAL IRV
Total/NA	Analysis	SM 2320B		1			411608	06/13/17 05:37	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	412236	06/15/17 11:52	XL	TAL IRV
Total/NA	Analysis	SM 4500 CO2 C		1	25 mL	25 mL	412017	06/14/17 15:56	SN	TAL IRV
Total/NA	Prep	SM 4500 NH3 B			50 mL	50 mL	411574	06/13/17 04:00	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			411575	06/13/17 05:51	YZ	TAL IRV
Total/NA	Analysis	SM 4500 S2 D		1	7.5 mL	7.5 mL	414444	06/27/17 15:18	HTL	TAL IRV
Total/NA	Analysis	SM 5310C		5	100 mL	100 mL	412114	06/14/17 13:00	YZ	TAL IRV

Client Sample ID: Combined Subdrains

Lab Sample ID: 440-186249-2

Date Collected: 06/12/17 12:15

Matrix: Water

Date Received: 06/12/17 18:10

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	411743	06/13/17 23:38	WK	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	412316	06/16/17 02:21	JB	TAL IRV
Total/NA	Prep	3520C			1030 mL	1.0 mL	411583	06/13/17 06:25	BMN	TAL IRV
Total/NA	Analysis	8270C		1			412261	06/15/17 15:10	TL	TAL IRV
Total/NA	Analysis	300.0		2			411404	06/12/17 22:08	NN	TAL IRV
Total/NA	Analysis	300.0		2			411405	06/12/17 22:08	NN	TAL IRV
Total/NA	Analysis	300.0		100			411405	06/13/17 03:30	NN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	413388	06/21/17 14:05	JL	TAL IRV
Total Recoverable	Analysis	6010B		1			413582	06/22/17 09:34	EN	TAL IRV
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	413661	06/22/17 15:39	KYP	TAL IRV
Total/NA	Analysis	SM 2320B		1			411608	06/13/17 05:47	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	412236	06/15/17 11:52	XL	TAL IRV
Total/NA	Analysis	SM 4500 CO2 C		1	25 mL	25 mL	412017	06/14/17 15:56	SN	TAL IRV
Total/NA	Prep	SM 4500 NH3 B			50 mL	50 mL	411574	06/13/17 04:00	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			411575	06/13/17 05:51	YZ	TAL IRV
Total/NA	Analysis	SM 4500 S2 D		1	7.5 mL	7.5 mL	414444	06/27/17 15:19	HTL	TAL IRV
Total/NA	Analysis	SM 5310C		5	100 mL	100 mL	412114	06/14/17 15:49	YZ	TAL IRV

Client Sample ID: CM-9R3

Lab Sample ID: 440-186249-3

Date Collected: 06/12/17 13:33

Matrix: Water

Date Received: 06/12/17 18:10

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	411743	06/14/17 00:05	WK	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	412316	06/16/17 02:48	JB	TAL IRV
Total/NA	Prep	3520C			1040 mL	1.0 mL	411583	06/13/17 06:25	BMN	TAL IRV
Total/NA	Analysis	8270C		1			412261	06/15/17 15:32	TL	TAL IRV
Total/NA	Analysis	300.0		10			411404	06/12/17 22:23	NN	TAL IRV
Total/NA	Analysis	300.0		10			411405	06/12/17 22:23	NN	TAL IRV
Total/NA	Analysis	300.0		200			411405	06/13/17 03:46	NN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	413388	06/21/17 14:05	JL	TAL IRV
Total Recoverable	Analysis	6010B		1			413582	06/22/17 09:36	EN	TAL IRV
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	413661	06/22/17 15:39	KYP	TAL IRV
Total/NA	Analysis	SM 2320B		1			411608	06/13/17 05:52	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	20 mL	100 mL	412236	06/15/17 11:52	XL	TAL IRV
Total/NA	Analysis	SM 4500 CO2 C		1	25 mL	25 mL	412017	06/14/17 15:56	SN	TAL IRV
Total/NA	Prep	SM 4500 NH3 B			50 mL	50 mL	411574	06/13/17 04:00	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			411575	06/13/17 05:51	YZ	TAL IRV
Total/NA	Analysis	SM 4500 S2 D		1	7.5 mL	7.5 mL	414444	06/27/17 15:19	HTL	TAL IRV
Total/NA	Analysis	SM 5310C		5	100 mL	100 mL	412114	06/14/17 13:12	YZ	TAL IRV

Client Sample ID: CM-10R

Lab Sample ID: 440-186249-4

Date Collected: 06/12/17 12:35

Matrix: Water

Date Received: 06/12/17 18:10

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	411743	06/14/17 00:31	WK	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	412397	06/16/17 18:35	WC	TAL IRV
Total/NA	Prep	3520C			1015 mL	1.0 mL	411583	06/13/17 06:25	BMN	TAL IRV
Total/NA	Analysis	8270C		1			412261	06/15/17 15:54	TL	TAL IRV
Total/NA	Analysis	300.0		2			411404	06/12/17 22:39	NN	TAL IRV
Total/NA	Analysis	300.0		2			411405	06/12/17 22:39	NN	TAL IRV
Total/NA	Analysis	300.0		100			411405	06/13/17 04:01	NN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	413388	06/21/17 14:05	JL	TAL IRV
Total Recoverable	Analysis	6010B		1			413582	06/22/17 09:38	EN	TAL IRV
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	413661	06/22/17 15:39	KYP	TAL IRV
Total/NA	Analysis	SM 2320B		1			411608	06/13/17 06:07	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	412236	06/15/17 11:52	XL	TAL IRV
Total/NA	Analysis	SM 4500 CO2 C		1	25 mL	25 mL	412017	06/14/17 15:56	SN	TAL IRV
Total/NA	Prep	SM 4500 NH3 B			50 mL	50 mL	411574	06/13/17 04:00	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		5			411575	06/13/17 05:51	YZ	TAL IRV
Total/NA	Analysis	SM 4500 S2 D		5	7.5 mL	7.5 mL	414444	06/27/17 15:19	HTL	TAL IRV
Total/NA	Analysis	SM 5310C		1	100 mL	100 mL	412114	06/14/17 16:13	YZ	TAL IRV

Client Sample ID: MW-5

Date Collected: 06/12/17 14:50
Date Received: 06/12/17 18:10

Lab Sample ID: 440-186249-5
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	411743	06/14/17 00:57	WK	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	412554	06/17/17 03:46	AA	TAL IRV
Total/NA	Prep	3520C			1020 mL	1.0 mL	411583	06/13/17 06:25	BMN	TAL IRV
Total/NA	Analysis	8270C		1			412261	06/15/17 16:16	TL	TAL IRV
Total/NA	Analysis	300.0		5			411404	06/12/17 22:54	NN	TAL IRV
Total/NA	Analysis	300.0		5			411405	06/12/17 22:54	NN	TAL IRV
Total/NA	Analysis	300.0		200			411405	06/13/17 04:16	NN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	413388	06/21/17 14:05	JL	TAL IRV
Total Recoverable	Analysis	6010B		1			413582	06/22/17 09:45	EN	TAL IRV
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	413661	06/22/17 15:39	KYP	TAL IRV
Total/NA	Analysis	SM 2320B		1			411608	06/13/17 06:30	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	20 mL	100 mL	412236	06/15/17 11:52	XL	TAL IRV
Total/NA	Analysis	SM 4500 CO2 C		1	25 mL	25 mL	412017	06/14/17 15:56	SN	TAL IRV
Total/NA	Prep	SM 4500 NH3 B			50 mL	50 mL	411574	06/13/17 04:00	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		5			411575	06/13/17 05:51	YZ	TAL IRV
Total/NA	Analysis	SM 4500 S2 D		1	7.5 mL	7.5 mL	414444	06/27/17 15:19	HTL	TAL IRV
Total/NA	Analysis	SM 5310C		5	100 mL	100 mL	412114	06/14/17 13:27	YZ	TAL IRV

Client Sample ID: Duplicate

Date Collected: 06/12/17 00:01
Date Received: 06/12/17 18:10

Lab Sample ID: 440-186249-6
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	411743	06/14/17 01:24	WK	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	412554	06/17/17 04:15	AA	TAL IRV
Total/NA	Prep	3520C			1010 mL	1.0 mL	411583	06/13/17 06:25	BMN	TAL IRV
Total/NA	Analysis	8270C		1			412261	06/15/17 16:38	TL	TAL IRV
Total/NA	Analysis	300.0		2			411404	06/12/17 23:40	NN	TAL IRV
Total/NA	Analysis	300.0		2			411405	06/12/17 23:40	NN	TAL IRV
Total/NA	Analysis	300.0		100			411405	06/13/17 04:32	NN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	413388	06/21/17 14:05	JL	TAL IRV
Total Recoverable	Analysis	6010B		1			413582	06/22/17 09:47	EN	TAL IRV
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	413661	06/22/17 15:39	KYP	TAL IRV
Total/NA	Analysis	SM 2320B		1			411608	06/13/17 06:41	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	412236	06/15/17 11:52	XL	TAL IRV
Total/NA	Analysis	SM 4500 CO2 C		1	25 mL	25 mL	412017	06/14/17 15:56	SN	TAL IRV
Total/NA	Prep	SM 4500 NH3 B			50 mL	50 mL	411574	06/13/17 04:00	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		5			411575	06/13/17 05:51	YZ	TAL IRV
Total/NA	Analysis	SM 4500 S2 D		5	7.5 mL	7.5 mL	414444	06/27/17 15:19	HTL	TAL IRV
Total/NA	Analysis	SM 5310C		1	100 mL	100 mL	412114	06/14/17 16:26	YZ	TAL IRV

Lab Chronicle

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

TestAmerica Job ID: 440-186249-1

Client Sample ID: QCAB

Lab Sample ID: 440-186249-7

Date Collected: 06/12/17 00:01
Matrix: Water
Date Received: 06/12/17 18:10

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	411743	06/14/17 01:50	WK	TAL IRV

Client Sample ID: QCTB

Lab Sample ID: 440-186249-8

Date Collected: 06/12/17 00:01
Matrix: Water
Date Received: 06/12/17 18:10

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	411743	06/14/17 02:16	WK	TAL IRV

Laboratory References:

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

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

TestAmerica Job ID: 440-186249-1

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

Lab Sample ID: MB 440-411743/4
Matrix: Water
Analysis Batch: 411743

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			06/13/17 17:02	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/13/17 17:02	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			06/13/17 17:02	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/13/17 17:02	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			06/13/17 17:02	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			06/13/17 17:02	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			06/13/17 17:02	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			06/13/17 17:02	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			06/13/17 17:02	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			06/13/17 17:02	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			06/13/17 17:02	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			06/13/17 17:02	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			06/13/17 17:02	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			06/13/17 17:02	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			06/13/17 17:02	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			06/13/17 17:02	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			06/13/17 17:02	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			06/13/17 17:02	1
2-Hexanone	ND		5.0	2.5	ug/L			06/13/17 17:02	1
Acetone	ND		20	10	ug/L			06/13/17 17:02	1
Acetonitrile	ND		20	10	ug/L			06/13/17 17:02	1
Benzene	ND		0.50	0.25	ug/L			06/13/17 17:02	1
Allyl chloride	ND		1.0	0.50	ug/L			06/13/17 17:02	1
Bromoform	ND		1.0	0.40	ug/L			06/13/17 17:02	1
Bromomethane	ND		0.50	0.25	ug/L			06/13/17 17:02	1
Carbon disulfide	ND		1.0	0.50	ug/L			06/13/17 17:02	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			06/13/17 17:02	1
Chlorobenzene	ND		0.50	0.25	ug/L			06/13/17 17:02	1
Bromochloromethane	ND		0.50	0.25	ug/L			06/13/17 17:02	1
Chloroethane	ND		1.0	0.40	ug/L			06/13/17 17:02	1
Chloroform	ND		0.50	0.25	ug/L			06/13/17 17:02	1
Chloromethane	ND		0.50	0.25	ug/L			06/13/17 17:02	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			06/13/17 17:02	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/13/17 17:02	1
Dibromochloromethane	ND		0.50	0.25	ug/L			06/13/17 17:02	1
Dibromomethane	ND		0.50	0.25	ug/L			06/13/17 17:02	1
Bromodichloromethane	ND		0.50	0.25	ug/L			06/13/17 17:02	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			06/13/17 17:02	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			06/13/17 17:02	1
Ethylbenzene	ND		0.50	0.25	ug/L			06/13/17 17:02	1
Iodomethane	ND		2.0	1.0	ug/L			06/13/17 17:02	1
Isobutyl alcohol	ND		25	13	ug/L			06/13/17 17:02	1
m,p-Xylene	ND		1.0	0.50	ug/L			06/13/17 17:02	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			06/13/17 17:02	1
Methyl methacrylate	ND		2.0	1.0	ug/L			06/13/17 17:02	1
Methylene Chloride	ND		2.0	0.88	ug/L			06/13/17 17:02	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			06/13/17 17:02	1
Naphthalene	ND		1.0	0.40	ug/L			06/13/17 17:02	1

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

Lab Sample ID: MB 440-411743/4
Matrix: Water
Analysis Batch: 411743

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.50	0.25	ug/L			06/13/17 17:02	1
Propionitrile	ND		20	10	ug/L			06/13/17 17:02	1
Styrene	ND		0.50	0.25	ug/L			06/13/17 17:02	1
t-Butanol	ND		10	5.0	ug/L			06/13/17 17:02	1
Tetrachloroethene	ND		0.50	0.25	ug/L			06/13/17 17:02	1
Tetrahydrofuran	ND		10	5.0	ug/L			06/13/17 17:02	1
Toluene	ND		0.50	0.25	ug/L			06/13/17 17:02	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			06/13/17 17:02	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/13/17 17:02	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			06/13/17 17:02	1
Trichloroethene	ND		0.50	0.25	ug/L			06/13/17 17:02	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			06/13/17 17:02	1
Vinyl acetate	ND		4.0	2.0	ug/L			06/13/17 17:02	1
Vinyl chloride	ND		0.50	0.25	ug/L			06/13/17 17:02	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			06/13/17 17:02	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			06/13/17 17:02	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			06/13/17 17:02	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*06/13/17 17:02*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*107*		*80 - 128*		*06/13/17 17:02*	*1*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*		*06/13/17 17:02*	*1*
Dibromofluoromethane (Surr)	*102*		*76 - 132*		*06/13/17 17:02*	*1*

Lab Sample ID: LCS 440-411743/5
Matrix: Water
Analysis Batch: 411743

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	25.2		ug/L		101	63 - 130
1,1,1,2-Tetrachloroethane	25.0	24.6		ug/L		98	60 - 141
1,1,1-Trichloroethane	25.0	26.2		ug/L		105	70 - 130
1,1,2,2-Tetrachloroethane	25.0	25.1		ug/L		100	63 - 130
1,1,2-Trichloroethane	25.0	26.8		ug/L		107	70 - 130
1,1-Dichloroethane	25.0	26.0		ug/L		104	64 - 130
1,1-Dichloroethene	25.0	24.6		ug/L		99	70 - 130
1,1-Dichloropropene	25.0	27.3		ug/L		109	70 - 130
1,2,4-Trichlorobenzene	25.0	25.4		ug/L		102	60 - 140
1,2-Dibromo-3-Chloropropane	25.0	24.8		ug/L		99	52 - 140
1,2-Dichlorobenzene	25.0	26.3		ug/L		105	70 - 130
1,2-Dichloroethane	25.0	25.4		ug/L		102	57 - 138
1,2-Dichloropropane	25.0	26.7		ug/L		107	67 - 130
1,3-Dichlorobenzene	25.0	26.1		ug/L		104	70 - 130
1,3-Dichloropropane	25.0	25.5		ug/L		102	70 - 130
1,4-Dichlorobenzene	25.0	26.2		ug/L		105	70 - 130

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

Lab Sample ID: LCS 440-411743/5
Matrix: Water
Analysis Batch: 411743

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,2-Dichloropropane	25.0	27.0		ug/L		108	68 - 141
2-Hexanone	25.0	26.4		ug/L		106	10 - 150
Acetone	25.0	24.7		ug/L		99	10 - 150
Benzene	25.0	26.6		ug/L		107	68 - 130
Bromoform	25.0	27.2		ug/L		109	60 - 148
Bromomethane	25.0	24.3		ug/L		97	64 - 139
Carbon disulfide	25.0	25.8		ug/L		103	52 - 136
Carbon tetrachloride	25.0	26.2		ug/L		105	60 - 150
Chlorobenzene	25.0	25.4		ug/L		102	70 - 130
Bromochloromethane	25.0	25.2		ug/L		101	70 - 130
Chloroethane	25.0	25.1		ug/L		101	64 - 135
Chloroform	25.0	25.8		ug/L		103	70 - 130
Chloromethane	25.0	24.2		ug/L		97	47 - 140
cis-1,2-Dichloroethene	25.0	25.7		ug/L		103	70 - 133
cis-1,3-Dichloropropene	25.0	26.6		ug/L		106	70 - 133
Dibromochloromethane	25.0	26.8		ug/L		107	69 - 145
Dibromomethane	25.0	25.7		ug/L		103	70 - 130
Bromodichloromethane	25.0	26.5		ug/L		106	70 - 132
Dichlorodifluoromethane	25.0	22.7		ug/L		91	29 - 150
Ethylbenzene	25.0	25.6		ug/L		102	70 - 130
m,p-Xylene	25.0	25.9		ug/L		103	70 - 130
Methylene Chloride	25.0	25.3		ug/L		101	52 - 130
Methyl tert-butyl ether	25.0	25.1		ug/L		101	63 - 131
Naphthalene	25.0	25.7		ug/L		103	60 - 140
o-Xylene	25.0	26.6		ug/L		106	70 - 130
Styrene	25.0	26.5		ug/L		106	70 - 134
t-Butanol	250	271		ug/L		108	70 - 130
Tetrachloroethene	25.0	26.7		ug/L		107	70 - 130
Toluene	25.0	26.1		ug/L		104	70 - 130
trans-1,2-Dichloroethene	25.0	25.2		ug/L		101	70 - 130
trans-1,3-Dichloropropene	25.0	26.2		ug/L		105	70 - 132
Trichloroethene	25.0	26.1		ug/L		105	70 - 130
Trichlorofluoromethane	25.0	24.7		ug/L		99	60 - 150
Vinyl acetate	25.0	24.9		ug/L		99	48 - 140
Vinyl chloride	25.0	24.9		ug/L		99	59 - 133
1,2-Dibromoethane (EDB)	25.0	26.3		ug/L		105	70 - 130
2-Butanone (MEK)	25.0	24.0		ug/L		96	44 - 150
4-Methyl-2-pentanone (MIBK)	25.0	27.0		ug/L		108	59 - 149

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*104*		*80 - 128*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*
Dibromofluoromethane (Surr)	*103*		*76 - 132*

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

Lab Sample ID: 440-186181-A-1 MS
Matrix: Water
Analysis Batch: 411743

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	26.5		ug/L		106	60 - 130
1,1,1,2-Tetrachloroethane	ND		25.0	25.1		ug/L		100	60 - 149
1,1,1-Trichloroethane	ND		25.0	26.3		ug/L		105	70 - 130
1,1,2,2-Tetrachloroethane	ND		25.0	25.6		ug/L		102	63 - 130
1,1,2-Trichloroethane	ND		25.0	27.9		ug/L		111	70 - 130
1,1-Dichloroethane	ND		25.0	25.9		ug/L		104	65 - 130
1,1-Dichloroethene	ND		25.0	24.4		ug/L		97	70 - 130
1,1-Dichloropropene	ND		25.0	26.3		ug/L		105	64 - 130
1,2,4-Trichlorobenzene	ND		25.0	25.8		ug/L		103	60 - 140
1,2-Dibromo-3-Chloropropane	ND		25.0	27.1		ug/L		108	48 - 140
1,2-Dichlorobenzene	ND		25.0	26.3		ug/L		105	70 - 130
1,2-Dichloroethane	ND		25.0	26.2		ug/L		105	56 - 146
1,2-Dichloropropane	ND		25.0	26.4		ug/L		105	69 - 130
1,3-Dichlorobenzene	ND		25.0	25.8		ug/L		103	70 - 130
1,3-Dichloropropane	ND		25.0	26.2		ug/L		105	70 - 130
1,4-Dichlorobenzene	ND		25.0	25.7		ug/L		103	70 - 130
2,2-Dichloropropane	ND		25.0	26.8		ug/L		107	69 - 138
2-Hexanone	ND		25.0	29.4		ug/L		118	10 - 150
Acetone	ND		25.0	31.1		ug/L		124	10 - 150
Benzene	ND		25.0	26.3		ug/L		105	66 - 130
Bromoform	ND		25.0	28.8		ug/L		115	59 - 150
Bromomethane	ND		25.0	24.4		ug/L		98	62 - 131
Carbon disulfide	ND		25.0	25.6		ug/L		102	49 - 140
Carbon tetrachloride	ND		25.0	26.0		ug/L		104	60 - 150
Chlorobenzene	ND		25.0	25.6		ug/L		102	70 - 130
Bromochloromethane	ND		25.0	25.6		ug/L		103	70 - 130
Chloroethane	ND		25.0	25.0		ug/L		100	68 - 130
Chloroform	ND		25.0	25.5		ug/L		102	70 - 130
Chloromethane	ND		25.0	24.4		ug/L		98	39 - 144
cis-1,2-Dichloroethene	ND		25.0	25.6		ug/L		102	70 - 130
cis-1,3-Dichloropropene	ND		25.0	26.8		ug/L		107	70 - 133
Dibromochloromethane	ND		25.0	27.2		ug/L		109	70 - 148
Dibromomethane	ND		25.0	26.5		ug/L		106	70 - 130
Bromodichloromethane	ND		25.0	26.9		ug/L		108	70 - 138
Dichlorodifluoromethane	ND		25.0	22.9		ug/L		92	25 - 142
Ethylbenzene	ND		25.0	25.1		ug/L		100	70 - 130
m,p-Xylene	ND		25.0	25.9		ug/L		103	70 - 133
Methylene Chloride	ND		25.0	25.2		ug/L		101	52 - 130
Methyl tert-butyl ether	ND		25.0	26.4		ug/L		106	70 - 130
Naphthalene	ND		25.0	27.1		ug/L		108	60 - 140
o-Xylene	ND		25.0	26.3		ug/L		105	70 - 133
Styrene	ND		25.0	25.2		ug/L		101	29 - 150
t-Butanol	ND		250	269		ug/L		108	70 - 130
Tetrachloroethene	ND		25.0	26.9		ug/L		107	70 - 137
Toluene	ND		25.0	25.8		ug/L		103	70 - 130
trans-1,2-Dichloroethene	ND		25.0	24.8		ug/L		99	70 - 130
trans-1,3-Dichloropropene	ND		25.0	26.6		ug/L		106	70 - 138
Trichloroethene	ND		25.0	26.2		ug/L		105	70 - 130

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

Lab Sample ID: 440-186181-A-1 MS
Matrix: Water
Analysis Batch: 411743

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
Trichlorofluoromethane	ND		25.0	24.8		ug/L		99	60 - 150
Vinyl acetate	ND		25.0	24.8		ug/L		99	23 - 150
Vinyl chloride	ND		25.0	25.2		ug/L		101	50 - 137
1,2-Dibromoethane (EDB)	ND		25.0	27.5		ug/L		110	70 - 131
2-Butanone (MEK)	ND		25.0	27.0		ug/L		108	48 - 140
4-Methyl-2-pentanone (MIBK)	ND		25.0	29.2		ug/L		117	52 - 150

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Toluene-d8 (Surr)	*101*		*80 - 128*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*
Dibromofluoromethane (Surr)	*105*		*76 - 132*

Lab Sample ID: 440-186181-A-1 MSD
Matrix: Water
Analysis Batch: 411743

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	26.9		ug/L		108	60 - 130	2	30
1,1,1,2-Tetrachloroethane	ND		25.0	25.4		ug/L		102	60 - 149	1	20
1,1,1-Trichloroethane	ND		25.0	25.8		ug/L		103	70 - 130	2	20
1,1,2,2-Tetrachloroethane	ND		25.0	26.2		ug/L		105	63 - 130	2	30
1,1,2-Trichloroethane	ND		25.0	27.8		ug/L		111	70 - 130	0	25
1,1-Dichloroethane	ND		25.0	26.3		ug/L		105	65 - 130	1	20
1,1-Dichloroethene	ND		25.0	24.1		ug/L		96	70 - 130	1	20
1,1-Dichloropropene	ND		25.0	26.5		ug/L		106	64 - 130	1	20
1,2,4-Trichlorobenzene	ND		25.0	26.3		ug/L		105	60 - 140	2	20
1,2-Dibromo-3-Chloropropane	ND		25.0	26.7		ug/L		107	48 - 140	2	30
1,2-Dichlorobenzene	ND		25.0	26.8		ug/L		107	70 - 130	2	20
1,2-Dichloroethane	ND		25.0	26.4		ug/L		106	56 - 146	1	20
1,2-Dichloropropane	ND		25.0	26.8		ug/L		107	69 - 130	2	20
1,3-Dichlorobenzene	ND		25.0	26.3		ug/L		105	70 - 130	2	20
1,3-Dichloropropane	ND		25.0	26.0		ug/L		104	70 - 130	1	25
1,4-Dichlorobenzene	ND		25.0	26.8		ug/L		107	70 - 130	4	20
2,2-Dichloropropane	ND		25.0	25.7		ug/L		103	69 - 138	4	25
2-Hexanone	ND		25.0	29.1		ug/L		117	10 - 150	1	35
Acetone	ND		25.0	32.0		ug/L		128	10 - 150	3	35
Benzene	ND		25.0	26.3		ug/L		105	66 - 130	0	20
Bromoform	ND		25.0	28.6		ug/L		114	59 - 150	1	25
Bromomethane	ND		25.0	24.7		ug/L		99	62 - 131	1	25
Carbon disulfide	ND		25.0	25.2		ug/L		101	49 - 140	2	20
Carbon tetrachloride	ND		25.0	25.8		ug/L		103	60 - 150	1	25
Chlorobenzene	ND		25.0	25.6		ug/L		102	70 - 130	0	20
Bromochloromethane	ND		25.0	25.9		ug/L		103	70 - 130	1	25
Chloroethane	ND		25.0	25.0		ug/L		100	68 - 130	0	25
Chloroform	ND		25.0	26.1		ug/L		104	70 - 130	2	20
Chloromethane	ND		25.0	25.1		ug/L		100	39 - 144	3	25
cis-1,2-Dichloroethene	ND		25.0	26.0		ug/L		104	70 - 130	2	20
cis-1,3-Dichloropropene	ND		25.0	27.2		ug/L		109	70 - 133	1	20

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

Lab Sample ID: 440-186181-A-1 MSD
Matrix: Water
Analysis Batch: 411743

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
Dibromochloromethane	ND		25.0	27.8		ug/L		111	70 - 148	2	25
Dibromomethane	ND		25.0	26.2		ug/L		105	70 - 130	1	25
Bromodichloromethane	ND		25.0	27.2		ug/L		109	70 - 138	1	20
Dichlorodifluoromethane	ND		25.0	22.2		ug/L		89	25 - 142	3	30
Ethylbenzene	ND		25.0	25.3		ug/L		101	70 - 130	1	20
m,p-Xylene	ND		25.0	25.6		ug/L		102	70 - 133	1	25
Methylene Chloride	ND		25.0	25.3		ug/L		101	52 - 130	0	20
Methyl tert-butyl ether	ND		25.0	25.8		ug/L		103	70 - 130	2	25
Naphthalene	ND		25.0	27.7		ug/L		111	60 - 140	2	30
o-Xylene	ND		25.0	26.4		ug/L		105	70 - 133	0	20
Styrene	ND		25.0	25.6		ug/L		103	29 - 150	2	35
t-Butanol	ND		250	273		ug/L		109	70 - 130	2	25
Tetrachloroethene	ND		25.0	26.7		ug/L		107	70 - 137	1	20
Toluene	ND		25.0	26.0		ug/L		104	70 - 130	1	20
trans-1,2-Dichloroethene	ND		25.0	25.3		ug/L		101	70 - 130	2	20
trans-1,3-Dichloropropene	ND		25.0	26.6		ug/L		106	70 - 138	0	25
Trichloroethene	ND		25.0	26.3		ug/L		105	70 - 130	1	20
Trichlorofluoromethane	ND		25.0	24.6		ug/L		99	60 - 150	1	25
Vinyl acetate	ND		25.0	25.6		ug/L		102	23 - 150	3	30
Vinyl chloride	ND		25.0	24.8		ug/L		99	50 - 137	2	30
1,2-Dibromoethane (EDB)	ND		25.0	27.4		ug/L		110	70 - 131	0	25
2-Butanone (MEK)	ND		25.0	26.5		ug/L		106	48 - 140	2	40
4-Methyl-2-pentanone (MIBK)	ND		25.0	29.4		ug/L		118	52 - 150	1	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*103*		*80 - 128*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*
Dibromofluoromethane (Surr)	*104*		*76 - 132*

Lab Sample ID: MB 440-412312/4
Matrix: Water
Analysis Batch: 412312

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			06/15/17 19:11	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/15/17 19:11	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			06/15/17 19:11	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/15/17 19:11	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			06/15/17 19:11	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			06/15/17 19:11	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			06/15/17 19:11	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			06/15/17 19:11	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			06/15/17 19:11	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			06/15/17 19:11	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			06/15/17 19:11	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			06/15/17 19:11	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			06/15/17 19:11	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			06/15/17 19:11	1

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

Lab Sample ID: MB 440-412312/4
Matrix: Water
Analysis Batch: 412312

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3-Dichloropropane	ND		0.50	0.25	ug/L			06/15/17 19:11	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			06/15/17 19:11	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			06/15/17 19:11	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			06/15/17 19:11	1
2-Hexanone	ND		5.0	2.5	ug/L			06/15/17 19:11	1
Acetone	ND		20	10	ug/L			06/15/17 19:11	1
Acetonitrile	ND		20	10	ug/L			06/15/17 19:11	1
Benzene	ND		0.50	0.25	ug/L			06/15/17 19:11	1
Allyl chloride	ND		1.0	0.50	ug/L			06/15/17 19:11	1
Bromoform	ND		1.0	0.40	ug/L			06/15/17 19:11	1
Bromomethane	ND		0.50	0.25	ug/L			06/15/17 19:11	1
Carbon disulfide	ND		1.0	0.50	ug/L			06/15/17 19:11	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			06/15/17 19:11	1
Chlorobenzene	ND		0.50	0.25	ug/L			06/15/17 19:11	1
Bromochloromethane	ND		0.50	0.25	ug/L			06/15/17 19:11	1
Chloroethane	ND		1.0	0.40	ug/L			06/15/17 19:11	1
Chloroform	ND		0.50	0.25	ug/L			06/15/17 19:11	1
Chloromethane	ND		0.50	0.25	ug/L			06/15/17 19:11	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			06/15/17 19:11	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/15/17 19:11	1
Dibromochloromethane	ND		0.50	0.25	ug/L			06/15/17 19:11	1
Dibromomethane	ND		0.50	0.25	ug/L			06/15/17 19:11	1
Bromodichloromethane	ND		0.50	0.25	ug/L			06/15/17 19:11	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			06/15/17 19:11	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			06/15/17 19:11	1
Ethylbenzene	ND		0.50	0.25	ug/L			06/15/17 19:11	1
Iodomethane	ND		2.0	1.0	ug/L			06/15/17 19:11	1
Isobutyl alcohol	ND		25	13	ug/L			06/15/17 19:11	1
m,p-Xylene	ND		1.0	0.50	ug/L			06/15/17 19:11	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			06/15/17 19:11	1
Methyl methacrylate	ND		2.0	1.0	ug/L			06/15/17 19:11	1
Methylene Chloride	ND		2.0	0.88	ug/L			06/15/17 19:11	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			06/15/17 19:11	1
Naphthalene	ND		1.0	0.40	ug/L			06/15/17 19:11	1
o-Xylene	ND		0.50	0.25	ug/L			06/15/17 19:11	1
Propionitrile	ND		20	10	ug/L			06/15/17 19:11	1
Styrene	ND		0.50	0.25	ug/L			06/15/17 19:11	1
t-Butanol	ND		10	5.0	ug/L			06/15/17 19:11	1
Tetrachloroethene	ND		0.50	0.25	ug/L			06/15/17 19:11	1
Tetrahydrofuran	ND		10	5.0	ug/L			06/15/17 19:11	1
Toluene	ND		0.50	0.25	ug/L			06/15/17 19:11	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			06/15/17 19:11	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/15/17 19:11	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			06/15/17 19:11	1
Trichloroethene	ND		0.50	0.25	ug/L			06/15/17 19:11	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			06/15/17 19:11	1
Vinyl acetate	ND		4.0	2.0	ug/L			06/15/17 19:11	1
Vinyl chloride	ND		0.50	0.25	ug/L			06/15/17 19:11	1

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

Lab Sample ID: MB 440-412312/4
Matrix: Water
Analysis Batch: 412312

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			06/15/17 19:11	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			06/15/17 19:11	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			06/15/17 19:11	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*06/15/17 19:11*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*104*		*80 - 128*		*06/15/17 19:11*	*1*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*		*06/15/17 19:11*	*1*
Dibromofluoromethane (Surr)	*95*		*76 - 132*		*06/15/17 19:11*	*1*

Lab Sample ID: LCS 440-412312/5
Matrix: Water
Analysis Batch: 412312

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	27.7		ug/L		111	63 - 130
1,1,1,2-Tetrachloroethane	25.0	24.5		ug/L		98	60 - 141
1,1,1-Trichloroethane	25.0	24.6		ug/L		98	70 - 130
1,1,2,2-Tetrachloroethane	25.0	28.8		ug/L		115	63 - 130
1,1,2-Trichloroethane	25.0	27.2		ug/L		109	70 - 130
1,1-Dichloroethane	25.0	26.8		ug/L		107	64 - 130
1,1-Dichloroethene	25.0	24.7		ug/L		99	70 - 130
1,1-Dichloropropene	25.0	26.6		ug/L		107	70 - 130
1,2,4-Trichlorobenzene	25.0	25.7		ug/L		103	60 - 140
1,2-Dibromo-3-Chloropropane	25.0	25.8		ug/L		103	52 - 140
1,2-Dichlorobenzene	25.0	25.8		ug/L		103	70 - 130
1,2-Dichloroethane	25.0	26.4		ug/L		105	57 - 138
1,2-Dichloropropane	25.0	28.0		ug/L		112	67 - 130
1,3-Dichlorobenzene	25.0	25.5		ug/L		102	70 - 130
1,3-Dichloropropane	25.0	27.4		ug/L		110	70 - 130
1,4-Dichlorobenzene	25.0	25.7		ug/L		103	70 - 130
2,2-Dichloropropane	25.0	24.3		ug/L		97	68 - 141
2-Hexanone	25.0	33.8		ug/L		135	10 - 150
Acetone	25.0	30.9		ug/L		124	10 - 150
Benzene	25.0	26.7		ug/L		107	68 - 130
Bromoform	25.0	23.4		ug/L		94	60 - 148
Bromomethane	25.0	23.9		ug/L		95	64 - 139
Carbon disulfide	25.0	25.7		ug/L		103	52 - 136
Carbon tetrachloride	25.0	23.0		ug/L		92	60 - 150
Chlorobenzene	25.0	25.3		ug/L		101	70 - 130
Bromochloromethane	25.0	25.0		ug/L		100	70 - 130
Chloroethane	25.0	25.5		ug/L		102	64 - 135
Chloroform	25.0	25.6		ug/L		102	70 - 130
Chloromethane	25.0	26.8		ug/L		107	47 - 140
cis-1,2-Dichloroethene	25.0	25.9		ug/L		104	70 - 133

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

Lab Sample ID: LCS 440-412312/5
Matrix: Water
Analysis Batch: 412312

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
cis-1,3-Dichloropropene	25.0	27.5		ug/L		110	70 - 133
Dibromochloromethane	25.0	25.4		ug/L		102	69 - 145
Dibromomethane	25.0	25.7		ug/L		103	70 - 130
Bromodichloromethane	25.0	26.4		ug/L		105	70 - 132
Dichlorodifluoromethane	25.0	22.4		ug/L		90	29 - 150
Ethylbenzene	25.0	26.2		ug/L		105	70 - 130
m,p-Xylene	25.0	26.1		ug/L		104	70 - 130
Methylene Chloride	25.0	25.7		ug/L		103	52 - 130
Methyl tert-butyl ether	25.0	26.4		ug/L		106	63 - 131
Naphthalene	25.0	27.7		ug/L		111	60 - 140
o-Xylene	25.0	26.4		ug/L		106	70 - 130
Styrene	25.0	26.9		ug/L		108	70 - 134
t-Butanol	250	260		ug/L		104	70 - 130
Tetrachloroethene	25.0	23.5		ug/L		94	70 - 130
Toluene	25.0	26.3		ug/L		105	70 - 130
trans-1,2-Dichloroethene	25.0	25.8		ug/L		103	70 - 130
trans-1,3-Dichloropropene	25.0	26.6		ug/L		106	70 - 132
Trichloroethene	25.0	24.4		ug/L		97	70 - 130
Trichlorofluoromethane	25.0	24.7		ug/L		99	60 - 150
Vinyl acetate	25.0	28.3		ug/L		113	48 - 140
Vinyl chloride	25.0	24.8		ug/L		99	59 - 133
1,2-Dibromoethane (EDB)	25.0	26.4		ug/L		105	70 - 130
2-Butanone (MEK)	25.0	24.4		ug/L		98	44 - 150
4-Methyl-2-pentanone (MIBK)	25.0	33.5		ug/L		134	59 - 149

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*101*		*80 - 128*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*
Dibromofluoromethane (Surr)	*96*		*76 - 132*

Lab Sample ID: 440-186491-A-2 MS
Matrix: Water
Analysis Batch: 412312

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	24.4		ug/L		98	60 - 149
1,1,1-Trichloroethane	ND		25.0	24.4		ug/L		98	70 - 130
1,1,2,2-Tetrachloroethane	ND		25.0	28.3		ug/L		113	63 - 130
1,1,2-Trichloroethane	ND		25.0	27.1		ug/L		109	70 - 130
1,1-Dichloroethane	ND		25.0	26.7		ug/L		107	65 - 130
1,1-Dichloroethene	ND		25.0	19.7		ug/L		79	70 - 130
1,1-Dichloropropene	ND		25.0	22.7		ug/L		91	64 - 130
1,2,4-Trichlorobenzene	ND		25.0	26.5		ug/L		106	60 - 140
1,2-Dibromo-3-Chloropropane	ND		25.0	25.7		ug/L		103	48 - 140
1,2-Dichlorobenzene	ND		25.0	26.1		ug/L		104	70 - 130
1,2-Dichloroethane	ND		25.0	26.6		ug/L		106	56 - 146
1,2-Dichloropropane	ND		25.0	27.9		ug/L		112	69 - 130

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

Lab Sample ID: 440-186491-A-2 MS
Matrix: Water
Analysis Batch: 412312

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
1,3-Dichlorobenzene	ND		25.0	25.7		ug/L		103	70 - 130
1,3-Dichloropropane	ND		25.0	26.5		ug/L		106	70 - 130
1,4-Dichlorobenzene	ND		25.0	26.2		ug/L		105	70 - 130
2,2-Dichloropropane	ND		25.0	25.4		ug/L		102	69 - 138
2-Hexanone	ND		25.0	31.4		ug/L		126	10 - 150
Acetone	10	J	25.0	39.0		ug/L		116	10 - 150
Benzene	ND		25.0	26.6		ug/L		107	66 - 130
Bromoform	1.2		25.0	24.0		ug/L		91	59 - 150
Bromomethane	ND		25.0	23.9		ug/L		96	62 - 131
Carbon disulfide	ND		25.0	25.1		ug/L		100	49 - 140
Carbon tetrachloride	ND		25.0	23.1		ug/L		92	60 - 150
Chlorobenzene	ND		25.0	25.0		ug/L		100	70 - 130
Bromochloromethane	ND		25.0	24.9		ug/L		99	70 - 130
Chloroethane	ND		25.0	25.4		ug/L		101	68 - 130
Chloroform	ND		25.0	25.6		ug/L		103	70 - 130
Chloromethane	ND		25.0	30.3		ug/L		121	39 - 144
cis-1,2-Dichloroethene	ND		25.0	27.0		ug/L		108	70 - 130
cis-1,3-Dichloropropene	ND		25.0	23.3		ug/L		93	70 - 133
Dibromochloromethane	ND		25.0	25.0		ug/L		100	70 - 148
Dibromomethane	ND		25.0	25.9		ug/L		104	70 - 130
Bromodichloromethane	ND		25.0	26.9		ug/L		107	70 - 138
Dichlorodifluoromethane	ND		25.0	22.0		ug/L		88	25 - 142
Ethylbenzene	ND		25.0	19.6		ug/L		78	70 - 130
m,p-Xylene	ND	F1	25.0	2.73	F1	ug/L		11	70 - 133
Methylene Chloride	ND		25.0	24.7		ug/L		99	52 - 130
Methyl tert-butyl ether	ND		25.0	26.7		ug/L		107	70 - 130
Naphthalene	ND	F1	25.0	ND	F1	ug/L		0	60 - 140
o-Xylene	ND	F1	25.0	2.99	F1	ug/L		12	70 - 133
Styrene	ND	F1	25.0	ND	F1	ug/L		0	29 - 150
t-Butanol	ND		250	265		ug/L		106	70 - 130
Tetrachloroethene	ND		25.0	23.2		ug/L		93	70 - 137
Toluene	ND		25.0	18.9		ug/L		75	70 - 130
trans-1,2-Dichloroethene	ND		25.0	24.4		ug/L		97	70 - 130
trans-1,3-Dichloropropene	ND		25.0	21.4		ug/L		86	70 - 138
Trichloroethene	ND		25.0	24.1		ug/L		96	70 - 130
Trichlorofluoromethane	ND		25.0	24.8		ug/L		99	60 - 150
Vinyl acetate	ND	F1	25.0	ND	F1	ug/L		0	23 - 150
Vinyl chloride	ND	F1	25.0	2.65	F1	ug/L		11	50 - 137
1,2-Dibromoethane (EDB)	ND		25.0	25.7		ug/L		103	70 - 131
2-Butanone (MEK)	ND		25.0	27.5		ug/L		110	48 - 140
4-Methyl-2-pentanone (MIBK)	ND		25.0	32.5		ug/L		130	52 - 150

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Toluene-d8 (Surr)	*74*	*X*	*80 - 128*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*
Dibromofluoromethane (Surr)	*97*		*76 - 132*

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

Lab Sample ID: 440-186491-A-2 MSD
Matrix: Water
Analysis Batch: 412312

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	27.2		ug/L		109	60 - 130	3	30
1,1,1,2-Tetrachloroethane	ND		25.0	24.6		ug/L		98	60 - 149	1	20
1,1,1-Trichloroethane	ND		25.0	24.8		ug/L		99	70 - 130	2	20
1,1,2,2-Tetrachloroethane	ND		25.0	27.0		ug/L		108	63 - 130	5	30
1,1,2-Trichloroethane	ND		25.0	26.9		ug/L		107	70 - 130	1	25
1,1-Dichloroethane	ND		25.0	27.3		ug/L		109	65 - 130	2	20
1,1-Dichloroethene	ND		25.0	19.9		ug/L		80	70 - 130	1	20
1,1-Dichloropropene	ND		25.0	22.7		ug/L		91	64 - 130	0	20
1,2,4-Trichlorobenzene	ND		25.0	26.0		ug/L		104	60 - 140	2	20
1,2-Dibromo-3-Chloropropane	ND		25.0	25.3		ug/L		101	48 - 140	1	30
1,2-Dichlorobenzene	ND		25.0	25.6		ug/L		102	70 - 130	2	20
1,2-Dichloroethane	ND		25.0	26.1		ug/L		105	56 - 146	2	20
1,2-Dichloropropane	ND		25.0	28.1		ug/L		112	69 - 130	1	20
1,3-Dichlorobenzene	ND		25.0	25.4		ug/L		101	70 - 130	1	20
1,3-Dichloropropane	ND		25.0	25.6		ug/L		102	70 - 130	3	25
1,4-Dichlorobenzene	ND		25.0	25.5		ug/L		102	70 - 130	3	20
2,2-Dichloropropane	ND		25.0	25.2		ug/L		101	69 - 138	1	25
2-Hexanone	ND		25.0	29.5		ug/L		118	10 - 150	6	35
Acetone	10	J	25.0	34.9		ug/L		99	10 - 150	11	35
Benzene	ND		25.0	26.9		ug/L		108	66 - 130	1	20
Bromoform	1.2		25.0	24.5		ug/L		93	59 - 150	2	25
Bromomethane	ND		25.0	23.8		ug/L		95	62 - 131	1	25
Carbon disulfide	ND		25.0	25.4		ug/L		102	49 - 140	1	20
Carbon tetrachloride	ND		25.0	23.3		ug/L		93	60 - 150	1	25
Chlorobenzene	ND		25.0	24.9		ug/L		100	70 - 130	0	20
Bromochloromethane	ND		25.0	25.0		ug/L		100	70 - 130	0	25
Chloroethane	ND		25.0	25.8		ug/L		103	68 - 130	2	25
Chloroform	ND		25.0	25.8		ug/L		103	70 - 130	1	20
Chloromethane	ND		25.0	30.9		ug/L		124	39 - 144	2	25
cis-1,2-Dichloroethene	ND		25.0	27.1		ug/L		109	70 - 130	1	20
cis-1,3-Dichloropropene	ND		25.0	22.4		ug/L		90	70 - 133	4	20
Dibromochloromethane	ND		25.0	24.8		ug/L		99	70 - 148	1	25
Dibromomethane	ND		25.0	25.7		ug/L		103	70 - 130	1	25
Bromodichloromethane	ND		25.0	27.1		ug/L		108	70 - 138	1	20
Dichlorodifluoromethane	ND		25.0	21.5		ug/L		86	25 - 142	3	30
Ethylbenzene	ND		25.0	18.6		ug/L		75	70 - 130	5	20
m,p-Xylene	ND	F1	25.0	2.33	F1	ug/L		9	70 - 133	16	25
Methylene Chloride	ND		25.0	25.5		ug/L		102	52 - 130	3	20
Methyl tert-butyl ether	ND		25.0	26.7		ug/L		107	70 - 130	0	25
Naphthalene	ND	F1	25.0	ND	F1	ug/L		0	60 - 140	NC	30
o-Xylene	ND	F1	25.0	2.54	F1	ug/L		10	70 - 133	16	20
Styrene	ND	F1	25.0	ND	F1	ug/L		0	29 - 150	NC	35
t-Butanol	ND		250	261		ug/L		104	70 - 130	2	25
Tetrachloroethene	ND		25.0	23.0		ug/L		92	70 - 137	1	20
Toluene	ND		25.0	17.6		ug/L		71	70 - 130	7	20
trans-1,2-Dichloroethene	ND		25.0	24.8		ug/L		99	70 - 130	2	20
trans-1,3-Dichloropropene	ND		25.0	20.6		ug/L		83	70 - 138	4	25
Trichloroethene	ND		25.0	24.4		ug/L		98	70 - 130	1	20

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

Lab Sample ID: 440-186491-A-2 MSD
Matrix: Water
Analysis Batch: 412312

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
Trichlorofluoromethane	ND		25.0	25.0		ug/L		100	60 - 150	1	25
Vinyl acetate	ND	F1	25.0	ND	F1	ug/L		0	23 - 150	NC	30
Vinyl chloride	ND	F1	25.0	3.11	F1	ug/L		12	50 - 137	16	30
1,2-Dibromoethane (EDB)	ND		25.0	25.2		ug/L		101	70 - 131	2	25
2-Butanone (MEK)	ND		25.0	25.9		ug/L		104	48 - 140	6	40
4-Methyl-2-pentanone (MIBK)	ND		25.0	30.6		ug/L		123	52 - 150	6	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*71*	*X*	*80 - 128*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*
Dibromofluoromethane (Surr)	*98*		*76 - 132*

Lab Sample ID: MB 440-412316/4
Matrix: Water
Analysis Batch: 412316

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			06/15/17 18:52	1
Acrylonitrile	ND		50	1.0	ug/L			06/15/17 18:52	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*107*		*80 - 128*		*06/15/17 18:52*	*1*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*		*06/15/17 18:52*	*1*
Dibromofluoromethane (Surr)	*103*		*76 - 132*		*06/15/17 18:52*	*1*

Lab Sample ID: LCS 440-412316/5
Matrix: Water
Analysis Batch: 412316

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	30.5	J	ug/L		122	10 - 145		
Acrylonitrile			250	279		ug/L		111	48 - 140		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*103*		*80 - 128*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*
Dibromofluoromethane (Surr)	*106*		*76 - 132*

Lab Sample ID: 440-186410-A-2 MS
Matrix: Water
Analysis Batch: 412316

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	31.9	J	ug/L		128	10 - 147		
Acrylonitrile	ND		250	292		ug/L		117	38 - 144		

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

Lab Sample ID: 440-186410-A-2 MS
Matrix: Water
Analysis Batch: 412316

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

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Toluene-d8 (Surr)	*103*		*80 - 128*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*
Dibromofluoromethane (Surr)	*107*		*76 - 132*

Lab Sample ID: 440-186410-A-2 MSD
Matrix: Water
Analysis Batch: 412316

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	32.7	J	ug/L		131	10 - 147	2	40
Acrylonitrile	ND		250	289		ug/L		116	38 - 144	1	40

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*102*		*80 - 128*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*
Dibromofluoromethane (Surr)	*107*		*76 - 132*

Lab Sample ID: MB 440-412397/4
Matrix: Water
Analysis Batch: 412397

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			06/16/17 08:09	1
Acrylonitrile	ND		50	1.0	ug/L			06/16/17 08:09	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*108*		*80 - 128*		*06/16/17 08:09*	*1*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*		*06/16/17 08:09*	*1*
Dibromofluoromethane (Surr)	*103*		*76 - 132*		*06/16/17 08:09*	*1*

Lab Sample ID: LCS 440-412397/5
Matrix: Water
Analysis Batch: 412397

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	32.1	J	ug/L		128	10 - 145		
Acrylonitrile			250	249		ug/L		100	48 - 140		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*99*		*80 - 128*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*
Dibromofluoromethane (Surr)	*106*		*76 - 132*

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

Lab Sample ID: LCSD 440-412397/29
Matrix: Water
Analysis Batch: 412397

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
Acrolein			25.0	27.4	J	ug/L		110	10 - 145	16	30
Acrylonitrile			250	243		ug/L		97	48 - 140	2	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*104*		*80 - 128*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*
Dibromofluoromethane (Surr)	*102*		*76 - 132*

Lab Sample ID: 550-84448-A-1 MS
Matrix: Water
Analysis Batch: 412397

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	6.82	J	ug/L		27	10 - 147
Acrylonitrile	ND		250	255		ug/L		102	38 - 144

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Toluene-d8 (Surr)	*101*		*80 - 128*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*
Dibromofluoromethane (Surr)	*99*		*76 - 132*

Lab Sample ID: 550-84448-A-1 MSD
Matrix: Water
Analysis Batch: 412397

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	5.91	J	ug/L		24	10 - 147	14	40
Acrylonitrile	ND		250	254		ug/L		102	38 - 144	0	40

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*97*		*80 - 128*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*
Dibromofluoromethane (Surr)	*96*		*76 - 132*

Lab Sample ID: MB 440-412554/4
Matrix: Water
Analysis Batch: 412554

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			06/16/17 19:53	1
Acrylonitrile	ND		50	1.0	ug/L			06/16/17 19:53	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*105*		*80 - 128*		*06/16/17 19:53*	*1*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*		*06/16/17 19:53*	*1*
Dibromofluoromethane (Surr)	*95*		*76 - 132*		*06/16/17 19:53*	*1*

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

Lab Sample ID: LCS 440-412554/6
Matrix: Water
Analysis Batch: 412554

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	33.9	J	ug/L		136	10 - 145		
Acrylonitrile			250	337		ug/L		135	48 - 140		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*102*		*80 - 128*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*
Dibromofluoromethane (Surr)	*96*		*76 - 132*

Lab Sample ID: 440-186557-D-1 MS
Matrix: Water
Analysis Batch: 412554

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	30.5	J	ug/L		122	10 - 147		
Acrylonitrile	ND		250	322		ug/L		129	38 - 144		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Toluene-d8 (Surr)	*100*		*80 - 128*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*
Dibromofluoromethane (Surr)	*97*		*76 - 132*

Lab Sample ID: 440-186557-D-1 MSD
Matrix: Water
Analysis Batch: 412554

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	33.3	J	ug/L		133	10 - 147	9	40
Acrylonitrile	ND		250	331		ug/L		133	38 - 144	3	40

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*100*		*80 - 128*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*
Dibromofluoromethane (Surr)	*96*		*76 - 132*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 440-411583/1-A
Matrix: Water
Analysis Batch: 412040

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 411583

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		1.0	0.25	ug/L		06/13/17 06:25	06/15/17 01:25	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*64*		*30 - 120*	*06/13/17 06:25*	*06/15/17 01:25*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 440-411583/2-A
Matrix: Water
Analysis Batch: 412040

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 411583

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)	*63*		*30 - 120*

Lab Sample ID: LCSD 440-411583/3-A
Matrix: Water
Analysis Batch: 412261

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 411583

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dioxane	2.00	1.46		ug/L		73	35 - 120	7	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,4-Dioxane-d8 (Surr)	*67*		*30 - 120*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 440-411404/15
Matrix: Water
Analysis Batch: 411404

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			06/12/17 13:53	1

Lab Sample ID: LCS 440-411404/13
Matrix: Water
Analysis Batch: 411404

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	1.16		mg/L		103	90 - 110

Lab Sample ID: MB 440-411405/15
Matrix: Water
Analysis Batch: 411405

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			06/12/17 13:53	1
Chloride	ND		0.50	0.25	mg/L			06/12/17 13:53	1
Fluoride	ND		0.50	0.25	mg/L			06/12/17 13:53	1
Sulfate	ND		0.50	0.25	mg/L			06/12/17 13:53	1

Lab Sample ID: LCS 440-411405/13
Matrix: Water
Analysis Batch: 411405

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	5.18		mg/L		104	90 - 110
Chloride	5.00	5.04		mg/L		101	90 - 110

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 440-411405/13
Matrix: Water
Analysis Batch: 411405

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Fluoride			5.00	4.94		mg/L		99	90 - 110		
Sulfate			5.00	5.22		mg/L		104	90 - 110		

Lab Sample ID: 440-186222-A-1 MS
Matrix: Water
Analysis Batch: 411405

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	0.26	J	5.00	5.33		mg/L		101	80 - 120
Fluoride	0.25	J	5.00	5.04		mg/L		101	80 - 120

Lab Sample ID: 440-186222-A-1 MSD
Matrix: Water
Analysis Batch: 411405

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	0.26	J	5.00	5.27		mg/L		100	80 - 120	1	20
Fluoride	0.25	J	5.00	5.03		mg/L		101	80 - 120	0	20

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 440-413388/1-A
Matrix: Water
Analysis Batch: 413582

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 413388

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Potassium	ND		0.50	0.25	mg/L		06/21/17 14:05	06/22/17 09:21	1
Manganese	ND		0.020	0.010	mg/L		06/21/17 14:05	06/22/17 09:21	1
Magnesium	ND		0.020	0.010	mg/L		06/21/17 14:05	06/22/17 09:21	1
Sodium	ND		0.50	0.25	mg/L		06/21/17 14:05	06/22/17 09:21	1
Calcium	ND		0.10	0.050	mg/L		06/21/17 14:05	06/22/17 09:21	1
Iron	ND		0.10	0.050	mg/L		06/21/17 14:05	06/22/17 09:21	1
Boron	ND		0.050	0.025	mg/L		06/21/17 14:05	06/22/17 09:21	1

Lab Sample ID: LCS 440-413388/2-A
Matrix: Water
Analysis Batch: 413582

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 413388

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Potassium			10.0	10.1		mg/L		101	80 - 120		
Manganese			1.00	0.988		mg/L		99	80 - 120		
Magnesium			5.00	5.01		mg/L		100	80 - 120		
Sodium			10.0	10.1		mg/L		101	80 - 120		
Calcium			5.00	4.97		mg/L		99	80 - 120		
Iron			1.00	0.985		mg/L		99	80 - 120		
Boron			1.00	0.993		mg/L		99	80 - 120		

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: 440-186249-1 MS
Matrix: Water
Analysis Batch: 413582

Client Sample ID: Subdrain N
Prep Type: Total Recoverable
Prep Batch: 413388

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Potassium	13		10.0	23.2		mg/L		104	75 - 125
Manganese	6.4		1.00	7.37	4	mg/L		92	75 - 125
Magnesium	180		5.00	185	4	mg/L		55	75 - 125
Sodium	290		10.0	305	4	mg/L		129	75 - 125
Calcium	350		5.00	357	4	mg/L		101	75 - 125
Iron	34		1.00	34.6	4	mg/L		101	75 - 125
Boron	0.83		1.00	1.87		mg/L		104	75 - 125

Lab Sample ID: 440-186249-1 MSD
Matrix: Water
Analysis Batch: 413582

Client Sample ID: Subdrain N
Prep Type: Total Recoverable
Prep Batch: 413388

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Potassium	13		10.0	23.5		mg/L		107	75 - 125	1	20
Manganese	6.4		1.00	7.43	4	mg/L		98	75 - 125	1	20
Magnesium	180		5.00	187	4	mg/L		80	75 - 125	1	20
Sodium	290		10.0	306	4	mg/L		138	75 - 125	0	20
Calcium	350		5.00	364	4	mg/L		232	75 - 125	2	20
Iron	34		1.00	35.1	4	mg/L		151	75 - 125	1	20
Boron	0.83		1.00	1.86		mg/L		103	75 - 125	0	20

Method: 410.4 - COD

Lab Sample ID: MB 440-413661/3
Matrix: Water
Analysis Batch: 413661

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			06/22/17 15:38	1

Lab Sample ID: LCS 440-413661/4
Matrix: Water
Analysis Batch: 413661

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	194		mg/L		97	90 - 110

Lab Sample ID: 440-186462-J-1 MS
Matrix: Water
Analysis Batch: 413661

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	23		200	227		mg/L		102	70 - 120

Method: 410.4 - COD (Continued)

Lab Sample ID: 440-186462-J-1 MSD
Matrix: Water
Analysis Batch: 413661

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	23		200	225		mg/L		101	70 - 120	1	15

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 440-411608/3
Matrix: Water
Analysis Batch: 411608

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			06/13/17 04:53	1
Bicarbonate Alkalinity as CaCO3	ND		4.0	4.0	mg/L			06/13/17 04:53	1

Lab Sample ID: LCS 440-411608/2
Matrix: Water
Analysis Batch: 411608

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	36.5		mg/L		108	80 - 120

Lab Sample ID: 440-186249-4 DU
Matrix: Water
Analysis Batch: 411608

Client Sample ID: CM-10R
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Alkalinity as CaCO3	550		551		mg/L		0.3	20
Bicarbonate Alkalinity as CaCO3	550		551		mg/L		0.3	20

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

Lab Sample ID: MB 440-412236/1
Matrix: Water
Analysis Batch: 412236

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			06/15/17 11:52	1

Lab Sample ID: LCS 440-412236/2
Matrix: Water
Analysis Batch: 412236

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	964		mg/L		96	90 - 110

Lab Sample ID: 440-186249-1 DU
Matrix: Water
Analysis Batch: 412236

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	3100		3040		mg/L		1	5

Method: SM 4500 CO2 C - Free Carbon Dioxide

Lab Sample ID: MB 440-412017/1
Matrix: Water
Analysis Batch: 412017

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			06/14/17 15:56	1

Lab Sample ID: 440-186249-1 DU
Matrix: Water
Analysis Batch: 412017

Client Sample ID: Subdrain N
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Carbon Dioxide, Free	350		356		mg/L		1	20

Method: SM 4500 NH3 D - Ammonia

Lab Sample ID: MB 440-411574/2-A
Matrix: Water
Analysis Batch: 411575

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 411574

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	ND		0.50	0.10	mg/L		06/13/17 04:00	06/13/17 05:51	1

Lab Sample ID: LCS 440-411574/1-A
Matrix: Water
Analysis Batch: 411575

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 411574

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	2.50	2.40		mg/L		96	85 - 115

Lab Sample ID: 440-186247-B-2-B MS
Matrix: Water
Analysis Batch: 411575

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 411574

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	ND		2.50	2.50		mg/L		100	75 - 125

Lab Sample ID: 440-186247-B-2-C MSD
Matrix: Water
Analysis Batch: 411575

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 411574

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	2.50		mg/L		100	75 - 125	0	15

Lab Sample ID: 440-186235-D-2-B DU
Matrix: Water
Analysis Batch: 411575

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 411574

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Ammonia (as N)	61		63.0		mg/L		4	15

Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MB 440-414444/3
Matrix: Water
Analysis Batch: 414444

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			06/27/17 15:18	1

Lab Sample ID: LCS 440-414444/4
Matrix: Water
Analysis Batch: 414444

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Sulfide	0.520	0.436		mg/L		84	80 - 120

Lab Sample ID: LCSD 440-414444/5
Matrix: Water
Analysis Batch: 414444

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	0.520	0.419		mg/L		81	80 - 120	4	20

Lab Sample ID: 440-187220-C-2 MS
Matrix: Water
Analysis Batch: 414444

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		0.520	0.369		mg/L		71	70 - 130

Lab Sample ID: 440-187220-C-2 MSD
Matrix: Water
Analysis Batch: 414444

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		0.520	0.362		mg/L		70	70 - 130	2	30

Method: SM 5310C - TOC

Lab Sample ID: MB 440-412114/6
Matrix: Water
Analysis Batch: 412114

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			06/14/17 07:23	1

Lab Sample ID: LCS 440-412114/5
Matrix: Water
Analysis Batch: 412114

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	5.00	5.08		mg/L		102	90 - 110

Method: SM 5310C - TOC (Continued)

Lab Sample ID: MRL 440-412114/16
Matrix: Water
Analysis Batch: 412114

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	0.130		mg/L		130	50 - 150

Lab Sample ID: MRL 440-412114/4
Matrix: Water
Analysis Batch: 412114

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	0.132		mg/L		132	50 - 150

Lab Sample ID: 440-186243-D-1 MS
Matrix: Water
Analysis Batch: 412114

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	0.52		5.00	5.49		mg/L		99	80 - 120

Lab Sample ID: 440-186243-D-1 MSD
Matrix: Water
Analysis Batch: 412114

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	0.52		5.00	5.34		mg/L		96	80 - 120	3	20

Lab Sample ID: 550-84269-L-1 DU
Matrix: Water
Analysis Batch: 412114

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Organic Carbon	0.49		0.493		mg/L		0.1	20

GC/MS VOA

Analysis Batch: 411743

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186249-2	Combined Subdrains	Total/NA	Water	8260B	
440-186249-3	CM-9R3	Total/NA	Water	8260B	
440-186249-4	CM-10R	Total/NA	Water	8260B	
440-186249-5	MW-5	Total/NA	Water	8260B	
440-186249-6	Duplicate	Total/NA	Water	8260B	
440-186249-7	QCAB	Total/NA	Water	8260B	
440-186249-8	QCTB	Total/NA	Water	8260B	
MB 440-411743/4	Method Blank	Total/NA	Water	8260B	
LCS 440-411743/5	Lab Control Sample	Total/NA	Water	8260B	
440-186181-A-1 MS	Matrix Spike	Total/NA	Water	8260B	
440-186181-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

Analysis Batch: 412312

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186249-1	Subdrain N	Total/NA	Water	8260B	
MB 440-412312/4	Method Blank	Total/NA	Water	8260B	
LCS 440-412312/5	Lab Control Sample	Total/NA	Water	8260B	
440-186491-A-2 MS	Matrix Spike	Total/NA	Water	8260B	
440-186491-A-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

Analysis Batch: 412316

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186249-1	Subdrain N	Total/NA	Water	8260B	
440-186249-2	Combined Subdrains	Total/NA	Water	8260B	
440-186249-3	CM-9R3	Total/NA	Water	8260B	
MB 440-412316/4	Method Blank	Total/NA	Water	8260B	
LCS 440-412316/5	Lab Control Sample	Total/NA	Water	8260B	
440-186410-A-2 MS	Matrix Spike	Total/NA	Water	8260B	
440-186410-A-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

Analysis Batch: 412397

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186249-4	CM-10R	Total/NA	Water	8260B	
MB 440-412397/4	Method Blank	Total/NA	Water	8260B	
LCS 440-412397/5	Lab Control Sample	Total/NA	Water	8260B	
LCSD 440-412397/29	Lab Control Sample Dup	Total/NA	Water	8260B	
550-84448-A-1 MS	Matrix Spike	Total/NA	Water	8260B	
550-84448-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

Analysis Batch: 412554

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186249-5	MW-5	Total/NA	Water	8260B	
440-186249-6	Duplicate	Total/NA	Water	8260B	
MB 440-412554/4	Method Blank	Total/NA	Water	8260B	
LCS 440-412554/6	Lab Control Sample	Total/NA	Water	8260B	
440-186557-D-1 MS	Matrix Spike	Total/NA	Water	8260B	
440-186557-D-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 411583

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186249-1	Subdrain N	Total/NA	Water	3520C	
440-186249-2	Combined Subdrains	Total/NA	Water	3520C	
440-186249-3	CM-9R3	Total/NA	Water	3520C	
440-186249-4	CM-10R	Total/NA	Water	3520C	
440-186249-5	MW-5	Total/NA	Water	3520C	
440-186249-6	Duplicate	Total/NA	Water	3520C	
MB 440-411583/1-A	Method Blank	Total/NA	Water	3520C	
LCS 440-411583/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 440-411583/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	

Analysis Batch: 412040

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 440-411583/1-A	Method Blank	Total/NA	Water	8270C	411583
LCS 440-411583/2-A	Lab Control Sample	Total/NA	Water	8270C	411583

Analysis Batch: 412261

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186249-1	Subdrain N	Total/NA	Water	8270C	411583
440-186249-2	Combined Subdrains	Total/NA	Water	8270C	411583
440-186249-3	CM-9R3	Total/NA	Water	8270C	411583
440-186249-4	CM-10R	Total/NA	Water	8270C	411583
440-186249-5	MW-5	Total/NA	Water	8270C	411583
440-186249-6	Duplicate	Total/NA	Water	8270C	411583
LCSD 440-411583/3-A	Lab Control Sample Dup	Total/NA	Water	8270C	411583

HPLC/IC

Analysis Batch: 411404

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186249-1	Subdrain N	Total/NA	Water	300.0	
440-186249-2	Combined Subdrains	Total/NA	Water	300.0	
440-186249-3	CM-9R3	Total/NA	Water	300.0	
440-186249-4	CM-10R	Total/NA	Water	300.0	
440-186249-5	MW-5	Total/NA	Water	300.0	
440-186249-6	Duplicate	Total/NA	Water	300.0	
MB 440-411404/15	Method Blank	Total/NA	Water	300.0	
LCS 440-411404/13	Lab Control Sample	Total/NA	Water	300.0	

Analysis Batch: 411405

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186249-1	Subdrain N	Total/NA	Water	300.0	
440-186249-1	Subdrain N	Total/NA	Water	300.0	
440-186249-2	Combined Subdrains	Total/NA	Water	300.0	
440-186249-2	Combined Subdrains	Total/NA	Water	300.0	
440-186249-3	CM-9R3	Total/NA	Water	300.0	
440-186249-3	CM-9R3	Total/NA	Water	300.0	
440-186249-4	CM-10R	Total/NA	Water	300.0	
440-186249-4	CM-10R	Total/NA	Water	300.0	
440-186249-5	MW-5	Total/NA	Water	300.0	
440-186249-5	MW-5	Total/NA	Water	300.0	

HPLC/IC (Continued)

Analysis Batch: 411405 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186249-6	Duplicate	Total/NA	Water	300.0	
440-186249-6	Duplicate	Total/NA	Water	300.0	
MB 440-411405/15	Method Blank	Total/NA	Water	300.0	
LCS 440-411405/13	Lab Control Sample	Total/NA	Water	300.0	
440-186222-A-1 MS	Matrix Spike	Total/NA	Water	300.0	
440-186222-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Metals

Prep Batch: 413388

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186249-1	Subdrain N	Total Recoverable	Water	3005A	
440-186249-2	Combined Subdrains	Total Recoverable	Water	3005A	
440-186249-3	CM-9R3	Total Recoverable	Water	3005A	
440-186249-4	CM-10R	Total Recoverable	Water	3005A	
440-186249-5	MW-5	Total Recoverable	Water	3005A	
440-186249-6	Duplicate	Total Recoverable	Water	3005A	
MB 440-413388/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 440-413388/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
440-186249-1 MS	Subdrain N	Total Recoverable	Water	3005A	
440-186249-1 MSD	Subdrain N	Total Recoverable	Water	3005A	

Analysis Batch: 413582

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186249-1	Subdrain N	Total Recoverable	Water	6010B	413388
440-186249-2	Combined Subdrains	Total Recoverable	Water	6010B	413388
440-186249-3	CM-9R3	Total Recoverable	Water	6010B	413388
440-186249-4	CM-10R	Total Recoverable	Water	6010B	413388
440-186249-5	MW-5	Total Recoverable	Water	6010B	413388
440-186249-6	Duplicate	Total Recoverable	Water	6010B	413388
MB 440-413388/1-A	Method Blank	Total Recoverable	Water	6010B	413388
LCS 440-413388/2-A	Lab Control Sample	Total Recoverable	Water	6010B	413388
440-186249-1 MS	Subdrain N	Total Recoverable	Water	6010B	413388
440-186249-1 MSD	Subdrain N	Total Recoverable	Water	6010B	413388

General Chemistry

Prep Batch: 411574

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186249-1	Subdrain N	Total/NA	Water	SM 4500 NH3 B	
440-186249-2	Combined Subdrains	Total/NA	Water	SM 4500 NH3 B	
440-186249-3	CM-9R3	Total/NA	Water	SM 4500 NH3 B	
440-186249-4	CM-10R	Total/NA	Water	SM 4500 NH3 B	
440-186249-5	MW-5	Total/NA	Water	SM 4500 NH3 B	
440-186249-6	Duplicate	Total/NA	Water	SM 4500 NH3 B	
MB 440-411574/2-A	Method Blank	Total/NA	Water	SM 4500 NH3 B	
LCS 440-411574/1-A	Lab Control Sample	Total/NA	Water	SM 4500 NH3 B	
440-186247-B-2-B MS	Matrix Spike	Total/NA	Water	SM 4500 NH3 B	
440-186247-B-2-C MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 NH3 B	
440-186235-D-2-B DU	Duplicate	Total/NA	Water	SM 4500 NH3 B	

General Chemistry (Continued)

Analysis Batch: 411575

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186249-1	Subdrain N	Total/NA	Water	SM 4500 NH3 D	411574
440-186249-2	Combined Subdrains	Total/NA	Water	SM 4500 NH3 D	411574
440-186249-3	CM-9R3	Total/NA	Water	SM 4500 NH3 D	411574
440-186249-4	CM-10R	Total/NA	Water	SM 4500 NH3 D	411574
440-186249-5	MW-5	Total/NA	Water	SM 4500 NH3 D	411574
440-186249-6	Duplicate	Total/NA	Water	SM 4500 NH3 D	411574
MB 440-411574/2-A	Method Blank	Total/NA	Water	SM 4500 NH3 D	411574
LCS 440-411574/1-A	Lab Control Sample	Total/NA	Water	SM 4500 NH3 D	411574
440-186247-B-2-B MS	Matrix Spike	Total/NA	Water	SM 4500 NH3 D	411574
440-186247-B-2-C MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 NH3 D	411574
440-186235-D-2-B DU	Duplicate	Total/NA	Water	SM 4500 NH3 D	411574

Analysis Batch: 411608

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186249-1	Subdrain N	Total/NA	Water	SM 2320B	
440-186249-2	Combined Subdrains	Total/NA	Water	SM 2320B	
440-186249-3	CM-9R3	Total/NA	Water	SM 2320B	
440-186249-4	CM-10R	Total/NA	Water	SM 2320B	
440-186249-5	MW-5	Total/NA	Water	SM 2320B	
440-186249-6	Duplicate	Total/NA	Water	SM 2320B	
MB 440-411608/3	Method Blank	Total/NA	Water	SM 2320B	
LCS 440-411608/2	Lab Control Sample	Total/NA	Water	SM 2320B	
440-186249-4 DU	CM-10R	Total/NA	Water	SM 2320B	

Analysis Batch: 412017

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186249-1	Subdrain N	Total/NA	Water	SM 4500 CO2 C	
440-186249-2	Combined Subdrains	Total/NA	Water	SM 4500 CO2 C	
440-186249-3	CM-9R3	Total/NA	Water	SM 4500 CO2 C	
440-186249-4	CM-10R	Total/NA	Water	SM 4500 CO2 C	
440-186249-5	MW-5	Total/NA	Water	SM 4500 CO2 C	
440-186249-6	Duplicate	Total/NA	Water	SM 4500 CO2 C	
MB 440-412017/1	Method Blank	Total/NA	Water	SM 4500 CO2 C	
440-186249-1 DU	Subdrain N	Total/NA	Water	SM 4500 CO2 C	

Analysis Batch: 412114

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186249-1	Subdrain N	Total/NA	Water	SM 5310C	
440-186249-2	Combined Subdrains	Total/NA	Water	SM 5310C	
440-186249-3	CM-9R3	Total/NA	Water	SM 5310C	
440-186249-4	CM-10R	Total/NA	Water	SM 5310C	
440-186249-5	MW-5	Total/NA	Water	SM 5310C	
440-186249-6	Duplicate	Total/NA	Water	SM 5310C	
MB 440-412114/6	Method Blank	Total/NA	Water	SM 5310C	
LCS 440-412114/5	Lab Control Sample	Total/NA	Water	SM 5310C	
MRL 440-412114/16	Lab Control Sample	Total/NA	Water	SM 5310C	
MRL 440-412114/4	Lab Control Sample	Total/NA	Water	SM 5310C	
440-186243-D-1 MS	Matrix Spike	Total/NA	Water	SM 5310C	
440-186243-D-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 5310C	
550-84269-L-1 DU	Duplicate	Total/NA	Water	SM 5310C	

General Chemistry (Continued)

Analysis Batch: 412236

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186249-1	Subdrain N	Total/NA	Water	SM 2540C	
440-186249-2	Combined Subdrains	Total/NA	Water	SM 2540C	
440-186249-3	CM-9R3	Total/NA	Water	SM 2540C	
440-186249-4	CM-10R	Total/NA	Water	SM 2540C	
440-186249-5	MW-5	Total/NA	Water	SM 2540C	
440-186249-6	Duplicate	Total/NA	Water	SM 2540C	
MB 440-412236/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 440-412236/2	Lab Control Sample	Total/NA	Water	SM 2540C	
440-186249-1 DU	Subdrain N	Total/NA	Water	SM 2540C	

Analysis Batch: 413661

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186249-1	Subdrain N	Total/NA	Water	410.4	
440-186249-2	Combined Subdrains	Total/NA	Water	410.4	
440-186249-3	CM-9R3	Total/NA	Water	410.4	
440-186249-4	CM-10R	Total/NA	Water	410.4	
440-186249-5	MW-5	Total/NA	Water	410.4	
440-186249-6	Duplicate	Total/NA	Water	410.4	
MB 440-413661/3	Method Blank	Total/NA	Water	410.4	
LCS 440-413661/4	Lab Control Sample	Total/NA	Water	410.4	
440-186462-J-1 MS	Matrix Spike	Total/NA	Water	410.4	
440-186462-J-1 MSD	Matrix Spike Duplicate	Total/NA	Water	410.4	

Analysis Batch: 414444

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186249-1	Subdrain N	Total/NA	Water	SM 4500 S2 D	
440-186249-2	Combined Subdrains	Total/NA	Water	SM 4500 S2 D	
440-186249-3	CM-9R3	Total/NA	Water	SM 4500 S2 D	
440-186249-4	CM-10R	Total/NA	Water	SM 4500 S2 D	
440-186249-5	MW-5	Total/NA	Water	SM 4500 S2 D	
440-186249-6	Duplicate	Total/NA	Water	SM 4500 S2 D	
MB 440-414444/3	Method Blank	Total/NA	Water	SM 4500 S2 D	
LCS 440-414444/4	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
LCSD 440-414444/5	Lab Control Sample Dup	Total/NA	Water	SM 4500 S2 D	
440-187220-C-2 MS	Matrix Spike	Total/NA	Water	SM 4500 S2 D	
440-187220-C-2 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 S2 D	

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.
ID	Analyte identified by RT & presence of single mass ion
F1	MS and/or MSD Recovery is outside acceptance limits.
X	Surrogate is outside control 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.

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
H	Sample was prepped or analyzed beyond the specified holding time

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: 440-186249-1

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	06-30-17 *
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	CA015312017-3	07-31-17
New Mexico	State Program	6	N/A	01-29-17 *
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
17461 Derian Ave
Suite 100
Irvine, CA 92614
Phone: 949.261.1022 Fax:

Chain of Custody Record

145714

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.

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

TAL-8210 (0713)

Client Contact	
Company Name:	GLA / Republic
Address:	1145 W. Bernardo Ct.
City/State/Zip:	San Diego CA 92127
Phone:	858-451-1136
Fax:	858-451-1087
Project Name:	Sunshine Cyn. Landfill
Site:	Sylmar
P O #	4400 7851

Project Manager: Kyle Welchons
Tel/Fax: 858-451-1136
Site Contact: P. Dickason
Lab Contact: R. Almonte
Date: 6-12-17
Carrier: TA

Analysis Turnaround Time: ☐ CALENDAR DAYS ☐ WORKING DAYS
TAT if different from Below ____
☐ 2 weeks
☐ 1 week
☐ 2 days
☐ 1 day

COC No: 1 of 1 COCs
Sampler: BS, AS
For Lab Use Only:
Walk-in Client:
Lab Sampling:
Job / SDG No.: 5017.1047

Analyses (handwritten headings): EPA 8260B - VOCs; 8260B (additional); Dichlorodifluoro...; ...; EPA 8270 ...; ...; Ammonia as N; C.O.D.; Chloride, Bromide; Nitrate-N, Nitrite-N; Metals: B, Ca, Fe; Mg, Mn, K, Na; T.D.S.; TOC; Flouride, Sulfide; SM-4500-CO2C; Carbon Dioxide

Filtered Sample (Y / N); Perform MS / MSD (Y / N)

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Analyses marked	Sample Specific Notes
Subdrain N	6/12/17	1140	G	WW	13	X (all analyses)	
Combined Subdrains	↓	1215	G	WW	13	X (all analyses)	
CM-9R3	↓	1333	↓	GW	13	X (all analyses)	
CM-10R	↓	1235	↓	↓	13	X (all analyses)	
MW-5	↓	1450	↓	↓	13	X (all analyses)	
Duplicate	↓	—	↓	↓	13	X (all analyses)	
QCAB	↓	—	↓	Lab DI	4	X X X X	
QCTB	↓	—	↓	"	4	X X X X	

OO 6/12/17

440-186249 Chain of Custody

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

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.
☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

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

Special Instructions/QC Requirements & Comments:
0.3 / 0.1 0.8 / 0.4

Custody Seals Intact: ☐ Yes ☐ No
Custody Seal No.:
Cooler Temp. (°C): Obs'd: ____ Corr'd: ____ Therm ID No.: 44

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	Geo-Logic	6/12/17 1455	[signature]	TA	6/12/17 1455
[signature]	TA 6/12/17	17:40	[signature]	TA-I	6-12-17 17:24
[signature]	TA-I 6-12-17	18:10	Received in Laboratory by: [signature]	TA-I	6/12/17 1810

Login Sample Receipt Checklist

Client: Geo-Logic Associates

Job Number: 440-186249-1

Login Number: 186249

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: 440-186359-1
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:
6/23/2017 3:28:05 PM

Rossina Tomova, Project Manager I
(949)261-1022
rossina.tomova@testamericainc.com

Table of Contents

Sample Summary

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

TestAmerica Job ID: 440-186359-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-186359-1	DW-1	Water	06/13/17 09:48	06/13/17 16:25
440-186359-2	DW-2	Water	06/13/17 10:28	06/13/17 16:25
440-186359-3	DW-3	Water	06/13/17 11:20	06/13/17 16:25
440-186359-4	PZ-2	Water	06/13/17 11:21	06/13/17 16:25
440-186359-5	CM-11R	Water	06/13/17 13:15	06/13/17 16:25
440-186359-6	MW-14	Water	06/13/17 08:15	06/13/17 16:25
440-186359-7	MW-6	Water	06/13/17 09:45	06/13/17 16:25
440-186359-8	QCAB	Water	06/13/17 00:01	06/13/17 16:25
440-186359-9	QCTB	Water	06/13/17 00:01	06/13/17 16:25

Job ID: 440-186359-1

Laboratory: TestAmerica Irvine

Narrative

Job Narrative
440-186359-1

Comments
No additional comments.

Receipt
The samples were received on 6/13/2017 4:25 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 1.4º C and 1.5º C.

GC/MS VOA
Method(s) 8260B: The initial calibration verification (ICV) result for batch 440-412759 was above the upper control limit for acrolein. Sample results were non-detects, and have been reported as qualified data.

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 440-412149 and analytical batch 440-412600. The laboratory control sample (LCS) was performed in duplicate to provide precision data for this batch.

Method(s) 8270C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 440-412693 and analytical batch 440-412846. 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 Sulfate, the matrix spike / matrix spike duplicate (MS/MSD) for analytical batch 440-411652 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 (440-186359-1), DW-2 (440-186359-2), PZ-2 (440-186359-4), CM-11R (440-186359-5), MW-14 (440-186359-6) and MW-6 (440-186359-7). 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 (440-186359-1), DW-2 (440-186359-2), PZ-2 (440-186359-4), CM-11R (440-186359-5), MW-14 (440-186359-6) and MW-6 (440-186359-7). 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
Method(s) SM 4500 S2 D: The following sample was diluted due to color: (720-79933-G-1 ^2). Elevated reporting limits (RL) are provided.

Method(s) SM 4500 S2 D: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for 720-79933-g-1 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.

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

Job ID: 440-186359-1 (Continued)

Laboratory: TestAmerica Irvine (Continued)

VOA Prep

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

Client Sample ID: DW-1
Date Collected: 06/13/17 09:48
Date Received: 06/13/17 16:25

Lab Sample ID: 440-186359-1
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			06/19/17 13:04	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/19/17 13:04	1
Acrolein	ND		50	2.5	ug/L			06/15/17 02:51	1
Acrylonitrile	ND		50	1.0	ug/L			06/15/17 02:51	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			06/19/17 13:04	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/19/17 13:04	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			06/19/17 13:04	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			06/19/17 13:04	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			06/19/17 13:04	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			06/19/17 13:04	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			06/19/17 13:04	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			06/19/17 13:04	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			06/19/17 13:04	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			06/19/17 13:04	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			06/19/17 13:04	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			06/19/17 13:04	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			06/19/17 13:04	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			06/19/17 13:04	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			06/19/17 13:04	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			06/19/17 13:04	1
2-Hexanone	ND		5.0	2.5	ug/L			06/19/17 13:04	1
Acetone	ND		20	10	ug/L			06/19/17 13:04	1
Acetonitrile	ND		20	10	ug/L			06/19/17 13:04	1
Benzene	ND		0.50	0.25	ug/L			06/19/17 13:04	1
Allyl chloride	ND		1.0	0.50	ug/L			06/19/17 13:04	1
Bromoform	ND		1.0	0.40	ug/L			06/19/17 13:04	1
Bromomethane	ND		0.50	0.25	ug/L			06/19/17 13:04	1
Carbon disulfide	ND		1.0	0.50	ug/L			06/19/17 13:04	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			06/19/17 13:04	1
Chlorobenzene	ND		0.50	0.25	ug/L			06/19/17 13:04	1
Bromochloromethane	ND		0.50	0.25	ug/L			06/19/17 13:04	1
Chloroethane	ND		1.0	0.40	ug/L			06/19/17 13:04	1
Chloroform	ND		0.50	0.25	ug/L			06/19/17 13:04	1
Chloromethane	ND		0.50	0.25	ug/L			06/19/17 13:04	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			06/19/17 13:04	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/19/17 13:04	1
Dibromochloromethane	ND		0.50	0.25	ug/L			06/19/17 13:04	1
Dibromomethane	ND		0.50	0.25	ug/L			06/19/17 13:04	1
Bromodichloromethane	ND		0.50	0.25	ug/L			06/19/17 13:04	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			06/19/17 13:04	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			06/19/17 13:04	1
Ethylbenzene	ND		0.50	0.25	ug/L			06/19/17 13:04	1
Iodomethane	ND		2.0	1.0	ug/L			06/19/17 13:04	1
Isobutyl alcohol	ND		25	13	ug/L			06/19/17 13:04	1
m,p-Xylene	ND		1.0	0.50	ug/L			06/19/17 13:04	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			06/19/17 13:04	1
Methyl methacrylate	ND		2.0	1.0	ug/L			06/19/17 13:04	1
Methylene Chloride	ND		2.0	0.88	ug/L			06/19/17 13:04	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			06/19/17 13:04	1

Client Sample ID: DW-1
Date Collected: 06/13/17 09:48
Date Received: 06/13/17 16:25

Lab Sample ID: 440-186359-1
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			06/19/17 13:04	1
o-Xylene	ND		0.50	0.25	ug/L			06/19/17 13:04	1
Propionitrile	ND		20	10	ug/L			06/19/17 13:04	1
Styrene	ND		0.50	0.25	ug/L			06/19/17 13:04	1
t-Butanol	ND		10	5.0	ug/L			06/19/17 13:04	1
Tetrachloroethene	ND		0.50	0.25	ug/L			06/19/17 13:04	1
Tetrahydrofuran	ND		10	5.0	ug/L			06/19/17 13:04	1
Toluene	ND		0.50	0.25	ug/L			06/19/17 13:04	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			06/19/17 13:04	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/19/17 13:04	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			06/19/17 13:04	1
Trichloroethene	ND		0.50	0.25	ug/L			06/19/17 13:04	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			06/19/17 13:04	1
Vinyl acetate	ND		4.0	2.0	ug/L			06/19/17 13:04	1
Vinyl chloride	ND		0.50	0.25	ug/L			06/19/17 13:04	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			06/19/17 13:04	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			06/19/17 13:04	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			06/19/17 13:04	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*06/19/17 13:04*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*104*		*80 - 128*		*06/15/17 02:51*	*1*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*		*06/15/17 02:51*	*1*
Toluene-d8 (Surr)	*105*		*80 - 128*		*06/19/17 13:04*	*1*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*		*06/19/17 13:04*	*1*
Dibromofluoromethane (Surr)	*103*		*76 - 132*		*06/15/17 02:51*	*1*
Dibromofluoromethane (Surr)	*108*		*76 - 132*		*06/19/17 13:04*	*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		06/15/17 07:24	06/17/17 06:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*58*		*30 - 120*	*06/15/17 07:24*	*06/17/17 06:56*	*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			06/13/17 17:58	5
Nitrate as N	ND		0.55	0.28	mg/L			06/13/17 17:58	5
Chloride	**13**		2.5	1.3	mg/L			06/13/17 17:58	5
Fluoride	**3.2**		2.5	1.3	mg/L			06/13/17 17:58	5
Sulfate	**1800**		100	50	mg/L			06/13/17 18:14	200

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**2.1**		0.050	0.025	mg/L		06/19/17 11:25	06/20/17 12:16	1
Calcium	**3.0**		0.10	0.050	mg/L		06/19/17 11:25	06/20/17 12:16	1
Iron	ND		0.10	0.050	mg/L		06/19/17 11:25	06/20/17 12:16	1
Magnesium	**1.6**		0.020	0.010	mg/L		06/19/17 11:25	06/20/17 12:16	1

Client Sample ID: DW-1

Date Collected: 06/13/17 09:48
Date Received: 06/13/17 16:25

Lab Sample ID: 440-186359-1
Matrix: Water

Method: 6010B - Metals (ICP) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Manganese	ND		0.020	0.010	mg/L		06/19/17 11:25	06/20/17 12:16	1
Potassium	**1.5**		0.50	0.25	mg/L		06/19/17 11:25	06/20/17 12:16	1
Sodium	**1100**		1.0	0.50	mg/L		06/19/17 11:25	06/20/17 19:10	2

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	**220**		200	100	mg/L			06/19/17 16:09	10
Total Dissolved Solids	**3100**		50	25	mg/L			06/16/17 08:29	1
Ammonia (as N)	**1.9**		0.50	0.10	mg/L		06/14/17 08:30	06/14/17 09:30	1
Total Sulfide	**0.49**		0.050	0.027	mg/L			06/13/17 20:36	1
Total Organic Carbon	**3.2**		0.10	0.050	mg/L			06/14/17 17:04	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	**580**		4.0	4.0	mg/L			06/14/17 09:41	1
Bicarbonate Alkalinity as CaCO3	**470**		4.0	4.0	mg/L			06/14/17 09:41	1
Carbon Dioxide, Free	ND		2.0	2.0	mg/L			06/14/17 15:56	1

Client Sample ID: DW-2

Date Collected: 06/13/17 10:28
Date Received: 06/13/17 16:25

Lab Sample ID: 440-186359-2
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			06/19/17 13:34	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/19/17 13:34	1
Acrolein	ND		50	2.5	ug/L			06/15/17 03:17	1
Acrylonitrile	ND		50	1.0	ug/L			06/15/17 03:17	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			06/19/17 13:34	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/19/17 13:34	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			06/19/17 13:34	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			06/19/17 13:34	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			06/19/17 13:34	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			06/19/17 13:34	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			06/19/17 13:34	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			06/19/17 13:34	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			06/19/17 13:34	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			06/19/17 13:34	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			06/19/17 13:34	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			06/19/17 13:34	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			06/19/17 13:34	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			06/19/17 13:34	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			06/19/17 13:34	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			06/19/17 13:34	1
2-Hexanone	ND		5.0	2.5	ug/L			06/19/17 13:34	1
Acetone	ND		20	10	ug/L			06/19/17 13:34	1
Acetonitrile	ND		20	10	ug/L			06/19/17 13:34	1
Benzene	ND		0.50	0.25	ug/L			06/19/17 13:34	1
Allyl chloride	ND		1.0	0.50	ug/L			06/19/17 13:34	1
Bromoform	ND		1.0	0.40	ug/L			06/19/17 13:34	1
Bromomethane	ND		0.50	0.25	ug/L			06/19/17 13:34	1
Carbon disulfide	ND		1.0	0.50	ug/L			06/19/17 13:34	1

Client Sample ID: DW-2
Date Collected: 06/13/17 10:28
Date Received: 06/13/17 16:25

Lab Sample ID: 440-186359-2
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			06/19/17 13:34	1
Chlorobenzene	ND		0.50	0.25	ug/L			06/19/17 13:34	1
Bromochloromethane	ND		0.50	0.25	ug/L			06/19/17 13:34	1
Chloroethane	ND		1.0	0.40	ug/L			06/19/17 13:34	1
Chloroform	ND		0.50	0.25	ug/L			06/19/17 13:34	1
Chloromethane	ND		0.50	0.25	ug/L			06/19/17 13:34	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			06/19/17 13:34	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/19/17 13:34	1
Dibromochloromethane	ND		0.50	0.25	ug/L			06/19/17 13:34	1
Dibromomethane	ND		0.50	0.25	ug/L			06/19/17 13:34	1
Bromodichloromethane	ND		0.50	0.25	ug/L			06/19/17 13:34	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			06/19/17 13:34	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			06/19/17 13:34	1
Ethylbenzene	ND		0.50	0.25	ug/L			06/19/17 13:34	1
Iodomethane	ND		2.0	1.0	ug/L			06/19/17 13:34	1
Isobutyl alcohol	ND		25	13	ug/L			06/19/17 13:34	1
m,p-Xylene	ND		1.0	0.50	ug/L			06/19/17 13:34	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			06/19/17 13:34	1
Methyl methacrylate	ND		2.0	1.0	ug/L			06/19/17 13:34	1
Methylene Chloride	ND		2.0	0.88	ug/L			06/19/17 13:34	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			06/19/17 13:34	1
Naphthalene	ND		1.0	0.40	ug/L			06/19/17 13:34	1
o-Xylene	ND		0.50	0.25	ug/L			06/19/17 13:34	1
Propionitrile	ND		20	10	ug/L			06/19/17 13:34	1
Styrene	ND		0.50	0.25	ug/L			06/19/17 13:34	1
t-Butanol	ND		10	5.0	ug/L			06/19/17 13:34	1
Tetrachloroethene	ND		0.50	0.25	ug/L			06/19/17 13:34	1
Tetrahydrofuran	ND		10	5.0	ug/L			06/19/17 13:34	1
Toluene	ND		0.50	0.25	ug/L			06/19/17 13:34	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			06/19/17 13:34	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/19/17 13:34	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			06/19/17 13:34	1
Trichloroethene	ND		0.50	0.25	ug/L			06/19/17 13:34	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			06/19/17 13:34	1
Vinyl acetate	ND		4.0	2.0	ug/L			06/19/17 13:34	1
Vinyl chloride	ND		0.50	0.25	ug/L			06/19/17 13:34	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			06/19/17 13:34	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			06/19/17 13:34	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			06/19/17 13:34	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*06/19/17 13:34*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*106*		*80 - 128*		*06/15/17 03:17*	*1*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*		*06/15/17 03:17*	*1*
Toluene-d8 (Surr)	*102*		*80 - 128*		*06/19/17 13:34*	*1*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*		*06/19/17 13:34*	*1*
Dibromofluoromethane (Surr)	*104*		*76 - 132*		*06/15/17 03:17*	*1*
Dibromofluoromethane (Surr)	*109*		*76 - 132*		*06/19/17 13:34*	*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		06/15/17 07:24	06/17/17 07:17	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*64*		*30 - 120*	*06/15/17 07:24*	*06/17/17 07:17*	*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			06/13/17 18:31	2
Nitrate as N	ND		0.22	0.11	mg/L			06/13/17 18:31	2
Chloride	**9.3**		1.0	0.50	mg/L			06/13/17 18:31	2
Fluoride	**1.0**		1.0	0.50	mg/L			06/13/17 18:31	2
Sulfate	**900**		50	25	mg/L			06/13/17 18:48	100

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**0.73**		0.050	0.025	mg/L		06/19/17 11:25	06/20/17 12:19	1
Calcium	**47**		0.10	0.050	mg/L		06/19/17 11:25	06/20/17 12:19	1
Iron	**0.37**		0.10	0.050	mg/L		06/19/17 11:25	06/20/17 12:19	1
Magnesium	**33**		0.020	0.010	mg/L		06/19/17 11:25	06/20/17 12:19	1
Manganese	**0.061**		0.020	0.010	mg/L		06/19/17 11:25	06/20/17 12:19	1
Potassium	**3.3**		0.50	0.25	mg/L		06/19/17 11:25	06/20/17 12:19	1
Sodium	**510**		0.50	0.25	mg/L		06/19/17 11:25	06/20/17 12:19	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	**35**		20	10	mg/L			06/19/17 16:09	1
Total Dissolved Solids	**1800**		20	10	mg/L			06/16/17 08:29	1
Ammonia (as N)	**2.6**		0.50	0.10	mg/L		06/14/17 08:30	06/14/17 09:30	1
Total Sulfide	ND		0.050	0.027	mg/L			06/13/17 20:36	1
Total Organic Carbon	**1.4**		0.10	0.050	mg/L			06/14/17 14:02	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	**430**		4.0	4.0	mg/L			06/14/17 09:50	1
Bicarbonate Alkalinity as CaCO3	**430**		4.0	4.0	mg/L			06/14/17 09:50	1
Carbon Dioxide, Free	**23**		2.0	2.0	mg/L			06/14/17 15:56	1

Client Sample ID: DW-3

Lab Sample ID: 440-186359-3

Date Collected: 06/13/17 11:20

Matrix: Water

Date Received: 06/13/17 16:25

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			06/19/17 14:04	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/19/17 14:04	1
Acrolein	ND		50	2.5	ug/L			06/15/17 03:43	1
Acrylonitrile	ND		50	1.0	ug/L			06/15/17 03:43	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			06/19/17 14:04	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/19/17 14:04	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			06/19/17 14:04	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			06/19/17 14:04	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			06/19/17 14:04	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			06/19/17 14:04	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			06/19/17 14:04	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			06/19/17 14:04	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			06/19/17 14:04	1

Client Sample ID: DW-3
Date Collected: 06/13/17 11:20
Date Received: 06/13/17 16:25

Lab Sample ID: 440-186359-3
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane	ND		0.50	0.25	ug/L			06/19/17 14:04	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			06/19/17 14:04	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			06/19/17 14:04	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			06/19/17 14:04	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			06/19/17 14:04	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			06/19/17 14:04	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			06/19/17 14:04	1
2-Hexanone	ND		5.0	2.5	ug/L			06/19/17 14:04	1
Acetone	ND		20	10	ug/L			06/19/17 14:04	1
Acetonitrile	ND		20	10	ug/L			06/19/17 14:04	1
Benzene	ND		0.50	0.25	ug/L			06/19/17 14:04	1
Allyl chloride	ND		1.0	0.50	ug/L			06/19/17 14:04	1
Bromoform	ND		1.0	0.40	ug/L			06/19/17 14:04	1
Bromomethane	ND		0.50	0.25	ug/L			06/19/17 14:04	1
Carbon disulfide	ND		1.0	0.50	ug/L			06/19/17 14:04	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			06/19/17 14:04	1
Chlorobenzene	ND		0.50	0.25	ug/L			06/19/17 14:04	1
Bromochloromethane	ND		0.50	0.25	ug/L			06/19/17 14:04	1
Chloroethane	ND		1.0	0.40	ug/L			06/19/17 14:04	1
Chloroform	ND		0.50	0.25	ug/L			06/19/17 14:04	1
Chloromethane	ND		0.50	0.25	ug/L			06/19/17 14:04	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			06/19/17 14:04	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/19/17 14:04	1
Dibromochloromethane	ND		0.50	0.25	ug/L			06/19/17 14:04	1
Dibromomethane	ND		0.50	0.25	ug/L			06/19/17 14:04	1
Bromodichloromethane	ND		0.50	0.25	ug/L			06/19/17 14:04	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			06/19/17 14:04	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			06/19/17 14:04	1
Ethylbenzene	ND		0.50	0.25	ug/L			06/19/17 14:04	1
Iodomethane	ND		2.0	1.0	ug/L			06/19/17 14:04	1
Isobutyl alcohol	ND		25	13	ug/L			06/19/17 14:04	1
m,p-Xylene	ND		1.0	0.50	ug/L			06/19/17 14:04	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			06/19/17 14:04	1
Methyl methacrylate	ND		2.0	1.0	ug/L			06/19/17 14:04	1
Methylene Chloride	ND		2.0	0.88	ug/L			06/19/17 14:04	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			06/19/17 14:04	1
Naphthalene	ND		1.0	0.40	ug/L			06/19/17 14:04	1
o-Xylene	ND		0.50	0.25	ug/L			06/19/17 14:04	1
Propionitrile	ND		20	10	ug/L			06/19/17 14:04	1
Styrene	ND		0.50	0.25	ug/L			06/19/17 14:04	1
t-Butanol	ND		10	5.0	ug/L			06/19/17 14:04	1
Tetrachloroethene	ND		0.50	0.25	ug/L			06/19/17 14:04	1
Tetrahydrofuran	ND		10	5.0	ug/L			06/19/17 14:04	1
Toluene	ND		0.50	0.25	ug/L			06/19/17 14:04	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			06/19/17 14:04	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/19/17 14:04	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			06/19/17 14:04	1
Trichloroethene	ND		0.50	0.25	ug/L			06/19/17 14:04	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			06/19/17 14:04	1

Client Sample ID: DW-3

Date Collected: 06/13/17 11:20
Date Received: 06/13/17 16:25

Lab Sample ID: 440-186359-3

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl acetate	ND		4.0	2.0	ug/L			06/19/17 14:04	1
Vinyl chloride	ND		0.50	0.25	ug/L			06/19/17 14:04	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			06/19/17 14:04	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			06/19/17 14:04	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			06/19/17 14:04	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*06/19/17 14:04*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*105*		*80 - 128*		*06/15/17 03:43*	*1*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*		*06/15/17 03:43*	*1*
Toluene-d8 (Surr)	*103*		*80 - 128*		*06/19/17 14:04*	*1*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*		*06/19/17 14:04*	*1*
Dibromofluoromethane (Surr)	*106*		*76 - 132*		*06/15/17 03:43*	*1*
Dibromofluoromethane (Surr)	*112*		*76 - 132*		*06/19/17 14:04*	*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		06/15/17 07:24	06/17/17 07:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*57*		*30 - 120*	*06/15/17 07:24*	*06/17/17 07:39*	*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			06/13/17 19:37	1
Nitrate as N	ND		0.11	0.055	mg/L			06/13/17 19:37	1
Chloride	**14**		0.50	0.25	mg/L			06/13/17 19:37	1
Fluoride	**0.64**	**F1**	0.50	0.25	mg/L			06/13/17 19:37	1
Sulfate	**1200**		25	13	mg/L			06/13/17 20:27	50

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**0.061**		0.050	0.025	mg/L		06/19/17 11:25	06/20/17 12:29	1
Calcium	**310**		0.10	0.050	mg/L		06/19/17 11:25	06/20/17 12:29	1
Iron	**0.68**		0.10	0.050	mg/L		06/19/17 11:25	06/20/17 12:29	1
Magnesium	**110**		0.020	0.010	mg/L		06/19/17 11:25	06/20/17 12:29	1
Manganese	**0.080**		0.020	0.010	mg/L		06/19/17 11:25	06/20/17 12:29	1
Potassium	**9.1**		0.50	0.25	mg/L		06/19/17 11:25	06/20/17 12:29	1
Sodium	**71**		0.50	0.25	mg/L		06/19/17 11:25	06/20/17 12:29	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	**29**		20	10	mg/L			06/19/17 16:09	1
Total Dissolved Solids	**1900**		10	5.0	mg/L			06/16/17 08:29	1
Ammonia (as N)	**0.58**		0.50	0.10	mg/L		06/14/17 08:30	06/14/17 09:30	1
Total Sulfide	ND		0.050	0.027	mg/L			06/13/17 20:36	1
Total Organic Carbon	**0.36**		0.10	0.050	mg/L			06/14/17 16:49	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	**170**		4.0	4.0	mg/L			06/14/17 09:57	1

Client Sample ID: DW-3

Date Collected: 06/13/17 11:20
Date Received: 06/13/17 16:25

Lab Sample ID: 440-186359-3
Matrix: Water

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Bicarbonate Alkalinity as CaCO3	170		4.0	4.0	mg/L			06/14/17 09:57	1
Carbon Dioxide, Free	21		2.0	2.0	mg/L			06/14/17 15:56	1

Client Sample ID: PZ-2

Date Collected: 06/13/17 11:21
Date Received: 06/13/17 16:25

Lab Sample ID: 440-186359-4
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			06/19/17 14:33	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/19/17 14:33	1
Acrolein	ND		50	2.5	ug/L			06/15/17 04:10	1
Acrylonitrile	ND		50	1.0	ug/L			06/15/17 04:10	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			06/19/17 14:33	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/19/17 14:33	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			06/19/17 14:33	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			06/19/17 14:33	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			06/19/17 14:33	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			06/19/17 14:33	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			06/19/17 14:33	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			06/19/17 14:33	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			06/19/17 14:33	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			06/19/17 14:33	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			06/19/17 14:33	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			06/19/17 14:33	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			06/19/17 14:33	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			06/19/17 14:33	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			06/19/17 14:33	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			06/19/17 14:33	1
2-Hexanone	ND		5.0	2.5	ug/L			06/19/17 14:33	1
Acetone	ND		20	10	ug/L			06/19/17 14:33	1
Acetonitrile	ND		20	10	ug/L			06/19/17 14:33	1
Benzene	ND		0.50	0.25	ug/L			06/19/17 14:33	1
Allyl chloride	ND		1.0	0.50	ug/L			06/19/17 14:33	1
Bromoform	ND		1.0	0.40	ug/L			06/19/17 14:33	1
Bromomethane	ND		0.50	0.25	ug/L			06/19/17 14:33	1
Carbon disulfide	ND		1.0	0.50	ug/L			06/19/17 14:33	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			06/19/17 14:33	1
Chlorobenzene	ND		0.50	0.25	ug/L			06/19/17 14:33	1
Bromochloromethane	ND		0.50	0.25	ug/L			06/19/17 14:33	1
Chloroethane	ND		1.0	0.40	ug/L			06/19/17 14:33	1
Chloroform	ND		0.50	0.25	ug/L			06/19/17 14:33	1
Chloromethane	ND		0.50	0.25	ug/L			06/19/17 14:33	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			06/19/17 14:33	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/19/17 14:33	1
Dibromochloromethane	ND		0.50	0.25	ug/L			06/19/17 14:33	1
Dibromomethane	ND		0.50	0.25	ug/L			06/19/17 14:33	1
Bromodichloromethane	ND		0.50	0.25	ug/L			06/19/17 14:33	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			06/19/17 14:33	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			06/19/17 14:33	1

Client Sample ID: PZ-2
Date Collected: 06/13/17 11:21
Date Received: 06/13/17 16:25

Lab Sample ID: 440-186359-4
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		0.50	0.25	ug/L			06/19/17 14:33	1
Iodomethane	ND		2.0	1.0	ug/L			06/19/17 14:33	1
Isobutyl alcohol	ND		25	13	ug/L			06/19/17 14:33	1
m,p-Xylene	ND		1.0	0.50	ug/L			06/19/17 14:33	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			06/19/17 14:33	1
Methyl methacrylate	ND		2.0	1.0	ug/L			06/19/17 14:33	1
Methylene Chloride	ND		2.0	0.88	ug/L			06/19/17 14:33	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			06/19/17 14:33	1
Naphthalene	ND		1.0	0.40	ug/L			06/19/17 14:33	1
o-Xylene	ND		0.50	0.25	ug/L			06/19/17 14:33	1
Propionitrile	ND		20	10	ug/L			06/19/17 14:33	1
Styrene	ND		0.50	0.25	ug/L			06/19/17 14:33	1
t-Butanol	ND		10	5.0	ug/L			06/19/17 14:33	1
Tetrachloroethene	ND		0.50	0.25	ug/L			06/19/17 14:33	1
Tetrahydrofuran	ND		10	5.0	ug/L			06/19/17 14:33	1
Toluene	ND		0.50	0.25	ug/L			06/19/17 14:33	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			06/19/17 14:33	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/19/17 14:33	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			06/19/17 14:33	1
Trichloroethene	ND		0.50	0.25	ug/L			06/19/17 14:33	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			06/19/17 14:33	1
Vinyl acetate	ND		4.0	2.0	ug/L			06/19/17 14:33	1
Vinyl chloride	ND		0.50	0.25	ug/L			06/19/17 14:33	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			06/19/17 14:33	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			06/19/17 14:33	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			06/19/17 14:33	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*06/19/17 14:33*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*106*		*80 - 128*		*06/15/17 04:10*	*1*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*		*06/15/17 04:10*	*1*
Toluene-d8 (Surr)	*104*		*80 - 128*		*06/19/17 14:33*	*1*
4-Bromofluorobenzene (Surr)	*106*		*80 - 120*		*06/19/17 14:33*	*1*
Dibromofluoromethane (Surr)	*104*		*76 - 132*		*06/15/17 04:10*	*1*
Dibromofluoromethane (Surr)	*110*		*76 - 132*		*06/19/17 14:33*	*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		06/15/17 07:24	06/17/17 08:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*62*		*30 - 120*	*06/15/17 07:24*	*06/17/17 08:00*	*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			06/13/17 19:04	10
Nitrate as N	ND		1.1	0.55	mg/L			06/13/17 19:04	10
Chloride	**10**		5.0	2.5	mg/L			06/13/17 19:04	10
Fluoride	**3.0**	**J**	5.0	2.5	mg/L			06/13/17 19:04	10

Client Sample ID: PZ-2

Lab Sample ID: 440-186359-4

Date Collected: 06/13/17 11:21

Matrix: Water

Date Received: 06/13/17 16:25

Method: 300.0 - Anions, Ion Chromatography (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfate	**2500**		100	50	mg/L			06/13/17 19:21	200

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**1.4**		0.050	0.025	mg/L		06/19/17 11:25	06/20/17 12:31	1
Calcium	**13**		0.10	0.050	mg/L		06/19/17 11:25	06/20/17 12:31	1
Iron	ND		0.10	0.050	mg/L		06/19/17 11:25	06/20/17 12:31	1
Magnesium	**11**		0.020	0.010	mg/L		06/19/17 11:25	06/20/17 12:31	1
Manganese	**0.025**		0.020	0.010	mg/L		06/19/17 11:25	06/20/17 12:31	1
Potassium	**2.8**		0.50	0.25	mg/L		06/19/17 11:25	06/20/17 12:31	1
Sodium	**1400**		1.0	0.50	mg/L		06/19/17 11:25	06/20/17 19:13	2

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	**31**		20	10	mg/L			06/19/17 16:10	1
Total Dissolved Solids	**4100**		100	50	mg/L			06/16/17 08:29	1
Ammonia (as N)	**2.9**		0.50	0.10	mg/L		06/14/17 08:30	06/14/17 09:30	1
Total Sulfide	ND		0.050	0.027	mg/L			06/13/17 20:36	1
Total Organic Carbon	**2.5**		0.10	0.050	mg/L			06/14/17 17:16	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	**400**		4.0	4.0	mg/L			06/14/17 10:07	1
Bicarbonate Alkalinity as CaCO3	**370**		4.0	4.0	mg/L			06/14/17 10:07	1
Carbon Dioxide, Free	ND		2.0	2.0	mg/L			06/14/17 15:56	1

Client Sample ID: CM-11R

Lab Sample ID: 440-186359-5

Date Collected: 06/13/17 13:15

Matrix: Water

Date Received: 06/13/17 16:25

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			06/19/17 15:03	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/19/17 15:03	1
Acrolein	ND		50	2.5	ug/L			06/15/17 04:36	1
Acrylonitrile	ND		50	1.0	ug/L			06/15/17 04:36	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			06/19/17 15:03	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/19/17 15:03	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			06/19/17 15:03	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			06/19/17 15:03	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			06/19/17 15:03	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			06/19/17 15:03	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			06/19/17 15:03	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			06/19/17 15:03	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			06/19/17 15:03	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			06/19/17 15:03	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			06/19/17 15:03	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			06/19/17 15:03	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			06/19/17 15:03	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			06/19/17 15:03	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			06/19/17 15:03	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			06/19/17 15:03	1

Client Sample ID: CM-11R
Date Collected: 06/13/17 13:15
Date Received: 06/13/17 16:25

Lab Sample ID: 440-186359-5
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2-Hexanone	ND		5.0	2.5	ug/L			06/19/17 15:03	1
Acetone	ND		20	10	ug/L			06/19/17 15:03	1
Acetonitrile	ND		20	10	ug/L			06/19/17 15:03	1
Benzene	ND		0.50	0.25	ug/L			06/19/17 15:03	1
Allyl chloride	ND		1.0	0.50	ug/L			06/19/17 15:03	1
Bromoform	ND		1.0	0.40	ug/L			06/19/17 15:03	1
Bromomethane	ND		0.50	0.25	ug/L			06/19/17 15:03	1
Carbon disulfide	ND		1.0	0.50	ug/L			06/19/17 15:03	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			06/19/17 15:03	1
Chlorobenzene	ND		0.50	0.25	ug/L			06/19/17 15:03	1
Bromochloromethane	ND		0.50	0.25	ug/L			06/19/17 15:03	1
Chloroethane	ND		1.0	0.40	ug/L			06/19/17 15:03	1
Chloroform	ND		0.50	0.25	ug/L			06/19/17 15:03	1
Chloromethane	ND		0.50	0.25	ug/L			06/19/17 15:03	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			06/19/17 15:03	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/19/17 15:03	1
Dibromochloromethane	ND		0.50	0.25	ug/L			06/19/17 15:03	1
Dibromomethane	ND		0.50	0.25	ug/L			06/19/17 15:03	1
Bromodichloromethane	ND		0.50	0.25	ug/L			06/19/17 15:03	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			06/19/17 15:03	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			06/19/17 15:03	1
Ethylbenzene	ND		0.50	0.25	ug/L			06/19/17 15:03	1
Iodomethane	ND		2.0	1.0	ug/L			06/19/17 15:03	1
Isobutyl alcohol	ND		25	13	ug/L			06/19/17 15:03	1
m,p-Xylene	ND		1.0	0.50	ug/L			06/19/17 15:03	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			06/19/17 15:03	1
Methyl methacrylate	ND		2.0	1.0	ug/L			06/19/17 15:03	1
Methylene Chloride	ND		2.0	0.88	ug/L			06/19/17 15:03	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			06/19/17 15:03	1
Naphthalene	ND		1.0	0.40	ug/L			06/19/17 15:03	1
o-Xylene	ND		0.50	0.25	ug/L			06/19/17 15:03	1
Propionitrile	ND		20	10	ug/L			06/19/17 15:03	1
Styrene	ND		0.50	0.25	ug/L			06/19/17 15:03	1
t-Butanol	ND		10	5.0	ug/L			06/19/17 15:03	1
Tetrachloroethene	ND		0.50	0.25	ug/L			06/19/17 15:03	1
Tetrahydrofuran	ND		10	5.0	ug/L			06/19/17 15:03	1
Toluene	ND		0.50	0.25	ug/L			06/19/17 15:03	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			06/19/17 15:03	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/19/17 15:03	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			06/19/17 15:03	1
Trichloroethene	ND		0.50	0.25	ug/L			06/19/17 15:03	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			06/19/17 15:03	1
Vinyl acetate	ND		4.0	2.0	ug/L			06/19/17 15:03	1
Vinyl chloride	ND		0.50	0.25	ug/L			06/19/17 15:03	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			06/19/17 15:03	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			06/19/17 15:03	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			06/19/17 15:03	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*06/19/17 15:03*	*1*

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	*105*		*80 - 128*		*06/15/17 04:36*	*1*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*		*06/15/17 04:36*	*1*
Toluene-d8 (Surr)	*106*		*80 - 128*		*06/19/17 15:03*	*1*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*		*06/19/17 15:03*	*1*
Dibromofluoromethane (Surr)	*108*		*76 - 132*		*06/15/17 04:36*	*1*
Dibromofluoromethane (Surr)	*112*		*76 - 132*		*06/19/17 15:03*	*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		06/15/17 07:24	06/17/17 08:22	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	*59*		*30 - 120*	*06/15/17 07:24*	*06/17/17 08:22*	*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			06/13/17 21:35	5
Nitrate as N	ND		0.55	0.28	mg/L			06/13/17 21:35	5
Chloride	**12**		2.5	1.3	mg/L			06/13/17 21:35	5
Fluoride	**3.8**		2.5	1.3	mg/L			06/13/17 21:35	5
Sulfate	**2800**		100	50	mg/L			06/13/17 21:51	200

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		06/19/17 11:25	06/20/17 12:34	1
Calcium	**340**		0.10	0.050	mg/L		06/19/17 11:25	06/20/17 12:34	1
Iron	ND		0.10	0.050	mg/L		06/19/17 11:25	06/20/17 12:34	1
Magnesium	**210**		0.020	0.010	mg/L		06/19/17 11:25	06/20/17 12:34	1
Manganese	**4.2**		0.020	0.010	mg/L		06/19/17 11:25	06/20/17 12:34	1
Potassium	**12**		0.50	0.25	mg/L		06/19/17 11:25	06/20/17 12:34	1
Sodium	**480**		0.50	0.25	mg/L		06/19/17 11:25	06/20/17 12:34	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	**27**		20	10	mg/L			06/19/17 16:10	1
Total Dissolved Solids	**4100**		50	25	mg/L			06/16/17 08:29	1
Ammonia (as N)	**0.48**	**J**	0.50	0.10	mg/L		06/14/17 08:30	06/14/17 09:30	1
Total Sulfide	ND		0.050	0.027	mg/L			06/13/17 20:36	1
Total Organic Carbon	**5.4**		0.10	0.050	mg/L			06/14/17 17:53	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	ND		4.0	4.0	mg/L			06/14/17 10:13	1
Bicarbonate Alkalinity as CaCO3	ND		4.0	4.0	mg/L			06/14/17 10:13	1
Carbon Dioxide, Free	**69**		2.0	2.0	mg/L			06/14/17 15:56	1

Client Sample ID: MW-14

Date Collected: 06/13/17 08:15
Date Received: 06/13/17 16:25

Lab Sample ID: 440-186359-6

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			06/19/17 15:33	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/19/17 15:33	1
Acrolein	ND		50	2.5	ug/L			06/15/17 05:03	1
Acrylonitrile	ND		50	1.0	ug/L			06/15/17 05:03	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			06/19/17 15:33	1

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

TestAmerica Job ID: 440-186359-1

Client Sample ID: MW-14
Date Collected: 06/13/17 08:15
Date Received: 06/13/17 16:25

Lab Sample ID: 440-186359-6
Matrix: Water

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		0.50	0.25	ug/L			06/19/17 15:33	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			06/19/17 15:33	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			06/19/17 15:33	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			06/19/17 15:33	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			06/19/17 15:33	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			06/19/17 15:33	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			06/19/17 15:33	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			06/19/17 15:33	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			06/19/17 15:33	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			06/19/17 15:33	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			06/19/17 15:33	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			06/19/17 15:33	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			06/19/17 15:33	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			06/19/17 15:33	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			06/19/17 15:33	1
2-Hexanone	ND		5.0	2.5	ug/L			06/19/17 15:33	1
Acetone	ND		20	10	ug/L			06/19/17 15:33	1
Acetonitrile	ND		20	10	ug/L			06/19/17 15:33	1
Benzene	ND		0.50	0.25	ug/L			06/19/17 15:33	1
Allyl chloride	ND		1.0	0.50	ug/L			06/19/17 15:33	1
Bromoform	ND		1.0	0.40	ug/L			06/19/17 15:33	1
Bromomethane	ND		0.50	0.25	ug/L			06/19/17 15:33	1
Carbon disulfide	ND		1.0	0.50	ug/L			06/19/17 15:33	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			06/19/17 15:33	1
Chlorobenzene	ND		0.50	0.25	ug/L			06/19/17 15:33	1
Bromochloromethane	ND		0.50	0.25	ug/L			06/19/17 15:33	1
Chloroethane	ND		1.0	0.40	ug/L			06/19/17 15:33	1
Chloroform	ND		0.50	0.25	ug/L			06/19/17 15:33	1
Chloromethane	ND		0.50	0.25	ug/L			06/19/17 15:33	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			06/19/17 15:33	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/19/17 15:33	1
Dibromochloromethane	ND		0.50	0.25	ug/L			06/19/17 15:33	1
Dibromomethane	ND		0.50	0.25	ug/L			06/19/17 15:33	1
Bromodichloromethane	ND		0.50	0.25	ug/L			06/19/17 15:33	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			06/19/17 15:33	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			06/19/17 15:33	1
Ethylbenzene	ND		0.50	0.25	ug/L			06/19/17 15:33	1
Iodomethane	ND		2.0	1.0	ug/L			06/19/17 15:33	1
Isobutyl alcohol	ND		25	13	ug/L			06/19/17 15:33	1
m,p-Xylene	ND		1.0	0.50	ug/L			06/19/17 15:33	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			06/19/17 15:33	1
Methyl methacrylate	ND		2.0	1.0	ug/L			06/19/17 15:33	1
Methylene Chloride	ND		2.0	0.88	ug/L			06/19/17 15:33	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			06/19/17 15:33	1
Naphthalene	ND		1.0	0.40	ug/L			06/19/17 15:33	1
o-Xylene	ND		0.50	0.25	ug/L			06/19/17 15:33	1
Propionitrile	ND		20	10	ug/L			06/19/17 15:33	1
Styrene	ND		0.50	0.25	ug/L			06/19/17 15:33	1
t-Butanol	ND		10	5.0	ug/L			06/19/17 15:33	1

Client Sample ID: MW-14

Date Collected: 06/13/17 08:15
Date Received: 06/13/17 16:25

Lab Sample ID: 440-186359-6

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		0.50	0.25	ug/L			06/19/17 15:33	1
Tetrahydrofuran	ND		10	5.0	ug/L			06/19/17 15:33	1
Toluene	ND		0.50	0.25	ug/L			06/19/17 15:33	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			06/19/17 15:33	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/19/17 15:33	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			06/19/17 15:33	1
Trichloroethene	ND		0.50	0.25	ug/L			06/19/17 15:33	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			06/19/17 15:33	1
Vinyl acetate	ND		4.0	2.0	ug/L			06/19/17 15:33	1
Vinyl chloride	ND		0.50	0.25	ug/L			06/19/17 15:33	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			06/19/17 15:33	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			06/19/17 15:33	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			06/19/17 15:33	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*06/19/17 15:33*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*105*		*80 - 128*		*06/15/17 05:03*	*1*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*		*06/15/17 05:03*	*1*
Toluene-d8 (Surr)	*104*		*80 - 128*		*06/19/17 15:33*	*1*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*		*06/19/17 15:33*	*1*
Dibromofluoromethane (Surr)	*105*		*76 - 132*		*06/15/17 05:03*	*1*
Dibromofluoromethane (Surr)	*110*		*76 - 132*		*06/19/17 15:33*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.97	0.24	ug/L		06/15/17 07:24	06/17/17 08:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*59*		*30 - 120*	*06/15/17 07:24*	*06/17/17 08:44*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	**3.8**	**J**	5.0	2.5	mg/L			06/13/17 22:08	10
Nitrate as N	ND		1.1	0.55	mg/L			06/13/17 22:08	10
Chloride	**86**		5.0	2.5	mg/L			06/13/17 22:08	10
Fluoride	**4.3**	**J**	5.0	2.5	mg/L			06/13/17 22:08	10
Sulfate	**3600**		100	50	mg/L			06/13/17 22:24	200

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**0.71**		0.050	0.025	mg/L		06/19/17 11:25	06/20/17 12:36	1
Calcium	**590**		0.20	0.10	mg/L		06/19/17 11:25	06/20/17 19:16	2
Iron	**0.080**	**J**	0.10	0.050	mg/L		06/19/17 11:25	06/20/17 12:36	1
Magnesium	**350**		0.020	0.010	mg/L		06/19/17 11:25	06/20/17 12:36	1
Manganese	**4.3**		0.020	0.010	mg/L		06/19/17 11:25	06/20/17 12:36	1
Potassium	**9.5**		0.50	0.25	mg/L		06/19/17 11:25	06/20/17 12:36	1
Sodium	**630**		0.50	0.25	mg/L		06/19/17 11:25	06/20/17 12:36	1

Client Sample ID: MW-14

Date Collected: 06/13/17 08:15
Date Received: 06/13/17 16:25

Lab Sample ID: 440-186359-6
Matrix: Water

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	52		20	10	mg/L			06/19/17 16:10	1
Total Dissolved Solids	6400		100	50	mg/L			06/16/17 08:29	1
Ammonia (as N)	0.14	J	0.50	0.10	mg/L		06/14/17 08:30	06/14/17 09:30	1
Total Sulfide	ND		0.050	0.027	mg/L			06/13/17 20:37	1
Total Organic Carbon	12		0.50	0.25	mg/L			06/14/17 15:24	5

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	660		4.0	4.0	mg/L			06/14/17 10:24	1
Bicarbonate Alkalinity as CaCO3	660		4.0	4.0	mg/L			06/14/17 10:24	1
Carbon Dioxide, Free	150		2.0	2.0	mg/L			06/14/17 15:56	1

Client Sample ID: MW-6

Date Collected: 06/13/17 09:45
Date Received: 06/13/17 16:25

Lab Sample ID: 440-186359-7
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			06/19/17 16:03	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/19/17 16:03	1
Acrolein	ND		50	2.5	ug/L			06/15/17 05:29	1
Acrylonitrile	ND		50	1.0	ug/L			06/15/17 05:29	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			06/19/17 16:03	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/19/17 16:03	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			06/19/17 16:03	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			06/19/17 16:03	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			06/19/17 16:03	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			06/19/17 16:03	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			06/19/17 16:03	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			06/19/17 16:03	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			06/19/17 16:03	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			06/19/17 16:03	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			06/19/17 16:03	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			06/19/17 16:03	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			06/19/17 16:03	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			06/19/17 16:03	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			06/19/17 16:03	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			06/19/17 16:03	1
2-Hexanone	ND		5.0	2.5	ug/L			06/19/17 16:03	1
Acetone	ND		20	10	ug/L			06/19/17 16:03	1
Acetonitrile	ND		20	10	ug/L			06/19/17 16:03	1
Benzene	ND		0.50	0.25	ug/L			06/19/17 16:03	1
Allyl chloride	ND		1.0	0.50	ug/L			06/19/17 16:03	1
Bromoform	ND		1.0	0.40	ug/L			06/19/17 16:03	1
Bromomethane	ND		0.50	0.25	ug/L			06/19/17 16:03	1
Carbon disulfide	ND		1.0	0.50	ug/L			06/19/17 16:03	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			06/19/17 16:03	1
Chlorobenzene	ND		0.50	0.25	ug/L			06/19/17 16:03	1
Bromochloromethane	ND		0.50	0.25	ug/L			06/19/17 16:03	1
Chloroethane	ND		1.0	0.40	ug/L			06/19/17 16:03	1
Chloroform	ND		0.50	0.25	ug/L			06/19/17 16:03	1

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

TestAmerica Job ID: 440-186359-1

Client Sample ID: MW-6
Date Collected: 06/13/17 09:45
Date Received: 06/13/17 16:25

Lab Sample ID: 440-186359-7
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloromethane	ND		0.50	0.25	ug/L			06/19/17 16:03	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			06/19/17 16:03	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/19/17 16:03	1
Dibromochloromethane	ND		0.50	0.25	ug/L			06/19/17 16:03	1
Dibromomethane	ND		0.50	0.25	ug/L			06/19/17 16:03	1
Bromodichloromethane	ND		0.50	0.25	ug/L			06/19/17 16:03	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			06/19/17 16:03	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			06/19/17 16:03	1
Ethylbenzene	ND		0.50	0.25	ug/L			06/19/17 16:03	1
Iodomethane	ND		2.0	1.0	ug/L			06/19/17 16:03	1
Isobutyl alcohol	ND		25	13	ug/L			06/19/17 16:03	1
m,p-Xylene	ND		1.0	0.50	ug/L			06/19/17 16:03	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			06/19/17 16:03	1
Methyl methacrylate	ND		2.0	1.0	ug/L			06/19/17 16:03	1
Methylene Chloride	ND		2.0	0.88	ug/L			06/19/17 16:03	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			06/19/17 16:03	1
Naphthalene	ND		1.0	0.40	ug/L			06/19/17 16:03	1
o-Xylene	ND		0.50	0.25	ug/L			06/19/17 16:03	1
Propionitrile	ND		20	10	ug/L			06/19/17 16:03	1
Styrene	ND		0.50	0.25	ug/L			06/19/17 16:03	1
t-Butanol	ND		10	5.0	ug/L			06/19/17 16:03	1
Tetrachloroethene	ND		0.50	0.25	ug/L			06/19/17 16:03	1
Tetrahydrofuran	ND		10	5.0	ug/L			06/19/17 16:03	1
Toluene	ND		0.50	0.25	ug/L			06/19/17 16:03	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			06/19/17 16:03	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/19/17 16:03	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			06/19/17 16:03	1
Trichloroethene	ND		0.50	0.25	ug/L			06/19/17 16:03	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			06/19/17 16:03	1
Vinyl acetate	ND		4.0	2.0	ug/L			06/19/17 16:03	1
Vinyl chloride	ND		0.50	0.25	ug/L			06/19/17 16:03	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			06/19/17 16:03	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			06/19/17 16:03	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			06/19/17 16:03	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*06/19/17 16:03*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*105*		*80 - 128*		*06/15/17 05:29*	*1*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*		*06/15/17 05:29*	*1*
Toluene-d8 (Surr)	*104*		*80 - 128*		*06/19/17 16:03*	*1*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*		*06/19/17 16:03*	*1*
Dibromofluoromethane (Surr)	*104*		*76 - 132*		*06/15/17 05:29*	*1*
Dibromofluoromethane (Surr)	*110*		*76 - 132*		*06/19/17 16:03*	*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	0.26	ug/L		06/18/17 07:51	06/19/17 15:52	1

Client Sample ID: MW-6

Date Collected: 06/13/17 09:45
Date Received: 06/13/17 16:25

Lab Sample ID: 440-186359-7

Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	31		30 - 120	06/18/17 07:51	06/19/17 15:52	1

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	1.7	J	2.5	1.3	mg/L			06/13/17 22:41	5
Nitrate as N	ND		0.55	0.28	mg/L			06/13/17 22:41	5
Chloride	42		2.5	1.3	mg/L			06/13/17 22:41	5
Fluoride	2.5		2.5	1.3	mg/L			06/13/17 22:41	5
Sulfate	2400		100	50	mg/L			06/13/17 22:57	200

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.76		0.050	0.025	mg/L		06/19/17 11:25	06/20/17 12:39	1
Calcium	460		0.10	0.050	mg/L		06/19/17 11:25	06/20/17 12:39	1
Iron	1.1		0.10	0.050	mg/L		06/19/17 11:25	06/20/17 12:39	1
Magnesium	220		0.020	0.010	mg/L		06/19/17 11:25	06/20/17 12:39	1
Manganese	1.2		0.020	0.010	mg/L		06/19/17 11:25	06/20/17 12:39	1
Potassium	6.4		0.50	0.25	mg/L		06/19/17 11:25	06/20/17 12:39	1
Sodium	390		0.50	0.25	mg/L		06/19/17 11:25	06/20/17 12:39	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	180		100	50	mg/L			06/19/17 16:10	5
Total Dissolved Solids	4500		50	25	mg/L			06/16/17 08:29	1
Ammonia (as N)	0.80		0.50	0.10	mg/L		06/14/17 08:30	06/14/17 09:30	1
Total Sulfide	2.9		0.25	0.14	mg/L			06/13/17 20:37	5
Total Organic Carbon	6.6		0.10	0.050	mg/L			06/14/17 18:25	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	520		4.0	4.0	mg/L			06/14/17 10:39	1
Bicarbonate Alkalinity as CaCO3	520		4.0	4.0	mg/L			06/14/17 10:39	1
Carbon Dioxide, Free	97		2.0	2.0	mg/L			06/14/17 15:56	1

Client Sample ID: QCAB

Date Collected: 06/13/17 00:01
Date Received: 06/13/17 16:25

Lab Sample ID: 440-186359-8

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			06/19/17 16:33	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/19/17 16:33	1
Acrolein	ND		50	2.5	ug/L			06/15/17 05:55	1
Acrylonitrile	ND		50	1.0	ug/L			06/15/17 05:55	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			06/19/17 16:33	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/19/17 16:33	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			06/19/17 16:33	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			06/19/17 16:33	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			06/19/17 16:33	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			06/19/17 16:33	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			06/19/17 16:33	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			06/19/17 16:33	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			06/19/17 16:33	1

Client Sample ID: QCAB
Date Collected: 06/13/17 00:01
Date Received: 06/13/17 16:25

Lab Sample ID: 440-186359-8
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane	ND		0.50	0.25	ug/L			06/19/17 16:33	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			06/19/17 16:33	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			06/19/17 16:33	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			06/19/17 16:33	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			06/19/17 16:33	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			06/19/17 16:33	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			06/19/17 16:33	1
2-Hexanone	ND		5.0	2.5	ug/L			06/19/17 16:33	1
Acetone	ND		20	10	ug/L			06/19/17 16:33	1
Acetonitrile	ND		20	10	ug/L			06/19/17 16:33	1
Benzene	ND		0.50	0.25	ug/L			06/19/17 16:33	1
Allyl chloride	ND		1.0	0.50	ug/L			06/19/17 16:33	1
Bromoform	ND		1.0	0.40	ug/L			06/19/17 16:33	1
Bromomethane	ND		0.50	0.25	ug/L			06/19/17 16:33	1
Carbon disulfide	ND		1.0	0.50	ug/L			06/19/17 16:33	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			06/19/17 16:33	1
Chlorobenzene	ND		0.50	0.25	ug/L			06/19/17 16:33	1
Bromochloromethane	ND		0.50	0.25	ug/L			06/19/17 16:33	1
Chloroethane	ND		1.0	0.40	ug/L			06/19/17 16:33	1
Chloroform	ND		0.50	0.25	ug/L			06/19/17 16:33	1
Chloromethane	ND		0.50	0.25	ug/L			06/19/17 16:33	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			06/19/17 16:33	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/19/17 16:33	1
Dibromochloromethane	ND		0.50	0.25	ug/L			06/19/17 16:33	1
Dibromomethane	ND		0.50	0.25	ug/L			06/19/17 16:33	1
Bromodichloromethane	ND		0.50	0.25	ug/L			06/19/17 16:33	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			06/19/17 16:33	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			06/19/17 16:33	1
Ethylbenzene	ND		0.50	0.25	ug/L			06/19/17 16:33	1
Iodomethane	ND		2.0	1.0	ug/L			06/19/17 16:33	1
Isobutyl alcohol	ND		25	13	ug/L			06/19/17 16:33	1
m,p-Xylene	ND		1.0	0.50	ug/L			06/19/17 16:33	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			06/19/17 16:33	1
Methyl methacrylate	ND		2.0	1.0	ug/L			06/19/17 16:33	1
Methylene Chloride	ND		2.0	0.88	ug/L			06/19/17 16:33	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			06/19/17 16:33	1
Naphthalene	ND		1.0	0.40	ug/L			06/19/17 16:33	1
o-Xylene	ND		0.50	0.25	ug/L			06/19/17 16:33	1
Propionitrile	ND		20	10	ug/L			06/19/17 16:33	1
Styrene	ND		0.50	0.25	ug/L			06/19/17 16:33	1
t-Butanol	ND		10	5.0	ug/L			06/19/17 16:33	1
Tetrachloroethene	ND		0.50	0.25	ug/L			06/19/17 16:33	1
Tetrahydrofuran	ND		10	5.0	ug/L			06/19/17 16:33	1
Toluene	ND		0.50	0.25	ug/L			06/19/17 16:33	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			06/19/17 16:33	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/19/17 16:33	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			06/19/17 16:33	1
Trichloroethene	ND		0.50	0.25	ug/L			06/19/17 16:33	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			06/19/17 16:33	1

Client Sample ID: QCAB

Lab Sample ID: 440-186359-8

Date Collected: 06/13/17 00:01

Matrix: Water

Date Received: 06/13/17 16:25

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl acetate	ND		4.0	2.0	ug/L			06/19/17 16:33	1
Vinyl chloride	ND		0.50	0.25	ug/L			06/19/17 16:33	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			06/19/17 16:33	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			06/19/17 16:33	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			06/19/17 16:33	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*06/19/17 16:33*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*104*		*80 - 128*		*06/15/17 05:55*	*1*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*		*06/15/17 05:55*	*1*
Toluene-d8 (Surr)	*106*		*80 - 128*		*06/19/17 16:33*	*1*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*		*06/19/17 16:33*	*1*
Dibromofluoromethane (Surr)	*107*		*76 - 132*		*06/15/17 05:55*	*1*
Dibromofluoromethane (Surr)	*109*		*76 - 132*		*06/19/17 16:33*	*1*

Client Sample ID: QCTB

Lab Sample ID: 440-186359-9

Date Collected: 06/13/17 00:01

Matrix: Water

Date Received: 06/13/17 16:25

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			06/19/17 17:03	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/19/17 17:03	1
Acrolein	ND		50	2.5	ug/L			06/15/17 06:21	1
Acrylonitrile	ND		50	1.0	ug/L			06/15/17 06:21	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			06/19/17 17:03	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/19/17 17:03	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			06/19/17 17:03	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			06/19/17 17:03	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			06/19/17 17:03	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			06/19/17 17:03	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			06/19/17 17:03	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			06/19/17 17:03	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			06/19/17 17:03	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			06/19/17 17:03	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			06/19/17 17:03	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			06/19/17 17:03	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			06/19/17 17:03	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			06/19/17 17:03	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			06/19/17 17:03	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			06/19/17 17:03	1
2-Hexanone	ND		5.0	2.5	ug/L			06/19/17 17:03	1
Acetone	ND		20	10	ug/L			06/19/17 17:03	1
Acetonitrile	ND		20	10	ug/L			06/19/17 17:03	1
Benzene	ND		0.50	0.25	ug/L			06/19/17 17:03	1
Allyl chloride	ND		1.0	0.50	ug/L			06/19/17 17:03	1
Bromoform	ND		1.0	0.40	ug/L			06/19/17 17:03	1
Bromomethane	ND		0.50	0.25	ug/L			06/19/17 17:03	1

Client Sample ID: QCTB
Date Collected: 06/13/17 00:01
Date Received: 06/13/17 16:25

Lab Sample ID: 440-186359-9
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			06/19/17 17:03	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			06/19/17 17:03	1
Chlorobenzene	ND		0.50	0.25	ug/L			06/19/17 17:03	1
Bromochloromethane	ND		0.50	0.25	ug/L			06/19/17 17:03	1
Chloroethane	ND		1.0	0.40	ug/L			06/19/17 17:03	1
Chloroform	ND		0.50	0.25	ug/L			06/19/17 17:03	1
Chloromethane	ND		0.50	0.25	ug/L			06/19/17 17:03	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			06/19/17 17:03	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/19/17 17:03	1
Dibromochloromethane	ND		0.50	0.25	ug/L			06/19/17 17:03	1
Dibromomethane	ND		0.50	0.25	ug/L			06/19/17 17:03	1
Bromodichloromethane	ND		0.50	0.25	ug/L			06/19/17 17:03	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			06/19/17 17:03	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			06/19/17 17:03	1
Ethylbenzene	ND		0.50	0.25	ug/L			06/19/17 17:03	1
Iodomethane	ND		2.0	1.0	ug/L			06/19/17 17:03	1
Isobutyl alcohol	ND		25	13	ug/L			06/19/17 17:03	1
m,p-Xylene	ND		1.0	0.50	ug/L			06/19/17 17:03	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			06/19/17 17:03	1
Methyl methacrylate	ND		2.0	1.0	ug/L			06/19/17 17:03	1
Methylene Chloride	ND		2.0	0.88	ug/L			06/19/17 17:03	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			06/19/17 17:03	1
Naphthalene	ND		1.0	0.40	ug/L			06/19/17 17:03	1
o-Xylene	ND		0.50	0.25	ug/L			06/19/17 17:03	1
Propionitrile	ND		20	10	ug/L			06/19/17 17:03	1
Styrene	ND		0.50	0.25	ug/L			06/19/17 17:03	1
t-Butanol	ND		10	5.0	ug/L			06/19/17 17:03	1
Tetrachloroethene	ND		0.50	0.25	ug/L			06/19/17 17:03	1
Tetrahydrofuran	ND		10	5.0	ug/L			06/19/17 17:03	1
Toluene	ND		0.50	0.25	ug/L			06/19/17 17:03	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			06/19/17 17:03	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/19/17 17:03	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			06/19/17 17:03	1
Trichloroethene	ND		0.50	0.25	ug/L			06/19/17 17:03	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			06/19/17 17:03	1
Vinyl acetate	ND		4.0	2.0	ug/L			06/19/17 17:03	1
Vinyl chloride	ND		0.50	0.25	ug/L			06/19/17 17:03	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			06/19/17 17:03	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			06/19/17 17:03	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			06/19/17 17:03	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*06/19/17 17:03*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*105*		*80 - 128*		*06/15/17 06:21*	*1*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*		*06/15/17 06:21*	*1*
Toluene-d8 (Surr)	*104*		*80 - 128*		*06/19/17 17:03*	*1*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*		*06/19/17 17:03*	*1*
Dibromofluoromethane (Surr)	*105*		*76 - 132*		*06/15/17 06:21*	*1*

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

TestAmerica Job ID: 440-186359-1

Client Sample ID: QCTB
Date Collected: 06/13/17 00:01
Date Received: 06/13/17 16:25

Lab Sample ID: 440-186359-9
Matrix: Water

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	*112*		*76 - 132*		*06/19/17 17:03*	*1*

Method Summary

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

TestAmerica Job ID: 440-186359-1

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

Client Sample ID: DW-1

Lab Sample ID: 440-186359-1

Date Collected: 06/13/17 09:48

Matrix: Water

Date Received: 06/13/17 16:25

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	412062	06/15/17 02:51	JB	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	412759	06/19/17 13:04	RMP	TAL IRV
Total/NA	Prep	3520C			1020 mL	1.0 mL	412149	06/15/17 07:24	JS1	TAL IRV
Total/NA	Analysis	8270C		1			412600	06/17/17 06:56	TL	TAL IRV
Total/NA	Analysis	300.0		5	5 mL	1.0 mL	411651	06/13/17 17:58	NN	TAL IRV
Total/NA	Analysis	300.0		5	5 mL	1.0 mL	411652	06/13/17 17:58	NN	TAL IRV
Total/NA	Analysis	300.0		200			411652	06/13/17 18:14	NN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	412831	06/19/17 11:25	JL	TAL IRV
Total Recoverable	Analysis	6010B		1			413142	06/20/17 12:16	K1E	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	412831	06/19/17 11:25	JL	TAL IRV
Total Recoverable	Analysis	6010B		2			413239	06/20/17 19:10	B1H	TAL IRV
Total/NA	Analysis	410.4		10	2.5 mL	2.5 mL	412923	06/19/17 16:09	KYP	TAL IRV
Total/NA	Analysis	SM 2320B		1			411921	06/14/17 09:41	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	20 mL	100 mL	412434	06/16/17 08:29	XL	TAL IRV
Total/NA	Analysis	SM 4500 CO2 C		1	25 mL	25 mL	412017	06/14/17 15:56	SN	TAL IRV
Total/NA	Prep	SM 4500 NH3 B			50 mL	50 mL	411874	06/14/17 08:30	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			411889	06/14/17 09:30	YZ	TAL IRV
Total/NA	Analysis	SM 4500 S2 D		1	7.5 mL	7.5 mL	411812	06/13/17 20:36	HTL	TAL IRV
Total/NA	Analysis	SM 5310C		1	100 mL	100 mL	412114	06/14/17 17:04	YZ	TAL IRV

Client Sample ID: DW-2

Lab Sample ID: 440-186359-2

Date Collected: 06/13/17 10:28

Matrix: Water

Date Received: 06/13/17 16:25

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	412062	06/15/17 03:17	JB	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	412759	06/19/17 13:34	RMP	TAL IRV
Total/NA	Prep	3520C			1020 mL	1.0 mL	412149	06/15/17 07:24	JS1	TAL IRV
Total/NA	Analysis	8270C		1			412600	06/17/17 07:17	TL	TAL IRV
Total/NA	Analysis	300.0		2			411651	06/13/17 18:31	NN	TAL IRV
Total/NA	Analysis	300.0		2			411652	06/13/17 18:31	NN	TAL IRV
Total/NA	Analysis	300.0		100			411652	06/13/17 18:48	NN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	412831	06/19/17 11:25	JL	TAL IRV
Total Recoverable	Analysis	6010B		1			413142	06/20/17 12:19	K1E	TAL IRV
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	412923	06/19/17 16:09	KYP	TAL IRV
Total/NA	Analysis	SM 2320B		1			411921	06/14/17 09:50	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	412434	06/16/17 08:29	XL	TAL IRV
Total/NA	Analysis	SM 4500 CO2 C		1	25 mL	25 mL	412017	06/14/17 15:56	SN	TAL IRV
Total/NA	Prep	SM 4500 NH3 B			50 mL	50 mL	411874	06/14/17 08:30	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			411889	06/14/17 09:30	YZ	TAL IRV
Total/NA	Analysis	SM 4500 S2 D		1	7.5 mL	7.5 mL	411812	06/13/17 20:36	HTL	TAL IRV

Lab Chronicle

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

TestAmerica Job ID: 440-186359-1

Client Sample ID: DW-2

Date Collected: 06/13/17 10:28
Date Received: 06/13/17 16:25

Lab Sample ID: 440-186359-2

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 5310C		1	100 mL	100 mL	412114	06/14/17 14:02	YZ	TAL IRV

Client Sample ID: DW-3

Date Collected: 06/13/17 11:20
Date Received: 06/13/17 16:25

Lab Sample ID: 440-186359-3

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	412062	06/15/17 03:43	JB	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	412759	06/19/17 14:04	RMP	TAL IRV
Total/NA	Prep	3520C			935 mL	1.0 mL	412149	06/15/17 07:24	JS1	TAL IRV
Total/NA	Analysis	8270C		1			412600	06/17/17 07:39	TL	TAL IRV
Total/NA	Analysis	300.0		1	5 mL	1.0 mL	411651	06/13/17 19:37	NN	TAL IRV
Total/NA	Analysis	300.0		1	5 mL	1.0 mL	411652	06/13/17 19:37	NN	TAL IRV
Total/NA	Analysis	300.0		50			411652	06/13/17 20:27	NN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	412831	06/19/17 11:25	JL	TAL IRV
Total Recoverable	Analysis	6010B		1			413142	06/20/17 12:29	K1E	TAL IRV
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	412923	06/19/17 16:09	KYP	TAL IRV
Total/NA	Analysis	SM 2320B		1			411921	06/14/17 09:57	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	412434	06/16/17 08:29	XL	TAL IRV
Total/NA	Analysis	SM 4500 CO2 C		1	25 mL	25 mL	412017	06/14/17 15:56	SN	TAL IRV
Total/NA	Prep	SM 4500 NH3 B			50 mL	50 mL	411874	06/14/17 08:30	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			411889	06/14/17 09:30	YZ	TAL IRV
Total/NA	Analysis	SM 4500 S2 D		1	7.5 mL	7.5 mL	411812	06/13/17 20:36	HTL	TAL IRV
Total/NA	Analysis	SM 5310C		1	100 mL	100 mL	412114	06/14/17 16:49	YZ	TAL IRV

Client Sample ID: PZ-2

Date Collected: 06/13/17 11:21
Date Received: 06/13/17 16:25

Lab Sample ID: 440-186359-4

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	412062	06/15/17 04:10	JB	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	412759	06/19/17 14:33	RMP	TAL IRV
Total/NA	Prep	3520C			945 mL	1.0 mL	412149	06/15/17 07:24	JS1	TAL IRV
Total/NA	Analysis	8270C		1			412600	06/17/17 08:00	TL	TAL IRV
Total/NA	Analysis	300.0		10			411651	06/13/17 19:04	NN	TAL IRV
Total/NA	Analysis	300.0		10			411652	06/13/17 19:04	NN	TAL IRV
Total/NA	Analysis	300.0		200			411652	06/13/17 19:21	NN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	412831	06/19/17 11:25	JL	TAL IRV
Total Recoverable	Analysis	6010B		1			413142	06/20/17 12:31	K1E	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	412831	06/19/17 11:25	JL	TAL IRV
Total Recoverable	Analysis	6010B		2			413239	06/20/17 19:13	B1H	TAL IRV

Client Sample ID: PZ-2

Date Collected: 06/13/17 11:21
Date Received: 06/13/17 16:25

Lab Sample ID: 440-186359-4

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	410.4		1	2.5 mL	2.5 mL	412923	06/19/17 16:10	KYP	TAL IRV
Total/NA	Analysis	SM 2320B		1			411921	06/14/17 10:07	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	412434	06/16/17 08:29	XL	TAL IRV
Total/NA	Analysis	SM 4500 CO2 C		1	25 mL	25 mL	412017	06/14/17 15:56	SN	TAL IRV
Total/NA	Prep	SM 4500 NH3 B			50 mL	50 mL	411874	06/14/17 08:30	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			411889	06/14/17 09:30	YZ	TAL IRV
Total/NA	Analysis	SM 4500 S2 D		1	7.5 mL	7.5 mL	411812	06/13/17 20:36	HTL	TAL IRV
Total/NA	Analysis	SM 5310C		1	100 mL	100 mL	412114	06/14/17 17:16	YZ	TAL IRV

Client Sample ID: CM-11R

Date Collected: 06/13/17 13:15
Date Received: 06/13/17 16:25

Lab Sample ID: 440-186359-5

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	412062	06/15/17 04:36	JB	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	412759	06/19/17 15:03	RMP	TAL IRV
Total/NA	Prep	3520C			945 mL	1.0 mL	412149	06/15/17 07:24	JS1	TAL IRV
Total/NA	Analysis	8270C		1			412600	06/17/17 08:22	TL	TAL IRV
Total/NA	Analysis	300.0		5			411651	06/13/17 21:35	NN	TAL IRV
Total/NA	Analysis	300.0		5			411652	06/13/17 21:35	NN	TAL IRV
Total/NA	Analysis	300.0		200			411652	06/13/17 21:51	NN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	412831	06/19/17 11:25	JL	TAL IRV
Total Recoverable	Analysis	6010B		1			413142	06/20/17 12:34	K1E	TAL IRV
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	412923	06/19/17 16:10	KYP	TAL IRV
Total/NA	Analysis	SM 2320B		1			411921	06/14/17 10:13	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	20 mL	100 mL	412434	06/16/17 08:29	XL	TAL IRV
Total/NA	Analysis	SM 4500 CO2 C		1	25 mL	25 mL	412017	06/14/17 15:56	SN	TAL IRV
Total/NA	Prep	SM 4500 NH3 B			50 mL	50 mL	411874	06/14/17 08:30	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			411889	06/14/17 09:30	YZ	TAL IRV
Total/NA	Analysis	SM 4500 S2 D		1	7.5 mL	7.5 mL	411812	06/13/17 20:36	HTL	TAL IRV
Total/NA	Analysis	SM 5310C		1	100 mL	100 mL	412114	06/14/17 17:53	YZ	TAL IRV

Client Sample ID: MW-14

Date Collected: 06/13/17 08:15
Date Received: 06/13/17 16:25

Lab Sample ID: 440-186359-6

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	412062	06/15/17 05:03	JB	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	412759	06/19/17 15:33	RMP	TAL IRV
Total/NA	Prep	3520C			1030 mL	1.0 mL	412149	06/15/17 07:24	JS1	TAL IRV
Total/NA	Analysis	8270C		1			412600	06/17/17 08:44	TL	TAL IRV

Lab Chronicle

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

TestAmerica Job ID: 440-186359-1

Client Sample ID: MW-14

Date Collected: 06/13/17 08:15
Date Received: 06/13/17 16:25

Lab Sample ID: 440-186359-6

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	300.0		10			411651	06/13/17 22:08	NN	TAL IRV
Total/NA	Analysis	300.0		10			411652	06/13/17 22:08	NN	TAL IRV
Total/NA	Analysis	300.0		200			411652	06/13/17 22:24	NN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	412831	06/19/17 11:25	JL	TAL IRV
Total Recoverable	Analysis	6010B		1			413142	06/20/17 12:36	K1E	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	412831	06/19/17 11:25	JL	TAL IRV
Total Recoverable	Analysis	6010B		2			413239	06/20/17 19:16	B1H	TAL IRV
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	412923	06/19/17 16:10	KYP	TAL IRV
Total/NA	Analysis	SM 2320B		1			411921	06/14/17 10:24	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	10 mL	100 mL	412434	06/16/17 08:29	XL	TAL IRV
Total/NA	Analysis	SM 4500 CO2 C		1	25 mL	25 mL	412017	06/14/17 15:56	SN	TAL IRV
Total/NA	Prep	SM 4500 NH3 B			50 mL	50 mL	411874	06/14/17 08:30	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			411889	06/14/17 09:30	YZ	TAL IRV
Total/NA	Analysis	SM 4500 S2 D		1	7.5 mL	7.5 mL	411812	06/13/17 20:37	HTL	TAL IRV
Total/NA	Analysis	SM 5310C		5	100 mL	100 mL	412114	06/14/17 15:24	YZ	TAL IRV

Client Sample ID: MW-6

Date Collected: 06/13/17 09:45
Date Received: 06/13/17 16:25

Lab Sample ID: 440-186359-7

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	412062	06/15/17 05:29	JB	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	412759	06/19/17 16:03	RMP	TAL IRV
Total/NA	Prep	3520C			970 mL	1.0 mL	412693	06/18/17 07:51	BMN	TAL IRV
Total/NA	Analysis	8270C		1			412846	06/19/17 15:52	AI	TAL IRV
Total/NA	Analysis	300.0		5			411651	06/13/17 22:41	NN	TAL IRV
Total/NA	Analysis	300.0		5			411652	06/13/17 22:41	NN	TAL IRV
Total/NA	Analysis	300.0		200			411652	06/13/17 22:57	NN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	412831	06/19/17 11:25	JL	TAL IRV
Total Recoverable	Analysis	6010B		1			413142	06/20/17 12:39	K1E	TAL IRV
Total/NA	Analysis	410.4		5	2.5 mL	2.5 mL	412923	06/19/17 16:10	KYP	TAL IRV
Total/NA	Analysis	SM 2320B		1			411921	06/14/17 10:39	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	20 mL	100 mL	412434	06/16/17 08:29	XL	TAL IRV
Total/NA	Analysis	SM 4500 CO2 C		1	25 mL	25 mL	412017	06/14/17 15:56	SN	TAL IRV
Total/NA	Prep	SM 4500 NH3 B			50 mL	50 mL	411874	06/14/17 08:30	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			411889	06/14/17 09:30	YZ	TAL IRV
Total/NA	Analysis	SM 4500 S2 D		5	7.5 mL	7.5 mL	411812	06/13/17 20:37	HTL	TAL IRV
Total/NA	Analysis	SM 5310C		1	100 mL	100 mL	412114	06/14/17 18:25	YZ	TAL IRV

Lab Chronicle

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

TestAmerica Job ID: 440-186359-1

Client Sample ID: QCAB

Lab Sample ID: 440-186359-8

Date Collected: 06/13/17 00:01
Date Received: 06/13/17 16:25

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	412062	06/15/17 05:55	JB	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	412759	06/19/17 16:33	RMP	TAL IRV

Client Sample ID: QCTB

Lab Sample ID: 440-186359-9

Date Collected: 06/13/17 00:01
Date Received: 06/13/17 16:25

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	412062	06/15/17 06:21	JB	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	412759	06/19/17 17:03	RMP	TAL IRV

Laboratory References:

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

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

Lab Sample ID: MB 440-412062/4
Matrix: Water
Analysis Batch: 412062

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			06/14/17 20:15	1
Acrylonitrile	ND		50	1.0	ug/L			06/14/17 20:15	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*106*		*80 - 128*		*06/14/17 20:15*	*1*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*		*06/14/17 20:15*	*1*
Dibromofluoromethane (Surr)	*103*		*76 - 132*		*06/14/17 20:15*	*1*

Lab Sample ID: LCS 440-412062/5
Matrix: Water
Analysis Batch: 412062

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	29.7	J	ug/L		119	10 - 145		
Acrylonitrile			250	283		ug/L		113	48 - 140		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*101*		*80 - 128*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*
Dibromofluoromethane (Surr)	*104*		*76 - 132*

Lab Sample ID: 440-186449-A-1 MS
Matrix: Water
Analysis Batch: 412062

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	30.3	J	ug/L		121	10 - 147		
Acrylonitrile	ND		250	287		ug/L		115	38 - 144		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Toluene-d8 (Surr)	*102*		*80 - 128*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*
Dibromofluoromethane (Surr)	*103*		*76 - 132*

Lab Sample ID: 440-186449-A-1 MSD
Matrix: Water
Analysis Batch: 412062

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	31.6	J	ug/L		126	10 - 147	4	40
Acrylonitrile	ND		250	298		ug/L		119	38 - 144	4	40

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*104*		*80 - 128*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*
Dibromofluoromethane (Surr)	*103*		*76 - 132*

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

Lab Sample ID: MB 440-412759/4
Matrix: Water
Analysis Batch: 412759

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			06/19/17 08:35	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/19/17 08:35	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			06/19/17 08:35	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/19/17 08:35	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			06/19/17 08:35	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			06/19/17 08:35	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			06/19/17 08:35	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			06/19/17 08:35	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			06/19/17 08:35	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			06/19/17 08:35	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			06/19/17 08:35	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			06/19/17 08:35	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			06/19/17 08:35	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			06/19/17 08:35	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			06/19/17 08:35	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			06/19/17 08:35	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			06/19/17 08:35	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			06/19/17 08:35	1
2-Hexanone	ND		5.0	2.5	ug/L			06/19/17 08:35	1
Acetone	ND		20	10	ug/L			06/19/17 08:35	1
Acetonitrile	ND		20	10	ug/L			06/19/17 08:35	1
Benzene	ND		0.50	0.25	ug/L			06/19/17 08:35	1
Allyl chloride	ND		1.0	0.50	ug/L			06/19/17 08:35	1
Bromoform	ND		1.0	0.40	ug/L			06/19/17 08:35	1
Bromomethane	ND		0.50	0.25	ug/L			06/19/17 08:35	1
Carbon disulfide	ND		1.0	0.50	ug/L			06/19/17 08:35	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			06/19/17 08:35	1
Chlorobenzene	ND		0.50	0.25	ug/L			06/19/17 08:35	1
Bromochloromethane	ND		0.50	0.25	ug/L			06/19/17 08:35	1
Chloroethane	ND		1.0	0.40	ug/L			06/19/17 08:35	1
Chloroform	ND		0.50	0.25	ug/L			06/19/17 08:35	1
Chloromethane	ND		0.50	0.25	ug/L			06/19/17 08:35	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			06/19/17 08:35	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/19/17 08:35	1
Dibromochloromethane	ND		0.50	0.25	ug/L			06/19/17 08:35	1
Dibromomethane	ND		0.50	0.25	ug/L			06/19/17 08:35	1
Bromodichloromethane	ND		0.50	0.25	ug/L			06/19/17 08:35	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			06/19/17 08:35	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			06/19/17 08:35	1
Ethylbenzene	ND		0.50	0.25	ug/L			06/19/17 08:35	1
Iodomethane	ND		2.0	1.0	ug/L			06/19/17 08:35	1
Isobutyl alcohol	ND		25	13	ug/L			06/19/17 08:35	1
m,p-Xylene	ND		1.0	0.50	ug/L			06/19/17 08:35	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			06/19/17 08:35	1
Methyl methacrylate	ND		2.0	1.0	ug/L			06/19/17 08:35	1
Methylene Chloride	ND		2.0	0.88	ug/L			06/19/17 08:35	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			06/19/17 08:35	1
Naphthalene	ND		1.0	0.40	ug/L			06/19/17 08:35	1

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

Lab Sample ID: MB 440-412759/4
Matrix: Water
Analysis Batch: 412759

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
o-Xylene	ND		0.50	0.25	ug/L			06/19/17 08:35	1
Propionitrile	ND		20	10	ug/L			06/19/17 08:35	1
Styrene	ND		0.50	0.25	ug/L			06/19/17 08:35	1
t-Butanol	ND		10	5.0	ug/L			06/19/17 08:35	1
Tetrachloroethene	ND		0.50	0.25	ug/L			06/19/17 08:35	1
Tetrahydrofuran	ND		10	5.0	ug/L			06/19/17 08:35	1
Toluene	ND		0.50	0.25	ug/L			06/19/17 08:35	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			06/19/17 08:35	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/19/17 08:35	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			06/19/17 08:35	1
Trichloroethene	ND		0.50	0.25	ug/L			06/19/17 08:35	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			06/19/17 08:35	1
Vinyl acetate	ND		4.0	2.0	ug/L			06/19/17 08:35	1
Vinyl chloride	ND		0.50	0.25	ug/L			06/19/17 08:35	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			06/19/17 08:35	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			06/19/17 08:35	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			06/19/17 08:35	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*06/19/17 08:35*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*107*		*80 - 128*		*06/19/17 08:35*	*1*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*		*06/19/17 08:35*	*1*
Dibromofluoromethane (Surr)	*108*		*76 - 132*		*06/19/17 08:35*	*1*

Lab Sample ID: LCS 440-412759/5
Matrix: Water
Analysis Batch: 412759

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	24.0		ug/L		96	63 - 130
1,1,1,2-Tetrachloroethane	25.0	24.0		ug/L		96	60 - 141
1,1,1-Trichloroethane	25.0	24.4		ug/L		98	70 - 130
1,1,2,2-Tetrachloroethane	25.0	23.5		ug/L		94	63 - 130
1,1,2-Trichloroethane	25.0	23.9		ug/L		96	70 - 130
1,1-Dichloroethane	25.0	24.5		ug/L		98	64 - 130
1,1-Dichloroethene	25.0	23.3		ug/L		93	70 - 130
1,1-Dichloropropene	25.0	25.6		ug/L		102	70 - 130
1,2,4-Trichlorobenzene	25.0	25.5		ug/L		102	60 - 140
1,2-Dibromo-3-Chloropropane	25.0	24.1		ug/L		97	52 - 140
1,2-Dichlorobenzene	25.0	25.1		ug/L		101	70 - 130
1,2-Dichloroethane	25.0	26.1		ug/L		104	57 - 138
1,2-Dichloropropane	25.0	26.0		ug/L		104	67 - 130
1,3-Dichlorobenzene	25.0	24.6		ug/L		98	70 - 130
1,3-Dichloropropane	25.0	25.3		ug/L		101	70 - 130
1,4-Dichlorobenzene	25.0	24.0		ug/L		96	70 - 130

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

Lab Sample ID: LCS 440-412759/5
Matrix: Water
Analysis Batch: 412759

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,2-Dichloropropane	25.0	24.5		ug/L		98	68 - 141
2-Hexanone	25.0	22.7		ug/L		91	10 - 150
Acetone	25.0	23.9		ug/L		95	10 - 150
Benzene	25.0	23.1		ug/L		92	68 - 130
Allyl chloride	25.0	24.5		ug/L		98	60 - 140
Bromoform	25.0	26.1		ug/L		105	60 - 148
Bromomethane	25.0	21.7		ug/L		87	64 - 139
Carbon disulfide	25.0	22.6		ug/L		90	52 - 136
Carbon tetrachloride	25.0	24.0		ug/L		96	60 - 150
Chlorobenzene	25.0	23.0		ug/L		92	70 - 130
Bromochloromethane	25.0	24.6		ug/L		98	70 - 130
Chloroethane	25.0	21.9		ug/L		88	64 - 135
Chloroform	25.0	23.5		ug/L		94	70 - 130
Chloromethane	25.0	19.3		ug/L		77	47 - 140
cis-1,2-Dichloroethene	25.0	25.2		ug/L		101	70 - 133
cis-1,3-Dichloropropene	25.0	26.0		ug/L		104	70 - 133
Dibromochloromethane	25.0	25.4		ug/L		102	69 - 145
Dibromomethane	25.0	24.1		ug/L		97	70 - 130
Bromodichloromethane	25.0	25.4		ug/L		102	70 - 132
Dichlorodifluoromethane	25.0	20.3		ug/L		81	29 - 150
Ethylbenzene	25.0	25.3		ug/L		101	70 - 130
m,p-Xylene	25.0	26.9		ug/L		107	70 - 130
Methylene Chloride	25.0	21.3		ug/L		85	52 - 130
Methyl tert-butyl ether	25.0	25.9		ug/L		104	63 - 131
Naphthalene	25.0	25.1		ug/L		101	60 - 140
o-Xylene	25.0	24.4		ug/L		97	70 - 130
Styrene	25.0	24.7		ug/L		99	70 - 134
t-Butanol	250	262		ug/L		105	70 - 130
Tetrachloroethene	25.0	22.2		ug/L		89	70 - 130
Toluene	25.0	25.5		ug/L		102	70 - 130
trans-1,2-Dichloroethene	25.0	24.9		ug/L		100	70 - 130
trans-1,3-Dichloropropene	25.0	25.8		ug/L		103	70 - 132
Trichloroethene	25.0	23.9		ug/L		95	70 - 130
Trichlorofluoromethane	25.0	23.1		ug/L		93	60 - 150
Vinyl acetate	25.0	24.4		ug/L		98	48 - 140
Vinyl chloride	25.0	21.2		ug/L		85	59 - 133
1,2-Dibromoethane (EDB)	25.0	25.4		ug/L		101	70 - 130
2-Butanone (MEK)	25.0	25.1		ug/L		100	44 - 150
4-Methyl-2-pentanone (MIBK)	25.0	26.8		ug/L		107	59 - 149

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*97*		*80 - 128*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*
Dibromofluoromethane (Surr)	*103*		*76 - 132*

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

Lab Sample ID: 440-186429-A-1 MS
Matrix: Water
Analysis Batch: 412759

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	23.9		ug/L		96	60 - 130
1,1,1,2-Tetrachloroethane	ND		25.0	23.6		ug/L		94	60 - 149
1,1,1-Trichloroethane	ND		25.0	26.0		ug/L		104	70 - 130
1,1,2,2-Tetrachloroethane	ND		25.0	24.5		ug/L		98	63 - 130
1,1,2-Trichloroethane	ND		25.0	25.0		ug/L		100	70 - 130
1,1-Dichloroethane	ND		25.0	25.5		ug/L		102	65 - 130
1,1-Dichloroethene	ND		25.0	26.2		ug/L		105	70 - 130
1,1-Dichloropropene	ND		25.0	28.2		ug/L		113	64 - 130
1,2,4-Trichlorobenzene	ND		25.0	26.0		ug/L		104	60 - 140
1,2-Dibromo-3-Chloropropane	ND		25.0	26.1		ug/L		104	48 - 140
1,2-Dichlorobenzene	ND		25.0	25.8		ug/L		103	70 - 130
1,2-Dichloroethane	ND		25.0	26.8		ug/L		107	56 - 146
1,2-Dichloropropane	ND		25.0	26.6		ug/L		106	69 - 130
1,3-Dichlorobenzene	ND		25.0	25.3		ug/L		101	70 - 130
1,3-Dichloropropane	ND		25.0	25.0		ug/L		100	70 - 130
1,4-Dichlorobenzene	ND		25.0	24.3		ug/L		97	70 - 130
2,2-Dichloropropane	ND		25.0	27.0		ug/L		108	69 - 138
2-Hexanone	ND		25.0	24.7		ug/L		99	10 - 150
Acetone	12	J	25.0	34.4		ug/L		91	10 - 150
Benzene	ND		25.0	25.3		ug/L		101	66 - 130
Allyl chloride	ND		25.0	26.0		ug/L		104	52 - 140
Bromoform	ND		25.0	26.0		ug/L		104	59 - 150
Bromomethane	ND		25.0	23.4		ug/L		94	62 - 131
Carbon disulfide	ND		25.0	26.4		ug/L		106	49 - 140
Carbon tetrachloride	ND		25.0	27.5		ug/L		110	60 - 150
Chlorobenzene	ND		25.0	24.2		ug/L		97	70 - 130
Bromochloromethane	ND		25.0	25.9		ug/L		104	70 - 130
Chloroethane	ND		25.0	23.8		ug/L		95	68 - 130
Chloroform	ND		25.0	25.0		ug/L		100	70 - 130
Chloromethane	ND		25.0	20.6		ug/L		83	39 - 144
cis-1,2-Dichloroethene	ND		25.0	27.1		ug/L		108	70 - 130
cis-1,3-Dichloropropene	ND		25.0	25.8		ug/L		103	70 - 133
Dibromochloromethane	ND		25.0	25.0		ug/L		100	70 - 148
Dibromomethane	ND		25.0	25.3		ug/L		101	70 - 130
Bromodichloromethane	ND		25.0	25.1		ug/L		100	70 - 138
Dichlorodifluoromethane	ND		25.0	23.6		ug/L		94	25 - 142
Ethylbenzene	ND		25.0	26.9		ug/L		108	70 - 130
m,p-Xylene	ND		25.0	28.9		ug/L		116	70 - 133
Methylene Chloride	ND		25.0	25.4		ug/L		101	52 - 130
Methyl tert-butyl ether	ND		25.0	26.8		ug/L		107	70 - 130
Naphthalene	ND		25.0	25.9		ug/L		103	60 - 140
o-Xylene	ND		25.0	25.6		ug/L		102	70 - 133
Styrene	ND		25.0	24.4		ug/L		98	29 - 150
t-Butanol	ND		250	273		ug/L		109	70 - 130
Tetrachloroethene	ND		25.0	24.9		ug/L		100	70 - 137
Toluene	ND		25.0	25.4		ug/L		102	70 - 130
trans-1,2-Dichloroethene	ND		25.0	26.3		ug/L		105	70 - 130
trans-1,3-Dichloropropene	ND		25.0	24.8		ug/L		99	70 - 138

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

Lab Sample ID: 440-186429-A-1 MS
Matrix: Water
Analysis Batch: 412759

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
Trichloroethene	ND		25.0	26.0		ug/L		104	70 - 130
Trichlorofluoromethane	ND		25.0	26.3		ug/L		105	60 - 150
Vinyl acetate	ND		25.0	26.0		ug/L		104	23 - 150
Vinyl chloride	ND		25.0	23.6		ug/L		94	50 - 137
1,2-Dibromoethane (EDB)	ND		25.0	25.5		ug/L		102	70 - 131
2-Butanone (MEK)	ND		25.0	24.7		ug/L		99	48 - 140
4-Methyl-2-pentanone (MIBK)	ND		25.0	27.9		ug/L		111	52 - 150

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Toluene-d8 (Surr)	*101*		*80 - 128*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*
Dibromofluoromethane (Surr)	*102*		*76 - 132*

Lab Sample ID: 440-186429-A-1 MSD
Matrix: Water
Analysis Batch: 412759

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	24.8		ug/L		99	60 - 130	4	30
1,1,1,2-Tetrachloroethane	ND		25.0	24.3		ug/L		97	60 - 149	3	20
1,1,1-Trichloroethane	ND		25.0	26.3		ug/L		105	70 - 130	1	20
1,1,2,2-Tetrachloroethane	ND		25.0	25.5		ug/L		102	63 - 130	4	30
1,1,2-Trichloroethane	ND		25.0	26.7		ug/L		107	70 - 130	6	25
1,1-Dichloroethane	ND		25.0	25.8		ug/L		103	65 - 130	1	20
1,1-Dichloroethene	ND		25.0	25.5		ug/L		102	70 - 130	3	20
1,1-Dichloropropene	ND		25.0	28.7		ug/L		115	64 - 130	2	20
1,2,4-Trichlorobenzene	ND		25.0	26.5		ug/L		106	60 - 140	2	20
1,2-Dibromo-3-Chloropropane	ND		25.0	25.6		ug/L		102	48 - 140	2	30
1,2-Dichlorobenzene	ND		25.0	26.2		ug/L		105	70 - 130	2	20
1,2-Dichloroethane	ND		25.0	26.4		ug/L		105	56 - 146	1	20
1,2-Dichloropropane	ND		25.0	25.9		ug/L		104	69 - 130	3	20
1,3-Dichlorobenzene	ND		25.0	24.9		ug/L		100	70 - 130	2	20
1,3-Dichloropropane	ND		25.0	26.1		ug/L		105	70 - 130	4	25
1,4-Dichlorobenzene	ND		25.0	25.2		ug/L		101	70 - 130	4	20
2,2-Dichloropropane	ND		25.0	27.1		ug/L		108	69 - 138	0	25
2-Hexanone	ND		25.0	26.1		ug/L		104	10 - 150	5	35
Acetone	12	J	25.0	32.9		ug/L		85	10 - 150	4	35
Benzene	ND		25.0	24.7		ug/L		99	66 - 130	2	20
Allyl chloride	ND		25.0	25.7		ug/L		103	52 - 140	1	40
Bromoform	ND		25.0	27.8		ug/L		111	59 - 150	7	25
Bromomethane	ND		25.0	23.0		ug/L		92	62 - 131	2	25
Carbon disulfide	ND		25.0	24.6		ug/L		98	49 - 140	7	20
Carbon tetrachloride	ND		25.0	26.5		ug/L		106	60 - 150	4	25
Chlorobenzene	ND		25.0	25.2		ug/L		101	70 - 130	4	20
Bromochloromethane	ND		25.0	25.6		ug/L		102	70 - 130	1	25
Chloroethane	ND		25.0	25.1		ug/L		101	68 - 130	5	25
Chloroform	ND		25.0	25.0		ug/L		100	70 - 130	0	20
Chloromethane	ND		25.0	22.3		ug/L		89	39 - 144	8	25

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

Lab Sample ID: 440-186429-A-1 MSD
Matrix: Water
Analysis Batch: 412759

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
cis-1,2-Dichloroethene	ND		25.0	26.3		ug/L		105	70 - 130	3	20
cis-1,3-Dichloropropene	ND		25.0	27.1		ug/L		109	70 - 133	5	20
Dibromochloromethane	ND		25.0	26.3		ug/L		105	70 - 148	5	25
Dibromomethane	ND		25.0	25.9		ug/L		104	70 - 130	2	25
Bromodichloromethane	ND		25.0	25.0		ug/L		100	70 - 138	0	20
Dichlorodifluoromethane	ND		25.0	24.5		ug/L		98	25 - 142	4	30
Ethylbenzene	ND		25.0	27.7		ug/L		111	70 - 130	3	20
m,p-Xylene	ND		25.0	29.6		ug/L		118	70 - 133	2	25
Methylene Chloride	ND		25.0	20.7		ug/L		83	52 - 130	20	20
Methyl tert-butyl ether	ND		25.0	26.6		ug/L		106	70 - 130	1	25
Naphthalene	ND		25.0	25.9		ug/L		104	60 - 140	0	30
o-Xylene	ND		25.0	26.6		ug/L		106	70 - 133	4	20
Styrene	ND		25.0	24.8		ug/L		99	29 - 150	2	35
t-Butanol	ND		250	283		ug/L		113	70 - 130	4	25
Tetrachloroethene	ND		25.0	25.6		ug/L		102	70 - 137	3	20
Toluene	ND		25.0	27.1		ug/L		108	70 - 130	6	20
trans-1,2-Dichloroethene	ND		25.0	27.4		ug/L		110	70 - 130	4	20
trans-1,3-Dichloropropene	ND		25.0	25.9		ug/L		103	70 - 138	4	25
Trichloroethene	ND		25.0	25.6		ug/L		102	70 - 130	2	20
Trichlorofluoromethane	ND		25.0	25.3		ug/L		101	60 - 150	4	25
Vinyl acetate	ND		25.0	25.0		ug/L		100	23 - 150	4	30
Vinyl chloride	ND		25.0	23.8		ug/L		95	50 - 137	1	30
1,2-Dibromoethane (EDB)	ND		25.0	26.7		ug/L		107	70 - 131	4	25
2-Butanone (MEK)	ND		25.0	26.0		ug/L		104	48 - 140	5	40
4-Methyl-2-pentanone (MIBK)	ND		25.0	28.1		ug/L		112	52 - 150	1	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*103*		*80 - 128*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*
Dibromofluoromethane (Surr)	*99*		*76 - 132*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 440-412149/1-A
Matrix: Water
Analysis Batch: 412600

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 412149

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		1.1	0.26	ug/L		06/15/17 07:24	06/17/17 05:51	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*64*		*30 - 120*	*06/15/17 07:24*	*06/17/17 05:51*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 440-412149/2-A
Matrix: Water
Analysis Batch: 412600

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 412149

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,4-Dioxane			2.11	1.38		ug/L		66	35 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,4-Dioxane-d8 (Surr)	*62*		*30 - 120*

Lab Sample ID: LCSD 440-412149/3-A
Matrix: Water
Analysis Batch: 412600

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 412149

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dioxane			2.09	1.32		ug/L		63	35 - 120	4	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,4-Dioxane-d8 (Surr)	*59*		*30 - 120*

Lab Sample ID: MB 440-412693/1-A
Matrix: Water
Analysis Batch: 412846

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 412693

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		1.0	0.25	ug/L		06/18/17 07:51	06/19/17 14:48	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*62*		*30 - 120*	*06/18/17 07:51*	*06/19/17 14:48*	*1*

Lab Sample ID: LCS 440-412693/2-A
Matrix: Water
Analysis Batch: 412846

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 412693

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,4-Dioxane			2.00	1.34		ug/L		67	35 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,4-Dioxane-d8 (Surr)	*62*		*30 - 120*

Lab Sample ID: LCSD 440-412693/3-A
Matrix: Water
Analysis Batch: 412846

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 412693

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dioxane			2.00	1.30		ug/L		65	35 - 120	3	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,4-Dioxane-d8 (Surr)	*61*		*30 - 120*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 440-411651/16
Matrix: Water
Analysis Batch: 411651

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			06/13/17 17:08	1

Lab Sample ID: LCS 440-411651/15
Matrix: Water
Analysis Batch: 411651

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	1.09		mg/L		97	90 - 110

Lab Sample ID: 440-186359-3 MS
Matrix: Water
Analysis Batch: 411651

Client Sample ID: DW-3
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	1.07		mg/L		94	80 - 120

Lab Sample ID: 440-186359-3 MSD
Matrix: Water
Analysis Batch: 411651

Client Sample ID: DW-3
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		1.13	1.04		mg/L		92	80 - 120	2	20

Lab Sample ID: MB 440-411652/16
Matrix: Water
Analysis Batch: 411652

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			06/13/17 17:08	1
Chloride	ND		0.50	0.25	mg/L			06/13/17 17:08	1
Fluoride	ND		0.50	0.25	mg/L			06/13/17 17:08	1
Sulfate	ND		0.50	0.25	mg/L			06/13/17 17:08	1

Lab Sample ID: LCS 440-411652/15
Matrix: Water
Analysis Batch: 411652

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	4.75		mg/L		95	90 - 110
Fluoride	5.00	4.70		mg/L		94	90 - 110
Sulfate	5.00	4.68		mg/L		94	90 - 110

Lab Sample ID: 440-186359-3 MS
Matrix: Water
Analysis Batch: 411652

Client Sample ID: DW-3
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromide	ND		5.00	4.62		mg/L		92	80 - 120

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 440-186359-3 MS
Matrix: Water
Analysis Batch: 411652

Client Sample ID: DW-3
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	14		5.00	19.2		mg/L		111	80 - 120
Fluoride	0.64	F1	5.00	4.28	F1	mg/L		73	80 - 120

Lab Sample ID: 440-186359-3 MSD
Matrix: Water
Analysis Batch: 411652

Client Sample ID: DW-3
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	4.61		mg/L		92	80 - 120	0	20
Chloride	14		5.00	19.1		mg/L		108	80 - 120	1	20
Fluoride	0.64	F1	5.00	4.31	F1	mg/L		73	80 - 120	1	20

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 440-412831/1-A
Matrix: Water
Analysis Batch: 413142

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 412831

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.050	0.025	mg/L		06/19/17 11:25	06/20/17 11:36	1
Calcium	ND		0.10	0.050	mg/L		06/19/17 11:25	06/20/17 11:36	1
Iron	ND		0.10	0.050	mg/L		06/19/17 11:25	06/20/17 11:36	1
Magnesium	ND		0.020	0.010	mg/L		06/19/17 11:25	06/20/17 11:36	1
Manganese	ND		0.020	0.010	mg/L		06/19/17 11:25	06/20/17 11:36	1
Potassium	ND		0.50	0.25	mg/L		06/19/17 11:25	06/20/17 11:36	1
Sodium	ND		0.50	0.25	mg/L		06/19/17 11:25	06/20/17 11:36	1

Lab Sample ID: LCS 440-412831/2-A
Matrix: Water
Analysis Batch: 413142

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 412831

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1.00	0.970		mg/L		97	80 - 120
Calcium	5.00	4.92		mg/L		98	80 - 120
Iron	1.00	0.953		mg/L		95	80 - 120
Magnesium	5.00	4.83		mg/L		97	80 - 120
Manganese	1.00	0.946		mg/L		95	80 - 120
Potassium	10.0	9.57		mg/L		96	80 - 120
Sodium	10.0	10.1		mg/L		101	80 - 120

Lab Sample ID: 440-186039-A-1-B MS
Matrix: Water
Analysis Batch: 413142

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 412831

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	ND		1.00	0.940		mg/L		94	75 - 125
Calcium	ND		5.00	4.92		mg/L		98	75 - 125
Iron	ND		1.00	0.945		mg/L		95	75 - 125
Magnesium	ND		5.00	4.68		mg/L		94	75 - 125

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: 440-186039-A-1-B MS
Matrix: Water
Analysis Batch: 413142

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 412831

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Manganese	ND		1.00	0.931		mg/L		93	75 - 125
Potassium	ND		10.0	9.64		mg/L		96	75 - 125
Sodium	ND		10.0	9.90		mg/L		99	75 - 125

Lab Sample ID: 440-186039-A-1-C MSD
Matrix: Water
Analysis Batch: 413142

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 412831

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Boron	ND		1.00	0.964		mg/L		96	75 - 125	2	20
Calcium	ND		5.00	4.99		mg/L		100	75 - 125	1	20
Iron	ND		1.00	0.954		mg/L		95	75 - 125	1	20
Magnesium	ND		5.00	4.81		mg/L		96	75 - 125	3	20
Manganese	ND		1.00	0.937		mg/L		94	75 - 125	1	20
Potassium	ND		10.0	9.80		mg/L		98	75 - 125	2	20
Sodium	ND		10.0	10.2		mg/L		102	75 - 125	3	20

Method: 410.4 - COD

Lab Sample ID: MB 440-412923/3
Matrix: Water
Analysis Batch: 412923

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			06/19/17 16:08	1

Lab Sample ID: LCS 440-412923/4
Matrix: Water
Analysis Batch: 412923

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: 440-186447-C-1 MS
Matrix: Water
Analysis Batch: 412923

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	130		200	323		mg/L		96	70 - 120

Lab Sample ID: 440-186447-C-1 MSD
Matrix: Water
Analysis Batch: 412923

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	130		200	330		mg/L		99	70 - 120	2	15

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 440-411921/3
Matrix: Water
Analysis Batch: 411921

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			06/14/17 07:47	1
Bicarbonate Alkalinity as CaCO3	ND		4.0	4.0	mg/L			06/14/17 07:47	1

Lab Sample ID: LCS 440-411921/2
Matrix: Water
Analysis Batch: 411921

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	36.0		mg/L		106	80 - 120

Lab Sample ID: 440-186370-D-1 DU
Matrix: Water
Analysis Batch: 411921

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	390		387		mg/L		0.7	20
Bicarbonate Alkalinity as CaCO3	240		248		mg/L		1	20

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

Lab Sample ID: MB 440-412434/1
Matrix: Water
Analysis Batch: 412434

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			06/16/17 08:29	1

Lab Sample ID: LCS 440-412434/2
Matrix: Water
Analysis Batch: 412434

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	980		mg/L		98	90 - 110

Lab Sample ID: 440-186359-1 DU
Matrix: Water
Analysis Batch: 412434

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		3190		mg/L		1	5

Method: SM 4500 CO2 C - Free Carbon Dioxide

Lab Sample ID: MB 440-412017/1
Matrix: Water
Analysis Batch: 412017

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			06/14/17 15:56	1

Lab Sample ID: 440-186359-3 DU
Matrix: Water
Analysis Batch: 412017

Client Sample ID: DW-3
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Carbon Dioxide, Free	21		19.4		mg/L		9	20

Method: SM 4500 NH3 D - Ammonia

Lab Sample ID: MB 440-411874/2-A
Matrix: Water
Analysis Batch: 411889

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 411874

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	ND		0.50	0.10	mg/L		06/14/17 08:30	06/14/17 09:30	1

Lab Sample ID: LCS 440-411874/1-A
Matrix: Water
Analysis Batch: 411889

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 411874

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	2.50	2.44		mg/L		97	85 - 115

Lab Sample ID: 440-186312-A-1-B MS
Matrix: Water
Analysis Batch: 411889

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 411874

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	0.18	J	2.50	2.64		mg/L		98	75 - 125

Lab Sample ID: 440-186312-A-1-C MSD
Matrix: Water
Analysis Batch: 411889

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 411874

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ammonia (as N)	0.18	J	2.50	2.53		mg/L		94	75 - 125	4	15

Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MB 440-411812/3
Matrix: Water
Analysis Batch: 411812

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			06/13/17 20:35	1

Lab Sample ID: LCS 440-411812/4
Matrix: Water
Analysis Batch: 411812

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	0.476		mg/L		95	80 - 120

Method: SM 4500 S2 D - Sulfide, Total (Continued)

Lab Sample ID: LCSD 440-411812/5
Matrix: Water
Analysis Batch: 411812

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			0.500	0.456		mg/L		91	80 - 120	4	20

Lab Sample ID: 720-79933-G-1 MS ^2
Matrix: Water
Analysis Batch: 411812

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	F1	1.00	0.198	F1	mg/L		20	70 - 130

Lab Sample ID: 720-79933-G-1 MSD ^2
Matrix: Water
Analysis Batch: 411812

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	F1	1.00	0.203	F1	mg/L		20	70 - 130	2	30

Method: SM 5310C - TOC

Lab Sample ID: MB 440-412114/6
Matrix: Water
Analysis Batch: 412114

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			06/14/17 07:23	1

Lab Sample ID: LCS 440-412114/5
Matrix: Water
Analysis Batch: 412114

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			5.00	5.08		mg/L		102	90 - 110

Lab Sample ID: MRL 440-412114/16
Matrix: Water
Analysis Batch: 412114

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	0.130		mg/L		130	50 - 150

Lab Sample ID: MRL 440-412114/4
Matrix: Water
Analysis Batch: 412114

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	0.132		mg/L		132	50 - 150

Method: SM 5310C - TOC (Continued)

Lab Sample ID: 440-186243-D-1 MS
Matrix: Water
Analysis Batch: 412114

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	0.52		5.00	5.49		mg/L		99	80 - 120

Lab Sample ID: 440-186243-D-1 MSD
Matrix: Water
Analysis Batch: 412114

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	0.52		5.00	5.34		mg/L		96	80 - 120	3	20

Lab Sample ID: 550-84269-L-1 DU
Matrix: Water
Analysis Batch: 412114

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Organic Carbon	0.49		0.493		mg/L		0.1	20

GC/MS VOA

Analysis Batch: 412062

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186359-1	DW-1	Total/NA	Water	8260B	
440-186359-2	DW-2	Total/NA	Water	8260B	
440-186359-3	DW-3	Total/NA	Water	8260B	
440-186359-4	PZ-2	Total/NA	Water	8260B	
440-186359-5	CM-11R	Total/NA	Water	8260B	
440-186359-6	MW-14	Total/NA	Water	8260B	
440-186359-7	MW-6	Total/NA	Water	8260B	
440-186359-8	QCAB	Total/NA	Water	8260B	
440-186359-9	QCTB	Total/NA	Water	8260B	
MB 440-412062/4	Method Blank	Total/NA	Water	8260B	
LCS 440-412062/5	Lab Control Sample	Total/NA	Water	8260B	
440-186449-A-1 MS	Matrix Spike	Total/NA	Water	8260B	
440-186449-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

Analysis Batch: 412759

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186359-1	DW-1	Total/NA	Water	8260B	
440-186359-2	DW-2	Total/NA	Water	8260B	
440-186359-3	DW-3	Total/NA	Water	8260B	
440-186359-4	PZ-2	Total/NA	Water	8260B	
440-186359-5	CM-11R	Total/NA	Water	8260B	
440-186359-6	MW-14	Total/NA	Water	8260B	
440-186359-7	MW-6	Total/NA	Water	8260B	
440-186359-8	QCAB	Total/NA	Water	8260B	
440-186359-9	QCTB	Total/NA	Water	8260B	
MB 440-412759/4	Method Blank	Total/NA	Water	8260B	
LCS 440-412759/5	Lab Control Sample	Total/NA	Water	8260B	
440-186429-A-1 MS	Matrix Spike	Total/NA	Water	8260B	
440-186429-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 412149

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186359-1	DW-1	Total/NA	Water	3520C	
440-186359-2	DW-2	Total/NA	Water	3520C	
440-186359-3	DW-3	Total/NA	Water	3520C	
440-186359-4	PZ-2	Total/NA	Water	3520C	
440-186359-5	CM-11R	Total/NA	Water	3520C	
440-186359-6	MW-14	Total/NA	Water	3520C	
MB 440-412149/1-A	Method Blank	Total/NA	Water	3520C	
LCS 440-412149/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 440-412149/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	

Analysis Batch: 412600

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186359-1	DW-1	Total/NA	Water	8270C	412149
440-186359-2	DW-2	Total/NA	Water	8270C	412149
440-186359-3	DW-3	Total/NA	Water	8270C	412149
440-186359-4	PZ-2	Total/NA	Water	8270C	412149

GC/MS Semi VOA (Continued)

Analysis Batch: 412600 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186359-5	CM-11R	Total/NA	Water	8270C	412149
440-186359-6	MW-14	Total/NA	Water	8270C	412149
MB 440-412149/1-A	Method Blank	Total/NA	Water	8270C	412149
LCS 440-412149/2-A	Lab Control Sample	Total/NA	Water	8270C	412149
LCSD 440-412149/3-A	Lab Control Sample Dup	Total/NA	Water	8270C	412149

Prep Batch: 412693

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186359-7	MW-6	Total/NA	Water	3520C	
MB 440-412693/1-A	Method Blank	Total/NA	Water	3520C	
LCS 440-412693/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 440-412693/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	

Analysis Batch: 412846

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186359-7	MW-6	Total/NA	Water	8270C	412693
MB 440-412693/1-A	Method Blank	Total/NA	Water	8270C	412693
LCS 440-412693/2-A	Lab Control Sample	Total/NA	Water	8270C	412693
LCSD 440-412693/3-A	Lab Control Sample Dup	Total/NA	Water	8270C	412693

HPLC/IC

Analysis Batch: 411651

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186359-1	DW-1	Total/NA	Water	300.0	
440-186359-2	DW-2	Total/NA	Water	300.0	
440-186359-3	DW-3	Total/NA	Water	300.0	
440-186359-4	PZ-2	Total/NA	Water	300.0	
440-186359-5	CM-11R	Total/NA	Water	300.0	
440-186359-6	MW-14	Total/NA	Water	300.0	
440-186359-7	MW-6	Total/NA	Water	300.0	
MB 440-411651/16	Method Blank	Total/NA	Water	300.0	
LCS 440-411651/15	Lab Control Sample	Total/NA	Water	300.0	
440-186359-3 MS	DW-3	Total/NA	Water	300.0	
440-186359-3 MSD	DW-3	Total/NA	Water	300.0	

Analysis Batch: 411652

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186359-1	DW-1	Total/NA	Water	300.0	
440-186359-1	DW-1	Total/NA	Water	300.0	
440-186359-2	DW-2	Total/NA	Water	300.0	
440-186359-2	DW-2	Total/NA	Water	300.0	
440-186359-3	DW-3	Total/NA	Water	300.0	
440-186359-3	DW-3	Total/NA	Water	300.0	
440-186359-4	PZ-2	Total/NA	Water	300.0	
440-186359-4	PZ-2	Total/NA	Water	300.0	
440-186359-5	CM-11R	Total/NA	Water	300.0	
440-186359-5	CM-11R	Total/NA	Water	300.0	
440-186359-6	MW-14	Total/NA	Water	300.0	
440-186359-6	MW-14	Total/NA	Water	300.0	

HPLC/IC (Continued)

Analysis Batch: 411652 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186359-7	MW-6	Total/NA	Water	300.0	
440-186359-7	MW-6	Total/NA	Water	300.0	
MB 440-411652/16	Method Blank	Total/NA	Water	300.0	
LCS 440-411652/15	Lab Control Sample	Total/NA	Water	300.0	
440-186359-3 MS	DW-3	Total/NA	Water	300.0	
440-186359-3 MSD	DW-3	Total/NA	Water	300.0	

Metals

Prep Batch: 412831

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186359-1	DW-1	Total Recoverable	Water	3005A	
440-186359-2	DW-2	Total Recoverable	Water	3005A	
440-186359-3	DW-3	Total Recoverable	Water	3005A	
440-186359-4	PZ-2	Total Recoverable	Water	3005A	
440-186359-5	CM-11R	Total Recoverable	Water	3005A	
440-186359-6	MW-14	Total Recoverable	Water	3005A	
440-186359-7	MW-6	Total Recoverable	Water	3005A	
MB 440-412831/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 440-412831/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
440-186039-A-1-B MS	Matrix Spike	Total Recoverable	Water	3005A	
440-186039-A-1-C MSD	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

Analysis Batch: 413142

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186359-1	DW-1	Total Recoverable	Water	6010B	412831
440-186359-2	DW-2	Total Recoverable	Water	6010B	412831
440-186359-3	DW-3	Total Recoverable	Water	6010B	412831
440-186359-4	PZ-2	Total Recoverable	Water	6010B	412831
440-186359-5	CM-11R	Total Recoverable	Water	6010B	412831
440-186359-6	MW-14	Total Recoverable	Water	6010B	412831
440-186359-7	MW-6	Total Recoverable	Water	6010B	412831
MB 440-412831/1-A	Method Blank	Total Recoverable	Water	6010B	412831
LCS 440-412831/2-A	Lab Control Sample	Total Recoverable	Water	6010B	412831
440-186039-A-1-B MS	Matrix Spike	Total Recoverable	Water	6010B	412831
440-186039-A-1-C MSD	Matrix Spike Duplicate	Total Recoverable	Water	6010B	412831

Analysis Batch: 413239

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186359-1	DW-1	Total Recoverable	Water	6010B	412831
440-186359-4	PZ-2	Total Recoverable	Water	6010B	412831
440-186359-6	MW-14	Total Recoverable	Water	6010B	412831

General Chemistry

Analysis Batch: 411812

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186359-1	DW-1	Total/NA	Water	SM 4500 S2 D	
440-186359-2	DW-2	Total/NA	Water	SM 4500 S2 D	
440-186359-3	DW-3	Total/NA	Water	SM 4500 S2 D	

General Chemistry (Continued)

Analysis Batch: 411812 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186359-4	PZ-2	Total/NA	Water	SM 4500 S2 D	
440-186359-5	CM-11R	Total/NA	Water	SM 4500 S2 D	
440-186359-6	MW-14	Total/NA	Water	SM 4500 S2 D	
440-186359-7	MW-6	Total/NA	Water	SM 4500 S2 D	
MB 440-411812/3	Method Blank	Total/NA	Water	SM 4500 S2 D	
LCS 440-411812/4	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
LCSD 440-411812/5	Lab Control Sample Dup	Total/NA	Water	SM 4500 S2 D	
720-79933-G-1 MS ^2	Matrix Spike	Total/NA	Water	SM 4500 S2 D	
720-79933-G-1 MSD ^2	Matrix Spike Duplicate	Total/NA	Water	SM 4500 S2 D	

Prep Batch: 411874

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186359-1	DW-1	Total/NA	Water	SM 4500 NH3 B	
440-186359-2	DW-2	Total/NA	Water	SM 4500 NH3 B	
440-186359-3	DW-3	Total/NA	Water	SM 4500 NH3 B	
440-186359-4	PZ-2	Total/NA	Water	SM 4500 NH3 B	
440-186359-5	CM-11R	Total/NA	Water	SM 4500 NH3 B	
440-186359-6	MW-14	Total/NA	Water	SM 4500 NH3 B	
440-186359-7	MW-6	Total/NA	Water	SM 4500 NH3 B	
MB 440-411874/2-A	Method Blank	Total/NA	Water	SM 4500 NH3 B	
LCS 440-411874/1-A	Lab Control Sample	Total/NA	Water	SM 4500 NH3 B	
440-186312-A-1-B MS	Matrix Spike	Total/NA	Water	SM 4500 NH3 B	
440-186312-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 NH3 B	

Analysis Batch: 411889

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186359-1	DW-1	Total/NA	Water	SM 4500 NH3 D	411874
440-186359-2	DW-2	Total/NA	Water	SM 4500 NH3 D	411874
440-186359-3	DW-3	Total/NA	Water	SM 4500 NH3 D	411874
440-186359-4	PZ-2	Total/NA	Water	SM 4500 NH3 D	411874
440-186359-5	CM-11R	Total/NA	Water	SM 4500 NH3 D	411874
440-186359-6	MW-14	Total/NA	Water	SM 4500 NH3 D	411874
440-186359-7	MW-6	Total/NA	Water	SM 4500 NH3 D	411874
MB 440-411874/2-A	Method Blank	Total/NA	Water	SM 4500 NH3 D	411874
LCS 440-411874/1-A	Lab Control Sample	Total/NA	Water	SM 4500 NH3 D	411874
440-186312-A-1-B MS	Matrix Spike	Total/NA	Water	SM 4500 NH3 D	411874
440-186312-A-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 NH3 D	411874

Analysis Batch: 411921

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186359-1	DW-1	Total/NA	Water	SM 2320B	
440-186359-2	DW-2	Total/NA	Water	SM 2320B	
440-186359-3	DW-3	Total/NA	Water	SM 2320B	
440-186359-4	PZ-2	Total/NA	Water	SM 2320B	
440-186359-5	CM-11R	Total/NA	Water	SM 2320B	
440-186359-6	MW-14	Total/NA	Water	SM 2320B	
440-186359-7	MW-6	Total/NA	Water	SM 2320B	
MB 440-411921/3	Method Blank	Total/NA	Water	SM 2320B	
LCS 440-411921/2	Lab Control Sample	Total/NA	Water	SM 2320B	
440-186370-D-1 DU	Duplicate	Total/NA	Water	SM 2320B	

General Chemistry (Continued)

Analysis Batch: 412017

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186359-1	DW-1	Total/NA	Water	SM 4500 CO2 C	
440-186359-2	DW-2	Total/NA	Water	SM 4500 CO2 C	
440-186359-3	DW-3	Total/NA	Water	SM 4500 CO2 C	
440-186359-4	PZ-2	Total/NA	Water	SM 4500 CO2 C	
440-186359-5	CM-11R	Total/NA	Water	SM 4500 CO2 C	
440-186359-6	MW-14	Total/NA	Water	SM 4500 CO2 C	
440-186359-7	MW-6	Total/NA	Water	SM 4500 CO2 C	
MB 440-412017/1	Method Blank	Total/NA	Water	SM 4500 CO2 C	
440-186359-3 DU	DW-3	Total/NA	Water	SM 4500 CO2 C	

Analysis Batch: 412114

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186359-1	DW-1	Total/NA	Water	SM 5310C	
440-186359-2	DW-2	Total/NA	Water	SM 5310C	
440-186359-3	DW-3	Total/NA	Water	SM 5310C	
440-186359-4	PZ-2	Total/NA	Water	SM 5310C	
440-186359-5	CM-11R	Total/NA	Water	SM 5310C	
440-186359-6	MW-14	Total/NA	Water	SM 5310C	
440-186359-7	MW-6	Total/NA	Water	SM 5310C	
MB 440-412114/6	Method Blank	Total/NA	Water	SM 5310C	
LCS 440-412114/5	Lab Control Sample	Total/NA	Water	SM 5310C	
MRL 440-412114/16	Lab Control Sample	Total/NA	Water	SM 5310C	
MRL 440-412114/4	Lab Control Sample	Total/NA	Water	SM 5310C	
440-186243-D-1 MS	Matrix Spike	Total/NA	Water	SM 5310C	
440-186243-D-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 5310C	
550-84269-L-1 DU	Duplicate	Total/NA	Water	SM 5310C	

Analysis Batch: 412434

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186359-1	DW-1	Total/NA	Water	SM 2540C	
440-186359-2	DW-2	Total/NA	Water	SM 2540C	
440-186359-3	DW-3	Total/NA	Water	SM 2540C	
440-186359-4	PZ-2	Total/NA	Water	SM 2540C	
440-186359-5	CM-11R	Total/NA	Water	SM 2540C	
440-186359-6	MW-14	Total/NA	Water	SM 2540C	
440-186359-7	MW-6	Total/NA	Water	SM 2540C	
MB 440-412434/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 440-412434/2	Lab Control Sample	Total/NA	Water	SM 2540C	
440-186359-1 DU	DW-1	Total/NA	Water	SM 2540C	

Analysis Batch: 412923

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186359-1	DW-1	Total/NA	Water	410.4	
440-186359-2	DW-2	Total/NA	Water	410.4	
440-186359-3	DW-3	Total/NA	Water	410.4	
440-186359-4	PZ-2	Total/NA	Water	410.4	
440-186359-5	CM-11R	Total/NA	Water	410.4	
440-186359-6	MW-14	Total/NA	Water	410.4	
440-186359-7	MW-6	Total/NA	Water	410.4	
MB 440-412923/3	Method Blank	Total/NA	Water	410.4	
LCS 440-412923/4	Lab Control Sample	Total/NA	Water	410.4	

General Chemistry (Continued)

Analysis Batch: 412923 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186447-C-1 MS	Matrix Spike	Total/NA	Water	410.4	
440-186447-C-1 MSD	Matrix Spike Duplicate	Total/NA	Water	410.4	

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.

HPLC/IC

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.

Metals

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.
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.
¤	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: 440-186359-1

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	06-30-17 *
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	CA015312017-3	07-31-17
New Mexico	State Program	6	N/A	01-29-17 *
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

THE LEADER IN ENVIRONMENTAL TESTING

TAL-0013 (0513)

CHAIN OF COSTODY FORM

17461 Derian Ave., #100, Irvine, CA 92614 (949) 261-1022 FAX (949) 260-3297

Page 1 of 1

Client Name / Address: Republic / Geo-Logic Assoc. 11415 W. Bernardo Ct. San Diego, CA 92127

Project / PO Number: 5017.1047 Sunshine Cyn. Landfill

Project Manager: Kyle Welchans

Phone Number: 858-451-1136

Sampler: BS, AS

Fax Number: 858-451-1087

Analysis Required

Sample Description	Sample Matrix	Container Type	# of Cont.	Sampling Date	Sampling Time	Preservatives	8260B-VOCs 40 CFR 258 Apdx.1 DCE, Vinyl Chloride, 1,4-Dioxane	SM-4500-CO2-Carbon Dioxide	EPA 8270 1,4-Dioxane	Total Alkalinity and Bicarbonate EPA 310.1	Ammonia as N, COD, Chloride, Bromide, Nitrate-N	Sulfate, TDS, TOC, Fluoride	Sulfide EPA 376.2	Total Metals: B, Ca, Fe, Mg, Mn, K, Na EPA 6010B		Special Instructions
DW-1	GW	P,V,G	13	6/13/17	0948	yes	X	X	X	X	X	X	X	X		
DW-2	↓	↓	13	↓	1028	↓	X	X	X	X	X	X	X	X		
DW-3	↓	↓	13	↓	1120	↓	X	X	X	X	X	X	X	X		
PZ-2	↓	↓	13	↓	1121	↓	X	X	X	X	X	X	X	X		
CM-11R	↓	↓	13	↓	1315	↓	X	X	X	X	X	X	X	X		
MW-14	↓	↓	13	↓	0815	↓	X	X	X	X	X	X	X	X		
MW-6	↓	↓	13	↓	0945	↓	X	X	X	X	X	X	X	X		
QCAB	Lab DI	VOAs	4	↓	—	↓	X									
QCTB	"	VOAs	4	↓	—	↓	X									

AS 6/13/17

440-186359 Chain of Custody

Relinquished By:	Date / Time:	Received By:	Date / Time:	Turnaround Time: (Check)
[signature]	6-13-17 / 1355	[signature]	6-13-17 1355	same day ____ 72 hours ____
Relinquished By: [signature]	6-13-17 1025	Received By:	Date / Time:	24 hours ____ 5 days ____ 48 hours ____ normal ____
Relinquished By:	Date / Time:	Received in Lab By: [signature]	6/13/17 16.25	Sample Integrity: (Check) intact ____ on ice ✓

Note: By relinquishing samples to TestAmerica, client agrees to pay for the services requested on this chain of custody form and any additional analyses performed on this project. Payment for services is due within 30 days from the date of invoice. Sample(s) will be disposed of after 30 days.

0.8/1.4° 0.9/1.5° 1.2/1.8° IR sc

Login Sample Receipt Checklist

Client: Geo-Logic Associates

Job Number: 440-186359-1

Login Number: 186359
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: 440-186462-1
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:
6/27/2017 10:37:03 AM

Rossina Tomova, Project Manager I
(949)261-1022
rossina.tomova@testamericainc.com

Table of Contents

Sample Summary

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

TestAmerica Job ID: 440-186462-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-186462-1	PZ-4	Water	06/14/17 11:03	06/14/17 19:07
440-186462-2	Extraction Trench	Water	06/14/17 09:40	06/14/17 19:07
440-186462-3	MW-1	Water	06/14/17 10:10	06/14/17 19:07
440-186462-4	MW-13R	Water	06/14/17 11:30	06/14/17 19:07
440-186462-5	DW-5	Water	06/14/17 09:15	06/14/17 19:07
440-186462-6	MW-9	Water	06/14/17 08:10	06/14/17 19:07
440-186462-7	QCAB	Water	06/14/17 00:01	06/14/17 19:07
440-186462-8	QCTB	Water	06/14/17 00:01	06/14/17 19:07

Job ID: 440-186462-1

Laboratory: TestAmerica Irvine

Narrative

Job Narrative
440-186462-1

Comments
No additional comments.

Receipt
The samples were received on 6/14/2017 7:07 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 3 coolers at receipt time were 3.3º C, 3.4º C and 4.0º C.

GC/MS VOA
Method(s) 8260B: The continuing calibration verification (CCV) associated with batch 440-412938 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: PZ-4 (440-186462-1), Extraction Trench (440-186462-2), MW-1 (440-186462-3), MW-13R (440-186462-4), DW-5 (440-186462-5), MW-9 (440-186462-6), QCAB (440-186462-7), QCTB (440-186462-8) and (CCV 440-412938/3).

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 440-412775 and analytical batch 440-413120. The laboratory control sample (LCS) was performed in duplicate to provide precision data for this batch.

Method(s) 8270C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 440-412775 and analytical batch 440-413699. 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 440-411908 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: MW-1 (440-186462-3) and MW-9 (440-186462-6). 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: Extraction Trench (440-186462-2), MW-1 (440-186462-3) and MW-9 (440-186462-6). 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: Geo-Logic Associates
Project/Site: Republic Sunshine Canyon

TestAmerica Job ID: 440-186462-1

Client Sample ID: PZ-4
Date Collected: 06/14/17 11:03
Date Received: 06/14/17 19:07

Lab Sample ID: 440-186462-1
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			06/19/17 21:08	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/19/17 21:08	1
Acrolein	ND		50	2.5	ug/L			06/17/17 01:10	1
Acrylonitrile	ND		50	1.0	ug/L			06/17/17 01:10	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			06/19/17 21:08	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/19/17 21:08	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			06/19/17 21:08	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			06/19/17 21:08	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			06/19/17 21:08	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			06/19/17 21:08	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			06/19/17 21:08	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			06/19/17 21:08	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			06/19/17 21:08	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			06/19/17 21:08	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			06/19/17 21:08	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			06/19/17 21:08	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			06/19/17 21:08	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			06/19/17 21:08	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			06/19/17 21:08	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			06/19/17 21:08	1
2-Hexanone	ND		5.0	2.5	ug/L			06/19/17 21:08	1
Acetone	ND		20	10	ug/L			06/19/17 21:08	1
Acetonitrile	ND		20	10	ug/L			06/19/17 21:08	1
Benzene	ND		0.50	0.25	ug/L			06/19/17 21:08	1
Bromoform	ND		1.0	0.40	ug/L			06/19/17 21:08	1
Bromomethane	ND		0.50	0.25	ug/L			06/19/17 21:08	1
Carbon disulfide	ND		1.0	0.50	ug/L			06/19/17 21:08	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			06/19/17 21:08	1
Chlorobenzene	ND		0.50	0.25	ug/L			06/19/17 21:08	1
Bromochloromethane	ND		0.50	0.25	ug/L			06/19/17 21:08	1
Chloroethane	ND		1.0	0.40	ug/L			06/19/17 21:08	1
Chloroform	ND		0.50	0.25	ug/L			06/19/17 21:08	1
Chloromethane	ND		0.50	0.25	ug/L			06/19/17 21:08	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			06/19/17 21:08	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/19/17 21:08	1
Dibromochloromethane	ND		0.50	0.25	ug/L			06/19/17 21:08	1
Dibromomethane	ND		0.50	0.25	ug/L			06/19/17 21:08	1
Bromodichloromethane	ND		0.50	0.25	ug/L			06/19/17 21:08	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			06/19/17 21:08	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			06/19/17 21:08	1
Ethylbenzene	ND		0.50	0.25	ug/L			06/19/17 21:08	1
Iodomethane	ND		2.0	1.0	ug/L			06/19/17 21:08	1
Isobutyl alcohol	ND		25	13	ug/L			06/19/17 21:08	1
m,p-Xylene	ND		1.0	0.50	ug/L			06/19/17 21:08	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			06/19/17 21:08	1
Methyl methacrylate	ND		2.0	1.0	ug/L			06/19/17 21:08	1
Methylene Chloride	ND		2.0	0.88	ug/L			06/19/17 21:08	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			06/19/17 21:08	1
o-Xylene	ND		0.50	0.25	ug/L			06/19/17 21:08	1

Client Sample ID: PZ-4
Date Collected: 06/14/17 11:03
Date Received: 06/14/17 19:07

Lab Sample ID: 440-186462-1
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			06/19/17 21:08	1
Styrene	ND		0.50	0.25	ug/L			06/19/17 21:08	1
t-Butanol	ND		10	5.0	ug/L			06/19/17 21:08	1
Tetrachloroethene	ND		0.50	0.25	ug/L			06/19/17 21:08	1
Tetrahydrofuran	ND		10	5.0	ug/L			06/19/17 21:08	1
Toluene	ND		0.50	0.25	ug/L			06/19/17 21:08	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			06/19/17 21:08	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/19/17 21:08	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			06/19/17 21:08	1
Trichloroethene	ND		0.50	0.25	ug/L			06/19/17 21:08	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			06/19/17 21:08	1
Vinyl acetate	ND		4.0	2.0	ug/L			06/19/17 21:08	1
Vinyl chloride	ND		0.50	0.25	ug/L			06/19/17 21:08	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			06/19/17 21:08	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			06/19/17 21:08	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			06/19/17 21:08	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*06/19/17 21:08*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*104*		*80 - 128*		*06/17/17 01:10*	*1*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*		*06/17/17 01:10*	*1*
Toluene-d8 (Surr)	*106*		*80 - 128*		*06/19/17 21:08*	*1*
4-Bromofluorobenzene (Surr)	*107*		*80 - 120*		*06/19/17 21:08*	*1*
Dibromofluoromethane (Surr)	*107*		*76 - 132*		*06/17/17 01:10*	*1*
Dibromofluoromethane (Surr)	*111*		*76 - 132*		*06/19/17 21:08*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Allyl chloride	ND		1.0	0.50	ug/L			06/20/17 11:28	1
Naphthalene	ND		1.0	0.40	ug/L			06/20/17 11:28	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*13*	*T J*	*ug/L*		*2.78*			*06/20/17 11:28*	*1*
Unknown	*13*	*T J*	*ug/L*		*6.99*			*06/20/17 11:28*	*1*
Unknown	*13*	*T J*	*ug/L*		*16.30*			*06/20/17 11:28*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*105*		*80 - 128*		*06/20/17 11:28*	*1*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*		*06/20/17 11:28*	*1*
Dibromofluoromethane (Surr)	*108*		*76 - 132*		*06/20/17 11:28*	*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	0.26	ug/L		06/19/17 08:39	06/22/17 21:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*55*		*30 - 120*	*06/19/17 08:39*	*06/22/17 21:47*	*1*

Client Sample ID: PZ-4

Lab Sample ID: 440-186462-1
Date Collected: 06/14/17 11:03
Matrix: Water
Date Received: 06/14/17 19:07

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			06/14/17 21:43	1
Nitrate as N	ND		0.11	0.055	mg/L			06/14/17 21:43	1
Chloride	**8.4**		0.50	0.25	mg/L			06/14/17 21:43	1
Fluoride	**1.2**		0.50	0.25	mg/L			06/14/17 21:43	1
Sulfate	**550**		25	13	mg/L			06/14/17 22:32	50

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**0.19**		0.050	0.025	mg/L		06/21/17 14:05	06/22/17 09:49	1
Calcium	**120**		0.10	0.050	mg/L		06/21/17 14:05	06/22/17 09:49	1
Iron	**0.78**		0.10	0.050	mg/L		06/21/17 14:05	06/22/17 09:49	1
Magnesium	**71**		0.020	0.010	mg/L		06/21/17 14:05	06/22/17 09:49	1
Manganese	**0.11**		0.020	0.010	mg/L		06/21/17 14:05	06/22/17 09:49	1
Potassium	**4.1**		0.50	0.25	mg/L		06/21/17 14:05	06/22/17 09:49	1
Sodium	**100**		0.50	0.25	mg/L		06/21/17 14:05	06/22/17 09:49	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	**23**		20	10	mg/L			06/22/17 15:38	1
Total Dissolved Solids	**1100**		10	5.0	mg/L			06/19/17 08:52	1
Ammonia (as N)	**2.6**		0.50	0.10	mg/L		06/15/17 07:30	06/15/17 09:00	1
Total Sulfide	ND		0.050	0.027	mg/L			06/15/17 12:55	1
Total Organic Carbon	**1.1**		0.10	0.050	mg/L			06/23/17 11:36	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	**350**		4.0	4.0	mg/L			06/15/17 13:18	1
Bicarbonate Alkalinity as CaCO3	**350**		4.0	4.0	mg/L			06/15/17 13:18	1
Carbon Dioxide, Free	**60**		2.0	2.0	mg/L			06/14/17 20:36	1

Client Sample ID: Extraction Trench

Lab Sample ID: 440-186462-2
Date Collected: 06/14/17 09:40
Matrix: Water
Date Received: 06/14/17 19:07

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			06/19/17 22:38	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/19/17 22:38	1
Acrolein	ND		50	2.5	ug/L			06/17/17 01:36	1
Acrylonitrile	ND		50	1.0	ug/L			06/17/17 01:36	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			06/19/17 22:38	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/19/17 22:38	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			06/19/17 22:38	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			06/19/17 22:38	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			06/19/17 22:38	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			06/19/17 22:38	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			06/19/17 22:38	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			06/19/17 22:38	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			06/19/17 22:38	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			06/19/17 22:38	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			06/19/17 22:38	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			06/19/17 22:38	1

Client Sample ID: Extraction Trench
Date Collected: 06/14/17 09:40
Date Received: 06/14/17 19:07

Lab Sample ID: 440-186462-2
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			06/19/17 22:38	1
1,4-Dichlorobenzene	**1.7**		0.50	0.25	ug/L			06/19/17 22:38	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			06/19/17 22:38	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			06/19/17 22:38	1
2-Hexanone	ND		5.0	2.5	ug/L			06/19/17 22:38	1
Acetone	ND		20	10	ug/L			06/19/17 22:38	1
Acetonitrile	ND		20	10	ug/L			06/19/17 22:38	1
Benzene	ND		0.50	0.25	ug/L			06/19/17 22:38	1
Bromoform	ND		1.0	0.40	ug/L			06/19/17 22:38	1
Bromomethane	ND		0.50	0.25	ug/L			06/19/17 22:38	1
Carbon disulfide	ND		1.0	0.50	ug/L			06/19/17 22:38	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			06/19/17 22:38	1
Chlorobenzene	**0.32**	**J**	0.50	0.25	ug/L			06/19/17 22:38	1
Bromochloromethane	ND		0.50	0.25	ug/L			06/19/17 22:38	1
Chloroethane	ND		1.0	0.40	ug/L			06/19/17 22:38	1
Chloroform	ND		0.50	0.25	ug/L			06/19/17 22:38	1
Chloromethane	ND		0.50	0.25	ug/L			06/19/17 22:38	1
cis-1,2-Dichloroethene	**2.1**		0.50	0.25	ug/L			06/19/17 22:38	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/19/17 22:38	1
Dibromochloromethane	ND		0.50	0.25	ug/L			06/19/17 22:38	1
Dibromomethane	ND		0.50	0.25	ug/L			06/19/17 22:38	1
Bromodichloromethane	ND		0.50	0.25	ug/L			06/19/17 22:38	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			06/19/17 22:38	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			06/19/17 22:38	1
Ethylbenzene	ND		0.50	0.25	ug/L			06/19/17 22:38	1
Iodomethane	ND		2.0	1.0	ug/L			06/19/17 22:38	1
Isobutyl alcohol	ND		25	13	ug/L			06/19/17 22:38	1
m,p-Xylene	ND		1.0	0.50	ug/L			06/19/17 22:38	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			06/19/17 22:38	1
Methyl methacrylate	ND		2.0	1.0	ug/L			06/19/17 22:38	1
Methylene Chloride	ND		2.0	0.88	ug/L			06/19/17 22:38	1
Methyl tert-butyl ether	**0.94**		0.50	0.25	ug/L			06/19/17 22:38	1
o-Xylene	ND		0.50	0.25	ug/L			06/19/17 22:38	1
Propionitrile	ND		20	10	ug/L			06/19/17 22:38	1
Styrene	ND		0.50	0.25	ug/L			06/19/17 22:38	1
t-Butanol	**44**		10	5.0	ug/L			06/19/17 22:38	1
Tetrachloroethene	ND		0.50	0.25	ug/L			06/19/17 22:38	1
Tetrahydrofuran	**6.3**	**J**	10	5.0	ug/L			06/19/17 22:38	1
Toluene	ND		0.50	0.25	ug/L			06/19/17 22:38	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			06/19/17 22:38	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/19/17 22:38	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			06/19/17 22:38	1
Trichloroethene	ND		0.50	0.25	ug/L			06/19/17 22:38	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			06/19/17 22:38	1
Vinyl acetate	ND		4.0	2.0	ug/L			06/19/17 22:38	1
Vinyl chloride	ND		0.50	0.25	ug/L			06/19/17 22:38	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			06/19/17 22:38	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			06/19/17 22:38	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			06/19/17 22:38	1

Client Sample ID: Extraction Trench

Date Collected: 06/14/17 09:40
Date Received: 06/14/17 19:07

Lab Sample ID: 440-186462-2

Matrix: Water

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Silanol, trimethyl-	7.4	T J N	ug/L		4.85	1066-40-6		06/19/17 22:38	1
Unknown	9.6	T J	ug/L		6.28			06/19/17 22:38	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	104		80 - 128		06/17/17 01:36	1
4-Bromofluorobenzene (Surr)	102		80 - 120		06/17/17 01:36	1
Toluene-d8 (Surr)	107		80 - 128		06/19/17 22:38	1
4-Bromofluorobenzene (Surr)	101		80 - 120		06/19/17 22:38	1
Dibromofluoromethane (Surr)	105		76 - 132		06/17/17 01:36	1
Dibromofluoromethane (Surr)	109		76 - 132		06/19/17 22:38	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Allyl chloride	ND		1.0	0.50	ug/L			06/20/17 11:58	1
Naphthalene	ND		1.0	0.40	ug/L			06/20/17 11:58	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	8.2	T J	ug/L		3.35			06/20/17 11:58	1
Unknown	8.4	T J	ug/L		5.52			06/20/17 11:58	1
Unknown	13	T J	ug/L		6.99			06/20/17 11:58	1
Unknown	26	T J	ug/L		16.37			06/20/17 11:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	108		80 - 128		06/20/17 11:58	1
4-Bromofluorobenzene (Surr)	101		80 - 120		06/20/17 11:58	1
Dibromofluoromethane (Surr)	102		76 - 132		06/20/17 11:58	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**16**		1.1	0.27	ug/L		06/19/17 08:39	06/22/17 22:08	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	40		30 - 120	06/19/17 08:39	06/22/17 22:08	1

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	**4.7**		2.5	1.3	mg/L			06/14/17 22:49	5
Nitrate as N	ND		0.55	0.28	mg/L			06/14/17 22:49	5
Chloride	**240**		100	50	mg/L			06/14/17 23:05	200
Fluoride	**2.8**		2.5	1.3	mg/L			06/14/17 22:49	5
Sulfate	**1700**		100	50	mg/L			06/14/17 23:05	200

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**1.3**		0.050	0.025	mg/L		06/21/17 14:05	06/22/17 09:52	1
Calcium	**410**		0.10	0.050	mg/L		06/21/17 14:05	06/22/17 09:52	1
Iron	**46**		0.10	0.050	mg/L		06/21/17 14:05	06/22/17 09:52	1
Magnesium	**210**		0.020	0.010	mg/L		06/21/17 14:05	06/22/17 09:52	1
Manganese	**5.2**		0.020	0.010	mg/L		06/21/17 14:05	06/22/17 09:52	1
Potassium	**28**		0.50	0.25	mg/L		06/21/17 14:05	06/22/17 09:52	1
Sodium	**370**		0.50	0.25	mg/L		06/21/17 14:05	06/22/17 09:52	1

Client Sample ID: Extraction Trench

Lab Sample ID: 440-186462-2

Date Collected: 06/14/17 09:40

Matrix: Water

Date Received: 06/14/17 19:07

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	**170**		20	10	mg/L			06/22/17 15:38	1
Total Dissolved Solids	**3600**		50	25	mg/L			06/19/17 08:52	1
Ammonia (as N)	**8.5**		2.5	0.50	mg/L		06/15/17 07:30	06/15/17 09:00	1
Total Sulfide	ND		0.050	0.027	mg/L			06/15/17 12:55	1
Total Organic Carbon	**64**		1.0	0.50	mg/L			06/26/17 09:00	10

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	**870**		4.0	4.0	mg/L			06/15/17 13:43	1
Bicarbonate Alkalinity as CaCO3	**870**		4.0	4.0	mg/L			06/15/17 13:43	1
Carbon Dioxide, Free	**460**		2.0	2.0	mg/L			06/14/17 20:36	1

Client Sample ID: MW-1

Lab Sample ID: 440-186462-3

Date Collected: 06/14/17 10:10

Matrix: Water

Date Received: 06/14/17 19:07

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			06/19/17 23:07	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/19/17 23:07	1
Acrolein	ND		50	2.5	ug/L			06/17/17 02:03	1
Acrylonitrile	ND		50	1.0	ug/L			06/17/17 02:03	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			06/19/17 23:07	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/19/17 23:07	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			06/19/17 23:07	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			06/19/17 23:07	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			06/19/17 23:07	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			06/19/17 23:07	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			06/19/17 23:07	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			06/19/17 23:07	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			06/19/17 23:07	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			06/19/17 23:07	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			06/19/17 23:07	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			06/19/17 23:07	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			06/19/17 23:07	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			06/19/17 23:07	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			06/19/17 23:07	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			06/19/17 23:07	1
2-Hexanone	ND		5.0	2.5	ug/L			06/19/17 23:07	1
Acetone	ND		20	10	ug/L			06/19/17 23:07	1
Acetonitrile	ND		20	10	ug/L			06/19/17 23:07	1
Benzene	ND		0.50	0.25	ug/L			06/19/17 23:07	1
Bromoform	ND		1.0	0.40	ug/L			06/19/17 23:07	1
Bromomethane	ND		0.50	0.25	ug/L			06/19/17 23:07	1
Carbon disulfide	ND		1.0	0.50	ug/L			06/19/17 23:07	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			06/19/17 23:07	1
Chlorobenzene	ND		0.50	0.25	ug/L			06/19/17 23:07	1
Bromochloromethane	ND		0.50	0.25	ug/L			06/19/17 23:07	1
Chloroethane	ND		1.0	0.40	ug/L			06/19/17 23:07	1
Chloroform	ND		0.50	0.25	ug/L			06/19/17 23:07	1
Chloromethane	ND		0.50	0.25	ug/L			06/19/17 23:07	1

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

TestAmerica Job ID: 440-186462-1

Client Sample ID: MW-1
Date Collected: 06/14/17 10:10
Date Received: 06/14/17 19:07

Lab Sample ID: 440-186462-3
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			06/19/17 23:07	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/19/17 23:07	1
Dibromochloromethane	ND		0.50	0.25	ug/L			06/19/17 23:07	1
Dibromomethane	ND		0.50	0.25	ug/L			06/19/17 23:07	1
Bromodichloromethane	ND		0.50	0.25	ug/L			06/19/17 23:07	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			06/19/17 23:07	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			06/19/17 23:07	1
Ethylbenzene	ND		0.50	0.25	ug/L			06/19/17 23:07	1
Iodomethane	ND		2.0	1.0	ug/L			06/19/17 23:07	1
Isobutyl alcohol	ND		25	13	ug/L			06/19/17 23:07	1
m,p-Xylene	ND		1.0	0.50	ug/L			06/19/17 23:07	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			06/19/17 23:07	1
Methyl methacrylate	ND		2.0	1.0	ug/L			06/19/17 23:07	1
Methylene Chloride	ND		2.0	0.88	ug/L			06/19/17 23:07	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			06/19/17 23:07	1
Naphthalene	ND		1.0	0.40	ug/L			06/19/17 23:07	1
o-Xylene	ND		0.50	0.25	ug/L			06/19/17 23:07	1
Propionitrile	ND		20	10	ug/L			06/19/17 23:07	1
Styrene	ND		0.50	0.25	ug/L			06/19/17 23:07	1
t-Butanol	**19**		10	5.0	ug/L			06/19/17 23:07	1
Tetrachloroethene	ND		0.50	0.25	ug/L			06/19/17 23:07	1
Tetrahydrofuran	ND		10	5.0	ug/L			06/19/17 23:07	1
Toluene	ND		0.50	0.25	ug/L			06/19/17 23:07	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			06/19/17 23:07	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/19/17 23:07	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			06/19/17 23:07	1
Trichloroethene	ND		0.50	0.25	ug/L			06/19/17 23:07	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			06/19/17 23:07	1
Vinyl acetate	ND		4.0	2.0	ug/L			06/19/17 23:07	1
Vinyl chloride	ND		0.50	0.25	ug/L			06/19/17 23:07	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			06/19/17 23:07	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			06/19/17 23:07	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			06/19/17 23:07	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*5.3*	*T J*	*ug/L*		*4.85*			*06/19/17 23:07*	*1*
Unknown	*9.8*	*T J*	*ug/L*		*6.28*			*06/19/17 23:07*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*106*		*80 - 128*		*06/17/17 02:03*	*1*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*		*06/17/17 02:03*	*1*
Toluene-d8 (Surr)	*107*		*80 - 128*		*06/19/17 23:07*	*1*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*		*06/19/17 23:07*	*1*
Dibromofluoromethane (Surr)	*107*		*76 - 132*		*06/17/17 02:03*	*1*
Dibromofluoromethane (Surr)	*107*		*76 - 132*		*06/19/17 23:07*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Allyl chloride	ND		1.0	0.50	ug/L			06/21/17 00:51	1

Client Sample ID: MW-1
Date Collected: 06/14/17 10:10
Date Received: 06/14/17 19:07

Lab Sample ID: 440-186462-3
Matrix: Water

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	3.2	T J	ug/L		3.35			06/21/17 00:51	1
Unknown	7.9	T J	ug/L		5.53			06/21/17 00:51	1
Unknown	14	T J	ug/L		6.99			06/21/17 00:51	1
Unknown	8.1	T J	ug/L		15.21			06/21/17 00:51	1
Unknown	8.2	T J	ug/L		15.98			06/21/17 00:51	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	107		80 - 128		06/21/17 00:51	1
4-Bromofluorobenzene (Surr)	102		80 - 120		06/21/17 00:51	1
Dibromofluoromethane (Surr)	112		76 - 132		06/21/17 00:51	1

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	18		1.0	0.25	ug/L		06/19/17 08:39	06/22/17 22:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	63		30 - 120	06/19/17 08:39	06/22/17 22:30	1

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	4.9	J	5.0	2.5	mg/L			06/14/17 23:22	10
Nitrate as N	ND		1.1	0.55	mg/L			06/14/17 23:22	10
Chloride	280		100	50	mg/L			06/14/17 23:39	200
Fluoride	4.1	J	5.0	2.5	mg/L			06/14/17 23:22	10
Sulfate	1700		100	50	mg/L			06/14/17 23:39	200

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		06/21/17 14:05	06/22/17 09:53	1
Calcium	480		0.10	0.050	mg/L		06/21/17 14:05	06/22/17 09:53	1
Iron	60		0.10	0.050	mg/L		06/21/17 14:05	06/22/17 09:53	1
Magnesium	210		0.020	0.010	mg/L		06/21/17 14:05	06/22/17 09:53	1
Manganese	3.2		0.020	0.010	mg/L		06/21/17 14:05	06/22/17 09:53	1
Potassium	30		0.50	0.25	mg/L		06/21/17 14:05	06/22/17 09:53	1
Sodium	350		0.50	0.25	mg/L		06/21/17 14:05	06/22/17 09:53	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	130		20	10	mg/L			06/22/17 15:38	1
Total Dissolved Solids	3500		50	25	mg/L			06/19/17 08:52	1
Ammonia (as N)	3.6		0.50	0.10	mg/L		06/15/17 07:30	06/15/17 09:00	1
Total Sulfide	ND		0.050	0.027	mg/L			06/15/17 12:55	1
Total Organic Carbon	51		1.0	0.50	mg/L			06/23/17 12:53	10

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	700		4.0	4.0	mg/L			06/15/17 13:54	1
Bicarbonate Alkalinity as CaCO3	700		4.0	4.0	mg/L			06/15/17 13:54	1
Carbon Dioxide, Free	350		2.0	2.0	mg/L			06/14/17 20:36	1

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

TestAmerica Job ID: 440-186462-1

Client Sample ID: MW-13R
Date Collected: 06/14/17 11:30
Date Received: 06/14/17 19:07

Lab Sample ID: 440-186462-4
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			06/19/17 23:38	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/19/17 23:38	1
Acrolein	ND		50	2.5	ug/L			06/17/17 02:29	1
Acrylonitrile	ND		50	1.0	ug/L			06/17/17 02:29	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			06/19/17 23:38	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/19/17 23:38	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			06/19/17 23:38	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			06/19/17 23:38	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			06/19/17 23:38	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			06/19/17 23:38	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			06/19/17 23:38	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			06/19/17 23:38	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			06/19/17 23:38	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			06/19/17 23:38	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			06/19/17 23:38	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			06/19/17 23:38	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			06/19/17 23:38	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			06/19/17 23:38	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			06/19/17 23:38	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			06/19/17 23:38	1
2-Hexanone	ND		5.0	2.5	ug/L			06/19/17 23:38	1
Acetone	ND		20	10	ug/L			06/19/17 23:38	1
Acetonitrile	ND		20	10	ug/L			06/19/17 23:38	1
Benzene	ND		0.50	0.25	ug/L			06/19/17 23:38	1
Bromoform	ND		1.0	0.40	ug/L			06/19/17 23:38	1
Bromomethane	ND		0.50	0.25	ug/L			06/19/17 23:38	1
Carbon disulfide	ND		1.0	0.50	ug/L			06/19/17 23:38	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			06/19/17 23:38	1
Chlorobenzene	ND		0.50	0.25	ug/L			06/19/17 23:38	1
Bromochloromethane	ND		0.50	0.25	ug/L			06/19/17 23:38	1
Chloroethane	ND		1.0	0.40	ug/L			06/19/17 23:38	1
Chloroform	ND		0.50	0.25	ug/L			06/19/17 23:38	1
Chloromethane	ND		0.50	0.25	ug/L			06/19/17 23:38	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			06/19/17 23:38	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/19/17 23:38	1
Dibromochloromethane	ND		0.50	0.25	ug/L			06/19/17 23:38	1
Dibromomethane	ND		0.50	0.25	ug/L			06/19/17 23:38	1
Bromodichloromethane	ND		0.50	0.25	ug/L			06/19/17 23:38	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			06/19/17 23:38	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			06/19/17 23:38	1
Ethylbenzene	ND		0.50	0.25	ug/L			06/19/17 23:38	1
Iodomethane	ND		2.0	1.0	ug/L			06/19/17 23:38	1
Isobutyl alcohol	ND		25	13	ug/L			06/19/17 23:38	1
m,p-Xylene	ND		1.0	0.50	ug/L			06/19/17 23:38	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			06/19/17 23:38	1
Methyl methacrylate	ND		2.0	1.0	ug/L			06/19/17 23:38	1
Methylene Chloride	ND		2.0	0.88	ug/L			06/19/17 23:38	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			06/19/17 23:38	1
Naphthalene	ND		1.0	0.40	ug/L			06/19/17 23:38	1

Client Sample ID: MW-13R
Date Collected: 06/14/17 11:30
Date Received: 06/14/17 19:07

Lab Sample ID: 440-186462-4
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			06/19/17 23:38	1
Propionitrile	ND		20	10	ug/L			06/19/17 23:38	1
Styrene	ND		0.50	0.25	ug/L			06/19/17 23:38	1
t-Butanol	5.9	J ID	10	5.0	ug/L			06/19/17 23:38	1
Tetrachloroethene	ND		0.50	0.25	ug/L			06/19/17 23:38	1
Tetrahydrofuran	ND		10	5.0	ug/L			06/19/17 23:38	1
Toluene	ND		0.50	0.25	ug/L			06/19/17 23:38	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			06/19/17 23:38	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/19/17 23:38	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			06/19/17 23:38	1
Trichloroethene	ND		0.50	0.25	ug/L			06/19/17 23:38	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			06/19/17 23:38	1
Vinyl acetate	ND		4.0	2.0	ug/L			06/19/17 23:38	1
Vinyl chloride	ND		0.50	0.25	ug/L			06/19/17 23:38	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			06/19/17 23:38	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			06/19/17 23:38	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			06/19/17 23:38	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*110*	*T J*	*ug/L*		*2.13*			*06/19/17 23:38*	*1*
Unknown	*310*	*T J*	*ug/L*		*2.19*			*06/19/17 23:38*	*1*
Unknown	*9.8*	*T J*	*ug/L*		*6.28*			*06/19/17 23:38*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*105*		*80 - 128*		*06/17/17 02:29*	*1*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*		*06/17/17 02:29*	*1*
Toluene-d8 (Surr)	*106*		*80 - 128*		*06/19/17 23:38*	*1*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*		*06/19/17 23:38*	*1*
Dibromofluoromethane (Surr)	*108*		*76 - 132*		*06/17/17 02:29*	*1*
Dibromofluoromethane (Surr)	*108*		*76 - 132*		*06/19/17 23:38*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Allyl chloride	ND		1.0	0.50	ug/L			06/21/17 01:21	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*530*	*T J*	*ug/L*		*2.60*			*06/21/17 01:21*	*1*
Unknown	*11*	*T J*	*ug/L*		*5.52*			*06/21/17 01:21*	*1*
Unknown	*13*	*T J*	*ug/L*		*6.99*			*06/21/17 01:21*	*1*
Unknown	*5.8*	*T J*	*ug/L*		*14.27*			*06/21/17 01:21*	*1*
Unknown	*2.6*	*T J*	*ug/L*		*15.65*			*06/21/17 01:21*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*107*		*80 - 128*		*06/21/17 01:21*	*1*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*		*06/21/17 01:21*	*1*
Dibromofluoromethane (Surr)	*114*		*76 - 132*		*06/21/17 01:21*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	7.2		1.0	0.26	ug/L		06/19/17 08:39	06/22/17 22:52	1

Client Sample ID: MW-13R

Date Collected: 06/14/17 11:30
Date Received: 06/14/17 19:07

Lab Sample ID: 440-186462-4

Matrix: Water

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*60*		*30 - 120*	*06/19/17 08:39*	*06/22/17 22:52*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	**2.0**		0.50	0.25	mg/L			06/14/17 23:55	1
Nitrate as N	ND		0.11	0.055	mg/L			06/14/17 23:55	1
Chloride	**120**		25	13	mg/L			06/15/17 00:12	50
Fluoride	**0.55**		0.50	0.25	mg/L			06/14/17 23:55	1
Sulfate	**330**		25	13	mg/L			06/15/17 00:12	50

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**0.78**		0.050	0.025	mg/L		06/21/17 14:05	06/22/17 09:55	1
Calcium	**110**		0.10	0.050	mg/L		06/21/17 14:05	06/22/17 09:55	1
Iron	ND		0.10	0.050	mg/L		06/21/17 14:05	06/22/17 09:55	1
Magnesium	**120**		0.020	0.010	mg/L		06/21/17 14:05	06/22/17 09:55	1
Manganese	ND		0.020	0.010	mg/L		06/21/17 14:05	06/22/17 09:55	1
Potassium	**25**		0.50	0.25	mg/L		06/21/17 14:05	06/22/17 09:55	1
Sodium	**210**		0.50	0.25	mg/L		06/21/17 14:05	06/22/17 09:55	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	**280**		20	10	mg/L			06/22/17 15:39	1
Total Dissolved Solids	**1500**		10	5.0	mg/L			06/19/17 08:52	1
Ammonia (as N)	**7.6**		2.5	0.50	mg/L		06/15/17 07:30	06/15/17 09:00	1
Total Sulfide	**44**		5.0	2.7	mg/L			06/15/17 12:55	100
Total Organic Carbon	**29**		2.0	1.0	mg/L			06/23/17 13:05	20

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	**820**		4.0	4.0	mg/L			06/15/17 14:08	1
Bicarbonate Alkalinity as CaCO3	**780**		4.0	4.0	mg/L			06/15/17 14:08	1
Carbon Dioxide, Free	**110**		2.0	2.0	mg/L			06/14/17 20:36	1

Client Sample ID: DW-5

Date Collected: 06/14/17 09:15
Date Received: 06/14/17 19:07

Lab Sample ID: 440-186462-5

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			06/20/17 00:08	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/20/17 00:08	1
Acrolein	ND		50	2.5	ug/L			06/17/17 02:56	1
Acrylonitrile	ND		50	1.0	ug/L			06/17/17 02:56	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			06/20/17 00:08	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/20/17 00:08	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			06/20/17 00:08	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			06/20/17 00:08	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			06/20/17 00:08	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			06/20/17 00:08	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			06/20/17 00:08	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			06/20/17 00:08	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			06/20/17 00:08	1

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

TestAmerica Job ID: 440-186462-1

Client Sample ID: DW-5
Date Collected: 06/14/17 09:15
Date Received: 06/14/17 19:07

Lab Sample ID: 440-186462-5
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane	ND		0.50	0.25	ug/L			06/20/17 00:08	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			06/20/17 00:08	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			06/20/17 00:08	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			06/20/17 00:08	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			06/20/17 00:08	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			06/20/17 00:08	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			06/20/17 00:08	1
2-Hexanone	ND		5.0	2.5	ug/L			06/20/17 00:08	1
Acetone	ND		20	10	ug/L			06/20/17 00:08	1
Acetonitrile	ND		20	10	ug/L			06/20/17 00:08	1
Benzene	ND		0.50	0.25	ug/L			06/20/17 00:08	1
Bromoform	ND		1.0	0.40	ug/L			06/20/17 00:08	1
Bromomethane	ND		0.50	0.25	ug/L			06/20/17 00:08	1
Carbon disulfide	ND		1.0	0.50	ug/L			06/20/17 00:08	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			06/20/17 00:08	1
Chlorobenzene	ND		0.50	0.25	ug/L			06/20/17 00:08	1
Bromochloromethane	ND		0.50	0.25	ug/L			06/20/17 00:08	1
Chloroethane	ND		1.0	0.40	ug/L			06/20/17 00:08	1
Chloroform	ND		0.50	0.25	ug/L			06/20/17 00:08	1
Chloromethane	ND		0.50	0.25	ug/L			06/20/17 00:08	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			06/20/17 00:08	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/20/17 00:08	1
Dibromochloromethane	ND		0.50	0.25	ug/L			06/20/17 00:08	1
Dibromomethane	ND		0.50	0.25	ug/L			06/20/17 00:08	1
Bromodichloromethane	ND		0.50	0.25	ug/L			06/20/17 00:08	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			06/20/17 00:08	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			06/20/17 00:08	1
Ethylbenzene	ND		0.50	0.25	ug/L			06/20/17 00:08	1
Iodomethane	ND		2.0	1.0	ug/L			06/20/17 00:08	1
Isobutyl alcohol	ND		25	13	ug/L			06/20/17 00:08	1
m,p-Xylene	ND		1.0	0.50	ug/L			06/20/17 00:08	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			06/20/17 00:08	1
Methyl methacrylate	ND		2.0	1.0	ug/L			06/20/17 00:08	1
Methylene Chloride	ND		2.0	0.88	ug/L			06/20/17 00:08	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			06/20/17 00:08	1
Naphthalene	ND		1.0	0.40	ug/L			06/20/17 00:08	1
o-Xylene	ND		0.50	0.25	ug/L			06/20/17 00:08	1
Propionitrile	ND		20	10	ug/L			06/20/17 00:08	1
Styrene	ND		0.50	0.25	ug/L			06/20/17 00:08	1
t-Butanol	ND		10	5.0	ug/L			06/20/17 00:08	1
Tetrachloroethene	ND		0.50	0.25	ug/L			06/20/17 00:08	1
Tetrahydrofuran	ND		10	5.0	ug/L			06/20/17 00:08	1
Toluene	ND		0.50	0.25	ug/L			06/20/17 00:08	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			06/20/17 00:08	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/20/17 00:08	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			06/20/17 00:08	1
Trichloroethene	ND		0.50	0.25	ug/L			06/20/17 00:08	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			06/20/17 00:08	1
Vinyl acetate	ND		4.0	2.0	ug/L			06/20/17 00:08	1

Client Sample ID: DW-5

Date Collected: 06/14/17 09:15
Date Received: 06/14/17 19:07

Lab Sample ID: 440-186462-5

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		0.50	0.25	ug/L			06/20/17 00:08	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			06/20/17 00:08	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			06/20/17 00:08	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			06/20/17 00:08	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Butane, 2,3-dimethyl-	*15*	*T J N*	*ug/L*		*4.89*	*79-29-8*		*06/20/17 00:08*	*1*
Unknown	*10*	*T J*	*ug/L*		*6.28*			*06/20/17 00:08*	*1*
Benzene, (2-methylpropyl)-	*11*	*T J N*	*ug/L*		*11.90*	*538-93-2*		*06/20/17 00:08*	*1*
1H-Indene, 2,3-dihydro-1,6-dimethyl-	*10*	*T J N*	*ug/L*		*13.24*	*17059-48-2*		*06/20/17 00:08*	*1*
Benzene, 1,2,3,5-tetramethyl-	*34*	*T J N*	*ug/L*		*13.42*	*527-53-7*		*06/20/17 00:08*	*1*
Unknown	*15*	*T J*	*ug/L*		*14.12*			*06/20/17 00:08*	*1*
Benzene, ethyl-1,2,4-trimethyl-	*9.4*	*T J N*	*ug/L*		*14.22*	*54120-62-6*		*06/20/17 00:08*	*1*
1H-Indene, 2,3-dihydro-1,1,5-trimethyl-	*9.7*	*T J N*	*ug/L*		*14.28*	*40650-41-7*		*06/20/17 00:08*	*1*
1H-Indene, 2,3-dihydro-4,6-dimethyl-	*11*	*T J N*	*ug/L*		*14.84*	*1685-82-1*		*06/20/17 00:08*	*1*
Unknown	*7.5*	*T J*	*ug/L*		*15.03*			*06/20/17 00:08*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*106*		*80 - 128*		*06/17/17 02:56*	*1*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*		*06/17/17 02:56*	*1*
Toluene-d8 (Surr)	*106*		*80 - 128*		*06/20/17 00:08*	*1*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*		*06/20/17 00:08*	*1*
Dibromofluoromethane (Surr)	*105*		*76 - 132*		*06/17/17 02:56*	*1*
Dibromofluoromethane (Surr)	*112*		*76 - 132*		*06/20/17 00:08*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Allyl chloride	ND		1.0	0.50	ug/L			06/21/17 01:51	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*29*	*T J*	*ug/L*		*2.60*			*06/21/17 01:51*	*1*
Unknown	*13*	*T J*	*ug/L*		*5.59*			*06/21/17 01:51*	*1*
Unknown	*14*	*T J*	*ug/L*		*6.99*			*06/21/17 01:51*	*1*
Benzene, (2-methylpropyl)-	*8.4*	*T J N*	*ug/L*		*12.74*	*538-93-2*		*06/21/17 01:51*	*1*
1H-Indene,2,3-dihydro-2,2-dimethyl-	*7.3*	*T J N*	*ug/L*		*13.93*	*20836-11-7*		*06/21/17 01:51*	*1*
Benzene, 1-ethyl-2,4-dimethyl-	*28*	*T J N*	*ug/L*		*14.08*	*874-41-9*		*06/21/17 01:51*	*1*
Unknown	*17*	*T J*	*ug/L*		*14.81*			*06/21/17 01:51*	*1*
Unknown	*10*	*T J*	*ug/L*		*15.25*			*06/21/17 01:51*	*1*
Unknown	*13*	*T J*	*ug/L*		*15.64*			*06/21/17 01:51*	*1*
Unknown	*8.0*	*T J*	*ug/L*		*15.85*			*06/21/17 01:51*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*110*		*80 - 128*		*06/21/17 01:51*	*1*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*		*06/21/17 01:51*	*1*
Dibromofluoromethane (Surr)	*116*		*76 - 132*		*06/21/17 01:51*	*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	0.26	ug/L		06/19/17 08:39	06/22/17 23:13	1

Client Sample ID: DW-5

Date Collected: 06/14/17 09:15
Date Received: 06/14/17 19:07

Lab Sample ID: 440-186462-5
Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	67		30 - 120	06/19/17 08:39	06/22/17 23:13	1

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	**0.52**		0.50	0.25	mg/L			06/15/17 01:23	1
Nitrate as N	ND		0.11	0.055	mg/L			06/15/17 01:23	1
Chloride	**17**		2.5	1.3	mg/L			06/15/17 22:24	5
Fluoride	**3.4**		0.50	0.25	mg/L			06/15/17 01:23	1
Sulfate	ND		0.50	0.25	mg/L			06/15/17 01:23	1

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**2.7**		0.050	0.025	mg/L		06/21/17 14:05	06/22/17 09:58	1
Calcium	**5.6**		0.10	0.050	mg/L		06/21/17 14:05	06/22/17 09:58	1
Iron	**0.12**		0.10	0.050	mg/L		06/21/17 14:05	06/22/17 09:58	1
Magnesium	**0.96**		0.020	0.010	mg/L		06/21/17 14:05	06/22/17 09:58	1
Manganese	**0.096**		0.020	0.010	mg/L		06/21/17 14:05	06/22/17 09:58	1
Potassium	**0.88**		0.50	0.25	mg/L		06/21/17 14:05	06/22/17 09:58	1
Sodium	**460**		0.50	0.25	mg/L		06/21/17 14:05	06/22/17 09:58	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	**33**		20	10	mg/L			06/22/17 15:39	1
Total Dissolved Solids	**1100**		10	5.0	mg/L			06/19/17 08:52	1
Ammonia (as N)	**0.37**	**J**	0.50	0.10	mg/L		06/15/17 07:30	06/15/17 09:00	1
Total Sulfide	ND		0.050	0.027	mg/L			06/15/17 12:55	1
Total Organic Carbon	**6.6**		0.10	0.050	mg/L			06/23/17 15:34	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	**1000**		4.0	4.0	mg/L			06/15/17 14:23	1
Bicarbonate Alkalinity as CaCO3	**950**		4.0	4.0	mg/L			06/15/17 14:23	1
Carbon Dioxide, Free	**12**		2.0	2.0	mg/L			06/14/17 20:36	1

Client Sample ID: MW-9

Date Collected: 06/14/17 08:10
Date Received: 06/14/17 19:07

Lab Sample ID: 440-186462-6
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			06/20/17 00:38	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/20/17 00:38	1
Acrolein	ND		50	2.5	ug/L			06/17/17 03:22	1
Acrylonitrile	ND		50	1.0	ug/L			06/17/17 03:22	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			06/20/17 00:38	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/20/17 00:38	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			06/20/17 00:38	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			06/20/17 00:38	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			06/20/17 00:38	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			06/20/17 00:38	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			06/20/17 00:38	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			06/20/17 00:38	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			06/20/17 00:38	1

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

TestAmerica Job ID: 440-186462-1

Client Sample ID: MW-9
Date Collected: 06/14/17 08:10
Date Received: 06/14/17 19:07

Lab Sample ID: 440-186462-6
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane	ND		0.50	0.25	ug/L			06/20/17 00:38	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			06/20/17 00:38	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			06/20/17 00:38	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			06/20/17 00:38	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			06/20/17 00:38	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			06/20/17 00:38	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			06/20/17 00:38	1
2-Hexanone	ND		5.0	2.5	ug/L			06/20/17 00:38	1
Acetone	**12**	**J**	20	10	ug/L			06/20/17 00:38	1
Acetonitrile	ND		20	10	ug/L			06/20/17 00:38	1
Benzene	ND		0.50	0.25	ug/L			06/20/17 00:38	1
Bromoform	ND		1.0	0.40	ug/L			06/20/17 00:38	1
Bromomethane	ND		0.50	0.25	ug/L			06/20/17 00:38	1
Carbon disulfide	ND		1.0	0.50	ug/L			06/20/17 00:38	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			06/20/17 00:38	1
Chlorobenzene	ND		0.50	0.25	ug/L			06/20/17 00:38	1
Bromochloromethane	ND		0.50	0.25	ug/L			06/20/17 00:38	1
Chloroethane	ND		1.0	0.40	ug/L			06/20/17 00:38	1
Chloroform	ND		0.50	0.25	ug/L			06/20/17 00:38	1
Chloromethane	ND		0.50	0.25	ug/L			06/20/17 00:38	1
cis-1,2-Dichloroethene	**0.94**		0.50	0.25	ug/L			06/20/17 00:38	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/20/17 00:38	1
Dibromochloromethane	ND		0.50	0.25	ug/L			06/20/17 00:38	1
Dibromomethane	ND		0.50	0.25	ug/L			06/20/17 00:38	1
Bromodichloromethane	ND		0.50	0.25	ug/L			06/20/17 00:38	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			06/20/17 00:38	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			06/20/17 00:38	1
Ethylbenzene	ND		0.50	0.25	ug/L			06/20/17 00:38	1
Iodomethane	ND		2.0	1.0	ug/L			06/20/17 00:38	1
Isobutyl alcohol	ND		25	13	ug/L			06/20/17 00:38	1
m,p-Xylene	ND		1.0	0.50	ug/L			06/20/17 00:38	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			06/20/17 00:38	1
Methyl methacrylate	ND		2.0	1.0	ug/L			06/20/17 00:38	1
Methylene Chloride	ND		2.0	0.88	ug/L			06/20/17 00:38	1
Methyl tert-butyl ether	**0.61**		0.50	0.25	ug/L			06/20/17 00:38	1
Naphthalene	ND		1.0	0.40	ug/L			06/20/17 00:38	1
o-Xylene	ND		0.50	0.25	ug/L			06/20/17 00:38	1
Propionitrile	ND		20	10	ug/L			06/20/17 00:38	1
Styrene	ND		0.50	0.25	ug/L			06/20/17 00:38	1
t-Butanol	**37**		10	5.0	ug/L			06/20/17 00:38	1
Tetrachloroethene	ND		0.50	0.25	ug/L			06/20/17 00:38	1
Tetrahydrofuran	**6.4**	**J**	10	5.0	ug/L			06/20/17 00:38	1
Toluene	ND		0.50	0.25	ug/L			06/20/17 00:38	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			06/20/17 00:38	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/20/17 00:38	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			06/20/17 00:38	1
Trichloroethene	ND		0.50	0.25	ug/L			06/20/17 00:38	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			06/20/17 00:38	1
Vinyl acetate	ND		4.0	2.0	ug/L			06/20/17 00:38	1

Client Sample ID: MW-9
Date Collected: 06/14/17 08:10
Date Received: 06/14/17 19:07

Lab Sample ID: 440-186462-6
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Vinyl chloride	ND		0.50	0.25	ug/L			06/20/17 00:38	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			06/20/17 00:38	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			06/20/17 00:38	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			06/20/17 00:38	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*7.6*	*T J*	*ug/L*		*4.85*			*06/20/17 00:38*	*1*
Unknown	*10*	*T J*	*ug/L*		*6.28*			*06/20/17 00:38*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*107*		*80 - 128*		*06/17/17 03:22*	*1*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*		*06/17/17 03:22*	*1*
Toluene-d8 (Surr)	*105*		*80 - 128*		*06/20/17 00:38*	*1*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*		*06/20/17 00:38*	*1*
Dibromofluoromethane (Surr)	*106*		*76 - 132*		*06/17/17 03:22*	*1*
Dibromofluoromethane (Surr)	*108*		*76 - 132*		*06/20/17 00:38*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Allyl chloride	ND		1.0	0.50	ug/L			06/21/17 02:21	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*24*	*T J*	*ug/L*		*2.59*			*06/21/17 02:21*	*1*
Unknown	*11*	*T J*	*ug/L*		*5.52*			*06/21/17 02:21*	*1*
Unknown	*14*	*T J*	*ug/L*		*6.99*			*06/21/17 02:21*	*1*
Unknown	*23*	*T J*	*ug/L*		*13.73*			*06/21/17 02:21*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*104*		*80 - 128*		*06/21/17 02:21*	*1*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*		*06/21/17 02:21*	*1*
Dibromofluoromethane (Surr)	*112*		*76 - 132*		*06/21/17 02:21*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**11**		1.0	0.26	ug/L		06/19/17 08:39	06/22/17 23:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*31*		*30 - 120*	*06/19/17 08:39*	*06/22/17 23:35*	*1*

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	**5.5**		5.0	2.5	mg/L			06/15/17 01:57	10
Nitrate as N	ND		1.1	0.55	mg/L			06/15/17 01:57	10
Chloride	**250**		100	50	mg/L			06/15/17 02:13	200
Fluoride	**4.2**	**J**	5.0	2.5	mg/L			06/15/17 01:57	10
Sulfate	**1600**		100	50	mg/L			06/15/17 02:13	200

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**1.5**		0.050	0.025	mg/L		06/21/17 14:27	06/22/17 10:47	1
Calcium	**450**		0.10	0.050	mg/L		06/21/17 14:27	06/22/17 10:47	1
Iron	**70**		0.10	0.050	mg/L		06/21/17 14:27	06/22/17 10:47	1

Client Sample ID: MW-9

Date Collected: 06/14/17 08:10
Date Received: 06/14/17 19:07

Lab Sample ID: 440-186462-6
Matrix: Water

Method: 6010B - Metals (ICP) - Total Recoverable (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Magnesium	220		0.020	0.010	mg/L		06/21/17 14:27	06/22/17 10:47	1
Manganese	3.9		0.020	0.010	mg/L		06/21/17 14:27	06/22/17 10:47	1
Potassium	29		0.50	0.25	mg/L		06/21/17 14:27	06/22/17 10:47	1
Sodium	460		0.50	0.25	mg/L		06/21/17 14:27	06/22/17 10:47	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	190		20	10	mg/L			06/22/17 15:39	1
Total Dissolved Solids	3600		50	25	mg/L			06/19/17 08:52	1
Ammonia (as N)	9.6		2.5	0.50	mg/L		06/15/17 07:30	06/15/17 09:00	1
Total Sulfide	ND		0.050	0.027	mg/L			06/15/17 12:55	1
Total Organic Carbon	62		1.0	0.50	mg/L			06/23/17 13:31	10

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	850		4.0	4.0	mg/L			06/15/17 14:36	1
Bicarbonate Alkalinity as CaCO3	850		4.0	4.0	mg/L			06/15/17 14:36	1
Carbon Dioxide, Free	360		2.0	2.0	mg/L			06/14/17 20:36	1

Client Sample ID: QCAB

Date Collected: 06/14/17 00:01
Date Received: 06/14/17 19:07

Lab Sample ID: 440-186462-7
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			06/20/17 01:08	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/20/17 01:08	1
Acrolein	ND		50	2.5	ug/L			06/17/17 03:48	1
Acrylonitrile	ND		50	1.0	ug/L			06/17/17 03:48	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			06/20/17 01:08	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/20/17 01:08	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			06/20/17 01:08	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			06/20/17 01:08	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			06/20/17 01:08	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			06/20/17 01:08	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			06/20/17 01:08	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			06/20/17 01:08	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			06/20/17 01:08	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			06/20/17 01:08	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			06/20/17 01:08	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			06/20/17 01:08	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			06/20/17 01:08	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			06/20/17 01:08	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			06/20/17 01:08	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			06/20/17 01:08	1
2-Hexanone	ND		5.0	2.5	ug/L			06/20/17 01:08	1
Acetone	ND		20	10	ug/L			06/20/17 01:08	1
Acetonitrile	ND		20	10	ug/L			06/20/17 01:08	1
Benzene	ND		0.50	0.25	ug/L			06/20/17 01:08	1
Bromoform	ND		1.0	0.40	ug/L			06/20/17 01:08	1
Bromomethane	ND		0.50	0.25	ug/L			06/20/17 01:08	1
Carbon disulfide	ND		1.0	0.50	ug/L			06/20/17 01:08	1

Client Sample ID: QCAB
Date Collected: 06/14/17 00:01
Date Received: 06/14/17 19:07

Lab Sample ID: 440-186462-7
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			06/20/17 01:08	1
Chlorobenzene	ND		0.50	0.25	ug/L			06/20/17 01:08	1
Bromochloromethane	ND		0.50	0.25	ug/L			06/20/17 01:08	1
Chloroethane	ND		1.0	0.40	ug/L			06/20/17 01:08	1
Chloroform	ND		0.50	0.25	ug/L			06/20/17 01:08	1
Chloromethane	ND		0.50	0.25	ug/L			06/20/17 01:08	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			06/20/17 01:08	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/20/17 01:08	1
Dibromochloromethane	ND		0.50	0.25	ug/L			06/20/17 01:08	1
Dibromomethane	ND		0.50	0.25	ug/L			06/20/17 01:08	1
Bromodichloromethane	ND		0.50	0.25	ug/L			06/20/17 01:08	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			06/20/17 01:08	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			06/20/17 01:08	1
Ethylbenzene	ND		0.50	0.25	ug/L			06/20/17 01:08	1
Iodomethane	ND		2.0	1.0	ug/L			06/20/17 01:08	1
Isobutyl alcohol	ND		25	13	ug/L			06/20/17 01:08	1
m,p-Xylene	ND		1.0	0.50	ug/L			06/20/17 01:08	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			06/20/17 01:08	1
Methyl methacrylate	ND		2.0	1.0	ug/L			06/20/17 01:08	1
Methylene Chloride	ND		2.0	0.88	ug/L			06/20/17 01:08	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			06/20/17 01:08	1
Naphthalene	ND		1.0	0.40	ug/L			06/20/17 01:08	1
o-Xylene	ND		0.50	0.25	ug/L			06/20/17 01:08	1
Propionitrile	ND		20	10	ug/L			06/20/17 01:08	1
Styrene	ND		0.50	0.25	ug/L			06/20/17 01:08	1
t-Butanol	ND		10	5.0	ug/L			06/20/17 01:08	1
Tetrachloroethene	ND		0.50	0.25	ug/L			06/20/17 01:08	1
Tetrahydrofuran	ND		10	5.0	ug/L			06/20/17 01:08	1
Toluene	ND		0.50	0.25	ug/L			06/20/17 01:08	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			06/20/17 01:08	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/20/17 01:08	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			06/20/17 01:08	1
Trichloroethene	ND		0.50	0.25	ug/L			06/20/17 01:08	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			06/20/17 01:08	1
Vinyl acetate	ND		4.0	2.0	ug/L			06/20/17 01:08	1
Vinyl chloride	ND		0.50	0.25	ug/L			06/20/17 01:08	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			06/20/17 01:08	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			06/20/17 01:08	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			06/20/17 01:08	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*9.8*	*T J*	*ug/L*		*6.28*			*06/20/17 01:08*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*106*		*80 - 128*		*06/17/17 03:48*	*1*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*		*06/17/17 03:48*	*1*
Toluene-d8 (Surr)	*106*		*80 - 128*		*06/20/17 01:08*	*1*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*		*06/20/17 01:08*	*1*
Dibromofluoromethane (Surr)	*104*		*76 - 132*		*06/17/17 03:48*	*1*
Dibromofluoromethane (Surr)	*110*		*76 - 132*		*06/20/17 01:08*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Allyl chloride	ND		1.0	0.50	ug/L			06/21/17 02:51	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*13*	*T J*	*ug/L*		*3.20*			*06/21/17 02:51*	*1*
Unknown	*14*	*T J*	*ug/L*		*6.99*			*06/21/17 02:51*	*1*
Unknown	*24*	*T J*	*ug/L*		*16.08*			*06/21/17 02:51*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*102*		*80 - 128*		*06/21/17 02:51*	*1*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*		*06/21/17 02:51*	*1*
Dibromofluoromethane (Surr)	*116*		*76 - 132*		*06/21/17 02:51*	*1*

Client Sample ID: QCTB

Lab Sample ID: 440-186462-8

Date Collected: 06/14/17 00:01

Matrix: Water

Date Received: 06/14/17 19:07

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			06/20/17 01:38	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/20/17 01:38	1
Acrolein	ND		50	2.5	ug/L			06/17/17 12:53	1
Acrylonitrile	ND		50	1.0	ug/L			06/17/17 12:53	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			06/20/17 01:38	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/20/17 01:38	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			06/20/17 01:38	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			06/20/17 01:38	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			06/20/17 01:38	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			06/20/17 01:38	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			06/20/17 01:38	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			06/20/17 01:38	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			06/20/17 01:38	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			06/20/17 01:38	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			06/20/17 01:38	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			06/20/17 01:38	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			06/20/17 01:38	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			06/20/17 01:38	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			06/20/17 01:38	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			06/20/17 01:38	1
2-Hexanone	ND		5.0	2.5	ug/L			06/20/17 01:38	1
Acetone	ND		20	10	ug/L			06/20/17 01:38	1
Acetonitrile	ND		20	10	ug/L			06/20/17 01:38	1
Benzene	ND		0.50	0.25	ug/L			06/20/17 01:38	1
Bromoform	ND		1.0	0.40	ug/L			06/20/17 01:38	1
Bromomethane	ND		0.50	0.25	ug/L			06/20/17 01:38	1
Carbon disulfide	ND		1.0	0.50	ug/L			06/20/17 01:38	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			06/20/17 01:38	1
Chlorobenzene	ND		0.50	0.25	ug/L			06/20/17 01:38	1
Bromochloromethane	ND		0.50	0.25	ug/L			06/20/17 01:38	1
Chloroethane	ND		1.0	0.40	ug/L			06/20/17 01:38	1
Chloroform	ND		0.50	0.25	ug/L			06/20/17 01:38	1
Chloromethane	ND		0.50	0.25	ug/L			06/20/17 01:38	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			06/20/17 01:38	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/20/17 01:38	1
Dibromochloromethane	ND		0.50	0.25	ug/L			06/20/17 01:38	1

Client Sample ID: QCTB
Date Collected: 06/14/17 00:01
Date Received: 06/14/17 19:07

Lab Sample ID: 440-186462-8
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibromomethane	ND		0.50	0.25	ug/L			06/20/17 01:38	1
Bromodichloromethane	ND		0.50	0.25	ug/L			06/20/17 01:38	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			06/20/17 01:38	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			06/20/17 01:38	1
Ethylbenzene	ND		0.50	0.25	ug/L			06/20/17 01:38	1
Iodomethane	ND		2.0	1.0	ug/L			06/20/17 01:38	1
Isobutyl alcohol	ND		25	13	ug/L			06/20/17 01:38	1
m,p-Xylene	ND		1.0	0.50	ug/L			06/20/17 01:38	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			06/20/17 01:38	1
Methyl methacrylate	ND		2.0	1.0	ug/L			06/20/17 01:38	1
Methylene Chloride	ND		2.0	0.88	ug/L			06/20/17 01:38	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			06/20/17 01:38	1
Naphthalene	ND		1.0	0.40	ug/L			06/20/17 01:38	1
o-Xylene	ND		0.50	0.25	ug/L			06/20/17 01:38	1
Propionitrile	ND		20	10	ug/L			06/20/17 01:38	1
Styrene	ND		0.50	0.25	ug/L			06/20/17 01:38	1
t-Butanol	ND		10	5.0	ug/L			06/20/17 01:38	1
Tetrachloroethene	ND		0.50	0.25	ug/L			06/20/17 01:38	1
Tetrahydrofuran	ND		10	5.0	ug/L			06/20/17 01:38	1
Toluene	ND		0.50	0.25	ug/L			06/20/17 01:38	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			06/20/17 01:38	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/20/17 01:38	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			06/20/17 01:38	1
Trichloroethene	ND		0.50	0.25	ug/L			06/20/17 01:38	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			06/20/17 01:38	1
Vinyl acetate	ND		4.0	2.0	ug/L			06/20/17 01:38	1
Vinyl chloride	ND		0.50	0.25	ug/L			06/20/17 01:38	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			06/20/17 01:38	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			06/20/17 01:38	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			06/20/17 01:38	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*10*	*T J*	*ug/L*		*6.28*			*06/20/17 01:38*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*112*		*80 - 128*		*06/17/17 12:53*	*1*
4-Bromofluorobenzene (Surr)	*108*		*80 - 120*		*06/17/17 12:53*	*1*
Toluene-d8 (Surr)	*107*		*80 - 128*		*06/20/17 01:38*	*1*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*		*06/20/17 01:38*	*1*
Dibromofluoromethane (Surr)	*106*		*76 - 132*		*06/17/17 12:53*	*1*
Dibromofluoromethane (Surr)	*111*		*76 - 132*		*06/20/17 01:38*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Allyl chloride	ND		1.0	0.50	ug/L			06/21/17 03:21	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*5.0*	*T J*	*ug/L*		*3.19*			*06/21/17 03:21*	*1*
Unknown	*4.2*	*T J*	*ug/L*		*5.53*			*06/21/17 03:21*	*1*
Unknown	*14*	*T J*	*ug/L*		*6.99*			*06/21/17 03:21*	*1*

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

TestAmerica Job ID: 440-186462-1

Client Sample ID: QCTB
Date Collected: 06/14/17 00:01
Date Received: 06/14/17 19:07

Lab Sample ID: 440-186462-8
Matrix: Water

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

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	13	T J	ug/L		16.16			06/21/17 03:21	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Toluene-d8 (Surr)	99		80 - 128		06/21/17 03:21	1
4-Bromofluorobenzene (Surr)	107		80 - 120		06/21/17 03:21	1
Dibromofluoromethane (Surr)	114		76 - 132		06/21/17 03:21	1

Method Summary

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

TestAmerica Job ID: 440-186462-1

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: 440-186462-1

Client Sample ID: PZ-4

Lab Sample ID: 440-186462-1

Date Collected: 06/14/17 11:03

Matrix: Water

Date Received: 06/14/17 19:07

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	412555	06/17/17 01:10	AA	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	412938	06/19/17 21:08	K1S	TAL IRV
Total/NA	Analysis	8260B	RA	1	10 mL	10 mL	413003	06/20/17 11:28	MF	TAL IRV
Total/NA	Prep	3520C			955 mL	1.0 mL	412775	06/19/17 08:39	BMN	TAL IRV
Total/NA	Analysis	8270C		1			413699	06/22/17 21:47	AI	TAL IRV
Total/NA	Analysis	300.0		1			411907	06/14/17 21:43	NTN	TAL IRV
Total/NA	Analysis	300.0		1			411908	06/14/17 21:43	NTN	TAL IRV
Total/NA	Analysis	300.0		50			411908	06/14/17 22:32	NTN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	413388	06/21/17 14:05	JL	TAL IRV
Total Recoverable	Analysis	6010B		1			413582	06/22/17 09:49	EN	TAL IRV
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	413661	06/22/17 15:38	KYP	TAL IRV
Total/NA	Analysis	SM 2320B		1			412387	06/15/17 13:18	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	412777	06/19/17 08:52	XL	TAL IRV
Total/NA	Analysis	SM 4500 CO2 C		1	25 mL	25 mL	412075	06/14/17 20:36	SN	TAL IRV
Total/NA	Prep	SM 4500 NH3 B			50 mL	50 mL	412150	06/15/17 07:30	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			412173	06/15/17 09:00	YZ	TAL IRV
Total/NA	Analysis	SM 4500 S2 D		1	7.5 mL	7.5 mL	412254	06/15/17 12:55	HTL	TAL IRV
Total/NA	Analysis	SM 5310C		1	100 mL	100 mL	413963	06/23/17 11:36	YZ	TAL IRV

Client Sample ID: Extraction Trench

Lab Sample ID: 440-186462-2

Date Collected: 06/14/17 09:40

Matrix: Water

Date Received: 06/14/17 19:07

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	412555	06/17/17 01:36	AA	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	412938	06/19/17 22:38	K1S	TAL IRV
Total/NA	Analysis	8260B	RA	1	10 mL	10 mL	413003	06/20/17 11:58	MF	TAL IRV
Total/NA	Prep	3520C			940 mL	1.0 mL	412775	06/19/17 08:39	BMN	TAL IRV
Total/NA	Analysis	8270C		1			413699	06/22/17 22:08	AI	TAL IRV
Total/NA	Analysis	300.0		5			411907	06/14/17 22:49	NTN	TAL IRV
Total/NA	Analysis	300.0		5			411908	06/14/17 22:49	NTN	TAL IRV
Total/NA	Analysis	300.0		200			411908	06/14/17 23:05	NTN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	413388	06/21/17 14:05	JL	TAL IRV
Total Recoverable	Analysis	6010B		1			413582	06/22/17 09:52	EN	TAL IRV
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	413661	06/22/17 15:38	KYP	TAL IRV
Total/NA	Analysis	SM 2320B		1			412387	06/15/17 13:43	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	20 mL	100 mL	412777	06/19/17 08:52	XL	TAL IRV
Total/NA	Analysis	SM 4500 CO2 C		1	25 mL	25 mL	412075	06/14/17 20:36	SN	TAL IRV
Total/NA	Prep	SM 4500 NH3 B			10.0 mL	50 mL	412150	06/15/17 07:30	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			412173	06/15/17 09:00	YZ	TAL IRV
Total/NA	Analysis	SM 4500 S2 D		1	7.5 mL	7.5 mL	412254	06/15/17 12:55	HTL	TAL IRV

Client Sample ID: Extraction Trench

Lab Sample ID: 440-186462-2

Date Collected: 06/14/17 09:40

Matrix: Water

Date Received: 06/14/17 19:07

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		10	100 mL	100 mL	414117	06/26/17 09:00	YZ	TAL IRV

Client Sample ID: MW-1

Lab Sample ID: 440-186462-3

Date Collected: 06/14/17 10:10

Matrix: Water

Date Received: 06/14/17 19:07

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	412555	06/17/17 02:03	AA	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	412938	06/19/17 23:07	K1S	TAL IRV
Total/NA	Analysis	8260B	RA	1	10 mL	10 mL	413193	06/21/17 00:51	RM	TAL IRV
Total/NA	Prep	3520C			985 mL	1.0 mL	412775	06/19/17 08:39	BMN	TAL IRV
Total/NA	Analysis	8270C		1			413699	06/22/17 22:30	AI	TAL IRV
Total/NA	Analysis	300.0		10			411907	06/14/17 23:22	NTN	TAL IRV
Total/NA	Analysis	300.0		10			411908	06/14/17 23:22	NTN	TAL IRV
Total/NA	Analysis	300.0		200			411908	06/14/17 23:39	NTN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	413388	06/21/17 14:05	JL	TAL IRV
Total Recoverable	Analysis	6010B		1			413582	06/22/17 09:53	EN	TAL IRV
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	413661	06/22/17 15:38	KYP	TAL IRV
Total/NA	Analysis	SM 2320B		1			412387	06/15/17 13:54	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	20 mL	100 mL	412777	06/19/17 08:52	XL	TAL IRV
Total/NA	Analysis	SM 4500 CO2 C		1	25 mL	25 mL	412075	06/14/17 20:36	SN	TAL IRV
Total/NA	Prep	SM 4500 NH3 B			50 mL	50 mL	412150	06/15/17 07:30	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			412173	06/15/17 09:00	YZ	TAL IRV
Total/NA	Analysis	SM 4500 S2 D		1	7.5 mL	7.5 mL	412254	06/15/17 12:55	HTL	TAL IRV
Total/NA	Analysis	SM 5310C		10	100 mL	100 mL	413963	06/23/17 12:53	YZ	TAL IRV

Client Sample ID: MW-13R

Lab Sample ID: 440-186462-4

Date Collected: 06/14/17 11:30

Matrix: Water

Date Received: 06/14/17 19:07

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	412555	06/17/17 02:29	AA	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	412938	06/19/17 23:38	K1S	TAL IRV
Total/NA	Analysis	8260B	RA	1	10 mL	10 mL	413193	06/21/17 01:21	RM	TAL IRV
Total/NA	Prep	3520C			970 mL	1.0 mL	412775	06/19/17 08:39	BMN	TAL IRV
Total/NA	Analysis	8270C		1			413699	06/22/17 22:52	AI	TAL IRV
Total/NA	Analysis	300.0		1			411907	06/14/17 23:55	NTN	TAL IRV
Total/NA	Analysis	300.0		1			411908	06/14/17 23:55	NTN	TAL IRV
Total/NA	Analysis	300.0		50			411908	06/15/17 00:12	NTN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	413388	06/21/17 14:05	JL	TAL IRV
Total Recoverable	Analysis	6010B		1			413582	06/22/17 09:55	EN	TAL IRV

Client Sample ID: MW-13R

Date Collected: 06/14/17 11:30
Date Received: 06/14/17 19:07

Lab Sample ID: 440-186462-4

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	410.4		1	2.5 mL	2.5 mL	413661	06/22/17 15:39	KYP	TAL IRV
Total/NA	Analysis	SM 2320B		1			412387	06/15/17 14:08	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	412777	06/19/17 08:52	XL	TAL IRV
Total/NA	Analysis	SM 4500 CO2 C		1	25 mL	25 mL	412075	06/14/17 20:36	SN	TAL IRV
Total/NA	Prep	SM 4500 NH3 B			10.0 mL	50 mL	412150	06/15/17 07:30	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			412173	06/15/17 09:00	YZ	TAL IRV
Total/NA	Analysis	SM 4500 S2 D		100	7.5 mL	7.5 mL	412254	06/15/17 12:55	HTL	TAL IRV
Total/NA	Analysis	SM 5310C		20	100 mL	100 mL	413963	06/23/17 13:05	YZ	TAL IRV

Client Sample ID: DW-5

Date Collected: 06/14/17 09:15
Date Received: 06/14/17 19:07

Lab Sample ID: 440-186462-5

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	412555	06/17/17 02:56	AA	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	412938	06/20/17 00:08	K1S	TAL IRV
Total/NA	Analysis	8260B	RA	1	10 mL	10 mL	413193	06/21/17 01:51	RM	TAL IRV
Total/NA	Prep	3520C			970 mL	1.0 mL	412775	06/19/17 08:39	BMN	TAL IRV
Total/NA	Analysis	8270C		1			413699	06/22/17 23:13	AI	TAL IRV
Total/NA	Analysis	300.0		5			412180	06/15/17 22:24	NTN	TAL IRV
Total/NA	Analysis	300.0		1			411907	06/15/17 01:23	NTN	TAL IRV
Total/NA	Analysis	300.0		1			411908	06/15/17 01:23	NTN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	413388	06/21/17 14:05	JL	TAL IRV
Total Recoverable	Analysis	6010B		1			413582	06/22/17 09:58	EN	TAL IRV
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	413661	06/22/17 15:39	KYP	TAL IRV
Total/NA	Analysis	SM 2320B		1			412387	06/15/17 14:23	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	412777	06/19/17 08:52	XL	TAL IRV
Total/NA	Analysis	SM 4500 CO2 C		1	25 mL	25 mL	412075	06/14/17 20:36	SN	TAL IRV
Total/NA	Prep	SM 4500 NH3 B			50 mL	50 mL	412150	06/15/17 07:30	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			412173	06/15/17 09:00	YZ	TAL IRV
Total/NA	Analysis	SM 4500 S2 D		1	7.5 mL	7.5 mL	412254	06/15/17 12:55	HTL	TAL IRV
Total/NA	Analysis	SM 5310C		1	100 mL	100 mL	413963	06/23/17 15:34	YZ	TAL IRV

Client Sample ID: MW-9

Date Collected: 06/14/17 08:10
Date Received: 06/14/17 19:07

Lab Sample ID: 440-186462-6

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	412555	06/17/17 03:22	AA	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	412938	06/20/17 00:38	K1S	TAL IRV
Total/NA	Analysis	8260B	RA	1	10 mL	10 mL	413193	06/21/17 02:21	RM	TAL IRV

Lab Chronicle

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

TestAmerica Job ID: 440-186462-1

Client Sample ID: MW-9

Date Collected: 06/14/17 08:10
Date Received: 06/14/17 19:07

Lab Sample ID: 440-186462-6

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			960 mL	1.0 mL	412775	06/19/17 08:39	BMN	TAL IRV
Total/NA	Analysis	8270C		1			413699	06/22/17 23:35	AI	TAL IRV
Total/NA	Analysis	300.0		10			411907	06/15/17 01:57	NTN	TAL IRV
Total/NA	Analysis	300.0		10			411908	06/15/17 01:57	NTN	TAL IRV
Total/NA	Analysis	300.0		200			411908	06/15/17 02:13	NTN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	413392	06/21/17 14:27	JL	TAL IRV
Total Recoverable	Analysis	6010B		1			413593	06/22/17 10:47	EN	TAL IRV
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	413661	06/22/17 15:39	KYP	TAL IRV
Total/NA	Analysis	SM 2320B		1			412387	06/15/17 14:36	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	20 mL	100 mL	412777	06/19/17 08:52	XL	TAL IRV
Total/NA	Analysis	SM 4500 CO2 C		1	25 mL	25 mL	412075	06/14/17 20:36	SN	TAL IRV
Total/NA	Prep	SM 4500 NH3 B			10.0 mL	50 mL	412150	06/15/17 07:30	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			412173	06/15/17 09:00	YZ	TAL IRV
Total/NA	Analysis	SM 4500 S2 D		1	7.5 mL	7.5 mL	412254	06/15/17 12:55	HTL	TAL IRV
Total/NA	Analysis	SM 5310C		10	100 mL	100 mL	413963	06/23/17 13:31	YZ	TAL IRV

Client Sample ID: QCAB

Date Collected: 06/14/17 00:01
Date Received: 06/14/17 19:07

Lab Sample ID: 440-186462-7

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	412555	06/17/17 03:48	AA	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	412938	06/20/17 01:08	K1S	TAL IRV
Total/NA	Analysis	8260B	RA	1	10 mL	10 mL	413193	06/21/17 02:51	RM	TAL IRV

Client Sample ID: QCTB

Date Collected: 06/14/17 00:01
Date Received: 06/14/17 19:07

Lab Sample ID: 440-186462-8

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	412629	06/17/17 12:53	JB	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	412938	06/20/17 01:38	K1S	TAL IRV
Total/NA	Analysis	8260B	RA	1	10 mL	10 mL	413193	06/21/17 03:21	RM	TAL IRV

Laboratory References:

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

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

Lab Sample ID: MB 440-412555/4
Matrix: Water
Analysis Batch: 412555

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			06/16/17 19:01	1
Acrylonitrile	ND		50	1.0	ug/L			06/16/17 19:01	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*106*		*80 - 128*		*06/16/17 19:01*	*1*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*		*06/16/17 19:01*	*1*
Dibromofluoromethane (Surr)	*106*		*76 - 132*		*06/16/17 19:01*	*1*

Lab Sample ID: LCS 440-412555/5
Matrix: Water
Analysis Batch: 412555

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	29.6	J	ug/L		118	10 - 145		
Acrylonitrile			250	292		ug/L		117	48 - 140		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*103*		*80 - 128*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*
Dibromofluoromethane (Surr)	*106*		*76 - 132*

Lab Sample ID: 720-80076-C-3 MS
Matrix: Water
Analysis Batch: 412555

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	31.8	J	ug/L		127	10 - 147		
Acrylonitrile	ND		250	307		ug/L		123	38 - 144		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Toluene-d8 (Surr)	*101*		*80 - 128*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*
Dibromofluoromethane (Surr)	*108*		*76 - 132*

Lab Sample ID: 720-80076-C-3 MSD
Matrix: Water
Analysis Batch: 412555

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	32.5	J	ug/L		130	10 - 147	2	40
Acrylonitrile	ND		250	301		ug/L		120	38 - 144	2	40

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*102*		*80 - 128*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*
Dibromofluoromethane (Surr)	*105*		*76 - 132*

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

Lab Sample ID: MB 440-412629/4
Matrix: Water
Analysis Batch: 412629

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			06/17/17 10:22	1
Acrylonitrile	ND		50	1.0	ug/L			06/17/17 10:22	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*109*		*80 - 128*		*06/17/17 10:22*	*1*
4-Bromofluorobenzene (Surr)	*106*		*80 - 120*		*06/17/17 10:22*	*1*
Dibromofluoromethane (Surr)	*104*		*76 - 132*		*06/17/17 10:22*	*1*

Lab Sample ID: LCS 440-412629/5
Matrix: Water
Analysis Batch: 412629

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	36.0	J	ug/L		144	10 - 145		
Acrylonitrile			250	275		ug/L		110	48 - 140		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*103*		*80 - 128*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*
Dibromofluoromethane (Surr)	*105*		*76 - 132*

Lab Sample ID: 440-186415-B-13 MS
Matrix: Water
Analysis Batch: 412629

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	31.4	J	ug/L		126	10 - 147		
Acrylonitrile	ND		250	241		ug/L		96	38 - 144		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Toluene-d8 (Surr)	*102*		*80 - 128*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*
Dibromofluoromethane (Surr)	*105*		*76 - 132*

Lab Sample ID: 440-186415-B-13 MSD
Matrix: Water
Analysis Batch: 412629

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	29.6	J	ug/L		118	10 - 147	6	40
Acrylonitrile	ND		250	246		ug/L		98	38 - 144	2	40

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*106*		*80 - 128*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*
Dibromofluoromethane (Surr)	*106*		*76 - 132*

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

Lab Sample ID: MB 440-412938/4
Matrix: Water
Analysis Batch: 412938

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			06/19/17 20:07	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/19/17 20:07	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			06/19/17 20:07	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/19/17 20:07	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			06/19/17 20:07	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			06/19/17 20:07	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			06/19/17 20:07	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			06/19/17 20:07	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			06/19/17 20:07	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			06/19/17 20:07	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			06/19/17 20:07	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			06/19/17 20:07	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			06/19/17 20:07	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			06/19/17 20:07	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			06/19/17 20:07	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			06/19/17 20:07	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			06/19/17 20:07	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			06/19/17 20:07	1
2-Hexanone	ND		5.0	2.5	ug/L			06/19/17 20:07	1
Acetone	ND		20	10	ug/L			06/19/17 20:07	1
Acetonitrile	ND		20	10	ug/L			06/19/17 20:07	1
Benzene	ND		0.50	0.25	ug/L			06/19/17 20:07	1
Bromoform	ND		1.0	0.40	ug/L			06/19/17 20:07	1
Bromomethane	ND		0.50	0.25	ug/L			06/19/17 20:07	1
Carbon disulfide	ND		1.0	0.50	ug/L			06/19/17 20:07	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			06/19/17 20:07	1
Chlorobenzene	ND		0.50	0.25	ug/L			06/19/17 20:07	1
Bromochloromethane	ND		0.50	0.25	ug/L			06/19/17 20:07	1
Chloroethane	ND		1.0	0.40	ug/L			06/19/17 20:07	1
Chloroform	ND		0.50	0.25	ug/L			06/19/17 20:07	1
Chloromethane	ND		0.50	0.25	ug/L			06/19/17 20:07	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			06/19/17 20:07	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/19/17 20:07	1
Dibromochloromethane	ND		0.50	0.25	ug/L			06/19/17 20:07	1
Dibromomethane	ND		0.50	0.25	ug/L			06/19/17 20:07	1
Bromodichloromethane	ND		0.50	0.25	ug/L			06/19/17 20:07	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			06/19/17 20:07	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			06/19/17 20:07	1
Ethylbenzene	ND		0.50	0.25	ug/L			06/19/17 20:07	1
Iodomethane	ND		2.0	1.0	ug/L			06/19/17 20:07	1
Isobutyl alcohol	ND		25	13	ug/L			06/19/17 20:07	1
m,p-Xylene	ND		1.0	0.50	ug/L			06/19/17 20:07	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			06/19/17 20:07	1
Methyl methacrylate	ND		2.0	1.0	ug/L			06/19/17 20:07	1
Methylene Chloride	ND		2.0	0.88	ug/L			06/19/17 20:07	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			06/19/17 20:07	1
Naphthalene	ND		1.0	0.40	ug/L			06/19/17 20:07	1
o-Xylene	ND		0.50	0.25	ug/L			06/19/17 20:07	1

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

Lab Sample ID: MB 440-412938/4
Matrix: Water
Analysis Batch: 412938

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Propionitrile	ND		20	10	ug/L			06/19/17 20:07	1
Styrene	ND		0.50	0.25	ug/L			06/19/17 20:07	1
t-Butanol	ND		10	5.0	ug/L			06/19/17 20:07	1
Tetrachloroethene	ND		0.50	0.25	ug/L			06/19/17 20:07	1
Tetrahydrofuran	ND		10	5.0	ug/L			06/19/17 20:07	1
Toluene	ND		0.50	0.25	ug/L			06/19/17 20:07	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			06/19/17 20:07	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/19/17 20:07	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			06/19/17 20:07	1
Trichloroethene	ND		0.50	0.25	ug/L			06/19/17 20:07	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			06/19/17 20:07	1
Vinyl acetate	ND		4.0	2.0	ug/L			06/19/17 20:07	1
Vinyl chloride	ND		0.50	0.25	ug/L			06/19/17 20:07	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			06/19/17 20:07	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			06/19/17 20:07	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			06/19/17 20:07	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*06/19/17 20:07*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*107*		*80 - 128*		*06/19/17 20:07*	*1*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*		*06/19/17 20:07*	*1*
Dibromofluoromethane (Surr)	*109*		*76 - 132*		*06/19/17 20:07*	*1*

Lab Sample ID: LCS 440-412938/5
Matrix: Water
Analysis Batch: 412938

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	29.2		ug/L		117	60 - 141
1,1,1-Trichloroethane	25.0	28.8		ug/L		115	70 - 130
1,1,2,2-Tetrachloroethane	25.0	25.2		ug/L		101	63 - 130
1,1,2-Trichloroethane	25.0	26.4		ug/L		106	70 - 130
1,1-Dichloroethane	25.0	25.9		ug/L		103	64 - 130
1,1-Dichloroethene	25.0	25.5		ug/L		102	70 - 130
1,1-Dichloropropene	25.0	27.5		ug/L		110	70 - 130
1,2,4-Trichlorobenzene	25.0	26.7		ug/L		107	60 - 140
1,2-Dibromo-3-Chloropropane	25.0	26.2		ug/L		105	52 - 140
1,2-Dichlorobenzene	25.0	27.2		ug/L		109	70 - 130
1,2-Dichloroethane	25.0	28.7		ug/L		115	57 - 138
1,2-Dichloropropane	25.0	25.8		ug/L		103	67 - 130
1,3-Dichlorobenzene	25.0	26.8		ug/L		107	70 - 130
1,3-Dichloropropane	25.0	25.9		ug/L		104	70 - 130
1,4-Dichlorobenzene	25.0	26.3		ug/L		105	70 - 130
2,2-Dichloropropane	25.0	29.2		ug/L		117	68 - 141

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

Lab Sample ID: LCS 440-412938/5
Matrix: Water
Analysis Batch: 412938

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Hexanone	25.0	27.8		ug/L		111	10 - 150
Acetone	25.0	27.4		ug/L		110	10 - 150
Benzene	25.0	25.9		ug/L		104	68 - 130
Bromoform	25.0	28.5		ug/L		114	60 - 148
Bromomethane	25.0	24.5		ug/L		98	64 - 139
Carbon disulfide	25.0	23.9		ug/L		96	52 - 136
Carbon tetrachloride	25.0	28.8		ug/L		115	60 - 150
Chlorobenzene	25.0	26.6		ug/L		106	70 - 130
Bromochloromethane	25.0	28.2		ug/L		113	70 - 130
Chloroethane	25.0	24.9		ug/L		100	64 - 135
Chloroform	25.0	27.1		ug/L		109	70 - 130
Chloromethane	25.0	21.6		ug/L		86	47 - 140
cis-1,2-Dichloroethene	25.0	26.5		ug/L		106	70 - 133
cis-1,3-Dichloropropene	25.0	28.0		ug/L		112	70 - 133
Dibromochloromethane	25.0	28.8		ug/L		115	69 - 145
Dibromomethane	25.0	25.9		ug/L		104	70 - 130
Bromodichloromethane	25.0	27.5		ug/L		110	70 - 132
Dichlorodifluoromethane	25.0	22.0		ug/L		88	29 - 150
Ethylbenzene	25.0	27.6		ug/L		110	70 - 130
m,p-Xylene	25.0	28.3		ug/L		113	70 - 130
Methylene Chloride	25.0	24.4		ug/L		97	52 - 130
Methyl tert-butyl ether	25.0	27.3		ug/L		109	63 - 131
Naphthalene	25.0	26.1		ug/L		104	60 - 140
o-Xylene	25.0	27.5		ug/L		110	70 - 130
Styrene	25.0	27.9		ug/L		112	70 - 134
t-Butanol	250	275		ug/L		110	70 - 130
Tetrachloroethene	25.0	28.4		ug/L		114	70 - 130
Toluene	25.0	27.0		ug/L		108	70 - 130
trans-1,2-Dichloroethene	25.0	27.2		ug/L		109	70 - 130
trans-1,3-Dichloropropene	25.0	27.7		ug/L		111	70 - 132
Trichloroethene	25.0	27.8		ug/L		111	70 - 130
Trichlorofluoromethane	25.0	27.3		ug/L		109	60 - 150
Vinyl acetate	25.0	24.3		ug/L		97	48 - 140
Vinyl chloride	25.0	24.0		ug/L		96	59 - 133
1,2-Dibromoethane (EDB)	25.0	28.1		ug/L		112	70 - 130
2-Butanone (MEK)	25.0	26.2		ug/L		105	44 - 150
4-Methyl-2-pentanone (MIBK)	25.0	28.0		ug/L		112	59 - 149

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*104*		*80 - 128*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*
Dibromofluoromethane (Surr)	*108*		*76 - 132*

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

Lab Sample ID: 440-186462-1 MS
Matrix: Water
Analysis Batch: 412938

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
1,2,3-Trichloropropane	ND		25.0	30.4		ug/L		121	60 - 130
1,1,1,2-Tetrachloroethane	ND		25.0	28.9		ug/L		116	60 - 149
1,1,1-Trichloroethane	ND		25.0	28.4		ug/L		114	70 - 130
1,1,2,2-Tetrachloroethane	ND		25.0	27.0		ug/L		108	63 - 130
1,1,2-Trichloroethane	ND		25.0	27.4		ug/L		110	70 - 130
1,1-Dichloroethane	ND		25.0	26.2		ug/L		105	65 - 130
1,1-Dichloroethene	ND		25.0	25.8		ug/L		103	70 - 130
1,1-Dichloropropene	ND		25.0	27.6		ug/L		110	64 - 130
1,2,4-Trichlorobenzene	ND		25.0	27.6		ug/L		110	60 - 140
1,2-Dibromo-3-Chloropropane	ND		25.0	30.5		ug/L		122	48 - 140
1,2-Dichlorobenzene	ND		25.0	27.2		ug/L		109	70 - 130
1,2-Dichloroethane	ND		25.0	28.5		ug/L		114	56 - 146
1,2-Dichloropropane	ND		25.0	26.0		ug/L		104	69 - 130
1,3-Dichlorobenzene	ND		25.0	26.6		ug/L		106	70 - 130
1,3-Dichloropropane	ND		25.0	27.8		ug/L		111	70 - 130
1,4-Dichlorobenzene	ND		25.0	27.0		ug/L		108	70 - 130
2,2-Dichloropropane	ND		25.0	29.5		ug/L		118	69 - 138
2-Hexanone	ND		25.0	32.0		ug/L		128	10 - 150
Acetone	ND		25.0	31.0		ug/L		124	10 - 150
Benzene	ND		25.0	26.2		ug/L		105	66 - 130
Bromoform	ND		25.0	30.0		ug/L		120	59 - 150
Bromomethane	ND		25.0	24.4		ug/L		98	62 - 131
Carbon disulfide	ND		25.0	24.1		ug/L		96	49 - 140
Carbon tetrachloride	ND		25.0	28.6		ug/L		115	60 - 150
Chlorobenzene	ND		25.0	26.5		ug/L		106	70 - 130
Bromochloromethane	ND		25.0	29.0		ug/L		116	70 - 130
Chloroethane	ND		25.0	25.0		ug/L		100	68 - 130
Chloroform	ND		25.0	27.7		ug/L		111	70 - 130
Chloromethane	ND		25.0	22.5		ug/L		90	39 - 144
cis-1,2-Dichloroethene	ND		25.0	26.9		ug/L		108	70 - 130
cis-1,3-Dichloropropene	ND		25.0	28.3		ug/L		113	70 - 133
Dibromochloromethane	ND		25.0	29.4		ug/L		117	70 - 148
Dibromomethane	ND		25.0	27.6		ug/L		110	70 - 130
Bromodichloromethane	ND		25.0	28.1		ug/L		112	70 - 138
Dichlorodifluoromethane	ND		25.0	24.2		ug/L		97	25 - 142
Ethylbenzene	ND		25.0	27.3		ug/L		109	70 - 130
m,p-Xylene	ND		25.0	27.0		ug/L		108	70 - 133
Methylene Chloride	ND		25.0	25.7		ug/L		103	52 - 130
Methyl tert-butyl ether	ND		25.0	29.4		ug/L		117	70 - 130
Naphthalene	0.50	J	25.0	28.2		ug/L		111	60 - 140
o-Xylene	ND		25.0	27.2		ug/L		109	70 - 133
Styrene	ND		25.0	25.2		ug/L		101	29 - 150
t-Butanol	ND		250	282		ug/L		113	70 - 130
Tetrachloroethene	ND		25.0	27.3		ug/L		109	70 - 137
Toluene	ND		25.0	26.7		ug/L		107	70 - 130
trans-1,2-Dichloroethene	ND		25.0	27.3		ug/L		109	70 - 130
trans-1,3-Dichloropropene	ND		25.0	28.7		ug/L		115	70 - 138
Trichloroethene	ND		25.0	27.7		ug/L		111	70 - 130

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

Lab Sample ID: 440-186462-1 MS
Matrix: Water
Analysis Batch: 412938

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
Trichlorofluoromethane	ND		25.0	28.1		ug/L		112	60 - 150
Vinyl acetate	ND		25.0	25.8		ug/L		103	23 - 150
Vinyl chloride	ND		25.0	25.0		ug/L		100	50 - 137
1,2-Dibromoethane (EDB)	ND		25.0	28.9		ug/L		116	70 - 131
2-Butanone (MEK)	ND		25.0	30.9		ug/L		124	48 - 140
4-Methyl-2-pentanone (MIBK)	ND		25.0	31.9		ug/L		128	52 - 150

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Toluene-d8 (Surr)	*106*		*80 - 128*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*
Dibromofluoromethane (Surr)	*108*		*76 - 132*

Lab Sample ID: 440-186462-1 MSD
Matrix: Water
Analysis Batch: 412938

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
1,2,3-Trichloropropane	ND		25.0	26.5		ug/L		106	60 - 130	13	30
1,1,1,2-Tetrachloroethane	ND		25.0	29.4		ug/L		118	60 - 149	2	20
1,1,1-Trichloroethane	ND		25.0	29.0		ug/L		116	70 - 130	2	20
1,1,2,2-Tetrachloroethane	ND		25.0	24.6		ug/L		98	63 - 130	9	30
1,1,2-Trichloroethane	ND		25.0	26.6		ug/L		106	70 - 130	3	25
1,1-Dichloroethane	ND		25.0	26.7		ug/L		107	65 - 130	2	20
1,1-Dichloroethene	ND		25.0	25.2		ug/L		101	70 - 130	2	20
1,1-Dichloropropene	ND		25.0	27.6		ug/L		111	64 - 130	0	20
1,2,4-Trichlorobenzene	ND		25.0	27.9		ug/L		112	60 - 140	1	20
1,2-Dibromo-3-Chloropropane	ND		25.0	25.4		ug/L		101	48 - 140	18	30
1,2-Dichlorobenzene	ND		25.0	27.0		ug/L		108	70 - 130	1	20
1,2-Dichloroethane	ND		25.0	28.4		ug/L		114	56 - 146	0	20
1,2-Dichloropropane	ND		25.0	26.0		ug/L		104	69 - 130	0	20
1,3-Dichlorobenzene	ND		25.0	26.7		ug/L		107	70 - 130	0	20
1,3-Dichloropropane	ND		25.0	25.2		ug/L		101	70 - 130	10	25
1,4-Dichlorobenzene	ND		25.0	26.9		ug/L		108	70 - 130	0	20
2,2-Dichloropropane	ND		25.0	29.9		ug/L		120	69 - 138	1	25
2-Hexanone	ND		25.0	25.7		ug/L		103	10 - 150	22	35
Acetone	ND		25.0	25.4		ug/L		102	10 - 150	20	35
Benzene	ND		25.0	25.9		ug/L		104	66 - 130	1	20
Bromoform	ND		25.0	27.6		ug/L		110	59 - 150	9	25
Bromomethane	ND		25.0	25.0		ug/L		100	62 - 131	2	25
Carbon disulfide	ND		25.0	24.6		ug/L		98	49 - 140	2	20
Carbon tetrachloride	ND		25.0	29.1		ug/L		116	60 - 150	2	25
Chlorobenzene	ND		25.0	26.4		ug/L		106	70 - 130	0	20
Bromochloromethane	ND		25.0	27.3		ug/L		109	70 - 130	6	25
Chloroethane	ND		25.0	25.3		ug/L		101	68 - 130	1	25
Chloroform	ND		25.0	27.0		ug/L		108	70 - 130	3	20
Chloromethane	ND		25.0	23.3		ug/L		93	39 - 144	3	25
cis-1,2-Dichloroethene	ND		25.0	26.8		ug/L		107	70 - 130	0	20
cis-1,3-Dichloropropene	ND		25.0	27.7		ug/L		111	70 - 133	2	20

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

Lab Sample ID: 440-186462-1 MSD
Matrix: Water
Analysis Batch: 412938

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
Dibromochloromethane	ND		25.0	27.9		ug/L		112	70 - 148	5	25
Dibromomethane	ND		25.0	26.5		ug/L		106	70 - 130	4	25
Bromodichloromethane	ND		25.0	27.6		ug/L		111	70 - 138	2	20
Dichlorodifluoromethane	ND		25.0	24.6		ug/L		98	25 - 142	2	30
Ethylbenzene	ND		25.0	27.2		ug/L		109	70 - 130	0	20
m,p-Xylene	ND		25.0	27.8		ug/L		111	70 - 133	3	25
Methylene Chloride	ND		25.0	24.9		ug/L		100	52 - 130	3	20
Methyl tert-butyl ether	ND		25.0	27.6		ug/L		110	70 - 130	6	25
Naphthalene	0.50	J	25.0	25.9		ug/L		102	60 - 140	8	30
o-Xylene	ND		25.0	27.2		ug/L		109	70 - 133	0	20
Styrene	ND		25.0	25.3		ug/L		101	29 - 150	0	35
t-Butanol	ND		250	283		ug/L		113	70 - 130	0	25
Tetrachloroethene	ND		25.0	27.1		ug/L		109	70 - 137	1	20
Toluene	ND		25.0	26.6		ug/L		107	70 - 130	0	20
trans-1,2-Dichloroethene	ND		25.0	27.9		ug/L		112	70 - 130	2	20
trans-1,3-Dichloropropene	ND		25.0	28.1		ug/L		113	70 - 138	2	25
Trichloroethene	ND		25.0	27.1		ug/L		109	70 - 130	2	20
Trichlorofluoromethane	ND		25.0	28.1		ug/L		113	60 - 150	0	25
Vinyl acetate	ND		25.0	23.6		ug/L		95	23 - 150	9	30
Vinyl chloride	ND		25.0	25.6		ug/L		103	50 - 137	2	30
1,2-Dibromoethane (EDB)	ND		25.0	27.6		ug/L		110	70 - 131	5	25
2-Butanone (MEK)	ND		25.0	25.5		ug/L		102	48 - 140	19	40
4-Methyl-2-pentanone (MIBK)	ND		25.0	27.4		ug/L		110	52 - 150	15	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*104*		*80 - 128*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*
Dibromofluoromethane (Surr)	*110*		*76 - 132*

Lab Sample ID: MB 440-413003/4
Matrix: Water
Analysis Batch: 413003

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Allyl chloride	ND		1.0	0.50	ug/L			06/20/17 07:51	1
Naphthalene	ND		1.0	0.40	ug/L			06/20/17 07:51	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*06/20/17 07:51*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*112*		*80 - 128*		*06/20/17 07:51*	*1*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*		*06/20/17 07:51*	*1*
Dibromofluoromethane (Surr)	*103*		*76 - 132*		*06/20/17 07:51*	*1*

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

Lab Sample ID: LCS 440-413003/5
Matrix: Water
Analysis Batch: 413003

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Allyl chloride	25.0	26.4		ug/L		106	60 - 140
Naphthalene	25.0	24.7		ug/L		99	60 - 140

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*107*		*80 - 128*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*
Dibromofluoromethane (Surr)	*105*		*76 - 132*

Lab Sample ID: 440-186652-A-1 MS
Matrix: Water
Analysis Batch: 413003

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
Allyl chloride	ND		25.0	23.9		ug/L		96	52 - 140
Naphthalene	ND		25.0	23.5		ug/L		94	60 - 140

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Toluene-d8 (Surr)	*102*		*80 - 128*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*
Dibromofluoromethane (Surr)	*104*		*76 - 132*

Lab Sample ID: 440-186652-A-1 MSD
Matrix: Water
Analysis Batch: 413003

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
Allyl chloride	ND		25.0	27.1		ug/L		108	52 - 140	13	40
Naphthalene	ND		25.0	25.6		ug/L		102	60 - 140	8	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*102*		*80 - 128*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*
Dibromofluoromethane (Surr)	*104*		*76 - 132*

Lab Sample ID: MB 440-413193/4
Matrix: Water
Analysis Batch: 413193

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Allyl chloride	ND		1.0	0.50	ug/L			06/20/17 19:23	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*06/20/17 19:23*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*110*		*80 - 128*		*06/20/17 19:23*	*1*

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

Lab Sample ID: MB 440-413193/4
Matrix: Water
Analysis Batch: 413193

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

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	101		80 - 120		06/20/17 19:23	1
Dibromofluoromethane (Surr)	108		76 - 132		06/20/17 19:23	1

Lab Sample ID: LCS 440-413193/5
Matrix: Water
Analysis Batch: 413193

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Allyl chloride	25.0	24.3		ug/L		97	60 - 140

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Toluene-d8 (Surr)	104		80 - 128
4-Bromofluorobenzene (Surr)	99		80 - 120
Dibromofluoromethane (Surr)	103		76 - 132

Lab Sample ID: 440-186816-A-5 MS
Matrix: Water
Analysis Batch: 413193

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
Allyl chloride	ND		25.0	24.7		ug/L		99	52 - 140

Surrogate	MS %Recovery	MS Qualifier	Limits
Toluene-d8 (Surr)	102		80 - 128
4-Bromofluorobenzene (Surr)	97		80 - 120
Dibromofluoromethane (Surr)	106		76 - 132

Lab Sample ID: 440-186816-A-5 MSD
Matrix: Water
Analysis Batch: 413193

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
Allyl chloride	ND		25.0	22.3		ug/L		89	52 - 140	10	40

Surrogate	MSD %Recovery	MSD Qualifier	Limits
Toluene-d8 (Surr)	99		80 - 128
4-Bromofluorobenzene (Surr)	99		80 - 120
Dibromofluoromethane (Surr)	107		76 - 132

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 440-412775/1-A
Matrix: Water
Analysis Batch: 413699

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 412775

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		1.0	0.25	ug/L		06/19/17 08:39	06/22/17 20:42	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	51		30 - 120	06/19/17 08:39	06/22/17 20:42	1

Lab Sample ID: LCS 440-412775/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 413699 — **Prep Batch: 412775**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,4-Dioxane			2.00	1.27		ug/L		64	35 - 120		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,4-Dioxane-d8 (Surr)	61		30 - 120

Lab Sample ID: LCSD 440-412775/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 413699 — **Prep Batch: 412775**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dioxane			2.00	1.17		ug/L		58	35 - 120	8	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,4-Dioxane-d8 (Surr)	55		30 - 120

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 440-411907/6 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 411907

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrate as N	ND		0.11	0.055	mg/L			06/14/17 13:54	1

Lab Sample ID: LCS 440-411907/4 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 411907

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrate as N			1.13	1.19		mg/L		106	90 - 110		

Lab Sample ID: 440-186462-1 MS — **Client Sample ID: PZ-4**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 411907

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Nitrate as N	ND		1.13	1.15		mg/L		102	80 - 120		

Lab Sample ID: 440-186462-1 MSD — **Client Sample ID: PZ-4**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 411907

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate as N	ND		1.13	1.16		mg/L		102	80 - 120	0	20

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: MB 440-411908/6
Matrix: Water
Analysis Batch: 411908

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			06/14/17 13:54	1
Chloride	ND		0.50	0.25	mg/L			06/14/17 13:54	1
Fluoride	ND		0.50	0.25	mg/L			06/14/17 13:54	1
Sulfate	ND		0.50	0.25	mg/L			06/14/17 13:54	1

Lab Sample ID: LCS 440-411908/4
Matrix: Water
Analysis Batch: 411908

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	5.16		mg/L		103	90 - 110
Chloride	5.00	5.04		mg/L		101	90 - 110
Fluoride	5.00	4.96		mg/L		99	90 - 110
Sulfate	5.00	4.94		mg/L		99	90 - 110

Lab Sample ID: 440-186462-1 MS
Matrix: Water
Analysis Batch: 411908

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
Bromide	ND		5.00	5.14		mg/L		103	80 - 120
Chloride	8.4		5.00	14.0		mg/L		113	80 - 120
Fluoride	1.2		5.00	5.75		mg/L		91	80 - 120

Lab Sample ID: 440-186462-1 MSD
Matrix: Water
Analysis Batch: 411908

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
Bromide	ND		5.00	5.17		mg/L		103	80 - 120	1	20
Chloride	8.4		5.00	14.1		mg/L		114	80 - 120	0	20
Fluoride	1.2		5.00	5.84		mg/L		92	80 - 120	1	20

Lab Sample ID: MB 440-412180/6
Matrix: Water
Analysis Batch: 412180

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			06/15/17 12:15	1

Lab Sample ID: LCS 440-412180/4
Matrix: Water
Analysis Batch: 412180

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	4.96		mg/L		99	90 - 110

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 440-186541-E-4 MS
Matrix: Water
Analysis Batch: 412180

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	ND		1000	968		mg/L		97	80 - 120

Lab Sample ID: 440-186541-E-4 MSD
Matrix: Water
Analysis Batch: 412180

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	ND		1000	964		mg/L		96	80 - 120	0	20

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 440-413388/1-A
Matrix: Water
Analysis Batch: 413582

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 413388

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.050	0.025	mg/L		06/21/17 14:05	06/22/17 09:21	1
Calcium	ND		0.10	0.050	mg/L		06/21/17 14:05	06/22/17 09:21	1
Iron	ND		0.10	0.050	mg/L		06/21/17 14:05	06/22/17 09:21	1
Magnesium	ND		0.020	0.010	mg/L		06/21/17 14:05	06/22/17 09:21	1
Manganese	ND		0.020	0.010	mg/L		06/21/17 14:05	06/22/17 09:21	1
Potassium	ND		0.50	0.25	mg/L		06/21/17 14:05	06/22/17 09:21	1
Sodium	ND		0.50	0.25	mg/L		06/21/17 14:05	06/22/17 09:21	1

Lab Sample ID: LCS 440-413388/2-A
Matrix: Water
Analysis Batch: 413582

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 413388

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1.00	0.993		mg/L		99	80 - 120
Calcium	5.00	4.97		mg/L		99	80 - 120
Iron	1.00	0.985		mg/L		99	80 - 120
Magnesium	5.00	5.01		mg/L		100	80 - 120
Manganese	1.00	0.988		mg/L		99	80 - 120
Potassium	10.0	10.1		mg/L		101	80 - 120
Sodium	10.0	10.1		mg/L		101	80 - 120

Lab Sample ID: 440-186249-K-1-B MS
Matrix: Water
Analysis Batch: 413582

Client Sample ID: Matrix Spike
Prep Type: Total Recoverable
Prep Batch: 413388

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	0.83		1.00	1.87		mg/L		104	75 - 125
Calcium	350		5.00	357	4	mg/L		101	75 - 125
Iron	34		1.00	34.6	4	mg/L		101	75 - 125
Magnesium	180		5.00	185	4	mg/L		55	75 - 125
Manganese	6.4		1.00	7.37	4	mg/L		92	75 - 125
Potassium	13		10.0	23.2		mg/L		104	75 - 125
Sodium	290		10.0	305	4	mg/L		129	75 - 125

QC Sample Results

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

TestAmerica Job ID: 440-186462-1

Lab Sample ID: 440-186249-K-1-C MSD
Matrix: Water
Analysis Batch: 413582

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total Recoverable
Prep Batch: 413388

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Boron	0.83		1.00	1.86		mg/L		103	75 - 125	0	20
Calcium	350		5.00	364	4	mg/L		232	75 - 125	2	20
Iron	34		1.00	35.1	4	mg/L		151	75 - 125	1	20
Magnesium	180		5.00	187	4	mg/L		80	75 - 125	1	20
Manganese	6.4		1.00	7.43	4	mg/L		98	75 - 125	1	20
Potassium	13		10.0	23.5		mg/L		107	75 - 125	1	20
Sodium	290		10.0	306	4	mg/L		138	75 - 125	0	20

Lab Sample ID: MB 440-413392/1-A
Matrix: Water
Analysis Batch: 413593

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 413392

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.050	0.025	mg/L		06/21/17 14:27	06/22/17 10:42	1
Calcium	ND		0.10	0.050	mg/L		06/21/17 14:27	06/22/17 10:42	1
Iron	ND		0.10	0.050	mg/L		06/21/17 14:27	06/22/17 10:42	1
Magnesium	ND		0.020	0.010	mg/L		06/21/17 14:27	06/22/17 10:42	1
Manganese	ND		0.020	0.010	mg/L		06/21/17 14:27	06/22/17 10:42	1
Potassium	ND		0.50	0.25	mg/L		06/21/17 14:27	06/22/17 10:42	1
Sodium	ND		0.50	0.25	mg/L		06/21/17 14:27	06/22/17 10:42	1

Lab Sample ID: LCS 440-413392/2-A
Matrix: Water
Analysis Batch: 413593

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 413392

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1.00	0.995		mg/L		99	80 - 120
Calcium	5.00	5.02		mg/L		100	80 - 120
Iron	1.00	0.988		mg/L		99	80 - 120
Magnesium	5.00	5.02		mg/L		100	80 - 120
Manganese	1.00	0.992		mg/L		99	80 - 120
Potassium	10.0	9.97		mg/L		100	80 - 120
Sodium	10.0	9.88		mg/L		99	80 - 120

Lab Sample ID: 440-186462-6 MS
Matrix: Water
Analysis Batch: 413593

Client Sample ID: MW-9
Prep Type: Total Recoverable
Prep Batch: 413392

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1.5		1.00	2.52		mg/L		106	75 - 125
Calcium	450		5.00	461	4	mg/L		208	75 - 125
Iron	70		1.00	71.9	4	mg/L		157	75 - 125
Magnesium	220		5.00	226	4	mg/L		62	75 - 125
Manganese	3.9		1.00	4.79		mg/L		93	75 - 125
Potassium	29		10.0	40.1		mg/L		112	75 - 125
Sodium	460		10.0	469	4	mg/L		129	75 - 125

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: 440-186462-6 MSD
Matrix: Water
Analysis Batch: 413593

Client Sample ID: MW-9
Prep Type: Total Recoverable
Prep Batch: 413392

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Boron	1.5		1.00	2.46		mg/L		99	75 - 125	3	20
Calcium	450		5.00	430	4	mg/L		-415	75 - 125	7	20
Iron	70		1.00	67.1	4	mg/L		-322	75 - 125	7	20
Magnesium	220		5.00	217	4	mg/L		-125	75 - 125	4	20
Manganese	3.9		1.00	4.65		mg/L		79	75 - 125	3	20
Potassium	29		10.0	37.8		mg/L		89	75 - 125	6	20
Sodium	460		10.0	442	4	mg/L		-142	75 - 125	6	20

Method: 410.4 - COD

Lab Sample ID: MB 440-413661/3
Matrix: Water
Analysis Batch: 413661

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			06/22/17 15:38	1

Lab Sample ID: LCS 440-413661/4
Matrix: Water
Analysis Batch: 413661

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	194		mg/L		97	90 - 110

Lab Sample ID: 440-186462-1 MS
Matrix: Water
Analysis Batch: 413661

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
Chemical Oxygen Demand	23		200	227		mg/L		102	70 - 120

Lab Sample ID: 440-186462-1 MSD
Matrix: Water
Analysis Batch: 413661

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
Chemical Oxygen Demand	23		200	225		mg/L		101	70 - 120	1	15

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 440-412387/3
Matrix: Water
Analysis Batch: 412387

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			06/15/17 11:55	1
Bicarbonate Alkalinity as CaCO3	ND		4.0	4.0	mg/L			06/15/17 11:55	1

Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: LCS 440-412387/2
Matrix: Water
Analysis Batch: 412387

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	36.0		mg/L		106	80 - 120

Lab Sample ID: 440-186462-1 DU
Matrix: Water
Analysis Batch: 412387

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	350		368		mg/L		4	20
Bicarbonate Alkalinity as CaCO3	350		368		mg/L		4	20

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

Lab Sample ID: MB 440-412777/1
Matrix: Water
Analysis Batch: 412777

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			06/19/17 08:52	1

Lab Sample ID: LCS 440-412777/2
Matrix: Water
Analysis Batch: 412777

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	952		mg/L		95	90 - 110

Lab Sample ID: 440-186399-C-11 DU
Matrix: Water
Analysis Batch: 412777

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	1900		1890		mg/L		1	5

Method: SM 4500 CO2 C - Free Carbon Dioxide

Lab Sample ID: MB 440-412075/1
Matrix: Water
Analysis Batch: 412075

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			06/14/17 19:02	1

Lab Sample ID: 440-186462-1 DU
Matrix: Water
Analysis Batch: 412075

Client Sample ID: PZ-4
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Carbon Dioxide, Free	60		52.8		mg/L		13	20

Method: SM 4500 NH3 D - Ammonia

Lab Sample ID: MB 440-412150/2-A
Matrix: Water
Analysis Batch: 412173

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 412150

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	ND		0.50	0.10	mg/L		06/15/17 07:30	06/15/17 09:00	1

Lab Sample ID: LCS 440-412150/1-A
Matrix: Water
Analysis Batch: 412173

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 412150

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	2.50	2.33		mg/L		93	85 - 115

Lab Sample ID: 440-186462-1 MS
Matrix: Water
Analysis Batch: 412173

Client Sample ID: PZ-4
Prep Type: Total/NA
Prep Batch: 412150

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	2.6		2.50	4.91		mg/L		92	75 - 125

Lab Sample ID: 440-186462-1 MSD
Matrix: Water
Analysis Batch: 412173

Client Sample ID: PZ-4
Prep Type: Total/NA
Prep Batch: 412150

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ammonia (as N)	2.6		2.50	5.11		mg/L		100	75 - 125	4	15

Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MB 440-412254/3
Matrix: Water
Analysis Batch: 412254

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			06/15/17 12:55	1

Lab Sample ID: LCS 440-412254/4
Matrix: Water
Analysis Batch: 412254

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Sulfide	0.460	0.404		mg/L		88	80 - 120

Lab Sample ID: 440-186479-B-2 MS
Matrix: Water
Analysis Batch: 412254

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	0.420		mg/L		91	70 - 130

Method: SM 4500 S2 D - Sulfide, Total (Continued)

Lab Sample ID: 440-186479-B-2 MSD
Matrix: Water
Analysis Batch: 412254

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	0.424		mg/L		92	70 - 130	1	30

Method: SM 5310C - TOC

Lab Sample ID: MB 440-413963/6
Matrix: Water
Analysis Batch: 413963

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			06/23/17 10:12	1

Lab Sample ID: LCS 440-413963/5
Matrix: Water
Analysis Batch: 413963

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	5.00	5.14		mg/L		103	90 - 110

Lab Sample ID: MRL 440-413963/7
Matrix: Water
Analysis Batch: 413963

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	0.0892	J	mg/L		89	50 - 150

Lab Sample ID: 440-186773-G-1 MS
Matrix: Water
Analysis Batch: 413963

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	3.1		5.00	7.87		mg/L		95	80 - 120

Lab Sample ID: 440-186773-G-1 MSD
Matrix: Water
Analysis Batch: 413963

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	3.1		5.00	9.03		mg/L		118	80 - 120	14	20

Lab Sample ID: MB 440-414117/6
Matrix: Water
Analysis Batch: 414117

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			06/26/17 05:58	1

Method: SM 5310C - TOC (Continued)

Lab Sample ID: LCS 440-414117/5
Matrix: Water
Analysis Batch: 414117

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	5.00	4.96		mg/L		99	90 - 110

Lab Sample ID: MRL 440-414117/4
Matrix: Water
Analysis Batch: 414117

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	0.129		mg/L		129	50 - 150

Lab Sample ID: 440-186828-A-6 MS ^5
Matrix: Water
Analysis Batch: 414117

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	16		25.0	43.3		mg/L		109	80 - 120

Lab Sample ID: 440-186828-B-6 MSD ^5
Matrix: Water
Analysis Batch: 414117

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	16		25.0	45.1		mg/L		116	80 - 120	4	20

GC/MS VOA

Analysis Batch: 412555

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186462-1	PZ-4	Total/NA	Water	8260B	
440-186462-2	Extraction Trench	Total/NA	Water	8260B	
440-186462-3	MW-1	Total/NA	Water	8260B	
440-186462-4	MW-13R	Total/NA	Water	8260B	
440-186462-5	DW-5	Total/NA	Water	8260B	
440-186462-6	MW-9	Total/NA	Water	8260B	
440-186462-7	QCAB	Total/NA	Water	8260B	
MB 440-412555/4	Method Blank	Total/NA	Water	8260B	
LCS 440-412555/5	Lab Control Sample	Total/NA	Water	8260B	
720-80076-C-3 MS	Matrix Spike	Total/NA	Water	8260B	
720-80076-C-3 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

Analysis Batch: 412629

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186462-8	QCTB	Total/NA	Water	8260B	
MB 440-412629/4	Method Blank	Total/NA	Water	8260B	
LCS 440-412629/5	Lab Control Sample	Total/NA	Water	8260B	
440-186415-B-13 MS	Matrix Spike	Total/NA	Water	8260B	
440-186415-B-13 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

Analysis Batch: 412938

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186462-1	PZ-4	Total/NA	Water	8260B	
440-186462-2	Extraction Trench	Total/NA	Water	8260B	
440-186462-3	MW-1	Total/NA	Water	8260B	
440-186462-4	MW-13R	Total/NA	Water	8260B	
440-186462-5	DW-5	Total/NA	Water	8260B	
440-186462-6	MW-9	Total/NA	Water	8260B	
440-186462-7	QCAB	Total/NA	Water	8260B	
440-186462-8	QCTB	Total/NA	Water	8260B	
MB 440-412938/4	Method Blank	Total/NA	Water	8260B	
LCS 440-412938/5	Lab Control Sample	Total/NA	Water	8260B	
440-186462-1 MS	PZ-4	Total/NA	Water	8260B	
440-186462-1 MSD	PZ-4	Total/NA	Water	8260B	

Analysis Batch: 413003

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186462-1 - RA	PZ-4	Total/NA	Water	8260B	
440-186462-2 - RA	Extraction Trench	Total/NA	Water	8260B	
MB 440-413003/4	Method Blank	Total/NA	Water	8260B	
LCS 440-413003/5	Lab Control Sample	Total/NA	Water	8260B	
440-186652-A-1 MS	Matrix Spike	Total/NA	Water	8260B	
440-186652-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

Analysis Batch: 413193

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186462-3 - RA	MW-1	Total/NA	Water	8260B	
440-186462-4 - RA	MW-13R	Total/NA	Water	8260B	
440-186462-5 - RA	DW-5	Total/NA	Water	8260B	
440-186462-6 - RA	MW-9	Total/NA	Water	8260B	
440-186462-7 - RA	QCAB	Total/NA	Water	8260B	

GC/MS VOA (Continued)

Analysis Batch: 413193 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186462-8 - RA	QCTB	Total/NA	Water	8260B	
MB 440-413193/4	Method Blank	Total/NA	Water	8260B	
LCS 440-413193/5	Lab Control Sample	Total/NA	Water	8260B	
440-186816-A-5 MS	Matrix Spike	Total/NA	Water	8260B	
440-186816-A-5 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 412775

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186462-1	PZ-4	Total/NA	Water	3520C	
440-186462-2	Extraction Trench	Total/NA	Water	3520C	
440-186462-3	MW-1	Total/NA	Water	3520C	
440-186462-4	MW-13R	Total/NA	Water	3520C	
440-186462-5	DW-5	Total/NA	Water	3520C	
440-186462-6	MW-9	Total/NA	Water	3520C	
MB 440-412775/1-A	Method Blank	Total/NA	Water	3520C	
LCS 440-412775/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 440-412775/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	

Analysis Batch: 413699

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186462-1	PZ-4	Total/NA	Water	8270C	412775
440-186462-2	Extraction Trench	Total/NA	Water	8270C	412775
440-186462-3	MW-1	Total/NA	Water	8270C	412775
440-186462-4	MW-13R	Total/NA	Water	8270C	412775
440-186462-5	DW-5	Total/NA	Water	8270C	412775
440-186462-6	MW-9	Total/NA	Water	8270C	412775
MB 440-412775/1-A	Method Blank	Total/NA	Water	8270C	412775
LCS 440-412775/2-A	Lab Control Sample	Total/NA	Water	8270C	412775
LCSD 440-412775/3-A	Lab Control Sample Dup	Total/NA	Water	8270C	412775

HPLC/IC

Analysis Batch: 411907

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186462-1	PZ-4	Total/NA	Water	300.0	
440-186462-2	Extraction Trench	Total/NA	Water	300.0	
440-186462-3	MW-1	Total/NA	Water	300.0	
440-186462-4	MW-13R	Total/NA	Water	300.0	
440-186462-5	DW-5	Total/NA	Water	300.0	
440-186462-6	MW-9	Total/NA	Water	300.0	
MB 440-411907/6	Method Blank	Total/NA	Water	300.0	
LCS 440-411907/4	Lab Control Sample	Total/NA	Water	300.0	
440-186462-1 MS	PZ-4	Total/NA	Water	300.0	
440-186462-1 MSD	PZ-4	Total/NA	Water	300.0	

Analysis Batch: 411908

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186462-1	PZ-4	Total/NA	Water	300.0	

HPLC/IC (Continued)

Analysis Batch: 411908 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186462-1	PZ-4	Total/NA	Water	300.0	
440-186462-2	Extraction Trench	Total/NA	Water	300.0	
440-186462-2	Extraction Trench	Total/NA	Water	300.0	
440-186462-3	MW-1	Total/NA	Water	300.0	
440-186462-3	MW-1	Total/NA	Water	300.0	
440-186462-4	MW-13R	Total/NA	Water	300.0	
440-186462-4	MW-13R	Total/NA	Water	300.0	
440-186462-5	DW-5	Total/NA	Water	300.0	
440-186462-6	MW-9	Total/NA	Water	300.0	
440-186462-6	MW-9	Total/NA	Water	300.0	
MB 440-411908/6	Method Blank	Total/NA	Water	300.0	
LCS 440-411908/4	Lab Control Sample	Total/NA	Water	300.0	
440-186462-1 MS	PZ-4	Total/NA	Water	300.0	
440-186462-1 MSD	PZ-4	Total/NA	Water	300.0	

Analysis Batch: 412180

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186462-5	DW-5	Total/NA	Water	300.0	
MB 440-412180/6	Method Blank	Total/NA	Water	300.0	
LCS 440-412180/4	Lab Control Sample	Total/NA	Water	300.0	
440-186541-E-4 MS	Matrix Spike	Total/NA	Water	300.0	
440-186541-E-4 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Metals

Prep Batch: 413388

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186462-1	PZ-4	Total Recoverable	Water	3005A	
440-186462-2	Extraction Trench	Total Recoverable	Water	3005A	
440-186462-3	MW-1	Total Recoverable	Water	3005A	
440-186462-4	MW-13R	Total Recoverable	Water	3005A	
440-186462-5	DW-5	Total Recoverable	Water	3005A	
MB 440-413388/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 440-413388/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
440-186249-K-1-B MS	Matrix Spike	Total Recoverable	Water	3005A	
440-186249-K-1-C MSD	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

Prep Batch: 413392

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186462-6	MW-9	Total Recoverable	Water	3005A	
MB 440-413392/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 440-413392/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
440-186462-6 MS	MW-9	Total Recoverable	Water	3005A	
440-186462-6 MSD	MW-9	Total Recoverable	Water	3005A	

Analysis Batch: 413582

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186462-1	PZ-4	Total Recoverable	Water	6010B	413388
440-186462-2	Extraction Trench	Total Recoverable	Water	6010B	413388
440-186462-3	MW-1	Total Recoverable	Water	6010B	413388

Metals (Continued)

Analysis Batch: 413582 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186462-4	MW-13R	Total Recoverable	Water	6010B	413388
440-186462-5	DW-5	Total Recoverable	Water	6010B	413388
MB 440-413388/1-A	Method Blank	Total Recoverable	Water	6010B	413388
LCS 440-413388/2-A	Lab Control Sample	Total Recoverable	Water	6010B	413388
440-186249-K-1-B MS	Matrix Spike	Total Recoverable	Water	6010B	413388
440-186249-K-1-C MSD	Matrix Spike Duplicate	Total Recoverable	Water	6010B	413388

Analysis Batch: 413593

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186462-6	MW-9	Total Recoverable	Water	6010B	413392
MB 440-413392/1-A	Method Blank	Total Recoverable	Water	6010B	413392
LCS 440-413392/2-A	Lab Control Sample	Total Recoverable	Water	6010B	413392
440-186462-6 MS	MW-9	Total Recoverable	Water	6010B	413392
440-186462-6 MSD	MW-9	Total Recoverable	Water	6010B	413392

General Chemistry

Analysis Batch: 412075

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186462-1	PZ-4	Total/NA	Water	SM 4500 CO2 C	
440-186462-2	Extraction Trench	Total/NA	Water	SM 4500 CO2 C	
440-186462-3	MW-1	Total/NA	Water	SM 4500 CO2 C	
440-186462-4	MW-13R	Total/NA	Water	SM 4500 CO2 C	
440-186462-5	DW-5	Total/NA	Water	SM 4500 CO2 C	
440-186462-6	MW-9	Total/NA	Water	SM 4500 CO2 C	
MB 440-412075/1	Method Blank	Total/NA	Water	SM 4500 CO2 C	
440-186462-1 DU	PZ-4	Total/NA	Water	SM 4500 CO2 C	

Prep Batch: 412150

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186462-1	PZ-4	Total/NA	Water	SM 4500 NH3 B	
440-186462-2	Extraction Trench	Total/NA	Water	SM 4500 NH3 B	
440-186462-3	MW-1	Total/NA	Water	SM 4500 NH3 B	
440-186462-4	MW-13R	Total/NA	Water	SM 4500 NH3 B	
440-186462-5	DW-5	Total/NA	Water	SM 4500 NH3 B	
440-186462-6	MW-9	Total/NA	Water	SM 4500 NH3 B	
MB 440-412150/2-A	Method Blank	Total/NA	Water	SM 4500 NH3 B	
LCS 440-412150/1-A	Lab Control Sample	Total/NA	Water	SM 4500 NH3 B	
440-186462-1 MS	PZ-4	Total/NA	Water	SM 4500 NH3 B	
440-186462-1 MSD	PZ-4	Total/NA	Water	SM 4500 NH3 B	

Analysis Batch: 412173

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186462-1	PZ-4	Total/NA	Water	SM 4500 NH3 D	412150
440-186462-2	Extraction Trench	Total/NA	Water	SM 4500 NH3 D	412150
440-186462-3	MW-1	Total/NA	Water	SM 4500 NH3 D	412150
440-186462-4	MW-13R	Total/NA	Water	SM 4500 NH3 D	412150
440-186462-5	DW-5	Total/NA	Water	SM 4500 NH3 D	412150
440-186462-6	MW-9	Total/NA	Water	SM 4500 NH3 D	412150
MB 440-412150/2-A	Method Blank	Total/NA	Water	SM 4500 NH3 D	412150

General Chemistry (Continued)

Analysis Batch: 412173 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 440-412150/1-A	Lab Control Sample	Total/NA	Water	SM 4500 NH3 D	412150
440-186462-1 MS	PZ-4	Total/NA	Water	SM 4500 NH3 D	412150
440-186462-1 MSD	PZ-4	Total/NA	Water	SM 4500 NH3 D	412150

Analysis Batch: 412254

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186462-1	PZ-4	Total/NA	Water	SM 4500 S2 D	
440-186462-2	Extraction Trench	Total/NA	Water	SM 4500 S2 D	
440-186462-3	MW-1	Total/NA	Water	SM 4500 S2 D	
440-186462-4	MW-13R	Total/NA	Water	SM 4500 S2 D	
440-186462-5	DW-5	Total/NA	Water	SM 4500 S2 D	
440-186462-6	MW-9	Total/NA	Water	SM 4500 S2 D	
MB 440-412254/3	Method Blank	Total/NA	Water	SM 4500 S2 D	
LCS 440-412254/4	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
440-186479-B-2 MS	Matrix Spike	Total/NA	Water	SM 4500 S2 D	
440-186479-B-2 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 S2 D	

Analysis Batch: 412387

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186462-1	PZ-4	Total/NA	Water	SM 2320B	
440-186462-2	Extraction Trench	Total/NA	Water	SM 2320B	
440-186462-3	MW-1	Total/NA	Water	SM 2320B	
440-186462-4	MW-13R	Total/NA	Water	SM 2320B	
440-186462-5	DW-5	Total/NA	Water	SM 2320B	
440-186462-6	MW-9	Total/NA	Water	SM 2320B	
MB 440-412387/3	Method Blank	Total/NA	Water	SM 2320B	
LCS 440-412387/2	Lab Control Sample	Total/NA	Water	SM 2320B	
440-186462-1 DU	PZ-4	Total/NA	Water	SM 2320B	

Analysis Batch: 412777

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186462-1	PZ-4	Total/NA	Water	SM 2540C	
440-186462-2	Extraction Trench	Total/NA	Water	SM 2540C	
440-186462-3	MW-1	Total/NA	Water	SM 2540C	
440-186462-4	MW-13R	Total/NA	Water	SM 2540C	
440-186462-5	DW-5	Total/NA	Water	SM 2540C	
440-186462-6	MW-9	Total/NA	Water	SM 2540C	
MB 440-412777/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 440-412777/2	Lab Control Sample	Total/NA	Water	SM 2540C	
440-186399-C-11 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 413661

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186462-1	PZ-4	Total/NA	Water	410.4	
440-186462-2	Extraction Trench	Total/NA	Water	410.4	
440-186462-3	MW-1	Total/NA	Water	410.4	
440-186462-4	MW-13R	Total/NA	Water	410.4	
440-186462-5	DW-5	Total/NA	Water	410.4	
440-186462-6	MW-9	Total/NA	Water	410.4	
MB 440-413661/3	Method Blank	Total/NA	Water	410.4	
LCS 440-413661/4	Lab Control Sample	Total/NA	Water	410.4	

General Chemistry (Continued)

Analysis Batch: 413661 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186462-1 MS	PZ-4	Total/NA	Water	410.4	
440-186462-1 MSD	PZ-4	Total/NA	Water	410.4	

Analysis Batch: 413963

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186462-1	PZ-4	Total/NA	Water	SM 5310C	
440-186462-3	MW-1	Total/NA	Water	SM 5310C	
440-186462-4	MW-13R	Total/NA	Water	SM 5310C	
440-186462-5	DW-5	Total/NA	Water	SM 5310C	
440-186462-6	MW-9	Total/NA	Water	SM 5310C	
MB 440-413963/6	Method Blank	Total/NA	Water	SM 5310C	
LCS 440-413963/5	Lab Control Sample	Total/NA	Water	SM 5310C	
MRL 440-413963/7	Lab Control Sample	Total/NA	Water	SM 5310C	
440-186773-G-1 MS	Matrix Spike	Total/NA	Water	SM 5310C	
440-186773-G-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 5310C	

Analysis Batch: 414117

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186462-2	Extraction Trench	Total/NA	Water	SM 5310C	
MB 440-414117/6	Method Blank	Total/NA	Water	SM 5310C	
LCS 440-414117/5	Lab Control Sample	Total/NA	Water	SM 5310C	
MRL 440-414117/4	Lab Control Sample	Total/NA	Water	SM 5310C	
440-186828-A-6 MS ^5	Matrix Spike	Total/NA	Water	SM 5310C	
440-186828-B-6 MSD ^5	Matrix Spike Duplicate	Total/NA	Water	SM 5310C	

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.
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
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.
¤	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: 440-186462-1

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	06-30-17 *
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	CA015312017-3	07-31-17
New Mexico	State Program	6	N/A	01-29-17 *
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
17461 Derian Ave
Suite 100
Irvine, CA 92614
Phone: 949.261.1022 Fax: 949.260.3297

Chain of Custody Record

145713

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

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

Client Contact			
Company Name: Republic (GLA	Project Manager: Kyle Welchen	Site Contact: P. Dickason	Date: 6-14-17
Address: 1415 W. Bernardo Ct.	Tel/Fax: 858-451-1136	Lab Contact: R. Tomova	Carrier: TA
City/State/Zip: San Diego, CA 92127	Analysis Turnaround Time: ☐ CALENDAR DAYS ☐ WORKING DAYS		COC No: 1 of 1 COCs
Phone: 858-451-1136	TAT if different from Below ______		Sampler: BS, AS
Fax: 858-451-1087	☐ 2 weeks		For Lab Use Only:
Project Name: Sunshine Cyn. 4F	☐ 1 week		Walk-in Client:
Site: Sylmar	☐ 2 days		Lab Sampling:
P O # 44007851	☐ 1 day		Job / SDG No.:

Analyses: Filtered Sample (Y/N); Perform MS / MSD (Y/N); EPA 8260B-VOCs; 8270 1,4-Dioxane; Total Alkalinity, Bicarbonate; Ammonia as N; Eqvivalent COD; Chloride, Bromide; Nitrate-N, Sulfate; Total: B, Ca, Fe, Mg, Mn, K, Na; TDS (EPA 160.1); TOC (EPA 415.1); Flouride, Sulfide; SM-4500-CO2; Carbon Dioxide

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	8270 1,4-Dioxane	Total Alkalinity, Bicarbonate	Ammonia as N	Eqvivalent COD	Chloride, Bromide	Nitrate-N, Sulfate	Total: B, Ca, Fe, Mg, Mn, K, Na	TDS (EPA 160.1)	TOC (EPA 415.1)	Flouride, Sulfide	SM-4500-CO2	Carbon Dioxide	Sample Specific Notes
PZ-4	6/14/17	1103	G	GW	13			X	X	X	X	X	X	X	X	X	X	X	X	X	8260 40 CFR Part 258 Appx. 1 Dichlorodifluoromethane MTBE, and 1,4-Dioxane
Extraction Trench	↓	0940	G	WW	13			X	X	X	X	X	X	X	X	X	X	X	X	X	
MW-1	↓	1010	↓	GW	13			X	X	X	X	X	X	X	X	X	X	X	X	X	
MW-13R	↓	1130	↓	↓	13			X	X	X	X	X	X	X	X	X	X	X	X	X	
DW-5	↓	0915	↓	↓	13			X	X	X	X	X	X	X	X	X	X	X	X	X	
MW-9	↓	0810	↓	↓	13			X	X	X	X	X	X	X	X	X	X	X	X	X	
QCAB	↓	—	↓	Lab DI	4			X													
QCTB	↓	—	↓	"	4			X													

440-186462 Chain of Custody

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

Possible Hazard Identification:
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.
☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

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

Special Instructions/QC Requirements & Comments:

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

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Bret Salinas	Geo-Logic	6-14-17 / 1415	[signature]	TA	6/14/17 1415
Relinquished by: [signature]	Company: TA	Date/Time: 6/14/17 1907	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by: [signature]	Company: TA	Date/Time: 6/14/17 1907

IR-SC4 2.8/3.4 3.4/4.0 2.7/3.3

6/14/17 LB

Login Sample Receipt Checklist

Client: Geo-Logic Associates

Job Number: 440-186462-1

Login Number: 186462
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

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ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614-5817
Tel: (949)261-1022

TestAmerica Job ID: 440-186557-1
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:
6/27/2017 11:23:55 AM

Rossina Tomova, Project Manager I
(949)261-1022
rossina.tomova@testamericainc.com

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Sample Summary

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

TestAmerica Job ID: 440-186557-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-186557-1	MW-2A	Water	06/15/17 10:20	06/15/17 18:15
440-186557-2	MW-2B	Water	06/15/17 08:55	06/15/17 18:15
440-186557-3	DW-4	Water	06/15/17 08:00	06/15/17 18:15
440-186557-4	QCAB	Water	06/15/17 00:01	06/15/17 18:15
440-186557-5	QCTB	Water	06/15/17 00:01	06/15/17 18:15

Job ID: 440-186557-1

Laboratory: TestAmerica Irvine

Narrative

Job Narrative
440-186557-1

Comments
No additional comments.

Receipt
The samples were received on 6/15/2017 6:15 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.7º C.

GC/MS VOA
Method(s) 8260B: The continuing calibration verification (CCV) associated with batch 440-412938 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: MW-2A (440-186557-1), MW-2B (440-186557-2), DW-4 (440-186557-3), QCAB (440-186557-4), QCTB (440-186557-5) and (CCV 440-412938/3).

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 440-412182 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 Bromide due to the nature of the sample matrix: MW-2A (440-186557-1) and MW-2B (440-186557-2). Elevated reporting limits (RLs) are provided.

Method(s) 300.0: The following sample was diluted for Bromide and Fluoride due to the nature of the sample matrix: DW-4 (440-186557-3). Elevated reporting limits (RLs) are provided.

Method(s) 300.0: The following samples was diluted for Nitrate as N due to the nature of the sample matrix: MW-2A (440-186557-1), MW-2B (440-186557-2) and DW-4 (440-186557-3). 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: Geo-Logic Associates
Project/Site: Republic Sunshine Canyon

TestAmerica Job ID: 440-186557-1

Client Sample ID: MW-2A
Date Collected: 06/15/17 10:20
Date Received: 06/15/17 18:15

Lab Sample ID: 440-186557-1
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			06/20/17 02:09	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/20/17 02:09	1
Acrolein	ND		50	2.5	ug/L			06/17/17 00:20	1
Acrylonitrile	ND		50	1.0	ug/L			06/17/17 00:20	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			06/20/17 02:09	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/20/17 02:09	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			06/20/17 02:09	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			06/20/17 02:09	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			06/20/17 02:09	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			06/20/17 02:09	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			06/20/17 02:09	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			06/20/17 02:09	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			06/20/17 02:09	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			06/20/17 02:09	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			06/20/17 02:09	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			06/20/17 02:09	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			06/20/17 02:09	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			06/20/17 02:09	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			06/20/17 02:09	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			06/20/17 02:09	1
2-Hexanone	ND		5.0	2.5	ug/L			06/20/17 02:09	1
Acetone	ND		20	10	ug/L			06/20/17 02:09	1
Acetonitrile	ND		20	10	ug/L			06/20/17 02:09	1
Benzene	ND		0.50	0.25	ug/L			06/20/17 02:09	1
Bromoform	ND		1.0	0.40	ug/L			06/20/17 02:09	1
Bromomethane	ND		0.50	0.25	ug/L			06/20/17 02:09	1
Carbon disulfide	ND		1.0	0.50	ug/L			06/20/17 02:09	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			06/20/17 02:09	1
Chlorobenzene	ND		0.50	0.25	ug/L			06/20/17 02:09	1
Bromochloromethane	ND		0.50	0.25	ug/L			06/20/17 02:09	1
Chloroethane	ND		1.0	0.40	ug/L			06/20/17 02:09	1
Chloroform	ND		0.50	0.25	ug/L			06/20/17 02:09	1
Chloromethane	ND		0.50	0.25	ug/L			06/20/17 02:09	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			06/20/17 02:09	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/20/17 02:09	1
Dibromochloromethane	ND		0.50	0.25	ug/L			06/20/17 02:09	1
Dibromomethane	ND		0.50	0.25	ug/L			06/20/17 02:09	1
Bromodichloromethane	ND		0.50	0.25	ug/L			06/20/17 02:09	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			06/20/17 02:09	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			06/20/17 02:09	1
Ethylbenzene	ND		0.50	0.25	ug/L			06/20/17 02:09	1
Iodomethane	ND		2.0	1.0	ug/L			06/20/17 02:09	1
Isobutyl alcohol	ND		25	13	ug/L			06/20/17 02:09	1
m,p-Xylene	ND		1.0	0.50	ug/L			06/20/17 02:09	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			06/20/17 02:09	1
Methyl methacrylate	ND		2.0	1.0	ug/L			06/20/17 02:09	1
Methylene Chloride	ND		2.0	0.88	ug/L			06/20/17 02:09	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			06/20/17 02:09	1
Naphthalene	ND		1.0	0.40	ug/L			06/20/17 02:09	1

Client Sample ID: MW-2A
Date Collected: 06/15/17 10:20
Date Received: 06/15/17 18:15

Lab Sample ID: 440-186557-1
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			06/20/17 02:09	1
Propionitrile	ND		20	10	ug/L			06/20/17 02:09	1
Styrene	ND		0.50	0.25	ug/L			06/20/17 02:09	1
t-Butanol	ND		10	5.0	ug/L			06/20/17 02:09	1
Tetrachloroethene	ND		0.50	0.25	ug/L			06/20/17 02:09	1
Tetrahydrofuran	ND		10	5.0	ug/L			06/20/17 02:09	1
Toluene	ND		0.50	0.25	ug/L			06/20/17 02:09	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			06/20/17 02:09	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/20/17 02:09	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			06/20/17 02:09	1
Trichloroethene	ND		0.50	0.25	ug/L			06/20/17 02:09	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			06/20/17 02:09	1
Vinyl acetate	ND		4.0	2.0	ug/L			06/20/17 02:09	1
Vinyl chloride	ND		0.50	0.25	ug/L			06/20/17 02:09	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			06/20/17 02:09	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			06/20/17 02:09	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			06/20/17 02:09	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*9.9*	*T J*	*ug/L*		*6.28*			*06/20/17 02:09*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*103*		*80 - 128*		*06/17/17 00:20*	*1*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*		*06/17/17 00:20*	*1*
Toluene-d8 (Surr)	*104*		*80 - 128*		*06/20/17 02:09*	*1*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*		*06/20/17 02:09*	*1*
Dibromofluoromethane (Surr)	*97*		*76 - 132*		*06/17/17 00:20*	*1*
Dibromofluoromethane (Surr)	*111*		*76 - 132*		*06/20/17 02:09*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Allyl chloride	ND		1.0	0.50	ug/L			06/21/17 03:50	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*7.2*	*T J*	*ug/L*		*3.16*			*06/21/17 03:50*	*1*
Unknown	*3.2*	*T J*	*ug/L*		*5.53*			*06/21/17 03:50*	*1*
Unknown	*14*	*T J*	*ug/L*		*6.99*			*06/21/17 03:50*	*1*
Unknown	*3.3*	*T J*	*ug/L*		*14.53*			*06/21/17 03:50*	*1*
Unknown	*9.0*	*T J*	*ug/L*		*15.80*			*06/21/17 03:50*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*103*		*80 - 128*		*06/21/17 03:50*	*1*
4-Bromofluorobenzene (Surr)	*107*		*80 - 120*		*06/21/17 03:50*	*1*
Dibromofluoromethane (Surr)	*118*		*76 - 132*		*06/21/17 03:50*	*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		06/21/17 06:20	06/22/17 18:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*57*		*30 - 120*	*06/21/17 06:20*	*06/22/17 18:11*	*1*

Client Sample ID: MW-2A

Lab Sample ID: 440-186557-1

Date Collected: 06/15/17 10:20

Matrix: Water

Date Received: 06/15/17 18:15

Method: 300.0 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromide	0.58	J	1.0	0.50	mg/L			06/15/17 21:44	2
Nitrate as N	0.18	J	0.22	0.11	mg/L			06/15/17 21:44	2
Chloride	19		1.0	0.50	mg/L			06/15/17 21:44	2
Fluoride	1.3		1.0	0.50	mg/L			06/15/17 21:44	2
Sulfate	1500		50	25	mg/L			06/15/17 22:36	100

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	0.55		0.050	0.025	mg/L		06/22/17 14:35	06/23/17 07:19	1
Calcium	230		0.10	0.050	mg/L		06/22/17 14:35	06/23/17 07:19	1
Iron	0.37		0.10	0.050	mg/L		06/22/17 14:35	06/23/17 07:19	1
Magnesium	120		0.020	0.010	mg/L		06/22/17 14:35	06/23/17 07:19	1
Manganese	0.46		0.020	0.010	mg/L		06/22/17 14:35	06/23/17 07:19	1
Potassium	5.4		0.50	0.25	mg/L		06/22/17 14:35	06/23/17 07:19	1
Sodium	430		0.50	0.25	mg/L		06/22/17 14:35	06/23/17 07:19	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		20	10	mg/L			06/22/17 17:02	1
Total Dissolved Solids	2600		20	10	mg/L			06/22/17 10:14	1
Ammonia (as N)	1.8		0.50	0.10	mg/L		06/16/17 07:00	06/16/17 08:00	1
Total Sulfide	ND		0.050	0.027	mg/L			06/16/17 13:55	1
Total Organic Carbon	3.0		0.10	0.050	mg/L			06/23/17 14:57	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	350		4.0	4.0	mg/L			06/16/17 05:06	1
Bicarbonate Alkalinity as CaCO3	350		4.0	4.0	mg/L			06/16/17 05:06	1
Carbon Dioxide, Free	44		2.0	2.0	mg/L			06/20/17 16:39	1

Client Sample ID: MW-2B

Lab Sample ID: 440-186557-2

Date Collected: 06/15/17 08:55

Matrix: Water

Date Received: 06/15/17 18:15

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			06/20/17 02:38	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/20/17 02:38	1
Acrolein	ND		50	2.5	ug/L			06/17/17 01:48	1
Acrylonitrile	ND		50	1.0	ug/L			06/17/17 01:48	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			06/20/17 02:38	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/20/17 02:38	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			06/20/17 02:38	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			06/20/17 02:38	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			06/20/17 02:38	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			06/20/17 02:38	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			06/20/17 02:38	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			06/20/17 02:38	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			06/20/17 02:38	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			06/20/17 02:38	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			06/20/17 02:38	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			06/20/17 02:38	1

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

TestAmerica Job ID: 440-186557-1

Client Sample ID: MW-2B
Date Collected: 06/15/17 08:55
Date Received: 06/15/17 18:15

Lab Sample ID: 440-186557-2
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			06/20/17 02:38	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			06/20/17 02:38	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			06/20/17 02:38	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			06/20/17 02:38	1
2-Hexanone	ND		5.0	2.5	ug/L			06/20/17 02:38	1
Acetone	ND		20	10	ug/L			06/20/17 02:38	1
Acetonitrile	ND		20	10	ug/L			06/20/17 02:38	1
Benzene	ND		0.50	0.25	ug/L			06/20/17 02:38	1
Bromoform	ND		1.0	0.40	ug/L			06/20/17 02:38	1
Bromomethane	ND		0.50	0.25	ug/L			06/20/17 02:38	1
Carbon disulfide	ND		1.0	0.50	ug/L			06/20/17 02:38	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			06/20/17 02:38	1
Chlorobenzene	ND		0.50	0.25	ug/L			06/20/17 02:38	1
Bromochloromethane	ND		0.50	0.25	ug/L			06/20/17 02:38	1
Chloroethane	ND		1.0	0.40	ug/L			06/20/17 02:38	1
Chloroform	ND		0.50	0.25	ug/L			06/20/17 02:38	1
Chloromethane	ND		0.50	0.25	ug/L			06/20/17 02:38	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			06/20/17 02:38	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/20/17 02:38	1
Dibromochloromethane	ND		0.50	0.25	ug/L			06/20/17 02:38	1
Dibromomethane	ND		0.50	0.25	ug/L			06/20/17 02:38	1
Bromodichloromethane	ND		0.50	0.25	ug/L			06/20/17 02:38	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			06/20/17 02:38	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			06/20/17 02:38	1
Ethylbenzene	ND		0.50	0.25	ug/L			06/20/17 02:38	1
Iodomethane	ND		2.0	1.0	ug/L			06/20/17 02:38	1
Isobutyl alcohol	ND		25	13	ug/L			06/20/17 02:38	1
m,p-Xylene	ND		1.0	0.50	ug/L			06/20/17 02:38	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			06/20/17 02:38	1
Methyl methacrylate	ND		2.0	1.0	ug/L			06/20/17 02:38	1
Methylene Chloride	ND		2.0	0.88	ug/L			06/20/17 02:38	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			06/20/17 02:38	1
Naphthalene	ND		1.0	0.40	ug/L			06/20/17 02:38	1
o-Xylene	ND		0.50	0.25	ug/L			06/20/17 02:38	1
Propionitrile	ND		20	10	ug/L			06/20/17 02:38	1
Styrene	ND		0.50	0.25	ug/L			06/20/17 02:38	1
t-Butanol	ND		10	5.0	ug/L			06/20/17 02:38	1
Tetrachloroethene	ND		0.50	0.25	ug/L			06/20/17 02:38	1
Tetrahydrofuran	ND		10	5.0	ug/L			06/20/17 02:38	1
Toluene	ND		0.50	0.25	ug/L			06/20/17 02:38	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			06/20/17 02:38	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/20/17 02:38	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			06/20/17 02:38	1
Trichloroethene	ND		0.50	0.25	ug/L			06/20/17 02:38	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			06/20/17 02:38	1
Vinyl acetate	ND		4.0	2.0	ug/L			06/20/17 02:38	1
Vinyl chloride	ND		0.50	0.25	ug/L			06/20/17 02:38	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			06/20/17 02:38	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			06/20/17 02:38	1

Client Sample ID: MW-2B

Date Collected: 06/15/17 08:55
Date Received: 06/15/17 18:15

Lab Sample ID: 440-186557-2

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			06/20/17 02:38	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*2.7*	*T J*	*ug/L*		*4.85*			*06/20/17 02:38*	*1*
Unknown	*10*	*T J*	*ug/L*		*6.28*			*06/20/17 02:38*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*103*		*80 - 128*		*06/17/17 01:48*	*1*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*		*06/17/17 01:48*	*1*
Toluene-d8 (Surr)	*102*		*80 - 128*		*06/20/17 02:38*	*1*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*		*06/20/17 02:38*	*1*
Dibromofluoromethane (Surr)	*99*		*76 - 132*		*06/17/17 01:48*	*1*
Dibromofluoromethane (Surr)	*111*		*76 - 132*		*06/20/17 02:38*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Allyl chloride	ND		1.0	0.50	ug/L			06/21/17 04:20	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*9.4*	*T J*	*ug/L*		*3.17*			*06/21/17 04:20*	*1*
Unknown	*14*	*T J*	*ug/L*		*6.99*			*06/21/17 04:20*	*1*
Unknown	*14*	*T J*	*ug/L*		*16.24*			*06/21/17 04:20*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*106*		*80 - 128*		*06/21/17 04:20*	*1*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*		*06/21/17 04:20*	*1*
Dibromofluoromethane (Surr)	*119*		*76 - 132*		*06/21/17 04:20*	*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		06/21/17 06:20	06/22/17 18:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*61*		*30 - 120*	*06/21/17 06:20*	*06/22/17 18:32*	*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			06/15/17 22:52	2
Nitrate as N	ND		0.22	0.11	mg/L			06/15/17 22:52	2
Chloride	**13**		1.0	0.50	mg/L			06/15/17 22:52	2
Fluoride	**1.0**		1.0	0.50	mg/L			06/15/17 22:52	2
Sulfate	**1600**		50	25	mg/L			06/15/17 23:07	100

Method: 6010B - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	**0.56**		0.050	0.025	mg/L		06/22/17 14:35	06/23/17 07:29	1
Calcium	**190**		0.10	0.050	mg/L		06/22/17 14:35	06/23/17 07:29	1
Iron	**2.1**		0.10	0.050	mg/L		06/22/17 14:35	06/23/17 07:29	1
Magnesium	**110**		0.020	0.010	mg/L		06/22/17 14:35	06/23/17 07:29	1
Manganese	**0.12**		0.020	0.010	mg/L		06/22/17 14:35	06/23/17 07:29	1
Potassium	**4.3**		0.50	0.25	mg/L		06/22/17 14:35	06/23/17 07:29	1
Sodium	**490**		0.50	0.25	mg/L		06/22/17 14:35	06/23/17 07:29	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		20	10	mg/L			06/22/17 17:02	1
Total Dissolved Solids	**2600**		20	10	mg/L			06/22/17 10:14	1
Ammonia (as N)	**3.4**		0.50	0.10	mg/L		06/16/17 07:00	06/16/17 08:00	1
Total Sulfide	ND		0.050	0.027	mg/L			06/16/17 13:55	1
Total Organic Carbon	**1.9**		0.10	0.050	mg/L			06/23/17 15:57	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	**360**		4.0	4.0	mg/L			06/16/17 05:14	1
Bicarbonate Alkalinity as CaCO3	**360**		4.0	4.0	mg/L			06/16/17 05:14	1
Carbon Dioxide, Free	**39**		2.0	2.0	mg/L			06/20/17 16:39	1

Client Sample ID: DW-4

Date Collected: 06/15/17 08:00
Date Received: 06/15/17 18:15

Lab Sample ID: 440-186557-3
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			06/20/17 03:08	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/20/17 03:08	1
Acrolein	ND		50	2.5	ug/L			06/17/17 02:18	1
Acrylonitrile	ND		50	1.0	ug/L			06/17/17 02:18	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			06/20/17 03:08	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/20/17 03:08	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			06/20/17 03:08	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			06/20/17 03:08	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			06/20/17 03:08	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			06/20/17 03:08	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			06/20/17 03:08	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			06/20/17 03:08	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			06/20/17 03:08	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			06/20/17 03:08	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			06/20/17 03:08	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			06/20/17 03:08	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			06/20/17 03:08	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			06/20/17 03:08	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			06/20/17 03:08	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			06/20/17 03:08	1
2-Hexanone	ND		5.0	2.5	ug/L			06/20/17 03:08	1
Acetone	ND		20	10	ug/L			06/20/17 03:08	1
Acetonitrile	ND		20	10	ug/L			06/20/17 03:08	1
Benzene	ND		0.50	0.25	ug/L			06/20/17 03:08	1
Bromoform	ND		1.0	0.40	ug/L			06/20/17 03:08	1
Bromomethane	ND		0.50	0.25	ug/L			06/20/17 03:08	1
Carbon disulfide	ND		1.0	0.50	ug/L			06/20/17 03:08	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			06/20/17 03:08	1
Chlorobenzene	ND		0.50	0.25	ug/L			06/20/17 03:08	1
Bromochloromethane	ND		0.50	0.25	ug/L			06/20/17 03:08	1
Chloroethane	ND		1.0	0.40	ug/L			06/20/17 03:08	1
Chloroform	ND		0.50	0.25	ug/L			06/20/17 03:08	1
Chloromethane	ND		0.50	0.25	ug/L			06/20/17 03:08	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			06/20/17 03:08	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/20/17 03:08	1
Dibromochloromethane	ND		0.50	0.25	ug/L			06/20/17 03:08	1
Dibromomethane	ND		0.50	0.25	ug/L			06/20/17 03:08	1

Client Sample ID: DW-4
Date Collected: 06/15/17 08:00
Date Received: 06/15/17 18:15

Lab Sample ID: 440-186557-3
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromodichloromethane	ND		0.50	0.25	ug/L			06/20/17 03:08	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			06/20/17 03:08	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			06/20/17 03:08	1
Ethylbenzene	ND		0.50	0.25	ug/L			06/20/17 03:08	1
Iodomethane	ND		2.0	1.0	ug/L			06/20/17 03:08	1
Isobutyl alcohol	ND		25	13	ug/L			06/20/17 03:08	1
m,p-Xylene	ND		1.0	0.50	ug/L			06/20/17 03:08	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			06/20/17 03:08	1
Methyl methacrylate	ND		2.0	1.0	ug/L			06/20/17 03:08	1
Methylene Chloride	ND		2.0	0.88	ug/L			06/20/17 03:08	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			06/20/17 03:08	1
Naphthalene	ND		1.0	0.40	ug/L			06/20/17 03:08	1
o-Xylene	ND		0.50	0.25	ug/L			06/20/17 03:08	1
Propionitrile	ND		20	10	ug/L			06/20/17 03:08	1
Styrene	ND		0.50	0.25	ug/L			06/20/17 03:08	1
t-Butanol	ND		10	5.0	ug/L			06/20/17 03:08	1
Tetrachloroethene	ND		0.50	0.25	ug/L			06/20/17 03:08	1
Tetrahydrofuran	ND		10	5.0	ug/L			06/20/17 03:08	1
Toluene	ND		0.50	0.25	ug/L			06/20/17 03:08	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			06/20/17 03:08	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/20/17 03:08	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			06/20/17 03:08	1
Trichloroethene	ND		0.50	0.25	ug/L			06/20/17 03:08	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			06/20/17 03:08	1
Vinyl acetate	ND		4.0	2.0	ug/L			06/20/17 03:08	1
Vinyl chloride	ND		0.50	0.25	ug/L			06/20/17 03:08	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			06/20/17 03:08	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			06/20/17 03:08	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			06/20/17 03:08	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*9.8*	*T J*	*ug/L*		*6.28*			*06/20/17 03:08*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*104*		*80 - 128*		*06/17/17 02:18*	*1*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*		*06/17/17 02:18*	*1*
Toluene-d8 (Surr)	*107*		*80 - 128*		*06/20/17 03:08*	*1*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*		*06/20/17 03:08*	*1*
Dibromofluoromethane (Surr)	*98*		*76 - 132*		*06/17/17 02:18*	*1*
Dibromofluoromethane (Surr)	*112*		*76 - 132*		*06/20/17 03:08*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Allyl chloride	ND		1.0	0.50	ug/L			06/21/17 04:50	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*19*	*T J*	*ug/L*		*2.67*			*06/21/17 04:50*	*1*
Unknown	*5.2*	*T J*	*ug/L*		*5.53*			*06/21/17 04:50*	*1*
Unknown	*15*	*T J*	*ug/L*		*6.99*			*06/21/17 04:50*	*1*
Unknown	*17*	*T J*	*ug/L*		*15.97*			*06/21/17 04:50*	*1*

Client Sample ID: DW-4

Date Collected: 06/15/17 08:00
Date Received: 06/15/17 18:15

Lab Sample ID: 440-186557-3

Matrix: Water

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*103*		*80 - 128*		*06/21/17 04:50*	*1*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*		*06/21/17 04:50*	*1*
Dibromofluoromethane (Surr)	*119*		*76 - 132*		*06/21/17 04:50*	*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		06/21/17 06:20	06/22/17 18:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*57*		*30 - 120*	*06/21/17 06:20*	*06/22/17 18:54*	*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			06/15/17 23:23	2
Nitrate as N	ND		0.22	0.11	mg/L			06/15/17 23:23	2
Chloride	**13**		1.0	0.50	mg/L			06/15/17 23:23	2
Fluoride	**0.78**	**J**	1.0	0.50	mg/L			06/15/17 23:23	2
Sulfate	**1800**		50	25	mg/L			06/15/17 23:39	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		06/22/17 14:35	06/23/17 07:31	1
Calcium	**220**		0.10	0.050	mg/L		06/22/17 14:35	06/23/17 07:31	1
Iron	**2.4**		0.10	0.050	mg/L		06/22/17 14:35	06/23/17 07:31	1
Magnesium	**140**		0.020	0.010	mg/L		06/22/17 14:35	06/23/17 07:31	1
Manganese	**0.12**		0.020	0.010	mg/L		06/22/17 14:35	06/23/17 07:31	1
Potassium	**4.5**		0.50	0.25	mg/L		06/22/17 14:35	06/23/17 07:31	1
Sodium	**550**		0.50	0.25	mg/L		06/22/17 14:35	06/23/17 07:31	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		20	10	mg/L			06/22/17 17:02	1
Total Dissolved Solids	**2800**		20	10	mg/L			06/22/17 10:14	1
Ammonia (as N)	**3.8**		0.50	0.10	mg/L		06/16/17 07:00	06/16/17 08:00	1
Total Sulfide	ND		0.050	0.027	mg/L			06/16/17 13:55	1
Total Organic Carbon	**1.9**		0.10	0.050	mg/L			06/23/17 16:09	1

Analyte	Result	Qualifier	RL	RL	Unit	D	Prepared	Analyzed	Dil Fac
Alkalinity as CaCO3	**360**		4.0	4.0	mg/L			06/16/17 05:23	1
Bicarbonate Alkalinity as CaCO3	**360**		4.0	4.0	mg/L			06/16/17 05:23	1
Carbon Dioxide, Free	**37**		2.0	2.0	mg/L			06/20/17 16:39	1

Client Sample ID: QCAB

Date Collected: 06/15/17 00:01
Date Received: 06/15/17 18:15

Lab Sample ID: 440-186557-4

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			06/20/17 03:38	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/20/17 03:38	1
Acrolein	ND		50	2.5	ug/L			06/17/17 02:47	1
Acrylonitrile	ND		50	1.0	ug/L			06/17/17 02:47	1

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

TestAmerica Job ID: 440-186557-1

Client Sample ID: QCAB
Date Collected: 06/15/17 00:01
Date Received: 06/15/17 18:15

Lab Sample ID: 440-186557-4
Matrix: Water

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			06/20/17 03:38	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/20/17 03:38	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			06/20/17 03:38	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			06/20/17 03:38	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			06/20/17 03:38	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			06/20/17 03:38	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			06/20/17 03:38	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			06/20/17 03:38	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			06/20/17 03:38	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			06/20/17 03:38	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			06/20/17 03:38	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			06/20/17 03:38	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			06/20/17 03:38	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			06/20/17 03:38	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			06/20/17 03:38	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			06/20/17 03:38	1
2-Hexanone	ND		5.0	2.5	ug/L			06/20/17 03:38	1
Acetone	ND		20	10	ug/L			06/20/17 03:38	1
Acetonitrile	ND		20	10	ug/L			06/20/17 03:38	1
Benzene	ND		0.50	0.25	ug/L			06/20/17 03:38	1
Bromoform	ND		1.0	0.40	ug/L			06/20/17 03:38	1
Bromomethane	ND		0.50	0.25	ug/L			06/20/17 03:38	1
Carbon disulfide	ND		1.0	0.50	ug/L			06/20/17 03:38	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			06/20/17 03:38	1
Chlorobenzene	ND		0.50	0.25	ug/L			06/20/17 03:38	1
Bromochloromethane	ND		0.50	0.25	ug/L			06/20/17 03:38	1
Chloroethane	ND		1.0	0.40	ug/L			06/20/17 03:38	1
Chloroform	ND		0.50	0.25	ug/L			06/20/17 03:38	1
Chloromethane	ND		0.50	0.25	ug/L			06/20/17 03:38	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			06/20/17 03:38	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/20/17 03:38	1
Dibromochloromethane	ND		0.50	0.25	ug/L			06/20/17 03:38	1
Dibromomethane	ND		0.50	0.25	ug/L			06/20/17 03:38	1
Bromodichloromethane	ND		0.50	0.25	ug/L			06/20/17 03:38	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			06/20/17 03:38	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			06/20/17 03:38	1
Ethylbenzene	ND		0.50	0.25	ug/L			06/20/17 03:38	1
Iodomethane	ND		2.0	1.0	ug/L			06/20/17 03:38	1
Isobutyl alcohol	ND		25	13	ug/L			06/20/17 03:38	1
m,p-Xylene	ND		1.0	0.50	ug/L			06/20/17 03:38	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			06/20/17 03:38	1
Methyl methacrylate	ND		2.0	1.0	ug/L			06/20/17 03:38	1
Methylene Chloride	ND		2.0	0.88	ug/L			06/20/17 03:38	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			06/20/17 03:38	1
Naphthalene	ND		1.0	0.40	ug/L			06/20/17 03:38	1
o-Xylene	ND		0.50	0.25	ug/L			06/20/17 03:38	1
Propionitrile	ND		20	10	ug/L			06/20/17 03:38	1
Styrene	ND		0.50	0.25	ug/L			06/20/17 03:38	1
t-Butanol	ND		10	5.0	ug/L			06/20/17 03:38	1

Client Sample ID: QCAB

Date Collected: 06/15/17 00:01
Date Received: 06/15/17 18:15

Lab Sample ID: 440-186557-4

Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	ND		0.50	0.25	ug/L			06/20/17 03:38	1
Tetrahydrofuran	ND		10	5.0	ug/L			06/20/17 03:38	1
Toluene	ND		0.50	0.25	ug/L			06/20/17 03:38	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			06/20/17 03:38	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/20/17 03:38	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			06/20/17 03:38	1
Trichloroethene	ND		0.50	0.25	ug/L			06/20/17 03:38	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			06/20/17 03:38	1
Vinyl acetate	ND		4.0	2.0	ug/L			06/20/17 03:38	1
Vinyl chloride	ND		0.50	0.25	ug/L			06/20/17 03:38	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			06/20/17 03:38	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			06/20/17 03:38	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			06/20/17 03:38	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*9.9*	*T J*	*ug/L*		*6.28*			*06/20/17 03:38*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*105*		*80 - 128*		*06/17/17 02:47*	*1*
4-Bromofluorobenzene (Surr)	*106*		*80 - 120*		*06/17/17 02:47*	*1*
Toluene-d8 (Surr)	*105*		*80 - 128*		*06/20/17 03:38*	*1*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*		*06/20/17 03:38*	*1*
Dibromofluoromethane (Surr)	*97*		*76 - 132*		*06/17/17 02:47*	*1*
Dibromofluoromethane (Surr)	*109*		*76 - 132*		*06/20/17 03:38*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Allyl chloride	ND		1.0	0.50	ug/L			06/21/17 05:20	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*8.6*	*T J*	*ug/L*		*3.19*			*06/21/17 05:20*	*1*
Unknown	*5.5*	*T J*	*ug/L*		*5.53*			*06/21/17 05:20*	*1*
Unknown	*14*	*T J*	*ug/L*		*6.99*			*06/21/17 05:20*	*1*
Unknown	*11*	*T J*	*ug/L*		*16.01*			*06/21/17 05:20*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*106*		*80 - 128*		*06/21/17 05:20*	*1*
4-Bromofluorobenzene (Surr)	*107*		*80 - 120*		*06/21/17 05:20*	*1*
Dibromofluoromethane (Surr)	*119*		*76 - 132*		*06/21/17 05:20*	*1*

Client Sample ID: QCTB

Date Collected: 06/15/17 00:01
Date Received: 06/15/17 18:15

Lab Sample ID: 440-186557-5

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			06/20/17 04:08	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/20/17 04:08	1
Acrolein	ND		50	2.5	ug/L			06/17/17 03:16	1
Acrylonitrile	ND		50	1.0	ug/L			06/17/17 03:16	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			06/20/17 04:08	1

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

TestAmerica Job ID: 440-186557-1

Client Sample ID: QCTB
Date Collected: 06/15/17 00:01
Date Received: 06/15/17 18:15

Lab Sample ID: 440-186557-5
Matrix: Water

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		0.50	0.25	ug/L			06/20/17 04:08	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			06/20/17 04:08	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			06/20/17 04:08	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			06/20/17 04:08	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			06/20/17 04:08	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			06/20/17 04:08	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			06/20/17 04:08	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			06/20/17 04:08	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			06/20/17 04:08	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			06/20/17 04:08	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			06/20/17 04:08	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			06/20/17 04:08	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			06/20/17 04:08	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			06/20/17 04:08	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			06/20/17 04:08	1
2-Hexanone	ND		5.0	2.5	ug/L			06/20/17 04:08	1
Acetone	ND		20	10	ug/L			06/20/17 04:08	1
Acetonitrile	ND		20	10	ug/L			06/20/17 04:08	1
Benzene	ND		0.50	0.25	ug/L			06/20/17 04:08	1
Bromoform	ND		1.0	0.40	ug/L			06/20/17 04:08	1
Bromomethane	ND		0.50	0.25	ug/L			06/20/17 04:08	1
Carbon disulfide	ND		1.0	0.50	ug/L			06/20/17 04:08	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			06/20/17 04:08	1
Chlorobenzene	ND		0.50	0.25	ug/L			06/20/17 04:08	1
Bromochloromethane	ND		0.50	0.25	ug/L			06/20/17 04:08	1
Chloroethane	ND		1.0	0.40	ug/L			06/20/17 04:08	1
Chloroform	ND		0.50	0.25	ug/L			06/20/17 04:08	1
Chloromethane	ND		0.50	0.25	ug/L			06/20/17 04:08	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			06/20/17 04:08	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/20/17 04:08	1
Dibromochloromethane	ND		0.50	0.25	ug/L			06/20/17 04:08	1
Dibromomethane	ND		0.50	0.25	ug/L			06/20/17 04:08	1
Bromodichloromethane	ND		0.50	0.25	ug/L			06/20/17 04:08	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			06/20/17 04:08	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			06/20/17 04:08	1
Ethylbenzene	ND		0.50	0.25	ug/L			06/20/17 04:08	1
Iodomethane	ND		2.0	1.0	ug/L			06/20/17 04:08	1
Isobutyl alcohol	ND		25	13	ug/L			06/20/17 04:08	1
m,p-Xylene	ND		1.0	0.50	ug/L			06/20/17 04:08	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			06/20/17 04:08	1
Methyl methacrylate	ND		2.0	1.0	ug/L			06/20/17 04:08	1
Methylene Chloride	ND		2.0	0.88	ug/L			06/20/17 04:08	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			06/20/17 04:08	1
Naphthalene	ND		1.0	0.40	ug/L			06/20/17 04:08	1
o-Xylene	ND		0.50	0.25	ug/L			06/20/17 04:08	1
Propionitrile	ND		20	10	ug/L			06/20/17 04:08	1
Styrene	ND		0.50	0.25	ug/L			06/20/17 04:08	1
t-Butanol	ND		10	5.0	ug/L			06/20/17 04:08	1
Tetrachloroethene	ND		0.50	0.25	ug/L			06/20/17 04:08	1

Client Sample ID: QCTB
Date Collected: 06/15/17 00:01
Date Received: 06/15/17 18:15

Lab Sample ID: 440-186557-5
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrahydrofuran	ND		10	5.0	ug/L			06/20/17 04:08	1
Toluene	ND		0.50	0.25	ug/L			06/20/17 04:08	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			06/20/17 04:08	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/20/17 04:08	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			06/20/17 04:08	1
Trichloroethene	ND		0.50	0.25	ug/L			06/20/17 04:08	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			06/20/17 04:08	1
Vinyl acetate	ND		4.0	2.0	ug/L			06/20/17 04:08	1
Vinyl chloride	ND		0.50	0.25	ug/L			06/20/17 04:08	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			06/20/17 04:08	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			06/20/17 04:08	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			06/20/17 04:08	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*9.7*	*T J*	*ug/L*		*6.28*			*06/20/17 04:08*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*104*		*80 - 128*		*06/17/17 03:16*	*1*
4-Bromofluorobenzene (Surr)	*106*		*80 - 120*		*06/17/17 03:16*	*1*
Toluene-d8 (Surr)	*105*		*80 - 128*		*06/20/17 04:08*	*1*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*		*06/20/17 04:08*	*1*
Dibromofluoromethane (Surr)	*97*		*76 - 132*		*06/17/17 03:16*	*1*
Dibromofluoromethane (Surr)	*109*		*76 - 132*		*06/20/17 04:08*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Allyl chloride	ND		1.0	0.50	ug/L			06/21/17 05:50	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*2.6*	*T J*	*ug/L*		*5.52*			*06/21/17 05:50*	*1*
Unknown	*14*	*T J*	*ug/L*		*6.99*			*06/21/17 05:50*	*1*
Unknown	*3.1*	*T J*	*ug/L*		*8.29*			*06/21/17 05:50*	*1*
Unknown	*21*	*T J*	*ug/L*		*16.15*			*06/21/17 05:50*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*103*		*80 - 128*		*06/21/17 05:50*	*1*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*		*06/21/17 05:50*	*1*
Dibromofluoromethane (Surr)	*115*		*76 - 132*		*06/21/17 05:50*	*1*

Method Summary

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

TestAmerica Job ID: 440-186557-1

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: 440-186557-1

Client Sample ID: MW-2A

Date Collected: 06/15/17 10:20
Date Received: 06/15/17 18:15

Lab Sample ID: 440-186557-1

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	412938	06/20/17 02:09	K1S	TAL IRV
Total/NA	Analysis	8260B	RA	1	10 mL	10 mL	413193	06/21/17 03:50	RM	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	412554	06/17/17 00:20	AA	TAL IRV
Total/NA	Prep	3520C			1005 mL	1.0 mL	413268	06/21/17 06:20	JS1	TAL IRV
Total/NA	Analysis	8270C		1			413623	06/22/17 18:11	TL	TAL IRV
Total/NA	Analysis	300.0		2			412181	06/15/17 21:44	NTN	TAL IRV
Total/NA	Analysis	300.0		2			412182	06/15/17 21:44	NTN	TAL IRV
Total/NA	Analysis	300.0		100			412182	06/15/17 22:36	NTN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	413639	06/22/17 14:35	JL	TAL IRV
Total Recoverable	Analysis	6010B		1			413766	06/23/17 07:19	EN	TAL IRV
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	413680	06/22/17 17:02	KYP	TAL IRV
Total/NA	Analysis	SM 2320B		1			412422	06/16/17 05:06	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	413553	06/22/17 10:14	XL	TAL IRV
Total/NA	Analysis	SM 4500 CO2 C		1	25 mL	25 mL	413195	06/20/17 16:39	SN	TAL IRV
Total/NA	Prep	SM 4500 NH3 B			50 mL	50 mL	412395	06/16/17 07:00	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			412396	06/16/17 08:00	YZ	TAL IRV
Total/NA	Analysis	SM 4500 S2 D		1	7.5 mL	7.5 mL	412523	06/16/17 13:55	HTL	TAL IRV
Total/NA	Analysis	SM 5310C		1	100 mL	100 mL	413963	06/23/17 14:57	YZ	TAL IRV

Client Sample ID: MW-2B

Date Collected: 06/15/17 08:55
Date Received: 06/15/17 18:15

Lab Sample ID: 440-186557-2

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	412938	06/20/17 02:38	K1S	TAL IRV
Total/NA	Analysis	8260B	RA	1	10 mL	10 mL	413193	06/21/17 04:20	RM	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	412554	06/17/17 01:48	AA	TAL IRV
Total/NA	Prep	3520C			1035 mL	1.0 mL	413268	06/21/17 06:20	JS1	TAL IRV
Total/NA	Analysis	8270C		1			413623	06/22/17 18:32	TL	TAL IRV
Total/NA	Analysis	300.0		2			412181	06/15/17 22:52	NTN	TAL IRV
Total/NA	Analysis	300.0		2			412182	06/15/17 22:52	NTN	TAL IRV
Total/NA	Analysis	300.0		100			412182	06/15/17 23:07	NTN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	413639	06/22/17 14:35	JL	TAL IRV
Total Recoverable	Analysis	6010B		1			413766	06/23/17 07:29	EN	TAL IRV
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	413680	06/22/17 17:02	KYP	TAL IRV
Total/NA	Analysis	SM 2320B		1			412422	06/16/17 05:14	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	413553	06/22/17 10:14	XL	TAL IRV
Total/NA	Analysis	SM 4500 CO2 C		1	25 mL	25 mL	413195	06/20/17 16:39	SN	TAL IRV
Total/NA	Prep	SM 4500 NH3 B			50 mL	50 mL	412395	06/16/17 07:00	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			412396	06/16/17 08:00	YZ	TAL IRV
Total/NA	Analysis	SM 4500 S2 D		1	7.5 mL	7.5 mL	412523	06/16/17 13:55	HTL	TAL IRV

Lab Chronicle

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

TestAmerica Job ID: 440-186557-1

Client Sample ID: MW-2B
Date Collected: 06/15/17 08:55
Date Received: 06/15/17 18:15

Lab Sample ID: 440-186557-2
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 5310C		1	100 mL	100 mL	413963	06/23/17 15:57	YZ	TAL IRV

Client Sample ID: DW-4
Date Collected: 06/15/17 08:00
Date Received: 06/15/17 18:15

Lab Sample ID: 440-186557-3
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	412938	06/20/17 03:08	K1S	TAL IRV
Total/NA	Analysis	8260B	RA	1	10 mL	10 mL	413193	06/21/17 04:50	RM	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	412554	06/17/17 02:18	AA	TAL IRV
Total/NA	Prep	3520C			1020 mL	1.0 mL	413268	06/21/17 06:20	JS1	TAL IRV
Total/NA	Analysis	8270C		1			413623	06/22/17 18:54	TL	TAL IRV
Total/NA	Analysis	300.0		2			412181	06/15/17 23:23	NTN	TAL IRV
Total/NA	Analysis	300.0		2			412182	06/15/17 23:23	NTN	TAL IRV
Total/NA	Analysis	300.0		100			412182	06/15/17 23:39	NTN	TAL IRV
Total Recoverable	Prep	3005A			25 mL	25 mL	413639	06/22/17 14:35	JL	TAL IRV
Total Recoverable	Analysis	6010B		1			413766	06/23/17 07:31	EN	TAL IRV
Total/NA	Analysis	410.4		1	2.5 mL	2.5 mL	413680	06/22/17 17:02	KYP	TAL IRV
Total/NA	Analysis	SM 2320B		1			412422	06/16/17 05:23	YZ	TAL IRV
Total/NA	Analysis	SM 2540C		1	50 mL	100 mL	413553	06/22/17 10:14	XL	TAL IRV
Total/NA	Analysis	SM 4500 CO2 C		1	25 mL	25 mL	413195	06/20/17 16:39	SN	TAL IRV
Total/NA	Prep	SM 4500 NH3 B			50 mL	50 mL	412395	06/16/17 07:00	YZ	TAL IRV
Total/NA	Analysis	SM 4500 NH3 D		1			412396	06/16/17 08:00	YZ	TAL IRV
Total/NA	Analysis	SM 4500 S2 D		1	7.5 mL	7.5 mL	412523	06/16/17 13:55	HTL	TAL IRV
Total/NA	Analysis	SM 5310C		1	100 mL	100 mL	413963	06/23/17 16:09	YZ	TAL IRV

Client Sample ID: QCAB
Date Collected: 06/15/17 00:01
Date Received: 06/15/17 18:15

Lab Sample ID: 440-186557-4
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	412938	06/20/17 03:38	K1S	TAL IRV
Total/NA	Analysis	8260B	RA	1	10 mL	10 mL	413193	06/21/17 05:20	RM	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	412554	06/17/17 02:47	AA	TAL IRV

Client Sample ID: QCTB
Date Collected: 06/15/17 00:01
Date Received: 06/15/17 18:15

Lab Sample ID: 440-186557-5
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	412938	06/20/17 04:08	K1S	TAL IRV

Lab Chronicle

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

TestAmerica Job ID: 440-186557-1

Client Sample ID: QCTB

Date Collected: 06/15/17 00:01
Date Received: 06/15/17 18:15

Lab Sample ID: 440-186557-5

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	RA	1	10 mL	10 mL	413193	06/21/17 05:50	RM	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	412554	06/17/17 03:16	AA	TAL IRV

Laboratory References:

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

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

Lab Sample ID: MB 440-412554/4
Matrix: Water
Analysis Batch: 412554

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			06/16/17 19:53	1
Acrylonitrile	ND		50	1.0	ug/L			06/16/17 19:53	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*105*		*80 - 128*		*06/16/17 19:53*	*1*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*		*06/16/17 19:53*	*1*
Dibromofluoromethane (Surr)	*95*		*76 - 132*		*06/16/17 19:53*	*1*

Lab Sample ID: LCS 440-412554/6
Matrix: Water
Analysis Batch: 412554

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	33.9	J	ug/L		136	10 - 145		
Acrylonitrile			250	337		ug/L		135	48 - 140		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*102*		*80 - 128*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*
Dibromofluoromethane (Surr)	*96*		*76 - 132*

Lab Sample ID: 440-186557-1 MS
Matrix: Water
Analysis Batch: 412554

Client Sample ID: MW-2A
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Acrolein	ND		25.0	30.5	J	ug/L		122	10 - 147		
Acrylonitrile	ND		250	322		ug/L		129	38 - 144		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Toluene-d8 (Surr)	*100*		*80 - 128*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*
Dibromofluoromethane (Surr)	*97*		*76 - 132*

Lab Sample ID: 440-186557-1 MSD
Matrix: Water
Analysis Batch: 412554

Client Sample ID: MW-2A
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	33.3	J	ug/L		133	10 - 147	9	40
Acrylonitrile	ND		250	331		ug/L		133	38 - 144	3	40

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*100*		*80 - 128*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*
Dibromofluoromethane (Surr)	*96*		*76 - 132*

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

Lab Sample ID: MB 440-412938/4
Matrix: Water
Analysis Batch: 412938

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			06/19/17 20:07	1
1,1,1,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/19/17 20:07	1
1,1,1-Trichloroethane	ND		0.50	0.25	ug/L			06/19/17 20:07	1
1,1,2,2-Tetrachloroethane	ND		0.50	0.25	ug/L			06/19/17 20:07	1
1,1,2-Trichloroethane	ND		0.50	0.25	ug/L			06/19/17 20:07	1
1,1-Dichloroethane	ND		0.50	0.25	ug/L			06/19/17 20:07	1
1,1-Dichloroethene	ND		0.50	0.25	ug/L			06/19/17 20:07	1
1,1-Dichloropropene	ND		0.50	0.25	ug/L			06/19/17 20:07	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			06/19/17 20:07	1
1,2-Dibromo-3-Chloropropane	ND		1.0	0.50	ug/L			06/19/17 20:07	1
1,2-Dichlorobenzene	ND		0.50	0.25	ug/L			06/19/17 20:07	1
1,2-Dichloroethane	ND		0.50	0.25	ug/L			06/19/17 20:07	1
1,2-Dichloropropane	ND		0.50	0.25	ug/L			06/19/17 20:07	1
1,3-Dichlorobenzene	ND		0.50	0.25	ug/L			06/19/17 20:07	1
1,3-Dichloropropane	ND		0.50	0.25	ug/L			06/19/17 20:07	1
1,4-Dichlorobenzene	ND		0.50	0.25	ug/L			06/19/17 20:07	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			06/19/17 20:07	1
2-Chloro-1,3-butadiene	ND		1.0	0.50	ug/L			06/19/17 20:07	1
2-Hexanone	ND		5.0	2.5	ug/L			06/19/17 20:07	1
Acetone	ND		20	10	ug/L			06/19/17 20:07	1
Acetonitrile	ND		20	10	ug/L			06/19/17 20:07	1
Benzene	ND		0.50	0.25	ug/L			06/19/17 20:07	1
Bromoform	ND		1.0	0.40	ug/L			06/19/17 20:07	1
Bromomethane	ND		0.50	0.25	ug/L			06/19/17 20:07	1
Carbon disulfide	ND		1.0	0.50	ug/L			06/19/17 20:07	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			06/19/17 20:07	1
Chlorobenzene	ND		0.50	0.25	ug/L			06/19/17 20:07	1
Bromochloromethane	ND		0.50	0.25	ug/L			06/19/17 20:07	1
Chloroethane	ND		1.0	0.40	ug/L			06/19/17 20:07	1
Chloroform	ND		0.50	0.25	ug/L			06/19/17 20:07	1
Chloromethane	ND		0.50	0.25	ug/L			06/19/17 20:07	1
cis-1,2-Dichloroethene	ND		0.50	0.25	ug/L			06/19/17 20:07	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/19/17 20:07	1
Dibromochloromethane	ND		0.50	0.25	ug/L			06/19/17 20:07	1
Dibromomethane	ND		0.50	0.25	ug/L			06/19/17 20:07	1
Bromodichloromethane	ND		0.50	0.25	ug/L			06/19/17 20:07	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			06/19/17 20:07	1
Ethyl methacrylate	ND		2.0	1.0	ug/L			06/19/17 20:07	1
Ethylbenzene	ND		0.50	0.25	ug/L			06/19/17 20:07	1
Iodomethane	ND		2.0	1.0	ug/L			06/19/17 20:07	1
Isobutyl alcohol	ND		25	13	ug/L			06/19/17 20:07	1
m,p-Xylene	ND		1.0	0.50	ug/L			06/19/17 20:07	1
Methylacrylonitrile	ND		5.0	2.5	ug/L			06/19/17 20:07	1
Methyl methacrylate	ND		2.0	1.0	ug/L			06/19/17 20:07	1
Methylene Chloride	ND		2.0	0.88	ug/L			06/19/17 20:07	1
Methyl tert-butyl ether	ND		0.50	0.25	ug/L			06/19/17 20:07	1
Naphthalene	ND		1.0	0.40	ug/L			06/19/17 20:07	1
o-Xylene	ND		0.50	0.25	ug/L			06/19/17 20:07	1

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

Lab Sample ID: MB 440-412938/4
Matrix: Water
Analysis Batch: 412938

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Propionitrile	ND		20	10	ug/L			06/19/17 20:07	1
Styrene	ND		0.50	0.25	ug/L			06/19/17 20:07	1
t-Butanol	ND		10	5.0	ug/L			06/19/17 20:07	1
Tetrachloroethene	ND		0.50	0.25	ug/L			06/19/17 20:07	1
Tetrahydrofuran	ND		10	5.0	ug/L			06/19/17 20:07	1
Toluene	ND		0.50	0.25	ug/L			06/19/17 20:07	1
trans-1,2-Dichloroethene	ND		0.50	0.25	ug/L			06/19/17 20:07	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			06/19/17 20:07	1
trans-1,4-Dichloro-2-butene	ND		5.0	2.5	ug/L			06/19/17 20:07	1
Trichloroethene	ND		0.50	0.25	ug/L			06/19/17 20:07	1
Trichlorofluoromethane	ND		0.50	0.25	ug/L			06/19/17 20:07	1
Vinyl acetate	ND		4.0	2.0	ug/L			06/19/17 20:07	1
Vinyl chloride	ND		0.50	0.25	ug/L			06/19/17 20:07	1
1,2-Dibromoethane (EDB)	ND		0.50	0.25	ug/L			06/19/17 20:07	1
2-Butanone (MEK)	ND		5.0	2.5	ug/L			06/19/17 20:07	1
4-Methyl-2-pentanone (MIBK)	ND		5.0	2.5	ug/L			06/19/17 20:07	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*06/19/17 20:07*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*107*		*80 - 128*		*06/19/17 20:07*	*1*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*		*06/19/17 20:07*	*1*
Dibromofluoromethane (Surr)	*109*		*76 - 132*		*06/19/17 20:07*	*1*

Lab Sample ID: LCS 440-412938/5
Matrix: Water
Analysis Batch: 412938

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	29.2		ug/L		117	60 - 141
1,1,1-Trichloroethane	25.0	28.8		ug/L		115	70 - 130
1,1,2,2-Tetrachloroethane	25.0	25.2		ug/L		101	63 - 130
1,1,2-Trichloroethane	25.0	26.4		ug/L		106	70 - 130
1,1-Dichloroethane	25.0	25.9		ug/L		103	64 - 130
1,1-Dichloroethene	25.0	25.5		ug/L		102	70 - 130
1,1-Dichloropropene	25.0	27.5		ug/L		110	70 - 130
1,2,4-Trichlorobenzene	25.0	26.7		ug/L		107	60 - 140
1,2-Dibromo-3-Chloropropane	25.0	26.2		ug/L		105	52 - 140
1,2-Dichlorobenzene	25.0	27.2		ug/L		109	70 - 130
1,2-Dichloroethane	25.0	28.7		ug/L		115	57 - 138
1,2-Dichloropropane	25.0	25.8		ug/L		103	67 - 130
1,3-Dichlorobenzene	25.0	26.8		ug/L		107	70 - 130
1,3-Dichloropropane	25.0	25.9		ug/L		104	70 - 130
1,4-Dichlorobenzene	25.0	26.3		ug/L		105	70 - 130
2,2-Dichloropropane	25.0	29.2		ug/L		117	68 - 141

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

Lab Sample ID: LCS 440-412938/5
Matrix: Water
Analysis Batch: 412938

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Hexanone	25.0	27.8		ug/L		111	10 - 150
Acetone	25.0	27.4		ug/L		110	10 - 150
Acetonitrile	250	224		ug/L		90	49 - 142
Benzene	25.0	25.9		ug/L		104	68 - 130
Bromoform	25.0	28.5		ug/L		114	60 - 148
Bromomethane	25.0	24.5		ug/L		98	64 - 139
Carbon disulfide	25.0	23.9		ug/L		96	52 - 136
Carbon tetrachloride	25.0	28.8		ug/L		115	60 - 150
Chlorobenzene	25.0	26.6		ug/L		106	70 - 130
Bromochloromethane	25.0	28.2		ug/L		113	70 - 130
Chloroethane	25.0	24.9		ug/L		100	64 - 135
Chloroform	25.0	27.1		ug/L		109	70 - 130
Chloromethane	25.0	21.6		ug/L		86	47 - 140
cis-1,2-Dichloroethene	25.0	26.5		ug/L		106	70 - 133
cis-1,3-Dichloropropene	25.0	28.0		ug/L		112	70 - 133
Dibromochloromethane	25.0	28.8		ug/L		115	69 - 145
Dibromomethane	25.0	25.9		ug/L		104	70 - 130
Bromodichloromethane	25.0	27.5		ug/L		110	70 - 132
Dichlorodifluoromethane	25.0	22.0		ug/L		88	29 - 150
Ethylbenzene	25.0	27.6		ug/L		110	70 - 130
m,p-Xylene	25.0	28.3		ug/L		113	70 - 130
Methylene Chloride	25.0	24.4		ug/L		97	52 - 130
Methyl tert-butyl ether	25.0	27.3		ug/L		109	63 - 131
Naphthalene	25.0	26.1		ug/L		104	60 - 140
o-Xylene	25.0	27.5		ug/L		110	70 - 130
Styrene	25.0	27.9		ug/L		112	70 - 134
t-Butanol	250	275		ug/L		110	70 - 130
Tetrachloroethene	25.0	28.4		ug/L		114	70 - 130
Toluene	25.0	27.0		ug/L		108	70 - 130
trans-1,2-Dichloroethene	25.0	27.2		ug/L		109	70 - 130
trans-1,3-Dichloropropene	25.0	27.7		ug/L		111	70 - 132
Trichloroethene	25.0	27.8		ug/L		111	70 - 130
Trichlorofluoromethane	25.0	27.3		ug/L		109	60 - 150
Vinyl acetate	25.0	24.3		ug/L		97	48 - 140
Vinyl chloride	25.0	24.0		ug/L		96	59 - 133
1,2-Dibromoethane (EDB)	25.0	28.1		ug/L		112	70 - 130
2-Butanone (MEK)	25.0	26.2		ug/L		105	44 - 150
4-Methyl-2-pentanone (MIBK)	25.0	28.0		ug/L		112	59 - 149

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*104*		*80 - 128*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*
Dibromofluoromethane (Surr)	*108*		*76 - 132*

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

Lab Sample ID: 440-186462-A-1 MS
Matrix: Water
Analysis Batch: 412938

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	30.4		ug/L		121	60 - 130
1,1,1,2-Tetrachloroethane	ND		25.0	28.9		ug/L		116	60 - 149
1,1,1-Trichloroethane	ND		25.0	28.4		ug/L		114	70 - 130
1,1,2,2-Tetrachloroethane	ND		25.0	27.0		ug/L		108	63 - 130
1,1,2-Trichloroethane	ND		25.0	27.4		ug/L		110	70 - 130
1,1-Dichloroethane	ND		25.0	26.2		ug/L		105	65 - 130
1,1-Dichloroethene	ND		25.0	25.8		ug/L		103	70 - 130
1,1-Dichloropropene	ND		25.0	27.6		ug/L		110	64 - 130
1,2,4-Trichlorobenzene	ND		25.0	27.6		ug/L		110	60 - 140
1,2-Dibromo-3-Chloropropane	ND		25.0	30.5		ug/L		122	48 - 140
1,2-Dichlorobenzene	ND		25.0	27.2		ug/L		109	70 - 130
1,2-Dichloroethane	ND		25.0	28.5		ug/L		114	56 - 146
1,2-Dichloropropane	ND		25.0	26.0		ug/L		104	69 - 130
1,3-Dichlorobenzene	ND		25.0	26.6		ug/L		106	70 - 130
1,3-Dichloropropane	ND		25.0	27.8		ug/L		111	70 - 130
1,4-Dichlorobenzene	ND		25.0	27.0		ug/L		108	70 - 130
2,2-Dichloropropane	ND		25.0	29.5		ug/L		118	69 - 138
2-Hexanone	ND		25.0	32.0		ug/L		128	10 - 150
Acetone	ND		25.0	31.0		ug/L		124	10 - 150
Acetonitrile	ND		250	296		ug/L		118	37 - 140
Benzene	ND		25.0	26.2		ug/L		105	66 - 130
Bromoform	ND		25.0	30.0		ug/L		120	59 - 150
Bromomethane	ND		25.0	24.4		ug/L		98	62 - 131
Carbon disulfide	ND		25.0	24.1		ug/L		96	49 - 140
Carbon tetrachloride	ND		25.0	28.6		ug/L		115	60 - 150
Chlorobenzene	ND		25.0	26.5		ug/L		106	70 - 130
Bromochloromethane	ND		25.0	29.0		ug/L		116	70 - 130
Chloroethane	ND		25.0	25.0		ug/L		100	68 - 130
Chloroform	ND		25.0	27.7		ug/L		111	70 - 130
Chloromethane	ND		25.0	22.5		ug/L		90	39 - 144
cis-1,2-Dichloroethene	ND		25.0	26.9		ug/L		108	70 - 130
cis-1,3-Dichloropropene	ND		25.0	28.3		ug/L		113	70 - 133
Dibromochloromethane	ND		25.0	29.4		ug/L		117	70 - 148
Dibromomethane	ND		25.0	27.6		ug/L		110	70 - 130
Bromodichloromethane	ND		25.0	28.1		ug/L		112	70 - 138
Dichlorodifluoromethane	ND		25.0	24.2		ug/L		97	25 - 142
Ethylbenzene	ND		25.0	27.3		ug/L		109	70 - 130
m,p-Xylene	ND		25.0	27.0		ug/L		108	70 - 133
Methylene Chloride	ND		25.0	25.7		ug/L		103	52 - 130
Methyl tert-butyl ether	ND		25.0	29.4		ug/L		117	70 - 130
Naphthalene	0.50	J	25.0	28.2		ug/L		111	60 - 140
o-Xylene	ND		25.0	27.2		ug/L		109	70 - 133
Styrene	ND		25.0	25.2		ug/L		101	29 - 150
t-Butanol	ND		250	282		ug/L		113	70 - 130
Tetrachloroethene	ND		25.0	27.3		ug/L		109	70 - 137
Toluene	ND		25.0	26.7		ug/L		107	70 - 130
trans-1,2-Dichloroethene	ND		25.0	27.3		ug/L		109	70 - 130
trans-1,3-Dichloropropene	ND		25.0	28.7		ug/L		115	70 - 138

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

Lab Sample ID: 440-186462-A-1 MS
Matrix: Water
Analysis Batch: 412938

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
Trichloroethene	ND		25.0	27.7		ug/L		111	70 - 130
Trichlorofluoromethane	ND		25.0	28.1		ug/L		112	60 - 150
Vinyl acetate	ND		25.0	25.8		ug/L		103	23 - 150
Vinyl chloride	ND		25.0	25.0		ug/L		100	50 - 137
1,2-Dibromoethane (EDB)	ND		25.0	28.9		ug/L		116	70 - 131
2-Butanone (MEK)	ND		25.0	30.9		ug/L		124	48 - 140
4-Methyl-2-pentanone (MIBK)	ND		25.0	31.9		ug/L		128	52 - 150

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Toluene-d8 (Surr)	*106*		*80 - 128*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*
Dibromofluoromethane (Surr)	*108*		*76 - 132*

Lab Sample ID: 440-186462-A-1 MSD
Matrix: Water
Analysis Batch: 412938

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	26.5		ug/L		106	60 - 130	13	30
1,1,1,2-Tetrachloroethane	ND		25.0	29.4		ug/L		118	60 - 149	2	20
1,1,1-Trichloroethane	ND		25.0	29.0		ug/L		116	70 - 130	2	20
1,1,2,2-Tetrachloroethane	ND		25.0	24.6		ug/L		98	63 - 130	9	30
1,1,2-Trichloroethane	ND		25.0	26.6		ug/L		106	70 - 130	3	25
1,1-Dichloroethane	ND		25.0	26.7		ug/L		107	65 - 130	2	20
1,1-Dichloroethene	ND		25.0	25.2		ug/L		101	70 - 130	2	20
1,1-Dichloropropene	ND		25.0	27.6		ug/L		111	64 - 130	0	20
1,2,4-Trichlorobenzene	ND		25.0	27.9		ug/L		112	60 - 140	1	20
1,2-Dibromo-3-Chloropropane	ND		25.0	25.4		ug/L		101	48 - 140	18	30
1,2-Dichlorobenzene	ND		25.0	27.0		ug/L		108	70 - 130	1	20
1,2-Dichloroethane	ND		25.0	28.4		ug/L		114	56 - 146	0	20
1,2-Dichloropropane	ND		25.0	26.0		ug/L		104	69 - 130	0	20
1,3-Dichlorobenzene	ND		25.0	26.7		ug/L		107	70 - 130	0	20
1,3-Dichloropropane	ND		25.0	25.2		ug/L		101	70 - 130	10	25
1,4-Dichlorobenzene	ND		25.0	26.9		ug/L		108	70 - 130	0	20
2,2-Dichloropropane	ND		25.0	29.9		ug/L		120	69 - 138	1	25
2-Hexanone	ND		25.0	25.7		ug/L		103	10 - 150	22	35
Acetone	ND		25.0	25.4		ug/L		102	10 - 150	20	35
Acetonitrile	ND		250	222		ug/L		89	37 - 140	28	40
Benzene	ND		25.0	25.9		ug/L		104	66 - 130	1	20
Bromoform	ND		25.0	27.6		ug/L		110	59 - 150	9	25
Bromomethane	ND		25.0	25.0		ug/L		100	62 - 131	2	25
Carbon disulfide	ND		25.0	24.6		ug/L		98	49 - 140	2	20
Carbon tetrachloride	ND		25.0	29.1		ug/L		116	60 - 150	2	25
Chlorobenzene	ND		25.0	26.4		ug/L		106	70 - 130	0	20
Bromochloromethane	ND		25.0	27.3		ug/L		109	70 - 130	6	25
Chloroethane	ND		25.0	25.3		ug/L		101	68 - 130	1	25
Chloroform	ND		25.0	27.0		ug/L		108	70 - 130	3	20
Chloromethane	ND		25.0	23.3		ug/L		93	39 - 144	3	25

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

Lab Sample ID: 440-186462-A-1 MSD
Matrix: Water
Analysis Batch: 412938

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
cis-1,2-Dichloroethene	ND		25.0	26.8		ug/L		107	70 - 130	0	20
cis-1,3-Dichloropropene	ND		25.0	27.7		ug/L		111	70 - 133	2	20
Dibromochloromethane	ND		25.0	27.9		ug/L		112	70 - 148	5	25
Dibromomethane	ND		25.0	26.5		ug/L		106	70 - 130	4	25
Bromodichloromethane	ND		25.0	27.6		ug/L		111	70 - 138	2	20
Dichlorodifluoromethane	ND		25.0	24.6		ug/L		98	25 - 142	2	30
Ethylbenzene	ND		25.0	27.2		ug/L		109	70 - 130	0	20
m,p-Xylene	ND		25.0	27.8		ug/L		111	70 - 133	3	25
Methylene Chloride	ND		25.0	24.9		ug/L		100	52 - 130	3	20
Methyl tert-butyl ether	ND		25.0	27.6		ug/L		110	70 - 130	6	25
Naphthalene	0.50	J	25.0	25.9		ug/L		102	60 - 140	8	30
o-Xylene	ND		25.0	27.2		ug/L		109	70 - 133	0	20
Styrene	ND		25.0	25.3		ug/L		101	29 - 150	0	35
t-Butanol	ND		250	283		ug/L		113	70 - 130	0	25
Tetrachloroethene	ND		25.0	27.1		ug/L		109	70 - 137	1	20
Toluene	ND		25.0	26.6		ug/L		107	70 - 130	0	20
trans-1,2-Dichloroethene	ND		25.0	27.9		ug/L		112	70 - 130	2	20
trans-1,3-Dichloropropene	ND		25.0	28.1		ug/L		113	70 - 138	2	25
Trichloroethene	ND		25.0	27.1		ug/L		109	70 - 130	2	20
Trichlorofluoromethane	ND		25.0	28.1		ug/L		113	60 - 150	0	25
Vinyl acetate	ND		25.0	23.6		ug/L		95	23 - 150	9	30
Vinyl chloride	ND		25.0	25.6		ug/L		103	50 - 137	2	30
1,2-Dibromoethane (EDB)	ND		25.0	27.6		ug/L		110	70 - 131	5	25
2-Butanone (MEK)	ND		25.0	25.5		ug/L		102	48 - 140	19	40
4-Methyl-2-pentanone (MIBK)	ND		25.0	27.4		ug/L		110	52 - 150	15	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*104*		*80 - 128*
4-Bromofluorobenzene (Surr)	*104*		*80 - 120*
Dibromofluoromethane (Surr)	*110*		*76 - 132*

Lab Sample ID: MB 440-413193/4
Matrix: Water
Analysis Batch: 413193

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Allyl chloride	ND		1.0	0.50	ug/L			06/20/17 19:23	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*06/20/17 19:23*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Toluene-d8 (Surr)	*110*		*80 - 128*		*06/20/17 19:23*	*1*
4-Bromofluorobenzene (Surr)	*101*		*80 - 120*		*06/20/17 19:23*	*1*
Dibromofluoromethane (Surr)	*108*		*76 - 132*		*06/20/17 19:23*	*1*

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

Lab Sample ID: LCS 440-413193/5
Matrix: Water
Analysis Batch: 413193

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Allyl chloride			25.0	24.3		ug/L		97	60 - 140		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*104*		*80 - 128*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*
Dibromofluoromethane (Surr)	*103*		*76 - 132*

Lab Sample ID: 440-186816-A-5 MS
Matrix: Water
Analysis Batch: 413193

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		
Allyl chloride	ND		25.0	24.7		ug/L		99	52 - 140		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
Toluene-d8 (Surr)	*102*		*80 - 128*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*
Dibromofluoromethane (Surr)	*106*		*76 - 132*

Lab Sample ID: 440-186816-A-5 MSD
Matrix: Water
Analysis Batch: 413193

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
Allyl chloride	ND		25.0	22.3		ug/L		89	52 - 140	10	40

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*99*		*80 - 128*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*
Dibromofluoromethane (Surr)	*107*		*76 - 132*

Method: 8270C - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 440-413268/1-A
Matrix: Water
Analysis Batch: 413623

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 413268

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		1.0	0.25	ug/L		06/21/17 06:20	06/22/17 15:17	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*53*		*30 - 120*	*06/21/17 06:20*	*06/22/17 15:17*	*1*

Method: 8270C - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 440-413268/3-A
Matrix: Water
Analysis Batch: 413623

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 413268

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,4-Dioxane			2.03	1.13		ug/L		56	35 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,4-Dioxane-d8 (Surr)	*57*		*30 - 120*

Lab Sample ID: 440-186930-F-9-A MS
Matrix: Water
Analysis Batch: 413623

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 413268

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,4-Dioxane	0.277		2.12	1.72		ug/L		68	35 - 120		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,4-Dioxane-d8 (Surr)	*65*		*30 - 120*

Lab Sample ID: 440-186930-F-9-B MSD
Matrix: Water
Analysis Batch: 413623

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 413268

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dioxane	0.277		2.15	1.46		ug/L		55	35 - 120	16	25

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,4-Dioxane-d8 (Surr)	*53*		*30 - 120*

Method: 300.0 - Anions, Ion Chromatography

Lab Sample ID: MB 440-412181/6
Matrix: Water
Analysis Batch: 412181

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			06/15/17 12:36	1

Lab Sample ID: LCS 440-412181/4
Matrix: Water
Analysis Batch: 412181

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	1.20		mg/L		106	90 - 110		

Lab Sample ID: 440-186547-D-2 MS
Matrix: Water
Analysis Batch: 412181

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	30		11.3	43.1		mg/L		114	80 - 120		

Method: 300.0 - Anions, Ion Chromatography (Continued)

Lab Sample ID: 440-186547-D-2 MSD
Matrix: Water
Analysis Batch: 412181

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	30		11.3	43.4		mg/L		117	80 - 120	1	20

Lab Sample ID: MB 440-412182/6
Matrix: Water
Analysis Batch: 412182

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			06/15/17 12:36	1
Chloride	ND		0.50	0.25	mg/L			06/15/17 12:36	1
Fluoride	ND		0.50	0.25	mg/L			06/15/17 12:36	1
Sulfate	ND		0.50	0.25	mg/L			06/15/17 12:36	1

Lab Sample ID: LCS 440-412182/4
Matrix: Water
Analysis Batch: 412182

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	5.25		mg/L		105	90 - 110
Chloride	5.00	4.95		mg/L		99	90 - 110
Fluoride	5.00	4.61		mg/L		92	90 - 110
Sulfate	5.00	5.01		mg/L		100	90 - 110

Lab Sample ID: 440-186547-D-2 MS
Matrix: Water
Analysis Batch: 412182

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	20		50.0	73.2		mg/L		107	80 - 120
Fluoride	ND		50.0	47.9		mg/L		96	80 - 120
Sulfate	230		50.0	291	4	mg/L		114	80 - 120

Lab Sample ID: 440-186547-D-2 MSD
Matrix: Water
Analysis Batch: 412182

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	20		50.0	73.8		mg/L		109	80 - 120	1	20
Fluoride	ND		50.0	48.3		mg/L		97	80 - 120	1	20
Sulfate	230		50.0	294	4	mg/L		119	80 - 120	1	20

Method: 6010B - Metals (ICP)

Lab Sample ID: MB 440-413639/1-A
Matrix: Water
Analysis Batch: 413766

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 413639

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Boron	ND		0.050	0.025	mg/L		06/22/17 14:35	06/23/17 07:14	1
Calcium	ND		0.10	0.050	mg/L		06/22/17 14:35	06/23/17 07:14	1

Method: 6010B - Metals (ICP) (Continued)

Lab Sample ID: MB 440-413639/1-A
Matrix: Water
Analysis Batch: 413766

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 413639

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Iron	ND		0.10	0.050	mg/L		06/22/17 14:35	06/23/17 07:14	1
Magnesium	ND		0.020	0.010	mg/L		06/22/17 14:35	06/23/17 07:14	1
Manganese	ND		0.020	0.010	mg/L		06/22/17 14:35	06/23/17 07:14	1
Potassium	ND		0.50	0.25	mg/L		06/22/17 14:35	06/23/17 07:14	1
Sodium	ND		0.50	0.25	mg/L		06/22/17 14:35	06/23/17 07:14	1

Lab Sample ID: LCS 440-413639/2-A
Matrix: Water
Analysis Batch: 413766

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 413639

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	1.00	0.938		mg/L		94	80 - 120
Calcium	5.00	5.18		mg/L		104	80 - 120
Iron	1.00	1.04		mg/L		104	80 - 120
Magnesium	5.00	4.72		mg/L		94	80 - 120
Manganese	1.00	0.884		mg/L		88	80 - 120
Potassium	10.0	9.60		mg/L		96	80 - 120
Sodium	10.0	10.2		mg/L		102	80 - 120

Lab Sample ID: 440-186557-1 MS
Matrix: Water
Analysis Batch: 413766

Client Sample ID: MW-2A
Prep Type: Total Recoverable
Prep Batch: 413639

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Boron	0.55		1.00	1.57		mg/L		102	75 - 125
Calcium	230		5.00	237	4	mg/L		230	75 - 125
Iron	0.37		1.00	1.35		mg/L		98	75 - 125
Magnesium	120		5.00	132	4	mg/L		168	75 - 125
Manganese	0.46		1.00	1.39		mg/L		93	75 - 125
Potassium	5.4		10.0	15.9		mg/L		105	75 - 125
Sodium	430		10.0	453	4	mg/L		214	75 - 125

Lab Sample ID: 440-186557-1 MSD
Matrix: Water
Analysis Batch: 413766

Client Sample ID: MW-2A
Prep Type: Total Recoverable
Prep Batch: 413639

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Boron	0.55		1.00	1.51		mg/L		97	75 - 125	3	20
Calcium	230		5.00	230	4	mg/L		80	75 - 125	3	20
Iron	0.37		1.00	1.32		mg/L		95	75 - 125	2	20
Magnesium	120		5.00	127	4	mg/L		72	75 - 125	4	20
Manganese	0.46		1.00	1.34		mg/L		89	75 - 125	3	20
Potassium	5.4		10.0	15.4		mg/L		100	75 - 125	3	20
Sodium	430		10.0	435	4	mg/L		27	75 - 125	4	20

Method: 410.4 - COD

Lab Sample ID: MB 440-413680/3
Matrix: Water
Analysis Batch: 413680

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			06/22/17 17:01	1

Lab Sample ID: LCS 440-413680/4
Matrix: Water
Analysis Batch: 413680

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	214		mg/L		107	90 - 110

Lab Sample ID: 440-186950-A-1 MS
Matrix: Water
Analysis Batch: 413680

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	94		200	299		mg/L		102	70 - 120

Lab Sample ID: 440-186950-A-1 MSD
Matrix: Water
Analysis Batch: 413680

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	94		200	294		mg/L		100	70 - 120	2	15

Lab Sample ID: 440-186950-A-1 DU
Matrix: Water
Analysis Batch: 413680

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	94		95.3		mg/L		1	15

Method: SM 2320B - Alkalinity

Lab Sample ID: MB 440-412422/3
Matrix: Water
Analysis Batch: 412422

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			06/16/17 04:40	1
Bicarbonate Alkalinity as CaCO3	ND		4.0	4.0	mg/L			06/16/17 04:40	1

Lab Sample ID: LCS 440-412422/2
Matrix: Water
Analysis Batch: 412422

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	36.1		mg/L		107	80 - 120

Method: SM 2320B - Alkalinity (Continued)

Lab Sample ID: 440-186622-J-1 DU
Matrix: Water
Analysis Batch: 412422

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	300		296		mg/L		0	20
Bicarbonate Alkalinity as CaCO3	300		296		mg/L		0	20

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

Lab Sample ID: MB 440-413553/1
Matrix: Water
Analysis Batch: 413553

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			06/22/17 10:14	1

Lab Sample ID: LCS 440-413553/2
Matrix: Water
Analysis Batch: 413553

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	1020		mg/L		102	90 - 110

Lab Sample ID: 440-186557-1 DU
Matrix: Water
Analysis Batch: 413553

Client Sample ID: MW-2A
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Dissolved Solids	2600		2610		mg/L		2	5

Method: SM 4500 CO2 C - Free Carbon Dioxide

Lab Sample ID: MB 440-413195/1
Matrix: Water
Analysis Batch: 413195

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			06/20/17 16:39	1

Lab Sample ID: 440-186575-I-1 DU
Matrix: Water
Analysis Batch: 413195

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	30		28.2		mg/L		6	20

Method: SM 4500 NH3 D - Ammonia

Lab Sample ID: MB 440-412395/2-A
Matrix: Water
Analysis Batch: 412396

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 412395

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia (as N)	ND		0.50	0.10	mg/L		06/16/17 07:00	06/16/17 08:00	1

Lab Sample ID: LCS 440-412395/1-A
Matrix: Water
Analysis Batch: 412396

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 412395

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	2.50	2.27		mg/L		91	85 - 115

Lab Sample ID: 440-186603-C-2-C MS
Matrix: Water
Analysis Batch: 412396

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 412395

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia (as N)	ND		2.50	2.45		mg/L		98	75 - 125

Lab Sample ID: 440-186603-C-2-D MSD
Matrix: Water
Analysis Batch: 412396

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 412395

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	2.45		mg/L		98	75 - 125	0	15

Lab Sample ID: 440-186542-D-2-C DU
Matrix: Water
Analysis Batch: 412396

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 412395

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Ammonia (as N)	110		113		mg/L		4	15

Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MB 440-412523/3
Matrix: Water
Analysis Batch: 412523

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			06/16/17 13:54	1

Lab Sample ID: LCS 440-412523/4
Matrix: Water
Analysis Batch: 412523

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	0.503		mg/L		101	80 - 120

Method: SM 4500 S2 D - Sulfide, Total (Continued)

Lab Sample ID: LCSD 440-412523/5
Matrix: Water
Analysis Batch: 412523

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			0.500	0.489		mg/L		98	80 - 120	3	20

Lab Sample ID: 550-84392-A-1 MS
Matrix: Water
Analysis Batch: 412523

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	0.455		mg/L		91	70 - 130

Lab Sample ID: 550-84392-A-1 MSD
Matrix: Water
Analysis Batch: 412523

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		0.500	0.444		mg/L		89	70 - 130	2	30

Method: SM 5310C - TOC

Lab Sample ID: MB 440-413963/6
Matrix: Water
Analysis Batch: 413963

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			06/23/17 10:12	1

Lab Sample ID: LCS 440-413963/5
Matrix: Water
Analysis Batch: 413963

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			5.00	5.14		mg/L		103	90 - 110

Lab Sample ID: MRL 440-413963/7
Matrix: Water
Analysis Batch: 413963

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	0.0892	J	mg/L		89	50 - 150

Lab Sample ID: 440-186773-G-1 MS
Matrix: Water
Analysis Batch: 413963

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	3.1		5.00	7.87		mg/L		95	80 - 120

Method: SM 5310C - TOC (Continued)

Lab Sample ID: 440-186773-G-1 MSD
Matrix: Water
Analysis Batch: 413963

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	3.1		5.00	9.03		mg/L		118	80 - 120	14	20

GC/MS VOA

Analysis Batch: 412554

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186557-1	MW-2A	Total/NA	Water	8260B	
440-186557-2	MW-2B	Total/NA	Water	8260B	
440-186557-3	DW-4	Total/NA	Water	8260B	
440-186557-4	QCAB	Total/NA	Water	8260B	
440-186557-5	QCTB	Total/NA	Water	8260B	
MB 440-412554/4	Method Blank	Total/NA	Water	8260B	
LCS 440-412554/6	Lab Control Sample	Total/NA	Water	8260B	
440-186557-1 MS	MW-2A	Total/NA	Water	8260B	
440-186557-1 MSD	MW-2A	Total/NA	Water	8260B	

Analysis Batch: 412938

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186557-1	MW-2A	Total/NA	Water	8260B	
440-186557-2	MW-2B	Total/NA	Water	8260B	
440-186557-3	DW-4	Total/NA	Water	8260B	
440-186557-4	QCAB	Total/NA	Water	8260B	
440-186557-5	QCTB	Total/NA	Water	8260B	
MB 440-412938/4	Method Blank	Total/NA	Water	8260B	
LCS 440-412938/5	Lab Control Sample	Total/NA	Water	8260B	
440-186462-A-1 MS	Matrix Spike	Total/NA	Water	8260B	
440-186462-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

Analysis Batch: 413193

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186557-1 - RA	MW-2A	Total/NA	Water	8260B	
440-186557-2 - RA	MW-2B	Total/NA	Water	8260B	
440-186557-3 - RA	DW-4	Total/NA	Water	8260B	
440-186557-4 - RA	QCAB	Total/NA	Water	8260B	
440-186557-5 - RA	QCTB	Total/NA	Water	8260B	
MB 440-413193/4	Method Blank	Total/NA	Water	8260B	
LCS 440-413193/5	Lab Control Sample	Total/NA	Water	8260B	
440-186816-A-5 MS	Matrix Spike	Total/NA	Water	8260B	
440-186816-A-5 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 413268

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186557-1	MW-2A	Total/NA	Water	3520C	
440-186557-2	MW-2B	Total/NA	Water	3520C	
440-186557-3	DW-4	Total/NA	Water	3520C	
MB 440-413268/1-A	Method Blank	Total/NA	Water	3520C	
LCS 440-413268/3-A	Lab Control Sample	Total/NA	Water	3520C	
440-186930-F-9-A MS	Matrix Spike	Total/NA	Water	3520C	
440-186930-F-9-B MSD	Matrix Spike Duplicate	Total/NA	Water	3520C	

Analysis Batch: 413623

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186557-1	MW-2A	Total/NA	Water	8270C	413268
440-186557-2	MW-2B	Total/NA	Water	8270C	413268

GC/MS Semi VOA (Continued)

Analysis Batch: 413623 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186557-3	DW-4	Total/NA	Water	8270C	413268
MB 440-413268/1-A	Method Blank	Total/NA	Water	8270C	413268
LCS 440-413268/3-A	Lab Control Sample	Total/NA	Water	8270C	413268
440-186930-F-9-A MS	Matrix Spike	Total/NA	Water	8270C	413268
440-186930-F-9-B MSD	Matrix Spike Duplicate	Total/NA	Water	8270C	413268

HPLC/IC

Analysis Batch: 412181

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186557-1	MW-2A	Total/NA	Water	300.0	
440-186557-2	MW-2B	Total/NA	Water	300.0	
440-186557-3	DW-4	Total/NA	Water	300.0	
MB 440-412181/6	Method Blank	Total/NA	Water	300.0	
LCS 440-412181/4	Lab Control Sample	Total/NA	Water	300.0	
440-186547-D-2 MS	Matrix Spike	Total/NA	Water	300.0	
440-186547-D-2 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Analysis Batch: 412182

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186557-1	MW-2A	Total/NA	Water	300.0	
440-186557-1	MW-2A	Total/NA	Water	300.0	
440-186557-2	MW-2B	Total/NA	Water	300.0	
440-186557-2	MW-2B	Total/NA	Water	300.0	
440-186557-3	DW-4	Total/NA	Water	300.0	
440-186557-3	DW-4	Total/NA	Water	300.0	
MB 440-412182/6	Method Blank	Total/NA	Water	300.0	
LCS 440-412182/4	Lab Control Sample	Total/NA	Water	300.0	
440-186547-D-2 MS	Matrix Spike	Total/NA	Water	300.0	
440-186547-D-2 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0	

Metals

Prep Batch: 413639

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186557-1	MW-2A	Total Recoverable	Water	3005A	
440-186557-2	MW-2B	Total Recoverable	Water	3005A	
440-186557-3	DW-4	Total Recoverable	Water	3005A	
MB 440-413639/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 440-413639/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
440-186557-1 MS	MW-2A	Total Recoverable	Water	3005A	
440-186557-1 MSD	MW-2A	Total Recoverable	Water	3005A	

Analysis Batch: 413766

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186557-1	MW-2A	Total Recoverable	Water	6010B	413639
440-186557-2	MW-2B	Total Recoverable	Water	6010B	413639
440-186557-3	DW-4	Total Recoverable	Water	6010B	413639
MB 440-413639/1-A	Method Blank	Total Recoverable	Water	6010B	413639
LCS 440-413639/2-A	Lab Control Sample	Total Recoverable	Water	6010B	413639

Metals (Continued)

Analysis Batch: 413766 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186557-1 MS	MW-2A	Total Recoverable	Water	6010B	413639
440-186557-1 MSD	MW-2A	Total Recoverable	Water	6010B	413639

General Chemistry

Prep Batch: 412395

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186557-1	MW-2A	Total/NA	Water	SM 4500 NH3 B	
440-186557-2	MW-2B	Total/NA	Water	SM 4500 NH3 B	
440-186557-3	DW-4	Total/NA	Water	SM 4500 NH3 B	
MB 440-412395/2-A	Method Blank	Total/NA	Water	SM 4500 NH3 B	
LCS 440-412395/1-A	Lab Control Sample	Total/NA	Water	SM 4500 NH3 B	
440-186603-C-2-C MS	Matrix Spike	Total/NA	Water	SM 4500 NH3 B	
440-186603-C-2-D MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 NH3 B	
440-186542-D-2-C DU	Duplicate	Total/NA	Water	SM 4500 NH3 B	

Analysis Batch: 412396

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186557-1	MW-2A	Total/NA	Water	SM 4500 NH3 D	412395
440-186557-2	MW-2B	Total/NA	Water	SM 4500 NH3 D	412395
440-186557-3	DW-4	Total/NA	Water	SM 4500 NH3 D	412395
MB 440-412395/2-A	Method Blank	Total/NA	Water	SM 4500 NH3 D	412395
LCS 440-412395/1-A	Lab Control Sample	Total/NA	Water	SM 4500 NH3 D	412395
440-186603-C-2-C MS	Matrix Spike	Total/NA	Water	SM 4500 NH3 D	412395
440-186603-C-2-D MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 NH3 D	412395
440-186542-D-2-C DU	Duplicate	Total/NA	Water	SM 4500 NH3 D	412395

Analysis Batch: 412422

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186557-1	MW-2A	Total/NA	Water	SM 2320B	
440-186557-2	MW-2B	Total/NA	Water	SM 2320B	
440-186557-3	DW-4	Total/NA	Water	SM 2320B	
MB 440-412422/3	Method Blank	Total/NA	Water	SM 2320B	
LCS 440-412422/2	Lab Control Sample	Total/NA	Water	SM 2320B	
440-186622-J-1 DU	Duplicate	Total/NA	Water	SM 2320B	

Analysis Batch: 412523

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186557-1	MW-2A	Total/NA	Water	SM 4500 S2 D	
440-186557-2	MW-2B	Total/NA	Water	SM 4500 S2 D	
440-186557-3	DW-4	Total/NA	Water	SM 4500 S2 D	
MB 440-412523/3	Method Blank	Total/NA	Water	SM 4500 S2 D	
LCS 440-412523/4	Lab Control Sample	Total/NA	Water	SM 4500 S2 D	
LCSD 440-412523/5	Lab Control Sample Dup	Total/NA	Water	SM 4500 S2 D	
550-84392-A-1 MS	Matrix Spike	Total/NA	Water	SM 4500 S2 D	
550-84392-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 4500 S2 D	

Analysis Batch: 413195

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186557-1	MW-2A	Total/NA	Water	SM 4500 CO2 C	

General Chemistry (Continued)

Analysis Batch: 413195 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186557-2	MW-2B	Total/NA	Water	SM 4500 CO2 C	
440-186557-3	DW-4	Total/NA	Water	SM 4500 CO2 C	
MB 440-413195/1	Method Blank	Total/NA	Water	SM 4500 CO2 C	
440-186575-I-1 DU	Duplicate	Total/NA	Water	SM 4500 CO2 C	

Analysis Batch: 413553

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186557-1	MW-2A	Total/NA	Water	SM 2540C	
440-186557-2	MW-2B	Total/NA	Water	SM 2540C	
440-186557-3	DW-4	Total/NA	Water	SM 2540C	
MB 440-413553/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 440-413553/2	Lab Control Sample	Total/NA	Water	SM 2540C	
440-186557-1 DU	MW-2A	Total/NA	Water	SM 2540C	

Analysis Batch: 413680

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186557-1	MW-2A	Total/NA	Water	410.4	
440-186557-2	MW-2B	Total/NA	Water	410.4	
440-186557-3	DW-4	Total/NA	Water	410.4	
MB 440-413680/3	Method Blank	Total/NA	Water	410.4	
LCS 440-413680/4	Lab Control Sample	Total/NA	Water	410.4	
440-186950-A-1 MS	Matrix Spike	Total/NA	Water	410.4	
440-186950-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	410.4	
440-186950-A-1 DU	Duplicate	Total/NA	Water	410.4	

Analysis Batch: 413963

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-186557-1	MW-2A	Total/NA	Water	SM 5310C	
440-186557-2	MW-2B	Total/NA	Water	SM 5310C	
440-186557-3	DW-4	Total/NA	Water	SM 5310C	
MB 440-413963/6	Method Blank	Total/NA	Water	SM 5310C	
LCS 440-413963/5	Lab Control Sample	Total/NA	Water	SM 5310C	
MRL 440-413963/7	Lab Control Sample	Total/NA	Water	SM 5310C	
440-186773-G-1 MS	Matrix Spike	Total/NA	Water	SM 5310C	
440-186773-G-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 5310C	

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.

HPLC/IC

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.
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.
¤	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: 440-186557-1

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	06-30-17 *
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	CA015312017-3	07-31-17
New Mexico	State Program	6	N/A	01-29-17 *
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
17461 Derian Ave
Suite 100
Irvine, CA 92614
Phone: 949.261.1022 Fax:

Chain of Custody Record

141848

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TestAmerica Laboratories, Inc.
TAL-8210 (0713)

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

Client Contact	Project Manager: Kyle Welchons	Site Contact: P. Dickerson	Date: 6-15-17	COC No:
Company Name: Republic Geo-logic	Tel/Fax: 858-451-1136	Lab Contact: R. Tumova	Carrier: TA	1 of 1 COCs
Address: 11411 S.W. Bernardo Ct	Analysis Turnaround Time			Sampler: BS, MC
City/State/Zip: S. Diego, Ca. 92127	☐ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
Phone: 858-451-1136	TAT if different from Below _____			Walk-in Client:
Fax: 858-451-1087	☐ 2 weeks			Lab Sampling:
Project Name: Sunshine Cyn. Landfill	☐ 1 week			
Site: Sylmar, Ca.	☐ 2 days			Job / SDG No.:
PO# 4400785 1	☐ 1 day			8260 40 CFR part 258 Appdx. 1 VOCs Dichlorodifluoromethane MTBE, 1,4-Dioxane

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	8270 1,4-Dioxane	Total Alkalinity (as CaCO3)	Ammonia as N	COD (EPA 410.4)	Chloride, Bromide	Nitrate-N, Sulfate	Total B, Ca, Fe, Mg, Mn, K, Na	TDS (EPA 160.1)	TOC (EPA 415.1)	Benzene (340.2)	Sulfide (376.2)	SM-4500-Cl C - Carbon Dioxide	Sample Specific Notes:
MW-2A	6/15/17	1020	G	GW	13			X	X	X	X	X	X	X	X	X	X	X	X	X	
MW-2B		0855			13			X	X	X	X	X	X	X	X	X	X	X	X	X	
DW-4		0800			13			X	X	X	X	X	X	X	X	X	X	X	X	X	
QCAB		—			4			X													
QCTB		—			4			X													

Page 43 of 44

440-186557 Chain of Custody

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

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

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

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

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

Special Instructions/QC Requirements & Comments:

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

	Company	Date/Time		Company	Date/Time
Relinquished by:	GLA	6-15-17 1215	Received by:	TA	6/15/17 1215
Relinquished by:	TA	6/15/17 1815	Received by:		
Relinquished by:			Received in Laboratory by:	TA-I	6/15/17 1815

6/27/2017

6/21/17 1K-GC

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

Login Sample Receipt Checklist

Client: Geo-Logic Associates

Job Number: 440-186557-1

Login Number: 186557
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

Geo-Logic ASSOCIATES

RES Environmental Inc.

NEXT MONTH 2-14-17

SUNSHINE CANYON LANDFILL – CITY
PERIMETER PROBE MONITORING DATA

TECHNICIAN: Robert Johns
DATE: 1-31-17
TEMPERATURE: 71°
WEATHER CONDITIONS: Sunny/clear
INST & SERIAL #: Gem 5000 / 4500530

PROBE NUMBER	TIME	PPM CH_4	%VOL CH_4	PRES (+/-)	%CO2	%O2	%BAL	PURGE TIME (min)	COMMENTS
213									
A - 13	1125		0.0	+.06	0.1	19.6	80.3	2	
B - 29	1127		0.0	.0	1.5	9.6	88.8	2	
C - 45	1129		0.0	-.17	0.1	19.8	80.2	3	
D - 61	1132		0.0	-.23	0.1	19.8	80.1	4	
E - 77	1136		0.0	-2.89	0.1	19.8	80.1	4	
214									
A - 13	1115		0.0	+.09	3.0	12.3	84.7	2	
B - 30	1117		0.0	-2.03	0.3	18.6	81.1	2	
C - 48	1119		0.0	-2.46	0.3	15.6	81.3	3	
215									
A - 13	1100		0.0	+.04	5.1	11.1	83.8	2	
B - 30	1102		0.0	-.08	6.2	9.6	84.2	2	
C - 47	1104		0.0	-.44	0.1	19.3	80.6	3	
D - 64	1107		0.0	-.17	0.4	19.1	80.5	4	
E - 81	1111		0.0	+.26	3.9	9.8	86.3	4	
216									
A - 14	1040		0.0	+.06	2.9	13.7	83.4	2	
B - 43	1042		0.0	+.03	0.9	18.6	80.5	2	
C - 62	1044		0.0	+.06	4.6	11.1	84.3	3	
D - 86	1047		0.0	+.07	0.8	12.9	86.2	4	
E - 110	1051		0.0	+.12	1.8	16.2	82.0	4	
217									
A - 13	1035		0.0	+.03	4.6	15.0	80.3	2	
B - 30	1037		0.0	-.02	4.8	14.0	81.2	2	
218									
A 7.5	1020		0.0	+.09	23.4	0.1	76.5	2	
B	1022		0.0	-.03	32.0	1.6	66.4		
C	1024		0.0	+.91	45.7	0.5	53.8		

RES SIGNATURE: [signature]

LEA SIGNATURE: _____

RES Environmental Inc.

SUNSHINE CANYON LANDFILL – CITY
PERIMETER PROBE MONITORING DATA

TECHNICIAN: Robert Johns
DATE: 1-31-17
TEMPERATURE: 56°
WEATHER CONDITIONS: Sunny & Clear
INST & SERIAL #: Gem 5000 / G5005530

PROBE NUMBER	TIME	PPM CH_4	%VOL CH_4	PRES (+/-)	%CO2	%O2	%BAL	PURGE TIME (min)	COMMENTS
219									
A - 13	1000		0.0	+.03	0.5	19.7	79.9	2	
B - 64	1002		0.0	+.08	3.0	13.9	83.2	2	
C - 115	1004		0.0	-.12	0.1	20.1	79.8	3	
D - 166	1007		0.0	+.05	0.1	20.3	79.7	4	
E - 217	1011		0.0	+.03	0.3	20.0	79.7	4	
220									
A - 14	0940		0.0	+.03	2.1	17.1	80.8	2	
B - 40	0942		0.0	-.08	0.1	19.6	80.2	2	
C - 87	0944		0.0	-.0	0.1	20.2	79.7	3	
D - 124	0947		0.0	+.15	0.1	20.3	79.6	4	
E - 158	0951		0.0	-.11	1.1	19.4	79.6	4	
220B									
A - 14	0920		0.0	+.08	2.4	15.2	82.4	2	
B - 38	0922		0.0	+.05	0.2	19.4	80.4	2	
C - 62	0924		0.0	-.01	2.4	15.9	81.7	3	
D - 86	0927		0.0	-.08	3.6	12.9	83.5	4	
E - 110	0931		0.0	-.16	4.9	6.9	88.2	4	
221									
A - 13	0850		0.0	.10	2.0	19.6	78.4	2	
B - 56	0852		0.0	-.05	7.3	5.0	87.7	2	
C - 99	0854		0.0	-.10	6.4	8.8	84.8	3	
D - 142	0857		0.0	-.03	0.1	20.2	79.7	4	
E - 185	0901		0.0	-.24	1.4	17.3	81.2	4	
222									
A - 13	0905		0.0	+.03	2.4	17.4	80.2	2	
B - 54.8	0907		0.0	-.02	0.1	19.9	80.0	2	
C - 96.5	0909		0.0	+.04	0.7	19.3	80.1	3	
D - 138.3	0912		0.0	-.02	0.5	19.6	79.9	4	
E - 180	0915		0.0	-.02	1.2	9.4	89.4	4	

RES SIGNATURE: _____

LEA SIGNATURE: _____

RES Environmental Inc.

SUNSHINE CANYON LANDFILL – CITY
PERIMETER PROBE MONITORING DATA

TECHNICIAN: Robert Johns
DATE: 1-31-17
TEMPERATURE: 52°
WEATHER CONDITIONS: Sunny & Clear
INST & SERIAL #: Gem 5000 / GS05530

PROBE NUMBER	TIME	PPM CH_4	%VOL CH_4	PRES (+/-)	%CO2	%O2	%BAL	PURGE TIME	COMMENTS
223									
A - 13	0830		0.0	+.02	5.2	12.1	82.6	2	
B - 37.5	0832		0.0	-.21	3.7	10.5	85.6	2	
C - 62	0834		0.0	-.01	2.2	17.6	80.2	3	
D - 86.5	0837		0.0	+.01	1.6	17.2	81.2	4	
E - 111	0841		0.0	-.13	2.1	15.7	82.2	4	
224									
A - 13	0815		0.0	+.11	0.1	20.3	79.6	2	
B - 67.5	0817		0.0	-.01	0.1	20.5	79.4	2	
C - 122	0819		0.0	-.06	1.2	14.5	84.3	3	
D - 177.5	0822		0.0	-7.83	0.1	20.6	79.3	4	
E - 232	0826		0.0	-5.08	0.1	20.7	79.2	4	
225									
A - 13	0800		0.0	-.01	4.1	15.2	80.7	2	
B - 72	0802		0.0	-4.50	2.6	16.9	80.5	2	
C - 131	0804		0.0	-7.19	0.7	19.2	80.0	3	
D - 190	0807		0.0	-6.39	0.1	20.1	79.8	4	
E - 244	0811		0.0	-5.65	0.1	20.2	79.7	4	
226									
A - 13	0710		0.0	+.01	0.1	20.4	79.6	2	
B - 64	0712		0.0	-8.31	0.1	20.4	79.6	2	
C - 114	0714		0.0	-6.71	0.1	20.4	79.5	3	
D - 164	0717		0.0	-7.74	0.1	20.4	79.5	4	
E - 208	0721		0.0	-7.11	0.1	20.4	79.5	4	
227									
A - 13	0725		0.0	-.06	0.1	20.2	79.7	2	
B - 48.7	0727		0.0	+.36	4.7	2.8	92.5	2	
C - 84.4	0729		0.0	+.03	4.9	2.8	92.3	3	
D - 114	0732		0.1	-.04	0.8	17.4	81.7	4	
E - 115.7	0736		0.0	-.15	0.2	19.6	80.1	4	

RES SIGNATURE: _____

LEA SIGNATURE: _____

RES Environmental Inc.

SUNSHINE CANYON LANDFILL – CITY
PERIMETER PROBE MONITORING DATA

TECHNICIAN: Robert Johns
DATE: 1-31-17
TEMPERATURE: 52°
WEATHER CONDITIONS: Sunny & Clear
INST & SERIAL #: Gem 5000 / G500530

PROBE NUMBER	TIME	PPM CH_4	%VOL CH_4	PRES (+/-)	%CO2	%O2	%BAL	PURGE TIME	COMMENTS
228									
A - 13	0740		0.0	1.07	0.6	19.0	80.4	2	
B - 63	0742		0.0	1.84	1.0	16.0	81.0	2	
C - 113	0744		0.0	1.37	4.2	1.9	94.0	3	
D - 163	0747		0.0	-.15	1.3	15.9	82.8	4	
E - 213	0751		0.0	10	0.9	19.1	80.0	4	
229									
A - 13	0655		0.0	-1.11	1.0	18.9	80.1	2	
B - 48.7	0657		0.0	-10.17	0.2	20.3	79.6	2	
C - 84.4	0659		0.0	-10.76	0.1	20.2	79.7	3	
D - 114	0702		0.0	-11.61	0.1	20.2	79.7	4	
E - 155.7	0706		0.0	-16.54	0.1	20.2	79.7	4	
230									Removed Due to Construction
A - 16								2	
B - 33								2	
C - 50								3	
231									Removed Due to Construction
A - 13								2	
B - 26								2	
C - 39								3	
D - 51								4	
E - 66								4	
241									
A - 13	1145		0.0	-2.00	0.0	19.8	80.1	2	
B - 28	1147		0.0	-20.94	0.0	19.8	80.2	2	
C - 47	1149		0.0	-3.49	0.0	19.8	80.2	3	
D - 64	1152		0.0	-25.36	0.0	19.7	80.2	4	
E - 85	1156		0.0	-18.90	0.0	19.8	80.2	4	

RES SIGNATURE: _____

LEA SIGNATURE: _____

RES Environmental Inc.

GAS MONITORING EQUIPMENT CALIBRATION

DATE	UNIT	SERIAL #	CAL GAS
1-31-17	GEM 5000	G500530	15% CH4
1-31-17	TVA 1000B	1030945322	500ppm CH4

SIGNATURE: _____

865 Via Lata ▪ Colton, California 92324 ▪ (909) 422-1001 Fax (909) 422-0707

RES Environmental Inc.

NEXT MONTH 2-16-17

SUNSHINE CANYON – COUNTY
PERIMETER PROBE MONITORING DATA

TECHNICIAN: Robert Johns
DATE: 1-26-17
TEMPERATURE: 35-6
WEATHER CONDITIONS: Sunny & Clear
INST & SERIAL #: Gem 5000 / GA500520

PROBE NUMBER	TIME	PPM CH_4	%VOL CH_4	PRES (+/-)	% CO_2	%O2	%BAL	PURGE TIME (min)	COMMENTS
202									Removed Due
A - 10								2	to construction
B - 25								2	
C - 38								3	
203									
A – 10	1010		0.0	+.05	2.7	18.4	78.9	2	
B – 25	1012		0.0	+.04	2.3	18.9	78.8	2	
C – 40	1014		0.0	+.17	1.3	19.8	78.9	3	
206									
A – 10	0840		0.0	+.02	7.9	13.3	78.8	2	
B – 25	0842		0.0	+.02	10.2	11.0	78.8	2	
C – 38	0844		0.0	+.05	15.7	9.1	75.2	3	
207									
A – 10	0820		0.0	-1.61	0.1	20.8	79.1	2	
B – 25	0822		0.2	-.06	0.4	20.5	78.9	2	
C – 40	0824		0.0	+.04	0.1	20.8	79.1	3	
208									
A – 9.1	0807		0.0	.0	0.2	20.6	79.2	2	
B – 25	0809		0.0	-.01	0.3	20.7	79.0	2	
C – 40	0811		0.0	-.02	0.1	20.9	79.0	3	
210									
A – 10	0735		0.0	-.79	0.2	21.1	78.7	2	
B – 25	0737		0.0	-.86	0.3	21.1	78.6	2	
C – 39	0740		0.0	-.04	0.2	21.0	78.8	3	

RES SIGNATURE:

LEA SIGNATURE:

RES Environmental Inc.

SUNSHINE CANYON – COUNTY
PERIMETER PROBE MONITORING DATA

TECHNICIAN: Robert Johns
DATE: 1-26-17
TEMPERATURE: 35°
WEATHER CONDITIONS: Sunny & Clear
INST & SERIAL #: Gem 5000 / G500530

PROBE NUMBER	TIME	PPM CH_4	%VOL CH_4	PRES (+/-)	%CO2	%O2	%BAL	PURGE TIME	COMMENTS
VADOSE ZONE									
203D	0950		0.0	-19.11	0.1	20.6	79.3	2	
204D	0830		0.0	-13.03	0.1	20.8	79.1	2	
211D	1000		0.0	-13.76	0.2	20.5	79.3	2	

PROBE NUMBER	TIME	PPM CH_4	%VOL CH_4						COMMENTS

RES SIGNATURE: _____

LEA SIGNATURE: _____

RES Environmental Inc.

SUNSHINE CANYON – COUNTY
PERIMETER PROBE MONITORING DATA

TECHNICIAN: Robert Johns
DATE: 1-26-17
TEMPERATURE: 35°
WEATHER CONDITIONS: Sunny 10 Clear
INST & SERIAL #: Gem 5000 / GH500530

PROBE NUMBER	TIME	PPM CH_4	%VOL CH_4	PRES (+/-)	% CO_2	%O2	%BAL	PURGE TIME (min)	COMMENTS
242									
C - 42	0750		0.0	-.03	3.0	17.2	79.8	3	
D - 60	0753		0.0	+.03	7.0	0.7	92.3	4	
E - 78	0757		0.0	.0	5.0	14.2	80.8	4	
243									
A - 11	0906		0.0	-.01	1.7	17.3	81.1	2	
B - 20	0908		0.0	+.27	12.3	5.8	81.9	2	
C - 33	0910		0.0	+.34	2.3	19.2	78.6	3	
244									
A - 11	0802		0.0	-.14	8.5	12.5	79.1	2	
B - 21	0804		0.0	-.02	5.3	16.6	78.1	2	
C - 36	0806		0.0	+.30	17.5	7.8	74.7	3	
245									
A - 11	0930		0.0	-.03	11.0	6.4	82.6	2	
B - 20	0932		0.0	.0	0.2	18.7	81.0	2	
C - 35	0934		0.0	+.01	9.9	12.6	77.5	3	
D - 50	0937		0.0	+.07	5.1	16.2	78.7	4	
E - 64	0941		0.0	-1.09	0.1	20.6	79.2	4	
246									Removed Due
A - 9								2	to Construction
B - 16								2	
205R									
A - 11	0850		0.0	-.02	6.3	10.2	83.5	2	
B - 20	0852		0.3	-.16	24.4	5.2	70.1	2	
C - 33	0854		1.4	-.30	40.9	0.2	57.5	3	
D - 48	0857		2.1	-.12	45.0	0.0	52.9	4	
E - 62	0901		0.6	-.50	32.8	0.0	66.6	4	

RES SIGNATURE:

LEA SIGNATURE:

RES Environmental Inc.

SUNSHINE CANYON – COUNTY
PERIMETER PROBE MONITORING DATA

TECHNICIAN: Robert Johns
DATE: 1-26-17
TEMPERATURE: 35°
WEATHER CONDITIONS: Sunny/Clear
INST & SERIAL #: Gem 5000 / G5205380

PROBE NUMBER	TIME	PPM CH_4	%VOL CH_4	PRES (+/-)	%CO2	%O2	%BAL	PURGE TIME (min)	COMMENTS
239									
A – 11	0719		0.0	+.01	6.0	15.6	78.4	2	
B – 20	0721		0.0	-.05	0.1	21.0	78.8	2	
C – 35	0723		0.0	+.05	0.1	21.2	78.7	3	
D – 50	0726		0.0	-.02	0.1	21.2	78.7	4	
E – 64	0730		0.0	.0	0.1	21.3	78.6	4	
240									
A –11	0700		0.0	-.05	0.1	20.5	79.4	2	
B – 20	0702		0.0	.0	0.4	20.3	79.3	2	
C – 33	0704		0.0	-.01	0.1	20.5	79.4	3	
D – 49	0707		0.0	-.02	0.2	20.5	79.3	4	
E – 61	0711		0.3	.0	0.1	20.7	78.8	4	

RES SIGNATURE: _____

LEA SIGNATURE: _____

RES Environmental Inc.

GAS MONITORING EQUIPMENT CALIBRATION

DATE	UNIT	SERIAL #	CAL GAS
1-26-17	Gem 5000	G520530	15 %CH4
1-26-17	TVA 1000B	1030945322	500ppm

SIGNATURE: _____

865 Via Lata • Colton, California 92324 • (909) 422-1001 Fax (909) 422-0707

RES Environmental Inc.

NEXT MONTH 3-21-17

SUNSHINE CANYON LANDFILL – CITY
PERIMETER PROBE MONITORING DATA

TECHNICIAN: Robert Johns
DATE: 2-21-17
TEMPERATURE: 47°
WEATHER CONDITIONS: Over cast
INST & SERIAL #: GEM 5000 / G5005530

PROBE NUMBER	TIME	PPM CH_4	%VOL CH_4	PRES (+/-)	%CO2	%O2	%BAL	PURGE TIME (min)	COMMENTS
213									
A - 13	1040		0.0	-.03	0.1	20.6	79.3	2	
B - 29	1042		0.0	-.30	0.1	20.7	79.3	2	
C - 45	1044		0.0	-1.85	0.1	20.7	79.3	3	
D - 61	1047		0.0	-1.82	0.1	20.6	79.3	4	
E - 77	1051		0.0	-6.05	0.1	20.6	79.3	4	
214									
A - 13	1056		0.0	+.98	1.4	17.8	80.8	2	
B - 30	1058		0.0	-5.06	0.3	19.9	79.9	2	
C - 48	1100		0.0	-4.73	1.6	20.1	78.3	3	
215									
A - 13	1110		0.0	-.39	4.5	10.7	84.9	2	
B - 30	1112		0.0	-.75	6.7	11.0	82.5	2	
C - 47	1114		0.0	-.84	0.2	17.8	82.0	3	
D - 64	1117		0.0	-.00	1.2	18.4	80.3	4	
E - 81	1121		0.0	-.13	5.7	8.7	85.6	4	
216									
A - 14	1130		0.0	+.02	0.1	20.8	79.1	2	
B - 43	1132		0.0	+.01	0.1	20.9	79.1	2	
C - 62	1134		0.0	-.09	0.1	20.9	79.0	3	
D - 86	1137		0.0	-.00	0.1	20.9	79.0	4	
E - 110	1141		0.0	+.07	0.1	20.9	79.0	4	
217									
A - 13	1030		0.0	-.61	6.7	12.0	81.3	2	
B - 30	1032		0.0	-.65	5.7	11.7	82.6	2	
218									
7.5	1017		0.0	-3.83	0.2	20.6	79.2	2	
	1019		8.0	+13.01	23.0	0.4	76.6		
	1021		0.0	+1.09	23.9	0.0	76.1		

RES SIGNATURE: _____

LEA SIGNATURE: _____

RES Environmental Inc.

SUNSHINE CANYON LANDFILL – CITY
PERIMETER PROBE MONITORING DATA

TECHNICIAN: Robert Johns
DATE: 2-21-17
TEMPERATURE: 47°
WEATHER CONDITIONS: Overcast
INST & SERIAL #: GEM 5000 / GA00530

PROBE NUMBER	TIME	PPM CH_4	%VOL CH_4	PRES (+/-)	%CO2	%O2	%BAL	PURGE TIME (min)	COMMENTS
219									
A - 13	0955		0.0	+.01	0.1	20.7	79.2	2	
B - 64	0957		0.0	+.01	0.1	20.7	79.2	2	
C - 115	0959		0.0	+.02	0.2	20.7	79.2	3	
D - 166	1002		0.0	+.03	0.1	20.7	79.3	4	
E - 217	1006		0.0	+.02	0.1	20.7	79.2	4	
220									
A - 14	0930		0.0	+.03	0.1	20.5	79.3	2	
B - 40	0932		0.0	-.22	0.1	20.6	79.3	2	
C - 87	0934		0.0	-.06	0.1	20.6	79.3	3	
D - 124	0937		0.0	.10	0.1	20.7	79.3	4	
E - 158	0941		0.0	-.14	0.1	20.7	79.3	4	
220B									
A - 14	0915		0.0	+.03	0.1	20.7	79.2	2	
B - 38	0917		0.0	+.17	0.1	20.7	79.2	2	
C - 62	0919		0.0	-.03	3.3	15.0	81.7	3	
D - 86	0922		0.0	+.02	3.9	12.4	83.6	4	
E - 110	0926		0.0	-.27	3.5	13.3	83.3	4	
221									
A - 13	0835		0.0	+.01	2.1	16.5	81.4	2	
B - 56	0840		0.0	-.14	0.1	20.6	79.3	2	
C - 99	0842		0.0	-.27	2.2	17.3	80.5	3	
D - 142	0845		0.0	-.12	0.0	20.7	79.2	4	
E - 185	0849		0.0	-.05	0.2	20.6	79.2	4	
222									
A - 13	0854		0.0	-.03	0.2	20.6	79.1	2	
B - 54.8	0856		0.0	-.02	0.1	20.4	79.1	2	
C - 96.5	0858		0.0	+.05	0.5	20.5	79.0	3	
D - 138.3	0901		0.0	-.06	1.2	19.8	79.1	4	
E - 180	0905		0.0	-.08	0.1	20.8	79.2	4	

RES SIGNATURE: _____

LEA SIGNATURE: _____

RES Environmental Inc.

SUNSHINE CANYON LANDFILL – CITY
PERIMETER PROBE MONITORING DATA

TECHNICIAN: Robert Johns
DATE: 2-21-17
TEMPERATURE: 47°
WEATHER CONDITIONS: Clear cast
INST & SERIAL #: GEM 5000 / G5C0530

PROBE NUMBER	TIME	PPM CH_4	%VOL CH_4	PRES (+/-)	%CO2	%O2	%BAL	PURGE TIME	COMMENTS
223									
A - 13	0821		0.0	-.70	0.1	21.0	79.0	2	
B - 37.5	0823		0.0	-.68	2.8	15.7	81.6	2	
C - 62	0825		0.0	-.02	3.2	14.3	82.4	3	
D - 86.5	0828		0.0	5.01	1.7	17.5	80.8	4	
E - 111	0834		0.0	-.02	2.5	16.2	81.4	4	
224									
A - 13	0806		0.0	-.03	0.1	20.9	79.0	2	
B - 67.5	0805		0.0	+.08	0.1	20.9	79.0	2	
C - 122	0810		0.0	-.06	0.1	20.9	79.0	3	
D - 177.5	0813		0.0	-15.16	0.1	20.9	79.0	4	
E - 232	0817		0.0	-12.75	0.1	21.0	79.0	4	
225									
A - 13	0750		0.0	-.03	4.5	15.4	80.1	2	
B - 72	0752		0.0	-7.13	2.5	18.0	79.5	2	
C - 131	0754		0.0	-15.65	0.1	20.6	79.3	3	
D - 190	0757		0.0	-15.07	0.1	20.9	79.0	4	
E - 244	0801		0.0	-13.44	0.1	20.9	79.9	4	
226									
A - 13	0646		0.0	-.03	0.1	20.4	79.5	2	
B - 64	0648		0.0	-13.21	0.1	20.4	79.5	2	
C - 114	0650		0.0	-14.31	0.1	20.6	79.3	3	
D - 164	0653		0.0	-14.56	0.1	20.7	79.2	4	
E - 208	0657		0.0	-15.51	0.1	20.7	79.2	4	
227									
A - 13	0710		0.0	-.02	0.8	19.2	80.0	2	
B - 48.7	0712		0.0	-.04	0.1	20.8	79.2	2	
C - 84.4	0714		0.0	-.18	0.1	20.8	79.1	3	
D - 114	0717		0.0	-2.66	0.1	20.8	79.1	4	
E - 115.7	0724		0.0	-2.50	0.1	20.8	79.1	4	

RES SIGNATURE: _____

LEA SIGNATURE: _____

RES Environmental Inc.

SUNSHINE CANYON LANDFILL – CITY
PERIMETER PROBE MONITORING DATA

TECHNICIAN: Robin Johns
DATE: 2-21-17
TEMPERATURE: 47°
WEATHER CONDITIONS: Overcast
INST & SERIAL #: GEM 5000 / G-SW530

PROBE NUMBER	TIME	PPM CH_4	%VOL CH_4	PRES (+/-)	%CO2	%O2	%BAL	PURGE TIME	COMMENTS
228									
A - 13	0726		0.0	.0	0.1	20.8	79.1	2	
B - 63	0728		0.0	-2.98	0.3	20.5	79.2	2	
C - 113	0730		0.0	-2.00	0.1	20.9	79.0	3	
D - 163	0733		0.0	-3.07	1.0	20.1	79.0	4	
E - 213	0737		0.0	-2.60	0.1	20.9	79.0	4	
229									
A - 13	0630		0.0	-1.90	0.1	20.2	79.7	2	
B - 48.7	0632		0.0	-18.76	0.1	20.2	79.8	2	
C - 84.4	0634		0.0	-19.32	0.1	20.1	79.8	3	
D - 114	0637		0.0	-20.96	0.1	20.1	79.8	4	
E - 155.7	0641		0.0	-24.07	0.1	20.1	79.7	4	
230									Removed Due to Construction
A - 16								2	
B - 33								2	
C - 50								3	
231									Removed Due to Construction
A - 13								2	
B - 26								2	
C - 39								3	
D - 51								4	
E - 66								4	
241									
A - 13	1150		0.0	-2.67	0.1	20.7	79.2	2	
B - 28	1152		0.0	-22.43	0.1	20.6	79.3	2	
C - 47	1154		0.0	1.05	0.1	20.7	79.5	3	
D - 64	1157		0.0	-26.97	0.1	20.6	79.3	4	
E - 85	1201		0.0	-20.13	0.1	20.6	79.3	4	

RES SIGNATURE: _____

LEA SIGNATURE: _____

RES Environmental Inc.

GAS MONITORING EQUIPMENT CALIBRATION

DATE	UNIT	SERIAL #	CAL GAS
2-21-17	GEM 5000	G500530	15% CH4

SIGNATURE: _____

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RES Environmental Inc.

NEXT MONTH 3-23-17

SUNSHINE CANYON – COUNTY
PERIMETER PROBE MONITORING DATA

TECHNICIAN: Robert Johns
DATE: 2-23-17
TEMPERATURE: 35°
WEATHER CONDITIONS: Sunny & Clear
INST & SERIAL #: GEM 5000 / G5C0530

PROBE NUMBER	TIME	PPM CH_4	%VOL CH_4	PRES (+/-)	% CO_2	%O2	%BAL	PURGE TIME (min)	COMMENTS
202									Removed due to construction
A - 10								2	
B - 25								2	
C - 38								3	
203									
A – 10	1020		0.0	+.01	3.7	17.3	79.0	2	
B – 25	1022		0.0	+.02	2.2	18.7	79.1	2	
C – 40	1024		0.0	+.03	1.5	19.6	78.9	3	
206									
A – 10	0850		0.0	+.03	5.8	12.1	79.0	2	
B – 25	0852		0.0	-.01	12.6	8.3	78.9	2	
C – 38	0854		0.0	.0	16.7	5.1	75.3	3	
207									
A – 10	0830		0.0	+.03	2.2	18.7	79.1	2	
B – 25	0832		0.6	-6.35	0.9	19.0	79.5	2	
C – 40	0834		0.0	+.25	0.2	20.2	79.6	3	
208									
A – 9.1	0820		0.0	-.02	0.1	20.4	79.5	2	
B – 25	0822		0.0	-.01	0.1	20.6	79.2	2	
C – 40	0824		0.0	+.59	0.1	20.6	79.3	3	
210									
A – 10	0710		0.0	-.78	0.2	21.3	78.5	2	
B – 25	0712		0.0	-.82	0.4	21.2	78.4	2	
C – 39	0714		0.0	-.37	0.5	20.8	78.6	3	

RES SIGNATURE: [signature]

LEA SIGNATURE: [signature]

RES Environmental Inc.

SUNSHINE CANYON – COUNTY
PERIMETER PROBE MONITORING DATA

TECHNICIAN: Robert Johns
DATE: 2-23-17
TEMPERATURE: 38°
WEATHER CONDITIONS: Sunny & Clear
INST & SERIAL #: GEM 5000 / G500530

PROBE NUMBER	TIME	PPM CH_4	%VOL CH_4	PRES (+/-)	% CO2	%O2	%BAL	PURGE TIME (min)	COMMENTS
242									
C - 42	0730		0.0	-.01	3.4	15.6	80.9	3	
D - 60	0733		0.0	-.03	7.0	0.0	92.9	4	
E - 78	0737		0.0	-.02	4.3	13.6	82.1	4	
243									
A - 11	0940		0.0	-.00	2.8	12.7	84.5	2	
B - 20	0942		0.0	+.05	3.5	12.8	83.7	2	
C - 33	0944		0.0	+.04	2.2	19.2	78.7	3	
244									
A - 11	0800		0.1	+.05	17.9	0.0	82.0	2	
B - 21	0803		0.2	-.09	12.6	7.4	79.8	2	
C - 36	0804		0.0	-.01	6.5	16.6	76.9	3	
245									
A - 11	0950		0.0	-.01	5.6	18.7	75.7	2	
B - 20	0952		0.0	-.02	23.1	5.2	71.6	2	
C - 35	0954		0.0	+.13	10.7	11.7	77.6	3	
D - 50	0957		0.0	+.36	10.3	11.9	77.9	4	
E - 64	1001		0.0	+.02	0.2	20.5	79.5	4	
246									Removed due
A - 9								2	to Construction
B - 16								2	
205R									
A - 11	0900		0.0	-.06	5.5	8.9	85.7	2	
B - 20	0902		0.3	+.23	22.2	7.4	70.1	2	
C - 33	0904		1.2	+.04	40.4	0.0	58.4	3	
D - 48	0907		2.1	-.03	45.1	0.0	52.8	4	
E - 62	0910		0.0	-.06	34.3	0.0	65.0	4	

RES SIGNATURE: [signature]

LEA SIGNATURE: [signature]

RES Environmental Inc.

SUNSHINE CANYON – COUNTY
PERIMETER PROBE MONITORING DATA

TECHNICIAN: Robert Johns
DATE: 2-23-17
TEMPERATURE: 38°
WEATHER CONDITIONS: Sunny Clear
INST & SERIAL #: GEM 5000 / G520530

PROBE NUMBER	TIME	PPM CH_4	%VOL CH_4	PRES (+/-)	%CO2	%O2	%BAL	PURGE TIME (min)	COMMENTS
239									
A – 11	0646		0.0	-.07	10.5	11.1	78.4	2	
B – 20	0648		0.0	-.03	0.1	21.7	78.2	2	
C – 35	0650		0.0	-.06	0.1	21.7	78.2	3	
D – 50	0653		0.0	-.06	0.1	21.5	78.1	4	
E – 64	0657		0.0	-.07	0.1	21.8	78.1	4	
240									
A – 11	0630		0.0	-.01	10.6	11.8	77.6	2	
B – 20	0632		0.0	-.10	0.1	20.6	79.2	2	
C – 33	0634		0.0	-.05	0.1	20.8	79.1	3	
D – 49	0637		0.0	-.04	0.1	21.1	78.8	4	
E – 61	0641		0.8	-.16	0.1	21.3	77.5	4	

RES SIGNATURE: _____

LEA SIGNATURE: _____

RES Environmental Inc.

SUNSHINE CANYON – COUNTY
PERIMETER PROBE MONITORING DATA

TECHNICIAN: Robert Johns
DATE: 2-23-17

TEMPERATURE: 38°
WEATHER CONDITIONS: Sunny Clear
INST & SERIAL #: GEM 5000 / G500530

PROBE NUMBER	TIME	PPM CH_4	%VOL CH_4	PRES (+/-)	%CO2	%O2	%BAL	PURGE TIME	COMMENTS
VADOSE ZONE									
203D	1007		0.0	-23.66	0.1	20.7	79.2	2	
204D	0840		0.0	-22.35	0.1	20.6	79.3	2	
211D	1012		0.0	-20.66	0.1	20.7	79.2	2	

PROBE NUMBER	TIME	PPM CH_4	%VOL CH_4						COMMENTS

RES SIGNATURE: [signature]

LEA SIGNATURE: [signature]

RES Environmental Inc.

GAS MONITORING EQUIPMENT CALIBRATION

DATE	UNIT	SERIAL #	CAL GAS
2-21-17	TVA 1000B	1030945322	500 ppm CH4
2-23-17	TVA 1000B	1030945322	500 ppm CH4
2-23-17	GEM 5000	G500530	15 % CH4

SIGNATURE: _____

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RES Environmental Inc.

NEXT MONTH 4-18-17

SUNSHINE CANYON LANDFILL – CITY
PERIMETER PROBE MONITORING DATA

TECHNICIAN: Robert Johns
DATE: 3-16-17
TEMPERATURE: 74°
WEATHER CONDITIONS: Sunny & clear
INST & SERIAL #: GEM 5000 / GS10530

PROBE NUMBER	TIME	PPM CH_4	%VOL CH_4	PRES (+/-)	%CO2	%O2	%BAL	PURGE TIME (min)	COMMENTS
213									
A - 13	1158		0.0	+.11	0.0	20.0	80.0	2	
B - 29	1200		0.0	+.05	0.0	20.0	79.9	2	
C - 45	1202		0.0	-.21	0.0	20.1	79.8	3	
D - 61	1205		0.0	-.21	0.0	20.0	79.9	4	
E - 77	1209		0.0	-16.64	0.0	20.0	80.0	4	
214									
A - 13	1151		0.0	+.06	6.4	12.5	81.1	2	
B - 30	1153		0.0	-5.35	0.1	19.5	80.4	2	
C - 48	1155		0.0	-5.72	0.0	19.7	80.2	3	
215									
A - 13	1136		0.0	+.08	5.4	6.9	87.7	2	
B - 30	1138		0.0	+.05	6.1	9.6	84.3	2	
C - 47	1140		0.0	+.11	0.1	19.0	80.9	3	
D - 64	1143		0.0	+.06	0.2	19.2	80.6	4	
E - 81	1147		0.0	+.12	6.0	9.9	84.1	4	
216									
A - 14	1117		0.0	+.06	0.1	19.9	80.1	2	
B - 43	1119		0.0	+.05	0.1	19.9	80.0	2	
C - 62	1121		0.0	+.02	0.0	20.0	80.0	3	
D - 86	1124		0.0	+.04	0.0	20.0	79.9	4	
E - 110	1128		0.0	+.09	0.0	20.0	80.0	4	
217									
A - 13	1045		0.0	+.09	5.1	12.6	82.3	2	
B - 30	1047		0.0	+.03	7.3	6.5	86.2	2	
218									
7.5	1030		0.0	+.06	13.0	18.8	68.2	2	
	1032		0.0	+.06	11.3	9.6	79.2		
	1034		0.0	+.47	21.6	0.7	77.7		

RES SIGNATURE: [signature]

LEA SIGNATURE: [signature]

RES Environmental Inc.

SUNSHINE CANYON LANDFILL – CITY
PERIMETER PROBE MONITORING DATA

TECHNICIAN: Robert Johns
DATE: 3-16-17
TEMPERATURE: 74°
WEATHER CONDITIONS: Sunny & Clear
INST & SERIAL #: GEM 5000 GSW530

PROBE NUMBER	TIME	PPM CH_4	%VOL CH_4	PRES (+/-)	%CO2	%O2	%BAL	PURGE TIME (min)	COMMENTS
219									
A - 13	1020		0.0	+.12	0.9	19.3	79.8	2	
B - 64	1023		0.0	+.03	5.0	7.9	87.1	2	
C - 115	1024		0.0	-.20	0.4	19.2	80.4	3	
D - 166	1027		0.0	-.01	0.1	20.3	79.7	4	
E - 217	1011		0.0	+.07	1.1	18.3	80.5	4	
220									
A - 14	0950		0.0	+.02	2.2	17.5	80.2	2	
B - 40	0952		0.0	-.06	0.1	20.4	79.5	2	
C - 87	0954		0.0	-.11	0.2	20.3	79.5	3	
D - 124	0957		0.0	-.07	0.1	20.6	79.4	4	
E - 158	1001		0.0	+.07	0.1	20.6	79.3	4	
220B									
A - 14	0925		0.0	.0	3.3	14.9	81.8	2	
B - 38	0927		0.0	+.03	0.1	20.1	79.9	2	
C - 62	0929		0.0	-.18	3.4	13.1	83.5	3	
D - 86	0932		0.0	+.06	3.7	12.7	83.6	4	
E - 110	0936		0.0	+.06	4.3	11.4	84.3	4	
221									
A - 13	0845		0.0	-.01	0.2	20.2	79.7	2	
B - 56	0847		0.0	+.10	0.1	20.3	79.7	2	
C - 99	0849		0.0	.0	1.5	19.2	79.3	3	
D - 142	0852		0.0	-.02	0.1	20.2	79.7	4	
E - 185	0856		0.0	+.02	0.1	20.2	79.7	4	
222									
A - 13	0902		0.0	-.02	1.2	19.1	79.7	2	
B - 54.8	0904		0.0	.0	0.0	20.0	79.9	2	
C - 96.5	0906		0.0	+.04	0.1	19.9	80.0	3	
D - 138.3	0909		0.0	+.01	0.3	19.8	79.9	4	
E - 180	0913		0.0	-.02	0.0	20.0	79.9	4	

RES SIGNATURE: [signature]

LEA SIGNATURE: [signature]

RES Environmental Inc.

SUNSHINE CANYON LANDFILL – CITY
PERIMETER PROBE MONITORING DATA

TECHNICIAN: Robert Ulus
DATE: 3-16-17
TEMPERATURE: 74°
WEATHER CONDITIONS: Sunny & Clear
INST & SERIAL #: GEM 5000/Q520530

PROBE NUMBER	TIME	PPM CH_4	%VOL CH_4	PRES (+/-)	%CO2	%O2	%BAL	PURGE TIME	COMMENTS
223									
A - 13	0825		0.0	-.01	6.2	10.3	83.5	2	
B - 37.5	0827		0.0	-.02	11.1	6.2	82.7	2	
C - 62	0829		0.0	+.04	1.0	18.9	80.1	3	
D - 86.5	0832		0.0	-.01	2.8	16.3	81.0	4	
E - 111	0836		0.0	+.12	2.6	16.3	81.1	4	
224									
A - 13	0810		0.0	-.03	0.1	20.7	79.3	2	
B - 67.5	0812		0.0	-.05	0.1	20.7	79.2	2	
C - 122	0814		0.0	+.03	0.1	20.7	79.2	3	
D - 177.5	0817		0.0	-11.38	0.1	20.7	79.2	4	
E - 232	0821		0.0	-8.45	0.1	20.7	79.2	4	
225									
A - 13	0750		0.0	-.14	2.9	17.9	79.2	2	
B - 72	0752		0.0	-7.16	1.2	19.5	79.3	2	
C - 131	0754		0.0	-6.77	1.2	19.5	79.3	3	
D - 190	0757		0.0	-12.99	0.6	20.5	78.9	4	
E - 244	0801		0.0	-10.45	0.1	20.7	79.3	4	
226									
A - 13	0700		0.0	-.02	0.1	20.5	79.4	2	
B - 64	0702		0.0	-8.27	0.1	20.6	79.4	2	
C - 114	0704		0.0	-10.91	0.1	20.6	79.3	3	
D - 164	0707		0.0	-7.86	0.1	20.7	79.3	4	
E - 208	0711		0.0	-10.30	0.1	20.7	79.2	4	
227									
A - 13	0715		0.0	-.03	0.1	20.8	79.2	2	
B - 48.7	0717		0.0	-.43	0.1	20.7	79.2	2	
C - 84.4	0719		0.0	-.48	0.1	20.8	79.2	3	
D - 114	0722		0.0	-.44	0.1	20.8	79.2	4	
E - 115.7	0726		0.0	-.41	0.1	20.7	79.2	4	

RES SIGNATURE: _____

LEA SIGNATURE: _____

RES Environmental Inc.

SUNSHINE CANYON LANDFILL – CITY
PERIMETER PROBE MONITORING DATA

TECHNICIAN: Robert Johns
DATE: 3-16-17
TEMPERATURE: 74°
WEATHER CONDITIONS: Sunny & Clear
INST & SERIAL #: GEM 5000 / G5005330

PROBE NUMBER	TIME	PPM CH_4	%VOL CH_4	PRES (+/-)	%CO2	%O2	%BAL	PURGE TIME	COMMENTS
228									
A - 13	0730		0.0	-.05	0.1	20.7	79.2	2	
B - 63	0732		0.0	-.09	2.0	17.1	81.0	2	
C - 113	0734		0.0	-.09	0.3	20.5	79.2	3	
D - 163	0737		0.0	-.07	1.3	19.8	78.9	4	
E - 213	0741		0.0	-.47	0.9	20.3	78.7	4	
229									
A - 13	0640		0.0	-.92	0.5	19.5	80.0	2	
B - 48.7	0642		0.0	-16.24	0.1	20.2	79.7	2	
C - 84.4	0644		0.0	-16.89	0.2	19.9	79.9	3	
D - 114	0647		0.0	-18.66	0.1	20.3	79.6	4	
E - 155.7	0651		0.0	-25.81	0.1	20.4	79.6	4	
230									Removed Due
A - 16								2	to construction
B - 33								2	
C - 50								3	
231									Removed Due
A - 13								2	to Construction
B - 26								2	
C - 39								3	
D - 51								4	
E - 66								4	
241									
A - 13	1216		0.0	-3.83	0.0	20.0	80.0	2	
B - 28	1218		0.0	-19.93	0.0	19.9	80.1	2	
C - 47	1220		0.0	+.13	0.0	19.9	80.0	3	
D - 64	1223		0.0	-25.51	0.0	19.9	80.1	4	
E - 85	1227		0.0	-17.49	0.0	19.9	80.1	4	

RES SIGNATURE: _____

LEA SIGNATURE: _____

RES Environmental Inc.

GAS MONITORING EQUIPMENT CALIBRATION

DATE	UNIT	SERIAL #	CAL GAS
3-16-17	GEM 5000	5500530	15% CH4

SIGNATURE: _____

865 Via Lata ▪ Colton, California 92324 ▪ (909) 422-1001 Fax (909) 422-0707

RES Environmental Inc.

NEXT MONTH 4-20-17

SUNSHINE CANYON – COUNTY
PERIMETER PROBE MONITORING DATA

TECHNICIAN: Robert Johns
DATE: 3-23-17
TEMPERATURE: 47°
WEATHER CONDITIONS: Windy
INST & SERIAL #: GEM 5000 / G500530

PROBE NUMBER	TIME	PPM CH_4	%VOL CH_4	PRES (+/-)	% CO2	%O2	%BAL	PURGE TIME (min)	COMMENTS
202									Removed Due to Construction
A - 10								2	
B - 25								2	
C - 38								3	
203									
A – 10	0910		0.0	-.04	3.5	17.6	78.7	2	
B – 25	0912		0.0	-.04	2.6	18.3	79.1	2	
C – 40	0914		0.0	-.11	1.3	19.5	79.2	3	
206									
A – 10	0830		0.0	-.07	9.9	9.6	80.5	2	
B – 25	0832		0.0	-.09	16.4	8.4	75.2	2	
C – 38	0834		0.0	-.03	11.9	9.1	79.1	3	
207									
A – 10	0810		0.0	-.58	0.1	20.4	79.5	2	
B – 25	0812		0.5	-23.21	1.2	18.0	80.2	2	
C – 40	0814		0.0	1.26	0.2	20.2	79.6	3	
208									
A – 9.1	0800		0.0	-.07	0.1	20.5	79.5	2	
B – 25	0802		0.0	-.09	12.1	9.0	79.0	2	
C – 40	0804		0.0	-.08	6.0	15.5	78.5	3	
210									
A – 10	0715		0.0	-.57	0.1	21.3	78.6	2	
B – 25	0712		0.0	-.91	0.3	21.1	78.6	2	
C – 39	0714		0.0	-.23	0.6	20.7	78.7	3	

RES SIGNATURE:

LEA SIGNATURE:

RES Environmental Inc.

SUNSHINE CANYON – COUNTY
PERIMETER PROBE MONITORING DATA

TECHNICIAN: Robert Johns
DATE: 3-22-17
TEMPERATURE: 42°
WEATHER CONDITIONS: windy
INST & SERIAL #: Gem 5000 / G5001130

PROBE NUMBER	TIME	PPM CH_4	%VOL CH_4	PRES (+/-)	% CO_2	%O2	%BAL	PURGE TIME (min)	COMMENTS
242									
C - 42	0723		0.0	-.06	3.0	15.7	81.3	3	
D - 60	0725		0.0	-.05	1.8	12.1	86.1	4	
E - 78	0729		0.0	-.02	4.1	13.0	82.9	4	
243									
A - 11	0900		0.0	-.11	5.5	10.1	84.5	2	
B - 20	0902		0.0	-.04	3.7	14.5	81.7	2	
C - 33	0904		0.0	.0	2.2	17.5	80.3	3	
244									
A - 11	0749		0.0	-.20	16.0	2.6	81.4	2	
B - 21	0751		0.1	-.21	7.0	13.3	79.6	2	
C - 36	0753		0.0	-.41	0.9	20.0	79.1	3	
245									
A - 11	0930		0.0	-.22	12.4	5.8	81.7	2	
B - 20	0932		0.0	-.03	0.2	15.5	84.3	2	
C - 35	0934		0.0	+.01	9.8	12.7	77.5	3	
D - 50	0937		0.0	-.27	7.5	14.0	78.5	4	
E - 64	0941		0.0	+.04	4.2	14.9	80.9	4	
246									Removed Due to Construction
A - 9								2	
B - 16								2	
205R									
A - 11	0840		0.0	-.02	5.6	8.1	86.3	2	
B - 20	0842		0.5	-.27	23.3	7.5	68.7	2	
C - 33	0844		1.2	-.24	40.1	0.9	57.8	3	
D - 48	0847		1.6	-.29	35.6	5.6	57.2	4	
E - 62	0857		1.9	-.35	44.3	0.0	53.9	4	

RES SIGNATURE: [signature]

LEA SIGNATURE: [signature]

RES Environmental Inc.

SUNSHINE CANYON – COUNTY
PERIMETER PROBE MONITORING DATA

TECHNICIAN: Robert Johns
DATE: 3-23-17
TEMPERATURE: 47°
WEATHER CONDITIONS: windy
INST & SERIAL #: GEM / 5000 G500530

PROBE NUMBER	TIME	PPM CH_4	%VOL CH_4	PRES (+/-)	%CO2	%O2	%BAL	PURGE TIME (min)	COMMENTS
239									
A – 11	0655		0.0	-.03	8.3	13.7	77.9	2	
B – 20	0657		0.0	-.08	0.1	21.3	78.6	2	
C – 35	0659		0.0	-.01	0.1	21.4	78.5	3	
D – 50	0702		0.0	-.01	0.1	21.4	78.5	4	
E – 64	0706		0.0	-.02	0.1	21.5	78.4	4	
240									
A –11	0640		0.0	-.09	2.4	18.1	79.5	2	
B – 20	0642		0.0	-.11	0.4	19.6	79.9	2	
C – 33	0644		0.0	-.13	0.1	20.1	79.8	3	
D – 49	0647		0.0	-.08	0.3	20.1	79.6	4	
E – 61	0651		0.9	-.26	0.1	20.6	78.4	4	

RES SIGNATURE: [signature]

LEA SIGNATURE: [signature]

RES Environmental Inc.

SUNSHINE CANYON – COUNTY
PERIMETER PROBE MONITORING DATA

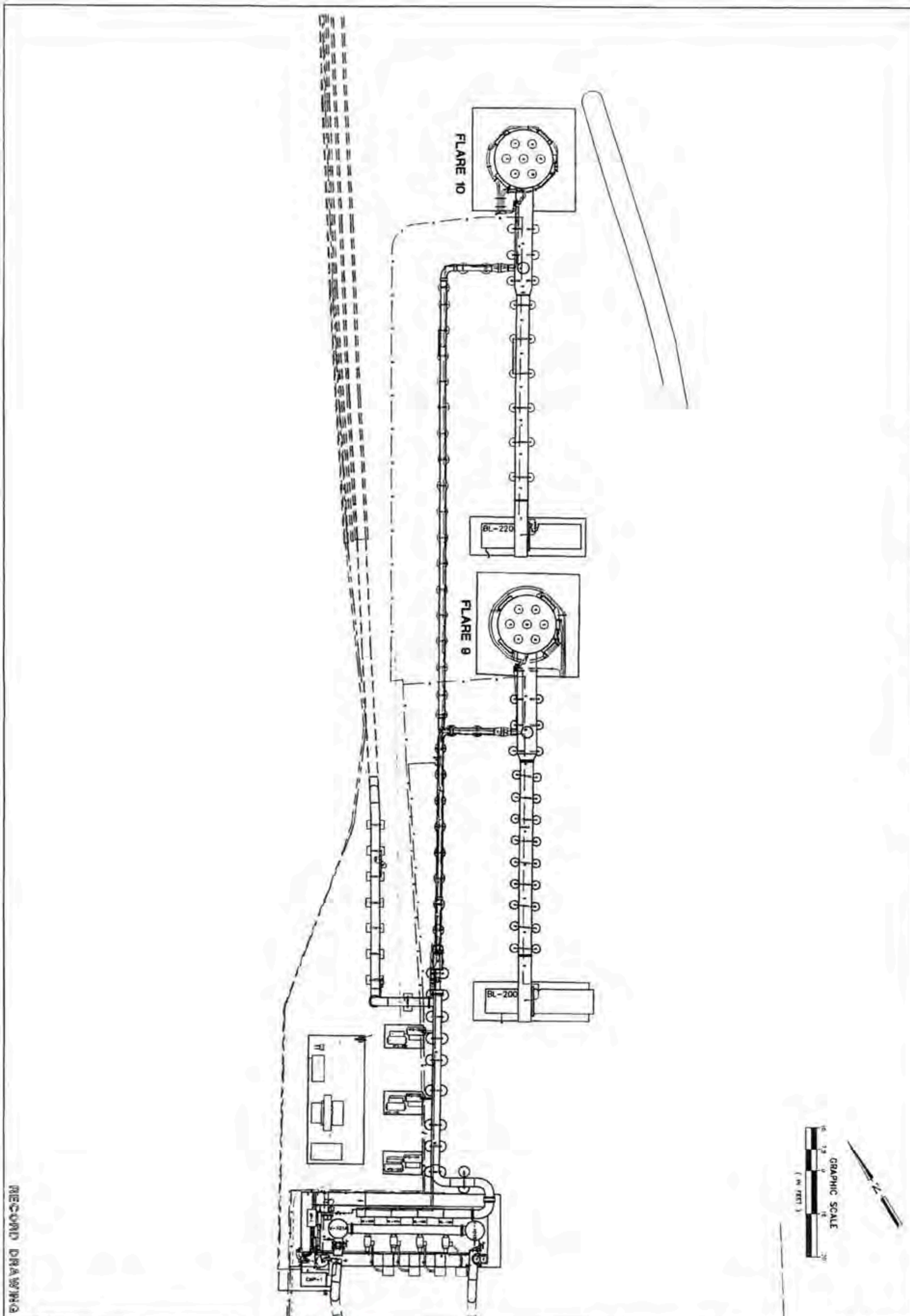
TECHNICIAN: Robert Johns
DATE: 3-23-17
TEMPERATURE: 47°
WEATHER CONDITIONS: windy
INST & SERIAL #: GEM 5000 / G500530

PROBE NUMBER	TIME	PPM CH_4	%VOL CH_4	PRES (+/-)	%CO2	%O2	%BAL	PURGE TIME	COMMENTS
VADOSE ZONE									
203D	1000		0.0	-19.21	0.1	20.7	79.2	2	
204D	0820		0.0	-6.73	2.1	18.9	79.0	2	
211D	1010		0.0	-17.76	0.1	20.7	79.2	2	

PROBE NUMBER	TIME	PPM CH_4	%VOL CH_4						COMMENTS

RES SIGNATURE:

LEA SIGNATURE:



SUNSHINE CANYON LANDFILL
SYLMAR, CALIFORNIA

FLARE 9 AND 10 PLAN

REPUBLIC SERVICES, INC.

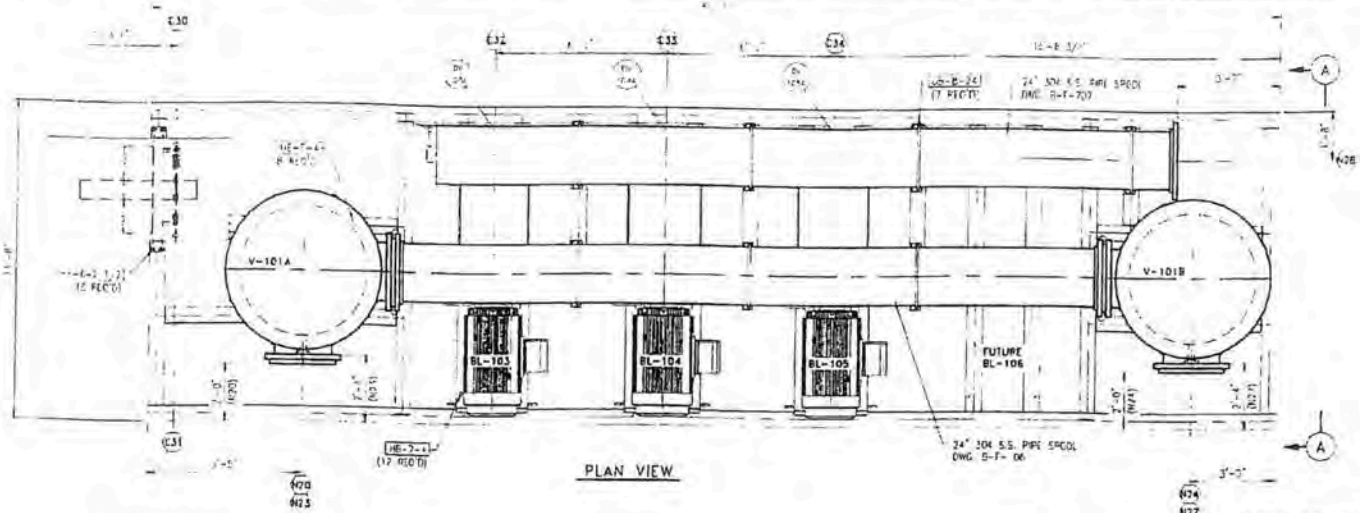
TETRA TECH BAS
1360 Valley Vista Drive, Diamond Bar, CA 91765
TEL 909.860.7777 FAX 909.860.8017

DRN	SNA		8/2013
DES	SNA		8/2013
CHK			
APP			

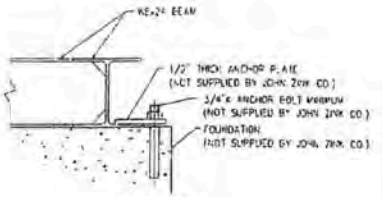
NO	REVISIONS	DRN	CHK	DATE

DATE AUGUST 2013
PROJECT NO 2013.0062
FILENAME
SHEET NO
DRAWING NO 1 OF 1

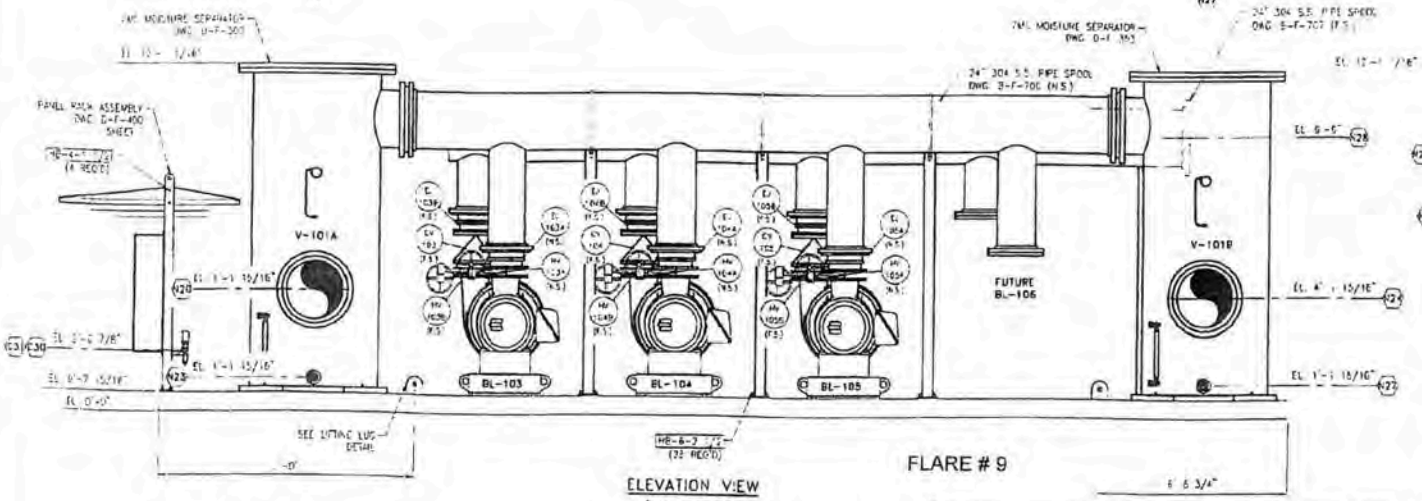
All Clear 3-23-17



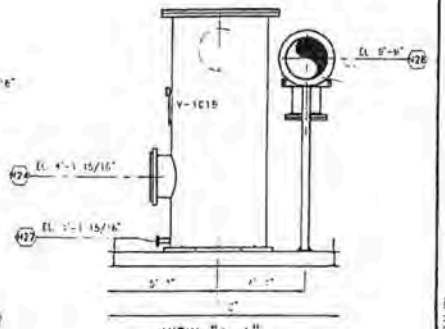
MK	QTY	DESCRIPTION
N20/N24	2	GAS INLET 24" FLANGE ADAPTER WITH 150# RAISED FACE LAP JOINT
N23/N27	2	CONCENTRIC REDUCER 12" ELBOW ADAPTER WITH 150# RAISED FACE
N26		GAS OUTLET 24" 150# RFLP
E30		PILOT GAS INLET 1/2" NPT
E31		PILOT GAS OUTLET 1/2" NPT
E32		BLOWER DRAIN 1/2" NPT
E33		BLOWER DRAIN 1/2" NPT
E34		BLOWER DRAIN 1/2" NPT



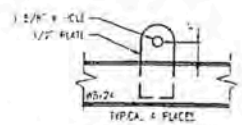
SKID ANCHOR DETAIL
(TYP 4 PLACES MINIMUM)



FLARE # 9



NOTES:
1. PREFIX ALL MK NO'S WITH SALES ORDER NUMBER.
2. DO NOT BOLT THE BLOWER DOWN RIGHT. DOING SO VOIDS THE WARRANTY. BLOWERS ARE MOUNTED ON VIBRATION ISOLATOR PADS.
3. WEIGHT APPROX. 42,740 LBS.
4. JOHN ZINK RECOMMENDS THAT A SPREADER BAR BE USED TO LIFT SKID.
5. SKID DESIGN AND CONSTRUCTION IS IN ACCORDANCE WITH STRUCTURAL REQUIREMENTS FOR SEISMIC ZONE 4.
6. NO ELECTRICAL AREA CLASSIFICATION.
7. SKID & PIPE SPOOLS FINISH PER SSPC-SP6 AND SHALL BE PAINTED IN ACCORDANCE WITH MIL SPEC ZINC CLAD II PLUS P800W210/B60W210 SERIES (3-4 MILS T.D.)



LIFTING LUG DETAIL
DESIGNED FOR 1" 1/2 TON CROSBY ANCHOR SHACKLE

EXHIBIT VB
Flare Component Leak Testing

NO	REVISION DESCRIPTION	BY	CK	APP	DATE		

FOR: REPUBLIC SERVICES INC
SALES: SUNSHINE ENERGY (AUSTIN)
JOB(S): STUART, FL
S.O. NO. EF-8120343
P.O. NO. 3271857

DR	EFC	DATE: 12-13-17	
EL	SM	DATE: 12-14-17	
APP	SM	DATE: 12-14-17	

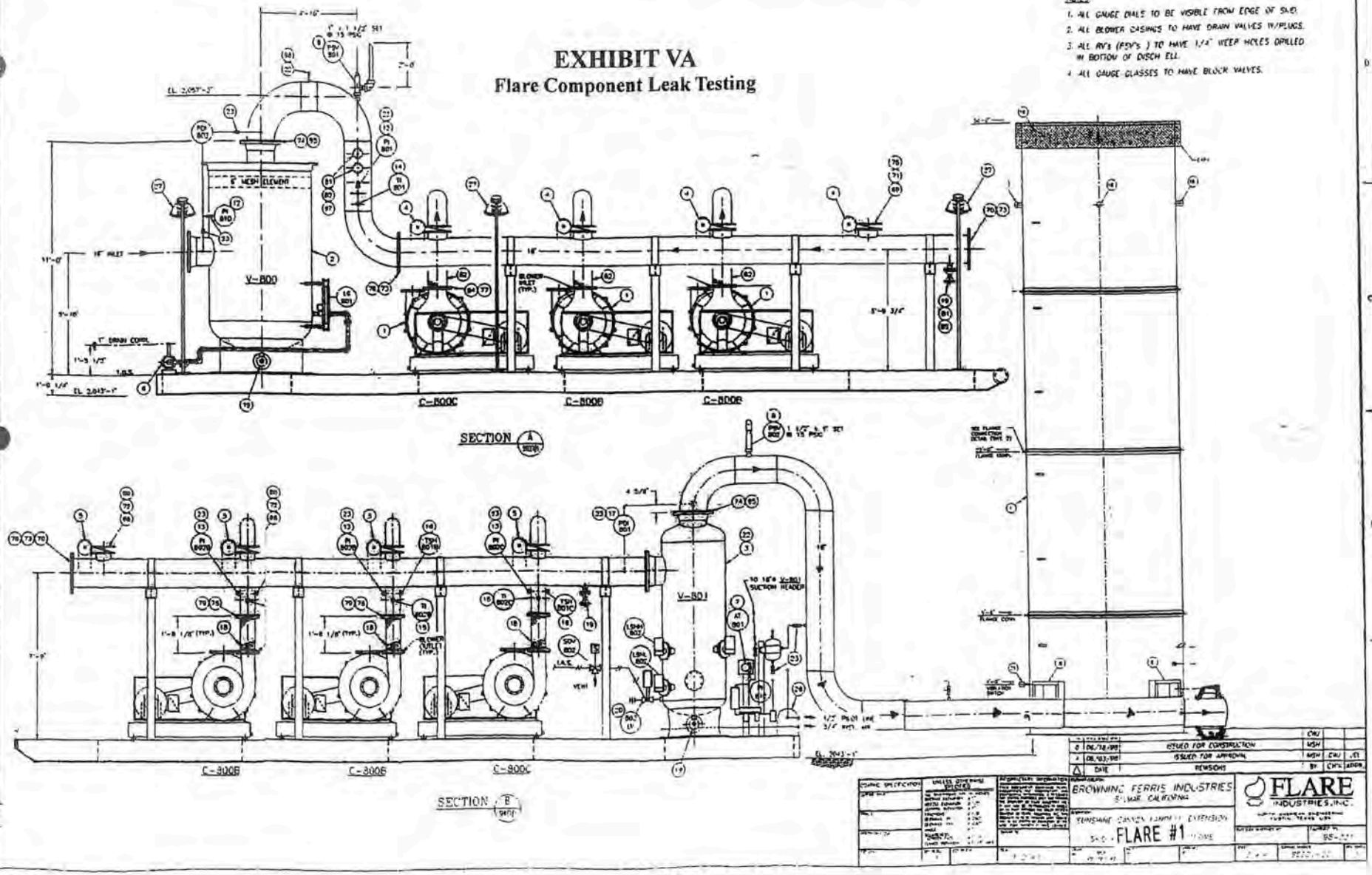
JOHN ZINK
JOHN ZINK COMPANY LLC
PARTS AND SERVICE, CALL: 1-800-725-4727 FAX (918) 234-1539

BLOWER SKID ASSEMBLY

DRAWING NUMBER: D-F-8120343-304 REV: 0
SCALE: NONE SHEET 1 OF 1

All : Clean 3-16-17

EXHIBIT VA
Flare Component Leak Testing



RES Environmental Inc.

L.T.F. MONITORING

TECHNICIAN: Robert Johns
DATE: 3-23-17
BACKGROUND: 2.5 ppm
TEMPERATURE: 47°
WEATHER CONDITIONS: wind-y
INST & SERIAL #: TVA-1000B / 1030945322

	TIME	CH4 ppm			COMMENTS
GAC #1	0625	2.7 ppm			

RES Environmental Inc.

GAS MONITORING EQUIPMENT CALIBRATION

DATE	UNIT	SERIAL #	CAL GAS
3-23-17	TVA 1000B	1030945322	500ppm CH4
3-23-17	GEM 5000	G500530	15% CH4

SIGNATURE: _____

865 Via Lata ▪ Colton, California 92324 ▪ (909) 422-1001 Fax (909) 422-0707

RES Environmental Inc.

SUNSHINE CANYON BUILDING METER CALIBRATION
CONTINUOUS BUILDING MONITORING

LOCATION	SERIAL NUMBER	DATE	CALIBRATION GAS	NOTES
LTP Trailer	Sierra 2001 0305501	3/23/17	1.0% by vol. CH_4	
LEA Office	Sierra 2001 011853	3/23/17	1.0% by vol. CH_4	
Scale House	Sierra 2001 011813	3/23/17	1.0% by vol. CH_4	
Training Room	Sierra 2001 043130490M	3/23/17	1.0% by vol. CH_4	
Scale House	Sierra 2001 043130409	3/23/17	1.0% by vol. CH_4	
Men's Locker Room	Sierra 2001 043130409	3/23/17	1.0% by vol. CH_4	
New Office North Hall	Sierra 2001 043130409	3/23/17	1.0% by vol. CH_4	
New Office South Hall	Sierra 2001 043130409	3/23/17	1.0% by vol. CH_4	

Technician: _____

RES Environmental Inc.

NEXT MONTH 5-23-17

SUNSHINE CANYON LANDFILL – CITY
PERIMETER PROBE MONITORING DATA

TECHNICIAN: Robert Johns
DATE: 4-18-17
TEMPERATURE: 72°
WEATHER CONDITIONS: Over cast
INST & SERIAL #: GEM 5200 / G520530

PROBE NUMBER	TIME	PPM CH_4	%VOL CH_4	PRES (+/-)	%CO2	%O2	%BAL	PURGE TIME (min)	COMMENTS
213									
A - 13	1240		0.0	+.06	0.1	20.5	79.5	2	
B - 29	1242		0.0	+.07	0.0	20.5	79.5	2	
C - 45	1244		0.0	-.11	0.0	20.5	79.4	3	
D - 61	1247		0.0	-.20	0.0	20.5	79.5	4	
E - 77	1251		0.0	-13.47	0.0	20.4	79.6	4	
214									
A - 13	1232		0.0	+.01	10.6	8.8	80.6	2	
B - 30	1234		0.0	-5.85	0.2	17.7	82.2	2	
C - 48	1236		0.0	-6.51	0.1	20.3	79.6	3	
215									
A - 13	1216		0.0	+.01	5.6	7.5	87.0	2	
B - 30	1218		0.0	+.05	7.3	10.2	82.5	2	
C - 47	1220		0.0	+.30	0.1	20.5	79.6	3	
D - 64	1223		0.0	+.04	0.2	20.2	79.6	4	
E - 81	1227		0.0	+.05	5.3	12.7	82.0	4	
216									
A - 14	1200		0.0	-.06	0.1	20.4	79.5	2	
B - 43	1202		0.0	+.02	0.0	20.5	79.4	2	
C - 62	1204		0.0	+.05	0.0	20.5	79.4	3	
D - 86	1207		0.0	+.05	0.0	20.5	79.4	4	
E - 110	1211		0.0	+.02	0.0	20.5	79.4	4	
217									
A - 13	1155		0.0	+.08	4.2	13.5	82.3	2	
B - 30	1157		0.0	+.08	3.5	15.5	80.9	2	
218R									
A - 11	1140		0.0	+.08	25.0	0.4	74.6	2	
B - 26.5	1142		0.0	+.09	22.4	2.1	75.5	2	
C - 47	1144		0.0	+.11	6.7	16.2	75.1	2	

RES SIGNATURE: [signature]

LEA SIGNATURE: [signature]

RES Environmental Inc.

SUNSHINE CANYON LANDFILL – CITY
PERIMETER PROBE MONITORING DATA

TECHNICIAN: Robert Johns
DATE: 4-18-17
TEMPERATURE: 72°
WEATHER CONDITIONS: Overcast
INST & SERIAL #: GEM 5000 / G500530

PROBE NUMBER	TIME	PPM CH_4	%VOL CH_4	PRES (+/-)	%CO2	%O2	%BAL	PURGE TIME (min)	COMMENTS
219									
A - 13	1115		0.0	+.05	1.3	16.8	79.9	2	
B - 64	1117		0.0	+.25	1.2	17.3	81.5	2	
C - 115	1119		0.0	+.09	0.0	20.2	79.8	3	
D - 166	1123		0.0	+.02	0.0	20.2	79.8	4	
E - 217	1127		0.0	.0	0.5	19.6	79.9	4	
220									
A - 14	1050		0.0	+.08	0.2	20.0	79.9	2	
B - 40	1052		0.0	+.02	0.1	20.0	79.9	2	
C - 87	1054		0.0	+.05	0.1	20.2	79.7	3	
D - 124	1057		0.0	.02	0.1	20.2	79.7	4	
E - 158	1101		0.0	+.07	0.1	20.2	79.7	4	
220B									
A - 14	1030		0.0	-.01	3.7	14.3	82.0	2	
B - 38	1032		0.0	-.01	0.1	17.8	82.1	2	
C - 62	1034		0.0	+.04	4.4	10.8	84.8	3	
D - 86	1037		0.0	-.09	4.0	13.9	82.2	4	
E - 110	1041		0.0	+.03	3.8	14.7	81.5	4	
221									
A - 13	0950		0.0	-.01	0.7	19.6	79.6	2	
B - 56	0952		0.0	-.12	0.1	20.2	79.7	2	
C - 99	0954		0.0	-.24	1.5	16.7	79.8	3	
D - 142	0957		0.0	-.07	0.0	20.4	79.6	4	
E - 185	1001		0.0	-.03	0.0	20.4	79.5	4	
222									
A - 13	1010		0.0	+.02	1.5	19.0	79.5	2	
B - 54.8	1012		0.0	+.01	0.1	20.5	79.5	2	
C - 96.5	1014		0.0	+.05	0.1	20.4	79.5	3	
D - 138.3	1017		0.0	+.02	0.3	20.2	79.5	4	
E - 180	1021		0.0	+.05	0.0	20.4	79.5	4	

RES SIGNATURE: _____

LEA SIGNATURE: _____

RES Environmental Inc.

SUNSHINE CANYON LANDFILL – CITY
PERIMETER PROBE MONITORING DATA

TECHNICIAN: Robert Johns
DATE: 4-18-17
TEMPERATURE: 72°
WEATHER CONDITIONS: Overcast
INST & SERIAL #: GEM 5000 / G5000510

PROBE NUMBER	TIME	PPM CH_4	%VOL CH_4	PRES (+/-)	%CO2	%O2	%BAL	PURGE TIME	COMMENTS
223									
A - 13	0925		0.0	+.03	7.9	9.3	82.8	2	
B - 37.5	0927		0.0	+.05	4.2	14.0	81.8	2	
C - 62	0929		0.0	+.24	3.9	14.9	81.2	3	
D - 86.5	0932		0.0	+.01	3.0	16.5	80.5	4	
E - 111	0936		0.0	+.03	3.6	15.3	81.1	4	
224									
A - 13	0907		0.0	+.01	0.1	20.4	79.5	2	
B - 67.5	0909		0.0	.0	0.1	20.4	79.5	2	
C - 122	0911		0.0	.0	0.1	20.5	79.5	3	
D - 177.5	0914		0.0	-11.34	0.1	20.4	79.5	4	
E - 232	0917		0.0	-8.60	0.1	20.4	79.5	4	
225									
A - 13	0840		0.0	-.05	1.8	19.1	79.2	2	
B - 72	0842		0.0	-6.84	0.7	20.0	79.3	2	
C - 131	0844		0.0	-11.53	2.2	18.8	79.0	3	
D - 190	0847		0.0	-11.28	0.1	20.4	79.6	4	
E - 244	0857		0.0	-10.15	0.1	20.4	79.5	4	
226									
A - 13	0730		0.0	.0	0.1	20.2	79.8	2	
B - 64	0732		0.0	-9.19	0.1	20.2	79.7	2	
C - 114	0734		0.0	-11.31	0.1	20.2	79.7	3	
D - 164	0737		0.0	-10.60	0.1	20.3	79.7	4	
E - 208	0741		0.0	-11.69	0.1	20.3	79.6	4	
227									
A - 13	0750		0.0	-.02	0.1	20.4	79.5	2	
B - 48.7	0752		0.0	-.81	0.1	20.4	79.5	2	
C - 84.4	0754		0.0	-.98	0.7	19.6	79.7	3	
D - 114	0757		0.0	-.93	0.1	20.4	79.5	4	
E - 115.7	0801		0.0	-.97	0.1	20.4	79.5	4	

RES SIGNATURE: _____

LEA SIGNATURE: _____

RES Environmental Inc.

SUNSHINE CANYON LANDFILL – CITY
PERIMETER PROBE MONITORING DATA

TECHNICIAN: Robert Johns
DATE: 4-15-17
TEMPERATURE: 72°
WEATHER CONDITIONS: Overcast
INST & SERIAL #: GEM 5000 / G500530

PROBE NUMBER	TIME	PPM CH_4	%VOL CH_4	PRES (+/-)	%CO2	%O2	%BAL	PURGE TIME	COMMENTS
228									
A - 13	0815		0.0	.0	0.4	19.9	79.7	2	
B - 63	0817		0.0	-.77	3.9	12.7	83.4	2	
C - 113	0819		0.0	-.53	0.1	20.3	79.7	3	
D - 163	0822		0.0	-.47	0.7	20.7	79.3	4	
E - 213	0826		0.0	-.75	0.1	20.4	79.5	4	
229									
A - 13	0710		0.0	-1.0	0.5	18.8	80.5	2	
B - 48.7	0712		0.0	-15.43	0.1	20.0	79.9	2	
C - 84.4	0714		0.0	-16.69	0.3	19.6	80.2	3	
D - 114	0717		0.0	-18.33	0.1	20.0	80.0	4	
E - 155.7	0721		0.0	-25.90	0.1	20.0	80.0	4	
230									Removed Due to Construction
A - 16								2	
B - 33								2	
C - 50								3	
231									Removed Due to Construction
A - 13								2	
B - 26								2	
C - 39								3	
D - 51								4	
E - 66								4	
241									
A - 13	1256		0.0	-3.99	0.0	20.3	79.7	2	
B - 28	1258		0.0	-19.95	0.0	20.3	79.7	2	
C - 47	1300		0.0	-1.02	0.1	20.2	79.7	3	
D - 64	1303		0.0	-25.15	0.0	20.2	79.7	4	
E - 85	1307		0.0	-18.02	0.0	20.3	79.7	4	

RES SIGNATURE: _____

LEA SIGNATURE: _____

RES Environmental Inc.

GAS MONITORING EQUIPMENT CALIBRATION

DATE	UNIT	SERIAL #	CAL GAS
4-18-17	GEM 5000	G500 530	15% CH4
4-18-17	TVA-1000B	1030945322	500 ppm CH4

SIGNATURE: _____

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RES Environmental Inc.

NEXT MONTH 5-25-17

SUNSHINE CANYON – COUNTY
PERIMETER PROBE MONITORING DATA

TECHNICIAN: Robert Johns
DATE: 4-20-17
TEMPERATURE: 70°
WEATHER CONDITIONS: Wind
INST & SERIAL #: GEM 5000 / G50053 0

PROBE NUMBER	TIME	PPM CH_4	%VOL CH_4	PRES (+/-)	% CO2	%O2	%BAL	PURGE TIME (min)	COMMENTS
202									Removed Due to construction
A - 10								2	
B - 25								2	
C - 38								3	
203									
A – 10	1030		0.0	+.02	0.2	19.8	79.9	2	
B – 25	1032		0.0	+.01	0.1	20.4	79.4	2	
C – 40	1034		0.0	-.03	0.2	20.5	79.2	3	
206									
A – 10	0855		0.0	+.01	9.3	13.1	77.6	2	
B – 25	0857		0.0	+.02	9.9	11.3	78.9	2	
C – 38	0859		0.0	+.18	14.8	9.0	76.2	3	
207									
A – 10	0830		0.0	-.36	1.0	19.4	79.7	2	
B – 25	0832		0.0	+.03	0.2	19.8	79.9	2	
C – 40	0834		0.0	-1.59	0.2	20.0	79.9	3	
208									
A – 9.1	0813		0.0	+.06	0.2	20.4	79.4	2	
B – 25	0815		0.0	+.01	12.0	9.6	78.4	2	
C – 40	0817		0.0	+.02	4.3	17.4	78.3	3	
210									
A – 10	0715		0.0	-.86	0.1	20.8	79.1	2	
B – 25	0717		0.0	-.92	0.1	20.8	79.1	2	
C – 39	0719		0.0	-.03	0.2	20.5	79.2	3	

RES SIGNATURE:

LEA SIGNATURE:

RES Environmental Inc.

SUNSHINE CANYON – COUNTY
PERIMETER PROBE MONITORING DATA

TECHNICIAN: Robert Johns
DATE: 4-20-17
TEMPERATURE: 70°
WEATHER CONDITIONS: windy
INST & SERIAL #: GEM 5000 / GS00530

PROBE NUMBER	TIME	PPM CH_4	%VOL CH_4	PRES (+/-)	% CO_2	%O2	%BAL	PURGE TIME (min)	COMMENTS
242									
C - 42	0725		0.0	-.03	3.2	17.3	79.5	3	
D - 60	0727		0.0	.0	7.5	0.3	92.2	4	
E - 78	0729		0.0	-.01	4.4	15.2	80.4	4	
243									
A - 11	0935		0.0	+.02	5.6	10.7	83.7	2	
B - 20	0937		0.0	+.09	3.5	15.0	81.5	2	
C - 33	0939		0.0	+.23	2.9	15.9	81.3	3	
244									
A - 11	0800		0.0	-.06	16.8	0.5	82.6	2	
B - 21	0802		0.1	+.08	16.7	3.5	79.6	2	
C - 36	0804		0.0	-.01	7.7	12.2	80.1	3	
245									
A - 11	0950		0.0	+.06	14.3	3.1	82.7	2	
B - 20	0952		0.0	+.01	19.9	6.1	74.1	2	
C - 35	0954		0.0	+.01	18.4	4.8	76.7	3	
D - 50	0957		0.0	+.13	16.2	4.3	79.5	4	
E - 64	1001		0.0	+.04	6.2	10.2	83.6	4	
246									Removed
A - 9								2	Due to
B - 16								2	Construction
205R									
A - 11	0910		0.0	+.07	8.2	8.8	83.0	2	
B - 20	0912		1.5	-.11	37.2	0.6	60.7	2	
C - 33	0914		1.4	-.15	43.6	0.0	55.0	3	
D - 48	0917		2.2	-.24	45.7	0.0	52.1	4	
E - 62	0921		2.3	-11.18	45.3	0.0	52.3	4	

RES SIGNATURE: Robert Johns

LEA SIGNATURE:

RES Environmental Inc.

SUNSHINE CANYON – COUNTY
PERIMETER PROBE MONITORING DATA

TECHNICIAN: Robert Johns
DATE: 4-20-17
TEMPERATURE: 70°
WEATHER CONDITIONS: Windy
INST & SERIAL #: GEM 5000 / GS20530

PROBE NUMBER	TIME	PPM CH_4	%VOL CH_4	PRES (+/-)	%CO2	%O2	%BAL	PURGE TIME	COMMENTS
VADOSE ZONE									
203D	1011		0.0	-15.77	0.1	20.4	79.5	2	
204D	0840		0.0	-3.66	0.1	20.1	79.9	2	
211D	1020		0.0	-14.05	0.1	20.1	79.8	2	

PROBE NUMBER	TIME	PPM CH_4	%VOL CH_4						COMMENTS

RES SIGNATURE: [signature]

LEA SIGNATURE: [signature]

RES Environmental Inc.

SUNSHINE CANYON – COUNTY
PERIMETER PROBE MONITORING DATA

TECHNICIAN: Robert Johns
DATE: 4-20-17
TEMPERATURE: 70°
WEATHER CONDITIONS: windy
INST & SERIAL #: GEM 5000 / 500580

PROBE NUMBER	TIME	PPM CH_4	%VOL CH_4	PRES (+/-)	%CO2	%O2	%BAL	PURGE TIME (min)	COMMENTS
239									
A – 11	0656		0.0	+.03	8.8	12.9	78.3	2	
B – 20	0658		0.0	-.06	0.1	20.9	79.0	2	
C – 35	0700		0.0	+.04	0.1	20.9	79.0	3	
D – 50	0703		0.0	-.03	0.1	20.9	79.0	4	
E – 64	0707		0.0	-.02	0.1	20.9	79.0	4	
240									
A –11	0640		0.0	-.13	9.1	12.4	78.5	2	
B – 20	0642		0.0	-.07	0.2	20.2	79.6	2	
C – 33	0644		0.0	+.07	0.1	20.4	79.5	3	
D – 49	0647		0.0	-.07	0.1	20.4	79.4	4	
E – 61	0651		0.0	-.02	0.1	20.5	78.5	4	

RES SIGNATURE: _____

LEA SIGNATURE: _____

RES Environmental Inc.

GAS MONITORING EQUIPMENT CALIBRATION

DATE	UNIT	SERIAL #	CAL GAS
4-20-17	GEM 5000	G5000530	15% CH4
4-20-17	TVA 1000B	1030945322	500 ppm CH4

SIGNATURE: _____

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RES Environmental Inc.

NEXT MONTH 6-27-17

SUNSHINE CANYON LANDFILL – CITY
PERIMETER PROBE MONITORING DATA

TECHNICIAN: Robert Johns
DATE: 5-23-17
TEMPERATURE: 90°
WEATHER CONDITIONS: Sunny & Clear
INST & SERIAL #: GEM 5000 G500530

PROBE NUMBER	TIME	PPM CH_4	%VOL CH_4	PRES (+/-)	%CO2	%O2	%BAL	PURGE TIME (min)	COMMENTS
213									
A - 13	1204		0.0	+.05	0.3	18.0	81.7	2	
B - 29	1206		0.0	+.03	0.1	18.5	81.5	2	
C - 45	1208		0.0	-.03	0.0	18.7	81.3	3	
D - 61	1211		0.0	-.10	0.0	18.8	81.2	4	
E - 77	1215		0.0	-6.49	0.0	18.7	81.2	4	
214									
A - 13	1155		0.0	+.09	10.7	8.2	81.1	2	
B - 30	1157		0.0	-1.29	0.5	16.4	82.9	2	
C - 48	1159		0.0	-.88	0.0	18.5	81.5	3	
215									
A - 13	1139		0.0	+.08	5.2	7.9	86.9	2	
B - 30	1141		0.0	+.04	5.4	9.8	84.7	2	
C - 47	1143		0.0	.0	0.1	18.0	82.0	3	
D - 64	1146		0.0	+.04	0.1	18.7	81.1	4	
E - 81	1150		0.0	+.06	4.3	11.8	83.9	4	
216									
A - 14	1121		0.0	-.06	0.0	19.1	80.9	2	
B - 43	1124		0.0	+.05	0.0	19.1	80.8	2	
C - 62	1126		0.0	+.06	0.0	19.2	80.8	3	
D - 86	1129		0.0	+.05	0.0	19.2	80.8	4	
E - 110	1133		0.0	+.01	0.0	19.2	80.8	4	
217									
A - 13	1115		0.0	+.06	4.7	12.3	82.9	2	
B - 30	1117		0.0	+.05	3.5	15.5	81.0	2	
218R									
A - 11	1100		0.0	+.07	20.9	4.2	75.0	2	
B - 26.5	1102		0.0	+.07	18.3	6.2	75.5	2	
C - 47	1104		0.0	+.06	5.7	16.8	77.5	2	

RES SIGNATURE: _____

LEA SIGNATURE: _____

RES Environmental Inc.

SUNSHINE CANYON LANDFILL – CITY
PERIMETER PROBE MONITORING DATA

TECHNICIAN: Robert Johns
DATE: 5-23-17
TEMPERATURE: 90°
WEATHER CONDITIONS: Sunny @ Clear
INST & SERIAL #: GEM 5000 / GS00530

PROBE NUMBER	TIME	PPM CH_4	%VOL CH_4	PRES (+/-)	%CO2	%O2	%BAL	PURGE TIME (min)	COMMENTS
219									
A - 13	1040		0.0	+.05	1.1	18.4	80.5	2	
B - 64	1042		0.0	+.06	0.0	19.0	81.0	2	
C - 115	1044		0.0	+.03	0.0	19.2	80.7	3	
D - 166	1047		0.0	+.07	0.0	19.6	80.4	4	
E - 217	1051		0.0	+.08	0.9	18.3	80.8	4	
220									
A - 14	1020		0.0	+.04	2.1	17.2	80.7	2	
B - 40	1022		0.0	+.04	0.1	19.2	80.7	2	
C - 87	1024		0.0	+.35	0.1	19.5	80.4	3	
D - 124	1027		0.0	+.02	0.1	19.5	80.4	4	
E - 158	1031		0.0	+.05	0.1	19.5	80.4	4	
220B									
A - 14	1000		0.0	+.07	0.4	19.1	80.5	2	
B - 38	1002		0.0	-.01	0.1	19.7	80.2	2	
C - 62	1004		0.0	+.01	1.9	16.4	81.7	3	
D - 86	1007		0.0	-.10	4.1	12.9	83.0	4	
E - 110	1011		0.0	-.12	3.0	15.3	81.7	4	
221									
A - 13	0920		0.0	+.02	0.3	19.9	79.8	2	
B - 56	0922		0.0	-.02	0.0	20.2	79.8	2	
C - 99	0924		0.0	-.04	1.1	19.2	79.7	3	
D - 142	0927		0.0	+.01	0.0	20.1	79.8	4	
E - 185	0931		0.0	-.02	0.0	20.1	79.8	4	
222									
A - 13	0940		0.0	+.69	1.5	18.3	80.2	2	
B - 54.8	0942		0.0	-.02	0.0	19.6	80.3	2	
C - 96.5	0944		0.0	+.05	0.1	19.8	80.1	3	
D - 138.3	0947		0.0	+.07	0.8	19.1	80.2	4	
E - 180	0951		0.0	-.01	0.0	19.9	80.1	4	

RES SIGNATURE: _____

LEA SIGNATURE: _____

RES Environmental Inc.

SUNSHINE CANYON LANDFILL – CITY
PERIMETER PROBE MONITORING DATA

TECHNICIAN: Robert Johns
DATE: 5-23-17
TEMPERATURE: 90°
WEATHER CONDITIONS: Sunny & clear
INST & SERIAL #: GEM 5000/G500530

PROBE NUMBER	TIME	PPM CH_4	%VOL CH_4	PRES (+/-)	%CO2	%O2	%BAL	PURGE TIME	COMMENTS
223									
A - 13	0905		0.0	-.07	3.6	14.9	81.5	2	
B - 37.5	0907		0.0	+.02	2.1	16.9	81.0	2	
C - 62	0909		0.0	+.03	2.4	16.6	81.1	3	
D - 86.5	0912		0.0	+.01	1.2	18.5	80.3	4	
E - 111	0916		0.0	-.11	2.8	16.3	80.9	4	
224									
A - 13	0845		0.0	+.04	0.1	19.6	80.4	2	
B - 67.5	0847		0.0	-.08	0.0	19.6	80.3	2	
C - 122	0849		0.0	-.07	0.0	19.7	80.3	3	
D - 177.5	0852		0.0	-6.02	0.0	19.7	80.2	4	
E - 232	0856		0.0	-4.42	0.0	19.7	80.2	4	
225									
A - 13	0827		0.0	-.04	1.5	17.8	80.7	2	
B - 72	0829		0.0	-3.34	0.8	18.5	80.7	2	
C - 131	0832		0.0	-5.37	0.1	19.4	80.6	3	
D - 190	0836		0.0	-05.46	0.0	19.4	80.5	4	
E - 244	0839		0.0	-4.92	0.0	19.4	80.5	4	
226									
A - 13	0725		0.0	.0	0.1	19.9	80.0	2	
B - 64	0727		0.0	-5.29	0.1	19.8	80.1	2	
C - 114	0729		0.0	-5.45	0.1	19.9	80.1	3	
D - 164	0732		0.0	-5.52	0.0	19.9	80.1	4	
E - 208	0736		0.0	-1.17	0.1	19.9	80.0	4	
227									
A - 13	0740		0.0	-.06	0.1	19.4	80.1	2	
B - 48.7	0742		0.0	-.49	0.1	19.6	80.3	2	
C - 84.4	0744		0.0	-.44	0.1	19.6	80.3	3	
D - 114	0747		0.0	-.60	0.1	19.5	80.5	4	
E - 115.7	0751		0.0	-.55	0.6	18.5	80.9	4	

RES SIGNATURE: _____

LEA SIGNATURE: _____

RES Environmental Inc.

SUNSHINE CANYON LANDFILL – CITY
PERIMETER PROBE MONITORING DATA

TECHNICIAN: Robert Johns
DATE: 5-23-17
TEMPERATURE: 90°
WEATHER CONDITIONS: sunny & clear
INST & SERIAL #: GEM 5000/G500530

PROBE NUMBER	TIME	PPM CH_4	%VOL CH_4	PRES (+/-)	%CO2	%O2	%BAL	PURGE TIME	COMMENTS
228									
A - 13	0807		0.0	-.05	0.1	19.0	81.0	2	
B - 63	0809		0.0	-.43	2.1	15.1	82.8	2	
C - 113	0811		0.0	-.12	0.2	18.8	81.0	3	
D - 163	0814		0.0	-.36	0.5	18.6	80.9	4	
E - 213	0816		0.0	-.49	0.1	18.9	81.0	4	
229									
A - 13	0650		0.0	-0.52	1.2	18.2	80.6	2	
B - 48.7	0652		0.0	-6.53	0.1	19.9	80.0	2	
C - 84.4	0654		0.0	-7.12	0.1	19.9	80.0	3	
D - 114	0657		0.0	-7.89	1.1	17.7	81.2	4	
E - 155.7	0701		0.0	-7.11	0.2	19.1	80.7	4	
230									Removed Due
A - 16								2	to
B - 33								2	Construction
C - 50								3	
231									
A - 13								2	Removed
B - 26								2	Due
C - 39								3	to
D - 51								4	Construction
E - 66								4	
241									
A - 13	1220		0.0	-2.97	0.0	18.9	81.1	2	
B - 28	1222		0.0	-11.90	0.0	18.9	81.1	2	
C - 47	1224		0.0	-7.17	0.0	18.9	81.1	3	
D - 64	1227		0.0	-16.41	0.0	18.8	81.1	4	
E - 85	1231		0.0	-10.06	0.0	18.9	81.1	4	

RES SIGNATURE: _____

LEA SIGNATURE: _____

RES Environmental Inc.

GAS MONITORING EQUIPMENT CALIBRATION

DATE	UNIT	SERIAL #	CAL GAS
5-23-17	GEM 500	G500530	15% CH4

SIGNATURE: _____

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RES Environmental Inc.

NEXT MONTH 6-29-17

SUNSHINE CANYON – COUNTY
PERIMETER PROBE MONITORING DATA

TECHNICIAN: Robert Julius
DATE: 5-25-17
TEMPERATURE: 68°
WEATHER CONDITIONS: Overcast
INST & SERIAL #: GEM 5000 / G5005130

PROBE NUMBER	TIME	PPM CH_4	%VOL CH_4	PRES (+/-)	% CO_2	%O2	%BAL	PURGE TIME (min)	COMMENTS
202									Removed Due
A - 10								2	to Construction
B - 25								2	
C - 38								3	
203									
A – 10	1100		0.0	+.10	2.9	17.8	79.3	2	
B – 25	1103		0.0	+.09	2.8	17.6	79.7	2	
C – 40	1106		0.0	+.12	1.8	18.5	79.7	3	
206									
A – 10	0920		0.0	+.14	9.9	12.1	78.0	2	
B – 25	0922		0.0	1.06	12.2	11.0	76.8	2	
C – 38	0924		0.0	+.06	15.0	9.4	75.6	3	
207									
A – 10	0905		0.0	-.18	0.7	20.2	79.1	2	
B – 25	0907		0.0	-.02	0.2	20.6	79.2	2	
C – 40	0909		0.0	+.07	0.2	20.6	79.2	3	
208									
A – 9.1	0855		0.0	+.05	4.0	17.2	78.7	2	
B – 25	0857		0.0	+.07	10.4	11.2	78.4	2	
C – 40	0859		0.0	-.17	0.9	19.9	79.3	3	
210									
A – 10	0755		0.0	-.53	0.1	20.5	79.4	2	
B – 25	0757		0.0	-.53	0.1	20.5	79.4	2	
C – 39	0759		0.0	-.03	0.2	20.3	79.5	3	

RES SIGNATURE:

LEA SIGNATURE:

RES Environmental Inc.

SUNSHINE CANYON – COUNTY
PERIMETER PROBE MONITORING DATA

TECHNICIAN: Robert Johns
DATE: 5-25-17
TEMPERATURE: 68°
WEATHER CONDITIONS: Overcast
INST & SERIAL #: GEM 5000 / G500530

PROBE NUMBER	TIME	PPM CH_4	%VOL CH_4	PRES (+/-)	% CO_2	%O2	%BAL	PURGE TIME (min)	COMMENTS
242									
C - 42	0830		0.0	+.06	3.9	15.9	80.2	3	
D - 60	0832		0.0	+.03	7.0	3.9	89.2	4	
E - 78	0834		0.0	+.07	4.2	15.2	80.6	4	
243									
A - 11	0958		0.0	-.36	5.9	12.0	82.0	2	
B - 20	1000		0.0	+.27	6.1	10.7	83.2	2	
C - 33	1003		0.0	+.06	4.7	13.1	82.2	3	
244									
A - 11	0845		0.0	+.05	18.1	0.0	81.8	2	
B - 21	0847		0.1	+.02	16.4	4.8	78.6	2	
C - 36	0849		0.0	+.06	11.8	9.3	78.9	3	
245									
A - 11	1017		0.0	+.12	8.2	13.2	78.6	2	
B - 20	1019		0.0	+.18	11.5	12.2	76.4	2	
C - 35	1022		0.0	+.05	7.4	14.1	78.5	3	
D - 50	1025		0.0	+.05	6.2	14.8	79.0	4	
E - 64	1029		0.0	+.12	4.8	14.5	80.7	4	
246									Removed Due
A - 9								2	to Construction
B - 16								2	
205R									
A - 11	0930		0.0	+.05	8.2	13.2	78.6	2	
B - 20	0932		1.2	-.13	11.5	12.2	76.4	2	
C - 33	0934		1.6	-.25	7.4	14.1	78.5	3	
D - 48	0938		2.5	-.02	6.2	14.8	79.0	4	
E - 62	0942		1.9	-.96	4.8	14.5	80.7	4	

RES SIGNATURE: _____

LEA SIGNATURE: _____

RES Environmental Inc.

SUNSHINE CANYON – COUNTY
PERIMETER PROBE MONITORING DATA

TECHNICIAN: Robert Johns
DATE: 5-25-17
TEMPERATURE: 68°
WEATHER CONDITIONS: overcast
INST & SERIAL #: GEM5000 / 500530

PROBE NUMBER	TIME	PPM CH_4	%VOL CH_4	PRES (+/-)	%CO2	%O2	%BAL	PURGE TIME (min)	COMMENTS
239									
A – 11	0730		0.0	+.04	14.2	9.0	76.8	2	
B – 20	0732		0.0	+.12	0.1	20.6	79.3	2	
C – 35	0734		0.0	+.08	0.1	20.6	79.4	3	
D – 50	0737		0.0	+.03	0.1	20.5	79.3	4	
E – 64	0741		0.0	+.07	0.1	20.6	79.4	4	
240									
A – 11	0700		0.0	-.12	12.6	10.5	76.9	2	
B – 20	0703		0.0	-.03	0.1	20.2	79.7	2	
C – 33	0706		0.0	-.05	0.1	20.4	79.6	3	
D – 49	0710		0.0	+.12	0.1	20.5	79.3	4	
E – 61	0714		0.8	+.02	0.1	20.7	78.5	4	

RES SIGNATURE: [signature]

LEA SIGNATURE: [signature]

RES Environmental Inc.

SUNSHINE CANYON – COUNTY
PERIMETER PROBE MONITORING DATA

TECHNICIAN: Robert Johns
DATE: 5-25-17
TEMPERATURE: 68°
WEATHER CONDITIONS: overcast
INST & SERIAL #: GEM 5000 / G5C0530

PROBE NUMBER	TIME	PPM CH_4	%VOL CH_4	PRES (+/-)	%CO2	%O2	%BAL	PURGE TIME	COMMENTS
VADOSE ZONE									
203D	1035		0.0	-12.18	0.1	19.4	80.5	2	
204D	0915		0.0	-3.0	0.3	20.1	79.6	2	
211D	1042		0.0	-4.61	0.1	20.3	79.6	2	
PROBE NUMBER	TIME	PPM CH_4	%VOL CH_4						COMMENTS

RES SIGNATURE: [signature]

LEA SIGNATURE: [signature]

RES Environmental Inc.

GAS MONITORING EQUIPMENT CALIBRATION

DATE	UNIT	SERIAL #	CAL GAS
5-25-17	TVA 1000B	1030945322	500ppm CH4
5-25-17	GEM 5000	G500520	15 % CH4

SIGNATURE: _____

865 Via Lata ▪ Colton, California 92324 ▪ (909) 422-1001 Fax (909) 422-0707

RES Environmental Inc.

NEXT MONTH 7-25-17

SUNSHINE CANYON LANDFILL – CITY
PERIMETER PROBE MONITORING DATA

TECHNICIAN: Robert Johns
DATE: 6-27-17
TEMPERATURE: 91°
WEATHER CONDITIONS: Sunny & Clear
INST & SERIAL #: GEM 5000 / GR0530

PROBE NUMBER	TIME	PPM CH_4	%VOL CH_4	PRES (+/-)	%CO2	%O2	%BAL	PURGE TIME (min)	COMMENTS
213									
A - 13	1225		0.0	+.08	1.3	18.1	80.6	2	
B - 29	1227		0.0	+.09	0.0	19.7	80.3	2	
C - 45	1229		0.0	-.21	0.0	19.8	80.2	3	
D - 61	1233		0.0	-.30	0.0	19.7	80.3	4	
E - 77	1237		0.0	-14.47	0.0	19.7	80.3	4	
214									
A - 13	1215		0.0	+.04	8.0	11.2	80.7	2	
B - 30	1217		0.0	-1.94	0.1	19.5	80.4	2	
C - 48	1219		0.0	-1.49	2.0	16.0	80.0	3	
215									
A - 13	1158		0.0	+.10	6.3	5.6	88.0	2	
B - 30	1200		0.0	+.24	5.4	10.6	84.0	2	
C - 47	1202		0.0	+.14	0.1	19.3	80.6	3	
D - 64	1205		0.0	+.06	0.2	19.7	80.2	4	
E - 81	1209		0.0	+.10	4.6	11.0	84.2	4	
216									
A - 14	1139		0.0	+.08	0.0	20.4	79.6	2	
B - 43	1141		0.0	+.03	0.0	20.4	79.6	2	
C - 62	1143		0.0	+.01	0.0	20.3	79.6	3	
D - 86	1146		0.0	+.07	0.0	20.3	79.6	4	
E - 110	1150		0.0	.0	0.0	20.2	79.8	4	
217									
A - 13	1132		0.0	+.78	5.3	12.6	82.1	2	
B - 30	1134		0.0	+.10	3.3	16.8	79.6	2	
218R									
A - 11	1124		0.0	+.15	3.4	16.5	80.1	2	
B - 26.5	1126		0.0	+.10	1.9	17.2	80.9	2	
C - 47	1128		0.0	+.23	2.7	16.7	80.6	2	

RES SIGNATURE: _____

LEA SIGNATURE: _____

RES Environmental Inc.

SUNSHINE CANYON LANDFILL – CITY
PERIMETER PROBE MONITORING DATA

TECHNICIAN: Robert Johns
DATE: 6-27-17
TEMPERATURE: 91°
WEATHER CONDITIONS: Sunny & Clear
INST & SERIAL #: GEM 5000 / G500530

PROBE NUMBER	TIME	PPM CH_4	%VOL CH_4	PRES (+/-)	%CO2	%O2	%BAL	PURGE TIME (min)	COMMENTS
219									
A - 13	1055		0.0	+.08	1.2	18.5	80.3	2	
B - 64	1057		0.0	+.06	0.1	19.6	80.4	2	
C - 115	1059		0.0	+.03	0.0	19.6	80.4	3	
D - 166	1102		0.0	+.05	0.0	20.1	79.9	4	
E - 217	1106		0.0	+.04	1.3	18.6	80.1	4	
220									
A - 14	1030		0.0	+.02	0.1	19.5	80.4	2	
B - 40	1032		0.0	+.27	0.1	19.4	80.6	2	
C - 87	1034		0.0	+.08	0.1	19.7	80.2	3	
D - 124	1037		0.0	+.03	0.0	19.7	80.2	4	
E - 158	1041		0.0	+.03	0.1	19.7	80.3	4	
220B									
A - 14	1010		0.0	+.27	1.8	17.7	80.5	2	
B - 38	1012		0.0	+.13	1.4	17.2	81.4	2	
C - 62	1014		0.0	+.04	3.5	14.0	82.5	3	
D - 86	1018		0.0	+.05	4.1	13.4	82.5	4	
E - 110	1022		0.0	-.04	2.7	15.8	81.6	4	
221									
A - 13	0930		0.0	+.01	0.1	19.8	80.1	2	
B - 56	0932		0.0	+.20	0.3	19.6	80.1	2	
C - 99	0934		0.0	+.05	3.9	14.9	81.1	3	
D - 142	0937		0.0	+.03	0.0	20.1	79.9	4	
E - 185	0941		0.0	+.15	0.1	20.0	80.0	4	
222									
A - 13	0950		0.0	+.74	0.4	19.5	80.1	2	
B - 54.8	0952		0.0	+.01	0.0	20.0	80.0	2	
C - 96.5	0954		0.0	+.08	0.1	19.9	80.0	3	
D - 138.3	0957		0.0	+.10	0.2	19.7	80.1	4	
E - 180	1001		0.0	+.03	0.0	20.0	80.0	4	

RES SIGNATURE: _____

LEA SIGNATURE: _____

RES Environmental Inc.

SUNSHINE CANYON LANDFILL – CITY
PERIMETER PROBE MONITORING DATA

TECHNICIAN: Robert Johns
DATE: 6-27-17
TEMPERATURE: 91°
WEATHER CONDITIONS: Sunny & Clear
INST & SERIAL #: GEM 5000 / 458530

PROBE NUMBER	TIME	PPM CH_4	%VOL CH_4	PRES (+/-)	%CO2	%O2	%BAL	PURGE TIME	COMMENTS
223									
A - 13	0910		0.0	+.08	5.1	13.0	81.9	2	
B - 37.5	0912		0.0	-.01	3.3	15.4	81.3	2	
C - 62	0914		0.0	+.01	1.2	18.5	80.2	3	
D - 86.5	0917		0.0	+.32	1.1	19.0	80.0	4	
E - 111	0923		0.0	+.05	2.4	17.3	80.3	4	
224									
A - 13	0835		0.0	+.04	0.1	19.5	80.5	2	
B - 67.5	0637		0.0	-.03	0.0	19.6	80.4	2	
C - 122	0839		0.0	+.08	0.0	19.6	80.4	3	
D - 177.5	0842		0.0	-9.85	0.0	19.6	80.4	4	
E - 232	0846		0.0	-7.11	0.0	19.6	80.4	4	
225									
A - 13	0815		0.0	+.09	0.9	18.5	80.6	2	
B - 72	0817		0.0	-6.09	0.0	19.3	80.7	2	
C - 131	0819		0.0	-10.0	0.4	19.0	80.6	3	
D - 190	0822		0.0	-9.81	0.0	19.4	80.5	4	
E - 244	0826		0.0	-8.75	0.0	19.5	80.5	4	
226									
A - 13	0720		0.0	-.07	0.1	19.7	80.2	2	
B - 64	0722		0.0	-10.16	0.1	19.7	80.2	2	
C - 114	0724		0.0	-10.33	0.1	19.6	80.3	3	
D - 164	0727		0.0	-10.60	0.1	19.6	80.3	4	
E - 208	0731		0.0	-10.92	0.1	19.5	80.3	4	
227									
A - 13	0735		0.0	+.05	0.1	19.5	80.4	2	
B - 48.7	0737		0.0	-.29	0.1	19.4	80.5	2	
C - 84.4	0739		0.0	-.32	0.7	19.1	80.2	3	
D - 114	0742		0.0	-.37	0.1	19.5	80.5	4	
E - 115.7	0746		0.0	-.07	0.7	18.3	80.9	4	

RES SIGNATURE: _____

LEA SIGNATURE: _____

RES Environmental Inc.

SUNSHINE CANYON LANDFILL – CITY
PERIMETER PROBE MONITORING DATA

TECHNICIAN: Robert Johns
DATE: 6-27-17
TEMPERATURE: 91°
WEATHER CONDITIONS: Sunny & Clear
INST & SERIAL #: GEM 5000 / G5C0530

PROBE NUMBER	TIME	PPM CH_4	%VOL CH_4	PRES (+/-)	%CO2	%O2	%BAL	PURGE TIME	COMMENTS
228									
A - 13	0755		0.0	+.04	0.1	19.3	80.7	2	
B - 63	0757		0.0	-.02	1.5	16.6	82.0	2	
C - 113	0759		0.0	+.04	0.0	19.3	80.6	3	
D - 163	0802		0.0	-.22	0.1	19.4	80.6	4	
E - 213	0806		0.0	-.07	0.1	19.4	80.6	4	
229									
A - 13	0700		0.0	-.94	0.9	19.8	79.3	2	
B - 48.7	0703		0.0	-10.01	0.3	19.9	79.9	2	
C - 84.4	0705		0.0	-13.71	0.1	20.0	79.9	3	
D - 114	0708		0.0	-15.48	0.1	19.9	80.0	4	
E - 155.7	0712		0.0	-20.74	0.1	19.9	80.0	4	
230									
A - 16								2	Removed Due
B - 33								2	to Construction
C - 50								3	
231									Removed Due
A - 13								2	to Construction
B - 26								2	
C - 39								3	
D - 51								4	
E - 66								4	
241									
A - 13	1242		0.0	-4.12	0.0	19.8	80.1	2	
B - 28	1244		0.0	-19.15	0.0	19.8	80.2	2	
C - 47	1246		0.0	-3.07	0.1	19.8	80.2	3	
D - 64	1249		0.0	-21.75	0.0	19.8	80.2	4	
E - 85	1254		0.0	-15.65	0.0	19.9	80.1	4	

RES SIGNATURE: _____

LEA SIGNATURE: _____

RES Environmental Inc.

GAS MONITORING EQUIPMENT CALIBRATION

DATE	UNIT	SERIAL #	CAL GAS
6-27-17	GEM 5000	G500530	1540 CH4
6-27-17	TVA 1000 B	1030945326	500 ppm CH4

SIGNATURE: [signature]

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RES Environmental Inc.

NEXT MONTH 7-27-17

SUNSHINE CANYON – COUNTY
PERIMETER PROBE MONITORING DATA

TECHNICIAN: Robert Johns
DATE: 6-29-17
TEMPERATURE: 74°
WEATHER CONDITIONS: Partly Cloudy
INST & SERIAL #: GEM 5000 / G5W550

PROBE NUMBER	TIME	PPM CH_4	%VOL CH_4	PRES (+/-)	% CO_2	%O_2	%BAL	PURGE TIME (min)	COMMENTS
202									Removed
A - 10								2	Due To
B - 25								2	Construction
C - 38								3	
203									
A – 10	1045		0.0	+.25	3.3	17.2	79.6	2	
B – 25	1047		0.0	+.02	3.2	16.6	80.2	2	
C – 40	1049		0.0	+.05	1.3	18.5	80.2	3	
206									
A – 10	0900		0.0	+.01	10.7	10.1	79.2	2	
B – 25	0902		0.0	-.01	12.3	9.0	78.8	2	
C – 38	0904		0.0	+.04	17.5	7.1	75.3	3	
207									
A – 10	0845		0.0	.10	0.2	19.8	80.0	2	
B – 25	0847		0.0	-18.71	0.2	19.7	80.1	2	
C – 40	0849		0.0	-.12	0.1	19.8	80.1	3	
208									
A – 9.1	0830		0.0	-.01	2.0	18.9	79.0	2	
B – 25	0832		0.0	+.03	9.8	12.1	78.2	2	
C – 40	0834		0.0	-.02	0.5	19.2	80.3	3	
210									
A – 10	0727		0.0	-.49	0.1	20.4	79.5	2	
B – 25	0729		0.0	-.50	0.1	20.4	79.5	2	
C – 39	0731		0.0	-.04	0.2	20.2	79.6	3	

RES SIGNATURE: Bryan Mc

LEA SIGNATURE:

RES Environmental Inc.

SUNSHINE CANYON – COUNTY
PERIMETER PROBE MONITORING DATA

TECHNICIAN: Robert Johns
DATE: 6-29-17

TEMPERATURE: 74°
WEATHER CONDITIONS: Partly Cloudy
INST & SERIAL #: GEM 5000 / G5C0530

PROBE NUMBER	TIME	PPM CH_4	%VOL CH_4	PRES (+/-)	% CO_2	%O2	%BAL	PURGE TIME (min)	COMMENTS
242									
C - 42	0740		0.0	+.02	4.1	14.9	81.0	3	
D - 60	0742		0.0	+.01	6.2	5.5	88.2	4	
E - 78	0744		0.0	+.03	5.1	11.9	82.9	4	
243									
A - 11	0950		0.0	+.03	7.5	9.6	82.9	2	
B - 20	0952		0.0	-.42	6.4	10.5	83.1	2	
C - 33	0954		0.0	-.07	5.6	11.9	82.5	3	
244									
A - 11	0810		0.0	+.09	18.3	0.2	81.5	2	
B - 21	0813		0.1	-.07	16.4	4.5	79.0	2	
C - 36	0816		0.0	-.08	18.3	0.1	81.5	3	
245									
A - 11	1010		0.0	+.04	10.2	9.8	80.1	2	
B - 20	1012		0.0	+.07	1.1	17.8	81.0	2	
C - 35	1014		0.0	+.23	6.2	15.1	78.7	3	
D - 50	1018		0.0	-.03	7.2	13.1	79.7	4	
E - 64	1022		0.0	+.07	1.3	18.6	80.1	4	
246									Removed Plug
A - 9								2	to Constant.
B - 16								2	
205R									
A - 11	0920		0.0	+.27	9.2	11.9	78.9	2	
B - 20	0922		0.0	+.03	15.5	10.4	74.1	2	
C - 33	0924		1.6	-.22	44.7	0.0	53.7	3	
D - 48	0927		2.5	-.03	46.4	0.0	51.1	4	
E - 62	0931		2.1	-.51	44.5	0.1	53.3	4	

RES SIGNATURE: [signature]

LEA SIGNATURE: [signature]

RES Environmental Inc.

SUNSHINE CANYON – COUNTY
PERIMETER PROBE MONITORING DATA

TECHNICIAN: Robert Johns
DATE: 6-29-17
TEMPERATURE: 74°
WEATHER CONDITIONS: Partly Cloudy
INST & SERIAL #: GEM 5000 / G5C0530

PROBE NUMBER	TIME	PPM CH_4	%VOL CH_4	PRES (+/-)	%CO2	%O2	%BAL	PURGE TIME (min)	COMMENTS
239									
A – 11	0707		0.0	-.09	14.2	8.9	76.9	2	
B – 20	0709		0.0	.0	0.3	20.2	79.4	2	
C – 35	0711		0.0	-.03	0.1	20.4	79.5	3	
D – 50	0714		0.0	-.03	0.2	20.3	79.5	4	
E – 64	0718		0.0	-.24	0.1	20.4	79.5	4	
240									
A – 11	0650		0.0	-.07	16.2	7.6	76.1	2	
B – 20	0652		0.0	-.10	0.1	20.1	79.8	2	
C – 33	0654		0.0	-.13	0.1	20.1	79.8	3	
D – 49	0657		0.0	-.15	0.1	20.1	79.8	4	
E – 61	0701		0.5	-0.11	0.1	20.1	79.3	4	

RES SIGNATURE: Robert Johns

LEA SIGNATURE:

RES Environmental Inc.

SUNSHINE CANYON – COUNTY
PERIMETER PROBE MONITORING DATA

TECHNICIAN: Robert Johns
DATE: 6-29-17
TEMPERATURE: 74°
WEATHER CONDITIONS: Partly Cloudy
INST & SERIAL #: GEM 5000 / G500530

PROBE NUMBER	TIME	PPM CH_4	%VOL CH_4	PRES (+/-)	%CO2	%O2	%BAL	PURGE TIME	COMMENTS
VADOSE ZONE									
203D	1030		0.0	-2.81	0.1	19.6	80.3	2	
204D	0855		0.0	-3.02	0.1	19.8	80.1	2	
211D	1037		0.0	-5.76	0.1	20.3	79.6	2	

PROBE NUMBER	TIME	PPM CH_4	%VOL CH_4						COMMENTS

RES SIGNATURE: _____

LEA SIGNATURE: _____

RES Environmental Inc.

GAS MONITORING EQUIPMENT CALIBRATION

DATE	UNIT	SERIAL #	CAL GAS
6-29-17	GEM 5000	G500530	1.5% CH4
6-29-17	TVA 1000B	1030945322	500ppm CH4

SIGNATURE: _____

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APPENDIX D

NPDES CERTIFICATION OF COMPLETION

SUNSHINE CANYON LANDFILL

A REPUBLIC SERVICES COMPANY

August 14, 2017

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 1st.

Sincerely,

Rob Sherman
General Manager
Sunshine Canyon Landfill

APPENDIX E

WASTE PLACEMENT AREAS
FIRST SEMIANNUAL 2017 MONITORING PERIOD

Geo-Logic ASSOCIATES

PREPARED ON: July 26, 2017

SUNSHINE CANYON LANDFILL

Compiled Waste Placed Limits

January 2017-June 2017

QUANTITIES

HORIZONTAL AREA: 2,241,029 S.F.
(51.44 Acres)

FILL LIMIT LEGEND

FILL LIMITS MONTH OF JANUARY 2017

FILL LIMITS MONTH OF FEBRUARY 2017

FILL LIMITS MONTH OF MARCH 2017

FILL LIMITS MONTH OF APRIL 2017

FILL LIMITS MONTH OF MAY 2017

FILL LIMITS MONTH OF JUNE 2017

290,827 S.F.
6.68 AC

754,390 S.F.
17.32 AC

491,551 S.F.
11.28 AC

308,977 S.F.
7.09 AC

395,284 S.F.
9.07 AC

NORTH

150 75 0 150 300 450

SCALE: 1"=150'

PREPARED FOR:

REPUBLIC SERVICES, INC.

WASTE COLLECTION • RECYCLING • TRANSFER • DISPOSAL

PREPARED BY:

Vertex Survey, Inc.
28348 Constellation Road, Suite 800
Santa Clarita, CA 91355
Tel: 661-254-1928 Fax: 661-254-1929

VERTEX SURVEY INC.

APPENDIX F

WASTE ACCEPTANCE REPORTS

REPUBLIC SERVICES, INC.

Republic Services, Inc.

18500 N. Allied Way, Phoenix, AZ 85054

SPECIAL WASTE DEPARTMENT DECISION

	Waste Profile #	Expiration Date	
	5123162417	2/12/2019	

I. Decision Request: Initial ✓ Recertification ✓ Change

Disposal Facility: 5123 - Sunshine Canyon Landfill

Generator Name: City of Los Angeles Police Department, Property Division

Generator Site Address: 180 North Los Angeles Street, RM BP-18

City: Los Angeles	County:	State: CA	Zip:

Name of Waste: Narcotics - Marijuana Contained in recycled Carboard Boxes

Estimated Annual Volume: 20,000 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.

Per the Special Waste Profile Change Form dated January 23, 2017, the Frequency has been changed from ONE-TIME to ON-GOING; also, the generator has increased the ESTIMATED ANNUAL VOLUME for disposal to 20,000 POUNDS.

Special Waste Analyst Signature: Joseph M. Sorokach **Name (Printed):** Joseph Sorokach

Date: 1/24/2017

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: 1/24/2017

REPUBLIC SERVICES

SPECIAL WASTE PROFILE – CHANGE

Saveable fill-in form. Restricted printing until all required (yellow) fields are completed.

I. Generator Information

This form may be used to request changes to an existing Special Waste Profile.			
Generator Name:	City of Los Angeles, Police Department, Property Division		
Name of Waste:	Narcotics - Marijuana Contained in recycli	Waste Profile #	5123162417

II. Purpose of Change

Description of Change Requested and Reason for Change: (Provide detailed explanation of why the change is requested following the appropriate checked box below).

- ☒ Volume Increase By: 9586 pounds - Annual Volume Est. 20,000 pounds
  Is the analysis originally submitted with the Profile representative of the volume Increase? ☑ Yes ☐ No If No, complete Section III, below.
- ☒ Extend Expiration Date: Change to Ongoing waste stream
- ☐ Change or Add Landfill:
- ☐ Add Additional Laboratory Reports: **Complete Representative Sample Certification, Section III, below.**
- ☐ Add MSDS:
- ☐ Generator Name Change:
- ☐ Other:

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?	☐ YES or ☐ NO
Type of Sample: ☐ COMPOSITE SAMPLE ☐ GRAB SAMPLE	
Sample Date:	
Sample ID Numbers:	

IV. Certification

I hereby certify that the waste and the process generating the waste are unchanged and are accurately represented in the original profile.

Iksoo Kim, principal Property Officer	City of Los Angeles, Police Department, Pro
Authorized Representative Name and Title (Printed)	Company Name
Authorized Representative Signature	1/23/2017
	Date

REPUBLIC SERVICES, INC.

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 #
		5123162417

I. Generator Information

Generator Name: City of Los Angeles, Police Department, Property Division			
Generator Site Address: 180 North Los Angeles St, RM BP-18			
City: Los Angeles	County: Los Angeles	State: California	Zip: 90011
State ID/Reg No: CAL000139919	State Approval/Waste Code:		NAICS #:
Generator Mailing Address (if different): ☐ 180 North Los Angeles St, RM BP-18			
City: Los Angeles	County:	State: California	Zip: 90011
Generator Contact Name: Delvin Brooks		Email: G8159@lapd.online	
Phone Number: (213) 356-3730		Fax Number: (213) 356-3787	

II. Waste Stream Information

Name of Waste: Narcotics - Marijuana contained in recycled cardboard cartons

Check Section 1 OR Section 2 below:

1. ☐ There has been a change in the characteristics of the waste stream due to the following:
   a. Change of a raw material used in the waste generating process.
   b. Change in the waste generating process itself.
   c. Change in a physical characteristic of the waste.
   d. New information has been documented concerning the human health effects of exposure to the waste.

   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.

2. ☒ There have been no changes that would alter the physical characteristics of the special waste stream. Updated analytical may be required.

III. Representative Sample Certification

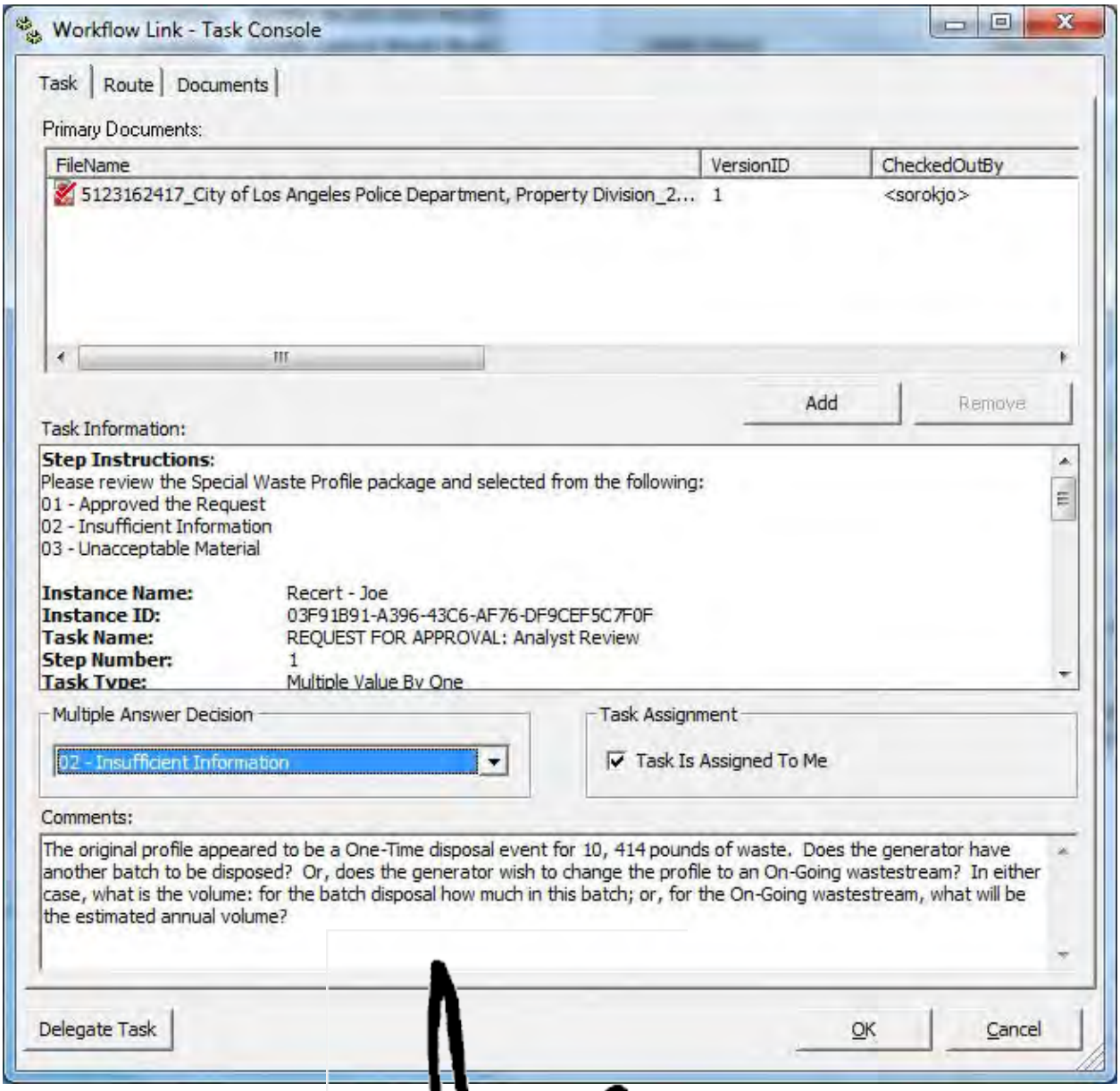
☒ No Sample Taken

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?	☐ YES or ☐ NO
Type of Sample: ☐ COMPOSITE SAMPLE ☐ GRAB SAMPLE	
Sample Date:	
Sample ID Numbers:	

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.

Iksoo Kim, Principal Property Officer	City of Los Angeles, Police Department, Property D
Authorized Representative Name And Title (Printed)	Company Name
Authorized Representative Signature	01/23/2017
	Date


Workflow Link - Task Console
Task
Route
Documents
Primary Documents:
FileName
VersionID
CheckedOutBy
5123162417_City of Los Angeles Police Department, Property Division_2...
1
<sorokjo>
Add
Remove
Task Information:
Step Instructions:
Please review the Special Waste Profile package and selected from the following:
01 - Approved the Request
02 - Insufficient Information
03 - Unacceptable Material
Instance Name: Recert - Joe
Instance ID: 03F91B91-A396-43C6-AF76-DF9CEF5C7F0F
Task Name: REQUEST FOR APPROVAL: Analyst Review
Step Number: 1
Task Type: Multiple Value By One
Multiple Answer Decision
02 - Insufficient Information
Task Assignment
Task Is Assigned To Me
Comments:
The original profile appeared to be a One-Time disposal event for 10, 414 pounds of waste. Does the generator have another batch to be disposed? Or, does the generator wish to change the profile to an On-Going wastestream? In either case, what is the volume: for the batch disposal how much in this batch; or, for the On-Going wastestream, what will be the estimated annual volume?
Delegate Task
OK
Cancel

REPUBLIC SERVICES, INC.

Republic Services, Inc.

18500 N. Allied Way, Phoenix, AZ 85054

SPECIAL WASTE DEPARTMENT DECISION

	Waste Profile #	Expiration Date	
	51231414575	6/22/2020	

I. Decision Request: ☐ Initial ☑ Recertification ☐ Change

Disposal Facility: 5123 - Sunshine Canyon Landfill

Generator Name: Grifols Biologicals Inc

Generator Site Address: 5555 Valley Blvd

City: Los Angeles **County:** **State:** CA **Zip:**

Name of Waste: Filter Press Waste

Estimated Annual Volume: 150 Tons

II. Special Waste Department Decision: ☑ Approved ☐ Rejected

Management Method(s): ☑ Landfill ☐ Solidification ☐ Bioremediation ☐ Transfer Facility

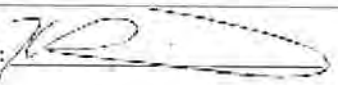
Problematic Special Waste according to Republic? ☐ Yes ☑ No

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:  **Name (Printed):** KEITH DIAMANTI

Date: 6/22/2017

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: 6/22/2017

REPUBLIC SERVICES, INC.

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 #
		51231414575

I. Generator Information

Generator Name: Grifols Biologocals Inc			
Generator Site Address: 5555 Valley Blvd			
City: Los Angeles	County: Los Angeles	State: California	Zip: 90032
State ID/Reg No:	State Approval/Waste Code:		NAICS #:
Generator Mailing Address (if different): ☐ 5555 Valley Blvd			
City: Los Angeles	County: Los Angeles	State: California	Zip: 90032
Generator Contact Name: Bruce Dolezal		Email: bruce.dolezal@grifols.com	
Phone Number: (323) 227-7099		Fax Number:	

II. Waste Stream Information

Name of Waste: Filter Press Waste

Check Section 1 OR Section 2 below:

1. ☐ There has been a change in the characteristics of the waste stream due to the following:
   a. Change of a raw material used in the waste generating process.
   b. Change in the waste generating process itself.
   c. Change in a physical characteristic of the waste.
   d. New information has been documented concerning the human health effects of exposure to the waste.

   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.

2. ☒ There have been no changes that would alter the physical characteristics of the special waste stream. Updated analytical may be required.

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?	☐ YES or ☐ NO
Type of Sample: ☐ COMPOSITE SAMPLE ☐ GRAB SAMPLE	
Sample Date:	
Sample ID Numbers:	

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.

Brandon Eastman - EHS Specialist	Grifols Biologicals Inc
Authorized Representative Name And Title (Printed)	Company Name
Authorized Representative Signature	6/22/17 Date

Republic Services, Inc.

18500 N. Allied Way, Phoenix, AZ 85054

SPECIAL WASTE DEPARTMENT DECISION

	Waste Profile #	Expiration Date	
	51231612630	5/1/2019	

I. Decision Request: ☐ Initial ☑ Recertification ☐ Change

Disposal Facility: 5123 - Sunshine Canyon Landfill

Generator Name: Walsh Shea Corridor Constructors

Generator Site Address: Intersection of Crenshaw 48th Street

City: Los Angeles **County:** **State:** CA **Zip:**

Name of Waste: Treated Wood Waste for New Construction

Estimated Annual Volume: 70 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 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):** MARK PHILLIPS

Date: 3/27/2017

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: 3/27/2017

REPUBLIC SERVICES

SPECIAL WASTE PROFILE – CHANGE

Saveable fill-in form. Restricted printing until all required (yellow) fields are completed

I. Generator Information

This form may be used to request changes to an existing Special Waste Profile.			
Generator Name:	Walsh Shea Corridor Constructors		
Name of Waste:	Treated Wood Waste	Waste Profile #	51231612630

II. Purpose of Change

Description of Change Requested and Reason for Change: (Provide detailed explanation of why the change is requested following the appropriate checked box below).

- ☐ Volume Increase By:
  Is the analysis originally submitted with the Profile representative of the volume Increase? ☐ Yes ☐ No If No, complete Section III, below.
- ☒ Extend Expiration Date: May 1, 2019
- ☐ Change or Add Landfill:
- ☐ Add Additional Laboratory Reports: **Complete Representative Sample Certification, Section III, below.**
- ☐ Add MSDS:
- ☐ Generator Name Change:
- ☒ Other: Project was extended and need more time to bring in the material already profiled.

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?	☐ YES or ☐ NO

Type of Sample: ☐ COMPOSITE SAMPLE ☐ GRAB SAMPLE

Sample Date: N/A

Sample ID Numbers: N/A

IV. Certification

I hereby certify that the waste and the process generating the waste are unchanged and are accurately represented in the original profile.

[illegible]	Walsh Shea Corridor Constructors
Authorized Representative Name and Title (Printed)	Company Name
Authorized Representative Signature	3/27/2017
	Date

REPUBLIC SERVICES, INC.

Republic Services, Inc.

18500 N. Allied Way, Phoenix, AZ 85054

SPECIAL WASTE DEPARTMENT DECISION

	Waste Profile #	Expiration Date	
	5123171985	3/31/2017	

I. Decision Request: ✓ **Initial** **Recertification** **Change**

Disposal Facility: 5123 - Sunshine Canyon Landfill

Generator Name: Southern California Edison Pomona TSD

Generator Site Address: 265 East End Avenue

City: Pomona	County:	State: CA	Zip:

Name of Waste: Non Hazardous Soil

Estimated Annual Volume: 3 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: Joseph M. Sorokach **Name (Printed):** Joseph Sorokach

Date: 2/6/2017

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: 2/6/2017

REPUBLIC SERVICES **SPECIAL WASTE PROFILE**

Requested Disposal Facility: 5123 Sunshine Canyon LF CA

Waste Profile #: 5123 17 1985

Sales Rep #: 525 - Stacy Loveland

Saveable fill-in form. Restricted printing until all required (yellow) fields are completed.

I. Generator Information

Generator Name: Southern California Edison Pomona TSD			
Generator Site Address: 265 East End Avenue			
City: Pomona	County: Los Angeles	State: California	Zip: 91767
State ID/Reg No: N/A	State Approval/Waste Code: N/A (if applicable)		NAICS # :
Generator Mailing Address (if different): ☑ 6040 Irwindale Suite A			
City: Irwindale	County: Los Angeles	State: California	Zip: 91702
Generator Contact Name: Sara Duvall		Email: sara.duvall@sce.com	
Phone Number: (626) 862-8458	Ext:	Fax Number:	

II. Billing Information

Bill To: Hal Hays Construction Inc.		Contact Name: Karun Mani	
Billing Address: 4181 Latham Street		Email: kmani@halhays.com	
City: Riverside	State: CA	Zip: 92501	Phone: (351) 205-3343

III. Waste Stream Information

Name of Waste: Non Hazardous Soil	
Process Generating Waste: Installation of electrical and data conduits	
Type of Waste:	☑ INDUSTRIAL PROCESS WASTE ☐ POLLUTION CONTROL WASTE
Physical State:	☑ SOLID ☐ SEMI-SOLID ☐ POWDER ☐ LIQUID
Method of Shipment:	☑ BULK ☐ DRUM ☐ BAGGED ☐ OTHER:
Estimated Annual Volume:	3 Cubic Yards
Frequency:	☑ ONE TIME ☐ ONGOING
Disposal Consideration:	☑ LANDFILL ☐ SOLIDIFICATION ☐ 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?	☑ YES or ☐ NO
Type of Sample: ☐ COMPOSITE SAMPLE ☑ GRAB SAMPLE	
Sample Date: 11/15/16	
Sample ID Numbers: 1604057-01 1604057-02	

REPUBLIC SERVICES **SPECIAL WASTE PROFILE**

Waste Profile #
5123 17 1985

V. Physical Characteristics of Waste

Characteristic Components	% by Weight (range)
1. Soil with TPH	100
2.	
3.	
4.	
5.	

Color	Odor (describe)	Does Waste Contain Free Liquids?	% Solids	pH:	Flash Point
Dark	None	☐ YES or ☑ NO	100	7	>140 °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?	☐ Yes or ☑ 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)]?	☐ Yes or ☑ No
Does this waste contain regulated concentrations of Polychlorinated Biphenyls (PCBs) as defined in 40 CFR Part 761?	☐ Yes or ☑ 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?	☐ Yes or ☑ No
Does this waste exhibit a Hazardous Characteristic as defined by Federal and/or State regulations?	☐ Yes or ☑ No
Does this waste contain regulated concentrations of 2,3,7,8-Tetrachlorodibenzodioxin (2,3,7,8-TCCD), or any other dioxin as defined in 40 CFR 261.31?	☐ Yes or ☑ No
Is this a regulated Radioactive Waste as defined by Federal and/or State regulations?	☐ Yes or ☑ No
Is this a regulated Medical or Infectious Waste as defined by Federal and/or State regulations?	☐ Yes or ☑ No
Is this waste a reactive or heat generating waste?	☐ Yes or ☑ No
Does the waste contain sulfur or sulfur by-products?	☐ Yes or ☑ No
Is this waste generated at a Federal Superfund Clean Up Site?	☐ Yes or ☑ No
Is this waste from a TSD facility, TSD like facility or consolidator?	☐ Yes or ☑ 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.

Sara Duvall	Southern California Edison
Authorized Representative Name And Title (Type or Print)	Company Name
Sara Duvall	1/24/2017
Authorized Representative Signature	Date

AGENT SPECIAL WASTE SERVICE AGREEMENT
NON-HAZARDOUS WASTES

REPUBLIC SERVICES

Special Waste Profile Number: **5123 17 1985**

Agent Billing Information		**Republic Waste Location (Company)**
Name:	HAL HAYS CONSTRUCTION (ACCOUNT # **333365**)	SUNSHINE CANYON LANDFILL, INC. (COMPANY 5123)
Address:	4181 LATHAM ST	14747 SAN FERNANDO ROAD
		SYLMAR, CA 91342
City:	RIVERSIDE	818.833.6500
State:	CA Zip: 92501	
Phone:	951.755.0703 Fax:	
Contact:	KARUN MANI	

Project: SOUTHERN CALIFORNIA EDISON POMONA TSD **County and State of Origin:** SAN DIEGO, CALIFORNIA

Generator Address: 265 EAST END AVENUE, POMONA, CA 91767

Additional Information: CONTACT: SARA DUVALL | CONTACT PHONE: 626.862.8458

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").

3. (A) **Rates for Disposal:**

Waste	Disposal Method	Disposal Rate:	Fees / Taxes / Misc.	Transportation
NON HAZARDOUS SOIL	LANDFILL	[redacted]	[redacted]	N/A
N/A	N/A	N/A	N/A	N/A

Additional Information: [redacted]

MATERIAL CODE: VG-SW-CONT SOIL | PROFILE EXPIRES: 3/31/2017

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 3 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 **2** months, commencing **2/6/2017** 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 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	**REPUBLIC SERVICES, INC/COMPANY**
SIGNATURE (AUTHORIZED REPRESENTATIVE)	SIGNATURE (AUTHORIZED REPRESENTATIVE)
KARUN MANI, PROJECT MANAGER	Stacy Loveland - SW Executive
NAME AND TITLE (PLEASE PRINT)	NAME AND TITLE (PLEASE PRINT)
2/7/2017	2/7/2017
DATE	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.

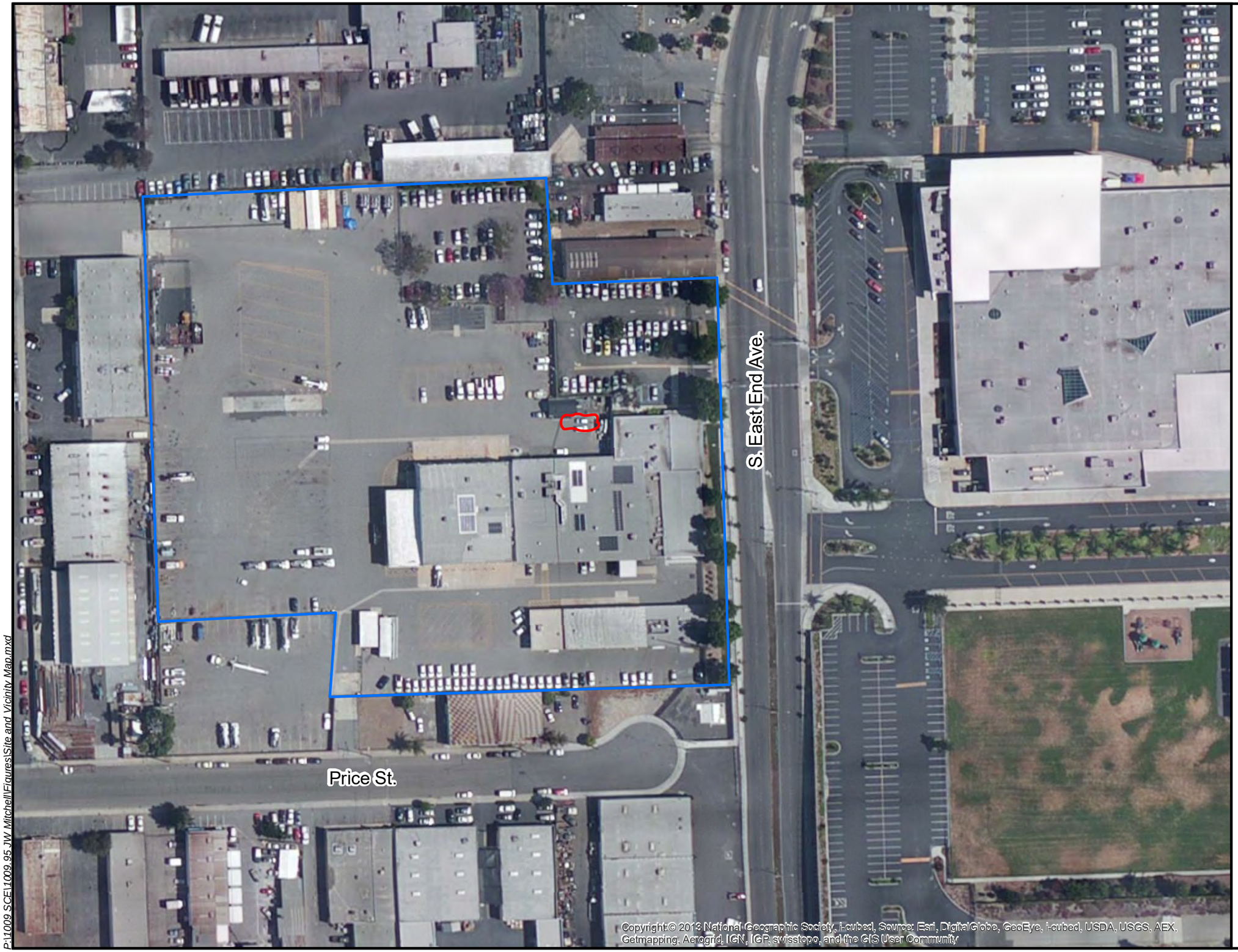
(G) Agent represents, warrants and covenants that it is and during the term of this Agreement, will remain, in compliance with and will perform its obligations pursuant to all applicable laws and regulations and shall indemnify, defend and hold harmless the Company from any breach thereof.

(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: _____



N

0 50 100 200
Feet

1:1,200

Legend

- Site Boundary
- Approximate Excavated Area where the Pipe Line was found

FIGURE 1

SITE AND VICINITY MAP

Southern California Edison
Pomona TSD
265 East End Avenue
Pomona, California

RUBICON
Engineering Corporation

P:\1009.SCE\1009.95.JW Mitchell\Figures\Site and Vicinity Map.mxd

ADVANCED TECHNOLOGY LABORATORIES

November 17, 2016

Peter Lee
Rubicon Engineering Corporation
12831 Newport Avenue, Suite 200
Tustin, CA 92780
Tel: (714) 573-0081
Fax:(714) 573-0082

ELAP No.: 1838
CSDLAC No.: 10196
ORELAP No.: CA300003
TCEQ No. : T104704502

Re: ATL Work Order Number : 1604057
Client Reference : Pomona TSD, 1009R.29

Enclosed are the results for sample(s) received on November 15, 2016 by Advanced Technology Laboratories. The sample(s) are tested for the parameters as indicated on the enclosed chain of custody in accordance with applicable laboratory certifications. The laboratory results contained in this report specifically pertains to the sample(s) submitted.

Thank you for the opportunity to serve the needs of your company. If you have any questions, please feel free to contact me or your Project Manager.

Sincerely,

Eddie Rodriguez
Laboratory Director

Certificate of Analysis

Rubicon Engineering Corporation		Project Number :	Pomona TSD, 1009R.29
12831 Newport Avenue, Suite 200		Report To :	Peter Lee
Tustin , CA 92780		Reported :	11/17/2016

SUMMARY OF SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
S1	1604057-01	Soil	11/15/16 11:08	11/15/16 14:08
S2	1604057-02	Soil	11/15/16 11:20	11/15/16 14:08

Certificate of Analysis

Rubicon Engineering Corporation	Project Number : Pomona TSD, 1009R.29
12831 Newport Avenue, Suite 200	Report To : Peter Lee
Tustin , CA 92780	Reported : 11/17/2016

Client Sample ID S1

Lab ID: 1604057-01

Title 22 Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B6K0547	11/15/2016	11/15/16 17:45	
Arsenic	**4.8**	1.0	1	B6K0547	11/15/2016	11/15/16 17:45	
Barium	**52**	1.0	1	B6K0547	11/15/2016	11/15/16 17:45	
Beryllium	ND	1.0	1	B6K0547	11/15/2016	11/15/16 17:45	
Cadmium	ND	1.0	1	B6K0547	11/15/2016	11/15/16 17:45	
Chromium	**12**	1.0	1	B6K0547	11/15/2016	11/15/16 17:45	
Cobalt	**5.6**	1.0	1	B6K0547	11/15/2016	11/15/16 17:45	
Copper	**17**	2.0	1	B6K0547	11/15/2016	11/15/16 17:45	
Lead	**20**	1.0	1	B6K0547	11/15/2016	11/15/16 17:45	
Molybdenum	ND	1.0	1	B6K0547	11/15/2016	11/15/16 17:45	
Nickel	**15**	1.0	1	B6K0547	11/15/2016	11/15/16 17:45	
Selenium	ND	1.0	1	B6K0547	11/15/2016	11/15/16 17:45	
Silver	ND	1.0	1	B6K0547	11/15/2016	11/15/16 17:45	
Thallium	ND	1.0	1	B6K0547	11/15/2016	11/15/16 17:45	
Vanadium	**18**	1.0	1	B6K0547	11/15/2016	11/15/16 17:45	
Zinc	**72**	1.0	1	B6K0547	11/15/2016	11/15/16 17:45	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: SB

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B6K0557	11/15/2016	11/15/16 18:48	

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: VW

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
C4	ND	1.0	1	B6K0545	11/15/2016	11/15/16 15:58	
C5	ND	1.0	1	B6K0545	11/15/2016	11/15/16 15:58	
C6	ND	1.0	1	B6K0545	11/15/2016	11/15/16 15:58	
C7	ND	1.0	1	B6K0545	11/15/2016	11/15/16 15:58	
Surrogate: 4-Bromofluorobenzene	*86.7 %*	*36 - 125*		B6K0545	11/15/2016	*11/15/16 15:58*	

Certificate of Analysis

Rubicon Engineering Corporation	Project Number : Pomona TSD, 1009R.29
12831 Newport Avenue, Suite 200	Report To : Peter Lee
Tustin , CA 92780	Reported : 11/17/2016

Client Sample ID S1

Lab ID: 1604057-01

Hydrocarbon Chain Distribution by EPA 8015B (Modified)

Analyst: CR

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
C8	ND	250	25	B6K0579	11/15/2016	11/16/16 10:32	
C9-C10	ND	250	25	B6K0579	11/15/2016	11/16/16 10:32	
C11-C12	ND	250	25	B6K0579	11/15/2016	11/16/16 10:32	
C13-C14	ND	250	25	B6K0579	11/15/2016	11/16/16 10:32	
C15-C16	ND	250	25	B6K0579	11/15/2016	11/16/16 10:32	
C17-C18	**370**	250	25	B6K0579	11/15/2016	11/16/16 10:32	
C19-C20	**480**	250	25	B6K0579	11/15/2016	11/16/16 10:32	
C21-C22	**680**	250	25	B6K0579	11/15/2016	11/16/16 10:32	
C23-C24	**760**	250	25	B6K0579	11/15/2016	11/16/16 10:32	
C25-C28	**2300**	250	25	B6K0579	11/15/2016	11/16/16 10:32	
C29-C32	**3200**	250	25	B6K0579	11/15/2016	11/16/16 10:32	
C33-C36	**3300**	250	25	B6K0579	11/15/2016	11/16/16 10:32	
C37-C40	**3500**	250	25	B6K0579	11/15/2016	11/16/16 10:32	
Surrogate: p-Terphenyl	*0%*	*47 - 157*		B6K0579	11/15/2016	*11/16/16 10:32*	S4

Total Hydrocarbons by Calculation

Analyst: CR

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
C4-C40 Total	**15000**	25	25	B6K0620	11/15/2016	11/16/16 10:32	

Polychlorinated Biphenyls by EPA 8082

Analyst: RL

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	16	1	B6K0588	11/15/2016	11/16/16 09:11	
Aroclor 1221	ND	16	1	B6K0588	11/15/2016	11/16/16 09:11	
Aroclor 1232	ND	16	1	B6K0588	11/15/2016	11/16/16 09:11	
Aroclor 1242	ND	16	1	B6K0588	11/15/2016	11/16/16 09:11	
Aroclor 1248	ND	16	1	B6K0588	11/15/2016	11/16/16 09:11	
Aroclor 1254	ND	16	1	B6K0588	11/15/2016	11/16/16 09:11	
Aroclor 1260	ND	16	1	B6K0588	11/15/2016	11/16/16 09:11	
Aroclor 1262	ND	16	1	B6K0588	11/15/2016	11/16/16 09:11	
Aroclor 1268	ND	16	1	B6K0588	11/15/2016	11/16/16 09:11	
Surrogate: Decachlorobiphenyl	*15.1 %*	*26 - 137*		B6K0588	11/15/2016	*11/16/16 09:11*	S2
Surrogate: Tetrachloro-m-xylene	*19.1 %*	*28 - 102*		B6K0588	11/15/2016	*11/16/16 09:11*	S2

Certificate of Analysis

Rubicon Engineering Corporation	Project Number : Pomona TSD, 1009R.29
12831 Newport Avenue, Suite 200	Report To : Peter Lee
Tustin , CA 92780	Reported : 11/17/2016

Client Sample ID S2

Lab ID: 1604057-02

Title 22 Metals by ICP-AES EPA 6010B

Analyst: GO

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Antimony	ND	2.0	1	B6K0547	11/15/2016	11/15/16 17:46	
Arsenic	**1.5**	1.0	1	B6K0547	11/15/2016	11/15/16 17:46	
Barium	**65**	1.0	1	B6K0547	11/15/2016	11/15/16 17:46	
Beryllium	ND	1.0	1	B6K0547	11/15/2016	11/15/16 17:46	
Cadmium	ND	1.0	1	B6K0547	11/15/2016	11/15/16 17:46	
Chromium	**5.4**	1.0	1	B6K0547	11/15/2016	11/15/16 17:46	
Cobalt	**4.7**	1.0	1	B6K0547	11/15/2016	11/15/16 17:46	
Copper	**12**	2.0	1	B6K0547	11/15/2016	11/15/16 17:46	
Lead	**3.6**	1.0	1	B6K0547	11/15/2016	11/15/16 17:46	
Molybdenum	ND	1.0	1	B6K0547	11/15/2016	11/15/16 17:46	
Nickel	**11**	1.0	1	B6K0547	11/15/2016	11/15/16 17:46	
Selenium	ND	1.0	1	B6K0547	11/15/2016	11/15/16 17:46	
Silver	ND	1.0	1	B6K0547	11/15/2016	11/15/16 17:46	
Thallium	ND	1.0	1	B6K0547	11/15/2016	11/15/16 17:46	
Vanadium	**19**	1.0	1	B6K0547	11/15/2016	11/15/16 17:46	
Zinc	**710**	1.0	1	B6K0547	11/15/2016	11/15/16 17:46	

Mercury by AA (Cold Vapor) EPA 7471A

Analyst: SB

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Mercury	ND	0.10	1	B6K0557	11/15/2016	11/15/16 18:51	

Gasoline Range Organics by EPA 8015B (Modified)

Analyst: VW

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
C4	ND	1.0	1	B6K0545	11/15/2016	11/15/16 16:14	
C5	ND	1.0	1	B6K0545	11/15/2016	11/15/16 16:14	
C6	ND	1.0	1	B6K0545	11/15/2016	11/15/16 16:14	
C7	ND	1.0	1	B6K0545	11/15/2016	11/15/16 16:14	
Surrogate: 4-Bromofluorobenzene	*85.6 %*	*36 - 125*		B6K0545	11/15/2016	*11/15/16 16:14*	

Certificate of Analysis

Rubicon Engineering Corporation	Project Number : Pomona TSD, 1009R.29
12831 Newport Avenue, Suite 200	Report To : Peter Lee
Tustin , CA 92780	Reported : 11/17/2016

Client Sample ID S2

Lab ID: 1604057-02

Hydrocarbon Chain Distribution by EPA 8015B (Modified)

Analyst: CR

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
C8	ND	250	25	B6K0579	11/15/2016	11/16/16 10:50	
C9-C10	ND	250	25	B6K0579	11/15/2016	11/16/16 10:50	
C11-C12	ND	250	25	B6K0579	11/15/2016	11/16/16 10:50	
C13-C14	ND	250	25	B6K0579	11/15/2016	11/16/16 10:50	
C15-C16	ND	250	25	B6K0579	11/15/2016	11/16/16 10:50	
C17-C18	**430**	250	25	B6K0579	11/15/2016	11/16/16 10:50	
C19-C20	**670**	250	25	B6K0579	11/15/2016	11/16/16 10:50	
C21-C22	**910**	250	25	B6K0579	11/15/2016	11/16/16 10:50	
C23-C24	**930**	250	25	B6K0579	11/15/2016	11/16/16 10:50	
C25-C28	**2800**	250	25	B6K0579	11/15/2016	11/16/16 10:50	
C29-C32	**4100**	250	25	B6K0579	11/15/2016	11/16/16 10:50	
C33-C36	**4500**	250	25	B6K0579	11/15/2016	11/16/16 10:50	
C37-C40	**4800**	250	25	B6K0579	11/15/2016	11/16/16 10:50	
Surrogate: p-Terphenyl	*0%*	*47 - 157*		B6K0579	11/15/2016	*11/16/16 10:50*	S4

Total Hydrocarbons by Calculation

Analyst: CR

Analyte	Result (mg/kg)	PQL (mg/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
C4-C40 Total	**19000**	25	25	B6K0620	11/15/2016	11/16/16 10:50	

Polychlorinated Biphenyls by EPA 8082

Analyst: RL

Analyte	Result (ug/kg)	PQL (ug/kg)	Dilution	Batch	Prepared	Date/Time Analyzed	Notes
Aroclor 1016	ND	16	1	B6K0588	11/15/2016	11/16/16 09:30	
Aroclor 1221	ND	16	1	B6K0588	11/15/2016	11/16/16 09:30	
Aroclor 1232	ND	16	1	B6K0588	11/15/2016	11/16/16 09:30	
Aroclor 1242	ND	16	1	B6K0588	11/15/2016	11/16/16 09:30	
Aroclor 1248	ND	16	1	B6K0588	11/15/2016	11/16/16 09:30	
Aroclor 1254	ND	16	1	B6K0588	11/15/2016	11/16/16 09:30	
Aroclor 1260	ND	16	1	B6K0588	11/15/2016	11/16/16 09:30	
Aroclor 1262	ND	16	1	B6K0588	11/15/2016	11/16/16 09:30	
Aroclor 1268	ND	16	1	B6K0588	11/15/2016	11/16/16 09:30	
Surrogate: Decachlorobiphenyl	*14.6 %*	*26 - 137*		B6K0588	11/15/2016	*11/16/16 09:30*	S2
Surrogate: Tetrachloro-m-xylene	*20.0 %*	*28 - 102*		B6K0588	11/15/2016	*11/16/16 09:30*	S2

Certificate of Analysis

Rubicon Engineering Corporation	Project Number : Pomona TSD, 1009R.29
12831 Newport Avenue, Suite 200	Report To : Peter Lee
Tustin , CA 92780	Reported : 11/17/2016

QUALITY CONTROL SECTION

Title 22 Metals by ICP-AES EPA 6010B - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B6K0547 - EPA 3050B_S									
Blank (B6K0547-BLK1)				Prepared: 11/15/2016 Analyzed: 11/15/2016					
Antimony	ND	2.0			NR				
Arsenic	ND	1.0			NR				
Barium	ND	1.0			NR				
Beryllium	ND	1.0			NR				
Cadmium	ND	1.0			NR				
Chromium	ND	1.0			NR				
Cobalt	ND	1.0			NR				
Copper	ND	2.0			NR				
Lead	ND	1.0			NR				
Molybdenum	ND	1.0			NR				
Nickel	ND	1.0			NR				
Selenium	ND	1.0			NR				
Silver	ND	1.0			NR				
Thallium	ND	1.0			NR				
Vanadium	ND	1.0			NR				
Zinc	ND	1.0			NR				
LCS (B6K0547-BS1)				Prepared: 11/15/2016 Analyzed: 11/15/2016					
Antimony	45.1431	2.0	50.0000		90.3	80 - 120			
Arsenic	44.0633	1.0	50.0000		88.1	80 - 120			
Barium	47.3052	1.0	50.0000		94.6	80 - 120			
Beryllium	44.6554	1.0	50.0000		89.3	80 - 120			
Cadmium	45.8046	1.0	50.0000		91.6	80 - 120			
Chromium	47.9742	1.0	50.0000		95.9	80 - 120			
Cobalt	47.0061	1.0	50.0000		94.0	80 - 120			
Copper	48.2342	2.0	50.0000		96.5	80 - 120			
Lead	45.5476	1.0	50.0000		91.1	80 - 120			
Molybdenum	46.4276	1.0	50.0000		92.9	80 - 120			
Nickel	46.2094	1.0	50.0000		92.4	80 - 120			
Selenium	41.2813	1.0	50.0000		82.6	80 - 120			
Silver	46.4474	1.0	50.0000		92.9	80 - 120			
Thallium	44.2750	1.0	50.0000		88.5	80 - 120			
Vanadium	49.1295	1.0	50.0000		98.3	80 - 120			
Zinc	45.6002	1.0	50.0000		91.2	80 - 120			
Duplicate (B6K0547-DUP1)		**Source: 1604028-39**		Prepared: 11/15/2016 Analyzed: 11/15/2016					
Antimony	ND	2.0		ND	NR			20	
Arsenic	5.99508	1.0		6.59596	NR		9.54	20	
Barium	54.5919	1.0		66.9612	NR		20.4	20	R
Beryllium	0.176406	1.0		0.207968	NR		16.4	20	

Certificate of Analysis

Rubicon Engineering Corporation	Project Number : Pomona TSD, 1009R.29
12831 Newport Avenue, Suite 200	Report To : Peter Lee
Tustin , CA 92780	Reported : 11/17/2016

Title 22 Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B6K0547 - EPA 3050B_S (continued)									
Duplicate (B6K0547-DUP1) - Continued		**Source: 1604028-39**		Prepared: 11/15/2016 Analyzed: 11/15/2016					
Cadmium	ND	1.0		ND	NR			20	
Chromium	25.5402	1.0		23.6503	NR		7.68	20	
Cobalt	7.65336	1.0		8.68460	NR		12.6	20	
Copper	140.807	2.0		64.0064	NR		75.0	20	R
Molybdenum	0.660529	1.0		0.888316	NR		29.4	20	R
Nickel	26.0284	1.0		20.9282	NR		21.7	20	R
Selenium	ND	1.0		ND	NR			20	
Silver	ND	1.0		ND	NR			20	
Thallium	ND	1.0		ND	NR			20	
Vanadium	31.0314	1.0		37.3192	NR		18.4	20	
Zinc	210.394	1.0		224.416	NR		6.45	20	
Duplicate (B6K0547-DUP2)		**Source: 1604028-39**		Prepared: 11/15/2016 Analyzed: 11/15/2016					
Lead	1730.47	5.0		1846.44	NR		6.48	20	D1
Matrix Spike (B6K0547-MS1)		**Source: 1604028-39**		Prepared: 11/15/2016 Analyzed: 11/15/2016					
Antimony	80.1738	2.0	125.000	ND	64.1	34 - 103			
Arsenic	98.5882	1.0	125.000	6.59596	73.6	59 - 103			
Barium	175.396	1.0	125.000	66.9612	86.7	30 - 134			
Beryllium	89.5130	1.0	125.000	0.207968	71.4	62 - 105			
Cadmium	87.4458	1.0	125.000	ND	70.0	53 - 102			
Chromium	115.513	1.0	125.000	23.6503	73.5	51 - 111			
Cobalt	94.5569	1.0	125.000	8.68460	68.7	55 - 105			
Copper	156.790	2.0	125.000	64.0064	74.2	53 - 126			
Molybdenum	89.4770	1.0	125.000	0.888316	70.9	57 - 105			
Nickel	106.977	1.0	125.000	20.9282	68.8	49 - 109			
Selenium	84.7258	1.0	125.000	ND	67.8	57 - 99			
Silver	96.1896	1.0	125.000	ND	77.0	64 - 105			
Thallium	83.6135	1.0	125.000	ND	66.9	46 - 105			
Vanadium	132.408	1.0	125.000	37.3192	76.1	60 - 109			
Zinc	264.778	1.0	250.000	224.416	16.1	29 - 122			M1
Matrix Spike (B6K0547-MS2)		**Source: 1604028-39**		Prepared: 11/15/2016 Analyzed: 11/15/2016					
Lead	1448.07	5.0	125.000	1846.44	-319	34 - 129			D1, M1
Matrix Spike Dup (B6K0547-MSD1)		**Source: 1604028-39**		Prepared: 11/15/2016 Analyzed: 11/15/2016					
Antimony	81.5050	2.0	125.000	ND	65.2	34 - 103	1.65	20	
Arsenic	98.8374	1.0	125.000	6.59596	73.8	59 - 103	0.252	20	
Barium	138.854	1.0	125.000	66.9612	57.5	30 - 134	23.3	20	R
Beryllium	89.8623	1.0	125.000	0.207968	71.7	62 - 105	0.389	20	
Cadmium	86.9021	1.0	125.000	ND	69.5	53 - 102	0.624	20	
Chromium	111.368	1.0	125.000	23.6503	70.2	51 - 111	3.65	20	

Certificate of Analysis

Rubicon Engineering Corporation	Project Number : Pomona TSD, 1009R.29
12831 Newport Avenue, Suite 200	Report To : Peter Lee
Tustin , CA 92780	Reported : 11/17/2016

Title 22 Metals by ICP-AES EPA 6010B - Quality Control (cont'd)

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B6K0547 - EPA 3050B_S (continued)									
Matrix Spike Dup (B6K0547-MSD1) - Continued		**Source: 1604028-39**		Prepared: 11/15/2016 Analyzed: 11/15/2016					
Cobalt	94.9664	1.0	125.000	8.68460	69.0	55 - 105	0.432	20	
Copper	149.286	2.0	125.000	64.0064	68.2	53 - 126	4.90	20	
Lead	1007.37	1.0	125.000	1846.44	-671	34 - 129	23.1	20	M1, R
Molybdenum	88.1244	1.0	125.000	0.888316	69.8	57 - 105	1.52	20	
Nickel	105.782	1.0	125.000	20.9282	67.9	49 - 109	1.12	20	
Selenium	85.1048	1.0	125.000	ND	68.1	57 - 99	0.446	20	
Silver	94.1805	1.0	125.000	ND	75.3	64 - 105	2.11	20	
Thallium	83.0538	1.0	125.000	ND	66.4	46 - 105	0.672	20	
Vanadium	132.088	1.0	125.000	37.3192	75.8	60 - 109	0.242	20	
Zinc	245.737	1.0	250.000	224.416	8.53	29 - 122	7.46	20	M1

Certificate of Analysis

Rubicon Engineering Corporation	Project Number : Pomona TSD, 1009R.29
12831 Newport Avenue, Suite 200	Report To : Peter Lee
Tustin , CA 92780	Reported : 11/17/2016

Mercury by AA (Cold Vapor) EPA 7471A - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B6K0557 - EPA 7471_S									
Blank (B6K0557-BLK1)				Prepared: 11/15/2016 Analyzed: 11/15/2016					
Mercury	ND	0.10			NR				
LCS (B6K0557-BS1)				Prepared: 11/15/2016 Analyzed: 11/15/2016					
Mercury	0.810746	0.10	0.833333		97.3	80 - 120			
Duplicate (B6K0557-DUP1)		**Source: 1604028-18**		Prepared: 11/15/2016 Analyzed: 11/15/2016					
Mercury	0.298402	0.10		0.344862	NR		14.4	20	
Matrix Spike (B6K0557-MS1)		**Source: 1604028-18**		Prepared: 11/15/2016 Analyzed: 11/15/2016					
Mercury	1.03389	0.10	0.833333	0.344862	82.7	70 - 130			
Matrix Spike Dup (B6K0557-MSD1)		**Source: 1604028-18**		Prepared: 11/15/2016 Analyzed: 11/15/2016					
Mercury	1.05561	0.10	0.833333	0.344862	85.3	70 - 130	2.08	20	
Post Spike (B6K0557-PS1)		**Source: 1604028-18**		Prepared: 11/15/2016 Analyzed: 11/15/2016					
Mercury	0.008728		5.00000E-3	0.004138	91.8	85 - 115			

Certificate of Analysis

Rubicon Engineering Corporation	Project Number : Pomona TSD, 1009R.29
12831 Newport Avenue, Suite 200	Report To : Peter Lee
Tustin , CA 92780	Reported : 11/17/2016

Gasoline Range Organics by EPA 8015B (Modified) - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B6K0545 - GCVOA_S									
Blank (B6K0545-BLK1)					Prepared: 11/15/2016 Analyzed: 11/15/2016				
C4	ND	1.0			NR				
C5	ND	1.0			NR				
C6	ND	1.0			NR				
C7	ND	1.0			NR				
Surrogate: 4-Bromofluorobenzene	*0.2028*		*0.200000*		*101*	*36 - 125*			
LCS (B6K0545-BS1)					Prepared: 11/15/2016 Analyzed: 11/15/2016				
Gasoline Range Organics	5.04000	1.0	5.00000		101	70 - 130			
Surrogate: 4-Bromofluorobenzene	*0.2055*		*0.200000*		*103*	*36 - 125*			
Duplicate (B6K0545-DUP1)		**Source: 1604029-30**			Prepared: 11/15/2016 Analyzed: 11/15/2016				
Gasoline Range Organics	ND	1.0		ND	NR			20	
Surrogate: 4-Bromofluorobenzene	*0.1974*		*0.200000*		*98.7*	*36 - 125*			
Matrix Spike (B6K0545-MS1)		**Source: 1604029-30**			Prepared: 11/15/2016 Analyzed: 11/15/2016				
Gasoline Range Organics	3.72200	1.0	5.00000	ND	74.4	32 - 161			
Surrogate: 4-Bromofluorobenzene	*0.1973*		*0.200000*		*98.7*	*36 - 125*			
Matrix Spike Dup (B6K0545-MSD1)		**Source: 1604029-30**			Prepared: 11/15/2016 Analyzed: 11/15/2016				
Gasoline Range Organics	3.75000	1.0	5.00000	ND	75.0	32 - 161	0.749	20	
Surrogate: 4-Bromofluorobenzene	*0.1998*		*0.200000*		*99.9*	*36 - 125*			

Certificate of Analysis

Rubicon Engineering Corporation	Project Number : Pomona TSD, 1009R.29
12831 Newport Avenue, Suite 200	Report To : Peter Lee
Tustin , CA 92780	Reported : 11/17/2016

Hydrocarbon Chain Distribution by EPA 8015B (Modified) - Quality Control

Analyte	Result (mg/kg)	PQL (mg/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B6K0579 - GCSEMI_DRO_S									
Blank (B6K0579-BLK1)					Prepared: 11/15/2016 Analyzed: 11/16/2016				
C8	ND	10			NR				
C9-C10	ND	10			NR				
C11-C12	ND	10			NR				
C13-C14	ND	10			NR				
C15-C16	ND	10			NR				
C17-C18	ND	10			NR				
C19-C20	ND	10			NR				
C21-C22	ND	10			NR				
C23-C24	ND	10			NR				
C25-C28	ND	10			NR				
C29-C32	ND	10			NR				
C33-C36	ND	10			NR				
C37-C40	ND	10			NR				
Surrogate: p-Terphenyl	*52.73*		*80.0000*		*65.9*	*47 - 157*			
LCS (B6K0579-BS1)					Prepared: 11/15/2016 Analyzed: 11/16/2016				
DRO	613.290	10	1000.00		61.3	36 - 164			
Surrogate: p-Terphenyl	*49.25*		*80.0000*		*61.6*	*47 - 157*			
Matrix Spike (B6K0579-MS1)		**Source: 1604008-01**			Prepared: 11/15/2016 Analyzed: 11/16/2016				
DRO	1046.47	10	1000.00	397.510	64.9	21 - 179			
Surrogate: p-Terphenyl	*55.85*		*80.0000*		*69.8*	*47 - 157*			
Matrix Spike Dup (B6K0579-MSD1)		**Source: 1604008-01**			Prepared: 11/15/2016 Analyzed: 11/16/2016				
DRO	985.400	10	1000.00	397.510	58.8	21 - 179	6.01	20	
Surrogate: p-Terphenyl	*50.67*		*80.0000*		*63.3*	*47 - 157*			

Certificate of Analysis

Rubicon Engineering Corporation	Project Number : Pomona TSD, 1009R.29
12831 Newport Avenue, Suite 200	Report To : Peter Lee
Tustin , CA 92780	Reported : 11/17/2016

Polychlorinated Biphenyls by EPA 8082 - Quality Control

Analyte	Result (ug/kg)	PQL (ug/kg)	Spike Level	Source Result	% Rec	% Rec Limits	RPD	RPD Limit	Notes
Batch B6K0588 - GCSEMI_PCB/PEST_S									
Blank (B6K0588-BLK1)				Prepared: 11/15/2016 Analyzed: 11/16/2016					
Aroclor 1016	ND	16			NR				
Aroclor 1221	ND	16			NR				
Aroclor 1232	ND	16			NR				
Aroclor 1242	ND	16			NR				
Aroclor 1248	ND	16			NR				
Aroclor 1254	ND	16			NR				
Aroclor 1260	ND	16			NR				
Aroclor 1262	ND	16			NR				
Aroclor 1268	ND	16			NR				
Surrogate: Decachlorobiphenyl	*12.68*		*16.6667*		*76.1*	*26 - 137*			
Surrogate: Tetrachloro-m-xylene	*14.40*		*16.6667*		*86.4*	*28 - 102*			
LCS (B6K0588-BS1)				Prepared: 11/15/2016 Analyzed: 11/16/2016					
Aroclor 1016	135.364	16	166.667		81.2	70 - 107			
Aroclor 1260	140.396	16	166.667		84.2	69 - 120			
Surrogate: Decachlorobiphenyl	*12.67*		*16.6667*		*76.0*	*26 - 137*			
Surrogate: Tetrachloro-m-xylene	*14.39*		*16.6667*		*86.4*	*28 - 102*			
Matrix Spike (B6K0588-MS1)		**Source: 1604057-02**		Prepared: 11/15/2016 Analyzed: 11/16/2016					
Aroclor 1016	43.9093	16	166.667	ND	26.3	34 - 120			M2
Aroclor 1260	46.2128	16	166.667	ND	27.7	39 - 128			M2
Surrogate: Decachlorobiphenyl	*3.812*		*16.6667*		*22.9*	*26 - 137*			S2
Surrogate: Tetrachloro-m-xylene	*4.374*		*16.6667*		*26.2*	*28 - 102*			S2
Matrix Spike Dup (B6K0588-MSD1)		**Source: 1604057-02**		Prepared: 11/15/2016 Analyzed: 11/16/2016					
Aroclor 1016	40.9007	16	166.667	ND	24.5	34 - 120	7.10	20	M2
Aroclor 1260	43.9002	16	166.667	ND	26.3	39 - 128	5.13	20	M2
Surrogate: Decachlorobiphenyl	*3.038*		*16.6667*		*18.2*	*26 - 137*			S2
Surrogate: Tetrachloro-m-xylene	*4.222*		*16.6667*		*25.3*	*28 - 102*			S2

Certificate of Analysis

Rubicon Engineering Corporation	Project Number : Pomona TSD, 1009R.29
12831 Newport Avenue, Suite 200	Report To : Peter Lee
Tustin , CA 92780	Reported : 11/17/2016

Notes and Definitions

S4	Surrogate was diluted out.
S2	Surrogate recovery was below laboratory acceptance limit. Reextraction and/or reanalysisconfirms low recovery caused by matrix effects.
R	RPD value outside acceptance criteria. Calculation is based on raw values.
M2	Matrix spike recovery outside of acceptance limit due to possible matrix interference. The analytical batch was validated by the laboratory control sample.
M1	Matrix spike recovery outside of acceptance limit. The analytical batch was validated by the laboratory control sample.
D1	Sample required dilution due to possible matrix interference.
ND	Analyte is not detected at or above the Practical Quantitation Limit (PQL). When client requests quantitation against MDL, analyte is not detected at or above the Method Detection Limit (MDL)
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
NR	Not Reported
RPD	Relative Percent Difference
CA2	CA-ELAP (CDPH)
OR1	OR-NELAP (OSPHL)
TX1	TX-NELAP (TCEQ)

Notes:
(1) The reported MDL and PQL are based on prep ratio variation and analytical dilution.
(2) The suffix [2C] of specific analytes signifies that the reported result is taken from the instrument's second column.
(3) Results are wet unless otherwise specified.

ADVANCED TECHNOLOGY LABORATORIES
3275 Walnut Ave., Signal Hill, CA 90755
Tel: (562) 989-4045 • Fax: (562) 989-4040

CHAIN OF CUSTODY RECORD

Page 1 of 1

Instruction: Complete all shaded areas.

For Laboratory Use Only — ATLCOC Ver: 20130715

Method of Transport		Sample Conditions Upon Receipt	Y	N	Condition	Y	N
☑ Client	☐ ATL	1. CHILLED	☑	☐	5. # OF SAMPLES MATCH COC	☐	☐
☐ FedEx	☐ OnTrac	2. HEADSPACE (VOA)	☐	☐	6. PRESERVED	☐	☐
☐ GSO		3. CONTAINER INTACT	☐	☐	7. COOLER TEMP, deg C: 5.3		
☐ Other:		4. SEALED	☐	☐			

CUSTOMER

Company: Rubicon Engineering Corp.
Address:
City: State: Zip:
Tel:
Fax:

SEND REPORT TO:	SEND INVOICE TO: ☐ same as SEND REPORT TO
Attn: ~~Rubicon~~ Peter Lee — Email: plee@rubiconeng.com	Attn: Edward Sirota — Email: edward.sirota@sce.com
Company: Rubicon	Company: SCE
Address:	Address:
City: State: Zip:	City: State: Zip:

PROJECT SAMPLES

Project Name: Pomona TSD
Project No.: 1009R.29
Sampler: Peter Lee
Quote No:
PO #:
Special Instructions/Comments: 24-Hr TAT

Encircle or Write Requested Analysis: 8260 / 624 (Volatiles); 8015(GRO); 8015(DRO); 8270(Semi-volatiles); 8081(Organochlorine Pesticides); 8082(PCBs); 6010 / 7000(Title 22 Metals); TO-15; TPH-CC (8 Hd)

Encircle Sample Matrix: SOIL / SEDIMENT / SLUDGE; SOLIDS / WIPE / FILTER; WATER - DRINKING / GROUND; WATER - STORM / WASTE; AQUEOUS / LAYERED - OIL

Container: Type: 1=Tube; 2=VOA; 3=Liter; 4=Pint; 5=Jar; 6=Tedlar; 7 = Canister. Material: 1=Glass; 2=Plastic; 3=Metal. Preservative: 1=HCl; 2=HNO3; 3=H2SO4; 4 = 4C; 5=Zn (Ac)2; 6=NaOH; 7=NA2S2O3

QA/QC: ☐ Routine ☐ Caltrans ☐ Legal ☐ RWQCB ☐ Level IV

ITEM	Lab No.	Sample ID / Location	Date	Time	8260/624	8015(GRO)	8015(DRO)	8270	8081	8082(PCBs)	6010/7000	TO-15	TPH-CC (8 Hd)	Matrix	TAT	#	Type	Material	Preservative	REMARKS
1	1604057-1	S1	11/15/16	1108						✓	✓		✓		1	1	5			
2	↓ 2	S2	11	1120						✓	✓		✓		1	1	5			
3																				
4																				
5																				
6																				
7																				
8																				
9																				
10																				

TERMS

1. Sample receiving hours: 7:30 AM to 7:30 PM Monday - Friday; Saturday 8:00 AM to 12:00 PM.
2. Samples Submitted AFTER 3:00 PM, are considered received the following Business day at 8:00 AM.
3. The following turnaround time conditions apply:
   - TAT = 0 : 300% Surcharge SAME BUSINESS DAY if received by 9:00 AM
   - TAT = 1 : 100% Surcharge NEXT BUSINESS DAY (COB 5:00 PM)
   - TAT = 2 : 50% Surcharge 2ND BUSINESS DAY (COB 5:00 PM)
   - TAT = 3 : 30% Surcharge 3RD BUSINESS DAY (COB 5:00 PM)
   - TAT = 4 : 20% Surcharge 4TH BUSINESS DAY (COB 5:00 PM)
   - TAT = 5 : NO SURCHARGE 5th BUSINESS DAY (COB 5:00 PM)
4. Weekend, holiday, after-hours work - ask for quote.
5. Subcontract TAT is 10 - 15 business days. Projects requiring shorter TATs will incur a surcharge respective to the subcontract lab --- ask for quote.
6. Liquid and solid samples will be disposed of after 45 calendar days from receipt of samples; air samples will be disposed of after 14 calendar days after receipt of samples.
7. Electronic records maintained for fi ve (5) years from report date.
8. Hard copy reports will be disposed of after 45 calendar days from report date.
9. Storage and Report Fees:
   - Liquid & solid samples: Complimentary storage for forty-fi ve (45) calendar days from receipt of samples; $2/sample/month if extended storage or hold is requested.
   - Air samples: Complimentary storage for ten (10) calendar days from receipt of samples; $20/ sample/week if extended storage is requested.
   - Hard copy and regenerated reports/EDDs: $17.50 per hard copy report requested; $50.00 per regenerated/reforma? ed report; $35 per reprocessed EDD.
10. Rush TCLP/STLC samples: add 2 days to analysis TAT for extraction on procedure.
11. Unanalyzed samples will incur a disposal fee of $7 per sample.

As the authorized agent of the company above, I hereby purchase laboratory services from ATL as shown above and hereby guarantee payment as quoted.

Submitter Print Name: Peter Lee
Signature: [signature]

CUSTODY

Relinquished by: (Signature and Printed Name)	Date:	Time:	Received by: (Signature and Printed Name)	Date:	Time:
[signature] Peter Lee	11/15/16	1408	Frows [signature]	11/15/16	1408

Republic Services, Inc.

18500 N. Allied Way, Phoenix, AZ 85054

SPECIAL WASTE DEPARTMENT DECISION

	Waste Profile #	Expiration Date	
	5123172733	2/20/2018	

I. Decision Request: ☑ Initial ☐ Recertification ☐ Change

Disposal Facility: 5123 - Sunshine Canyon Landfill

Generator Name: Jag World Wide Imports

Generator Site Address: 1300 E Franklin Ave

City: Pomona	County:	State: CA	Zip:

Name of Waste: Food Waste

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: 2/21/2017

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: 2/21/2017

REPUBLIC SERVICES — 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 2733
Sales Rep #.

I. Generator Information

Generator Name: Jag World Wide Imports			
Generator Site Address: 1300 E Franklin Ave.			
City: Pomona	County: Los Angeles	State: California	Zip: 91750
State ID/Reg No:	State Approval/Waste Code: (if applicable)		NAICS #.
Generator Mailing Address (if different): 1300 E Franklin Ave.			
City: Pomona	County: Pomona	State: California	Zip: 91750
Generator Contact Name: ~~Heather Miller~~ Tyler Jones		Email: parhea@covenanttransport.com	
Phone Number: ~~(423) 463-3714~~ 956.220.4733 Ext:		Fax Number: ~~(423) 821-8105~~ Ok'd by Heather via phone 2/20/17	

II. Billing Information

Bill To: Covenant Transport		Contact Name: Shannon Van Dusen	
Billing Address: 400 Birmingham Hwy		Email: Shannon.VanDusen@ctgcompanies	
City: Chattanooga	State: TN	Zip: 37415	Phone: (423) 463-3714

III. Waste Stream Information

Name of Waste: (Petroleum products-applies only to contaminated media and debris).

☐ Diesel Fuel	☐ Weathered Wood	☐ Friable Asbestos	
☐ Home Heating Fuel #1-6	☐ RCRA Empty Containers	☐ Non Friable Asbestos	
☐ Kerosene	☐ Treated Medical Waste	☐ Cured Asphalt	
☐ Aviation Fuel	☐ Animal Carcass (non infectious)	☐ Tires	
☐ Hydraulic Fluid	☐ Plant Trash	☑ Food Products (Including Animal Food)	
☐ Unleaded Gasoline (UST Corrective Action)	☐ Meth Contaminated Debris		

Process Generating Waste: 360 cases of shriveled mini sweet peppers

Method of Shipment: ☐ BULK ☐ DRUM ☐ BAGGED ☑ OTHER: 360 cases

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.

Heather Miller	Covenant Transport
Authorized Representative Name/Title (Type or Print)	Company Name
Heather Miller	02/20/2017
Authorized Representative Signature	Date

REPUBLIC SERVICES

THIRD PARTY SIGNATURE AUTHORIZATION
for Special Waste Disposal

Date: 02/20/2017

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	Title
Heather Miller	Customer Service Rep
Name of Company	Telephone Number
Covenant Transport	4234633714

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	Mailing Address
Jag World Wide Imports	22 Talbot St. W Leamington ON N8H1M4
Generator Contact (Print Name)	Title
Tyler Jones	Sales
Signature	Telephone Number
	956-220-4733

AGENT SPECIAL WASTE SERVICE AGREEMENT
NON-HAZARDOUS WASTES

REPUBLIC SERVICES

Special Waste Profile Number: **5123 17 2733**

Agent Billing Information		**Republic Waste Location (Company)**
Name:	COVENANT TRANSPORT (ACCOUNT# CASH 321)	SUNSHINE CANYON LANDFILL (5123)
Address:	400 BIRMINGHAM HWY	14747 SAN FERNANDO ROAD
		SYLMAR, CA 91342
City:	CHATTANOOGA	818.362.2141
State:	TN Zip: 37415	
Phone:	423.463.3714 Fax:	
Contact:	SHANNON VAN DUSEN	

Project: JAG WORLD WIDE IMPORTS **County and State of Origin:** LOS ANGELES, CALIFORNIA

Generator Address: 1300 E FRANKLIN AVE, POMONA, CA 91750

Additional Information: CONTACT TYLER JONES | PHONE:956.220.4733

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").

3. **(A) Rates for Disposal**:

Waste	Disposal Method	Disposal Rate:	Fees / Taxes / Misc.	Transportation
FOOD PRODUCTS	LANDFILL	[redacted]		N/A

Additional Information: [redacted]

MATERIAL CODE: XD-SW-FOOD WASTES | PROFILE EXPIRES: 2/20/2018 | 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 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

4. **Term of Agreement**. This Agreement is effective for **12** months, commencing **2/21/2017** 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	REPUBLIC SERVICES, INC/COMPANY
Heather Miller	
SIGNATURE (AUTHORIZED REPRESENTATIVE)	SIGNATURE (AUTHORIZED REPRESENTATIVE)
Heather Miller	Stacy Loveland - SW Executive
NAME AND TITLE (PLEASE PRINT)	NAME AND TITLE (PLEASE PRINT)
2/21/17	2/21/2017
DATE	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: Heather Miller Republic Services, INC./COMPANY: _____

REPUBLIC SERVICES, INC.

Republic Services, Inc.

18500 N. Allied Way, Phoenix, AZ 85054

FAX

INCOMPLETE FILE TRANSMITTAL

TO: Leanne Smith	**LOG NO.:** 5123172733
FAX:	**File Received:** 2/20/2017
From: Special Waste Dept.	**Response Date:** 2/20/2017
Re: Jag World Wide Imports / Food Waste	

SECTION I	SECTION II	SECTION III	SECTION IV	SECTION V	SECTION VI
☐ DisposalFacility	☐ TransporterName	☐ NameOfWaste	☐ USEPA	☐ CharacteristicComponents	☑ GenAuthSignature
☐ GeneratorName	☐ TransporterSiteAddress	☐ ProcessGeneratingWaste	☐ SampleDate	☐ FreeLiquids	☐ GenCoName
☐ GeneratorSiteAddress	☐ TransporterCityStateZip	☐ TypeOfWaste	☐ CompositeGrab	☐ YesNo	☐ NoStateLetter
☐ GeneratorCityStateZip	☐ TransporterMailingAddress	☐ PhysicalState	☐ SampleID	☐ pH_Flash	☐ Name_Title
☐ GeneratorMailingAddress	☐ TransporterContactName	☐ MethodOfShipment			☐ SignatureDate
☐ GeneratorContactName	☐ TransporterTelFax	☐ EstimatedAnnualVolume			
☐ GeneratorTelFax		☐ Frequency			
☐ GeneratorStateID		☐ DisposalConsideration			
☐ WasteCodeTexas					

ANALYTICALS	TCLP TOTAL METALS	TCLP VOLATILES	TCLP SEMI-VOLATILES	PESTICIDES / HERBICIDE	
☐ TotalCyanide	☐ Arsenic	☐ Benzene	☐ Cresols	☐ Chlordane	☐ LabLetterhead
☐ ReactiveCyanide	☐ Barium	☐ CarbonTetrachloride	☐ DichlorobenzeneOne	☐ Endrin	☐ ChainOfCustody
☐ TotalSulfide	☐ Cadmium	☐ Chlorobenzene	☐ DinitrotolueneTwo	☐ Heptachlor	☐ NoLabSignature
☐ ReactiveSulfide	☐ Chromium	☐ Chloroform	☐ Hexachlorobenzene	☐ HeptachlorEpoxide	☐ ReportOneYearOldPlus
☐ TotalPCB	☐ Copper	☐ DichloroethaneOne	☐ Nitrobenzene	☐ Lindane	☐ NoThirdPartyLab
☐ TOX_EOX	☐ Lead	☐ DichloroehyleneTwo	☐ Pentachlorophenol	☐ Methoxychlor	☐ MissingReportPages
☐ Phenols	☐ Mercury	☐ MethylEthylKetone	☐ Pyridine	☐ Toxaphene	☐ MissingMSDSPages
☐ FlashPoint	☐ Selenium	☐ Tetrachloroethylene	☐ TrichlorophenolFive	☐ TwoFourD	☐ TotalSulfates
☐ pH	☐ Silver	☐ Trichlorethylene	☐ TrichlorphenolSix	☐ TwoFourFiveTP	☐ TotalSulfur
☐ PaintFilter	☐ Zinc	☐ VinylChloride			☐ WrongProfile
☐ TPH					
☐ BTEX					☑ GeneratorIncomplete

Notes:

On the 3rd party form, please have Tyler Jones actually sign the form and provide a complete address in the Mailing Address field.

Thanks, Suzie

REPUBLIC SERVICES

THIRD PARTY SIGNATURE AUTHORIZATION
for Special Waste Disposal

Date: 02/20/2017

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	Title
Heather Miller	Customer Service Rep
Name of Company	Telephone Number
Covenant Transport	4234633714

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	Mailing Address
Jag World WIde Imports	22 Talbots St W ON.
Generator Contact (Print Name)	Title
Tyler Jones	Sales
Signature	Telephone Number
	956-220-4733

REPUBLIC SERVICES, INC.

Republic Services, Inc.

18500 N. Allied Way, Phoenix, AZ 85054

SPECIAL WASTE DEPARTMENT DECISION

	Waste Profile # 5123173022	**Expiration Date** 6/30/2017	
I. Decision Request:	✓ **Initial** **Recertification** **Change**		

Disposal Facility: 5123 - Sunshine Canyon Landfill

Generator Name: Greenfield Produce Imports

Generator Site Address: 718 S Alameda St

City: Los Angeles	**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

FOOD PRODUCT: This waste must be buried immediately upon receipt at the landfill.

Special Waste Analyst Signature: Joseph M. Sorokach **Name (Printed):** Joseph Sorokach

Date: 2/24/2017

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: Rob Sherman **Name (Printed):** Rob Sherman

Date: 2/24/2017

REPUBLIC SERVICES — EXPRESS WASTE PROFILE

Requested Disposal Facility: 5123 Sunshine Canyon LF CA

Waste Profile #: 5123 17 3022

Sales Rep #: 525 - Stacy Loveland

Saveable fill in form. Restricted printing until all required (yellow) fields are completed.

I. Generator Information

Generator Name: Greenfield Produce Imports			
Generator Site Address: 718 S Alameda St			
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): 718 S Alameda St			
City: LOS ANGELES	County: -- Select a State --	State: California	Zip: 90021
Generator Contact Name: PETER CHHOEU		Email: PETERGREENFIELD@SBCGLOBAL	
Phone Number: (213) 623-8887 Ext:		Fax Number:	

II. Billing Information

Bill To: Greenfield Pruduce Imports		Contact Name: Peter Chhoeu	
Billing Address: 718 S. Alameda St		Email: PETERGREENFIELD@SBCGLOBAL	
City: Los Angeles	State: CA	Zip: 90021	Phone: (213) 623-8887

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 POTATO FOUND WITH INSECT INSPECTED BY LA COUNTY AGRICUTURE.

Method of Shipment: ☐ BULK ☐ DRUM ☑ BAGGED ☐ OTHER:

Estimated Annual Volume: 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.

PETER CHHOEU	GREENFIELD PRODUCE IMPORTS
Authorized Representative Name/Title (Type or Print)	Company Name
Authorized Representative Signature	2/23/17
	Date

REV 2

SPECIAL WASTE SERVICE AGREEMENT
NON-HAZARDOUS WASTES

REPUBLIC SERVICES

Special Waste Profile Number: **5123 17 3022**

Generator Billing Information

Name: GREENFIELD PRODUCE IMPORTS (ACCT CASH # 321)
Address: 718 S ALAMEDA ST
City: LOS ANGELES
State: CA Zip: 90021
Phone: 213.623.8887 Fax:
Contact: PETER CHHOEU

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").

3. **(A) Rates for Disposal**:

Waste	Disposal Method	Disposal Rate:	Fees / Taxes / Misc	Transportation
FOOD PRODUCTS	LANDFILL	[redacted]		N/A

Additional Information: [redacted]
MATERIAL CODE: XD-SW-FOOD WASTES | PROFILE EXPIRES: 6/30/2017 | 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 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 **4** months, commencing **2/24/2017** 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 (AUTHORIZED REPRESENTATIVE)
Peter CHHOEU President
NAME AND TITLE (PLEASE PRINT)
2/28/17
DATE

REPUBLIC SERVICES, INC/COMPANY

SIGNATURE (AUTHORIZED REPRESENTATIVE)
Stacy Loveland - SW Executive
NAME AND TITLE (PLEASE PRINT)
2/28/2017
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 to Generator being allowed on Facility premises, Generator shall provide the Company with certific insurance or other satisfactory evidence that such ins has been procured and is in force. Said policies shall not thereafter be canceled, be permitted to ex lapse, or be changed without thirty (30) days advance written notice to the Company. Generator w that it will secure the above minimum amounts of insurance from any transportation of the Waste Facility.

15. Failure to Perform. Neither party hereto shall be liable for its failure to perform hereunder circumstances not its fault and beyond its reasonable control, including, but not limited to, strikes o labor disputes, riots, protests, civil disturbances or sabotage, changes in law, fires, floods, compliani government requests, explosions, accidents, weather, lack of required natural resources, or acts affecting either party hereto. In the event of any of the circumstances provided for in the pre sentence, including, but not limited to, whether any federal, state or local court or governmental a takes any action which would (i) close or restrict operations at the Facility, (ii) limit the quantity or the disposal of Waste at the Facility, or (iii) limit the ability of or prohibit Generator from delivering W the Facility, the Company shall have the right, at its option, to reduce, suspend or terminate Gene access to the Facility immediately, without prior notice and without any additional liabilities betwe parties, other than Generator's payment obligation hereunder. Neither Party is required hereur 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 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 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 p in whole or in part, any of its rights or obligations under the Agreement without the prior written con the Company, provided, however, that the Company may without any such prior written consent, as 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 acco herewith. The Company reserves the right to immediately terminate access to the Facility by Ge and Generator's personnel in the event of breach or violation by Generator of any of the terms 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 a information, or information not previously provided to the Company by Generator which may aff acceptability of the Waste by the Company. Further, the Generator shall comply with all Co requests for evidence of Generator's continuing compliance with the terms of the Agreement includ not limited to the following: (i) providing new, updated Waste profiles on the Waste(s) offered for d or, (ii) providing appropriate certification that the Waste being offered for disposal is accurately refle the appropriate Application or, (iii) re-sample the Waste at Generator's expense if reasonable cause as to its acceptability under the terms of this Agreement or, (iv) allow the Company to re-sample the at Generator's expense if reasonable cause exists as to its acceptability under the terms of this Agr 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 waiver of any prior or succeeding breach of the same obligation or of any other obligation Agreement.

(C) No modification, release, discharge or waiver of any provision or obligation hereof shall be 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 t this Agreement, except as is necessary to perform this Agreement, or to comply with any ap law or regulation any information (including any technical information, experience or date) re the Company's plans, programs, plants, processes, products, costs, equipment or operation may come within the knowledge of the Generator or its employees in the performance 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, ill unenforceable in any respect, this Agreement shall remain in effect and be construed without to such term, phrase, obligation or provision.

(F) This Agreement constitutes the entire understanding between the parties, replacing and an any prior agreements between the parties, and shall be binding upon all parties hereto successors, heirs, representatives and assigns. Any provision, term or condition acknowledgement, purchase order or other response by Generator which is in addition to or c from the provisions of this Agreement shall be deemed objected to by the Company and sha no effect.

(G) Generator represents, warrants and covenants that it is and, during the term of this Agreem remain, in compliance with and will perform its obligations pursuant to all applicable la regulations and shall indemnify, defend and hold harmless the Company from any breach there

(H) It is the understanding and agreement of the parties that the Company is an independent cor 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 place mail, certified postage prepaid addressed to the Company or Generator at the address herein set 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 manne accordance with paragraph 4 hereof, or terminated due to a breach of this Agreement by the Ge the Generator shall pay, as liquidated damages, and not as a penalty, the greater of an amount e six (6) months' service charges or the Generator's most recent monthly charge multiplied by six (6 Generator shall be given credit for any advance payments made hereunder, however, in compu amount owed as liquidated damages hereunder. The Generator acknowledges that this liq damages clause is reasonable and is applicable to recover damages related to its investn equipment, development of landfills and hiring of employees undertaken by the Company to se customers including the Generator. This liquidated damages clause in no way relieves the Generat 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 #	Expiration Date
5123173022	6/30/2017

I. Decision Request: ☑ Initial ☐ Recertification ☐ Change

Disposal Facility: 5123 - Sunshine Canyon Landfill

Generator Name: Greenfield Produce Imports

Generator Site Address: 718 S Alameda St

City: Los Angeles **County:** **State:** CA **Zip:**

Name of Waste: Food Products

Estimated Annual Volume: 612 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.

Per the Special Waste Profile Change Form dated March 1, 2017, the generator has increased the ESTIMATED VOLUME for disposal by 112 POUNDS.

Total volume approved for disposal is 612 POUNDS.

Special Waste Analyst Signature: Joseph M. Sorokach **Name (Printed):** Joseph Sorokach

Date: 3/1/2017

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: 3/1/2017

REPUBLIC SERVICES

SPECIAL WASTE PROFILE – CHANGE

Saveable fill-in form. Restricted printing until all required (yellow) fields are completed.

I. Generator Information

This form may be used to request changes to an existing Special Waste Profile.			
Generator Name:	Greenfield Produce Imports		
Name of Waste:	Food Products	Waste Profile #	5123173022

II. Purpose of Change

Description of Change Requested and Reason for Change: (Provide detailed explanation of why the change is requested following the appropriate checked box below).

- ☒ Volume Increase By: 112 pounds
  Is the analysis originally submitted with the Profile representative of the volume Increase? ☑ Yes ☐ No If No, complete Section III, below.
- ☐ Extend Expiration Date:
- ☐ Change or Add Landfill:
- ☐ Add Additional Laboratory Reports: **Complete Representative Sample Certification, Section III, below.**
- ☐ Add MSDS:
- ☐ Generator Name Change:
- ☒ Other:
  11 boxes of Hot Basil found with a pest infestation by LA County Agriculture. Each box weighs 14 pounds. Total weight is 112 pounds.

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?	☐ YES or ☐ NO
Type of Sample: ☐ COMPOSITE SAMPLE ☐ GRAB SAMPLE	
Sample Date:	
Sample ID Numbers:	

IV. Certification

I hereby certify that the waste and the process generating the waste are unchanged and are accurately represented in the original profile.

Peter Chhoeu, President	Greenfield Produce Imports
Authorized Representative Name and Title (Printed)	Company Name
Authorized Representative Signature	3/1/2017
	Date

REPUBLIC SERVICES, INC.

Republic Services, Inc.

18500 N. Allied Way, Phoenix, AZ 85054

SPECIAL WASTE DEPARTMENT DECISION

	Waste Profile #	Expiration Date	
	5123173282	3/1/2019	

I. Decision Request: ☑ Initial ☐ Recertification ☐ Change

Disposal Facility: 5123 - Sunshine Canyon Landfill

Generator Name: Union Pacific Railroad

Generator Site Address: 505 thru 555 N Mission Road

City: Los Angeles **County:** **State:** CA **Zip:**

Name of Waste: Crushed Concrete and Asphalt

Estimated Annual Volume: 100,000 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: MP Phillips **Name (Printed):** MARK PHILLIPS

Date: 3/3/2017

III. Facility Decision: ☑ Approved ☐ Rejected

Precautions, Conditions or Limitations on Approval

This is approved for beneficial reuse on site at Sunshine.
The site is limited to 6,600 tons of beneficial reuse material per week. Daily inbound volume is limited to no more than 2,000 tons.
Once we reach the weekly max, we will stop receiving material until the following week.

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: 3/3/2017

Aasen, Holly

From: Costa, Patti
Sent: Friday, March 03, 2017 3:44 PM
To: Aasen, Holly; Hays, Fred; Whittle, Todd; Logan, Kate
Cc: Sherman, Rob; Loveland, Stacy; Ross, Tyson; Wauters, Andra
Subject: RE: Shamrock UPRR Concrete

All,

Based on a review of the analytical results provided for this material against the site's Waste Acceptance Plan, this material can be used for beneficial reuse at Sunshine Canyon Landfill.

Patti K. Costa, P.E.
Environmental Manager
Sunshine Canyon Landfill

14747 San Fernando Road
Sylmar, CA 91342
e PCosta@Republicservices.com
o 818-362-2075 c 818-822-2177
f 818-362-5484 w www.RepublicServices.com

We'll handle it from here.™

SPECIAL WASTE PROFILE

Requested Disposal Facility: 5123 Sunshine Canyon LF CA

Waste Profile #: 5123 17 3282

Saveable fill-in form. Restricted printing until all required (yellow) fields are completed.

Sales Rep #: 177 - Fred Hays

I. Generator Information

Generator Name: Union Pacific Railroad (UPRR)			
Generator Site Address: 750 Lamar Street			
City: Los Angeles	County: Los Angeles	State: California	Zip: 90031
State ID/Reg No: n/a	State Approval/Waste Code: n/a (if applicable)		NAICS # : n/a
Generator Mailing Address (if different): ☑ 301 NE 2nd Avenue Attn: Traci Rodhe			
City: Portland	County: Multnomah	State: Oregon	Zip: 93239
Generator Contact Name: Lauren Mancuso		Email: lamancus@up.com	
Phone Number: (510) 268-3025	Ext:	Fax Number: (402) 997-3989	

II. Billing Information

Bill To: Global Transloading LLC		Contact Name: Shannon Griego	
Billing Address: 1842 E 29th St.		Email: shannongriego@globaltransloadi	
City: Signal Hill	State: California	Zip: 90755	Phone: (562) 495-9600

III. Waste Stream Information

Name of Waste: crushed concrete and asphalt	
Process Generating Waste: On site screening and crushing of rubble pile. Fines/soils are screening and remaining concrete and asphalt is crushed.	
Type of Waste:	☑ INDUSTRIAL PROCESS WASTE ☐ POLLUTION CONTROL WASTE
Physical State:	☑ SOLID ☐ SEMI-SOLID ☐ POWDER ☐ LIQUID
Method of Shipment:	☑ BULK ☐ DRUM ☐ BAGGED ☐ OTHER:
Estimated Annual Volume:	100,000 Tons
Frequency:	☑ ONE TIME ☐ ONGOING
Disposal Consideration:	☑ LANDFILL ☐ SOLIDIFICATION ☐ 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?	☑ YES or ☐ NO
Type of Sample: ☑ COMPOSITE SAMPLE ☐ GRAB SAMPLE	
Sample Date: 02/08/2017	
Sample ID Numbers: AB-2-8-17A-WI AB-2-8-17B-W2	

REPUBLIC SERVICES **SPECIAL WASTE PROFILE**

Waste Profile #
5123 17 3282

V. Physical Characteristics of Waste

Characteristic Components	% by Weight (range)
1. crushed asphalt and concrete	99-100%
2. fines	0-1%
3.	
4.	
5.	

Color	Odor (describe)	Does Waste Contain Free Liquids?	% Solids	pH:	Flash Point
Brown	None	☐ YES or ☑ NO	100%	6-8	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?	☐ Yes or ☑ 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)]?	☐ Yes or ☑ No
Does this waste contain regulated concentrations of Polychlorinated Biphenyls (PCBs) as defined in 40 CFR Part 761?	☐ Yes or ☑ 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?	☐ Yes or ☑ No
Does this waste exhibit a Hazardous Characteristic as defined by Federal and/or State regulations?	☐ Yes or ☑ No
Does this waste contain regulated concentrations of 2,3,7,8-Tetrachlorodibenzodioxin (2,3,7,8-TCCD), or any other dioxin as defined in 40 CFR 261.31?	☐ Yes or ☑ No
Is this a regulated Radioactive Waste as defined by Federal and/or State regulations?	☐ Yes or ☑ No
Is this a regulated Medical or Infectious Waste as defined by Federal and/or State regulations?	☐ Yes or ☑ No
Is this waste a reactive or heat generating waste?	☐ Yes or ☑ No
Does the waste contain sulfur or sulfur by-products?	☐ Yes or ☑ No
Is this waste generated at a Federal Superfund Clean Up Site?	☐ Yes or ☑ No
Is this waste from a TSD facility, TSD like facility or consolidator?	☐ Yes or ☑ 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.

Mohamed Ibrahim, as agent for UPRR/SME-GHD Services, Inc.	Union Pacific Railroad (UPRR)
Authorized Representative Name And Title (Type or Print)	Company Name
, as agent for UPRR	3/3/2017
Authorized Representative Signature	Date

AGENT SPECIAL WASTE SERVICE AGREEMENT
NON-HAZARDOUS WASTES

REPUBLIC SERVICES

Special Waste Profile Number: **5123173282**

Agent Billing Information		**Republic Waste Location (Company)**
Name:	GLOBAL TRANSLOADING LLC ACCOUNT 100411	SUNSHINE CANYON LANDFILL (5123)
Address:	301 VISTA DEL MAR BLVD	14747 SAN FERNANDO ROAD
		SYLMAR, CA 91342
City:	1842 EAST 29TH STREET	818.833.6500
State:	CALIFORNIA Zip: 90755	
Phone:	562.495.9600 Fax: 562.495.9600	
Contact:	SHANNON GRIEGO	

Project: UNION PACIFIC RAILROAD – UPRR **County and State of Origin:** LOS ANGELES, CALIFORNIA

Generator Address: 750 LAMAR STREET, LOS ANGELES, CA 90031

Additional Information: CONTACT: LAUREN MANCUSO | PHONE: 510.268.3025

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").

3. **(A) Rates for Disposal**:

Waste	Disposal Method	Disposal Rate:	Fees / Taxes / Misc.	Transportation
CRUSHED CONCRETE & ASPHALT	REUSE	[redacted]		N/A

Additional Information: [redacted]

MATERIAL CODE: WU-SW-BENEFICIAL REUSE | PROFILE EXPIRES: 3/1/2019 | A completed / signed manifest is required for each profiled approved load received at Sunshine Landfill (Please schedule all loads 24 hours in advance) | EAV: 100,000 TONS

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 **DAILY MAX 2,000 TONS MAX PER WEEK 6,600 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 **24** months, commencing **3/3/2017** 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 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)

Shannon Griego President

NAME AND TITLE (PLEASE PRINT)

3.3.17

DATE

REPUBLIC SERVICES, INC/COMPANY

FRED HAYS II

SIGNATURE (AUTHORIZED REPRESENTATIVE)

Fred Hays - Director of MESE

NAME AND TITLE (PLEASE PRINT)

3/3/2017

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 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: FRED HAYS II

December 19, 2016
Service Order No 65740

Change Order No. 1

SEAN GRADY
GHD SERVICES INC
5551 Corporate Blvd, Suite 200
BATON ROUGE LA - 70808

Dear Sean:

Enclosed is your copy of the fully executed Change Order No. 1 to CA757241 which utilize GHD's WasteManager© software to track UPRR's wastes and provide regulatory compliance support in order to comply with all local, state and federal regulations and reporting requirements at System Wide - Manifest Tracking Program.

This Change Order covers adding addendum entitled "Agency Agreement for Signing Manifests" and is effective as of DECEMBER 16, 2016.

Sincerely,
Trisha Clary
TRCLARY@UP.COM

Supply Department
UNION PACIFIC RAILROAD
1400 Douglas St., Stop 0750, Omaha, NE 68179-0750

(trc)
SO# 65740

CONTRACT CHANGE ORDER

Change Order No. 1 to Contract Audit No. 757241 Date Prepared: December 15, 2016

Change Order Effective Date: DECEMBER 16, 2016

Contractor's Name: GHD SERVICES INC

Project/Location: System Wide - Manifest Tracking Program

Section 1. REMARKS

Adding addendum entitled "Agency Agreement for Signing Manifests".

This Change Order Agreement shall be effective when fully executed by both parties, and is considered supplemental to the Basic Agreement. Nothing herein contained shall be construed as amending or modifying the Basic Agreement except as herein specifically provided.

UNION PACIFIC RAILROAD,
a Delaware corporation

By: Trisha Clary

Printed Name: Trisha Clary

Title: Sr. Manager – Strategic Sourcing

GHD SERVICES INC,
a DELAWARE
C Corporation

By: Sean Grady

Printed Name: Sean Grady

Title: Vice President

Agency Agreement for Signing Manifests

This Agency Agreement for Signing Manifests (hereinafter "Agreement") is entered into this 16 day of December 2016, by and between Union Pacific Railroad (hereinafter "Client") and GHD Inc. (hereinafter "GHD"), sometimes referred to collectively as "Parties" and individually as "Party".

WHEREAS, Client requires off-Site transportation of wastes from the facility or property identified below (hereinafter "Site") to off-Site disposal facilities approved in advance by Client:

Site Locations: UPRR System wide operating locations and projects managed by Operations, Hazmat, and SiteRem.

WHEREAS, Client acknowledges that GHD is not the Arranger, Operator, Generator, or Transporter of such wastes, as defined under applicable laws, and that GHD has neither created nor contributed to the existence of such wastes at the Site;

WHEREAS, as a convenience to Client, Client desires to appoint GHD as its agent to sign waste profiles, waste manifests, and other shipping documents ("Documents") for the exclusive purpose of expediting off-Site transportation of such wastes; and

WHEREAS, GHD is amenable to acting as Client's agent for such purpose.

NOW THEREFORE in consideration of the mutual covenants and agreements contained herein, Client and GHD covenant and agree as follows:

1. Client hereby constitutes and appoints GHD as Client's agent to sign Documents for the exclusive purpose of expediting off-Site transportation of wastes and GHD hereby accepts said appointment as agent for Client exclusively for the aforesaid purpose.
2. In performing its obligation hereunder, GHD agrees to sign Documents as an agent for Client by signing "As Agent for Union Pacific Railroad".
3. Client shall release, defend, indemnify and hold harmless GHD, its directors, officers, agents, employees, contractors, or representatives from and against any and all claims, liabilities, damages, losses, costs, fines, penalties, and expenses whether direct, indirect, or consequential of any kind or nature arising out of or in any way related to GHD's signing Documents as the Client's agent under this Agreement ("Claims") including, but not limited to, attorneys' fees, and costs of defense, except to the extent any claim, liability, damage, demand, loss, cost, fine, penalty and/or expense is due to GHD's professional negligence or willful misconduct.
4. Client agrees to defend, indemnify, and hold harmless GHD, its directors, officers, agents, employees, contractors, or representatives from and against any and all liabilities, claims, damages, demands, losses, expenses and costs (including but not limited to all fees and charges of engineers, architects, attorneys and other professionals and all court or arbitration or other dispute resolution costs) arising out of GHD's performance of Services under this Agreement and made or brought against GHD arising or resulting from (a) any existing condition at the Site; or (b) any status based strict liability under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), and state or local environmental laws, alleging or asserting, without limitation, that GHD is liable as an owner, operator, handler, generator, arranger, transporter, treater, storer or disposer of any

contaminant, or for any actual or threatened pollution or contamination, except to the extent any claim, liability, damage, demand, loss, cost, fine, penalty and/or expense, including costs associated with investigation and/or cleanup of actual or threatened pollution, are due to GHD's professional negligence or willful misconduct.

5. Client's obligations under this Agreement shall survive the termination or cancellation or completion of GHD's services to Client or this Agreement.
6. This Agreement shall be governed by the laws of the State of Nebraska.
7. This Agreement embodies the entire agreement and understanding of the Parties hereto and supersedes all prior agreements and understandings relating to the subject matter hereof.
8. This Agreement may be executed in multiple counterparts (which may be delivered by facsimile), each of which shall be deemed an original and all of which shall constitute one instrument.

IN WITNESS WHEREOF, the Parties have executed this Agreement effective as of the day and year first above written.

AGREED

Union Pacific Railroad		**GHD Inc.**	
By:	Trisha Clary (Authorized Signature)	By:	(Authorized Signature)
	Trisha Clary Print Name		Sean Grady Print Name
Title:	Sr. Manager – Strategic Sourcing	Title:	Vice-President

MANDATORY SUBCONTRACTORS INFORMATION
(TO BE FILLED OUT BY CONTRACTOR)

TOTAL PERCENT OF WORK TO BE SUBCONTRACTED ON THIS PROJECT: _____% *(If none, indicate N/A)*

You are required to enter in to our CAS system all information regarding subcontracted employees and equipment. You are responsible to update your CAS profile, and ensure this information is current and accurate.

Complete the table below with subcontractor information:

Subcontractor Company Name	**Do/does subcontractor(s) have a current active contract with Union Pacific?**	**MWBE or veteran status**	**% of work to be performed**
At this time, subcontractor usage is unknown beyond what is identified in the proposal documents.			

Supplier Code of Conduct

Union Pacific Railroad Company (UPRR) is committed to high standards of ethical business conduct. As a condition of doing business with UPRR, all Suppliers (suppliers, vendors, contractors, subcontractors, consultants, agents and other providers of materials and/or services) must fully comply with all federal, state, and local laws, rules, regulations, orders, codes and ordinances as outlined in the contract as well as UPRR's Supplier Code of Conduct.

- Suppliers must compete fairly for UPRR's business without paying bribes, kickbacks or giving anything of value to UPRR employees or their relatives in order to secure an improper advantage or create the appearance of gaining an improper advantage.
- Suppliers must independently develop proposals and bid responses, without consultation with other bidders, other potential bidders, or UPRR personnel outside the bounds of the standard bidding process.
- Suppliers must refrain from asking UPRR employees for another supplier's price information.
- Suppliers must not directly or indirectly enter into any business transaction with UPRR employees or their relatives without the UPRR Supply department's prior written consent.
- Suppliers must not use any UPRR-owned or leased equipment without the UPRR Supply department's prior written consent, or take ownership of any such equipment unless Suppliers have executed an agreement generated by UPRR's Supply department that authorizes such action.
- Suppliers must not subcontract any part of the work to be performed for UPRR to a subsidiary or affiliate, or to a relative or an entity owned or controlled by the relative, without the UPRR Supply department's prior written consent.
- Supplier must ensure that its personnel assigned to perform work on UPRR property act in a professional and respectful manner, keeping the workplace free from harassment including verbal, physical, and written conduct.
- Suppliers must adhere to applicable UPRR policies while working on UPRR property including but not limited to general safety practices and UPRR's no smoking policy.
- Suppliers may only access information through UPRR computer systems as authorized; must ensure the information security and confidentiality of all information obtained through such authorized access; and may not use any UPRR information other than for the purposes authorized by UPRR.
- Suppliers must prohibit in hiring and employment practices any discrimination or harassment based on a person's race, color, sex, national origin, age, disability, religion, veteran status, sexual orientation, gender identity, genetic information, pregnancy, or any other ground prohibited by law ("protected status").
- Suppliers must effectively distribute and communicate UPRR's Supplier Code of Conduct to all employees involved in a business relationship with UPRR.

Suppliers must immediately report any violation of this Code to UPRR by calling UPRR's Values Line at:
1 (800) 998-2000

For Supply department questions and/or consent please call or email the Regional Procurement Center at:
(402) 544-0772 or spc@up.com

A supplier's failure to comply with UPRR's Supplier Code of Conduct may result in UPRR pursuing legal action and/or discontinuing the business relationship.

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

March 01, 2017

David Poley
CH2M Hill Inc
1000 Wilshire Blvd
Suite 2100
Los Angeles, CA 90017

RE: Project: UPRR LATC Upper Lot REV
Pace Project No.: 10378598

Dear David Poley:
Enclosed are the analytical results for sample(s) received by the laboratory on February 09, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

This is a revised report which has the data reported to the MDL.

Per the client on 2/24/17, TCLP Chlordane was added to both samples. This report reflects these changes.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jennifer Gross for
Carrie Jensen
carrie.jensen@pacelabs.com
(612)607-1700
Project Manager

Enclosures

cc: Carolyn Kossik, CH2M Hill UPRR-Sysdat@ghd.com, UPRR

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

CERTIFICATIONS

Project: UPRR LATC Upper Lot REV
Pace Project No.: 10378598

Minnesota Certification IDs

1700 Elm Street SE Suite 200, Minneapolis, MN 55414
Alaska Certification UST-107
525 N 8th Street, Salina, KS 67401
A2LA Certification #: 2926.01
Alaska Certification #: UST-078
Alaska Certification #MN00064
Alabama Certification #40770
Arizona Certification #: AZ-0014
Arkansas Certification #: 88-0680
California Certification #: 01155CA
Colorado Certification #Pace
Connecticut Certification #: PH-0256
EPA Region 8 Certification #: 8TMS-L
Florida/NELAP Certification #: E87605
Guam Certification #:14-008r
Georgia Certification #: 959
Georgia EPD #: Pace
Idaho Certification #: MN00064
Hawaii Certification #MN00064
Illinois Certification #: 200011
Indiana Certification#C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky Dept of Envi. Protection - DW #90062
Kentucky Dept of Envi. Protection - WW #:90062
Louisiana DEQ Certification #: 3086
Louisiana DHH #: LA140001
Maine Certification #: 2013011
Maryland Certification #: 322
Michigan DEPH Certification #: 9909
Minnesota Certification #: 027-053-137
Mississippi Certification #: Pace
Montana Certification #: MT0092
Nevada Certification #: MN_00064
Nebraska Certification #: Pace
New Jersey Certification #: MN-002
New York Certification #: 11647
North Carolina Certification #: 530
North Carolina State Public Health #: 27700
North Dakota Certification #: R-036
Ohio EPA #: 4150
Ohio VAP Certification #: CL101
Oklahoma Certification #: 9507
Oregon Certification #: MN200001
Oregon Certification #: MN300001
Pennsylvania Certification #: 68-00563
Puerto Rico Certification
Saipan (CNMI) #:MP0003
South Carolina #:74003001
Texas Certification #: T104704192
Tennessee Certification #: 02818
Utah Certification #: MN000642013-4
Virginia DGS Certification #: 251
Virginia/VELAP Certification #: Pace
Washington Certification #: C486
West Virginia Certification #: 382
West Virginia DHHR #:9952C
Wisconsin Certification #: 999407970

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

SAMPLE SUMMARY

Project: UPRR LATC Upper Lot REV
Pace Project No.: 10378598

Lab ID	Sample ID	Matrix	Date Collected	Date Received
10378598001	**AB_2_8_17A_W1**	Solid	02/08/17 14:45	02/09/17 07:40
10378598002	**AB_2_8_17B_W2**	Solid	02/08/17 14:50	02/09/17 07:40

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

SAMPLE ANALYTE COUNT

Project: UPRR LATC Upper Lot REV
Pace Project No.: 10378598

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
10378598001	**AB_2_8_17A_W1**	EPA 8015 Modified	JRH	4	PASI-M
		EPA 8081	XV1	24	PASI-M
		EPA 8081A	XV1	3	PASI-M
		EPA 8082	SNG	11	PASI-M
		EPA 8015	KMZ	2	PASI-M
		EPA 6010	IP	16	PASI-M
		EPA 6010	IP	1	PASI-M
		EPA 7471	LMW	1	PASI-M
		EPA 8270 by SIM	KLL	18	PASI-M
		EPA 8260B	MRB	70	PASI-M
10378598002	**AB_2_8_17B_W2**	EPA 8015 Modified	JRH	4	PASI-M
		EPA 8081	XV1	24	PASI-M
		EPA 8081A	XV1	3	PASI-M
		EPA 8082	SNG	11	PASI-M
		EPA 8015	KMZ	2	PASI-M
		EPA 6010	IP	16	PASI-M
		EPA 6010	IP	1	PASI-M
		EPA 7471	LMW	1	PASI-M
		EPA 8270 by SIM	KLL	18	PASI-M
		EPA 8260B	MRB	70	PASI-M

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

PROJECT NARRATIVE

Project: UPRR LATC Upper Lot REV
Pace Project No.: 10378598

Method: **EPA 8015 Modified**
Description: 8015 GCS THC-Diesel
Client: UPRR_CH2M Hill
Date: March 01, 2017

General Information:
2 samples were analyzed for EPA 8015 Modified. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3550 Sonication with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

QC Batch: 459406

S4: Surrogate recovery not evaluated against control limits due to sample dilution.
- AB_2_8_17B_W2 (Lab ID: 10378598002)
  - n-Triacontane (S)
  - o-Terphenyl (S)

S5: Surrogate recovery outside control limits due to matrix interferences (not confirmed by re-analysis).
- MS (Lab ID: 2513191)
  - n-Triacontane (S)

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 459406

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10378598001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
- MS (Lab ID: 2513191)
  - Motor Oil Range (C24-C36)
  - TPH-DRO (C10-C28)
- MSD (Lab ID: 2513192)

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

PROJECT NARRATIVE

Project: UPRR LATC Upper Lot REV
Pace Project No.: 10378598

Method: **EPA 8015 Modified**
Description: 8015 GCS THC-Diesel
Client: UPRR_CH2M Hill
Date: March 01, 2017

QC Batch: 459406

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10378598001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- Motor Oil Range (C24-C36)
- TPH-DRO (C10-C28)

R1: RPD value was outside control limits.

- MSD (Lab ID: 2513192)
  - Motor Oil Range (C24-C36)
  - TPH-DRO (C10-C28)

Additional Comments:

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

PROJECT NARRATIVE

Project: UPRR LATC Upper Lot REV
Pace Project No.: 10378598

Method: **EPA 8081**
Description: 8081 GCS Pesticides
Client: UPRR_CH2M Hill
Date: March 01, 2017

General Information:
2 samples were analyzed for EPA 8081. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3550 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

QC Batch: 459437

S4: Surrogate recovery not evaluated against control limits due to sample dilution.

- AB_2_8_17A_W1 (Lab ID: 10378598001)
  - Decachlorobiphenyl (S)
  - Tetrachloro-m-xylene (S)
- AB_2_8_17B_W2 (Lab ID: 10378598002)
  - Decachlorobiphenyl (S)
  - Tetrachloro-m-xylene (S)
- MS (Lab ID: 2513304)
  - Decachlorobiphenyl (S)
  - Tetrachloro-m-xylene (S)
- MSD (Lab ID: 2513305)
  - Decachlorobiphenyl (S)
  - Tetrachloro-m-xylene (S)

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

PROJECT NARRATIVE

Project: UPRR LATC Upper Lot REV
Pace Project No.: 10378598

Method: **EPA 8081**
Description: 8081 GCS Pesticides
Client: UPRR_CH2M Hill
Date: March 01, 2017

QC Batch: 459437

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10378598001

M6: Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

- MS (Lab ID: 2513304)
  - 4,4'-DDE
  - 4,4'-DDT
  - Aldrin
  - Dieldrin
  - Endosulfan I
  - Endosulfan II
  - Endosulfan sulfate
  - Endrin aldehyde
  - Endrin ketone
  - Heptachlor
  - Heptachlor epoxide
  - alpha-Chlordane
  - beta-BHC
  - delta-BHC
  - gamma-BHC (Lindane)
  - gamma-Chlordane
- MSD (Lab ID: 2513305)
  - 4,4'-DDE
  - 4,4'-DDT
  - Aldrin
  - Dieldrin
  - Endosulfan I
  - Endosulfan II
  - Endosulfan sulfate
  - Endrin
  - Endrin ketone
  - Heptachlor
  - Heptachlor epoxide
  - alpha-BHC
  - alpha-Chlordane
  - beta-BHC
  - gamma-BHC (Lindane)
  - gamma-Chlordane

Additional Comments:

Analyte Comments:

QC Batch: 459437

2M: Samples were black in color and very viscous. Samples intially ran at 100X with failing continuing calibrations.

- AB_2_8_17A_W1 (Lab ID: 10378598001)
  - Tetrachloro-m-xylene (S)

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

PROJECT NARRATIVE

Project: UPRR LATC Upper Lot REV
Pace Project No.: 10378598

Method: **EPA 8081**
Description: 8081 GCS Pesticides
Client: UPRR_CH2M Hill
Date: March 01, 2017

Analyte Comments:

QC Batch: 459437

2M: Samples were black in color and very viscous. Samples intially ran at 100X with failing continuing calibrations.

- AB_2_8_17B_W2 (Lab ID: 10378598002)
  - Tetrachloro-m-xylene (S)
- MS (Lab ID: 2513304)
  - Tetrachloro-m-xylene (S)
- MSD (Lab ID: 2513305)
  - Tetrachloro-m-xylene (S)

D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

- AB_2_8_17A_W1 (Lab ID: 10378598001)
  - Tetrachloro-m-xylene (S)
- AB_2_8_17B_W2 (Lab ID: 10378598002)
  - Tetrachloro-m-xylene (S)
- MS (Lab ID: 2513304)
  - Tetrachloro-m-xylene (S)
- MSD (Lab ID: 2513305)
  - Tetrachloro-m-xylene (S)

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Minneapolis, MN 55414
(612)607-1700

PROJECT NARRATIVE

Project: UPRR LATC Upper Lot REV
Pace Project No.: 10378598

Method: **EPA 8081A**
Description: 8081A GCS Pesticides, TCLP
Client: UPRR_CH2M Hill
Date: March 01, 2017

General Information:
2 samples were analyzed for EPA 8081A. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA Mod. 3510C with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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Minneapolis, MN 55414
(612)607-1700

PROJECT NARRATIVE

Project: UPRR LATC Upper Lot REV
Pace Project No.: 10378598

Method: **EPA 8082**
Description: 8082 GCS PCB
Client: UPRR_CH2M Hill
Date: March 01, 2017

General Information:
2 samples were analyzed for EPA 8082. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3546 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

QC Batch: 459490

CH: The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased high.

- AB_2_8_17A_W1 (Lab ID: 10378598001)
  - Decachlorobiphenyl (S)
- AB_2_8_17B_W2 (Lab ID: 10378598002)
  - Decachlorobiphenyl (S)
- BLANK (Lab ID: 2513589)
  - Decachlorobiphenyl (S)
- LCS (Lab ID: 2513590)
  - Decachlorobiphenyl (S)
- MS (Lab ID: 2513591)
  - Decachlorobiphenyl (S)
- MSD (Lab ID: 2513592)
  - Decachlorobiphenyl (S)

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

QC Batch: 459490

S5: Surrogate recovery outside control limits due to matrix interferences (not confirmed by re-analysis).

- AB_2_8_17B_W2 (Lab ID: 10378598002)
  - Decachlorobiphenyl (S)
- MS (Lab ID: 2513591)
  - Decachlorobiphenyl (S)
- MSD (Lab ID: 2513592)
  - Decachlorobiphenyl (S)

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

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Minneapolis, MN 55414
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PROJECT NARRATIVE

Project: UPRR LATC Upper Lot REV
Pace Project No.: 10378598

Method: **EPA 8082**
Description: 8082 GCS PCB
Client: UPRR_CH2M Hill
Date: March 01, 2017

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: UPRR LATC Upper Lot REV
Pace Project No.: 10378598

Method: **EPA 8015**
Description: 8015 GCV GRO
Client: UPRR_CH2M Hill
Date: March 01, 2017

General Information:
2 samples were analyzed for EPA 8015. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 5030 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Analyte Comments:

QC Batch: 459651

1M: Sample preserved in lab; results are from sample aliquot taken from a glass jar with headspace.

- AB_2_8_17A_W1 (Lab ID: 10378598001)
  - Gasoline Range Organics

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PROJECT NARRATIVE

Project: UPRR LATC Upper Lot REV
Pace Project No.: 10378598

Method: **EPA 6010**
Description: 6010 MET ICP
Client: UPRR_CH2M Hill
Date: March 01, 2017

General Information:
2 samples were analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3050 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 459521

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10377936001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 2513937)
  - Antimony
  - Arsenic
  - Barium
  - Beryllium
  - Cobalt
  - Copper
  - Molybdenum
  - Nickel
  - Selenium
  - Thallium
  - Vanadium
- MSD (Lab ID: 2513938)
  - Antimony
  - Barium
  - Beryllium

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1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

PROJECT NARRATIVE

Project: UPRR LATC Upper Lot REV
Pace Project No.: 10378598

Method: **EPA 6010**
Description: 6010 MET ICP
Client: UPRR_CH2M Hill
Date: March 01, 2017

QC Batch: 459521

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10377936001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- Cobalt
- Lead
- Molybdenum
- Nickel
- Selenium
- Thallium

Additional Comments:

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Minneapolis, MN 55414
(612)607-1700

PROJECT NARRATIVE

Project: UPRR LATC Upper Lot REV
Pace Project No.: 10378598

Method: **EPA 6010**
Description: 6010 MET ICP, WET
Client: UPRR_CH2M Hill
Date: March 01, 2017

General Information:
2 samples were analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with CA WET Leachate with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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Minneapolis, MN 55414
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PROJECT NARRATIVE

Project: UPRR LATC Upper Lot REV
Pace Project No.: 10378598

Method: **EPA 7471**
Description: 7471 Mercury
Client: UPRR_CH2M Hill
Date: March 01, 2017

General Information:
2 samples were analyzed for EPA 7471. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 7471 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

PROJECT NARRATIVE

Project: UPRR LATC Upper Lot REV
Pace Project No.: 10378598

Method: **EPA 8270 by SIM**
Description: 8270 MSSV PAH by SIM
Client: UPRR_CH2M Hill
Date: March 01, 2017

General Information:
2 samples were analyzed for EPA 8270 by SIM. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3550 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 459405

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10378598001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- MS (Lab ID: 2513187)
  - Benzo(a)anthracene
  - Benzo(a)pyrene
  - Benzo(b)fluoranthene
  - Chrysene
  - Dibenz(a,h)anthracene
  - Phenanthrene
  - Pyrene
- MSD (Lab ID: 2513188)
  - Benzo(a)anthracene

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1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

PROJECT NARRATIVE

Project: UPRR LATC Upper Lot REV
Pace Project No.: 10378598

Method: **EPA 8270 by SIM**
Description: 8270 MSSV PAH by SIM
Client: UPRR_CH2M Hill
Date: March 01, 2017

QC Batch: 459405

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 10378598001

M1: Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

- Benzo(b)fluoranthene
- Dibenz(a,h)anthracene
- Phenanthrene

Additional Comments:

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

PROJECT NARRATIVE

Project: UPRR LATC Upper Lot REV
Pace Project No.: 10378598

Method: **EPA 8260B**
Description: 8260B MSV 5035 Low Level
Client: UPRR_CH2M Hill
Date: March 01, 2017

General Information:
2 samples were analyzed for EPA 8260B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 5035 Low with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 459350

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

Additional Comments:

Analyte Comments:

QC Batch: 459350

3M: The sample was taken from a glass jar with headspace.

- AB_2_8_17A_W1 (Lab ID: 10378598001)
  - 1,2-Dichloroethane-d4 (S)

This data package has been reviewed for quality and completeness and is approved for release.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: UPRR LATC Upper Lot REV
Pace Project No.: 10378598

Sample: AB_2_8_17A_W1 **Lab ID: 10378598001** Collected: 02/08/17 14:45 Received: 02/09/17 07:40 Matrix: Solid
Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015 Modified Preparation Method: EPA 3550 Sonication								
Motor Oil Range (C24-C36)	**1550**	mg/kg	99.9	9.0	2	02/09/17 10:52	02/10/17 12:33		M1,R1
TPH-DRO (C10-C28)	**295**	mg/kg	99.9	26.1	2	02/09/17 10:52	02/10/17 12:33		M1,R1
Surrogates									
o-Terphenyl (S)	100	%.	57-125		2	02/09/17 10:52	02/10/17 12:33	84-15-1	
n-Triacontane (S)	80	%.	62-125		2	02/09/17 10:52	02/10/17 12:33	638-68-6	
8081 GCS Pesticides	Analytical Method: EPA 8081 Preparation Method: EPA 3550								
Aldrin	**<50.0**	ug/kg	334	50.0	200	02/09/17 11:59	02/13/17 21:43	309-00-2	M6
alpha-BHC	**<44.0**	ug/kg	334	44.0	200	02/09/17 11:59	02/13/17 21:43	319-84-6	M6
beta-BHC	**<52.0**	ug/kg	334	52.0	200	02/09/17 11:59	02/13/17 21:43	319-85-7	M6
delta-BHC	**<42.0**	ug/kg	334	42.0	200	02/09/17 11:59	02/13/17 21:43	319-86-8	M6
gamma-BHC (Lindane)	**<48.0**	ug/kg	334	48.0	200	02/09/17 11:59	02/13/17 21:43	58-89-9	M6
Chlordane (Technical)	**<1060**	ug/kg	3340	1060	200	02/09/17 11:59	02/13/17 21:43	57-74-9	
alpha-Chlordane	**<78.0**	ug/kg	334	78.0	200	02/09/17 11:59	02/13/17 21:43	5103-71-9	M6
gamma-Chlordane	**<48.0**	ug/kg	334	48.0	200	02/09/17 11:59	02/13/17 21:43	5103-74-2	M6
4,4'-DDD	**<80.0**	ug/kg	666	80.0	200	02/09/17 11:59	02/13/17 21:43	72-54-8	
4,4'-DDE	**<106**	ug/kg	666	106	200	02/09/17 11:59	02/13/17 21:43	72-55-9	M6
4,4'-DDT	**<134**	ug/kg	666	134	200	02/09/17 11:59	02/13/17 21:43	50-29-3	M6
Dieldrin	**<86.0**	ug/kg	666	86.0	200	02/09/17 11:59	02/13/17 21:43	60-57-1	M6
Endosulfan I	**<52.0**	ug/kg	334	52.0	200	02/09/17 11:59	02/13/17 21:43	959-98-8	M6
Endosulfan II	**<104**	ug/kg	666	104	200	02/09/17 11:59	02/13/17 21:43	33213-65-9	M6
Endosulfan sulfate	**<108**	ug/kg	666	108	200	02/09/17 11:59	02/13/17 21:43	1031-07-8	M6
Endrin	**<94.0**	ug/kg	666	94.0	200	02/09/17 11:59	02/13/17 21:43	72-20-8	M6
Endrin aldehyde	**<106**	ug/kg	666	106	200	02/09/17 11:59	02/13/17 21:43	7421-93-4	M6
Endrin ketone	**<108**	ug/kg	666	108	200	02/09/17 11:59	02/13/17 21:43	53494-70-5	M6
Heptachlor	**<48.0**	ug/kg	334	48.0	200	02/09/17 11:59	02/13/17 21:43	76-44-8	M6
Heptachlor epoxide	**<78.0**	ug/kg	334	78.0	200	02/09/17 11:59	02/13/17 21:43	1024-57-3	M6
Methoxychlor	**<640**	ug/kg	3340	640	200	02/09/17 11:59	02/13/17 21:43	72-43-5	
Toxaphene	**<2000**	ug/kg	10000	2000	200	02/09/17 11:59	02/13/17 21:43	8001-35-2	
Surrogates									
Tetrachloro-m-xylene (S)	0	%.	71-125		200	02/09/17 11:59	02/13/17 21:43	877-09-8	2M,D3, S4
Decachlorobiphenyl (S)	0	%.	69-125		200	02/09/17 11:59	02/13/17 21:43	2051-24-3	S4
8081A GCS Pesticides, TCLP	Analytical Method: EPA 8081A Preparation Method: EPA Mod. 3510C Leachate Method/Date: EPA 1311; 02/28/17 11:57 Initial pH: 10.81; Final pH: 2.9								
Chlordane (Technical)	**<0.078**	ug/L	5.0	0.078	1	02/28/17 12:58	02/28/17 15:25	57-74-9	
Surrogates									
Tetrachloro-m-xylene (S)	96	%.	64-125		1	02/28/17 12:58	02/28/17 15:25	877-09-8	
Decachlorobiphenyl (S)	93	%.	66-125		1	02/28/17 12:58	02/28/17 15:25	2051-24-3	
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3546								
PCB-1016 (Aroclor 1016)	**<5.3**	ug/kg	33.0	5.3	1	02/09/17 15:51	02/14/17 16:02	12674-11-2	
PCB-1221 (Aroclor 1221)	**<8.7**	ug/kg	33.0	8.7	1	02/09/17 15:51	02/14/17 16:02	11104-28-2	
PCB-1232 (Aroclor 1232)	**<6.2**	ug/kg	33.0	6.2	1	02/09/17 15:51	02/14/17 16:02	11141-16-5	

REPORT OF LABORATORY ANALYSIS

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1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: UPRR LATC Upper Lot REV
Pace Project No.: 10378598

Sample: AB_2_8_17A_W1 **Lab ID: 10378598001** Collected: 02/08/17 14:45 Received: 02/09/17 07:40 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3546								
PCB-1242 (Aroclor 1242)	**<10.8**	ug/kg	33.0	10.8	1	02/09/17 15:51	02/14/17 16:02	53469-21-9	
PCB-1248 (Aroclor 1248)	**<5.9**	ug/kg	33.0	5.9	1	02/09/17 15:51	02/14/17 16:02	12672-29-6	
PCB-1254 (Aroclor 1254)	**<6.4**	ug/kg	33.0	6.4	1	02/09/17 15:51	02/14/17 16:02	11097-69-1	
PCB-1260 (Aroclor 1260)	**<4.4**	ug/kg	33.0	4.4	1	02/09/17 15:51	02/14/17 16:02	11096-82-5	
PCB-1262 (Aroclor 1262)	**<3.1**	ug/kg	33.0	3.1	1	02/09/17 15:51	02/14/17 16:02	37324-23-5	
PCB-1268 (Aroclor 1268)	**<5.6**	ug/kg	33.0	5.6	1	02/09/17 15:51	02/14/17 16:02	11100-14-4	
Surrogates									
Tetrachloro-m-xylene (S)	86	%.	70-130		1	02/09/17 15:51	02/14/17 16:02	877-09-8	
Decachlorobiphenyl (S)	70	%.	70-130		1	02/09/17 15:51	02/14/17 16:02	2051-24-3	CH
8015 GCV GRO	Analytical Method: EPA 8015 Preparation Method: EPA 5030								
Gasoline Range Organics	**<1.3**	mg/kg	4.9	1.3	1	02/10/17 13:46	02/10/17 16:22		1M
Surrogates									
a,a,a-Trifluorotoluene (S)	80	%.	50-150		1	02/10/17 13:46	02/10/17 16:22	98-08-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Antimony	**<0.19**	mg/kg	0.96	0.19	1	02/10/17 11:58	02/14/17 13:53	7440-36-0	
Arsenic	**4.3**	mg/kg	0.96	0.19	1	02/10/17 11:58	02/14/17 13:53	7440-38-2	
Barium	**79.5**	mg/kg	0.48	0.015	1	02/10/17 11:58	02/14/17 13:53	7440-39-3	
Beryllium	**0.18J**	mg/kg	0.24	0.026	1	02/10/17 11:58	02/14/17 13:53	7440-41-7	
Cadmium	**0.18**	mg/kg	0.14	0.0091	1	02/10/17 11:58	02/14/17 13:53	7440-43-9	
Chromium	**9.8**	mg/kg	0.48	0.10	1	02/10/17 11:58	02/14/17 13:53	7440-47-3	
Cobalt	**3.4**	mg/kg	0.48	0.025	1	02/10/17 11:58	02/14/17 13:53	7440-48-4	
Copper	**13.6**	mg/kg	0.48	0.038	1	02/10/17 11:58	02/14/17 13:53	7440-50-8	
Lead	**24.4**	mg/kg	0.48	0.096	1	02/10/17 11:58	02/14/17 13:53	7439-92-1	
Molybdenum	**0.66J**	mg/kg	0.72	0.048	1	02/10/17 11:58	02/14/17 13:53	7439-98-7	
Nickel	**7.6**	mg/kg	0.96	0.26	1	02/10/17 11:58	02/14/17 13:53	7440-02-0	
Selenium	**0.38J**	mg/kg	0.96	0.28	1	02/10/17 11:58	02/14/17 13:53	7782-49-2	
Silver	**<0.077**	mg/kg	0.48	0.077	1	02/10/17 11:58	02/14/17 13:53	7440-22-4	
Thallium	**<0.16**	mg/kg	0.96	0.16	1	02/10/17 11:58	02/14/17 13:53	7440-28-0	
Vanadium	**21.4**	mg/kg	0.72	0.013	1	02/10/17 11:58	02/14/17 13:53	7440-62-2	
Zinc	**56.4**	mg/kg	0.96	0.27	1	02/10/17 11:58	02/14/17 13:53	7440-66-6	
6010 MET ICP, WET	Analytical Method: EPA 6010 Preparation Method: CA WET Leachate Leachate Method/Date: CA WET Leachate; 02/12/17 10:39								
Lead	**0.58**	mg/L	0.10	0.019	1	02/14/17 15:25	02/15/17 09:36	7439-92-1	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.039**	mg/kg	0.018	0.0046	1	02/10/17 11:08	02/14/17 18:13	7439-97-6	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3550								
Acenaphthene	**25.7J**	ug/kg	50.0	2.0	5	02/09/17 10:52	02/10/17 16:14	83-32-9	
Acenaphthylene	**<1.4**	ug/kg	50.0	1.4	5	02/09/17 10:52	02/10/17 16:14	208-96-8	
Anthracene	**54.2**	ug/kg	50.0	2.3	5	02/09/17 10:52	02/10/17 16:14	120-12-7	
Benzo(a)anthracene	**110**	ug/kg	50.0	2.3	5	02/09/17 10:52	02/10/17 16:14	56-55-3	M1

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: UPRR LATC Upper Lot REV
Pace Project No.: 10378598

Sample: AB_2_8_17A_W1 **Lab ID: 10378598001** Collected: 02/08/17 14:45 Received: 02/09/17 07:40 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3550								
Benzo(a)pyrene	**105**	ug/kg	50.0	1.7	5	02/09/17 10:52	02/10/17 16:14	50-32-8	M1
Benzo(b)fluoranthene	**126**	ug/kg	50.0	2.9	5	02/09/17 10:52	02/10/17 16:14	205-99-2	M1
Benzo(g,h,i)perylene	**81.9**	ug/kg	50.0	2.3	5	02/09/17 10:52	02/10/17 16:14	191-24-2	
Benzo(k)fluoranthene	**77.2**	ug/kg	50.0	2.5	5	02/09/17 10:52	02/10/17 16:14	207-08-9	
Chrysene	**161**	ug/kg	50.0	2.8	5	02/09/17 10:52	02/10/17 16:14	218-01-9	M1
Dibenz(a,h)anthracene	**<1.6**	ug/kg	50.0	1.6	5	02/09/17 10:52	02/10/17 16:14	53-70-3	M1
Fluoranthene	**313**	ug/kg	50.0	3.9	5	02/09/17 10:52	02/10/17 16:14	206-44-0	
Fluorene	**24.2J**	ug/kg	50.0	1.9	5	02/09/17 10:52	02/10/17 16:14	86-73-7	
Indeno(1,2,3-cd)pyrene	**62.8**	ug/kg	50.0	3.7	5	02/09/17 10:52	02/10/17 16:14	193-39-5	
Naphthalene	**<1.8**	ug/kg	50.0	1.8	5	02/09/17 10:52	02/10/17 16:14	91-20-3	
Phenanthrene	**266**	ug/kg	50.0	2.0	5	02/09/17 10:52	02/10/17 16:14	85-01-8	M1
Pyrene	**258**	ug/kg	50.0	4.1	5	02/09/17 10:52	02/10/17 16:14	129-00-0	M1
Surrogates									
2-Fluorobiphenyl (S)	69	%.	41-125		5	02/09/17 10:52	02/10/17 16:14	321-60-8	
p-Terphenyl-d14 (S)	63	%.	39-125		5	02/09/17 10:52	02/10/17 16:14	1718-51-0	
8260B MSV 5035 Low Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035 Low								
Acetone	**218**	ug/kg	18.6	3.9	1	02/10/17 11:41	02/10/17 15:04	67-64-1	
Allyl chloride	**<0.36**	ug/kg	9.3	0.36	1	02/10/17 11:41	02/10/17 15:04	107-05-1	
Benzene	**<1.6**	ug/kg	3.7	1.6	1	02/10/17 11:41	02/10/17 15:04	71-43-2	
Bromobenzene	**<0.43**	ug/kg	3.7	0.43	1	02/10/17 11:41	02/10/17 15:04	108-86-1	
Bromochloromethane	**<1.6**	ug/kg	3.7	1.6	1	02/10/17 11:41	02/10/17 15:04	74-97-5	
Bromodichloromethane	**<1.5**	ug/kg	3.7	1.5	1	02/10/17 11:41	02/10/17 15:04	75-27-4	
Bromoform	**<1.8**	ug/kg	18.6	1.8	1	02/10/17 11:41	02/10/17 15:04	75-25-2	
Bromomethane	**<1.2**	ug/kg	18.6	1.2	1	02/10/17 11:41	02/10/17 15:04	74-83-9	
2-Butanone (MEK)	**<7.6**	ug/kg	18.6	7.6	1	02/10/17 11:41	02/10/17 15:04	78-93-3	
n-Butylbenzene	**<1.4**	ug/kg	3.7	1.4	1	02/10/17 11:41	02/10/17 15:04	104-51-8	
sec-Butylbenzene	**<1.3**	ug/kg	3.7	1.3	1	02/10/17 11:41	02/10/17 15:04	135-98-8	
tert-Butylbenzene	**<1.5**	ug/kg	3.7	1.5	1	02/10/17 11:41	02/10/17 15:04	98-06-6	
Carbon tetrachloride	**<1.1**	ug/kg	3.7	1.1	1	02/10/17 11:41	02/10/17 15:04	56-23-5	
Chlorobenzene	**<1.5**	ug/kg	3.7	1.5	1	02/10/17 11:41	02/10/17 15:04	108-90-7	
Chloroethane	**<0.57**	ug/kg	9.3	0.57	1	02/10/17 11:41	02/10/17 15:04	75-00-3	
Chloroform	**<1.7**	ug/kg	3.7	1.7	1	02/10/17 11:41	02/10/17 15:04	67-66-3	
Chloromethane	**<1.0**	ug/kg	9.3	1.0	1	02/10/17 11:41	02/10/17 15:04	74-87-3	
2-Chlorotoluene	**<0.72**	ug/kg	3.7	0.72	1	02/10/17 11:41	02/10/17 15:04	95-49-8	
4-Chlorotoluene	**<1.8**	ug/kg	3.7	1.8	1	02/10/17 11:41	02/10/17 15:04	106-43-4	
1,2-Dibromo-3-chloropropane	**<3.9**	ug/kg	9.3	3.9	1	02/10/17 11:41	02/10/17 15:04	96-12-8	
Dibromochloromethane	**<1.7**	ug/kg	3.7	1.7	1	02/10/17 11:41	02/10/17 15:04	124-48-1	
1,2-Dibromoethane (EDB)	**<1.7**	ug/kg	3.7	1.7	1	02/10/17 11:41	02/10/17 15:04	106-93-4	
Dibromomethane	**<0.64**	ug/kg	3.7	0.64	1	02/10/17 11:41	02/10/17 15:04	74-95-3	
1,2-Dichlorobenzene	**<1.7**	ug/kg	3.7	1.7	1	02/10/17 11:41	02/10/17 15:04	95-50-1	
1,3-Dichlorobenzene	**<1.4**	ug/kg	3.7	1.4	1	02/10/17 11:41	02/10/17 15:04	541-73-1	
1,4-Dichlorobenzene	**<1.4**	ug/kg	3.7	1.4	1	02/10/17 11:41	02/10/17 15:04	106-46-7	
Dichlorodifluoromethane	**<0.66**	ug/kg	9.3	0.66	1	02/10/17 11:41	02/10/17 15:04	75-71-8	
1,1-Dichloroethane	**<1.2**	ug/kg	3.7	1.2	1	02/10/17 11:41	02/10/17 15:04	75-34-3	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: UPRR LATC Upper Lot REV
Pace Project No.: 10378598

Sample: AB_2_8_17A_W1 **Lab ID: 10378598001** Collected: 02/08/17 14:45 Received: 02/09/17 07:40 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5035 Low Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035 Low								
1,2-Dichloroethane	**<1.3**	ug/kg	3.7	1.3	1	02/10/17 11:41	02/10/17 15:04	107-06-2	
1,1-Dichloroethene	**<1.5**	ug/kg	3.7	1.5	1	02/10/17 11:41	02/10/17 15:04	75-35-4	
cis-1,2-Dichloroethene	**<1.7**	ug/kg	3.7	1.7	1	02/10/17 11:41	02/10/17 15:04	156-59-2	
trans-1,2-Dichloroethene	**<1.4**	ug/kg	3.7	1.4	1	02/10/17 11:41	02/10/17 15:04	156-60-5	
Dichlorofluoromethane	**<0.91**	ug/kg	3.7	0.91	1	02/10/17 11:41	02/10/17 15:04	75-43-4	
1,2-Dichloropropane	**<1.4**	ug/kg	3.7	1.4	1	02/10/17 11:41	02/10/17 15:04	78-87-5	
1,3-Dichloropropane	**<0.54**	ug/kg	3.7	0.54	1	02/10/17 11:41	02/10/17 15:04	142-28-9	
2,2-Dichloropropane	**<1.2**	ug/kg	9.3	1.2	1	02/10/17 11:41	02/10/17 15:04	594-20-7	
1,1-Dichloropropene	**<1.7**	ug/kg	3.7	1.7	1	02/10/17 11:41	02/10/17 15:04	563-58-6	
cis-1,3-Dichloropropene	**<1.7**	ug/kg	3.7	1.7	1	02/10/17 11:41	02/10/17 15:04	10061-01-5	
trans-1,3-Dichloropropene	**<1.6**	ug/kg	3.7	1.6	1	02/10/17 11:41	02/10/17 15:04	10061-02-6	
Diethyl ether (Ethyl ether)	**<1.6**	ug/kg	9.3	1.6	1	02/10/17 11:41	02/10/17 15:04	60-29-7	
Ethylbenzene	**<1.3**	ug/kg	3.7	1.3	1	02/10/17 11:41	02/10/17 15:04	100-41-4	
Hexachloro-1,3-butadiene	**<1.7**	ug/kg	9.3	1.7	1	02/10/17 11:41	02/10/17 15:04	87-68-3	
Isopropylbenzene (Cumene)	**<1.4**	ug/kg	3.7	1.4	1	02/10/17 11:41	02/10/17 15:04	98-82-8	
p-Isopropyltoluene	**<1.2**	ug/kg	3.7	1.2	1	02/10/17 11:41	02/10/17 15:04	99-87-6	
Methylene Chloride	**<1.3**	ug/kg	18.6	1.3	1	02/10/17 11:41	02/10/17 15:04	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<8.2**	ug/kg	18.6	8.2	1	02/10/17 11:41	02/10/17 15:04	108-10-1	
Methyl-tert-butyl ether	**<1.5**	ug/kg	3.7	1.5	1	02/10/17 11:41	02/10/17 15:04	1634-04-4	
Naphthalene	**<2.2**	ug/kg	9.3	2.2	1	02/10/17 11:41	02/10/17 15:04	91-20-3	
n-Propylbenzene	**<1.7**	ug/kg	3.7	1.7	1	02/10/17 11:41	02/10/17 15:04	103-65-1	
Styrene	**<1.7**	ug/kg	3.7	1.7	1	02/10/17 11:41	02/10/17 15:04	100-42-5	
1,1,1,2-Tetrachloroethane	**<1.5**	ug/kg	3.7	1.5	1	02/10/17 11:41	02/10/17 15:04	630-20-6	
1,1,2,2-Tetrachloroethane	**<1.7**	ug/kg	3.7	1.7	1	02/10/17 11:41	02/10/17 15:04	79-34-5	
Tetrachloroethene	**<1.7**	ug/kg	3.7	1.7	1	02/10/17 11:41	02/10/17 15:04	127-18-4	
Tetrahydrofuran	**<8.5**	ug/kg	37.1	8.5	1	02/10/17 11:41	02/10/17 15:04	109-99-9	
Toluene	**<1.6**	ug/kg	3.7	1.6	1	02/10/17 11:41	02/10/17 15:04	108-88-3	
1,2,3-Trichlorobenzene	**<1.6**	ug/kg	3.7	1.6	1	02/10/17 11:41	02/10/17 15:04	87-61-6	
1,2,4-Trichlorobenzene	**<0.30**	ug/kg	3.7	0.30	1	02/10/17 11:41	02/10/17 15:04	120-82-1	
1,1,1-Trichloroethane	**<1.2**	ug/kg	3.7	1.2	1	02/10/17 11:41	02/10/17 15:04	71-55-6	
1,1,2-Trichloroethane	**<0.72**	ug/kg	3.7	0.72	1	02/10/17 11:41	02/10/17 15:04	79-00-5	
Trichloroethene	**<1.3**	ug/kg	3.7	1.3	1	02/10/17 11:41	02/10/17 15:04	79-01-6	
Trichlorofluoromethane	**<0.96**	ug/kg	9.3	0.96	1	02/10/17 11:41	02/10/17 15:04	75-69-4	
1,2,3-Trichloropropane	**<1.7**	ug/kg	3.7	1.7	1	02/10/17 11:41	02/10/17 15:04	96-18-4	
1,1,2-Trichlorotrifluoroethane	**<1.3**	ug/kg	3.7	1.3	1	02/10/17 11:41	02/10/17 15:04	76-13-1	
1,2,4-Trimethylbenzene	**<1.4**	ug/kg	3.7	1.4	1	02/10/17 11:41	02/10/17 15:04	95-63-6	
1,3,5-Trimethylbenzene	**<1.7**	ug/kg	3.7	1.7	1	02/10/17 11:41	02/10/17 15:04	108-67-8	
Vinyl chloride	**<0.89**	ug/kg	3.7	0.89	1	02/10/17 11:41	02/10/17 15:04	75-01-4	
Xylene (Total)	**<1.6**	ug/kg	11.1	1.6	1	02/10/17 11:41	02/10/17 15:04	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	103	%.	30-150		1	02/10/17 11:41	02/10/17 15:04	17060-07-0	3M
Toluene-d8 (S)	106	%.	30-150		1	02/10/17 11:41	02/10/17 15:04	2037-26-5	
4-Bromofluorobenzene (S)	114	%.	30-150		1	02/10/17 11:41	02/10/17 15:04	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: UPRR LATC Upper Lot REV
Pace Project No.: 10378598

Sample: AB_2_8_17B_W2 **Lab ID: 10378598002** Collected: 02/08/17 14:50 Received: 02/09/17 07:40 Matrix: Solid
Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8015 GCS THC-Diesel	Analytical Method: EPA 8015 Modified Preparation Method: EPA 3550 Sonication								
Motor Oil Range (C24-C36)	**1580**	mg/kg	198	17.7	20	02/09/17 10:52	02/10/17 12:11		
TPH-DRO (C10-C28)	**270**	mg/kg	198	51.7	20	02/09/17 10:52	02/10/17 12:11		
Surrogates									
o-Terphenyl (S)	0	%.	57-125		20	02/09/17 10:52	02/10/17 12:11	84-15-1	S4
n-Triacontane (S)	0	%.	62-125		20	02/09/17 10:52	02/10/17 12:11	638-68-6	S4
8081 GCS Pesticides	Analytical Method: EPA 8081 Preparation Method: EPA 3550								
Aldrin	**<49.9**	ug/kg	333	49.9	200	02/09/17 11:59	02/13/17 23:33	309-00-2	
alpha-BHC	**<43.9**	ug/kg	333	43.9	200	02/09/17 11:59	02/13/17 23:33	319-84-6	
beta-BHC	**<51.9**	ug/kg	333	51.9	200	02/09/17 11:59	02/13/17 23:33	319-85-7	
delta-BHC	**<41.9**	ug/kg	333	41.9	200	02/09/17 11:59	02/13/17 23:33	319-86-8	
gamma-BHC (Lindane)	**<47.9**	ug/kg	333	47.9	200	02/09/17 11:59	02/13/17 23:33	58-89-9	
Chlordane (Technical)	**<1060**	ug/kg	3330	1060	200	02/09/17 11:59	02/13/17 23:33	57-74-9	
alpha-Chlordane	**<77.8**	ug/kg	333	77.8	200	02/09/17 11:59	02/13/17 23:33	5103-71-9	
gamma-Chlordane	**<47.9**	ug/kg	333	47.9	200	02/09/17 11:59	02/13/17 23:33	5103-74-2	
4,4'-DDD	**<79.8**	ug/kg	664	79.8	200	02/09/17 11:59	02/13/17 23:33	72-54-8	
4,4'-DDE	**<106**	ug/kg	664	106	200	02/09/17 11:59	02/13/17 23:33	72-55-9	
4,4'-DDT	**<134**	ug/kg	664	134	200	02/09/17 11:59	02/13/17 23:33	50-29-3	
Dieldrin	**<85.8**	ug/kg	664	85.8	200	02/09/17 11:59	02/13/17 23:33	60-57-1	
Endosulfan I	**<51.9**	ug/kg	333	51.9	200	02/09/17 11:59	02/13/17 23:33	959-98-8	
Endosulfan II	**<104**	ug/kg	664	104	200	02/09/17 11:59	02/13/17 23:33	33213-65-9	
Endosulfan sulfate	**<108**	ug/kg	664	108	200	02/09/17 11:59	02/13/17 23:33	1031-07-8	
Endrin	**<93.8**	ug/kg	664	93.8	200	02/09/17 11:59	02/13/17 23:33	72-20-8	
Endrin aldehyde	**<106**	ug/kg	664	106	200	02/09/17 11:59	02/13/17 23:33	7421-93-4	
Endrin ketone	**<108**	ug/kg	664	108	200	02/09/17 11:59	02/13/17 23:33	53494-70-5	
Heptachlor	**<47.9**	ug/kg	333	47.9	200	02/09/17 11:59	02/13/17 23:33	76-44-8	
Heptachlor epoxide	**<77.8**	ug/kg	333	77.8	200	02/09/17 11:59	02/13/17 23:33	1024-57-3	
Methoxychlor	**<638**	ug/kg	3330	638	200	02/09/17 11:59	02/13/17 23:33	72-43-5	
Toxaphene	**<1990**	ug/kg	9970	1990	200	02/09/17 11:59	02/13/17 23:33	8001-35-2	
Surrogates									
Tetrachloro-m-xylene (S)	0	%.	71-125		200	02/09/17 11:59	02/13/17 23:33	877-09-8	2M, D3, S4
Decachlorobiphenyl (S)	0	%.	69-125		200	02/09/17 11:59	02/13/17 23:33	2051-24-3	S4
8081A GCS Pesticides, TCLP	Analytical Method: EPA 8081A Preparation Method: EPA Mod. 3510C Leachate Method/Date: EPA 1311; 02/28/17 11:57 Initial pH: 11.11; Final pH: 2.84								
Chlordane (Technical)	**<0.078**	ug/L	5.0	0.078	1	02/28/17 12:58	02/28/17 16:19	57-74-9	
Surrogates									
Tetrachloro-m-xylene (S)	93	%.	64-125		1	02/28/17 12:58	02/28/17 16:19	877-09-8	
Decachlorobiphenyl (S)	94	%.	66-125		1	02/28/17 12:58	02/28/17 16:19	2051-24-3	
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3546								
PCB-1016 (Aroclor 1016)	**<5.3**	ug/kg	33.0	5.3	1	02/09/17 15:51	02/14/17 16:50	12674-11-2	
PCB-1221 (Aroclor 1221)	**<8.7**	ug/kg	33.0	8.7	1	02/09/17 15:51	02/14/17 16:50	11104-28-2	
PCB-1232 (Aroclor 1232)	**<6.2**	ug/kg	33.0	6.2	1	02/09/17 15:51	02/14/17 16:50	11141-16-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: UPRR LATC Upper Lot REV
Pace Project No.: 10378598

Sample: AB_2_8_17B_W2 **Lab ID: 10378598002** Collected: 02/08/17 14:50 Received: 02/09/17 07:40 Matrix: Solid
Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3546								
PCB-1242 (Aroclor 1242)	**<10.8**	ug/kg	33.0	10.8	1	02/09/17 15:51	02/14/17 16:50	53469-21-9	
PCB-1248 (Aroclor 1248)	**<5.9**	ug/kg	33.0	5.9	1	02/09/17 15:51	02/14/17 16:50	12672-29-6	
PCB-1254 (Aroclor 1254)	**<6.4**	ug/kg	33.0	6.4	1	02/09/17 15:51	02/14/17 16:50	11097-69-1	
PCB-1260 (Aroclor 1260)	**<4.4**	ug/kg	33.0	4.4	1	02/09/17 15:51	02/14/17 16:50	11096-82-5	
PCB-1262 (Aroclor 1262)	**<3.1**	ug/kg	33.0	3.1	1	02/09/17 15:51	02/14/17 16:50	37324-23-5	
PCB-1268 (Aroclor 1268)	**<5.6**	ug/kg	33.0	5.6	1	02/09/17 15:51	02/14/17 16:50	11100-14-4	
Surrogates									
Tetrachloro-m-xylene (S)	83	%.	70-130		1	02/09/17 15:51	02/14/17 16:50	877-09-8	
Decachlorobiphenyl (S)	66	%.	70-130		1	02/09/17 15:51	02/14/17 16:50	2051-24-3	CH,S5
8015 GCV GRO	Analytical Method: EPA 8015 Preparation Method: EPA 5030								
Gasoline Range Organics	**<1.3**	mg/kg	4.9	1.3	1	02/10/17 13:46	02/10/17 17:06		
Surrogates									
a,a,a-Trifluorotoluene (S)	81	%.	50-150		1	02/10/17 13:46	02/10/17 17:06	98-08-8	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3050								
Antimony	**0.33J**	mg/kg	0.98	0.20	1	02/10/17 11:58	02/14/17 13:57	7440-36-0	
Arsenic	**5.1**	mg/kg	0.98	0.20	1	02/10/17 11:58	02/14/17 13:57	7440-38-2	
Barium	**102**	mg/kg	0.49	0.016	1	02/10/17 11:58	02/14/17 13:57	7440-39-3	
Beryllium	**0.21J**	mg/kg	0.25	0.026	1	02/10/17 11:58	02/14/17 13:57	7440-41-7	
Cadmium	**0.20**	mg/kg	0.15	0.0093	1	02/10/17 11:58	02/14/17 13:57	7440-43-9	
Chromium	**10.4**	mg/kg	0.49	0.10	1	02/10/17 11:58	02/14/17 13:57	7440-47-3	
Cobalt	**4.3**	mg/kg	0.49	0.026	1	02/10/17 11:58	02/14/17 13:57	7440-48-4	
Copper	**19.6**	mg/kg	0.49	0.039	1	02/10/17 11:58	02/14/17 13:57	7440-50-8	
Lead	**30.0**	mg/kg	0.49	0.098	1	02/10/17 11:58	02/14/17 13:57	7439-92-1	
Molybdenum	**0.70J**	mg/kg	0.74	0.049	1	02/10/17 11:58	02/14/17 13:57	7439-98-7	
Nickel	**8.4**	mg/kg	0.98	0.27	1	02/10/17 11:58	02/14/17 13:57	7440-02-0	
Selenium	**<0.28**	mg/kg	0.98	0.28	1	02/10/17 11:58	02/14/17 13:57	7782-49-2	
Silver	**<0.078**	mg/kg	0.49	0.078	1	02/10/17 11:58	02/14/17 13:57	7440-22-4	
Thallium	**<0.17**	mg/kg	0.98	0.17	1	02/10/17 11:58	02/14/17 13:57	7440-28-0	
Vanadium	**24.6**	mg/kg	0.74	0.013	1	02/10/17 11:58	02/14/17 13:57	7440-62-2	
Zinc	**57.4**	mg/kg	0.98	0.27	1	02/10/17 11:58	02/14/17 13:57	7440-66-6	
6010 MET ICP, WET	Analytical Method: EPA 6010 Preparation Method: CA WET Leachate Leachate Method/Date: CA WET Leachate; 02/12/17 10:39								
Lead	**0.52**	mg/L	0.10	0.019	1	02/14/17 15:25	02/15/17 09:55	7439-92-1	
7471 Mercury	Analytical Method: EPA 7471 Preparation Method: EPA 7471								
Mercury	**0.047**	mg/kg	0.019	0.0049	1	02/10/17 11:08	02/14/17 18:15	7439-97-6	
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3550								
Acenaphthene	**37.9J**	ug/kg	49.8	1.9	5	02/09/17 10:52	02/10/17 17:20	83-32-9	
Acenaphthylene	**<1.4**	ug/kg	49.8	1.4	5	02/09/17 10:52	02/10/17 17:20	208-96-8	
Anthracene	**81.7**	ug/kg	49.8	2.3	5	02/09/17 10:52	02/10/17 17:20	120-12-7	
Benzo(a)anthracene	**167**	ug/kg	49.8	2.3	5	02/09/17 10:52	02/10/17 17:20	56-55-3	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: UPRR LATC Upper Lot REV
Pace Project No.: 10378598

Sample: AB_2_8_17B_W2 **Lab ID: 10378598002** Collected: 02/08/17 14:50 Received: 02/09/17 07:40 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by SIM	Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3550								
Benzo(a)pyrene	**143**	ug/kg	49.8	1.7	5	02/09/17 10:52	02/10/17 17:20	50-32-8	
Benzo(b)fluoranthene	**180**	ug/kg	49.8	2.9	5	02/09/17 10:52	02/10/17 17:20	205-99-2	
Benzo(g,h,i)perylene	**103**	ug/kg	49.8	2.3	5	02/09/17 10:52	02/10/17 17:20	191-24-2	
Benzo(k)fluoranthene	**88.6**	ug/kg	49.8	2.4	5	02/09/17 10:52	02/10/17 17:20	207-08-9	
Chrysene	**228**	ug/kg	49.8	2.8	5	02/09/17 10:52	02/10/17 17:20	218-01-9	
Dibenz(a,h)anthracene	**<1.6**	ug/kg	49.8	1.6	5	02/09/17 10:52	02/10/17 17:20	53-70-3	
Fluoranthene	**441**	ug/kg	49.8	3.9	5	02/09/17 10:52	02/10/17 17:20	206-44-0	
Fluorene	**30.4J**	ug/kg	49.8	1.9	5	02/09/17 10:52	02/10/17 17:20	86-73-7	
Indeno(1,2,3-cd)pyrene	**82.0**	ug/kg	49.8	3.7	5	02/09/17 10:52	02/10/17 17:20	193-39-5	
Naphthalene	**<1.8**	ug/kg	49.8	1.8	5	02/09/17 10:52	02/10/17 17:20	91-20-3	
Phenanthrene	**367**	ug/kg	49.8	2.0	5	02/09/17 10:52	02/10/17 17:20	85-01-8	
Pyrene	**351**	ug/kg	49.8	4.1	5	02/09/17 10:52	02/10/17 17:20	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	78	%.	41-125		5	02/09/17 10:52	02/10/17 17:20	321-60-8	
p-Terphenyl-d14 (S)	67	%.	39-125		5	02/09/17 10:52	02/10/17 17:20	1718-51-0	
8260B MSV 5035 Low Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035 Low								
Acetone	**47.0**	ug/kg	18.6	3.9	1	02/10/17 11:41	02/10/17 15:23	67-64-1	
Allyl chloride	**<0.36**	ug/kg	9.3	0.36	1	02/10/17 11:41	02/10/17 15:23	107-05-1	
Benzene	**<1.6**	ug/kg	3.7	1.6	1	02/10/17 11:41	02/10/17 15:23	71-43-2	
Bromobenzene	**<0.43**	ug/kg	3.7	0.43	1	02/10/17 11:41	02/10/17 15:23	108-86-1	
Bromochloromethane	**<1.6**	ug/kg	3.7	1.6	1	02/10/17 11:41	02/10/17 15:23	74-97-5	
Bromodichloromethane	**<1.5**	ug/kg	3.7	1.5	1	02/10/17 11:41	02/10/17 15:23	75-27-4	
Bromoform	**<1.8**	ug/kg	18.6	1.8	1	02/10/17 11:41	02/10/17 15:23	75-25-2	
Bromomethane	**<1.2**	ug/kg	18.6	1.2	1	02/10/17 11:41	02/10/17 15:23	74-83-9	
2-Butanone (MEK)	**<7.6**	ug/kg	18.6	7.6	1	02/10/17 11:41	02/10/17 15:23	78-93-3	
n-Butylbenzene	**<1.5**	ug/kg	3.7	1.5	1	02/10/17 11:41	02/10/17 15:23	104-51-8	
sec-Butylbenzene	**<1.3**	ug/kg	3.7	1.3	1	02/10/17 11:41	02/10/17 15:23	135-98-8	
tert-Butylbenzene	**<1.5**	ug/kg	3.7	1.5	1	02/10/17 11:41	02/10/17 15:23	98-06-6	
Carbon tetrachloride	**<1.1**	ug/kg	3.7	1.1	1	02/10/17 11:41	02/10/17 15:23	56-23-5	
Chlorobenzene	**<1.5**	ug/kg	3.7	1.5	1	02/10/17 11:41	02/10/17 15:23	108-90-7	
Chloroethane	**<0.58**	ug/kg	9.3	0.58	1	02/10/17 11:41	02/10/17 15:23	75-00-3	
Chloroform	**<1.7**	ug/kg	3.7	1.7	1	02/10/17 11:41	02/10/17 15:23	67-66-3	
Chloromethane	**<1.0**	ug/kg	9.3	1.0	1	02/10/17 11:41	02/10/17 15:23	74-87-3	
2-Chlorotoluene	**<0.73**	ug/kg	3.7	0.73	1	02/10/17 11:41	02/10/17 15:23	95-49-8	
4-Chlorotoluene	**<1.8**	ug/kg	3.7	1.8	1	02/10/17 11:41	02/10/17 15:23	106-43-4	
1,2-Dibromo-3-chloropropane	**<3.9**	ug/kg	9.3	3.9	1	02/10/17 11:41	02/10/17 15:23	96-12-8	
Dibromochloromethane	**<1.7**	ug/kg	3.7	1.7	1	02/10/17 11:41	02/10/17 15:23	124-48-1	
1,2-Dibromoethane (EDB)	**<1.7**	ug/kg	3.7	1.7	1	02/10/17 11:41	02/10/17 15:23	106-93-4	
Dibromomethane	**<0.64**	ug/kg	3.7	0.64	1	02/10/17 11:41	02/10/17 15:23	74-95-3	
1,2-Dichlorobenzene	**<1.7**	ug/kg	3.7	1.7	1	02/10/17 11:41	02/10/17 15:23	95-50-1	
1,3-Dichlorobenzene	**<1.5**	ug/kg	3.7	1.5	1	02/10/17 11:41	02/10/17 15:23	541-73-1	
1,4-Dichlorobenzene	**<1.4**	ug/kg	3.7	1.4	1	02/10/17 11:41	02/10/17 15:23	106-46-7	
Dichlorodifluoromethane	**<0.66**	ug/kg	9.3	0.66	1	02/10/17 11:41	02/10/17 15:23	75-71-8	
1,1-Dichloroethane	**<1.2**	ug/kg	3.7	1.2	1	02/10/17 11:41	02/10/17 15:23	75-34-3	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

ANALYTICAL RESULTS

Project: UPRR LATC Upper Lot REV
Pace Project No.: 10378598

Sample: AB_2_8_17B_W2 **Lab ID: 10378598002** Collected: 02/08/17 14:50 Received: 02/09/17 07:40 Matrix: Solid

Results reported on a "wet-weight" basis

Parameters	Results	Units	PQL	MDL	DF	Prepared	Analyzed	CAS No.	Qual
8260B MSV 5035 Low Level	Analytical Method: EPA 8260B Preparation Method: EPA 5035 Low								
1,2-Dichloroethane	**<1.3**	ug/kg	3.7	1.3	1	02/10/17 11:41	02/10/17 15:23	107-06-2	
1,1-Dichloroethene	**<1.5**	ug/kg	3.7	1.5	1	02/10/17 11:41	02/10/17 15:23	75-35-4	
cis-1,2-Dichloroethene	**<1.7**	ug/kg	3.7	1.7	1	02/10/17 11:41	02/10/17 15:23	156-59-2	
trans-1,2-Dichloroethene	**<1.4**	ug/kg	3.7	1.4	1	02/10/17 11:41	02/10/17 15:23	156-60-5	
Dichlorofluoromethane	**<0.91**	ug/kg	3.7	0.91	1	02/10/17 11:41	02/10/17 15:23	75-43-4	
1,2-Dichloropropane	**<1.4**	ug/kg	3.7	1.4	1	02/10/17 11:41	02/10/17 15:23	78-87-5	
1,3-Dichloropropane	**<0.55**	ug/kg	3.7	0.55	1	02/10/17 11:41	02/10/17 15:23	142-28-9	
2,2-Dichloropropane	**<1.2**	ug/kg	9.3	1.2	1	02/10/17 11:41	02/10/17 15:23	594-20-7	
1,1-Dichloropropene	**<1.7**	ug/kg	3.7	1.7	1	02/10/17 11:41	02/10/17 15:23	563-58-6	
cis-1,3-Dichloropropene	**<1.7**	ug/kg	3.7	1.7	1	02/10/17 11:41	02/10/17 15:23	10061-01-5	
trans-1,3-Dichloropropene	**<1.6**	ug/kg	3.7	1.6	1	02/10/17 11:41	02/10/17 15:23	10061-02-6	
Diethyl ether (Ethyl ether)	**<1.6**	ug/kg	9.3	1.6	1	02/10/17 11:41	02/10/17 15:23	60-29-7	
Ethylbenzene	**<1.3**	ug/kg	3.7	1.3	1	02/10/17 11:41	02/10/17 15:23	100-41-4	
Hexachloro-1,3-butadiene	**<1.7**	ug/kg	9.3	1.7	1	02/10/17 11:41	02/10/17 15:23	87-68-3	
Isopropylbenzene (Cumene)	**<1.4**	ug/kg	3.7	1.4	1	02/10/17 11:41	02/10/17 15:23	98-82-8	
p-Isopropyltoluene	**<1.2**	ug/kg	3.7	1.2	1	02/10/17 11:41	02/10/17 15:23	99-87-6	
Methylene Chloride	**<1.3**	ug/kg	18.6	1.3	1	02/10/17 11:41	02/10/17 15:23	75-09-2	
4-Methyl-2-pentanone (MIBK)	**<8.2**	ug/kg	18.6	8.2	1	02/10/17 11:41	02/10/17 15:23	108-10-1	
Methyl-tert-butyl ether	**<1.5**	ug/kg	3.7	1.5	1	02/10/17 11:41	02/10/17 15:23	1634-04-4	
Naphthalene	**<2.2**	ug/kg	9.3	2.2	1	02/10/17 11:41	02/10/17 15:23	91-20-3	
n-Propylbenzene	**<1.7**	ug/kg	3.7	1.7	1	02/10/17 11:41	02/10/17 15:23	103-65-1	
Styrene	**<1.7**	ug/kg	3.7	1.7	1	02/10/17 11:41	02/10/17 15:23	100-42-5	
1,1,1,2-Tetrachloroethane	**<1.5**	ug/kg	3.7	1.5	1	02/10/17 11:41	02/10/17 15:23	630-20-6	
1,1,2,2-Tetrachloroethane	**<1.7**	ug/kg	3.7	1.7	1	02/10/17 11:41	02/10/17 15:23	79-34-5	
Tetrachloroethene	**<1.7**	ug/kg	3.7	1.7	1	02/10/17 11:41	02/10/17 15:23	127-18-4	
Tetrahydrofuran	**<8.5**	ug/kg	37.2	8.5	1	02/10/17 11:41	02/10/17 15:23	109-99-9	
Toluene	**<1.6**	ug/kg	3.7	1.6	1	02/10/17 11:41	02/10/17 15:23	108-88-3	
1,2,3-Trichlorobenzene	**<1.6**	ug/kg	3.7	1.6	1	02/10/17 11:41	02/10/17 15:23	87-61-6	
1,2,4-Trichlorobenzene	**<0.30**	ug/kg	3.7	0.30	1	02/10/17 11:41	02/10/17 15:23	120-82-1	
1,1,1-Trichloroethane	**<1.2**	ug/kg	3.7	1.2	1	02/10/17 11:41	02/10/17 15:23	71-55-6	
1,1,2-Trichloroethane	**<0.72**	ug/kg	3.7	0.72	1	02/10/17 11:41	02/10/17 15:23	79-00-5	
Trichloroethene	**<1.4**	ug/kg	3.7	1.4	1	02/10/17 11:41	02/10/17 15:23	79-01-6	
Trichlorofluoromethane	**<0.96**	ug/kg	9.3	0.96	1	02/10/17 11:41	02/10/17 15:23	75-69-4	
1,2,3-Trichloropropane	**<1.7**	ug/kg	3.7	1.7	1	02/10/17 11:41	02/10/17 15:23	96-18-4	
1,1,2-Trichlorotrifluoroethane	**<1.3**	ug/kg	3.7	1.3	1	02/10/17 11:41	02/10/17 15:23	76-13-1	
1,2,4-Trimethylbenzene	**<1.4**	ug/kg	3.7	1.4	1	02/10/17 11:41	02/10/17 15:23	95-63-6	
1,3,5-Trimethylbenzene	**<1.7**	ug/kg	3.7	1.7	1	02/10/17 11:41	02/10/17 15:23	108-67-8	
Vinyl chloride	**<0.89**	ug/kg	3.7	0.89	1	02/10/17 11:41	02/10/17 15:23	75-01-4	
Xylene (Total)	**<1.6**	ug/kg	11.2	1.6	1	02/10/17 11:41	02/10/17 15:23	1330-20-7	
Surrogates									
1,2-Dichloroethane-d4 (S)	106	%.	30-150		1	02/10/17 11:41	02/10/17 15:23	17060-07-0	
Toluene-d8 (S)	105	%.	30-150		1	02/10/17 11:41	02/10/17 15:23	2037-26-5	
4-Bromofluorobenzene (S)	112	%.	30-150		1	02/10/17 11:41	02/10/17 15:23	460-00-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: UPRR LATC Upper Lot REV
Pace Project No.: 10378598

QC Batch: 459651 Analysis Method: EPA 8015
QC Batch Method: EPA 5030 Analysis Description: 8015 Solid
Associated Lab Samples: 10378598001, 10378598002

METHOD BLANK: 2514407 Matrix: Solid
Associated Lab Samples: 10378598001, 10378598002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Gasoline Range Organics	mg/kg	<1.3	5.0	1.3	02/10/17 15:38	
a,a,a-Trifluorotoluene (S)	%.	83	50-150		02/10/17 15:38	

LABORATORY CONTROL SAMPLE & LCSD: 2514408 2514409

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Gasoline Range Organics	mg/kg	50	49.3	48.3	99	97	75-125	2	20	
a,a,a-Trifluorotoluene (S)	%.				94	92	50-150			

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: UPRR LATC Upper Lot REV
Pace Project No.: 10378598

QC Batch: 459535 Analysis Method: EPA 7471
QC Batch Method: EPA 7471 Analysis Description: 7471 Mercury
Associated Lab Samples: 10378598001, 10378598002

METHOD BLANK: 2513982 Matrix: Solid
Associated Lab Samples: 10378598001, 10378598002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/kg	<0.0045	0.017	0.0045	02/14/17 17:36	

LABORATORY CONTROL SAMPLE: 2513983

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	.43	0.44	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2513984 2513985

Parameter	Units	10377936001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/kg	0.058	.52	.52	0.54	0.58	91	99	80-120	8	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: UPRR LATC Upper Lot REV
Pace Project No.: 10378598

QC Batch: 459521 Analysis Method: EPA 6010
QC Batch Method: EPA 3050 Analysis Description: 6010 MET
Associated Lab Samples: 10378598001, 10378598002

METHOD BLANK: 2513935 Matrix: Solid
Associated Lab Samples: 10378598001, 10378598002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/kg	<0.19	0.96	0.19	02/14/17 12:18	
Arsenic	mg/kg	<0.19	0.96	0.19	02/14/17 12:18	
Barium	mg/kg	0.19J	0.48	0.015	02/14/17 12:18	
Beryllium	mg/kg	<0.026	0.24	0.026	02/14/17 12:18	
Cadmium	mg/kg	<0.0091	0.14	0.0091	02/14/17 12:18	
Chromium	mg/kg	<0.10	0.48	0.10	02/14/17 12:18	
Cobalt	mg/kg	<0.025	0.48	0.025	02/14/17 12:18	
Copper	mg/kg	<0.038	0.48	0.038	02/14/17 12:18	
Lead	mg/kg	<0.096	0.48	0.096	02/14/17 12:18	
Molybdenum	mg/kg	<0.048	0.72	0.048	02/14/17 12:18	
Nickel	mg/kg	<0.26	0.96	0.26	02/14/17 12:18	
Selenium	mg/kg	<0.28	0.96	0.28	02/14/17 12:18	
Silver	mg/kg	<0.077	0.48	0.077	02/14/17 12:18	
Thallium	mg/kg	<0.16	0.96	0.16	02/14/17 12:18	
Vanadium	mg/kg	<0.013	0.72	0.013	02/14/17 12:18	
Zinc	mg/kg	0.37J	0.96	0.27	02/14/17 12:18	

LABORATORY CONTROL SAMPLE: 2513936

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/kg	46.3	41.9	90	80-120	
Arsenic	mg/kg	46.3	43.4	94	80-120	
Barium	mg/kg	46.3	44.0	95	80-120	
Beryllium	mg/kg	46.3	41.2	89	80-120	
Cadmium	mg/kg	46.3	41.7	90	80-120	
Chromium	mg/kg	46.3	43.6	94	80-120	
Cobalt	mg/kg	46.3	43.3	94	80-120	
Copper	mg/kg	46.3	42.2	91	80-120	
Lead	mg/kg	46.3	43.7	94	80-120	
Molybdenum	mg/kg	46.3	42.5	92	80-120	
Nickel	mg/kg	46.3	43.8	95	80-120	
Selenium	mg/kg	46.3	41.6	90	80-120	
Silver	mg/kg	23.1	21.7	94	80-120	
Thallium	mg/kg	46.3	42.5	92	80-120	
Vanadium	mg/kg	46.3	44.4	96	80-120	
Zinc	mg/kg	46.3	44.8	97	80-120	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: UPRR LATC Upper Lot REV
Pace Project No.: 10378598

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2513937 2513938

Parameter	Units	10377936001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	mg/kg	ND	53.5	53.5	12.4	13.5	23	25	75-125	8	20	M1
Arsenic	mg/kg	11.2	53.5	53.5	49.5	54.2	72	80	75-125	9	20	M1
Barium	mg/kg	1760	53.5	53.5	1580	1690	-329	-129	75-125	7	20	M1
Beryllium	mg/kg	0.60	53.5	53.5	39.8	39.7	73	73	75-125	0	20	M1
Cadmium	mg/kg	ND	53.5	53.5	40.2	40.4	75	75	75-125	1	20	
Chromium	mg/kg	17.7	53.5	53.5	58.4	58.8	76	77	75-125	1	20	
Cobalt	mg/kg	8.2	53.5	53.5	46.0	45.8	71	70	75-125	0	20	M1
Copper	mg/kg	21.8	53.5	53.5	60.9	64.1	73	79	75-125	5	20	M1
Lead	mg/kg	14.0	53.5	53.5	55.1	52.6	77	72	75-125	5	20	M1
Molybdenum	mg/kg	ND	53.5	53.5	35.6	35.3	65	65	75-125	1	20	M1
Nickel	mg/kg	25.5	53.5	53.5	61.0	64.4	66	73	75-125	5	20	M1
Selenium	mg/kg	1.5	53.5	53.5	40.6	41.4	73	74	75-125	2	20	M1
Silver	mg/kg	ND	26.8	26.8	21.2	21.3	79	79	75-125	0	20	
Thallium	mg/kg	ND	53.5	53.5	35.6	35.9	67	67	75-125	1	20	M1
Vanadium	mg/kg	46.2	53.5	53.5	84.8	88.3	72	79	75-125	4	20	M1
Zinc	mg/kg	90.5	53.5	53.5	133	130	79	75	75-125	2	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(612)607-1700

QUALITY CONTROL DATA

Project: UPRR LATC Upper Lot REV
Pace Project No.: 10378598

QC Batch: 459992 Analysis Method: EPA 6010
QC Batch Method: CA WET Leachate Analysis Description: 6010 MET WET
Associated Lab Samples: 10378598001, 10378598002

METHOD BLANK: 2515790 Matrix: Water
Associated Lab Samples: 10378598001, 10378598002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Lead	mg/L	<0.019	0.10	0.019	02/15/17 09:28	

LABORATORY CONTROL SAMPLE: 2515791

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead	mg/L	10	8.9	89	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2515792 2515793

Parameter	Units	10378598001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Lead	mg/L	0.58	10	10	9.9	10.0	93	94	75-125	1	30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: UPRR LATC Upper Lot REV
Pace Project No.: 10378598

QC Batch: 459350 Analysis Method: EPA 8260B
QC Batch Method: EPA 5035 Low Analysis Description: 8260B MSV 5035 Low Level
Associated Lab Samples: 10378598001, 10378598002

METHOD BLANK: 2513035 Matrix: Solid
Associated Lab Samples: 10378598001, 10378598002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	<1.6	4.0	1.6	02/10/17 13:10	
1,1,1-Trichloroethane	ug/kg	<1.3	4.0	1.3	02/10/17 13:10	
1,1,2,2-Tetrachloroethane	ug/kg	<1.8	4.0	1.8	02/10/17 13:10	
1,1,2-Trichloroethane	ug/kg	<0.78	4.0	0.78	02/10/17 13:10	
1,1,2-Trichlorotrifluoroethane	ug/kg	<1.4	4.0	1.4	02/10/17 13:10	
1,1-Dichloroethane	ug/kg	<1.3	4.0	1.3	02/10/17 13:10	
1,1-Dichloroethene	ug/kg	<1.6	4.0	1.6	02/10/17 13:10	
1,1-Dichloropropene	ug/kg	<1.8	4.0	1.8	02/10/17 13:10	
1,2,3-Trichlorobenzene	ug/kg	<1.7	4.0	1.7	02/10/17 13:10	
1,2,3-Trichloropropane	ug/kg	<1.8	4.0	1.8	02/10/17 13:10	
1,2,4-Trichlorobenzene	ug/kg	0.60J	4.0	0.32	02/10/17 13:10	
1,2,4-Trimethylbenzene	ug/kg	<1.5	4.0	1.5	02/10/17 13:10	
1,2-Dibromo-3-chloropropane	ug/kg	<4.2	10.0	4.2	02/10/17 13:10	
1,2-Dibromoethane (EDB)	ug/kg	<1.9	4.0	1.9	02/10/17 13:10	
1,2-Dichlorobenzene	ug/kg	<1.8	4.0	1.8	02/10/17 13:10	
1,2-Dichloroethane	ug/kg	<1.4	4.0	1.4	02/10/17 13:10	
1,2-Dichloropropane	ug/kg	<1.5	4.0	1.5	02/10/17 13:10	
1,3,5-Trimethylbenzene	ug/kg	<1.8	4.0	1.8	02/10/17 13:10	
1,3-Dichlorobenzene	ug/kg	<1.6	4.0	1.6	02/10/17 13:10	
1,3-Dichloropropane	ug/kg	<0.59	4.0	0.59	02/10/17 13:10	
1,4-Dichlorobenzene	ug/kg	<1.5	4.0	1.5	02/10/17 13:10	
2,2-Dichloropropane	ug/kg	<1.3	10.0	1.3	02/10/17 13:10	
2-Butanone (MEK)	ug/kg	<8.2	20.0	8.2	02/10/17 13:10	
2-Chlorotoluene	ug/kg	<0.78	4.0	0.78	02/10/17 13:10	
4-Chlorotoluene	ug/kg	<1.9	4.0	1.9	02/10/17 13:10	
4-Methyl-2-pentanone (MIBK)	ug/kg	<8.8	20.0	8.8	02/10/17 13:10	
Acetone	ug/kg	<4.2	20.0	4.2	02/10/17 13:10	
Allyl chloride	ug/kg	<0.39	10.0	0.39	02/10/17 13:10	
Benzene	ug/kg	<1.7	4.0	1.7	02/10/17 13:10	
Bromobenzene	ug/kg	<0.46	4.0	0.46	02/10/17 13:10	
Bromochloromethane	ug/kg	<1.7	4.0	1.7	02/10/17 13:10	
Bromodichloromethane	ug/kg	<1.6	4.0	1.6	02/10/17 13:10	
Bromoform	ug/kg	<2.0	20.0	2.0	02/10/17 13:10	
Bromomethane	ug/kg	<1.3	20.0	1.3	02/10/17 13:10	
Carbon tetrachloride	ug/kg	<1.2	4.0	1.2	02/10/17 13:10	
Chlorobenzene	ug/kg	<1.6	4.0	1.6	02/10/17 13:10	
Chloroethane	ug/kg	<0.62	10.0	0.62	02/10/17 13:10	
Chloroform	ug/kg	<1.8	4.0	1.8	02/10/17 13:10	
Chloromethane	ug/kg	<1.1	10.0	1.1	02/10/17 13:10	
cis-1,2-Dichloroethene	ug/kg	<1.8	4.0	1.8	02/10/17 13:10	
cis-1,3-Dichloropropene	ug/kg	<1.8	4.0	1.8	02/10/17 13:10	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: UPRR LATC Upper Lot REV
Pace Project No.: 10378598

METHOD BLANK: 2513035 Matrix: Solid
Associated Lab Samples: 10378598001, 10378598002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Dibromochloromethane	ug/kg	<1.8	4.0	1.8	02/10/17 13:10	
Dibromomethane	ug/kg	<0.69	4.0	0.69	02/10/17 13:10	
Dichlorodifluoromethane	ug/kg	<0.71	10.0	0.71	02/10/17 13:10	
Dichlorofluoromethane	ug/kg	<0.98	4.0	0.98	02/10/17 13:10	
Diethyl ether (Ethyl ether)	ug/kg	<1.7	10.0	1.7	02/10/17 13:10	
Ethylbenzene	ug/kg	<1.4	4.0	1.4	02/10/17 13:10	
Hexachloro-1,3-butadiene	ug/kg	<1.8	10.0	1.8	02/10/17 13:10	
Isopropylbenzene (Cumene)	ug/kg	<1.5	4.0	1.5	02/10/17 13:10	
Methyl-tert-butyl ether	ug/kg	<1.6	4.0	1.6	02/10/17 13:10	
Methylene Chloride	ug/kg	<1.4	20.0	1.4	02/10/17 13:10	
n-Butylbenzene	ug/kg	<1.6	4.0	1.6	02/10/17 13:10	
n-Propylbenzene	ug/kg	<1.8	4.0	1.8	02/10/17 13:10	
Naphthalene	ug/kg	<2.4	10.0	2.4	02/10/17 13:10	
p-Isopropyltoluene	ug/kg	<1.3	4.0	1.3	02/10/17 13:10	
sec-Butylbenzene	ug/kg	<1.4	4.0	1.4	02/10/17 13:10	
Styrene	ug/kg	<1.8	4.0	1.8	02/10/17 13:10	
tert-Butylbenzene	ug/kg	<1.6	4.0	1.6	02/10/17 13:10	
Tetrachloroethene	ug/kg	<1.8	4.0	1.8	02/10/17 13:10	
Tetrahydrofuran	ug/kg	<9.2	40.0	9.2	02/10/17 13:10	
Toluene	ug/kg	<1.8	4.0	1.8	02/10/17 13:10	
trans-1,2-Dichloroethene	ug/kg	<1.5	4.0	1.5	02/10/17 13:10	
trans-1,3-Dichloropropene	ug/kg	<1.7	4.0	1.7	02/10/17 13:10	
Trichloroethene	ug/kg	<1.4	4.0	1.4	02/10/17 13:10	
Trichlorofluoromethane	ug/kg	<1.0	10.0	1.0	02/10/17 13:10	
Vinyl chloride	ug/kg	<0.96	4.0	0.96	02/10/17 13:10	
Xylene (Total)	ug/kg	<1.7	12.0	1.7	02/10/17 13:10	
1,2-Dichloroethane-d4 (S)	%.	103	30-150		02/10/17 13:10	
4-Bromofluorobenzene (S)	%.	112	30-150		02/10/17 13:10	
Toluene-d8 (S)	%.	107	30-150		02/10/17 13:10	

LABORATORY CONTROL SAMPLE & LCSD: 2513036 2513037

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1,1,2-Tetrachloroethane	ug/kg	20	18.6	19.6	93	98	75-125	5	20	
1,1,1-Trichloroethane	ug/kg	20	17.8	17.2	89	86	63-128	3	20	
1,1,2,2-Tetrachloroethane	ug/kg	20	18.5	19.2	93	96	54-125	4	20	
1,1,2-Trichloroethane	ug/kg	20	19.5	20.9	97	104	74-125	7	20	
1,1,2-Trichlorotrifluoroethane	ug/kg	20	18.0	20.1	90	101	75-149	11	20	
1,1-Dichloroethane	ug/kg	20	17.9	19.2	90	96	63-125	7	20	
1,1-Dichloroethene	ug/kg	20	18.4	20.3	92	102	61-125	10	20	
1,1-Dichloropropene	ug/kg	20	18.9	19.6	94	98	56-125	4	20	
1,2,3-Trichlorobenzene	ug/kg	20	18.9	19.5	95	97	31-142	3	20	
1,2,3-Trichloropropane	ug/kg	20	20.5	21.2	103	106	57-125	3	20	
1,2,4-Trichlorobenzene	ug/kg	20	18.1	18.2	90	91	52-135	0	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: UPRR LATC Upper Lot REV
Pace Project No.: 10378598

LABORATORY CONTROL SAMPLE & LCSD: 2513036 2513037

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2,4-Trimethylbenzene	ug/kg	20	18.5	19.5	92	97	72-125	5	20	
1,2-Dibromo-3-chloropropane	ug/kg	50	47.3	48.4	95	97	37-131	2	20	
1,2-Dibromoethane (EDB)	ug/kg	20	19.5	20.0	98	100	69-125	2	20	
1,2-Dichlorobenzene	ug/kg	20	19.3	20.3	97	102	74-125	5	20	
1,2-Dichloroethane	ug/kg	20	18.6	19.4	93	97	67-125	4	20	
1,2-Dichloropropane	ug/kg	20	18.7	19.3	93	96	70-125	3	20	
1,3,5-Trimethylbenzene	ug/kg	20	19.0	19.8	95	99	72-125	4	20	
1,3-Dichlorobenzene	ug/kg	20	19.0	20.0	95	100	74-125	5	20	
1,3-Dichloropropane	ug/kg	20	19.9	20.2	99	101	74-125	2	20	
1,4-Dichlorobenzene	ug/kg	20	18.8	19.4	94	97	75-125	3	20	
2,2-Dichloropropane	ug/kg	20	17.3	19.1	86	95	50-133	10	20	
2-Butanone (MEK)	ug/kg	100	89.3	93.4	89	93	30-133	5	20	
2-Chlorotoluene	ug/kg	20	19.1	20.0	96	100	68-125	5	20	
4-Chlorotoluene	ug/kg	20	19.3	20.4	96	102	70-125	6	20	
4-Methyl-2-pentanone (MIBK)	ug/kg	100	97.0	97.9	97	98	42-130	1	20	
Acetone	ug/kg	100	76.6	85.1	77	85	64-133	11	20	
Allyl chloride	ug/kg	20	17.4	18.2	87	91	52-125	5	20	
Benzene	ug/kg	20	18.5	19.5	93	98	65-125	5	20	
Bromobenzene	ug/kg	20	19.4	20.1	97	101	70-125	4	20	
Bromochloromethane	ug/kg	20	19.2	20.3	96	102	69-125	6	20	
Bromodichloromethane	ug/kg	20	19.5	19.9	97	99	72-125	2	20	
Bromoform	ug/kg	20	17.6J	18.1J	88	91	60-132		20	
Bromomethane	ug/kg	20	19.0J	21.0	95	105	30-150		20	
Carbon tetrachloride	ug/kg	20	18.3	19.4	91	97	60-130	6	20	
Chlorobenzene	ug/kg	20	18.8	19.7	94	99	75-125	5	20	
Chloroethane	ug/kg	20	18.6	19.7	93	99	42-150	6	20	
Chloroform	ug/kg	20	18.5	20.1	93	100	66-125	8	20	
Chloromethane	ug/kg	20	19.6	21.2	98	106	43-125	7	20	
cis-1,2-Dichloroethene	ug/kg	20	18.6	19.4	93	97	63-125	4	20	
cis-1,3-Dichloropropene	ug/kg	20	19.3	19.7	97	99	72-125	2	20	
Dibromochloromethane	ug/kg	20	18.9	19.2	95	96	71-125	2	20	
Dibromomethane	ug/kg	20	18.6	18.7	93	93	75-125	0	20	
Dichlorodifluoromethane	ug/kg	20	20.6	22.2	103	111	30-125	7	20	
Dichlorofluoromethane	ug/kg	20	18.5	19.2	93	96	33-150	4	20	
Diethyl ether (Ethyl ether)	ug/kg	20	17.6	19.1	88	96	54-125	9	20	
Ethylbenzene	ug/kg	20	18.4	19.6	92	98	72-125	6	20	
Hexachloro-1,3-butadiene	ug/kg	20	17.6	19.3	88	96	52-132	9	20	
Isopropylbenzene (Cumene)	ug/kg	20	18.2	19.3	91	96	64-130	6	20	
Methyl-tert-butyl ether	ug/kg	20	18.3	19.1	91	95	60-125	4	20	
Methylene Chloride	ug/kg	20	17.6J	18.8J	88	94	58-125		20	
n-Butylbenzene	ug/kg	20	17.8	19.2	89	96	67-125	8	20	
n-Propylbenzene	ug/kg	20	17.9	19.3	90	96	72-125	7	20	
Naphthalene	ug/kg	20	17.9	18.4	89	92	30-144	3	20	
p-Isopropyltoluene	ug/kg	20	17.3	19.0	87	95	73-125	9	20	
sec-Butylbenzene	ug/kg	20	18.6	19.6	93	98	68-125	5	20	
Styrene	ug/kg	20	18.6	19.9	93	99	68-129	7	20	
tert-Butylbenzene	ug/kg	20	18.3	19.5	91	98	73-125	7	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: UPRR LATC Upper Lot REV
Pace Project No.: 10378598

LABORATORY CONTROL SAMPLE & LCSD: 2513036 2513037

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Tetrachloroethene	ug/kg	20	17.8	19.2	89	96	69-125	8	20	
Tetrahydrofuran	ug/kg	200	187	165	93	83	73-129	12	20	
Toluene	ug/kg	20	19.7	20.1	98	101	71-125	2	20	
trans-1,2-Dichloroethene	ug/kg	20	18.3	19.6	91	98	68-125	7	20	
trans-1,3-Dichloropropene	ug/kg	20	19.5	20.3	98	101	60-125	4	20	
Trichloroethene	ug/kg	20	18.6	19.1	93	96	70-129	3	20	
Trichlorofluoromethane	ug/kg	20	18.0	19.3	90	97	41-150	7	20	
Vinyl chloride	ug/kg	20	19.0	21.5	95	107	42-125	12	20	
Xylene (Total)	ug/kg	60	56.4	59.3	94	99	71-126	5	20	
1,2-Dichloroethane-d4 (S)	%.				92	97	30-150			
4-Bromofluorobenzene (S)	%.				103	102	30-150			
Toluene-d8 (S)	%.				102	99	30-150			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: UPRR LATC Upper Lot REV
Pace Project No.: 10378598

QC Batch: 459406 Analysis Method: EPA 8015 Modified
QC Batch Method: EPA 3550 Sonication Analysis Description: 8015 Solid GCSV
Associated Lab Samples: 10378598001, 10378598002

METHOD BLANK: 2513189 Matrix: Solid
Associated Lab Samples: 10378598001, 10378598002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Motor Oil Range (C24-C36)	mg/kg	8.4J	10.0	0.90	02/10/17 10:16	
TPH-DRO (C10-C28)	mg/kg	4.5J	10.0	2.6	02/10/17 10:16	
n-Triacontane (S)	%.	98	62-125		02/10/17 10:16	
o-Terphenyl (S)	%.	113	57-125		02/10/17 10:16	

LABORATORY CONTROL SAMPLE: 2513190

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Motor Oil Range (C24-C36)	mg/kg	50	59.0	118	60-125	
TPH-DRO (C10-C28)	mg/kg	50	54.0	108	61-125	
n-Triacontane (S)	%.			98	62-125	
o-Terphenyl (S)	%.			101	57-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2513191 2513192

Parameter	Units	10378598001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Motor Oil Range (C24-C36)	mg/kg	1550	49.6	49.6	1820	1320	536	-466	30-150	32	30	M1,R1
TPH-DRO (C10-C28)	mg/kg	295	49.6	49.6	415	300	243	11	30-150	32	30	M1,R1
n-Triacontane (S)	%.						137	97	62-125			S5
o-Terphenyl (S)	%.						105	106	57-125			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: UPRR LATC Upper Lot REV
Pace Project No.: 10378598

QC Batch: 459437 Analysis Method: EPA 8081
QC Batch Method: EPA 3550 Analysis Description: 8081 GCS Pesticides
Associated Lab Samples: 10378598001, 10378598002

METHOD BLANK: 2513302 Matrix: Solid
Associated Lab Samples: 10378598001, 10378598002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
4,4'-DDD	ug/kg	<0.40	3.3	0.40	02/14/17 19:46	
4,4'-DDE	ug/kg	<0.53	3.3	0.53	02/14/17 19:46	
4,4'-DDT	ug/kg	<0.67	3.3	0.67	02/14/17 19:46	
Aldrin	ug/kg	<0.25	1.7	0.25	02/14/17 19:46	
alpha-BHC	ug/kg	<0.22	1.7	0.22	02/14/17 19:46	
alpha-Chlordane	ug/kg	<0.39	1.7	0.39	02/14/17 19:46	
beta-BHC	ug/kg	<0.26	1.7	0.26	02/14/17 19:46	
Chlordane (Technical)	ug/kg	<5.3	16.7	5.3	02/14/17 19:46	
delta-BHC	ug/kg	<0.21	1.7	0.21	02/14/17 19:46	
Dieldrin	ug/kg	<0.43	3.3	0.43	02/14/17 19:46	
Endosulfan I	ug/kg	<0.26	1.7	0.26	02/14/17 19:46	
Endosulfan II	ug/kg	<0.52	3.3	0.52	02/14/17 19:46	
Endosulfan sulfate	ug/kg	<0.54	3.3	0.54	02/14/17 19:46	
Endrin	ug/kg	<0.47	3.3	0.47	02/14/17 19:46	
Endrin aldehyde	ug/kg	<0.53	3.3	0.53	02/14/17 19:46	
Endrin ketone	ug/kg	<0.54	3.3	0.54	02/14/17 19:46	
gamma-BHC (Lindane)	ug/kg	<0.24	1.7	0.24	02/14/17 19:46	
gamma-Chlordane	ug/kg	<0.24	1.7	0.24	02/14/17 19:46	
Heptachlor	ug/kg	<0.24	1.7	0.24	02/14/17 19:46	
Heptachlor epoxide	ug/kg	<0.39	1.7	0.39	02/14/17 19:46	
Methoxychlor	ug/kg	<3.2	16.7	3.2	02/14/17 19:46	
Toxaphene	ug/kg	<10.0	50.0	10.0	02/14/17 19:46	
Decachlorobiphenyl (S)	%.	80	69-125		02/14/17 19:46	
Tetrachloro-m-xylene (S)	%.	79	71-125		02/14/17 19:46	

LABORATORY CONTROL SAMPLE: 2513303

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
4,4'-DDD	ug/kg	33.3	28.1	84	65-125	
4,4'-DDE	ug/kg	33.3	29.5	88	60-125	
4,4'-DDT	ug/kg	33.3	30.7	92	58-129	
Aldrin	ug/kg	16.7	13.5	81	63-125	
alpha-BHC	ug/kg	16.7	13.2	79	59-125	
alpha-Chlordane	ug/kg	16.7	13.9	83	64-125	
beta-BHC	ug/kg	16.7	14.2	85	64-125	
delta-BHC	ug/kg	16.7	10.0	60	51-125	
Dieldrin	ug/kg	33.3	27.6	83	70-130	
Endosulfan I	ug/kg	16.7	12.9	77	58-125	
Endosulfan II	ug/kg	33.3	28.1	84	63-125	
Endosulfan sulfate	ug/kg	33.3	26.4	79	64-133	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: UPRR LATC Upper Lot REV
Pace Project No.: 10378598

LABORATORY CONTROL SAMPLE: 2513303

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Endrin	ug/kg	33.3	28.3	85	63-125	
Endrin aldehyde	ug/kg	33.3	26.8	80	65-125	
Endrin ketone	ug/kg	33.3	28.1	84	57-129	
gamma-BHC (Lindane)	ug/kg	16.7	13.5	81	62-125	
gamma-Chlordane	ug/kg	16.7	14.1	85	64-125	
Heptachlor	ug/kg	16.7	13.5	81	63-125	
Heptachlor epoxide	ug/kg	16.7	13.8	83	59-125	
Methoxychlor	ug/kg	167	153	92	60-125	
Decachlorobiphenyl (S)	%.			85	69-125	
Tetrachloro-m-xylene (S)	%.			81	71-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2513304 2513305

Parameter	Units	10378598001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
4,4'-DDD	ug/kg	<80.0	33.3	33.2	<79.8	<79.7	100	124	49-132		20	
4,4'-DDE	ug/kg	<106	33.3	33.2	<106	<106	161	158	44-139		20	M6
4,4'-DDT	ug/kg	<134	33.3	33.2	<134	<133	192	188	46-142		20	M6
Aldrin	ug/kg	<50.0	16.6	16.6	<49.9	<49.8	189	185	51-125		20	M6
alpha-BHC	ug/kg	<44.0	16.6	16.6	<43.9	<43.8	118	168	52-125		20	M6
alpha-Chlordane	ug/kg	<78.0	16.6	16.6	<77.8	<77.7	238	211	46-135		20	M6
beta-BHC	ug/kg	<52.0	16.6	16.6	<51.9	<51.8	171	210	34-150		20	M6
delta-BHC	ug/kg	<42.0	16.6	16.6	<41.9	<41.8	128	123	45-125		20	M6
Dieldrin	ug/kg	<86.0	33.3	33.2	<85.8	<85.7	195	145	70-130		20	M6
Endosulfan I	ug/kg	<52.0	16.6	16.6	<51.9	<51.8	193	140	46-126		20	M6
Endosulfan II	ug/kg	<104	33.3	33.2	<104	<104	153	145	51-132		20	M6
Endosulfan sulfate	ug/kg	<108	33.3	33.2	<108	<108	195	174	53-138		20	M6
Endrin	ug/kg	<94.0	33.3	33.2	<93.8	<93.6	134	140	48-139		20	M6
Endrin aldehyde	ug/kg	<106	33.3	33.2	<106	<106	154	134	38-150		20	M6
Endrin ketone	ug/kg	<108	33.3	33.2	<108	<108	163	165	42-147		20	M6
gamma-BHC (Lindane)	ug/kg	<48.0	16.6	16.6	<47.9	<47.8	165	164	54-125		20	M6
gamma-Chlordane	ug/kg	<48.0	16.6	16.6	<47.9	<47.8	212	188	37-146		20	M6
Heptachlor	ug/kg	<48.0	16.6	16.6	<47.9	<47.8	169	151	52-125		20	M6
Heptachlor epoxide	ug/kg	<78.0	16.6	16.6	<77.8	<77.7	197	177	49-132		20	M6
Methoxychlor	ug/kg	<640	166	166	<639	<637	125	131	46-139		20	
Decachlorobiphenyl (S)	%.						0	0	69-125			S4
Tetrachloro-m-xylene (S)	%.						0	0	71-125			2M, D3, S4

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: UPRR LATC Upper Lot REV
Pace Project No.: 10378598

QC Batch: 461836 Analysis Method: EPA 8081A
QC Batch Method: EPA Mod. 3510C Analysis Description: 8081A GCS Pesticides, TCLP
Associated Lab Samples: 10378598001, 10378598002

METHOD BLANK: 2525535 Matrix: Water
Associated Lab Samples: 10378598001, 10378598002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chlordane (Technical)	ug/L	<0.078	5.0	0.078	02/28/17 14:46	
Decachlorobiphenyl (S)	%.	94	66-125		02/28/17 14:46	
Tetrachloro-m-xylene (S)	%.	98	64-125		02/28/17 14:46	

LABORATORY CONTROL SAMPLE: 2525536

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Decachlorobiphenyl (S)	%.			92	66-125	
Tetrachloro-m-xylene (S)	%.			91	64-125	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2525537 2525538

Parameter	Units	10378598001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Decachlorobiphenyl (S)	%.						93	91	66-125			
Tetrachloro-m-xylene (S)	%.						94	91	64-125			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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(612)607-1700

QUALITY CONTROL DATA

Project: UPRR LATC Upper Lot REV
Pace Project No.: 10378598

QC Batch: 459490 Analysis Method: EPA 8082
QC Batch Method: EPA 3546 Analysis Description: 8082 GCS PCB
Associated Lab Samples: 10378598001, 10378598002

METHOD BLANK: 2513589 Matrix: Solid
Associated Lab Samples: 10378598001, 10378598002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg	<5.3	32.9	5.3	02/14/17 15:30	
PCB-1221 (Aroclor 1221)	ug/kg	<8.7	32.9	8.7	02/14/17 15:30	
PCB-1232 (Aroclor 1232)	ug/kg	<6.2	32.9	6.2	02/14/17 15:30	
PCB-1242 (Aroclor 1242)	ug/kg	<10.8	32.9	10.8	02/14/17 15:30	
PCB-1248 (Aroclor 1248)	ug/kg	<5.9	32.9	5.9	02/14/17 15:30	
PCB-1254 (Aroclor 1254)	ug/kg	<6.3	32.9	6.3	02/14/17 15:30	
PCB-1260 (Aroclor 1260)	ug/kg	<4.4	32.9	4.4	02/14/17 15:30	
PCB-1262 (Aroclor 1262)	ug/kg	<3.1	32.9	3.1	02/14/17 15:30	
PCB-1268 (Aroclor 1268)	ug/kg	<5.5	32.9	5.5	02/14/17 15:30	
Decachlorobiphenyl (S)	%.	95	70-130		02/14/17 15:30	CH
Tetrachloro-m-xylene (S)	%.	74	70-130		02/14/17 15:30	

LABORATORY CONTROL SAMPLE: 2513590

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
PCB-1016 (Aroclor 1016)	ug/kg	664	659	99	70-130	
PCB-1260 (Aroclor 1260)	ug/kg	664	692	104	70-130	
Decachlorobiphenyl (S)	%.			99	70-130	CH
Tetrachloro-m-xylene (S)	%.			82	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2513591 2513592

Parameter	Units	10378598001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
PCB-1016 (Aroclor 1016)	ug/kg	<5.3	667	667	676	727	101	109	70-130	7	30	
PCB-1260 (Aroclor 1260)	ug/kg	<4.4	667	667	542	570	81	85	70-130	5	30	
Decachlorobiphenyl (S)	%.						66	68	70-130			CH,S5
Tetrachloro-m-xylene (S)	%.						86	89	70-130			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
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(612)607-1700

QUALITY CONTROL DATA

Project: UPRR LATC Upper Lot REV
Pace Project No.: 10378598

QC Batch: 459405
QC Batch Method: EPA 3550
Analysis Method: EPA 8270 by SIM
Analysis Description: 8270 Solid PAH by SIM MSSV
Associated Lab Samples: 10378598001, 10378598002

METHOD BLANK: 2513185
Matrix: Solid
Associated Lab Samples: 10378598001, 10378598002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Acenaphthene	ug/kg	<0.39	10.0	0.39	02/10/17 15:30	
Acenaphthylene	ug/kg	<0.27	10.0	0.27	02/10/17 15:30	
Anthracene	ug/kg	<0.45	10.0	0.45	02/10/17 15:30	
Benzo(a)anthracene	ug/kg	<0.47	10.0	0.47	02/10/17 15:30	
Benzo(a)pyrene	ug/kg	<0.35	10.0	0.35	02/10/17 15:30	
Benzo(b)fluoranthene	ug/kg	<0.57	10.0	0.57	02/10/17 15:30	
Benzo(g,h,i)perylene	ug/kg	<0.46	10.0	0.46	02/10/17 15:30	
Benzo(k)fluoranthene	ug/kg	<0.49	10.0	0.49	02/10/17 15:30	
Chrysene	ug/kg	<0.56	10.0	0.56	02/10/17 15:30	
Dibenz(a,h)anthracene	ug/kg	<0.33	10.0	0.33	02/10/17 15:30	
Fluoranthene	ug/kg	<0.78	10.0	0.78	02/10/17 15:30	
Fluorene	ug/kg	<0.38	10.0	0.38	02/10/17 15:30	
Indeno(1,2,3-cd)pyrene	ug/kg	<0.75	10.0	0.75	02/10/17 15:30	
Naphthalene	ug/kg	<0.36	10.0	0.36	02/10/17 15:30	
Phenanthrene	ug/kg	<0.40	10.0	0.40	02/10/17 15:30	
Pyrene	ug/kg	<0.83	10.0	0.83	02/10/17 15:30	
2-Fluorobiphenyl (S)	%.	73	41-125		02/10/17 15:30	
p-Terphenyl-d14 (S)	%.	74	39-125		02/10/17 15:30	

LABORATORY CONTROL SAMPLE: 2513186

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Acenaphthene	ug/kg	33.3	23.7	71	53-125	
Acenaphthylene	ug/kg	33.3	23.0	69	50-125	
Anthracene	ug/kg	33.3	27.9	84	60-125	
Benzo(a)anthracene	ug/kg	33.3	25.9	78	63-125	
Benzo(a)pyrene	ug/kg	33.3	28.5	86	65-125	
Benzo(b)fluoranthene	ug/kg	33.3	27.9	84	61-125	
Benzo(g,h,i)perylene	ug/kg	33.3	26.4	79	62-125	
Benzo(k)fluoranthene	ug/kg	33.3	27.5	82	65-125	
Chrysene	ug/kg	33.3	27.2	82	62-125	
Dibenz(a,h)anthracene	ug/kg	33.3	29.7	89	61-125	
Fluoranthene	ug/kg	33.3	28.2	85	64-125	
Fluorene	ug/kg	33.3	24.1	72	57-125	
Indeno(1,2,3-cd)pyrene	ug/kg	33.3	28.2	85	61-125	
Naphthalene	ug/kg	33.3	25.7	77	52-125	
Phenanthrene	ug/kg	33.3	27.7	83	58-125	
Pyrene	ug/kg	33.3	25.6	77	65-125	
2-Fluorobiphenyl (S)	%.			72	41-125	
p-Terphenyl-d14 (S)	%.			73	39-125	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA

Project: UPRR LATC Upper Lot REV
Pace Project No.: 10378598

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 2513187 2513188

Parameter	Units	10378598001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Acenaphthene	ug/kg	25.7J	33.3	33.3	43.2J	49.3J	53	71	37-125		30	
Acenaphthylene	ug/kg	<1.4	33.3	33.3	26.6J	29.8J	80	89	30-132		30	
Anthracene	ug/kg	54.2	33.3	33.3	72.9	76.4	56	67	30-150	5	30	
Benzo(a)anthracene	ug/kg	110	33.3	33.3	165	160	165	149	30-144	3	30	M1
Benzo(a)pyrene	ug/kg	105	33.3	33.3	162	147	171	127	30-150	9	30	M1
Benzo(b)fluoranthene	ug/kg	126	33.3	33.3	201	183	225	172	30-150	9	30	M1
Benzo(g,h,i)perylene	ug/kg	81.9	33.3	33.3	127	117	136	105	30-150	8	30	
Benzo(k)fluoranthene	ug/kg	77.2	33.3	33.3	93.7	94.8	49	53	30-150	1	30	
Chrysene	ug/kg	161	33.3	33.3	210	202	147	121	30-129	4	30	M1
Dibenz(a,h)anthracene	ug/kg	<1.6	33.3	33.3	54.7	53.7	164	161	30-150	2	30	M1
Fluoranthene	ug/kg	313	33.3	33.3	355	338	127	75	30-150	5	30	
Fluorene	ug/kg	24.2J	33.3	33.3	38.5J	42.9J	43	56	30-136		30	
Indeno(1,2,3-cd)pyrene	ug/kg	62.8	33.3	33.3	103	92.8	122	90	30-143	11	30	
Naphthalene	ug/kg	<1.8	33.3	33.3	31.1J	32.6J	94	98	30-125		30	
Phenanthrene	ug/kg	266	33.3	33.3	253	245	-38	-62	30-129	3	30	M1
Pyrene	ug/kg	258	33.3	33.3	310	285	155	81	30-150	8	30	M1
2-Fluorobiphenyl (S)	%.						74	75	41-125			
p-Terphenyl-d14 (S)	%.						66	65	39-125			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALIFIERS

Project: UPRR LATC Upper Lot REV
Pace Project No.: 10378598

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

LABORATORIES

PASI-M	Pace Analytical Services - Minneapolis

BATCH QUALIFIERS

Batch: 459835

[M5]	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

1M	Sample preserved in lab; results are from sample aliquot taken from a glass jar with headspace.
2M	Samples were black in color and very viscous. Samples intially ran at 100X with failing continuing calibrations.
3M	The sample was taken from a glass jar with headspace.
CH	The continuing calibration for this compound is outside of Pace Analytical acceptance limits. The results may be biased high.
D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
M1	Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
M6	Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.
R1	RPD value was outside control limits.
S4	Surrogate recovery not evaluated against control limits due to sample dilution.
S5	Surrogate recovery outside control limits due to matrix interferences (not confirmed by re-analysis).

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

METHOD CROSS REFERENCE TABLE

Project: UPRR LATC Upper Lot REV
Pace Project No.: 10378598

Parameter	Matrix	Analytical Method	Preparation Method
6010 MET ICP	Solid	SW-846 6010B	SW-846 3050B
7471 Mercury	Solid	SW-846 7471A	SW-846 7471A
8015 GCV GRO	Solid	SW-846 8015C/8021B	SW-846 5030B
8081 GCS Pesticides	Solid	SW-846 8081A	SW-846 3550C
8260B MSV 5035 Low Level	Solid	SW-846 8260B	SW-846 5035/5030B
8270 MSSV PAH by SIM	Solid	SW-846 8270C SIM	SW-846 3550C

Pace Analytical Services, LLC
1700 Elm Street - Suite 200
Minneapolis, MN 55414
(612)607-1700

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: UPRR LATC Upper Lot REV
Pace Project No.: 10378598

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
10378598001	**AB_2_8_17A_W1**	EPA 3550 Sonication	459406	EPA 8015 Modified	459568
10378598002	**AB_2_8_17B_W2**	EPA 3550 Sonication	459406	EPA 8015 Modified	459568
10378598001	**AB_2_8_17A_W1**	EPA 3550	459437	EPA 8081	459701
10378598002	**AB_2_8_17B_W2**	EPA 3550	459437	EPA 8081	459701
10378598001	**AB_2_8_17A_W1**	EPA Mod. 3510C	461836	EPA 8081A	461905
10378598002	**AB_2_8_17B_W2**	EPA Mod. 3510C	461836	EPA 8081A	461905
10378598001	**AB_2_8_17A_W1**	EPA 3546	459490	EPA 8082	460057
10378598002	**AB_2_8_17B_W2**	EPA 3546	459490	EPA 8082	460057
10378598001	**AB_2_8_17A_W1**	EPA 5030	459651	EPA 8015	459690
10378598002	**AB_2_8_17B_W2**	EPA 5030	459651	EPA 8015	459690
10378598001	**AB_2_8_17A_W1**	EPA 3050	459521	EPA 6010	459753
10378598002	**AB_2_8_17B_W2**	EPA 3050	459521	EPA 6010	459753
10378598001	**AB_2_8_17A_W1**	CA WET Leachate	459992	EPA 6010	460101
10378598002	**AB_2_8_17B_W2**	CA WET Leachate	459992	EPA 6010	460101
10378598001	**AB_2_8_17A_W1**	EPA 7471	459535	EPA 7471	459731
10378598002	**AB_2_8_17B_W2**	EPA 7471	459535	EPA 7471	459731
10378598001	**AB_2_8_17A_W1**	EPA 3550	459405	EPA 8270 by SIM	459571
10378598002	**AB_2_8_17B_W2**	EPA 3550	459405	EPA 8270 by SIM	459571
10378598001	**AB_2_8_17A_W1**	EPA 5035 Low	459350	EPA 8260B	459835
10378598002	**AB_2_8_17B_W2**	EPA 5035 Low	459350	EPA 8260B	459835

Pace Analytical
www.pacelabs.com

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

10379598

Page: 1 of 1

Section A Required Client Information:

Company:	Union Pacific Railroad
Address:	555 N. Mission Rd., Los Angeles, CA
Email To:	david.poley@ch2m.com
Phone: (310) 795-2445	Fax: (714) 424-2024
Requested Due Date/TAT:	3-day TAT

Section B Required Project Information:

Report To:	David Poley
Copy To:	Sean.Thomas@antcagroup.com
Purchase Order No.:	
Project Name:	UPRR LATC Upper Lot
Project Number:	LATC Upper Lot

Section C Invoice Information:

Attention:	Lauren Mancuso
Company Name:	Union Pacific Railroad
Address:	
Pace Quote Reference:	
Pace Project Manager:	Chris Bremer
Pace Profile #:	

REGULATORY AGENCY

☐ NPDES ☐ GROUND WATER ☐ DRINKING WATER
☐ UST ☐ RCRA ☑ OTHER

Site Location STATE: CA

Section D Required Client Information

SAMPLE ID (A-Z, 0-9 / ,-) Sample IDs MUST BE UNIQUE

Valid Matrix Codes

MATRIX	CODE
DRINKING WATER	DW
WATER	WT
WASTE WATER	WW
PRODUCT	P
SOIL/SOLID	SL
OIL	OL
WIPE	WP
AIR	AR
OTHER	OT
TISSUE	TS

Requested Analysis Filtered (Y/N)

ITEM #	SAMPLE ID	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED COMPOSITE START DATE	COLLECTED COMPOSITE START TIME	COLLECTED COMPOSITE END/GRAB DATE	COLLECTED COMPOSITE END/GRAB TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives: Unpreserved	H_2SO_4	HNO_3	HCl	NaOH	$Na_2S_2O_3$	Methanol	Other	Y/N	Analysis Test: CAM Title 22 Metals	VOCs (EPA 8260B)	PCBs (EPA 8082)	TPHs (8015M full scan)	Pesticides (8081/8151)	PAHs (EPA 8270D SIM)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1	AB_2_8_17A_W1	OT	G	2-8-17	1415	2-8-17	1445		7	X								N	X	X	X	X	X	X	N	001
2	AB_2_8_17B_W2			1	1420	1	1450		7									N	X	X	X	X	X	X	N	002
3																										
4																										
5																										
6																										
7																										
8																										
9																										
10																										
11																										
12																										

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS			
Relinquished to FedEx	Sean Thomas/Antea Group	2-8-17		[signature] PMK	2-9-17	740	2.0	Y	N	Y N 2917
Note: Pesticides by EPA 8081/8151										

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Sean Thomas/Antea

SIGNATURE of SAMPLER: [signature] DATE Signed (MM/DD/YY): 02-08-2017

Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

Pace Analytical	Document Name: **Sample Condition Upon Receipt Form - ESI**	Document Revised: 21Dec2016 Page 1 of 2
	Document No.: **F-MN-L-210-rev.22**	Issuing Authority: Pace Minnesota Quality Office

Sample Condition Upon Receipt – ESI Tech Specs

Client Name: UPRRCHZM

Project #: WO#: 10378598

10378598

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ SpeeDee ☐ Other:

Tracking Number: 8081 8470 1579

Custody Seal on Cooler/Box Present? ☐ Yes ☑ No **Seals Intact?** ☐ Yes ☑ No

Optional: Proj. Due Date: Proj. Name:

Packing Material: ☐ Bubble Wrap ☑ Bubble Bags ☐ None ☐ Other: **Temp Blank?** ☐ Yes ☑ No

Thermometer Used: ☑ 151401163 ☐ 151401164

Type of Ice: ☑ Wet ☐ Blue ☐ None ☐ Samples on ice, cooling process has begun

Cooler Temp Read (°C): 1.9 **Cooler Temp Corrected (°C):** 2.0 **Biological Tissue Frozen?** ☐ Yes ☐ No ☑ NA

Temp should be above freezing to 6°C **Correction Factor:** +0.1 **Date and Initials of Person Examining Contents:** 2-9-17 MP

USDA Regulated Soil (☐ N/A, water sample)

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA. MS, NC, NM, NY, OK, OR, SC, TN, TX or VA (check maps)? ☑ Yes ☐ No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☐ No

If Yes to either question, fill out a Regulated Soil Checklist (F-MN-Q-338) and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present?	☑ Yes	☐ No		1.
Chain of Custody Filled Out?	☑ Yes	☐ No		2.
Chain of Custody Relinquished?	☑ Yes	☐ No		3.
Sampler Name and/or Signature on COC?	☑ Yes	☐ No	☐ N/A	4.
Samples Arrived within Hold Time?	☑ Yes	☐ No		5.
Short Hold Time Analysis (<72 hr)?	☐ Yes	☑ No		6.
Rush Turn Around Time Requested?	☐ Yes	☑ No		7.
Sufficient Volume (triple volume provided for MS/MSD)?	☑ Yes	☐ No		8. NO MS/MSD
Correct Containers Used?	☑ Yes	☐ No		9.
-Pace Containers Used?	☐ Yes	☑ No		
Containers Intact?	☐ Yes	☑ No		10. 17-AGW1-1JGFU Broken upon receipt
Filtered Volume Received for Dissolved Tests?	☐ Yes	☐ No	☑ N/A	11. Note if sediment is visible in the dissolved container.
Sample Labels Match COC? -Includes Date/Time/ID/Analysis Matrix: SL	☑ Yes	☐ No		12.
All containers needing acid/base preservation have been checked?	☐ Yes	☐ No	☑ N/A	13. ☐ HNO_3 ☐ H_2SO_4 ☐ NaOH Positive for Res. Chlorine? Y N
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, NaOH>9 Sulfide, NaOH>12 Cyanide)	☐ Yes	☐ No	☑ N/A	Sample #
Exceptions: VOA, Coliform, TOC/DOC, Oil and Grease, DRO/8015 (water) and Dioxin. Per method, VOA pH is checked after analysis	☐ Yes	☐ No	☑ N/A	Initial when completed: Lot # of added preservative:
Headspace in VOA Vials (>6mm)?	☐ Yes	☐ No	☑ N/A	14.
3 Trip Blanks Present?	☐ Yes	☐ No	☑ N/A	15.
Trip Blank Custody Seals Present?	☐ Yes	☐ No	☑ N/A	
Pace Trip Blank Lot # (if purchased):				

CLIENT NOTIFICATION/RESOLUTION **Field Data Required?** ☐ Yes ☐ No

Person Contacted: Date/Time:

Comments/Resolution:

Temp Log: Temp must be maintained at <6°C during login, record temp every 20 mins			
Opened Time: 910	Temp: 1.9	Corrected Temp: 2.0	
Time: 930	put in cooler		
Time:	Temp:	Corrected Temp:	

Project Manager Review: Date: 2/9/17

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e out of hold, incorrect preservative, out of temp, incorrect containers)

USDA REGULATED SOIL CHECKLIST

To Be Completed by SR Staff:

WO: 10378592 Date: 2-9-17 Initials: NS

Sample Origin (circle one): DOMESTIC QUARANTINED FOREIGN

(Note: soil samples from Hawaii, Guam, Puerto Rico and the US Virgin Islands are considered to be of o Foreign Source)

If Domestic, circle State of Origin: AL AR (CA) FL GA LA MS NC NM NY OK OR SC TN TX VA

(Includes: IFA, SOD, Golden Nematode, Karnal Bunt and Witchweed) List County: LA County

(USDA Permit/Compliance Agreement authorizes movement of samples from these domestic regulated zones)

If Quarantined, circle State of Origin: CA FL ID TX List County: _____

(Includes Fruit Fly, Giant African Snail and Pale Cyst Nemotode)

(Movement is not authorized for Pale Cyst Nematode [ID or Giant African Snail [FL], remaining quarantines require additional paperwork)

If Foreign, list Country of Origin: _____

(Movement from some Canadian Providences is not allowed. Refer to CS-232 Regulated Soil Flow Chart)

REQUIREMENT	ACTION	COMPLETED
PPQ-530 Paperwork must be included for any samples from counties with a Fruit Fly Quarantine in CA and TX. Refer to **MN-S063** through **MN-S065.**	Scan PPQ-530 to the corresponding Project folder on the x drive. If PPQ-530 is not present, contact the Waste Coordinator and do not continue processing samples.	YES NO (N/A)
Samples from ID may not be moved from the quarantined region. Refer to **MN-S055.**	If samples originated in a quarantined zone, contact the Waste Coordinator and do not continue processing samples.	YES NO (N/A)
Samples from Giant African Snail Quarantine in FL may not be moved from the quarantined region. Refer to **MN-S068.**	If samples originated in a quarantined zone, contact the Waste Coordinator and do not continue processing samples.	YES NO (N/A)

REQUIREMENT	ACTION	COMPLETED
"Special Handling" stickers are to be placed on all samples.	Did "special handling" stickers get placed on all sample containers?	YES (NO)
Samples must be segregated and stored in designated bins, shelves and coolers.	Were samples placed in a designated cooler, containers and shelves?	YES (NO)
Samples must be double contained to prevent accidental release.	Were there any signs of breakage or leakage (check for broken glass and/or loose soil in the cooler)? *If NO, ice and melt water can be disposed of by normal process (down the drain).*	YES (NO)
	If **YES**, were ice and melt water separated from the cooler and disposed of properly?	YES NO (N/A)
	Any broken glass and/or loose soil are to be bagged and placed in a USDA Regulated satellite container or active drum (see Waste Coordinator). **Ice and melt water should be baked at a temperature range of 121-1S4°F for 2 hours and then cooled before going down the drain.**	
Equipment and supplies that have come into contact samples must be decontaminated.	Was the cooler(s) and/or countertop(s) decontaminated using either a fresh 10% bleach solution or 70% ethanol? *(Gloves and other lab supplies will be bagged and placed in the USDA Regulated sotellite contoiner or active drum).*	YES (NO)

Comments: Soils were Not regulated

To Be Completed by PM and/or PC:

Sample Analysis to be conducted (circle all that apply): MN Subcontract Lab

Name of Subcontract Lab (s): _____

REQUIREMENT	ACTION	COMPLETED
Permission to ship untreated soil must be on file prior to shipping to any subcontract lab, including IR Pace Labs.	Go to: J:\SHARE\PRJ_MGR\10_Client Services Department Documents\Regulated Soils Permits – if permission to ship letter is not there, contact the Waste Coordinator.	YES NO N/A
Shipment must include a valid copy of the receiving lab's permit as well as permission to ship letter.	Is a copy of all needed paperwork included with the COC? Do **NOT** ship samples until all necessary paperwork is compiled.	YES NO N/A

Comments: _____

Project Manager Signature: _____ Date: 2/9/17

Republic Services, Inc.

18500 N. Allied Way, Phoenix, AZ 85054

SPECIAL WASTE DEPARTMENT DECISION

Waste Profile #	Expiration Date
5123173303	8/31/2017

I. Decision Request: ☑ Initial ☐ Recertification ☐ Change

Disposal Facility: 5123 - Sunshine Canyon Landfill

Generator Name: La Specialty

Generator Site Address: 13527 Orden Drive

City: Santa Fe Springs **County:** **State:** CA **Zip:**

Name of Waste: Food Products (Bagged Potato Chips)

Estimated Annual Volume: 153 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: _____ **Name (Printed):** Raymond Rutkowski

Date: 3/2/2017

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: 3/2/2017

REPUBLIC SERVICES — EXPRESS WASTE PROFILE

Requested Disposal Facility: 5123 Sunshine Canyon LF CA

Waste Profile #: 5123 17 3303

Sales Rep #. 525 - Stacy Loveland

Saveable fill in form. Restricted printing until all required (yellow) fields are completed.

I. Generator Information

Generator Name: LA SPECIALTY PRODUCE			
Generator Site Address: 13527 Orden Drive			
City: Santa Fe Springs	County: Los Angeles	State: California	Zip: 90670
State ID/Reg No: N\A	State Approval/Waste Code: N\A (if applicable)		NAICS #. 424480
Generator Mailing Address (if different): 13527 Orden Drive			
City: Santa Fe Springs	County: LA SPECIALTY PROD	State: California	Zip: 90670
Generator Contact Name: Boun Panyanouvong		Email: boun.panyanouvong@laspecialty.co	
Phone Number: (562) 741-2200 Ext: 3280		Fax Number: (562) 741-2907	

II. Billing Information

Bill To: REPUBLIC SERVICES		Contact Name: JOSE ESPINOZA	
Billing Address: 2531 East 67th Street		Email:	
City: Long Beach	State: CALIFORNIA	Zip: 90805	Phone: (562) 537-1139

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: The 51 cases of 2 oz bagged potato chips has been marked (per vendor) no longer usable due to possible traces of salmonella.

Method of Shipment: ☑ BULK ☐ DRUM ☐ BAGGED ☐ OTHER:

Estimated Annual Volume: 153 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.

BOUN PANYANOUVONG
Authorized Representative Name/Title (Type or Print)

Authorized Representative Signature

LA SPECIALTY
Company Name

03-02-2017
Date

REV 2

REPUBLIC SERVICES, INC.

Republic Services, Inc.

18500 N. Allied Way, Phoenix, AZ 85054

SPECIAL WASTE DEPARTMENT DECISION

	Waste Profile #	Expiration Date	
	5123174206	3/20/2018	

I. Decision Request: ☐ Initial ☐ Recertification ☑ Change

Disposal Facility: 5123 - Sunshine Canyon Landfill

Generator Name: VSE Corp

Generator Site Address: VARIOUS

City: VARIOUS	County:	State: CA	Zip:

Name of Waste: Cigarettes

Estimated Annual Volume: 13 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

Per the Special Waste Change form dated 5-30-2017, the estimated volume was increased 10 cubic yards and the generating location was changed to various.

This material must be buried immediately upon receipt at the landfill.

A Waste Shipment Record for each generating facility/location within the load must accompany each load to the landfill.
Acceptable generating locations are:
***Kruger Tow, 7803 S. Santa Fe Ave, Rancho Dominguez, CA
***Americold Logistics, 19840 S. Rancho Way, Compton, CA

Special Waste Analyst Signature: _____ **Name (Printed):** Suzanne Glass

Date: 5/30/2017

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: 5/30/2017

REPUBLIC SERVICES

SPECIAL WASTE PROFILE – CHANGE

Saveable fill-in form. Restricted printing until all required (yellow) fields are completed.

I. Generator Information

This form may be used to request changes to an existing Special Waste Profile.			
Generator Name:	VSE Corp.		
Name of Waste:	Cigarattes	Waste Profile #	5123174206

II. Purpose of Change

Description of Change Requested and Reason for Change: (Provide detailed explanation of why the change is requested following the appropriate checked box below).

- ☒ Volume Increase By: 10 Cubic Yards
  Is the analysis originally submitted with the Profile representative of the volume Increase? ☐ Yes ☐ No If No, complete Section III, below.
- ☐ Extend Expiration Date:
- ☐ Change or Add Landfill:
- ☐ Add Additional Laboratory Reports: **Complete Representative Sample Certification, Section III, below.**
- ☐ Add MSDS:
- ☐ Generator Name Change:
- ☒ Other:
  Additional shipping location: Americold Logistics 19840 South Rancho Way Compton CA 90220

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?	☐ YES or ☐ NO

Type of Sample: ☐ COMPOSITE SAMPLE ☐ GRAB SAMPLE

Sample Date:

Sample ID Numbers:

IV. Certification

I hereby certify that the waste and the process generating the waste are unchanged and are accurately represented in the original profile.

Cynthia Inscoe Program Control Analyst	VSE Corp
Authorized Representative Name and Title (Printed)	Company Name
Authorized Representative Signature	5/30/2017
	Date

REPUBLIC SERVICES, INC.

Republic Services, Inc.

18500 N. Allied Way, Phoenix, AZ 85054

SPECIAL WASTE DEPARTMENT DECISION

	Waste Profile #	Expiration Date	
	5123174206	3/20/2018	

I. Decision Request: ☑ Initial ☐ Recertification ☐ Change

Disposal Facility: 5123 - Sunshine Canyon Landfill

Generator Name: VSE Corp

Generator Site Address: Kruger Tow 17803 S Santa Fe Ave

City: Rancho Dominguez	County:	State: CA	Zip:

Name of Waste: Cigarettes

Estimated Annual Volume: 3 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

This material must be buried immediately upon receipt at the landfill.

Special Waste Analyst Signature: _____ **Name (Printed):** Suzanne Glass

Date: 3/20/2017

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: 3/20/2017

REPUBLIC SERVICES **SPECIAL WASTE PROFILE**

Requested Disposal Facility: 5123 Sunshine Canyon LF CA

Waste Profile #
5123 17 4206
Sales Rep #: 525 - Stacy Loveland

Saveable fill-in form Restricted printing until all required (yellow) fields are completed

I. Generator Information

Generator Name: VSE Corp			
Generator Site Address: Kruger Tow, 17803 S.Santa Fe Ave			
City: Rancho Dominguez	County: Los Angeles	State: California	Zip: 90221
State ID/Reg No:	State Approval/Waste Code: (if applicable)		NAICS # :
Generator Mailing Address (if different): ☐ Kruger Tow, 17803 S.Santa Fe Ave			
City: Rancho Dominguez	County:	State: California	Zip: 90221
Generator Contact Name: Cynthia Inscoe		Email:	
Phone Number: (703) 329-4364	Ext:	Fax Number:	

II. Billing Information

Bill To: Republic Services		Contact Name: Gabby Munoz	
Billing Address: 2531 East 67th Street		Email: GMunoz@republicservices.com	
City: Long Beach	State: CA	Zip: 90804	Phone: (888) 245-3657

III. Waste Stream Information

Name of Waste: Cigarettes	
Process Generating Waste: Unused product for disposal	
Type of Waste:	☑ INDUSTRIAL PROCESS WASTE ☐ POLLUTION CONTROL WASTE
Physical State:	☑ SOLID ☐ SEMI-SOLID ☐ POWDER ☐ LIQUID
Method of Shipment:	☑ BULK ☐ DRUM ☐ BAGGED ☐ OTHER:
Estimated Annual Volume:	3 Cubic Yards
Frequency:	☑ ONE TIME ☐ ONGOING
Disposal Consideration:	☑ LANDFILL ☐ SOLIDIFICATION ☐ 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?	☐ YES or ☐ NO
Type of Sample: ☐ COMPOSITE SAMPLE ☐ GRAB SAMPLE	
Sample Date:	
Sample ID Numbers:	

REPUBLIC SERVICES **SPECIAL WASTE PROFILE**

Waste Profile #
5123 17 4206

V. Physical Characteristics of Waste

Characteristic Components	% by Weight (range)
1. Cigarettes	100
2.	
3.	
4.	
5.	

Color	Odor (describe)	Does Waste Contain Free Liquids?	% Solids	pH:	Flash Point
varies	tobacco	☐ YES or ☑ NO	100	5-7	>140 °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?	☐ Yes or ☑ 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)]?	☐ Yes or ☑ No
Does this waste contain regulated concentrations of Polychlorinated Biphenyls (PCBs) as defined in 40 CFR Part 761?	☐ Yes or ☑ 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?	☐ Yes or ☑ No
Does this waste exhibit a Hazardous Characteristic as defined by Federal and/or State regulations?	☐ Yes or ☑ No
Does this waste contain regulated concentrations of 2,3,7,8-Tetrachlorodibenzodioxin (2,3,7,8-TCCD), or any other dioxin as defined in 40 CFR 261.31?	☐ Yes or ☑ No
Is this a regulated Radioactive Waste as defined by Federal and/or State regulations?	☐ Yes or ☑ No
Is this a regulated Medical or Infectious Waste as defined by Federal and/or State regulations?	☐ Yes or ☑ No
Is this waste a reactive or heat generating waste?	☐ Yes or ☑ No
Does the waste contain sulfur or sulfur by-products?	☐ Yes or ☑ No
Is this waste generated at a Federal Superfund Clean Up Site?	☐ Yes or ☑ No
Is this waste from a TSD facility, TSD like facility or consolidator?	☐ Yes or ☑ 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.

Cynthia Inscoe Program Control Analyst	VSE Corp
Authorized Representative Name And Title (Type or Print)	Company Name
Cynthia Inscoe 3-20-17	3/20/2017
Authorized Representative Signature	Date

REPUBLIC SERVICES, INC.

Republic Services, Inc.

18500 N. Allied Way, Phoenix, AZ 85054

SPECIAL WASTE DEPARTMENT DECISION

	Waste Profile #	Expiration Date	
	5123174289	6/21/2017	

I. Decision Request: ☑ Initial ☐ Recertification ☐ Change

Disposal Facility: 5123 - Sunshine Canyon Landfill

Generator Name: Green Island Produce Inc

Generator Site Address: 4423 Hawthorne Ave

City: Vernon **County:** **State:** CA **Zip:**

Name of Waste: Food Products

Estimated Annual Volume: 390 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 **Name (Printed):** Joseph Sorokach

Date: 3/21/2017

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: 3/21/2017

REPUBLIC SERVICES

EXPRESS WASTE PROFILE

Requested Disposal Facility: 5123 Sunshine Canyon LF CA

Waste Profile #: 5123 17 4289

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: (Petroleum products-applies only to contaminated media and debris).

☐ Diesel Fuel	☐ Weathered Wood	☐ Friable Asbestos	
☐ Home Heating Fuel #1-6	☐ RCRA Empty Containers	☐ Non Friable Asbestos	
☐ Kerosene	☐ Treated Medical Waste	☐ Cured Asphalt	
☐ Aviation Fuel	☐ Animal Carcass (non infectious)	☐ Tires	
☐ Hydraulic Fluid	☐ Plant Trash	☑ Food Products (Including Animal Food)	
☐ Unleaded Gasoline (UST Corrective Action)	☐ Meth Contaminated Debris		

Process Generating Waste: LA COUNTY AGRICULTURE INSPECTED 13cs OF SWEET POTATO @ 30lbs PER BOX AND FOUND THAT THEY WERE INFESTED WITH INSECTS.

Method of Shipment: ☐ BULK ☐ DRUM ☑ BAGGED ☐ OTHER:

Estimated Annual Volume: 390 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.

JEFF LIU	GREEN ISLAND PRODUCE, INC.
Authorized Representative Name/Title (Type or Print)	Company Name
Authorized Representative Signature	03/21/2017
	Date

REV 2

SPECIAL WASTE SERVICE AGREEMENT
NON-HAZARDOUS WASTES

REPUBLIC SERVICES

Special Waste Profile Number: **5123 17 4289**

Generator Billing Information		**Republic Waste Location (Company)**
Name:	GREEN ISLAND PRODUCE INC (ACCT CASH # 321)	SUNSHINE CANYON LANDFILL (5123)
Address:	4423 HAWTHORNE AVE	14747 SAN FERNANDO ROAD
		SYLMAR, CA 91342
City:	VERNON	818.362.2141
State:	CA Zip: 90058	
Phone:	323.234.5888 Fax:	
Contact:	JEFF LIU	

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").

3. **(A) Rates for Disposal**:

Waste	Disposal Method	Disposal Rate:	Fees / Taxes / Misc.	Transportation
FOOD PRODUCTS	LANDFILL	[redacted]		N/A

Additional Information: [redacted]

MATERIAL CODE: XD-SW-FOOD WASTES | PROFILE EXPIRES: 6/21/2017 | 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 390 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 **3/21/2017** 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	**REPUBLIC SERVICES, INC/COMPANY**
SIGNATURE (AUTHORIZED REPRESENTATIVE)	SIGNATURE (AUTHORIZED REPRESENTATIVE)
Jeff Liu - Manager	Stacy Loveland - SW Executive
NAME AND TITLE (PLEASE PRINT)	NAME AND TITLE (PLEASE PRINT)
3-24-17	3/27/2017
DATE	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 #	Expiration Date
5123174457	6/30/2017

I. Decision Request: ☑ Initial ☐ Recertification ☐ Change

Disposal Facility: 5123 - Sunshine Canyon Landfill

Generator Name: Northrop Grumman

Generator Site Address: 2550 Santa Fe Ave

City: Redondo Beach **County:** **State:** CA **Zip:**

Name of Waste: Excavated Diesel Contaminated Soil

Estimated Annual Volume: 30 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 **Name (Printed):** Joseph Sorokach

Date: 3/23/2017

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: 3/23/2017

REPUBLIC SERVICES SPECIAL WASTE PROFILE

Requested Disposal Facility: 5123 Sunshine Canyon LF CA

Waste Profile #: 5123 17 4457

Saveable fill-in form. Restricted printing until all required (yellow) fields are completed.

Sales Rep #: 525 - Stacy Loveland

I. Generator Information

Generator Name: Northrop Grumman			
Generator Site Address: 2550 Santa Fe Ave.			
City: Redondo Beach	County: Los Angeles	State: California	Zip: 90278
State ID/Reg No:	State Approval/Waste Code: 611 (if applicable)		NAICS # :
Generator Mailing Address (if different): ☐ 2550 Santa Fe Ave.			
City: Redondo Beach	County:	State: California	Zip: 90278
Generator Contact Name: Arlen Fuhrman		Email: arlen.fuhrman@ngc.com	
Phone Number: (310) 813-5994	Ext:	Fax Number:	

II. Billing Information

Bill To: Republic Services - Long Beach		Contact Name: Maria Andrade	
Billing Address: 2531 East 67th Street		Email: MAndrade@republicservices.com	
City: Long Beach	State: CA	Zip: 90805	Phone: (714) 470-5635

III. Waste Stream Information

Name of Waste: Excavated Diesel Contaminated Soil

Process Generating Waste:

Excavation of building 149 at building interior warehouse area. Source of diesel is unknown. No known source of diesel used during present tenant's (Northrop) use of building

Type of Waste:	☐ INDUSTRIAL PROCESS WASTE ☑ POLLUTION CONTROL WASTE
Physical State:	☑ SOLID ☐ SEMI-SOLID ☐ POWDER ☐ LIQUID
Method of Shipment:	☑ BULK ☐ DRUM ☐ BAGGED ☐ OTHER:
Estimated Annual Volume:	30 Tons
Frequency:	☑ ONE TIME ☐ ONGOING
Disposal Consideration:	☑ LANDFILL ☐ SOLIDIFICATION ☐ 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?	☑ YES or ☐ NO
Type of Sample: ☑ COMPOSITE SAMPLE ☐ GRAB SAMPLE	
Sample Date: 9/21/16	
Sample ID Numbers: 01-JRS-149ABD 02-JRS-149C	

Waste Profile #
5123 17 4457

V. Physical Characteristics of Waste

Characteristic Components	% by Weight (range)
1. Diesel Fuel	0 - 0.5
2. Soil	99.5 - 100
3.	
4.	
5.	

Color	Odor (describe)	Does Waste Contain Free Liquids?	% Solids	pH:	Flash Point
Brown	Mild	☐ YES or ☑ 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

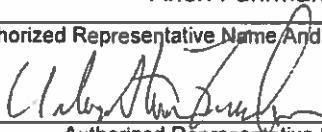
Does this waste or generating process contain regulated concentrations of the following Pesticides and/or Herbicides: Chlordane, Endrin, Heptachlor (and its epoxides), Lindane, Methoxychlor, Toxaphene, 2,4-D, or 2,4,5-TP Silvex as defined in 40 CFR 261.33?	☐ Yes or ☑ No
Does this waste contain reactive sulfides (greater than 500 ppm) or reactive cyanide (greater than 250 ppm)[reference 40 CFR 261.23(a)(5)]?	☐ Yes or ☑ No
Does this waste contain regulated concentrations of Polychlorinated Biphenyls (PCBs) as defined in 40 CFR Part 761?	☐ Yes or ☑ 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?	☐ Yes or ☑ No
Does this waste exhibit a Hazardous Characteristic as defined by Federal and/or State regulations?	☐ Yes or ☑ No
Does this waste contain regulated concentrations of 2,3,7,8-Tetrachlorodibenzodioxin (2,3,7,8-TCCD), or any other dioxin as defined in 40 CFR 261.31?	☐ Yes or ☑ No
Is this a regulated Radioactive Waste as defined by Federal and/or State regulations?	☐ Yes or ☑ No
Is this a regulated Medical or Infectious Waste as defined by Federal and/or State regulations?	☐ Yes or ☑ No
Is this waste a reactive or heat generating waste?	☐ Yes or ☑ No
Does the waste contain sulfur or sulfur by-products?	☐ Yes or ☑ No
Is this waste generated at a Federal Superfund Clean Up Site?	☐ Yes or ☑ No
Is this waste from a TSD facility, TSD like facility or consolidator?	☐ Yes or ☑ 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.

Arlen Fuhrman	Northrop Grumman
Authorized Representative Name And Title (Type or Print)	Company Name
	3/7/17
Authorized Representative Signature	Date

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WORK ORDER NUMBER: 16-09-1499

The difference is service

AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: Northrop Grumman Systems Corporation

Client Project Name: Space Park

Attention: Doug Hill
8710 Freeport Parkway, Suite 200
Irving, TX 75063-2577

Kathleen M. Burney FOR

Approved for release on 09/23/2016 by:
Carla Hollowell
Project Manager

ResultLink ▸

Email your PM ▸

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Contents

Client Project Name: Space Park
Work Order Number: 16-09-1499

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Work Order Narrative

Work Order: 16-09-1499 Page 1 of 1

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 09/21/16. They were assigned to Work Order 16-09-1499.

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 <= 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.

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Sample Summary

Client:	Northrop Grumman Systems Corporation 8710 Freeport Parkway, Suite 200 Irving, TX 75063-2577	Work Order:	16-09-1499
		Project Name:	Space Park
		PO Number:	4800011247
		Date/Time Received:	09/21/16 13:30
		Number of Containers:	14
Attn:	Doug Hill		

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
01-JRS-149ABD	16-09-1499-1	09/21/16 07:10	7	Solid
02-JRS-149C	16-09-1499-2	09/21/16 07:15	7	Solid

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Detections Summary

Client: Northrop Grumman Systems Corporation
8710 Freeport Parkway, Suite 200
Irving, TX 75063-2577

Work Order: 16-09-1499
Project Name: Space Park
Received: 09/21/16

Attn: Doug Hill

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
01-JRS-149ABD (16-09-1499-1)						
Barium	37.9		0.478	mg/kg	EPA 6010B	EPA 3050B
Chromium	9.99		0.239	mg/kg	EPA 6010B	EPA 3050B
Cobalt	3.25		0.239	mg/kg	EPA 6010B	EPA 3050B
Copper	5.46		0.478	mg/kg	EPA 6010B	EPA 3050B
Lead	40.9		0.478	mg/kg	EPA 6010B	EPA 3050B
Nickel	5.00		0.239	mg/kg	EPA 6010B	EPA 3050B
Vanadium	13.4		0.239	mg/kg	EPA 6010B	EPA 3050B
Zinc	24.2		0.957	mg/kg	EPA 6010B	EPA 3050B
Diesel Range Organics	86	HD	5.0	mg/kg	EPA 8015B	EPA 3550B
02-JRS-149C (16-09-1499-2)						
Arsenic	0.803		0.781	mg/kg	EPA 6010B	EPA 3050B
Barium	38.0		0.521	mg/kg	EPA 6010B	EPA 3050B
Chromium	9.01		0.260	mg/kg	EPA 6010B	EPA 3050B
Cobalt	3.39		0.260	mg/kg	EPA 6010B	EPA 3050B
Copper	5.35		0.521	mg/kg	EPA 6010B	EPA 3050B
Lead	18.9		0.521	mg/kg	EPA 6010B	EPA 3050B
Nickel	5.00		0.260	mg/kg	EPA 6010B	EPA 3050B
Vanadium	13.0		0.260	mg/kg	EPA 6010B	EPA 3050B
Zinc	23.6		1.04	mg/kg	EPA 6010B	EPA 3050B
Mercury	0.921		0.0806	mg/kg	EPA 7471A	EPA 7471A Total
Diesel Range Organics	130	HD	9.9	mg/kg	EPA 8015B	EPA 3550B

Subcontracted analyses, if any, are not included in this summary.

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* MDL is shown

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Analytical Report

Northrop Grumman Systems Corporation
8710 Freeport Parkway, Suite 200
Irving, TX 75063-2577

Project: Space Park

Date Received: 09/21/16
Work Order: 16-09-1499
Preparation: EPA 3550B
Method: EPA 8015B
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
01-JRS-149ABD	**16-09-1499-1-A**	**09/21/16 07:10**	**Solid**	**GC 47**	**09/21/16**	**09/21/16 21:13**	**160921B11**

Parameter	Result	RL	DF	Qualifiers
Diesel Range Organics	86	5.0	1.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	73	42-162	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02-JRS-149C	**16-09-1499-2-A**	**09/21/16 07:15**	**Solid**	**GC 47**	**09/21/16**	**09/21/16 21:29**	**160921B11**

Parameter	Result	RL	DF	Qualifiers
Diesel Range Organics	130	9.9	2.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	71	42-162	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-15-414-745**	**N/A**	**Solid**	**GC 47**	**09/21/16**	**09/21/16 19:50**	**160921B11**

Parameter	Result	RL	DF	Qualifiers
Diesel Range Organics	ND	5.0	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	63	42-162	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Northrop Grumman Systems Corporation
8710 Freeport Parkway, Suite 200
Irving, TX 75063-2577

Project: Space Park

Date Received: 09/21/16
Work Order: 16-09-1499
Preparation: EPA 5030C
Method: EPA 8015B
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
01-JRS-149ABD	**16-09-1499-1-A**	**09/21/16 07:10**	**Solid**	**GC 25**	**09/21/16**	**09/21/16 20:39**	**160921L062**

Parameter	Result	RL	DF	Qualifiers
Gasoline Range Organics	ND	0.53	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	70	42-126	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02-JRS-149C	**16-09-1499-2-A**	**09/21/16 07:15**	**Solid**	**GC 25**	**09/21/16**	**09/21/16 22:24**	**160921L062**

Parameter	Result	RL	DF	Qualifiers
Gasoline Range Organics	ND	0.50	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	70	42-126	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-024-1015**	**N/A**	**Solid**	**GC 25**	**09/21/16**	**09/21/16 15:37**	**160921L062**

Parameter	Result	RL	DF	Qualifiers
Gasoline Range Organics	ND	0.50	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	80	42-126	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Northrop Grumman Systems Corporation
8710 Freeport Parkway, Suite 200
Irving, TX 75063-2577

Project: Space Park

Date Received: 09/21/16
Work Order: 16-09-1499
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
01-JRS-149ABD	**16-09-1499-1-A**	**09/21/16 07:10**	**Solid**	**ICP 7300**	**09/21/16**	**09/22/16 13:40**	**160921L02**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.718	0.957	
Arsenic	ND	0.718	0.957	
Barium	37.9	0.478	0.957	
Beryllium	ND	0.239	0.957	
Cadmium	ND	0.478	0.957	
Chromium	9.99	0.239	0.957	
Cobalt	3.25	0.239	0.957	
Copper	5.46	0.478	0.957	
Lead	40.9	0.478	0.957	
Molybdenum	ND	0.239	0.957	
Nickel	5.00	0.239	0.957	
Selenium	ND	0.718	0.957	
Silver	ND	0.239	0.957	
Thallium	ND	0.718	0.957	
Vanadium	13.4	0.239	0.957	
Zinc	24.2	0.957	0.957	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Northrop Grumman Systems Corporation
8710 Freeport Parkway, Suite 200
Irving, TX 75063-2577

Date Received: 09/21/16
Work Order: 16-09-1499
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: Space Park

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02-JRS-149C	**16-09-1499-2-A**	**09/21/16 07:15**	**Solid**	**ICP 7300**	**09/21/16**	**09/22/16 13:41**	**160921L02**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.781	1.04	
Arsenic	0.803	0.781	1.04	
Barium	38.0	0.521	1.04	
Beryllium	ND	0.260	1.04	
Cadmium	ND	0.521	1.04	
Chromium	9.01	0.260	1.04	
Cobalt	3.39	0.260	1.04	
Copper	5.35	0.521	1.04	
Lead	18.9	0.521	1.04	
Molybdenum	ND	0.260	1.04	
Nickel	5.00	0.260	1.04	
Selenium	ND	0.781	1.04	
Silver	ND	0.260	1.04	
Thallium	ND	0.781	1.04	
Vanadium	13.0	0.260	1.04	
Zinc	23.6	1.04	1.04	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Northrop Grumman Systems Corporation
8710 Freeport Parkway, Suite 200
Irving, TX 75063-2577

Date Received: 09/21/16
Work Order: 16-09-1499
Preparation: EPA 3050B
Method: EPA 6010B
Units: mg/kg

Project: Space Park

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**097-01-002-23271**	**N/A**	**Solid**	**ICP 7300**	**09/21/16**	**09/22/16 13:20**	**160921L02**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.758	1.01	
Arsenic	ND	0.758	1.01	
Barium	ND	0.505	1.01	
Beryllium	ND	0.253	1.01	
Cadmium	ND	0.505	1.01	
Chromium	ND	0.253	1.01	
Cobalt	ND	0.253	1.01	
Copper	ND	0.505	1.01	
Lead	ND	0.505	1.01	
Molybdenum	ND	0.253	1.01	
Nickel	ND	0.253	1.01	
Selenium	ND	0.758	1.01	
Silver	ND	0.253	1.01	
Thallium	ND	0.758	1.01	
Vanadium	ND	0.253	1.01	
Zinc	ND	1.01	1.01	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Northrop Grumman Systems Corporation
8710 Freeport Parkway, Suite 200
Irving, TX 75063-2577

Project: Space Park

Date Received: 09/21/16
Work Order: 16-09-1499
Preparation: EPA 7471A Total
Method: EPA 7471A
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
01-JRS-149ABD	**16-09-1499-1-A**	**09/21/16 07:10**	**Solid**	**Mercury 05**	**09/21/16**	**09/21/16 19:07**	**160921L04**

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0862	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02-JRS-149C	**16-09-1499-2-A**	**09/21/16 07:15**	**Solid**	**Mercury 05**	**09/21/16**	**09/21/16 19:09**	**160921L04**

Parameter	Result	RL	DF	Qualifiers
Mercury	0.921	0.0806	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-16-272-2552**	**N/A**	**Solid**	**Mercury 05**	**09/21/16**	**09/21/16 18:40**	**160921L04**

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0833	1.00	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Northrop Grumman Systems Corporation
8710 Freeport Parkway, Suite 200
Irving, TX 75063-2577

Project: Space Park

Date Received: 09/21/16
Work Order: 16-09-1499
Preparation: EPA 3545
Method: EPA 8082
Units: ug/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
01-JRS-149ABD	**16-09-1499-1-A**	**09/21/16 07:10**	**Solid**	**GC 66**	**09/21/16**	**09/22/16 13:25**	**160921L10**

Parameter	Result	RL	DF	Qualifiers
Aroclor-1016	ND	50	1.00	
Aroclor-1221	ND	50	1.00	
Aroclor-1232	ND	50	1.00	
Aroclor-1242	ND	50	1.00	
Aroclor-1248	ND	50	1.00	
Aroclor-1254	ND	50	1.00	
Aroclor-1260	ND	50	1.00	
Aroclor-1262	ND	50	1.00	
Aroclor-1268	ND	50	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	111	24-168	
2,4,5,6-Tetrachloro-m-Xylene	82	25-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02-JRS-149C	**16-09-1499-2-A**	**09/21/16 07:15**	**Solid**	**GC 66**	**09/21/16**	**09/22/16 13:43**	**160921L10**

Parameter	Result	RL	DF	Qualifiers
Aroclor-1016	ND	50	1.00	
Aroclor-1221	ND	50	1.00	
Aroclor-1232	ND	50	1.00	
Aroclor-1242	ND	50	1.00	
Aroclor-1248	ND	50	1.00	
Aroclor-1254	ND	50	1.00	
Aroclor-1260	ND	50	1.00	
Aroclor-1262	ND	50	1.00	
Aroclor-1268	ND	50	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	109	24-168	
2,4,5,6-Tetrachloro-m-Xylene	79	25-145	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Northrop Grumman Systems Corporation
8710 Freeport Parkway, Suite 200
Irving, TX 75063-2577

Date Received: 09/21/16
Work Order: 16-09-1499
Preparation: EPA 3545
Method: EPA 8082
Units: ug/kg

Project: Space Park

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-535-3915**	**N/A**	**Solid**	**GC 58**	**09/21/16**	**09/21/16 13:00**	**160921L10**

Parameter	Result	RL	DF	Qualifiers
Aroclor-1016	ND	50	1.00	
Aroclor-1221	ND	50	1.00	
Aroclor-1232	ND	50	1.00	
Aroclor-1242	ND	50	1.00	
Aroclor-1248	ND	50	1.00	
Aroclor-1254	ND	50	1.00	
Aroclor-1260	ND	50	1.00	
Aroclor-1262	ND	50	1.00	
Aroclor-1268	ND	50	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	101	24-168	
2,4,5,6-Tetrachloro-m-Xylene	93	25-145	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Northrop Grumman Systems Corporation
8710 Freeport Parkway, Suite 200
Irving, TX 75063-2577

Project: Space Park

Date Received: 09/21/16
Work Order: 16-09-1499
Preparation: EPA 3545
Method: EPA 8270C
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
01-JRS-149ABD	**16-09-1499-1-A**	**09/21/16 07:10**	**Solid**	**GC/MS CCC**	**09/21/16**	**09/22/16 14:54**	**160921L18**

Parameter	Result	RL	DF	Qualifiers
Acenaphthene	ND	0.50	1.00	
Acenaphthylene	ND	0.50	1.00	
Aniline	ND	0.50	1.00	
Anthracene	ND	0.50	1.00	
Azobenzene	ND	0.50	1.00	
Benzidine	ND	9.9	1.00	
Benzo (a) Anthracene	ND	0.50	1.00	
Benzo (a) Pyrene	ND	0.50	1.00	
Benzo (b) Fluoranthene	ND	0.50	1.00	
Benzo (g,h,i) Perylene	ND	0.50	1.00	
Benzo (k) Fluoranthene	ND	0.50	1.00	
Benzoic Acid	ND	2.5	1.00	
Benzyl Alcohol	ND	0.50	1.00	
Bis(2-Chloroethoxy) Methane	ND	0.50	1.00	
Bis(2-Chloroethyl) Ether	ND	2.5	1.00	
Bis(2-Chloroisopropyl) Ether	ND	0.50	1.00	
Bis(2-Ethylhexyl) Phthalate	ND	0.50	1.00	
4-Bromophenyl-Phenyl Ether	ND	0.50	1.00	
Butyl Benzyl Phthalate	ND	0.50	1.00	
4-Chloro-3-Methylphenol	ND	0.50	1.00	
4-Chloroaniline	ND	0.50	1.00	
2-Chloronaphthalene	ND	0.50	1.00	
2-Chlorophenol	ND	0.50	1.00	
4-Chlorophenyl-Phenyl Ether	ND	0.50	1.00	
Chrysene	ND	0.50	1.00	
Di-n-Butyl Phthalate	ND	0.50	1.00	
Di-n-Octyl Phthalate	ND	0.50	1.00	
Dibenz (a,h) Anthracene	ND	0.50	1.00	
Dibenzofuran	ND	0.50	1.00	
1,2-Dichlorobenzene	ND	0.50	1.00	
1,3-Dichlorobenzene	ND	0.50	1.00	
1,4-Dichlorobenzene	ND	0.50	1.00	
3,3'-Dichlorobenzidine	ND	9.9	1.00	
2,4-Dichlorophenol	ND	0.50	1.00	
Diethyl Phthalate	ND	0.50	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Northrop Grumman Systems Corporation
8710 Freeport Parkway, Suite 200
Irving, TX 75063-2577

Project: Space Park

Date Received: 09/21/16
Work Order: 16-09-1499
Preparation: EPA 3545
Method: EPA 8270C
Units: mg/kg

Parameter	Result	RL	DF	Qualifiers
Dimethyl Phthalate	ND	0.50	1.00	
2,4-Dimethylphenol	ND	0.50	1.00	
4,6-Dinitro-2-Methylphenol	ND	2.5	1.00	
2,4-Dinitrophenol	ND	2.5	1.00	
2,4-Dinitrotoluene	ND	0.50	1.00	
2,6-Dichlorophenol	ND	0.50	1.00	
2,6-Dinitrotoluene	ND	0.50	1.00	
Fluoranthene	ND	0.50	1.00	
Fluorene	ND	0.50	1.00	
Hexachloro-1,3-Butadiene	ND	0.50	1.00	
Hexachlorobenzene	ND	0.50	1.00	
Hexachlorocyclopentadiene	ND	2.5	1.00	
Hexachloroethane	ND	0.50	1.00	
Indeno (1,2,3-c,d) Pyrene	ND	0.50	1.00	
Isophorone	ND	0.50	1.00	
2-Methylnaphthalene	ND	0.50	1.00	
1-Methylnaphthalene	ND	0.50	1.00	
2-Methylphenol	ND	0.50	1.00	
3/4-Methylphenol	ND	0.50	1.00	
N-Nitroso-di-n-propylamine	ND	0.50	1.00	
N-Nitrosodimethylamine	ND	0.50	1.00	
N-Nitrosodiphenylamine	ND	0.50	1.00	
Naphthalene	ND	0.50	1.00	
4-Nitroaniline	ND	0.50	1.00	
3-Nitroaniline	ND	0.50	1.00	
2-Nitroaniline	ND	0.50	1.00	
Nitrobenzene	ND	2.5	1.00	
4-Nitrophenol	ND	0.50	1.00	
2-Nitrophenol	ND	0.50	1.00	
Pentachlorophenol	ND	2.5	1.00	
Phenanthrene	ND	0.50	1.00	
Phenol	ND	0.50	1.00	
Pyrene	ND	0.50	1.00	
Pyridine	ND	0.50	1.00	
1,2,4-Trichlorobenzene	ND	0.50	1.00	
2,4,6-Trichlorophenol	ND	0.50	1.00	
2,4,5-Trichlorophenol	ND	0.50	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Northrop Grumman Systems Corporation	Date Received:	09/21/16
8710 Freeport Parkway, Suite 200	Work Order:	16-09-1499
Irving, TX 75063-2577	Preparation:	EPA 3545
	Method:	EPA 8270C
	Units:	mg/kg
Project: Space Park		Page 3 of 9

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	73	27-120	
2-Fluorophenol	66	25-120	
Nitrobenzene-d5	66	33-123	
p-Terphenyl-d14	90	27-159	
Phenol-d6	75	26-122	
2,4,6-Tribromophenol	96	18-138	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Northrop Grumman Systems Corporation
8710 Freeport Parkway, Suite 200
Irving, TX 75063-2577

Project: Space Park

Date Received: 09/21/16
Work Order: 16-09-1499
Preparation: EPA 3545
Method: EPA 8270C
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02-JRS-149C	**16-09-1499-2-A**	**09/21/16 07:15**	**Solid**	**GC/MS CCC**	**09/21/16**	**09/22/16 15:12**	**160921L18**

Parameter	Result	RL	DF	Qualifiers
Acenaphthene	ND	0.50	1.00	
Acenaphthylene	ND	0.50	1.00	
Aniline	ND	0.50	1.00	
Anthracene	ND	0.50	1.00	
Azobenzene	ND	0.50	1.00	
Benzidine	ND	10	1.00	
Benzo (a) Anthracene	ND	0.50	1.00	
Benzo (a) Pyrene	ND	0.50	1.00	
Benzo (b) Fluoranthene	ND	0.50	1.00	
Benzo (g,h,i) Perylene	ND	0.50	1.00	
Benzo (k) Fluoranthene	ND	0.50	1.00	
Benzoic Acid	ND	2.5	1.00	
Benzyl Alcohol	ND	0.50	1.00	
Bis(2-Chloroethoxy) Methane	ND	0.50	1.00	
Bis(2-Chloroethyl) Ether	ND	2.5	1.00	
Bis(2-Chloroisopropyl) Ether	ND	0.50	1.00	
Bis(2-Ethylhexyl) Phthalate	ND	0.50	1.00	
4-Bromophenyl-Phenyl Ether	ND	0.50	1.00	
Butyl Benzyl Phthalate	ND	0.50	1.00	
4-Chloro-3-Methylphenol	ND	0.50	1.00	
4-Chloroaniline	ND	0.50	1.00	
2-Chloronaphthalene	ND	0.50	1.00	
2-Chlorophenol	ND	0.50	1.00	
4-Chlorophenyl-Phenyl Ether	ND	0.50	1.00	
Chrysene	ND	0.50	1.00	
Di-n-Butyl Phthalate	ND	0.50	1.00	
Di-n-Octyl Phthalate	ND	0.50	1.00	
Dibenz (a,h) Anthracene	ND	0.50	1.00	
Dibenzofuran	ND	0.50	1.00	
1,2-Dichlorobenzene	ND	0.50	1.00	
1,3-Dichlorobenzene	ND	0.50	1.00	
1,4-Dichlorobenzene	ND	0.50	1.00	
3,3'-Dichlorobenzidine	ND	10	1.00	
2,4-Dichlorophenol	ND	0.50	1.00	
Diethyl Phthalate	ND	0.50	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Northrop Grumman Systems Corporation
8710 Freeport Parkway, Suite 200
Irving, TX 75063-2577

Project: Space Park

Date Received: 09/21/16
Work Order: 16-09-1499
Preparation: EPA 3545
Method: EPA 8270C
Units: mg/kg

Parameter	Result	RL	DF	Qualifiers
Dimethyl Phthalate	ND	0.50	1.00	
2,4-Dimethylphenol	ND	0.50	1.00	
4,6-Dinitro-2-Methylphenol	ND	2.5	1.00	
2,4-Dinitrophenol	ND	2.5	1.00	
2,4-Dinitrotoluene	ND	0.50	1.00	
2,6-Dichlorophenol	ND	0.50	1.00	
2,6-Dinitrotoluene	ND	0.50	1.00	
Fluoranthene	ND	0.50	1.00	
Fluorene	ND	0.50	1.00	
Hexachloro-1,3-Butadiene	ND	0.50	1.00	
Hexachlorobenzene	ND	0.50	1.00	
Hexachlorocyclopentadiene	ND	2.5	1.00	
Hexachloroethane	ND	0.50	1.00	
Indeno (1,2,3-c,d) Pyrene	ND	0.50	1.00	
Isophorone	ND	0.50	1.00	
2-Methylnaphthalene	ND	0.50	1.00	
1-Methylnaphthalene	ND	0.50	1.00	
2-Methylphenol	ND	0.50	1.00	
3/4-Methylphenol	ND	0.50	1.00	
N-Nitroso-di-n-propylamine	ND	0.50	1.00	
N-Nitrosodimethylamine	ND	0.50	1.00	
N-Nitrosodiphenylamine	ND	0.50	1.00	
Naphthalene	ND	0.50	1.00	
4-Nitroaniline	ND	0.50	1.00	
3-Nitroaniline	ND	0.50	1.00	
2-Nitroaniline	ND	0.50	1.00	
Nitrobenzene	ND	2.5	1.00	
4-Nitrophenol	ND	0.50	1.00	
2-Nitrophenol	ND	0.50	1.00	
Pentachlorophenol	ND	2.5	1.00	
Phenanthrene	ND	0.50	1.00	
Phenol	ND	0.50	1.00	
Pyrene	ND	0.50	1.00	
Pyridine	ND	0.50	1.00	
1,2,4-Trichlorobenzene	ND	0.50	1.00	
2,4,6-Trichlorophenol	ND	0.50	1.00	
2,4,5-Trichlorophenol	ND	0.50	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Northrop Grumman Systems Corporation	Date Received:	09/21/16
8710 Freeport Parkway, Suite 200	Work Order:	16-09-1499
Irving, TX 75063-2577	Preparation:	EPA 3545
	Method:	EPA 8270C
	Units:	mg/kg
Project: Space Park		Page 6 of 9

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	48	27-120	
2-Fluorophenol	43	25-120	
Nitrobenzene-d5	44	33-123	
p-Terphenyl-d14	59	27-159	
Phenol-d6	46	26-122	
2,4,6-Tribromophenol	58	18-138	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Northrop Grumman Systems Corporation
8710 Freeport Parkway, Suite 200
Irving, TX 75063-2577

Project: Space Park

Date Received: 09/21/16
Work Order: 16-09-1499
Preparation: EPA 3545
Method: EPA 8270C
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-549-3712**	**N/A**	**Solid**	**GC/MS CCC**	**09/21/16**	**09/22/16 13:41**	**160921L18**

Parameter	Result	RL	DF	Qualifiers
Acenaphthene	ND	0.50	1.00	
Acenaphthylene	ND	0.50	1.00	
Aniline	ND	0.50	1.00	
Anthracene	ND	0.50	1.00	
Azobenzene	ND	0.50	1.00	
Benzidine	ND	10	1.00	
Benzo (a) Anthracene	ND	0.50	1.00	
Benzo (a) Pyrene	ND	0.50	1.00	
Benzo (b) Fluoranthene	ND	0.50	1.00	
Benzo (g,h,i) Perylene	ND	0.50	1.00	
Benzo (k) Fluoranthene	ND	0.50	1.00	
Benzoic Acid	ND	2.5	1.00	
Benzyl Alcohol	ND	0.50	1.00	
Bis(2-Chloroethoxy) Methane	ND	0.50	1.00	
Bis(2-Chloroethyl) Ether	ND	2.5	1.00	
Bis(2-Chloroisopropyl) Ether	ND	0.50	1.00	
Bis(2-Ethylhexyl) Phthalate	ND	0.50	1.00	
4-Bromophenyl-Phenyl Ether	ND	0.50	1.00	
Butyl Benzyl Phthalate	ND	0.50	1.00	
4-Chloro-3-Methylphenol	ND	0.50	1.00	
4-Chloroaniline	ND	0.50	1.00	
2-Chloronaphthalene	ND	0.50	1.00	
2-Chlorophenol	ND	0.50	1.00	
4-Chlorophenyl-Phenyl Ether	ND	0.50	1.00	
Chrysene	ND	0.50	1.00	
Di-n-Butyl Phthalate	ND	0.50	1.00	
Di-n-Octyl Phthalate	ND	0.50	1.00	
Dibenz (a,h) Anthracene	ND	0.50	1.00	
Dibenzofuran	ND	0.50	1.00	
1,2-Dichlorobenzene	ND	0.50	1.00	
1,3-Dichlorobenzene	ND	0.50	1.00	
1,4-Dichlorobenzene	ND	0.50	1.00	
3,3'-Dichlorobenzidine	ND	10	1.00	
2,4-Dichlorophenol	ND	0.50	1.00	
Diethyl Phthalate	ND	0.50	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Northrop Grumman Systems Corporation
8710 Freeport Parkway, Suite 200
Irving, TX 75063-2577

Project: Space Park

Date Received: 09/21/16
Work Order: 16-09-1499
Preparation: EPA 3545
Method: EPA 8270C
Units: mg/kg

Parameter	Result	RL	DF	Qualifiers
Dimethyl Phthalate	ND	0.50	1.00	
2,4-Dimethylphenol	ND	0.50	1.00	
4,6-Dinitro-2-Methylphenol	ND	2.5	1.00	
2,4-Dinitrophenol	ND	2.5	1.00	
2,4-Dinitrotoluene	ND	0.50	1.00	
2,6-Dichlorophenol	ND	0.50	1.00	
2,6-Dinitrotoluene	ND	0.50	1.00	
Fluoranthene	ND	0.50	1.00	
Fluorene	ND	0.50	1.00	
Hexachloro-1,3-Butadiene	ND	0.50	1.00	
Hexachlorobenzene	ND	0.50	1.00	
Hexachlorocyclopentadiene	ND	2.5	1.00	
Hexachloroethane	ND	0.50	1.00	
Indeno (1,2,3-c,d) Pyrene	ND	0.50	1.00	
Isophorone	ND	0.50	1.00	
2-Methylnaphthalene	ND	0.50	1.00	
1-Methylnaphthalene	ND	0.50	1.00	
2-Methylphenol	ND	0.50	1.00	
3/4-Methylphenol	ND	0.50	1.00	
N-Nitroso-di-n-propylamine	ND	0.50	1.00	
N-Nitrosodimethylamine	ND	0.50	1.00	
N-Nitrosodiphenylamine	ND	0.50	1.00	
Naphthalene	ND	0.50	1.00	
4-Nitroaniline	ND	0.50	1.00	
3-Nitroaniline	ND	0.50	1.00	
2-Nitroaniline	ND	0.50	1.00	
Nitrobenzene	ND	2.5	1.00	
4-Nitrophenol	ND	0.50	1.00	
2-Nitrophenol	ND	0.50	1.00	
Pentachlorophenol	ND	2.5	1.00	
Phenanthrene	ND	0.50	1.00	
Phenol	ND	0.50	1.00	
Pyrene	ND	0.50	1.00	
Pyridine	ND	0.50	1.00	
1,2,4-Trichlorobenzene	ND	0.50	1.00	
2,4,6-Trichlorophenol	ND	0.50	1.00	
2,4,5-Trichlorophenol	ND	0.50	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Northrop Grumman Systems Corporation	Date Received:	09/21/16
8710 Freeport Parkway, Suite 200	Work Order:	16-09-1499
Irving, TX 75063-2577	Preparation:	EPA 3545
	Method:	EPA 8270C
	Units:	mg/kg
Project: Space Park		Page 9 of 9

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	93	27-120	
2-Fluorophenol	110	25-120	
Nitrobenzene-d5	94	33-123	
p-Terphenyl-d14	106	27-159	
Phenol-d6	101	26-122	
2,4,6-Tribromophenol	99	18-138	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Northrop Grumman Systems Corporation
8710 Freeport Parkway, Suite 200
Irving, TX 75063-2577

Date Received: 09/21/16
Work Order: 16-09-1499
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/kg

Project: Space Park

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
01-JRS-149ABD	**16-09-1499-1-A**	**09/21/16 07:10**	**Solid**	**GC/MS Q**	**09/21/16**	**09/21/16 16:26**	**160921L016**

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	130	1.00	
Benzene	ND	5.0	1.00	
Bromobenzene	ND	5.0	1.00	
Bromochloromethane	ND	5.0	1.00	
Bromodichloromethane	ND	5.0	1.00	
Bromoform	ND	5.0	1.00	
Bromomethane	ND	25	1.00	
2-Butanone	ND	50	1.00	
n-Butylbenzene	ND	5.0	1.00	
sec-Butylbenzene	ND	5.0	1.00	
tert-Butylbenzene	ND	5.0	1.00	
Carbon Disulfide	ND	50	1.00	
Carbon Tetrachloride	ND	5.0	1.00	
Chlorobenzene	ND	5.0	1.00	
Chloroethane	ND	5.0	1.00	
Chloroform	ND	5.0	1.00	
Chloromethane	ND	25	1.00	
2-Chlorotoluene	ND	5.0	1.00	
4-Chlorotoluene	ND	5.0	1.00	
Dibromochloromethane	ND	5.0	1.00	
1,2-Dibromo-3-Chloropropane	ND	10	1.00	
1,2-Dibromoethane	ND	5.0	1.00	
Dibromomethane	ND	5.0	1.00	
1,2-Dichlorobenzene	ND	5.0	1.00	
1,3-Dichlorobenzene	ND	5.0	1.00	
1,4-Dichlorobenzene	ND	5.0	1.00	
Dichlorodifluoromethane	ND	5.0	1.00	
1,1-Dichloroethane	ND	5.0	1.00	
1,2-Dichloroethane	ND	5.0	1.00	
1,1-Dichloroethene	ND	5.0	1.00	
c-1,2-Dichloroethene	ND	5.0	1.00	
t-1,2-Dichloroethene	ND	5.0	1.00	
1,2-Dichloropropane	ND	5.0	1.00	
1,3-Dichloropropane	ND	5.0	1.00	
2,2-Dichloropropane	ND	5.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Northrop Grumman Systems Corporation
8710 Freeport Parkway, Suite 200
Irving, TX 75063-2577

Project: Space Park

Date Received: 09/21/16
Work Order: 16-09-1499
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/kg

Parameter	Result	RL	DF	Qualifiers
1,1-Dichloropropene	ND	5.0	1.00	
c-1,3-Dichloropropene	ND	5.0	1.00	
t-1,3-Dichloropropene	ND	5.0	1.00	
Ethylbenzene	ND	5.0	1.00	
2-Hexanone	ND	50	1.00	
Isopropylbenzene	ND	5.0	1.00	
p-Isopropyltoluene	ND	5.0	1.00	
Methylene Chloride	ND	50	1.00	
4-Methyl-2-Pentanone	ND	50	1.00	
Naphthalene	ND	50	1.00	
n-Propylbenzene	ND	5.0	1.00	
Styrene	ND	5.0	1.00	
1,1,1,2-Tetrachloroethane	ND	5.0	1.00	
1,1,2,2-Tetrachloroethane	ND	5.0	1.00	
Tetrachloroethene	ND	5.0	1.00	
Toluene	ND	5.0	1.00	
1,2,3-Trichlorobenzene	ND	10	1.00	
1,2,4-Trichlorobenzene	ND	5.0	1.00	
1,1,1-Trichloroethane	ND	5.0	1.00	
1,1,2-Trichloroethane	ND	5.0	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	50	1.00	
Trichloroethene	ND	5.0	1.00	
1,2,3-Trichloropropane	ND	5.0	1.00	
1,2,4-Trimethylbenzene	ND	5.0	1.00	
Trichlorofluoromethane	ND	50	1.00	
1,3,5-Trimethylbenzene	ND	5.0	1.00	
Vinyl Acetate	ND	50	1.00	
Vinyl Chloride	ND	5.0	1.00	
p/m-Xylene	ND	5.0	1.00	
o-Xylene	ND	5.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	5.0	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	96	60-132	
Dibromofluoromethane	109	63-141	
1,2-Dichloroethane-d4	115	62-146	
Toluene-d8	99	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Northrop Grumman Systems Corporation
8710 Freeport Parkway, Suite 200
Irving, TX 75063-2577

Date Received: 09/21/16
Work Order: 16-09-1499
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/kg

Project: Space Park

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
02-JRS-149C	**16-09-1499-2-A**	**09/21/16 07:15**	**Solid**	**GC/MS Q**	**09/21/16**	**09/21/16 16:53**	**160921L016**

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	130	1.00	
Benzene	ND	5.1	1.00	
Bromobenzene	ND	5.1	1.00	
Bromochloromethane	ND	5.1	1.00	
Bromodichloromethane	ND	5.1	1.00	
Bromoform	ND	5.1	1.00	
Bromomethane	ND	26	1.00	
2-Butanone	ND	51	1.00	
n-Butylbenzene	ND	5.1	1.00	
sec-Butylbenzene	ND	5.1	1.00	
tert-Butylbenzene	ND	5.1	1.00	
Carbon Disulfide	ND	51	1.00	
Carbon Tetrachloride	ND	5.1	1.00	
Chlorobenzene	ND	5.1	1.00	
Chloroethane	ND	5.1	1.00	
Chloroform	ND	5.1	1.00	
Chloromethane	ND	26	1.00	
2-Chlorotoluene	ND	5.1	1.00	
4-Chlorotoluene	ND	5.1	1.00	
Dibromochloromethane	ND	5.1	1.00	
1,2-Dibromo-3-Chloropropane	ND	10	1.00	
1,2-Dibromoethane	ND	5.1	1.00	
Dibromomethane	ND	5.1	1.00	
1,2-Dichlorobenzene	ND	5.1	1.00	
1,3-Dichlorobenzene	ND	5.1	1.00	
1,4-Dichlorobenzene	ND	5.1	1.00	
Dichlorodifluoromethane	ND	5.1	1.00	
1,1-Dichloroethane	ND	5.1	1.00	
1,2-Dichloroethane	ND	5.1	1.00	
1,1-Dichloroethene	ND	5.1	1.00	
c-1,2-Dichloroethene	ND	5.1	1.00	
t-1,2-Dichloroethene	ND	5.1	1.00	
1,2-Dichloropropane	ND	5.1	1.00	
1,3-Dichloropropane	ND	5.1	1.00	
2,2-Dichloropropane	ND	5.1	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Northrop Grumman Systems Corporation
8710 Freeport Parkway, Suite 200
Irving, TX 75063-2577

Project: Space Park

Date Received: 09/21/16
Work Order: 16-09-1499
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/kg

Parameter	Result	RL	DF	Qualifiers
1,1-Dichloropropene	ND	5.1	1.00	
c-1,3-Dichloropropene	ND	5.1	1.00	
t-1,3-Dichloropropene	ND	5.1	1.00	
Ethylbenzene	ND	5.1	1.00	
2-Hexanone	ND	51	1.00	
Isopropylbenzene	ND	5.1	1.00	
p-Isopropyltoluene	ND	5.1	1.00	
Methylene Chloride	ND	51	1.00	
4-Methyl-2-Pentanone	ND	51	1.00	
Naphthalene	ND	51	1.00	
n-Propylbenzene	ND	5.1	1.00	
Styrene	ND	5.1	1.00	
1,1,1,2-Tetrachloroethane	ND	5.1	1.00	
1,1,2,2-Tetrachloroethane	ND	5.1	1.00	
Tetrachloroethene	ND	5.1	1.00	
Toluene	ND	5.1	1.00	
1,2,3-Trichlorobenzene	ND	10	1.00	
1,2,4-Trichlorobenzene	ND	5.1	1.00	
1,1,1-Trichloroethane	ND	5.1	1.00	
1,1,2-Trichloroethane	ND	5.1	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	51	1.00	
Trichloroethene	ND	5.1	1.00	
1,2,3-Trichloropropane	ND	5.1	1.00	
1,2,4-Trimethylbenzene	ND	5.1	1.00	
Trichlorofluoromethane	ND	51	1.00	
1,3,5-Trimethylbenzene	ND	5.1	1.00	
Vinyl Acetate	ND	51	1.00	
Vinyl Chloride	ND	5.1	1.00	
p/m-Xylene	ND	5.1	1.00	
o-Xylene	ND	5.1	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	5.1	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	98	60-132	
Dibromofluoromethane	106	63-141	
1,2-Dichloroethane-d4	112	62-146	
Toluene-d8	100	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Northrop Grumman Systems Corporation
8710 Freeport Parkway, Suite 200
Irving, TX 75063-2577

Date Received: 09/21/16
Work Order: 16-09-1499
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/kg

Project: Space Park

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-796-11751**	**N/A**	**Solid**	**GC/MS Q**	**09/21/16**	**09/21/16 11:04**	**160921L016**

Parameter	Result	RL	DF	Qualifiers
Acetone	ND	120	1.00	
Benzene	ND	5.0	1.00	
Bromobenzene	ND	5.0	1.00	
Bromochloromethane	ND	5.0	1.00	
Bromodichloromethane	ND	5.0	1.00	
Bromoform	ND	5.0	1.00	
Bromomethane	ND	25	1.00	
2-Butanone	ND	50	1.00	
n-Butylbenzene	ND	5.0	1.00	
sec-Butylbenzene	ND	5.0	1.00	
tert-Butylbenzene	ND	5.0	1.00	
Carbon Disulfide	ND	50	1.00	
Carbon Tetrachloride	ND	5.0	1.00	
Chlorobenzene	ND	5.0	1.00	
Chloroethane	ND	5.0	1.00	
Chloroform	ND	5.0	1.00	
Chloromethane	ND	25	1.00	
2-Chlorotoluene	ND	5.0	1.00	
4-Chlorotoluene	ND	5.0	1.00	
Dibromochloromethane	ND	5.0	1.00	
1,2-Dibromo-3-Chloropropane	ND	10	1.00	
1,2-Dibromoethane	ND	5.0	1.00	
Dibromomethane	ND	5.0	1.00	
1,2-Dichlorobenzene	ND	5.0	1.00	
1,3-Dichlorobenzene	ND	5.0	1.00	
1,4-Dichlorobenzene	ND	5.0	1.00	
Dichlorodifluoromethane	ND	5.0	1.00	
1,1-Dichloroethane	ND	5.0	1.00	
1,2-Dichloroethane	ND	5.0	1.00	
1,1-Dichloroethene	ND	5.0	1.00	
c-1,2-Dichloroethene	ND	5.0	1.00	
t-1,2-Dichloroethene	ND	5.0	1.00	
1,2-Dichloropropane	ND	5.0	1.00	
1,3-Dichloropropane	ND	5.0	1.00	
2,2-Dichloropropane	ND	5.0	1.00	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Northrop Grumman Systems Corporation
8710 Freeport Parkway, Suite 200
Irving, TX 75063-2577

Project: Space Park

Date Received: 09/21/16
Work Order: 16-09-1499
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/kg

Parameter	Result	RL	DF	Qualifiers
1,1-Dichloropropene	ND	5.0	1.00	
c-1,3-Dichloropropene	ND	5.0	1.00	
t-1,3-Dichloropropene	ND	5.0	1.00	
Ethylbenzene	ND	5.0	1.00	
2-Hexanone	ND	50	1.00	
Isopropylbenzene	ND	5.0	1.00	
p-Isopropyltoluene	ND	5.0	1.00	
Methylene Chloride	ND	50	1.00	
4-Methyl-2-Pentanone	ND	50	1.00	
Naphthalene	ND	50	1.00	
n-Propylbenzene	ND	5.0	1.00	
Styrene	ND	5.0	1.00	
1,1,1,2-Tetrachloroethane	ND	5.0	1.00	
1,1,2,2-Tetrachloroethane	ND	5.0	1.00	
Tetrachloroethene	ND	5.0	1.00	
Toluene	ND	5.0	1.00	
1,2,3-Trichlorobenzene	ND	10	1.00	
1,2,4-Trichlorobenzene	ND	5.0	1.00	
1,1,1-Trichloroethane	ND	5.0	1.00	
1,1,2-Trichloroethane	ND	5.0	1.00	
1,1,2-Trichloro-1,2,2-Trifluoroethane	ND	50	1.00	
Trichloroethene	ND	5.0	1.00	
1,2,3-Trichloropropane	ND	5.0	1.00	
1,2,4-Trimethylbenzene	ND	5.0	1.00	
Trichlorofluoromethane	ND	50	1.00	
1,3,5-Trimethylbenzene	ND	5.0	1.00	
Vinyl Acetate	ND	50	1.00	
Vinyl Chloride	ND	5.0	1.00	
p/m-Xylene	ND	5.0	1.00	
o-Xylene	ND	5.0	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	5.0	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	94	60-132	
Dibromofluoromethane	95	63-141	
1,2-Dichloroethane-d4	100	62-146	
Toluene-d8	98	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Quality Control - Spike/Spike Duplicate

Northrop Grumman Systems Corporation
8710 Freeport Parkway, Suite 200
Irving, TX 75063-2577

Project: Space Park

Date Received: 09/21/16
Work Order: 16-09-1499
Preparation: EPA 3550B
Method: EPA 8015B

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
16-09-1500-1	**Sample**	**Solid**	**GC 47**	**09/21/16**	**09/21/16 20:56**	**160921S11**
16-09-1500-1	**Matrix Spike**	**Solid**	**GC 47**	**09/21/16**	**09/21/16 20:23**	**160921S11**
16-09-1500-1	**Matrix Spike Duplicate**	**Solid**	**GC 47**	**09/21/16**	**09/21/16 20:39**	**160921S11**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Diesel Range Organics	24.12	400.0	361.3	84	369.8	86	33-153	2	0-32	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Spike/Spike Duplicate

Northrop Grumman Systems Corporation
8710 Freeport Parkway, Suite 200
Irving, TX 75063-2577

Project: Space Park

Date Received: 09/21/16
Work Order: 16-09-1499
Preparation: EPA 5030C
Method: EPA 8015B

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
01-JRS-149ABD	**Sample**	**Solid**	**GC 25**	**09/21/16**	**09/21/16 20:39**	**160921S026**
01-JRS-149ABD	**Matrix Spike**	**Solid**	**GC 25**	**09/21/16**	**09/21/16 21:14**	**160921S026**
01-JRS-149ABD	**Matrix Spike Duplicate**	**Solid**	**GC 25**	**09/21/16**	**09/21/16 18:54**	**160921S026**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Gasoline Range Organics	ND	10.00	6.150	62	6.856	69	66-108	11	0-18	3

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Spike/Spike Duplicate

Northrop Grumman Systems Corporation
8710 Freeport Parkway, Suite 200
Irving, TX 75063-2577

Project: Space Park

Date Received: 09/21/16
Work Order: 16-09-1499
Preparation: EPA 3050B
Method: EPA 6010B

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
16-09-1212-2	**Sample**	**Solid**	**ICP 7300**	**09/21/16**	**09/22/16 13:44**	**160921S02**
16-09-1212-2	**Matrix Spike**	**Solid**	**ICP 7300**	**09/21/16**	**09/22/16 13:45**	**160921S02**
16-09-1212-2	**Matrix Spike Duplicate**	**Solid**	**ICP 7300**	**09/21/16**	**09/22/16 13:46**	**160921S02**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Antimony	ND	25.00	14.67	59	13.35	53	50-115	9	0-20	
Arsenic	1.680	25.00	29.72	112	28.36	107	75-125	5	0-20	
Barium	96.25	25.00	121.3	100	119.9	95	75-125	1	0-20	
Beryllium	0.3165	25.00	29.53	117	27.83	110	75-125	6	0-20	
Cadmium	0.9525	25.00	28.94	112	27.00	104	75-125	7	0-20	
Chromium	14.66	25.00	41.40	107	41.99	109	75-125	1	0-20	
Cobalt	25.71	25.00	61.67	144	52.98	109	75-125	15	0-20	3
Copper	29.88	25.00	68.00	152	60.41	122	75-125	12	0-20	3
Lead	8.116	25.00	37.37	117	35.94	111	75-125	4	0-20	
Molybdenum	ND	25.00	26.82	107	25.17	101	75-125	6	0-20	
Nickel	14.80	25.00	43.56	115	42.71	112	75-125	2	0-20	
Selenium	ND	25.00	28.12	112	26.24	105	75-125	7	0-20	
Silver	ND	12.50	14.27	114	13.29	106	75-125	7	0-20	
Thallium	ND	25.00	27.39	110	26.29	105	75-125	4	0-20	
Vanadium	32.24	25.00	56.77	98	56.40	97	75-125	1	0-20	
Zinc	61.39	25.00	94.72	133	88.75	109	75-125	7	0-20	3

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Spike/Spike Duplicate

Northrop Grumman Systems Corporation
8710 Freeport Parkway, Suite 200
Irving, TX 75063-2577

Project: Space Park

Date Received: 09/21/16
Work Order: 16-09-1499
Preparation: EPA 7471A Total
Method: EPA 7471A
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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
16-07-1415-1	**Sample**	**Sediment**	**Mercury 05**	**09/21/16**	**09/21/16 16:57**	**160921S04**
16-07-1415-1	**Matrix Spike**	**Sediment**	**Mercury 05**	**09/21/16**	**09/21/16 18:45**	**160921S04**
16-07-1415-1	**Matrix Spike Duplicate**	**Sediment**	**Mercury 05**	**09/21/16**	**09/21/16 18:47**	**160921S04**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Mercury	0.1400	0.8350	1.025	106	1.017	105	76-136	1	0-16	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Spike/Spike Duplicate

Northrop Grumman Systems Corporation
8710 Freeport Parkway, Suite 200
Irving, TX 75063-2577

Project: Space Park

Date Received: 09/21/16
Work Order: 16-09-1499
Preparation: EPA 3545
Method: EPA 8082

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
16-09-0833-1	**Sample**	**Solid**	**GC 58**	**09/21/16**	**09/21/16 13:41**	**160921S10**
16-09-0833-1	**Matrix Spike**	**Solid**	**GC 58**	**09/21/16**	**09/21/16 13:59**	**160921S10**
16-09-0833-1	**Matrix Spike Duplicate**	**Solid**	**GC 58**	**09/21/16**	**09/21/16 14:17**	**160921S10**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Aroclor-1016	ND	100.0	89.00	89	85.50	86	50-135	4	0-20	
Aroclor-1260	ND	100.0	99.00	99	96.00	96	50-135	3	0-20	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Spike/Spike Duplicate

Northrop Grumman Systems Corporation
8710 Freeport Parkway, Suite 200
Irving, TX 75063-2577

Project: Space Park

Date Received: 09/21/16
Work Order: 16-09-1499
Preparation: EPA 3545
Method: EPA 8270C

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
16-09-1521-5	**Sample**	**Solid**	**GC/MS CCC**	**09/21/16**	**09/22/16 13:59**	**160921S18**
16-09-1521-5	**Matrix Spike**	**Solid**	**GC/MS CCC**	**09/21/16**	**09/22/16 14:17**	**160921S18**
16-09-1521-5	**Matrix Spike Duplicate**	**Solid**	**GC/MS CCC**	**09/21/16**	**09/22/16 14:36**	**160921S18**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Acenaphthene	ND	10.00	8.036	80	7.801	78	34-148	3	0-20	
Acenaphthylene	ND	10.00	7.529	75	7.301	73	53-120	3	0-20	
Butyl Benzyl Phthalate	ND	10.00	8.221	82	7.818	78	15-189	5	0-20	
4-Chloro-3-Methylphenol	ND	10.00	8.557	86	8.383	84	32-120	2	0-20	
2-Chlorophenol	ND	10.00	7.391	74	7.192	72	53-120	3	0-20	
1,4-Dichlorobenzene	ND	10.00	6.427	64	6.581	66	43-120	2	0-26	
Dimethyl Phthalate	ND	10.00	8.028	80	7.566	76	44-122	6	0-20	
2,4-Dinitrotoluene	ND	10.00	8.347	83	7.902	79	28-120	5	0-20	
Fluorene	ND	10.00	7.562	76	7.417	74	12-186	2	0-20	
N-Nitroso-di-n-propylamine	ND	10.00	6.683	67	6.517	65	38-140	3	0-20	
Naphthalene	ND	10.00	6.937	69	6.984	70	20-140	1	0-20	
4-Nitrophenol	ND	10.00	7.342	73	7.059	71	14-128	4	0-59	
Pentachlorophenol	ND	10.00	8.168	82	7.414	74	10-124	10	0-20	
Phenol	ND	10.00	7.478	75	7.153	72	22-124	4	0-20	
Pyrene	ND	10.00	8.515	85	7.974	80	31-169	7	0-20	
1,2,4-Trichlorobenzene	ND	10.00	7.464	75	7.610	76	56-120	2	0-20	

RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Spike/Spike Duplicate

Northrop Grumman Systems Corporation
8710 Freeport Parkway, Suite 200
Irving, TX 75063-2577

Project: Space Park

Date Received: 09/21/16
Work Order: 16-09-1499
Preparation: EPA 5030C
Method: EPA 8260B

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
16-09-1451-1	**Sample**	**Solid**	**GC/MS Q**	**09/21/16**	**09/21/16 11:57**	**160921S002**
16-09-1451-1	**Matrix Spike**	**Solid**	**GC/MS Q**	**09/21/16**	**09/21/16 12:23**	**160921S002**
16-09-1451-1	**Matrix Spike Duplicate**	**Solid**	**GC/MS Q**	**09/21/16**	**09/21/16 12:49**	**160921S002**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Benzene	ND	50.00	45.21	90	47.32	95	61-127	5	0-20	
Carbon Tetrachloride	ND	50.00	47.78	96	49.49	99	51-135	4	0-29	
Chlorobenzene	ND	50.00	48.23	96	49.48	99	57-123	3	0-20	
1,2-Dibromoethane	ND	50.00	50.57	101	52.91	106	64-124	5	0-20	
1,2-Dichlorobenzene	ND	50.00	48.77	98	49.78	100	35-131	2	0-25	
1,2-Dichloroethane	ND	50.00	46.33	93	47.85	96	80-120	3	0-20	
1,1-Dichloroethene	ND	50.00	51.31	103	53.81	108	47-143	5	0-25	
Ethylbenzene	ND	50.00	49.71	99	50.71	101	57-129	2	0-22	
Toluene	ND	50.00	49.73	99	51.27	103	63-123	3	0-20	
Trichloroethene	ND	50.00	49.12	98	51.39	103	44-158	5	0-20	
Vinyl Chloride	ND	50.00	51.48	103	53.26	107	49-139	3	0-47	
p/m-Xylene	ND	100.0	97.33	97	100.1	100	70-130	3	0-30	
o-Xylene	ND	50.00	49.06	98	50.30	101	70-130	2	0-30	
Methyl-t-Butyl Ether (MTBE)	ND	50.00	46.92	94	48.77	98	57-123	4	0-21	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS

Northrop Grumman Systems Corporation		Date Received:	09/21/16
8710 Freeport Parkway, Suite 200		Work Order:	16-09-1499
Irving, TX 75063-2577		Preparation:	EPA 3550B
		Method:	EPA 8015B
Project: Space Park			Page 1 of 7

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-15-414-745	**LCS**	**Solid**	**GC 47**	**09/21/16**	**09/22/16 13:56**	**160921B11**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Diesel Range Organics	400.0	386.7	97	67-121	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS

Northrop Grumman Systems Corporation		Date Received:	09/21/16
8710 Freeport Parkway, Suite 200		Work Order:	16-09-1499
Irving, TX 75063-2577		Preparation:	EPA 5030C
		Method:	EPA 8015B
Project: Space Park			Page 2 of 7

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-12-024-1015	**LCS**	**Solid**	**GC 25**	**09/21/16**	**09/21/16 15:02**	**160921L062**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Gasoline Range Organics	10.00	7.850	78	70-118	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS

Northrop Grumman Systems Corporation
8710 Freeport Parkway, Suite 200
Irving, TX 75063-2577

Project: Space Park

Date Received: 09/21/16
Work Order: 16-09-1499
Preparation: EPA 3050B
Method: EPA 6010B

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
097-01-002-23271	**LCS**	**Solid**	**ICP 7300**	**09/21/16**	**09/22/16 13:21**	**160921L02**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Antimony	25.00	24.81	99	80-120	73-127	
Arsenic	25.00	24.71	99	80-120	73-127	
Barium	25.00	25.78	103	80-120	73-127	
Beryllium	25.00	24.51	98	80-120	73-127	
Cadmium	25.00	24.74	99	80-120	73-127	
Chromium	25.00	25.00	100	80-120	73-127	
Cobalt	25.00	25.80	103	80-120	73-127	
Copper	25.00	25.21	101	80-120	73-127	
Lead	25.00	25.58	102	80-120	73-127	
Molybdenum	25.00	24.77	99	80-120	73-127	
Nickel	25.00	25.83	103	80-120	73-127	
Selenium	25.00	24.26	97	80-120	73-127	
Silver	12.50	12.54	100	80-120	73-127	
Thallium	25.00	26.03	104	80-120	73-127	
Vanadium	25.00	24.01	96	80-120	73-127	
Zinc	25.00	25.10	100	80-120	73-127	

Total number of LCS compounds: 16
Total number of ME compounds: 0
Total number of ME compounds allowed: 1
LCS ME CL validation result: Pass

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS

Northrop Grumman Systems Corporation		Date Received:	09/21/16
8710 Freeport Parkway, Suite 200		Work Order:	16-09-1499
Irving, TX 75063-2577		Preparation:	EPA 7471A Total
		Method:	EPA 7471A
Project: Space Park			Page 4 of 7

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-16-272-2552	**LCS**	**Solid**	**Mercury 05**	**09/21/16**	**09/21/16 18:42**	**160921L04**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Mercury	0.8350	0.9309	111	85-121	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS

Northrop Grumman Systems Corporation		Date Received:	09/21/16
8710 Freeport Parkway, Suite 200		Work Order:	16-09-1499
Irving, TX 75063-2577		Preparation:	EPA 3545
		Method:	EPA 8082
Project: Space Park			Page 5 of 7

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-12-535-3915	**LCS**	**Solid**	**GC 58**	**09/21/16**	**09/21/16 13:23**	**160921L10**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Aroclor-1016	100.0	95.00	95	50-135	
Aroclor-1260	100.0	96.50	96	50-135	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS

Northrop Grumman Systems Corporation
8710 Freeport Parkway, Suite 200
Irving, TX 75063-2577

Project: Space Park

Date Received: 09/21/16
Work Order: 16-09-1499
Preparation: EPA 3545
Method: EPA 8270C

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-12-549-3712	**LCS**	**Solid**	**GC/MS CCC**	**09/21/16**	**09/22/16 13:22**	**160921L18**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Acenaphthene	10.00	7.118	71	51-123	39-135	
Acenaphthylene	10.00	6.870	69	52-120	41-131	
Butyl Benzyl Phthalate	10.00	7.839	78	43-139	27-155	
4-Chloro-3-Methylphenol	10.00	7.546	75	55-121	44-132	
2-Chlorophenol	10.00	7.702	77	58-124	47-135	
1,4-Dichlorobenzene	10.00	6.664	67	42-132	27-147	
Dimethyl Phthalate	10.00	7.127	71	51-123	39-135	
2,4-Dinitrotoluene	10.00	8.123	81	51-129	38-142	
Fluorene	10.00	6.976	70	54-126	42-138	
N-Nitroso-di-n-propylamine	10.00	6.663	67	40-136	24-152	
Naphthalene	10.00	6.824	68	32-146	13-165	
4-Nitrophenol	10.00	6.892	69	24-126	7-143	
Pentachlorophenol	10.00	5.218	52	23-131	5-149	
Phenol	10.00	7.481	75	40-130	25-145	
Pyrene	10.00	7.763	78	47-143	31-159	
1,2,4-Trichlorobenzene	10.00	7.406	74	45-129	31-143	

Total number of LCS compounds: 16
Total number of ME compounds: 0
Total number of ME compounds allowed: 1
LCS ME CL validation result: Pass

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS

Northrop Grumman Systems Corporation
8710 Freeport Parkway, Suite 200
Irving, TX 75063-2577

Project: Space Park

Date Received: 09/21/16
Work Order: 16-09-1499
Preparation: EPA 5030C
Method: EPA 8260B

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-12-796-11751	**LCS**	**Solid**	**GC/MS Q**	**09/21/16**	**09/21/16 10:07**	**160921L016**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Benzene	50.00	47.95	96	78-120	71-127	
Carbon Tetrachloride	50.00	44.94	90	49-139	34-154	
Chlorobenzene	50.00	51.17	102	79-120	72-127	
1,2-Dibromoethane	50.00	51.25	102	80-120	73-127	
1,2-Dichlorobenzene	50.00	51.99	104	75-120	68-128	
1,2-Dichloroethane	50.00	45.53	91	80-120	73-127	
1,1-Dichloroethene	50.00	46.31	93	74-122	66-130	
Ethylbenzene	50.00	52.43	105	76-120	69-127	
Toluene	50.00	54.29	109	77-120	70-127	
Trichloroethene	50.00	52.68	105	80-120	73-127	
Vinyl Chloride	50.00	45.73	91	68-122	59-131	
p/m-Xylene	100.0	103.8	104	75-125	67-133	
o-Xylene	50.00	52.51	105	75-125	67-133	
Methyl-t-Butyl Ether (MTBE)	50.00	48.33	97	77-120	70-127	

Total number of LCS compounds: 14
Total number of ME compounds: 0
Total number of ME compounds allowed: 1
LCS ME CL validation result: Pass

Return to Contents

RPD: Relative Percent Difference. CL: Control Limits

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Glossary of Terms and Qualifiers

Work Order: 16-09-1499 Page 1 of 1

Qualifiers	Definition
*	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.

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7440 Lincoln Way, Garden Grove, CA 92841-1427 • (714) 895-5494
For courier service / sample drop off information, contact us26_sales@eurofinsus.com or call us.

CHAIN OF CUSTODY RECORD

WO # / LAB USE ONLY: **16-09-1499**

DATE: 9/21/16

PAGE: 1 OF 1

LABORATORY CLIENT: Northrop Grumman

ADDRESS: One Space Park

CITY: Redondo Beach STATE: CA ZIP: 90278

TEL: 310-813-3189 E-MAIL: doug.hill@ngc.com

CLIENT PROJECT NAME / NUMBER: Space Park

P.O. NO.: 4800011247

PROJECT CONTACT: Doug Hill

SAMPLER(S): (PRINT) James Smith

TURNAROUND TIME (Rush surcharges may apply to any TAT not "STANDARD"):
☐ SAME DAY ☐ 24 HR ☒ 48 HR ☐ 72 HR ☐ 7 Days (standard)

☐ COELT EDF GLOBAL ID: LOG CODE:

SPECIAL INSTRUCTIONS:
149 Soil samples

FPH is (hartix Low

REQUESTED ANALYSES

Please check box or fill in blank as needed.

LAB USE ONLY	SAMPLE ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	Unpreserved	Preserved	Field Filtered	EPA 8015 GRO	EPA 8015 DRO	EPA 6010/7471 Title 22 Metals	EPA 8082 PCBs	EPA 8260B VOCs	EPA 8270C Semi-Volatile Organics
1	01-JRS-149ABD	9/21/16	0710	Soil	1	X			X	X	X	X	X	X
2	02-JRS149C	9/21/16	0715	Soil	1	X			X	X	X	X	X	X

Relinquished by: (Signature) James R. Smith	Received by: (Signature/Affiliation) Rudy ECI	Date: 9/21/16	Time: 1044
Relinquished by: (Signature) Rudy	Received by: (Signature/Affiliation) ECI	Date: 092126	Time: 1330
Relinquished by: (Signature)	Received by: (Signature/Affiliation)	Date:	Time:

06/02/14 Revision

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WORK ORDER NUMBER: 16-09- 1499

SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

CLIENT: NORTHROP GRUMMAN

DATE: 09 / 21 / 2016

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC2A (CF: 0.0°C); Temperature (w/o CF): 2.3 °C (w/ CF): 2.3 °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: 676

CUSTODY SEAL:

Cooler ☐ Present and Intact ☐ Present but Not Intact ☑ Not Present ☐ N/A Checked by: 676

Sample(s) ☐ Present and Intact ☐ Present but Not Intact ☑ Not Present ☐ N/A Checked by: 676

SAMPLE CONDITION:	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Sampling date ☐ Sampling time ☐ Matrix ☐ Number of containers			
☐ No analysis requested ☐ Not relinquished ☐ No relinquished date ☐ No relinquished time			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and in good condition	☑	☐	☐
Proper containers for analyses requested	☑	☐	☐
Sufficient volume/mass for analyses requested	☑	☐	☐
Samples received within holding time	☑	☐	☐
Aqueous samples for certain analyses received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfide ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation chemical(s) noted on COC and/or sample container	☐	☐	☑
Unpreserved aqueous sample(s) received for certain analyses			
☐ Volatile Organics ☐ Total Metals ☐ Dissolved Metals			
Container(s) for certain analysis free of headspace	☐	☐	☑
☐ Volatile Organics ☐ Dissolved Gases (RSK-175) ☐ Dissolved Oxygen (SM 4500)			
☐ Carbon Dioxide (SM 4500) ☐ Ferrous Iron (SM 3500) ☐ Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE: (Trip Blank Lot Number: _____)

Aqueous: ☐ VOA ☐ VOA**h** ☐ VOA**na$_2$** ☐ 100PJ ☐ 100PJ**na$_2$** ☐ 125AGB ☐ 125AGB**h** ☐ 125AGB**p** ☐ 125PB

☐ 125PB**znna** ☐ 250AGB ☐ 250CGB ☐ 250CGB**s** ☐ 250PB ☐ 250PB**n** ☐ 500AGB ☐ 500AGJ ☐ 500AGJ**s**

☐ 500PB ☐ 1AGB ☐ 1AGB**na$_2$** ☐ 1AGB**s** ☐ 1PB ☐ 1PB**na** ☐ _____ ☐ _____ ☐ _____ ☐ _____

Solid: ☑ 4ozCGJ ☐ 8ozCGJ ☐ 16ozCGJ ☐ Sleeve (_____) ☐ EnCores® (_____) ☐ TerraCores® (_____) ☐ _____

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_3, **na** = NaOH, **na$_2$** = $Na_2S_2O_3$, **p** = H_3PO_4, **s** = H_2SO_4, **u** = ultra-pure, **znna** = Zn $(CH_3CO_2)_2$ + NaOH

Labeled/Checked by: 676

Reviewed by: MB

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Republic Services, Inc.

18500 N. Allied Way, Phoenix, AZ 85054

SPECIAL WASTE DEPARTMENT DECISION

	Waste Profile #	Expiration Date	
	5123174742	3/28/2018	

I. Decision Request: ☑ Initial ☐ Recertification ☐ Change

Disposal Facility: 5123 - Sunshine Canyon Landfill

Generator Name: Hawaiian Host

Generator Site Address: 15601 South Avalon Boulevard

City: Gardena **County:** **State:** CA **Zip:**

Name of Waste: Food Products

Estimated Annual Volume: 100 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:  **Name (Printed):** KEITH DIAMANTI

Date: 3/28/2017

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: 3/28/2017

REPUBLIC SERVICES — 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 4742
Sales Rep #. 525 - Stacy Loveland

I. Generator Information

Generator Name: HAWAIIAN HOST			
Generator Site Address: 15601 SOUTH AVALON BOULEVARD			
City: GARDENA	County: LOS ANGELES	State: California	Zip: 90248
State ID/Reg No: NA	State Approval/Waste Code: NA (if applicable)		NAICS #.
Generator Mailing Address (if different): 15601 SOUTH AVALON BOULEVARD			
City: GARDENA	County: LOS ANGELES	State: California	Zip: 90248
Generator Contact Name: DINO ORTIZ		Email: DORTIZ@HAWAIIANHOST.COM	
Phone Number: (310) 532-6583 Ext: 220		Fax Number: (310) 532-0667	

II. Billing Information

Bill To: REPUBLIC SERVICES		Contact Name:	
Billing Address:		Email:	
City: GARDENA	State: CALIFORNIA	Zip: 90248	Phone:

III. Waste Stream Information

Name of Waste: (Petroleum products-applies only to contaminated media and debris).			
☐ Diesel Fuel	☐ Weathered Wood	☐ Friable Asbestos	
☐ Home Heating Fuel #1-6	☐ RCRA Empty Containers	☐ Non Friable Asbestos	
☐ Kerosene	☐ Treated Medical Waste	☐ Cured Asphalt	
☐ Aviation Fuel	☐ Animal Carcass (non infectious)	☐ Tires	
☐ Hydraulic Fluid	☐ Plant Trash	☑ Food Products (Including Animal Food)	
☐ Unleaded Gasoline (UST Corrective Action)	☐ Meth Contaminated Debris		

Process Generating Waste: Expired Chocolate

Method of Shipment: ☑ BULK ☐ DRUM ☐ BAGGED ☐ OTHER:

Estimated Annual Volume: 100 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.

Dino Ortiz / Logistics Manager	Hawaiian Host
Authorized Representative Name/Title (Type or Print)	Company Name
Authorized Representative Signature	03/28/2017
	Date

REV 2

REPUBLIC SERVICES, INC.

Republic Services, Inc.

18500 N. Allied Way, Phoenix, AZ 85054

SPECIAL WASTE DEPARTMENT DECISION

	Waste Profile #	Expiration Date	
	5123174818	3/29/2018	

I. Decision Request: ☑ Initial ☐ Recertification ☐ Change

Disposal Facility: 5123 - Sunshine Canyon Landfill

Generator Name: Department of Transportation

Generator Site Address: Rte 5 400' North of Newell Street

City: Los Angeles **County:** **State:** CA **Zip:**

Name of Waste: Weathered Wood

Estimated Annual Volume: 60 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 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: 3/29/2017

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: 3/29/2017

REPUBLIC SERVICES — EXPRESS WASTE PROFILE

Requested Disposal Facility: 5123 Sunshine Canyon LF CA

Waste Profile #: 5123 17 4818

Sales Rep #: 525 - Stacy Loveland

Saveable fill in form. Restricted printing until all required (yellow) fields are completed.

I. Generator Information

Generator Name: Department of Transportation			
Generator Site Address: Rte. 5 400' North of Newell Street			
City: Los Angeles	County: Los Angeles	State: California	Zip: 90039
State ID/Reg No: CAC002902169	State Approval/Waste Code: N/A (if applicable)		NAICS #: N/a
Generator Mailing Address (if different): 13171 Telfair Ave. Suite 101			
City: Sylmar	County: Los Angeles	State: California	Zip: 91342
Generator Contact Name: Patricia Amadi		Email: patricia.amadi@dot.ca.gov	
Phone Number: (818) 364-2760 Ext: 239		Fax Number: (818) 367-4754	

II. Billing Information

Bill To: Powell Constructors, Inc.		Contact Name: Paul Zolezzi	
Billing Address: 8555 Banana Ave.		Email: paul@powellconstructors.com	
City: Fontana	State: California	Zip: 92335	Phone: (909) 356-8880

III. Waste Stream Information

Name of Waste: (Petroleum products-applies only to contaminated media and debris).			
☐ Diesel Fuel	☑ Weathered Wood	☐ Friable Asbestos	
☐ Home Heating Fuel #1-6	☐ RCRA Empty Containers	☐ Non Friable Asbestos	
☐ Kerosene	☐ Treated Medical Waste	☐ Cured Asphalt	
☐ Aviation Fuel	☐ Animal Carcass (non infectious)	☐ Tires	
☐ Hydraulic Fluid	☐ Plant Trash	☐ Food Products (Including Animal Food)	
☐ Unleaded Gasoline (UST Corrective Action)	☐ Meth Contaminated Debris		

Process Generating Waste: Telephone Poles & Guardrail Posts
EPA ID # CAC002902169

Method of Shipment: ☑ BULK ☐ DRUM ☐ BAGGED ☐ OTHER:

Estimated Annual Volume: 60 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.

Patricia Amadi, Resident Engineer
Authorized Representative Name/Title (Type or Print)

Patricia Amadi
Authorized Representative Signature

Department of Transportation
Company Name

03/29/2017
Date

REV 2

AGENT SPECIAL WASTE SERVICE AGREEMENT
NON-HAZARDOUS WASTES

REPUBLIC SERVICES

Special Waste Profile Number: **5123174818**

Agent Billing Information		**Republic Waste Location (Company)**
Name:	POWELL CONSTRUCTORS INC (ACCOUNT# CASH 321)	SUNSHINE CANYON LANDFILL (5123)
Address:	85555 BANANA AVE	14747 SAN FERNANDO ROAD
		SYLMAR, CA 91342
City:	FONTANA	818.362.2141
State:	CALIFORNIA Zip: 92335	
Phone:	909.356.8880 Fax:	
Contact:	PAUL ZOLEZZI	

Project: DEPARTMENT OF TRANSPORTATION **County and State of Origin:** LOS ANGELES, CALIFORNIA

Generator Address: RTE 5 400" NORTH OF NEWELL STREET, LOS ANGELES, CA 90039

Additional Information: CONTACT: PATRICIA AMADI | PHONE: 818.364.2760

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").

3. **(A) Rates for Disposal**:

Waste	Disposal Method	Disposal Rate:	Fees / Taxes / Misc.	Transportation
WEATHERED WOOD	LANDFILL	[redacted]		N/A

Additional Information: [redacted]

MATERIAL CODE: VS-SW-TIMBER/TREATED/OLD | PROFILE EXPIRES: 3/29/2018 | 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 60 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 **3/29/2017** 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

Paul Zolezzi
SIGNATURE (AUTHORIZED REPRESENTATIVE)

PAUL Zolezzi CONTRACT MANAGER
NAME AND TITLE (PLEASE PRINT)

3-29-17
DATE

REPUBLIC SERVICES, INC/COMPANY

SIGNATURE (AUTHORIZED REPRESENTATIVE)

Stacy Loveland - SW Executive
NAME AND TITLE (PLEASE PRINT)

3/29/2017
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: PZ Republic Services, INC./COMPANY: _____

Republic Services, Inc.

18500 N. Allied Way, Phoenix, AZ 85054

FAX

INCOMPLETE FILE TRANSMITTAL

TO: Holly Aasen	**LOG NO.:** 5123174818
FAX:	**File Received:** 3/29/2017
From: Special Waste Dept.	**Response Date:** 3/29/2017
Re: Department of Transportation / Weathered Wood	

SECTION I	SECTION II	SECTION III	SECTION IV	SECTION V	SECTION VI
☐ DisposalFacility	☐ TransporterName	☐ NameOfWaste	☐ USEPA	☐ CharacteristicComponents	☐ GenAuthSignature
☐ GeneratorName	☐ TransporterSiteAddress	☐ ProcessGeneratingWaste	☐ SampleDate	☐ FreeLiquids	☐ GenCoName
☐ GeneratorSiteAddress	☐ TransporterCityStateZip	☐ TypeOfWaste	☐ CompositeGrab	☐ YesNo	☐ NoStateLetter
☐ GeneratorCityStateZip	☐ TransporterMailingAddress	☐ PhysicalState	☐ SampleID	☐ pH_Flash	☐ Name_Title
☐ GeneratorMailingAddress	☐ TransporterContactName	☐ MethodOfShipment			☑ SignatureDate
☐ GeneratorContactName	☐ TransporterTelFax	☐ EstimatedAnnualVolume			
☐ GeneratorTelFax		☐ Frequency			
☐ GeneratorStateID		☐ DisposalConsideration			
☐ WasteCodeTexas					

ANALYTICALS	TCLP TOTAL METALS	TCLP VOLATILES	TCLP SEMI-VOLATILES	PESTICIDES / HERBICIDE	
☐ TotalCyanide	☐ Arsenic	☐ Benzene	☐ Cresols	☐ Chlordane	☐ LabLetterhead
☐ ReactiveCyanide	☐ Barium	☐ CarbonTetrachloride	☐ DichlorobenzeneOne	☐ Endrin	☐ ChainOfCustody
☐ TotalSulfide	☐ Cadmium	☐ Chlorobenzene	☐ DinitrotolueneTwo	☐ Heptachlor	☐ NoLabSignature
☐ ReactiveSulfide	☐ Chromium	☐ Chloroform	☐ Hexachlorobenzene	☐ HeptachlorEpoxide	☐ ReportOneYearOldPlus
☐ TotalPCB	☐ Copper	☐ DichloroethaneOne	☐ Nitrobenzene	☐ Lindane	☐ NoThirdPartyLab
☐ TOX_EOX	☐ Lead	☐ DichloroehyleneTwo	☐ Pentachlorophenol	☐ Methoxychlor	☐ MissingReportPages
☐ Phenols	☐ Mercury	☐ MethylEthylKetone	☐ Pyridine	☐ Toxaphene	☐ MissingMSDSPages
☐ FlashPoint	☐ Selenium	☐ Tetrachloroethylene	☐ TrichlorophenolFive	☐ TwoFourD	☐ TotalSulfates
☐ pH	☐ Silver	☐ Trichlorethylene	☐ TrichlorphenolSix	☐ TwoFourFiveTP	☐ TotalSulfur
☐ PaintFilter	☐ Zinc	☐ VinylChloride			☐ WrongProfile
☐ TPH					
☐ BTEX					☑ GeneratorIncomplete

Notes:

Please have the generator wet sign the profile. The signature appears to be electronically generated.

Thanks, Suzie

REPUBLIC SERVICES — EXPRESS WASTE PROFILE

Requested Disposal Facility: 5123 Sunshine Canyon LF CA

Waste Profile #: 5123 17 4818

Sales Rep #: 525 - Stacy Loveland

Saveable fill in form. Restricted printing until all required (yellow) fields are completed.

I. Generator Information

Generator Name: Department of Transportation			
Generator Site Address: Rte. 5 400' North of Newell Street			
City: Los Angeles	County: Los Angeles	State: California	Zip: 90039
State ID/Reg No: CAC002902169	State Approval/Waste Code: N/A (if applicable)		NAICS #. N/a
Generator Mailing Address (if different): 13171 Telfair Ave. Suite 101			
City: Sylmar	County: Los Angeles	State: California	Zip: 91342
Generator Contact Name: Patricia Amadi		Email: patricia.amadi@dot.ca.gov	
Phone Number: (818) 364-2760 Ext: 239		Fax Number: (818) 367-4754	

II. Billing Information

Bill To: Powell Constructors, Inc.		Contact Name: Paul Zolezzi	
Billing Address: 8555 Banana Ave.		Email: paul@powellconstructors.com	
City: Fontana	State: California	Zip: 92335	Phone: (909) 356-8880

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: Telephone Poles & Guardrail Posts
EPA ID # CAC002902169

Method of Shipment: ☑ BULK ☐ DRUM ☐ BAGGED ☐ OTHER:

Estimated Annual Volume: 60 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.

Patricia Amadi, Resident Engineer	Department of Transportation
Authorized Representative Name/Title (Type or Print)	Company Name
patricia amadi	03/29/2017
Authorized Representative Signature	Date

REV 2

REPUBLIC SERVICES, INC.

Republic Services, Inc.

18500 N. Allied Way, Phoenix, AZ 85054

SPECIAL WASTE DEPARTMENT DECISION

Waste Profile #	Expiration Date
5123177276	8/31/2017

I. Decision Request: ☑ Initial ☐ Recertification ☐ Change

Disposal Facility: 5123 - Sunshine Canyon Landfill

Generator Name: Steve Mermell

Generator Site Address: 18141 Donmetz Street

City: Northridge **County:** **State:** CA **Zip:**

Name of Waste: Weather Wood

Estimated Annual Volume: 4 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 must be in accordance with California Health and Safety Code (HSC) Sections 25150.7 and 25150.8.

Special Waste Analyst Signature: Joseph M. Sorokach **Name (Printed):** Joseph Sorokach

Date: 5/9/2017

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: 5/9/2017

REPUBLIC SERVICES — EXPRESS WASTE PROFILE

Requested Disposal Facility: 5123 Sunshine Canyon LF CA

Waste Profile #: 5123 17 7276

Sales Rep #: 525 -Stacy Loveland

Saveable fill in form. Restricted printing until all required (yellow) fields are completed.

I. Generator Information

Generator Name: Steve Mermell			
Generator Site Address: 18141 Donmetz Street			
City: Norhtridge	County: LA	State: California	Zip: 91326
State ID/Reg No:	State Approval/Waste Code: (if applicable)		NAICS #.
Generator Mailing Address (if different): 18141 Donmetz Street			
City: Norhtridge	County: Norhtridge	State: California	Zip: 91326
Generator Contact Name: Steve Mermell		Email: smermell@socal.rr.com	
Phone Number: (818) 321-6817 Ext:		Fax Number:	

II. Billing Information

Bill To: De Los Santos Brothers Inc.		Contact Name: Leo De Los Santos	
Billing Address: 21001 Lull Street		Email: ldelossantosbro@att.net	
City: Canoga Park	State: ca	Zip: 91304	Phone: (818) 713-1061

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: new landscaping - removing railroad ties and replacing them with Jumbo Nursery Stone

Method of Shipment: ☑ BULK ☐ DRUM ☐ BAGGED ☐ OTHER:

Estimated Annual Volume: 4 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.

Leobardo De Los Santos
Authorized Representative Name/Title (Type or Print)

Leobardo De Los Santos
Authorized Representative Signature

De Los Santos Brothers Inc.
Company Name

5/8/17
Date

REV 2

Special Waste Express
Profile Instructions.pdf

REPUBLIC SERVICES

THIRD PARTY SIGNATURE AUTHORIZATION
for Special Waste Disposal

Date: 4-28-17
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	Title
Leobardo De los Santos	CEO
Name of Company	**Telephone Number**
DeLosSantos Brothers Inc.	Cell 310 487 2161 Office 8187131061

The above broker/individual is authorized to act as our authorized agent for the following purposes:

- [x] 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	Mailing Address
	18741 Donmetz St. Northridge CA 91326
Generator Contact (Print Name)	Title
Steve Merwell	Owner
Signature	Telephone Number
	818 321 6817

AGENT SPECIAL WASTE SERVICE AGREEMENT
NON-HAZARDOUS WASTES

REPUBLIC SERVICES

Special Waste Profile Number: **5123177276**

Agent Billing Information

Name: DE LOS SANTOS BROTHERS INC (ACCOUNT# CASH 321)
Address: 21001 LULL STREET
City: CANAOGA PARK
State: CA Zip: 91304
Phone: 818.713.1061 Fax:
Contact: LEO DE LOS SANTOS

Republic Waste Location (Company)

SUNSHINE CANYON LANDFILL (5123)
14747 SAN FERNANDO ROAD
SYLMAR, CA 91342
818.362.2141

Project: STEVE MERMELL
County and State of Origin: LOS ANGELES, CALIFORNIA
Generator Address: 18141 DONMETZ STREET, NORTHRIDGE, CA 91326
Additional Information: CONTACT PHONE: 818.321.6817

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").

3. **(A) Rates for Disposal:**

Waste	Disposal Method	Disposal Rate:	Fees / Taxes / Misc.	Transportation
WEATHERED WOOD	LANDFILL	[redacted]	[redacted]	N/A

Additional Information:
MATERIAL CODE: VS-SW-TIMBER/TREATED/OLD | PROFILE EXPIRES: 8/31/2017 | 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 4 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 **5/9/2017** 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
Leonardo De los Santos
SIGNATURE (AUTHORIZED REPRESENTATIVE)
Leonardo DeLos Santos CEO
NAME AND TITLE (PLEASE PRINT)
5/15/17
DATE

REPUBLIC SERVICES, INC/COMPANY
SIGNATURE (AUTHORIZED REPRESENTATIVE)
Stacy Loveland - SW Executive
NAME AND TITLE (PLEASE PRINT)
5/15/2017
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.

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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: Eduardo De Los Santos Republic Services, INC./COMPANY: _____

May 2009

REPUBLIC SERVICES, INC.

Republic Services, Inc.

18500 N. Allied Way, Phoenix, AZ 85054

SPECIAL WASTE DEPARTMENT DECISION

	Waste Profile #	Expiration Date	
	5123177628	7/31/2017	

I. Decision Request: ☑ Initial ☐ Recertification ☐ Change

Disposal Facility: 5123 - Sunshine Canyon Landfill

Generator Name: Shapiro Gilman Shandler Co

Generator Site Address: 739 Decatur Street

City: Los Angeles **County:** **State:** CA **Zip:**

Name of Waste: Food Products

Estimated Annual Volume: 4,300 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 **Name (Printed):** Joseph Sorokach

Date: 5/15/2017

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: 5/15/2017

REPUBLIC SERVICES — 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 7628
Sales Rep #. 525 - Stacy Loveland

I. Generator Information

Generator Name: SHAPIRO-GILMAN-SHANDLER CO.			
Generator Site Address: 739 DECATUR STREET			
City: LOS ANGELES	County: LOS ANGELES	State: California	Zip: 90021
State ID/Reg No: 138-8130-5	State Approval/Waste Code: (if applicable)		NAICS #.
Generator Mailing Address (if different): 739 DECATUR STREET			
City: LOS ANGELES	County: LOS ANGELES	State: California	Zip: 90021
Generator Contact Name: STEVEN CHICO		Email: SCHICO@SGSPRODUCE.COM	
Phone Number: (213) 593-1200 Ext: 102		Fax Number: (213) 593-1210	

II. Billing Information

Bill To: SHAPIRO-GILMAN-SHANDLER CO.		Contact Name: STEVEN CHICO	
Billing Address: 739 DECATUR STREET		Email: SCHICO@SGSPRODUCE.COM	
City: LOS ANGELES	State: CA	Zip: 90021	Phone: (213) 593-1200

III. Waste Stream Information

Name of Waste: (Petroleum products-applies only to contaminated media and debris).			
☐ Diesel Fuel	☐ Weathered Wood	☐ Friable Asbestos	
☐ Home Heating Fuel #1-6	☐ RCRA Empty Containers	☐ Non Friable Asbestos	
☐ Kerosene	☐ Treated Medical Waste	☐ Cured Asphalt	
☐ Aviation Fuel	☐ Animal Carcass (non infectious)	☐ Tires	
☐ Hydraulic Fluid	☐ Plant Trash	☑ Food Products (Including Animal Food)	
☐ Unleaded Gasoline (UST Corrective Action)	☐ Meth Contaminated Debris		

Process Generating Waste: MANDARIN ORANGES, NON-HAZARDOUS, PRODUCT IN VIOLATION OF ASIAN CITRUS PSYLLID QUARANTINE.

Method of Shipment: ☐ BULK ☐ DRUM ☐ BAGGED ☑ OTHER: BOXED

Estimated Annual Volume: 4,300 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.

STEVEN CHICO	SHAPIRO-GILMAN-SHANDLER CO.
Authorized Representative Name/Title (Type or Print)	Company Name
Authorized Representative Signature	5-15-17
	Date

REV 2

SPECIAL WASTE SERVICE AGREEMENT
NON-HAZARDOUS WASTES

REPUBLIC SERVICES

Special Waste Profile Number: **5123 17 7628**

Generator Billing Information		Republic Waste Location (Company)
Name:	SHAPIRO GILMAN SHANDLER CO (ACCT CASH # 321)	SUNSHINE CANYON LANDFILL (5123)
Address:	739 DECATUR STREET	14747 SAN FERNANDO ROAD
		SYLMAR, CA 91342
City:	LOS ANGELES	818.362.2141
State:	CA Zip: 90021	
Phone:	213.593.1200 Fax:	
Contact:	STEVEN CHICO	

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").

3. (A) **Rates for Disposal**:

Waste	Disposal Method	Disposal Rate:	Fees / Taxes / Misc.	Transportation
FOOD PRODUCTS	LANDFILL	[redacted]		N/A

Additional Information: [redacted]

MATERIAL CODE: XD-SW-FOOD WASTES | PROFILE EXPIRES: 7/31/2017 | 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 4,300 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 **5/15/2017** 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)

Carole Shandler / Owner

NAME AND TITLE (PLEASE PRINT)

5-15-17

DATE

REPUBLIC SERVICES, INC/COMPANY

SIGNATURE (AUTHORIZED REPRESENTATIVE)

Stacy Loveland - SW Executive

NAME AND TITLE (PLEASE PRINT)

5/15/2017

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

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.

Republic Services, Inc.

18500 N. Allied Way, Phoenix, AZ 85054

SPECIAL WASTE DEPARTMENT DECISION

	Waste Profile #	Expiration Date	
	5123177631	7/31/2017	

I. Decision Request: ☑ Initial ☐ Recertification ☐ Change

Disposal Facility: 5123 - Sunshine Canyon Landfill

Generator Name: Mecca Produce Distributors Inc

Generator Site Address: 800 McGarry St No. 4

City: Los Angeles	County:	State: CA	Zip:

Name of Waste: Food Products

Estimated Annual Volume: 700 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 **Name (Printed):** Joseph Sorokach

Date: 5/15/2017

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: 5/15/2017

REPUBLIC SERVICES

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 7631
Sales Rep #. 525 - Stacy Loveland

I. Generator Information

Generator Name: Mecca Produce Distributors, Inc			
Generator Site Address: 800 McGarry St., #4			
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): 800 McGarry St., #4			
City: Los Angeles	County: Los Angeles	State: California	Zip: 90021
Generator Contact Name: Jesse		Email: meccainc@outlook.com	
Phone Number: (714) 371-3035 Ext:		Fax Number: (714) 908-8081	

II. Billing Information

Bill To: Mecca Produce Distributors Inc		Contact Name: Jesse	
Billing Address: 800 McGarry St., #4		Email: meccainc@Outlook.com	
City: Los Angeles	State: CA	Zip: 90021	Phone: (714) 371-3035

III. Waste Stream Information

Name of Waste: (Petroleum products-applies only to contaminated media and debris).			
☐ Diesel Fuel	☐ Weathered Wood	☐ Friable Asbestos	
☐ Home Heating Fuel #1-6	☐ RCRA Empty Containers	☐ Non Friable Asbestos	
☐ Kerosene	☐ Treated Medical Waste	☐ Cured Asphalt	
☐ Aviation Fuel	☐ Animal Carcass (non infectious)	☐ Tires	
☐ Hydraulic Fluid	☐ Plant Trash	☑ Food Products (Including Animal Food)	
☐ Unleaded Gasoline (UST Corrective Action)	☐ Meth Contaminated Debris		

Process Generating Waste: LA County requiring disposal of mandarin (Produce) due to quarantine violation.

Method of Shipment: ☐ BULK ☐ DRUM ☑ BAGGED ☐ OTHER:

Estimated Annual Volume: 700 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.

Issa Awad / President	Mecca Produce Distributors Inc
Authorized Representative Name/Title (Type or Print)	Company Name
Authorized Representative Signature	05-15-2017
	Date

SPECIAL WASTE SERVICE AGREEMENT
NON-HAZARDOUS WASTES

REPUBLIC SERVICES

Special Waste Profile Number: **5123 17 7631**

Generator Billing Information

Name: MECCA PRODUCE DISTRIBUTORS INC (ACCT CASH # 321)
Address: 800 MCGARRY ST #4
City: LOS ANGELES
State: CA Zip: 90021
Phone: 714.371.3035 Fax:
Contact: JESSE

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").

3. **(A) Rates for Disposal**:

Waste	Disposal Method	Disposal Rate:	Fees / Taxes / Misc.	Transportation
FOOD PRODUCTS	LANDFILL	[redacted]		N/A

Additional Information: [redacted]

MATERIAL CODE: XD-SW-FOOD WASTES | PROFILE EXPIRES: 7/31/2017 | 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 700 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 **5/15/2017** 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)

Issa Awad / President
NAME AND TITLE (PLEASE PRINT)

5.15.17
DATE

REPUBLIC SERVICES, INC/COMPANY

SIGNATURE (AUTHORIZED REPRESENTATIVE)

Stacy Loveland - SW Executive
NAME AND TITLE (PLEASE PRINT)

5/15/2017
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

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.

Republic Services, Inc.

18500 N. Allied Way, Phoenix, AZ 85054

SPECIAL WASTE DEPARTMENT DECISION

	Waste Profile #	Expiration Date	
	5123178916	9/5/2017	

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

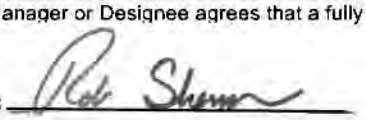
Special Waste Analyst Signature:  **Name (Printed):** KEITH DIAMANTI

Date: 6/6/2017

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: 6/6/2017

REPUBLIC SERVICES — EXPRESS WASTE PROFILE

Requested Disposal Facility: 5123 Sunshine Canyon LF CA

Waste Profile #: 5123 17 8916

Sales Rep #: 525 - Stacy Loveland

Saveable fill in form. Restricted printing until all required (yellow) fields are completed.

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: -- Select a State --	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: (Petroleum products-applies only to contaminated media and debris).			
☐ Diesel Fuel	☐ Weathered Wood	☐ Friable Asbestos	
☐ Home Heating Fuel #1-6	☐ RCRA Empty Containers	☐ Non Friable Asbestos	
☐ Kerosene	☐ Treated Medical Waste	☐ Cured Asphalt	
☐ Aviation Fuel	☐ Animal Carcass (non infectious)	☐ Tires	
☐ Hydraulic Fluid	☐ Plant Trash	☑ Food Products (Including Animal Food)	
☐ Unleaded Gasoline (UST Corrective Action)	☐ Meth Contaminated Debris		

Process Generating Waste: OUARENTINED PRODUCED NOT ACCEPTED FOR CONSUMER USE
MUST BE DISPOSED OF
PRODUCT: OKINAWA SWEET POTATO

Method of Shipment: ☐ BULK ☐ DRUM ☑ BAGGED ☐ OTHER:

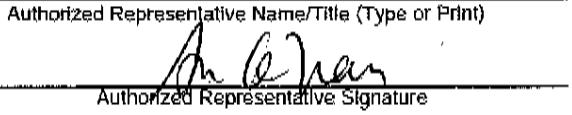
Estimated Annual Volume: 360 Pounds

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.

AN Q. TRAN
Authorized Representative Name/Title (Type or Print)


Authorized Representative Signature

AMEX FARM LLC.
Company Name

6/5/2017
Date

REV 2

SPECIAL WASTE SERVICE AGREEMENT
NON-HAZARDOUS WASTES

REPUBLIC SERVICES

Special Waste Profile Number: **5123 17 8916**

Generator Billing Information		Republic Waste Location (Company)
Name:	AMEX FARM LLC (ACCT CASH # 321)	SUNSHINE CANYON LANDFILL (5123)
Address:	2622 S ALAMEDA ST	14747 SAN FERNANDO ROAD
		SYLMAR, CA 91342
City:	VERNON	818.362.2141
State:	CA Zip: 90058	
Phone:	323.521.1816 Fax:	
Contact:	ANDY TRAN	

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.

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3. **(A) Rates for Disposal:**

Waste	Disposal Method	Disposal Rate:	Fees / Taxes / Misc.	Transportation
FOOD PRODUCTS	LANDFILL	[redacted]		N/A
Additional Information:	[redacted]			

MATERIAL CODE: XD-SW-FOOD WASTES | PROFILE EXPIRES: 9/5/2017 | 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 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 3 months, commencing **6/6/2017** 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)

ANDY TRAN

NAME AND TITLE (PLEASE PRINT)

6/8/17

DATE

REPUBLIC SERVICES, INC/COMPANY

SIGNATURE (AUTHORIZED REPRESENTATIVE)

Stacy Loveland - SW Executive

NAME AND TITLE (PLEASE PRINT)

6/8/2017

DATE

Terms and Conditions of Special Waste Service Agreement

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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.

Republic Services, Inc.

18500 N. Allied Way, Phoenix, AZ 85054

SPECIAL WASTE DEPARTMENT DECISION

	Waste Profile #	Expiration Date	
	5123178995	6/7/2018	

I. Decision Request: ☑ Initial ☐ Recertification ☐ Change

Disposal Facility: 5123 - Sunshine Canyon Landfill

Generator Name: Matt Salisian

Generator Site Address: 630 Haverkamp Dr

City: Glendale	County:	State: CA	Zip:

Name of Waste: Weathered Wood

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

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: 6/7/2017

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: 6/7/2017

REPUBLIC SERVICES — EXPRESS WASTE PROFILE

Requested Disposal Facility: 5123 Sunshine Canyon LF CA

Waste Profile #: 5123 17 8995

Sales Rep #: 525 - Stacy Loveland

Saveable fill in form. Restricted printing until all required (yellow) fields are completed.

I. Generator Information

Generator Name: Matt Salisian			
Generator Site Address: 630 Haverkamp Dr.			
City: Glendale	County: Los Angeles	State: California	Zip: 91206
State ID/Reg No:	State Approval/Waste Code: (if applicable)		NAICS #.
Generator Mailing Address (if different): 630 Haverkamp Dr.			
City: Glendale	County: Glendale	State: California	Zip: 91206
Generator Contact Name: Johnny McCoy		Email: reallandscape@aol.com	
Phone Number: (626) 975-1910 Ext:		Fax Number:	

II. Billing Information

Bill To: same as above		Contact Name:	
Billing Address: same as above		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: weathered wood border for a garden

Method of Shipment: ☐ BULK ☐ DRUM ☐ BAGGED ☑ OTHER: loose in trailer/pick up truck

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.

Johnny McCoy	n/a
Authorized Representative Name/Title (Type or Print)	Company Name
Authorized Representative Signature	6/06/2017
	Date

REV 2

REPUBLIC SERVICES

THIRD PARTY SIGNATURE AUTHORIZATION
for Special Waste Disposal

Date: 6/6/2017

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	Title
Johnny McCoy	n/a
Name of Company	Telephone Number
Johnny McCoy	626.975.1910

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	Mailing Address
n/a	630 Haverkamp Dr, Glendale, Ca, 91206
Generator Contact (Print Name)	Title
Matt Salisian	n/a
Signature	Telephone Number
	213 479 6024

SPECIAL WASTE SERVICE AGREEMENT
NON-HAZARDOUS WASTES

REPUBLIC SERVICES

Special Waste Profile Number: **5123 17 8995**

Generator Billing Information

Name: MATT SALISIAN (ACCT CASH # 321)
Address: 630 HAVERKAMP DR
City: GLENDALE
State: CA Zip: 91206
Phone: 626.975.1910 Fax:
Contact:

Republic Waste Location (Company)

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").

3. **(A) Rates for Disposal**:

Waste	Disposal Method	Disposal Rate:	Fees / Taxes / Misc.	Transportation
WEATHERED WOOD	LANDFILL	[redacted]		N/A

Additional Information: [redacted]

MATERIAL CODE: VS-SW-TIMBER/TREATED/OLD | PROFILE EXPIRES: 6/7/2018 | 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

4. **Term of Agreement**. This Agreement is effective for **12** months, commencing **6/7/2017** 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)

JOHN D. McCOY

NAME AND TITLE (PLEASE PRINT)

6-7-2017

DATE

REPUBLIC SERVICES, INC/COMPANY

SIGNATURE (AUTHORIZED REPRESENTATIVE)

Stacy Loveland - SW Executive

NAME AND TITLE (PLEASE PRINT)

6/7/2017

DATE

May 2009

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 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: _____

REPUBLIC SERVICES, INC.

Republic Services, Inc.

18500 N. Allied Way, Phoenix, AZ 85054

SPECIAL WASTE DEPARTMENT DECISION

Waste Profile #	Expiration Date
51231710220	9/26/2017

I. Decision Request: ☑ Initial ☐ Recertification ☐ Change

Disposal Facility: 5123 - Sunshine Canyon Landfill

Generator Name: Sea Snack Cold Storage

Generator Site Address: 200 Mesnagers St

City: Los Angeles **County:** **State:** CA **Zip:**

Name of Waste: Food Products

Estimated Annual Volume: 72,000 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 **Name (Printed):** Joseph Sorokach

Date: 6/26/2017

III. Facility Decision: ☐ Approved ☒ Rejected **GM REJECTED**

Precautions, Conditions or Limitations on Approval

We need to reject this load of frozen shrimp. The paperwork indicates that product was embargoed due to the odorous smell. Under the current Abatement Order as well as the site's Odor Management Plan, odorous loads or those that have the potential to be odorous must be rejected.

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: 6/26/2017

REPUBLIC SERVICES — EXPRESS WASTE PROFILE

Requested Disposal Facility: 5123 Sunshine Canyon LFCA

Saveable fill in form. Restricted printing until all required (yellow) fields are completed.

Waste Profile #	
	5123 17 10220
Sales Rep #.	525 - Stacy Loveland

I. Generator Information

Generator Name: Sea Snack Cold Storage			
Generator Site Address: 200 Mesnagers St			
City: Los Angeles	County:	State: California	Zip: 90012
State ID/Reg No:	State Approval/Waste Code: (If applicable)		NAICS #.
Generator Mailing Address (if different): 200 Mesnagers St			
City: Los Angeles	County: Heartlight-Seafood LLC	State: California	Zip: 90012
Generator Contact Name: Jeff Kahn		Email: jefkssc@att.net	
Phone Number: (323) 223-1955	Ext:	Fax Number: (323) 223-1970	

II. Billing Information

Bill To: HeartLight Seafood LLC		Contact Name: Stacy Tabler	
Billing Address: 1331 N Cole St		Email: stacy@heartlight-seafood.com	
City: Lima	State: Ohio	Zip: 45801	Phone: (419) 879-3694

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: Embargoed by the state of California Department of Health due to quality issues of the shrimp

Method of Shipment: ☐ BULK ☐ DRUM ☐ BAGGED ☑ OTHER:

Estimated Annual Volume: 72,000 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.

E.V.P.
Authorized Representative Name/Title (Type or Print)

Jeff Kahn
Authorized Representative Signature

Sea Snack Cold Storage
Company Name

6-23-17
Date

REV 2

REPUBLIC SERVICES

THIRD PARTY SIGNATURE AUTHORIZATION
for Special Waste Disposal

Date: 06/23/2017

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	Title
Stacy Tabler	Operations Manager
Name of Company	Telephone Number
HeartLight Seafood LLC	4198793694

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	Mailing Address
Sea Snack Cold Storage	200 Mesnagers St Los Angeles, CA 90021
Generator Contact (Print Name)	Title
Jeff Kahn	EVP
Signature	Telephone Number
	323-223-1955

AGENT SPECIAL WASTE SERVICE AGREEMENT
NON-HAZARDOUS WASTES

REPUBLIC SERVICES

Special Waste Profile Number: **5123 17 10220**

Agent Billing Information		**Republic Waste Location (Company)**
Name:	HEARTLIGHT SEAFOOD LLC (ACCOUNT# CASH 321)	SUNSHINE CANYON LANDFILL (5123)
Address:	1331 N COLE ST	14747 SAN FERNANDO ROAD
		SYLMAR, CA 91342
City:	LIMA	818.362.2141
State:	OH Zip: 45801	
Phone:	419.879.3694 Fax:	
Contact:	STACY TABLER	

Project: SEA SNACK COLD STORAGE **County and State of Origin:** LOS ANGELES, CALIFORNIA

Generator Address: 200 MESNAGERS ST, LOS ANGELES, CA 90012

Additional Information: CONTACT: JEFF KAHN | PHONE:323.223.1055

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").

3. **(A) Rates for Disposal**:

Waste	Disposal Method	Disposal Rate:	Fees / Taxes / Misc.	Transportation
FOOD PRODUCTS	LANDFILL	[redacted]		N/A

Additional Information: [redacted]

MATERIAL CODE: XD-SW-FOOD WASTES | PROFILE EXPIRES: 9/26/2017 | 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 72,000 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 **3** months, commencing **6/26/2017** 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 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	**REPUBLIC SERVICES, INC/COMPANY**
Stacy Tabler	
SIGNATURE (AUTHORIZED REPRESENTATIVE)	SIGNATURE (AUTHORIZED REPRESENTATIVE)
Stacy Tabler Operations Mgr	Stacy Loveland - SW Executive
NAME AND TITLE (PLEASE PRINT)	NAME AND TITLE (PLEASE PRINT)
6-27-17	6/27/2017
DATE	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: _____

AFFIDAVIT

SAMPLE NO.

STATE OF
California

COUNTY OF
Los Angeles

Before me, Investigator Dennis N. Hoang, an employee of the Department of Health and Human Services, Food and Drug Administration, designated by the Secretary, under authority of the Act of January 31, 1925, 43 Statutes at Large 803; Reorganization Plan No. IV, Secs. 12-15, effective June 30, 1940; Reorganization Plan No. 1 of 1953, Secs. 1-9, effective April 11, 1953; and P.L. 96-88, Sec. 509, 93 Statutes at Large 965 (20 U.S.C. 3508) effective May 4, 1980; to administer or take oaths, affirmations, and affidavits, personally appeared Mr. Wilfrido (NMI) Hernandez in the county and state aforesaid, who, being duly sworn, deposes and says:

I, Wilfrido Hernandez, am Manager of Sea Snack Cold Storage, 200 W Mesnager St., Los Angeles, CA 90012. I have been manager for approximately 10 years, and have worked for this company for 22 years. I am responsible for checking incoming containers, prepare orders, keep records and inventory. As such, I can answer questions and provide documents pertaining to products received and stored by my company.

On April 13, 2017, FDA Investigator Dennis N. Hoang interviewed me regarding 2 shipping containers of shrimp received for Heartlight. The first container, BMOU9710242, was received on 5/24/2016, and we assigned lot numbers 98859 and 98860 to it. When the container was received and I opened the doors, I noticed that it smelled really bad. I also told my boss, Jeff Khan, on the same day about what happened. I collected 5 samples from the lots, each consisting of 1 block of shrimp. The samples were sent to the other Sea Snack facility by truck for testing. I do not know what happened with the samples after that. I provided Investigator Hoang with a copy of Sea Snack Cold Storage Container Manifest for 5/24/2016, showing the items and quantities received, with the assigned lot number. It also shows the dates I recorded for when people came to collect samples. I also provided a copy of Sea Snack Cold Storage Samples Report on 5-31-16 for Lots 98859 and 98860, which shows the number of blocks for each sample.

The second container of shrimp for Heartlight, TRIU8039927, was received on 6/6/2016, and we assigned lot numbers 98909, 98910, 98911. The same thing happened as with the first container. I opened the doors, and noticed it smelled really bad. I collected 7 samples from the lots, and these were also sent to the other Sea Snack facility by truck for testing. Again, I told my boss, Jeff Khan, on the same day about what happened. I provided Investigator Hoang with a copy of Sea Snack Cold Storage Container Manifest for 6/6/2016, showing the items and quantities received, with the assigned lot numbers. It also shows the dates I recorded for when people came to collect samples. I also provided a copy of Sea Snack Cold Storage Samples Report on 6-7-16 for Lots 98909, 98910, and 98911, which shows the number of blocks taken for each sample.

Documents I provided to Investigator Hoang:
1. Sea Snack Cold Storage Container Manifest for BMOU9710242, dated 5/24/2016.

AFFIANT'S SIGNATURE AND TITLE

W. Wilfrido manager

FIRM'S NAME AND ADDRESS (Include ZIP Code)

Sea Snack Cold Storage, 200 W Mesnager St., Los Angeles, CA 90012.

Subscribed and sworn to before me at Los Angeles, CA (City and State)

this 13th **day of** April, **20** 17.

(Employee's Signature)

Employee of the Department of Health and Human Services designated under Act of January 31, 1925, Reorganization Plan IV effective June 30, 1940; Reorganization Plan No. 1 of 1953, effective April 11, 1953; and P.L. 96-88, effective May 4, 1980.

AFFIDAVIT

SAMPLE NO.

STATE OF: California

COUNTY OF: Los Angeles

Before me, Investigator Dennis N. Hoang, an employee of the Department of Health and Human Services, Food and Drug Administration, designated by the Secretary, under authority of the Act of January 31, 1925, 43 Statutes at Large 803; Reorganization Plan No. IV, Secs. 12-15, effective June 30, 1940; Reorganization Plan No. 1 of 1953, Secs. 1-9, effective April 11, 1953; and P.L. 96-88, Sec. 509, 93 Statutes at Large 965 (20 U.S.C. 3508) effective May 4, 1980; to administer or take oaths, affirmations, and affidavits, personally appeared Mr. Wilfrido (NMI) Hernandez in the county and state aforesaid, who, being duly sworn, deposes and says:

2. Sea Snack Cold Storage Samples Report for Lots 98859 and 98860, dated on 5-31-16.
3. Sea Snack Cold Storage Container Manifest for TRIU8039927, dated 6/6/2016.
4. Sea Snack Cold Storage Samples Report for Lots 98909, 98910, and 98911, dated on 5-7-16.

this above is true

AFFIANT'S SIGNATURE AND TITLE

Wilfrido Manager.

FIRM'S NAME AND ADDRESS (Include ZIP Code)

Sea Snack Cold Storage, 200 W Mesnager St., Los Angeles, CA 90012.

Subscribed and sworn to before me at Los Angeles, CA (City and State)

this 13th **day of** April, **20** 17.

(Employee's Signature)

Employee of the Department of Health and Human Services designated under Act of January 31, 1925, Reorganization Plan IV effective June 30, 1940; Reorganization Plan No. 1 of 1953, effective April 11, 1953; and P.L. 96-88, effective May 4, 1980.

DEPARTMENT OF HEALTH AND HUMAN SERVICES
FOOD AND DRUG ADMINISTRATION

1. DISTRICT ADDRESS & PHONE NUMBER
Los Angeles District Office (LOS-DO)
19701 Fairchild, Irvine, CA 92612

949-608-2900

2. NAME AND TITLE OF INDIVIDUAL	3. DATE	4. SAMPLE NUMBER
Jeffrey L. Kahn, Executive Vice President & Co-owner	4/13 DNM/2017	DI 960~~462~~ 642 DNM

5. FIRM NAME	6. FIRM'S DEA NUMBER
Sea Snack Cold Storage	

7. NUMBER AND STREET	8. CITY AND STATE (Include Zip Code)
200 Mesnagers St.	Los Angeles, CA 90012

9. SAMPLE COLLECTED *(Describe fully. List lot, serial, model numbers and other positive identification)*

The following samples were collected by the Food and Drug Administration and receipt is hereby acknowledged pursuant to Section 704(c) of the Federal Food, Drug, and Cosmetic Act [21 U.S.C. 374(c)] and/or Section 532 (b) of the Federal Food, Drug, and Cosmetic Act [21 U.S.C. 360ll(b)] and/or 21 Code of Federal Regulations (CFR) 1307.02. Excerpts of these are quoted on the reverse of this form.
(**NOTE** : *If you bill FDA for the cost of the Sample(s) listed below, please attach a copy of this form to your bill.*)

642 DNM
DI 960~~462~~: Collected 1 package (2 kg) of Raw Peeled Undeveined Tail-off Shrimp, size 300/500 from 15 previously unopened master cartons, Production Code BGASL 160~~7~~58 DNM, C/S Lot # 98860. Equal quantity collected for 702 (b) portion. Total of 30 packages (132-lbs) collected.

10. SAMPLES WERE	11. AMOUNT RECEIVED FOR SAMPLE	12. SIGNATURE *(Persons receiving payment for sample or person providing sample to FDA at no charge.)*
☒ PROVIDED AT NO CHARGE ☐ PURCHASED ☐ BORROWED *(To be returned)*	☐ CASH ☐ BILLED ☐ VOUCHER DNM ☐ CREDIT CARD	

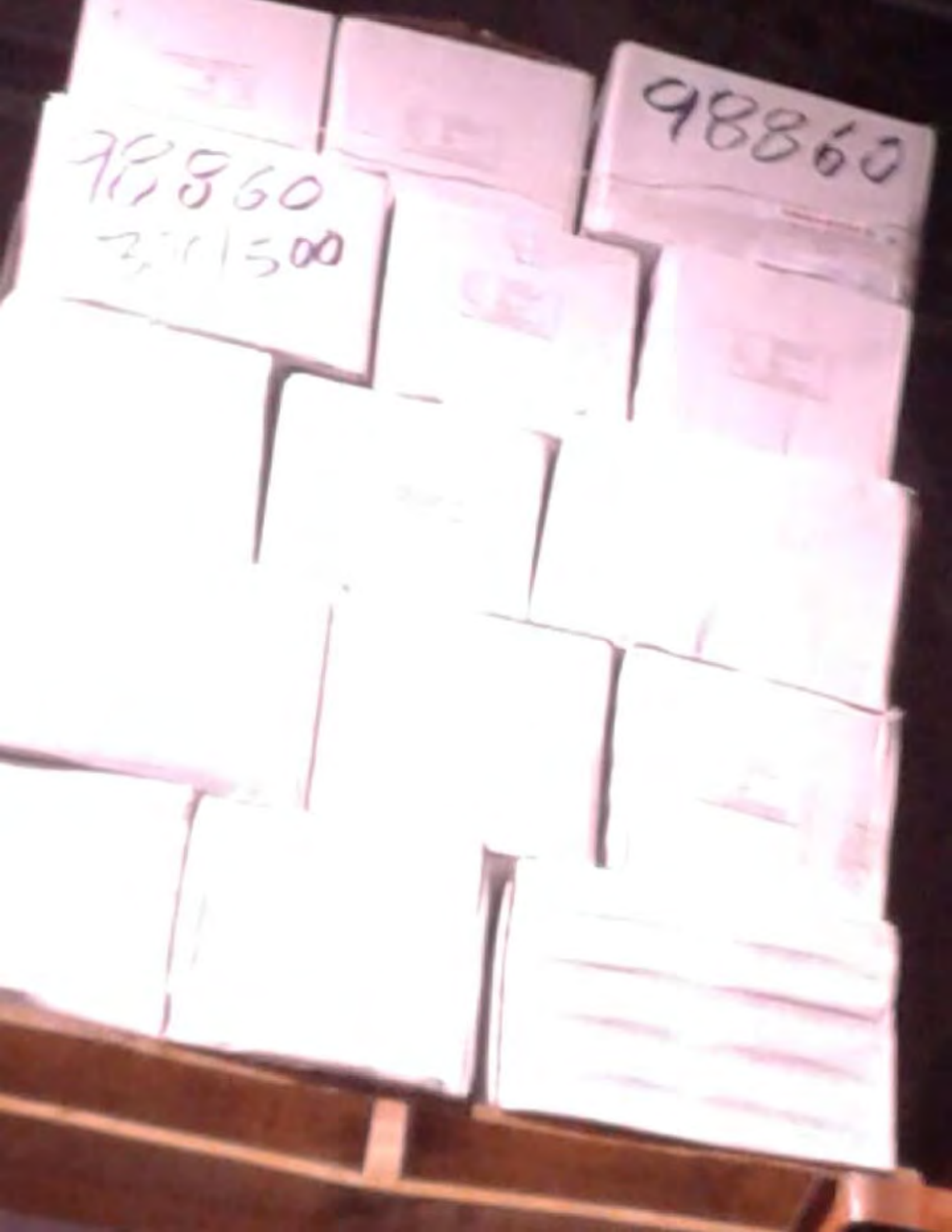
13. COLLECTOR'S NAME *(Print or Type)*	14. COLLECTOR'S TITLE *(Print or Type)*	15. COLLECTOR'S SIGNATURE
Dennis N. Hoang	Investigator	

FORM FDA 484 (3/06) PREVIOUS EDITION MAY BE USED **RECEIPT FOR SAMPLES**


& DRUG BRANCH
BARGOED
CA FOOD & DRUG BRAN
EMBARGOED
200/300
98859
200/300


98859
EMBARGOED

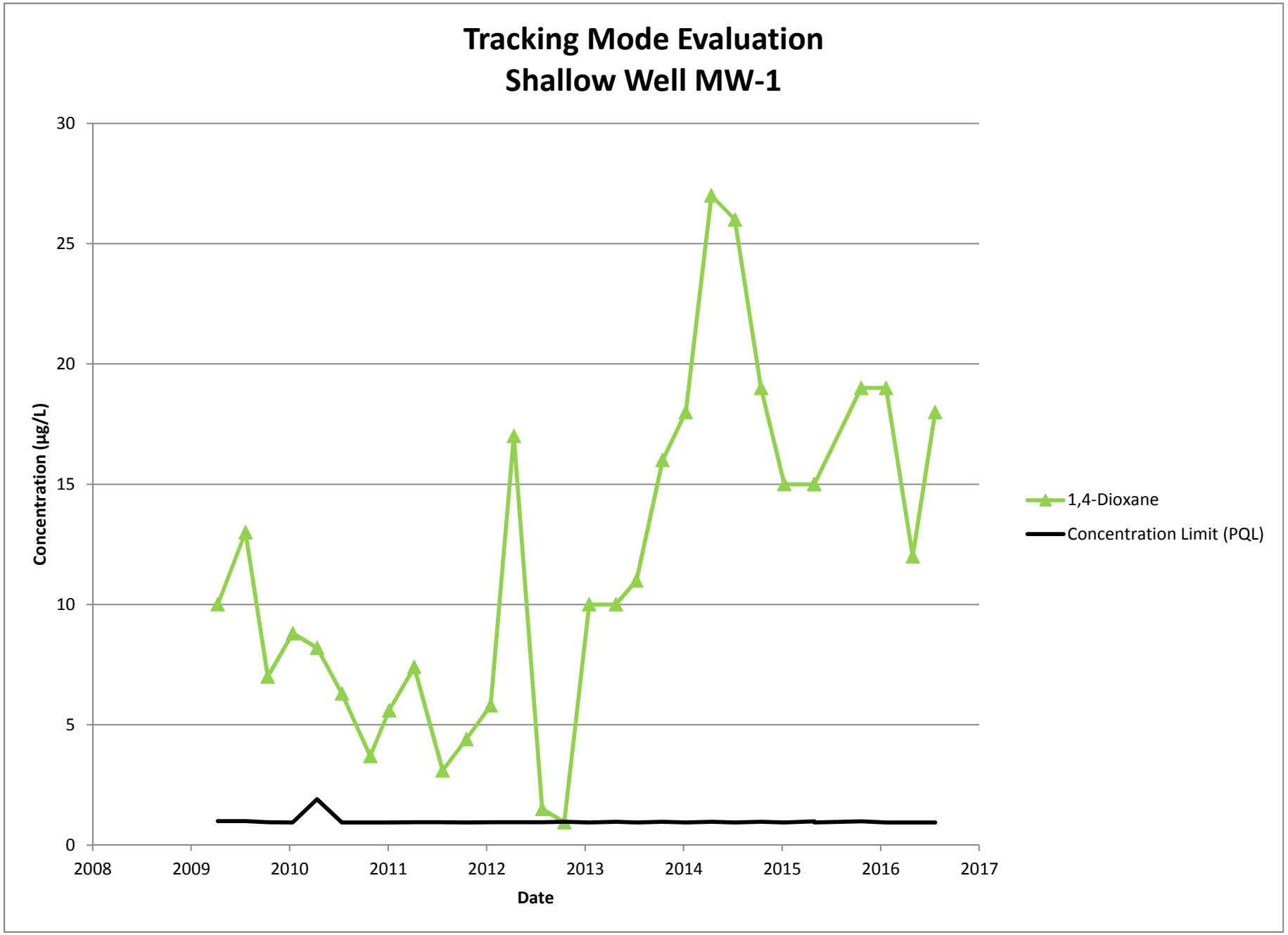

CA FOOD & DRUG BRANCH
EMBARGOED
CA FOOD & DRUG BRANCH
EMBARGOED
shrimp
shrimp
Shrim

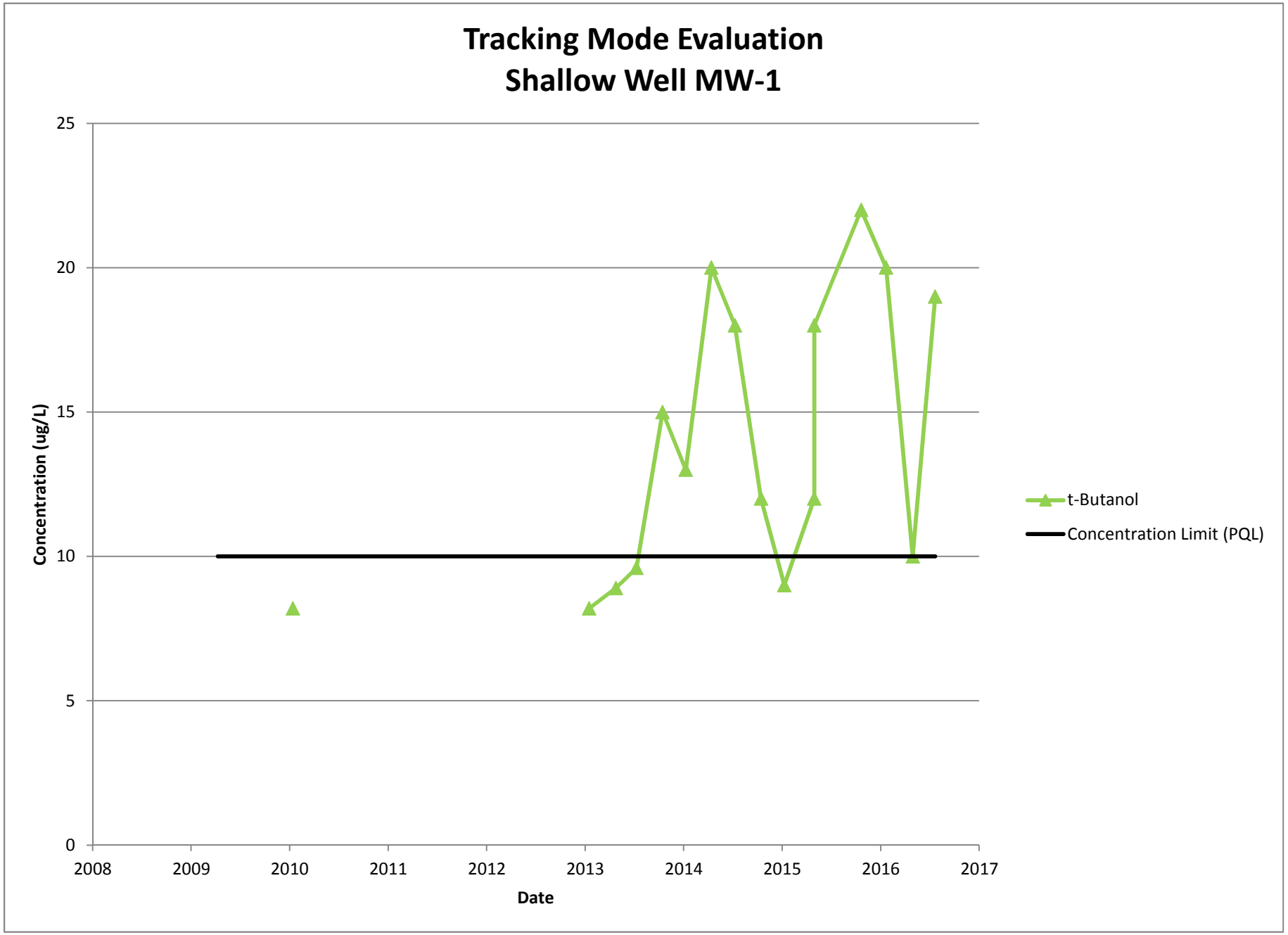

98860

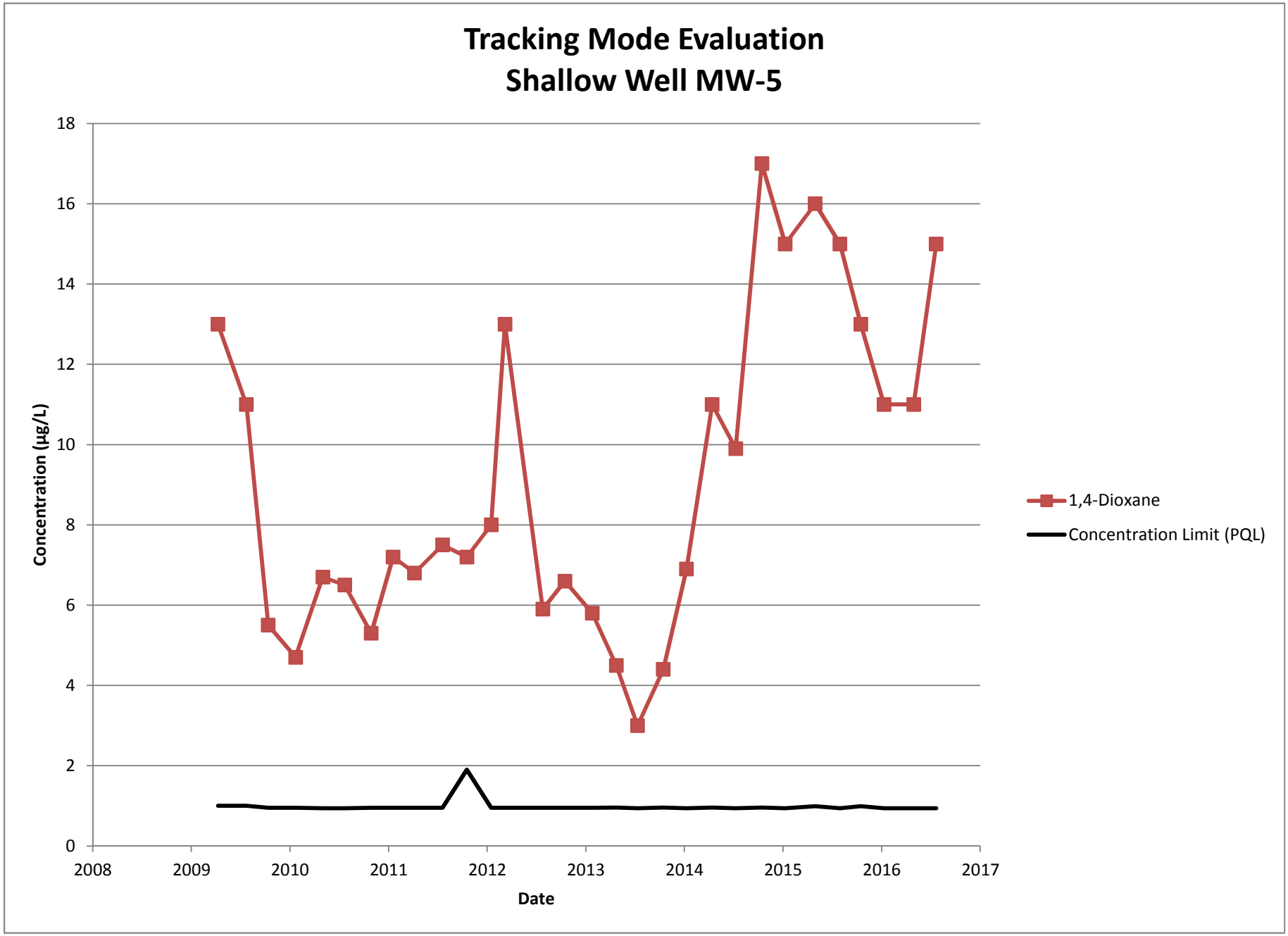

CA FOOD & DRUG BRANCH
EMBARGOED
13857
200/300
98859
Shrimp
6
7
CA FOOD & DRUG BRANCH
EMBARGOED
200/300
98859
200/300
5184

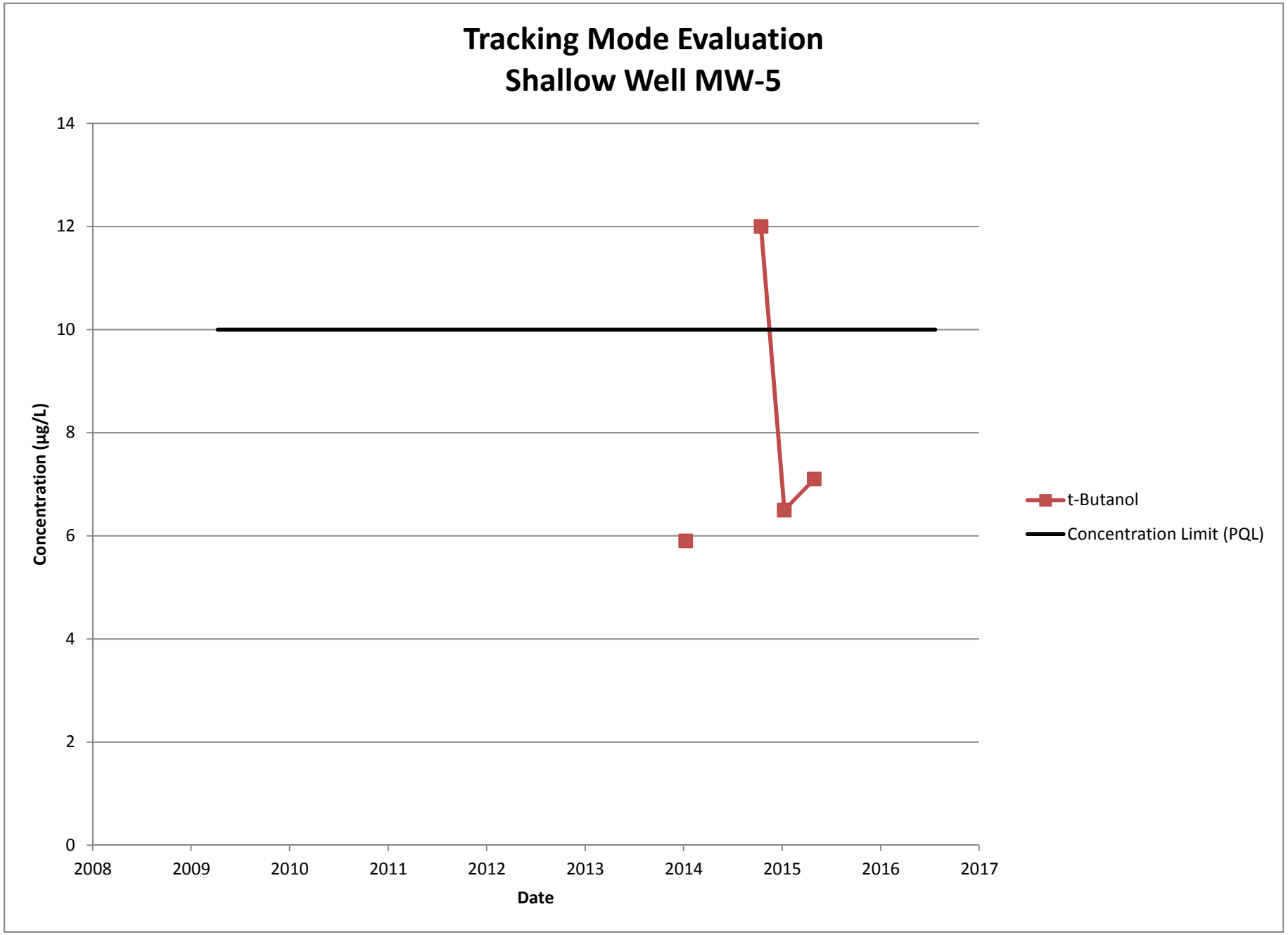
APPENDIX G

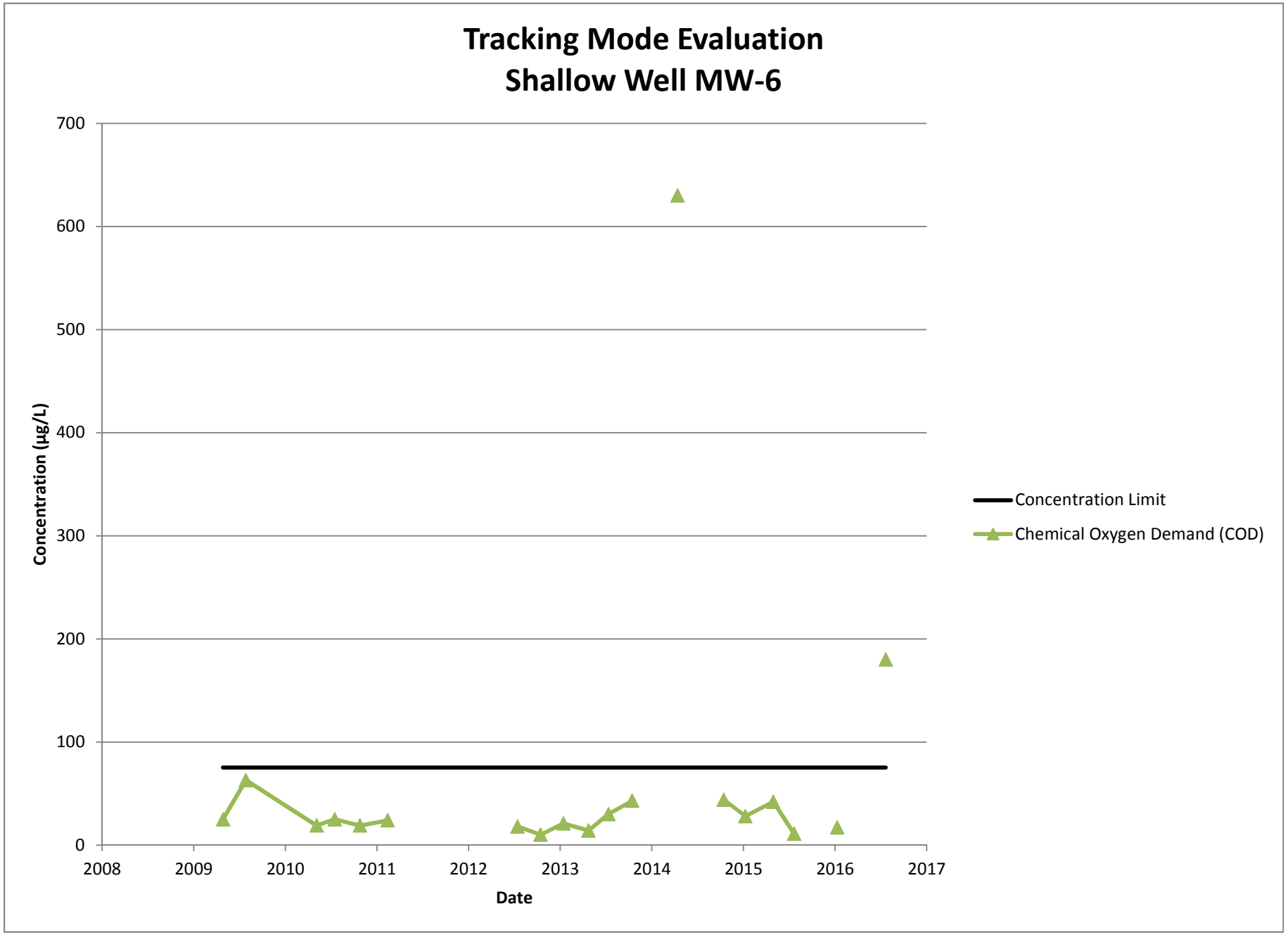
TRACKING MODE TRENDS

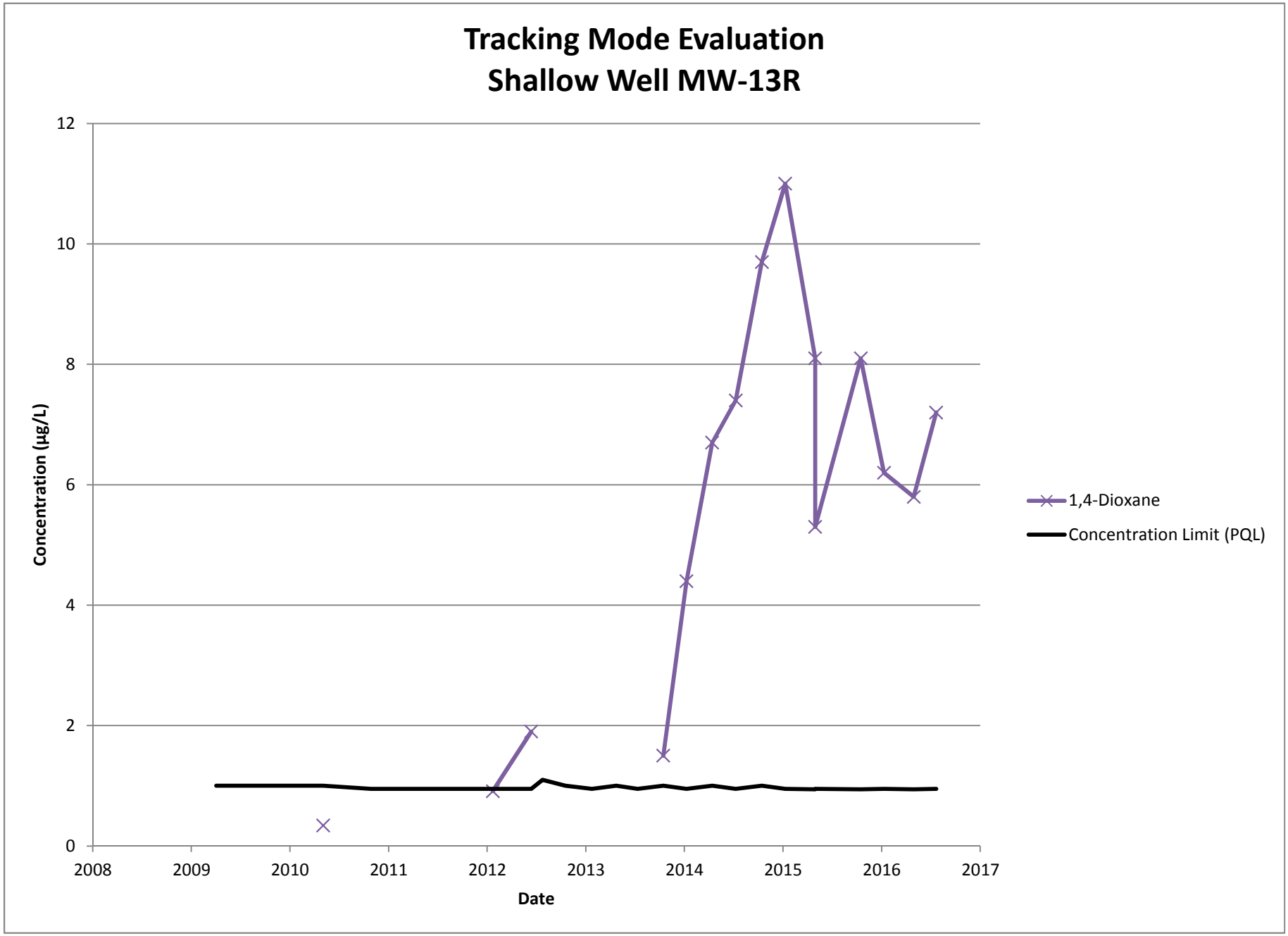

Tracking Mode Evaluation
Shallow Well MW-1
Concentration (µg/L)
30
25
20
15
10
5
0
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
Date
1,4-Dioxane
Concentration Limit (PQL)

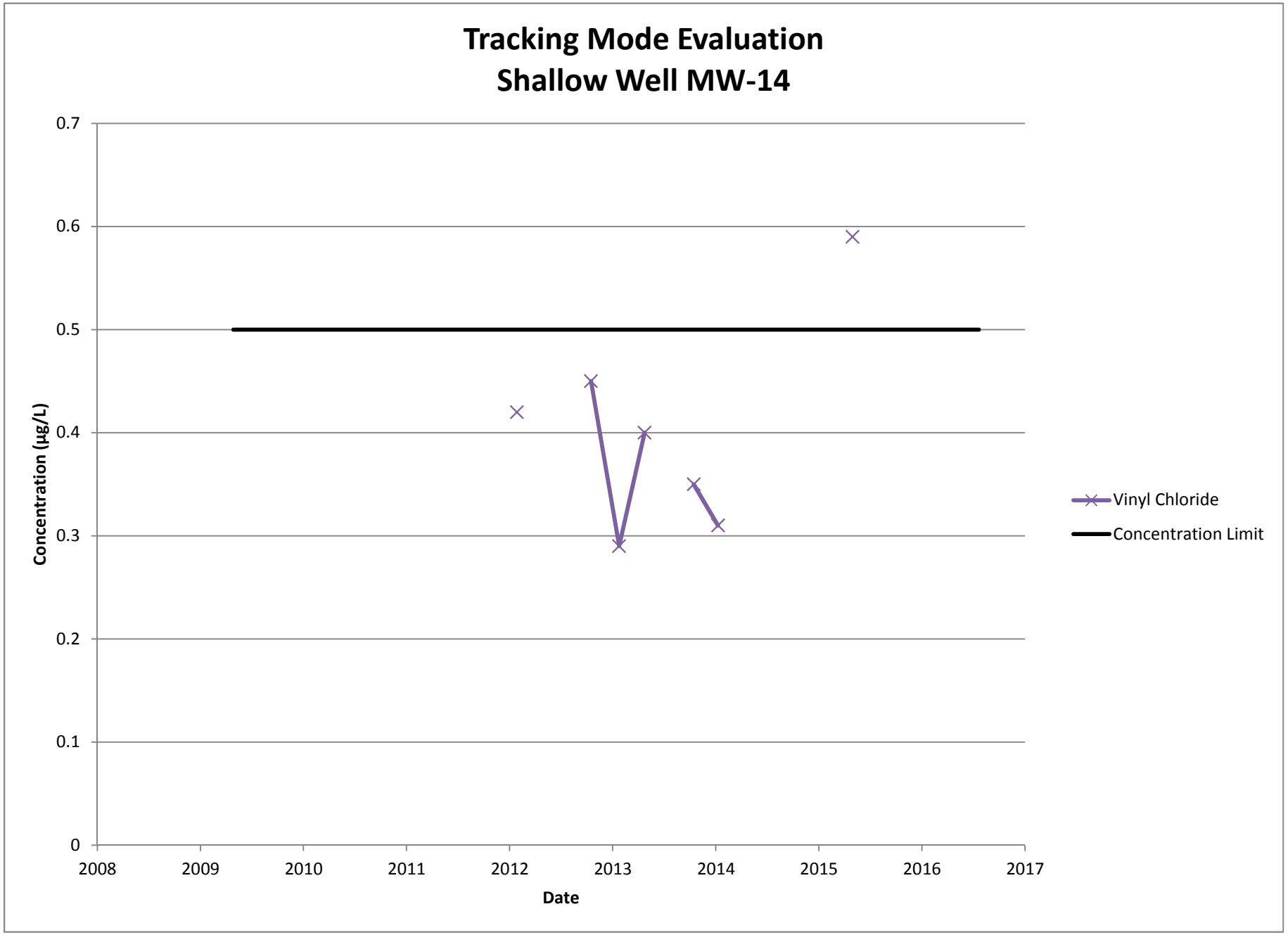

Tracking Mode Evaluation
Shallow Well MW-1
Concentration (ug/L)
25
20
15
10
5
0
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
Date
t-Butanol
Concentration Limit (PQL)

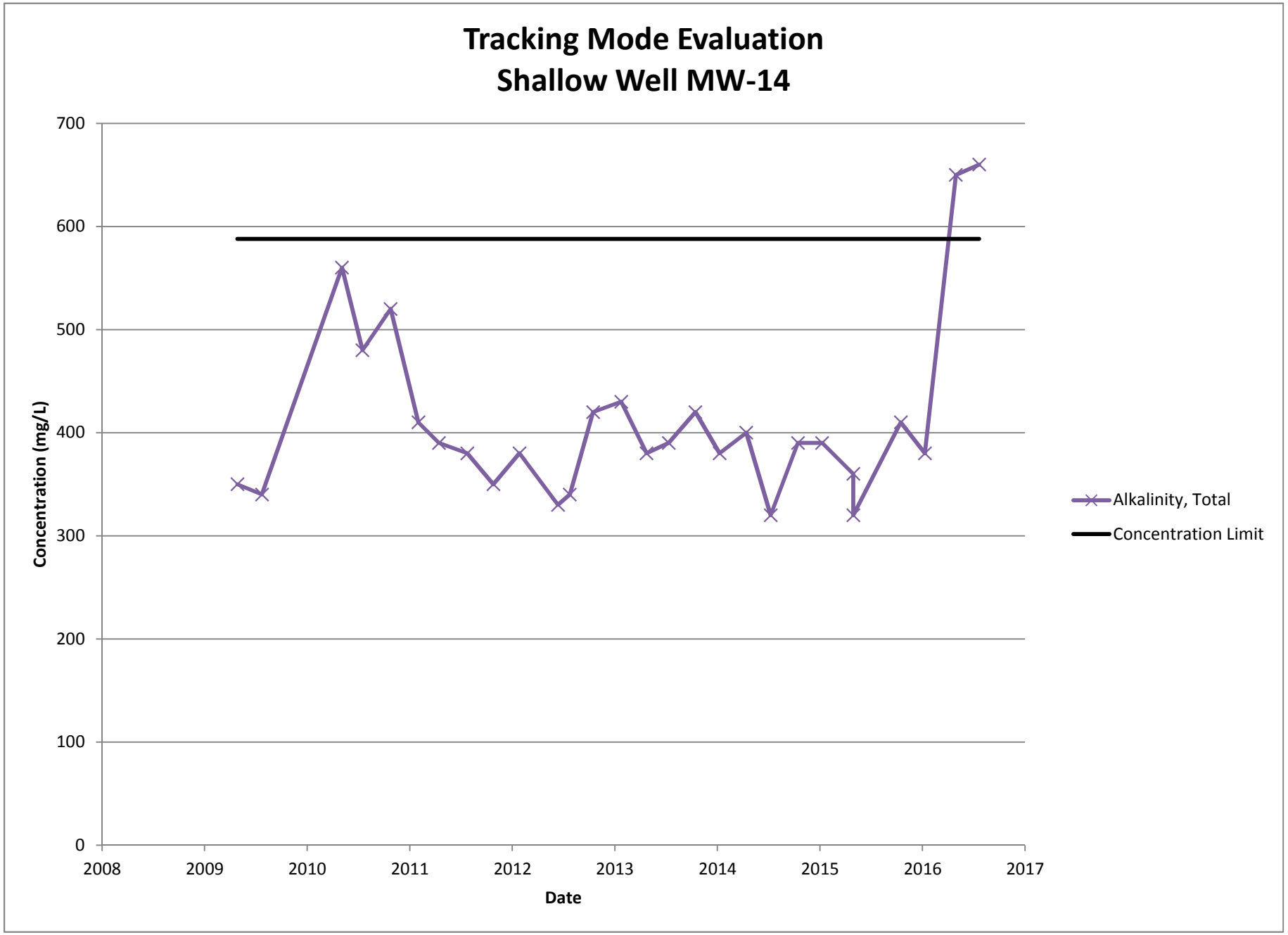

Tracking Mode Evaluation
Shallow Well MW-5
Concentration (µg/L)
18
16
14
12
10
8
6
4
2
0
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
Date
1,4-Dioxane
Concentration Limit (PQL)

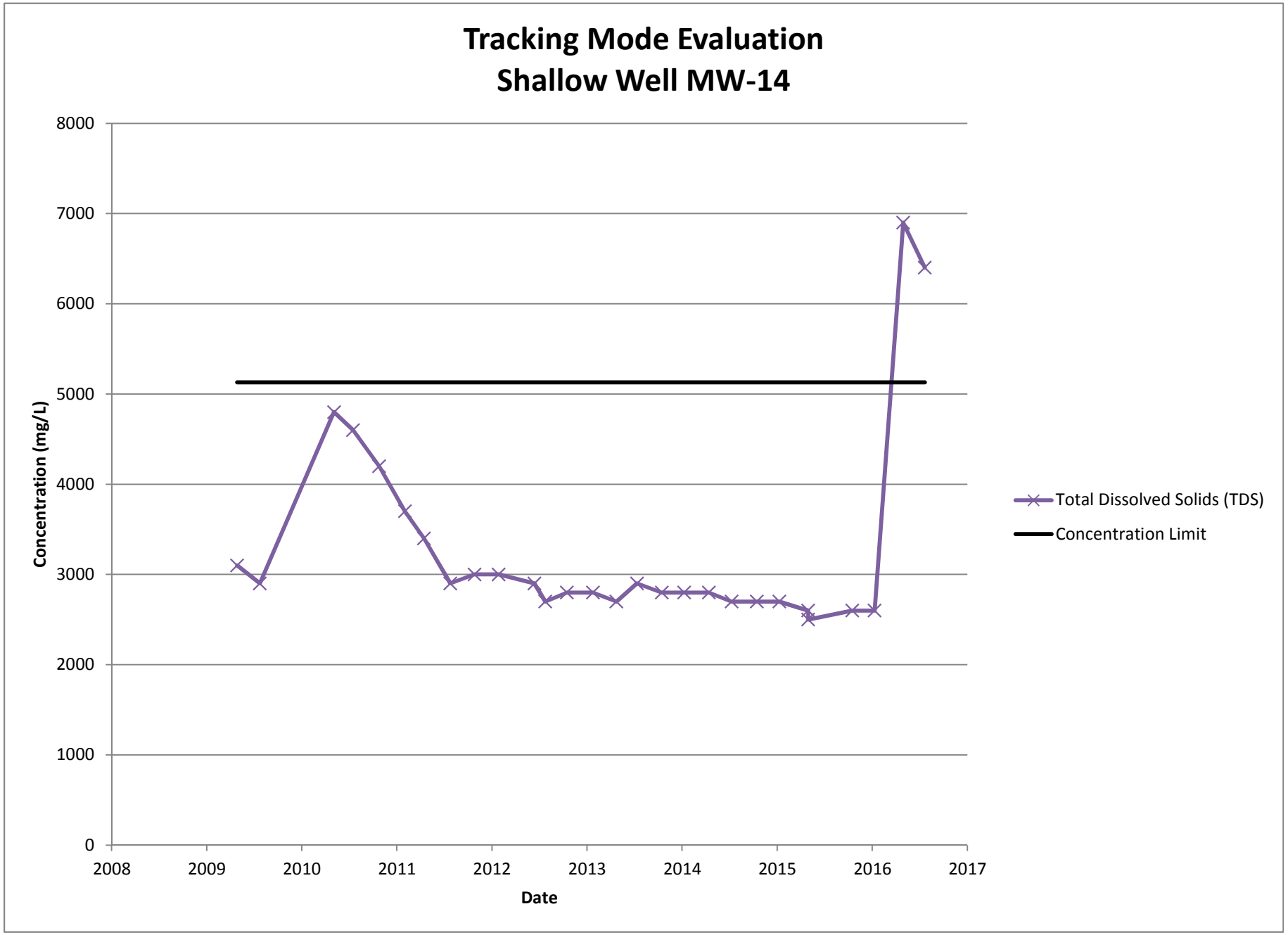

Tracking Mode Evaluation
Shallow Well MW-5
Concentration (µg/L)
14
12
10
8
6
4
2
0
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
Date
t-Butanol
Concentration Limit (PQL)

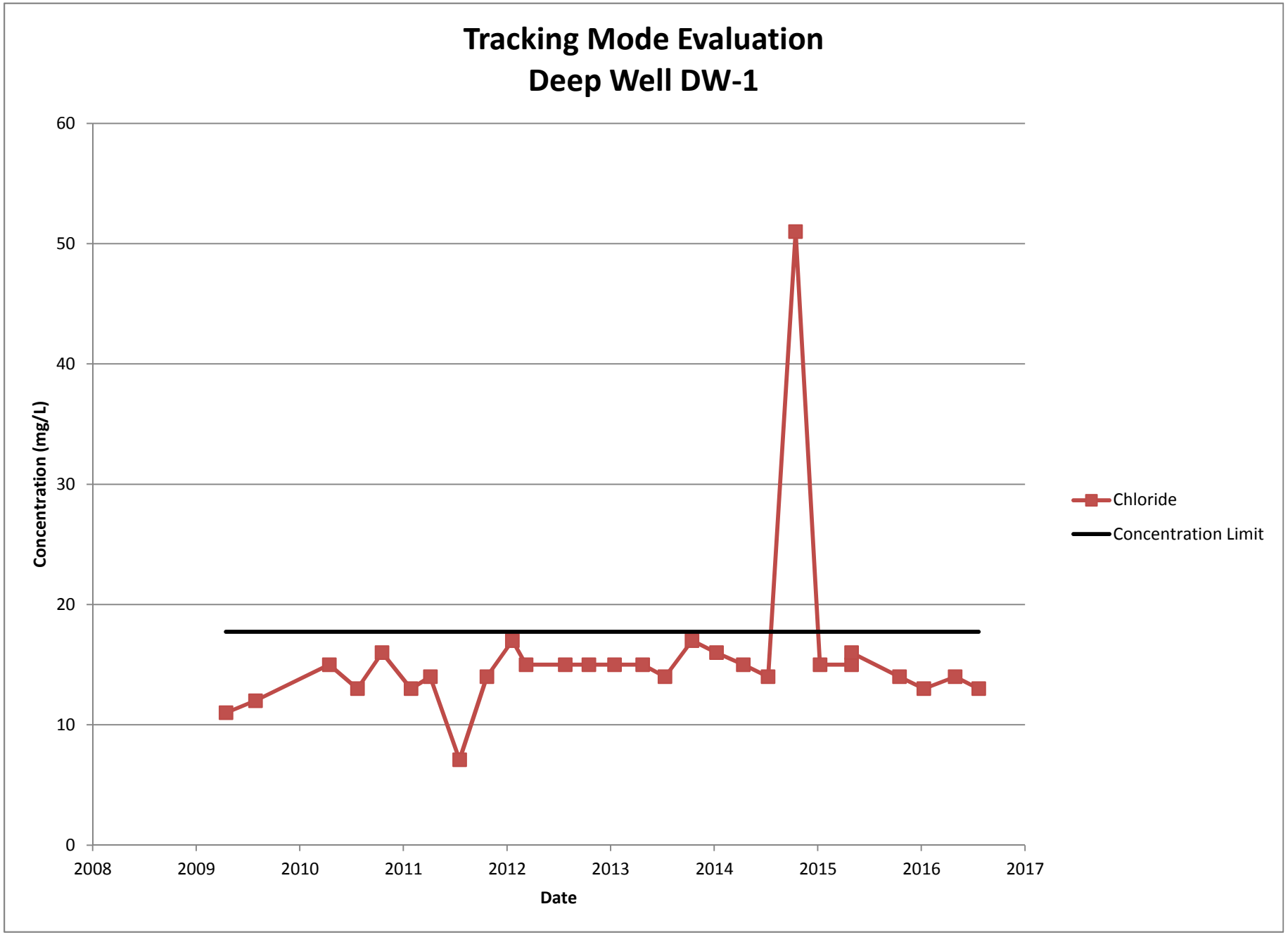

Tracking Mode Evaluation
Shallow Well MW-6
700
600
500
400
300
200
100
0
Concentration (µg/L)
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
Date
Concentration Limit
Chemical Oxygen Demand (COD)

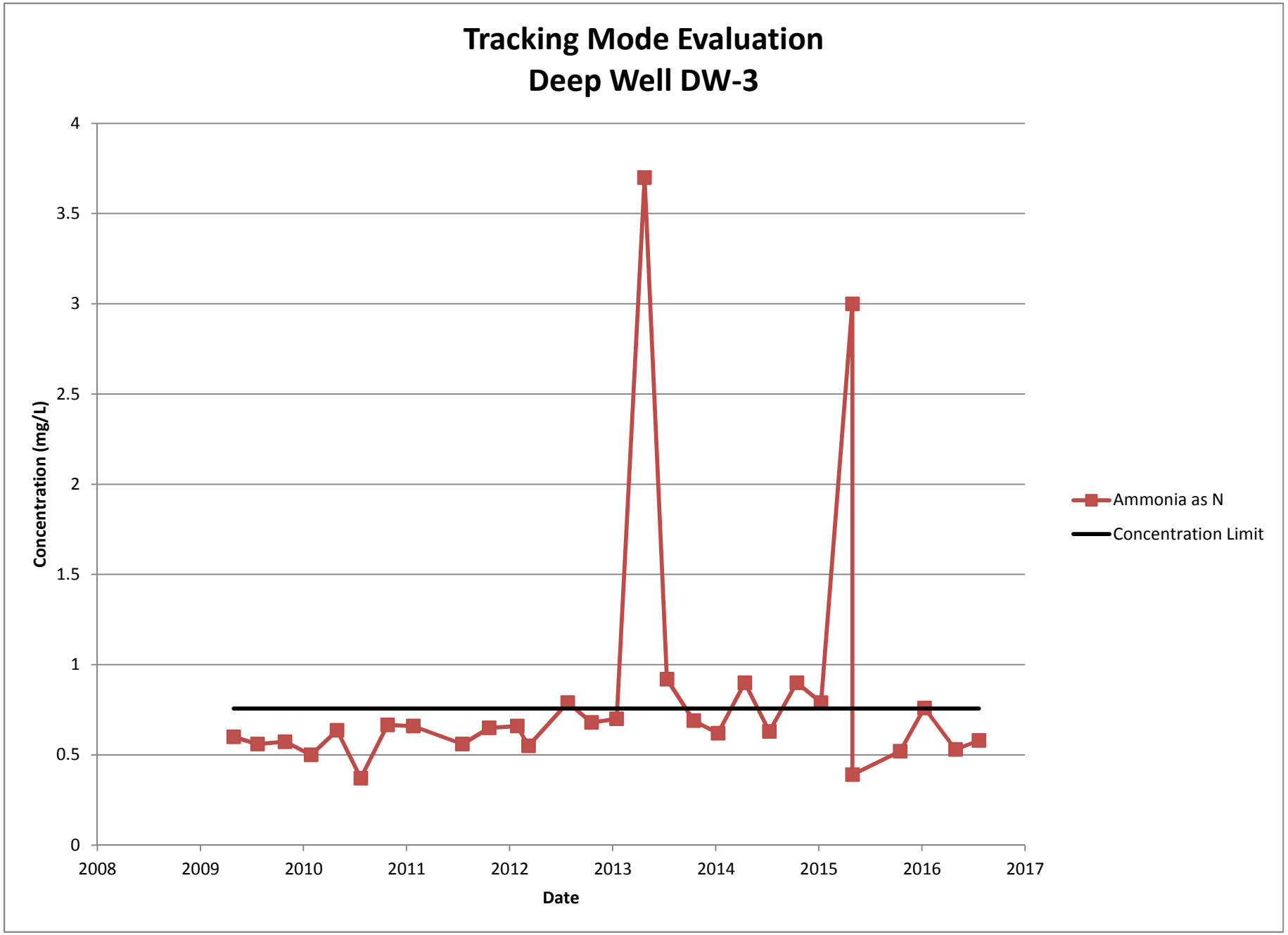

Tracking Mode Evaluation
Shallow Well MW-13R
Concentration (µg/L)
12
10
8
6
4
2
0
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
Date
1,4-Dioxane
Concentration Limit (PQL)

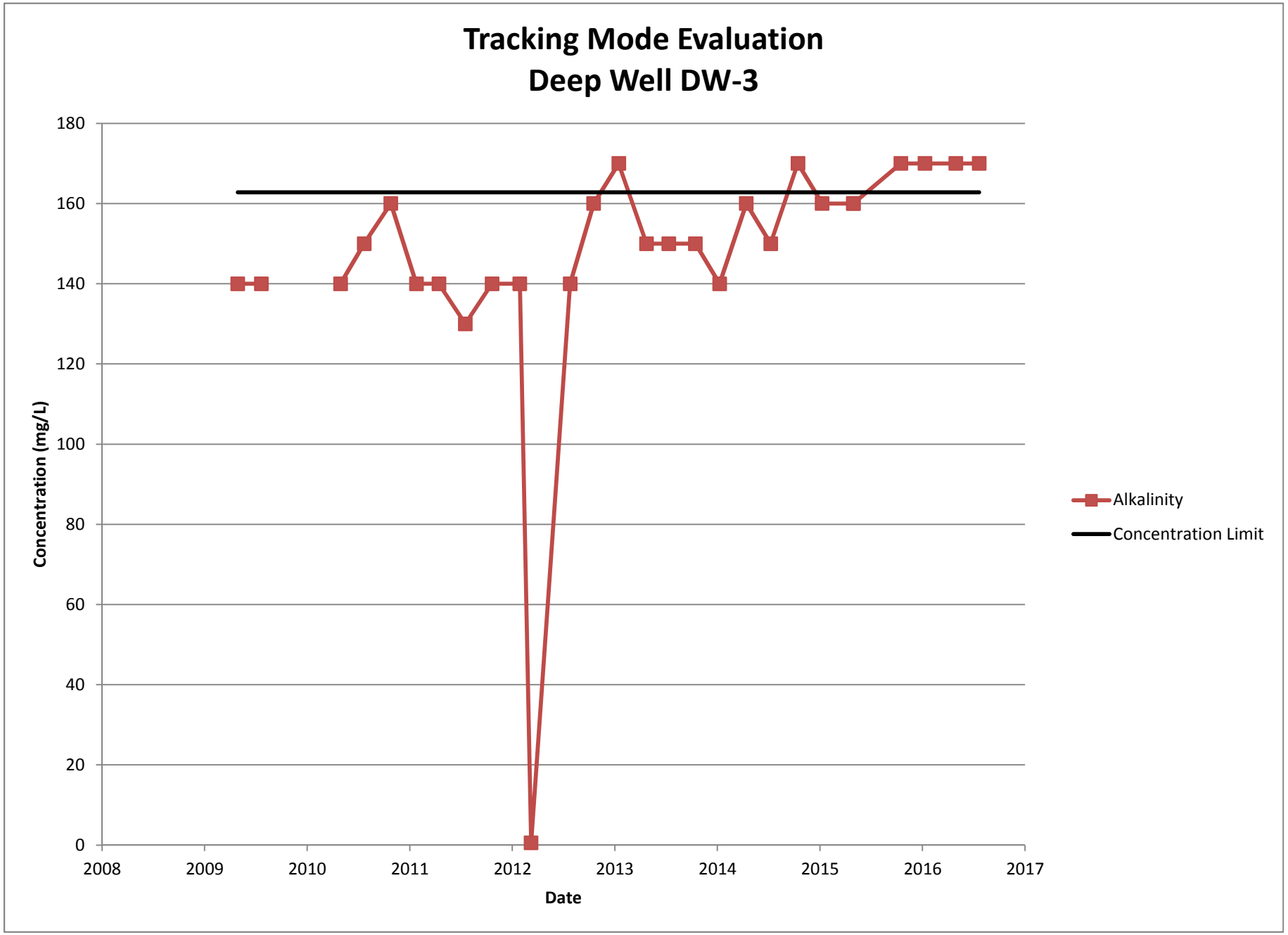

Tracking Mode Evaluation
Shallow Well MW-14
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
Concentration (µg/L)
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
Date
Vinyl Chloride
Concentration Limit

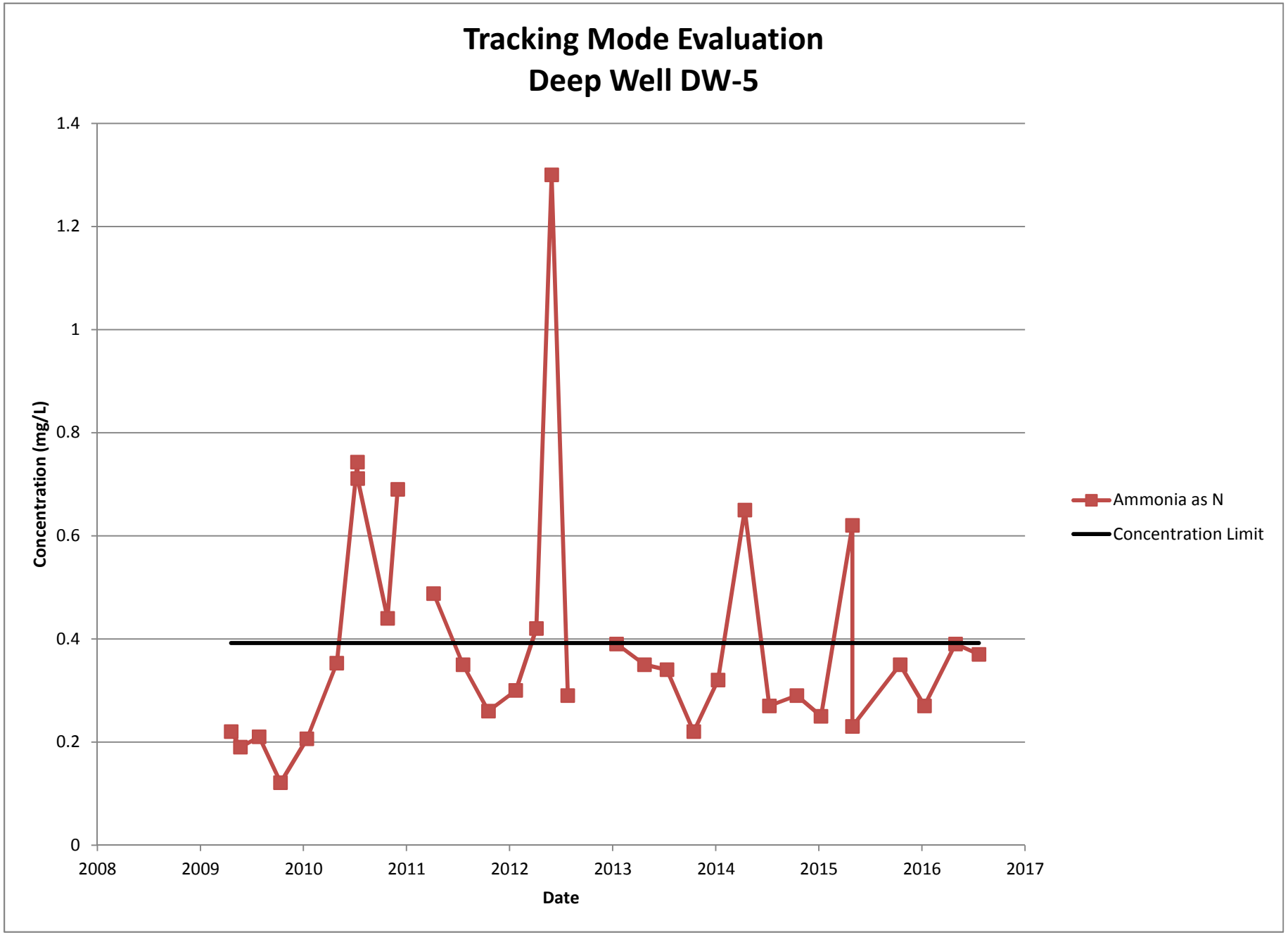

Tracking Mode Evaluation
Shallow Well MW-14
700
600
500
400
300
200
100
0
Concentration (mg/L)
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
Date
Alkalinity, Total
Concentration Limit

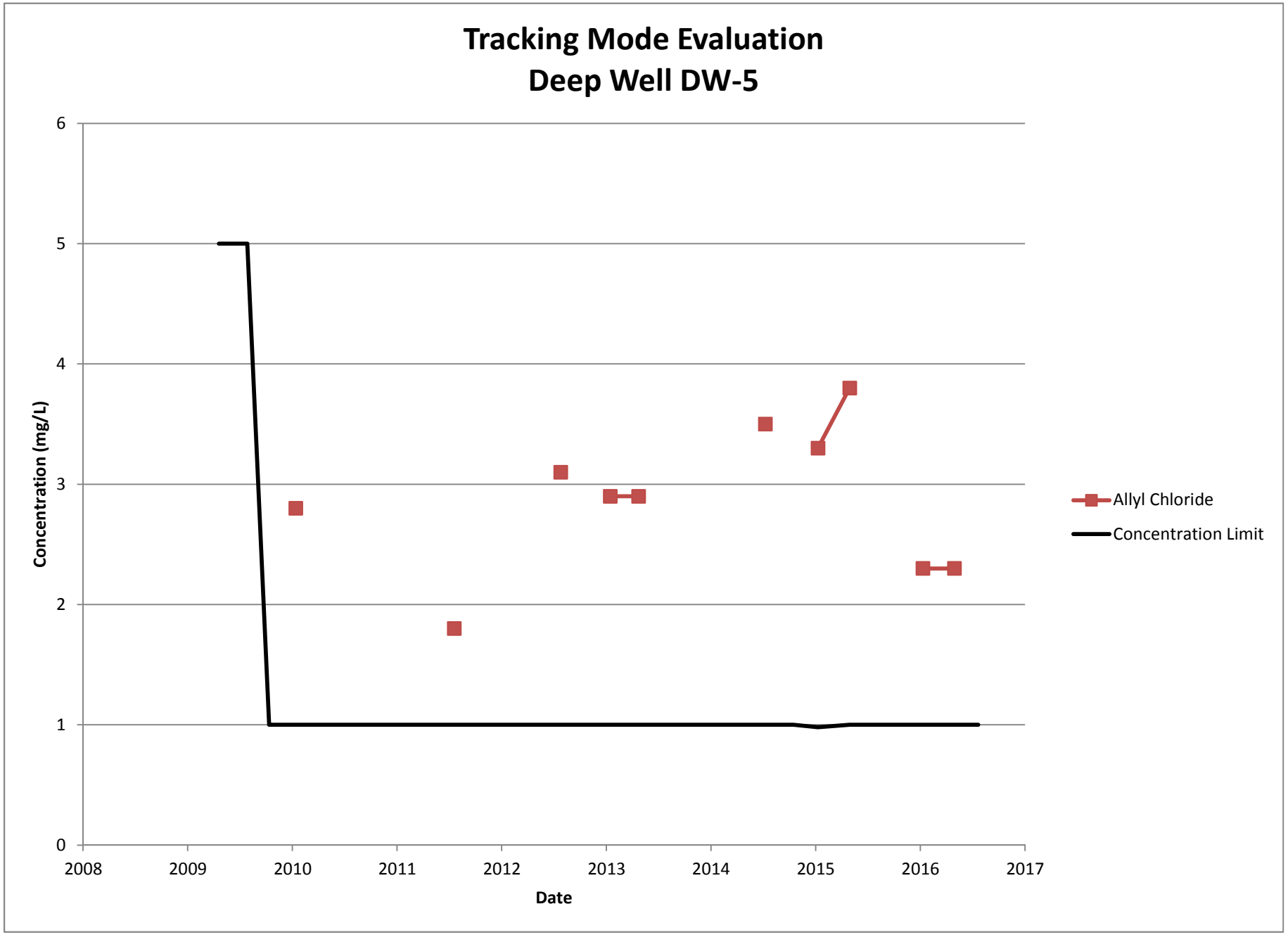

Tracking Mode Evaluation
Shallow Well MW-14
8000
7000
6000
5000
4000
3000
2000
1000
0
Concentration (mg/L)
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
Date
Total Dissolved Solids (TDS)
Concentration Limit

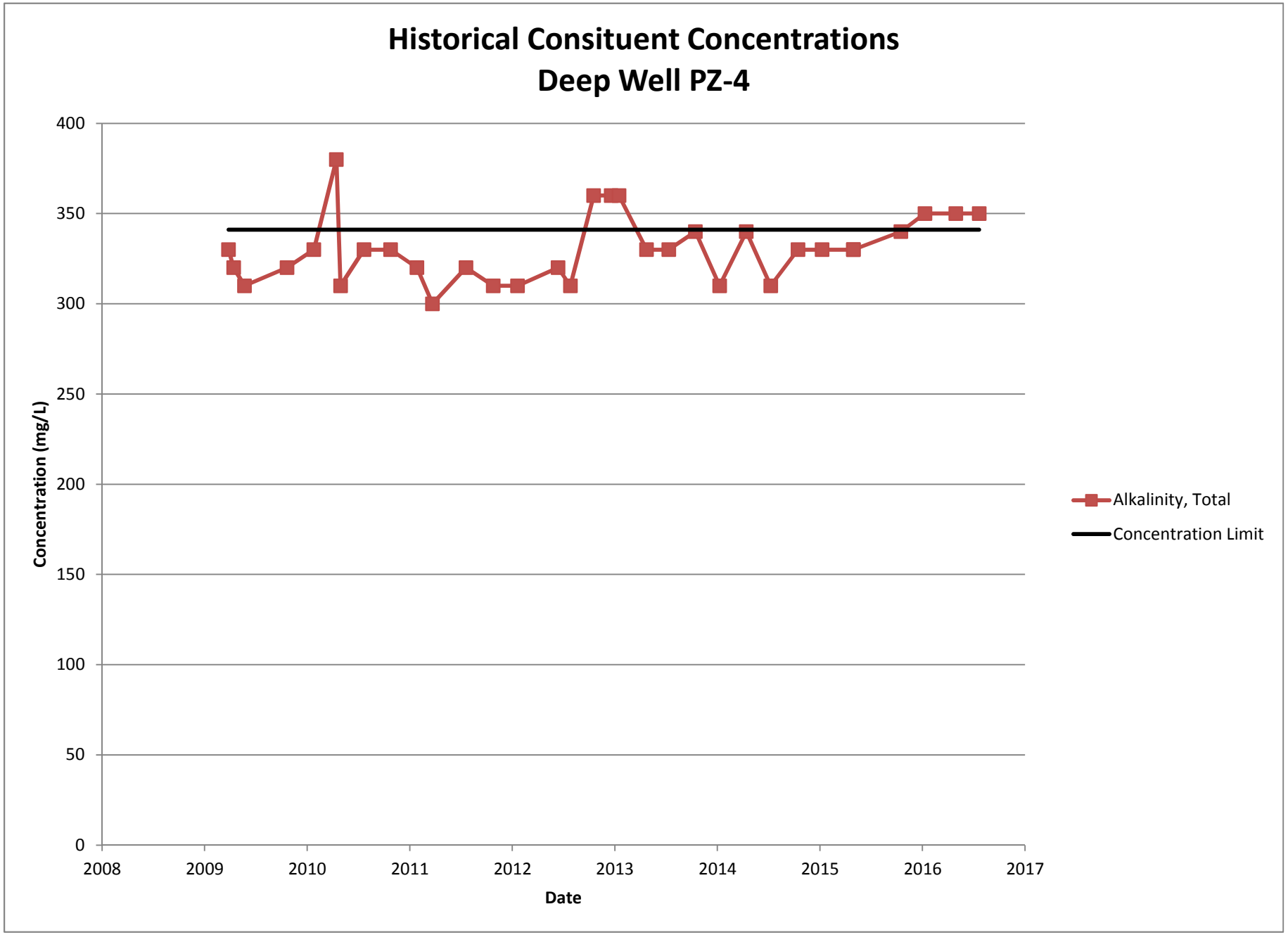

Tracking Mode Evaluation
Deep Well DW-1
Concentration (mg/L)
60
50
40
30
20
10
0
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
Date
Chloride
Concentration Limit

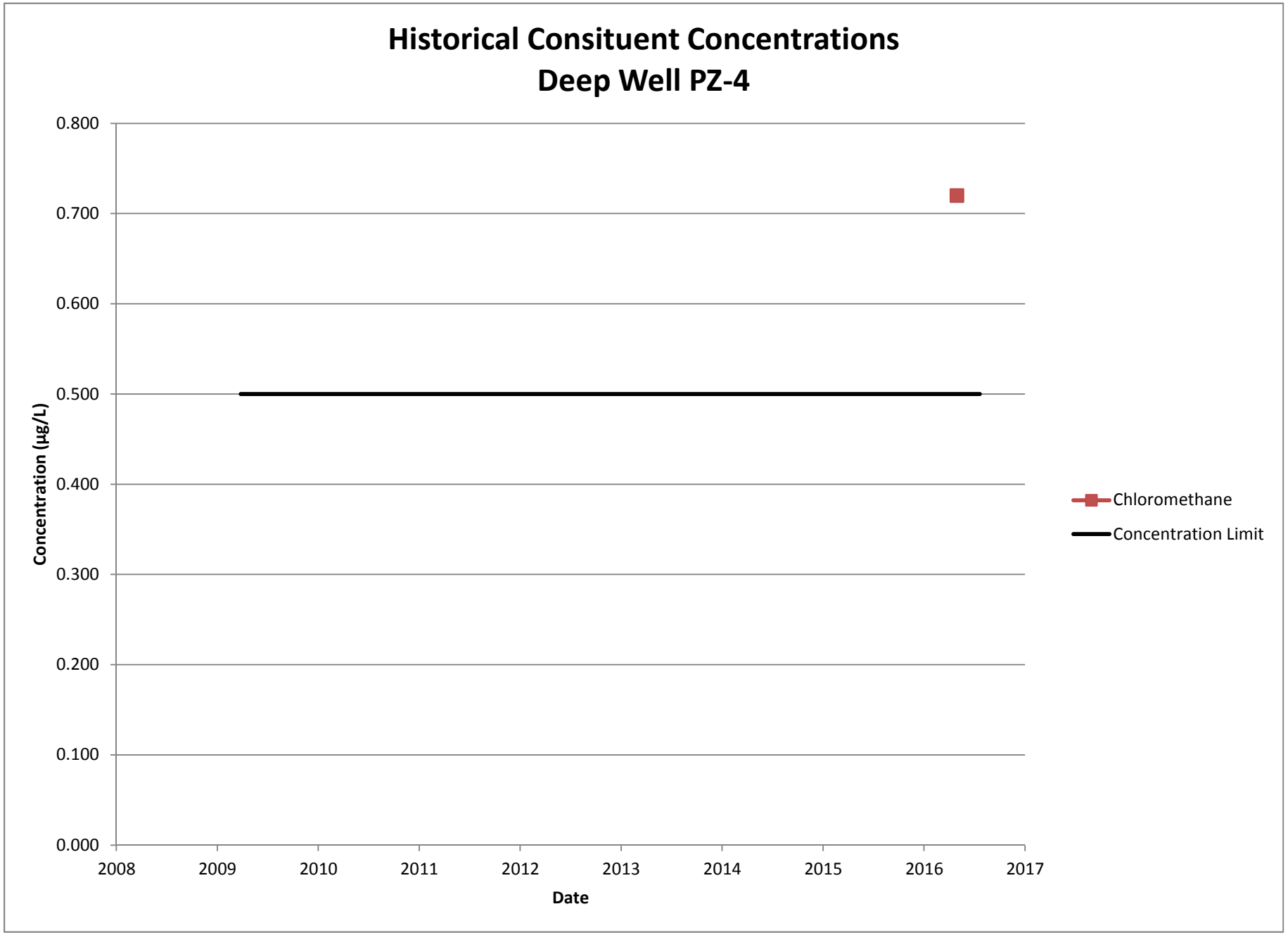

Tracking Mode Evaluation
Deep Well DW-3
Concentration (mg/L)
4
3.5
3
2.5
2
1.5
1
0.5
0
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
Date
Ammonia as N
Concentration Limit


Tracking Mode Evaluation
Deep Well DW-3
180
160
140
120
100
80
60
40
20
0
Concentration (mg/L)
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
Date
Alkalinity
Concentration Limit


Tracking Mode Evaluation
Deep Well DW-5
Concentration (mg/L)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
Date
Ammonia as N
Concentration Limit


Tracking Mode Evaluation
Deep Well DW-5
Concentration (mg/L)
0
1
2
3
4
5
6
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
Date
Allyl Chloride
Concentration Limit


Historical Consituent Concentrations
Deep Well PZ-4
400
350
300
250
200
150
100
50
0
Concentration (mg/L)
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
Date
Alkalinity, Total
Concentration Limit


Historical Consituent Concentrations
Deep Well PZ-4
0.800
0.700
0.600
0.500
0.400
0.300
0.200
0.100
0.000
Concentration (µg/L)
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
Date
Chloromethane
Concentration Limit