SEMS-RM DOCID # 100020130

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May 15, 2019

Wayne Praskins
Remedial Project Manager
United States Environmental Protection Agency
75 Hawthorne Street
San Francisco, California 94105

Subject: Quarterly Performance Evaluation Report,
Interim Groundwater Containment Remedy,
Omega Chemical Superfund Site, Whittier, California

Dear Mr. Praskins:

Enclosed for your review is the Quarterly Performance Evaluation Report for the Operable Unit 1 (OU-1) Interim Groundwater Containment Remedy (GCR), Omega Chemical Superfund Site, Whittier, California. The purpose for this report is to provide the USEPA with data associated with the operations of the OU-1 Groundwater Containment Remedy during the first quarter 2019.

This report complies with the requirements in the April 2007 Performance Standards Verification Plan, Operations, Maintenance, and Monitoring Manual for the operation of the GCR. Overall, this report is being provided to satisfy the data reporting requirements defined under Section IX of the February 2001 Consent Decree No. 00-12471 between the USEPA and OPOG by presenting data collected during the period and providing evidence that the GCR is compliant with the OU-1 Groundwater Removal Acton Objectives.

Should you have any questions, regarding the above, please contact me.

Sincerely,

Omega Chemical Site PRP Organized Group

Edward Modiano
Project Coordinator

Jaime Dinello, PE
Project Manager

cc: Don Indermill, DTSC

de maximis, inc.

MAY 15, 2019

INTERIM GROUNDWATER CONTAINMENT REMEDY QUARTERLY PERFORMANCE EVALUATION REPORT FIRST QUARTER 2019 OMEGA CHEMICAL SUPERFUND SITE, OU-1

Prepared for:

Omega Chemical Site
PRP Organized Group
(OPOG)

Prepared by:

de maximis, inc.
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INTERIM GROUNDWATER CONTAINMENT REMEDY
OPERABLE UNIT 1 OMEGA CHEMICAL SUPERFUND SITE

Quarterly Performance Evaluation Report
First Quarter 2019

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INTERIM GROUNDWATER CONTAINMENT REMEDY
OPERABLE UNIT 1 OMEGA CHEMICAL SUPERFUND SITE

Quarterly Performance Evaluation Report
First Quarter 2019

1. INTRODUCTION

This Quarterly Performance Evaluation Report (QPER) has been prepared for the Interim Groundwater Containment Remedy by the Omega Chemical Site Potentially Responsible Parties Organized Group (OPOG) to comply with the February 2001 Consent Decree (CD) No. 00-12471 between the USEPA and OPOG (USEPA, 2001). As stated in the subsequent September 2005 Removal Action Memorandum (USEPA, 2005), the primary goal of the selected remedy is to contain the highest levels of contamination dissolved in groundwater within Operable Unit 1 (OU-1), so that the contamination does not migrate and contribute to the downgradient regional groundwater plume. To achieve this goal, the OU-1 Groundwater Containment Remedy (GCR) was installed and began operating in 2009. The location and components of the GCR are presented on Figure 1.

Current GCR Remedial Action Objective (RAO) monitoring requirements are specified in the Performance Standards Verification Plan (PSVP) (CDM, 2007). Updated monitoring requirements will be included in the updated OU-1 Groundwater Containment System Operations Monitoring & Maintenance (OM&M) Manual expected to be finalized in 2019. Current monitoring requirements are as follows:

- GCR operational data are collected to support the determination of compliance with the second RAO (RAO #2, treated vapor emissions and treated groundwater discharge) as well as to conform to the requirements of the PSVP and the current OM&M Manual (CDM, 2010). These data are included in Section 2.

- Quarterly piezometric data from the PSVP-specified monitoring locations are plotted to illustrate that groundwater flow is toward the pumping wells (CDM, 2005). The goal of this monitoring is to verify that vertical and hydraulic containment of groundwater

contamination within OU-1 is achieved. According to the CD, these data provide the primary documentation of containment required by RAO #1 (USEPA, 2001). These data are included in Section 3.

- Annually, a particle tracking figure that simulates the hydraulic capture zone within the OU-1 boundary is prepared from the updated analytical model (CDM, 2007). The simulated capture zone is used to support the piezometric capture analysis. This analysis is conducted as part of the Annual Performance Evaluation Report (which replaces the Third Quarter QPER). No particle tracking evaluations were performed for this quarter.

- Semi-annual water quality monitoring data are plotted on time-series charts to show concentration trends (CDM, 2007). These data are collected during the first and third quarter monitoring events and are used to further demonstrate horizontal and vertical containment. Results of the water quality monitoring are summarized in Section 4.

2. GCR SYSTEM OPERATIONS THIS QUARTER

The GCR System functioned this quarter with minimal issues or downtime. The GCR had an operational run time of approximately 97 percent during the quarter (Table 1). Approximately 3.3 pounds of Volatile Organic Carbon (VOC) mass were removed from treated groundwater (via the air stripper) this quarter, compared to 2.3 pounds the previous quarter. Figure 2 shows the cumulative mass removed since 2009.

EXTRACTION WELLS

The EWs (EW-1 through EW-5) were mechanically functional this quarter. The measured pump run-time calculated extracted volume, average flow rates per well, and calculated mass removed per extraction well are provided in Attachment A, Table A-1.

Other groundwater data collected during the quarter, including data from groundwater pumped from the Full Scale On-Site (OU-1) Soil Remedy Duel Phase Extraction (DPE) wells, are summarized in Attachment B. This includes operational information such as volume of groundwater extracted this quarter and if analytical data were collected, then also calculations of mass removed per pumping well. Laboratory analytical results and associated data validation reports are included in Attachment C.

AIR STRIPPER

VOC concentrations in groundwater prior to and after treatment by the air stripper are summarized in Table 2. These data show continued effectiveness in transferring VOCs from the aqueous phase to the vapor phase for treatment by the Vapor Phase Granular Activated Carbon (VGAC). Air stripper influent concentrations over time are shown on Figure 3. Laboratory analytical results and associated data validation reports are included in Attachment C.

TREATED VAPOR DISCHARGE

The GCR operated in accordance with treated vapor discharge limits and VGAC operations requirements. The carbon changeout criteria were not triggered during this quarter (Attachment A, Table A-2). The criteria are currently based on the existing Health Risk Assessment (CDM Smith, 2015), which is currently being updated as part of the revised GWCS OM&M Manual.

Table 3 shows the chemical-specific concentrations in the VGAC influent, midpoint, and effluent and effluent discharge limits. Attachment A, Table A-2 show VGAC operational conditions for flow rate, temperature, and total VOC emissions as indicated by a Photo Ionization Detector (PID).

TREATED EFFLUENT DISCHARGE

Discharge compliance samples are collected on a quarterly basis from the designated sample collection point (20039A) to confirm compliance with the current County Sanitation Districts of Los Angeles County (SDLAC) Industrial Waste Discharge Permit (No. 20039). The results for the quarterly effluent samples were provided to SDLAC in the self-monitoring report (Attachment D). The analytical results show that all analytes were within SDLAC permit limits or were non-detectable above reporting limits.

3. QUARTERLY PIEZOMETRIC MONITORING

The quarterly piezometric data are provided in Attachment E, Table E-1. Historical piezometric data are presented in time series charts in Attachment E, Figures E-1 through E-20. Note that observation wells OW-4a and OW-4b, included in the PSVP, were transferred out of the OU-1 program in 2017 and are now monitored by OPOG and other Settling Work Defendants as part of OU-2 in accordance with the OU-2 Consent Decree (USEPA 2017).

Attachment F provides a review of the piezometric conditions during the quarterly piezometric monitoring. As demonstrated by Figure F-1, horizontal containment of OU-1 groundwater continues to be achieved. It is also noted that the regional drought conditions and the pumping from Full Scale On-Site (OU-1) Soil Remedy DPE wells have reduced water levels locally to below the pump intake of some GCR extraction wells. The combination of all these factors has essentially dewatered the aquifer within the OU-1 boundary, and thus is providing horizontal containment.

Vertical gradients are examined at a well triplet and two well pairs (Figure F-2). There is minimal hydraulic connection between the shallow extraction zone (A-Zone) and the deeper B-Zone due to the presence of a confining layer which prevents significant downward vertical transport (Figure F-4). The significant head differential between the A-Zone and B-Zone is further evidence of poor hydraulic connection between the zones.

GROUNDWATER MODEL UPDATE AND FLOW TRACKING FIGURE

The annual groundwater model update was not completed this quarter. Attachment G serves as a placeholder for the next annual groundwater model update, expected to be included in the Annual Performance Evaluation Report (which takes the place of the third quarter QPER).

4. SEMI-ANNUAL WATER QUALITY MONITORING

Concentrations of tetrachloroethylene (PCE), trichloroethylene (TCE), 1,4-dioxane, and other analytes in samples collected during this quarter are presented in Attachment E, Table E-2. Historical data from these locations are presented in time series charts in Figures E-21 through E-36. Field forms for the semi-annual monitoring are included in Attachment H. Analytical laboratory reports and data validation reports are included in Attachment C.

5. SUBMITTALS DURING THE QUARTER

The following submittal was made this quarter as part of the OU-1 GCR:

- Interim Groundwater Containment Remedy Quarterly Performance Evaluation Report, Fourth Quarter 2018 (January 15, 2019)

6. PLANNED ACTIVITIES

Planned operational and monitoring activities scheduled for the next quarter include the following:

- Quarterly piezometric monitoring
- Monthly assessment of VGAC effectiveness and need for carbon changeout
- Monthly and quarterly assessment of data to determine if system adjustments are appropriate
- GCR System alarm testing
- Quarterly performance reporting

7. REFERENCES

CDM. (2005). *Removal Action Plan and Preliminary Design Report, December 16.*
CDM. (2007). *Performance Standards Verification Plan for Phase 1a Area Groundwater Treatment System, April 19.*
CDM. (2010). *Final Operations, Maintenance, and Monitoring Manual, February 19*
CDM Smith. (2015). *Memorandum: Treatment of Effluent from Groundwater Treatment System and Soil Vapor Extraction, Omega Chemical Superfund Site, Whittier, California 90602, February 26.*
USEPA. (2001). *Consent Decree No. 00-12471, February 28.*
USEPA. (2005). *Removal Action Memorandum, September 27.*
USEPA. (2017). *Consent Decree No. 2:16-cv-02696-GW-E*, March 31.

TABLES

Table 1
GWTP Operational Summary and Mass Removed Totals
OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
First Quarter 2019

Month	GWTP Runtime Percent[1] (%)	GWTP Runtime Hours (hrs)	Operational Flow Rate[2] (gpm)	Average Flow Rate[3] (gpm)	Total Gallons Processed[4] (gal)	Mass Removed[5] (lbs)
January 2019	100	742	5.2	5.2	230,600	1.0
February 2019	96	647	5.8	5.6	224,200	1.0
March 2019	94	701	5.9	5.5	244,900	1.3
1st Quarter 2019	**Average = 97**	**Average = 697**	**Average = 5.6**	**Average = 5.4**	**Total = 699,700**	**Total = 3.3**
				Cumulative Total[6]	**43,076,365**	**972.4**

Notes:

1. GWTP Runtime Percent is the percentage of total hours in the month that the GWTP actually operated.
2. Operational flow rate calculated from total gallons processed in the month and hours the GWTP actually operated in the month.
3. Average flow rate is calculated from total gallons processed in the month and total hours in the month, regardless of GWTP uptime.
4. Total gallons processed includes groundwater pumped to the GWTP from the Full Scale On-Site (OU-1) Soil Remedy DPE wells.
5. Mass removed is calculated from the average VOC concentration in the air stripper influent and discharge, and the total gallons processed. See Table 3.
6. The GWTP has to date treated 43,076,365 gallons of water and removed a cumulative total of 972.4 pounds of contaminant. See Figure 2.

gpm = gallons per minute
hrs = hours
gal = gallons
lbs = pounds

Table 2
Air Stripper Influent and Effluent Concentrations Demonstrating Proper System Function
OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
First Quarter 2019

Sample ID	Sample Date	PCE	TCE	MeCL	1,2-DCA	Freon 11	Freon 113
OC_SP210_INF_012419	1/24/2019	300	30	25 U	5 U	19	110
OC_SP220B_EFF_012419	1/24/2019	1 U	1 U	5 U	1 U	1 U	5 U
OC_SP210_INF_022019	2/20/2019	320	37	5 U	4.1	21	110
OC_SP220B_EFF_022019	2/20/2019	1 U	1 U	5 U	1 U	1 U	5 U
OC_SP210_INF_031319	3/13/2019	340	40	10 U	2.5	23	150
OC_SP220B_EFF_031319	3/13/2019	1 U	1 U	5 U	1 U	1 U	5 U

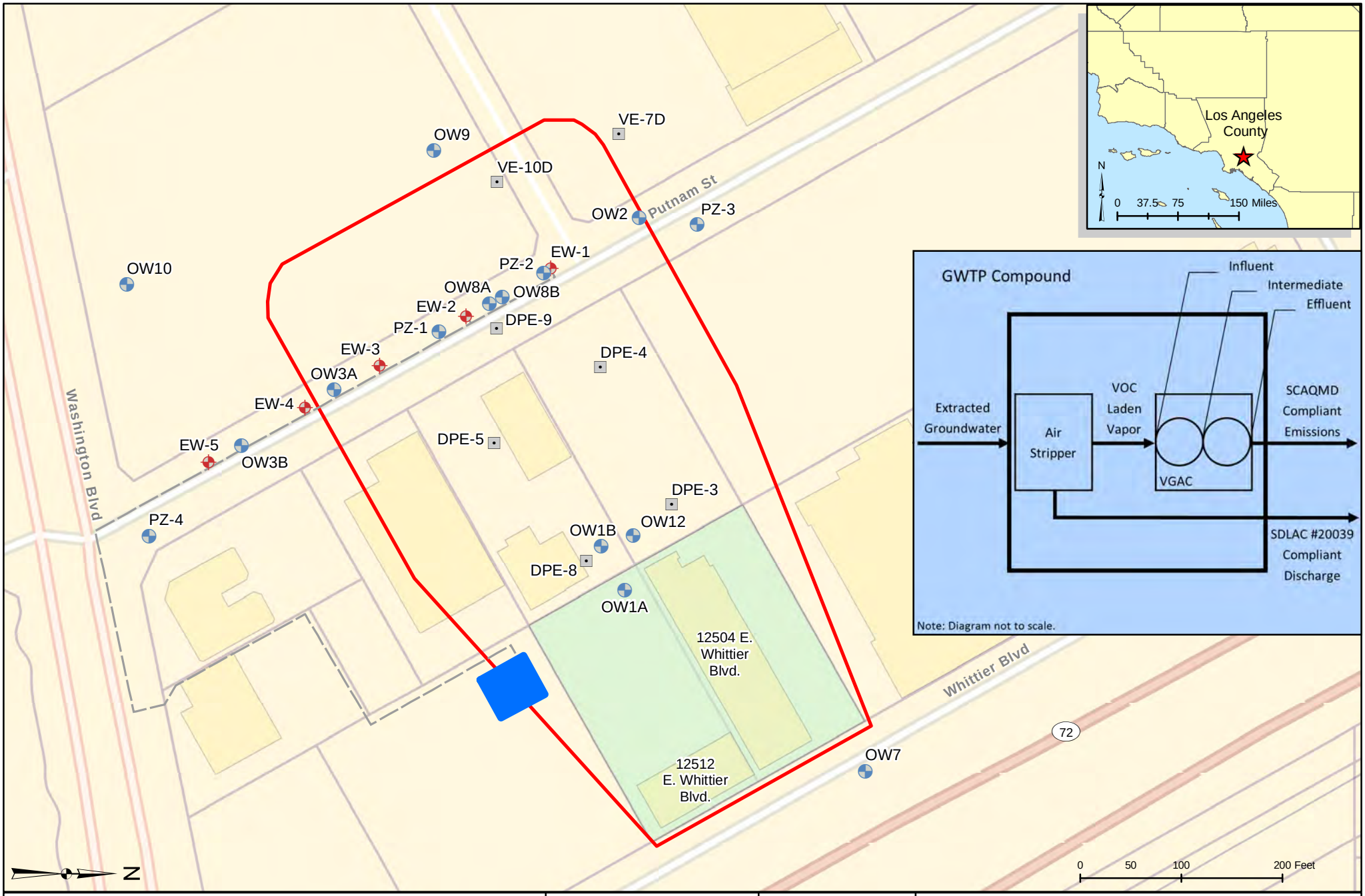
Notes:
INF = Air stripper influent water. Untreated water sample collected downstream of bag filters.
EFF = Air stripper effluent water. Treated water sample collected in discharge header upstream of SDLAC sample box.
All results are in micrograms per liter (ug/L)
U = not detected above reporting limit listed
PCE = Tetrachloroethene; TCE = Trichloroethene; MeCL = Methylene chloride; 1,2-DCA = Dichloroethane

Table 3
Vapor Phase GAC Concentrations Demonstrating Substantive Compliance with SCAQMD Regulations
OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
First Quarter 2019

SCAQMD Chemical-Specific Effluent Limit[1]			268.6	13.4	60	4.6	20	31.2	20	13
Sample ID	**Sample Date**	**Units**	**PCE**	**TCE**	**1,1-DCA**	**1,2-DCA**	**BZ**	**MeCL**	**VC**	**CFM**
OC_VGAC_INF_SP241_012419	1/24/2019	ppbv	68	9.4	1.2 U	1.2	1.2 U	12 U	1.2 U	5.6
OC_VGAC_INT_SP245_012419	1/24/2019	ppbv	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	12 U	1.2 U	3.7
OC_VGAC_EFF_SP242_012419[2]	1/24/2019	ppbv	**1.1 U**	**1.1 U**	**1.1 U**	**1.1 U**	**1.1 U**	**11 U**	**1.1 U**	**3.4**
OC_VGAC_INF_SP241_022019	2/20/2019	ppbv	79	11	1.2 U	1.7	1.2 U	12 U	1.2 U	6.9
OC_VGAC_INT_SP245_022019	2/20/2019	ppbv	1.1 U	1.1 U	1.1 U	1.4	1.1 U	11 U	1.1 U	4.1
OC_VGAC_EFF_SP242_022019	2/20/2019	ppbv	**1.1 U**	**1.1 U**	**1.1 U**	**1.1 U**	**1.1 U**	**11 U**	**1.1 U**	**3.6**
OC_VGAC_INF_SP241_031319	3/13/2019	ppbv	65	11	1 U	1.1	1 U	10 U	1 U	5.2
OC_VGAC_INT_SP245_031319	3/13/2019	ppbv	1.2 U	1.2 U	1.2 U	1.2 U	1.2 U	12 U	1.2 U	2.5
OC_VGAC_EFF_SP242_031319	3/13/2019	ppbv	**1.3 U**	**1.3 U**	**1.3 U**	**1.3 U**	**1.3 U**	**13 U**	**1.3 U**	**2.7**
Compliance with Effluent Limits?			**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**	**YES**

1. SCAQMD effluent limits are in parts per billion volume (ppbv)
2. Bold text indicates vapor effluent results from the VGAC effluent required to meet SCAQMD HRA chemical specific limits shown in the table.
INF = Vapor phase GAC influent. VOC-laden vapor sample collected at the influent to the lead vapor GAC unit.
INT = Vapor phase GAC intermediate. Partially treated vapor sample collected between the lead and lag vapor GAC units.
EFF = Vapor phase GAC effluent. Fully treated vapor sample collected at the effluent from lag (polishing) vapor GAC unit.
VGAC = vapor phase granular activated carbon; GAC = granular activated carbon
SCAQMD HRA Limit = South Coast Air Quality Management District Health Risk Assessment permitted concentration limit in ppbv
U = not detected above reporting limit listed
PCE = Tetrachloroethene; TCE = Trichloroethene; 1,1-DCA = 1,1-Dichloroethane; 1,2-DCA = 1,2-Dichloroethane; BZ = Benzene; MeCL = Methylene chloride; VC = Vinyl chloride; CFM = Chloroform

FIGURES



GCR Extraction Well

Observation Well / Piezometer

OU-1 On-Site Soil Remedy Dual Phase Extraction Well

GCR Conveyance Piping

GWTP Compound Location

Former Omega Chemical Property Boundary

OU-1 Boundary

Only piezometric data are collected from PZ-3 for GCR performance monitoring.

ddms

de maximis, inc.

Reviewed By: MH
Drawn By: LEM
Date: 8/2/2018

Figure 1
OU-1 Location Map and Groundwater Containment Remedy Location
OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
12504/12512 East Whittier Boulevard
Whittier, California

Figure 2
GCR GWTP Cumulative Gallons Treated and Mass Removed
OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
First Quarter 2019

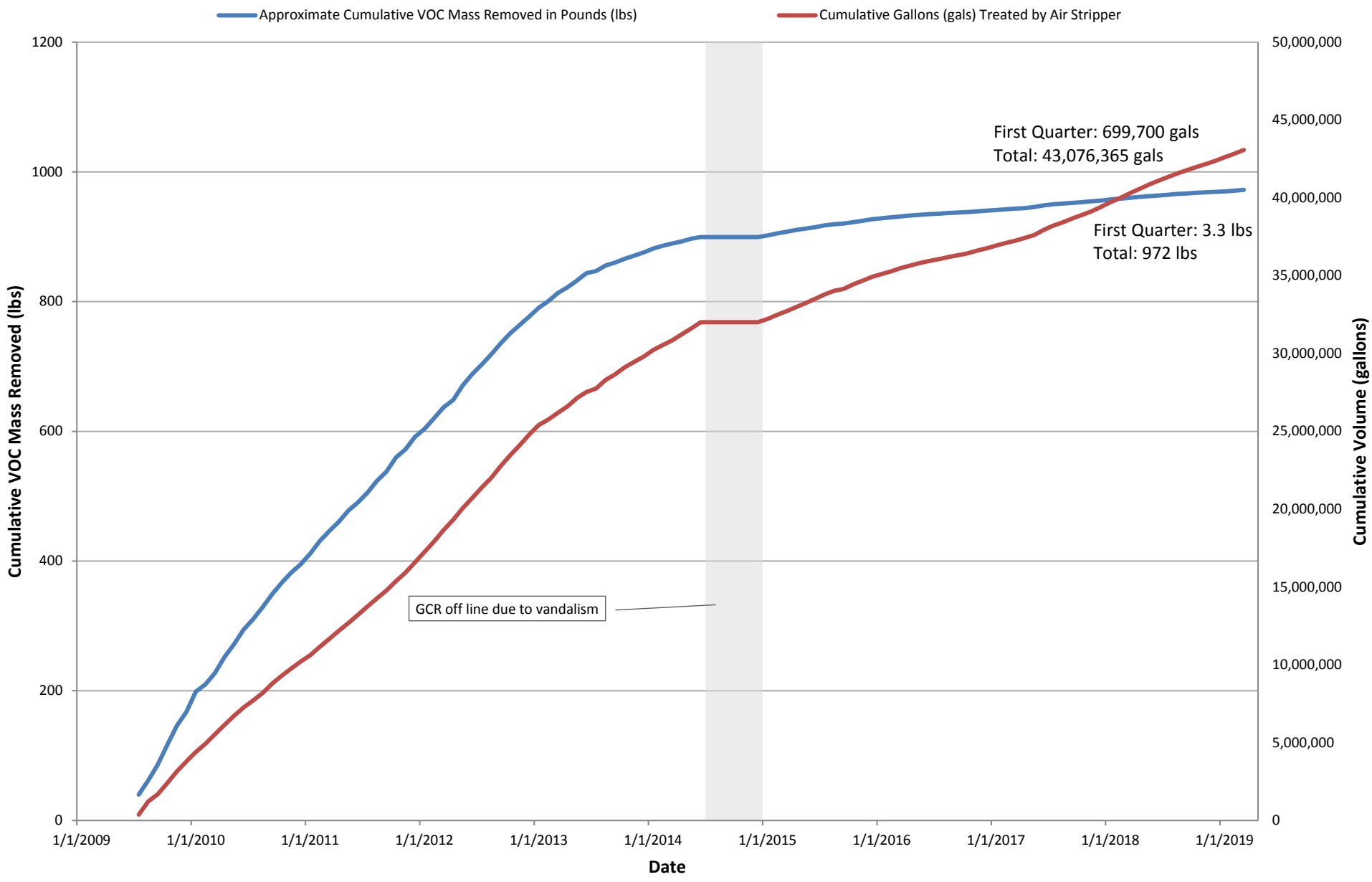
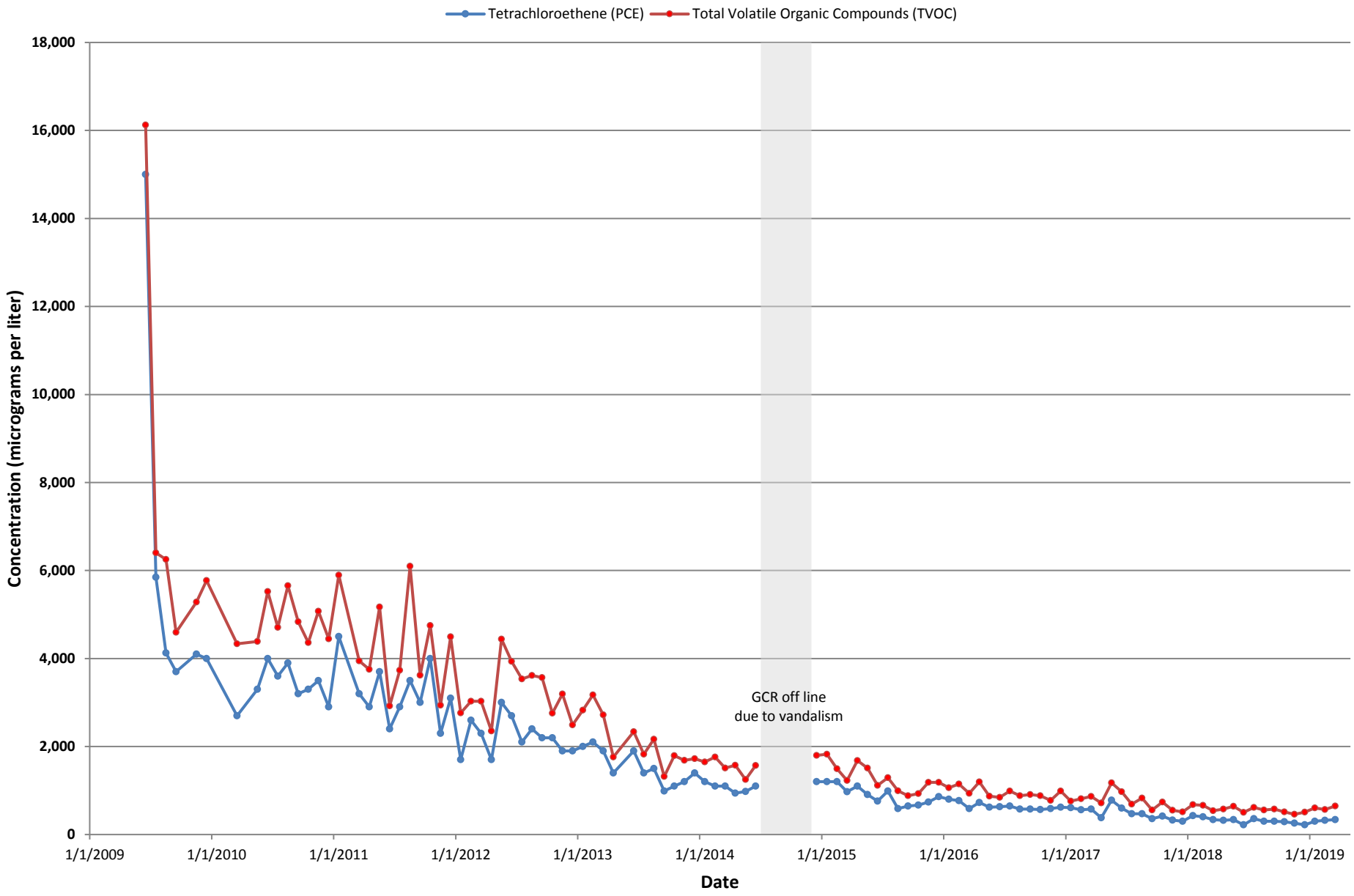


Figure 3
GCR Air Stripper Influent Concentrations
OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
First Quarter 2019



ATTACHMENT A

Operational Data Summaries

Attachment A, Table A-1
Hydraulic Containment Extraction Well Operational Summary
OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
First Quarter 2019

		Pump Runtime (hrs)	Total Volume Extracted (gal)	Operational Flow Rate[1] (gpm)	Average Flow Rate[2] (gpm)	Mass Removed (lbs)
EW-1	January 2019	0.02	0.33	0.27	0.00001	
	February 2019	0.04	1.12	0.47	0.00003	
	March 2019	0	0	0	0	
	1st Quarter 2019	0.06	1.45	0.37	0.00001	NA
EW-2	January 2019	0	0	0	0	
	February 2019	0[3]	0	0	0	
	March 2019	0	0	0	0	
	1st Quarter 2019	0	0	0	0	NA
EW-3	January 2019	1.05	123	1.95	0.003	
	February 2019	5.17	523	1.69	0.01	
	March 2019	0.14	14.4	1.71	0.0003	
	1st Quarter 2019	6.36	660	1.78	0.01	0.0001
EW-4	January 2019	5.01	824	2.74	0.02	
	February 2019	5.96	836	2.34	0.02	
	March 2019	12.2	880	1.20	0.02	
	1st Quarter 2019	23.2	2,541	2.09	0.02	0.002
EW-5	January 2019	9.73	2,770	4.74	0.06	
	February 2019	31.1	2,394	1.28	0.06	
	March 2019	11.9	3,358	4.69	0.08	
	1st Quarter 2019	52.7	8,521	3.57	0.07	0.01

Notes:

1. Operational flow rate calculated from total gallons processed in the month and hours the pump actually operated in the month.

2. Average flow rate is calculated from total gallons processed in the month and total hours in the month, regardless of pump uptime.

3. Hour meter indicated the pump motor experienced short and intermittent periods of being energized, but the pump itself did not discharge.

All extraction wells operate on/off based on water levels measured by pressure transducers installed in each well.

NA = no analytical data available, no mass calculation performed

hrs = hours

gal = gallons

gpm = gallons per minute

Attachment A, Table A-2
Vapor Phase GAC Operational Data Demonstrating Substantive Compliance with SCAQMD Regulations
First Quarter 2019

SCAQMD Limit		1000	145			3.6		
HRA Changeout Criteria					12[3]		90[3]	
Date	Influent Vapor Relative Humidity (%)	Influent Vapor Flow Rate (SCFM)	Influent Vapor Temperature (°F)	Influent PID Measurement (ppmv)	Intermediate PID Measurement (ppmv)	Effluent PID Measurement (ppmv)	Lead VGAC Efficiency[1] (%)	Overall VGAC Efficiency[2] (%)
1/3/2019	15.5	685	92.9	0.814	0.298	0.000	63	100
1/9/2019	15.6	685	96.4	0.000	0.000	0.000	100	100
1/16/2019	15.5	684	94.3	0.331	0.000	0.004	100	99
1/24/2019	15.7	676	95.7	0.000	0.000	0.110	100	100
1/30/2019	15.8	672	95.3	0.302	0.067	0.050	78	83
2/6/2019	15.8	663	89.3	0.323	0.021	0.000	93	100
2/15/2019	15.7	686	93.8	0.350	0.106	0.019	70	95
2/20/2019	15.7	678	92.1	0.409	0.000	0.000	100	100
2/27/2019	15.8	684	95.9	1.039	0.948	0.286	9	72
3/6/2019	15.6	678	92.7	0.675	0.199	0.224	71	67
3/13/2019	16.0	686	92.5	0.522	0.360	0.097	31	81
3/22/2019	16.0	676	93.5	0.957	0.115	0.085	88	91
3/27/2019	16.1	674	96.6	0.943	0.985	0.285	0	70
1st Quarter 2019	**15.8**	**679**	**93.9**	**0.487**	**0.238**	**0.089**	**51**	**82**
Compliance with SCAQMD Limits?		**YES**	**YES**			**YES**		
Carbon changeout required this quarter?					**NO**		**NO**	

Notes:

°F = degrees Fahrenheight
SCFM = Standard Cubic Feet per Minute
PID = photoionization detector
-- = not measured
VGAC = vapor phase granular activated carbon
GAC = granular activated carbon
ppmv = parts per million by volume as hexane
SCAQMD HRA = South Coast Air Quality Management District Health Risk Assessment

1. Lead VGAC efficiency is calculated by the PID readings between the influent and intermediate.
2. Overall VGAC efficiency is calculated by the PID readings between the influent and effluent.
3. These limits by the SCAQMD Health Risk Assessment are for determining when a carbon changeout is required. **BOTH** limits for intermediate PID concentration and the lead VGAC efficiency must be exceeded during the same sampling event for the changeout requirement to take effect.

Kyle King

From: Reed, Alesandra F. <reedaf@cdmsmith.com>
Sent: Wednesday, April 03, 2019 7:01 PM
To: Merry Coons; Kyle King
Cc: Jaime Dinello; Laura Millan; Bamer, Jeffrey
Subject: Omega GWCS GAC Assessment - January 2019
Attachments: Omega GWCS GAC Assessment_Jan 2019.xlsx

**** WARNING EXTERNAL SENDER ****

Team,

We evaluated the performance of the GAC used by the GWCS for the month of January 2019, relative to the conditions listed in the Health Risk Assessment (HRA) (CDM Smith 2015). These conditions must be met to remain in substantive compliance with SCAQMD requirements.

During the month of January, the GWCS system met the conditions presented in the HRA and was therefore substantively compliant:

- None of the toxic air contaminants listed in Condition #14 of the HRA were detected in the effluent above their respective effluent limit (see table below).
- The GWCS did not meet the two criteria for replacement of the lead GAC vessel (listed under Condition #12 of the HRA), and therefore no GAC replacement was required.
- No other carcinogenic air contaminants beyond those listed in Condition #14 of the HRA were detected in effluent above 10 ppbv, and therefore per Condition #16, no toxic risk assessment was required.

We also evaluated all the analytical and PID data and, based on our professional judgement, we do not recommend a voluntary changeout of the lead vessel GAC at this time.

GWCS GAC Assessment - Based on Samples Collected January 24, 2019					
	Concentration (ppbv)				
Parameter	**Influent**	**Midpoint**	**Effluent**	**HRA Effluent Limit**	**Below 2015 HRA Limit?**
1,1,1-Trichloroethane (TCA)	ND	ND	ND	3	Yes
1,1-Dichloroethane	ND	ND	ND	18	Yes
1,1-Dichloroethene	16	15	13	140	Yes
1,2-Dichloroethane	1.2	ND	ND	12	Yes
Benzene	ND	ND	ND	12	Yes
Carbon disulfide	ND	ND	ND	690	Yes
Chloroform	5.6	3.7	3.4	95	Yes
Freon 11	5.8	5.4	4.6	4200	Yes
Freon 113	22	17	17	510	Yes
Freon 12	ND	ND	ND	249	Yes
Isopropyl Alcohol (Isopropanol)	ND	ND	ND	29	Yes
o-Xylene	ND	ND	ND	3	Yes

Methyl ethyl ketone	ND	ND	ND	24	Yes
Methylene chloride	ND	ND	ND	6900	Yes
Tetrachloroethene (PCE)	68	ND	ND	28	Yes
TNMOC ref. to Heptane (MW=100)	190	39	66	4177	Yes
Toluene	2.1	ND	ND	42	Yes
Trichloroethene (TCE)	9.4	ND	ND	12	Yes
Vinyl chloride	ND	ND	ND	230	Yes

Please let us know if you have any questions or wish to discuss these data further.

Thanks!

Alesandra

Alesandra Reed, PE
Environmental Engineer
CDM Smith
555 17th Street, Suite 500, Denver, CO 80202
(cell) 352.222.2583, (office) 303.383.2475

Kyle King

From: Reed, Alesandra F. <reedaf@cdmsmith.com>
Sent: Wednesday, April 03, 2019 7:02 PM
To: Kyle King; Merry Coons
Cc: Jaime Dinello; Laura Millan; Bamer, Jeffrey
Subject: Omega GWCS GAC Assessment - February 2019
Attachments: Omega GWCS GAC Assessment_Feb 2019_ND.xlsx

**** WARNING EXTERNAL SENDER ****

Team,

We evaluated the performance of the GAC used by the GWCS for the month of February 2019, relative to the conditions listed in the Health Risk Assessment (HRA) (CDM Smith 2015). These conditions must be met to remain in substantive compliance with SCAQMD requirements.

During the month of February, the GWCS system met the conditions presented in the HRA and was therefore substantively compliant:

- None of the toxic air contaminants listed in Condition #14 of the HRA were detected in the effluent above their respective effluent limit (see table below).
- The GWCS did not meet the two criteria for replacement of the lead GAC vessel (listed under Condition #12 of the HRA), and therefore no GAC replacement was required.
- No other carcinogenic air contaminants beyond those listed in Condition #14 of the HRA were detected in effluent above 10 ppbv, and therefore per Condition #16, no toxic risk assessment was required.

We also evaluated all the analytical and PID data and, based on our professional judgement, we do not recommend a voluntary changeout of the lead vessel GAC at this time.

GWCS GAC Assessment - Based on Samples Collected February 20, 2019					
	Concentration (ppbv)				
Parameter	**Influent**	**Midpoint**	**Effluent**	**HRA Effluent Limit**	**Below 2015 HRA Limit?**
1,1,1-Trichloroethane (TCA)	ND	ND	ND	3	Yes
1,1-Dichloroethane	ND	ND	ND	18	Yes
1,1-Dichloroethene	18	12	11	140	Yes
1,2-Dichloroethane	1.7	1.4	ND	12	Yes
Benzene	ND	ND	ND	12	Yes
Carbon disulfide	ND	ND	ND	690	Yes
Chloroform	6.9	4.1	3.6	95	Yes
Freon 11	8	6.9	5.9	4200	Yes
Freon 113	25	18	21	510	Yes
Freon 12	ND	ND	ND	249	Yes
Isopropyl Alcohol (Isopropanol)	7.7	ND	ND	29	Yes
o-Xylene	ND	ND	ND	3	Yes

Methyl ethyl ketone	ND	ND	ND	24	Yes
Methylene chloride	ND	ND	ND	6900	Yes
Tetrachloroethene (PCE)	79	ND	ND	28	Yes
TNMOC ref. to Heptane (MW=100)	170	54	54	4177	Yes
Toluene	ND	ND	ND	42	Yes
Trichloroethene (TCE)	11	ND	ND	12	Yes
Vinyl chloride	ND	ND	ND	230	Yes

Please let us know if you have any questions or wish to discuss these data further.

Thanks!

Alesandra

Alesandra Reed, PE
Environmental Engineer
CDM Smith
555 17th Street, Suite 500, Denver, CO 80202
(cell) 352.222.2583, (office) 303.383.2475

Kyle King

From: Reed, Alesandra F. <reedaf@cdmsmith.com>
Sent: Thursday, May 02, 2019 10:25 AM
To: Kyle King; Laura Millan; Merry Coons
Subject: GWCS GAC Assessment - March 2019
Attachments: Omega GWCS GAC Assessment_March 2019.xlsx

**** WARNING EXTERNAL SENDER ****

Team,

We evaluated the performance of the GAC used by the GWCS for the month of March 2019, relative to the conditions listed in the Health Risk Assessment (HRA) (CDM Smith 2015). These conditions must be met to remain in substantive compliance with SCAQMD requirements.

During the month of March, the GWCS system met the conditions presented in the HRA and was therefore substantively compliant:

- None of the toxic air contaminants listed in Condition #14 of the HRA were detected in the effluent above their respective effluent limit (see table below).
- The GWCS did not meet the two criteria for replacement of the lead GAC vessel (listed under Condition #12 of the HRA), and therefore no GAC replacement was required.
- No other carcinogenic air contaminants beyond those listed in Condition #14 of the HRA were detected in effluent above 10 ppbv, and therefore per Condition #16, no toxic risk assessment was required.

We also evaluated all the analytical and PID data and, based on our professional judgement, we do not recommend a voluntary changeout of the lead vessel GAC at this time.

GWCS GAC Assessment - Based on Samples Collected March 13, 2019					
	Concentration (ppbv)				
Parameter	**Influent**	**Midpoint**	**Effluent**	**HRA Effluent Limit**	**Below 2015 HRA Limit?**
1,1,1-Trichloroethane (TCA)	ND	ND	ND	3	Yes
1,1-Dichloroethane	ND	ND	ND	18	Yes
1,1-Dichloroethene	17	8.9	8.4	140	Yes
1,2-Dichloroethane	1.1	ND	ND	12	Yes
Benzene	ND	ND	ND	12	Yes
Carbon disulfide	ND	ND	ND	690	Yes
Chloroform	5.2	2.5	2.7	95	Yes
Freon 11	5.6	3.7	3.3	4200	Yes
Freon 113	26	9.3	11	510	Yes
Freon 12	ND	ND	ND	249	Yes
Isopropyl Alcohol (Isopropanol)	ND	ND	ND	29	Yes
o-Xylene	ND	ND	ND	3	Yes
Methyl ethyl ketone	ND	ND	ND	24	Yes
Methylene chloride	ND	ND	ND	6900	Yes

Tetrachloroethene (PCE)	65	ND	ND	28	Yes
TNMOC ref. to Heptane (MW=100)	200	39	55	4177	Yes
Toluene	ND	ND	ND	42	Yes
Trichloroethene (TCE)	11	ND	ND	12	Yes
Vinyl chloride	ND	ND	ND	230	Yes

ND: Not detected above the quantitation limit

Please let us know if you have any questions or wish to discuss these data further.

Thanks!
Alesandra

Alesandra Reed, PE
Environmental Engineer
CDM Smith
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ATTACHMENT B

Other Data Collected This Quarter

OU-1 On-Site Soil Remedy Dual Phase Extraction Well

Observation Well/Piezometer

Former Omega Chemical Property Boundary

OU-1 Boundary

ddms

de maximis, inc.

Reviewed By: LEM
Drawn By: KM
Date: 5/3/2019

Attachment B, Figure B-1
Other Groundwater Data Locations
Omega Chemical Superfund Site

Attachment B, Table B-1
Other Groundwater Elevation Data Collected This Quarter
Omega Chemical Superfund Site
1st Quarter 2019

Well No.	Top of Casing Elevation (feet MSL)	Screen Interval (feet MSL)	Date	Depth To Water (feet btoc)	Groundwater Elevation (feet MSL)
PZ-9	197.97	108.49 - 128.49	2/12/2019	84.70	113.27
OW11	200.06	100.52 - 120.52	2/11/2019	87.67	112.39
OW13B	210.89	71.37 - 81.37	2/13/2019	99.62	111.27
DPE-3	206.76	109.32 - 169.32	2/11/2019	92.31	114.45
DPE-4	202.97	105.50 - 165.50	2/11/2019	91.86	111.11
DPE-5	201.77	104.36 - 164.36	2/11/2019	92.00	109.77
DPE-8	204.87	107.46 - 167.46	2/11/2019	90.73	114.14
DPE-9	199.06	101.59 - 161.59	2/12/2019	85.26	113.80
VE-7D	200.11	102.03 - 162.03	2/13/2019	92.73	107.38
VE-10D	198.8	100.66 - 160.66	2/12/2019	93.34	105.46

Notes:
Elevation data per California Coordinate System NADV88
btoc = below top of casing
Dry = No water detected, water detected below the screen interval, or water detected at or near total depth of well
MSL = mean sea level

Attachment B, Table B-2
Other Groundwater Analytical Data Collected This Quarter
Omega Chemical Superfund Site
First Quarter 2019

Well ID / Screen Interval[1]	Sample Date	Sample Type	PCE	TCE	1,4DIOX	1,1,1-TCA	1,1-DCE	1,2-DCA	Freon 113	Freon 11	Freon 12
PZ-3 (69.8 - 89.8)	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry
PZ-9 (70 - 90)	2/12/2019	ORIG	410	41	93 J-	1.0 U	78	9.8	140	44	1.0 UJ
OW11 (80 - 100)	2/11/2019	ORIG	210	43	0.49 UJ	1.0 U	27	1.0 U	46	16	1.0 UJ
OW13B (130 - 140)	2/13/2019	ORIG	21	1.0 U	0.48 U	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 UJ
DPE-3 (40 - 100)	2/11/2019	ORIG	130 J-	6.1	4.7 J-	0.32 J	2.9	2.8	64	8.3	1.0 UJ
DPE-4 (40 - 100)	2/11/2019	ORIG	440 J-	46	27 J-	1.6 J	19	4.1	290	10	2.0 UJ
DPE-5 (40 - 100)	2/11/2019	ORIG	88 J-	8.7	2.0 J-	1.0 U	32	1.0 U	9.3	6.4	1.0 UJ
DPE-8 (40 - 100)	2/11/2019	ORIG	16 J-	2.6	2.2 J-	1.0 U	0.56 J	1.0 U	2.8 J	2.1	1.0 UJ
DPE-9 (40 - 100)	2/12/2019	ORIG	200 J-	13	30 J-	1.0 U	20	3.0	28	11	1.0 UJ
VE-7D (40 - 100)	2/13/2019	ORIG	71	31	0.49 UJ	1.0 U	15	1.0 U	15	5.4	1.0 UJ
VE-10D (40 - 100)	2/12/2019	ORIG	590 J-	64	21 J-	2.0 U	90	6.4	130	40	2.0 UJ

Notes:

1. The screen interval units are feet below top of casing.

All results are in micrograms per liter (ug/L)

ORIG = primary sample

PCE = Tetrachloroethene; TCE = Trichloroethene; TCA = Trichloroethane; DCE = Dichloroethene;

Freon 113 = 1,1,2-Trichloro-1,2,2-trifluoroethane; Freon 11 = Trichlorofluoromethane;

Freon 12 = Dichlorodifluoromethane; DCA = Dichloroethane; 1,4DIOX = 1,4-dioxane

Dry = No water detected, water detected below the screen interval, or insufficient water to sample

U = not detected above reporting limit listed

UJ = analyte was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

J = results are qualified as estimated

J- = result is an estimated quantity, but the result may be biased low. See data validation report in Attachment C.

Attachment B, Table B-3
Other Groundwater Pumping Data Collected This Quarter
Omega Chemical Superfund Site
First Quarter 2019

		Pump Runtime (hrs)	Total Volume Extracted (gal)	Operational Flow Rate[1] (gpm)	Average Flow Rate[2] (gpm)	Mass Removed (lbs)
DPE-3	January 2019	49.8	7,983	2.67	0.18	
	February 2019	197	22,344	1.89	0.55	
	March 2019	200	24,698	2.06	0.55	
	1st Quarter 2019	446	55,024	2.21	0.43	0.09
DPE-4	January 2019	115	15,924	2.31	0.36	
	February 2019	150	21,562	2.39	0.53	
	March 2019	153	21,127	2.31	0.47	
	1st Quarter 2019	418	58,613	2.34	0.45	0.38
DPE-5	January 2019	165	20,328	2.06	0.46	
	February 2019	146	17,653	2.01	0.44	
	March 2019	168	21,049	2.08	0.47	
	1st Quarter 2019	479	59,030	2.05	0.45	0.07
DPE-8	January 2019	190	15,608	1.37	0.35	
	February 2019	186	15,728	1.41	0.39	
	March 2019	207	16,815	1.35	0.38	
	1st Quarter 2019	583	48,152	1.38	0.37	0.01
DPE-9	January 2019	294	61,050	3.47	1.37	
	February 2019	257	47,526	3.08	1.18	
	March 2019	304	53,585	2.94	1.20	
	1st Quarter 2019	855	162,161	3.16	1.25	0.39

Attachment B, Table B-3
Other Groundwater Pumping Data Collected This Quarter
Omega Chemical Superfund Site
First Quarter 2019

		Pump Runtime (hrs)	Total Volume Extracted (gal)	Operational Flow Rate[1] (gpm)	Average Flow Rate[2] (gpm)	Mass Removed (lbs)
VE-7D	January 2019	282	34,826	2.06	0.78	
	February 2019	247	30,141	2.03	0.75	
	March 2019	266	30,972	1.94	0.69	
	1st Quarter 2019	795	95,938	2.01	0.74	0.10
VE-10D	January 2019	588	71,165	2.02	1.59	
	February 2019	545	65,492	2.00	1.62	
	March 2019	636	72,402	1.90	1.62	
	1st Quarter 2019	1,768	209,058	1.97	1.61	1.55

Notes:

1. Operational flow rate calculated from total gallons processed in the month and hours the pump actually operated in the month.

2. Average flow rate is calculated from total gallons processed in the month and total hours in the month, regardless of pump uptime.

All extraction wells operate on/off based on water levels measured by pressure transducers installed in each well.

hrs = hours

gal = gallons

gpm = gallons per minute

ATTACHMENT C

Laboratory Analytical Results and Data Verification Reports

Data Quality Assessment
OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
First Quarter 2019

Sampling Event	Sampling Rationale	Frequency of Analysis	Matrix	Lab WO#	Sampling Date	Field Quality Control Samples	Data Review Level	Review of Laboratory QC Samples	Data Usability
SDLAC Quarterly Sampling									
Q1	Quarterly sampling of the treatment plant effluent is required per Los Angeles County Sanitation District Industrial Waste Discharge Permit Number 20039.	Quarterly	Water	233700	2/14/2019 - 2/15/2019	Equipment blanks are not needed as sampling equipment is not used. Trip blanks and field duplicates are not needed for this compliance sampling.	Stage 2A	MB, LCS/LCSD, MS/MSD, surrogates	Results for pH and dissolved sulfide are qualified as estimated (J,UJ). These parameters are 'analyze immediately' parameters. Field measurements should be used. Results for all phenols compounds, 1,4-dioxane, 1,2-dichlorobenzene, 1,3-dichlorobenzene, 1,4-dichlorobenzene, 2-chlorophenol, benzidine, benzyl alcohol, hexachlorobutadiene, hexachlorocyclopentadiene, hexachloroethane, n-nitrosodimethylamine, and phenol in GRAB were qualified as estimated (J, UJ) due to unacceptable LCS/LCSD %Rs, and/or surrogate recoveries.
GWTS Process Sampling									
SCAQMD Compliance									
Q1	Sampling of the influent, intermediate, and effluent sample ports of the VPGAC vessels is required monthly for the SCAQMD permit.	Monthly	Air	1901523R1	1/24/2019	Equipment blanks are not needed as sampling equipment is not used to collect the vapor samples. Trip blanks are not typically submitted with Summa canisters. Field duplicates are not needed for this compliance sampling.	Stage 2B	MB, LCS/LCSD, surrogates	The TNMOC value reported should not be used as TVOC as it is not the sum of the reported concentrations. No other qualification of sample results was warranted.
				1902485	2/20/2019				The TNMOC value reported should not be used as TVOC as it is not the sum of the reported concentrations. No other qualification of sample results was warranted.
				1903363	3/13/2019				The TNMOC value reported should not be used as TVOC as it is not the sum of the reported concentrations. No other qualification of sample results was warranted.

Data Quality Assessment
OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
First Quarter 2019

Sampling Event	Sampling Rationale	Frequency of Analysis	Matrix	Lab WO#	Sampling Date	Field Quality Control Samples	Data Review Level	Review of Laboratory QC Samples	Data Usability
Treatment System Process Sampling									
Q1	Analysis of the influent and effluent samples (before and after the air stripper) from the GWTS are needed to assess the performance of the treatment equipment.	Monthly (monthly for the first year of operation for the influent sample, frequency may change after 1st year); monthly for effluent sample.	Water	231564	1/24/2019	Equipment blanks are not needed as sampling equipment is not used to collect these samples from the sample ports. Field duplicates are not needed for this treatment assessment sampling. Trip blanks were analyzed with these samples and all trip blank results were nondetect.	Stage 2A	MB, LCS/LCSD, MS/MSD, surrogates	The result for acetone in OC_SP220B_EFF_012419 was qualified as estimated (J+) due to a high LCS recovery. The result for 1,4-dioxane in OC_SP220B_EFF_012419 was qualified estimated (J-) due to unacceptable surrogate and LCS recoveries. The result may be biased low. No other data required qualification a result of the review effort.
				234227	2/20/2019				All results for OC_TB_022019 were qualified estimated (J-,UJ) and may be biased low due to significant headspace in the vial used for analysis. The result for 1,4-dioxane in OC_SP220B_EFF_022019 was qualified estimated (J-) due to unacceptable surrogate and LCS recoveries. The result may be biased low. No other qualification of sample results was warranted.
				236408	3/13/2019				Results for dichlorodifluoromethane in all samples were qualified as estimated (UJ) due to a low LCS recovery. The results may be biased low. The result for 1,4-dioxane in OC_SP220B_EFF_031319 was qualified estimated (J-) due to low surrogate and LCS recoveries. The result may be biased low. Results for IPA were qualified as estimated (UJ) because no LCS analysis was performed to verify the laboratory could acceptably recover the analyte. No other qualification of sample results was warranted.

DATA VALIDATION

FOR

SEMI-ANNUAL GROUND WATER MONITORING
OMEGA CHEMICAL SITE
WHITTIER CALIFORNIA

ORGANIC ANALYSIS DATA
Volatile Organics and 1,4-Dioxane in Water

Laboratory Job Nos.

440-233274-1
440-233427-1

Analyses Performed By:

Test America
Irvine, CA

For:

de maximis, inc.
1322 Scott Street
Suite 104
San Diego, CA 92106

Data Validation By:

ddms, inc.
St. Paul, Minnesota 55108

April 29, 2019

1547-3139C/jlr
Omega\GW.docx

EXECUTIVE SUMMARY

Validation of the volatile organics and semi-volatile organic (1,4-dioxane only) analysis data prepared by Test America-Irvine for eight ground water samples, one rinse blank (RB) and one trip blank (TB) from the Omega Chemical Site has been completed by de maximis Data Management Solutions, Inc. (ddms). Stage 4 validation was performed on one sample (**bolded below**), which represents 10% of the total number of ground water samples received and analyzed by Test America. A Stage 2B review was performed on the remaining samples. The data were reported by the laboratory under Laboratory Job Nos. 440-233274-1 and 440-233427-1. The following samples were reported:

SDG	Sample ID	VOCs	1,4-Dioxane
440-233274-1	OC_GW_OW-1B_20190211N	X	
	OC_GW_OW-3B_20190211	X	X
	OC_GW_OW-10_20190212	X	X
	OC_GW_OW-10_20190212K	X	X
	OC_GW_OW-12_20190212	X	X
	OC_GW_OW-1B_20190212	X	X
	OC_GW_OW-9_20190212	X	X
	OC_GW_OW-9_20190212K	X	X
	OC_GW_TB_20190212	X	
440-233427-1	OC_GW_OW-8B_20190213	X	X

Based on the validation effort, the following data qualifiers were applied:

- The results for dichlorodifluoromethane, acetone, and 1,2-dibromo-3-chloropropane in all samples were qualified as estimated (UJ).
- The results for methylene chloride in OC_GW_OW-3B_20190211, OC_GW_OW-9_20190212, OC_GW_OW-9_20190212K and OC_GW_OW-12_20190212 were qualified as not detected (U) at the RL or reported value, whichever is greater.
- The results for 1,4-dioxane in all samples were qualified as estimated (J-, UJ) .
- The volatile organic tentatively identified compounds (TICs) at retention times (RTs) of approximately 1.4 and 1.5 minutes (carbon dioxide), 5.2 minutes (1,2-dichloroethane-d_4 surrogate) and 8.1 minutes (tetrachloroethene) were removed by the validator.

All other results were determined to be valid as reported. A brief explanation of each reason for the actions taken above may be found in the Overall Assessment (Section IV). Details of the validation findings and conclusions based on review of the results for each quality control requirement are provided in the remaining sections of this report.

Documentation issues are discussed in Section II. This report should be considered part of the data package for all future distributions of the data.

INTRODUCTION

Analyses were performed in accordance with USEPA SW846 Method 8260B and Method 8270C Selected Ion Monitoring (SIM). The laboratory provided a 'Level 4' data package for review.

ddms' validation was performed, to the extent possible, in conformance with the "Omega Chemical Superfund Site Sampling and Analysis Plan for Remedial Action/Remedial Design October 4, 2010", ddms SOPs ECS-002 and ECS-003, and the analytical methods. Professional judgment was applied as necessary and appropriate.

The data validation process is intended to evaluate data on a technical basis rather than a contract compliance basis for chemical analyses conducted under the referenced methods. It is assumed that the data package represents the best efforts of the laboratory and has already been subjected to adequate and sufficient quality review prior to submission for validation.

During the validation process, laboratory data are verified against all available supporting documentation. Based on the findings of the evaluation, qualifier codes may be added by the data validator. Validated results are, therefore, either qualified or unqualified. Unqualified results mean that the reported values may be used without reservation. Final validated results are annotated with the following codes as defined by the National Functional Guidelines:

U The analyte was analyzed for but was not detected above the level of the reported sample quantitation limit.

J The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

J+ The result is an estimated quantity, but the result may be biased high.

J- The result is an estimated quantity, but the result may be biased low.

NJ The analyte has been "tentatively identified" or "presumptively" as present and the associated numerical value is the estimated concentration in the sample.

UJ The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

R The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

All data users should note two facts. First, the "R" qualifier means that the laboratory-reported value is unusable. In other words, due to significant quality control problems, the analysis is invalid and provides no information as to whether the analyte is present or not. Rejected values should not appear on data tables because they cannot be relied upon, even as a last resort. Second, no concentration is guaranteed to be accurate even if all associated quality control is acceptable. Strict quality control conformance serves only to increase confidence in reported results; any analytical result will always contain some error.

The data user is also cautioned that the validation effort is based on the raw data printouts as provided by the laboratory. Software manipulation cannot be routinely detected during validation; unless otherwise stated in the report, these kinds of issues are outside the scope of this review.

I. Holding Times, Preservation and Sample Integrity

Copies of the applicable chain of custody (COC) records were included in the data packages documenting sample collection dates of February 11, 12, and 13, 2019. The samples were received at the laboratory on February 12, and 13, 2019.

The temperatures of the coolers upon receipt at the laboratory were within acceptance limits (acceptable range is 4 ^{o}C ±2 ^{o}C). Documentation of proper pH was included in the data packages. All samples were prepared and analyzed within method holding times with the following exceptions for 1,4-dioxane analysis:

- OC_GW_OW-10_20190212K and OC_GW_OW-12_20190212 – extracted two days outside hold time.
- OC_GW_OW-9_20190212 and OC_GW_OW-9_20190212K extracted one day outside hold time.

The results for 1,4-dioxane were qualified as estimated (J-, UJ) because they were extracted outside the seven day hold time.

II. Documentation

The following documentation issues were observed during the validation effort:

- The percent recoveries (%R) for isopropanol were not reported on the summary forms. A review of the raw data indicated isopropanol was spiked into all quality control (QC) samples. The validator manually calculated the recoveries and relative percent differences (RPDs) and found them all to be acceptable (70-130%R, RPD<30).

- The volatile organic tentatively identified compounds (TICs) at retention times (RTs) of approximately 1.4 and 1.5 minutes (carbon dioxide), 5.2 minutes (1,2-dichloroethane-d_4 surrogate) and 8.1 minutes (tetrachloroethene) were removed by the validator because they are not true sample components.

At the discretion of the data user, the laboratory may be contacted and requested to revise the laboratory data packages.

The remainder of this report is divided into two sections, one reporting the review effort for each of the parameters and the other, the Overall Assessment, summarizing the reason for the qualifications made to sample results as a result of the validation effort. The table below documents the Quality Control (QC) parameters reviewed. Only those quality excursions resulting in qualified data are discussed below. Quality control excursions having no impact to sample results are not discussed. Where a result was qualified J+ or J- and J, the J qualifier takes precedence. Where a result was qualified

biased high and low for differing data quality excursions, the final qualifier is J with an indeterminate bias.

III. VOCs

Review Element	Acceptable?
GC/MS Instrument Tunes	Y
Calibration (Initial Calibration [IC], IC Verification [ICV], Continuing Calibration [CC])	N
Laboratory and Field Blanks	N
Surrogates	Y
Laboratory Control Samples (LCS)/ LCS Duplicates (LCSD)	N
Field Duplicates	Y
Matrix Spike (MS)/Matrix Spike Duplicate (MSD)	N
Internal Standard Responses	Y
Compound Identification	Y

Calibration

Summary results for all initial calibrations (IC) were reported in support of sample analyses. Although the standards included more compounds than were specifically applicable to these analyses, all project-specified target analytes were included on the IC summary form. For the relevant target analytes, the reported average relative response factors (RRFs) were greater than the evaluation criterion (>0.05) and the relative standard deviations (RSDs) were acceptable (<20% RSD). An ICV was analyzed immediately following the IC and was acceptable (<30%D) with the following exceptions:

Instrument	Compound	%D	Affected Sample(s)
GCMS59 (2/14/19)	Dichlorodifluoromethane	37	OC_GW_OW-1B_20190211N OC_GW_OW-3B_20190211 OC_GW_OW-10_20190212 OC_GW_OW-10_20190212K OC_GW_OW-12_20190212 OC_GW_OW-1B_20190212 OC_GW_OW-9_20190212 OC_GW_OW-9_20190212K OC_GW_TB_20190212

Samples results were qualified as estimated (UJ) due to unacceptable percent difference in the ICV.

Summary forms were provided for continuing calibration (CC) standards, as appropriate. Reported RRFs and percent difference (%D) values were acceptable except

as summarized below. Where excursions represented an increase in response sensitivity and the compound was not detected, no data required qualification in these cases and are not detailed below.

Instr.	CC Date	Compound	%D	Affected Samples
GCMS59	2/22/2019	Acetone	30	OC_GW_OW-1B_20190211N OC_GW_OW-3B_20190211 OC_GW_OW-10_20190212 OC_GW_OW-10_20190212K OC_GW_OW-12_20190212 OC_GW_OW-1B_20190212 OC_GW_OW-9_20190212 OC_GW_OW-9_20190212K OC_GW_TB_20190212 OC_GW_OW-8B_20190213
		1,2-Dibromo-3-Chloropropane	29	

Sample results were qualified as estimated (UJ) due to low response in the CC.

Blanks

No target compounds were detected in the rinse blank, trip blank or method blanks, with the exceptions noted below:

Blank	Conc (ug/L)	Compound	Affected Sample(s)
OC_GW_TB_20190212	0.93	Methylene chloride	OC_GW_OW-3B_20190211 OC_GW_OW-9_20190212 OC_GW_OW-9_20190212K OC_GW_OW-12_20190212

Sample results were qualified as not detected (U) at the reporting limit (RL) or reported value, whichever is greater because the sample concentration was less than five times the concentration in the associated blank.

Matrix Spike/Matrix Spike Duplicate (MS/MSD)

Parent Sample	Compound	MS%R	MSD %R	Affected Sample(s)
OC_GW_OW-9_20190212	Dichlorodifluoromethane	65	68	OC_GW_OW-3B_20190211 OC_GW_OW-10_20190212 OC_GW_OW-10_20190212K OC_GW_OW-12_20190212 OC_GW_OW-1B_20190212 OC_GW_OW-9_20190212 OC_GW_OW-9_20190212K

Sample results were qualified as estimated (UJ) due to low MS/MSD recoveries.

Laboratory Control Sample (LCS/LCS Duplicate)

All percent recoveries were acceptable (70-130%R) with the following exceptions:

LCS	Compound	LCS%R	Affected Sample(s)
440-530231	Dichlorodifluoromethane	67	OC_GW_OW-3B_20190211 OC_GW_OW-10_20190212 OC_GW_OW-10_20190212K OC_GW_OW-12_20190212 OC_GW_OW-1B_20190212 OC_GW_OW-9_20190212 OC_GW_OW-9_20190212K OC_GW_OW-8B_20190213 OC_GW_TB_20190212

Sample results were qualified as estimated (UJ) due to low LCS recoveries.

Compound Identification

The tentatively identified compounds (TICs) at retention times (RTs) approximately 1.4 and 1.5 minutes (carbon dioxide), 5.2 (1,2-dichloroethane-d4 surrogate) and 8.1 (tetrachloroethene) were removed by the validator because they are not true sample components

IV. SVOCs – 1,4-Dioxane only

Review Element	Acceptable?
GC/MS Instrument Tunes	Y
Calibration - IC, ICV, CC	Y
Laboratory and Field Blanks	Y
Surrogates	N
LCS/LCSD	Y
Field Duplicates	Y
MS/MSD	NA
Internal Standard Responses	Y
Compound Identification	Y

Surrogates

The results for 1,4-dioxane in all samples except OC_GW_OW-9_20190212 were qualified as estimated (J-, UJ) due to low surrogate recoveries (70-130%R).

The 1,4-dioxane-d_8 surrogate in OC_GW_OW-9_20190212 was diluted out and no qualification of sample results was made.

V. Overall Assessment

Based on the validation effort, the following qualifiers were applied:

- The results for 1,4-dioxane in OC_GW_OW-10_20190212K, OC_GW_OW-12_20190212, OC_GW_OW-9_20190212 and OC_GW_OW-9_20190212K were qualified as estimated (J-, UJ) because they were extracted outside the seven day hold time.

- The results for dichlorodifluoromethane in OC_GW_OW-1B_20190211N, OC_GW_OW-3B_20190211, OC_GW_OW-10_20190212, OC_GW_OW-10_20190212K, OC_GW_OW-12_20190212, OC_GW_OW-1B_20190212, OC_GW_OW-9_20190212, OC_GW_OW-9_20190212K and OC_GW_TB_20190212 were qualified as estimated (UJ) due to unacceptable %D in the ICV.

- The results for acetone and 1,2-dibromo-3-chloropropane in all samples were qualified as estimated (UJ) due to low responses in the CC.

- The results for methylene chloride in OC_GW_OW-3B_20190211, OC_GW_OW-9_20190212, OC_GW_OW-9_20190212K and OC_GW_OW-12_20190212 were qualified as not detected (U) at the RL or reported value, whichever is greater, due to associated trip blank contamination.

- The results for dichlorodifluoromethane in OC_GW_OW-3B_20190211, OC_GW_OW-10_20190212, OC_GW_OW-10_20190212K, OC_GW_OW-12_20190212, OC_GW_OW-1B_20190212, OC_GW_OW-9_20190212 and OC_GW_OW-9_20190212K were qualified as estimated (UJ) due to low MS/MSD recoveries.

- The results for dichlorodifluoromethane in all samples were qualified as estimated (UJ) due to low LCS recoveries.

- The results for 1,4-dioxane in all samples except OC_GW_OW-9_20190212 were qualified as estimated (J-, UJ) due to low surrogate recoveries.

- The volatile organic tentatively identified compounds (TICs) at retention times (RTs) of approximately 1.4 and 1.5 minutes (carbon dioxide), 5.2 minutes (1,2-dichloroethane-d_4 surrogate) and 8.1 minutes (tetrachloroethene) were removed by the validator because they are not true sample components.

All other results were determined to be valid as reported. This validation report should be considered part of the data package for all future distributions of the data.

ATTACHMENT A

DATA SUMMARY FORMS
440-233274-1
440-233427-1

Data Summary Form
Groundwaters
Omega Chemical
(ug/L)

	Field Sample ID	OC_GW_OW-10_20190212		OC_GW_OW-10_20190212K		OC_GW_OW-12_20190212	
	Sample Type	N		FD		N	
	Lab Sample ID	440-233274-4		440-233274-5		440-233274-8	
RL	Dilution Factor	1		1		1, 20, 100	
1	1,1,1,2-Tetrachloroethane	1	U	1	U	20	U
1	1,1,1-Trichloroethane (TCA)	1	U	1	U	**210**	
1	1,1,2,2-Tetrachloroethane	1	U	1	U	20	U
1	1,1,2-Trichloroethane	1	U	1	U	20	U
1	1,1-Dichloroethane	1	U	1	U	20	U
1	1,1-Dichloroethene	**13**		**15**		**340**	
1	1,1-Dichloropropene	1	U	1	U	20	U
1	1,2,3-Trichlorobenzene	1	U	1	U	20	U
1	1,2,3-Trichloropropane	1	U	1	U	20	U
1	1,2,4-Trichlorobenzene	1	U	1	U	20	U
1	1,2,4-Trimethylbenzene	1	U	1	U	20	U
5	1,2-Dibromo-3-chloropropane	5	UJ	5	**UJ**	100	**UJ**
1	1,2-Dibromoethane (EDB)	1	**U**	1	U	20	U
1	1,2-Dichlorobenzene	1	U	1	U	**7.9**	**J**
1	1,2-Dichloroethane	1	U	1	U	**13**	**J**
1	1,2-Dichloropropane	1	U	1	U	20	U
1	1,3,5-Trimethylbenzene	1	U	1	U	20	U
1	1,3-Dichlorobenzene	1	U	1	U	20	U
1	1,3-Dichloropropane	1	U	1	U	20	U
1	1,4-Dichlorobenzene	1	U	1	U	20	U
1	2,2-Dichloropropane	1	U	1	U	20	U
1	2-Chlorotoluene	1	U	1	U	20	U
1	4-Chlorotoluene	1	U	1	U	20	U
10	Acetone	10	**UJ**	10	**UJ**	200	**UJ**
0.5	Benzene	0.5	U	0.5	U	10	U
1	Bromobenzene	1	U	1	U	20	U
1	Bromochloromethane	1	U	1	U	20	U
1	Bromodichloromethane	1	U	1	U	20	U
1	Bromoform	1	U	1	U	20	U
1	Bromomethane	1	U	1	U	20	U
0.5	Carbon tetrachloride	0.5	U	0.5	U	10	U
1	Chlorobenzene	1	U	1	U	20	U
1	Chloroethane	1	U	1	U	20	U
1	Chloroform	1	U	1	U	**270**	
1	Chloromethane	1	U	1	U	20	U
1	cis-1,2-Dichloroethene	1	U	1	U	20	U
0.5	cis-1,3-Dichloropropene	0.5	U	0.5	U	10	U
1	Dibromochloromethane	1	U	1	U	20	U
1	Dibromomethane	1	U	1	U	20	U
1	Ethylbenzene	1	U	1	U	20	U
1	Freon 11	**2**		**2.4**		**140**	
5	Freon 113	**3.5**	**J**	**3.8**	**J**	**3900**	
1	Freon 12	1	**UJ**	1	**UJ**	20	**UJ**
1	Hexachlorobutadiene	1	U	1	U	20	U
250	Isopropyl Alcohol (Isopropanol)	250	U	250	U	5000	U
1	Isopropylbenzene	1	U	1	U	20	U
1	m,p-Xylene	1	U	1	U	20	U
1	Methyl Tert-Butyl Ether	1	U	1	U	20	U
5	Methylene chloride	5	U	5	U	100	U
1	Naphthalene	1	U	1	U	20	U
1	N-butylbenzene	1	U	1	U	20	U
1	o-Xylene	1	U	1	U	20	U
1	p-Isopropyltoluene	1	U	1	U	20	U
1	Propylbenzene	1	U	1	U	20	U
1	sec-Butylbenzene	1	U	1	U	20	U
1	Styrene	1	U	1	U	20	U
1	tert-Butylbenzene	1	U	1	U	20	U
1	Tetrachloroethene (PCE)	**19**		**22**		**5600**	
1	Toluene	1	U	1	U	**17**	**J**
1	trans-1,2-Dichloroethene	1	U	1	U	20	U
0.5	trans-1,3-Dichloropropene	0.5	U	0.5	U	10	U
1	Trichloroethene (TCE)	**1.3**		**1.6**		**1000**	
0.5	Vinyl chloride	0.5	U	0.5	U	10	U
0.5	1,4-Dioxane	**0.66**	**J-**	**0.12**	**J-**	**8.7**	**J-**

Data Summary Form
Groundwaters
Omega Chemical
(ug/L)

	Field Sample ID	OC_GW_OW-1B_20190211N		OC_GW_OW-1B_20190212		OC_GW_OW-3B_20190211	
	Sample Type	RB		N		N	
	Lab Sample ID	440-233274-3		440-233274-2		440-233274-1	
RL	Dilution Factor	1		1		1	
1	1,1,1,2-Tetrachloroethane	1	U	1	U	1	U
1	1,1,1-Trichloroethane (TCA)	1	U	1	U	1	U
1	1,1,2,2-Tetrachloroethane	1	U	1	U	1	U
1	1,1,2-Trichloroethane	1	U	1	U	1	U
1	1,1-Dichloroethane	1	U	1	U	1	U
1	1,1-Dichloroethene	1	U	1	U	1	U
1	1,1-Dichloropropene	1	U	1	U	1	U
1	1,2,3-Trichlorobenzene	1	U	1	U	**0.52**	**J**
1	1,2,3-Trichloropropane	1	U	1	U	1	U
1	1,2,4-Trichlorobenzene	1	U	1	U	1	U
1	1,2,4-Trimethylbenzene	1	U	1	U	1	U
5	1,2-Dibromo-3-chloropropane	5	**UJ**	5	**UJ**	5	**UJ**
1	1,2-Dibromoethane (EDB)	1	U	1	U	1	U
1	1,2-Dichlorobenzene	1	U	1	U	1	U
1	1,2-Dichloroethane	1	U	1	U	1	U
1	1,2-Dichloropropane	1	U	1	U	1	U
1	1,3,5-Trimethylbenzene	1	U	1	U	1	U
1	1,3-Dichlorobenzene	1	U	1	U	1	U
1	1,3-Dichloropropane	1	U	1	U	1	U
1	1,4-Dichlorobenzene	1	U	1	U	1	U
1	2,2-Dichloropropane	1	U	1	U	1	U
1	2-Chlorotoluene	1	U	1	U	1	U
1	4-Chlorotoluene	1	U	1	U	1	U
10	Acetone	10	**UJ**	10	**UJ**	10	**UJ**
0.5	Benzene	0.5	U	0.5	U	0.5	U
1	Bromobenzene	1	U	1	U	1	U
1	Bromochloromethane	1	U	1	U	1	U
1	Bromodichloromethane	1	U	1	U	1	U
1	Bromoform	1	U	1	U	1	U
1	Bromomethane	1	U	1	U	1	U
0.5	Carbon tetrachloride	0.5	U	0.5	U	0.5	U
1	Chlorobenzene	1	U	1	U	1	U
1	Chloroethane	1	U	1	U	1	U
1	Chloroform	1	U	1	U	1	U
1	Chloromethane	1	U	1	U	1	U
1	cis-1,2-Dichloroethene	1	U	1	U	1	U
0.5	cis-1,3-Dichloropropene	0.5	U	0.5	U	0.5	U
1	Dibromochloromethane	1	U	1	U	1	U
1	Dibromomethane	1	U	1	U	1	U
1	Ethylbenzene	1	U	1	U	1	U
1	Freon 11	1	U	**1.7**		1	U
5	Freon 113	5	U	**4.3**	**J**	5	U
1	Freon 12	1	**UJ**	1	**UJ**	1	**UJ**
1	Hexachlorobutadiene	1	U	1	U	**0.34**	**J**
250	Isopropyl Alcohol (Isopropanol)	250	U	250	U	250	U
1	Isopropylbenzene	1	U	1	U	1	U
1	m,p-Xylene	1	U	1	U	1	U
1	Methyl Tert-Butyl Ether	1	U	1	U	1	U
5	Methylene chloride	5	U	5	U	5	U
1	Naphthalene	1	U	1	U	1	U
1	N-butylbenzene	1	U	1	U	1	U
1	o-Xylene	1	U	1	U	1	U
1	p-Isopropyltoluene	1	U	1	U	1	U
1	Propylbenzene	1	U	1	U	1	U
1	sec-Butylbenzene	1	U	1	U	1	U
1	Styrene	1	U	1	U	1	U
1	tert-Butylbenzene	1	U	1	U	**0.28**	**J**
1	Tetrachloroethene (PCE)	1	U	**5.3**		**7.8**	
1	Toluene	1	U	1	U	1	U
1	trans-1,2-Dichloroethene	1	U	1	U	1	U
0.5	trans-1,3-Dichloropropene	0.5	U	0.5	U	0.5	U
1	Trichloroethene (TCE)	1	U	1	U	1	U
0.5	Vinyl chloride	0.5	U	0.5	U	0.5	U
0.5	1,4-Dioxane			**0.69**	**J-**	0.49	**UJ**

Data Summary Form
Groundwaters
Omega Chemical
(ug/L)

	Field Sample ID	OC_GW_OW-9_20190212		OC_GW_OW-9_20190212K		OC_GW_TB_20190212	
	Sample Type	N		FD		TB	
	Lab Sample ID	440-233274-6		440-233274-7		440-233274-9	
RL	Dilution Factor	10, 50		10, 50		1	
1	1,1,1,2-Tetrachloroethane	10	U	10	U	1	U
1	1,1,1-Trichloroethane (TCA)	10	U	10	U	1	U
1	1,1,2,2-Tetrachloroethane	10	U	10	U	1	U
1	1,1,2-Trichloroethane	**6.6**	**J**	**7**	**J**	1	U
1	1,1-Dichloroethane	**12**		**12**		1	U
1	1,1-Dichloroethene	**410**		**440**		1	U
1	1,1-Dichloropropene	10	U	10	U	1	U
1	1,2,3-Trichlorobenzene	**5.1**	**J**	10	U	1	U
1	1,2,3-Trichloropropane	10	U	10	U	1	U
1	1,2,4-Trichlorobenzene	10	U	10	U	1	U
1	1,2,4-Trimethylbenzene	10	U	10	U	1	U
5	1,2-Dibromo-3-chloropropane	50	**UJ**	50	**UJ**	5	**UJ**
1	1,2-Dibromoethane (EDB)	10	U	10	U	1	U
1	1,2-Dichlorobenzene	10	U	10	U	1	U
1	1,2-Dichloroethane	**85**		**91**		1	U
1	1,2-Dichloropropane	10	U	10	U	1	U
1	1,3,5-Trimethylbenzene	10	U	10	U	1	U
1	1,3-Dichlorobenzene	10	U	10	U	1	U
1	1,3-Dichloropropane	10	U	10	U	1	U
1	1,4-Dichlorobenzene	10	U	10	U	1	U
1	2,2-Dichloropropane	10	U	10	U	1	U
1	2-Chlorotoluene	10	U	10	U	1	U
1	4-Chlorotoluene	10	U	10	U	1	U
10	Acetone	100	**UJ**	100	**UJ**	10	**UJ**
0.5	Benzene	5	U	5	U	0.5	U
1	Bromobenzene	10	U	10	U	1	U
1	Bromochloromethane	10	U	10	U	1	U
1	Bromodichloromethane	10	U	10	U	1	U
1	Bromoform	10	U	10	U	1	U
1	Bromomethane	10	U	10	U	1	U
0.5	Carbon tetrachloride	5	U	5	U	0.5	U
1	Chlorobenzene	10	U	10	U	1	U
1	Chloroethane	10	U	10	U	1	U
1	Chloroform	**360**		**380**		1	U
1	Chloromethane	10	U	10	U	1	U
1	cis-1,2-Dichloroethene	**4.3**	**J**	**4.7**	**J**	1	U
0.5	cis-1,3-Dichloropropene	5	U	5	U	0.5	U
1	Dibromochloromethane	10	U	10	U	1	U
1	Dibromomethane	10	U	10	U	1	U
1	Ethylbenzene	10	U	10	U	1	U
1	Freon 11	**74**		**74**		1	U
5	Freon 113	**180**		**190**		5	U
1	Freon 12	10	**UJ**	10	**UJ**	1	**UJ**
1	Hexachlorobutadiene	10	U	10	U	1	U
250	Isopropyl Alcohol (Isopropanol)	2500	U	2500	U	250	U
1	Isopropylbenzene	10	U	10	U	1	U
1	m,p-Xylene	10	U	10	U	1	U
1	Methyl Tert-Butyl Ether	10	U	10	U	1	U
5	Methylene chloride	50	U	50	U	**0.93**	**J**
1	Naphthalene	10	U	10	U	1	U
1	N-butylbenzene	10	U	10	U	1	U
1	o-Xylene	10	U	10	U	1	U
1	p-Isopropyltoluene	10	U	10	U	1	U
1	Propylbenzene	10	U	10	U	1	U
1	sec-Butylbenzene	10	U	10	U	1	U
1	Styrene	10	U	10	U	1	U
1	tert-Butylbenzene	**2.7**	**J**	10	U	1	U
1	Tetrachloroethene (PCE)	**4700**		**4900**		1	U
1	Toluene	10	U	10	U	1	U
1	trans-1,2-Dichloroethene	**5**	**J**	**6.1**	**J**	1	U
0.5	trans-1,3-Dichloropropene	5	U	5	U	0.5	U
1	Trichloroethene (TCE)	**240**		**250**		1	U
0.5	Vinyl chloride	5	U	5	U	0.5	U
0.5	1,4-Dioxane	**620**	**J-**	**610**	**J-**		

Data Summary Form
Groundwaters
Omega Chemical
(ug/L)

	Field Sample ID	**OC_GW_OW-8B_20190213**	
	Sample Type	N	
	Lab Sample ID	440-233427-1	
RL	**Dilution Factor**	1	
	1,1,1,2-Tetrachloroethane	1	U
	1,1,1-Trichloroethane (TCA)	1	U
	1,1,2,2-Tetrachloroethane	1	U
	1,1,2-Trichloroethane	1	U
	1,1-Dichloroethane	1	U
	1,1-Dichloroethene	1	U
	1,1-Dichloropropene	1	U
	1,2,3-Trichlorobenzene	1	U
	1,2,3-Trichloropropane	1	U
	1,2,4-Trichlorobenzene	1	U
	1,2,4-Trimethylbenzene	1	U
	1,2-Dibromo-3-chloropropane	5	**UJ**
	1,2-Dibromoethane (EDB)	1	U
	1,2-Dichlorobenzene	1	U
	1,2-Dichloroethane	1	U
	1,2-Dichloropropane	1	U
	1,3,5-Trimethylbenzene	1	U
	1,3-Dichlorobenzene	1	U
	1,3-Dichloropropane	1	U
	1,4-Dichlorobenzene	1	U
	2,2-Dichloropropane	1	U
	2-Chlorotoluene	1	U
	4-Chlorotoluene	1	U
	Acetone	10	**UJ**
	Benzene	0.5	U
	Bromobenzene	1	U
	Bromochloromethane	1	U
	Bromodichloromethane	1	U
	Bromoform	1	U
	Bromomethane	1	U
	Carbon tetrachloride	0.5	U
	Chlorobenzene	1	U
	Chloroethane	1	U
	Chloroform	1	U
	Chloromethane	1	U
	cis-1,2-Dichloroethene	1	U
	cis-1,3-Dichloropropene	0.5	U
	Dibromochloromethane	1	U
	Dibromomethane	1	U
	Ethylbenzene	1	U
	Freon 11	1	U
	Freon 113	5	U
	Freon 12	1	**UJ**
	Hexachlorobutadiene	1	U
	Isopropyl Alcohol (Isopropanol)	250	U
	Isopropylbenzene	1	U
	m,p-Xylene	1	U
	Methyl Tert-Butyl Ether	1	U
	Methylene chloride	5	U
	Naphthalene	1	U
	N-butylbenzene	1	U
	o-Xylene	1	U
	p-Isopropyltoluene	1	U
	Propylbenzene	1	U
	sec-Butylbenzene	1	U
	Styrene	1	U
	tert-Butylbenzene	1	U
	Tetrachloroethene (PCE)	**21**	
	Toluene	1	U
	trans-1,2-Dichloroethene	1	U
	trans-1,3-Dichloropropene	0.5	U
	Trichloroethene (TCE)	1	U
	Vinyl chloride	0.5	U
	1,4-Dioxane	0.49	**UJ**

DATA VALIDATION

FOR

SEMI-ANNUAL GROUND WATER MONITORING
OMEGA CHEMICAL SITE
WHITTIER CALIFORNIA

ORGANIC ANALYSIS DATA
Volatile Organics and 1,4-Dioxane in Water

Laboratory Job Nos.

440-233269-1
440-233270-1
440-233271-1
440-233428-1
440-233429-1
440-233420-1

Analyses Performed By:

Test America
Irvine, CA

For:

de maximis, inc.
1322 Scott Street
Suite 104
San Diego, CA 92106

Data Validation By:

ddms, inc.
St. Paul, Minnesota 55108

April 29, 2019

1547-3139C/jlr
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EXECUTIVE SUMMARY

The Stage 2B validation of the volatile organics and semi-volatile organic (1,4-dioxane only) analysis data prepared by Test America-Irvine for 13 ground water samples, two rinse blanks (RBs) and two trip blanks (TBs) from the Omega Chemical Site has been completed by de maximis Data Management Solutions, Inc. (ddms). The data were reported by the laboratory under Laboratory Job Nos. 440-233269-1, 440-233270-1, 440-233271-1, 440-233428-1, 440-233429-1 and 440-233430-1. The following samples were reported:

SDG	Sample ID	VOCs	1,4-Dioxane
440-233269-1	OC_GW_EW-4_20190211	X	X
	OC_GW_EW-5_20190212	X	X
440-233270-1	OC_GW_OW-11_20190211	X	X
	OC_GW_PZ-9_20190212	X	X
	OC_GW_PZ-9_20190212N	X	
440-233271-1	OC_GW_DPE-3_20190211	X	X
	OC_GW_DPE-4_20190211	X	X
	OC_GW_DPE-5_20190211	X	X
	OC_GW_DPE-8_20190211	X	X
	OC_GW_TB_20190211	X	
	OC_GW_DPE-10D_20190212	X	X
	OC_GW_DPE-9_20190212	X	X
440-233428-1	OC_GW_EW-3_20190213	X	X
440-233429-1	OC_GW_OW-13B_20190213	X	X
	OC_GW_OW-13B_20190213N	X	
440-233430-1	OC_GW_DPE-7D_20190213	X	X
	OC_TB_20190213	X	

Based on the validation effort, the following data qualifiers were applied:

- The results for dichlorodifluoromethane in all samples except OC_GW_EW-3_20190213 were qualified as estimated (UJ).

- The results for acetone and 1,2-dibromo-3-chloropropane in all samples except OC_GW_EW3-20190213 were qualified as estimated (J, UJ).

- The results for tetrachloroethene in OC_GW_DPE-5_20190211, OC_GW_DPE-3_20190211, OC_GW_DPE-8_20190211, OC_GW_DPE-

4_20190211, OC_GW_DPE-9_20190212 and OC_GW_DPE-10D_20190212 were qualified as estimated (J-, UJ).

- The volatile organic tentatively identified compounds (TICs) at retention times (RTs) of approximately 1.4 and 1.5 minutes (carbon dioxide), 5.2 minutes (1,2-dichloroethane-d4 surrogate) and 8.1 minutes (tetrachloroethene) were removed by the validator because they are not true sample components.

- The results for 1,4-dioxane in OC_GW_EW-3_20190213, OC_GW_OW-13B_20190213 and OC_GW_DPE-7D_20190213 were qualified as not detected (U) at the reporting limit (RL).

- The results for 1,4-dioxane in all samples except OC_GW_OW-13B_20190213 and OC_GW_PZ-9_20190212 were qualified as estimated (J-, UJ).

All other results were determined to be valid as reported. A brief explanation of each reason for the actions taken above may be found in the Overall Assessment (Section IV). Details of the validation findings and conclusions based on review of the results for each quality control requirement are provided in the remaining sections of this report.

Documentation issues are discussed in Section II. This report should be considered <u>part of the data package</u> for all future distributions of the data.

INTRODUCTION

Analyses were performed in accordance with USEPA SW846 Method 8260B and Method 8270C Selected Ion Monitoring (SIM). The laboratory provided a 'Level 4' data package for review.

ddms' validation was performed, to the extent possible, in conformance with the "Omega Chemical Superfund Site Sampling and Analysis Plan for Remedial Action/Remedial Design October 4, 2010", ddms SOPs ECS-002 and ECS-003, and the analytical methods. Professional judgment was applied as necessary and appropriate.

The data validation process is intended to evaluate data on a technical basis rather than a contract compliance basis for chemical analyses conducted under the referenced methods. It is assumed that the data package represents the best efforts of the laboratory and has already been subjected to adequate and sufficient quality review prior to submission for validation.

During the validation process, laboratory data are verified against all available supporting documentation. Based on the findings of the evaluation, qualifier codes may be added by the data validator. Validated results are, therefore, either qualified or unqualified. Unqualified results mean that the reported values may be used without reservation. Final validated results are annotated with the following codes as defined by the National Functional Guidelines:

U The analyte was analyzed for but was not detected above the level of the reported sample quantitation limit.

J The result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.

J+ The result is an estimated quantity, but the result may be biased high.

J- The result is an estimated quantity, but the result may be biased low.

NJ The analyte has been "tentatively identified" or "presumptively" as present and the associated numerical value is the estimated concentration in the sample.

UJ The analyte was analyzed for, but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

R The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the sample.

All data users should note two facts. First, the "R" qualifier means that the laboratory-reported value is unusable. In other words, due to significant quality control problems, the analysis is invalid and provides no information as to whether the analyte is present or not. Rejected values should not appear on data tables because they cannot be relied upon, even as a last resort. Second, no concentration is guaranteed to be accurate even if all associated quality control is acceptable. Strict quality control conformance serves only to increase confidence in reported results; any analytical result will always contain some error.

The data user is also cautioned that the validation effort is based on the raw data printouts as provided by the laboratory. Software manipulation cannot be routinely detected during validation; unless otherwise stated in the report, these kinds of issues are outside the scope of this review.

I. Holding Times, Preservation and Sample Integrity

Copies of the applicable chain of custody (COC) records were included in the data packages documenting sample collection dates of February 11, 12, and 13, 2019. The samples were received at the laboratory on February 12, and 13, 2019.

The temperatures of the coolers upon receipt at the laboratory were within acceptance limits (acceptable range is 4 ^{o}C ±2 ^{o}C). Documentation of proper pH was included in the data packages. All samples were prepared and analyzed within method holding times.

II. Documentation

The following documentation issues were observed during the validation effort:

- The percent recoveries (%R) for isopropanol were not reported on the summary forms. A review of the raw data indicated isopropanol was spiked into all quality control (QC) samples. The validator manually calculated the recoveries and relative percent differences (RPDs) and found them all to be acceptable (70-130%R, RPD<30).

- The volatile organic tentatively identified compounds (TICs) at retention times (RTs) of approximately 1.4 and 1.5 minutes (carbon dioxide), 5.2 minutes (1,2-dichloroethane-d_4 surrogate) and 8.1 minutes (tetrachloroethene) were removed by the validator because they are not true sample components.

At the discretion of the data user, the laboratory may be contacted and requested to revise the laboratory data packages.

The remainder of this report is divided into two sections, one reporting the review effort for each of the parameters and the other, the Overall Assessment, summarizing the reason for the qualifications made to sample results as a result of the validation effort. The table below documents the Quality Control (QC) parameters reviewed. Only those quality excursions resulting in qualified data are discussed below. Quality control excursions having no impact to sample results are not discussed. Where a result was qualified J+ or J- and J, the J qualifier takes precedence. Where a result was qualified biased high and low for differing data quality excursions, the final qualifier is J with an indeterminate bias.

III. VOCs

Review Element	Acceptable?
GC/MS Instrument Tunes	Y
Calibration (Initial Calibration [IC], IC Verification [ICV], Continuing Calibration [CC])	N
Laboratory and Field Blanks	Y
Surrogates	Y
Laboratory Control Samples (LCS)/ LCS Duplicates (LCSD)	N
Field Duplicates	Y
Matrix Spike (MS)/Matrix Spike Duplicate (MSD)	N
Internal Standard Responses	Y
Compound Identification	Y

Calibration

Summary results for all initial calibrations (IC) were reported in support of sample analyses. Although the standards included more compounds than were specifically applicable to these analyses, all project-specified target analytes were included on the IC summary form. For the relevant target analytes, the reported average relative response factors (RRFs) were greater than the evaluation criterion (>0.05) and the relative standard deviations (RSDs) were acceptable (<20% RSD). An ICV was analyzed immediately following the IC and was acceptable (<30%D) with the following exceptions:

Instrument	Compound	%D	Affected Sample(s)
GCMS59 (2/14/19)	Dichlorodifluoromethane	37	OC_GW_EW-4_20190211 OC_GW_EW-5_20190212 OC_GW_OW-11_20190211 OC_GW_PZ-9_20190212 OC_GW_PZ-9_20190212N OC_GW_DPE-3_20190211 OC_GW_DPE-4_20190211 OC_GW_DPE-5_20190211 OC_GW_DPE-8_20190211 OC_GW_TB_20190211 OC_GW_DPE-10D_20190212 OC_GW_DPE-9_20190212 OC_GW_OW-13B_20190213 OC_GW_OW-13B_20190213N OC_GW_DPE-7D_20190213 OC_TB_20190213

Samples results were qualified as estimated (UJ) due to unacceptable percent difference in the ICV.

Summary forms were provided for continuing calibration (CC) standards, as appropriate. Reported RRFs and percent difference (%D) values were acceptable except as summarized as summarized below. Where excursions represented an increase in response sensitivity and the compound was not detected, no data required qualification in these cases and are not detailed below.

Instr.	CC Date	Compound	%D	Affected Samples
GCMS59	2/22/2019	Acetone	30	OC_GW_EW-4_20190211 OC_GW_EW-5_20190212 OC_GW_OW-11_20190211 OC_GW_PZ-9_20190212 OC_GW_PZ-9_20190212N OC_GW_DPE-3_20190211 OC_GW_DPE-4_20190211 OC_GW_DPE-5_20190211 OC_GW_DPE-8_20190211 OC_GW_TB_20190211 OC_GW_DPE-10D_20190212 OC_GW_DPE-9_20190212 OC_GW_OW-13B_20190213 OC_GW_OW-13B_20190213N OC_GW_DPE-7D_20190213 OC_TB_20190213
		1,2-Dibromo-3-Chloropropane	29	

Sample results were qualified as estimated (J, UJ) due to low response in the CC.

<u>Matrix Spike/Matrix Spike Duplicate (MS/MSD)</u>

Parent Sample	Compound	MS%R	MSD %R	Affected Sample(s)
OC_GW_DPE-5_20190211	Dichlorodifluoromethane	64	67	OC_GW_DPE-5_20190211 OC_GW_DPE-3_20190211 OC_GW_DPE-8_20190211 OC_GW_DPE-4_20190211 OC_GW_DPE-9_20190212 OC_GW_DPE-10D_20190212
	Tetrachloroethene	53	48	
OC_GW_OW-9_20190212 (SDG 440-233274-1)	Dichlorodifluoromethane	65	68	OC_GW_OW-13B_20190213 OC_GW_DPE-7D_20190213

Sample results were qualified as estimated (UJ) due to low MS/MSD recoveries.

Laboratory Control Sample (LCS/LCS Duplicate)

All percent recoveries were acceptable (70-130%R) with the following exceptions:

LCS	Compound	LCS%R	Affected Sample(s)
440-530170	Dichlorodifluoromethane	69	OC_GW_DPE-5_20190211 OC_GW_DPE-3_20190211 OC_GW_DPE-8_20190211 OC_GW_DPE-4_20190211 OC_GW_DPE-9_20190212 OC_GW_DPE-10D_20190212 OC_GW_TB_20190211
440-530231	Dichlorodifluoromethane	67	OC_GW_OW-13B_20190213 OC_GW_OW-13B_20190213N OC_GW_DPE-7D_20190213 OC_TB_20190213

Sample results were qualified as estimated (UJ) due to low LCS recoveries. Where a recovery was biased high, outside acceptance limits and the compound was not detected in the associated samples, no qualification of samples result was warranted, and is not discussed further.

Compound Identification

The tentatively identified compounds (TICs) at retention times (RTs) approximately 1.4 and 1.5 minutes (carbon dioxide), 5.2 (1,2-dichloroethane-d4 surrogate) and 8.1 (tetrachloroethene) were removed by the validator because they are not true sample components

IV. SVOCs – 1,4-Dioxane only

Review Element	Acceptable?
GC/MS Instrument Tunes	Y
Calibration - IC, ICV, CC	Y
Laboratory and Field Blanks	N
Surrogates	N
LCS/LCSD	N
Field Duplicates	Y
MS/MSD	NA
Internal Standard Responses	Y
Compound Identification	Y

Blanks

The results for 1,4-dioxane in OC_GW_EW-3_20190213, OC_GW_OW-13B_20190213 and OC_GW_DPE-7D_20190213 were qualified as not detected (U) at the reporting limit (RL) due to method blank contamination.

Surrogates

The results for 1,4-dioxane in all samples except OC_GW_OW-13B_20190213 and OC_GW_PZ-9_20190212 were qualified as estimated (J-, UJ) due to low surrogate recoveries (acceptance limit 70-130%R).

Laboratory Control Sample (LCS)

An LCS and LCS Duplicate (LCSD) was prepared with each batch of samples. The percent recoveries and RPDs for 1,4-dioxane were acceptable (70-130%R, RPD<30) with the following exceptions:

LCS	LCS %R	LCSD%R	Affected Sample(s)
440-529201	65	64	OC_GW_DPE-3_20190211 OC_GW_DPE-4_20190211 OC_GW_DPE-5_20190211 OC_GW_DPE-8_20190211 OC_GW_DPE-10D_20190212 OC_GW_DPE-9_20190212 OC_GW_OW-11_20190211 OC_GW_PZ-9_20190212 OC_GW_EW-4_20190211 OC_GW_EW-5_20190212

Sample results for 1,4-dioxane were qualified as estimated (J-, UJ) due to low LCS/LCSD recoveries.

V. Overall Assessment

Based on the validation effort, the following qualifiers were applied:

- The results for dichlorodifluoromethane in all samples except OC_GW_EW-3_20190213 were qualified as estimated (UJ) due to unacceptable percent difference in the ICV.

- The results for acetone and 1,2-dibromo-3-chloropropane in all samples except OC_GW_EW3-20190213 were qualified as estimated (J, UJ) due to low response in the associated CC standard.

- The results for dichlorodifluoromethane and tetrachloroethene in OC_GW_DPE-5_20190211, OC_GW_DPE-3_20190211, OC_GW_DPE-8_20190211, OC_GW_DPE-4_20190211, OC_GW_DPE-9_20190212 and OC_GW_DPE-10D_20190212 and dichlorodifluoromethane in OC_GW_OW-13B_20190213 and OC_GW_DPE-7D_20190213 were qualified as estimated (J-, UJ) due to low MS/MSD recoveries.

- The results for dichlorodifluoromethane in OC_GW_DPE-3_20190211, OC_GW_DPE-4_20190211, OC_GW_DPE-5_20190211, OC_GW_DPE-8_20190211, OC_GW_DPE-10D_20190212, OC_GW_DPE-9_20190212, OC_GW_OW-11_20190211, OC_GW_PZ-9_20190212, OC_GW_EW-4_20190211 and OC_GW_EW-5_20190212 were qualified as estimated (UJ) due to low recovery in the LCS.

- The volatile organic tentatively identified compounds (TICs) at retention times (RTs) of approximately 1.4 and 1.5 minutes (carbon dioxide), 5.2 minutes (1,2-dichloroethane-d_4 surrogate) and 8.1 minutes (tetrachloroethene) were removed by the validator because they are not true sample components.

- The results for 1,4-dioxane in OC_GW_EW-3_20190213, OC_GW_OW-13B_20190213 and OC_GW_DPE-7D_20190213 were qualified as not detected (U) at the reporting limit (RL) due to method blank contamination.

- The results for 1,4-dioxane in all samples except OC_GW_OW-13B_20190213 and OC_GW_PZ-9_20190212 were qualified as estimated (J-, UJ) due to low surrogate recoveries.

- The results for 1,4-dioxane in OC_GW_DPE-3_20190211, OC_GW_DPE-4_20190211, OC_GW_DPE-5_20190211, OC_GW_DPE-8_20190211, OC_GW_DPE-10D_20190212, OC_GW_DPE-9_20190212, OC_GW_OW-11_20190211, OC_GW_PZ-9_20190212, OC_GW_EW-4_20190211 and OC_GW_EW-5_20190212 were qualified as estimated (J-, UJ) due to low recoveries in the LCS/LCSD.

All other results were determined to be valid as reported. This validation report should be considered <u>part of the data package</u> for all future distributions of the data.

ATTACHMENT A

DATA SUMMARY FORMS
440-233269-1
440-233270-1
440-233271-1
440-233428-1
440-233429-1
440-233420-1

Data Summary Form
Groundwaters
Omega Chemical
(ug/L)

	Field Sample ID	OC_GW_EW-4_20190211		OC_GW_EW-5_20190212	
	Sample Type	N		N	
	Lab Sample ID	440-233269-1		440-233269-2	
RL	Dilution Factor	1		1	
1	1,1,1,2-Tetrachloroethane	1	U	1	U
1	1,1,1-Trichloroethane (TCA)	1	U	1	U
1	1,1,2,2-Tetrachloroethane	1	U	1	U
1	1,1,2-Trichloroethane	1	U	1	U
1	1,1-Dichloroethane	1	U	1	U
1	1,1-Dichloroethene	**29**		**8.4**	
1	1,1-Dichloropropene	1	U	1	U
1	1,2,3-Trichlorobenzene	1	U	1	U
1	1,2,3-Trichloropropane	1	U	1	U
1	1,2,4-Trichlorobenzene	1	U	1	U
1	1,2,4-Trimethylbenzene	1	U	1	U
5	1,2-Dibromo-3-chloropropane	5	**UJ**	5	**UJ**
1	1,2-Dibromoethane (EDB)	1	U	1	U
1	1,2-Dichlorobenzene	1	U	1	U
1	1,2-Dichloroethane	1	U	1	U
1	1,2-Dichloropropane	1	U	1	U
1	1,3,5-Trimethylbenzene	1	U	1	U
1	1,3-Dichlorobenzene	1	U	1	U
1	1,3-Dichloropropane	1	U	1	U
1	1,4-Dichlorobenzene	1	U	1	U
1	2,2-Dichloropropane	1	U	1	U
1	2-Chlorotoluene	1	U	1	U
1	4-Chlorotoluene	1	U	1	U
10	Acetone	10	**UJ**	10	**UJ**
0.5	Benzene	0.5	U	0.5	U
1	Bromobenzene	1	U	1	U
1	Bromochloromethane	1	U	1	U
1	Bromodichloromethane	1	U	1	U
1	Bromoform	1	U	1	U
1	Bromomethane	1	U	1	U
0.5	Carbon tetrachloride	0.5	U	0.5	U
1	Chlorobenzene	1	U	1	U
1	Chloroethane	1	U	1	U
1	Chloroform	1	U	1	U
1	Chloromethane	1	U	1	U
1	cis-1,2-Dichloroethene	1	U	1	U
0.5	cis-1,3-Dichloropropene	0.5	U	0.5	U
1	Dibromochloromethane	1	U	1	U
1	Dibromomethane	1	U	1	U
1	Ethylbenzene	1	U	1	U
1	Freon 11	**8.7**		**32**	
5	Freon 113	**14**		**51**	
1	Freon 12	1	**UJ**	1	**UJ**
1	Hexachlorobutadiene	1	U	1	U
250	Isopropyl Alcohol (Isopropanol)	250	U	250	U
1	Isopropylbenzene	1	U	1	U
1	m,p-Xylene	1	U	1	U
1	Methyl Tert-Butyl Ether	1	U	1	U
5	Methylene chloride	5	U	5	U
1	Naphthalene	1	U	1	U
1	N-butylbenzene	1	U	1	U
1	o-Xylene	1	U	1	U
1	p-Isopropyltoluene	1	U	1	U
1	Propylbenzene	1	U	1	U
1	sec-Butylbenzene	1	U	1	U
1	Styrene	1	U	1	U
1	tert-Butylbenzene	1	U	1	U
1	Tetrachloroethene (PCE)	**25**		**12**	
1	Toluene	1	U	1	U
1	trans-1,2-Dichloroethene	1	U	1	U
0.5	trans-1,3-Dichloropropene	0.5	U	0.5	U
1	Trichloroethene (TCE)	**3**		**1.7**	
0.5	Vinyl chloride	0.5	U	0.5	U
0.5	1,4-Dioxane	**0.33**	**J-**	**0.59**	**J-**

Data Summary Form
Groundwaters
Omega Chemical
(ug/L)

	Field Sample ID	OC_GW_OW-11_20190211		OC_GW_PZ-9_20190212		OC_GW_PZ-9_20190212N	
	Sample Type	N		N		RB	
	Lab Sample ID	440-233270-1		440-233270-2		440-233270-3	
RL	Dilution Factor	1, 5		1, 10		1	
1	1,1,1,2-Tetrachloroethane	1	U	1	U	1	U
1	1,1,1-Trichloroethane (TCA)	1	U	1	U	1	U
1	1,1,2,2-Tetrachloroethane	1	U	1	U	1	U
1	1,1,2-Trichloroethane	1	U	**0.93**	**J**	1	U
1	1,1-Dichloroethane	1	U	**1.5**		1	U
1	1,1-Dichloroethene	**27**		**78**		1	U
1	1,1-Dichloropropene	1	U	1	U	1	U
1	1,2,3-Trichlorobenzene	1	U	1	U	1	U
1	1,2,3-Trichloropropane	1	U	1	U	1	U
1	1,2,4-Trichlorobenzene	1	U	1	U	1	U
1	1,2,4-Trimethylbenzene	1	U	1	U	1	U
5	1,2-Dibromo-3-chloropropane	5	**UJ**	5	**UJ**	5	**UJ**
1	1,2-Dibromoethane (EDB)	1	U	1	U	1	U
1	1,2-Dichlorobenzene	1	U	1	U	1	U
1	1,2-Dichloroethane	1	U	**9.8**		1	U
1	1,2-Dichloropropane	1	U	1	U	1	U
1	1,3,5-Trimethylbenzene	1	U	1	U	1	U
1	1,3-Dichlorobenzene	1	U	1	U	1	U
1	1,3-Dichloropropane	1	U	1	U	1	U
1	1,4-Dichlorobenzene	1	U	1	U	1	U
1	2,2-Dichloropropane	1	U	1	U	1	U
1	2-Chlorotoluene	1	U	1	U	1	U
1	4-Chlorotoluene	1	U	1	U	1	U
10	Acetone	10	**UJ**	10	**UJ**	10	**UJ**
0.5	Benzene	0.5	U	0.5	U	0.5	U
1	Bromobenzene	1	U	1	U	1	U
1	Bromochloromethane	1	U	1	U	1	U
1	Bromodichloromethane	1	U	1	U	1	U
1	Bromoform	1	U	1	U	1	U
1	Bromomethane	1	U	1	U	1	U
0.5	Carbon tetrachloride	0.5	U	0.5	U	0.5	U
1	Chlorobenzene	1	U	1	U	1	U
1	Chloroethane	1	U	1	U	1	U
1	Chloroform	**0.62**	**J**	**47**		1	U
1	Chloromethane	1	U	1	U	1	U
1	cis-1,2-Dichloroethene	1	U	**0.39**	**J**	1	U
0.5	cis-1,3-Dichloropropene	0.5	U	0.5	U	0.5	U
1	Dibromochloromethane	1	U	1	U	1	U
1	Dibromomethane	1	U	1	U	1	U
1	Ethylbenzene	1	U	1	U	1	U
1	Freon 11	**16**		**44**		1	U
5	Freon 113	**46**			**140**	5	U
1	Freon 12	1	**UJ**	1	**UJ**	1	**UJ**
1	Hexachlorobutadiene	1	U	1	U	1	U
250	Isopropyl Alcohol (Isopropanol)	250	U	250	U	250	U
1	Isopropylbenzene	1	U	1	U	1	U
1	m,p-Xylene	1	U	1	U	1	U
1	Methyl Tert-Butyl Ether	1	U	1	U	1	U
5	Methylene chloride	5	U	5	U	5	U
1	Naphthalene	1	U	1	U	1	U
1	N-butylbenzene	1	U	1	U	1	U
1	o-Xylene	1	U	1	U	1	U
1	p-Isopropyltoluene	1	U	1	U	1	U
1	Propylbenzene	1	U	1	U	1	U
1	sec-Butylbenzene	1	U	1	U	1	U
1	Styrene	1	U	1	U	1	U
1	tert-Butylbenzene	1	U	1	U	1	U
1	Tetrachloroethene (PCE)	**210**				1	U
1	Toluene	1	U	1	U	1	U
1	trans-1,2-Dichloroethene	1	U	**0.73**	**J**	1	U
0.5	trans-1,3-Dichloropropene	0.5	U	0.5	U	0.5	U
1	Trichloroethene (TCE)	**43**		**41**		1	U
0.5	Vinyl chloride	0.5	U	0.5	U	0.5	U
0.5	1,4-Dioxane	0.49	**UJ**				

Data Summary Form
Groundwaters
Omega Chemical
(ug/L)

	Field Sample ID	OC_GW_DPE-10D_20190212		OC_GW_DPE-3_20190211		OC_GW_DPE-4_20190211	
	Sample Type	N		N		N	
	Lab Sample ID	440-233271-6		440-233271-2		440-233271-4	
RL	Dilution Factor	1, 2, 100		1, 5		1, 2, 10	
1	1,1,1,2-Tetrachloroethane	2	U	1	U	2	U
1	1,1,1-Trichloroethane (TCA)	2	U	**0.32**	**J**	**1.6**	**J**
1	1,1,2,2-Tetrachloroethane	2	U	1	U	2	U
1	1,1,2-Trichloroethane	2	U	1	U	2	U
1	1,1-Dichloroethane	**1.3**	**J**	1	U	2	U
1	1,1-Dichloroethene	**90**		**2.9**		**19**	
1	1,1-Dichloropropene	2	U	1	U	2	U
1	1,2,3-Trichlorobenzene	2	U	1	U	2	U
1	1,2,3-Trichloropropane	2	U	1	U	2	U
1	1,2,4-Trichlorobenzene	2	U	1	U	2	U
1	1,2,4-Trimethylbenzene	2	U	1	U	2	U
5	1,2-Dibromo-3-chloropropane	10	**UJ**	5	**UJ**	10	**UJ**
1	1,2-Dibromoethane (EDB)	2	U	1	U	2	U
1	1,2-Dichlorobenzene	2	U	1	U	2	U
1	1,2-Dichloroethane	**6.4**		**2.8**		**4.1**	
1	1,2-Dichloropropane	2	U	1	U	2	U
1	1,3,5-Trimethylbenzene	2	U	1	U	2	U
1	1,3-Dichlorobenzene	2	U	1	U	2	U
1	1,3-Dichloropropane	2	U	1	U	2	U
1	1,4-Dichlorobenzene	2	U	1	U	2	U
1	2,2-Dichloropropane	2	U	1	U	2	U
1	2-Chlorotoluene	2	U	1	U	2	U
1	4-Chlorotoluene	2	U	1	U	2	U
10	Acetone	20	**UJ**	10	**UJ**	20	**UJ**
0.5	Benzene	1	U	0.5	U	1	U
1	Bromobenzene	2	U	1	U	2	U
1	Bromochloromethane	2	U	1	U	2	U
1	Bromodichloromethane	2	U	1	U	2	U
1	Bromoform	2	U	1	U	2	U
1	Bromomethane	2	U	1	U	2	U
0.5	Carbon tetrachloride	1	U	0.5	U	1	U
1	Chlorobenzene	2	U	1	U	2	U
1	Chloroethane	2	U	1	U	2	U
1	Chloroform	**39**		**2.4**		**25**	
1	Chloromethane	2	U	1	U	2	U
1	cis-1,2-Dichloroethene	2	U	1	U	2	U
0.5	cis-1,3-Dichloropropene	1	U	0.5	U	1	U
1	Dibromochloromethane	2	U	1	U	2	U
1	Dibromomethane	2	U	1	U	2	U
1	Ethylbenzene	2	U	1	U	2	U
1	Freon 11	**40**		**8.3**		**10**	
5	Freon 113	**130**		**64**		**290**	
1	Freon 12	2	**UJ**	1	**UJ**	2	**UJ**
1	Hexachlorobutadiene	2	U	1	U	2	U
250	Isopropyl Alcohol (Isopropanol)	500	U	250	U	500	U
1	Isopropylbenzene	2	U	1	U	2	U
1	m,p-Xylene	2	U	1	U	2	U
1	Methyl Tert-Butyl Ether	2	U	1	U	2	U
5	Methylene chloride	10	U	5	U	10	U
1	Naphthalene	2	U	1	U	2	U
1	N-butylbenzene	2	U	1	U	2	U
1	o-Xylene	2	U	1	U	2	U
1	p-Isopropyltoluene	2	U	1	U	2	U
1	Propylbenzene	2	U	1	U	2	U
1	sec-Butylbenzene	2	U	1	U	2	U
1	Styrene	2	U	1	U	2	U
1	tert-Butylbenzene	2	U	1	U	2	U
1	Tetrachloroethene (PCE)	**590**	**J-**	**130**	**J-**		
1	Toluene	2	U	1	U	2	U
1	trans-1,2-Dichloroethene	**0.54**	**J**	1	U	2	U
0.5	trans-1,3-Dichloropropene	1	U	0.5	U	1	U
1	Trichloroethene (TCE)	**64**		**6.1**		**46**	
0.5	Vinyl chloride	1	U	0.5	U	1	U
0.5	1,4-Dioxane	**21**	**J-**	**4.7**	**J-**	**27**	**J-**

Data Summary Form
Groundwaters
Omega Chemical
(ug/L)

	Field Sample ID	OC_GW_DPE-5_20190211		OC_GW_DPE-8_20190211		OC_GW_DPE-9_20190212	
	Sample Type	N		N		N	
	Lab Sample ID	440-233271-1		440-233271-3		440-233271-5	
RL	Dilution Factor	1		1		1, 10	
1	1,1,1,2-Tetrachloroethane	1	U	1	U	1	U
1	1,1,1-Trichloroethane (TCA)	1	U	1	U	1	U
1	1,1,2,2-Tetrachloroethane	1	U	1	U	1	U
1	1,1,2-Trichloroethane	1	U	1	U	1	U
1	1,1-Dichloroethane	1	U	1	U	**0.34**	**J**
1	1,1-Dichloroethene	**32**		**0.56**	**J**	**20**	
1	1,1-Dichloropropene	1	U	1	U	1	U
1	1,2,3-Trichlorobenzene	**0.47**	**J**	1	U	1	U
1	1,2,3-Trichloropropane	1	U	1	U	1	U
1	1,2,4-Trichlorobenzene	1	U	1	U	1	U
1	1,2,4-Trimethylbenzene	1	U	1	U	1	U
5	1,2-Dibromo-3-chloropropane	5	**UJ**	5	**UJ**	5	**UJ**
1	1,2-Dibromoethane (EDB)	1	U	1	U	1	U
1	1,2-Dichlorobenzene	1	U	1	U	1	U
1	1,2-Dichloroethane	1	U	1	U	**3**	
1	1,2-Dichloropropane	1	U	1	U	1	U
1	1,3,5-Trimethylbenzene	1	U	1	U	1	U
1	1,3-Dichlorobenzene	1	U	1	U	1	U
1	1,3-Dichloropropane	1	U	1	U	1	U
1	1,4-Dichlorobenzene	1	U	1	U	1	U
1	2,2-Dichloropropane	1	U	1	U	1	U
1	2-Chlorotoluene	1	U	1	U	1	U
1	4-Chlorotoluene	1	U	1	U	1	U
10	Acetone	10	**UJ**	10	**UJ**	10	**UJ**
0.5	Benzene	0.5	U	0.5	U	0.5	U
1	Bromobenzene	1	U	1	U	1	U
1	Bromochloromethane	1	U	1	U	1	U
1	Bromodichloromethane	1	U	1	U	1	U
1	Bromoform	1	U	1	U	1	U
1	Bromomethane	1	U	1	U	1	U
0.5	Carbon tetrachloride	0.5	U	0.5	U	0.5	U
1	Chlorobenzene	1	U	1	U	1	U
1	Chloroethane	1	U	1	U	1	U
1	Chloroform	**1.3**		1	U	**13**	
1	Chloromethane	1	U	1	U	1	U
1	cis-1,2-Dichloroethene	1	U	1	U	1	U
0.5	cis-1,3-Dichloropropene	0.5	U	0.5	U	0.5	U
1	Dibromochloromethane	1	U	1	U	1	U
1	Dibromomethane	1	U	1	U	1	U
1	Ethylbenzene	1	U	1	U	1	U
1	Freon 11	**6.4**		**2.1**		**11**	
5	Freon 113	**9.3**		**2.8**	**J**	**28**	
1	Freon 12	1	**UJ**	1	**UJ**	1	**UJ**
1	Hexachlorobutadiene	1	U	1	U	1	U
250	Isopropyl Alcohol (Isopropanol)	250	U	250	U	250	U
1	Isopropylbenzene	1	U	1	U	1	U
1	m,p-Xylene	1	U	1	U	1	U
1	Methyl Tert-Butyl Ether	1	U	1	U	1	U
5	Methylene chloride	5	U	5	U	5	U
1	Naphthalene	1	U	1	U	1	U
1	N-butylbenzene	1	U	1	U	1	U
1	o-Xylene	1	U	1	U	1	U
1	p-Isopropyltoluene	1	U	1	U	1	U
1	Propylbenzene	1	U	1	U	1	U
1	sec-Butylbenzene	1	U	1	U	1	U
1	Styrene	1	U	1	U	1	U
1	tert-Butylbenzene	**0.28**	**J**	1	U	1	U
1	Tetrachloroethene (PCE)	**88**	**J-**	**16**	**J-**	**200**	**J-**
1	Toluene	1	U	1	U	1	U
1	trans-1,2-Dichloroethene	1	U	1	U	1	U
0.5	trans-1,3-Dichloropropene	0.5	U	0.5	U	0.5	U
1	Trichloroethene (TCE)	**8.7**		**2.6**		**13**	
0.5	Vinyl chloride	0.5	U	0.5	U	0.5	U
0.5	1,4-Dioxane	**2**	**J-**	**2.2**	**J-**	**30**	**J-**

Data Summary Form
Groundwaters
Omega Chemical
(ug/L)

	Field Sample ID	**OC_GW_TB_20190211**	
	Sample Type	TB	
	Lab Sample ID	440-233271-7	
RL	**Dilution Factor**	1	
1	1,1,1,2-Tetrachloroethane	1	U
1	1,1,1-Trichloroethane (TCA)	1	U
1	1,1,2,2-Tetrachloroethane	1	U
1	1,1,2-Trichloroethane	1	U
1	1,1-Dichloroethane	1	U
1	1,1-Dichloroethene	1	U
1	1,1-Dichloropropene	1	U
1	1,2,3-Trichlorobenzene	1	U
1	1,2,3-Trichloropropane	1	U
1	1,2,4-Trichlorobenzene	1	U
1	1,2,4-Trimethylbenzene	1	U
5	1,2-Dibromo-3-chloropropane	5	**UJ**
1	1,2-Dibromoethane (EDB)	1	U
1	1,2-Dichlorobenzene	1	U
1	1,2-Dichloroethane	1	U
1	1,2-Dichloropropane	1	U
1	1,3,5-Trimethylbenzene	1	U
1	1,3-Dichlorobenzene	1	U
1	1,3-Dichloropropane	1	U
1	1,4-Dichlorobenzene	1	U
1	2,2-Dichloropropane	1	U
1	2-Chlorotoluene	1	U
1	4-Chlorotoluene	1	U
10	Acetone	10	**UJ**
0.5	Benzene	0.5	U
1	Bromobenzene	1	U
1	Bromochloromethane	1	U
1	Bromodichloromethane	1	U
1	Bromoform	1	U
1	Bromomethane	1	U
0.5	Carbon tetrachloride	0.5	U
1	Chlorobenzene	1	U
1	Chloroethane	1	U
1	Chloroform	1	U
1	Chloromethane	1	U
1	cis-1,2-Dichloroethene	1	U
0.5	cis-1,3-Dichloropropene	0.5	U
1	Dibromochloromethane	1	U
1	Dibromomethane	1	U
1	Ethylbenzene	1	U
1	Freon 11	1	U
5	Freon 113	5	U
1	Freon 12	1	**UJ**
1	Hexachlorobutadiene	1	U
250	Isopropyl Alcohol (Isopropanol)	250	U
1	Isopropylbenzene	1	U
1	m,p-Xylene	1	U
1	Methyl Tert-Butyl Ether	1	U
5	Methylene chloride	5	U
1	Naphthalene	1	U
1	N-butylbenzene	1	U
1	o-Xylene	1	U
1	p-Isopropyltoluene	1	U
1	Propylbenzene	1	U
1	sec-Butylbenzene	1	U
1	Styrene	1	U
1	tert-Butylbenzene	1	U
1	Tetrachloroethene (PCE)	1	U
1	Toluene	1	U
1	trans-1,2-Dichloroethene	1	U
0.5	trans-1,3-Dichloropropene	0.5	U
1	Trichloroethene (TCE)	1	U
0.5	Vinyl chloride	0.5	U
0.5	1,4-Dioxane		

Data Summary Form
Groundwaters
Omega Chemical
(ug/L)

	Field Sample ID	**OC_GW_EW-3_20190213**	
	Sample Type	N	
	Lab Sample ID	440-233428-1	
RL	**Dilution Factor**	1	
1	1,1,1,2-Tetrachloroethane	1	U
1	1,1,1-Trichloroethane (TCA)	1	U
1	1,1,2,2-Tetrachloroethane	1	U
1	1,1,2-Trichloroethane	1	U
1	1,1-Dichloroethane	1	U
1	1,1-Dichloroethene	**1.5**	
1	1,1-Dichloropropene	1	U
1	1,2,3-Trichlorobenzene	1	U
1	1,2,3-Trichloropropane	1	U
1	1,2,4-Trichlorobenzene	1	U
1	1,2,4-Trimethylbenzene	1	U
5	1,2-Dibromo-3-chloropropane	5	U
1	1,2-Dibromoethane (EDB)	1	U
1	1,2-Dichlorobenzene	1	U
1	1,2-Dichloroethane	1	U
1	1,2-Dichloropropane	1	U
1	1,3,5-Trimethylbenzene	1	U
1	1,3-Dichlorobenzene	1	U
1	1,3-Dichloropropane	1	U
1	1,4-Dichlorobenzene	1	U
1	2,2-Dichloropropane	1	U
1	2-Chlorotoluene	1	U
1	4-Chlorotoluene	1	U
10	Acetone	10	U
0.5	Benzene	0.5	U
1	Bromobenzene	1	U
1	Bromochloromethane	1	U
1	Bromodichloromethane	1	U
1	Bromoform	1	U
1	Bromomethane	1	U
0.5	Carbon tetrachloride	0.5	U
1	Chlorobenzene	1	U
1	Chloroethane	1	U
1	Chloroform	**0.71**	**J**
1	Chloromethane	1	U
1	cis-1,2-Dichloroethene	1	U
0.5	cis-1,3-Dichloropropene	0.5	U
1	Dibromochloromethane	1	U
1	Dibromomethane	1	U
1	Ethylbenzene	1	U
1	Freon 11	**0.74**	**J**
5	Freon 113	**3.9**	**J**
1	Freon 12	1	U
1	Hexachlorobutadiene	1	U
250	Isopropyl Alcohol (Isopropanol)	250	U
1	Isopropylbenzene	1	U
1	m,p-Xylene	1	U
1	Methyl Tert-Butyl Ether	1	U
5	Methylene chloride	5	U
1	Naphthalene	1	U
1	N-butylbenzene	1	U
1	o-Xylene	1	U
1	p-Isopropyltoluene	1	U
1	Propylbenzene	1	U
1	sec-Butylbenzene	1	U
1	Styrene	1	U
1	tert-Butylbenzene	1	U
1	Tetrachloroethene (PCE)	**13**	
1	Toluene	1	U
1	trans-1,2-Dichloroethene	1	U
0.5	trans-1,3-Dichloropropene	0.5	U
1	Trichloroethene (TCE)	**1.3**	
0.5	Vinyl chloride	0.5	U
	1,4-Dioxane	0.51	**UJ**

Data Summary Form
Groundwaters
Omega Chemical
(ug/L)

	Field Sample ID	OC_GW_OW-13B_20190213		OC_GW_OW-13B_20190213N	
	Sample Type	N		RB	
	Lab Sample ID	440-233429-1		440-233429-2	
RL	Dilution Factor	1		1	
	1,1,1,2-Tetrachloroethane	1	U	1	U
	1,1,1-Trichloroethane (TCA)	1	U	1	U
	1,1,2,2-Tetrachloroethane	1	U	1	U
	1,1,2-Trichloroethane	1	U	1	U
	1,1-Dichloroethane	1	U	1	U
	1,1-Dichloroethene	1	U	1	U
	1,1-Dichloropropene	1	U	1	U
	1,2,3-Trichlorobenzene	1	U	1	U
	1,2,3-Trichloropropane	1	U	1	U
	1,2,4-Trichlorobenzene	1	U	1	U
	1,2,4-Trimethylbenzene	1	U	1	U
	1,2-Dibromo-3-chloropropane	5	**UJ**	5	**UJ**
	1,2-Dibromoethane (EDB)	1	U	1	U
	1,2-Dichlorobenzene	1	U	1	U
	1,2-Dichloroethane	1	U	1	U
	1,2-Dichloropropane	1	U	1	U
	1,3,5-Trimethylbenzene	1	U	1	U
	1,3-Dichlorobenzene	1	U	1	U
	1,3-Dichloropropane	1	U	1	U
	1,4-Dichlorobenzene	1	U	1	U
	2,2-Dichloropropane	1	U	1	U
	2-Chlorotoluene	1	U	1	U
	4-Chlorotoluene	1	U	1	U
	Acetone	10	UJ	**10**	**J**
	Benzene	0.5	U	0.5	U
	Bromobenzene	1	U	1	U
	Bromochloromethane	1	U	1	U
	Bromodichloromethane	1	U	1	U
	Bromoform	1	U	1	U
	Bromomethane	1	U	1	U
	Carbon tetrachloride	0.5	U	0.5	U
	Chlorobenzene	1	U	1	U
	Chloroethane	1	U	1	U
	Chloroform	1	U	1	U
	Chloromethane	1	U	1	U
	cis-1,2-Dichloroethene	1	U	1	U
	cis-1,3-Dichloropropene	0.5	U	0.5	U
	Dibromochloromethane	1	U	1	U
	Dibromomethane	1	U	1	U
	Ethylbenzene	1	U	1	U
	Freon 11	1	U	1	U
	Freon 113	5	U	5	U
	Freon 12	1	**UJ**	1	**UJ**
	Hexachlorobutadiene	1	U	1	U
	Isopropyl Alcohol (Isopropanol)	250	U	250	U
	Isopropylbenzene	1	U	1	U
	m,p-Xylene	1	U	1	U
	Methyl Tert-Butyl Ether	1	U	1	U
	Methylene chloride	5	U	5	U
	Naphthalene	1	U	1	U
	N-butylbenzene	1	U	1	U
	o-Xylene	1	U	1	U
	p-Isopropyltoluene	1	U	1	U
	Propylbenzene	1	U	1	U
	sec-Butylbenzene	1	U	1	U
	Styrene	1	U	1	U
	tert-Butylbenzene	1	U	1	U
	Tetrachloroethene (PCE)	**21**		1	U
	Toluene	1	U	1	U
	trans-1,2-Dichloroethene	1	U	1	U
	trans-1,3-Dichloropropene	0.5	U	0.5	U
	Trichloroethene (TCE)	1	U	1	U
	Vinyl chloride	0.5	U	0.5	U
	1,4-Dioxane	0.48	U		

Data Summary Form
Groundwaters
Omega Chemical
(ug/L)

	Field Sample ID	OC_GW_DPE-7D_20190213		OC_TB_20190213	
	Sample Type	N		TB	
	Lab Sample ID	440-233430-1		440-233430-2	
RL	Dilution Factor	1		1	
	1,1,1,2-Tetrachloroethane	1	U	1	U
	1,1,1-Trichloroethane (TCA)	1	U	1	U
	1,1,2,2-Tetrachloroethane	1	U	1	U
	1,1,2-Trichloroethane	1	U	1	U
	1,1-Dichloroethane	1	U	1	U
	1,1-Dichloroethene	**15**		1	U
	1,1-Dichloropropene	1	U	1	U
	1,2,3-Trichlorobenzene	1	U	1	U
	1,2,3-Trichloropropane	1	U	1	U
	1,2,4-Trichlorobenzene	1	U	1	U
	1,2,4-Trimethylbenzene	1	U	1	U
	1,2-Dibromo-3-chloropropane	5	**UJ**	5	**UJ**
	1,2-Dibromoethane (EDB)	1	U	1	U
	1,2-Dichlorobenzene	1	U	1	U
	1,2-Dichloroethane	1	U	1	U
	1,2-Dichloropropane	1	U	1	U
	1,3,5-Trimethylbenzene	1	U	1	U
	1,3-Dichlorobenzene	1	U	1	U
	1,3-Dichloropropane	1	U	1	U
	1,4-Dichlorobenzene	1	U	1	U
	2,2-Dichloropropane	1	U	1	U
	2-Chlorotoluene	1	U	1	U
	4-Chlorotoluene	1	U	1	U
	Acetone	10	**UJ**	10	**UJ**
	Benzene	0.5	U	0.5	U
	Bromobenzene	1	U	1	U
	Bromochloromethane	1	U	1	U
	Bromodichloromethane	1	U	1	U
	Bromoform	1	U	1	U
	Bromomethane	1	U	1	U
	Carbon tetrachloride	0.5	U	0.5	U
	Chlorobenzene	1	U	1	U
	Chloroethane	1	U	1	U
	Chloroform	1	U	1	U
	Chloromethane	1	U	1	U
	cis-1,2-Dichloroethene	1	U	1	U
	cis-1,3-Dichloropropene	0.5	U	0.5	U
	Dibromochloromethane	1	U	1	U
	Dibromomethane	1	U	1	U
	Ethylbenzene	1	U	1	U
	Freon 11	**5.4**		1	U
	Freon 113	**15**		5	U
	Freon 12	1	**UJ**	1	**UJ**
	Hexachlorobutadiene	1	U	1	U
	Isopropyl Alcohol (Isopropanol)	250	U	250	U
	Isopropylbenzene	1	U	1	U
	m,p-Xylene	1	U	1	U
	Methyl Tert-Butyl Ether	1	U	1	U
	Methylene chloride	5	U	5	U
	Naphthalene	1	U	1	U
	N-butylbenzene	1	U	1	U
	o-Xylene	1	U	1	U
	p-Isopropyltoluene	1	U	1	U
	Propylbenzene	1	U	1	U
	sec-Butylbenzene	1	U	1	U
	Styrene	1	U	1	U
	tert-Butylbenzene	1	U	1	U
	Tetrachloroethene (PCE)	**71**		1	U
	Toluene	1	U	1	U
	trans-1,2-Dichloroethene	1	U	1	U
	trans-1,3-Dichloropropene	0.5	U	0.5	U
	Trichloroethene (TCE)	**31**		1	U
	Vinyl chloride	0.5	U	0.5	U
	1,4-Dioxane	0.49	**UJ**		

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2/12/2019
Ms. Jaime Dinello
DeMaximis, Inc
1340 Reynolds Ave, Suite 105

Irvine CA 92614

Project Name: Omega-GWTS Monthly GAC
Project #:
Workorder #: 1901523R1

Dear Ms. Jaime Dinello

The following report includes the data for the above referenced project for sample(s) received on 1/29/2019 at Air Toxics Ltd.

The data and associated QC analyzed by TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics Inc. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kelly Buettner at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Kelly Buettner

Project Manager

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WORK ORDER #: 1901523R1

Work Order Summary

CLIENT:	Ms. Jaime Dinello DeMaximis, Inc 1340 Reynolds Ave, Suite 105 Irvine, CA 92614	**BILL TO:**	Mr. Tom Dorsey Omega Chemical Site Environmental Remediation Trust 1322 Scott St. Suite 104
PHONE:	949.679.9290	**P.O. #**	
FAX:	949.679.9078	**PROJECT #**	Omega-GWTS Monthly GAC
DATE RECEIVED:	01/29/2019	**CONTACT:**	Kelly Buettner
DATE COMPLETED:	02/05/2019		
DATE REISSUED:	02/12/2019		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	OC_VGAC_EFF_SP242_012419	TO-15	3.5 "Hg	15 psi
02A	OC_VGAC_INT_SP245_012419	TO-15	4.5 "Hg	15 psi
03A	OC_VGAC_INF_SP241_012419	TO-15	4.0 "Hg	15 psi
04A	Lab Blank	TO-15	NA	NA
05A	CCV	TO-15	NA	NA
06A	LCS	TO-15	NA	NA
06AA	LCSD	TO-15	NA	NA

CERTIFIED BY: Heidi Hayes

Technical Director

DATE: 02/12/19

Certification numbers: AZ Licensure AZ0775, FL NELAP - E8 , LA NELAP - 02089, NH NELAP - 209218, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP - T104704434-18-13, UT NELAP CA009332018-10, VA NELAP - 9505, WA NELAP - C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005-011, Effective date: 10/18/2018, Expiration date: 10/17/2019.
Eurofins Air Toxics LLC. certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics LLC.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
EPA Method TO-15
DeMaximis, Inc
Workorder# 1901523R1

Three 1 Liter Summa Canister samples were received on January 29, 2019. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Receiving Notes

The Chain of Custody (COC) was not relinquished properly. A date was not provided by the field sampler.

The work order was reissued on 2/12/19 to correct identification of sample OC_VGAC_EFF_SP242_012419 due to laboratory transcription error.

Analytical Notes

The TNMOC concentration was calculated by taking the total area counts in the sample and quantitating the area based on the response factor of Heptane.

Definition of Data Qualifying Flags

Ten qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).
J - Estimated value.
E - Exceeds instrument calibration range.
S - Saturated peak.
Q - Exceeds quality control limits.
U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.
UJ- Non-detected compound associated with low bias in the CCV
N - The identification is based on presumptive evidence.
M - Reported value may be biased due to apparent matrix interferences.
CN - See Case Narrative.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified
b-File was quantified by a second column and detector
r1-File was requantified for the purpose of reissue

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Summary of Detected Compounds
EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: OC_VGAC_EFF_SP242_012419

Lab ID#: 1901523R1-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	1.1	4.6	6.4	26
Freon 113	1.1	17	8.8	130
1,1-Dichloroethene	1.1	13	4.5	52
Chloroform	1.1	3.4	5.6	17
TNMOC ref. to Heptane (MW=100)	23	66	94	270

Client Sample ID: OC_VGAC_INT_SP245_012419

Lab ID#: 1901523R1-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	1.2	5.4	6.7	30
Freon 113	1.2	17	9.1	130
1,1-Dichloroethene	1.2	15	4.7	59
Chloroform	1.2	3.7	5.8	18
TNMOC ref. to Heptane (MW=100)	24	39	97	160

Client Sample ID: OC_VGAC_INF_SP241_012419

Lab ID#: 1901523R1-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	1.2	5.8	6.5	33
Freon 113	1.2	22	8.9	170
1,1-Dichloroethene	1.2	16	4.6	63
Chloroform	1.2	5.6	5.7	27
1,2-Dichloroethane	1.2	1.2	4.7	5.0
Trichloroethene	1.2	9.4	6.3	50
Toluene	1.2	2.1	4.4	7.9
Tetrachloroethene	1.2	68	7.9	460
TNMOC ref. to Heptane (MW=100)	23	190	95	780

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Client Sample ID: OC_VGAC_EFF_SP242_012419

Lab ID#: 1901523R1-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**a020418**	**Date of Collection:**	**1/24/19 10:21:00 AM**
Dil. Factor:	**2.29**	**Date of Analysis:**	**2/4/19 10:01 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.1	Not Detected	5.7	Not Detected
Vinyl Chloride	1.1	Not Detected	2.9	Not Detected
Freon 11	1.1	4.6	6.4	26
Freon 113	1.1	17	8.8	130
1,1-Dichloroethene	1.1	13	4.5	52
2-Propanol	4.6	Not Detected	11	Not Detected
Carbon Disulfide	4.6	Not Detected	14	Not Detected
Methylene Chloride	11	Not Detected	40	Not Detected
Hexane	1.1	Not Detected	4.0	Not Detected
1,1-Dichloroethane	1.1	Not Detected	4.6	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.6	Not Detected	14	Not Detected
Chloroform	1.1	3.4	5.6	17
1,1,1-Trichloroethane	1.1	Not Detected	6.2	Not Detected
Carbon Tetrachloride	1.1	Not Detected	7.2	Not Detected
Benzene	1.1	Not Detected	3.6	Not Detected
1,2-Dichloroethane	1.1	Not Detected	4.6	Not Detected
Trichloroethene	1.1	Not Detected	6.2	Not Detected
1,4-Dioxane	4.6	Not Detected	16	Not Detected
Toluene	1.1	Not Detected	4.3	Not Detected
1,1,2-Trichloroethane	1.1	Not Detected	6.2	Not Detected
Tetrachloroethene	1.1	Not Detected	7.8	Not Detected
o-Xylene	1.1	Not Detected	5.0	Not Detected
TNMOC ref. to Heptane (MW=100)	23	66	94	270

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	89	70-130
4-Bromofluorobenzene	96	70-130

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Client Sample ID: OC_VGAC_INT_SP245_012419

Lab ID#: 1901523R1-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**a020419**	**Date of Collection:**	**1/24/19 10:21:00 AM**
Dil. Factor:	**2.38**	**Date of Analysis:**	**2/4/19 10:28 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.2	Not Detected	5.9	Not Detected
Vinyl Chloride	1.2	Not Detected	3.0	Not Detected
Freon 11	1.2	5.4	6.7	30
Freon 113	1.2	17	9.1	130
1,1-Dichloroethene	1.2	15	4.7	59
2-Propanol	4.8	Not Detected	12	Not Detected
Carbon Disulfide	4.8	Not Detected	15	Not Detected
Methylene Chloride	12	Not Detected	41	Not Detected
Hexane	1.2	Not Detected	4.2	Not Detected
1,1-Dichloroethane	1.2	Not Detected	4.8	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.8	Not Detected	14	Not Detected
Chloroform	1.2	3.7	5.8	18
1,1,1-Trichloroethane	1.2	Not Detected	6.5	Not Detected
Carbon Tetrachloride	1.2	Not Detected	7.5	Not Detected
Benzene	1.2	Not Detected	3.8	Not Detected
1,2-Dichloroethane	1.2	Not Detected	4.8	Not Detected
Trichloroethene	1.2	Not Detected	6.4	Not Detected
1,4-Dioxane	4.8	Not Detected	17	Not Detected
Toluene	1.2	Not Detected	4.5	Not Detected
1,1,2-Trichloroethane	1.2	Not Detected	6.5	Not Detected
Tetrachloroethene	1.2	Not Detected	8.1	Not Detected
o-Xylene	1.2	Not Detected	5.2	Not Detected
TNMOC ref. to Heptane (MW=100)	24	39	97	160

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	94	70-130
1,2-Dichloroethane-d4	89	70-130
4-Bromofluorobenzene	98	70-130

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Client Sample ID: OC_VGAC_INF_SP241_012419

Lab ID#: 1901523R1-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**a020420**	**Date of Collection:**	**1/24/19 10:22:00 AM**
Dil. Factor:	**2.33**	**Date of Analysis:**	**2/4/19 10:54 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.2	Not Detected	5.8	Not Detected
Vinyl Chloride	1.2	Not Detected	3.0	Not Detected
Freon 11	1.2	5.8	6.5	33
Freon 113	1.2	22	8.9	170
1,1-Dichloroethene	1.2	16	4.6	63
2-Propanol	4.7	Not Detected	11	Not Detected
Carbon Disulfide	4.7	Not Detected	14	Not Detected
Methylene Chloride	12	Not Detected	40	Not Detected
Hexane	1.2	Not Detected	4.1	Not Detected
1,1-Dichloroethane	1.2	Not Detected	4.7	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.7	Not Detected	14	Not Detected
Chloroform	1.2	5.6	5.7	27
1,1,1-Trichloroethane	1.2	Not Detected	6.4	Not Detected
Carbon Tetrachloride	1.2	Not Detected	7.3	Not Detected
Benzene	1.2	Not Detected	3.7	Not Detected
1,2-Dichloroethane	1.2	1.2	4.7	5.0
Trichloroethene	1.2	9.4	6.3	50
1,4-Dioxane	4.7	Not Detected	17	Not Detected
Toluene	1.2	2.1	4.4	7.9
1,1,2-Trichloroethane	1.2	Not Detected	6.4	Not Detected
Tetrachloroethene	1.2	68	7.9	460
o-Xylene	1.2	Not Detected	5.0	Not Detected
TNMOC ref. to Heptane (MW=100)	23	190	95	780

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	96	70-130
1,2-Dichloroethane-d4	88	70-130
4-Bromofluorobenzene	97	70-130

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Client Sample ID: Lab Blank

Lab ID#: 1901523R1-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**a020405**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/4/19 11:38 AM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	2.0	Not Detected	6.2	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	Not Detected	5.9	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
TNMOC ref. to Heptane (MW=100)	10	Not Detected	41	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	96	70-130
1,2-Dichloroethane-d4	86	70-130
4-Bromofluorobenzene	96	70-130

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Client Sample ID: CCV

Lab ID#: 1901523R1-05A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**a020402**	**Date of Collection: NA**
Dil. Factor:	**1.00**	**Date of Analysis: 2/4/19 09:51 AM**

Compound	%Recovery
Freon 12	96
Vinyl Chloride	92
Freon 11	99
Freon 113	99
1,1-Dichloroethene	94
2-Propanol	88
Carbon Disulfide	94
Methylene Chloride	94
Hexane	90
1,1-Dichloroethane	91
2-Butanone (Methyl Ethyl Ketone)	86
Chloroform	100
1,1,1-Trichloroethane	102
Carbon Tetrachloride	102
Benzene	102
1,2-Dichloroethane	101
Trichloroethene	107
1,4-Dioxane	100
Toluene	100
1,1,2-Trichloroethane	109
Tetrachloroethene	105
o-Xylene	100
TNMOC ref. to Heptane (MW=100)	100

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	98	70-130
1,2-Dichloroethane-d4	90	70-130
4-Bromofluorobenzene	97	70-130

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Client Sample ID: LCS

Lab ID#: 1901523R1-06A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**a020403**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/4/19 10:16 AM**	

Compound	**%Recovery**	**Method Limits**
Freon 12	95	70-130
Vinyl Chloride	81	70-130
Freon 11	98	70-130
Freon 113	97	70-130
1,1-Dichloroethene	94	70-130
2-Propanol	81	70-130
Carbon Disulfide	96	70-130
Methylene Chloride	94	70-130
Hexane	92	70-130
1,1-Dichloroethane	88	70-130
2-Butanone (Methyl Ethyl Ketone)	82	70-130
Chloroform	99	70-130
1,1,1-Trichloroethane	101	70-130
Carbon Tetrachloride	100	70-130
Benzene	99	70-130
1,2-Dichloroethane	97	70-130
Trichloroethene	105	70-130
1,4-Dioxane	81	70-130
Toluene	95	70-130
1,1,2-Trichloroethane	106	70-130
Tetrachloroethene	100	70-130
o-Xylene	97	70-130
TNMOC ref. to Heptane (MW=100)	Not Spiked	

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
Toluene-d8	97	70-130
1,2-Dichloroethane-d4	91	70-130
4-Bromofluorobenzene	97	70-130

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Client Sample ID: LCSD

Lab ID#: 1901523R1-06AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**a020404**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/4/19 10:40 AM**	

Compound	**%Recovery**	**Method Limits**
Freon 12	93	70-130
Vinyl Chloride	91	70-130
Freon 11	96	70-130
Freon 113	94	70-130
1,1-Dichloroethene	90	70-130
2-Propanol	81	70-130
Carbon Disulfide	94	70-130
Methylene Chloride	92	70-130
Hexane	89	70-130
1,1-Dichloroethane	87	70-130
2-Butanone (Methyl Ethyl Ketone)	84	70-130
Chloroform	97	70-130
1,1,1-Trichloroethane	99	70-130
Carbon Tetrachloride	99	70-130
Benzene	99	70-130
1,2-Dichloroethane	96	70-130
Trichloroethene	104	70-130
1,4-Dioxane	84	70-130
Toluene	95	70-130
1,1,2-Trichloroethane	108	70-130
Tetrachloroethene	101	70-130
o-Xylene	99	70-130
TNMOC ref. to Heptane (MW=100)	Not Spiked	

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
Toluene-d8	96	70-130
1,2-Dichloroethane-d4	88	70-130
4-Bromofluorobenzene	98	70-130

Calscience Environmental Laboratories, Inc.
7440 LINCOLN WAY
GARDEN GROVE, CA 92841-1427
TEL: (714) 895-5494 . FAX: (714) 894-7501

AIR CHAIN OF CUSTODY RECORD

DATE: 1/24/2019
PAGE: 1 OF 1

LABORATORY CLIENT: de maximis
ADDRESS: 1322 Scott St., Suite 104
CITY: San Diego STATE: CA ZIP: 92106
TEL: (562) 756-8149 EMAIL: jdinello@demaximis.com

CLIENT PROJECT NAME / NUMBER: Omega - GWTS Monthly GAC
PROJECT ADDRESS: 12520 Whittier Blvd.
CITY: Whittier STATE: CA ZIP: 90602
PROJECT CONTACT: Trent Henderson thenderson@jacobandhefner.com

P.O. NO.:
LAB CONTACT OR QUOTE NO.:
LAB USE ONLY ☐☐-☐☐☐☐

TURNAROUND TIME: ☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ 5 DAYS ☐ 10 DAYS

SAMPLER(S): (NAME / SIGNATURE) Khalid Azhar

SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY)
☒ EDD

SPECIAL INSTRUCTIONS:

REQUESTED ANALYSES

	LAB USE ONLY	SAMPLE ID	FIELD ID / Point of Collection	Air Type (I) Indoor (SV) Soil Vap. (A) Ambient	Sampling Equipment Info: Canister ID#	Canister Size 6L or 1L	Flow Controller ID#	Start Sampling Information: Date	Time (24hr clock)	Canister Pressure ("Hg)	Stop Sampling Information: Date	Time (24hr clock)	Canister Pressure ("Hg)	TO-15 (TAL 2.3)
01A	1	OC_VGAC_EFF_SP242_01 24 19	SP-EFF-GAC	Vapor	1L2360	1L	23323	1/24/2019	1016	-28.5	1/24/2019	1021	-4.5	X
02A	2	OC_VGAC_INT_SP245_01 24 19	SP-MID-GAC	Vapor	1L2567	1L	23203	1/24/2019	1017	-30	1/24/2019	1021	-5	X
03A	3	OC_VGAC_INF_SP241_01 24 19	SP-INF-GAC	Vapor	3049	1L	23574	1/24/2019	1017	-30	1/24/2019	1022	-5	X
	4													
	5													
	6													
	7													
	8													
	9													
	10													
	11													
	12													
	13													
	14													
	15													

Custody Seal Intact?
Y N None Temp NA
FEDEX

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
	EATL	1/29/19	0945
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

1901523

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3/4/2019
Ms. Jaime Dinello
DeMaximis, Inc
1340 Reynolds Ave, Suite 105

Irvine CA 92614

Project Name: Omega - GWCS Monthly GAC
Project #:
Workorder #: 1902485

Dear Ms. Jaime Dinello

The following report includes the data for the above referenced project for sample(s) received on 2/25/2019 at Air Toxics Ltd.

The data and associated QC analyzed by TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics Inc. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kelly Buettner at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Kelly Buettner

Project Manager

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WORK ORDER #: 1902485

Work Order Summary

CLIENT:	Ms. Jaime Dinello DeMaximis, Inc 1340 Reynolds Ave, Suite 105 Irvine, CA 92614	**BILL TO:**	Mr. Tom Dorsey Omega Chemical Site Environmental Remediation Trust 1322 Scott St. Suite 104
PHONE:	949.679.9290	**P.O. #**	
FAX:	949.679.9078	**PROJECT #**	Omega - GWCS Monthly GAC
DATE RECEIVED:	02/25/2019	**CONTACT:**	Kelly Buettner
DATE COMPLETED:	03/02/2019		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	OC_VGAC_EFF_SP242_022019	TO-15	3.0 "Hg	15 psi
02A	OC_VGAC_INT_SP245_022019	TO-15	3.0 "Hg	15 psi
03A	OC_VGAC_INF_SP241_022019	TO-15	5.0 "Hg	15 psi
04A	Lab Blank	TO-15	NA	NA
05A	CCV	TO-15	NA	NA
06A	LCS	TO-15	NA	NA
06AA	LCSD	TO-15	NA	NA

CERTIFIED BY: Heidi Mayo

Technical Director

DATE: 03/02/19

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,
TX NELAP - T104704434-15-9, UT NELAP CA0093332015-6, VA NELAP - 8113, WA NELAP - C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2015, Expiration date: 10/17/2016.
Eurofins Air Toxics Inc.. certifies that the test results contained in this report meet all requirements of the NELAC standards

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LABORATORY NARRATIVE
EPA Method TO-15
DeMaximis, Inc
Workorder# 1902485

Three 1 Liter Summa Canister samples were received on February 25, 2019. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

This workorder was independently validated prior to submittal using 'USEPA National Functional Guidelines' as generally applied to the analysis of volatile organic compounds in air. A rules-based, logic driven, independent validation engine was employed to assess completeness, evaluate pass/fail of relevant project quality control requirements and verification of all quantified amounts.

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

The TNMOC ref. to Heptane concentration was calculated by taking the total area counts in the sample and quantitating the area based on the response factor of TNMOC ref. to Heptane (MW=100).

Definition of Data Qualifying Flags

Ten qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).
J - Estimated value.
E - Exceeds instrument calibration range.
S - Saturated peak.
Q - Exceeds quality control limits.
U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.
UJ- Non-detected compound associated with low bias in the CCV
N - The identification is based on presumptive evidence.
M - Reported value may be biased due to apparent matrix interferences.
CN - See Case Narrative.

File extensions may have been used on the data analysis sheets and indicates as follows:
a-File was requantified
b-File was quantified by a second column and detector
r1-File was requantified for the purpose of reissue

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Summary of Detected Compounds
EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: OC_VGAC_EFF_SP242_022019

Lab ID#: 1902485-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	1.1	5.9	6.3	33
Freon 113	1.1	21	8.6	160
1,1-Dichloroethene	1.1	11	4.4	44
Chloroform	1.1	3.6	5.5	17
TNMOC ref. to Heptane (MW=100)	22	54	92	220

Client Sample ID: OC_VGAC_INT_SP245_022019

Lab ID#: 1902485-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	1.1	6.9	6.3	39
Freon 113	1.1	18	8.6	140
1,1-Dichloroethene	1.1	12	4.4	49
Chloroform	1.1	4.1	5.5	20
1,2-Dichloroethane	1.1	1.4	4.5	5.7
TNMOC ref. to Heptane (MW=100)	22	54	92	220

Client Sample ID: OC_VGAC_INF_SP241_022019

Lab ID#: 1902485-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	1.2	8.0	6.8	45
Freon 113	1.2	25	9.3	190
1,1-Dichloroethene	1.2	18	4.8	72
2-Propanol	4.8	7.7	12	19
Chloroform	1.2	6.9	5.9	34
1,2-Dichloroethane	1.2	1.7	4.9	7.0
Trichloroethene	1.2	11	6.5	59
Tetrachloroethene	1.2	79	8.2	540
TNMOC ref. to Heptane (MW=100)	24	170	99	700

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Client Sample ID: OC_VGAC_EFF_SP242_022019

Lab ID#: 1902485-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**p022707**	**Date of Collection:**	**2/20/19 1:41:00 PM**
Dil. Factor:	**2.24**	**Date of Analysis:**	**2/27/19 04:50 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.1	Not Detected	5.5	Not Detected
Vinyl Chloride	1.1	Not Detected	2.9	Not Detected
Freon 11	1.1	5.9	6.3	33
Freon 113	1.1	21	8.6	160
1,1-Dichloroethene	1.1	11	4.4	44
2-Propanol	4.5	Not Detected	11	Not Detected
Carbon Disulfide	4.5	Not Detected	14	Not Detected
Methylene Chloride	11	Not Detected	39	Not Detected
Hexane	1.1	Not Detected	3.9	Not Detected
1,1-Dichloroethane	1.1	Not Detected	4.5	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.5	Not Detected	13	Not Detected
Chloroform	1.1	3.6	5.5	17
1,1,1-Trichloroethane	1.1	Not Detected	6.1	Not Detected
Carbon Tetrachloride	1.1	Not Detected	7.0	Not Detected
Benzene	1.1	Not Detected	3.6	Not Detected
1,2-Dichloroethane	1.1	Not Detected	4.5	Not Detected
Trichloroethene	1.1	Not Detected	6.0	Not Detected
1,4-Dioxane	4.5	Not Detected	16	Not Detected
Toluene	1.1	Not Detected	4.2	Not Detected
1,1,2-Trichloroethane	1.1	Not Detected	6.1	Not Detected
Tetrachloroethene	1.1	Not Detected	7.6	Not Detected
o-Xylene	1.1	Not Detected	4.9	Not Detected
TNMOC ref. to Heptane (MW=100)	22	54	92	220

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130
1,2-Dichloroethane-d4	116	70-130
4-Bromofluorobenzene	103	70-130

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Client Sample ID: OC_VGAC_INT_SP245_022019

Lab ID#: 1902485-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**p022708**	**Date of Collection:**	**2/20/19 1:42:00 PM**
Dil. Factor:	**2.24**	**Date of Analysis:**	**2/27/19 05:16 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.1	Not Detected	5.5	Not Detected
Vinyl Chloride	1.1	Not Detected	2.9	Not Detected
Freon 11	1.1	6.9	6.3	39
Freon 113	1.1	18	8.6	140
1,1-Dichloroethene	1.1	12	4.4	49
2-Propanol	4.5	Not Detected	11	Not Detected
Carbon Disulfide	4.5	Not Detected	14	Not Detected
Methylene Chloride	11	Not Detected	39	Not Detected
Hexane	1.1	Not Detected	3.9	Not Detected
1,1-Dichloroethane	1.1	Not Detected	4.5	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.5	Not Detected	13	Not Detected
Chloroform	1.1	4.1	5.5	20
1,1,1-Trichloroethane	1.1	Not Detected	6.1	Not Detected
Carbon Tetrachloride	1.1	Not Detected	7.0	Not Detected
Benzene	1.1	Not Detected	3.6	Not Detected
1,2-Dichloroethane	1.1	1.4	4.5	5.7
Trichloroethene	1.1	Not Detected	6.0	Not Detected
1,4-Dioxane	4.5	Not Detected	16	Not Detected
Toluene	1.1	Not Detected	4.2	Not Detected
1,1,2-Trichloroethane	1.1	Not Detected	6.1	Not Detected
Tetrachloroethene	1.1	Not Detected	7.6	Not Detected
o-Xylene	1.1	Not Detected	4.9	Not Detected
TNMOC ref. to Heptane (MW=100)	22	54	92	220

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130
1,2-Dichloroethane-d4	120	70-130
4-Bromofluorobenzene	103	70-130

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Client Sample ID: OC_VGAC_INF_SP241_022019

Lab ID#: 1902485-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**p022709**	**Date of Collection:**	**2/20/19 1:47:00 PM**
Dil. Factor:	**2.42**	**Date of Analysis:**	**2/27/19 05:43 PM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.2	Not Detected	6.0	Not Detected
Vinyl Chloride	1.2	Not Detected	3.1	Not Detected
Freon 11	1.2	8.0	6.8	45
Freon 113	1.2	25	9.3	190
1,1-Dichloroethene	1.2	18	4.8	72
2-Propanol	4.8	7.7	12	19
Carbon Disulfide	4.8	Not Detected	15	Not Detected
Methylene Chloride	12	Not Detected	42	Not Detected
Hexane	1.2	Not Detected	4.3	Not Detected
1,1-Dichloroethane	1.2	Not Detected	4.9	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.8	Not Detected	14	Not Detected
Chloroform	1.2	6.9	5.9	34
1,1,1-Trichloroethane	1.2	Not Detected	6.6	Not Detected
Carbon Tetrachloride	1.2	Not Detected	7.6	Not Detected
Benzene	1.2	Not Detected	3.9	Not Detected
1,2-Dichloroethane	1.2	1.7	4.9	7.0
Trichloroethene	1.2	11	6.5	59
1,4-Dioxane	4.8	Not Detected	17	Not Detected
Toluene	1.2	Not Detected	4.6	Not Detected
1,1,2-Trichloroethane	1.2	Not Detected	6.6	Not Detected
Tetrachloroethene	1.2	79	8.2	540
o-Xylene	1.2	Not Detected	5.2	Not Detected
TNMOC ref. to Heptane (MW=100)	24	170	99	700

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	101	70-130
1,2-Dichloroethane-d4	119	70-130
4-Bromofluorobenzene	105	70-130

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Client Sample ID: Lab Blank

Lab ID#: 1902485-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**p022706**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/27/19 12:17 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	2.0	Not Detected	6.2	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	Not Detected	5.9	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
TNMOC ref. to Heptane (MW=100)	10	Not Detected	41	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	102	70-130
1,2-Dichloroethane-d4	111	70-130
4-Bromofluorobenzene	105	70-130

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Client Sample ID: CCV

Lab ID#: 1902485-05A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**p022702**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/27/19 10:33 AM**	

Compound	**%Recovery**
Freon 12	107
Vinyl Chloride	98
Freon 11	117
Freon 113	96
1,1-Dichloroethene	85
2-Propanol	89
Carbon Disulfide	85
Methylene Chloride	102
Hexane	88
1,1-Dichloroethane	94
2-Butanone (Methyl Ethyl Ketone)	83
Chloroform	103
1,1,1-Trichloroethane	117
Carbon Tetrachloride	122
Benzene	89
1,2-Dichloroethane	124
Trichloroethene	104
1,4-Dioxane	83
Toluene	99
1,1,2-Trichloroethane	95
Tetrachloroethene	101
o-Xylene	97
TNMOC ref. to Heptane (MW=100)	100

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
Toluene-d8	104	70-130
1,2-Dichloroethane-d4	118	70-130
4-Bromofluorobenzene	108	70-130

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Client Sample ID: LCS

Lab ID#: 1902485-06A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**p022703**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/27/19 10:58 AM**	

Compound	**%Recovery**	**Method Limits**
Freon 12	109	70-130
Vinyl Chloride	100	70-130
Freon 11	119	70-130
Freon 113	96	70-130
1,1-Dichloroethene	86	70-130
2-Propanol	91	70-130
Carbon Disulfide	74	70-130
Methylene Chloride	100	70-130
Hexane	85	70-130
1,1-Dichloroethane	97	70-130
2-Butanone (Methyl Ethyl Ketone)	82	70-130
Chloroform	104	70-130
1,1,1-Trichloroethane	114	70-130
Carbon Tetrachloride	123	70-130
Benzene	90	70-130
1,2-Dichloroethane	124	70-130
Trichloroethene	102	70-130
1,4-Dioxane	81	70-130
Toluene	97	70-130
1,1,2-Trichloroethane	94	70-130
Tetrachloroethene	100	70-130
o-Xylene	101	70-130
TNMOC ref. to Heptane (MW=100)	Not Spiked	

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
Toluene-d8	99	70-130
1,2-Dichloroethane-d4	115	70-130
4-Bromofluorobenzene	104	70-130

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Client Sample ID: LCSD

Lab ID#: 1902485-06AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**p022704**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 2/27/19 11:24 AM**	

Compound	**%Recovery**	**Method Limits**
Freon 12	116	70-130
Vinyl Chloride	99	70-130
Freon 11	125	70-130
Freon 113	101	70-130
1,1-Dichloroethene	90	70-130
2-Propanol	96	70-130
Carbon Disulfide	77	70-130
Methylene Chloride	107	70-130
Hexane	91	70-130
1,1-Dichloroethane	99	70-130
2-Butanone (Methyl Ethyl Ketone)	84	70-130
Chloroform	108	70-130
1,1,1-Trichloroethane	118	70-130
Carbon Tetrachloride	128	70-130
Benzene	92	70-130
1,2-Dichloroethane	126	70-130
Trichloroethene	106	70-130
1,4-Dioxane	84	70-130
Toluene	100	70-130
1,1,2-Trichloroethane	97	70-130
Tetrachloroethene	103	70-130
o-Xylene	102	70-130
TNMOC ref. to Heptane (MW=100)	Not Spiked	

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
Toluene-d8	102	70-130
1,2-Dichloroethane-d4	122	70-130
4-Bromofluorobenzene	105	70-130

Calscience Environmental Laboratories, Inc.
7440 LINCOLN WAY
GARDEN GROVE, CA 92841-1427
TEL: (714) 895-5494 . FAX: (714) 894-7501

AIR CHAIN OF CUSTODY RECORD

DATE: 02/20/19
PAGE: 1 OF 1

LABORATORY CLIENT: de maximis
ADDRESS: 1322 Scott St., Suite 104
CITY: San Diego STATE: CA ZIP: 92106
TEL: (562) 756-8149 EMAIL: jdinello@demaximis.com

CLIENT PROJECT NAME / NUMBER: Omega - GWCS Monthly GAC
PROJECT ADDRESS: 12520 Whittier Blvd.
CITY: Whittier STATE: CA ZIP: 90602
PROJECT CONTACT: Trent Henderson thenderson@jacobandhefner.com

P.O. NO.:
LAB CONTACT OR QUOTE NO.:
LAB USE ONLY: ☐☐-☐☐☐☐

TURNAROUND TIME: ☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☑ 5 DAYS ☐ 10 DAYS

SAMPLER(S): (NAME / SIGNATURE) Khalid Dzhu

SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY): ☑ EDD

SPECIAL INSTRUCTIONS:

REQUESTED ANALYSES

LAB USE ONLY	SAMPLE ID	FIELD ID / Point of Collection	Air Type (I) Indoor (SV) Soil Vap. (A) Ambient	Sampling Equipment Info: Canister ID#	Canister Size 6L or 1L	Flow Controller ID#	Start Sampling Information: Date	Time (24hr clock)	Canister Pressure ("Hg)	Stop Sampling Information: Date	Time (24hr clock)	Canister Pressure ("Hg)	TO-15 (TAL 2.3)
01A 1	OC_VGAC_EFF_SP242_022019	SP-EFF-GAC	Vapor	1L3028	1L	24204	2/20/2019	1336	-27	2/20/2019	1341	-4	X
02A 2	OC_VGAC_INT_SP245_022019	SP-MID-GAC	Vapor	1L2304	1L	23461	2/20/2019	1337	-27.5	2/20/2019	1342	-5	X
03A 3	OC_VGAC_INF_SP241_022019	SP-INF-GAC	Vapor	1L2812	1L	23265	2/20/2019	1342	-26	2/20/2019	1347	-5	X
4													
5													
6													
7													
8													
9													
10													
11													
12													
13													
14													
15													

Custody Seal Intact?
Y N None Temp NA

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
		2/25/19	0905
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

1902485

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3/22/2019
Ms. Jaime Dinello
DeMaximis, Inc
1340 Reynolds Ave, Suite 105

Irvine CA 92614

Project Name: Omega - GWCS Monthly GAC
Project #:
Workorder #: 1903363

Dear Ms. Jaime Dinello

The following report includes the data for the above referenced project for sample(s) received on 3/15/2019 at Air Toxics Ltd.

The data and associated QC analyzed by TO-15 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics Inc. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Kelly Buettner at 916-985-1000 if you have any questions regarding the data in this report.

Regards,

Kelly Buettner

Project Manager

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WORK ORDER #: 1903363

Work Order Summary

CLIENT:	Ms. Jaime Dinello DeMaximis, Inc 1340 Reynolds Ave, Suite 105 Irvine, CA 92614	**BILL TO:**	Mr. Tom Dorsey Omega Chemical Site Environmental Remediation Trust 1322 Scott St. Suite 104
PHONE:	949.679.9290	**P.O. #**	
FAX:	949.679.9078	**PROJECT #**	Omega - GWCS Monthly GAC
DATE RECEIVED:	03/15/2019	**CONTACT:**	Kelly Buettner
DATE COMPLETED:	03/22/2019		

FRACTION #	NAME	TEST	RECEIPT VAC./PRES.	FINAL PRESSURE
01A	OC_VGAC_EFF_SP242_031319	TO-15	5.9 "Hg	15.6 psi
02A	OC_VGAC_INT_SP245_031319	TO-15	4.3 "Hg	15.1 psi
03A	OC_VGAC_INF_SP241_031319	TO-15	0.4 "Hg	15.1 psi
04A	Lab Blank	TO-15	NA	NA
05A	CCV	TO-15	NA	NA
06A	LCS	TO-15	NA	NA
06AA	LCSD	TO-15	NA	NA

CERTIFIED BY: Heidi Mayo

Technical Director

DATE: 03/22/19

Certification numbers: AZ Licensure AZ0775, NJ NELAP - CA016, NY NELAP - 11291,
TX NELAP - T104704434-15-9, UT NELAP CA0093332015-6, VA NELAP - 8113, WA NELAP - C935
Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
Accreditation number: CA300005, Effective date: 10/18/2015, Expiration date: 10/17/2016.
Eurofins Air Toxics Inc.. certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, Inc.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
(916) 985-1000 . (800) 985-5955 . FAX (916) 985-1020

LABORATORY NARRATIVE
EPA Method TO-15
DeMaximis, Inc
Workorder# 1903363

Three 1 Liter Summa Canister samples were received on March 15, 2019. The laboratory performed analysis via EPA Method TO-15 using GC/MS in the full scan mode.

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Receiving Notes

There were no receiving discrepancies.

Analytical Notes

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UJ- Non-detected compound associated with low bias in the CCV
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r1-File was requantified for the purpose of reissue

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Summary of Detected Compounds
EPA METHOD TO-15 GC/MS FULL SCAN

Client Sample ID: OC_VGAC_EFF_SP242_031319

Lab ID#: 1903363-01A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	1.3	3.3	7.2	19
Freon 113	1.3	11	9.8	88
1,1-Dichloroethene	1.3	8.4	5.1	33
Chloroform	1.3	2.7	6.2	13
TNMOC ref. to Heptane (MW=100)	26	55	100	220

Client Sample ID: OC_VGAC_INT_SP245_031319

Lab ID#: 1903363-02A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	1.2	3.7	6.6	21
Freon 113	1.2	9.3	9.1	72
1,1-Dichloroethene	1.2	8.9	4.7	35
Chloroform	1.2	2.5	5.8	12
TNMOC ref. to Heptane (MW=100)	24	39	97	160

Client Sample ID: OC_VGAC_INF_SP241_031319

Lab ID#: 1903363-03A

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 11	1.0	5.6	5.8	32
Freon 113	1.0	26	7.8	200
1,1-Dichloroethene	1.0	17	4.1	66
Chloroform	1.0	5.2	5.0	26
1,2-Dichloroethane	1.0	1.1	4.1	4.5
Trichloroethene	1.0	11	5.5	61
Tetrachloroethene	1.0	65	7.0	440
TNMOC ref. to Heptane (MW=100)	20	200	84	820

eurofins | Air Toxics

Client Sample ID: OC_VGAC_EFF_SP242_031319

Lab ID#: 1903363-01A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17032119**	**Date of Collection:**	**3/13/19 8:57:00 AM**
Dil. Factor:	**2.56**	**Date of Analysis:**	**3/22/19 12:55 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.3	Not Detected	6.3	Not Detected
Vinyl Chloride	1.3	Not Detected	3.3	Not Detected
Freon 11	1.3	3.3	7.2	19
Freon 113	1.3	11	9.8	88
1,1-Dichloroethene	1.3	8.4	5.1	33
2-Propanol	5.1	Not Detected	12	Not Detected
Carbon Disulfide	5.1	Not Detected	16	Not Detected
Methylene Chloride	13	Not Detected	44	Not Detected
Hexane	1.3	Not Detected	4.5	Not Detected
1,1-Dichloroethane	1.3	Not Detected	5.2	Not Detected
2-Butanone (Methyl Ethyl Ketone)	5.1	Not Detected	15	Not Detected
Chloroform	1.3	2.7	6.2	13
1,1,1-Trichloroethane	1.3	Not Detected	7.0	Not Detected
Carbon Tetrachloride	1.3	Not Detected	8.0	Not Detected
Benzene	1.3	Not Detected	4.1	Not Detected
1,2-Dichloroethane	1.3	Not Detected	5.2	Not Detected
Trichloroethene	1.3	Not Detected	6.9	Not Detected
1,4-Dioxane	5.1	Not Detected	18	Not Detected
Toluene	1.3	Not Detected	4.8	Not Detected
1,1,2-Trichloroethane	1.3	Not Detected	7.0	Not Detected
Tetrachloroethene	1.3	Not Detected	8.7	Not Detected
o-Xylene	1.3	Not Detected	5.6	Not Detected
TNMOC ref. to Heptane (MW=100)	26	55	100	220

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	109	70-130
1,2-Dichloroethane-d4	102	70-130
4-Bromofluorobenzene	94	70-130

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Client Sample ID: OC_VGAC_INT_SP245_031319

Lab ID#: 1903363-02A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17032120**	**Date of Collection:**	**3/13/19 8:58:00 AM**
Dil. Factor:	**2.37**	**Date of Analysis:**	**3/22/19 01:23 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.2	Not Detected	5.9	Not Detected
Vinyl Chloride	1.2	Not Detected	3.0	Not Detected
Freon 11	1.2	3.7	6.6	21
Freon 113	1.2	9.3	9.1	72
1,1-Dichloroethene	1.2	8.9	4.7	35
2-Propanol	4.7	Not Detected	12	Not Detected
Carbon Disulfide	4.7	Not Detected	15	Not Detected
Methylene Chloride	12	Not Detected	41	Not Detected
Hexane	1.2	Not Detected	4.2	Not Detected
1,1-Dichloroethane	1.2	Not Detected	4.8	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.7	Not Detected	14	Not Detected
Chloroform	1.2	2.5	5.8	12
1,1,1-Trichloroethane	1.2	Not Detected	6.5	Not Detected
Carbon Tetrachloride	1.2	Not Detected	7.4	Not Detected
Benzene	1.2	Not Detected	3.8	Not Detected
1,2-Dichloroethane	1.2	Not Detected	4.8	Not Detected
Trichloroethene	1.2	Not Detected	6.4	Not Detected
1,4-Dioxane	4.7	Not Detected	17	Not Detected
Toluene	1.2	Not Detected	4.5	Not Detected
1,1,2-Trichloroethane	1.2	Not Detected	6.5	Not Detected
Tetrachloroethene	1.2	Not Detected	8.0	Not Detected
o-Xylene	1.2	Not Detected	5.1	Not Detected
TNMOC ref. to Heptane (MW=100)	24	39	97	160

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	107	70-130
1,2-Dichloroethane-d4	102	70-130
4-Bromofluorobenzene	89	70-130

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Client Sample ID: OC_VGAC_INF_SP241_031319

Lab ID#: 1903363-03A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17032121**	**Date of Collection:**	**3/13/19 8:59:00 AM**
Dil. Factor:	**2.05**	**Date of Analysis:**	**3/22/19 01:51 AM**

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	1.0	Not Detected	5.1	Not Detected
Vinyl Chloride	1.0	Not Detected	2.6	Not Detected
Freon 11	1.0	5.6	5.8	32
Freon 113	1.0	26	7.8	200
1,1-Dichloroethene	1.0	17	4.1	66
2-Propanol	4.1	Not Detected	10	Not Detected
Carbon Disulfide	4.1	Not Detected	13	Not Detected
Methylene Chloride	10	Not Detected	36	Not Detected
Hexane	1.0	Not Detected	3.6	Not Detected
1,1-Dichloroethane	1.0	Not Detected	4.1	Not Detected
2-Butanone (Methyl Ethyl Ketone)	4.1	Not Detected	12	Not Detected
Chloroform	1.0	5.2	5.0	26
1,1,1-Trichloroethane	1.0	Not Detected	5.6	Not Detected
Carbon Tetrachloride	1.0	Not Detected	6.4	Not Detected
Benzene	1.0	Not Detected	3.3	Not Detected
1,2-Dichloroethane	1.0	1.1	4.1	4.5
Trichloroethene	1.0	11	5.5	61
1,4-Dioxane	4.1	Not Detected	15	Not Detected
Toluene	1.0	Not Detected	3.9	Not Detected
1,1,2-Trichloroethane	1.0	Not Detected	5.6	Not Detected
Tetrachloroethene	1.0	65	7.0	440
o-Xylene	1.0	Not Detected	4.4	Not Detected
TNMOC ref. to Heptane (MW=100)	20	200	84	820

Container Type: 1 Liter Summa Canister

Surrogates	%Recovery	Method Limits
Toluene-d8	106	70-130
1,2-Dichloroethane-d4	100	70-130
4-Bromofluorobenzene	88	70-130

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Client Sample ID: Lab Blank

Lab ID#: 1903363-04A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17032107c**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/21/19 03:17 PM**	

Compound	Rpt. Limit (ppbv)	Amount (ppbv)	Rpt. Limit (ug/m3)	Amount (ug/m3)
Freon 12	0.50	Not Detected	2.5	Not Detected
Vinyl Chloride	0.50	Not Detected	1.3	Not Detected
Freon 11	0.50	Not Detected	2.8	Not Detected
Freon 113	0.50	Not Detected	3.8	Not Detected
1,1-Dichloroethene	0.50	Not Detected	2.0	Not Detected
2-Propanol	2.0	Not Detected	4.9	Not Detected
Carbon Disulfide	2.0	Not Detected	6.2	Not Detected
Methylene Chloride	5.0	Not Detected	17	Not Detected
Hexane	0.50	Not Detected	1.8	Not Detected
1,1-Dichloroethane	0.50	Not Detected	2.0	Not Detected
2-Butanone (Methyl Ethyl Ketone)	2.0	Not Detected	5.9	Not Detected
Chloroform	0.50	Not Detected	2.4	Not Detected
1,1,1-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Carbon Tetrachloride	0.50	Not Detected	3.1	Not Detected
Benzene	0.50	Not Detected	1.6	Not Detected
1,2-Dichloroethane	0.50	Not Detected	2.0	Not Detected
Trichloroethene	0.50	Not Detected	2.7	Not Detected
1,4-Dioxane	2.0	Not Detected	7.2	Not Detected
Toluene	0.50	Not Detected	1.9	Not Detected
1,1,2-Trichloroethane	0.50	Not Detected	2.7	Not Detected
Tetrachloroethene	0.50	Not Detected	3.4	Not Detected
o-Xylene	0.50	Not Detected	2.2	Not Detected
TNMOC ref. to Heptane (MW=100)	10	Not Detected	41	Not Detected

Container Type: NA - Not Applicable

Surrogates	%Recovery	Method Limits
Toluene-d8	109	70-130
1,2-Dichloroethane-d4	104	70-130
4-Bromofluorobenzene	88	70-130

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Client Sample ID: CCV

Lab ID#: 1903363-05A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17032102**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/21/19 10:35 AM**	

Compound	**%Recovery**
Freon 12	96
Vinyl Chloride	111
Freon 11	98
Freon 113	94
1,1-Dichloroethene	102
2-Propanol	110
Carbon Disulfide	114
Methylene Chloride	112
Hexane	100
1,1-Dichloroethane	112
2-Butanone (Methyl Ethyl Ketone)	111
Chloroform	109
1,1,1-Trichloroethane	98
Carbon Tetrachloride	100
Benzene	111
1,2-Dichloroethane	110
Trichloroethene	109
1,4-Dioxane	115
Toluene	111
1,1,2-Trichloroethane	106
Tetrachloroethene	97
o-Xylene	99
TNMOC ref. to Heptane (MW=100)	100

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
Toluene-d8	107	70-130
1,2-Dichloroethane-d4	103	70-130
4-Bromofluorobenzene	92	70-130

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Client Sample ID: LCS

Lab ID#: 1903363-06A

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17032103**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/21/19 11:20 AM**	

Compound	**%Recovery**	**Method Limits**
Freon 12	98	70-130
Vinyl Chloride	118	70-130
Freon 11	103	70-130
Freon 113	95	70-130
1,1-Dichloroethene	105	70-130
2-Propanol	116	70-130
Carbon Disulfide	103	70-130
Methylene Chloride	116	70-130
Hexane	104	70-130
1,1-Dichloroethane	113	70-130
2-Butanone (Methyl Ethyl Ketone)	110	70-130
Chloroform	110	70-130
1,1,1-Trichloroethane	99	70-130
Carbon Tetrachloride	99	70-130
Benzene	113	70-130
1,2-Dichloroethane	111	70-130
Trichloroethene	113	70-130
1,4-Dioxane	118	70-130
Toluene	114	70-130
1,1,2-Trichloroethane	107	70-130
Tetrachloroethene	99	70-130
o-Xylene	103	70-130
TNMOC ref. to Heptane (MW=100)	Not Spiked	

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
Toluene-d8	108	70-130
1,2-Dichloroethane-d4	103	70-130
4-Bromofluorobenzene	91	70-130

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Client Sample ID: LCSD

Lab ID#: 1903363-06AA

EPA METHOD TO-15 GC/MS FULL SCAN

File Name:	**17032104**	**Date of Collection: NA**	
Dil. Factor:	**1.00**	**Date of Analysis: 3/21/19 11:46 AM**	

Compound	**%Recovery**	**Method Limits**
Freon 12	97	70-130
Vinyl Chloride	119	70-130
Freon 11	104	70-130
Freon 113	95	70-130
1,1-Dichloroethene	107	70-130
2-Propanol	119	70-130
Carbon Disulfide	103	70-130
Methylene Chloride	116	70-130
Hexane	105	70-130
1,1-Dichloroethane	114	70-130
2-Butanone (Methyl Ethyl Ketone)	109	70-130
Chloroform	111	70-130
1,1,1-Trichloroethane	102	70-130
Carbon Tetrachloride	101	70-130
Benzene	112	70-130
1,2-Dichloroethane	111	70-130
Trichloroethene	113	70-130
1,4-Dioxane	118	70-130
Toluene	112	70-130
1,1,2-Trichloroethane	105	70-130
Tetrachloroethene	97	70-130
o-Xylene	102	70-130
TNMOC ref. to Heptane (MW=100)	Not Spiked	

Container Type: NA - Not Applicable

Surrogates	**%Recovery**	**Method Limits**
Toluene-d8	108	70-130
1,2-Dichloroethane-d4	105	70-130
4-Bromofluorobenzene	93	70-130

AIR CHAIN OF CUSTODY RECORD

DATE: 03/13/19
PAGE: 1 OF 1

Calscience Environmental Laboratories, Inc.
7440 LINCOLN WAY
GARDEN GROVE, CA 92841-1427
TEL: (714) 895-5494 . FAX: (714) 894-7501

LABORATORY CLIENT: de maximis
ADDRESS: 1322 Scott St., Suite 104
CITY: San Diego STATE: CA ZIP: 92106
TEL: (562) 756-8149 EMAIL: jdinello@demaximis.com

CLIENT PROJECT NAME / NUMBER: Omega - GWCS Monthly GAC
PROJECT ADDRESS: 12520 Whittier Blvd.
CITY: Whittier STATE: CA ZIP: 90602
PROJECT CONTACT: Trent Henderson thenderson@jacobandhefner.com
SAMPLER(S): (NAME / SIGNATURE) Khalid Acher

P.O. NO.:
LAB CONTACT OR QUOTE NO.:
LAB USE ONLY ☐☐-☐☐☐☐

TURNAROUND TIME: ☐ SAME DAY ☐ 24 HR ☐ 48 HR ☐ 72 HR ☑ 5 DAYS ☐ 10 DAYS

SPECIAL REQUIREMENTS (ADDITIONAL COSTS MAY APPLY)
☑ EDD

SPECIAL INSTRUCTIONS:

REQUESTED ANALYSES

	LAB USE ONLY	SAMPLE ID	FIELD ID / Point of Collection	Air Type (I) Indoor (SV) Soil Vap. (A) Ambient	Sampling Equipment Info: Canister ID#	Canister Size 6L or 1L	Flow Controller ID#	Start Sampling Information: Date	Time (24hr clock)	Canister Pressure (°Hg)	Stop Sampling Information: Date	Time (24hr clock)	Canister Pressure (°Hg)	TO-15 (TAL 2.3)
01A	1	OC_VGAC_EFF_SP242_031319	SP-EFF-GAC	Vapor	12360	1L	24386	3/13/2019	0857	-26	3/13/2019	0901	-4	X
02A	2	OC_VGAC_INT_SP245_031319	SP-MID-GAC	Vapor	1368	1L	23655	3/13/2019	0858	-26	3/13/2019	0902	-5	X
03A	3	OC_VGAC_INF_SP241_031319	SP-INF-GAC	Vapor	40880	1L	24363	3/13/2019	0859	-29	3/13/2019	0904	-5	X
	4													
	5													
	6													
	7													
	8													
	9													
	10													
	11													
	12													
	13													
	14													
	15													

Custody Seal Intact?
Y N None Temp NA
Fed Ex

Relinquished by: (Signature)	Received by: (Signature)	Date: 3/15/19 Time: 0945
Relinquished by: (Signature)	Received by: (Signature)	Date: Time:
Relinquished by: (Signature)	Received by: (Signature)	Date: Time:

1903363

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: 440-231564-1
Client Project/Site: Omega Chemical - GWTS Monthly

For:
Jacob & Hefner Associates P.C.
15375 Barranca Parkway, J-101
Irvine, California 92618

Attn: Trent Henderson

Authorized for release by:
1/31/2019 9:21:36 PM
Urvashi Patel, Manager of Project Management
urvashi.patel@testamericainc.com

Designee for

Danielle Roberts, Senior Project Manager
(949)261-1022
danielle.roberts@testamericainc.com

LINKS

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

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

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

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Sample Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical - GWTS Monthly

TestAmerica Job ID: 440-231564-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-231564-1	OC_SP220B_EFF_012419	Water	01/24/19 10:30	01/25/19 13:10
440-231564-2	OC_SP210_INF_012419	Water	01/24/19 10:40	01/25/19 13:10
440-231564-3	OC_TB_012419	Water	01/24/19 10:00	01/25/19 13:10

Job ID: 440-231564-1

Laboratory: TestAmerica Irvine

Narrative

Job Narrative
440-231564-1

Comments
No additional comments.

Receipt
The samples were received on 1/25/2019 1:10 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
Method(s) 624, 8260B: The continuing calibration verification (CCV) associated with batch 440-525473 recovered above the upper control limit for Vinyl chloride. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method(s) 8260B: The laboratory control sample (LCS) for analytical batch 440-525473 recovered outside control limits for the following analyte: Acetone. This analytes was biased high in the LCS and was not detected in the associated samples; 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
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.

Detection Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical - GWTS Monthly

TestAmerica Job ID: 440-231564-1

Client Sample ID: OC_SP220B_EFF_012419 — Lab Sample ID: 440-231564-1

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Acetone	42	* F1	10	ug/L	1		8260B	Total/NA
1,4-Dioxane	20		0.50	ug/L	1		8270C SIM	Total/NA

Client Sample ID: OC_SP210_INF_012419 — Lab Sample ID: 440-231564-2

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
1,1,2-Trichloro-1,2,2-trifluoroethane	110		25	ug/L	5		8260B	Total/NA
1,1-Dichloroethene	42		5.0	ug/L	5		8260B	Total/NA
Chloroform	19		5.0	ug/L	5		8260B	Total/NA
Tetrachloroethene	300		5.0	ug/L	5		8260B	Total/NA
Trichloroethene	30		5.0	ug/L	5		8260B	Total/NA
Trichlorofluoromethane	19		5.0	ug/L	5		8260B	Total/NA

Client Sample ID: OC_TB_012419 — Lab Sample ID: 440-231564-3

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical - GWTS Monthly

TestAmerica Job ID: 440-231564-1

Client Sample ID: OC_SP220B_EFF_012419

Lab Sample ID: 440-231564-1

Date Collected: 01/24/19 10:30
Matrix: Water
Date Received: 01/25/19 13:10

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			01/29/19 10:08	1
1,1,1-Trichloroethane	ND		1.0		ug/L			01/29/19 10:08	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			01/29/19 10:08	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0		ug/L			01/29/19 10:08	1
1,1,2-Trichloroethane	ND		1.0		ug/L			01/29/19 10:08	1
1,1-Dichloroethane	ND		1.0		ug/L			01/29/19 10:08	1
1,1-Dichloroethene	ND		1.0		ug/L			01/29/19 10:08	1
1,1-Dichloropropene	ND		1.0		ug/L			01/29/19 10:08	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			01/29/19 10:08	1
1,2,3-Trichloropropane	ND		1.0		ug/L			01/29/19 10:08	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			01/29/19 10:08	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			01/29/19 10:08	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			01/29/19 10:08	1
1,2-Dibromoethane (EDB)	ND		1.0		ug/L			01/29/19 10:08	1
1,2-Dichlorobenzene	ND		1.0		ug/L			01/29/19 10:08	1
1,2-Dichloroethane	ND		1.0		ug/L			01/29/19 10:08	1
1,2-Dichloropropane	ND		1.0		ug/L			01/29/19 10:08	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			01/29/19 10:08	1
1,3-Dichlorobenzene	ND		1.0		ug/L			01/29/19 10:08	1
1,3-Dichloropropane	ND		1.0		ug/L			01/29/19 10:08	1
1,4-Dichlorobenzene	ND		1.0		ug/L			01/29/19 10:08	1
2,2-Dichloropropane	ND		1.0		ug/L			01/29/19 10:08	1
2-Chlorotoluene	ND		1.0		ug/L			01/29/19 10:08	1
4-Chlorotoluene	ND		1.0		ug/L			01/29/19 10:08	1
Acetone	**42**	*** F1**	10		ug/L			01/29/19 10:08	1
Benzene	ND		0.50		ug/L			01/29/19 10:08	1
Bromobenzene	ND		1.0		ug/L			01/29/19 10:08	1
Bromochloromethane	ND		1.0		ug/L			01/29/19 10:08	1
Bromodichloromethane	ND		1.0		ug/L			01/29/19 10:08	1
Bromoform	ND		1.0		ug/L			01/29/19 10:08	1
Bromomethane	ND		1.0		ug/L			01/29/19 10:08	1
Carbon tetrachloride	ND		0.50		ug/L			01/29/19 10:08	1
Chlorobenzene	ND		1.0		ug/L			01/29/19 10:08	1
Chloroethane	ND		1.0		ug/L			01/29/19 10:08	1
Chloroform	ND		1.0		ug/L			01/29/19 10:08	1
Chloromethane	ND		1.0		ug/L			01/29/19 10:08	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			01/29/19 10:08	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			01/29/19 10:08	1
Dibromochloromethane	ND		1.0		ug/L			01/29/19 10:08	1
Dibromomethane	ND		1.0		ug/L			01/29/19 10:08	1
Dichlorodifluoromethane	ND		1.0		ug/L			01/29/19 10:08	1
Ethylbenzene	ND		1.0		ug/L			01/29/19 10:08	1
Hexachlorobutadiene	ND		1.0		ug/L			01/29/19 10:08	1
Isopropyl alcohol	ND		250		ug/L			01/29/19 10:08	1
Isopropylbenzene	ND		1.0		ug/L			01/29/19 10:08	1
m,p-Xylene	ND		1.0		ug/L			01/29/19 10:08	1
Methylene Chloride	ND		5.0		ug/L			01/29/19 10:08	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0		ug/L			01/29/19 10:08	1
Naphthalene	ND		1.0		ug/L			01/29/19 10:08	1

Client Sample ID: OC_SP220B_EFF_012419 — Lab Sample ID: 440-231564-1

Date Collected: 01/24/19 10:30 — **Matrix: Water**
Date Received: 01/25/19 13:10

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	ND		1.0		ug/L			01/29/19 10:08	1
N-Propylbenzene	ND		1.0		ug/L			01/29/19 10:08	1
o-Xylene	ND		1.0		ug/L			01/29/19 10:08	1
p-Isopropyltoluene	ND		1.0		ug/L			01/29/19 10:08	1
sec-Butylbenzene	ND		1.0		ug/L			01/29/19 10:08	1
Styrene	ND		1.0		ug/L			01/29/19 10:08	1
tert-Butylbenzene	ND		1.0		ug/L			01/29/19 10:08	1
Tetrachloroethene	ND		1.0		ug/L			01/29/19 10:08	1
Toluene	ND		1.0		ug/L			01/29/19 10:08	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			01/29/19 10:08	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			01/29/19 10:08	1
Trichloroethene	ND		1.0		ug/L			01/29/19 10:08	1
Trichlorofluoromethane	ND		1.0		ug/L			01/29/19 10:08	1
Vinyl chloride	ND		0.50		ug/L			01/29/19 10:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*115*		*70 - 130*		*01/29/19 10:08*	*1*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*		*01/29/19 10:08*	*1*
Dibromofluoromethane (Surr)	*108*		*76 - 132*		*01/29/19 10:08*	*1*
Toluene-d8 (Surr)	*107*		*80 - 128*		*01/29/19 10:08*	*1*

Method: 8270C SIM - 1,4 Dioxane by SIM

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**20**		0.50		ug/L		01/28/19 11:34	01/29/19 17:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*50*		*27 - 120*	*01/28/19 11:34*	*01/29/19 17:55*	*1*

Client Sample ID: OC_SP210_INF_012419 — Lab Sample ID: 440-231564-2

Date Collected: 01/24/19 10:40 — **Matrix: Water**
Date Received: 01/25/19 13:10

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		5.0		ug/L			01/29/19 17:27	5
1,1,1-Trichloroethane	ND		5.0		ug/L			01/29/19 17:27	5
1,1,2,2-Tetrachloroethane	ND		5.0		ug/L			01/29/19 17:27	5
1,1,2-Trichloro-1,2,2-trifluoroethane	**110**		25		ug/L			01/29/19 17:27	5
1,1,2-Trichloroethane	ND		5.0		ug/L			01/29/19 17:27	5
1,1-Dichloroethane	ND		5.0		ug/L			01/29/19 17:27	5
1,1-Dichloroethene	**42**		5.0		ug/L			01/29/19 17:27	5
1,1-Dichloropropene	ND		5.0		ug/L			01/29/19 17:27	5
1,2,3-Trichlorobenzene	ND		5.0		ug/L			01/29/19 17:27	5
1,2,3-Trichloropropane	ND		5.0		ug/L			01/29/19 17:27	5
1,2,4-Trichlorobenzene	ND		5.0		ug/L			01/29/19 17:27	5
1,2,4-Trimethylbenzene	ND		5.0		ug/L			01/29/19 17:27	5
1,2-Dibromo-3-Chloropropane	ND		25		ug/L			01/29/19 17:27	5
1,2-Dibromoethane (EDB)	ND		5.0		ug/L			01/29/19 17:27	5
1,2-Dichlorobenzene	ND		5.0		ug/L			01/29/19 17:27	5

Client Sample Results

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical - GWTS Monthly

TestAmerica Job ID: 440-231564-1

Client Sample ID: OC_SP210_INF_012419

Lab Sample ID: 440-231564-2

Date Collected: 01/24/19 10:40
Date Received: 01/25/19 13:10

Matrix: Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane	ND		5.0		ug/L			01/29/19 17:27	5
1,2-Dichloropropane	ND		5.0		ug/L			01/29/19 17:27	5
1,3,5-Trimethylbenzene	ND		5.0		ug/L			01/29/19 17:27	5
1,3-Dichlorobenzene	ND		5.0		ug/L			01/29/19 17:27	5
1,3-Dichloropropane	ND		5.0		ug/L			01/29/19 17:27	5
1,4-Dichlorobenzene	ND		5.0		ug/L			01/29/19 17:27	5
2,2-Dichloropropane	ND		5.0		ug/L			01/29/19 17:27	5
2-Chlorotoluene	ND		5.0		ug/L			01/29/19 17:27	5
4-Chlorotoluene	ND		5.0		ug/L			01/29/19 17:27	5
Acetone	ND	*	50		ug/L			01/29/19 17:27	5
Benzene	ND		2.5		ug/L			01/29/19 17:27	5
Bromobenzene	ND		5.0		ug/L			01/29/19 17:27	5
Bromochloromethane	ND		5.0		ug/L			01/29/19 17:27	5
Bromodichloromethane	ND		5.0		ug/L			01/29/19 17:27	5
Bromoform	ND		5.0		ug/L			01/29/19 17:27	5
Bromomethane	ND		5.0		ug/L			01/29/19 17:27	5
Carbon tetrachloride	ND		2.5		ug/L			01/29/19 17:27	5
Chlorobenzene	ND		5.0		ug/L			01/29/19 17:27	5
Chloroethane	ND		5.0		ug/L			01/29/19 17:27	5
Chloroform	**19**		5.0		ug/L			01/29/19 17:27	5
Chloromethane	ND		5.0		ug/L			01/29/19 17:27	5
cis-1,2-Dichloroethene	ND		5.0		ug/L			01/29/19 17:27	5
cis-1,3-Dichloropropene	ND		2.5		ug/L			01/29/19 17:27	5
Dibromochloromethane	ND		5.0		ug/L			01/29/19 17:27	5
Dibromomethane	ND		5.0		ug/L			01/29/19 17:27	5
Dichlorodifluoromethane	ND		5.0		ug/L			01/29/19 17:27	5
Ethylbenzene	ND		5.0		ug/L			01/29/19 17:27	5
Hexachlorobutadiene	ND		5.0		ug/L			01/29/19 17:27	5
Isopropyl alcohol	ND		1300		ug/L			01/29/19 17:27	5
Isopropylbenzene	ND		5.0		ug/L			01/29/19 17:27	5
m,p-Xylene	ND		5.0		ug/L			01/29/19 17:27	5
Methylene Chloride	ND		25		ug/L			01/29/19 17:27	5
Methyl-t-Butyl Ether (MTBE)	ND		5.0		ug/L			01/29/19 17:27	5
Naphthalene	ND		5.0		ug/L			01/29/19 17:27	5
n-Butylbenzene	ND		5.0		ug/L			01/29/19 17:27	5
N-Propylbenzene	ND		5.0		ug/L			01/29/19 17:27	5
o-Xylene	ND		5.0		ug/L			01/29/19 17:27	5
p-Isopropyltoluene	ND		5.0		ug/L			01/29/19 17:27	5
sec-Butylbenzene	ND		5.0		ug/L			01/29/19 17:27	5
Styrene	ND		5.0		ug/L			01/29/19 17:27	5
tert-Butylbenzene	ND		5.0		ug/L			01/29/19 17:27	5
Tetrachloroethene	**300**		5.0		ug/L			01/29/19 17:27	5
Toluene	ND		5.0		ug/L			01/29/19 17:27	5
trans-1,2-Dichloroethene	ND		5.0		ug/L			01/29/19 17:27	5
trans-1,3-Dichloropropene	ND		2.5		ug/L			01/29/19 17:27	5
Trichloroethene	**30**		5.0		ug/L			01/29/19 17:27	5
Trichlorofluoromethane	**19**		5.0		ug/L			01/29/19 17:27	5
Vinyl chloride	ND		2.5		ug/L			01/29/19 17:27	5

Client Sample Results

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical - GWTS Monthly

TestAmerica Job ID: 440-231564-1

Client Sample ID: OC_SP210_INF_012419

Lab Sample ID: 440-231564-2

Date Collected: 01/24/19 10:40
Matrix: Water
Date Received: 01/25/19 13:10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*115*		*70 - 130*		*01/29/19 17:27*	*5*
4-Bromofluorobenzene (Surr)	*106*		*80 - 120*		*01/29/19 17:27*	*5*
Dibromofluoromethane (Surr)	*111*		*76 - 132*		*01/29/19 17:27*	*5*
Toluene-d8 (Surr)	*108*		*80 - 128*		*01/29/19 17:27*	*5*

Client Sample ID: OC_TB_012419

Lab Sample ID: 440-231564-3

Date Collected: 01/24/19 10:00
Matrix: Water
Date Received: 01/25/19 13:10

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	ug/L			01/29/19 11:58	1
1,1,1-Trichloroethane	ND		1.0	ug/L			01/29/19 11:58	1
1,1,2,2-Tetrachloroethane	ND		1.0	ug/L			01/29/19 11:58	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	ug/L			01/29/19 11:58	1
1,1,2-Trichloroethane	ND		1.0	ug/L			01/29/19 11:58	1
1,1-Dichloroethane	ND		1.0	ug/L			01/29/19 11:58	1
1,1-Dichloroethene	ND		1.0	ug/L			01/29/19 11:58	1
1,1-Dichloropropene	ND		1.0	ug/L			01/29/19 11:58	1
1,2,3-Trichlorobenzene	ND		1.0	ug/L			01/29/19 11:58	1
1,2,3-Trichloropropane	ND		1.0	ug/L			01/29/19 11:58	1
1,2,4-Trichlorobenzene	ND		1.0	ug/L			01/29/19 11:58	1
1,2,4-Trimethylbenzene	ND		1.0	ug/L			01/29/19 11:58	1
1,2-Dibromo-3-Chloropropane	ND		5.0	ug/L			01/29/19 11:58	1
1,2-Dibromoethane (EDB)	ND		1.0	ug/L			01/29/19 11:58	1
1,2-Dichlorobenzene	ND		1.0	ug/L			01/29/19 11:58	1
1,2-Dichloroethane	ND		1.0	ug/L			01/29/19 11:58	1
1,2-Dichloropropane	ND		1.0	ug/L			01/29/19 11:58	1
1,3,5-Trimethylbenzene	ND		1.0	ug/L			01/29/19 11:58	1
1,3-Dichlorobenzene	ND		1.0	ug/L			01/29/19 11:58	1
1,3-Dichloropropane	ND		1.0	ug/L			01/29/19 11:58	1
1,4-Dichlorobenzene	ND		1.0	ug/L			01/29/19 11:58	1
2,2-Dichloropropane	ND		1.0	ug/L			01/29/19 11:58	1
2-Chlorotoluene	ND		1.0	ug/L			01/29/19 11:58	1
4-Chlorotoluene	ND		1.0	ug/L			01/29/19 11:58	1
Benzene	ND		0.50	ug/L			01/29/19 11:58	1
Bromobenzene	ND		1.0	ug/L			01/29/19 11:58	1
Bromochloromethane	ND		1.0	ug/L			01/29/19 11:58	1
Bromodichloromethane	ND		1.0	ug/L			01/29/19 11:58	1
Bromoform	ND		1.0	ug/L			01/29/19 11:58	1
Bromomethane	ND		1.0	ug/L			01/29/19 11:58	1
Carbon tetrachloride	ND		0.50	ug/L			01/29/19 11:58	1
Chlorobenzene	ND		1.0	ug/L			01/29/19 11:58	1
Chloroethane	ND		1.0	ug/L			01/29/19 11:58	1
Chloroform	ND		1.0	ug/L			01/29/19 11:58	1
Chloromethane	ND		1.0	ug/L			01/29/19 11:58	1
cis-1,2-Dichloroethene	ND		1.0	ug/L			01/29/19 11:58	1
cis-1,3-Dichloropropene	ND		0.50	ug/L			01/29/19 11:58	1
Dibromochloromethane	ND		1.0	ug/L			01/29/19 11:58	1
Dibromomethane	ND		1.0	ug/L			01/29/19 11:58	1

Client Sample ID: OC_TB_012419

Lab Sample ID: 440-231564-3

Date Collected: 01/24/19 10:00

Matrix: Water

Date Received: 01/25/19 13:10

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Dichlorodifluoromethane	ND		1.0		ug/L			01/29/19 11:58	1
Ethylbenzene	ND		1.0		ug/L			01/29/19 11:58	1
Hexachlorobutadiene	ND		1.0		ug/L			01/29/19 11:58	1
Isopropyl alcohol	ND		250		ug/L			01/29/19 11:58	1
Isopropylbenzene	ND		1.0		ug/L			01/29/19 11:58	1
m,p-Xylene	ND		1.0		ug/L			01/29/19 11:58	1
Methylene Chloride	ND		5.0		ug/L			01/29/19 11:58	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0		ug/L			01/29/19 11:58	1
Naphthalene	ND		1.0		ug/L			01/29/19 11:58	1
n-Butylbenzene	ND		1.0		ug/L			01/29/19 11:58	1
N-Propylbenzene	ND		1.0		ug/L			01/29/19 11:58	1
o-Xylene	ND		1.0		ug/L			01/29/19 11:58	1
p-Isopropyltoluene	ND		1.0		ug/L			01/29/19 11:58	1
sec-Butylbenzene	ND		1.0		ug/L			01/29/19 11:58	1
Styrene	ND		1.0		ug/L			01/29/19 11:58	1
tert-Butylbenzene	ND		1.0		ug/L			01/29/19 11:58	1
Tetrachloroethene	ND		1.0		ug/L			01/29/19 11:58	1
Toluene	ND		1.0		ug/L			01/29/19 11:58	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			01/29/19 11:58	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			01/29/19 11:58	1
Trichloroethene	ND		1.0		ug/L			01/29/19 11:58	1
Trichlorofluoromethane	ND		1.0		ug/L			01/29/19 11:58	1
Vinyl chloride	ND		0.50		ug/L			01/29/19 11:58	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*116*		*70 - 130*		*01/29/19 11:58*	*1*
4-Bromofluorobenzene (Surr)	*107*		*80 - 120*		*01/29/19 11:58*	*1*
Dibromofluoromethane (Surr)	*109*		*76 - 132*		*01/29/19 11:58*	*1*
Toluene-d8 (Surr)	*110*		*80 - 128*		*01/29/19 11:58*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		10		ug/L			01/30/19 16:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*98*		*70 - 130*		*01/30/19 16:29*	*1*
4-Bromofluorobenzene (Surr)	*109*		*80 - 120*		*01/30/19 16:29*	*1*
Dibromofluoromethane (Surr)	*106*		*76 - 132*		*01/30/19 16:29*	*1*
Toluene-d8 (Surr)	*106*		*80 - 128*		*01/30/19 16:29*	*1*

Surrogate Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical - GWTS Monthly

TestAmerica Job ID: 440-231564-1

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

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(70-130)	(80-120)	(76-132)	(80-128)
440-230802-A-2 MS	Matrix Spike	92	99	103	101
440-230802-A-2 MSD	Matrix Spike Duplicate	92	97	104	99
440-231564-1	OC_SP220B_EFF_012419	115	105	108	107
440-231564-1 MS	OC_SP220B_EFF_012419	105	105	101	101
440-231564-1 MSD	OC_SP220B_EFF_012419	110	106	104	101
440-231564-2	OC_SP210_INF_012419	115	106	111	108
440-231564-3	OC_TB_012419	116	107	109	110
440-231564-3 - RA	OC_TB_012419	98	109	106	106
LCS 440-525473/11	Lab Control Sample	108	106	103	109
LCS 440-525473/5	Lab Control Sample	107	105	102	103
LCS 440-525727/5	Lab Control Sample	94	100	105	95
MB 440-525473/4	Method Blank	112	102	107	110
MB 440-525727/4	Method Blank	102	103	104	102

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

Method: 8270C SIM - 1,4 Dioxane by SIM

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
		DXE
Lab Sample ID	Client Sample ID	(27-120)
280-119494-D-8-B MS	Matrix Spike	61
280-119494-E-8-A MSD	Matrix Spike Duplicate	62
440-231564-1	OC_SP220B_EFF_012419	50
LCS 440-525335/3-A	Lab Control Sample	62
MB 440-525335/1-A	Method Blank	60

Surrogate Legend

DXE = 1,4-Dioxane-d8 (Surr)

Method Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical - GWTS Monthly

TestAmerica Job ID: 440-231564-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL IRV
8270C SIM	1,4 Dioxane by SIM	SW846	TAL IRV
3520C	Liquid-Liquid Extraction (Continuous)	SW846	TAL IRV
5030B	Purge and Trap	SW846	TAL IRV

Protocol References:

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: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical - GWTS Monthly

TestAmerica Job ID: 440-231564-1

Client Sample ID: OC_SP220B_EFF_012419 — Lab Sample ID: 440-231564-1

Date Collected: 01/24/19 10:30 — **Matrix: Water**
Date Received: 01/25/19 13:10

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	525473	01/29/19 10:08	DCI	TAL IRV
Total/NA	Prep	3520C			995 mL	1.0 mL	525335	01/28/19 11:34	JAA	TAL IRV
Total/NA	Analysis	8270C SIM		1			525626	01/29/19 17:55	HN	TAL IRV

Client Sample ID: OC_SP210_INF_012419 — Lab Sample ID: 440-231564-2

Date Collected: 01/24/19 10:40 — **Matrix: Water**
Date Received: 01/25/19 13:10

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		5	10 mL	10 mL	525473	01/29/19 17:27	DCI	TAL IRV

Client Sample ID: OC_TB_012419 — Lab Sample ID: 440-231564-3

Date Collected: 01/24/19 10:00 — **Matrix: Water**
Date Received: 01/25/19 13:10

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	525473	01/29/19 11:58	DCI	TAL IRV
Total/NA	Analysis	8260B	RA	1	10 mL	10 mL	525727	01/30/19 16:29	TCN	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 440-525473/4
Matrix: Water
Analysis Batch: 525473

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

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			01/29/19 08:18	1
1,1,1-Trichloroethane	ND		1.0		ug/L			01/29/19 08:18	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			01/29/19 08:18	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0		ug/L			01/29/19 08:18	1
1,1,2-Trichloroethane	ND		1.0		ug/L			01/29/19 08:18	1
1,1-Dichloroethane	ND		1.0		ug/L			01/29/19 08:18	1
1,1-Dichloroethene	ND		1.0		ug/L			01/29/19 08:18	1
1,1-Dichloropropene	ND		1.0		ug/L			01/29/19 08:18	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			01/29/19 08:18	1
1,2,3-Trichloropropane	ND		1.0		ug/L			01/29/19 08:18	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			01/29/19 08:18	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			01/29/19 08:18	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			01/29/19 08:18	1
1,2-Dibromoethane (EDB)	ND		1.0		ug/L			01/29/19 08:18	1
1,2-Dichlorobenzene	ND		1.0		ug/L			01/29/19 08:18	1
1,2-Dichloroethane	ND		1.0		ug/L			01/29/19 08:18	1
1,2-Dichloropropane	ND		1.0		ug/L			01/29/19 08:18	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			01/29/19 08:18	1
1,3-Dichlorobenzene	ND		1.0		ug/L			01/29/19 08:18	1
1,3-Dichloropropane	ND		1.0		ug/L			01/29/19 08:18	1
1,4-Dichlorobenzene	ND		1.0		ug/L			01/29/19 08:18	1
2,2-Dichloropropane	ND		1.0		ug/L			01/29/19 08:18	1
2-Chlorotoluene	ND		1.0		ug/L			01/29/19 08:18	1
4-Chlorotoluene	ND		1.0		ug/L			01/29/19 08:18	1
Acetone	ND		10		ug/L			01/29/19 08:18	1
Benzene	ND		0.50		ug/L			01/29/19 08:18	1
Bromobenzene	ND		1.0		ug/L			01/29/19 08:18	1
Bromochloromethane	ND		1.0		ug/L			01/29/19 08:18	1
Bromodichloromethane	ND		1.0		ug/L			01/29/19 08:18	1
Bromoform	ND		1.0		ug/L			01/29/19 08:18	1
Bromomethane	ND		1.0		ug/L			01/29/19 08:18	1
Carbon tetrachloride	ND		0.50		ug/L			01/29/19 08:18	1
Chlorobenzene	ND		1.0		ug/L			01/29/19 08:18	1
Chloroethane	ND		1.0		ug/L			01/29/19 08:18	1
Chloroform	ND		1.0		ug/L			01/29/19 08:18	1
Chloromethane	ND		1.0		ug/L			01/29/19 08:18	1
cis-1,2-Dichloroethene	ND		1.0		ug/L			01/29/19 08:18	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			01/29/19 08:18	1
Dibromochloromethane	ND		1.0		ug/L			01/29/19 08:18	1
Dibromomethane	ND		1.0		ug/L			01/29/19 08:18	1
Dichlorodifluoromethane	ND		1.0		ug/L			01/29/19 08:18	1
Ethylbenzene	ND		1.0		ug/L			01/29/19 08:18	1
Hexachlorobutadiene	ND		1.0		ug/L			01/29/19 08:18	1
Isopropyl alcohol	ND		250		ug/L			01/29/19 08:18	1
Isopropylbenzene	ND		1.0		ug/L			01/29/19 08:18	1
m,p-Xylene	ND		1.0		ug/L			01/29/19 08:18	1
Methylene Chloride	ND		5.0		ug/L			01/29/19 08:18	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0		ug/L			01/29/19 08:18	1

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

Lab Sample ID: MB 440-525473/4
Matrix: Water
Analysis Batch: 525473

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		1.0	ug/L			01/29/19 08:18	1
n-Butylbenzene	ND		1.0	ug/L			01/29/19 08:18	1
N-Propylbenzene	ND		1.0	ug/L			01/29/19 08:18	1
o-Xylene	ND		1.0	ug/L			01/29/19 08:18	1
p-Isopropyltoluene	ND		1.0	ug/L			01/29/19 08:18	1
sec-Butylbenzene	ND		1.0	ug/L			01/29/19 08:18	1
Styrene	ND		1.0	ug/L			01/29/19 08:18	1
tert-Butylbenzene	ND		1.0	ug/L			01/29/19 08:18	1
Tetrachloroethene	ND		1.0	ug/L			01/29/19 08:18	1
Toluene	ND		1.0	ug/L			01/29/19 08:18	1
trans-1,2-Dichloroethene	ND		1.0	ug/L			01/29/19 08:18	1
trans-1,3-Dichloropropene	ND		0.50	ug/L			01/29/19 08:18	1
Trichloroethene	ND		1.0	ug/L			01/29/19 08:18	1
Trichlorofluoromethane	ND		1.0	ug/L			01/29/19 08:18	1
Vinyl chloride	ND		0.50	ug/L			01/29/19 08:18	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*112*		*70 - 130*		*01/29/19 08:18*	*1*
4-Bromofluorobenzene (Surr)	*102*		*80 - 120*		*01/29/19 08:18*	*1*
Dibromofluoromethane (Surr)	*107*		*76 - 132*		*01/29/19 08:18*	*1*
Toluene-d8 (Surr)	*110*		*80 - 128*		*01/29/19 08:18*	*1*

Lab Sample ID: LCS 440-525473/11
Matrix: Water
Analysis Batch: 525473

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Isopropyl alcohol	250	318		ug/L		127	49 - 142

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*108*		*70 - 130*
4-Bromofluorobenzene (Surr)	*106*		*80 - 120*
Dibromofluoromethane (Surr)	*103*		*76 - 132*
Toluene-d8 (Surr)	*109*		*80 - 128*

Lab Sample ID: LCS 440-525473/5
Matrix: Water
Analysis Batch: 525473

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	24.2		ug/L		97	60 - 141
1,1,1-Trichloroethane	25.0	27.4		ug/L		110	70 - 130
1,1,2,2-Tetrachloroethane	25.0	32.3		ug/L		129	63 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	28.1		ug/L		113	60 - 140
1,1,2-Trichloroethane	25.0	29.1		ug/L		116	70 - 130
1,1-Dichloroethane	25.0	29.5		ug/L		118	64 - 130
1,1-Dichloroethene	25.0	25.8		ug/L		103	70 - 130

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

Lab Sample ID: LCS 440-525473/5
Matrix: Water
Analysis Batch: 525473

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloropropene	25.0	27.5		ug/L		110	70 - 130
1,2,3-Trichlorobenzene	25.0	23.7		ug/L		95	60 - 140
1,2,3-Trichloropropane	25.0	31.1		ug/L		125	63 - 130
1,2,4-Trichlorobenzene	25.0	22.7		ug/L		91	60 - 140
1,2,4-Trimethylbenzene	25.0	26.7		ug/L		107	70 - 135
1,2-Dibromo-3-Chloropropane	25.0	33.0		ug/L		132	52 - 140
1,2-Dibromoethane (EDB)	25.0	27.2		ug/L		109	70 - 130
1,2-Dichlorobenzene	25.0	26.1		ug/L		104	70 - 130
1,2-Dichloroethane	25.0	29.0		ug/L		116	57 - 138
1,2-Dichloropropane	25.0	30.6		ug/L		122	67 - 130
1,3,5-Trimethylbenzene	25.0	27.0		ug/L		108	70 - 136
1,3-Dichlorobenzene	25.0	26.0		ug/L		104	70 - 130
1,3-Dichloropropane	25.0	28.2		ug/L		113	70 - 130
1,4-Dichlorobenzene	25.0	25.7		ug/L		103	70 - 130
2,2-Dichloropropane	25.0	30.7		ug/L		123	68 - 141
2-Chlorotoluene	25.0	26.1		ug/L		104	70 - 130
4-Chlorotoluene	25.0	26.4		ug/L		106	70 - 130
Acetone	25.0	37.8	*	ug/L		151	10 - 150
Benzene	25.0	27.6		ug/L		111	68 - 130
Bromobenzene	25.0	24.2		ug/L		97	70 - 130
Bromochloromethane	25.0	25.7		ug/L		103	70 - 130
Bromodichloromethane	25.0	28.5		ug/L		114	70 - 132
Bromoform	25.0	25.4		ug/L		102	60 - 148
Bromomethane	25.0	20.9		ug/L		84	64 - 139
Carbon tetrachloride	25.0	26.9		ug/L		108	60 - 150
Chlorobenzene	25.0	24.6		ug/L		99	70 - 130
Chloroethane	25.0	24.2		ug/L		97	64 - 135
Chloroform	25.0	27.2		ug/L		109	70 - 130
Chloromethane	25.0	24.9		ug/L		100	47 - 140
cis-1,2-Dichloroethene	25.0	26.7		ug/L		107	70 - 133
cis-1,3-Dichloropropene	25.0	29.4		ug/L		118	70 - 133
Dibromochloromethane	25.0	25.2		ug/L		101	69 - 145
Dibromomethane	25.0	26.1		ug/L		104	70 - 130
Dichlorodifluoromethane	25.0	22.7		ug/L		91	29 - 150
Ethylbenzene	25.0	25.2		ug/L		101	70 - 130
Hexachlorobutadiene	25.0	24.8		ug/L		99	10 - 150
Isopropylbenzene	25.0	27.0		ug/L		108	70 - 136
m,p-Xylene	25.0	25.5		ug/L		102	70 - 130
Methylene Chloride	25.0	26.1		ug/L		104	52 - 130
Methyl-t-Butyl Ether (MTBE)	25.0	24.4		ug/L		98	63 - 131
Naphthalene	25.0	24.0		ug/L		96	60 - 140
n-Butylbenzene	25.0	27.7		ug/L		111	65 - 150
N-Propylbenzene	25.0	27.7		ug/L		111	67 - 139
o-Xylene	25.0	26.0		ug/L		104	70 - 130
p-Isopropyltoluene	25.0	27.1		ug/L		109	70 - 132
sec-Butylbenzene	25.0	28.3		ug/L		113	70 - 138
Styrene	25.0	23.0		ug/L		92	70 - 134
tert-Butylbenzene	25.0	26.1		ug/L		104	70 - 130

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

Lab Sample ID: LCS 440-525473/5
Matrix: Water
Analysis Batch: 525473

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Tetrachloroethene	25.0	25.4		ug/L		102	70 - 130
Toluene	25.0	26.1		ug/L		104	70 - 130
trans-1,2-Dichloroethene	25.0	26.5		ug/L		106	70 - 130
trans-1,3-Dichloropropene	25.0	26.3		ug/L		105	70 - 132
Trichloroethene	25.0	25.5		ug/L		102	70 - 130
Trichlorofluoromethane	25.0	25.2		ug/L		101	60 - 150
Vinyl chloride	25.0	26.4		ug/L		106	59 - 133

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*107*		*70 - 130*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*
Dibromofluoromethane (Surr)	*102*		*76 - 132*
Toluene-d8 (Surr)	*103*		*80 - 128*

Lab Sample ID: 440-231564-1 MS
Matrix: Water
Analysis Batch: 525473

Client Sample ID: OC_SP220B_EFF_012419
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	ND		25.0	23.4		ug/L		93	60 - 149
1,1,1-Trichloroethane	ND		25.0	25.9		ug/L		104	70 - 130
1,1,2,2-Tetrachloroethane	ND		25.0	30.9		ug/L		123	63 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		25.0	26.2		ug/L		105	60 - 140
1,1,2-Trichloroethane	ND		25.0	28.0		ug/L		112	70 - 130
1,1-Dichloroethane	ND		25.0	27.4		ug/L		110	65 - 130
1,1-Dichloroethene	ND		25.0	24.5		ug/L		98	70 - 130
1,1-Dichloropropene	ND		25.0	28.4		ug/L		114	64 - 130
1,2,3-Trichlorobenzene	ND		25.0	23.5		ug/L		94	60 - 140
1,2,3-Trichloropropane	ND		25.0	28.9		ug/L		116	60 - 130
1,2,4-Trichlorobenzene	ND		25.0	23.4		ug/L		94	60 - 140
1,2,4-Trimethylbenzene	ND		25.0	25.6		ug/L		102	70 - 130
1,2-Dibromo-3-Chloropropane	ND		25.0	29.1		ug/L		117	48 - 140
1,2-Dibromoethane (EDB)	ND		25.0	25.3		ug/L		101	70 - 131
1,2-Dichlorobenzene	ND		25.0	25.4		ug/L		102	70 - 130
1,2-Dichloroethane	ND		25.0	28.2		ug/L		113	56 - 146
1,2-Dichloropropane	ND		25.0	29.9		ug/L		120	69 - 130
1,3,5-Trimethylbenzene	ND		25.0	26.3		ug/L		105	70 - 130
1,3-Dichlorobenzene	ND		25.0	25.3		ug/L		101	70 - 130
1,3-Dichloropropane	ND		25.0	26.8		ug/L		107	70 - 130
1,4-Dichlorobenzene	ND		25.0	25.1		ug/L		101	70 - 130
2,2-Dichloropropane	ND		25.0	29.6		ug/L		118	69 - 138
2-Chlorotoluene	ND		25.0	25.1		ug/L		100	70 - 130
4-Chlorotoluene	ND		25.0	25.5		ug/L		102	70 - 130
Acetone	42	* F1	25.0	81.0	F1	ug/L		157	10 - 150
Benzene	ND		25.0	27.2		ug/L		109	66 - 130
Bromobenzene	ND		25.0	24.3		ug/L		97	70 - 130
Bromochloromethane	ND		25.0	25.0		ug/L		100	70 - 130

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

Lab Sample ID: 440-231564-1 MS
Matrix: Water
Analysis Batch: 525473

Client Sample ID: OC_SP220B_EFF_012419
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromodichloromethane	ND		25.0	27.8		ug/L		111	70 - 138
Bromoform	ND		25.0	23.9		ug/L		95	59 - 150
Bromomethane	ND		25.0	19.1		ug/L		76	62 - 131
Carbon tetrachloride	ND		25.0	25.9		ug/L		103	60 - 150
Chlorobenzene	ND		25.0	23.9		ug/L		95	70 - 130
Chloroethane	ND		25.0	22.4		ug/L		90	68 - 130
Chloroform	ND		25.0	26.7		ug/L		107	70 - 130
Chloromethane	ND		25.0	22.3		ug/L		89	39 - 144
cis-1,2-Dichloroethene	ND		25.0	26.1		ug/L		104	70 - 130
cis-1,3-Dichloropropene	ND		25.0	28.0		ug/L		112	70 - 133
Dibromochloromethane	ND		25.0	24.5		ug/L		98	70 - 148
Dibromomethane	ND		25.0	25.1		ug/L		100	70 - 130
Dichlorodifluoromethane	ND		25.0	18.9		ug/L		75	25 - 142
Ethylbenzene	ND		25.0	24.3		ug/L		97	70 - 130
Hexachlorobutadiene	ND		25.0	24.0		ug/L		96	10 - 150
Isopropyl alcohol	ND		250	350		ug/L		140	46 - 142
Isopropylbenzene	ND		25.0	25.3		ug/L		101	70 - 132
m,p-Xylene	ND		25.0	25.1		ug/L		100	70 - 133
Methylene Chloride	ND		25.0	24.9		ug/L		100	52 - 130
Methyl-t-Butyl Ether (MTBE)	ND		25.0	23.4		ug/L		94	70 - 130
Naphthalene	ND		25.0	23.0		ug/L		92	60 - 140
n-Butylbenzene	ND		25.0	26.9		ug/L		108	61 - 149
N-Propylbenzene	ND		25.0	26.8		ug/L		107	66 - 135
o-Xylene	ND		25.0	24.7		ug/L		99	70 - 133
p-Isopropyltoluene	ND		25.0	26.2		ug/L		105	70 - 130
sec-Butylbenzene	ND		25.0	27.3		ug/L		109	67 - 134
Styrene	ND		25.0	21.8		ug/L		87	29 - 150
tert-Butylbenzene	ND		25.0	25.0		ug/L		100	70 - 130
Tetrachloroethene	ND		25.0	24.3		ug/L		97	70 - 137
Toluene	ND		25.0	25.0		ug/L		100	70 - 130
trans-1,2-Dichloroethene	ND		25.0	25.4		ug/L		102	70 - 130
trans-1,3-Dichloropropene	ND		25.0	25.1		ug/L		100	70 - 138
Trichloroethene	ND		25.0	24.1		ug/L		97	70 - 130
Trichlorofluoromethane	ND		25.0	23.3		ug/L		93	60 - 150
Vinyl chloride	ND		25.0	23.4		ug/L		94	50 - 137

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*105*		*70 - 130*
4-Bromofluorobenzene (Surr)	*105*		*80 - 120*
Dibromofluoromethane (Surr)	*101*		*76 - 132*
Toluene-d8 (Surr)	*101*		*80 - 128*

Lab Sample ID: 440-231564-1 MSD
Matrix: Water
Analysis Batch: 525473

Client Sample ID: OC_SP220B_EFF_012419
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	ND		25.0	23.9		ug/L		96	60 - 149	2	20

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

Lab Sample ID: 440-231564-1 MSD
Matrix: Water
Analysis Batch: 525473

Client Sample ID: OC_SP220B_EFF_012419
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	ND		25.0	26.1		ug/L		104	70 - 130	1	20
1,1,2,2-Tetrachloroethane	ND		25.0	31.9		ug/L		128	63 - 130	3	30
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		25.0	26.0		ug/L		104	60 - 140	1	20
1,1,2-Trichloroethane	ND		25.0	28.0		ug/L		112	70 - 130	0	25
1,1-Dichloroethane	ND		25.0	28.2		ug/L		113	65 - 130	3	20
1,1-Dichloroethene	ND		25.0	25.2		ug/L		101	70 - 130	3	20
1,1-Dichloropropene	ND		25.0	28.0		ug/L		112	64 - 130	2	20
1,2,3-Trichlorobenzene	ND		25.0	24.4		ug/L		98	60 - 140	4	20
1,2,3-Trichloropropane	ND		25.0	30.7		ug/L		123	60 - 130	6	30
1,2,4-Trichlorobenzene	ND		25.0	23.9		ug/L		96	60 - 140	2	20
1,2,4-Trimethylbenzene	ND		25.0	25.6		ug/L		102	70 - 130	0	25
1,2-Dibromo-3-Chloropropane	ND		25.0	30.2		ug/L		121	48 - 140	4	30
1,2-Dibromoethane (EDB)	ND		25.0	26.1		ug/L		104	70 - 131	3	25
1,2-Dichlorobenzene	ND		25.0	25.8		ug/L		103	70 - 130	2	20
1,2-Dichloroethane	ND		25.0	28.9		ug/L		116	56 - 146	2	20
1,2-Dichloropropane	ND		25.0	30.2		ug/L		121	69 - 130	1	20
1,3,5-Trimethylbenzene	ND		25.0	26.2		ug/L		105	70 - 130	0	20
1,3-Dichlorobenzene	ND		25.0	25.8		ug/L		103	70 - 130	2	20
1,3-Dichloropropane	ND		25.0	27.7		ug/L		111	70 - 130	3	25
1,4-Dichlorobenzene	ND		25.0	25.5		ug/L		102	70 - 130	1	20
2,2-Dichloropropane	ND		25.0	28.8		ug/L		115	69 - 138	3	25
2-Chlorotoluene	ND		25.0	25.5		ug/L		102	70 - 130	2	20
4-Chlorotoluene	ND		25.0	25.9		ug/L		103	70 - 130	1	20
Acetone	42	* F1	25.0	88.6	F1	ug/L		188	10 - 150	9	35
Benzene	ND		25.0	27.4		ug/L		110	66 - 130	1	20
Bromobenzene	ND		25.0	24.5		ug/L		98	70 - 130	1	20
Bromochloromethane	ND		25.0	26.3		ug/L		105	70 - 130	5	25
Bromodichloromethane	ND		25.0	29.1		ug/L		116	70 - 138	4	20
Bromoform	ND		25.0	24.3		ug/L		97	59 - 150	2	25
Bromomethane	ND		25.0	19.4		ug/L		78	62 - 131	2	25
Carbon tetrachloride	ND		25.0	26.1		ug/L		104	60 - 150	1	25
Chlorobenzene	ND		25.0	23.8		ug/L		95	70 - 130	0	20
Chloroethane	ND		25.0	22.8		ug/L		91	68 - 130	2	25
Chloroform	ND		25.0	27.0		ug/L		108	70 - 130	1	20
Chloromethane	ND		25.0	22.3		ug/L		89	39 - 144	0	25
cis-1,2-Dichloroethene	ND		25.0	25.9		ug/L		104	70 - 130	1	20
cis-1,3-Dichloropropene	ND		25.0	28.9		ug/L		115	70 - 133	3	20
Dibromochloromethane	ND		25.0	24.4		ug/L		98	70 - 148	0	25
Dibromomethane	ND		25.0	25.8		ug/L		103	70 - 130	3	25
Dichlorodifluoromethane	ND		25.0	18.3		ug/L		73	25 - 142	3	30
Ethylbenzene	ND		25.0	24.3		ug/L		97	70 - 130	0	20
Hexachlorobutadiene	ND		25.0	24.3		ug/L		97	10 - 150	1	20
Isopropyl alcohol	ND		250	347		ug/L		139	46 - 142	1	40
Isopropylbenzene	ND		25.0	25.4		ug/L		102	70 - 132	0	20
m,p-Xylene	ND		25.0	24.9		ug/L		100	70 - 133	1	25
Methylene Chloride	ND		25.0	25.0		ug/L		100	52 - 130	1	20
Methyl-t-Butyl Ether (MTBE)	ND		25.0	24.7		ug/L		99	70 - 130	5	25

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

Lab Sample ID: 440-231564-1 MSD — **Client Sample ID: OC_SP220B_EFF_012419**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 525473

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Naphthalene	ND		25.0	24.1		ug/L		96	60 - 140	5	30
n-Butylbenzene	ND		25.0	27.1		ug/L		108	61 - 149	1	20
N-Propylbenzene	ND		25.0	27.0		ug/L		108	66 - 135	1	20
o-Xylene	ND		25.0	24.8		ug/L		99	70 - 133	1	20
p-Isopropyltoluene	ND		25.0	26.2		ug/L		105	70 - 130	0	20
sec-Butylbenzene	ND		25.0	27.3		ug/L		109	67 - 134	0	20
Styrene	ND		25.0	22.0		ug/L		88	29 - 150	1	35
tert-Butylbenzene	ND		25.0	24.9		ug/L		100	70 - 130	0	20
Tetrachloroethene	ND		25.0	24.4		ug/L		98	70 - 137	0	20
Toluene	ND		25.0	24.8		ug/L		99	70 - 130	1	20
trans-1,2-Dichloroethene	ND		25.0	25.8		ug/L		103	70 - 130	2	20
trans-1,3-Dichloropropene	ND		25.0	26.4		ug/L		106	70 - 138	5	25
Trichloroethene	ND		25.0	25.1		ug/L		101	70 - 130	4	20
Trichlorofluoromethane	ND		25.0	23.1		ug/L		92	60 - 150	1	25
Vinyl chloride	ND		25.0	23.3		ug/L		93	50 - 137	0	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*110*		*70 - 130*
4-Bromofluorobenzene (Surr)	*106*		*80 - 120*
Dibromofluoromethane (Surr)	*104*		*76 - 132*
Toluene-d8 (Surr)	*101*		*80 - 128*

Lab Sample ID: MB 440-525727/4 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 525727

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		10		ug/L			01/30/19 08:17	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*102*		*70 - 130*		*01/30/19 08:17*	*1*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*		*01/30/19 08:17*	*1*
Dibromofluoromethane (Surr)	*104*		*76 - 132*		*01/30/19 08:17*	*1*
Toluene-d8 (Surr)	*102*		*80 - 128*		*01/30/19 08:17*	*1*

Lab Sample ID: LCS 440-525727/5 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 525727

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Acetone			25.0	22.1		ug/L		88	10 - 150		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*94*		*70 - 130*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*
Dibromofluoromethane (Surr)	*105*		*76 - 132*
Toluene-d8 (Surr)	*95*		*80 - 128*

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

Lab Sample ID: 440-230802-A-2 MS
Matrix: Water
Analysis Batch: 525727

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		1000	929		ug/L		93	10 - 150

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*92*		*70 - 130*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*
Dibromofluoromethane (Surr)	*103*		*76 - 132*
Toluene-d8 (Surr)	*101*		*80 - 128*

Lab Sample ID: 440-230802-A-2 MSD
Matrix: Water
Analysis Batch: 525727

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		1000	889		ug/L		89	10 - 150	4	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*92*		*70 - 130*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*
Dibromofluoromethane (Surr)	*104*		*76 - 132*
Toluene-d8 (Surr)	*99*		*80 - 128*

Method: 8270C SIM - 1,4 Dioxane by SIM

Lab Sample ID: MB 440-525335/1-A
Matrix: Water
Analysis Batch: 525626

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 525335

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.50	ug/L		01/28/19 11:34	01/29/19 15:57	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*60*		*27 - 120*	*01/28/19 11:34*	*01/29/19 15:57*	*1*

Lab Sample ID: LCS 440-525335/3-A
Matrix: Water
Analysis Batch: 525626

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 525335

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dioxane	2.00	1.32		ug/L		66	36 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,4-Dioxane-d8 (Surr)	*62*		*27 - 120*

Method: 8270C SIM - 1,4 Dioxane by SIM (Continued)

Lab Sample ID: 280-119494-D-8-B MS
Matrix: Water
Analysis Batch: 525626

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 525335

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dioxane	ND		2.13	1.46		ug/L		69	10 - 150

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,4-Dioxane-d8 (Surr)	*61*		*27 - 120*

Lab Sample ID: 280-119494-E-8-A MSD
Matrix: Water
Analysis Batch: 525626

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 525335

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dioxane	ND		2.12	1.46		ug/L		69	10 - 150	0	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,4-Dioxane-d8 (Surr)	*62*		*27 - 120*

QC Association Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical - GWTS Monthly

TestAmerica Job ID: 440-231564-1

GC/MS VOA

Analysis Batch: 525473

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-231564-1	OC_SP220B_EFF_012419	Total/NA	Water	8260B	
440-231564-2	OC_SP210_INF_012419	Total/NA	Water	8260B	
440-231564-3	OC_TB_012419	Total/NA	Water	8260B	
MB 440-525473/4	Method Blank	Total/NA	Water	8260B	
LCS 440-525473/11	Lab Control Sample	Total/NA	Water	8260B	
LCS 440-525473/5	Lab Control Sample	Total/NA	Water	8260B	
440-231564-1 MS	OC_SP220B_EFF_012419	Total/NA	Water	8260B	
440-231564-1 MSD	OC_SP220B_EFF_012419	Total/NA	Water	8260B	

Analysis Batch: 525727

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-231564-3 - RA	OC_TB_012419	Total/NA	Water	8260B	
MB 440-525727/4	Method Blank	Total/NA	Water	8260B	
LCS 440-525727/5	Lab Control Sample	Total/NA	Water	8260B	
440-230802-A-2 MS	Matrix Spike	Total/NA	Water	8260B	
440-230802-A-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 525335

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-231564-1	OC_SP220B_EFF_012419	Total/NA	Water	3520C	
MB 440-525335/1-A	Method Blank	Total/NA	Water	3520C	
LCS 440-525335/3-A	Lab Control Sample	Total/NA	Water	3520C	
280-119494-D-8-B MS	Matrix Spike	Total/NA	Water	3520C	
280-119494-E-8-A MSD	Matrix Spike Duplicate	Total/NA	Water	3520C	

Analysis Batch: 525626

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-231564-1	OC_SP220B_EFF_012419	Total/NA	Water	8270C SIM	525335
MB 440-525335/1-A	Method Blank	Total/NA	Water	8270C SIM	525335
LCS 440-525335/3-A	Lab Control Sample	Total/NA	Water	8270C SIM	525335
280-119494-D-8-B MS	Matrix Spike	Total/NA	Water	8270C SIM	525335
280-119494-E-8-A MSD	Matrix Spike Duplicate	Total/NA	Water	8270C SIM	525335

Definitions/Glossary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical - GWTS Monthly

TestAmerica Job ID: 440-231564-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
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: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical - GWTS Monthly

TestAmerica Job ID: 440-231564-1

Laboratory: TestAmerica Irvine

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
California	State Program	9	CA ELAP 2706	06-30-19

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8260B		Water	1,1,2-Trichloro-1,2,2-trifluoroethane
8260B		Water	m,p-Xylene
8270C SIM	3520C	Water	1,4-Dioxane

TestAmerica Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614
phone 949.261.1022 fax

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.

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

Client Contact	Project Manager: Trent Henderson	Site Contact: Khalid Azhar	Date: 1/24/2019	COC No:
De Maximis - Jaime Dinello	Tel/Fax: (949) 453-1045 / (949) 453-1047	Lab Contact: Danielle Roberts	Carrier:	1 of 1 COCs
1322 Scott St., Suite 104	Analysis Turnaround Time			Sampler:
San Diego, CA 92106	☐ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
(562) 756-8149	TAT if different from Below STD			Walk-in Client:
	☐ 2 weeks			Lab Sampling.
Project Name: Omega Chemical - GWTS Monthly	☐ 1 week			
Site: Omega Chemical	☐ 2 days			Job / SDG No..
P O #:	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)	EPA 8260B - VOCs + Freons	EPA 8270C - 1,4-Dioxane	Sample Specific Notes.
OC_SP220B_EFF_0124 19	1/24/19	1030	Grab	GW	5			x	x	
OC_SP210_INF_0124 19	1/24/19	1040	Grab	GW	3			x		
OC_TB_0124 19	1/24/19	1000		H2O	2			x		

440-231564 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: 3.0 Corr'd: 2.5 | Therm ID No.: IR-94

Relinquished by:	Company:	Date/Time	Received by:	Company:	Date/Time:
[signature]	JHA	1/25/19 1212	[signature]	TA IRV	1/25/19 1212
[signature]	TA IRV	1/25/19 1310			
			Received in Laboratory by: [signature]	TA-IRV	1/25/19 1310

Login Sample Receipt Checklist

Client: Jacob & Hefner Associates P.C.

Job Number: 440-231564-1

Login Number: 231564
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	

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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: 440-233269-1
TestAmerica Sample Delivery Group: Whittier
Client Project/Site: Omega Chemical-2019 Semi-Annual GWM Feb.

For:
Jacob & Hefner Associates P.C.
15375 Barranca Parkway, J-101
Irvine, California 92618

Attn: Trent Henderson

Authorized for release by:
2/22/2019 4:38:30 PM

Danielle Roberts, Senior Project Manager
(949)261-1022
danielle.roberts@testamericainc.com

LINKS

Review your project results through TotalAccess

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

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

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

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Sample Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-2019 Semi-Annual GWM Feb.

TestAmerica Job ID: 440-233269-1
SDG: Whittier

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-233269-1	OC_GW_EW-4_20190211	Water	02/11/19 09:48	02/12/19 16:52
440-233269-2	OC_GW_EW-5_20190212	Water	02/12/19 07:45	02/12/19 16:52

Job ID: 440-233269-1

Laboratory: TestAmerica Irvine

Narrative

Job Narrative
440-233269-1

Comments
No additional comments.

Receipt
The samples were received on 2/12/2019 4:52 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.9º 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 SIM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for batch preparation batch 440-529201 and analytical batch 440-529338 recovered outside control limits for the following analyte: 1,4-Dioxane. Laboratory control sample / laboratory control sample duplicate (LCS/LCSD) percent recovery is in control for affected analytes.

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

Organic Prep
Method(s) 3520C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 440-529201. 8270 1,4 DXN

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

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

Detection Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-2019 Semi-Annual GWM Feb.

TestAmerica Job ID: 440-233269-1
SDG: Whittier

Client Sample ID: OC_GW_EW-4_20190211 — Lab Sample ID: 440-233269-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,2-Trichloro-1,2,2-trifluoroethane	14		5.0	0.50	ug/L	1		8260B	Total/NA
1,1-Dichloroethene	29		1.0	0.25	ug/L	1		8260B	Total/NA
Tetrachloroethene	25		1.0	0.25	ug/L	1		8260B	Total/NA
Trichloroethene	3.0		1.0	0.25	ug/L	1		8260B	Total/NA
Trichlorofluoromethane	8.7		1.0	0.25	ug/L	1		8260B	Total/NA
1,4-Dioxane	0.33	J *	0.49	0.098	ug/L	1		8270C SIM	Total/NA

Client Sample ID: OC_GW_EW-5_20190212 — Lab Sample ID: 440-233269-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,2-Trichloro-1,2,2-trifluoroethane	51		5.0	0.50	ug/L	1		8260B	Total/NA
1,1-Dichloroethene	8.4		1.0	0.25	ug/L	1		8260B	Total/NA
Tetrachloroethene	12		1.0	0.25	ug/L	1		8260B	Total/NA
Trichloroethene	1.7		1.0	0.25	ug/L	1		8260B	Total/NA
Trichlorofluoromethane	32		1.0	0.25	ug/L	1		8260B	Total/NA
1,4-Dioxane	0.59	*	0.50	0.10	ug/L	1		8270C SIM	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-2019 Semi-Annual GWM Feb.

TestAmerica Job ID: 440-233269-1
SDG: Whittier

Client Sample ID: OC_GW_EW-4_20190211

Lab Sample ID: 440-233269-1

Date Collected: 02/11/19 09:48
Matrix: Water
Date Received: 02/12/19 16:52

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/21/19 14:42	1
1,1,1-Trichloroethane	ND		1.0	0.25	ug/L			02/21/19 14:42	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/21/19 14:42	1
1,1,2-Trichloro-1,2,2-trifluoroethane	**14**		5.0	0.50	ug/L			02/21/19 14:42	1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L			02/21/19 14:42	1
1,1-Dichloroethane	ND		1.0	0.25	ug/L			02/21/19 14:42	1
1,1-Dichloroethene	**29**		1.0	0.25	ug/L			02/21/19 14:42	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			02/21/19 14:42	1
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L			02/21/19 14:42	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			02/21/19 14:42	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			02/21/19 14:42	1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			02/21/19 14:42	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			02/21/19 14:42	1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			02/21/19 14:42	1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			02/21/19 14:42	1
1,2-Dichloroethane	ND		1.0	0.25	ug/L			02/21/19 14:42	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			02/21/19 14:42	1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			02/21/19 14:42	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			02/21/19 14:42	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			02/21/19 14:42	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			02/21/19 14:42	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			02/21/19 14:42	1
2-Chlorotoluene	ND		1.0	0.25	ug/L			02/21/19 14:42	1
4-Chlorotoluene	ND		1.0	0.25	ug/L			02/21/19 14:42	1
Acetone	ND		10	10	ug/L			02/21/19 14:42	1
Benzene	ND		0.50	0.25	ug/L			02/21/19 14:42	1
Bromobenzene	ND		1.0	0.25	ug/L			02/21/19 14:42	1
Bromochloromethane	ND		1.0	0.25	ug/L			02/21/19 14:42	1
Bromodichloromethane	ND		1.0	0.25	ug/L			02/21/19 14:42	1
Bromoform	ND		1.0	0.40	ug/L			02/21/19 14:42	1
Bromomethane	ND		1.0	0.25	ug/L			02/21/19 14:42	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			02/21/19 14:42	1
Chlorobenzene	ND		1.0	0.25	ug/L			02/21/19 14:42	1
Chloroethane	ND		1.0	0.40	ug/L			02/21/19 14:42	1
Chloroform	ND		1.0	0.25	ug/L			02/21/19 14:42	1
Chloromethane	ND		1.0	0.25	ug/L			02/21/19 14:42	1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			02/21/19 14:42	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/21/19 14:42	1
Dibromochloromethane	ND		1.0	0.25	ug/L			02/21/19 14:42	1
Dibromomethane	ND		1.0	0.25	ug/L			02/21/19 14:42	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			02/21/19 14:42	1
Ethylbenzene	ND		1.0	0.25	ug/L			02/21/19 14:42	1
Hexachlorobutadiene	ND		1.0	0.25	ug/L			02/21/19 14:42	1
Isopropyl alcohol	ND		250	180	ug/L			02/21/19 14:42	1
Isopropylbenzene	ND		1.0	0.25	ug/L			02/21/19 14:42	1
m,p-Xylene	ND		1.0	0.50	ug/L			02/21/19 14:42	1
Methylene Chloride	ND		5.0	0.88	ug/L			02/21/19 14:42	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			02/21/19 14:42	1

Client Sample ID: OC_GW_EW-4_20190211

Lab Sample ID: 440-233269-1
Date Collected: 02/11/19 09:48
Matrix: Water
Date Received: 02/12/19 16:52

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			02/21/19 14:42	1
n-Butylbenzene	ND		1.0	0.40	ug/L			02/21/19 14:42	1
N-Propylbenzene	ND		1.0	0.25	ug/L			02/21/19 14:42	1
o-Xylene	ND		1.0	0.25	ug/L			02/21/19 14:42	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			02/21/19 14:42	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			02/21/19 14:42	1
Styrene	ND		1.0	0.25	ug/L			02/21/19 14:42	1
tert-Butylbenzene	ND		1.0	0.25	ug/L			02/21/19 14:42	1
Tetrachloroethene	**25**		1.0	0.25	ug/L			02/21/19 14:42	1
Toluene	ND		1.0	0.25	ug/L			02/21/19 14:42	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			02/21/19 14:42	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/21/19 14:42	1
Trichloroethene	**3.0**		1.0	0.25	ug/L			02/21/19 14:42	1
Trichlorofluoromethane	**8.7**		1.0	0.25	ug/L			02/21/19 14:42	1
Vinyl chloride	ND		0.50	0.25	ug/L			02/21/19 14:42	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*840*	*T J*	*ug/L*		*1.49*			*02/21/19 14:42*	*1*
Unknown	*10*	*T J*	*ug/L*		*5.25*			*02/21/19 14:42*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*		*02/21/19 14:42*	*1*
Dibromofluoromethane (Surr)	*107*		*76 - 132*		*02/21/19 14:42*	*1*
Toluene-d8 (Surr)	*104*		*80 - 128*		*02/21/19 14:42*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**0.33**	**J ***	0.49	0.098	ug/L		02/17/19 13:35	02/18/19 16:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*51*		*27 - 120*	*02/17/19 13:35*	*02/18/19 16:50*	*1*

Client Sample ID: OC_GW_EW-5_20190212

Lab Sample ID: 440-233269-2
Date Collected: 02/12/19 07:45
Matrix: Water
Date Received: 02/12/19 16:52

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/21/19 15:09	1
1,1,1-Trichloroethane	ND		1.0	0.25	ug/L			02/21/19 15:09	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/21/19 15:09	1
1,1,2-Trichloro-1,2,2-trifluoroethane	**51**		5.0	0.50	ug/L			02/21/19 15:09	1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L			02/21/19 15:09	1
1,1-Dichloroethane	ND		1.0	0.25	ug/L			02/21/19 15:09	1
1,1-Dichloroethene	**8.4**		1.0	0.25	ug/L			02/21/19 15:09	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			02/21/19 15:09	1
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L			02/21/19 15:09	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			02/21/19 15:09	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			02/21/19 15:09	1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			02/21/19 15:09	1

Client Sample ID: OC_GW_EW-5_20190212

Lab Sample ID: 440-233269-2

Date Collected: 02/12/19 07:45
Matrix: Water
Date Received: 02/12/19 16:52

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			02/21/19 15:09	1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			02/21/19 15:09	1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			02/21/19 15:09	1
1,2-Dichloroethane	ND		1.0	0.25	ug/L			02/21/19 15:09	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			02/21/19 15:09	1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			02/21/19 15:09	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			02/21/19 15:09	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			02/21/19 15:09	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			02/21/19 15:09	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			02/21/19 15:09	1
2-Chlorotoluene	ND		1.0	0.25	ug/L			02/21/19 15:09	1
4-Chlorotoluene	ND		1.0	0.25	ug/L			02/21/19 15:09	1
Acetone	ND		10	10	ug/L			02/21/19 15:09	1
Benzene	ND		0.50	0.25	ug/L			02/21/19 15:09	1
Bromobenzene	ND		1.0	0.25	ug/L			02/21/19 15:09	1
Bromochloromethane	ND		1.0	0.25	ug/L			02/21/19 15:09	1
Bromodichloromethane	ND		1.0	0.25	ug/L			02/21/19 15:09	1
Bromoform	ND		1.0	0.40	ug/L			02/21/19 15:09	1
Bromomethane	ND		1.0	0.25	ug/L			02/21/19 15:09	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			02/21/19 15:09	1
Chlorobenzene	ND		1.0	0.25	ug/L			02/21/19 15:09	1
Chloroethane	ND		1.0	0.40	ug/L			02/21/19 15:09	1
Chloroform	ND		1.0	0.25	ug/L			02/21/19 15:09	1
Chloromethane	ND		1.0	0.25	ug/L			02/21/19 15:09	1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			02/21/19 15:09	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/21/19 15:09	1
Dibromochloromethane	ND		1.0	0.25	ug/L			02/21/19 15:09	1
Dibromomethane	ND		1.0	0.25	ug/L			02/21/19 15:09	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			02/21/19 15:09	1
Ethylbenzene	ND		1.0	0.25	ug/L			02/21/19 15:09	1
Hexachlorobutadiene	ND		1.0	0.25	ug/L			02/21/19 15:09	1
Isopropyl alcohol	ND		250	180	ug/L			02/21/19 15:09	1
Isopropylbenzene	ND		1.0	0.25	ug/L			02/21/19 15:09	1
m,p-Xylene	ND		1.0	0.50	ug/L			02/21/19 15:09	1
Methylene Chloride	ND		5.0	0.88	ug/L			02/21/19 15:09	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			02/21/19 15:09	1
Naphthalene	ND		1.0	0.40	ug/L			02/21/19 15:09	1
n-Butylbenzene	ND		1.0	0.40	ug/L			02/21/19 15:09	1
N-Propylbenzene	ND		1.0	0.25	ug/L			02/21/19 15:09	1
o-Xylene	ND		1.0	0.25	ug/L			02/21/19 15:09	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			02/21/19 15:09	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			02/21/19 15:09	1
Styrene	ND		1.0	0.25	ug/L			02/21/19 15:09	1
tert-Butylbenzene	ND		1.0	0.25	ug/L			02/21/19 15:09	1
Tetrachloroethene	**12**		1.0	0.25	ug/L			02/21/19 15:09	1
Toluene	ND		1.0	0.25	ug/L			02/21/19 15:09	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			02/21/19 15:09	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/21/19 15:09	1
Trichloroethene	**1.7**		1.0	0.25	ug/L			02/21/19 15:09	1

Client Sample Results

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-2019 Semi-Annual GWM Feb.

TestAmerica Job ID: 440-233269-1
SDG: Whittier

Client Sample ID: OC_GW_EW-5_20190212

Lab Sample ID: 440-233269-2

Date Collected: 02/12/19 07:45
Matrix: Water
Date Received: 02/12/19 16:52

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	**32**		1.0	0.25	ug/L			02/21/19 15:09	1
Vinyl chloride	ND		0.50	0.25	ug/L			02/21/19 15:09	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*870*	*T J*	*ug/L*		*1.49*			*02/21/19 15:09*	*1*
Unknown	*10*	*T J*	*ug/L*		*5.25*			*02/21/19 15:09*	*1*
Unknown	*4.3*	*T J*	*ug/L*		*13.84*			*02/21/19 15:09*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*80 - 120*		*02/21/19 15:09*	*1*
Dibromofluoromethane (Surr)	*110*		*76 - 132*		*02/21/19 15:09*	*1*
Toluene-d8 (Surr)	*103*		*80 - 128*		*02/21/19 15:09*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**0.59**	*	0.50	0.10	ug/L		02/17/19 13:35	02/18/19 17:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*50*		*27 - 120*	*02/17/19 13:35*	*02/18/19 17:13*	*1*

Surrogate Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-2019 Semi-Annual GWM Feb.

TestAmerica Job ID: 440-233269-1
SDG: Whittier

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

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(80-120)	(76-132)	(80-128)
440-233269-1	OC_GW_EW-4_20190211	94	107	104
440-233269-2	OC_GW_EW-5_20190212	93	110	103
440-233700-A-2 MS	Matrix Spike	95	100	97
440-233700-A-2 MSD	Matrix Spike Duplicate	96	100	97
LCS 440-530007/5	Lab Control Sample	98	106	98
LCS 440-530007/6	Lab Control Sample	93	104	105
MB 440-530007/4	Method Blank	95	106	103

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

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

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
		DXE
Lab Sample ID	Client Sample ID	(27-120)
440-233269-1	OC_GW_EW-4_20190211	51
440-233269-2	OC_GW_EW-5_20190212	50
LCS 440-529201/2-A	Lab Control Sample	51
LCSD 440-529201/3-A	Lab Control Sample Dup	51
MB 440-529201/1-A	Method Blank	47

Surrogate Legend

DXE = 1,4-Dioxane-d8 (Surr)

Method Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-2019 Semi-Annual GWM Feb.

TestAmerica Job ID: 440-233269-1
SDG: Whittier

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL IRV
8270C SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL IRV
3520C	Liquid-Liquid Extraction (Continuous)	SW846	TAL IRV
5030B	Purge and Trap	SW846	TAL IRV

Protocol References:

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: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-2019 Semi-Annual GWM Feb.

TestAmerica Job ID: 440-233269-1
SDG: Whittier

Client Sample ID: OC_GW_EW-4_20190211

Lab Sample ID: 440-233269-1
Date Collected: 02/11/19 09:48
Matrix: Water
Date Received: 02/12/19 16:52

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	530007	02/21/19 14:42	TCN	TAL IRV
Total/NA	Prep	3520C			1020 mL	1 mL	529201	02/17/19 13:35	AJP	TAL IRV
Total/NA	Analysis	8270C SIM		1			529338	02/18/19 16:50	HN	TAL IRV

Client Sample ID: OC_GW_EW-5_20190212

Lab Sample ID: 440-233269-2
Date Collected: 02/12/19 07:45
Matrix: Water
Date Received: 02/12/19 16:52

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	530007	02/21/19 15:09	TCN	TAL IRV
Total/NA	Prep	3520C			1005 mL	1 mL	529201	02/17/19 13:35	AJP	TAL IRV
Total/NA	Analysis	8270C SIM		1			529338	02/18/19 17:13	HN	TAL IRV

Laboratory References:

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

QC Sample Results

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-2019 Semi-Annual GWM Feb.

TestAmerica Job ID: 440-233269-1
SDG: Whittier

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

Lab Sample ID: MB 440-530007/4
Matrix: Water
Analysis Batch: 530007

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/21/19 08:09	1
1,1,1-Trichloroethane	ND		1.0	0.25	ug/L			02/21/19 08:09	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/21/19 08:09	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	0.50	ug/L			02/21/19 08:09	1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L			02/21/19 08:09	1
1,1-Dichloroethane	ND		1.0	0.25	ug/L			02/21/19 08:09	1
1,1-Dichloroethene	ND		1.0	0.25	ug/L			02/21/19 08:09	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			02/21/19 08:09	1
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L			02/21/19 08:09	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			02/21/19 08:09	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			02/21/19 08:09	1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			02/21/19 08:09	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			02/21/19 08:09	1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			02/21/19 08:09	1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			02/21/19 08:09	1
1,2-Dichloroethane	ND		1.0	0.25	ug/L			02/21/19 08:09	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			02/21/19 08:09	1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			02/21/19 08:09	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			02/21/19 08:09	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			02/21/19 08:09	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			02/21/19 08:09	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			02/21/19 08:09	1
2-Chlorotoluene	ND		1.0	0.25	ug/L			02/21/19 08:09	1
4-Chlorotoluene	ND		1.0	0.25	ug/L			02/21/19 08:09	1
Acetone	ND		10	10	ug/L			02/21/19 08:09	1
Benzene	ND		0.50	0.25	ug/L			02/21/19 08:09	1
Bromobenzene	ND		1.0	0.25	ug/L			02/21/19 08:09	1
Bromochloromethane	ND		1.0	0.25	ug/L			02/21/19 08:09	1
Bromodichloromethane	ND		1.0	0.25	ug/L			02/21/19 08:09	1
Bromoform	ND		1.0	0.40	ug/L			02/21/19 08:09	1
Bromomethane	ND		1.0	0.25	ug/L			02/21/19 08:09	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			02/21/19 08:09	1
Chlorobenzene	ND		1.0	0.25	ug/L			02/21/19 08:09	1
Chloroethane	ND		1.0	0.40	ug/L			02/21/19 08:09	1
Chloroform	ND		1.0	0.25	ug/L			02/21/19 08:09	1
Chloromethane	ND		1.0	0.25	ug/L			02/21/19 08:09	1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			02/21/19 08:09	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/21/19 08:09	1
Dibromochloromethane	ND		1.0	0.25	ug/L			02/21/19 08:09	1
Dibromomethane	ND		1.0	0.25	ug/L			02/21/19 08:09	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			02/21/19 08:09	1
Ethylbenzene	ND		1.0	0.25	ug/L			02/21/19 08:09	1
Hexachlorobutadiene	ND		1.0	0.25	ug/L			02/21/19 08:09	1
Isopropyl alcohol	ND		250	180	ug/L			02/21/19 08:09	1
Isopropylbenzene	ND		1.0	0.25	ug/L			02/21/19 08:09	1
m,p-Xylene	ND		1.0	0.50	ug/L			02/21/19 08:09	1
Methylene Chloride	ND		5.0	0.88	ug/L			02/21/19 08:09	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			02/21/19 08:09	1

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

Lab Sample ID: MB 440-530007/4
Matrix: Water
Analysis Batch: 530007

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		1.0	0.40	ug/L			02/21/19 08:09	1
n-Butylbenzene	ND		1.0	0.40	ug/L			02/21/19 08:09	1
N-Propylbenzene	ND		1.0	0.25	ug/L			02/21/19 08:09	1
o-Xylene	ND		1.0	0.25	ug/L			02/21/19 08:09	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			02/21/19 08:09	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			02/21/19 08:09	1
Styrene	ND		1.0	0.25	ug/L			02/21/19 08:09	1
tert-Butylbenzene	ND		1.0	0.25	ug/L			02/21/19 08:09	1
Tetrachloroethene	ND		1.0	0.25	ug/L			02/21/19 08:09	1
Toluene	ND		1.0	0.25	ug/L			02/21/19 08:09	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			02/21/19 08:09	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/21/19 08:09	1
Trichloroethene	ND		1.0	0.25	ug/L			02/21/19 08:09	1
Trichlorofluoromethane	ND		1.0	0.25	ug/L			02/21/19 08:09	1
Vinyl chloride	ND		0.50	0.25	ug/L			02/21/19 08:09	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*02/21/19 08:09*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*		*02/21/19 08:09*	*1*
Dibromofluoromethane (Surr)	*106*		*76 - 132*		*02/21/19 08:09*	*1*
Toluene-d8 (Surr)	*103*		*80 - 128*		*02/21/19 08:09*	*1*

Lab Sample ID: LCS 440-530007/5
Matrix: Water
Analysis Batch: 530007

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	25.0		ug/L		100	60 - 141
1,1,1-Trichloroethane	25.0	25.7		ug/L		103	70 - 130
1,1,2,2-Tetrachloroethane	25.0	25.8		ug/L		103	63 - 130
1,1,2-Trichloroethane	25.0	23.6		ug/L		94	70 - 130
1,1-Dichloroethane	25.0	25.7		ug/L		103	64 - 130
1,1-Dichloroethene	25.0	24.3		ug/L		97	70 - 130
1,1-Dichloropropene	25.0	27.8		ug/L		111	70 - 130
1,2,3-Trichlorobenzene	25.0	30.6		ug/L		123	60 - 140
1,2,3-Trichloropropane	25.0	26.6		ug/L		106	63 - 130
1,2,4-Trichlorobenzene	25.0	34.4		ug/L		137	60 - 140
1,2,4-Trimethylbenzene	25.0	28.0		ug/L		112	70 - 135
1,2-Dibromo-3-Chloropropane	25.0	25.9		ug/L		103	52 - 140
1,2-Dibromoethane (EDB)	25.0	24.9		ug/L		99	70 - 130
1,2-Dichlorobenzene	25.0	29.3		ug/L		117	70 - 130
1,2-Dichloroethane	25.0	26.0		ug/L		104	57 - 138
1,2-Dichloropropane	25.0	26.6		ug/L		106	67 - 130
1,3,5-Trimethylbenzene	25.0	27.1		ug/L		109	70 - 136
1,3-Dichlorobenzene	25.0	28.8		ug/L		115	70 - 130

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

Lab Sample ID: LCS 440-530007/5
Matrix: Water
Analysis Batch: 530007

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	23.4		ug/L		94	70 - 130
1,4-Dichlorobenzene	25.0	27.0		ug/L		108	70 - 130
2,2-Dichloropropane	25.0	31.5		ug/L		126	68 - 141
2-Chlorotoluene	25.0	25.6		ug/L		102	70 - 130
4-Chlorotoluene	25.0	28.3		ug/L		113	70 - 130
Acetone	25.0	22.9		ug/L		92	10 - 150
Benzene	25.0	26.5		ug/L		106	68 - 130
Bromobenzene	25.0	25.4		ug/L		102	70 - 130
Bromochloromethane	25.0	27.6		ug/L		110	70 - 130
Bromodichloromethane	25.0	26.6		ug/L		106	70 - 132
Bromoform	25.0	25.8		ug/L		103	60 - 148
Bromomethane	25.0	21.8		ug/L		87	64 - 139
Carbon tetrachloride	25.0	25.2		ug/L		101	60 - 150
Chlorobenzene	25.0	24.6		ug/L		98	70 - 130
Chloroethane	25.0	22.0		ug/L		88	64 - 135
Chloroform	25.0	25.4		ug/L		102	70 - 130
Chloromethane	25.0	22.1		ug/L		88	47 - 140
cis-1,2-Dichloroethene	25.0	28.5		ug/L		114	70 - 133
cis-1,3-Dichloropropene	25.0	27.3		ug/L		109	70 - 133
Dibromochloromethane	25.0	25.8		ug/L		103	69 - 145
Dibromomethane	25.0	26.7		ug/L		107	70 - 130
Dichlorodifluoromethane	25.0	20.9		ug/L		83	29 - 150
Ethylbenzene	25.0	27.3		ug/L		109	70 - 130
Hexachlorobutadiene	25.0	30.5		ug/L		122	10 - 150
Isopropylbenzene	25.0	27.0		ug/L		108	70 - 136
m,p-Xylene	25.0	26.1		ug/L		104	70 - 130
Methylene Chloride	25.0	22.6		ug/L		90	52 - 130
Methyl-t-Butyl Ether (MTBE)	25.0	28.4		ug/L		113	63 - 131
Naphthalene	25.0	28.1		ug/L		112	60 - 140
n-Butylbenzene	25.0	29.7		ug/L		119	65 - 150
N-Propylbenzene	25.0	29.2		ug/L		117	67 - 139
o-Xylene	25.0	25.5		ug/L		102	70 - 130
p-Isopropyltoluene	25.0	31.0		ug/L		124	70 - 132
sec-Butylbenzene	25.0	26.9		ug/L		108	70 - 138
Styrene	25.0	24.6		ug/L		98	70 - 134
tert-Butylbenzene	25.0	27.1		ug/L		108	70 - 130
Tetrachloroethene	25.0	24.8		ug/L		99	70 - 130
Toluene	25.0	26.6		ug/L		106	70 - 130
trans-1,2-Dichloroethene	25.0	27.7		ug/L		111	70 - 130
trans-1,3-Dichloropropene	25.0	24.2		ug/L		97	70 - 132
Trichloroethene	25.0	27.6		ug/L		111	70 - 130
Trichlorofluoromethane	25.0	22.5		ug/L		90	60 - 150
Vinyl chloride	25.0	20.8		ug/L		83	59 - 133

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

QC Sample Results

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-2019 Semi-Annual GWM Feb.

TestAmerica Job ID: 440-233269-1
SDG: Whittier

Lab Sample ID: LCS 440-530007/6
Matrix: Water
Analysis Batch: 530007

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

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*93*		*80 - 120*
Dibromofluoromethane (Surr)	*104*		*76 - 132*
Toluene-d8 (Surr)	*105*		*80 - 128*

Lab Sample ID: 440-233700-A-2 MS
Matrix: Water
Analysis Batch: 530007

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
1,1,1,2-Tetrachloroethane	ND		25.0	24.9		ug/L		99	60 - 149
1,1,1-Trichloroethane	ND		25.0	26.3		ug/L		105	70 - 130
1,1,2,2-Tetrachloroethane	ND		25.0	23.7		ug/L		95	63 - 130
1,1,2-Trichloroethane	ND		25.0	23.1		ug/L		92	70 - 130
1,1-Dichloroethane	ND		25.0	25.9		ug/L		104	65 - 130
1,1-Dichloroethene	ND		25.0	25.5		ug/L		102	70 - 130
1,1-Dichloropropene	ND		25.0	30.3		ug/L		121	64 - 130
1,2,3-Trichlorobenzene	ND		25.0	28.4		ug/L		114	60 - 140
1,2,3-Trichloropropane	ND		25.0	23.9		ug/L		96	60 - 130
1,2,4-Trichlorobenzene	ND		25.0	33.7		ug/L		135	60 - 140
1,2,4-Trimethylbenzene	ND		25.0	27.1		ug/L		109	70 - 130
1,2-Dibromo-3-Chloropropane	ND		25.0	22.9		ug/L		92	48 - 140
1,2-Dibromoethane (EDB)	ND		25.0	23.9		ug/L		96	70 - 131
1,2-Dichlorobenzene	ND		25.0	28.5		ug/L		114	70 - 130
1,2-Dichloroethane	ND		25.0	26.2		ug/L		105	56 - 146
1,2-Dichloropropane	ND		25.0	27.7		ug/L		111	69 - 130
1,3,5-Trimethylbenzene	ND		25.0	26.4		ug/L		106	70 - 130
1,3-Dichlorobenzene	ND		25.0	27.8		ug/L		111	70 - 130
1,3-Dichloropropane	ND		25.0	23.3		ug/L		93	70 - 130
1,4-Dichlorobenzene	ND		25.0	25.7		ug/L		103	70 - 130
2,2-Dichloropropane	ND		25.0	32.5		ug/L		130	69 - 138
2-Chlorotoluene	ND		25.0	25.2		ug/L		101	70 - 130
4-Chlorotoluene	ND		25.0	27.5		ug/L		110	70 - 130
Acetone	ND		25.0	32.5		ug/L		130	10 - 150
Benzene	ND		25.0	27.5		ug/L		110	66 - 130
Bromobenzene	ND		25.0	24.5		ug/L		98	70 - 130
Bromochloromethane	ND		25.0	27.3		ug/L		109	70 - 130
Bromodichloromethane	ND		25.0	27.3		ug/L		109	70 - 138
Bromoform	ND		25.0	25.3		ug/L		101	59 - 150
Bromomethane	ND		25.0	22.5		ug/L		90	62 - 131
Carbon tetrachloride	ND		25.0	26.0		ug/L		104	60 - 150
Chlorobenzene	ND		25.0	25.0		ug/L		100	70 - 130
Chloroethane	ND		25.0	22.2		ug/L		89	68 - 130
Chloroform	ND		25.0	25.9		ug/L		104	70 - 130
Chloromethane	ND		25.0	22.2		ug/L		89	39 - 144
cis-1,2-Dichloroethene	ND		25.0	29.4		ug/L		118	70 - 130
cis-1,3-Dichloropropene	ND		25.0	27.6		ug/L		110	70 - 133
Dibromochloromethane	ND		25.0	25.1		ug/L		100	70 - 148
Dibromomethane	ND		25.0	26.6		ug/L		106	70 - 130
Dichlorodifluoromethane	ND		25.0	21.2		ug/L		85	25 - 142
Ethylbenzene	ND		25.0	28.1		ug/L		113	70 - 130

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

Lab Sample ID: 440-233700-A-2 MS
Matrix: Water
Analysis Batch: 530007

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
Hexachlorobutadiene	ND		25.0	30.0		ug/L		120	10 - 150
Isopropylbenzene	ND		25.0	27.0		ug/L		108	70 - 132
m,p-Xylene	ND		25.0	25.7		ug/L		103	70 - 133
Methylene Chloride	ND		25.0	23.7		ug/L		95	52 - 130
Methyl-t-Butyl Ether (MTBE)	ND		25.0	28.7		ug/L		115	70 - 130
Naphthalene	ND		25.0	26.5		ug/L		106	60 - 140
n-Butylbenzene	ND		25.0	29.0		ug/L		116	61 - 149
N-Propylbenzene	ND		25.0	28.5		ug/L		114	66 - 135
o-Xylene	ND		25.0	25.9		ug/L		104	70 - 133
p-Isopropyltoluene	ND		25.0	30.1		ug/L		120	70 - 130
sec-Butylbenzene	ND		25.0	26.1		ug/L		104	67 - 134
Styrene	ND		25.0	25.3		ug/L		101	29 - 150
tert-Butylbenzene	ND		25.0	25.8		ug/L		103	70 - 130
Tetrachloroethene	ND		25.0	26.1		ug/L		104	70 - 137
Toluene	ND		25.0	27.5		ug/L		110	70 - 130
trans-1,2-Dichloroethene	ND		25.0	29.2		ug/L		117	70 - 130
trans-1,3-Dichloropropene	ND		25.0	24.7		ug/L		99	70 - 138
Trichloroethene	ND		25.0	28.5		ug/L		114	70 - 130
Trichlorofluoromethane	ND		25.0	22.4		ug/L		90	60 - 150
Vinyl chloride	ND		25.0	21.1		ug/L		84	50 - 137

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*
Dibromofluoromethane (Surr)	*100*		*76 - 132*
Toluene-d8 (Surr)	*97*		*80 - 128*

Lab Sample ID: 440-233700-A-2 MSD
Matrix: Water
Analysis Batch: 530007

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
1,1,1,2-Tetrachloroethane	ND		25.0	25.1		ug/L		100	60 - 149	1	20
1,1,1-Trichloroethane	ND		25.0	26.7		ug/L		107	70 - 130	1	20
1,1,2,2-Tetrachloroethane	ND		25.0	24.2		ug/L		97	63 - 130	2	30
1,1,2-Trichloroethane	ND		25.0	23.1		ug/L		93	70 - 130	0	25
1,1-Dichloroethane	ND		25.0	25.9		ug/L		104	65 - 130	0	20
1,1-Dichloroethene	ND		25.0	26.3		ug/L		105	70 - 130	3	20
1,1-Dichloropropene	ND		25.0	30.7		ug/L		123	64 - 130	1	20
1,2,3-Trichlorobenzene	ND		25.0	29.4		ug/L		118	60 - 140	3	20
1,2,3-Trichloropropane	ND		25.0	25.6		ug/L		102	60 - 130	7	30
1,2,4-Trichlorobenzene	ND		25.0	34.8		ug/L		139	60 - 140	3	20
1,2,4-Trimethylbenzene	ND		25.0	27.6		ug/L		110	70 - 130	2	25
1,2-Dibromo-3-Chloropropane	ND		25.0	23.9		ug/L		95	48 - 140	4	30
1,2-Dibromoethane (EDB)	ND		25.0	23.6		ug/L		95	70 - 131	1	25
1,2-Dichlorobenzene	ND		25.0	28.8		ug/L		115	70 - 130	1	20
1,2-Dichloroethane	ND		25.0	26.3		ug/L		105	56 - 146	1	20
1,2-Dichloropropane	ND		25.0	27.1		ug/L		108	69 - 130	2	20
1,3,5-Trimethylbenzene	ND		25.0	27.1		ug/L		108	70 - 130	2	20

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

Lab Sample ID: 440-233700-A-2 MSD
Matrix: Water
Analysis Batch: 530007

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,3-Dichlorobenzene	ND		25.0	28.0		ug/L		112	70 - 130	1	20
1,3-Dichloropropane	ND		25.0	23.2		ug/L		93	70 - 130	1	25
1,4-Dichlorobenzene	ND		25.0	26.2		ug/L		105	70 - 130	2	20
2,2-Dichloropropane	ND		25.0	33.8		ug/L		135	69 - 138	4	25
2-Chlorotoluene	ND		25.0	25.7		ug/L		103	70 - 130	2	20
4-Chlorotoluene	ND		25.0	27.7		ug/L		111	70 - 130	1	20
Acetone	ND		25.0	32.9		ug/L		132	10 - 150	1	35
Benzene	ND		25.0	28.0		ug/L		112	66 - 130	2	20
Bromobenzene	ND		25.0	24.7		ug/L		99	70 - 130	1	20
Bromochloromethane	ND		25.0	26.9		ug/L		108	70 - 130	1	25
Bromodichloromethane	ND		25.0	27.3		ug/L		109	70 - 138	0	20
Bromoform	ND		25.0	24.7		ug/L		99	59 - 150	3	25
Bromomethane	ND		25.0	22.9		ug/L		92	62 - 131	2	25
Carbon tetrachloride	ND		25.0	26.6		ug/L		106	60 - 150	2	25
Chlorobenzene	ND		25.0	24.8		ug/L		99	70 - 130	1	20
Chloroethane	ND		25.0	22.3		ug/L		89	68 - 130	1	25
Chloroform	ND		25.0	25.9		ug/L		104	70 - 130	0	20
Chloromethane	ND		25.0	22.9		ug/L		92	39 - 144	3	25
cis-1,2-Dichloroethene	ND		25.0	29.0		ug/L		116	70 - 130	1	20
cis-1,3-Dichloropropene	ND		25.0	27.8		ug/L		111	70 - 133	1	20
Dibromochloromethane	ND		25.0	25.0		ug/L		100	70 - 148	0	25
Dibromomethane	ND		25.0	26.3		ug/L		105	70 - 130	1	25
Dichlorodifluoromethane	ND		25.0	22.0		ug/L		88	25 - 142	3	30
Ethylbenzene	ND		25.0	28.3		ug/L		113	70 - 130	0	20
Hexachlorobutadiene	ND		25.0	31.3		ug/L		125	10 - 150	4	20
Isopropylbenzene	ND		25.0	27.4		ug/L		110	70 - 132	2	20
m,p-Xylene	ND		25.0	26.4		ug/L		105	70 - 133	2	25
Methylene Chloride	ND		25.0	23.9		ug/L		96	52 - 130	1	20
Methyl-t-Butyl Ether (MTBE)	ND		25.0	28.1		ug/L		112	70 - 130	2	25
Naphthalene	ND		25.0	27.6		ug/L		110	60 - 140	4	30
n-Butylbenzene	ND		25.0	29.7		ug/L		119	61 - 149	2	20
N-Propylbenzene	ND		25.0	29.1		ug/L		116	66 - 135	2	20
o-Xylene	ND		25.0	26.1		ug/L		104	70 - 133	1	20
p-Isopropyltoluene	ND		25.0	30.7		ug/L		123	70 - 130	2	20
sec-Butylbenzene	ND		25.0	26.5		ug/L		106	67 - 134	2	20
Styrene	ND		25.0	24.8		ug/L		99	29 - 150	2	35
tert-Butylbenzene	ND		25.0	26.7		ug/L		107	70 - 130	3	20
Tetrachloroethene	ND		25.0	25.8		ug/L		103	70 - 137	1	20
Toluene	ND		25.0	27.4		ug/L		110	70 - 130	0	20
trans-1,2-Dichloroethene	ND		25.0	28.9		ug/L		116	70 - 130	1	20
trans-1,3-Dichloropropene	ND		25.0	24.2		ug/L		97	70 - 138	2	25
Trichloroethene	ND		25.0	28.6		ug/L		114	70 - 130	0	20
Trichlorofluoromethane	ND		25.0	23.1		ug/L		92	60 - 150	3	25
Vinyl chloride	ND		25.0	21.6		ug/L		87	50 - 137	2	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*
Dibromofluoromethane (Surr)	*100*		*76 - 132*

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

Lab Sample ID: 440-233700-A-2 MSD
Matrix: Water
Analysis Batch: 530007

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

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
Toluene-d8 (Surr)	*97*		*80 - 128*

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

Lab Sample ID: MB 440-529201/1-A
Matrix: Water
Analysis Batch: 529338

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 529201

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.50	0.10	ug/L		02/17/19 13:35	02/18/19 14:28	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*47*		*27 - 120*	*02/17/19 13:35*	*02/18/19 14:28*	*1*

Lab Sample ID: LCS 440-529201/2-A
Matrix: Water
Analysis Batch: 529338

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 529201

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,4-Dioxane			4.00	2.58		ug/L		65	36 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,4-Dioxane-d8 (Surr)	*51*		*27 - 120*

Lab Sample ID: LCSD 440-529201/3-A
Matrix: Water
Analysis Batch: 529338

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 529201

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dioxane			2.00	1.28	*	ug/L		64	36 - 120	68	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,4-Dioxane-d8 (Surr)	*51*		*27 - 120*

QC Association Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-2019 Semi-Annual GWM Feb.

TestAmerica Job ID: 440-233269-1
SDG: Whittier

GC/MS VOA

Analysis Batch: 530007

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-233269-1	OC_GW_EW-4_20190211	Total/NA	Water	8260B	
440-233269-2	OC_GW_EW-5_20190212	Total/NA	Water	8260B	
MB 440-530007/4	Method Blank	Total/NA	Water	8260B	
LCS 440-530007/5	Lab Control Sample	Total/NA	Water	8260B	
LCS 440-530007/6	Lab Control Sample	Total/NA	Water	8260B	
440-233700-A-2 MS	Matrix Spike	Total/NA	Water	8260B	
440-233700-A-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 529201

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-233269-1	OC_GW_EW-4_20190211	Total/NA	Water	3520C	
440-233269-2	OC_GW_EW-5_20190212	Total/NA	Water	3520C	
MB 440-529201/1-A	Method Blank	Total/NA	Water	3520C	
LCS 440-529201/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 440-529201/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	

Analysis Batch: 529338

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-233269-1	OC_GW_EW-4_20190211	Total/NA	Water	8270C SIM	529201
440-233269-2	OC_GW_EW-5_20190212	Total/NA	Water	8270C SIM	529201
MB 440-529201/1-A	Method Blank	Total/NA	Water	8270C SIM	529201
LCS 440-529201/2-A	Lab Control Sample	Total/NA	Water	8270C SIM	529201
LCSD 440-529201/3-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM	529201

Definitions/Glossary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-2019 Semi-Annual GWM Feb.

TestAmerica Job ID: 440-233269-1
SDG: Whittier

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.

GC/MS Semi VOA

Qualifier	Qualifier Description
*	RPD of the LCS and LCSD exceeds the control 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	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: Jacob & Hefner Associates P.C. TestAmerica Job ID: 440-233269-1
Project/Site: Omega Chemical-2019 Semi-Annual GWM Feb. SDG: Whittier

Laboratory: TestAmerica Irvine

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
California	State Program	9	CA ELAP 2706	06-30-19

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8260B		Water	1,1,2-Trichloro-1,2,2-trifluoroethane
8260B		Water	m,p-Xylene
8270C SIM	3520C	Water	1,4-Dioxane

TestAmerica Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614
phone 949.261.1022 fax

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.

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

Client Contact	Project Manager: Trent Henderson	Site Contact: Khalid Azhar	Date: 2/11/19	COC No:
De Maximis - Jaime Dinello	Tel/Fax: (949) 453-1045 / (949) 453-1047	Lab Contact: Danielle Roberts	Carrier:	1 of 1 COCs
1322 Scott St., Suite 104	Analysis Turnaround Time			Sampler:
San Diego, CA 92106	☐CALENDAR DAYS ☐WORKING DAYS			For Lab Use Only:
(562) 756-8149	TAT if different from Below STD			Walk-in Client:
	☐ 2 weeks			Lab Sampling:
Project Name: Omega Chem - 2019 Semi-Ann. GWM August	☐ 1 week			
Site: Omega Chemical	☐ 2 days			Job / SDG No.:
P O #: 3139G/E742	☐ 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 + Freons	EPA 8270C - 1,4 Dioxane	Sample Specific Notes:
OC_GW_EW-4_20190211	2/11/2019	09:48	Grab	GW	5			x	x	
OC_GW_EW-5_20190212	2/12/2019	07:45	Grab	GW	5			x	x	

440-233269 Chain of Custody

CO 2/13/19

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]	JWA	2/12/19 1430	[signature]	TA IRV	2/12/19 1430
[signature]	TA IRV	2/12/19 1652	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by: [signature]	Company: TA IRV	Date/Time: 2/12/19 1652

~~1.4/1.4~~ ~~4.5/4.5~~ 4.9/4.9 ~~5.3/5.3~~ IR-88
CO 2/13/19 CO 2/13/19

Login Sample Receipt Checklist

Client: Jacob & Hefner Associates P.C.

Job Number: 440-233269-1
SDG Number: Whittier

Login Number: 233269
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: 440-233270-1
TestAmerica Sample Delivery Group: Whittier, CA
Client Project/Site: Omega Chemical-2019 Semi-annual GWM Feb

For:
Jacob & Hefner Associates P.C.
15375 Barranca Parkway, J-101
Irvine, California 92618

Attn: Trent Henderson

Authorized for release by:
2/25/2019 3:38:35 PM

Danielle Roberts, Senior Project Manager
(949)261-1022
danielle.roberts@testamericainc.com

LINKS

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

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

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

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Sample Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-2019 Semi-annual GWM Feb

TestAmerica Job ID: 440-233270-1
SDG: Whittier, CA

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-233270-1	OC_GW_OW-11_20190211	Water	02/11/19 11:07	02/12/19 16:52
440-233270-2	OC_GW_PZ-9_20190212	Water	02/12/19 13:07	02/12/19 16:52
440-233270-3	OC_GW_PZ-9_20190212N	Water	02/12/19 14:00	02/12/19 16:52

Job ID: 440-233270-1

Laboratory: TestAmerica Irvine

Narrative

Job Narrative
440-233270-1

Comments
No additional comments.

Receipt
The samples were received on 2/12/2019 4:52 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 5.3º 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 SIM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for batch preparation batch 440-529201 and analytical batch 440-529338 recovered outside control limits for the following analyte: 1,4-Dioxane. Laboratory control sample / laboratory control sample duplicate (LCS/LCSD) percent recovery is in control for affected analytes.

Method(s) 8270C SIM: The following sample required a dilution due to the nature of the sample matrix: OC_GW_PZ-9_20190212 (440-233270-2). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

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

Organic Prep
Method(s) 3520C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 440-529201. 8270 1,4 DXN

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

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

Detection Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-2019 Semi-annual GWM Feb

TestAmerica Job ID: 440-233270-1
SDG: Whittier, CA

Client Sample ID: OC_GW_OW-11_20190211 — Lab Sample ID: 440-233270-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,2-Trichloro-1,2,2-trifluoroethane	46		5.0	0.50	ug/L	1		8260B	Total/NA
1,1-Dichloroethene	27		1.0	0.25	ug/L	1		8260B	Total/NA
Chloroform	0.62	J	1.0	0.25	ug/L	1		8260B	Total/NA
Trichloroethene	43		1.0	0.25	ug/L	1		8260B	Total/NA
Trichlorofluoromethane	16		1.0	0.25	ug/L	1		8260B	Total/NA
Tetrachloroethene - DL	210		5.0	1.3	ug/L	5		8260B	Total/NA

Client Sample ID: OC_GW_PZ-9_20190212 — Lab Sample ID: 440-233270-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,2-Trichloroethane	0.93	J	1.0	0.25	ug/L	1		8260B	Total/NA
1,1-Dichloroethane	1.5		1.0	0.25	ug/L	1		8260B	Total/NA
1,1-Dichloroethene	78		1.0	0.25	ug/L	1		8260B	Total/NA
1,2-Dichloroethane	9.8		1.0	0.25	ug/L	1		8260B	Total/NA
Chloroform	47		1.0	0.25	ug/L	1		8260B	Total/NA
cis-1,2-Dichloroethene	0.39	J	1.0	0.25	ug/L	1		8260B	Total/NA
trans-1,2-Dichloroethene	0.73	J	1.0	0.25	ug/L	1		8260B	Total/NA
Trichloroethene	41		1.0	0.25	ug/L	1		8260B	Total/NA
Trichlorofluoromethane	44		1.0	0.25	ug/L	1		8260B	Total/NA
1,1,2-Trichloro-1,2,2-trifluoroethane - DL	140		50	5.0	ug/L	10		8260B	Total/NA
Tetrachloroethene - DL	410		10	2.5	ug/L	10		8260B	Total/NA
1,4-Dioxane	93	*	4.9	0.99	ug/L	10		8270C SIM	Total/NA

Client Sample ID: OC_GW_PZ-9_20190212N — Lab Sample ID: 440-233270-3

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-2019 Semi-annual GWM Feb

TestAmerica Job ID: 440-233270-1
SDG: Whittier, CA

Client Sample ID: OC_GW_OW-11_20190211

Lab Sample ID: 440-233270-1

Date Collected: 02/11/19 11:07
Matrix: Water
Date Received: 02/12/19 16:52

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/21/19 15:35	1
1,1,1-Trichloroethane	ND		1.0	0.25	ug/L			02/21/19 15:35	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/21/19 15:35	1
1,1,2-Trichloro-1,2,2-trifluoroethane	**46**		5.0	0.50	ug/L			02/21/19 15:35	1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L			02/21/19 15:35	1
1,1-Dichloroethane	ND		1.0	0.25	ug/L			02/21/19 15:35	1
1,1-Dichloroethene	**27**		1.0	0.25	ug/L			02/21/19 15:35	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			02/21/19 15:35	1
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L			02/21/19 15:35	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			02/21/19 15:35	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			02/21/19 15:35	1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			02/21/19 15:35	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			02/21/19 15:35	1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			02/21/19 15:35	1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			02/21/19 15:35	1
1,2-Dichloroethane	ND		1.0	0.25	ug/L			02/21/19 15:35	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			02/21/19 15:35	1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			02/21/19 15:35	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			02/21/19 15:35	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			02/21/19 15:35	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			02/21/19 15:35	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			02/21/19 15:35	1
2-Chlorotoluene	ND		1.0	0.25	ug/L			02/21/19 15:35	1
4-Chlorotoluene	ND		1.0	0.25	ug/L			02/21/19 15:35	1
Acetone	ND		10	10	ug/L			02/21/19 15:35	1
Benzene	ND		0.50	0.25	ug/L			02/21/19 15:35	1
Bromobenzene	ND		1.0	0.25	ug/L			02/21/19 15:35	1
Bromochloromethane	ND		1.0	0.25	ug/L			02/21/19 15:35	1
Bromodichloromethane	ND		1.0	0.25	ug/L			02/21/19 15:35	1
Bromoform	ND		1.0	0.40	ug/L			02/21/19 15:35	1
Bromomethane	ND		1.0	0.25	ug/L			02/21/19 15:35	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			02/21/19 15:35	1
Chlorobenzene	ND		1.0	0.25	ug/L			02/21/19 15:35	1
Chloroethane	ND		1.0	0.40	ug/L			02/21/19 15:35	1
Chloroform	**0.62**	**J**	1.0	0.25	ug/L			02/21/19 15:35	1
Chloromethane	ND		1.0	0.25	ug/L			02/21/19 15:35	1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			02/21/19 15:35	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/21/19 15:35	1
Dibromochloromethane	ND		1.0	0.25	ug/L			02/21/19 15:35	1
Dibromomethane	ND		1.0	0.25	ug/L			02/21/19 15:35	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			02/21/19 15:35	1
Ethylbenzene	ND		1.0	0.25	ug/L			02/21/19 15:35	1
Hexachlorobutadiene	ND		1.0	0.25	ug/L			02/21/19 15:35	1
Isopropyl alcohol	ND		250	180	ug/L			02/21/19 15:35	1
Isopropylbenzene	ND		1.0	0.25	ug/L			02/21/19 15:35	1
m,p-Xylene	ND		1.0	0.50	ug/L			02/21/19 15:35	1
Methylene Chloride	ND		5.0	0.88	ug/L			02/21/19 15:35	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			02/21/19 15:35	1

Client Sample ID: OC_GW_OW-11_20190211

Lab Sample ID: 440-233270-1

Date Collected: 02/11/19 11:07
Matrix: Water
Date Received: 02/12/19 16:52

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			02/21/19 15:35	1
n-Butylbenzene	ND		1.0	0.40	ug/L			02/21/19 15:35	1
N-Propylbenzene	ND		1.0	0.25	ug/L			02/21/19 15:35	1
o-Xylene	ND		1.0	0.25	ug/L			02/21/19 15:35	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			02/21/19 15:35	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			02/21/19 15:35	1
Styrene	ND		1.0	0.25	ug/L			02/21/19 15:35	1
tert-Butylbenzene	ND		1.0	0.25	ug/L			02/21/19 15:35	1
Toluene	ND		1.0	0.25	ug/L			02/21/19 15:35	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			02/21/19 15:35	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/21/19 15:35	1
Trichloroethene	**43**		1.0	0.25	ug/L			02/21/19 15:35	1
Trichlorofluoromethane	**16**		1.0	0.25	ug/L			02/21/19 15:35	1
Vinyl chloride	ND		0.50	0.25	ug/L			02/21/19 15:35	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*790*	*T J*	*ug/L*		*1.49*			*02/21/19 15:35*	*1*
Unknown	*10*	*T J*	*ug/L*		*5.25*			*02/21/19 15:35*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*		*02/21/19 15:35*	*1*
Dibromofluoromethane (Surr)	*108*		*76 - 132*		*02/21/19 15:35*	*1*
Toluene-d8 (Surr)	*101*		*80 - 128*		*02/21/19 15:35*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	**210**		5.0	1.3	ug/L			02/21/19 16:01	5

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*2700*	*T J*	*ug/L*		*1.49*			*02/21/19 16:01*	*5*
Unknown	*37*	*T J*	*ug/L*		*1.56*			*02/21/19 16:01*	*5*
Unknown	*53*	*T J*	*ug/L*		*5.25*			*02/21/19 16:01*	*5*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*		*02/21/19 16:01*	*5*
Dibromofluoromethane (Surr)	*108*		*76 - 132*		*02/21/19 16:01*	*5*
Toluene-d8 (Surr)	*105*		*80 - 128*		*02/21/19 16:01*	*5*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND	*	0.49	0.099	ug/L		02/17/19 13:35	02/18/19 17:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*58*		*27 - 120*	*02/17/19 13:35*	*02/18/19 17:36*	*1*

Client Sample Results

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-2019 Semi-annual GWM Feb

TestAmerica Job ID: 440-233270-1
SDG: Whittier, CA

Client Sample ID: OC_GW_PZ-9_20190212

Lab Sample ID: 440-233270-2

Date Collected: 02/12/19 13:07
Matrix: Water
Date Received: 02/12/19 16:52

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/21/19 16:27	1
1,1,1-Trichloroethane	ND		1.0	0.25	ug/L			02/21/19 16:27	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/21/19 16:27	1
1,1,2-Trichloroethane	**0.93**	**J**	1.0	0.25	ug/L			02/21/19 16:27	1
1,1-Dichloroethane	**1.5**		1.0	0.25	ug/L			02/21/19 16:27	1
1,1-Dichloroethene	**78**		1.0	0.25	ug/L			02/21/19 16:27	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			02/21/19 16:27	1
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L			02/21/19 16:27	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			02/21/19 16:27	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			02/21/19 16:27	1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			02/21/19 16:27	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			02/21/19 16:27	1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			02/21/19 16:27	1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			02/21/19 16:27	1
1,2-Dichloroethane	**9.8**		1.0	0.25	ug/L			02/21/19 16:27	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			02/21/19 16:27	1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			02/21/19 16:27	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			02/21/19 16:27	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			02/21/19 16:27	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			02/21/19 16:27	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			02/21/19 16:27	1
2-Chlorotoluene	ND		1.0	0.25	ug/L			02/21/19 16:27	1
4-Chlorotoluene	ND		1.0	0.25	ug/L			02/21/19 16:27	1
Acetone	ND		10	10	ug/L			02/21/19 16:27	1
Benzene	ND		0.50	0.25	ug/L			02/21/19 16:27	1
Bromobenzene	ND		1.0	0.25	ug/L			02/21/19 16:27	1
Bromochloromethane	ND		1.0	0.25	ug/L			02/21/19 16:27	1
Bromodichloromethane	ND		1.0	0.25	ug/L			02/21/19 16:27	1
Bromoform	ND		1.0	0.40	ug/L			02/21/19 16:27	1
Bromomethane	ND		1.0	0.25	ug/L			02/21/19 16:27	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			02/21/19 16:27	1
Chlorobenzene	ND		1.0	0.25	ug/L			02/21/19 16:27	1
Chloroethane	ND		1.0	0.40	ug/L			02/21/19 16:27	1
Chloroform	**47**		1.0	0.25	ug/L			02/21/19 16:27	1
Chloromethane	ND		1.0	0.25	ug/L			02/21/19 16:27	1
cis-1,2-Dichloroethene	**0.39**	**J**	1.0	0.25	ug/L			02/21/19 16:27	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/21/19 16:27	1
Dibromochloromethane	ND		1.0	0.25	ug/L			02/21/19 16:27	1
Dibromomethane	ND		1.0	0.25	ug/L			02/21/19 16:27	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			02/21/19 16:27	1
Ethylbenzene	ND		1.0	0.25	ug/L			02/21/19 16:27	1
Hexachlorobutadiene	ND		1.0	0.25	ug/L			02/21/19 16:27	1
Isopropyl alcohol	ND		250	180	ug/L			02/21/19 16:27	1
Isopropylbenzene	ND		1.0	0.25	ug/L			02/21/19 16:27	1
m,p-Xylene	ND		1.0	0.50	ug/L			02/21/19 16:27	1
Methylene Chloride	ND		5.0	0.88	ug/L			02/21/19 16:27	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			02/21/19 16:27	1
Naphthalene	ND		1.0	0.40	ug/L			02/21/19 16:27	1
n-Butylbenzene	ND		1.0	0.40	ug/L			02/21/19 16:27	1

Client Sample ID: OC_GW_PZ-9_20190212

Lab Sample ID: 440-233270-2

Date Collected: 02/12/19 13:07
Matrix: Water
Date Received: 02/12/19 16:52

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Propylbenzene	ND		1.0	0.25	ug/L			02/21/19 16:27	1
o-Xylene	ND		1.0	0.25	ug/L			02/21/19 16:27	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			02/21/19 16:27	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			02/21/19 16:27	1
Styrene	ND		1.0	0.25	ug/L			02/21/19 16:27	1
tert-Butylbenzene	ND		1.0	0.25	ug/L			02/21/19 16:27	1
Toluene	ND		1.0	0.25	ug/L			02/21/19 16:27	1
trans-1,2-Dichloroethene	**0.73**	**J**	1.0	0.25	ug/L			02/21/19 16:27	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/21/19 16:27	1
Trichloroethene	**41**		1.0	0.25	ug/L			02/21/19 16:27	1
Trichlorofluoromethane	**44**		1.0	0.25	ug/L			02/21/19 16:27	1
Vinyl chloride	ND		0.50	0.25	ug/L			02/21/19 16:27	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*610*	*T J*	*ug/L*		*1.49*			*02/21/19 16:27*	*1*
Unknown	*9.6*	*T J*	*ug/L*		*1.56*			*02/21/19 16:27*	*1*
Unknown	*10*	*T J*	*ug/L*		*5.25*			*02/21/19 16:27*	*1*
Unknown	*4.2*	*T J*	*ug/L*		*8.10*			*02/21/19 16:27*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*		*02/21/19 16:27*	*1*
Dibromofluoromethane (Surr)	*106*		*76 - 132*		*02/21/19 16:27*	*1*
Toluene-d8 (Surr)	*105*		*80 - 128*		*02/21/19 16:27*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloro-1,2,2-trifluoroethane	**140**		50	5.0	ug/L			02/21/19 16:53	10
Tetrachloroethene	**410**		10	2.5	ug/L			02/21/19 16:53	10

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*2500*	*T J*	*ug/L*		*1.48*			*02/21/19 16:53*	*10*
Unknown	*110*	*T J*	*ug/L*		*5.25*			*02/21/19 16:53*	*10*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*		*02/21/19 16:53*	*10*
Dibromofluoromethane (Surr)	*117*		*76 - 132*		*02/21/19 16:53*	*10*
Toluene-d8 (Surr)	*101*		*80 - 128*		*02/21/19 16:53*	*10*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**93**	*****	4.9	0.99	ug/L		02/17/19 13:35	02/19/19 10:14	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*0*	*X*	*27 - 120*	*02/17/19 13:35*	*02/19/19 10:14*	*10*

Client Sample Results

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-2019 Semi-annual GWM Feb

TestAmerica Job ID: 440-233270-1
SDG: Whittier, CA

Client Sample ID: OC_GW_PZ-9_20190212N

Lab Sample ID: 440-233270-3

Date Collected: 02/12/19 14:00
Matrix: Water
Date Received: 02/12/19 16:52

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/21/19 17:19	1
1,1,1-Trichloroethane	ND		1.0	0.25	ug/L			02/21/19 17:19	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/21/19 17:19	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	0.50	ug/L			02/21/19 17:19	1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L			02/21/19 17:19	1
1,1-Dichloroethane	ND		1.0	0.25	ug/L			02/21/19 17:19	1
1,1-Dichloroethene	ND		1.0	0.25	ug/L			02/21/19 17:19	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			02/21/19 17:19	1
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L			02/21/19 17:19	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			02/21/19 17:19	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			02/21/19 17:19	1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			02/21/19 17:19	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			02/21/19 17:19	1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			02/21/19 17:19	1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			02/21/19 17:19	1
1,2-Dichloroethane	ND		1.0	0.25	ug/L			02/21/19 17:19	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			02/21/19 17:19	1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			02/21/19 17:19	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			02/21/19 17:19	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			02/21/19 17:19	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			02/21/19 17:19	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			02/21/19 17:19	1
2-Chlorotoluene	ND		1.0	0.25	ug/L			02/21/19 17:19	1
4-Chlorotoluene	ND		1.0	0.25	ug/L			02/21/19 17:19	1
Acetone	ND		10	10	ug/L			02/21/19 17:19	1
Benzene	ND		0.50	0.25	ug/L			02/21/19 17:19	1
Bromobenzene	ND		1.0	0.25	ug/L			02/21/19 17:19	1
Bromochloromethane	ND		1.0	0.25	ug/L			02/21/19 17:19	1
Bromodichloromethane	ND		1.0	0.25	ug/L			02/21/19 17:19	1
Bromoform	ND		1.0	0.40	ug/L			02/21/19 17:19	1
Bromomethane	ND		1.0	0.25	ug/L			02/21/19 17:19	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			02/21/19 17:19	1
Chlorobenzene	ND		1.0	0.25	ug/L			02/21/19 17:19	1
Chloroethane	ND		1.0	0.40	ug/L			02/21/19 17:19	1
Chloroform	ND		1.0	0.25	ug/L			02/21/19 17:19	1
Chloromethane	ND		1.0	0.25	ug/L			02/21/19 17:19	1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			02/21/19 17:19	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/21/19 17:19	1
Dibromochloromethane	ND		1.0	0.25	ug/L			02/21/19 17:19	1
Dibromomethane	ND		1.0	0.25	ug/L			02/21/19 17:19	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			02/21/19 17:19	1
Ethylbenzene	ND		1.0	0.25	ug/L			02/21/19 17:19	1
Hexachlorobutadiene	ND		1.0	0.25	ug/L			02/21/19 17:19	1
Isopropyl alcohol	ND		250	180	ug/L			02/21/19 17:19	1
Isopropylbenzene	ND		1.0	0.25	ug/L			02/21/19 17:19	1
m,p-Xylene	ND		1.0	0.50	ug/L			02/21/19 17:19	1
Methylene Chloride	ND		5.0	0.88	ug/L			02/21/19 17:19	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			02/21/19 17:19	1
Naphthalene	ND		1.0	0.40	ug/L			02/21/19 17:19	1

Client Sample Results

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-2019 Semi-annual GWM Feb

TestAmerica Job ID: 440-233270-1
SDG: Whittier, CA

Client Sample ID: OC_GW_PZ-9_20190212N

Lab Sample ID: 440-233270-3

Date Collected: 02/12/19 14:00
Matrix: Water
Date Received: 02/12/19 16:52

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	ND		1.0	0.40	ug/L			02/21/19 17:19	1
N-Propylbenzene	ND		1.0	0.25	ug/L			02/21/19 17:19	1
o-Xylene	ND		1.0	0.25	ug/L			02/21/19 17:19	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			02/21/19 17:19	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			02/21/19 17:19	1
Styrene	ND		1.0	0.25	ug/L			02/21/19 17:19	1
tert-Butylbenzene	ND		1.0	0.25	ug/L			02/21/19 17:19	1
Tetrachloroethene	ND		1.0	0.25	ug/L			02/21/19 17:19	1
Toluene	ND		1.0	0.25	ug/L			02/21/19 17:19	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			02/21/19 17:19	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/21/19 17:19	1
Trichloroethene	ND		1.0	0.25	ug/L			02/21/19 17:19	1
Trichlorofluoromethane	ND		1.0	0.25	ug/L			02/21/19 17:19	1
Vinyl chloride	ND		0.50	0.25	ug/L			02/21/19 17:19	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*76*	*T J*	*ug/L*		*1.48*			*02/21/19 17:19*	*1*
Unknown	*10*	*T J*	*ug/L*		*5.25*			*02/21/19 17:19*	*1*
Unknown	*2.8*	*T J*	*ug/L*		*12.10*			*02/21/19 17:19*	*1*
Unknown	*3.6*	*T J*	*ug/L*		*13.84*			*02/21/19 17:19*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*		*02/21/19 17:19*	*1*
Dibromofluoromethane (Surr)	*109*		*76 - 132*		*02/21/19 17:19*	*1*
Toluene-d8 (Surr)	*106*		*80 - 128*		*02/21/19 17:19*	*1*

Surrogate Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-2019 Semi-annual GWM Feb

TestAmerica Job ID: 440-233270-1
SDG: Whittier, CA

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

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(80-120)	(76-132)	(80-128)
440-233270-1	OC_GW_OW-11_20190211	95	108	101
440-233270-1 - DL	OC_GW_OW-11_20190211	94	108	105
440-233270-2	OC_GW_PZ-9_20190212	95	106	105
440-233270-2 - DL	OC_GW_PZ-9_20190212	94	117	101
440-233270-3	OC_GW_PZ-9_20190212N	95	109	106
440-233700-A-2 MS	Matrix Spike	95	100	97
440-233700-A-2 MSD	Matrix Spike Duplicate	96	100	97
LCS 440-530007/5	Lab Control Sample	98	106	98
LCS 440-530007/6	Lab Control Sample	93	104	105
MB 440-530007/4	Method Blank	95	106	103

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

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

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
		DXE
Lab Sample ID	Client Sample ID	(27-120)
440-233270-1	OC_GW_OW-11_20190211	58
440-233270-2	OC_GW_PZ-9_20190212	0 X
LCS 440-529201/2-A	Lab Control Sample	51
LCSD 440-529201/3-A	Lab Control Sample Dup	51
MB 440-529201/1-A	Method Blank	47

Surrogate Legend

DXE = 1,4-Dioxane-d8 (Surr)

Method Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-2019 Semi-annual GWM Feb

TestAmerica Job ID: 440-233270-1
SDG: Whittier, CA

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL IRV
8270C SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL IRV
3520C	Liquid-Liquid Extraction (Continuous)	SW846	TAL IRV
5030B	Purge and Trap	SW846	TAL IRV

Protocol References:

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: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-2019 Semi-annual GWM Feb

TestAmerica Job ID: 440-233270-1
SDG: Whittier, CA

Client Sample ID: OC_GW_OW-11_20190211 — Lab Sample ID: 440-233270-1

Date Collected: 02/11/19 11:07 — **Matrix: Water**
Date Received: 02/12/19 16:52

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	530007	02/21/19 15:35	TCN	TAL IRV
Total/NA	Analysis	8260B	DL	5	10 mL	10 mL	530007	02/21/19 16:01	TCN	TAL IRV
Total/NA	Prep	3520C			1015 mL	1 mL	529201	02/17/19 13:35	AJP	TAL IRV
Total/NA	Analysis	8270C SIM		1			529338	02/18/19 17:36	HN	TAL IRV

Client Sample ID: OC_GW_PZ-9_20190212 — Lab Sample ID: 440-233270-2

Date Collected: 02/12/19 13:07 — **Matrix: Water**
Date Received: 02/12/19 16:52

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	530007	02/21/19 16:27	TCN	TAL IRV
Total/NA	Analysis	8260B	DL	10	10 mL	10 mL	530007	02/21/19 16:53	TCN	TAL IRV
Total/NA	Prep	3520C			1015 mL	1 mL	529201	02/17/19 13:35	AJP	TAL IRV
Total/NA	Analysis	8270C SIM		10			529518	02/19/19 10:14	HN	TAL IRV

Client Sample ID: OC_GW_PZ-9_20190212N — Lab Sample ID: 440-233270-3

Date Collected: 02/12/19 14:00 — **Matrix: Water**
Date Received: 02/12/19 16:52

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	530007	02/21/19 17:19	TCN	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 440-530007/4
Matrix: Water
Analysis Batch: 530007

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/21/19 08:09	1
1,1,1-Trichloroethane	ND		1.0	0.25	ug/L			02/21/19 08:09	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/21/19 08:09	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	0.50	ug/L			02/21/19 08:09	1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L			02/21/19 08:09	1
1,1-Dichloroethane	ND		1.0	0.25	ug/L			02/21/19 08:09	1
1,1-Dichloroethene	ND		1.0	0.25	ug/L			02/21/19 08:09	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			02/21/19 08:09	1
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L			02/21/19 08:09	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			02/21/19 08:09	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			02/21/19 08:09	1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			02/21/19 08:09	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			02/21/19 08:09	1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			02/21/19 08:09	1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			02/21/19 08:09	1
1,2-Dichloroethane	ND		1.0	0.25	ug/L			02/21/19 08:09	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			02/21/19 08:09	1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			02/21/19 08:09	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			02/21/19 08:09	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			02/21/19 08:09	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			02/21/19 08:09	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			02/21/19 08:09	1
2-Chlorotoluene	ND		1.0	0.25	ug/L			02/21/19 08:09	1
4-Chlorotoluene	ND		1.0	0.25	ug/L			02/21/19 08:09	1
Acetone	ND		10	10	ug/L			02/21/19 08:09	1
Benzene	ND		0.50	0.25	ug/L			02/21/19 08:09	1
Bromobenzene	ND		1.0	0.25	ug/L			02/21/19 08:09	1
Bromochloromethane	ND		1.0	0.25	ug/L			02/21/19 08:09	1
Bromodichloromethane	ND		1.0	0.25	ug/L			02/21/19 08:09	1
Bromoform	ND		1.0	0.40	ug/L			02/21/19 08:09	1
Bromomethane	ND		1.0	0.25	ug/L			02/21/19 08:09	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			02/21/19 08:09	1
Chlorobenzene	ND		1.0	0.25	ug/L			02/21/19 08:09	1
Chloroethane	ND		1.0	0.40	ug/L			02/21/19 08:09	1
Chloroform	ND		1.0	0.25	ug/L			02/21/19 08:09	1
Chloromethane	ND		1.0	0.25	ug/L			02/21/19 08:09	1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			02/21/19 08:09	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/21/19 08:09	1
Dibromochloromethane	ND		1.0	0.25	ug/L			02/21/19 08:09	1
Dibromomethane	ND		1.0	0.25	ug/L			02/21/19 08:09	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			02/21/19 08:09	1
Ethylbenzene	ND		1.0	0.25	ug/L			02/21/19 08:09	1
Hexachlorobutadiene	ND		1.0	0.25	ug/L			02/21/19 08:09	1
Isopropyl alcohol	ND		250	180	ug/L			02/21/19 08:09	1
Isopropylbenzene	ND		1.0	0.25	ug/L			02/21/19 08:09	1
m,p-Xylene	ND		1.0	0.50	ug/L			02/21/19 08:09	1
Methylene Chloride	ND		5.0	0.88	ug/L			02/21/19 08:09	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			02/21/19 08:09	1

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

Lab Sample ID: MB 440-530007/4
Matrix: Water
Analysis Batch: 530007

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		1.0	0.40	ug/L			02/21/19 08:09	1
n-Butylbenzene	ND		1.0	0.40	ug/L			02/21/19 08:09	1
N-Propylbenzene	ND		1.0	0.25	ug/L			02/21/19 08:09	1
o-Xylene	ND		1.0	0.25	ug/L			02/21/19 08:09	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			02/21/19 08:09	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			02/21/19 08:09	1
Styrene	ND		1.0	0.25	ug/L			02/21/19 08:09	1
tert-Butylbenzene	ND		1.0	0.25	ug/L			02/21/19 08:09	1
Tetrachloroethene	ND		1.0	0.25	ug/L			02/21/19 08:09	1
Toluene	ND		1.0	0.25	ug/L			02/21/19 08:09	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			02/21/19 08:09	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/21/19 08:09	1
Trichloroethene	ND		1.0	0.25	ug/L			02/21/19 08:09	1
Trichlorofluoromethane	ND		1.0	0.25	ug/L			02/21/19 08:09	1
Vinyl chloride	ND		0.50	0.25	ug/L			02/21/19 08:09	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*02/21/19 08:09*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*		*02/21/19 08:09*	*1*
Dibromofluoromethane (Surr)	*106*		*76 - 132*		*02/21/19 08:09*	*1*
Toluene-d8 (Surr)	*103*		*80 - 128*		*02/21/19 08:09*	*1*

Lab Sample ID: LCS 440-530007/5
Matrix: Water
Analysis Batch: 530007

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	25.0		ug/L		100	60 - 141
1,1,1-Trichloroethane	25.0	25.7		ug/L		103	70 - 130
1,1,2,2-Tetrachloroethane	25.0	25.8		ug/L		103	63 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	23.1		ug/L		92	60 - 140
1,1,2-Trichloroethane	25.0	23.6		ug/L		94	70 - 130
1,1-Dichloroethane	25.0	25.7		ug/L		103	64 - 130
1,1-Dichloroethene	25.0	24.3		ug/L		97	70 - 130
1,1-Dichloropropene	25.0	27.8		ug/L		111	70 - 130
1,2,3-Trichlorobenzene	25.0	30.6		ug/L		123	60 - 140
1,2,3-Trichloropropane	25.0	26.6		ug/L		106	63 - 130
1,2,4-Trichlorobenzene	25.0	34.4		ug/L		137	60 - 140
1,2,4-Trimethylbenzene	25.0	28.0		ug/L		112	70 - 135
1,2-Dibromo-3-Chloropropane	25.0	25.9		ug/L		103	52 - 140
1,2-Dibromoethane (EDB)	25.0	24.9		ug/L		99	70 - 130
1,2-Dichlorobenzene	25.0	29.3		ug/L		117	70 - 130
1,2-Dichloroethane	25.0	26.0		ug/L		104	57 - 138
1,2-Dichloropropane	25.0	26.6		ug/L		106	67 - 130
1,3,5-Trimethylbenzene	25.0	27.1		ug/L		109	70 - 136

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

Lab Sample ID: LCS 440-530007/5
Matrix: Water
Analysis Batch: 530007

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,3-Dichlorobenzene	25.0	28.8		ug/L		115	70 - 130
1,3-Dichloropropane	25.0	23.4		ug/L		94	70 - 130
1,4-Dichlorobenzene	25.0	27.0		ug/L		108	70 - 130
2,2-Dichloropropane	25.0	31.5		ug/L		126	68 - 141
2-Chlorotoluene	25.0	25.6		ug/L		102	70 - 130
4-Chlorotoluene	25.0	28.3		ug/L		113	70 - 130
Acetone	25.0	22.9		ug/L		92	10 - 150
Benzene	25.0	26.5		ug/L		106	68 - 130
Bromobenzene	25.0	25.4		ug/L		102	70 - 130
Bromochloromethane	25.0	27.6		ug/L		110	70 - 130
Bromodichloromethane	25.0	26.6		ug/L		106	70 - 132
Bromoform	25.0	25.8		ug/L		103	60 - 148
Bromomethane	25.0	21.8		ug/L		87	64 - 139
Carbon tetrachloride	25.0	25.2		ug/L		101	60 - 150
Chlorobenzene	25.0	24.6		ug/L		98	70 - 130
Chloroethane	25.0	22.0		ug/L		88	64 - 135
Chloroform	25.0	25.4		ug/L		102	70 - 130
Chloromethane	25.0	22.1		ug/L		88	47 - 140
cis-1,2-Dichloroethene	25.0	28.5		ug/L		114	70 - 133
cis-1,3-Dichloropropene	25.0	27.3		ug/L		109	70 - 133
Dibromochloromethane	25.0	25.8		ug/L		103	69 - 145
Dibromomethane	25.0	26.7		ug/L		107	70 - 130
Dichlorodifluoromethane	25.0	20.9		ug/L		83	29 - 150
Ethylbenzene	25.0	27.3		ug/L		109	70 - 130
Hexachlorobutadiene	25.0	30.5		ug/L		122	10 - 150
Isopropylbenzene	25.0	27.0		ug/L		108	70 - 136
m,p-Xylene	25.0	26.1		ug/L		104	70 - 130
Methylene Chloride	25.0	22.6		ug/L		90	52 - 130
Methyl-t-Butyl Ether (MTBE)	25.0	28.4		ug/L		113	63 - 131
Naphthalene	25.0	28.1		ug/L		112	60 - 140
n-Butylbenzene	25.0	29.7		ug/L		119	65 - 150
N-Propylbenzene	25.0	29.2		ug/L		117	67 - 139
o-Xylene	25.0	25.5		ug/L		102	70 - 130
p-Isopropyltoluene	25.0	31.0		ug/L		124	70 - 132
sec-Butylbenzene	25.0	26.9		ug/L		108	70 - 138
Styrene	25.0	24.6		ug/L		98	70 - 134
tert-Butylbenzene	25.0	27.1		ug/L		108	70 - 130
Tetrachloroethene	25.0	24.8		ug/L		99	70 - 130
Toluene	25.0	26.6		ug/L		106	70 - 130
trans-1,2-Dichloroethene	25.0	27.7		ug/L		111	70 - 130
trans-1,3-Dichloropropene	25.0	24.2		ug/L		97	70 - 132
Trichloroethene	25.0	27.6		ug/L		111	70 - 130
Trichlorofluoromethane	25.0	22.5		ug/L		90	60 - 150
Vinyl chloride	25.0	20.8		ug/L		83	59 - 133

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*
Dibromofluoromethane (Surr)	*106*		*76 - 132*

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

Lab Sample ID: LCS 440-530007/5
Matrix: Water
Analysis Batch: 530007

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

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
Toluene-d8 (Surr)	*98*		*80 - 128*

Lab Sample ID: LCS 440-530007/6
Matrix: Water
Analysis Batch: 530007

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Isopropyl alcohol	250	239	J	ug/L		96	49 - 142

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*93*		*80 - 120*
Dibromofluoromethane (Surr)	*104*		*76 - 132*
Toluene-d8 (Surr)	*105*		*80 - 128*

Lab Sample ID: 440-233700-A-2 MS
Matrix: Water
Analysis Batch: 530007

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
1,1,1,2-Tetrachloroethane	ND		25.0	24.9		ug/L		99	60 - 149
1,1,1-Trichloroethane	ND		25.0	26.3		ug/L		105	70 - 130
1,1,2,2-Tetrachloroethane	ND		25.0	23.7		ug/L		95	63 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		25.0	23.9		ug/L		96	60 - 140
1,1,2-Trichloroethane	ND		25.0	23.1		ug/L		92	70 - 130
1,1-Dichloroethane	ND		25.0	25.9		ug/L		104	65 - 130
1,1-Dichloroethene	ND		25.0	25.5		ug/L		102	70 - 130
1,1-Dichloropropene	ND		25.0	30.3		ug/L		121	64 - 130
1,2,3-Trichlorobenzene	ND		25.0	28.4		ug/L		114	60 - 140
1,2,3-Trichloropropane	ND		25.0	23.9		ug/L		96	60 - 130
1,2,4-Trichlorobenzene	ND		25.0	33.7		ug/L		135	60 - 140
1,2,4-Trimethylbenzene	ND		25.0	27.1		ug/L		109	70 - 130
1,2-Dibromo-3-Chloropropane	ND		25.0	22.9		ug/L		92	48 - 140
1,2-Dibromoethane (EDB)	ND		25.0	23.9		ug/L		96	70 - 131
1,2-Dichlorobenzene	ND		25.0	28.5		ug/L		114	70 - 130
1,2-Dichloroethane	ND		25.0	26.2		ug/L		105	56 - 146
1,2-Dichloropropane	ND		25.0	27.7		ug/L		111	69 - 130
1,3,5-Trimethylbenzene	ND		25.0	26.4		ug/L		106	70 - 130
1,3-Dichlorobenzene	ND		25.0	27.8		ug/L		111	70 - 130
1,3-Dichloropropane	ND		25.0	23.3		ug/L		93	70 - 130
1,4-Dichlorobenzene	ND		25.0	25.7		ug/L		103	70 - 130
2,2-Dichloropropane	ND		25.0	32.5		ug/L		130	69 - 138
2-Chlorotoluene	ND		25.0	25.2		ug/L		101	70 - 130
4-Chlorotoluene	ND		25.0	27.5		ug/L		110	70 - 130
Acetone	ND		25.0	32.5		ug/L		130	10 - 150
Benzene	ND		25.0	27.5		ug/L		110	66 - 130
Bromobenzene	ND		25.0	24.5		ug/L		98	70 - 130
Bromochloromethane	ND		25.0	27.3		ug/L		109	70 - 130

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

Lab Sample ID: 440-233700-A-2 MS
Matrix: Water
Analysis Batch: 530007

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
Bromodichloromethane	ND		25.0	27.3		ug/L		109	70 - 138
Bromoform	ND		25.0	25.3		ug/L		101	59 - 150
Bromomethane	ND		25.0	22.5		ug/L		90	62 - 131
Carbon tetrachloride	ND		25.0	26.0		ug/L		104	60 - 150
Chlorobenzene	ND		25.0	25.0		ug/L		100	70 - 130
Chloroethane	ND		25.0	22.2		ug/L		89	68 - 130
Chloroform	ND		25.0	25.9		ug/L		104	70 - 130
Chloromethane	ND		25.0	22.2		ug/L		89	39 - 144
cis-1,2-Dichloroethene	ND		25.0	29.4		ug/L		118	70 - 130
cis-1,3-Dichloropropene	ND		25.0	27.6		ug/L		110	70 - 133
Dibromochloromethane	ND		25.0	25.1		ug/L		100	70 - 148
Dibromomethane	ND		25.0	26.6		ug/L		106	70 - 130
Dichlorodifluoromethane	ND		25.0	21.2		ug/L		85	25 - 142
Ethylbenzene	ND		25.0	28.1		ug/L		113	70 - 130
Hexachlorobutadiene	ND		25.0	30.0		ug/L		120	10 - 150
Isopropyl alcohol	ND		250	251		ug/L		101	46 - 142
Isopropylbenzene	ND		25.0	27.0		ug/L		108	70 - 132
m,p-Xylene	ND		25.0	25.7		ug/L		103	70 - 133
Methylene Chloride	ND		25.0	23.7		ug/L		95	52 - 130
Methyl-t-Butyl Ether (MTBE)	ND		25.0	28.7		ug/L		115	70 - 130
Naphthalene	ND		25.0	26.5		ug/L		106	60 - 140
n-Butylbenzene	ND		25.0	29.0		ug/L		116	61 - 149
N-Propylbenzene	ND		25.0	28.5		ug/L		114	66 - 135
o-Xylene	ND		25.0	25.9		ug/L		104	70 - 133
p-Isopropyltoluene	ND		25.0	30.1		ug/L		120	70 - 130
sec-Butylbenzene	ND		25.0	26.1		ug/L		104	67 - 134
Styrene	ND		25.0	25.3		ug/L		101	29 - 150
tert-Butylbenzene	ND		25.0	25.8		ug/L		103	70 - 130
Tetrachloroethene	ND		25.0	26.1		ug/L		104	70 - 137
Toluene	ND		25.0	27.5		ug/L		110	70 - 130
trans-1,2-Dichloroethene	ND		25.0	29.2		ug/L		117	70 - 130
trans-1,3-Dichloropropene	ND		25.0	24.7		ug/L		99	70 - 138
Trichloroethene	ND		25.0	28.5		ug/L		114	70 - 130
Trichlorofluoromethane	ND		25.0	22.4		ug/L		90	60 - 150
Vinyl chloride	ND		25.0	21.1		ug/L		84	50 - 137

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*
Dibromofluoromethane (Surr)	*100*		*76 - 132*
Toluene-d8 (Surr)	*97*		*80 - 128*

Lab Sample ID: 440-233700-A-2 MSD
Matrix: Water
Analysis Batch: 530007

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
1,1,1,2-Tetrachloroethane	ND		25.0	25.1		ug/L		100	60 - 149	1	20
1,1,1-Trichloroethane	ND		25.0	26.7		ug/L		107	70 - 130	1	20

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

Lab Sample ID: 440-233700-A-2 MSD
Matrix: Water
Analysis Batch: 530007

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
1,1,2,2-Tetrachloroethane	ND		25.0	24.2		ug/L		97	63 - 130	2	30
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		25.0	24.5		ug/L		98	60 - 140	2	20
1,1,2-Trichloroethane	ND		25.0	23.1		ug/L		93	70 - 130	0	25
1,1-Dichloroethane	ND		25.0	25.9		ug/L		104	65 - 130	0	20
1,1-Dichloroethene	ND		25.0	26.3		ug/L		105	70 - 130	3	20
1,1-Dichloropropene	ND		25.0	30.7		ug/L		123	64 - 130	1	20
1,2,3-Trichlorobenzene	ND		25.0	29.4		ug/L		118	60 - 140	3	20
1,2,3-Trichloropropane	ND		25.0	25.6		ug/L		102	60 - 130	7	30
1,2,4-Trichlorobenzene	ND		25.0	34.8		ug/L		139	60 - 140	3	20
1,2,4-Trimethylbenzene	ND		25.0	27.6		ug/L		110	70 - 130	2	25
1,2-Dibromo-3-Chloropropane	ND		25.0	23.9		ug/L		95	48 - 140	4	30
1,2-Dibromoethane (EDB)	ND		25.0	23.6		ug/L		95	70 - 131	1	25
1,2-Dichlorobenzene	ND		25.0	28.8		ug/L		115	70 - 130	1	20
1,2-Dichloroethane	ND		25.0	26.3		ug/L		105	56 - 146	1	20
1,2-Dichloropropane	ND		25.0	27.1		ug/L		108	69 - 130	2	20
1,3,5-Trimethylbenzene	ND		25.0	27.1		ug/L		108	70 - 130	2	20
1,3-Dichlorobenzene	ND		25.0	28.0		ug/L		112	70 - 130	1	20
1,3-Dichloropropane	ND		25.0	23.2		ug/L		93	70 - 130	1	25
1,4-Dichlorobenzene	ND		25.0	26.2		ug/L		105	70 - 130	2	20
2,2-Dichloropropane	ND		25.0	33.8		ug/L		135	69 - 138	4	25
2-Chlorotoluene	ND		25.0	25.7		ug/L		103	70 - 130	2	20
4-Chlorotoluene	ND		25.0	27.7		ug/L		111	70 - 130	1	20
Acetone	ND		25.0	32.9		ug/L		132	10 - 150	1	35
Benzene	ND		25.0	28.0		ug/L		112	66 - 130	2	20
Bromobenzene	ND		25.0	24.7		ug/L		99	70 - 130	1	20
Bromochloromethane	ND		25.0	26.9		ug/L		108	70 - 130	1	25
Bromodichloromethane	ND		25.0	27.3		ug/L		109	70 - 138	0	20
Bromoform	ND		25.0	24.7		ug/L		99	59 - 150	3	25
Bromomethane	ND		25.0	22.9		ug/L		92	62 - 131	2	25
Carbon tetrachloride	ND		25.0	26.6		ug/L		106	60 - 150	2	25
Chlorobenzene	ND		25.0	24.8		ug/L		99	70 - 130	1	20
Chloroethane	ND		25.0	22.3		ug/L		89	68 - 130	1	25
Chloroform	ND		25.0	25.9		ug/L		104	70 - 130	0	20
Chloromethane	ND		25.0	22.9		ug/L		92	39 - 144	3	25
cis-1,2-Dichloroethene	ND		25.0	29.0		ug/L		116	70 - 130	1	20
cis-1,3-Dichloropropene	ND		25.0	27.8		ug/L		111	70 - 133	1	20
Dibromochloromethane	ND		25.0	25.0		ug/L		100	70 - 148	0	25
Dibromomethane	ND		25.0	26.3		ug/L		105	70 - 130	1	25
Dichlorodifluoromethane	ND		25.0	22.0		ug/L		88	25 - 142	3	30
Ethylbenzene	ND		25.0	28.3		ug/L		113	70 - 130	0	20
Hexachlorobutadiene	ND		25.0	31.3		ug/L		125	10 - 150	4	20
Isopropyl alcohol	ND		250	291		ug/L		116	46 - 142	14	40
Isopropylbenzene	ND		25.0	27.4		ug/L		110	70 - 132	2	20
m,p-Xylene	ND		25.0	26.4		ug/L		105	70 - 133	2	25
Methylene Chloride	ND		25.0	23.9		ug/L		96	52 - 130	1	20
Methyl-t-Butyl Ether (MTBE)	ND		25.0	28.1		ug/L		112	70 - 130	2	25
Naphthalene	ND		25.0	27.6		ug/L		110	60 - 140	4	30

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

Lab Sample ID: 440-233700-A-2 MSD
Matrix: Water
Analysis Batch: 530007

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
n-Butylbenzene	ND		25.0	29.7		ug/L		119	61 - 149	2	20
N-Propylbenzene	ND		25.0	29.1		ug/L		116	66 - 135	2	20
o-Xylene	ND		25.0	26.1		ug/L		104	70 - 133	1	20
p-Isopropyltoluene	ND		25.0	30.7		ug/L		123	70 - 130	2	20
sec-Butylbenzene	ND		25.0	26.5		ug/L		106	67 - 134	2	20
Styrene	ND		25.0	24.8		ug/L		99	29 - 150	2	35
tert-Butylbenzene	ND		25.0	26.7		ug/L		107	70 - 130	3	20
Tetrachloroethene	ND		25.0	25.8		ug/L		103	70 - 137	1	20
Toluene	ND		25.0	27.4		ug/L		110	70 - 130	0	20
trans-1,2-Dichloroethene	ND		25.0	28.9		ug/L		116	70 - 130	1	20
trans-1,3-Dichloropropene	ND		25.0	24.2		ug/L		97	70 - 138	2	25
Trichloroethene	ND		25.0	28.6		ug/L		114	70 - 130	0	20
Trichlorofluoromethane	ND		25.0	23.1		ug/L		92	60 - 150	3	25
Vinyl chloride	ND		25.0	21.6		ug/L		87	50 - 137	2	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*
Dibromofluoromethane (Surr)	*100*		*76 - 132*
Toluene-d8 (Surr)	*97*		*80 - 128*

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

Lab Sample ID: MB 440-529201/1-A
Matrix: Water
Analysis Batch: 529338

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 529201

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.50	0.10	ug/L		02/17/19 13:35	02/18/19 14:28	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*47*		*27 - 120*	*02/17/19 13:35*	*02/18/19 14:28*	*1*

Lab Sample ID: LCS 440-529201/2-A
Matrix: Water
Analysis Batch: 529338

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 529201

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dioxane	4.00	2.58		ug/L		65	36 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,4-Dioxane-d8 (Surr)	*51*		*27 - 120*

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

Lab Sample ID: LCSD 440-529201/3-A
Matrix: Water
Analysis Batch: 529338

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 529201

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dioxane			2.00	1.28	*	ug/L		64	36 - 120	68	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,4-Dioxane-d8 (Surr)	*51*		*27 - 120*

QC Association Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-2019 Semi-annual GWM Feb

TestAmerica Job ID: 440-233270-1
SDG: Whittier, CA

GC/MS VOA

Analysis Batch: 530007

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-233270-1	OC_GW_OW-11_20190211	Total/NA	Water	8260B	
440-233270-1 - DL	OC_GW_OW-11_20190211	Total/NA	Water	8260B	
440-233270-2	OC_GW_PZ-9_20190212	Total/NA	Water	8260B	
440-233270-2 - DL	OC_GW_PZ-9_20190212	Total/NA	Water	8260B	
440-233270-3	OC_GW_PZ-9_20190212N	Total/NA	Water	8260B	
MB 440-530007/4	Method Blank	Total/NA	Water	8260B	
LCS 440-530007/5	Lab Control Sample	Total/NA	Water	8260B	
LCS 440-530007/6	Lab Control Sample	Total/NA	Water	8260B	
440-233700-A-2 MS	Matrix Spike	Total/NA	Water	8260B	
440-233700-A-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 529201

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-233270-1	OC_GW_OW-11_20190211	Total/NA	Water	3520C	
440-233270-2	OC_GW_PZ-9_20190212	Total/NA	Water	3520C	
MB 440-529201/1-A	Method Blank	Total/NA	Water	3520C	
LCS 440-529201/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 440-529201/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	

Analysis Batch: 529338

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-233270-1	OC_GW_OW-11_20190211	Total/NA	Water	8270C SIM	529201
MB 440-529201/1-A	Method Blank	Total/NA	Water	8270C SIM	529201
LCS 440-529201/2-A	Lab Control Sample	Total/NA	Water	8270C SIM	529201
LCSD 440-529201/3-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM	529201

Analysis Batch: 529518

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-233270-2	OC_GW_PZ-9_20190212	Total/NA	Water	8270C SIM	529201

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.

GC/MS Semi VOA

Qualifier	Qualifier Description
*	RPD of the LCS and LCSD exceeds the control limits
X	Surrogate is outside control 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: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-2019 Semi-annual GWM Feb

TestAmerica Job ID: 440-233270-1
SDG: Whittier, CA

Laboratory: TestAmerica Irvine

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
California	State Program	9	CA ELAP 2706	06-30-19

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8260B		Water	1,1,2-Trichloro-1,2,2-trifluoroethane
8260B		Water	m,p-Xylene
8270C SIM	3520C	Water	1,4-Dioxane

TestAmerica Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614
phone 949.261 1022 fax

Chain of Custody Record

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TestAmerica Laboratories, Inc.

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

Client Contact	Project Manager: Trent Henderson	Site Contact: Khalid Azhar	Date: 2/11/19	COC No:
De Maximis - Jaime Dinello	Tel/Fax: (949) 453-1045 / (949) 453-1047	Lab Contact: Danielle Roberts	Carrier:	1 of 1 COCs
1322 Scott St., Suite 104	Analysis Turnaround Time			Sampler:
San Diego, CA 92106	☐CALENDAR DAYS ☐WORKING DAYS			For Lab Use Only:
(562) 756-8149	TAT if different from Below STD			Walk-in Client:
	☐ 2 weeks			Lab Sampling:
Project Name: Omega Chem. - 2019 Semi-Ann. GWM August	☐ 1 week			
Site: Omega Chemical	☐ 2 days			Job / SDG No.:
P O #: 3139G/E742	☐ 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 + Freons	EPA 8270C - 1,4 Dioxane	Sample Specific Notes
OC_GW_OW-11_20190211	2/11/2019	11:07	Grab	GW	5			x	x	
OC_GW_PZ-9_20190212	2/12/2019	13:07	Grab	GW	5			x	x	
OC_GW_PZ-9_20190212N	2/12/2019	14.00	Grab	GW	5			x		

440-233270 Chain of Custody

CO 2/13/19

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]	JHS	2/12/19 1430	[signature]	TA IRV	2/12/19 1430
[signature]	TA IRV	2/12/19 1652			
			Received in Laboratory by: [signature]	TA IRV	2/12/19 1652

~~1.4/1.4~~ ~~4.5/4.5~~ ~~4.9/4.9~~ 5.3/5.3 IR-88
CO 2/13/19

Login Sample Receipt Checklist

Client: Jacob & Hefner Associates P.C.

Job Number: 440-233270-1
SDG Number: Whittier, CA

Login Number: 233270
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	

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ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
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TestAmerica Job ID: 440-233271-1
TestAmerica Sample Delivery Group: Whittier
Client Project/Site: Omega Chenical-2019 Semi-Annual GWM Feb

For:
Jacob & Hefner Associates P.C.
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Irvine, California 92618

Attn: Trent Henderson

Authorized for release by:
2/25/2019 4:04:41 PM

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

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

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

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Sample Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chenical-2019 Semi-Annual GWM Feb

TestAmerica Job ID: 440-233271-1
SDG: Whittier

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-233271-1	OC_GW_DPE-5_20190211	Water	02/11/19 13:25	02/12/19 16:52
440-233271-2	OC_GW_DPE-3_20190211	Water	02/11/19 13:02	02/12/19 16:52
440-233271-3	OC_GW_DPE-8_20190211	Water	02/11/19 12:43	02/12/19 16:52
440-233271-4	OC_GW_DPE-4_20190211	Water	02/11/19 13:48	02/12/19 16:52
440-233271-5	OC_GW_DPE-9_20190212	Water	02/12/19 08:56	02/12/19 16:52
440-233271-6	OC_GW_DPE-10D_20190212	Water	02/12/19 10:30	02/12/19 16:52
440-233271-7	OC_GW_TB_20190211	Water	02/11/19 07:00	02/12/19 16:52

Job ID: 440-233271-1

Laboratory: TestAmerica Irvine

Narrative

Job Narrative
440-233271-1

Comments
No additional comments.

Receipt
The samples were received on 2/12/2019 4:52 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 1.4º C, 4.5º C, 4.9º C and 5.3º 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 SIM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for batch preparation batch 440-529201 and analytical batch 440-529338 recovered outside control limits for the following analyte: 1,4-Dioxane. Laboratory control sample / laboratory control sample duplicate (LCS/LCSD) percent recovery is in control for affected analytes.

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

Organic Prep
Method(s) 3520C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 440-529201. 8270 1,4 DXN

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

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

Detection Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chenical-2019 Semi-Annual GWM Feb

TestAmerica Job ID: 440-233271-1
SDG: Whittier

Client Sample ID: OC_GW_DPE-5_20190211 — Lab Sample ID: 440-233271-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,2-Trichloro-1,2,2-trifluoroethane	9.3		5.0	0.50	ug/L	1		8260B	Total/NA
1,1-Dichloroethene	32		1.0	0.25	ug/L	1		8260B	Total/NA
1,2,3-Trichlorobenzene	0.47	J	1.0	0.40	ug/L	1		8260B	Total/NA
Chloroform	1.3		1.0	0.25	ug/L	1		8260B	Total/NA
tert-Butylbenzene	0.28	J	1.0	0.25	ug/L	1		8260B	Total/NA
Tetrachloroethene	88	F1	1.0	0.25	ug/L	1		8260B	Total/NA
Trichloroethene	8.7		1.0	0.25	ug/L	1		8260B	Total/NA
Trichlorofluoromethane	6.4		1.0	0.25	ug/L	1		8260B	Total/NA
1,4-Dioxane	2.0	*	0.50	0.099	ug/L	1		8270C SIM	Total/NA

Client Sample ID: OC_GW_DPE-3_20190211 — Lab Sample ID: 440-233271-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	0.32	J	1.0	0.25	ug/L	1		8260B	Total/NA
1,1,2-Trichloro-1,2,2-trifluoroethane	64		5.0	0.50	ug/L	1		8260B	Total/NA
1,1-Dichloroethene	2.9		1.0	0.25	ug/L	1		8260B	Total/NA
1,2-Dichloroethane	2.8		1.0	0.25	ug/L	1		8260B	Total/NA
Chloroform	2.4		1.0	0.25	ug/L	1		8260B	Total/NA
Trichloroethene	6.1		1.0	0.25	ug/L	1		8260B	Total/NA
Trichlorofluoromethane	8.3		1.0	0.25	ug/L	1		8260B	Total/NA
Tetrachloroethene - DL	130		5.0	1.3	ug/L	5		8260B	Total/NA
1,4-Dioxane	4.7	*	0.49	0.098	ug/L	1		8270C SIM	Total/NA

Client Sample ID: OC_GW_DPE-8_20190211 — Lab Sample ID: 440-233271-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,2-Trichloro-1,2,2-trifluoroethane	2.8	J	5.0	0.50	ug/L	1		8260B	Total/NA
1,1-Dichloroethene	0.56	J	1.0	0.25	ug/L	1		8260B	Total/NA
Tetrachloroethene	16		1.0	0.25	ug/L	1		8260B	Total/NA
Trichloroethene	2.6		1.0	0.25	ug/L	1		8260B	Total/NA
Trichlorofluoromethane	2.1		1.0	0.25	ug/L	1		8260B	Total/NA
1,4-Dioxane	2.2	*	0.50	0.10	ug/L	1		8270C SIM	Total/NA

Client Sample ID: OC_GW_DPE-4_20190211 — Lab Sample ID: 440-233271-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	1.6	J	2.0	0.50	ug/L	2		8260B	Total/NA
1,1-Dichloroethene	19		2.0	0.50	ug/L	2		8260B	Total/NA
1,2-Dichloroethane	4.1		2.0	0.50	ug/L	2		8260B	Total/NA
Chloroform	25		2.0	0.50	ug/L	2		8260B	Total/NA
Trichloroethene	46		2.0	0.50	ug/L	2		8260B	Total/NA
Trichlorofluoromethane	10		2.0	0.50	ug/L	2		8260B	Total/NA
1,1,2-Trichloro-1,2,2-trifluoroethane - DL	290		50	5.0	ug/L	10		8260B	Total/NA
Tetrachloroethene - DL	440		10	2.5	ug/L	10		8260B	Total/NA
1,4-Dioxane	27	*	0.50	0.099	ug/L	1		8270C SIM	Total/NA

Client Sample ID: OC_GW_DPE-9_20190212 — Lab Sample ID: 440-233271-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,2-Trichloro-1,2,2-trifluoroethane	28		5.0	0.50	ug/L	1		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chenical-2019 Semi-Annual GWM Feb

TestAmerica Job ID: 440-233271-1
SDG: Whittier

Client Sample ID: OC_GW_DPE-9_20190212 (Continued) — Lab Sample ID: 440-233271-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	0.34	J	1.0	0.25	ug/L	1		8260B	Total/NA
1,1-Dichloroethene	20		1.0	0.25	ug/L	1		8260B	Total/NA
1,2-Dichloroethane	3.0		1.0	0.25	ug/L	1		8260B	Total/NA
Chloroform	13		1.0	0.25	ug/L	1		8260B	Total/NA
Trichloroethene	13		1.0	0.25	ug/L	1		8260B	Total/NA
Trichlorofluoromethane	11		1.0	0.25	ug/L	1		8260B	Total/NA
Tetrachloroethene - DL	200		10	2.5	ug/L	10		8260B	Total/NA
1,4-Dioxane	30	*	0.50	0.099	ug/L	1		8270C SIM	Total/NA

Client Sample ID: OC_GW_DPE-10D_20190212 — Lab Sample ID: 440-233271-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,2-Trichloro-1,2,2-trifluoroethane	130		10	1.0	ug/L	2		8260B	Total/NA
1,1-Dichloroethane	1.3	J	2.0	0.50	ug/L	2		8260B	Total/NA
1,1-Dichloroethene	90		2.0	0.50	ug/L	2		8260B	Total/NA
1,2-Dichloroethane	6.4		2.0	0.50	ug/L	2		8260B	Total/NA
Chloroform	39		2.0	0.50	ug/L	2		8260B	Total/NA
trans-1,2-Dichloroethene	0.54	J	2.0	0.50	ug/L	2		8260B	Total/NA
Trichloroethene	64		2.0	0.50	ug/L	2		8260B	Total/NA
Trichlorofluoromethane	40		2.0	0.50	ug/L	2		8260B	Total/NA
Tetrachloroethene - DL	590		100	25	ug/L	100		8260B	Total/NA
1,4-Dioxane	21	*	0.49	0.098	ug/L	1		8270C SIM	Total/NA

Client Sample ID: OC_GW_TB_20190211 — Lab Sample ID: 440-233271-7

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chenical-2019 Semi-Annual GWM Feb

TestAmerica Job ID: 440-233271-1
SDG: Whittier

Client Sample ID: OC_GW_DPE-5_20190211

Lab Sample ID: 440-233271-1

Date Collected: 02/11/19 13:25
Matrix: Water
Date Received: 02/12/19 16:52

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/21/19 20:38	1
1,1,1-Trichloroethane	ND		1.0	0.25	ug/L			02/21/19 20:38	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/21/19 20:38	1
1,1,2-Trichloro-1,2,2-trifluoroethane	**9.3**		5.0	0.50	ug/L			02/21/19 20:38	1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L			02/21/19 20:38	1
1,1-Dichloroethane	ND		1.0	0.25	ug/L			02/21/19 20:38	1
1,1-Dichloroethene	**32**		1.0	0.25	ug/L			02/21/19 20:38	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			02/21/19 20:38	1
1,2,3-Trichlorobenzene	**0.47**	**J**	1.0	0.40	ug/L			02/21/19 20:38	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			02/21/19 20:38	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			02/21/19 20:38	1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			02/21/19 20:38	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			02/21/19 20:38	1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			02/21/19 20:38	1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			02/21/19 20:38	1
1,2-Dichloroethane	ND		1.0	0.25	ug/L			02/21/19 20:38	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			02/21/19 20:38	1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			02/21/19 20:38	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			02/21/19 20:38	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			02/21/19 20:38	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			02/21/19 20:38	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			02/21/19 20:38	1
2-Chlorotoluene	ND		1.0	0.25	ug/L			02/21/19 20:38	1
4-Chlorotoluene	ND		1.0	0.25	ug/L			02/21/19 20:38	1
Acetone	ND		10	10	ug/L			02/21/19 20:38	1
Benzene	ND		0.50	0.25	ug/L			02/21/19 20:38	1
Bromobenzene	ND		1.0	0.25	ug/L			02/21/19 20:38	1
Bromochloromethane	ND		1.0	0.25	ug/L			02/21/19 20:38	1
Bromodichloromethane	ND		1.0	0.25	ug/L			02/21/19 20:38	1
Bromoform	ND		1.0	0.40	ug/L			02/21/19 20:38	1
Bromomethane	ND		1.0	0.25	ug/L			02/21/19 20:38	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			02/21/19 20:38	1
Chlorobenzene	ND		1.0	0.25	ug/L			02/21/19 20:38	1
Chloroethane	ND		1.0	0.40	ug/L			02/21/19 20:38	1
Chloroform	**1.3**		1.0	0.25	ug/L			02/21/19 20:38	1
Chloromethane	ND		1.0	0.25	ug/L			02/21/19 20:38	1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			02/21/19 20:38	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/21/19 20:38	1
Dibromochloromethane	ND		1.0	0.25	ug/L			02/21/19 20:38	1
Dibromomethane	ND		1.0	0.25	ug/L			02/21/19 20:38	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			02/21/19 20:38	1
Ethylbenzene	ND		1.0	0.25	ug/L			02/21/19 20:38	1
Hexachlorobutadiene	ND		1.0	0.25	ug/L			02/21/19 20:38	1
Isopropyl alcohol	ND		250	180	ug/L			02/21/19 20:38	1
Isopropylbenzene	ND		1.0	0.25	ug/L			02/21/19 20:38	1
m,p-Xylene	ND		1.0	0.50	ug/L			02/21/19 20:38	1
Methylene Chloride	ND		5.0	0.88	ug/L			02/21/19 20:38	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			02/21/19 20:38	1

Client Sample ID: OC_GW_DPE-5_20190211

Lab Sample ID: 440-233271-1

Date Collected: 02/11/19 13:25
Matrix: Water
Date Received: 02/12/19 16:52

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			02/21/19 20:38	1
n-Butylbenzene	ND		1.0	0.40	ug/L			02/21/19 20:38	1
N-Propylbenzene	ND		1.0	0.25	ug/L			02/21/19 20:38	1
o-Xylene	ND		1.0	0.25	ug/L			02/21/19 20:38	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			02/21/19 20:38	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			02/21/19 20:38	1
Styrene	ND		1.0	0.25	ug/L			02/21/19 20:38	1
tert-Butylbenzene	**0.28**	**J**	1.0	0.25	ug/L			02/21/19 20:38	1
Tetrachloroethene	**88**	**F1**	1.0	0.25	ug/L			02/21/19 20:38	1
Toluene	ND		1.0	0.25	ug/L			02/21/19 20:38	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			02/21/19 20:38	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/21/19 20:38	1
Trichloroethene	**8.7**		1.0	0.25	ug/L			02/21/19 20:38	1
Trichlorofluoromethane	**6.4**		1.0	0.25	ug/L			02/21/19 20:38	1
Vinyl chloride	ND		0.50	0.25	ug/L			02/21/19 20:38	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*930*	*T J*	*ug/L*		*1.48*			*02/21/19 20:38*	*1*
Unknown	*3.7*	*T J*	*ug/L*		*9.99*			*02/21/19 20:38*	*1*
Unknown	*2.6*	*T J*	*ug/L*		*12.10*			*02/21/19 20:38*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*80 - 120*		*02/21/19 20:38*	*1*
Dibromofluoromethane (Surr)	*108*		*76 - 132*		*02/21/19 20:38*	*1*
Toluene-d8 (Surr)	*102*		*80 - 128*		*02/21/19 20:38*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**2.0**	*****	0.50	0.099	ug/L		02/17/19 13:35	02/18/19 18:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*54*		*27 - 120*	*02/17/19 13:35*	*02/18/19 18:23*	*1*

Client Sample ID: OC_GW_DPE-3_20190211

Lab Sample ID: 440-233271-2

Date Collected: 02/11/19 13:02
Matrix: Water
Date Received: 02/12/19 16:52

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/22/19 01:53	1
1,1,1-Trichloroethane	**0.32**	**J**	1.0	0.25	ug/L			02/22/19 01:53	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/22/19 01:53	1
1,1,2-Trichloro-1,2,2-trifluoroethane	**64**		5.0	0.50	ug/L			02/22/19 01:53	1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L			02/22/19 01:53	1
1,1-Dichloroethane	ND		1.0	0.25	ug/L			02/22/19 01:53	1
1,1-Dichloroethene	**2.9**		1.0	0.25	ug/L			02/22/19 01:53	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			02/22/19 01:53	1
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L			02/22/19 01:53	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			02/22/19 01:53	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			02/22/19 01:53	1

Client Sample Results

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chenical-2019 Semi-Annual GWM Feb

TestAmerica Job ID: 440-233271-1
SDG: Whittier

Client Sample ID: OC_GW_DPE-3_20190211

Lab Sample ID: 440-233271-2

Date Collected: 02/11/19 13:02
Matrix: Water
Date Received: 02/12/19 16:52

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			02/22/19 01:53	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			02/22/19 01:53	1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			02/22/19 01:53	1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			02/22/19 01:53	1
1,2-Dichloroethane	**2.8**		1.0	0.25	ug/L			02/22/19 01:53	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			02/22/19 01:53	1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			02/22/19 01:53	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			02/22/19 01:53	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			02/22/19 01:53	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			02/22/19 01:53	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			02/22/19 01:53	1
2-Chlorotoluene	ND		1.0	0.25	ug/L			02/22/19 01:53	1
4-Chlorotoluene	ND		1.0	0.25	ug/L			02/22/19 01:53	1
Acetone	ND		10	10	ug/L			02/22/19 01:53	1
Benzene	ND		0.50	0.25	ug/L			02/22/19 01:53	1
Bromobenzene	ND		1.0	0.25	ug/L			02/22/19 01:53	1
Bromochloromethane	ND		1.0	0.25	ug/L			02/22/19 01:53	1
Bromodichloromethane	ND		1.0	0.25	ug/L			02/22/19 01:53	1
Bromoform	ND		1.0	0.40	ug/L			02/22/19 01:53	1
Bromomethane	ND		1.0	0.25	ug/L			02/22/19 01:53	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			02/22/19 01:53	1
Chlorobenzene	ND		1.0	0.25	ug/L			02/22/19 01:53	1
Chloroethane	ND		1.0	0.40	ug/L			02/22/19 01:53	1
Chloroform	**2.4**		1.0	0.25	ug/L			02/22/19 01:53	1
Chloromethane	ND		1.0	0.25	ug/L			02/22/19 01:53	1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			02/22/19 01:53	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/22/19 01:53	1
Dibromochloromethane	ND		1.0	0.25	ug/L			02/22/19 01:53	1
Dibromomethane	ND		1.0	0.25	ug/L			02/22/19 01:53	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			02/22/19 01:53	1
Ethylbenzene	ND		1.0	0.25	ug/L			02/22/19 01:53	1
Hexachlorobutadiene	ND		1.0	0.25	ug/L			02/22/19 01:53	1
Isopropyl alcohol	ND		250	180	ug/L			02/22/19 01:53	1
Isopropylbenzene	ND		1.0	0.25	ug/L			02/22/19 01:53	1
m,p-Xylene	ND		1.0	0.50	ug/L			02/22/19 01:53	1
Methylene Chloride	ND		5.0	0.88	ug/L			02/22/19 01:53	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			02/22/19 01:53	1
Naphthalene	ND		1.0	0.40	ug/L			02/22/19 01:53	1
n-Butylbenzene	ND		1.0	0.40	ug/L			02/22/19 01:53	1
N-Propylbenzene	ND		1.0	0.25	ug/L			02/22/19 01:53	1
o-Xylene	ND		1.0	0.25	ug/L			02/22/19 01:53	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			02/22/19 01:53	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			02/22/19 01:53	1
Styrene	ND		1.0	0.25	ug/L			02/22/19 01:53	1
tert-Butylbenzene	ND		1.0	0.25	ug/L			02/22/19 01:53	1
Toluene	ND		1.0	0.25	ug/L			02/22/19 01:53	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			02/22/19 01:53	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/22/19 01:53	1
Trichloroethene	**6.1**		1.0	0.25	ug/L			02/22/19 01:53	1

Client Sample ID: OC_GW_DPE-3_20190211 — Lab Sample ID: 440-233271-2

Date Collected: 02/11/19 13:02 — **Matrix: Water**
Date Received: 02/12/19 16:52

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	**8.3**		1.0	0.25	ug/L			02/22/19 01:53	1
Vinyl chloride	ND		0.50	0.25	ug/L			02/22/19 01:53	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*930*	*T J*	*ug/L*		*1.48*			*02/22/19 01:53*	*1*
Unknown	*10*	*T J*	*ug/L*		*5.25*			*02/22/19 01:53*	*1*
Unknown	*2.6*	*T J*	*ug/L*		*9.99*			*02/22/19 01:53*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*		*02/22/19 01:53*	*1*
Dibromofluoromethane (Surr)	*108*		*76 - 132*		*02/22/19 01:53*	*1*
Toluene-d8 (Surr)	*106*		*80 - 128*		*02/22/19 01:53*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	**130**		5.0	1.3	ug/L			02/22/19 14:23	5

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*100*	*T J*	*ug/L*		*16.04*			*02/22/19 14:23*	*5*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*80 - 120*		*02/22/19 14:23*	*5*
Dibromofluoromethane (Surr)	*94*		*76 - 132*		*02/22/19 14:23*	*5*
Toluene-d8 (Surr)	*97*		*80 - 128*		*02/22/19 14:23*	*5*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**4.7**	*	0.49	0.098	ug/L		02/17/19 13:35	02/18/19 18:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*47*		*27 - 120*	*02/17/19 13:35*	*02/18/19 18:46*	*1*

Client Sample ID: OC_GW_DPE-8_20190211 — Lab Sample ID: 440-233271-3

Date Collected: 02/11/19 12:43 — **Matrix: Water**
Date Received: 02/12/19 16:52

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/22/19 02:19	1
1,1,1-Trichloroethane	ND		1.0	0.25	ug/L			02/22/19 02:19	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/22/19 02:19	1
1,1,2-Trichloro-1,2,2-trifluoroethane	**2.8**	**J**	5.0	0.50	ug/L			02/22/19 02:19	1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L			02/22/19 02:19	1
1,1-Dichloroethane	ND		1.0	0.25	ug/L			02/22/19 02:19	1
1,1-Dichloroethene	**0.56**	**J**	1.0	0.25	ug/L			02/22/19 02:19	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			02/22/19 02:19	1
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L			02/22/19 02:19	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			02/22/19 02:19	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			02/22/19 02:19	1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			02/22/19 02:19	1

Client Sample ID: OC_GW_DPE-8_20190211

Lab Sample ID: 440-233271-3

Date Collected: 02/11/19 12:43
Matrix: Water
Date Received: 02/12/19 16:52

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			02/22/19 02:19	1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			02/22/19 02:19	1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			02/22/19 02:19	1
1,2-Dichloroethane	ND		1.0	0.25	ug/L			02/22/19 02:19	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			02/22/19 02:19	1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			02/22/19 02:19	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			02/22/19 02:19	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			02/22/19 02:19	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			02/22/19 02:19	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			02/22/19 02:19	1
2-Chlorotoluene	ND		1.0	0.25	ug/L			02/22/19 02:19	1
4-Chlorotoluene	ND		1.0	0.25	ug/L			02/22/19 02:19	1
Acetone	ND		10	10	ug/L			02/22/19 02:19	1
Benzene	ND		0.50	0.25	ug/L			02/22/19 02:19	1
Bromobenzene	ND		1.0	0.25	ug/L			02/22/19 02:19	1
Bromochloromethane	ND		1.0	0.25	ug/L			02/22/19 02:19	1
Bromodichloromethane	ND		1.0	0.25	ug/L			02/22/19 02:19	1
Bromoform	ND		1.0	0.40	ug/L			02/22/19 02:19	1
Bromomethane	ND		1.0	0.25	ug/L			02/22/19 02:19	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			02/22/19 02:19	1
Chlorobenzene	ND		1.0	0.25	ug/L			02/22/19 02:19	1
Chloroethane	ND		1.0	0.40	ug/L			02/22/19 02:19	1
Chloroform	ND		1.0	0.25	ug/L			02/22/19 02:19	1
Chloromethane	ND		1.0	0.25	ug/L			02/22/19 02:19	1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			02/22/19 02:19	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/22/19 02:19	1
Dibromochloromethane	ND		1.0	0.25	ug/L			02/22/19 02:19	1
Dibromomethane	ND		1.0	0.25	ug/L			02/22/19 02:19	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			02/22/19 02:19	1
Ethylbenzene	ND		1.0	0.25	ug/L			02/22/19 02:19	1
Hexachlorobutadiene	ND		1.0	0.25	ug/L			02/22/19 02:19	1
Isopropyl alcohol	ND		250	180	ug/L			02/22/19 02:19	1
Isopropylbenzene	ND		1.0	0.25	ug/L			02/22/19 02:19	1
m,p-Xylene	ND		1.0	0.50	ug/L			02/22/19 02:19	1
Methylene Chloride	ND		5.0	0.88	ug/L			02/22/19 02:19	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			02/22/19 02:19	1
Naphthalene	ND		1.0	0.40	ug/L			02/22/19 02:19	1
n-Butylbenzene	ND		1.0	0.40	ug/L			02/22/19 02:19	1
N-Propylbenzene	ND		1.0	0.25	ug/L			02/22/19 02:19	1
o-Xylene	ND		1.0	0.25	ug/L			02/22/19 02:19	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			02/22/19 02:19	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			02/22/19 02:19	1
Styrene	ND		1.0	0.25	ug/L			02/22/19 02:19	1
tert-Butylbenzene	ND		1.0	0.25	ug/L			02/22/19 02:19	1
Tetrachloroethene	**16**		1.0	0.25	ug/L			02/22/19 02:19	1
Toluene	ND		1.0	0.25	ug/L			02/22/19 02:19	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			02/22/19 02:19	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/22/19 02:19	1
Trichloroethene	**2.6**		1.0	0.25	ug/L			02/22/19 02:19	1

Client Sample ID: OC_GW_DPE-8_20190211

Lab Sample ID: 440-233271-3

Date Collected: 02/11/19 12:43
Matrix: Water
Date Received: 02/12/19 16:52

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	**2.1**		1.0	0.25	ug/L			02/22/19 02:19	1
Vinyl chloride	ND		0.50	0.25	ug/L			02/22/19 02:19	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*1000*	*T J*	*ug/L*		*1.49*			*02/22/19 02:19*	*1*
Unknown	*10*	*T J*	*ug/L*		*5.25*			*02/22/19 02:19*	*1*
Unknown	*3.4*	*T J*	*ug/L*		*12.10*			*02/22/19 02:19*	*1*
Unknown	*5.2*	*T J*	*ug/L*		*13.84*			*02/22/19 02:19*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*80 - 120*		*02/22/19 02:19*	*1*
Dibromofluoromethane (Surr)	*107*		*76 - 132*		*02/22/19 02:19*	*1*
Toluene-d8 (Surr)	*105*		*80 - 128*		*02/22/19 02:19*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**2.2**	*	0.50	0.10	ug/L		02/17/19 13:35	02/18/19 19:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*49*		*27 - 120*	*02/17/19 13:35*	*02/18/19 19:10*	*1*

Client Sample ID: OC_GW_DPE-4_20190211

Lab Sample ID: 440-233271-4

Date Collected: 02/11/19 13:48
Matrix: Water
Date Received: 02/12/19 16:52

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		2.0	0.50	ug/L			02/22/19 02:45	2
1,1,1-Trichloroethane	**1.6**	**J**	2.0	0.50	ug/L			02/22/19 02:45	2
1,1,2,2-Tetrachloroethane	ND		2.0	0.50	ug/L			02/22/19 02:45	2
1,1,2-Trichloroethane	ND		2.0	0.50	ug/L			02/22/19 02:45	2
1,1-Dichloroethane	ND		2.0	0.50	ug/L			02/22/19 02:45	2
1,1-Dichloroethene	**19**		2.0	0.50	ug/L			02/22/19 02:45	2
1,1-Dichloropropene	ND		2.0	0.50	ug/L			02/22/19 02:45	2
1,2,3-Trichlorobenzene	ND		2.0	0.80	ug/L			02/22/19 02:45	2
1,2,3-Trichloropropane	ND		2.0	0.80	ug/L			02/22/19 02:45	2
1,2,4-Trichlorobenzene	ND		2.0	0.80	ug/L			02/22/19 02:45	2
1,2,4-Trimethylbenzene	ND		2.0	0.50	ug/L			02/22/19 02:45	2
1,2-Dibromo-3-Chloropropane	ND		10	1.0	ug/L			02/22/19 02:45	2
1,2-Dibromoethane (EDB)	ND		2.0	0.50	ug/L			02/22/19 02:45	2
1,2-Dichlorobenzene	ND		2.0	0.50	ug/L			02/22/19 02:45	2
1,2-Dichloroethane	**4.1**		2.0	0.50	ug/L			02/22/19 02:45	2
1,2-Dichloropropane	ND		2.0	0.50	ug/L			02/22/19 02:45	2
1,3,5-Trimethylbenzene	ND		2.0	0.50	ug/L			02/22/19 02:45	2
1,3-Dichlorobenzene	ND		2.0	0.50	ug/L			02/22/19 02:45	2
1,3-Dichloropropane	ND		2.0	0.50	ug/L			02/22/19 02:45	2
1,4-Dichlorobenzene	ND		2.0	0.50	ug/L			02/22/19 02:45	2
2,2-Dichloropropane	ND		2.0	0.80	ug/L			02/22/19 02:45	2
2-Chlorotoluene	ND		2.0	0.50	ug/L			02/22/19 02:45	2
4-Chlorotoluene	ND		2.0	0.50	ug/L			02/22/19 02:45	2

Client Sample Results

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chenical-2019 Semi-Annual GWM Feb

TestAmerica Job ID: 440-233271-1
SDG: Whittier

Client Sample ID: OC_GW_DPE-4_20190211

Lab Sample ID: 440-233271-4

Date Collected: 02/11/19 13:48
Matrix: Water
Date Received: 02/12/19 16:52

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	20	ug/L			02/22/19 02:45	2
Benzene	ND		1.0	0.50	ug/L			02/22/19 02:45	2
Bromobenzene	ND		2.0	0.50	ug/L			02/22/19 02:45	2
Bromochloromethane	ND		2.0	0.50	ug/L			02/22/19 02:45	2
Bromodichloromethane	ND		2.0	0.50	ug/L			02/22/19 02:45	2
Bromoform	ND		2.0	0.80	ug/L			02/22/19 02:45	2
Bromomethane	ND		2.0	0.50	ug/L			02/22/19 02:45	2
Carbon tetrachloride	ND		1.0	0.50	ug/L			02/22/19 02:45	2
Chlorobenzene	ND		2.0	0.50	ug/L			02/22/19 02:45	2
Chloroethane	ND		2.0	0.80	ug/L			02/22/19 02:45	2
Chloroform	**25**		2.0	0.50	ug/L			02/22/19 02:45	2
Chloromethane	ND		2.0	0.50	ug/L			02/22/19 02:45	2
cis-1,2-Dichloroethene	ND		2.0	0.50	ug/L			02/22/19 02:45	2
cis-1,3-Dichloropropene	ND		1.0	0.50	ug/L			02/22/19 02:45	2
Dibromochloromethane	ND		2.0	0.50	ug/L			02/22/19 02:45	2
Dibromomethane	ND		2.0	0.50	ug/L			02/22/19 02:45	2
Dichlorodifluoromethane	ND		2.0	0.80	ug/L			02/22/19 02:45	2
Ethylbenzene	ND		2.0	0.50	ug/L			02/22/19 02:45	2
Hexachlorobutadiene	ND		2.0	0.50	ug/L			02/22/19 02:45	2
Isopropyl alcohol	ND		500	350	ug/L			02/22/19 02:45	2
Isopropylbenzene	ND		2.0	0.50	ug/L			02/22/19 02:45	2
m,p-Xylene	ND		2.0	1.0	ug/L			02/22/19 02:45	2
Methylene Chloride	ND		10	1.8	ug/L			02/22/19 02:45	2
Methyl-t-Butyl Ether (MTBE)	ND		2.0	0.50	ug/L			02/22/19 02:45	2
Naphthalene	ND		2.0	0.80	ug/L			02/22/19 02:45	2
n-Butylbenzene	ND		2.0	0.80	ug/L			02/22/19 02:45	2
N-Propylbenzene	ND		2.0	0.50	ug/L			02/22/19 02:45	2
o-Xylene	ND		2.0	0.50	ug/L			02/22/19 02:45	2
p-Isopropyltoluene	ND		2.0	0.50	ug/L			02/22/19 02:45	2
sec-Butylbenzene	ND		2.0	0.50	ug/L			02/22/19 02:45	2
Styrene	ND		2.0	0.50	ug/L			02/22/19 02:45	2
tert-Butylbenzene	ND		2.0	0.50	ug/L			02/22/19 02:45	2
Toluene	ND		2.0	0.50	ug/L			02/22/19 02:45	2
trans-1,2-Dichloroethene	ND		2.0	0.50	ug/L			02/22/19 02:45	2
trans-1,3-Dichloropropene	ND		1.0	0.50	ug/L			02/22/19 02:45	2
Trichloroethene	**46**		2.0	0.50	ug/L			02/22/19 02:45	2
Trichlorofluoromethane	**10**		2.0	0.50	ug/L			02/22/19 02:45	2
Vinyl chloride	ND		1.0	0.50	ug/L			02/22/19 02:45	2

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*980*	*T J*	*ug/L*		*1.49*			*02/22/19 02:45*	*2*
Unknown	*11*	*T J*	*ug/L*		*1.56*			*02/22/19 02:45*	*2*
Unknown	*22*	*T J*	*ug/L*		*5.25*			*02/22/19 02:45*	*2*
Unknown	*5.1*	*T J*	*ug/L*		*8.10*			*02/22/19 02:45*	*2*
Unknown	*9.5*	*T J*	*ug/L*		*13.84*			*02/22/19 02:45*	*2*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*		*02/22/19 02:45*	*2*
Dibromofluoromethane (Surr)	*111*		*76 - 132*		*02/22/19 02:45*	*2*
Toluene-d8 (Surr)	*102*		*80 - 128*		*02/22/19 02:45*	*2*

Client Sample Results

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chenical-2019 Semi-Annual GWM Feb

TestAmerica Job ID: 440-233271-1
SDG: Whittier

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloro-1,2,2-trifluoroethane	**290**		50	5.0	ug/L			02/22/19 14:52	10
Tetrachloroethene	**440**		10	2.5	ug/L			02/22/19 14:52	10

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*45*	*T J*	*ug/L*		*15.11*			*02/22/19 14:52*	*10*
Unknown	*78*	*T J*	*ug/L*		*15.24*			*02/22/19 14:52*	*10*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*80 - 120*		*02/22/19 14:52*	*10*
Dibromofluoromethane (Surr)	*97*		*76 - 132*		*02/22/19 14:52*	*10*
Toluene-d8 (Surr)	*97*		*80 - 128*		*02/22/19 14:52*	*10*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**27**	*	0.50	0.099	ug/L		02/17/19 13:35	02/18/19 19:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*51*		*27 - 120*	*02/17/19 13:35*	*02/18/19 19:33*	*1*

Client Sample ID: OC_GW_DPE-9_20190212

Lab Sample ID: 440-233271-5

Date Collected: 02/12/19 08:56
Matrix: Water
Date Received: 02/12/19 16:52

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/22/19 03:38	1
1,1,1-Trichloroethane	ND		1.0	0.25	ug/L			02/22/19 03:38	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/22/19 03:38	1
1,1,2-Trichloro-1,2,2-trifluoroethane	**28**		5.0	0.50	ug/L			02/22/19 03:38	1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L			02/22/19 03:38	1
1,1-Dichloroethane	**0.34**	**J**	1.0	0.25	ug/L			02/22/19 03:38	1
1,1-Dichloroethene	**20**		1.0	0.25	ug/L			02/22/19 03:38	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			02/22/19 03:38	1
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L			02/22/19 03:38	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			02/22/19 03:38	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			02/22/19 03:38	1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			02/22/19 03:38	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			02/22/19 03:38	1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			02/22/19 03:38	1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			02/22/19 03:38	1
1,2-Dichloroethane	**3.0**		1.0	0.25	ug/L			02/22/19 03:38	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			02/22/19 03:38	1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			02/22/19 03:38	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			02/22/19 03:38	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			02/22/19 03:38	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			02/22/19 03:38	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			02/22/19 03:38	1
2-Chlorotoluene	ND		1.0	0.25	ug/L			02/22/19 03:38	1
4-Chlorotoluene	ND		1.0	0.25	ug/L			02/22/19 03:38	1
Acetone	ND		10	10	ug/L			02/22/19 03:38	1
Benzene	ND		0.50	0.25	ug/L			02/22/19 03:38	1
Bromobenzene	ND		1.0	0.25	ug/L			02/22/19 03:38	1
Bromochloromethane	ND		1.0	0.25	ug/L			02/22/19 03:38	1

Client Sample ID: OC_GW_DPE-9_20190212

Lab Sample ID: 440-233271-5

Date Collected: 02/12/19 08:56
Matrix: Water
Date Received: 02/12/19 16:52

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromodichloromethane	ND		1.0	0.25	ug/L			02/22/19 03:38	1
Bromoform	ND		1.0	0.40	ug/L			02/22/19 03:38	1
Bromomethane	ND		1.0	0.25	ug/L			02/22/19 03:38	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			02/22/19 03:38	1
Chlorobenzene	ND		1.0	0.25	ug/L			02/22/19 03:38	1
Chloroethane	ND		1.0	0.40	ug/L			02/22/19 03:38	1
Chloroform	**13**		1.0	0.25	ug/L			02/22/19 03:38	1
Chloromethane	ND		1.0	0.25	ug/L			02/22/19 03:38	1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			02/22/19 03:38	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/22/19 03:38	1
Dibromochloromethane	ND		1.0	0.25	ug/L			02/22/19 03:38	1
Dibromomethane	ND		1.0	0.25	ug/L			02/22/19 03:38	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			02/22/19 03:38	1
Ethylbenzene	ND		1.0	0.25	ug/L			02/22/19 03:38	1
Hexachlorobutadiene	ND		1.0	0.25	ug/L			02/22/19 03:38	1
Isopropyl alcohol	ND		250	180	ug/L			02/22/19 03:38	1
Isopropylbenzene	ND		1.0	0.25	ug/L			02/22/19 03:38	1
m,p-Xylene	ND		1.0	0.50	ug/L			02/22/19 03:38	1
Methylene Chloride	ND		5.0	0.88	ug/L			02/22/19 03:38	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			02/22/19 03:38	1
Naphthalene	ND		1.0	0.40	ug/L			02/22/19 03:38	1
n-Butylbenzene	ND		1.0	0.40	ug/L			02/22/19 03:38	1
N-Propylbenzene	ND		1.0	0.25	ug/L			02/22/19 03:38	1
o-Xylene	ND		1.0	0.25	ug/L			02/22/19 03:38	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			02/22/19 03:38	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			02/22/19 03:38	1
Styrene	ND		1.0	0.25	ug/L			02/22/19 03:38	1
tert-Butylbenzene	ND		1.0	0.25	ug/L			02/22/19 03:38	1
Toluene	ND		1.0	0.25	ug/L			02/22/19 03:38	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			02/22/19 03:38	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/22/19 03:38	1
Trichloroethene	**13**		1.0	0.25	ug/L			02/22/19 03:38	1
Trichlorofluoromethane	**11**		1.0	0.25	ug/L			02/22/19 03:38	1
Vinyl chloride	ND		0.50	0.25	ug/L			02/22/19 03:38	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*680*	*T J*	*ug/L*		*1.49*			*02/22/19 03:38*	*1*
Unknown	*10*	*T J*	*ug/L*		*5.25*			*02/22/19 03:38*	*1*
Unknown	*2.9*	*T J*	*ug/L*		*8.10*			*02/22/19 03:38*	*1*
Unknown	*3.3*	*T J*	*ug/L*		*10.01*			*02/22/19 03:38*	*1*
Unknown	*3.4*	*T J*	*ug/L*		*12.10*			*02/22/19 03:38*	*1*
Unknown	*5.0*	*T J*	*ug/L*		*13.84*			*02/22/19 03:38*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*		*02/22/19 03:38*	*1*
Dibromofluoromethane (Surr)	*109*		*76 - 132*		*02/22/19 03:38*	*1*
Toluene-d8 (Surr)	*102*		*80 - 128*		*02/22/19 03:38*	*1*

Client Sample ID: OC_GW_DPE-9_20190212

Lab Sample ID: 440-233271-5

Date Collected: 02/12/19 08:56
Matrix: Water
Date Received: 02/12/19 16:52

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	**200**		10	2.5	ug/L			02/22/19 04:04	10

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*2100*	*T J*	*ug/L*		*1.49*			*02/22/19 04:04*	*10*
Unknown	*100*	*T J*	*ug/L*		*5.25*			*02/22/19 04:04*	*10*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*		*02/22/19 04:04*	*10*
Dibromofluoromethane (Surr)	*111*		*76 - 132*		*02/22/19 04:04*	*10*
Toluene-d8 (Surr)	*103*		*80 - 128*		*02/22/19 04:04*	*10*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**30**	*	0.50	0.099	ug/L		02/17/19 13:35	02/18/19 19:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*53*		*27 - 120*	*02/17/19 13:35*	*02/18/19 19:57*	*1*

Client Sample ID: OC_GW_DPE-10D_20190212

Lab Sample ID: 440-233271-6

Date Collected: 02/12/19 10:30
Matrix: Water
Date Received: 02/12/19 16:52

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		2.0	0.50	ug/L			02/22/19 04:30	2
1,1,1-Trichloroethane	ND		2.0	0.50	ug/L			02/22/19 04:30	2
1,1,2,2-Tetrachloroethane	ND		2.0	0.50	ug/L			02/22/19 04:30	2
1,1,2-Trichloro-1,2,2-trifluoroethane	**130**		10	1.0	ug/L			02/22/19 04:30	2
1,1,2-Trichloroethane	ND		2.0	0.50	ug/L			02/22/19 04:30	2
1,1-Dichloroethane	**1.3**	**J**	2.0	0.50	ug/L			02/22/19 04:30	2
1,1-Dichloroethene	**90**		2.0	0.50	ug/L			02/22/19 04:30	2
1,1-Dichloropropene	ND		2.0	0.50	ug/L			02/22/19 04:30	2
1,2,3-Trichlorobenzene	ND		2.0	0.80	ug/L			02/22/19 04:30	2
1,2,3-Trichloropropane	ND		2.0	0.80	ug/L			02/22/19 04:30	2
1,2,4-Trichlorobenzene	ND		2.0	0.80	ug/L			02/22/19 04:30	2
1,2,4-Trimethylbenzene	ND		2.0	0.50	ug/L			02/22/19 04:30	2
1,2-Dibromo-3-Chloropropane	ND		10	1.0	ug/L			02/22/19 04:30	2
1,2-Dibromoethane (EDB)	ND		2.0	0.50	ug/L			02/22/19 04:30	2
1,2-Dichlorobenzene	ND		2.0	0.50	ug/L			02/22/19 04:30	2
1,2-Dichloroethane	**6.4**		2.0	0.50	ug/L			02/22/19 04:30	2
1,2-Dichloropropane	ND		2.0	0.50	ug/L			02/22/19 04:30	2
1,3,5-Trimethylbenzene	ND		2.0	0.50	ug/L			02/22/19 04:30	2
1,3-Dichlorobenzene	ND		2.0	0.50	ug/L			02/22/19 04:30	2
1,3-Dichloropropane	ND		2.0	0.50	ug/L			02/22/19 04:30	2
1,4-Dichlorobenzene	ND		2.0	0.50	ug/L			02/22/19 04:30	2
2,2-Dichloropropane	ND		2.0	0.80	ug/L			02/22/19 04:30	2
2-Chlorotoluene	ND		2.0	0.50	ug/L			02/22/19 04:30	2
4-Chlorotoluene	ND		2.0	0.50	ug/L			02/22/19 04:30	2
Acetone	ND		20	20	ug/L			02/22/19 04:30	2
Benzene	ND		1.0	0.50	ug/L			02/22/19 04:30	2

Client Sample ID: OC_GW_DPE-10D_20190212

Lab Sample ID: 440-233271-6

Date Collected: 02/12/19 10:30
Matrix: Water
Date Received: 02/12/19 16:52

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromobenzene	ND		2.0	0.50	ug/L			02/22/19 04:30	2
Bromochloromethane	ND		2.0	0.50	ug/L			02/22/19 04:30	2
Bromodichloromethane	ND		2.0	0.50	ug/L			02/22/19 04:30	2
Bromoform	ND		2.0	0.80	ug/L			02/22/19 04:30	2
Bromomethane	ND		2.0	0.50	ug/L			02/22/19 04:30	2
Carbon tetrachloride	ND		1.0	0.50	ug/L			02/22/19 04:30	2
Chlorobenzene	ND		2.0	0.50	ug/L			02/22/19 04:30	2
Chloroethane	ND		2.0	0.80	ug/L			02/22/19 04:30	2
Chloroform	**39**		2.0	0.50	ug/L			02/22/19 04:30	2
Chloromethane	ND		2.0	0.50	ug/L			02/22/19 04:30	2
cis-1,2-Dichloroethene	ND		2.0	0.50	ug/L			02/22/19 04:30	2
cis-1,3-Dichloropropene	ND		1.0	0.50	ug/L			02/22/19 04:30	2
Dibromochloromethane	ND		2.0	0.50	ug/L			02/22/19 04:30	2
Dibromomethane	ND		2.0	0.50	ug/L			02/22/19 04:30	2
Dichlorodifluoromethane	ND		2.0	0.80	ug/L			02/22/19 04:30	2
Ethylbenzene	ND		2.0	0.50	ug/L			02/22/19 04:30	2
Hexachlorobutadiene	ND		2.0	0.50	ug/L			02/22/19 04:30	2
Isopropyl alcohol	ND		500	350	ug/L			02/22/19 04:30	2
Isopropylbenzene	ND		2.0	0.50	ug/L			02/22/19 04:30	2
m,p-Xylene	ND		2.0	1.0	ug/L			02/22/19 04:30	2
Methylene Chloride	ND		10	1.8	ug/L			02/22/19 04:30	2
Methyl-t-Butyl Ether (MTBE)	ND		2.0	0.50	ug/L			02/22/19 04:30	2
Naphthalene	ND		2.0	0.80	ug/L			02/22/19 04:30	2
n-Butylbenzene	ND		2.0	0.80	ug/L			02/22/19 04:30	2
N-Propylbenzene	ND		2.0	0.50	ug/L			02/22/19 04:30	2
o-Xylene	ND		2.0	0.50	ug/L			02/22/19 04:30	2
p-Isopropyltoluene	ND		2.0	0.50	ug/L			02/22/19 04:30	2
sec-Butylbenzene	ND		2.0	0.50	ug/L			02/22/19 04:30	2
Styrene	ND		2.0	0.50	ug/L			02/22/19 04:30	2
tert-Butylbenzene	ND		2.0	0.50	ug/L			02/22/19 04:30	2
Toluene	ND		2.0	0.50	ug/L			02/22/19 04:30	2
trans-1,2-Dichloroethene	**0.54**	**J**	2.0	0.50	ug/L			02/22/19 04:30	2
trans-1,3-Dichloropropene	ND		1.0	0.50	ug/L			02/22/19 04:30	2
Trichloroethene	**64**		2.0	0.50	ug/L			02/22/19 04:30	2
Trichlorofluoromethane	**40**		2.0	0.50	ug/L			02/22/19 04:30	2
Vinyl chloride	ND		1.0	0.50	ug/L			02/22/19 04:30	2

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*1300*	*T J*	*ug/L*		*1.49*			*02/22/19 04:30*	*2*
Unknown	*18*	*T J*	*ug/L*		*1.56*			*02/22/19 04:30*	*2*
Unknown	*21*	*T J*	*ug/L*		*5.25*			*02/22/19 04:30*	*2*
Unknown	*7.3*	*T J*	*ug/L*		*8.10*			*02/22/19 04:30*	*2*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*		*02/22/19 04:30*	*2*
Dibromofluoromethane (Surr)	*115*		*76 - 132*		*02/22/19 04:30*	*2*
Toluene-d8 (Surr)	*103*		*80 - 128*		*02/22/19 04:30*	*2*

Client Sample ID: OC_GW_DPE-10D_20190212

Lab Sample ID: 440-233271-6

Date Collected: 02/12/19 10:30
Matrix: Water
Date Received: 02/12/19 16:52

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	590		100	25	ug/L			02/22/19 04:56	100

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*420*	*T J*	*ug/L*		*1.40*			*02/22/19 04:56*	*100*
Unknown	*8400*	*T J*	*ug/L*		*1.48*			*02/22/19 04:56*	*100*
Unknown	*1100*	*T J*	*ug/L*		*5.25*			*02/22/19 04:56*	*100*
Unknown	*320*	*T J*	*ug/L*		*12.10*			*02/22/19 04:56*	*100*
Unknown	*590*	*T J*	*ug/L*		*13.84*			*02/22/19 04:56*	*100*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*		*02/22/19 04:56*	*100*
Dibromofluoromethane (Surr)	*111*		*76 - 132*		*02/22/19 04:56*	*100*
Toluene-d8 (Surr)	*104*		*80 - 128*		*02/22/19 04:56*	*100*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	21	*	0.49	0.098	ug/L		02/17/19 13:35	02/18/19 20:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*49*		*27 - 120*	*02/17/19 13:35*	*02/18/19 20:20*	*1*

Client Sample ID: OC_GW_TB_20190211

Lab Sample ID: 440-233271-7

Date Collected: 02/11/19 07:00
Matrix: Water
Date Received: 02/12/19 16:52

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/22/19 05:22	1
1,1,1-Trichloroethane	ND		1.0	0.25	ug/L			02/22/19 05:22	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/22/19 05:22	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	0.50	ug/L			02/22/19 05:22	1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L			02/22/19 05:22	1
1,1-Dichloroethane	ND		1.0	0.25	ug/L			02/22/19 05:22	1
1,1-Dichloroethene	ND		1.0	0.25	ug/L			02/22/19 05:22	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			02/22/19 05:22	1
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L			02/22/19 05:22	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			02/22/19 05:22	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			02/22/19 05:22	1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			02/22/19 05:22	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			02/22/19 05:22	1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			02/22/19 05:22	1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			02/22/19 05:22	1
1,2-Dichloroethane	ND		1.0	0.25	ug/L			02/22/19 05:22	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			02/22/19 05:22	1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			02/22/19 05:22	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			02/22/19 05:22	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			02/22/19 05:22	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			02/22/19 05:22	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			02/22/19 05:22	1
2-Chlorotoluene	ND		1.0	0.25	ug/L			02/22/19 05:22	1

Client Sample ID: OC_GW_TB_20190211

Lab Sample ID: 440-233271-7

Date Collected: 02/11/19 07:00
Matrix: Water
Date Received: 02/12/19 16:52

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
4-Chlorotoluene	ND		1.0	0.25	ug/L			02/22/19 05:22	1
Acetone	ND		10	10	ug/L			02/22/19 05:22	1
Benzene	ND		0.50	0.25	ug/L			02/22/19 05:22	1
Bromobenzene	ND		1.0	0.25	ug/L			02/22/19 05:22	1
Bromochloromethane	ND		1.0	0.25	ug/L			02/22/19 05:22	1
Bromodichloromethane	ND		1.0	0.25	ug/L			02/22/19 05:22	1
Bromoform	ND		1.0	0.40	ug/L			02/22/19 05:22	1
Bromomethane	ND		1.0	0.25	ug/L			02/22/19 05:22	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			02/22/19 05:22	1
Chlorobenzene	ND		1.0	0.25	ug/L			02/22/19 05:22	1
Chloroethane	ND		1.0	0.40	ug/L			02/22/19 05:22	1
Chloroform	ND		1.0	0.25	ug/L			02/22/19 05:22	1
Chloromethane	ND		1.0	0.25	ug/L			02/22/19 05:22	1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			02/22/19 05:22	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/22/19 05:22	1
Dibromochloromethane	ND		1.0	0.25	ug/L			02/22/19 05:22	1
Dibromomethane	ND		1.0	0.25	ug/L			02/22/19 05:22	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			02/22/19 05:22	1
Ethylbenzene	ND		1.0	0.25	ug/L			02/22/19 05:22	1
Hexachlorobutadiene	ND		1.0	0.25	ug/L			02/22/19 05:22	1
Isopropyl alcohol	ND		250	180	ug/L			02/22/19 05:22	1
Isopropylbenzene	ND		1.0	0.25	ug/L			02/22/19 05:22	1
m,p-Xylene	ND		1.0	0.50	ug/L			02/22/19 05:22	1
Methylene Chloride	ND		5.0	0.88	ug/L			02/22/19 05:22	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			02/22/19 05:22	1
Naphthalene	ND		1.0	0.40	ug/L			02/22/19 05:22	1
n-Butylbenzene	ND		1.0	0.40	ug/L			02/22/19 05:22	1
N-Propylbenzene	ND		1.0	0.25	ug/L			02/22/19 05:22	1
o-Xylene	ND		1.0	0.25	ug/L			02/22/19 05:22	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			02/22/19 05:22	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			02/22/19 05:22	1
Styrene	ND		1.0	0.25	ug/L			02/22/19 05:22	1
tert-Butylbenzene	ND		1.0	0.25	ug/L			02/22/19 05:22	1
Tetrachloroethene	ND		1.0	0.25	ug/L			02/22/19 05:22	1
Toluene	ND		1.0	0.25	ug/L			02/22/19 05:22	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			02/22/19 05:22	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/22/19 05:22	1
Trichloroethene	ND		1.0	0.25	ug/L			02/22/19 05:22	1
Trichlorofluoromethane	ND		1.0	0.25	ug/L			02/22/19 05:22	1
Vinyl chloride	ND		0.50	0.25	ug/L			02/22/19 05:22	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*100*	*T J*	*ug/L*		*1.48*			*02/22/19 05:22*	*1*
Unknown	*11*	*T J*	*ug/L*		*5.25*			*02/22/19 05:22*	*1*
Unknown	*7.5*	*T J*	*ug/L*		*10.00*			*02/22/19 05:22*	*1*
Unknown	*7.5*	*T J*	*ug/L*		*12.10*			*02/22/19 05:22*	*1*
Unknown	*7.7*	*T J*	*ug/L*		*13.84*			*02/22/19 05:22*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*80 - 120*		*02/22/19 05:22*	*1*

Client Sample Results

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chenical-2019 Semi-Annual GWM Feb

TestAmerica Job ID: 440-233271-1
SDG: Whittier

Client Sample ID: OC_GW_TB_20190211

Lab Sample ID: 440-233271-7

Date Collected: 02/11/19 07:00
Matrix: Water
Date Received: 02/12/19 16:52

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Dibromofluoromethane (Surr)	113		76 - 132		02/22/19 05:22	1
Toluene-d8 (Surr)	106		80 - 128		02/22/19 05:22	1

Surrogate Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chenical-2019 Semi-Annual GWM Feb

TestAmerica Job ID: 440-233271-1
SDG: Whittier

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

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(80-120)	(76-132)	(80-128)
440-233168-C-8 MS	Matrix Spike	91	92	93
440-233168-C-8 MSD	Matrix Spike Duplicate	91	95	96
440-233271-1	OC_GW_DPE-5_20190211	92	108	102
440-233271-1 MS	OC_GW_DPE-5_20190211	94	102	96
440-233271-1 MSD	OC_GW_DPE-5_20190211	97	101	98
440-233271-2	OC_GW_DPE-3_20190211	95	108	106
440-233271-2 - DL	OC_GW_DPE-3_20190211	93	94	97
440-233271-3	OC_GW_DPE-8_20190211	90	107	105
440-233271-4	OC_GW_DPE-4_20190211	94	111	102
440-233271-4 - DL	OC_GW_DPE-4_20190211	93	97	97
440-233271-5	OC_GW_DPE-9_20190212	94	109	102
440-233271-5 - DL	OC_GW_DPE-9_20190212	96	111	103
440-233271-6	OC_GW_DPE-10D_20190212	97	115	103
440-233271-6 - DL	OC_GW_DPE-10D_20190212	94	111	104
440-233271-7	OC_GW_TB_20190211	93	113	106
LCS 440-530170/1003	Lab Control Sample	94	107	102
LCS 440-530170/5	Lab Control Sample	94	100	99
LCS 440-530233/5	Lab Control Sample	92	97	93
MB 440-530170/4	Method Blank	94	107	106
MB 440-530233/4	Method Blank	94	97	99

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

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

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
		DXE
Lab Sample ID	Client Sample ID	(27-120)
440-233271-1	OC_GW_DPE-5_20190211	54
440-233271-2	OC_GW_DPE-3_20190211	47
440-233271-3	OC_GW_DPE-8_20190211	49
440-233271-4	OC_GW_DPE-4_20190211	51
440-233271-5	OC_GW_DPE-9_20190212	53
440-233271-6	OC_GW_DPE-10D_20190212	49
LCS 440-529201/2-A	Lab Control Sample	51
LCSD 440-529201/3-A	Lab Control Sample Dup	51
MB 440-529201/1-A	Method Blank	47

Surrogate Legend

DXE = 1,4-Dioxane-d8 (Surr)

Method Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chenical-2019 Semi-Annual GWM Feb

TestAmerica Job ID: 440-233271-1
SDG: Whittier

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL IRV
8270C SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL IRV
3520C	Liquid-Liquid Extraction (Continuous)	SW846	TAL IRV
5030B	Purge and Trap	SW846	TAL IRV

Protocol References:

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: Jacob & Hefner Associates P.C.
Project/Site: Omega Chenical-2019 Semi-Annual GWM Feb

TestAmerica Job ID: 440-233271-1
SDG: Whittier

Client Sample ID: OC_GW_DPE-5_20190211 — Lab Sample ID: 440-233271-1

Date Collected: 02/11/19 13:25 — **Matrix: Water**
Date Received: 02/12/19 16:52

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	530170	02/21/19 20:38	JB	TAL IRV
Total/NA	Prep	3520C			1010 mL	1 mL	529201	02/17/19 13:35	AJP	TAL IRV
Total/NA	Analysis	8270C SIM		1			529338	02/18/19 18:23	HN	TAL IRV

Client Sample ID: OC_GW_DPE-3_20190211 — Lab Sample ID: 440-233271-2

Date Collected: 02/11/19 13:02 — **Matrix: Water**
Date Received: 02/12/19 16:52

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	530170	02/22/19 01:53	JB	TAL IRV
Total/NA	Analysis	8260B	DL	5	10 mL	10 mL	530233	02/22/19 14:23	RM	TAL IRV
Total/NA	Prep	3520C			1020 mL	1 mL	529201	02/17/19 13:35	AJP	TAL IRV
Total/NA	Analysis	8270C SIM		1			529338	02/18/19 18:46	HN	TAL IRV

Client Sample ID: OC_GW_DPE-8_20190211 — Lab Sample ID: 440-233271-3

Date Collected: 02/11/19 12:43 — **Matrix: Water**
Date Received: 02/12/19 16:52

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	530170	02/22/19 02:19	JB	TAL IRV
Total/NA	Prep	3520C			1005 mL	1 mL	529201	02/17/19 13:35	AJP	TAL IRV
Total/NA	Analysis	8270C SIM		1			529338	02/18/19 19:10	HN	TAL IRV

Client Sample ID: OC_GW_DPE-4_20190211 — Lab Sample ID: 440-233271-4

Date Collected: 02/11/19 13:48 — **Matrix: Water**
Date Received: 02/12/19 16:52

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		2	10 mL	10 mL	530170	02/22/19 02:45	JB	TAL IRV
Total/NA	Analysis	8260B	DL	10	10 mL	10 mL	530233	02/22/19 14:52	RM	TAL IRV
Total/NA	Prep	3520C			1010 mL	1 mL	529201	02/17/19 13:35	AJP	TAL IRV
Total/NA	Analysis	8270C SIM		1			529338	02/18/19 19:33	HN	TAL IRV

Client Sample ID: OC_GW_DPE-9_20190212 — Lab Sample ID: 440-233271-5

Date Collected: 02/12/19 08:56 — **Matrix: Water**
Date Received: 02/12/19 16:52

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	530170	02/22/19 03:38	JB	TAL IRV
Total/NA	Analysis	8260B	DL	10	10 mL	10 mL	530170	02/22/19 04:04	JB	TAL IRV
Total/NA	Prep	3520C			1010 mL	1 mL	529201	02/17/19 13:35	AJP	TAL IRV
Total/NA	Analysis	8270C SIM		1			529338	02/18/19 19:57	HN	TAL IRV

Lab Chronicle

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chenical-2019 Semi-Annual GWM Feb

TestAmerica Job ID: 440-233271-1
SDG: Whittier

Client Sample ID: OC_GW_DPE-10D_20190212

Lab Sample ID: 440-233271-6
Date Collected: 02/12/19 10:30
Matrix: Water
Date Received: 02/12/19 16:52

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		2	10 mL	10 mL	530170	02/22/19 04:30	JB	TAL IRV
Total/NA	Analysis	8260B	DL	100	10 mL	10 mL	530170	02/22/19 04:56	JB	TAL IRV
Total/NA	Prep	3520C			1025 mL	1 mL	529201	02/17/19 13:35	AJP	TAL IRV
Total/NA	Analysis	8270C SIM		1			529338	02/18/19 20:20	HN	TAL IRV

Client Sample ID: OC_GW_TB_20190211

Lab Sample ID: 440-233271-7
Date Collected: 02/11/19 07:00
Matrix: Water
Date Received: 02/12/19 16:52

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	530170	02/22/19 05:22	JB	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 440-530170/4
Matrix: Water
Analysis Batch: 530170

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/21/19 19:37	1
1,1,1-Trichloroethane	ND		1.0	0.25	ug/L			02/21/19 19:37	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/21/19 19:37	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	0.50	ug/L			02/21/19 19:37	1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L			02/21/19 19:37	1
1,1-Dichloroethane	ND		1.0	0.25	ug/L			02/21/19 19:37	1
1,1-Dichloroethene	ND		1.0	0.25	ug/L			02/21/19 19:37	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			02/21/19 19:37	1
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L			02/21/19 19:37	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			02/21/19 19:37	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			02/21/19 19:37	1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			02/21/19 19:37	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			02/21/19 19:37	1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			02/21/19 19:37	1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			02/21/19 19:37	1
1,2-Dichloroethane	ND		1.0	0.25	ug/L			02/21/19 19:37	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			02/21/19 19:37	1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			02/21/19 19:37	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			02/21/19 19:37	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			02/21/19 19:37	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			02/21/19 19:37	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			02/21/19 19:37	1
2-Chlorotoluene	ND		1.0	0.25	ug/L			02/21/19 19:37	1
4-Chlorotoluene	ND		1.0	0.25	ug/L			02/21/19 19:37	1
Acetone	ND		10	10	ug/L			02/21/19 19:37	1
Benzene	ND		0.50	0.25	ug/L			02/21/19 19:37	1
Bromobenzene	ND		1.0	0.25	ug/L			02/21/19 19:37	1
Bromochloromethane	ND		1.0	0.25	ug/L			02/21/19 19:37	1
Bromodichloromethane	ND		1.0	0.25	ug/L			02/21/19 19:37	1
Bromoform	ND		1.0	0.40	ug/L			02/21/19 19:37	1
Bromomethane	ND		1.0	0.25	ug/L			02/21/19 19:37	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			02/21/19 19:37	1
Chlorobenzene	ND		1.0	0.25	ug/L			02/21/19 19:37	1
Chloroethane	ND		1.0	0.40	ug/L			02/21/19 19:37	1
Chloroform	ND		1.0	0.25	ug/L			02/21/19 19:37	1
Chloromethane	ND		1.0	0.25	ug/L			02/21/19 19:37	1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			02/21/19 19:37	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/21/19 19:37	1
Dibromochloromethane	ND		1.0	0.25	ug/L			02/21/19 19:37	1
Dibromomethane	ND		1.0	0.25	ug/L			02/21/19 19:37	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			02/21/19 19:37	1
Ethylbenzene	ND		1.0	0.25	ug/L			02/21/19 19:37	1
Hexachlorobutadiene	ND		1.0	0.25	ug/L			02/21/19 19:37	1
Isopropyl alcohol	ND		250	180	ug/L			02/21/19 19:37	1
Isopropylbenzene	ND		1.0	0.25	ug/L			02/21/19 19:37	1
m,p-Xylene	ND		1.0	0.50	ug/L			02/21/19 19:37	1
Methylene Chloride	ND		5.0	0.88	ug/L			02/21/19 19:37	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			02/21/19 19:37	1

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

Lab Sample ID: MB 440-530170/4
Matrix: Water
Analysis Batch: 530170

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		1.0	0.40	ug/L			02/21/19 19:37	1
n-Butylbenzene	ND		1.0	0.40	ug/L			02/21/19 19:37	1
N-Propylbenzene	ND		1.0	0.25	ug/L			02/21/19 19:37	1
o-Xylene	ND		1.0	0.25	ug/L			02/21/19 19:37	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			02/21/19 19:37	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			02/21/19 19:37	1
Styrene	ND		1.0	0.25	ug/L			02/21/19 19:37	1
tert-Butylbenzene	ND		1.0	0.25	ug/L			02/21/19 19:37	1
Tetrachloroethene	ND		1.0	0.25	ug/L			02/21/19 19:37	1
Toluene	ND		1.0	0.25	ug/L			02/21/19 19:37	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			02/21/19 19:37	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/21/19 19:37	1
Trichloroethene	ND		1.0	0.25	ug/L			02/21/19 19:37	1
Trichlorofluoromethane	ND		1.0	0.25	ug/L			02/21/19 19:37	1
Vinyl chloride	ND		0.50	0.25	ug/L			02/21/19 19:37	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*62.7*	*T J*	*ug/L*		*1.48*			*02/21/19 19:37*	*1*
Unknown	*2.64*	*T J*	*ug/L*		*12.10*			*02/21/19 19:37*	*1*
Unknown	*7.20*	*T J*	*ug/L*		*13.84*			*02/21/19 19:37*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*		*02/21/19 19:37*	*1*
Dibromofluoromethane (Surr)	*107*		*76 - 132*		*02/21/19 19:37*	*1*
Toluene-d8 (Surr)	*106*		*80 - 128*		*02/21/19 19:37*	*1*

Lab Sample ID: LCS 440-530170/1003
Matrix: Water
Analysis Batch: 530170

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Isopropyl alcohol	250	274		ug/L		110	49 - 142

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*
Dibromofluoromethane (Surr)	*107*		*76 - 132*
Toluene-d8 (Surr)	*102*		*80 - 128*

Lab Sample ID: LCS 440-530170/5
Matrix: Water
Analysis Batch: 530170

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	23.4		ug/L		94	60 - 141
1,1,1-Trichloroethane	25.0	24.3		ug/L		97	70 - 130
1,1,2,2-Tetrachloroethane	25.0	22.2		ug/L		89	63 - 130

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

Lab Sample ID: LCS 440-530170/5
Matrix: Water
Analysis Batch: 530170

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	21.5		ug/L		86	60 - 140
1,1,2-Trichloroethane	25.0	22.1		ug/L		89	70 - 130
1,1-Dichloroethane	25.0	24.1		ug/L		97	64 - 130
1,1-Dichloroethene	25.0	22.8		ug/L		91	70 - 130
1,1-Dichloropropene	25.0	26.9		ug/L		108	70 - 130
1,2,3-Trichlorobenzene	25.0	25.5		ug/L		102	60 - 140
1,2,3-Trichloropropane	25.0	22.8		ug/L		91	63 - 130
1,2,4-Trichlorobenzene	25.0	29.7		ug/L		119	60 - 140
1,2,4-Trimethylbenzene	25.0	25.4		ug/L		102	70 - 135
1,2-Dibromo-3-Chloropropane	25.0	21.4		ug/L		86	52 - 140
1,2-Dibromoethane (EDB)	25.0	22.3		ug/L		89	70 - 130
1,2-Dichlorobenzene	25.0	26.4		ug/L		106	70 - 130
1,2-Dichloroethane	25.0	24.5		ug/L		98	57 - 138
1,2-Dichloropropane	25.0	24.8		ug/L		99	67 - 130
1,3,5-Trimethylbenzene	25.0	24.8		ug/L		99	70 - 136
1,3-Dichlorobenzene	25.0	25.8		ug/L		103	70 - 130
1,3-Dichloropropane	25.0	22.3		ug/L		89	70 - 130
1,4-Dichlorobenzene	25.0	24.1		ug/L		97	70 - 130
2,2-Dichloropropane	25.0	29.8		ug/L		119	68 - 141
2-Chlorotoluene	25.0	23.7		ug/L		95	70 - 130
4-Chlorotoluene	25.0	25.5		ug/L		102	70 - 130
Acetone	25.0	24.1		ug/L		96	10 - 150
Benzene	25.0	25.5		ug/L		102	68 - 130
Bromobenzene	25.0	22.5		ug/L		90	70 - 130
Bromochloromethane	25.0	24.7		ug/L		99	70 - 130
Bromodichloromethane	25.0	25.1		ug/L		100	70 - 132
Bromoform	25.0	23.0		ug/L		92	60 - 148
Bromomethane	25.0	21.6		ug/L		86	64 - 139
Carbon tetrachloride	25.0	24.6		ug/L		99	60 - 150
Chlorobenzene	25.0	23.1		ug/L		92	70 - 130
Chloroethane	25.0	20.7		ug/L		83	64 - 135
Chloroform	25.0	24.5		ug/L		98	70 - 130
Chloromethane	25.0	20.0		ug/L		80	47 - 140
cis-1,2-Dichloroethene	25.0	26.5		ug/L		106	70 - 133
cis-1,3-Dichloropropene	25.0	26.1		ug/L		104	70 - 133
Dibromochloromethane	25.0	24.1		ug/L		96	69 - 145
Dibromomethane	25.0	24.2		ug/L		97	70 - 130
Dichlorodifluoromethane	25.0	17.2		ug/L		69	29 - 150
Ethylbenzene	25.0	26.6		ug/L		107	70 - 130
Hexachlorobutadiene	25.0	26.9		ug/L		108	10 - 150
Isopropylbenzene	25.0	26.2		ug/L		105	70 - 136
m,p-Xylene	25.0	24.6		ug/L		99	70 - 130
Methylene Chloride	25.0	22.2		ug/L		89	52 - 130
Methyl-t-Butyl Ether (MTBE)	25.0	25.9		ug/L		104	63 - 131
Naphthalene	25.0	23.7		ug/L		95	60 - 140
n-Butylbenzene	25.0	27.3		ug/L		109	65 - 150
N-Propylbenzene	25.0	26.8		ug/L		107	67 - 139

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

Lab Sample ID: LCS 440-530170/5
Matrix: Water
Analysis Batch: 530170

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
o-Xylene	25.0	25.0		ug/L		100	70 - 130
p-Isopropyltoluene	25.0	28.0		ug/L		112	70 - 132
sec-Butylbenzene	25.0	24.9		ug/L		100	70 - 138
Styrene	25.0	22.9		ug/L		92	70 - 134
tert-Butylbenzene	25.0	24.5		ug/L		98	70 - 130
Tetrachloroethene	25.0	23.7		ug/L		95	70 - 130
Toluene	25.0	26.3		ug/L		105	70 - 130
trans-1,2-Dichloroethene	25.0	26.4		ug/L		105	70 - 130
trans-1,3-Dichloropropene	25.0	22.4		ug/L		90	70 - 132
Trichloroethene	25.0	25.7		ug/L		103	70 - 130
Trichlorofluoromethane	25.0	21.6		ug/L		86	60 - 150
Vinyl chloride	25.0	20.1		ug/L		80	59 - 133

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*
Dibromofluoromethane (Surr)	*100*		*76 - 132*
Toluene-d8 (Surr)	*99*		*80 - 128*

Lab Sample ID: 440-233271-1 MS
Matrix: Water
Analysis Batch: 530170

Client Sample ID: OC_GW_DPE-5_20190211
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	ND		25.0	23.4		ug/L		94	60 - 149
1,1,1-Trichloroethane	ND		25.0	24.0		ug/L		96	70 - 130
1,1,2,2-Tetrachloroethane	ND		25.0	22.2		ug/L		89	63 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	9.3		25.0	28.8		ug/L		78	60 - 140
1,1,2-Trichloroethane	ND		25.0	21.6		ug/L		87	70 - 130
1,1-Dichloroethane	ND		25.0	23.9		ug/L		96	65 - 130
1,1-Dichloroethene	32		25.0	50.7		ug/L		75	70 - 130
1,1-Dichloropropene	ND		25.0	27.6		ug/L		110	64 - 130
1,2,3-Trichlorobenzene	0.47	J	25.0	26.2		ug/L		103	60 - 140
1,2,3-Trichloropropane	ND		25.0	22.1		ug/L		88	60 - 130
1,2,4-Trichlorobenzene	ND		25.0	30.9		ug/L		124	60 - 140
1,2,4-Trimethylbenzene	ND		25.0	25.4		ug/L		102	70 - 130
1,2-Dibromo-3-Chloropropane	ND		25.0	20.5		ug/L		82	48 - 140
1,2-Dibromoethane (EDB)	ND		25.0	22.1		ug/L		88	70 - 131
1,2-Dichlorobenzene	ND		25.0	26.4		ug/L		106	70 - 130
1,2-Dichloroethane	ND		25.0	24.7		ug/L		99	56 - 146
1,2-Dichloropropane	ND		25.0	25.7		ug/L		103	69 - 130
1,3,5-Trimethylbenzene	ND		25.0	24.7		ug/L		99	70 - 130
1,3-Dichlorobenzene	ND		25.0	26.1		ug/L		105	70 - 130
1,3-Dichloropropane	ND		25.0	21.4		ug/L		86	70 - 130
1,4-Dichlorobenzene	ND		25.0	23.8		ug/L		95	70 - 130
2,2-Dichloropropane	ND		25.0	29.0		ug/L		116	69 - 138
2-Chlorotoluene	ND		25.0	23.8		ug/L		95	70 - 130
4-Chlorotoluene	ND		25.0	25.5		ug/L		102	70 - 130

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

Lab Sample ID: 440-233271-1 MS
Matrix: Water
Analysis Batch: 530170

Client Sample ID: OC_GW_DPE-5_20190211
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	ND		25.0	29.7		ug/L		119	10 - 150
Benzene	ND		25.0	25.8		ug/L		103	66 - 130
Bromobenzene	ND		25.0	23.3		ug/L		93	70 - 130
Bromochloromethane	ND		25.0	24.9		ug/L		100	70 - 130
Bromodichloromethane	ND		25.0	25.1		ug/L		100	70 - 138
Bromoform	ND		25.0	22.8		ug/L		91	59 - 150
Bromomethane	ND		25.0	20.7		ug/L		83	62 - 131
Carbon tetrachloride	ND		25.0	23.9		ug/L		95	60 - 150
Chlorobenzene	ND		25.0	23.4		ug/L		93	70 - 130
Chloroethane	ND		25.0	20.8		ug/L		83	68 - 130
Chloroform	1.3		25.0	25.6		ug/L		97	70 - 130
Chloromethane	ND		25.0	19.0		ug/L		76	39 - 144
cis-1,2-Dichloroethene	ND		25.0	27.6		ug/L		110	70 - 130
cis-1,3-Dichloropropene	ND		25.0	26.0		ug/L		104	70 - 133
Dibromochloromethane	ND		25.0	23.6		ug/L		95	70 - 148
Dibromomethane	ND		25.0	24.8		ug/L		99	70 - 130
Dichlorodifluoromethane	ND		25.0	16.0		ug/L		64	25 - 142
Ethylbenzene	ND		25.0	26.0		ug/L		104	70 - 130
Hexachlorobutadiene	ND		25.0	27.7		ug/L		111	10 - 150
Isopropyl alcohol	ND		250	278		ug/L		111	46 - 142
Isopropylbenzene	ND		25.0	25.5		ug/L		102	70 - 132
m,p-Xylene	ND		25.0	24.3		ug/L		97	70 - 133
Methylene Chloride	ND		25.0	21.6		ug/L		87	52 - 130
Methyl-t-Butyl Ether (MTBE)	ND		25.0	24.9		ug/L		100	70 - 130
Naphthalene	ND		25.0	23.7		ug/L		95	60 - 140
n-Butylbenzene	ND		25.0	27.6		ug/L		110	61 - 149
N-Propylbenzene	ND		25.0	26.8		ug/L		107	66 - 135
o-Xylene	ND		25.0	24.4		ug/L		97	70 - 133
p-Isopropyltoluene	ND		25.0	28.3		ug/L		113	70 - 130
sec-Butylbenzene	ND		25.0	24.5		ug/L		98	67 - 134
Styrene	ND		25.0	23.2		ug/L		93	29 - 150
tert-Butylbenzene	0.28	J	25.0	24.4		ug/L		96	70 - 130
Tetrachloroethene	88	F1	25.0	102	E F1	ug/L		53	70 - 137
Toluene	ND		25.0	25.4		ug/L		102	70 - 130
trans-1,2-Dichloroethene	ND		25.0	26.0		ug/L		104	70 - 130
trans-1,3-Dichloropropene	ND		25.0	22.8		ug/L		91	70 - 138
Trichloroethene	8.7		25.0	34.8		ug/L		105	70 - 130
Trichlorofluoromethane	6.4		25.0	26.0		ug/L		79	60 - 150
Vinyl chloride	ND		25.0	18.7		ug/L		75	50 - 137

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*
Dibromofluoromethane (Surr)	*102*		*76 - 132*
Toluene-d8 (Surr)	*96*		*80 - 128*

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

Lab Sample ID: 440-233271-1 MSD
Matrix: Water
Analysis Batch: 530170

Client Sample ID: OC_GW_DPE-5_20190211
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	ND		25.0	23.7		ug/L		95	60 - 149	1	20
1,1,1-Trichloroethane	ND		25.0	25.0		ug/L		100	70 - 130	4	20
1,1,2,2-Tetrachloroethane	ND		25.0	22.5		ug/L		90	63 - 130	1	30
1,1,2-Trichloro-1,2,2-trifluoroethane	9.3		25.0	28.9		ug/L		79	60 - 140	0	20
1,1,2-Trichloroethane	ND		25.0	22.7		ug/L		91	70 - 130	5	25
1,1-Dichloroethane	ND		25.0	23.9		ug/L		96	65 - 130	0	20
1,1-Dichloroethene	32		25.0	49.2		ug/L		70	70 - 130	3	20
1,1-Dichloropropene	ND		25.0	28.6		ug/L		114	64 - 130	4	20
1,2,3-Trichlorobenzene	0.47	J	25.0	26.4		ug/L		104	60 - 140	1	20
1,2,3-Trichloropropane	ND		25.0	22.6		ug/L		91	60 - 130	2	30
1,2,4-Trichlorobenzene	ND		25.0	31.1		ug/L		124	60 - 140	1	20
1,2,4-Trimethylbenzene	ND		25.0	26.2		ug/L		105	70 - 130	3	25
1,2-Dibromo-3-Chloropropane	ND		25.0	21.5		ug/L		86	48 - 140	5	30
1,2-Dibromoethane (EDB)	ND		25.0	22.9		ug/L		92	70 - 131	3	25
1,2-Dichlorobenzene	ND		25.0	26.8		ug/L		107	70 - 130	1	20
1,2-Dichloroethane	ND		25.0	24.9		ug/L		100	56 - 146	1	20
1,2-Dichloropropane	ND		25.0	26.4		ug/L		105	69 - 130	2	20
1,3,5-Trimethylbenzene	ND		25.0	25.6		ug/L		102	70 - 130	3	20
1,3-Dichlorobenzene	ND		25.0	26.6		ug/L		106	70 - 130	2	20
1,3-Dichloropropane	ND		25.0	22.5		ug/L		90	70 - 130	5	25
1,4-Dichlorobenzene	ND		25.0	24.5		ug/L		98	70 - 130	3	20
2,2-Dichloropropane	ND		25.0	29.0		ug/L		116	69 - 138	0	25
2-Chlorotoluene	ND		25.0	24.6		ug/L		98	70 - 130	3	20
4-Chlorotoluene	ND		25.0	26.7		ug/L		107	70 - 130	4	20
Acetone	ND		25.0	26.5		ug/L		106	10 - 150	11	35
Benzene	ND		25.0	26.6		ug/L		107	66 - 130	3	20
Bromobenzene	ND		25.0	23.9		ug/L		96	70 - 130	3	20
Bromochloromethane	ND		25.0	25.5		ug/L		102	70 - 130	2	25
Bromodichloromethane	ND		25.0	26.7		ug/L		107	70 - 138	6	20
Bromoform	ND		25.0	23.1		ug/L		92	59 - 150	1	25
Bromomethane	ND		25.0	20.7		ug/L		83	62 - 131	0	25
Carbon tetrachloride	ND		25.0	24.6		ug/L		99	60 - 150	3	25
Chlorobenzene	ND		25.0	24.1		ug/L		96	70 - 130	3	20
Chloroethane	ND		25.0	20.5		ug/L		82	68 - 130	1	25
Chloroform	1.3		25.0	25.7		ug/L		98	70 - 130	0	20
Chloromethane	ND		25.0	19.2		ug/L		77	39 - 144	1	25
cis-1,2-Dichloroethene	ND		25.0	27.2		ug/L		109	70 - 130	1	20
cis-1,3-Dichloropropene	ND		25.0	26.9		ug/L		108	70 - 133	3	20
Dibromochloromethane	ND		25.0	24.4		ug/L		97	70 - 148	3	25
Dibromomethane	ND		25.0	25.6		ug/L		102	70 - 130	3	25
Dichlorodifluoromethane	ND		25.0	16.7		ug/L		67	25 - 142	4	30
Ethylbenzene	ND		25.0	27.1		ug/L		108	70 - 130	4	20
Hexachlorobutadiene	ND		25.0	28.2		ug/L		113	10 - 150	2	20
Isopropyl alcohol	ND		250	257		ug/L		103	46 - 142	8	40
Isopropylbenzene	ND		25.0	25.8		ug/L		103	70 - 132	1	20
m,p-Xylene	ND		25.0	25.2		ug/L		101	70 - 133	4	25
Methylene Chloride	ND		25.0	22.1		ug/L		88	52 - 130	2	20

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

Lab Sample ID: 440-233271-1 MSD — **Client Sample ID: OC_GW_DPE-5_20190211**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 530170

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methyl-t-Butyl Ether (MTBE)	ND		25.0	25.6		ug/L		103	70 - 130	3	25
Naphthalene	ND		25.0	24.3		ug/L		97	60 - 140	2	30
n-Butylbenzene	ND		25.0	27.8		ug/L		111	61 - 149	1	20
N-Propylbenzene	ND		25.0	28.1		ug/L		112	66 - 135	5	20
o-Xylene	ND		25.0	24.7		ug/L		99	70 - 133	1	20
p-Isopropyltoluene	ND		25.0	29.0		ug/L		116	70 - 130	2	20
sec-Butylbenzene	ND		25.0	25.2		ug/L		101	67 - 134	3	20
Styrene	ND		25.0	24.0		ug/L		96	29 - 150	3	35
tert-Butylbenzene	0.28	J	25.0	25.5		ug/L		101	70 - 130	5	20
Tetrachloroethene	88	F1	25.0	100	E F1	ug/L		48	70 - 137	1	20
Toluene	ND		25.0	26.4		ug/L		106	70 - 130	4	20
trans-1,2-Dichloroethene	ND		25.0	26.8		ug/L		107	70 - 130	3	20
trans-1,3-Dichloropropene	ND		25.0	23.5		ug/L		94	70 - 138	3	25
Trichloroethene	8.7		25.0	35.7		ug/L		108	70 - 130	2	20
Trichlorofluoromethane	6.4		25.0	26.5		ug/L		80	60 - 150	2	25
Vinyl chloride	ND		25.0	19.0		ug/L		76	50 - 137	2	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*
Dibromofluoromethane (Surr)	*101*		*76 - 132*
Toluene-d8 (Surr)	*98*		*80 - 128*

Lab Sample ID: MB 440-530233/4 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 530233

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	0.50	ug/L			02/22/19 08:00	1
Tetrachloroethene	ND		1.0	0.25	ug/L			02/22/19 08:00	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*10.0*	*T J*	*ug/L*		*15.15*			*02/22/19 08:00*	*1*
Unknown	*6.79*	*T J*	*ug/L*		*15.24*			*02/22/19 08:00*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*		*02/22/19 08:00*	*1*
Dibromofluoromethane (Surr)	*97*		*76 - 132*		*02/22/19 08:00*	*1*
Toluene-d8 (Surr)	*99*		*80 - 128*		*02/22/19 08:00*	*1*

Lab Sample ID: LCS 440-530233/5 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 530233

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,2-Trichloro-1,2,2-trifluoroetha ne	25.0	23.4		ug/L		94	60 - 140
Tetrachloroethene	25.0	24.9		ug/L		100	70 - 130

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

Lab Sample ID: LCS 440-530233/5
Matrix: Water
Analysis Batch: 530233

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

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*92*		*80 - 120*
Dibromofluoromethane (Surr)	*97*		*76 - 132*
Toluene-d8 (Surr)	*93*		*80 - 128*

Lab Sample ID: 440-233168-C-8 MS
Matrix: Water
Analysis Batch: 530233

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		
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		25.0	24.1		ug/L		96	60 - 140		
Tetrachloroethene	ND		25.0	24.9		ug/L		100	70 - 137		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*91*		*80 - 120*
Dibromofluoromethane (Surr)	*92*		*76 - 132*
Toluene-d8 (Surr)	*93*		*80 - 128*

Lab Sample ID: 440-233168-C-8 MSD
Matrix: Water
Analysis Batch: 530233

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
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		25.0	23.9		ug/L		96	60 - 140	1	20
Tetrachloroethene	ND		25.0	25.5		ug/L		102	70 - 137	2	20

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*91*		*80 - 120*
Dibromofluoromethane (Surr)	*95*		*76 - 132*
Toluene-d8 (Surr)	*96*		*80 - 128*

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

Lab Sample ID: MB 440-529201/1-A
Matrix: Water
Analysis Batch: 529338

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 529201

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.50	0.10	ug/L		02/17/19 13:35	02/18/19 14:28	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*47*		*27 - 120*	*02/17/19 13:35*	*02/18/19 14:28*	*1*

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

Lab Sample ID: LCS 440-529201/2-A
Matrix: Water
Analysis Batch: 529338

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 529201

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,4-Dioxane			4.00	2.58		ug/L		65	36 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,4-Dioxane-d8 (Surr)	*51*		*27 - 120*

Lab Sample ID: LCSD 440-529201/3-A
Matrix: Water
Analysis Batch: 529338

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 529201

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dioxane			2.00	1.28	*	ug/L		64	36 - 120	68	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,4-Dioxane-d8 (Surr)	*51*		*27 - 120*

QC Association Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chenical-2019 Semi-Annual GWM Feb

TestAmerica Job ID: 440-233271-1
SDG: Whittier

GC/MS VOA

Analysis Batch: 530170

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-233271-1	OC_GW_DPE-5_20190211	Total/NA	Water	8260B	
440-233271-2	OC_GW_DPE-3_20190211	Total/NA	Water	8260B	
440-233271-3	OC_GW_DPE-8_20190211	Total/NA	Water	8260B	
440-233271-4	OC_GW_DPE-4_20190211	Total/NA	Water	8260B	
440-233271-5	OC_GW_DPE-9_20190212	Total/NA	Water	8260B	
440-233271-5 - DL	OC_GW_DPE-9_20190212	Total/NA	Water	8260B	
440-233271-6	OC_GW_DPE-10D_20190212	Total/NA	Water	8260B	
440-233271-6 - DL	OC_GW_DPE-10D_20190212	Total/NA	Water	8260B	
440-233271-7	OC_GW_TB_20190211	Total/NA	Water	8260B	
MB 440-530170/4	Method Blank	Total/NA	Water	8260B	
LCS 440-530170/1003	Lab Control Sample	Total/NA	Water	8260B	
LCS 440-530170/5	Lab Control Sample	Total/NA	Water	8260B	
440-233271-1 MS	OC_GW_DPE-5_20190211	Total/NA	Water	8260B	
440-233271-1 MSD	OC_GW_DPE-5_20190211	Total/NA	Water	8260B	

Analysis Batch: 530233

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-233271-2 - DL	OC_GW_DPE-3_20190211	Total/NA	Water	8260B	
440-233271-4 - DL	OC_GW_DPE-4_20190211	Total/NA	Water	8260B	
MB 440-530233/4	Method Blank	Total/NA	Water	8260B	
LCS 440-530233/5	Lab Control Sample	Total/NA	Water	8260B	
440-233168-C-8 MS	Matrix Spike	Total/NA	Water	8260B	
440-233168-C-8 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 529201

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-233271-1	OC_GW_DPE-5_20190211	Total/NA	Water	3520C	
440-233271-2	OC_GW_DPE-3_20190211	Total/NA	Water	3520C	
440-233271-3	OC_GW_DPE-8_20190211	Total/NA	Water	3520C	
440-233271-4	OC_GW_DPE-4_20190211	Total/NA	Water	3520C	
440-233271-5	OC_GW_DPE-9_20190212	Total/NA	Water	3520C	
440-233271-6	OC_GW_DPE-10D_20190212	Total/NA	Water	3520C	
MB 440-529201/1-A	Method Blank	Total/NA	Water	3520C	
LCS 440-529201/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 440-529201/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	

Analysis Batch: 529338

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-233271-1	OC_GW_DPE-5_20190211	Total/NA	Water	8270C SIM	529201
440-233271-2	OC_GW_DPE-3_20190211	Total/NA	Water	8270C SIM	529201
440-233271-3	OC_GW_DPE-8_20190211	Total/NA	Water	8270C SIM	529201
440-233271-4	OC_GW_DPE-4_20190211	Total/NA	Water	8270C SIM	529201
440-233271-5	OC_GW_DPE-9_20190212	Total/NA	Water	8270C SIM	529201
440-233271-6	OC_GW_DPE-10D_20190212	Total/NA	Water	8270C SIM	529201
MB 440-529201/1-A	Method Blank	Total/NA	Water	8270C SIM	529201
LCS 440-529201/2-A	Lab Control Sample	Total/NA	Water	8270C SIM	529201
LCSD 440-529201/3-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM	529201

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F1	MS and/or MSD Recovery is outside acceptance limits.
E	Result exceeded calibration range.

GC/MS VOA TICs

Qualifier	Qualifier Description
J	Indicates an Estimated Value for TICs
T	Result is a tentatively identified compound (TIC) and an estimated value.

GC/MS Semi VOA

Qualifier	Qualifier Description
*	RPD of the LCS and LCSD exceeds the control 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: Jacob & Hefner Associates P.C. TestAmerica Job ID: 440-233271-1
Project/Site: Omega Chenical-2019 Semi-Annual GWM Feb SDG: Whittier

Laboratory: TestAmerica Irvine

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
California	State Program	9	CA ELAP 2706	06-30-19

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8260B		Water	1,1,2-Trichloro-1,2,2-trifluoroethane
8260B		Water	m,p-Xylene
8270C SIM	3520C	Water	1,4-Dioxane

TestAmerica Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614
phone 949 261.1022 fax

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.

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

Client Contact	Project Manager: Trent Henderson	Site Contact: Khalid Azhar	Date: 2/11/19	COC No.
De Maximis - Jaime Dinello	Tel/Fax: (949) 453-1045 / (949) 453-1047	Lab Contact: Danielle Roberts	Carrier:	1 of 1 COCs
1322 Scott St , Suite 104	Analysis Turnaround Time			Sampler:
San Diego, CA 92106	☐CALENDAR DAYS ☐WORKING DAYS			For Lab Use Only:
(562) 756-8149	TAT if different from Below STD			Walk-in Client:
	☐ 2 weeks			Lab Sampling:
Project Name: Omega Chem. - 2019 Semi-Ann GWM August	☐ 1 week			
Site: Omega Chemical	☐ 2 days			Job / SDG No.
P O #: 3139G/E742	☐ 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 + Freons	EPA 8270C - 1,4 Dioxane	Sample Specific Notes:
OC_GW_DPE-5_20190211	2/11/2019	13:25	Grab	GW	5			x	x	
OC_GW_DPE-3_20190211	2/11/2019	13:02	Grab	GW	5			x	x	
OC_GW_DPE-8_20190211	2/11/2019	12:43	Grab	GW	5			x	x	
OC_GW_DPE-4_20190211	2/11/2019	13:48	Grab	GW	5			x	x	
OC_GW_DPE-9_20190212	2/12/2019	08:56	Grab	GW	5			x	x	
OC_GW_DPE-10D_20190212	2/12/2019	10:30	Grab	GW	5			x	x	
OC_GW_TB_20190211	2/11/2019	07:00		H2O	3			x		

440-233271 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]	JHA	2/12/19 1430	[signature]	TA IRV	2/12/19 1430
Relinquished by: [signature]	Company: TA IRV	Date/Time: 2/12/19 1652	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by: [signature]	Company: TA IRV	Date/Time: 2/12/19 1652

1.4/1.4 4.5/4.5 4.9/4.9 5.3/5.3 IR88

2/12/19

Login Sample Receipt Checklist

Client: Jacob & Hefner Associates P.C.

Job Number: 440-233271-1
SDG Number: Whittier

Login Number: 233271
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: 440-233274-1
TestAmerica Sample Delivery Group: Whittier
Client Project/Site: Omega Chemical-2019 Semi-Annual GWM Feb
Revision: 3

For:
Jacob & Hefner Associates P.C.
15375 Barranca Parkway, J-101
Irvine, California 92618

Attn: Trent Henderson

Authorized for release by:
3/30/2019 6:50:05 AM

Danielle Roberts, Senior Project Manager
(949)261-1022
danielle.roberts@testamericainc.com

LINKS

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

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

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

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Sample Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-2019 Semi-Annual GWM Feb

TestAmerica Job ID: 440-233274-1
SDG: Whittier

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-233274-1	OC_GW_OW-3B_20190211	Water	02/11/19 08:58	02/12/19 16:52
440-233274-2	OC_GW_OW-1B_20190212	Water	02/12/19 08:15	02/12/19 16:52
440-233274-3	OC_GW_OW-1B_20190211N	Water	02/11/19 14:30	02/12/19 16:52
440-233274-4	OC_GW_OW-10_20190212	Water	02/12/19 12:45	02/12/19 16:52
440-233274-5	OC_GW_OW-10_20190212K	Water	02/12/19 12:50	02/12/19 16:52
440-233274-6	OC_GW_OW-9_20190212	Water	02/12/19 13:15	02/12/19 16:52
440-233274-7	OC_GW_OW-9_20190212K	Water	02/12/19 13:20	02/12/19 16:52
440-233274-8	OC_GW_OW-12_20190212	Water	02/12/19 13:40	02/12/19 16:52
440-233274-9	OC_GW_TB_20190212	Water	02/12/19 07:00	02/12/19 16:52

Job ID: 440-233274-1

Laboratory: TestAmerica Irvine

Narrative

Job Narrative
440-233274-1

Comments
No additional comments.

Receipt
The samples were received on 2/12/2019 4:52 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 1.4º C, 4.5º C, 4.9º C and 5.3º 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 SIM: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for batch preparation batch 440-529201 and analytical batch 440-529338 recovered outside control limits for the following analyte: 1,4-Dioxane, due to double spike of LCS. Laboratory control sample / laboratory control sample duplicate (LCS/LCSD) percent recovery is in control for affected analytes.

Method(s) 8270C SIM: The following samples required a dilution due to the nature of the sample matrix: OC_GW_OW-9_20190212 (440-233274-6) and OC_GW_OW-9_20190212K (440-233274-7). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

Method(s) 8270C SIM: The method blank for preparation batch 440-529836 and analytical batch 440-530058 contained 1,4-Dioxane above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

Method(s) 8270C SIM: The following sample(s) was re-prepared outside of preparation holding time. The original preparation was within holding time but LCS/LCSD were out of acceptance limits : OC_GW_OW-9_20190212 (440-233274-6) and OC_GW_OW-9_20190212K (440-233274-7).

Method(s) 8270C SIM: The following sample(s) was re-prepared outside of preparation holding time. Method Blank, LCS/LCSD failed in the original extract due to high contaminated sample: OC_GW_OW-10_20190212K (440-233274-5) and OC_GW_OW-12_20190212 (440-233274-8).

Method(s) 8270C SIM: A double spike for target analyte 1,4-Dioxane was suspected in the laboratory control sample (LCS) and confirmed. Investigation showed that the double spiked LCS was accidental. The laboratory control sample duplicate (LCSD) is spiked at the normal level.

(LCS 440-529201/2-A)

Method(s) 8270C SIM: Method blank (MB) contaminated. Samples are reported as secondary for B flag.

OC_GW_OW-9_20190212 (440-233274-6) and OC_GW_OW-9_20190212K (440-233274-7)

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

Organic Prep
Method(s) 3520C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 440-529201. 8270 1,4 DXN

Method(s) 3520C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 440-529257. 8270-SIM-1,4-Dioxane. LCS was performed in duplicate to provide precision of data.

Method(s) 3520C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with

Job ID: 440-233274-1 (Continued)

Laboratory: TestAmerica Irvine (Continued)

preparation batch 440-529836. LCS was performed in duplicate to maintain precision of data. 8270 1,4 DXN

Method(s) 3520C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 440-530083. 8270-SIM-1,4-Dioxane. LCS was performed in duplicate to provide precision of data.

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

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

Detection Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-2019 Semi-Annual GWM Feb

TestAmerica Job ID: 440-233274-1
SDG: Whittier

Client Sample ID: OC_GW_OW-3B_20190211 — Lab Sample ID: 440-233274-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,2,3-Trichlorobenzene	0.52	J	1.0	0.40	ug/L	1		8260B	Total/NA
Hexachlorobutadiene	0.34	J	1.0	0.25	ug/L	1		8260B	Total/NA
Methylene Chloride	1.0	J	5.0	0.88	ug/L	1		8260B	Total/NA
tert-Butylbenzene	0.28	J	1.0	0.25	ug/L	1		8260B	Total/NA
Tetrachloroethene	7.8		1.0	0.25	ug/L	1		8260B	Total/NA

Client Sample ID: OC_GW_OW-1B_20190212 — Lab Sample ID: 440-233274-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,2-Trichloro-1,2,2-trifluoroethane	4.3	J	5.0	0.50	ug/L	1		8260B	Total/NA
Tetrachloroethene	5.3		1.0	0.25	ug/L	1		8260B	Total/NA
Trichlorofluoromethane	1.7		1.0	0.25	ug/L	1		8260B	Total/NA
1,4-Dioxane	0.69	*	0.49	0.098	ug/L	1		8270C SIM	Total/NA

Client Sample ID: OC_GW_OW-1B_20190211N — Lab Sample ID: 440-233274-3

No Detections.

Client Sample ID: OC_GW_OW-10_20190212 — Lab Sample ID: 440-233274-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,2-Trichloro-1,2,2-trifluoroethane	3.5	J	5.0	0.50	ug/L	1		8260B	Total/NA
1,1-Dichloroethene	13		1.0	0.25	ug/L	1		8260B	Total/NA
Tetrachloroethene	19		1.0	0.25	ug/L	1		8260B	Total/NA
Trichloroethene	1.3		1.0	0.25	ug/L	1		8260B	Total/NA
Trichlorofluoromethane	2.0		1.0	0.25	ug/L	1		8260B	Total/NA
1,4-Dioxane	0.66	*	0.49	0.098	ug/L	1		8270C SIM	Total/NA

Client Sample ID: OC_GW_OW-10_20190212K — Lab Sample ID: 440-233274-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,2-Trichloro-1,2,2-trifluoroethane	3.8	J	5.0	0.50	ug/L	1		8260B	Total/NA
1,1-Dichloroethene	15		1.0	0.25	ug/L	1		8260B	Total/NA
Tetrachloroethene	22		1.0	0.25	ug/L	1		8260B	Total/NA
Trichloroethene	1.6		1.0	0.25	ug/L	1		8260B	Total/NA
Trichlorofluoromethane	2.4		1.0	0.25	ug/L	1		8260B	Total/NA
1,4-Dioxane	0.12	J H	0.49	0.099	ug/L	1		8270C SIM	Total/NA

Client Sample ID: OC_GW_OW-9_20190212 — Lab Sample ID: 440-233274-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,2-Trichloro-1,2,2-trifluoroethane	180		50	5.0	ug/L	10		8260B	Total/NA
1,1,2-Trichloroethane	6.6	J	10	2.5	ug/L	10		8260B	Total/NA
1,1-Dichloroethane	12		10	2.5	ug/L	10		8260B	Total/NA
1,1-Dichloroethene	410		10	2.5	ug/L	10		8260B	Total/NA
1,2,3-Trichlorobenzene	5.1	J	10	4.0	ug/L	10		8260B	Total/NA
1,2-Dichloroethane	85		10	2.5	ug/L	10		8260B	Total/NA
Chloroform	360		10	2.5	ug/L	10		8260B	Total/NA
cis-1,2-Dichloroethene	4.3	J	10	2.5	ug/L	10		8260B	Total/NA
Methylene Chloride	20	J	50	8.8	ug/L	10		8260B	Total/NA
tert-Butylbenzene	2.7	J	10	2.5	ug/L	10		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

Detection Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-2019 Semi-Annual GWM Feb

TestAmerica Job ID: 440-233274-1
SDG: Whittier

Client Sample ID: OC_GW_OW-9_20190212 (Continued) — Lab Sample ID: 440-233274-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
trans-1,2-Dichloroethene	5.0	J	10	2.5	ug/L	10		8260B	Total/NA
Trichloroethene	240		10	2.5	ug/L	10		8260B	Total/NA
Trichlorofluoromethane	74		10	2.5	ug/L	10		8260B	Total/NA
Tetrachloroethene - DL	4700	F1	50	13	ug/L	50		8260B	Total/NA
1,4-Dioxane	640	* E B	0.51	0.10	ug/L	1		8270C SIM	Total/NA
1,4-Dioxane	620	H B	5.0	1.0	ug/L	10		8270C SIM	Total/NA

Client Sample ID: OC_GW_OW-9_20190212K — Lab Sample ID: 440-233274-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,2-Trichloro-1,2,2-trifluoroethane	190		50	5.0	ug/L	10		8260B	Total/NA
1,1,2-Trichloroethane	7.0	J	10	2.5	ug/L	10		8260B	Total/NA
1,1-Dichloroethane	12		10	2.5	ug/L	10		8260B	Total/NA
1,1-Dichloroethene	440		10	2.5	ug/L	10		8260B	Total/NA
1,2-Dichloroethane	91		10	2.5	ug/L	10		8260B	Total/NA
Chloroform	380		10	2.5	ug/L	10		8260B	Total/NA
cis-1,2-Dichloroethene	4.7	J	10	2.5	ug/L	10		8260B	Total/NA
Methylene Chloride	17	J	50	8.8	ug/L	10		8260B	Total/NA
trans-1,2-Dichloroethene	6.1	J	10	2.5	ug/L	10		8260B	Total/NA
Trichloroethene	250		10	2.5	ug/L	10		8260B	Total/NA
Trichlorofluoromethane	74		10	2.5	ug/L	10		8260B	Total/NA
Tetrachloroethene - DL	4900		50	13	ug/L	50		8260B	Total/NA
1,4-Dioxane	1000	* E B	0.51	0.10	ug/L	1		8270C SIM	Total/NA
1,4-Dioxane	610	H B	4.9	0.99	ug/L	10		8270C SIM	Total/NA

Client Sample ID: OC_GW_OW-12_20190212 — Lab Sample ID: 440-233274-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	210		20	5.0	ug/L	20		8260B	Total/NA
1,1-Dichloroethene	340		20	5.0	ug/L	20		8260B	Total/NA
1,2-Dichlorobenzene	7.9	J	20	5.0	ug/L	20		8260B	Total/NA
1,2-Dichloroethane	13	J	20	5.0	ug/L	20		8260B	Total/NA
Chloroform	270		20	5.0	ug/L	20		8260B	Total/NA
Methylene Chloride	35	J	100	18	ug/L	20		8260B	Total/NA
Toluene	17	J	20	5.0	ug/L	20		8260B	Total/NA
Trichloroethene	1000		20	5.0	ug/L	20		8260B	Total/NA
Trichlorofluoromethane	140		20	5.0	ug/L	20		8260B	Total/NA
1,1,2-Trichloro-1,2,2-trifluoroethane - DL	3900		500	50	ug/L	100		8260B	Total/NA
Tetrachloroethene - DL	5600		100	25	ug/L	100		8260B	Total/NA
1,4-Dioxane	8.7	H	0.49	0.098	ug/L	1		8270C SIM	Total/NA

Client Sample ID: OC_GW_TB_20190212 — Lab Sample ID: 440-233274-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Methylene Chloride	0.93	J	5.0	0.88	ug/L	1		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-2019 Semi-Annual GWM Feb

TestAmerica Job ID: 440-233274-1
SDG: Whittier

Client Sample ID: OC_GW_OW-3B_20190211

Lab Sample ID: 440-233274-1

Date Collected: 02/11/19 08:58
Matrix: Water
Date Received: 02/12/19 16:52

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/22/19 11:08	1
1,1,1-Trichloroethane	ND		1.0	0.25	ug/L			02/22/19 11:08	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/22/19 11:08	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	0.50	ug/L			02/22/19 11:08	1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L			02/22/19 11:08	1
1,1-Dichloroethane	ND		1.0	0.25	ug/L			02/22/19 11:08	1
1,1-Dichloroethene	ND		1.0	0.25	ug/L			02/22/19 11:08	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			02/22/19 11:08	1
1,2,3-Trichlorobenzene	**0.52**	**J**	1.0	0.40	ug/L			02/22/19 11:08	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			02/22/19 11:08	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			02/22/19 11:08	1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			02/22/19 11:08	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			02/22/19 11:08	1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			02/22/19 11:08	1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			02/22/19 11:08	1
1,2-Dichloroethane	ND		1.0	0.25	ug/L			02/22/19 11:08	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			02/22/19 11:08	1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			02/22/19 11:08	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			02/22/19 11:08	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			02/22/19 11:08	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			02/22/19 11:08	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			02/22/19 11:08	1
2-Chlorotoluene	ND		1.0	0.25	ug/L			02/22/19 11:08	1
4-Chlorotoluene	ND		1.0	0.25	ug/L			02/22/19 11:08	1
Acetone	ND		10	10	ug/L			02/22/19 11:08	1
Benzene	ND		0.50	0.25	ug/L			02/22/19 11:08	1
Bromobenzene	ND		1.0	0.25	ug/L			02/22/19 11:08	1
Bromochloromethane	ND		1.0	0.25	ug/L			02/22/19 11:08	1
Bromodichloromethane	ND		1.0	0.25	ug/L			02/22/19 11:08	1
Bromoform	ND		1.0	0.40	ug/L			02/22/19 11:08	1
Bromomethane	ND		1.0	0.25	ug/L			02/22/19 11:08	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			02/22/19 11:08	1
Chlorobenzene	ND		1.0	0.25	ug/L			02/22/19 11:08	1
Chloroethane	ND		1.0	0.40	ug/L			02/22/19 11:08	1
Chloroform	ND		1.0	0.25	ug/L			02/22/19 11:08	1
Chloromethane	ND		1.0	0.25	ug/L			02/22/19 11:08	1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			02/22/19 11:08	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/22/19 11:08	1
Dibromochloromethane	ND		1.0	0.25	ug/L			02/22/19 11:08	1
Dibromomethane	ND		1.0	0.25	ug/L			02/22/19 11:08	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			02/22/19 11:08	1
Ethylbenzene	ND		1.0	0.25	ug/L			02/22/19 11:08	1
Hexachlorobutadiene	**0.34**	**J**	1.0	0.25	ug/L			02/22/19 11:08	1
Isopropyl alcohol	ND		250	180	ug/L			02/22/19 11:08	1
Isopropylbenzene	ND		1.0	0.25	ug/L			02/22/19 11:08	1
m,p-Xylene	ND		1.0	0.50	ug/L			02/22/19 11:08	1
Methylene Chloride	**1.0**	**J**	5.0	0.88	ug/L			02/22/19 11:08	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			02/22/19 11:08	1
Naphthalene	ND		1.0	0.40	ug/L			02/22/19 11:08	1

Client Sample ID: OC_GW_OW-3B_20190211

Lab Sample ID: 440-233274-1
Date Collected: 02/11/19 08:58
Matrix: Water
Date Received: 02/12/19 16:52

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	ND		1.0	0.40	ug/L			02/22/19 11:08	1
N-Propylbenzene	ND		1.0	0.25	ug/L			02/22/19 11:08	1
o-Xylene	ND		1.0	0.25	ug/L			02/22/19 11:08	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			02/22/19 11:08	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			02/22/19 11:08	1
Styrene	ND		1.0	0.25	ug/L			02/22/19 11:08	1
tert-Butylbenzene	**0.28**	**J**	1.0	0.25	ug/L			02/22/19 11:08	1
Tetrachloroethene	**7.8**		1.0	0.25	ug/L			02/22/19 11:08	1
Toluene	ND		1.0	0.25	ug/L			02/22/19 11:08	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			02/22/19 11:08	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/22/19 11:08	1
Trichloroethene	ND		1.0	0.25	ug/L			02/22/19 11:08	1
Trichlorofluoromethane	ND		1.0	0.25	ug/L			02/22/19 11:08	1
Vinyl chloride	ND		0.50	0.25	ug/L			02/22/19 11:08	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*730*	*T J*	*ug/L*		*1.49*			*02/22/19 11:08*	*1*
Unknown	*10*	*T J*	*ug/L*		*5.25*			*02/22/19 11:08*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*		*02/22/19 11:08*	*1*
Dibromofluoromethane (Surr)	*106*		*76 - 132*		*02/22/19 11:08*	*1*
Toluene-d8 (Surr)	*105*		*80 - 128*		*02/22/19 11:08*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND	*	0.49	0.098	ug/L		02/17/19 13:35	02/18/19 20:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*41*		*27 - 120*	*02/17/19 13:35*	*02/18/19 20:43*	*1*

Client Sample ID: OC_GW_OW-1B_20190212

Lab Sample ID: 440-233274-2
Date Collected: 02/12/19 08:15
Matrix: Water
Date Received: 02/12/19 16:52

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/22/19 11:34	1
1,1,1-Trichloroethane	ND		1.0	0.25	ug/L			02/22/19 11:34	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/22/19 11:34	1
1,1,2-Trichloro-1,2,2-trifluoroethane	**4.3**	**J**	5.0	0.50	ug/L			02/22/19 11:34	1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L			02/22/19 11:34	1
1,1-Dichloroethane	ND		1.0	0.25	ug/L			02/22/19 11:34	1
1,1-Dichloroethene	ND		1.0	0.25	ug/L			02/22/19 11:34	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			02/22/19 11:34	1
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L			02/22/19 11:34	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			02/22/19 11:34	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			02/22/19 11:34	1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			02/22/19 11:34	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			02/22/19 11:34	1

Client Sample ID: OC_GW_OW-1B_20190212

Lab Sample ID: 440-233274-2

Date Collected: 02/12/19 08:15
Matrix: Water
Date Received: 02/12/19 16:52

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			02/22/19 11:34	1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			02/22/19 11:34	1
1,2-Dichloroethane	ND		1.0	0.25	ug/L			02/22/19 11:34	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			02/22/19 11:34	1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			02/22/19 11:34	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			02/22/19 11:34	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			02/22/19 11:34	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			02/22/19 11:34	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			02/22/19 11:34	1
2-Chlorotoluene	ND		1.0	0.25	ug/L			02/22/19 11:34	1
4-Chlorotoluene	ND		1.0	0.25	ug/L			02/22/19 11:34	1
Acetone	ND		10	10	ug/L			02/22/19 11:34	1
Benzene	ND		0.50	0.25	ug/L			02/22/19 11:34	1
Bromobenzene	ND		1.0	0.25	ug/L			02/22/19 11:34	1
Bromochloromethane	ND		1.0	0.25	ug/L			02/22/19 11:34	1
Bromodichloromethane	ND		1.0	0.25	ug/L			02/22/19 11:34	1
Bromoform	ND		1.0	0.40	ug/L			02/22/19 11:34	1
Bromomethane	ND		1.0	0.25	ug/L			02/22/19 11:34	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			02/22/19 11:34	1
Chlorobenzene	ND		1.0	0.25	ug/L			02/22/19 11:34	1
Chloroethane	ND		1.0	0.40	ug/L			02/22/19 11:34	1
Chloroform	ND		1.0	0.25	ug/L			02/22/19 11:34	1
Chloromethane	ND		1.0	0.25	ug/L			02/22/19 11:34	1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			02/22/19 11:34	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/22/19 11:34	1
Dibromochloromethane	ND		1.0	0.25	ug/L			02/22/19 11:34	1
Dibromomethane	ND		1.0	0.25	ug/L			02/22/19 11:34	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			02/22/19 11:34	1
Ethylbenzene	ND		1.0	0.25	ug/L			02/22/19 11:34	1
Hexachlorobutadiene	ND		1.0	0.25	ug/L			02/22/19 11:34	1
Isopropyl alcohol	ND		250	180	ug/L			02/22/19 11:34	1
Isopropylbenzene	ND		1.0	0.25	ug/L			02/22/19 11:34	1
m,p-Xylene	ND		1.0	0.50	ug/L			02/22/19 11:34	1
Methylene Chloride	ND		5.0	0.88	ug/L			02/22/19 11:34	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			02/22/19 11:34	1
Naphthalene	ND		1.0	0.40	ug/L			02/22/19 11:34	1
n-Butylbenzene	ND		1.0	0.40	ug/L			02/22/19 11:34	1
N-Propylbenzene	ND		1.0	0.25	ug/L			02/22/19 11:34	1
o-Xylene	ND		1.0	0.25	ug/L			02/22/19 11:34	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			02/22/19 11:34	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			02/22/19 11:34	1
Styrene	ND		1.0	0.25	ug/L			02/22/19 11:34	1
tert-Butylbenzene	ND		1.0	0.25	ug/L			02/22/19 11:34	1
Tetrachloroethene	**5.3**		1.0	0.25	ug/L			02/22/19 11:34	1
Toluene	ND		1.0	0.25	ug/L			02/22/19 11:34	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			02/22/19 11:34	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/22/19 11:34	1
Trichloroethene	ND		1.0	0.25	ug/L			02/22/19 11:34	1
Trichlorofluoromethane	**1.7**		1.0	0.25	ug/L			02/22/19 11:34	1

Client Sample ID: OC_GW_OW-1B_20190212

Lab Sample ID: 440-233274-2

Date Collected: 02/12/19 08:15
Matrix: Water
Date Received: 02/12/19 16:52

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			02/22/19 11:34	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*970*	*T J*	*ug/L*		*1.49*			*02/22/19 11:34*	*1*
Unknown	*10*	*T J*	*ug/L*		*5.25*			*02/22/19 11:34*	*1*
Unknown	*6.5*	*T J*	*ug/L*		*13.84*			*02/22/19 11:34*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*90*		*80 - 120*		*02/22/19 11:34*	*1*
Dibromofluoromethane (Surr)	*107*		*76 - 132*		*02/22/19 11:34*	*1*
Toluene-d8 (Surr)	*105*		*80 - 128*		*02/22/19 11:34*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**0.69**	*	0.49	0.098	ug/L		02/17/19 13:35	02/18/19 21:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*46*		*27 - 120*	*02/17/19 13:35*	*02/18/19 21:07*	*1*

Client Sample ID: OC_GW_OW-1B_20190211N

Lab Sample ID: 440-233274-3

Date Collected: 02/11/19 14:30
Matrix: Water
Date Received: 02/12/19 16:52

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/22/19 12:00	1
1,1,1-Trichloroethane	ND		1.0	0.25	ug/L			02/22/19 12:00	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/22/19 12:00	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	0.50	ug/L			02/22/19 12:00	1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L			02/22/19 12:00	1
1,1-Dichloroethane	ND		1.0	0.25	ug/L			02/22/19 12:00	1
1,1-Dichloroethene	ND		1.0	0.25	ug/L			02/22/19 12:00	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			02/22/19 12:00	1
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L			02/22/19 12:00	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			02/22/19 12:00	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			02/22/19 12:00	1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			02/22/19 12:00	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			02/22/19 12:00	1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			02/22/19 12:00	1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			02/22/19 12:00	1
1,2-Dichloroethane	ND		1.0	0.25	ug/L			02/22/19 12:00	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			02/22/19 12:00	1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			02/22/19 12:00	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			02/22/19 12:00	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			02/22/19 12:00	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			02/22/19 12:00	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			02/22/19 12:00	1
2-Chlorotoluene	ND		1.0	0.25	ug/L			02/22/19 12:00	1
4-Chlorotoluene	ND		1.0	0.25	ug/L			02/22/19 12:00	1
Acetone	ND		10	10	ug/L			02/22/19 12:00	1
Benzene	ND		0.50	0.25	ug/L			02/22/19 12:00	1

Client Sample ID: OC_GW_OW-1B_20190211N

Lab Sample ID: 440-233274-3

Date Collected: 02/11/19 14:30
Matrix: Water
Date Received: 02/12/19 16:52

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromobenzene	ND		1.0	0.25	ug/L			02/22/19 12:00	1
Bromochloromethane	ND		1.0	0.25	ug/L			02/22/19 12:00	1
Bromodichloromethane	ND		1.0	0.25	ug/L			02/22/19 12:00	1
Bromoform	ND		1.0	0.40	ug/L			02/22/19 12:00	1
Bromomethane	ND		1.0	0.25	ug/L			02/22/19 12:00	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			02/22/19 12:00	1
Chlorobenzene	ND		1.0	0.25	ug/L			02/22/19 12:00	1
Chloroethane	ND		1.0	0.40	ug/L			02/22/19 12:00	1
Chloroform	ND		1.0	0.25	ug/L			02/22/19 12:00	1
Chloromethane	ND		1.0	0.25	ug/L			02/22/19 12:00	1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			02/22/19 12:00	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/22/19 12:00	1
Dibromochloromethane	ND		1.0	0.25	ug/L			02/22/19 12:00	1
Dibromomethane	ND		1.0	0.25	ug/L			02/22/19 12:00	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			02/22/19 12:00	1
Ethylbenzene	ND		1.0	0.25	ug/L			02/22/19 12:00	1
Hexachlorobutadiene	ND		1.0	0.25	ug/L			02/22/19 12:00	1
Isopropyl alcohol	ND		250	180	ug/L			02/22/19 12:00	1
Isopropylbenzene	ND		1.0	0.25	ug/L			02/22/19 12:00	1
m,p-Xylene	ND		1.0	0.50	ug/L			02/22/19 12:00	1
Methylene Chloride	ND		5.0	0.88	ug/L			02/22/19 12:00	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			02/22/19 12:00	1
Naphthalene	ND		1.0	0.40	ug/L			02/22/19 12:00	1
n-Butylbenzene	ND		1.0	0.40	ug/L			02/22/19 12:00	1
N-Propylbenzene	ND		1.0	0.25	ug/L			02/22/19 12:00	1
o-Xylene	ND		1.0	0.25	ug/L			02/22/19 12:00	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			02/22/19 12:00	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			02/22/19 12:00	1
Styrene	ND		1.0	0.25	ug/L			02/22/19 12:00	1
tert-Butylbenzene	ND		1.0	0.25	ug/L			02/22/19 12:00	1
Tetrachloroethene	ND		1.0	0.25	ug/L			02/22/19 12:00	1
Toluene	ND		1.0	0.25	ug/L			02/22/19 12:00	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			02/22/19 12:00	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/22/19 12:00	1
Trichloroethene	ND		1.0	0.25	ug/L			02/22/19 12:00	1
Trichlorofluoromethane	ND		1.0	0.25	ug/L			02/22/19 12:00	1
Vinyl chloride	ND		0.50	0.25	ug/L			02/22/19 12:00	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*75*	*T J*	*ug/L*		*1.48*			*02/22/19 12:00*	*1*
Unknown	*2.7*	*T J*	*ug/L*		*1.84*			*02/22/19 12:00*	*1*
Unknown	*10*	*T J*	*ug/L*		*5.25*			*02/22/19 12:00*	*1*
Unknown	*2.8*	*T J*	*ug/L*		*13.84*			*02/22/19 12:00*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*		*02/22/19 12:00*	*1*
Dibromofluoromethane (Surr)	*107*		*76 - 132*		*02/22/19 12:00*	*1*
Toluene-d8 (Surr)	*106*		*80 - 128*		*02/22/19 12:00*	*1*

Client Sample Results

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-2019 Semi-Annual GWM Feb

TestAmerica Job ID: 440-233274-1
SDG: Whittier

Client Sample ID: OC_GW_OW-10_20190212

Lab Sample ID: 440-233274-4

Date Collected: 02/12/19 12:45
Matrix: Water
Date Received: 02/12/19 16:52

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/22/19 12:27	1
1,1,1-Trichloroethane	ND		1.0	0.25	ug/L			02/22/19 12:27	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/22/19 12:27	1
1,1,2-Trichloro-1,2,2-trifluoroethane	**3.5**	**J**	5.0	0.50	ug/L			02/22/19 12:27	1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L			02/22/19 12:27	1
1,1-Dichloroethane	ND		1.0	0.25	ug/L			02/22/19 12:27	1
1,1-Dichloroethene	**13**		1.0	0.25	ug/L			02/22/19 12:27	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			02/22/19 12:27	1
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L			02/22/19 12:27	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			02/22/19 12:27	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			02/22/19 12:27	1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			02/22/19 12:27	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			02/22/19 12:27	1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			02/22/19 12:27	1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			02/22/19 12:27	1
1,2-Dichloroethane	ND		1.0	0.25	ug/L			02/22/19 12:27	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			02/22/19 12:27	1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			02/22/19 12:27	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			02/22/19 12:27	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			02/22/19 12:27	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			02/22/19 12:27	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			02/22/19 12:27	1
2-Chlorotoluene	ND		1.0	0.25	ug/L			02/22/19 12:27	1
4-Chlorotoluene	ND		1.0	0.25	ug/L			02/22/19 12:27	1
Acetone	ND		10	10	ug/L			02/22/19 12:27	1
Benzene	ND		0.50	0.25	ug/L			02/22/19 12:27	1
Bromobenzene	ND		1.0	0.25	ug/L			02/22/19 12:27	1
Bromochloromethane	ND		1.0	0.25	ug/L			02/22/19 12:27	1
Bromodichloromethane	ND		1.0	0.25	ug/L			02/22/19 12:27	1
Bromoform	ND		1.0	0.40	ug/L			02/22/19 12:27	1
Bromomethane	ND		1.0	0.25	ug/L			02/22/19 12:27	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			02/22/19 12:27	1
Chlorobenzene	ND		1.0	0.25	ug/L			02/22/19 12:27	1
Chloroethane	ND		1.0	0.40	ug/L			02/22/19 12:27	1
Chloroform	ND		1.0	0.25	ug/L			02/22/19 12:27	1
Chloromethane	ND		1.0	0.25	ug/L			02/22/19 12:27	1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			02/22/19 12:27	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/22/19 12:27	1
Dibromochloromethane	ND		1.0	0.25	ug/L			02/22/19 12:27	1
Dibromomethane	ND		1.0	0.25	ug/L			02/22/19 12:27	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			02/22/19 12:27	1
Ethylbenzene	ND		1.0	0.25	ug/L			02/22/19 12:27	1
Hexachlorobutadiene	ND		1.0	0.25	ug/L			02/22/19 12:27	1
Isopropyl alcohol	ND		250	180	ug/L			02/22/19 12:27	1
Isopropylbenzene	ND		1.0	0.25	ug/L			02/22/19 12:27	1
m,p-Xylene	ND		1.0	0.50	ug/L			02/22/19 12:27	1
Methylene Chloride	ND		5.0	0.88	ug/L			02/22/19 12:27	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			02/22/19 12:27	1
Naphthalene	ND		1.0	0.40	ug/L			02/22/19 12:27	1

Client Sample ID: OC_GW_OW-10_20190212

Lab Sample ID: 440-233274-4
Date Collected: 02/12/19 12:45
Matrix: Water
Date Received: 02/12/19 16:52

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	ND		1.0	0.40	ug/L			02/22/19 12:27	1
N-Propylbenzene	ND		1.0	0.25	ug/L			02/22/19 12:27	1
o-Xylene	ND		1.0	0.25	ug/L			02/22/19 12:27	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			02/22/19 12:27	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			02/22/19 12:27	1
Styrene	ND		1.0	0.25	ug/L			02/22/19 12:27	1
tert-Butylbenzene	ND		1.0	0.25	ug/L			02/22/19 12:27	1
Tetrachloroethene	**19**		1.0	0.25	ug/L			02/22/19 12:27	1
Toluene	ND		1.0	0.25	ug/L			02/22/19 12:27	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			02/22/19 12:27	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/22/19 12:27	1
Trichloroethene	**1.3**		1.0	0.25	ug/L			02/22/19 12:27	1
Trichlorofluoromethane	**2.0**		1.0	0.25	ug/L			02/22/19 12:27	1
Vinyl chloride	ND		0.50	0.25	ug/L			02/22/19 12:27	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*1100*	*T J*	*ug/L*		*1.49*			*02/22/19 12:27*	*1*
Unknown	*10*	*T J*	*ug/L*		*5.25*			*02/22/19 12:27*	*1*
Unknown	*3.1*	*T J*	*ug/L*		*13.84*			*02/22/19 12:27*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*		*02/22/19 12:27*	*1*
Dibromofluoromethane (Surr)	*108*		*76 - 132*		*02/22/19 12:27*	*1*
Toluene-d8 (Surr)	*106*		*80 - 128*		*02/22/19 12:27*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**0.66**	*	0.49	0.098	ug/L		02/17/19 13:35	02/19/19 10:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*46*		*27 - 120*	*02/17/19 13:35*	*02/19/19 10:37*	*1*

Client Sample ID: OC_GW_OW-10_20190212K

Lab Sample ID: 440-233274-5
Date Collected: 02/12/19 12:50
Matrix: Water
Date Received: 02/12/19 16:52

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/22/19 12:53	1
1,1,1-Trichloroethane	ND		1.0	0.25	ug/L			02/22/19 12:53	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/22/19 12:53	1
1,1,2-Trichloro-1,2,2-trifluoroethane	**3.8**	**J**	5.0	0.50	ug/L			02/22/19 12:53	1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L			02/22/19 12:53	1
1,1-Dichloroethane	ND		1.0	0.25	ug/L			02/22/19 12:53	1
1,1-Dichloroethene	**15**		1.0	0.25	ug/L			02/22/19 12:53	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			02/22/19 12:53	1
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L			02/22/19 12:53	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			02/22/19 12:53	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			02/22/19 12:53	1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			02/22/19 12:53	1

Client Sample Results

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-2019 Semi-Annual GWM Feb

TestAmerica Job ID: 440-233274-1
SDG: Whittier

Client Sample ID: OC_GW_OW-10_20190212K

Lab Sample ID: 440-233274-5

Date Collected: 02/12/19 12:50
Matrix: Water
Date Received: 02/12/19 16:52

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			02/22/19 12:53	1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			02/22/19 12:53	1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			02/22/19 12:53	1
1,2-Dichloroethane	ND		1.0	0.25	ug/L			02/22/19 12:53	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			02/22/19 12:53	1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			02/22/19 12:53	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			02/22/19 12:53	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			02/22/19 12:53	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			02/22/19 12:53	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			02/22/19 12:53	1
2-Chlorotoluene	ND		1.0	0.25	ug/L			02/22/19 12:53	1
4-Chlorotoluene	ND		1.0	0.25	ug/L			02/22/19 12:53	1
Acetone	ND		10	10	ug/L			02/22/19 12:53	1
Benzene	ND		0.50	0.25	ug/L			02/22/19 12:53	1
Bromobenzene	ND		1.0	0.25	ug/L			02/22/19 12:53	1
Bromochloromethane	ND		1.0	0.25	ug/L			02/22/19 12:53	1
Bromodichloromethane	ND		1.0	0.25	ug/L			02/22/19 12:53	1
Bromoform	ND		1.0	0.40	ug/L			02/22/19 12:53	1
Bromomethane	ND		1.0	0.25	ug/L			02/22/19 12:53	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			02/22/19 12:53	1
Chlorobenzene	ND		1.0	0.25	ug/L			02/22/19 12:53	1
Chloroethane	ND		1.0	0.40	ug/L			02/22/19 12:53	1
Chloroform	ND		1.0	0.25	ug/L			02/22/19 12:53	1
Chloromethane	ND		1.0	0.25	ug/L			02/22/19 12:53	1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			02/22/19 12:53	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/22/19 12:53	1
Dibromochloromethane	ND		1.0	0.25	ug/L			02/22/19 12:53	1
Dibromomethane	ND		1.0	0.25	ug/L			02/22/19 12:53	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			02/22/19 12:53	1
Ethylbenzene	ND		1.0	0.25	ug/L			02/22/19 12:53	1
Hexachlorobutadiene	ND		1.0	0.25	ug/L			02/22/19 12:53	1
Isopropyl alcohol	ND		250	180	ug/L			02/22/19 12:53	1
Isopropylbenzene	ND		1.0	0.25	ug/L			02/22/19 12:53	1
m,p-Xylene	ND		1.0	0.50	ug/L			02/22/19 12:53	1
Methylene Chloride	ND		5.0	0.88	ug/L			02/22/19 12:53	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			02/22/19 12:53	1
Naphthalene	ND		1.0	0.40	ug/L			02/22/19 12:53	1
n-Butylbenzene	ND		1.0	0.40	ug/L			02/22/19 12:53	1
N-Propylbenzene	ND		1.0	0.25	ug/L			02/22/19 12:53	1
o-Xylene	ND		1.0	0.25	ug/L			02/22/19 12:53	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			02/22/19 12:53	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			02/22/19 12:53	1
Styrene	ND		1.0	0.25	ug/L			02/22/19 12:53	1
tert-Butylbenzene	ND		1.0	0.25	ug/L			02/22/19 12:53	1
Tetrachloroethene	**22**		1.0	0.25	ug/L			02/22/19 12:53	1
Toluene	ND		1.0	0.25	ug/L			02/22/19 12:53	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			02/22/19 12:53	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/22/19 12:53	1
Trichloroethene	**1.6**		1.0	0.25	ug/L			02/22/19 12:53	1

Client Sample ID: OC_GW_OW-10_20190212K

Lab Sample ID: 440-233274-5
Date Collected: 02/12/19 12:50
Matrix: Water
Date Received: 02/12/19 16:52

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	**2.4**		1.0	0.25	ug/L			02/22/19 12:53	1
Vinyl chloride	ND		0.50	0.25	ug/L			02/22/19 12:53	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*790*	*T J*	*ug/L*		*1.49*			*02/22/19 12:53*	*1*
Unknown	*11*	*T J*	*ug/L*		*5.25*			*02/22/19 12:53*	*1*
Unknown	*3.0*	*T J*	*ug/L*		*13.84*			*02/22/19 12:53*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*		*02/22/19 12:53*	*1*
Dibromofluoromethane (Surr)	*113*		*76 - 132*		*02/22/19 12:53*	*1*
Toluene-d8 (Surr)	*107*		*80 - 128*		*02/22/19 12:53*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**0.12**	**J H**	0.49	0.099	ug/L		02/21/19 11:01	02/22/19 12:05	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*56*		*27 - 120*	*02/21/19 11:01*	*02/22/19 12:05*	*1*

Client Sample ID: OC_GW_OW-9_20190212

Lab Sample ID: 440-233274-6
Date Collected: 02/12/19 13:15
Matrix: Water
Date Received: 02/12/19 16:52

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		10	2.5	ug/L			02/22/19 09:23	10
1,1,1-Trichloroethane	ND		10	2.5	ug/L			02/22/19 09:23	10
1,1,2,2-Tetrachloroethane	ND		10	2.5	ug/L			02/22/19 09:23	10
1,1,2-Trichloro-1,2,2-trifluoroethane	**180**		50	5.0	ug/L			02/22/19 09:23	10
1,1,2-Trichloroethane	**6.6**	**J**	10	2.5	ug/L			02/22/19 09:23	10
1,1-Dichloroethane	**12**		10	2.5	ug/L			02/22/19 09:23	10
1,1-Dichloroethene	**410**		10	2.5	ug/L			02/22/19 09:23	10
1,1-Dichloropropene	ND		10	2.5	ug/L			02/22/19 09:23	10
1,2,3-Trichlorobenzene	**5.1**	**J**	10	4.0	ug/L			02/22/19 09:23	10
1,2,3-Trichloropropane	ND		10	4.0	ug/L			02/22/19 09:23	10
1,2,4-Trichlorobenzene	ND		10	4.0	ug/L			02/22/19 09:23	10
1,2,4-Trimethylbenzene	ND		10	2.5	ug/L			02/22/19 09:23	10
1,2-Dibromo-3-Chloropropane	ND		50	5.0	ug/L			02/22/19 09:23	10
1,2-Dibromoethane (EDB)	ND		10	2.5	ug/L			02/22/19 09:23	10
1,2-Dichlorobenzene	ND		10	2.5	ug/L			02/22/19 09:23	10
1,2-Dichloroethane	**85**		10	2.5	ug/L			02/22/19 09:23	10
1,2-Dichloropropane	ND		10	2.5	ug/L			02/22/19 09:23	10
1,3,5-Trimethylbenzene	ND		10	2.5	ug/L			02/22/19 09:23	10
1,3-Dichlorobenzene	ND		10	2.5	ug/L			02/22/19 09:23	10
1,3-Dichloropropane	ND		10	2.5	ug/L			02/22/19 09:23	10
1,4-Dichlorobenzene	ND		10	2.5	ug/L			02/22/19 09:23	10
2,2-Dichloropropane	ND		10	4.0	ug/L			02/22/19 09:23	10
2-Chlorotoluene	ND		10	2.5	ug/L			02/22/19 09:23	10
4-Chlorotoluene	ND		10	2.5	ug/L			02/22/19 09:23	10

Client Sample Results

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-2019 Semi-Annual GWM Feb

TestAmerica Job ID: 440-233274-1
SDG: Whittier

Client Sample ID: OC_GW_OW-9_20190212

Lab Sample ID: 440-233274-6

Date Collected: 02/12/19 13:15
Matrix: Water
Date Received: 02/12/19 16:52

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		100	100	ug/L			02/22/19 09:23	10
Benzene	ND		5.0	2.5	ug/L			02/22/19 09:23	10
Bromobenzene	ND		10	2.5	ug/L			02/22/19 09:23	10
Bromochloromethane	ND		10	2.5	ug/L			02/22/19 09:23	10
Bromodichloromethane	ND		10	2.5	ug/L			02/22/19 09:23	10
Bromoform	ND		10	4.0	ug/L			02/22/19 09:23	10
Bromomethane	ND		10	2.5	ug/L			02/22/19 09:23	10
Carbon tetrachloride	ND		5.0	2.5	ug/L			02/22/19 09:23	10
Chlorobenzene	ND		10	2.5	ug/L			02/22/19 09:23	10
Chloroethane	ND		10	4.0	ug/L			02/22/19 09:23	10
Chloroform	**360**		10	2.5	ug/L			02/22/19 09:23	10
Chloromethane	ND		10	2.5	ug/L			02/22/19 09:23	10
cis-1,2-Dichloroethene	**4.3**	**J**	10	2.5	ug/L			02/22/19 09:23	10
cis-1,3-Dichloropropene	ND		5.0	2.5	ug/L			02/22/19 09:23	10
Dibromochloromethane	ND		10	2.5	ug/L			02/22/19 09:23	10
Dibromomethane	ND		10	2.5	ug/L			02/22/19 09:23	10
Dichlorodifluoromethane	ND		10	4.0	ug/L			02/22/19 09:23	10
Ethylbenzene	ND		10	2.5	ug/L			02/22/19 09:23	10
Hexachlorobutadiene	ND		10	2.5	ug/L			02/22/19 09:23	10
Isopropyl alcohol	ND		2500	1800	ug/L			02/22/19 09:23	10
Isopropylbenzene	ND		10	2.5	ug/L			02/22/19 09:23	10
m,p-Xylene	ND		10	5.0	ug/L			02/22/19 09:23	10
Methylene Chloride	**20**	**J**	50	8.8	ug/L			02/22/19 09:23	10
Methyl-t-Butyl Ether (MTBE)	ND		10	2.5	ug/L			02/22/19 09:23	10
Naphthalene	ND		10	4.0	ug/L			02/22/19 09:23	10
n-Butylbenzene	ND		10	4.0	ug/L			02/22/19 09:23	10
N-Propylbenzene	ND		10	2.5	ug/L			02/22/19 09:23	10
o-Xylene	ND		10	2.5	ug/L			02/22/19 09:23	10
p-Isopropyltoluene	ND		10	2.5	ug/L			02/22/19 09:23	10
sec-Butylbenzene	ND		10	2.5	ug/L			02/22/19 09:23	10
Styrene	ND		10	2.5	ug/L			02/22/19 09:23	10
tert-Butylbenzene	**2.7**	**J**	10	2.5	ug/L			02/22/19 09:23	10
Toluene	ND		10	2.5	ug/L			02/22/19 09:23	10
trans-1,2-Dichloroethene	**5.0**	**J**	10	2.5	ug/L			02/22/19 09:23	10
trans-1,3-Dichloropropene	ND		5.0	2.5	ug/L			02/22/19 09:23	10
Trichloroethene	**240**		10	2.5	ug/L			02/22/19 09:23	10
Trichlorofluoromethane	**74**		10	2.5	ug/L			02/22/19 09:23	10
Vinyl chloride	ND		5.0	2.5	ug/L			02/22/19 09:23	10

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*51*	*T J*	*ug/L*		*1.40*			*02/22/19 09:23*	*10*
Unknown	*5500*	*T J*	*ug/L*		*1.49*			*02/22/19 09:23*	*10*
Unknown	*54*	*T J*	*ug/L*		*1.56*			*02/22/19 09:23*	*10*
Unknown	*93*	*T J*	*ug/L*		*5.25*			*02/22/19 09:23*	*10*
Unknown	*29*	*T J*	*ug/L*		*8.10*			*02/22/19 09:23*	*10*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*80 - 120*		*02/22/19 09:23*	*10*
Dibromofluoromethane (Surr)	*106*		*76 - 132*		*02/22/19 09:23*	*10*
Toluene-d8 (Surr)	*108*		*80 - 128*		*02/22/19 09:23*	*10*

Client Sample Results

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-2019 Semi-Annual GWM Feb

TestAmerica Job ID: 440-233274-1
SDG: Whittier

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	**4700**	**F1**	50	13	ug/L			02/22/19 09:49	50

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*270*	*T J*	*ug/L*		*1.40*			*02/22/19 09:49*	*50*
Unknown	*11000*	*T J*	*ug/L*		*1.48*			*02/22/19 09:49*	*50*
Unknown	*190*	*T J*	*ug/L*		*13.84*			*02/22/19 09:49*	*50*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*80 - 120*		*02/22/19 09:49*	*50*
Dibromofluoromethane (Surr)	*109*		*76 - 132*		*02/22/19 09:49*	*50*
Toluene-d8 (Surr)	*103*		*80 - 128*		*02/22/19 09:49*	*50*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**640**	*** E B**	0.51	0.10	ug/L		02/18/19 08:16	02/19/19 16:01	1
1,4-Dioxane	**620**	**H B**	5.0	1.0	ug/L		02/20/19 11:33	02/21/19 21:55	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*37*		*27 - 120*	*02/18/19 08:16*	*02/19/19 16:01*	*1*
1,4-Dioxane-d8 (Surr)	*0*	*X*	*27 - 120*	*02/20/19 11:33*	*02/21/19 21:55*	*10*

Client Sample ID: OC_GW_OW-9_20190212K

Lab Sample ID: 440-233274-7

Date Collected: 02/12/19 13:20

Matrix: Water

Date Received: 02/12/19 16:52

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		10	2.5	ug/L			02/22/19 13:19	10
1,1,1-Trichloroethane	ND		10	2.5	ug/L			02/22/19 13:19	10
1,1,2,2-Tetrachloroethane	ND		10	2.5	ug/L			02/22/19 13:19	10
1,1,2-Trichloro-1,2,2-trifluoroethane	**190**		50	5.0	ug/L			02/22/19 13:19	10
1,1,2-Trichloroethane	**7.0**	**J**	10	2.5	ug/L			02/22/19 13:19	10
1,1-Dichloroethane	**12**		10	2.5	ug/L			02/22/19 13:19	10
1,1-Dichloroethene	**440**		10	2.5	ug/L			02/22/19 13:19	10
1,1-Dichloropropene	ND		10	2.5	ug/L			02/22/19 13:19	10
1,2,3-Trichlorobenzene	ND		10	4.0	ug/L			02/22/19 13:19	10
1,2,3-Trichloropropane	ND		10	4.0	ug/L			02/22/19 13:19	10
1,2,4-Trichlorobenzene	ND		10	4.0	ug/L			02/22/19 13:19	10
1,2,4-Trimethylbenzene	ND		10	2.5	ug/L			02/22/19 13:19	10
1,2-Dibromo-3-Chloropropane	ND		50	5.0	ug/L			02/22/19 13:19	10
1,2-Dibromoethane (EDB)	ND		10	2.5	ug/L			02/22/19 13:19	10
1,2-Dichlorobenzene	ND		10	2.5	ug/L			02/22/19 13:19	10
1,2-Dichloroethane	**91**		10	2.5	ug/L			02/22/19 13:19	10
1,2-Dichloropropane	ND		10	2.5	ug/L			02/22/19 13:19	10
1,3,5-Trimethylbenzene	ND		10	2.5	ug/L			02/22/19 13:19	10
1,3-Dichlorobenzene	ND		10	2.5	ug/L			02/22/19 13:19	10
1,3-Dichloropropane	ND		10	2.5	ug/L			02/22/19 13:19	10
1,4-Dichlorobenzene	ND		10	2.5	ug/L			02/22/19 13:19	10
2,2-Dichloropropane	ND		10	4.0	ug/L			02/22/19 13:19	10
2-Chlorotoluene	ND		10	2.5	ug/L			02/22/19 13:19	10
4-Chlorotoluene	ND		10	2.5	ug/L			02/22/19 13:19	10
Acetone	ND		100	100	ug/L			02/22/19 13:19	10
Benzene	ND		5.0	2.5	ug/L			02/22/19 13:19	10
Bromobenzene	ND		10	2.5	ug/L			02/22/19 13:19	10

Client Sample ID: OC_GW_OW-9_20190212K

Lab Sample ID: 440-233274-7

Date Collected: 02/12/19 13:20
Matrix: Water
Date Received: 02/12/19 16:52

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromochloromethane	ND		10	2.5	ug/L			02/22/19 13:19	10
Bromodichloromethane	ND		10	2.5	ug/L			02/22/19 13:19	10
Bromoform	ND		10	4.0	ug/L			02/22/19 13:19	10
Bromomethane	ND		10	2.5	ug/L			02/22/19 13:19	10
Carbon tetrachloride	ND		5.0	2.5	ug/L			02/22/19 13:19	10
Chlorobenzene	ND		10	2.5	ug/L			02/22/19 13:19	10
Chloroethane	ND		10	4.0	ug/L			02/22/19 13:19	10
Chloroform	**380**		10	2.5	ug/L			02/22/19 13:19	10
Chloromethane	ND		10	2.5	ug/L			02/22/19 13:19	10
cis-1,2-Dichloroethene	**4.7**	**J**	10	2.5	ug/L			02/22/19 13:19	10
cis-1,3-Dichloropropene	ND		5.0	2.5	ug/L			02/22/19 13:19	10
Dibromochloromethane	ND		10	2.5	ug/L			02/22/19 13:19	10
Dibromomethane	ND		10	2.5	ug/L			02/22/19 13:19	10
Dichlorodifluoromethane	ND		10	4.0	ug/L			02/22/19 13:19	10
Ethylbenzene	ND		10	2.5	ug/L			02/22/19 13:19	10
Hexachlorobutadiene	ND		10	2.5	ug/L			02/22/19 13:19	10
Isopropyl alcohol	ND		2500	1800	ug/L			02/22/19 13:19	10
Isopropylbenzene	ND		10	2.5	ug/L			02/22/19 13:19	10
m,p-Xylene	ND		10	5.0	ug/L			02/22/19 13:19	10
Methylene Chloride	**17**	**J**	50	8.8	ug/L			02/22/19 13:19	10
Methyl-t-Butyl Ether (MTBE)	ND		10	2.5	ug/L			02/22/19 13:19	10
Naphthalene	ND		10	4.0	ug/L			02/22/19 13:19	10
n-Butylbenzene	ND		10	4.0	ug/L			02/22/19 13:19	10
N-Propylbenzene	ND		10	2.5	ug/L			02/22/19 13:19	10
o-Xylene	ND		10	2.5	ug/L			02/22/19 13:19	10
p-Isopropyltoluene	ND		10	2.5	ug/L			02/22/19 13:19	10
sec-Butylbenzene	ND		10	2.5	ug/L			02/22/19 13:19	10
Styrene	ND		10	2.5	ug/L			02/22/19 13:19	10
tert-Butylbenzene	ND		10	2.5	ug/L			02/22/19 13:19	10
Toluene	ND		10	2.5	ug/L			02/22/19 13:19	10
trans-1,2-Dichloroethene	**6.1**	**J**	10	2.5	ug/L			02/22/19 13:19	10
trans-1,3-Dichloropropene	ND		5.0	2.5	ug/L			02/22/19 13:19	10
Trichloroethene	**250**		10	2.5	ug/L			02/22/19 13:19	10
Trichlorofluoromethane	**74**		10	2.5	ug/L			02/22/19 13:19	10
Vinyl chloride	ND		5.0	2.5	ug/L			02/22/19 13:19	10

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*4500*	*T J*	*ug/L*		*1.48*			*02/22/19 13:19*	*10*
Unknown	*41*	*T J*	*ug/L*		*1.56*			*02/22/19 13:19*	*10*
Unknown	*98*	*T J*	*ug/L*		*5.25*			*02/22/19 13:19*	*10*
Unknown	*42*	*T J*	*ug/L*		*8.10*			*02/22/19 13:19*	*10*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*		*02/22/19 13:19*	*10*
Dibromofluoromethane (Surr)	*105*		*76 - 132*		*02/22/19 13:19*	*10*
Toluene-d8 (Surr)	*106*		*80 - 128*		*02/22/19 13:19*	*10*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	**4900**		50	13	ug/L			02/22/19 13:45	50

Client Sample ID: OC_GW_OW-9_20190212K — Lab Sample ID: 440-233274-7

Date Collected: 02/12/19 13:20 — **Matrix: Water**
Date Received: 02/12/19 16:52

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	290	T J	ug/L		1.40			02/22/19 13:45	50
Unknown	12000	T J	ug/L		1.48			02/22/19 13:45	50
Unknown	530	T J	ug/L		5.25			02/22/19 13:45	50

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91		80 - 120		02/22/19 13:45	50
Dibromofluoromethane (Surr)	115		76 - 132		02/22/19 13:45	50
Toluene-d8 (Surr)	104		80 - 128		02/22/19 13:45	50

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**1000**	*** E B**	0.51	0.10	ug/L		02/18/19 08:16	02/19/19 16:24	1
1,4-Dioxane	**610**	**H B**	4.9	0.99	ug/L		02/20/19 11:33	02/21/19 22:19	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	29		27 - 120	02/18/19 08:16	02/19/19 16:24	1
1,4-Dioxane-d8 (Surr)	46		27 - 120	02/20/19 11:33	02/21/19 22:19	10

Client Sample ID: OC_GW_OW-12_20190212 — Lab Sample ID: 440-233274-8

Date Collected: 02/12/19 13:40 — **Matrix: Water**
Date Received: 02/12/19 16:52

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		20	5.0	ug/L			02/22/19 14:12	20
1,1,1-Trichloroethane	**210**		20	5.0	ug/L			02/22/19 14:12	20
1,1,2,2-Tetrachloroethane	ND		20	5.0	ug/L			02/22/19 14:12	20
1,1,2-Trichloroethane	ND		20	5.0	ug/L			02/22/19 14:12	20
1,1-Dichloroethane	ND		20	5.0	ug/L			02/22/19 14:12	20
1,1-Dichloroethene	**340**		20	5.0	ug/L			02/22/19 14:12	20
1,1-Dichloropropene	ND		20	5.0	ug/L			02/22/19 14:12	20
1,2,3-Trichlorobenzene	ND		20	8.0	ug/L			02/22/19 14:12	20
1,2,3-Trichloropropane	ND		20	8.0	ug/L			02/22/19 14:12	20
1,2,4-Trichlorobenzene	ND		20	8.0	ug/L			02/22/19 14:12	20
1,2,4-Trimethylbenzene	ND		20	5.0	ug/L			02/22/19 14:12	20
1,2-Dibromo-3-Chloropropane	ND		100	10	ug/L			02/22/19 14:12	20
1,2-Dibromoethane (EDB)	ND		20	5.0	ug/L			02/22/19 14:12	20
1,2-Dichlorobenzene	**7.9**	**J**	20	5.0	ug/L			02/22/19 14:12	20
1,2-Dichloroethane	**13**	**J**	20	5.0	ug/L			02/22/19 14:12	20
1,2-Dichloropropane	ND		20	5.0	ug/L			02/22/19 14:12	20
1,3,5-Trimethylbenzene	ND		20	5.0	ug/L			02/22/19 14:12	20
1,3-Dichlorobenzene	ND		20	5.0	ug/L			02/22/19 14:12	20
1,3-Dichloropropane	ND		20	5.0	ug/L			02/22/19 14:12	20
1,4-Dichlorobenzene	ND		20	5.0	ug/L			02/22/19 14:12	20
2,2-Dichloropropane	ND		20	8.0	ug/L			02/22/19 14:12	20
2-Chlorotoluene	ND		20	5.0	ug/L			02/22/19 14:12	20
4-Chlorotoluene	ND		20	5.0	ug/L			02/22/19 14:12	20
Acetone	ND		200	200	ug/L			02/22/19 14:12	20
Benzene	ND		10	5.0	ug/L			02/22/19 14:12	20
Bromobenzene	ND		20	5.0	ug/L			02/22/19 14:12	20
Bromochloromethane	ND		20	5.0	ug/L			02/22/19 14:12	20

Client Sample Results

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-2019 Semi-Annual GWM Feb

TestAmerica Job ID: 440-233274-1
SDG: Whittier

Client Sample ID: OC_GW_OW-12_20190212

Lab Sample ID: 440-233274-8

Date Collected: 02/12/19 13:40
Matrix: Water
Date Received: 02/12/19 16:52

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromodichloromethane	ND		20	5.0	ug/L			02/22/19 14:12	20
Bromoform	ND		20	8.0	ug/L			02/22/19 14:12	20
Bromomethane	ND		20	5.0	ug/L			02/22/19 14:12	20
Carbon tetrachloride	ND		10	5.0	ug/L			02/22/19 14:12	20
Chlorobenzene	ND		20	5.0	ug/L			02/22/19 14:12	20
Chloroethane	ND		20	8.0	ug/L			02/22/19 14:12	20
Chloroform	**270**		20	5.0	ug/L			02/22/19 14:12	20
Chloromethane	ND		20	5.0	ug/L			02/22/19 14:12	20
cis-1,2-Dichloroethene	ND		20	5.0	ug/L			02/22/19 14:12	20
cis-1,3-Dichloropropene	ND		10	5.0	ug/L			02/22/19 14:12	20
Dibromochloromethane	ND		20	5.0	ug/L			02/22/19 14:12	20
Dibromomethane	ND		20	5.0	ug/L			02/22/19 14:12	20
Dichlorodifluoromethane	ND		20	8.0	ug/L			02/22/19 14:12	20
Ethylbenzene	ND		20	5.0	ug/L			02/22/19 14:12	20
Hexachlorobutadiene	ND		20	5.0	ug/L			02/22/19 14:12	20
Isopropyl alcohol	ND		5000	3500	ug/L			02/22/19 14:12	20
Isopropylbenzene	ND		20	5.0	ug/L			02/22/19 14:12	20
m,p-Xylene	ND		20	10	ug/L			02/22/19 14:12	20
Methylene Chloride	**35**	**J**	100	18	ug/L			02/22/19 14:12	20
Methyl-t-Butyl Ether (MTBE)	ND		20	5.0	ug/L			02/22/19 14:12	20
Naphthalene	ND		20	8.0	ug/L			02/22/19 14:12	20
n-Butylbenzene	ND		20	8.0	ug/L			02/22/19 14:12	20
N-Propylbenzene	ND		20	5.0	ug/L			02/22/19 14:12	20
o-Xylene	ND		20	5.0	ug/L			02/22/19 14:12	20
p-Isopropyltoluene	ND		20	5.0	ug/L			02/22/19 14:12	20
sec-Butylbenzene	ND		20	5.0	ug/L			02/22/19 14:12	20
Styrene	ND		20	5.0	ug/L			02/22/19 14:12	20
tert-Butylbenzene	ND		20	5.0	ug/L			02/22/19 14:12	20
Toluene	**17**	**J**	20	5.0	ug/L			02/22/19 14:12	20
trans-1,2-Dichloroethene	ND		20	5.0	ug/L			02/22/19 14:12	20
trans-1,3-Dichloropropene	ND		10	5.0	ug/L			02/22/19 14:12	20
Trichloroethene	**1000**		20	5.0	ug/L			02/22/19 14:12	20
Trichlorofluoromethane	**140**		20	5.0	ug/L			02/22/19 14:12	20
Vinyl chloride	ND		10	5.0	ug/L			02/22/19 14:12	20

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*91*	*T J*	*ug/L*		*1.40*			*02/22/19 14:12*	*20*
Unknown	*3700*	*T J*	*ug/L*		*1.48*			*02/22/19 14:12*	*20*
Unknown	*210*	*T J*	*ug/L*		*5.25*			*02/22/19 14:12*	*20*
Unknown	*51*	*T J*	*ug/L*		*8.10*			*02/22/19 14:12*	*20*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*93*		*80 - 120*		*02/22/19 14:12*	*20*
Dibromofluoromethane (Surr)	*112*		*76 - 132*		*02/22/19 14:12*	*20*
Toluene-d8 (Surr)	*105*		*80 - 128*		*02/22/19 14:12*	*20*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloro-1,2,2-trifluoroethane	**3900**		500	50	ug/L			02/22/19 14:38	100

Client Sample ID: OC_GW_OW-12_20190212

Lab Sample ID: 440-233274-8
Date Collected: 02/12/19 13:40
Matrix: Water
Date Received: 02/12/19 16:52

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	5600		100	25	ug/L			02/22/19 14:38	100

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*11000*	*T J*	*ug/L*		*1.48*			*02/22/19 14:38*	*100*
Unknown	*1000*	*T J*	*ug/L*		*5.25*			*02/22/19 14:38*	*100*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*		*02/22/19 14:38*	*100*
Dibromofluoromethane (Surr)	*110*		*76 - 132*		*02/22/19 14:38*	*100*
Toluene-d8 (Surr)	*105*		*80 - 128*		*02/22/19 14:38*	*100*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	8.7	H	0.49	0.098	ug/L		02/21/19 11:01	02/22/19 12:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*51*		*27 - 120*	*02/21/19 11:01*	*02/22/19 12:29*	*1*

Client Sample ID: OC_GW_TB_20190212

Lab Sample ID: 440-233274-9
Date Collected: 02/12/19 07:00
Matrix: Water
Date Received: 02/12/19 16:52

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/22/19 15:04	1
1,1,1-Trichloroethane	ND		1.0	0.25	ug/L			02/22/19 15:04	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/22/19 15:04	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	0.50	ug/L			02/22/19 15:04	1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L			02/22/19 15:04	1
1,1-Dichloroethane	ND		1.0	0.25	ug/L			02/22/19 15:04	1
1,1-Dichloroethene	ND		1.0	0.25	ug/L			02/22/19 15:04	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			02/22/19 15:04	1
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L			02/22/19 15:04	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			02/22/19 15:04	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			02/22/19 15:04	1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			02/22/19 15:04	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			02/22/19 15:04	1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			02/22/19 15:04	1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			02/22/19 15:04	1
1,2-Dichloroethane	ND		1.0	0.25	ug/L			02/22/19 15:04	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			02/22/19 15:04	1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			02/22/19 15:04	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			02/22/19 15:04	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			02/22/19 15:04	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			02/22/19 15:04	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			02/22/19 15:04	1
2-Chlorotoluene	ND		1.0	0.25	ug/L			02/22/19 15:04	1
4-Chlorotoluene	ND		1.0	0.25	ug/L			02/22/19 15:04	1
Acetone	ND		10	10	ug/L			02/22/19 15:04	1
Benzene	ND		0.50	0.25	ug/L			02/22/19 15:04	1
Bromobenzene	ND		1.0	0.25	ug/L			02/22/19 15:04	1

Client Sample ID: OC_GW_TB_20190212

Lab Sample ID: 440-233274-9

Date Collected: 02/12/19 07:00
Matrix: Water
Date Received: 02/12/19 16:52

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Bromochloromethane	ND		1.0	0.25	ug/L			02/22/19 15:04	1
Bromodichloromethane	ND		1.0	0.25	ug/L			02/22/19 15:04	1
Bromoform	ND		1.0	0.40	ug/L			02/22/19 15:04	1
Bromomethane	ND		1.0	0.25	ug/L			02/22/19 15:04	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			02/22/19 15:04	1
Chlorobenzene	ND		1.0	0.25	ug/L			02/22/19 15:04	1
Chloroethane	ND		1.0	0.40	ug/L			02/22/19 15:04	1
Chloroform	ND		1.0	0.25	ug/L			02/22/19 15:04	1
Chloromethane	ND		1.0	0.25	ug/L			02/22/19 15:04	1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			02/22/19 15:04	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/22/19 15:04	1
Dibromochloromethane	ND		1.0	0.25	ug/L			02/22/19 15:04	1
Dibromomethane	ND		1.0	0.25	ug/L			02/22/19 15:04	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			02/22/19 15:04	1
Ethylbenzene	ND		1.0	0.25	ug/L			02/22/19 15:04	1
Hexachlorobutadiene	ND		1.0	0.25	ug/L			02/22/19 15:04	1
Isopropyl alcohol	ND		250	180	ug/L			02/22/19 15:04	1
Isopropylbenzene	ND		1.0	0.25	ug/L			02/22/19 15:04	1
m,p-Xylene	ND		1.0	0.50	ug/L			02/22/19 15:04	1
Methylene Chloride	**0.93**	**J**	5.0	0.88	ug/L			02/22/19 15:04	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			02/22/19 15:04	1
Naphthalene	ND		1.0	0.40	ug/L			02/22/19 15:04	1
n-Butylbenzene	ND		1.0	0.40	ug/L			02/22/19 15:04	1
N-Propylbenzene	ND		1.0	0.25	ug/L			02/22/19 15:04	1
o-Xylene	ND		1.0	0.25	ug/L			02/22/19 15:04	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			02/22/19 15:04	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			02/22/19 15:04	1
Styrene	ND		1.0	0.25	ug/L			02/22/19 15:04	1
tert-Butylbenzene	ND		1.0	0.25	ug/L			02/22/19 15:04	1
Tetrachloroethene	ND		1.0	0.25	ug/L			02/22/19 15:04	1
Toluene	ND		1.0	0.25	ug/L			02/22/19 15:04	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			02/22/19 15:04	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/22/19 15:04	1
Trichloroethene	ND		1.0	0.25	ug/L			02/22/19 15:04	1
Trichlorofluoromethane	ND		1.0	0.25	ug/L			02/22/19 15:04	1
Vinyl chloride	ND		0.50	0.25	ug/L			02/22/19 15:04	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*91*	*T J*	*ug/L*		*1.47*			*02/22/19 15:04*	*1*
Unknown	*11*	*T J*	*ug/L*		*5.25*			*02/22/19 15:04*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*92*		*80 - 120*		*02/22/19 15:04*	*1*
Dibromofluoromethane (Surr)	*113*		*76 - 132*		*02/22/19 15:04*	*1*
Toluene-d8 (Surr)	*104*		*80 - 128*		*02/22/19 15:04*	*1*

Surrogate Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-2019 Semi-Annual GWM Feb

TestAmerica Job ID: 440-233274-1
SDG: Whittier

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

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(80-120)	(76-132)	(80-128)
440-233274-1	OC_GW_OW-3B_20190211	96	106	105
440-233274-2	OC_GW_OW-1B_20190212	90	107	105
440-233274-3	OC_GW_OW-1B_20190211N	95	107	106
440-233274-4	OC_GW_OW-10_20190212	94	108	106
440-233274-5	OC_GW_OW-10_20190212K	98	113	107
440-233274-6	OC_GW_OW-9_20190212	92	106	108
440-233274-6 - DL	OC_GW_OW-9_20190212	92	109	103
440-233274-6 MS	OC_GW_OW-9_20190212	95	106	100
440-233274-6 MSD	OC_GW_OW-9_20190212	96	104	98
440-233274-7	OC_GW_OW-9_20190212K	95	105	106
440-233274-7 - DL	OC_GW_OW-9_20190212K	91	115	104
440-233274-8	OC_GW_OW-12_20190212	93	112	105
440-233274-8 - DL	OC_GW_OW-12_20190212	95	110	105
440-233274-9	OC_GW_TB_20190212	92	113	104
LCS 440-530231/1003	Lab Control Sample	94	101	105
LCS 440-530231/5	Lab Control Sample	100	104	99
MB 440-530231/4	Method Blank	99	108	104

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

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

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
		DXE
Lab Sample ID	Client Sample ID	(27-120)
440-233274-1	OC_GW_OW-3B_20190211	41
440-233274-2	OC_GW_OW-1B_20190212	46
440-233274-4	OC_GW_OW-10_20190212	46
440-233274-5	OC_GW_OW-10_20190212K	56
440-233274-6	OC_GW_OW-9_20190212	37
440-233274-6	OC_GW_OW-9_20190212	0 X
440-233274-7	OC_GW_OW-9_20190212K	29
440-233274-7	OC_GW_OW-9_20190212K	46
440-233274-8	OC_GW_OW-12_20190212	51
LCS 440-529201/2-A	Lab Control Sample	51
LCS 440-529257/2-A	Lab Control Sample	60
LCS 440-529836/2-A	Lab Control Sample	66
LCS 440-530083/3-A	Lab Control Sample	55
LCSD 440-529201/3-A	Lab Control Sample Dup	51
LCSD 440-529257/3-A	Lab Control Sample Dup	60
LCSD 440-529836/3-A	Lab Control Sample Dup	58
LCSD 440-530083/4-A	Lab Control Sample Dup	43
MB 440-529201/1-A	Method Blank	47
MB 440-529257/1-A	Method Blank	46
MB 440-529836/1-A	Method Blank	57

Surrogate Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-2019 Semi-Annual GWM Feb

TestAmerica Job ID: 440-233274-1
SDG: Whittier

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

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)							
Lab Sample ID	**Client Sample ID**	**DXE (27-120)**							
MB 440-530083/1-A	Method Blank	53							

Surrogate Legend

DXE = 1,4-Dioxane-d8 (Surr)

Method Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-2019 Semi-Annual GWM Feb

TestAmerica Job ID: 440-233274-1
SDG: Whittier

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL IRV
8270C SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL IRV
3520C	Liquid-Liquid Extraction (Continuous)	SW846	TAL IRV
5030B	Purge and Trap	SW846	TAL IRV

Protocol References:

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: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-2019 Semi-Annual GWM Feb

TestAmerica Job ID: 440-233274-1
SDG: Whittier

Client Sample ID: OC_GW_OW-3B_20190211 — Lab Sample ID: 440-233274-1

Date Collected: 02/11/19 08:58 — **Matrix: Water**
Date Received: 02/12/19 16:52

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	530231	02/22/19 11:08	RM	TAL IRV
Total/NA	Prep	3520C			1025 mL	1 mL	529201	02/17/19 13:35	AJP	TAL IRV
Total/NA	Analysis	8270C SIM		1			529338	02/18/19 20:43	HN	TAL IRV

Client Sample ID: OC_GW_OW-1B_20190212 — Lab Sample ID: 440-233274-2

Date Collected: 02/12/19 08:15 — **Matrix: Water**
Date Received: 02/12/19 16:52

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	530231	02/22/19 11:34	RM	TAL IRV
Total/NA	Prep	3520C			1020 mL	1 mL	529201	02/17/19 13:35	AJP	TAL IRV
Total/NA	Analysis	8270C SIM		1			529338	02/18/19 21:07	HN	TAL IRV

Client Sample ID: OC_GW_OW-1B_20190211N — Lab Sample ID: 440-233274-3

Date Collected: 02/11/19 14:30 — **Matrix: Water**
Date Received: 02/12/19 16:52

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	530231	02/22/19 12:00	RM	TAL IRV

Client Sample ID: OC_GW_OW-10_20190212 — Lab Sample ID: 440-233274-4

Date Collected: 02/12/19 12:45 — **Matrix: Water**
Date Received: 02/12/19 16:52

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	530231	02/22/19 12:27	RM	TAL IRV
Total/NA	Prep	3520C			1020 mL	1 mL	529201	02/17/19 13:35	AJP	TAL IRV
Total/NA	Analysis	8270C SIM		1			529518	02/19/19 10:37	HN	TAL IRV

Client Sample ID: OC_GW_OW-10_20190212K — Lab Sample ID: 440-233274-5

Date Collected: 02/12/19 12:50 — **Matrix: Water**
Date Received: 02/12/19 16:52

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	530231	02/22/19 12:53	RM	TAL IRV
Total/NA	Prep	3520C			1015 mL	1.0 mL	530083	02/21/19 11:01	JAA	TAL IRV
Total/NA	Analysis	8270C SIM		1			530289	02/22/19 12:05	L1B	TAL IRV

Lab Chronicle

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-2019 Semi-Annual GWM Feb

TestAmerica Job ID: 440-233274-1
SDG: Whittier

Client Sample ID: OC_GW_OW-9_20190212 — Lab Sample ID: 440-233274-6

Date Collected: 02/12/19 13:15
Date Received: 02/12/19 16:52
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		10	10 mL	10 mL	530231	02/22/19 09:23	RM	TAL IRV
Total/NA	Analysis	8260B	DL	50	10 mL	10 mL	530231	02/22/19 09:49	RM	TAL IRV
Total/NA	Prep	3520C			985 mL	1.0 mL	529257	02/18/19 08:16	JAA	TAL IRV
Total/NA	Analysis	8270C SIM		1			529518	02/19/19 16:01	HN	TAL IRV
Total/NA	Prep	3520C			1000 mL	1.0 mL	529836	02/20/19 11:33	JAA	TAL IRV
Total/NA	Analysis	8270C SIM		10			530058	02/21/19 21:55	L1B	TAL IRV

Client Sample ID: OC_GW_OW-9_20190212K — Lab Sample ID: 440-233274-7

Date Collected: 02/12/19 13:20
Date Received: 02/12/19 16:52
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		10	10 mL	10 mL	530231	02/22/19 13:19	RM	TAL IRV
Total/NA	Analysis	8260B	DL	50	10 mL	10 mL	530231	02/22/19 13:45	RM	TAL IRV
Total/NA	Prep	3520C			975 mL	1.0 mL	529257	02/18/19 08:16	JAA	TAL IRV
Total/NA	Analysis	8270C SIM		1			529518	02/19/19 16:24	HN	TAL IRV
Total/NA	Prep	3520C			1015 mL	1.0 mL	529836	02/20/19 11:33	JAA	TAL IRV
Total/NA	Analysis	8270C SIM		10			530058	02/21/19 22:19	L1B	TAL IRV

Client Sample ID: OC_GW_OW-12_20190212 — Lab Sample ID: 440-233274-8

Date Collected: 02/12/19 13:40
Date Received: 02/12/19 16:52
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		20	10 mL	10 mL	530231	02/22/19 14:12	RM	TAL IRV
Total/NA	Analysis	8260B	DL	100	10 mL	10 mL	530231	02/22/19 14:38	RM	TAL IRV
Total/NA	Prep	3520C			1025 mL	1.0 mL	530083	02/21/19 11:01	JAA	TAL IRV
Total/NA	Analysis	8270C SIM		1			530289	02/22/19 12:29	L1B	TAL IRV

Client Sample ID: OC_GW_TB_20190212 — Lab Sample ID: 440-233274-9

Date Collected: 02/12/19 07:00
Date Received: 02/12/19 16:52
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	530231	02/22/19 15:04	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 440-530231/4
Matrix: Water
Analysis Batch: 530231

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/22/19 07:53	1
1,1,1-Trichloroethane	ND		1.0	0.25	ug/L			02/22/19 07:53	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/22/19 07:53	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	0.50	ug/L			02/22/19 07:53	1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L			02/22/19 07:53	1
1,1-Dichloroethane	ND		1.0	0.25	ug/L			02/22/19 07:53	1
1,1-Dichloroethene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L			02/22/19 07:53	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			02/22/19 07:53	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			02/22/19 07:53	1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			02/22/19 07:53	1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			02/22/19 07:53	1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
1,2-Dichloroethane	ND		1.0	0.25	ug/L			02/22/19 07:53	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			02/22/19 07:53	1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			02/22/19 07:53	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			02/22/19 07:53	1
2-Chlorotoluene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
4-Chlorotoluene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
Acetone	ND		10	10	ug/L			02/22/19 07:53	1
Benzene	ND		0.50	0.25	ug/L			02/22/19 07:53	1
Bromobenzene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
Bromochloromethane	ND		1.0	0.25	ug/L			02/22/19 07:53	1
Bromodichloromethane	ND		1.0	0.25	ug/L			02/22/19 07:53	1
Bromoform	ND		1.0	0.40	ug/L			02/22/19 07:53	1
Bromomethane	ND		1.0	0.25	ug/L			02/22/19 07:53	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			02/22/19 07:53	1
Chlorobenzene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
Chloroethane	ND		1.0	0.40	ug/L			02/22/19 07:53	1
Chloroform	ND		1.0	0.25	ug/L			02/22/19 07:53	1
Chloromethane	ND		1.0	0.25	ug/L			02/22/19 07:53	1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/22/19 07:53	1
Dibromochloromethane	ND		1.0	0.25	ug/L			02/22/19 07:53	1
Dibromomethane	ND		1.0	0.25	ug/L			02/22/19 07:53	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			02/22/19 07:53	1
Ethylbenzene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
Hexachlorobutadiene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
Isopropyl alcohol	ND		250	180	ug/L			02/22/19 07:53	1
Isopropylbenzene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
m,p-Xylene	ND		1.0	0.50	ug/L			02/22/19 07:53	1
Methylene Chloride	ND		5.0	0.88	ug/L			02/22/19 07:53	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			02/22/19 07:53	1

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

Lab Sample ID: MB 440-530231/4
Matrix: Water
Analysis Batch: 530231

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		1.0	0.40	ug/L			02/22/19 07:53	1
n-Butylbenzene	ND		1.0	0.40	ug/L			02/22/19 07:53	1
N-Propylbenzene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
o-Xylene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
Styrene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
tert-Butylbenzene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
Tetrachloroethene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
Toluene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/22/19 07:53	1
Trichloroethene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
Trichlorofluoromethane	ND		1.0	0.25	ug/L			02/22/19 07:53	1
Vinyl chloride	ND		0.50	0.25	ug/L			02/22/19 07:53	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*56.0*	*T J*	*ug/L*		*1.48*			*02/22/19 07:53*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*		*02/22/19 07:53*	*1*
Dibromofluoromethane (Surr)	*108*		*76 - 132*		*02/22/19 07:53*	*1*
Toluene-d8 (Surr)	*104*		*80 - 128*		*02/22/19 07:53*	*1*

Lab Sample ID: LCS 440-530231/1003
Matrix: Water
Analysis Batch: 530231

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Isopropyl alcohol	250	235	J	ug/L		94	49 - 142

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*
Dibromofluoromethane (Surr)	*101*		*76 - 132*
Toluene-d8 (Surr)	*105*		*80 - 128*

Lab Sample ID: LCS 440-530231/5
Matrix: Water
Analysis Batch: 530231

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	24.3		ug/L		97	60 - 141
1,1,1-Trichloroethane	25.0	26.0		ug/L		104	70 - 130
1,1,2,2-Tetrachloroethane	25.0	22.4		ug/L		89	63 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	21.2		ug/L		85	60 - 140
1,1,2-Trichloroethane	25.0	22.5		ug/L		90	70 - 130

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

Lab Sample ID: LCS 440-530231/5
Matrix: Water
Analysis Batch: 530231

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethane	25.0	24.2		ug/L		97	64 - 130
1,1-Dichloroethene	25.0	22.6		ug/L		91	70 - 130
1,1-Dichloropropene	25.0	27.0		ug/L		108	70 - 130
1,2,3-Trichlorobenzene	25.0	26.2		ug/L		105	60 - 140
1,2,3-Trichloropropane	25.0	23.6		ug/L		94	63 - 130
1,2,4-Trichlorobenzene	25.0	30.1		ug/L		120	60 - 140
1,2,4-Trimethylbenzene	25.0	26.2		ug/L		105	70 - 135
1,2-Dibromo-3-Chloropropane	25.0	22.4		ug/L		90	52 - 140
1,2-Dibromoethane (EDB)	25.0	23.2		ug/L		93	70 - 130
1,2-Dichlorobenzene	25.0	25.9		ug/L		104	70 - 130
1,2-Dichloroethane	25.0	26.6		ug/L		106	57 - 138
1,2-Dichloropropane	25.0	25.6		ug/L		102	67 - 130
1,3,5-Trimethylbenzene	25.0	25.6		ug/L		102	70 - 136
1,3-Dichlorobenzene	25.0	26.2		ug/L		105	70 - 130
1,3-Dichloropropane	25.0	23.1		ug/L		92	70 - 130
1,4-Dichlorobenzene	25.0	24.3		ug/L		97	70 - 130
2,2-Dichloropropane	25.0	29.6		ug/L		118	68 - 141
2-Chlorotoluene	25.0	24.3		ug/L		97	70 - 130
4-Chlorotoluene	25.0	26.5		ug/L		106	70 - 130
Acetone	25.0	26.3		ug/L		105	10 - 150
Benzene	25.0	25.4		ug/L		102	68 - 130
Bromobenzene	25.0	23.8		ug/L		95	70 - 130
Bromochloromethane	25.0	25.4		ug/L		101	70 - 130
Bromodichloromethane	25.0	26.4		ug/L		105	70 - 132
Bromoform	25.0	24.1		ug/L		96	60 - 148
Bromomethane	25.0	20.0		ug/L		80	64 - 139
Carbon tetrachloride	25.0	25.6		ug/L		102	60 - 150
Chlorobenzene	25.0	23.6		ug/L		95	70 - 130
Chloroethane	25.0	19.9		ug/L		79	64 - 135
Chloroform	25.0	25.1		ug/L		100	70 - 130
Chloromethane	25.0	18.5		ug/L		74	47 - 140
cis-1,2-Dichloroethene	25.0	26.5		ug/L		106	70 - 133
cis-1,3-Dichloropropene	25.0	26.5		ug/L		106	70 - 133
Dibromochloromethane	25.0	25.0		ug/L		100	69 - 145
Dibromomethane	25.0	25.2		ug/L		101	70 - 130
Dichlorodifluoromethane	25.0	16.8		ug/L		67	29 - 150
Ethylbenzene	25.0	26.8		ug/L		107	70 - 130
Hexachlorobutadiene	25.0	27.9		ug/L		112	10 - 150
Isopropylbenzene	25.0	25.5		ug/L		102	70 - 136
m,p-Xylene	25.0	24.6		ug/L		98	70 - 130
Methylene Chloride	25.0	21.7		ug/L		87	52 - 130
Methyl-t-Butyl Ether (MTBE)	25.0	26.6		ug/L		107	63 - 131
Naphthalene	25.0	24.5		ug/L		98	60 - 140
n-Butylbenzene	25.0	26.9		ug/L		108	65 - 150
N-Propylbenzene	25.0	27.2		ug/L		109	67 - 139
o-Xylene	25.0	24.6		ug/L		98	70 - 130
p-Isopropyltoluene	25.0	28.5		ug/L		114	70 - 132
sec-Butylbenzene	25.0	24.7		ug/L		99	70 - 138

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

Lab Sample ID: LCS 440-530231/5
Matrix: Water
Analysis Batch: 530231

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Styrene	25.0	23.0		ug/L		92	70 - 134
tert-Butylbenzene	25.0	25.1		ug/L		100	70 - 130
Tetrachloroethene	25.0	24.2		ug/L		97	70 - 130
Toluene	25.0	26.1		ug/L		105	70 - 130
trans-1,2-Dichloroethene	25.0	25.6		ug/L		102	70 - 130
trans-1,3-Dichloropropene	25.0	23.9		ug/L		96	70 - 132
Trichloroethene	25.0	26.7		ug/L		107	70 - 130
Trichlorofluoromethane	25.0	20.5		ug/L		82	60 - 150
Vinyl chloride	25.0	18.3		ug/L		73	59 - 133

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*
Dibromofluoromethane (Surr)	*104*		*76 - 132*
Toluene-d8 (Surr)	*99*		*80 - 128*

Lab Sample ID: 440-233274-6 MS
Matrix: Water
Analysis Batch: 530231

Client Sample ID: OC_GW_OW-9_20190212
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	ND		1250	1200		ug/L		96	60 - 149
1,1,1-Trichloroethane	ND		1250	1290		ug/L		103	70 - 130
1,1,2,2-Tetrachloroethane	ND		1250	1060		ug/L		84	63 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	180	J	1250	1190		ug/L		81	60 - 140
1,1,2-Trichloroethane	ND		1250	1140		ug/L		91	70 - 130
1,1-Dichloroethane	ND		1250	1220		ug/L		97	65 - 130
1,1-Dichloroethene	400		1250	1460		ug/L		85	70 - 130
1,1-Dichloropropene	ND		1250	1390		ug/L		111	64 - 130
1,2,3-Trichlorobenzene	ND		1250	1290		ug/L		103	60 - 140
1,2,3-Trichloropropane	ND		1250	1040		ug/L		83	60 - 130
1,2,4-Trichlorobenzene	ND		1250	1480		ug/L		119	60 - 140
1,2,4-Trimethylbenzene	ND		1250	1250		ug/L		100	70 - 130
1,2-Dibromo-3-Chloropropane	ND		1250	913		ug/L		73	48 - 140
1,2-Dibromoethane (EDB)	ND		1250	1200		ug/L		96	70 - 131
1,2-Dichlorobenzene	ND		1250	1300		ug/L		104	70 - 130
1,2-Dichloroethane	95		1250	1490		ug/L		111	56 - 146
1,2-Dichloropropane	ND		1250	1290		ug/L		103	69 - 130
1,3,5-Trimethylbenzene	ND		1250	1210		ug/L		97	70 - 130
1,3-Dichlorobenzene	ND		1250	1290		ug/L		103	70 - 130
1,3-Dichloropropane	ND		1250	1140		ug/L		91	70 - 130
1,4-Dichlorobenzene	ND		1250	1190		ug/L		95	70 - 130
2,2-Dichloropropane	ND		1250	1590		ug/L		127	69 - 138
2-Chlorotoluene	ND		1250	1160		ug/L		93	70 - 130
4-Chlorotoluene	ND		1250	1270		ug/L		102	70 - 130
Acetone	ND		1250	1310		ug/L		105	10 - 150
Benzene	ND		1250	1290		ug/L		103	66 - 130
Bromobenzene	ND		1250	1120		ug/L		90	70 - 130

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

Lab Sample ID: 440-233274-6 MS
Matrix: Water
Analysis Batch: 530231

Client Sample ID: OC_GW_OW-9_20190212
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Bromochloromethane	ND		1250	1280		ug/L		102	70 - 130
Bromodichloromethane	ND		1250	1370		ug/L		110	70 - 138
Bromoform	ND		1250	1090		ug/L		88	59 - 150
Bromomethane	ND		1250	1020		ug/L		81	62 - 131
Carbon tetrachloride	ND		1250	1300		ug/L		104	60 - 150
Chlorobenzene	ND		1250	1200		ug/L		96	70 - 130
Chloroethane	ND		1250	986		ug/L		79	68 - 130
Chloroform	380		1250	1620		ug/L		99	70 - 130
Chloromethane	ND		1250	926		ug/L		74	39 - 144
cis-1,2-Dichloroethene	ND		1250	1370		ug/L		110	70 - 130
cis-1,3-Dichloropropene	ND		1250	1400		ug/L		112	70 - 133
Dibromochloromethane	ND		1250	1300		ug/L		104	70 - 148
Dibromomethane	ND		1250	1290		ug/L		103	70 - 130
Dichlorodifluoromethane	ND		1250	813		ug/L		65	25 - 142
Ethylbenzene	ND		1250	1330		ug/L		106	70 - 130
Hexachlorobutadiene	ND		1250	1300		ug/L		104	10 - 150
Isopropyl alcohol	ND		12500	12800	J	ug/L		102	46 - 142
Isopropylbenzene	ND		1250	1260		ug/L		101	70 - 132
m,p-Xylene	ND		1250	1220		ug/L		97	70 - 133
Methylene Chloride	110	J	1250	1220		ug/L		89	52 - 130
Methyl-t-Butyl Ether (MTBE)	ND		1250	1310		ug/L		105	70 - 130
Naphthalene	ND		1250	1090		ug/L		87	60 - 140
n-Butylbenzene	ND		1250	1320		ug/L		106	61 - 149
N-Propylbenzene	ND		1250	1290		ug/L		103	66 - 135
o-Xylene	ND		1250	1240		ug/L		99	70 - 133
p-Isopropyltoluene	ND		1250	1370		ug/L		110	70 - 130
sec-Butylbenzene	ND		1250	1190		ug/L		95	67 - 134
Styrene	ND		1250	1200		ug/L		96	29 - 150
tert-Butylbenzene	ND		1250	1160		ug/L		93	70 - 130
Tetrachloroethene	4700	F1	1250	5770	E	ug/L		89	70 - 137
Toluene	ND		1250	1330		ug/L		107	70 - 130
trans-1,2-Dichloroethene	ND		1250	1280		ug/L		102	70 - 130
trans-1,3-Dichloropropene	ND		1250	1250		ug/L		100	70 - 138
Trichloroethene	230		1250	1590		ug/L		109	70 - 130
Trichlorofluoromethane	76		1250	1060		ug/L		79	60 - 150
Vinyl chloride	ND		1250	899		ug/L		72	50 - 137

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*
Dibromofluoromethane (Surr)	*106*		*76 - 132*
Toluene-d8 (Surr)	*100*		*80 - 128*

Lab Sample ID: 440-233274-6 MSD
Matrix: Water
Analysis Batch: 530231

Client Sample ID: OC_GW_OW-9_20190212
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	ND		1250	1170		ug/L		94	60 - 149	3	20

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

Lab Sample ID: 440-233274-6 MSD
Matrix: Water
Analysis Batch: 530231

Client Sample ID: OC_GW_OW-9_20190212
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1-Trichloroethane	ND		1250	1200		ug/L		96	70 - 130	7	20
1,1,2,2-Tetrachloroethane	ND		1250	1110		ug/L		89	63 - 130	5	30
1,1,2-Trichloro-1,2,2-trifluoroethane	180	J	1250	1170		ug/L		79	60 - 140	2	20
1,1,2-Trichloroethane	ND		1250	1100		ug/L		88	70 - 130	3	25
1,1-Dichloroethane	ND		1250	1180		ug/L		94	65 - 130	3	20
1,1-Dichloroethene	400		1250	1450		ug/L		84	70 - 130	1	20
1,1-Dichloropropene	ND		1250	1360		ug/L		109	64 - 130	2	20
1,2,3-Trichlorobenzene	ND		1250	1330		ug/L		107	60 - 140	3	20
1,2,3-Trichloropropane	ND		1250	1120		ug/L		90	60 - 130	8	30
1,2,4-Trichlorobenzene	ND		1250	1530		ug/L		123	60 - 140	3	20
1,2,4-Trimethylbenzene	ND		1250	1280		ug/L		102	70 - 130	2	25
1,2-Dibromo-3-Chloropropane	ND		1250	1000		ug/L		80	48 - 140	9	30
1,2-Dibromoethane (EDB)	ND		1250	1130		ug/L		90	70 - 131	6	25
1,2-Dichlorobenzene	ND		1250	1330		ug/L		106	70 - 130	2	20
1,2-Dichloroethane	95		1250	1340		ug/L		100	56 - 146	10	20
1,2-Dichloropropane	ND		1250	1300		ug/L		104	69 - 130	1	20
1,3,5-Trimethylbenzene	ND		1250	1230		ug/L		99	70 - 130	2	20
1,3-Dichlorobenzene	ND		1250	1300		ug/L		104	70 - 130	0	20
1,3-Dichloropropane	ND		1250	1140		ug/L		91	70 - 130	0	25
1,4-Dichlorobenzene	ND		1250	1220		ug/L		97	70 - 130	2	20
2,2-Dichloropropane	ND		1250	1410		ug/L		113	69 - 138	12	25
2-Chlorotoluene	ND		1250	1170		ug/L		94	70 - 130	1	20
4-Chlorotoluene	ND		1250	1300		ug/L		104	70 - 130	2	20
Acetone	ND		1250	1330		ug/L		107	10 - 150	2	35
Benzene	ND		1250	1290		ug/L		103	66 - 130	0	20
Bromobenzene	ND		1250	1140		ug/L		92	70 - 130	2	20
Bromochloromethane	ND		1250	1260		ug/L		101	70 - 130	1	25
Bromodichloromethane	ND		1250	1310		ug/L		105	70 - 138	5	20
Bromoform	ND		1250	1120		ug/L		90	59 - 150	2	25
Bromomethane	ND		1250	1020		ug/L		82	62 - 131	1	25
Carbon tetrachloride	ND		1250	1180		ug/L		94	60 - 150	10	25
Chlorobenzene	ND		1250	1200		ug/L		96	70 - 130	0	20
Chloroethane	ND		1250	1030		ug/L		82	68 - 130	4	25
Chloroform	380		1250	1570		ug/L		95	70 - 130	3	20
Chloromethane	ND		1250	963		ug/L		77	39 - 144	4	25
cis-1,2-Dichloroethene	ND		1250	1350		ug/L		108	70 - 130	2	20
cis-1,3-Dichloropropene	ND		1250	1350		ug/L		108	70 - 133	4	20
Dibromochloromethane	ND		1250	1220		ug/L		97	70 - 148	7	25
Dibromomethane	ND		1250	1240		ug/L		99	70 - 130	4	25
Dichlorodifluoromethane	ND		1250	855		ug/L		68	25 - 142	5	30
Ethylbenzene	ND		1250	1350		ug/L		108	70 - 130	2	20
Hexachlorobutadiene	ND		1250	1360		ug/L		109	10 - 150	4	20
Isopropyl alcohol	ND		12500	12900	J	ug/L		103	46 - 142	1	40
Isopropylbenzene	ND		1250	1290		ug/L		104	70 - 132	3	20
m,p-Xylene	ND		1250	1240		ug/L		99	70 - 133	2	25
Methylene Chloride	110	J	1250	1200		ug/L		87	52 - 130	2	20
Methyl-t-Butyl Ether (MTBE)	ND		1250	1270		ug/L		101	70 - 130	4	25

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

Lab Sample ID: 440-233274-6 MSD — **Client Sample ID: OC_GW_OW-9_20190212**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 530231

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Naphthalene	ND		1250	1170		ug/L		94	60 - 140	8	30
n-Butylbenzene	ND		1250	1350		ug/L		108	61 - 149	2	20
N-Propylbenzene	ND		1250	1320		ug/L		105	66 - 135	2	20
o-Xylene	ND		1250	1260		ug/L		100	70 - 133	1	20
p-Isopropyltoluene	ND		1250	1400		ug/L		112	70 - 130	2	20
sec-Butylbenzene	ND		1250	1190		ug/L		96	67 - 134	1	20
Styrene	ND		1250	1210		ug/L		97	29 - 150	1	35
tert-Butylbenzene	ND		1250	1200		ug/L		96	70 - 130	3	20
Tetrachloroethene	4700	F1	1250	5450	E F1	ug/L		63	70 - 137	6	20
Toluene	ND		1250	1310		ug/L		105	70 - 130	2	20
trans-1,2-Dichloroethene	ND		1250	1300		ug/L		104	70 - 130	1	20
trans-1,3-Dichloropropene	ND		1250	1200		ug/L		96	70 - 138	4	25
Trichloroethene	230		1250	1540		ug/L		105	70 - 130	3	20
Trichlorofluoromethane	76		1250	987		ug/L		73	60 - 150	7	25
Vinyl chloride	ND		1250	935		ug/L		75	50 - 137	4	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*
Dibromofluoromethane (Surr)	*104*		*76 - 132*
Toluene-d8 (Surr)	*98*		*80 - 128*

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

Lab Sample ID: MB 440-529201/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 529338 — **Prep Batch: 529201**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.50	0.10	ug/L		02/17/19 13:35	02/18/19 14:28	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*47*		*27 - 120*	*02/17/19 13:35*	*02/18/19 14:28*	*1*

Lab Sample ID: LCS 440-529201/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 529338 — **Prep Batch: 529201**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dioxane	4.00	2.58		ug/L		65	36 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,4-Dioxane-d8 (Surr)	*51*		*27 - 120*

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

Lab Sample ID: LCSD 440-529201/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 529338 — **Prep Batch: 529201**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dioxane			2.00	1.28	*	ug/L		64	36 - 120	68	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,4-Dioxane-d8 (Surr)	*51*		*27 - 120*

Lab Sample ID: MB 440-529257/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 529518 — **Prep Batch: 529257**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	4.01		0.50	0.10	ug/L		02/18/19 08:16	02/19/19 11:24	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*46*		*27 - 120*	*02/18/19 08:16*	*02/19/19 11:24*	*1*

Lab Sample ID: LCS 440-529257/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 529518 — **Prep Batch: 529257**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,4-Dioxane			2.00	8.45	*	ug/L		422	36 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,4-Dioxane-d8 (Surr)	*60*		*27 - 120*

Lab Sample ID: LCSD 440-529257/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 529518 — **Prep Batch: 529257**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dioxane			2.00	6.75	*	ug/L		338	36 - 120	22	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,4-Dioxane-d8 (Surr)	*60*		*27 - 120*

Lab Sample ID: MB 440-529836/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 530058 — **Prep Batch: 529836**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.442	J	0.50	0.10	ug/L		02/20/19 11:33	02/21/19 16:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*57*		*27 - 120*	*02/20/19 11:33*	*02/21/19 16:04*	*1*

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

Lab Sample ID: LCS 440-529836/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 530058 — **Prep Batch: 529836**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,4-Dioxane			2.00	1.65		ug/L		83	36 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,4-Dioxane-d8 (Surr)	*66*		*27 - 120*

Lab Sample ID: LCSD 440-529836/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 530058 — **Prep Batch: 529836**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dioxane			2.00	1.58		ug/L		79	36 - 120	4	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,4-Dioxane-d8 (Surr)	*58*		*27 - 120*

Lab Sample ID: MB 440-530083/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 530289 — **Prep Batch: 530083**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.50	0.10	ug/L		02/21/19 11:01	02/22/19 10:56	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*53*		*27 - 120*	*02/21/19 11:01*	*02/22/19 10:56*	*1*

Lab Sample ID: LCS 440-530083/3-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 530289 — **Prep Batch: 530083**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,4-Dioxane			2.00	1.14		ug/L		57	36 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,4-Dioxane-d8 (Surr)	*55*		*27 - 120*

Lab Sample ID: LCSD 440-530083/4-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 530289 — **Prep Batch: 530083**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dioxane			2.00	0.903		ug/L		45	36 - 120	23	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,4-Dioxane-d8 (Surr)	*43*		*27 - 120*

QC Association Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-2019 Semi-Annual GWM Feb

TestAmerica Job ID: 440-233274-1
SDG: Whittier

GC/MS VOA

Analysis Batch: 530231

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-233274-1	OC_GW_OW-3B_20190211	Total/NA	Water	8260B	
440-233274-2	OC_GW_OW-1B_20190212	Total/NA	Water	8260B	
440-233274-3	OC_GW_OW-1B_20190211N	Total/NA	Water	8260B	
440-233274-4	OC_GW_OW-10_20190212	Total/NA	Water	8260B	
440-233274-5	OC_GW_OW-10_20190212K	Total/NA	Water	8260B	
440-233274-6	OC_GW_OW-9_20190212	Total/NA	Water	8260B	
440-233274-6 - DL	OC_GW_OW-9_20190212	Total/NA	Water	8260B	
440-233274-7	OC_GW_OW-9_20190212K	Total/NA	Water	8260B	
440-233274-7 - DL	OC_GW_OW-9_20190212K	Total/NA	Water	8260B	
440-233274-8	OC_GW_OW-12_20190212	Total/NA	Water	8260B	
440-233274-8 - DL	OC_GW_OW-12_20190212	Total/NA	Water	8260B	
440-233274-9	OC_GW_TB_20190212	Total/NA	Water	8260B	
MB 440-530231/4	Method Blank	Total/NA	Water	8260B	
LCS 440-530231/1003	Lab Control Sample	Total/NA	Water	8260B	
LCS 440-530231/5	Lab Control Sample	Total/NA	Water	8260B	
440-233274-6 MS	OC_GW_OW-9_20190212	Total/NA	Water	8260B	
440-233274-6 MSD	OC_GW_OW-9_20190212	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 529201

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-233274-1	OC_GW_OW-3B_20190211	Total/NA	Water	3520C	
440-233274-2	OC_GW_OW-1B_20190212	Total/NA	Water	3520C	
440-233274-4	OC_GW_OW-10_20190212	Total/NA	Water	3520C	
MB 440-529201/1-A	Method Blank	Total/NA	Water	3520C	
LCS 440-529201/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 440-529201/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	

Prep Batch: 529257

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-233274-6	OC_GW_OW-9_20190212	Total/NA	Water	3520C	
440-233274-7	OC_GW_OW-9_20190212K	Total/NA	Water	3520C	
MB 440-529257/1-A	Method Blank	Total/NA	Water	3520C	
LCS 440-529257/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 440-529257/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	

Analysis Batch: 529338

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-233274-1	OC_GW_OW-3B_20190211	Total/NA	Water	8270C SIM	529201
440-233274-2	OC_GW_OW-1B_20190212	Total/NA	Water	8270C SIM	529201
MB 440-529201/1-A	Method Blank	Total/NA	Water	8270C SIM	529201
LCS 440-529201/2-A	Lab Control Sample	Total/NA	Water	8270C SIM	529201
LCSD 440-529201/3-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM	529201

Analysis Batch: 529518

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-233274-4	OC_GW_OW-10_20190212	Total/NA	Water	8270C SIM	529201
440-233274-6	OC_GW_OW-9_20190212	Total/NA	Water	8270C SIM	529257
440-233274-7	OC_GW_OW-9_20190212K	Total/NA	Water	8270C SIM	529257

GC/MS Semi VOA (Continued)

Analysis Batch: 529518 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 440-529257/1-A	Method Blank	Total/NA	Water	8270C SIM	529257
LCS 440-529257/2-A	Lab Control Sample	Total/NA	Water	8270C SIM	529257
LCSD 440-529257/3-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM	529257

Prep Batch: 529836

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-233274-6	OC_GW_OW-9_20190212	Total/NA	Water	3520C	
440-233274-7	OC_GW_OW-9_20190212K	Total/NA	Water	3520C	
MB 440-529836/1-A	Method Blank	Total/NA	Water	3520C	
LCS 440-529836/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 440-529836/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	

Analysis Batch: 530058

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-233274-6	OC_GW_OW-9_20190212	Total/NA	Water	8270C SIM	529836
440-233274-7	OC_GW_OW-9_20190212K	Total/NA	Water	8270C SIM	529836
MB 440-529836/1-A	Method Blank	Total/NA	Water	8270C SIM	529836
LCS 440-529836/2-A	Lab Control Sample	Total/NA	Water	8270C SIM	529836
LCSD 440-529836/3-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM	529836

Prep Batch: 530083

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-233274-5	OC_GW_OW-10_20190212K	Total/NA	Water	3520C	
440-233274-8	OC_GW_OW-12_20190212	Total/NA	Water	3520C	
MB 440-530083/1-A	Method Blank	Total/NA	Water	3520C	
LCS 440-530083/3-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 440-530083/4-A	Lab Control Sample Dup	Total/NA	Water	3520C	

Analysis Batch: 530289

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-233274-5	OC_GW_OW-10_20190212K	Total/NA	Water	8270C SIM	530083
440-233274-8	OC_GW_OW-12_20190212	Total/NA	Water	8270C SIM	530083
MB 440-530083/1-A	Method Blank	Total/NA	Water	8270C SIM	530083
LCS 440-530083/3-A	Lab Control Sample	Total/NA	Water	8270C SIM	530083
LCSD 440-530083/4-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM	530083

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F1	MS and/or MSD Recovery is outside acceptance limits.
E	Result exceeded calibration range.

GC/MS VOA TICs

Qualifier	Qualifier Description
J	Indicates an Estimated Value for TICs
T	Result is a tentatively identified compound (TIC) and an estimated value.

GC/MS Semi VOA

Qualifier	Qualifier Description
*	RPD of the LCS and LCSD exceeds the control limits
H	Sample was prepped or analyzed beyond the specified holding time
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
*	LCS or LCSD is outside acceptance limits.
B	Compound was found in the blank and sample.
E	Result exceeded calibration range.
X	Surrogate is outside control 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: Jacob & Hefner Associates P.C. TestAmerica Job ID: 440-233274-1
Project/Site: Omega Chemical-2019 Semi-Annual GWM Feb SDG: Whittier

Laboratory: TestAmerica Irvine

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
California	State Program	9	CA ELAP 2706	06-30-19

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8260B		Water	1,1,2-Trichloro-1,2,2-trifluoroethane
8260B		Water	m,p-Xylene
8270C SIM	3520C	Water	1,4-Dioxane

TestAmerica Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614
phone 949 261.1022 fax

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.

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

Client Contact	Project Manager: Trent Henderson	Site Contact: Khalid Azhar	Date: 2/11/19	COC No:
De Maximis - Jaime Dinello	Tel/Fax: (949) 453-1045 / (949) 453-1047	Lab Contact: Danielle Roberts	Carrier:	1 of 1 COCs
1322 Scott St., Suite 104	Analysis Turnaround Time			Sampler:
San Diego, CA 92106	☐CALENDAR DAYS ☐WORKING DAYS			For Lab Use Only:
(562) 756-8149	TAT if different from Below STD			Walk-in Client:
	☐ 2 weeks			Lab Sampling:
Project Name: Omega Chem. - 2019 Semi-Ann. GWM August	☐ 1 week			
Site: Omega Chemical	☐ 2 days			Job / SDG No :
P O #: 3139G/E742	☐ 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 + Freons	EPA 8270C - 1,4 Dioxane	Sample Specific Notes
OC_GW_OW-3B_20190211	2/11/2019	08:58	Grab	GW	5			x	x	
OC_GW_OW-1B_20190212	2/12/2019	08:15	Grab	GW	5			x	x	
OC_GW_OW-1B_20190211N	2/11/2019	14:30	Grab	GW	3			x		
OC_GW_OW-10_20190212	2/12/2019	12:45	Grab	GW	5			x	x	
OC_GW_OW-10_20190212K	2/12/2019	12:50	Grab	GW	5			x	x	
OC_GW_OW-9_20190212	2/12/2019	13.15	Grab	GW	5			x	x	
OC_GW_OW-9_20190212K	2/12/2019	13:20	Grab	GW	5			x	x	
OC_GW_OW-12_20190212	2/12/2019	13 40	Grab	GW	5			x	x	
OC_GW_TB_20190212	2/12/2019	07:00		H2O	3			x		

440-233274 Chain of Custody

2/12/19

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]	JHA	2/12/19 1430	[signature]	TA IRV	2/12/19 1430
Pete Miller	TA IRV	2/12/19 1652	[signature]		
			Received in Laboratory by: [signature]	TA IRV	2/12/19 1652

1.4/1.4 4.5/4.5 4.9/4.9 5.3/5.3 IR-88

Login Sample Receipt Checklist

Client: Jacob & Hefner Associates P.C.

Job Number: 440-233274-1
SDG Number: Whittier

Login Number: 233274
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	

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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: 440-233427-1
TestAmerica Sample Delivery Group: Whittier
Client Project/Site: Omega Chemical- 2019 Semi-Annual GWM Feb

For:
de maximis, inc.
2365 Northside Drive, Suite C-100
San Diego, California 92108

Attn: Jaime Dinello

Authorized for release by:
2/26/2019 10:33:15 AM

Danielle Roberts, Senior Project Manager
(949)261-1022
danielle.roberts@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

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

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

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

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Sample Summary

Client: de maximis, inc.
Project/Site: Omega Chemical- 2019 Semi-Annual GWM Feb

TestAmerica Job ID: 440-233427-1
SDG: Whittier

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-233427-1	OC_GW_OW-8B_20190213	Water	02/13/19 08:17	02/13/19 14:45

Job ID: 440-233427-1

Laboratory: TestAmerica Irvine

Narrative

Job Narrative
440-233427-1

Comments
No additional comments.

Receipt
The sample was received on 2/13/2019 2:45 PM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.0º C.

GC/MS VOA
No analytical or quality issues were noted, other than those described 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.

Organic Prep
Method(s) 3520C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 440-529257. 8270-SIM-1,4-Dioxane. LCS was performed in duplicate to provide precision of data.

Method(s) 3520C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 440-529836. LCS was performed in duplicate to maintain precision of data. 8270 1,4 DXN

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

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

Detection Summary

Client: de maximis, inc.
Project/Site: Omega Chemical- 2019 Semi-Annual GWM Feb

TestAmerica Job ID: 440-233427-1
SDG: Whittier

Client Sample ID: OC_GW_OW-8B_20190213 — Lab Sample ID: 440-233427-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	21		1.0	0.25	ug/L	1		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: de maximis, inc.
Project/Site: Omega Chemical- 2019 Semi-Annual GWM Feb

TestAmerica Job ID: 440-233427-1
SDG: Whittier

Client Sample ID: OC_GW_OW-8B_20190213

Lab Sample ID: 440-233427-1

Date Collected: 02/13/19 08:17
Matrix: Water
Date Received: 02/13/19 14:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/22/19 15:30	1
1,1,1-Trichloroethane	ND		1.0	0.25	ug/L			02/22/19 15:30	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/22/19 15:30	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	0.50	ug/L			02/22/19 15:30	1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L			02/22/19 15:30	1
1,1-Dichloroethane	ND		1.0	0.25	ug/L			02/22/19 15:30	1
1,1-Dichloroethene	ND		1.0	0.25	ug/L			02/22/19 15:30	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			02/22/19 15:30	1
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L			02/22/19 15:30	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			02/22/19 15:30	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			02/22/19 15:30	1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			02/22/19 15:30	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			02/22/19 15:30	1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			02/22/19 15:30	1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			02/22/19 15:30	1
1,2-Dichloroethane	ND		1.0	0.25	ug/L			02/22/19 15:30	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			02/22/19 15:30	1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			02/22/19 15:30	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			02/22/19 15:30	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			02/22/19 15:30	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			02/22/19 15:30	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			02/22/19 15:30	1
2-Chlorotoluene	ND		1.0	0.25	ug/L			02/22/19 15:30	1
4-Chlorotoluene	ND		1.0	0.25	ug/L			02/22/19 15:30	1
Acetone	ND		10	10	ug/L			02/22/19 15:30	1
Benzene	ND		0.50	0.25	ug/L			02/22/19 15:30	1
Bromobenzene	ND		1.0	0.25	ug/L			02/22/19 15:30	1
Bromochloromethane	ND		1.0	0.25	ug/L			02/22/19 15:30	1
Bromodichloromethane	ND		1.0	0.25	ug/L			02/22/19 15:30	1
Bromoform	ND		1.0	0.40	ug/L			02/22/19 15:30	1
Bromomethane	ND		1.0	0.25	ug/L			02/22/19 15:30	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			02/22/19 15:30	1
Chlorobenzene	ND		1.0	0.25	ug/L			02/22/19 15:30	1
Chloroethane	ND		1.0	0.40	ug/L			02/22/19 15:30	1
Chloroform	ND		1.0	0.25	ug/L			02/22/19 15:30	1
Chloromethane	ND		1.0	0.25	ug/L			02/22/19 15:30	1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			02/22/19 15:30	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/22/19 15:30	1
Dibromochloromethane	ND		1.0	0.25	ug/L			02/22/19 15:30	1
Dibromomethane	ND		1.0	0.25	ug/L			02/22/19 15:30	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			02/22/19 15:30	1
Ethylbenzene	ND		1.0	0.25	ug/L			02/22/19 15:30	1
Hexachlorobutadiene	ND		1.0	0.25	ug/L			02/22/19 15:30	1
Isopropyl alcohol	ND		250	180	ug/L			02/22/19 15:30	1
Isopropylbenzene	ND		1.0	0.25	ug/L			02/22/19 15:30	1
m,p-Xylene	ND		1.0	0.50	ug/L			02/22/19 15:30	1
Methylene Chloride	ND		5.0	0.88	ug/L			02/22/19 15:30	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			02/22/19 15:30	1
Naphthalene	ND		1.0	0.40	ug/L			02/22/19 15:30	1

Client Sample Results

Client: de maximis, inc.
Project/Site: Omega Chemical- 2019 Semi-Annual GWM Feb

TestAmerica Job ID: 440-233427-1
SDG: Whittier

Client Sample ID: OC_GW_OW-8B_20190213

Lab Sample ID: 440-233427-1

Date Collected: 02/13/19 08:17
Matrix: Water
Date Received: 02/13/19 14:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	ND		1.0	0.40	ug/L			02/22/19 15:30	1
N-Propylbenzene	ND		1.0	0.25	ug/L			02/22/19 15:30	1
o-Xylene	ND		1.0	0.25	ug/L			02/22/19 15:30	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			02/22/19 15:30	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			02/22/19 15:30	1
Styrene	ND		1.0	0.25	ug/L			02/22/19 15:30	1
tert-Butylbenzene	ND		1.0	0.25	ug/L			02/22/19 15:30	1
Tetrachloroethene	**21**		1.0	0.25	ug/L			02/22/19 15:30	1
Toluene	ND		1.0	0.25	ug/L			02/22/19 15:30	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			02/22/19 15:30	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/22/19 15:30	1
Trichloroethene	ND		1.0	0.25	ug/L			02/22/19 15:30	1
Trichlorofluoromethane	ND		1.0	0.25	ug/L			02/22/19 15:30	1
Vinyl chloride	ND		0.50	0.25	ug/L			02/22/19 15:30	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*800*	*T J*	*ug/L*		*1.49*			*02/22/19 15:30*	*1*
Unknown	*11*	*T J*	*ug/L*		*5.25*			*02/22/19 15:30*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*		*02/22/19 15:30*	*1*
Dibromofluoromethane (Surr)	*111*		*76 - 132*		*02/22/19 15:30*	*1*
Toluene-d8 (Surr)	*104*		*80 - 128*		*02/22/19 15:30*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.49	0.098	ug/L		02/20/19 11:33	02/21/19 18:47	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*58*		*27 - 120*	*02/20/19 11:33*	*02/21/19 18:47*	*1*

Surrogate Summary

Client: de maximis, inc.
Project/Site: Omega Chemical- 2019 Semi-Annual GWM Feb

TestAmerica Job ID: 440-233427-1
SDG: Whittier

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

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(80-120)	(76-132)	(80-128)
440-233274-A-6 MS	Matrix Spike	95	106	100
440-233274-A-6 MSD	Matrix Spike Duplicate	96	104	98
440-233427-1	OC_GW_OW-8B_20190213	94	111	104
LCS 440-530231/1003	Lab Control Sample	94	101	105
LCS 440-530231/5	Lab Control Sample	100	104	99
MB 440-530231/4	Method Blank	99	108	104

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

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

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
		DXE
Lab Sample ID	Client Sample ID	(27-120)
440-233427-1	OC_GW_OW-8B_20190213	58
LCS 440-529836/2-A	Lab Control Sample	66
LCSD 440-529836/3-A	Lab Control Sample Dup	58
MB 440-529836/1-A	Method Blank	57

Surrogate Legend

DXE = 1,4-Dioxane-d8 (Surr)

Method Summary

Client: de maximis, inc.
Project/Site: Omega Chemical- 2019 Semi-Annual GWM Feb

TestAmerica Job ID: 440-233427-1
SDG: Whittier

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL IRV
8270C SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL IRV
3520C	Liquid-Liquid Extraction (Continuous)	SW846	TAL IRV
5030B	Purge and Trap	SW846	TAL IRV

Protocol References:

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: de maximis, inc.
Project/Site: Omega Chemical- 2019 Semi-Annual GWM Feb

TestAmerica Job ID: 440-233427-1
SDG: Whittier

Client Sample ID: OC_GW_OW-8B_20190213

Lab Sample ID: 440-233427-1

Date Collected: 02/13/19 08:17

Matrix: Water

Date Received: 02/13/19 14:45

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	530231	02/22/19 15:30	RM	TAL IRV
Total/NA	Prep	3520C			1025 mL	1.0 mL	529836	02/20/19 11:33	JAA	TAL IRV
Total/NA	Analysis	8270C SIM		1			530058	02/21/19 18:47	L1B	TAL IRV

Laboratory References:

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

QC Sample Results

Client: de maximis, inc.
Project/Site: Omega Chemical- 2019 Semi-Annual GWM Feb

TestAmerica Job ID: 440-233427-1
SDG: Whittier

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

Lab Sample ID: MB 440-530231/4
Matrix: Water
Analysis Batch: 530231

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/22/19 07:53	1
1,1,1-Trichloroethane	ND		1.0	0.25	ug/L			02/22/19 07:53	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/22/19 07:53	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	0.50	ug/L			02/22/19 07:53	1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L			02/22/19 07:53	1
1,1-Dichloroethane	ND		1.0	0.25	ug/L			02/22/19 07:53	1
1,1-Dichloroethene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L			02/22/19 07:53	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			02/22/19 07:53	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			02/22/19 07:53	1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			02/22/19 07:53	1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			02/22/19 07:53	1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
1,2-Dichloroethane	ND		1.0	0.25	ug/L			02/22/19 07:53	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			02/22/19 07:53	1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			02/22/19 07:53	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			02/22/19 07:53	1
2-Chlorotoluene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
4-Chlorotoluene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
Acetone	ND		10	10	ug/L			02/22/19 07:53	1
Benzene	ND		0.50	0.25	ug/L			02/22/19 07:53	1
Bromobenzene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
Bromochloromethane	ND		1.0	0.25	ug/L			02/22/19 07:53	1
Bromodichloromethane	ND		1.0	0.25	ug/L			02/22/19 07:53	1
Bromoform	ND		1.0	0.40	ug/L			02/22/19 07:53	1
Bromomethane	ND		1.0	0.25	ug/L			02/22/19 07:53	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			02/22/19 07:53	1
Chlorobenzene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
Chloroethane	ND		1.0	0.40	ug/L			02/22/19 07:53	1
Chloroform	ND		1.0	0.25	ug/L			02/22/19 07:53	1
Chloromethane	ND		1.0	0.25	ug/L			02/22/19 07:53	1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/22/19 07:53	1
Dibromochloromethane	ND		1.0	0.25	ug/L			02/22/19 07:53	1
Dibromomethane	ND		1.0	0.25	ug/L			02/22/19 07:53	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			02/22/19 07:53	1
Ethylbenzene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
Hexachlorobutadiene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
Isopropyl alcohol	ND		250	180	ug/L			02/22/19 07:53	1
Isopropylbenzene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
m,p-Xylene	ND		1.0	0.50	ug/L			02/22/19 07:53	1
Methylene Chloride	ND		5.0	0.88	ug/L			02/22/19 07:53	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			02/22/19 07:53	1

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

Lab Sample ID: MB 440-530231/4
Matrix: Water
Analysis Batch: 530231

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		1.0	0.40	ug/L			02/22/19 07:53	1
n-Butylbenzene	ND		1.0	0.40	ug/L			02/22/19 07:53	1
N-Propylbenzene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
o-Xylene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
Styrene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
tert-Butylbenzene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
Tetrachloroethene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
Toluene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/22/19 07:53	1
Trichloroethene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
Trichlorofluoromethane	ND		1.0	0.25	ug/L			02/22/19 07:53	1
Vinyl chloride	ND		0.50	0.25	ug/L			02/22/19 07:53	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*56.0*	*T J*	*ug/L*		*1.48*			*02/22/19 07:53*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*		*02/22/19 07:53*	*1*
Dibromofluoromethane (Surr)	*108*		*76 - 132*		*02/22/19 07:53*	*1*
Toluene-d8 (Surr)	*104*		*80 - 128*		*02/22/19 07:53*	*1*

Lab Sample ID: LCS 440-530231/1003
Matrix: Water
Analysis Batch: 530231

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Isopropyl alcohol	250	235	J	ug/L		94	49 - 142

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*
Dibromofluoromethane (Surr)	*101*		*76 - 132*
Toluene-d8 (Surr)	*105*		*80 - 128*

Lab Sample ID: LCS 440-530231/5
Matrix: Water
Analysis Batch: 530231

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	24.3		ug/L		97	60 - 141
1,1,1-Trichloroethane	25.0	26.0		ug/L		104	70 - 130
1,1,2,2-Tetrachloroethane	25.0	22.4		ug/L		89	63 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	21.2		ug/L		85	60 - 140
1,1,2-Trichloroethane	25.0	22.5		ug/L		90	70 - 130

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

Lab Sample ID: LCS 440-530231/5
Matrix: Water
Analysis Batch: 530231

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethane	25.0	24.2		ug/L		97	64 - 130
1,1-Dichloroethene	25.0	22.6		ug/L		91	70 - 130
1,1-Dichloropropene	25.0	27.0		ug/L		108	70 - 130
1,2,3-Trichlorobenzene	25.0	26.2		ug/L		105	60 - 140
1,2,3-Trichloropropane	25.0	23.6		ug/L		94	63 - 130
1,2,4-Trichlorobenzene	25.0	30.1		ug/L		120	60 - 140
1,2,4-Trimethylbenzene	25.0	26.2		ug/L		105	70 - 135
1,2-Dibromo-3-Chloropropane	25.0	22.4		ug/L		90	52 - 140
1,2-Dibromoethane (EDB)	25.0	23.2		ug/L		93	70 - 130
1,2-Dichlorobenzene	25.0	25.9		ug/L		104	70 - 130
1,2-Dichloroethane	25.0	26.6		ug/L		106	57 - 138
1,2-Dichloropropane	25.0	25.6		ug/L		102	67 - 130
1,3,5-Trimethylbenzene	25.0	25.6		ug/L		102	70 - 136
1,3-Dichlorobenzene	25.0	26.2		ug/L		105	70 - 130
1,3-Dichloropropane	25.0	23.1		ug/L		92	70 - 130
1,4-Dichlorobenzene	25.0	24.3		ug/L		97	70 - 130
2,2-Dichloropropane	25.0	29.6		ug/L		118	68 - 141
2-Chlorotoluene	25.0	24.3		ug/L		97	70 - 130
4-Chlorotoluene	25.0	26.5		ug/L		106	70 - 130
Acetone	25.0	26.3		ug/L		105	10 - 150
Benzene	25.0	25.4		ug/L		102	68 - 130
Bromobenzene	25.0	23.8		ug/L		95	70 - 130
Bromochloromethane	25.0	25.4		ug/L		101	70 - 130
Bromodichloromethane	25.0	26.4		ug/L		105	70 - 132
Bromoform	25.0	24.1		ug/L		96	60 - 148
Bromomethane	25.0	20.0		ug/L		80	64 - 139
Carbon tetrachloride	25.0	25.6		ug/L		102	60 - 150
Chlorobenzene	25.0	23.6		ug/L		95	70 - 130
Chloroethane	25.0	19.9		ug/L		79	64 - 135
Chloroform	25.0	25.1		ug/L		100	70 - 130
Chloromethane	25.0	18.5		ug/L		74	47 - 140
cis-1,2-Dichloroethene	25.0	26.5		ug/L		106	70 - 133
cis-1,3-Dichloropropene	25.0	26.5		ug/L		106	70 - 133
Dibromochloromethane	25.0	25.0		ug/L		100	69 - 145
Dibromomethane	25.0	25.2		ug/L		101	70 - 130
Dichlorodifluoromethane	25.0	16.8		ug/L		67	29 - 150
Ethylbenzene	25.0	26.8		ug/L		107	70 - 130
Hexachlorobutadiene	25.0	27.9		ug/L		112	10 - 150
Isopropylbenzene	25.0	25.5		ug/L		102	70 - 136
m,p-Xylene	25.0	24.6		ug/L		98	70 - 130
Methylene Chloride	25.0	21.7		ug/L		87	52 - 130
Methyl-t-Butyl Ether (MTBE)	25.0	26.6		ug/L		107	63 - 131
Naphthalene	25.0	24.5		ug/L		98	60 - 140
n-Butylbenzene	25.0	26.9		ug/L		108	65 - 150
N-Propylbenzene	25.0	27.2		ug/L		109	67 - 139
o-Xylene	25.0	24.6		ug/L		98	70 - 130
p-Isopropyltoluene	25.0	28.5		ug/L		114	70 - 132
sec-Butylbenzene	25.0	24.7		ug/L		99	70 - 138

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

Lab Sample ID: LCS 440-530231/5
Matrix: Water
Analysis Batch: 530231

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Styrene	25.0	23.0		ug/L		92	70 - 134
tert-Butylbenzene	25.0	25.1		ug/L		100	70 - 130
Tetrachloroethene	25.0	24.2		ug/L		97	70 - 130
Toluene	25.0	26.1		ug/L		105	70 - 130
trans-1,2-Dichloroethene	25.0	25.6		ug/L		102	70 - 130
trans-1,3-Dichloropropene	25.0	23.9		ug/L		96	70 - 132
Trichloroethene	25.0	26.7		ug/L		107	70 - 130
Trichlorofluoromethane	25.0	20.5		ug/L		82	60 - 150
Vinyl chloride	25.0	18.3		ug/L		73	59 - 133

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*
Dibromofluoromethane (Surr)	*104*		*76 - 132*
Toluene-d8 (Surr)	*99*		*80 - 128*

Lab Sample ID: 440-233274-A-6 MS
Matrix: Water
Analysis Batch: 530231

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
1,1,1,2-Tetrachloroethane	ND		1250	1200		ug/L		96	60 - 149
1,1,1-Trichloroethane	ND		1250	1290		ug/L		103	70 - 130
1,1,2,2-Tetrachloroethane	ND		1250	1060		ug/L		84	63 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	180	J	1250	1190		ug/L		81	60 - 140
1,1,2-Trichloroethane	ND		1250	1140		ug/L		91	70 - 130
1,1-Dichloroethane	ND		1250	1220		ug/L		97	65 - 130
1,1-Dichloroethene	400		1250	1460		ug/L		85	70 - 130
1,1-Dichloropropene	ND		1250	1390		ug/L		111	64 - 130
1,2,3-Trichlorobenzene	ND		1250	1290		ug/L		103	60 - 140
1,2,3-Trichloropropane	ND		1250	1040		ug/L		83	60 - 130
1,2,4-Trichlorobenzene	ND		1250	1480		ug/L		119	60 - 140
1,2,4-Trimethylbenzene	ND		1250	1250		ug/L		100	70 - 130
1,2-Dibromo-3-Chloropropane	ND		1250	913		ug/L		73	48 - 140
1,2-Dibromoethane (EDB)	ND		1250	1200		ug/L		96	70 - 131
1,2-Dichlorobenzene	ND		1250	1300		ug/L		104	70 - 130
1,2-Dichloroethane	95		1250	1490		ug/L		111	56 - 146
1,2-Dichloropropane	ND		1250	1290		ug/L		103	69 - 130
1,3,5-Trimethylbenzene	ND		1250	1210		ug/L		97	70 - 130
1,3-Dichlorobenzene	ND		1250	1290		ug/L		103	70 - 130
1,3-Dichloropropane	ND		1250	1140		ug/L		91	70 - 130
1,4-Dichlorobenzene	ND		1250	1190		ug/L		95	70 - 130
2,2-Dichloropropane	ND		1250	1590		ug/L		127	69 - 138
2-Chlorotoluene	ND		1250	1160		ug/L		93	70 - 130
4-Chlorotoluene	ND		1250	1270		ug/L		102	70 - 130
Acetone	ND		1250	1310		ug/L		105	10 - 150
Benzene	ND		1250	1290		ug/L		103	66 - 130
Bromobenzene	ND		1250	1120		ug/L		90	70 - 130

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

Lab Sample ID: 440-233274-A-6 MS
Matrix: Water
Analysis Batch: 530231

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
Bromochloromethane	ND		1250	1280		ug/L		102	70 - 130
Bromodichloromethane	ND		1250	1370		ug/L		110	70 - 138
Bromoform	ND		1250	1090		ug/L		88	59 - 150
Bromomethane	ND		1250	1020		ug/L		81	62 - 131
Carbon tetrachloride	ND		1250	1300		ug/L		104	60 - 150
Chlorobenzene	ND		1250	1200		ug/L		96	70 - 130
Chloroethane	ND		1250	986		ug/L		79	68 - 130
Chloroform	380		1250	1620		ug/L		99	70 - 130
Chloromethane	ND		1250	926		ug/L		74	39 - 144
cis-1,2-Dichloroethene	ND		1250	1370		ug/L		110	70 - 130
cis-1,3-Dichloropropene	ND		1250	1400		ug/L		112	70 - 133
Dibromochloromethane	ND		1250	1300		ug/L		104	70 - 148
Dibromomethane	ND		1250	1290		ug/L		103	70 - 130
Dichlorodifluoromethane	ND		1250	813		ug/L		65	25 - 142
Ethylbenzene	ND		1250	1330		ug/L		106	70 - 130
Hexachlorobutadiene	ND		1250	1300		ug/L		104	10 - 150
Isopropyl alcohol	ND		12500	12800	J	ug/L		102	46 - 142
Isopropylbenzene	ND		1250	1260		ug/L		101	70 - 132
m,p-Xylene	ND		1250	1220		ug/L		97	70 - 133
Methylene Chloride	110	J	1250	1220		ug/L		89	52 - 130
Methyl-t-Butyl Ether (MTBE)	ND		1250	1310		ug/L		105	70 - 130
Naphthalene	ND		1250	1090		ug/L		87	60 - 140
n-Butylbenzene	ND		1250	1320		ug/L		106	61 - 149
N-Propylbenzene	ND		1250	1290		ug/L		103	66 - 135
o-Xylene	ND		1250	1240		ug/L		99	70 - 133
p-Isopropyltoluene	ND		1250	1370		ug/L		110	70 - 130
sec-Butylbenzene	ND		1250	1190		ug/L		95	67 - 134
Styrene	ND		1250	1200		ug/L		96	29 - 150
tert-Butylbenzene	ND		1250	1160		ug/L		93	70 - 130
Tetrachloroethene	4700	F1	1250	5770	E	ug/L		89	70 - 137
Toluene	ND		1250	1330		ug/L		107	70 - 130
trans-1,2-Dichloroethene	ND		1250	1280		ug/L		102	70 - 130
trans-1,3-Dichloropropene	ND		1250	1250		ug/L		100	70 - 138
Trichloroethene	230		1250	1590		ug/L		109	70 - 130
Trichlorofluoromethane	76		1250	1060		ug/L		79	60 - 150
Vinyl chloride	ND		1250	899		ug/L		72	50 - 137

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*
Dibromofluoromethane (Surr)	*106*		*76 - 132*
Toluene-d8 (Surr)	*100*		*80 - 128*

Lab Sample ID: 440-233274-A-6 MSD
Matrix: Water
Analysis Batch: 530231

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
1,1,1,2-Tetrachloroethane	ND		1250	1170		ug/L		94	60 - 149	3	20

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

Lab Sample ID: 440-233274-A-6 MSD
Matrix: Water
Analysis Batch: 530231

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
1,1,1-Trichloroethane	ND		1250	1200		ug/L		96	70 - 130	7	20
1,1,2,2-Tetrachloroethane	ND		1250	1110		ug/L		89	63 - 130	5	30
1,1,2-Trichloro-1,2,2-trifluoroethane	180	J	1250	1170		ug/L		79	60 - 140	2	20
1,1,2-Trichloroethane	ND		1250	1100		ug/L		88	70 - 130	3	25
1,1-Dichloroethane	ND		1250	1180		ug/L		94	65 - 130	3	20
1,1-Dichloroethene	400		1250	1450		ug/L		84	70 - 130	1	20
1,1-Dichloropropene	ND		1250	1360		ug/L		109	64 - 130	2	20
1,2,3-Trichlorobenzene	ND		1250	1330		ug/L		107	60 - 140	3	20
1,2,3-Trichloropropane	ND		1250	1120		ug/L		90	60 - 130	8	30
1,2,4-Trichlorobenzene	ND		1250	1530		ug/L		123	60 - 140	3	20
1,2,4-Trimethylbenzene	ND		1250	1280		ug/L		102	70 - 130	2	25
1,2-Dibromo-3-Chloropropane	ND		1250	1000		ug/L		80	48 - 140	9	30
1,2-Dibromoethane (EDB)	ND		1250	1130		ug/L		90	70 - 131	6	25
1,2-Dichlorobenzene	ND		1250	1330		ug/L		106	70 - 130	2	20
1,2-Dichloroethane	95		1250	1340		ug/L		100	56 - 146	10	20
1,2-Dichloropropane	ND		1250	1300		ug/L		104	69 - 130	1	20
1,3,5-Trimethylbenzene	ND		1250	1230		ug/L		99	70 - 130	2	20
1,3-Dichlorobenzene	ND		1250	1300		ug/L		104	70 - 130	0	20
1,3-Dichloropropane	ND		1250	1140		ug/L		91	70 - 130	0	25
1,4-Dichlorobenzene	ND		1250	1220		ug/L		97	70 - 130	2	20
2,2-Dichloropropane	ND		1250	1410		ug/L		113	69 - 138	12	25
2-Chlorotoluene	ND		1250	1170		ug/L		94	70 - 130	1	20
4-Chlorotoluene	ND		1250	1300		ug/L		104	70 - 130	2	20
Acetone	ND		1250	1330		ug/L		107	10 - 150	2	35
Benzene	ND		1250	1290		ug/L		103	66 - 130	0	20
Bromobenzene	ND		1250	1140		ug/L		92	70 - 130	2	20
Bromochloromethane	ND		1250	1260		ug/L		101	70 - 130	1	25
Bromodichloromethane	ND		1250	1310		ug/L		105	70 - 138	5	20
Bromoform	ND		1250	1120		ug/L		90	59 - 150	2	25
Bromomethane	ND		1250	1020		ug/L		82	62 - 131	1	25
Carbon tetrachloride	ND		1250	1180		ug/L		94	60 - 150	10	25
Chlorobenzene	ND		1250	1200		ug/L		96	70 - 130	0	20
Chloroethane	ND		1250	1030		ug/L		82	68 - 130	4	25
Chloroform	380		1250	1570		ug/L		95	70 - 130	3	20
Chloromethane	ND		1250	963		ug/L		77	39 - 144	4	25
cis-1,2-Dichloroethene	ND		1250	1350		ug/L		108	70 - 130	2	20
cis-1,3-Dichloropropene	ND		1250	1350		ug/L		108	70 - 133	4	20
Dibromochloromethane	ND		1250	1220		ug/L		97	70 - 148	7	25
Dibromomethane	ND		1250	1240		ug/L		99	70 - 130	4	25
Dichlorodifluoromethane	ND		1250	855		ug/L		68	25 - 142	5	30
Ethylbenzene	ND		1250	1350		ug/L		108	70 - 130	2	20
Hexachlorobutadiene	ND		1250	1360		ug/L		109	10 - 150	4	20
Isopropyl alcohol	ND		12500	12900	J	ug/L		103	46 - 142	1	40
Isopropylbenzene	ND		1250	1290		ug/L		104	70 - 132	3	20
m,p-Xylene	ND		1250	1240		ug/L		99	70 - 133	2	25
Methylene Chloride	110	J	1250	1200		ug/L		87	52 - 130	2	20
Methyl-t-Butyl Ether (MTBE)	ND		1250	1270		ug/L		101	70 - 130	4	25

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

Lab Sample ID: 440-233274-A-6 MSD
Matrix: Water
Analysis Batch: 530231

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
Naphthalene	ND		1250	1170		ug/L		94	60 - 140	8	30
n-Butylbenzene	ND		1250	1350		ug/L		108	61 - 149	2	20
N-Propylbenzene	ND		1250	1320		ug/L		105	66 - 135	2	20
o-Xylene	ND		1250	1260		ug/L		100	70 - 133	1	20
p-Isopropyltoluene	ND		1250	1400		ug/L		112	70 - 130	2	20
sec-Butylbenzene	ND		1250	1190		ug/L		96	67 - 134	1	20
Styrene	ND		1250	1210		ug/L		97	29 - 150	1	35
tert-Butylbenzene	ND		1250	1200		ug/L		96	70 - 130	3	20
Tetrachloroethene	4700	F1	1250	5450	E F1	ug/L		63	70 - 137	6	20
Toluene	ND		1250	1310		ug/L		105	70 - 130	2	20
trans-1,2-Dichloroethene	ND		1250	1300		ug/L		104	70 - 130	1	20
trans-1,3-Dichloropropene	ND		1250	1200		ug/L		96	70 - 138	4	25
Trichloroethene	230		1250	1540		ug/L		105	70 - 130	3	20
Trichlorofluoromethane	76		1250	987		ug/L		73	60 - 150	7	25
Vinyl chloride	ND		1250	935		ug/L		75	50 - 137	4	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*
Dibromofluoromethane (Surr)	*104*		*76 - 132*
Toluene-d8 (Surr)	*98*		*80 - 128*

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

Lab Sample ID: MB 440-529836/1-A
Matrix: Water
Analysis Batch: 530058

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 529836

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.442	J	0.50	0.10	ug/L		02/20/19 11:33	02/21/19 16:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*57*		*27 - 120*	*02/20/19 11:33*	*02/21/19 16:04*	*1*

Lab Sample ID: LCS 440-529836/2-A
Matrix: Water
Analysis Batch: 530058

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 529836

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,4-Dioxane			2.00	1.65		ug/L		83	36 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,4-Dioxane-d8 (Surr)	*66*		*27 - 120*

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

Lab Sample ID: LCSD 440-529836/3-A
Matrix: Water
Analysis Batch: 530058

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 529836

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dioxane			2.00	1.58		ug/L		79	36 - 120	4	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,4-Dioxane-d8 (Surr)	*58*		*27 - 120*

QC Association Summary

Client: de maximis, inc.
Project/Site: Omega Chemical- 2019 Semi-Annual GWM Feb

TestAmerica Job ID: 440-233427-1
SDG: Whittier

GC/MS VOA

Analysis Batch: 530231

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-233427-1	OC_GW_OW-8B_20190213	Total/NA	Water	8260B	
MB 440-530231/4	Method Blank	Total/NA	Water	8260B	
LCS 440-530231/1003	Lab Control Sample	Total/NA	Water	8260B	
LCS 440-530231/5	Lab Control Sample	Total/NA	Water	8260B	
440-233274-A-6 MS	Matrix Spike	Total/NA	Water	8260B	
440-233274-A-6 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 529836

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-233427-1	OC_GW_OW-8B_20190213	Total/NA	Water	3520C	
MB 440-529836/1-A	Method Blank	Total/NA	Water	3520C	
LCS 440-529836/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 440-529836/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	

Analysis Batch: 530058

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-233427-1	OC_GW_OW-8B_20190213	Total/NA	Water	8270C SIM	529836
MB 440-529836/1-A	Method Blank	Total/NA	Water	8270C SIM	529836
LCS 440-529836/2-A	Lab Control Sample	Total/NA	Water	8270C SIM	529836
LCSD 440-529836/3-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM	529836

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.
E	Result exceeded calibration range.
F1	MS and/or MSD Recovery is outside acceptance limits.

GC/MS VOA TICs

Qualifier	Qualifier Description
J	Indicates an Estimated Value for TICs
T	Result is a tentatively identified compound (TIC) and an estimated value.

GC/MS Semi VOA

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

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: de maximis, inc.
Project/Site: Omega Chemical- 2019 Semi-Annual GWM Feb

TestAmerica Job ID: 440-233427-1
SDG: Whittier

Laboratory: TestAmerica Irvine

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
California	State Program	9	CA ELAP 2706	06-30-19

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8260B		Water	1,1,2-Trichloro-1,2,2-trifluoroethane
8260B		Water	m,p-Xylene
8270C SIM	3520C	Water	1,4-Dioxane

TestAmerica Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614
phone 949.261 1022 fax

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.

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

Client Contact	Project Manager: Trent Henderson	Site Contact: Khalid Azhar	Date: 2/13/19	COC No:
De Maximis - Jaime Dinello	Tel/Fax: (949) 453-1045 / (949) 453-1047	Lab Contact: Danielle Roberts	Carrier:	____ of ____ COCs
1322 Scott St., Suite 104	Analysis Turnaround Time			Sampler:
San Diego, CA 92106	☐CALENDAR DAYS ☐WORKING DAYS			For Lab Use Only:
(562) 756-8149	TAT if different from Below STD			Walk-in Client:
	☐ 2 weeks			Lab Sampling:
Project Name: Omega Chem. - 2019 Semi-Ann GWM Feb	☐ 1 week			
Site: Omega Chemical	☐ 2 days			Job / SDG No.:
P O #: 3139G/E742	☐ 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 + Freons	EPA 8270C - 1,4 Dioxane	Sample Specific Notes:
OC_GW_OW-8B_20190213	2/13/2019	08:17	Grab	GW	5			x	x	

440-233427 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 | 43509 | Cooler Temp. (°C): Obs'd: .6 Corr'd: 1.0 Therm ID No.: 59

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	JHA	2/13/19 1220	[signature]	TAIRV	2/13/19 1220
[signature]	TA IRV	2/13/19 1445	[signature]		
			Received in Laboratory by: [signature]	TA IRV	2/13/19 1445

1.6 2/13

Login Sample Receipt Checklist

Client: de maximis, inc.

Job Number: 440-233427-1
SDG Number: Whittier

Login Number: 233427
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: 440-233428-1
TestAmerica Sample Delivery Group: Whittier, CA
Client Project/Site: Omega Chemical-2019 Semi-Annual GWM Feb.

For:
Jacob & Hefner Associates P.C.
15375 Barranca Parkway, J-101
Irvine, California 92618

Attn: Trent Henderson

Authorized for release by:
2/26/2019 11:31:13 AM

Danielle Roberts, Senior Project Manager
(949)261-1022
danielle.roberts@testamericainc.com

LINKS

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Visit us at: www.testamericainc.com

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

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

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

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Sample Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-2019 Semi-Annual GWM Feb.

TestAmerica Job ID: 440-233428-1
SDG: Whittier, CA

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-233428-1	OC_GW_EW-3_20190213	Water	02/13/19 08:36	02/13/19 14:45

Job ID: 440-233428-1

Laboratory: TestAmerica Irvine

Narrative

Job Narrative
440-233428-1

Comments
No additional comments.

Receipt
The sample was received on 2/13/2019 2:45 PM; the sample arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.0º 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 SIM: The method blank for preparation batch 440-529836 and analytical batch 440-530058 contained 1,4-Dioxane above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

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

Organic Prep
Method(s) 3520C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 440-529257. 8270-SIM-1,4-Dioxane. LCS was performed in duplicate to provide precision of data.

Method(s) 3520C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 440-529836. LCS was performed in duplicate to maintain precision of data. 8270 1,4 DXN

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

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

Detection Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-2019 Semi-Annual GWM Feb.

TestAmerica Job ID: 440-233428-1
SDG: Whittier, CA

Client Sample ID: OC_GW_EW-3_20190213 — Lab Sample ID: 440-233428-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,2-Trichloro-1,2,2-trifluoroethane	3.9	J	5.0	0.50	ug/L	1		8260B	Total/NA
1,1-Dichloroethene	1.5		1.0	0.25	ug/L	1		8260B	Total/NA
Chloroform	0.71	J	1.0	0.25	ug/L	1		8260B	Total/NA
Tetrachloroethene	13		1.0	0.25	ug/L	1		8260B	Total/NA
Trichloroethene	1.3		1.0	0.25	ug/L	1		8260B	Total/NA
Trichlorofluoromethane	0.74	J	1.0	0.25	ug/L	1		8260B	Total/NA
1,4-Dioxane	1.3	B	0.51	0.10	ug/L	1		8270C SIM	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-2019 Semi-Annual GWM Feb.

TestAmerica Job ID: 440-233428-1
SDG: Whittier, CA

Client Sample ID: OC_GW_EW-3_20190213

Lab Sample ID: 440-233428-1

Date Collected: 02/13/19 08:36
Matrix: Water
Date Received: 02/13/19 14:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/19/19 12:29	1
1,1,1-Trichloroethane	ND		1.0	0.25	ug/L			02/19/19 12:29	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/19/19 12:29	1
1,1,2-Trichloro-1,2,2-trifluoroethane	**3.9**	**J**	5.0	0.50	ug/L			02/19/19 12:29	1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L			02/19/19 12:29	1
1,1-Dichloroethane	ND		1.0	0.25	ug/L			02/19/19 12:29	1
1,1-Dichloroethene	**1.5**		1.0	0.25	ug/L			02/19/19 12:29	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			02/19/19 12:29	1
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L			02/19/19 12:29	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			02/19/19 12:29	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			02/19/19 12:29	1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			02/19/19 12:29	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			02/19/19 12:29	1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			02/19/19 12:29	1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			02/19/19 12:29	1
1,2-Dichloroethane	ND		1.0	0.25	ug/L			02/19/19 12:29	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			02/19/19 12:29	1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			02/19/19 12:29	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			02/19/19 12:29	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			02/19/19 12:29	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			02/19/19 12:29	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			02/19/19 12:29	1
2-Chlorotoluene	ND		1.0	0.25	ug/L			02/19/19 12:29	1
4-Chlorotoluene	ND		1.0	0.25	ug/L			02/19/19 12:29	1
Acetone	ND		10	10	ug/L			02/19/19 12:29	1
Benzene	ND		0.50	0.25	ug/L			02/19/19 12:29	1
Bromobenzene	ND		1.0	0.25	ug/L			02/19/19 12:29	1
Bromochloromethane	ND		1.0	0.25	ug/L			02/19/19 12:29	1
Bromodichloromethane	ND		1.0	0.25	ug/L			02/19/19 12:29	1
Bromoform	ND		1.0	0.40	ug/L			02/19/19 12:29	1
Bromomethane	ND		1.0	0.25	ug/L			02/19/19 12:29	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			02/19/19 12:29	1
Chlorobenzene	ND		1.0	0.25	ug/L			02/19/19 12:29	1
Chloroethane	ND		1.0	0.40	ug/L			02/19/19 12:29	1
Chloroform	**0.71**	**J**	1.0	0.25	ug/L			02/19/19 12:29	1
Chloromethane	ND		1.0	0.25	ug/L			02/19/19 12:29	1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			02/19/19 12:29	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/19/19 12:29	1
Dibromochloromethane	ND		1.0	0.25	ug/L			02/19/19 12:29	1
Dibromomethane	ND		1.0	0.25	ug/L			02/19/19 12:29	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			02/19/19 12:29	1
Ethylbenzene	ND		1.0	0.25	ug/L			02/19/19 12:29	1
Hexachlorobutadiene	ND		1.0	0.25	ug/L			02/19/19 12:29	1
Isopropylbenzene	ND		1.0	0.25	ug/L			02/19/19 12:29	1
m,p-Xylene	ND		1.0	0.50	ug/L			02/19/19 12:29	1
Methylene Chloride	ND		5.0	0.88	ug/L			02/19/19 12:29	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			02/19/19 12:29	1
Naphthalene	ND		1.0	0.40	ug/L			02/19/19 12:29	1

Client Sample ID: OC_GW_EW-3_20190213

Lab Sample ID: 440-233428-1

Date Collected: 02/13/19 08:36
Matrix: Water
Date Received: 02/13/19 14:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	ND		1.0	0.40	ug/L			02/19/19 12:29	1
N-Propylbenzene	ND		1.0	0.25	ug/L			02/19/19 12:29	1
o-Xylene	ND		1.0	0.25	ug/L			02/19/19 12:29	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			02/19/19 12:29	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			02/19/19 12:29	1
Styrene	ND		1.0	0.25	ug/L			02/19/19 12:29	1
tert-Butylbenzene	ND		1.0	0.25	ug/L			02/19/19 12:29	1
Tetrachloroethene	**13**		1.0	0.25	ug/L			02/19/19 12:29	1
Toluene	ND		1.0	0.25	ug/L			02/19/19 12:29	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			02/19/19 12:29	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/19/19 12:29	1
Trichloroethene	**1.3**		1.0	0.25	ug/L			02/19/19 12:29	1
Trichlorofluoromethane	**0.74**	**J**	1.0	0.25	ug/L			02/19/19 12:29	1
Vinyl chloride	ND		0.50	0.25	ug/L			02/19/19 12:29	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*11*	*T J*	*ug/L*		*7.12*			*02/19/19 12:29*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*111*		*80 - 120*		*02/19/19 12:29*	*1*
Dibromofluoromethane (Surr)	*96*		*76 - 132*		*02/19/19 12:29*	*1*
Toluene-d8 (Surr)	*102*		*80 - 128*		*02/19/19 12:29*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropyl alcohol	ND		250	180	ug/L			02/21/19 00:21	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*10*	*T J*	*ug/L*		*7.17*			*02/21/19 00:21*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*108*		*80 - 120*		*02/21/19 00:21*	*1*
Dibromofluoromethane (Surr)	*112*		*76 - 132*		*02/21/19 00:21*	*1*
Toluene-d8 (Surr)	*108*		*80 - 128*		*02/21/19 00:21*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**1.3**	**B**	0.51	0.10	ug/L		02/20/19 11:33	02/21/19 19:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*63*		*27 - 120*	*02/20/19 11:33*	*02/21/19 19:10*	*1*

Surrogate Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-2019 Semi-Annual GWM Feb.

TestAmerica Job ID: 440-233428-1
SDG: Whittier, CA

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

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(80-120)	(76-132)	(80-128)
440-233428-1	OC_GW_EW-3_20190213	111	96	102
440-233428-1 - RA	OC_GW_EW-3_20190213	108	112	108
440-233448-B-1 MS	Matrix Spike	103	108	105
440-233448-B-1 MSD	Matrix Spike Duplicate	106	107	101
440-233457-D-1 MS	Matrix Spike	108	93	103
440-233457-D-1 MSD	Matrix Spike Duplicate	103	96	104
LCS 440-529443/5	Lab Control Sample	107	95	103
LCS 440-529870/1004	Lab Control Sample	108	110	109
MB 440-529443/7	Method Blank	109	96	102
MB 440-529870/6	Method Blank	111	113	107

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

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

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
		DXE
Lab Sample ID	Client Sample ID	(27-120)
440-233428-1	OC_GW_EW-3_20190213	63
LCS 440-529836/2-A	Lab Control Sample	66
LCSD 440-529836/3-A	Lab Control Sample Dup	58
MB 440-529836/1-A	Method Blank	57

Surrogate Legend

DXE = 1,4-Dioxane-d8 (Surr)

Method Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-2019 Semi-Annual GWM Feb.

TestAmerica Job ID: 440-233428-1
SDG: Whittier, CA

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL IRV
8270C SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL IRV
3520C	Liquid-Liquid Extraction (Continuous)	SW846	TAL IRV
5030B	Purge and Trap	SW846	TAL IRV

Protocol References:

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: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-2019 Semi-Annual GWM Feb.

TestAmerica Job ID: 440-233428-1
SDG: Whittier, CA

Client Sample ID: OC_GW_EW-3_20190213

Lab Sample ID: 440-233428-1

Date Collected: 02/13/19 08:36

Matrix: Water

Date Received: 02/13/19 14:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B	RA	1	10 mL	10 mL	529870	02/21/19 00:21	DMP	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	529443	02/19/19 12:29	TCN	TAL IRV
Total/NA	Prep	3520C			990 mL	1.0 mL	529836	02/20/19 11:33	JAA	TAL IRV
Total/NA	Analysis	8270C SIM		1			530058	02/21/19 19:10	L1B	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 440-529443/7
Matrix: Water
Analysis Batch: 529443

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/19/19 09:16	1
1,1,1-Trichloroethane	ND		1.0	0.25	ug/L			02/19/19 09:16	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/19/19 09:16	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	0.50	ug/L			02/19/19 09:16	1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L			02/19/19 09:16	1
1,1-Dichloroethane	ND		1.0	0.25	ug/L			02/19/19 09:16	1
1,1-Dichloroethene	ND		1.0	0.25	ug/L			02/19/19 09:16	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			02/19/19 09:16	1
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L			02/19/19 09:16	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			02/19/19 09:16	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			02/19/19 09:16	1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			02/19/19 09:16	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			02/19/19 09:16	1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			02/19/19 09:16	1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			02/19/19 09:16	1
1,2-Dichloroethane	ND		1.0	0.25	ug/L			02/19/19 09:16	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			02/19/19 09:16	1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			02/19/19 09:16	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			02/19/19 09:16	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			02/19/19 09:16	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			02/19/19 09:16	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			02/19/19 09:16	1
2-Chlorotoluene	ND		1.0	0.25	ug/L			02/19/19 09:16	1
4-Chlorotoluene	ND		1.0	0.25	ug/L			02/19/19 09:16	1
Acetone	ND		10	10	ug/L			02/19/19 09:16	1
Benzene	ND		0.50	0.25	ug/L			02/19/19 09:16	1
Bromobenzene	ND		1.0	0.25	ug/L			02/19/19 09:16	1
Bromochloromethane	ND		1.0	0.25	ug/L			02/19/19 09:16	1
Bromodichloromethane	ND		1.0	0.25	ug/L			02/19/19 09:16	1
Bromoform	ND		1.0	0.40	ug/L			02/19/19 09:16	1
Bromomethane	ND		1.0	0.25	ug/L			02/19/19 09:16	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			02/19/19 09:16	1
Chlorobenzene	ND		1.0	0.25	ug/L			02/19/19 09:16	1
Chloroethane	ND		1.0	0.40	ug/L			02/19/19 09:16	1
Chloroform	ND		1.0	0.25	ug/L			02/19/19 09:16	1
Chloromethane	ND		1.0	0.25	ug/L			02/19/19 09:16	1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			02/19/19 09:16	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/19/19 09:16	1
Dibromochloromethane	ND		1.0	0.25	ug/L			02/19/19 09:16	1
Dibromomethane	ND		1.0	0.25	ug/L			02/19/19 09:16	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			02/19/19 09:16	1
Ethylbenzene	ND		1.0	0.25	ug/L			02/19/19 09:16	1
Hexachlorobutadiene	ND		1.0	0.25	ug/L			02/19/19 09:16	1
Isopropylbenzene	ND		1.0	0.25	ug/L			02/19/19 09:16	1
m,p-Xylene	ND		1.0	0.50	ug/L			02/19/19 09:16	1
Methylene Chloride	ND		5.0	0.88	ug/L			02/19/19 09:16	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			02/19/19 09:16	1
Naphthalene	ND		1.0	0.40	ug/L			02/19/19 09:16	1

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

Lab Sample ID: MB 440-529443/7
Matrix: Water
Analysis Batch: 529443

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	ND		1.0	0.40	ug/L			02/19/19 09:16	1
N-Propylbenzene	ND		1.0	0.25	ug/L			02/19/19 09:16	1
o-Xylene	ND		1.0	0.25	ug/L			02/19/19 09:16	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			02/19/19 09:16	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			02/19/19 09:16	1
Styrene	ND		1.0	0.25	ug/L			02/19/19 09:16	1
tert-Butylbenzene	ND		1.0	0.25	ug/L			02/19/19 09:16	1
Tetrachloroethene	ND		1.0	0.25	ug/L			02/19/19 09:16	1
Toluene	ND		1.0	0.25	ug/L			02/19/19 09:16	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			02/19/19 09:16	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/19/19 09:16	1
Trichloroethene	ND		1.0	0.25	ug/L			02/19/19 09:16	1
Trichlorofluoromethane	ND		1.0	0.25	ug/L			02/19/19 09:16	1
Vinyl chloride	ND		0.50	0.25	ug/L			02/19/19 09:16	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*02/19/19 09:16*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*109*		*80 - 120*		*02/19/19 09:16*	*1*
Dibromofluoromethane (Surr)	*96*		*76 - 132*		*02/19/19 09:16*	*1*
Toluene-d8 (Surr)	*102*		*80 - 128*		*02/19/19 09:16*	*1*

Lab Sample ID: LCS 440-529443/5
Matrix: Water
Analysis Batch: 529443

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	24.7		ug/L		99	60 - 141
1,1,1-Trichloroethane	25.0	26.8		ug/L		107	70 - 130
1,1,2,2-Tetrachloroethane	25.0	26.4		ug/L		105	63 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	24.9		ug/L		100	60 - 140
1,1,2-Trichloroethane	25.0	27.0		ug/L		108	70 - 130
1,1-Dichloroethane	25.0	25.6		ug/L		103	64 - 130
1,1-Dichloroethene	25.0	25.3		ug/L		101	70 - 130
1,1-Dichloropropene	25.0	28.5		ug/L		114	70 - 130
1,2,3-Trichlorobenzene	25.0	28.4		ug/L		114	60 - 140
1,2,3-Trichloropropane	25.0	25.0		ug/L		100	63 - 130
1,2,4-Trichlorobenzene	25.0	28.4		ug/L		114	60 - 140
1,2,4-Trimethylbenzene	25.0	28.9		ug/L		116	70 - 135
1,2-Dibromo-3-Chloropropane	25.0	25.7		ug/L		103	52 - 140
1,2-Dibromoethane (EDB)	25.0	25.8		ug/L		103	70 - 130
1,2-Dichlorobenzene	25.0	26.8		ug/L		107	70 - 130
1,2-Dichloroethane	25.0	24.2		ug/L		97	57 - 138
1,2-Dichloropropane	25.0	27.3		ug/L		109	67 - 130
1,3,5-Trimethylbenzene	25.0	29.0		ug/L		116	70 - 136
1,3-Dichlorobenzene	25.0	25.7		ug/L		103	70 - 130

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

Lab Sample ID: LCS 440-529443/5
Matrix: Water
Analysis Batch: 529443

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	27.8		ug/L		111	70 - 130
1,4-Dichlorobenzene	25.0	25.7		ug/L		103	70 - 130
2,2-Dichloropropane	25.0	30.8		ug/L		123	68 - 141
2-Chlorotoluene	25.0	27.9		ug/L		111	70 - 130
4-Chlorotoluene	25.0	28.5		ug/L		114	70 - 130
Acetone	25.0	17.5		ug/L		70	10 - 150
Benzene	25.0	27.7		ug/L		111	68 - 130
Bromobenzene	25.0	26.1		ug/L		104	70 - 130
Bromochloromethane	25.0	24.4		ug/L		98	70 - 130
Bromodichloromethane	25.0	26.2		ug/L		105	70 - 132
Bromoform	25.0	23.2		ug/L		93	60 - 148
Bromomethane	25.0	23.3		ug/L		93	64 - 139
Carbon tetrachloride	25.0	25.5		ug/L		102	60 - 150
Chlorobenzene	25.0	23.4		ug/L		93	70 - 130
Chloroethane	25.0	25.7		ug/L		103	64 - 135
Chloroform	25.0	25.2		ug/L		101	70 - 130
Chloromethane	25.0	21.0		ug/L		84	47 - 140
cis-1,2-Dichloroethene	25.0	25.6		ug/L		102	70 - 133
cis-1,3-Dichloropropene	25.0	29.9		ug/L		120	70 - 133
Dibromochloromethane	25.0	26.0		ug/L		104	69 - 145
Dibromomethane	25.0	25.9		ug/L		104	70 - 130
Dichlorodifluoromethane	25.0	24.3		ug/L		97	29 - 150
Ethylbenzene	25.0	26.1		ug/L		104	70 - 130
Hexachlorobutadiene	25.0	27.3		ug/L		109	10 - 150
Isopropylbenzene	25.0	27.6		ug/L		110	70 - 136
m,p-Xylene	25.0	27.6		ug/L		111	70 - 130
Methylene Chloride	25.0	24.7		ug/L		99	52 - 130
Methyl-t-Butyl Ether (MTBE)	25.0	26.4		ug/L		106	63 - 131
Naphthalene	25.0	25.1		ug/L		100	60 - 140
n-Butylbenzene	25.0	29.6		ug/L		119	65 - 150
N-Propylbenzene	25.0	27.8		ug/L		111	67 - 139
o-Xylene	25.0	27.8		ug/L		111	70 - 130
p-Isopropyltoluene	25.0	28.8		ug/L		115	70 - 132
sec-Butylbenzene	25.0	28.0		ug/L		112	70 - 138
Styrene	25.0	26.9		ug/L		107	70 - 134
tert-Butylbenzene	25.0	28.7		ug/L		115	70 - 130
Tetrachloroethene	25.0	23.9		ug/L		96	70 - 130
Toluene	25.0	26.3		ug/L		105	70 - 130
trans-1,2-Dichloroethene	25.0	26.6		ug/L		106	70 - 130
trans-1,3-Dichloropropene	25.0	28.7		ug/L		115	70 - 132
Trichloroethene	25.0	24.3		ug/L		97	70 - 130
Trichlorofluoromethane	25.0	24.1		ug/L		96	60 - 150
Vinyl chloride	25.0	23.4		ug/L		93	59 - 133

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*107*		*80 - 120*
Dibromofluoromethane (Surr)	*95*		*76 - 132*
Toluene-d8 (Surr)	*103*		*80 - 128*

QC Sample Results

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-2019 Semi-Annual GWM Feb.

TestAmerica Job ID: 440-233428-1
SDG: Whittier, CA

Lab Sample ID: 440-233457-D-1 MS
Matrix: Water
Analysis Batch: 529443

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
1,1,1,2-Tetrachloroethane	ND		25.0	22.6		ug/L		91	60 - 149
1,1,1-Trichloroethane	ND		25.0	24.8		ug/L		99	70 - 130
1,1,2,2-Tetrachloroethane	ND		25.0	24.8		ug/L		99	63 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		25.0	23.6		ug/L		94	60 - 140
1,1,2-Trichloroethane	ND		25.0	25.2		ug/L		101	70 - 130
1,1-Dichloroethane	ND		25.0	25.0		ug/L		100	65 - 130
1,1-Dichloroethene	ND		25.0	23.7		ug/L		95	70 - 130
1,1-Dichloropropene	ND		25.0	27.6		ug/L		110	64 - 130
1,2,3-Trichlorobenzene	ND		25.0	26.7		ug/L		107	60 - 140
1,2,3-Trichloropropane	ND		25.0	23.6		ug/L		94	60 - 130
1,2,4-Trichlorobenzene	ND		25.0	26.8		ug/L		107	60 - 140
1,2,4-Trimethylbenzene	ND		25.0	27.8		ug/L		111	70 - 130
1,2-Dibromo-3-Chloropropane	ND		25.0	24.0		ug/L		96	48 - 140
1,2-Dibromoethane (EDB)	ND		25.0	25.5		ug/L		102	70 - 131
1,2-Dichlorobenzene	ND		25.0	25.7		ug/L		103	70 - 130
1,2-Dichloroethane	ND		25.0	24.2		ug/L		97	56 - 146
1,2-Dichloropropane	ND		25.0	25.2		ug/L		101	69 - 130
1,3,5-Trimethylbenzene	ND		25.0	28.2		ug/L		113	70 - 130
1,3-Dichlorobenzene	ND		25.0	24.9		ug/L		100	70 - 130
1,3-Dichloropropane	ND		25.0	27.3		ug/L		109	70 - 130
1,4-Dichlorobenzene	ND		25.0	25.4		ug/L		102	70 - 130
2,2-Dichloropropane	ND		25.0	28.0		ug/L		112	69 - 138
2-Chlorotoluene	ND		25.0	26.8		ug/L		107	70 - 130
4-Chlorotoluene	ND		25.0	27.1		ug/L		108	70 - 130
Acetone	ND		25.0	14.3		ug/L		57	10 - 150
Benzene	ND		25.0	26.5		ug/L		106	66 - 130
Bromobenzene	ND		25.0	25.1		ug/L		100	70 - 130
Bromochloromethane	ND		25.0	23.2		ug/L		93	70 - 130
Bromodichloromethane	ND		25.0	25.8		ug/L		103	70 - 138
Bromoform	ND		25.0	22.8		ug/L		91	59 - 150
Bromomethane	ND		25.0	22.0		ug/L		88	62 - 131
Carbon tetrachloride	ND		25.0	23.4		ug/L		94	60 - 150
Chlorobenzene	ND		25.0	22.7		ug/L		91	70 - 130
Chloroethane	ND		25.0	22.4		ug/L		90	68 - 130
Chloroform	ND		25.0	24.9		ug/L		99	70 - 130
Chloromethane	ND		25.0	19.3		ug/L		77	39 - 144
cis-1,2-Dichloroethene	ND		25.0	25.1		ug/L		101	70 - 130
cis-1,3-Dichloropropene	ND		25.0	28.9		ug/L		116	70 - 133
Dibromochloromethane	ND		25.0	24.5		ug/L		98	70 - 148
Dibromomethane	ND		25.0	24.1		ug/L		96	70 - 130
Dichlorodifluoromethane	ND		25.0	21.4		ug/L		86	25 - 142
Ethylbenzene	ND		25.0	25.3		ug/L		101	70 - 130
Hexachlorobutadiene	ND		25.0	26.2		ug/L		105	10 - 150
Isopropylbenzene	ND		25.0	26.3		ug/L		105	70 - 132
m,p-Xylene	ND		25.0	26.8		ug/L		107	70 - 133
Methylene Chloride	ND		25.0	24.3		ug/L		97	52 - 130
Methyl-t-Butyl Ether (MTBE)	0.31	J	25.0	25.4		ug/L		100	70 - 130
Naphthalene	ND		25.0	23.7		ug/L		95	60 - 140
n-Butylbenzene	ND		25.0	28.3		ug/L		113	61 - 149

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

Lab Sample ID: 440-233457-D-1 MS
Matrix: Water
Analysis Batch: 529443

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
N-Propylbenzene	ND		25.0	26.8		ug/L		107	66 - 135
o-Xylene	ND		25.0	26.4		ug/L		106	70 - 133
p-Isopropyltoluene	ND		25.0	28.2		ug/L		113	70 - 130
sec-Butylbenzene	ND		25.0	27.7		ug/L		111	67 - 134
Styrene	ND		25.0	25.6		ug/L		103	29 - 150
tert-Butylbenzene	ND		25.0	27.8		ug/L		111	70 - 130
Tetrachloroethene	ND		25.0	23.0		ug/L		92	70 - 137
Toluene	ND		25.0	26.1		ug/L		104	70 - 130
trans-1,2-Dichloroethene	ND		25.0	25.0		ug/L		100	70 - 130
trans-1,3-Dichloropropene	ND		25.0	26.8		ug/L		107	70 - 138
Trichloroethene	ND		25.0	23.5		ug/L		94	70 - 130
Trichlorofluoromethane	ND		25.0	22.5		ug/L		90	60 - 150
Vinyl chloride	ND		25.0	20.9		ug/L		84	50 - 137

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*108*		*80 - 120*
Dibromofluoromethane (Surr)	*93*		*76 - 132*
Toluene-d8 (Surr)	*103*		*80 - 128*

Lab Sample ID: 440-233457-D-1 MSD
Matrix: Water
Analysis Batch: 529443

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
1,1,1,2-Tetrachloroethane	ND		25.0	24.7		ug/L		99	60 - 149	9	20
1,1,1-Trichloroethane	ND		25.0	25.8		ug/L		103	70 - 130	4	20
1,1,2,2-Tetrachloroethane	ND		25.0	27.0		ug/L		108	63 - 130	8	30
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		25.0	24.1		ug/L		97	60 - 140	2	20
1,1,2-Trichloroethane	ND		25.0	27.9		ug/L		112	70 - 130	10	25
1,1-Dichloroethane	ND		25.0	26.3		ug/L		105	65 - 130	5	20
1,1-Dichloroethene	ND		25.0	25.1		ug/L		101	70 - 130	6	20
1,1-Dichloropropene	ND		25.0	29.3		ug/L		117	64 - 130	6	20
1,2,3-Trichlorobenzene	ND		25.0	28.4		ug/L		113	60 - 140	6	20
1,2,3-Trichloropropane	ND		25.0	25.8		ug/L		103	60 - 130	9	30
1,2,4-Trichlorobenzene	ND		25.0	28.2		ug/L		113	60 - 140	5	20
1,2,4-Trimethylbenzene	ND		25.0	28.5		ug/L		114	70 - 130	3	25
1,2-Dibromo-3-Chloropropane	ND		25.0	26.7		ug/L		107	48 - 140	10	30
1,2-Dibromoethane (EDB)	ND		25.0	27.2		ug/L		109	70 - 131	6	25
1,2-Dichlorobenzene	ND		25.0	26.6		ug/L		106	70 - 130	3	20
1,2-Dichloroethane	ND		25.0	25.0		ug/L		100	56 - 146	3	20
1,2-Dichloropropane	ND		25.0	27.5		ug/L		110	69 - 130	9	20
1,3,5-Trimethylbenzene	ND		25.0	28.8		ug/L		115	70 - 130	2	20
1,3-Dichlorobenzene	ND		25.0	25.4		ug/L		102	70 - 130	2	20
1,3-Dichloropropane	ND		25.0	28.4		ug/L		113	70 - 130	4	25
1,4-Dichlorobenzene	ND		25.0	26.0		ug/L		104	70 - 130	3	20
2,2-Dichloropropane	ND		25.0	28.8		ug/L		115	69 - 138	3	25
2-Chlorotoluene	ND		25.0	27.6		ug/L		110	70 - 130	3	20

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

Lab Sample ID: 440-233457-D-1 MSD
Matrix: Water
Analysis Batch: 529443

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
4-Chlorotoluene	ND		25.0	28.4		ug/L		113	70 - 130	5	20
Acetone	ND		25.0	18.2		ug/L		73	10 - 150	24	35
Benzene	ND		25.0	27.1		ug/L		109	66 - 130	2	20
Bromobenzene	ND		25.0	26.4		ug/L		106	70 - 130	5	20
Bromochloromethane	ND		25.0	24.2		ug/L		97	70 - 130	4	25
Bromodichloromethane	ND		25.0	26.6		ug/L		106	70 - 138	3	20
Bromoform	ND		25.0	24.0		ug/L		96	59 - 150	5	25
Bromomethane	ND		25.0	22.8		ug/L		91	62 - 131	3	25
Carbon tetrachloride	ND		25.0	24.9		ug/L		100	60 - 150	6	25
Chlorobenzene	ND		25.0	23.7		ug/L		95	70 - 130	4	20
Chloroethane	ND		25.0	24.3		ug/L		97	68 - 130	8	25
Chloroform	ND		25.0	25.1		ug/L		100	70 - 130	1	20
Chloromethane	ND		25.0	19.6		ug/L		78	39 - 144	2	25
cis-1,2-Dichloroethene	ND		25.0	26.8		ug/L		107	70 - 130	6	20
cis-1,3-Dichloropropene	ND		25.0	30.3		ug/L		121	70 - 133	5	20
Dibromochloromethane	ND		25.0	26.2		ug/L		105	70 - 148	7	25
Dibromomethane	ND		25.0	25.7		ug/L		103	70 - 130	6	25
Dichlorodifluoromethane	ND		25.0	22.7		ug/L		91	25 - 142	6	30
Ethylbenzene	ND		25.0	26.3		ug/L		105	70 - 130	4	20
Hexachlorobutadiene	ND		25.0	27.0		ug/L		108	10 - 150	3	20
Isopropylbenzene	ND		25.0	27.9		ug/L		112	70 - 132	6	20
m,p-Xylene	ND		25.0	27.8		ug/L		111	70 - 133	4	25
Methylene Chloride	ND		25.0	24.8		ug/L		99	52 - 130	2	20
Methyl-t-Butyl Ether (MTBE)	0.31	J	25.0	27.4		ug/L		109	70 - 130	8	25
Naphthalene	ND		25.0	25.4		ug/L		102	60 - 140	7	30
n-Butylbenzene	ND		25.0	29.9		ug/L		120	61 - 149	6	20
N-Propylbenzene	ND		25.0	28.0		ug/L		112	66 - 135	4	20
o-Xylene	ND		25.0	28.0		ug/L		112	70 - 133	6	20
p-Isopropyltoluene	ND		25.0	28.9		ug/L		116	70 - 130	2	20
sec-Butylbenzene	ND		25.0	28.0		ug/L		112	67 - 134	1	20
Styrene	ND		25.0	26.5		ug/L		106	29 - 150	4	35
tert-Butylbenzene	ND		25.0	28.5		ug/L		114	70 - 130	2	20
Tetrachloroethene	ND		25.0	24.7		ug/L		99	70 - 137	7	20
Toluene	ND		25.0	26.6		ug/L		106	70 - 130	2	20
trans-1,2-Dichloroethene	ND		25.0	27.4		ug/L		109	70 - 130	9	20
trans-1,3-Dichloropropene	ND		25.0	28.9		ug/L		116	70 - 138	8	25
Trichloroethene	ND		25.0	24.5		ug/L		98	70 - 130	4	20
Trichlorofluoromethane	ND		25.0	23.3		ug/L		93	60 - 150	4	25
Vinyl chloride	ND		25.0	21.7		ug/L		87	50 - 137	4	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*
Dibromofluoromethane (Surr)	*96*		*76 - 132*
Toluene-d8 (Surr)	*104*		*80 - 128*

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

Lab Sample ID: MB 440-529870/6
Matrix: Water
Analysis Batch: 529870

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Isopropyl alcohol	ND		250	180	ug/L			02/20/19 15:56	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*02/20/19 15:56*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*111*		*80 - 120*		*02/20/19 15:56*	*1*
Dibromofluoromethane (Surr)	*113*		*76 - 132*		*02/20/19 15:56*	*1*
Toluene-d8 (Surr)	*107*		*80 - 128*		*02/20/19 15:56*	*1*

Lab Sample ID: LCS 440-529870/1004
Matrix: Water
Analysis Batch: 529870

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Isopropyl alcohol			250	225	J	ug/L		90	49 - 142		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*108*		*80 - 120*
Dibromofluoromethane (Surr)	*110*		*76 - 132*
Toluene-d8 (Surr)	*109*		*80 - 128*

Lab Sample ID: 440-233448-B-1 MS
Matrix: Water
Analysis Batch: 529870

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		
Isopropyl alcohol	ND		250	235	J	ug/L		94	46 - 142		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*103*		*80 - 120*
Dibromofluoromethane (Surr)	*108*		*76 - 132*
Toluene-d8 (Surr)	*105*		*80 - 128*

Lab Sample ID: 440-233448-B-1 MSD
Matrix: Water
Analysis Batch: 529870

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
Isopropyl alcohol	ND		250	241	J	ug/L		96	46 - 142	2	40

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*106*		*80 - 120*
Dibromofluoromethane (Surr)	*107*		*76 - 132*
Toluene-d8 (Surr)	*101*		*80 - 128*

QC Sample Results

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-2019 Semi-Annual GWM Feb.

TestAmerica Job ID: 440-233428-1
SDG: Whittier, CA

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

Lab Sample ID: MB 440-529836/1-A
Matrix: Water
Analysis Batch: 530058

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 529836

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.442	J	0.50	0.10	ug/L		02/20/19 11:33	02/21/19 16:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*57*		*27 - 120*	*02/20/19 11:33*	*02/21/19 16:04*	*1*

Lab Sample ID: LCS 440-529836/2-A
Matrix: Water
Analysis Batch: 530058

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 529836

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,4-Dioxane			2.00	1.65		ug/L		83	36 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,4-Dioxane-d8 (Surr)	*66*		*27 - 120*

Lab Sample ID: LCSD 440-529836/3-A
Matrix: Water
Analysis Batch: 530058

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 529836

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dioxane			2.00	1.58		ug/L		79	36 - 120	4	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,4-Dioxane-d8 (Surr)	*58*		*27 - 120*

QC Association Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-2019 Semi-Annual GWM Feb.

TestAmerica Job ID: 440-233428-1
SDG: Whittier, CA

GC/MS VOA

Analysis Batch: 529443

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-233428-1	OC_GW_EW-3_20190213	Total/NA	Water	8260B	
MB 440-529443/7	Method Blank	Total/NA	Water	8260B	
LCS 440-529443/5	Lab Control Sample	Total/NA	Water	8260B	
440-233457-D-1 MS	Matrix Spike	Total/NA	Water	8260B	
440-233457-D-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

Analysis Batch: 529870

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-233428-1 - RA	OC_GW_EW-3_20190213	Total/NA	Water	8260B	
MB 440-529870/6	Method Blank	Total/NA	Water	8260B	
LCS 440-529870/1004	Lab Control Sample	Total/NA	Water	8260B	
440-233448-B-1 MS	Matrix Spike	Total/NA	Water	8260B	
440-233448-B-1 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 529836

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-233428-1	OC_GW_EW-3_20190213	Total/NA	Water	3520C	
MB 440-529836/1-A	Method Blank	Total/NA	Water	3520C	
LCS 440-529836/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 440-529836/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	

Analysis Batch: 530058

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-233428-1	OC_GW_EW-3_20190213	Total/NA	Water	8270C SIM	529836
MB 440-529836/1-A	Method Blank	Total/NA	Water	8270C SIM	529836
LCS 440-529836/2-A	Lab Control Sample	Total/NA	Water	8270C SIM	529836
LCSD 440-529836/3-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM	529836

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.

GC/MS Semi VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
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: Jacob & Hefner Associates P.C. TestAmerica Job ID: 440-233428-1
Project/Site: Omega Chemical-2019 Semi-Annual GWM Feb. SDG: Whittier, CA

Laboratory: TestAmerica Irvine

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
California	State Program	9	CA ELAP 2706	06-30-19

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8260B		Water	1,1,2-Trichloro-1,2,2-trifluoroethane
8260B		Water	m,p-Xylene
8270C SIM	3520C	Water	1,4-Dioxane

TestAmerica Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614
phone 949.261.1022 fax

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.

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

Client Contact	Project Manager: Trent Henderson	Site Contact: Khalid Azhar	Date: 2/13/19	COC No:
De Maximis - Jaime Dinello	Tel/Fax: (949) 453-1045 / (949) 453-1047	Lab Contact: Danielle Roberts	Carrier:	1 of 1 COCs
1322 Scott St., Suite 104	Analysis Turnaround Time			Sampler:
San Diego, CA 92106	☐CALENDAR DAYS ☐WORKING DAYS			For Lab Use Only:
(562) 756-8149	TAT if different from Below STD			Walk-in Client:
	☐ 2 weeks			Lab Sampling:
Project Name: Omega Chem. - 2019 Semi-Ann GWM Feb	☐ 1 week			
Site: Omega Chemical	☐ 2 days			Job / SDG No.:
P O #: 3139G/E742	☐ 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 + Freons	EPA 8270C - 1,4 Dioxane	Sample Specific Notes:
OC_GW_EW-3_20190213	2/13/2019	08.36	Grab	GW	5			x	x	

440-233428 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 | 43509 | Cooler Temp (°C): Obs'd: .6 Corr'd: 1.0 | Therm ID No.: 49

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	JWD	2/13/19 1220		TA IRV	2/13/19 1220
Relinquished by:	Company: TA IRV	Date/Time: 2/13/19 1445	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company: TA IRV	Date/Time: 2/13/19 1445

Login Sample Receipt Checklist

Client: Jacob & Hefner Associates P.C.

Job Number: 440-233428-1
SDG Number: Whittier, CA

Login Number: 233428
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	

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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: 440-233429-1
TestAmerica Sample Delivery Group: Whittier, CA
Client Project/Site: Omega Chemical-2019 Semi-annual GWM Feb.

For:
Jacob & Hefner Associates P.C.
15375 Barranca Parkway, J-101
Irvine, California 92618

Attn: Trent Henderson

Authorized for release by:
2/26/2019 12:32:52 PM

Danielle Roberts, Senior Project Manager
(949)261-1022
danielle.roberts@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

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

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

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

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Sample Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-2019 Semi-annual GWM Feb.

TestAmerica Job ID: 440-233429-1
SDG: Whittier, CA

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-233429-1	OC_GW_OW-13B_20190213	Water	02/13/19 10:23	02/13/19 14:45
440-233429-2	OC_GW_OW-13B_20190213N	Water	02/13/19 12:00	02/13/19 14:45

Job ID: 440-233429-1

Laboratory: TestAmerica Irvine

Narrative

Job Narrative
440-233429-1

Comments
No additional comments.

Receipt
The samples were received on 2/13/2019 2:45 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.0º 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 SIM: The method blank for preparation batch 440-529836 and analytical batch 440-530058 contained 1,4-Dioxane above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

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

Organic Prep
Method(s) 3520C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 440-529257. 8270-SIM-1,4-Dioxane. LCS was performed in duplicate to provide precision of data.

Method(s) 3520C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 440-529836. LCS was performed in duplicate to maintain precision of data. 8270 1,4 DXN

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

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

Detection Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-2019 Semi-annual GWM Feb.

TestAmerica Job ID: 440-233429-1
SDG: Whittier, CA

Client Sample ID: OC_GW_OW-13B_20190213 — Lab Sample ID: 440-233429-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Tetrachloroethene	21		1.0	0.25	ug/L	1		8260B	Total/NA
1,4-Dioxane	0.29	J B	0.48	0.096	ug/L	1		8270C SIM	Total/NA

Client Sample ID: OC_GW_OW-13B_20190213N — Lab Sample ID: 440-233429-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone	10		10	10	ug/L	1		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-2019 Semi-annual GWM Feb.

TestAmerica Job ID: 440-233429-1
SDG: Whittier, CA

Client Sample ID: OC_GW_OW-13B_20190213

Lab Sample ID: 440-233429-1

Date Collected: 02/13/19 10:23
Matrix: Water
Date Received: 02/13/19 14:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/22/19 15:57	1
1,1,1-Trichloroethane	ND		1.0	0.25	ug/L			02/22/19 15:57	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/22/19 15:57	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	0.50	ug/L			02/22/19 15:57	1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L			02/22/19 15:57	1
1,1-Dichloroethane	ND		1.0	0.25	ug/L			02/22/19 15:57	1
1,1-Dichloroethene	ND		1.0	0.25	ug/L			02/22/19 15:57	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			02/22/19 15:57	1
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L			02/22/19 15:57	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			02/22/19 15:57	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			02/22/19 15:57	1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			02/22/19 15:57	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			02/22/19 15:57	1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			02/22/19 15:57	1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			02/22/19 15:57	1
1,2-Dichloroethane	ND		1.0	0.25	ug/L			02/22/19 15:57	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			02/22/19 15:57	1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			02/22/19 15:57	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			02/22/19 15:57	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			02/22/19 15:57	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			02/22/19 15:57	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			02/22/19 15:57	1
2-Chlorotoluene	ND		1.0	0.25	ug/L			02/22/19 15:57	1
4-Chlorotoluene	ND		1.0	0.25	ug/L			02/22/19 15:57	1
Acetone	ND		10	10	ug/L			02/22/19 15:57	1
Benzene	ND		0.50	0.25	ug/L			02/22/19 15:57	1
Bromobenzene	ND		1.0	0.25	ug/L			02/22/19 15:57	1
Bromochloromethane	ND		1.0	0.25	ug/L			02/22/19 15:57	1
Bromodichloromethane	ND		1.0	0.25	ug/L			02/22/19 15:57	1
Bromoform	ND		1.0	0.40	ug/L			02/22/19 15:57	1
Bromomethane	ND		1.0	0.25	ug/L			02/22/19 15:57	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			02/22/19 15:57	1
Chlorobenzene	ND		1.0	0.25	ug/L			02/22/19 15:57	1
Chloroethane	ND		1.0	0.40	ug/L			02/22/19 15:57	1
Chloroform	ND		1.0	0.25	ug/L			02/22/19 15:57	1
Chloromethane	ND		1.0	0.25	ug/L			02/22/19 15:57	1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			02/22/19 15:57	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/22/19 15:57	1
Dibromochloromethane	ND		1.0	0.25	ug/L			02/22/19 15:57	1
Dibromomethane	ND		1.0	0.25	ug/L			02/22/19 15:57	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			02/22/19 15:57	1
Ethylbenzene	ND		1.0	0.25	ug/L			02/22/19 15:57	1
Hexachlorobutadiene	ND		1.0	0.25	ug/L			02/22/19 15:57	1
Isopropyl alcohol	ND		250	180	ug/L			02/22/19 15:57	1
Isopropylbenzene	ND		1.0	0.25	ug/L			02/22/19 15:57	1
m,p-Xylene	ND		1.0	0.50	ug/L			02/22/19 15:57	1
Methylene Chloride	ND		5.0	0.88	ug/L			02/22/19 15:57	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			02/22/19 15:57	1
Naphthalene	ND		1.0	0.40	ug/L			02/22/19 15:57	1

Client Sample ID: OC_GW_OW-13B_20190213

Lab Sample ID: 440-233429-1

Date Collected: 02/13/19 10:23
Matrix: Water
Date Received: 02/13/19 14:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	ND		1.0	0.40	ug/L			02/22/19 15:57	1
N-Propylbenzene	ND		1.0	0.25	ug/L			02/22/19 15:57	1
o-Xylene	ND		1.0	0.25	ug/L			02/22/19 15:57	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			02/22/19 15:57	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			02/22/19 15:57	1
Styrene	ND		1.0	0.25	ug/L			02/22/19 15:57	1
tert-Butylbenzene	ND		1.0	0.25	ug/L			02/22/19 15:57	1
Tetrachloroethene	**21**		1.0	0.25	ug/L			02/22/19 15:57	1
Toluene	ND		1.0	0.25	ug/L			02/22/19 15:57	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			02/22/19 15:57	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/22/19 15:57	1
Trichloroethene	ND		1.0	0.25	ug/L			02/22/19 15:57	1
Trichlorofluoromethane	ND		1.0	0.25	ug/L			02/22/19 15:57	1
Vinyl chloride	ND		0.50	0.25	ug/L			02/22/19 15:57	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*950*	*T J*	*ug/L*		*1.48*			*02/22/19 15:57*	*1*
Unknown	*11*	*T J*	*ug/L*		*5.25*			*02/22/19 15:57*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*		*02/22/19 15:57*	*1*
Dibromofluoromethane (Surr)	*113*		*76 - 132*		*02/22/19 15:57*	*1*
Toluene-d8 (Surr)	*103*		*80 - 128*		*02/22/19 15:57*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**0.29**	**J B**	0.48	0.096	ug/L		02/20/19 11:33	02/21/19 19:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*74*		*27 - 120*	*02/20/19 11:33*	*02/21/19 19:33*	*1*

Client Sample ID: OC_GW_OW-13B_20190213N

Lab Sample ID: 440-233429-2

Date Collected: 02/13/19 12:00
Matrix: Water
Date Received: 02/13/19 14:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/22/19 16:23	1
1,1,1-Trichloroethane	ND		1.0	0.25	ug/L			02/22/19 16:23	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/22/19 16:23	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	0.50	ug/L			02/22/19 16:23	1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L			02/22/19 16:23	1
1,1-Dichloroethane	ND		1.0	0.25	ug/L			02/22/19 16:23	1
1,1-Dichloroethene	ND		1.0	0.25	ug/L			02/22/19 16:23	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			02/22/19 16:23	1
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L			02/22/19 16:23	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			02/22/19 16:23	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			02/22/19 16:23	1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			02/22/19 16:23	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			02/22/19 16:23	1

Client Sample Results

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-2019 Semi-annual GWM Feb.

TestAmerica Job ID: 440-233429-1
SDG: Whittier, CA

Client Sample ID: OC_GW_OW-13B_20190213N

Lab Sample ID: 440-233429-2

Date Collected: 02/13/19 12:00
Matrix: Water
Date Received: 02/13/19 14:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			02/22/19 16:23	1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			02/22/19 16:23	1
1,2-Dichloroethane	ND		1.0	0.25	ug/L			02/22/19 16:23	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			02/22/19 16:23	1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			02/22/19 16:23	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			02/22/19 16:23	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			02/22/19 16:23	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			02/22/19 16:23	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			02/22/19 16:23	1
2-Chlorotoluene	ND		1.0	0.25	ug/L			02/22/19 16:23	1
4-Chlorotoluene	ND		1.0	0.25	ug/L			02/22/19 16:23	1
Acetone	**10**		10	10	ug/L			02/22/19 16:23	1
Benzene	ND		0.50	0.25	ug/L			02/22/19 16:23	1
Bromobenzene	ND		1.0	0.25	ug/L			02/22/19 16:23	1
Bromochloromethane	ND		1.0	0.25	ug/L			02/22/19 16:23	1
Bromodichloromethane	ND		1.0	0.25	ug/L			02/22/19 16:23	1
Bromoform	ND		1.0	0.40	ug/L			02/22/19 16:23	1
Bromomethane	ND		1.0	0.25	ug/L			02/22/19 16:23	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			02/22/19 16:23	1
Chlorobenzene	ND		1.0	0.25	ug/L			02/22/19 16:23	1
Chloroethane	ND		1.0	0.40	ug/L			02/22/19 16:23	1
Chloroform	ND		1.0	0.25	ug/L			02/22/19 16:23	1
Chloromethane	ND		1.0	0.25	ug/L			02/22/19 16:23	1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			02/22/19 16:23	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/22/19 16:23	1
Dibromochloromethane	ND		1.0	0.25	ug/L			02/22/19 16:23	1
Dibromomethane	ND		1.0	0.25	ug/L			02/22/19 16:23	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			02/22/19 16:23	1
Ethylbenzene	ND		1.0	0.25	ug/L			02/22/19 16:23	1
Hexachlorobutadiene	ND		1.0	0.25	ug/L			02/22/19 16:23	1
Isopropyl alcohol	ND		250	180	ug/L			02/22/19 16:23	1
Isopropylbenzene	ND		1.0	0.25	ug/L			02/22/19 16:23	1
m,p-Xylene	ND		1.0	0.50	ug/L			02/22/19 16:23	1
Methylene Chloride	ND		5.0	0.88	ug/L			02/22/19 16:23	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			02/22/19 16:23	1
Naphthalene	ND		1.0	0.40	ug/L			02/22/19 16:23	1
n-Butylbenzene	ND		1.0	0.40	ug/L			02/22/19 16:23	1
N-Propylbenzene	ND		1.0	0.25	ug/L			02/22/19 16:23	1
o-Xylene	ND		1.0	0.25	ug/L			02/22/19 16:23	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			02/22/19 16:23	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			02/22/19 16:23	1
Styrene	ND		1.0	0.25	ug/L			02/22/19 16:23	1
tert-Butylbenzene	ND		1.0	0.25	ug/L			02/22/19 16:23	1
Tetrachloroethene	ND		1.0	0.25	ug/L			02/22/19 16:23	1
Toluene	ND		1.0	0.25	ug/L			02/22/19 16:23	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			02/22/19 16:23	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/22/19 16:23	1
Trichloroethene	ND		1.0	0.25	ug/L			02/22/19 16:23	1
Trichlorofluoromethane	ND		1.0	0.25	ug/L			02/22/19 16:23	1

Client Sample Results

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-2019 Semi-annual GWM Feb.

TestAmerica Job ID: 440-233429-1
SDG: Whittier, CA

Client Sample ID: OC_GW_OW-13B_20190213N

Lab Sample ID: 440-233429-2

Date Collected: 02/13/19 12:00
Matrix: Water
Date Received: 02/13/19 14:45

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			02/22/19 16:23	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*110*	*T J*	*ug/L*		*1.48*			*02/22/19 16:23*	*1*
Unknown	*3.6*	*T J*	*ug/L*		*1.86*			*02/22/19 16:23*	*1*
Unknown	*10*	*T J*	*ug/L*		*5.25*			*02/22/19 16:23*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*91*		*80 - 120*		*02/22/19 16:23*	*1*
Dibromofluoromethane (Surr)	*113*		*76 - 132*		*02/22/19 16:23*	*1*
Toluene-d8 (Surr)	*108*		*80 - 128*		*02/22/19 16:23*	*1*

Surrogate Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-2019 Semi-annual GWM Feb.

TestAmerica Job ID: 440-233429-1
SDG: Whittier, CA

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

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(80-120)	(76-132)	(80-128)
440-233274-A-6 MS	Matrix Spike	95	106	100
440-233274-A-6 MSD	Matrix Spike Duplicate	96	104	98
440-233429-1	OC_GW_OW-13B_20190213	95	113	103
440-233429-2	OC_GW_OW-13B_20190213N	91	113	108
LCS 440-530231/1003	Lab Control Sample	94	101	105
LCS 440-530231/5	Lab Control Sample	100	104	99
MB 440-530231/4	Method Blank	99	108	104

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

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

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
		DXE
Lab Sample ID	Client Sample ID	(27-120)
440-233429-1	OC_GW_OW-13B_20190213	74
LCS 440-529836/2-A	Lab Control Sample	66
LCSD 440-529836/3-A	Lab Control Sample Dup	58
MB 440-529836/1-A	Method Blank	57

Surrogate Legend

DXE = 1,4-Dioxane-d8 (Surr)

Method Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-2019 Semi-annual GWM Feb.

TestAmerica Job ID: 440-233429-1
SDG: Whittier, CA

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL IRV
8270C SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL IRV
3520C	Liquid-Liquid Extraction (Continuous)	SW846	TAL IRV
5030B	Purge and Trap	SW846	TAL IRV

Protocol References:

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: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-2019 Semi-annual GWM Feb.

TestAmerica Job ID: 440-233429-1
SDG: Whittier, CA

Client Sample ID: OC_GW_OW-13B_20190213 — Lab Sample ID: 440-233429-1

Date Collected: 02/13/19 10:23 — **Matrix: Water**
Date Received: 02/13/19 14:45

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	530231	02/22/19 15:57	RM	TAL IRV
Total/NA	Prep	3520C			1040 mL	1.0 mL	529836	02/20/19 11:33	JAA	TAL IRV
Total/NA	Analysis	8270C SIM		1			530058	02/21/19 19:33	L1B	TAL IRV

Client Sample ID: OC_GW_OW-13B_20190213N — Lab Sample ID: 440-233429-2

Date Collected: 02/13/19 12:00 — **Matrix: Water**
Date Received: 02/13/19 14:45

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	530231	02/22/19 16:23	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 440-530231/4
Matrix: Water
Analysis Batch: 530231

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/22/19 07:53	1
1,1,1-Trichloroethane	ND		1.0	0.25	ug/L			02/22/19 07:53	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/22/19 07:53	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	0.50	ug/L			02/22/19 07:53	1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L			02/22/19 07:53	1
1,1-Dichloroethane	ND		1.0	0.25	ug/L			02/22/19 07:53	1
1,1-Dichloroethene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L			02/22/19 07:53	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			02/22/19 07:53	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			02/22/19 07:53	1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			02/22/19 07:53	1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			02/22/19 07:53	1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
1,2-Dichloroethane	ND		1.0	0.25	ug/L			02/22/19 07:53	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			02/22/19 07:53	1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			02/22/19 07:53	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			02/22/19 07:53	1
2-Chlorotoluene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
4-Chlorotoluene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
Acetone	ND		10	10	ug/L			02/22/19 07:53	1
Benzene	ND		0.50	0.25	ug/L			02/22/19 07:53	1
Bromobenzene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
Bromochloromethane	ND		1.0	0.25	ug/L			02/22/19 07:53	1
Bromodichloromethane	ND		1.0	0.25	ug/L			02/22/19 07:53	1
Bromoform	ND		1.0	0.40	ug/L			02/22/19 07:53	1
Bromomethane	ND		1.0	0.25	ug/L			02/22/19 07:53	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			02/22/19 07:53	1
Chlorobenzene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
Chloroethane	ND		1.0	0.40	ug/L			02/22/19 07:53	1
Chloroform	ND		1.0	0.25	ug/L			02/22/19 07:53	1
Chloromethane	ND		1.0	0.25	ug/L			02/22/19 07:53	1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/22/19 07:53	1
Dibromochloromethane	ND		1.0	0.25	ug/L			02/22/19 07:53	1
Dibromomethane	ND		1.0	0.25	ug/L			02/22/19 07:53	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			02/22/19 07:53	1
Ethylbenzene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
Hexachlorobutadiene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
Isopropyl alcohol	ND		250	180	ug/L			02/22/19 07:53	1
Isopropylbenzene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
m,p-Xylene	ND		1.0	0.50	ug/L			02/22/19 07:53	1
Methylene Chloride	ND		5.0	0.88	ug/L			02/22/19 07:53	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			02/22/19 07:53	1

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

Lab Sample ID: MB 440-530231/4
Matrix: Water
Analysis Batch: 530231

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		1.0	0.40	ug/L			02/22/19 07:53	1
n-Butylbenzene	ND		1.0	0.40	ug/L			02/22/19 07:53	1
N-Propylbenzene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
o-Xylene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
Styrene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
tert-Butylbenzene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
Tetrachloroethene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
Toluene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/22/19 07:53	1
Trichloroethene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
Trichlorofluoromethane	ND		1.0	0.25	ug/L			02/22/19 07:53	1
Vinyl chloride	ND		0.50	0.25	ug/L			02/22/19 07:53	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*56.0*	*T J*	*ug/L*		*1.48*			*02/22/19 07:53*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*		*02/22/19 07:53*	*1*
Dibromofluoromethane (Surr)	*108*		*76 - 132*		*02/22/19 07:53*	*1*
Toluene-d8 (Surr)	*104*		*80 - 128*		*02/22/19 07:53*	*1*

Lab Sample ID: LCS 440-530231/1003
Matrix: Water
Analysis Batch: 530231

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Isopropyl alcohol	250	235	J	ug/L		94	49 - 142

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*
Dibromofluoromethane (Surr)	*101*		*76 - 132*
Toluene-d8 (Surr)	*105*		*80 - 128*

Lab Sample ID: LCS 440-530231/5
Matrix: Water
Analysis Batch: 530231

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	24.3		ug/L		97	60 - 141
1,1,1-Trichloroethane	25.0	26.0		ug/L		104	70 - 130
1,1,2,2-Tetrachloroethane	25.0	22.4		ug/L		89	63 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	21.2		ug/L		85	60 - 140
1,1,2-Trichloroethane	25.0	22.5		ug/L		90	70 - 130

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

Lab Sample ID: LCS 440-530231/5
Matrix: Water
Analysis Batch: 530231

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethane	25.0	24.2		ug/L		97	64 - 130
1,1-Dichloroethene	25.0	22.6		ug/L		91	70 - 130
1,1-Dichloropropene	25.0	27.0		ug/L		108	70 - 130
1,2,3-Trichlorobenzene	25.0	26.2		ug/L		105	60 - 140
1,2,3-Trichloropropane	25.0	23.6		ug/L		94	63 - 130
1,2,4-Trichlorobenzene	25.0	30.1		ug/L		120	60 - 140
1,2,4-Trimethylbenzene	25.0	26.2		ug/L		105	70 - 135
1,2-Dibromo-3-Chloropropane	25.0	22.4		ug/L		90	52 - 140
1,2-Dibromoethane (EDB)	25.0	23.2		ug/L		93	70 - 130
1,2-Dichlorobenzene	25.0	25.9		ug/L		104	70 - 130
1,2-Dichloroethane	25.0	26.6		ug/L		106	57 - 138
1,2-Dichloropropane	25.0	25.6		ug/L		102	67 - 130
1,3,5-Trimethylbenzene	25.0	25.6		ug/L		102	70 - 136
1,3-Dichlorobenzene	25.0	26.2		ug/L		105	70 - 130
1,3-Dichloropropane	25.0	23.1		ug/L		92	70 - 130
1,4-Dichlorobenzene	25.0	24.3		ug/L		97	70 - 130
2,2-Dichloropropane	25.0	29.6		ug/L		118	68 - 141
2-Chlorotoluene	25.0	24.3		ug/L		97	70 - 130
4-Chlorotoluene	25.0	26.5		ug/L		106	70 - 130
Acetone	25.0	26.3		ug/L		105	10 - 150
Benzene	25.0	25.4		ug/L		102	68 - 130
Bromobenzene	25.0	23.8		ug/L		95	70 - 130
Bromochloromethane	25.0	25.4		ug/L		101	70 - 130
Bromodichloromethane	25.0	26.4		ug/L		105	70 - 132
Bromoform	25.0	24.1		ug/L		96	60 - 148
Bromomethane	25.0	20.0		ug/L		80	64 - 139
Carbon tetrachloride	25.0	25.6		ug/L		102	60 - 150
Chlorobenzene	25.0	23.6		ug/L		95	70 - 130
Chloroethane	25.0	19.9		ug/L		79	64 - 135
Chloroform	25.0	25.1		ug/L		100	70 - 130
Chloromethane	25.0	18.5		ug/L		74	47 - 140
cis-1,2-Dichloroethene	25.0	26.5		ug/L		106	70 - 133
cis-1,3-Dichloropropene	25.0	26.5		ug/L		106	70 - 133
Dibromochloromethane	25.0	25.0		ug/L		100	69 - 145
Dibromomethane	25.0	25.2		ug/L		101	70 - 130
Dichlorodifluoromethane	25.0	16.8		ug/L		67	29 - 150
Ethylbenzene	25.0	26.8		ug/L		107	70 - 130
Hexachlorobutadiene	25.0	27.9		ug/L		112	10 - 150
Isopropylbenzene	25.0	25.5		ug/L		102	70 - 136
m,p-Xylene	25.0	24.6		ug/L		98	70 - 130
Methylene Chloride	25.0	21.7		ug/L		87	52 - 130
Methyl-t-Butyl Ether (MTBE)	25.0	26.6		ug/L		107	63 - 131
Naphthalene	25.0	24.5		ug/L		98	60 - 140
n-Butylbenzene	25.0	26.9		ug/L		108	65 - 150
N-Propylbenzene	25.0	27.2		ug/L		109	67 - 139
o-Xylene	25.0	24.6		ug/L		98	70 - 130
p-Isopropyltoluene	25.0	28.5		ug/L		114	70 - 132
sec-Butylbenzene	25.0	24.7		ug/L		99	70 - 138

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

Lab Sample ID: LCS 440-530231/5
Matrix: Water
Analysis Batch: 530231

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Styrene	25.0	23.0		ug/L		92	70 - 134
tert-Butylbenzene	25.0	25.1		ug/L		100	70 - 130
Tetrachloroethene	25.0	24.2		ug/L		97	70 - 130
Toluene	25.0	26.1		ug/L		105	70 - 130
trans-1,2-Dichloroethene	25.0	25.6		ug/L		102	70 - 130
trans-1,3-Dichloropropene	25.0	23.9		ug/L		96	70 - 132
Trichloroethene	25.0	26.7		ug/L		107	70 - 130
Trichlorofluoromethane	25.0	20.5		ug/L		82	60 - 150
Vinyl chloride	25.0	18.3		ug/L		73	59 - 133

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*
Dibromofluoromethane (Surr)	*104*		*76 - 132*
Toluene-d8 (Surr)	*99*		*80 - 128*

Lab Sample ID: 440-233274-A-6 MS
Matrix: Water
Analysis Batch: 530231

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
1,1,1,2-Tetrachloroethane	ND		1250	1200		ug/L		96	60 - 149
1,1,1-Trichloroethane	ND		1250	1290		ug/L		103	70 - 130
1,1,2,2-Tetrachloroethane	ND		1250	1060		ug/L		84	63 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	180	J	1250	1190		ug/L		81	60 - 140
1,1,2-Trichloroethane	ND		1250	1140		ug/L		91	70 - 130
1,1-Dichloroethane	ND		1250	1220		ug/L		97	65 - 130
1,1-Dichloroethene	400		1250	1460		ug/L		85	70 - 130
1,1-Dichloropropene	ND		1250	1390		ug/L		111	64 - 130
1,2,3-Trichlorobenzene	ND		1250	1290		ug/L		103	60 - 140
1,2,3-Trichloropropane	ND		1250	1040		ug/L		83	60 - 130
1,2,4-Trichlorobenzene	ND		1250	1480		ug/L		119	60 - 140
1,2,4-Trimethylbenzene	ND		1250	1250		ug/L		100	70 - 130
1,2-Dibromo-3-Chloropropane	ND		1250	913		ug/L		73	48 - 140
1,2-Dibromoethane (EDB)	ND		1250	1200		ug/L		96	70 - 131
1,2-Dichlorobenzene	ND		1250	1300		ug/L		104	70 - 130
1,2-Dichloroethane	95		1250	1490		ug/L		111	56 - 146
1,2-Dichloropropane	ND		1250	1290		ug/L		103	69 - 130
1,3,5-Trimethylbenzene	ND		1250	1210		ug/L		97	70 - 130
1,3-Dichlorobenzene	ND		1250	1290		ug/L		103	70 - 130
1,3-Dichloropropane	ND		1250	1140		ug/L		91	70 - 130
1,4-Dichlorobenzene	ND		1250	1190		ug/L		95	70 - 130
2,2-Dichloropropane	ND		1250	1590		ug/L		127	69 - 138
2-Chlorotoluene	ND		1250	1160		ug/L		93	70 - 130
4-Chlorotoluene	ND		1250	1270		ug/L		102	70 - 130
Acetone	ND		1250	1310		ug/L		105	10 - 150
Benzene	ND		1250	1290		ug/L		103	66 - 130
Bromobenzene	ND		1250	1120		ug/L		90	70 - 130

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

Lab Sample ID: 440-233274-A-6 MS
Matrix: Water
Analysis Batch: 530231

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
Bromochloromethane	ND		1250	1280		ug/L		102	70 - 130
Bromodichloromethane	ND		1250	1370		ug/L		110	70 - 138
Bromoform	ND		1250	1090		ug/L		88	59 - 150
Bromomethane	ND		1250	1020		ug/L		81	62 - 131
Carbon tetrachloride	ND		1250	1300		ug/L		104	60 - 150
Chlorobenzene	ND		1250	1200		ug/L		96	70 - 130
Chloroethane	ND		1250	986		ug/L		79	68 - 130
Chloroform	380		1250	1620		ug/L		99	70 - 130
Chloromethane	ND		1250	926		ug/L		74	39 - 144
cis-1,2-Dichloroethene	ND		1250	1370		ug/L		110	70 - 130
cis-1,3-Dichloropropene	ND		1250	1400		ug/L		112	70 - 133
Dibromochloromethane	ND		1250	1300		ug/L		104	70 - 148
Dibromomethane	ND		1250	1290		ug/L		103	70 - 130
Dichlorodifluoromethane	ND		1250	813		ug/L		65	25 - 142
Ethylbenzene	ND		1250	1330		ug/L		106	70 - 130
Hexachlorobutadiene	ND		1250	1300		ug/L		104	10 - 150
Isopropyl alcohol	ND		12500	12800	J	ug/L		102	46 - 142
Isopropylbenzene	ND		1250	1260		ug/L		101	70 - 132
m,p-Xylene	ND		1250	1220		ug/L		97	70 - 133
Methylene Chloride	110	J	1250	1220		ug/L		89	52 - 130
Methyl-t-Butyl Ether (MTBE)	ND		1250	1310		ug/L		105	70 - 130
Naphthalene	ND		1250	1090		ug/L		87	60 - 140
n-Butylbenzene	ND		1250	1320		ug/L		106	61 - 149
N-Propylbenzene	ND		1250	1290		ug/L		103	66 - 135
o-Xylene	ND		1250	1240		ug/L		99	70 - 133
p-Isopropyltoluene	ND		1250	1370		ug/L		110	70 - 130
sec-Butylbenzene	ND		1250	1190		ug/L		95	67 - 134
Styrene	ND		1250	1200		ug/L		96	29 - 150
tert-Butylbenzene	ND		1250	1160		ug/L		93	70 - 130
Tetrachloroethene	4700	F1	1250	5770	E	ug/L		89	70 - 137
Toluene	ND		1250	1330		ug/L		107	70 - 130
trans-1,2-Dichloroethene	ND		1250	1280		ug/L		102	70 - 130
trans-1,3-Dichloropropene	ND		1250	1250		ug/L		100	70 - 138
Trichloroethene	230		1250	1590		ug/L		109	70 - 130
Trichlorofluoromethane	76		1250	1060		ug/L		79	60 - 150
Vinyl chloride	ND		1250	899		ug/L		72	50 - 137

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*
Dibromofluoromethane (Surr)	*106*		*76 - 132*
Toluene-d8 (Surr)	*100*		*80 - 128*

Lab Sample ID: 440-233274-A-6 MSD
Matrix: Water
Analysis Batch: 530231

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
1,1,1,2-Tetrachloroethane	ND		1250	1170		ug/L		94	60 - 149	3	20

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

Lab Sample ID: 440-233274-A-6 MSD
Matrix: Water
Analysis Batch: 530231

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
1,1,1-Trichloroethane	ND		1250	1200		ug/L		96	70 - 130	7	20
1,1,2,2-Tetrachloroethane	ND		1250	1110		ug/L		89	63 - 130	5	30
1,1,2-Trichloro-1,2,2-trifluoroethane	180	J	1250	1170		ug/L		79	60 - 140	2	20
1,1,2-Trichloroethane	ND		1250	1100		ug/L		88	70 - 130	3	25
1,1-Dichloroethane	ND		1250	1180		ug/L		94	65 - 130	3	20
1,1-Dichloroethene	400		1250	1450		ug/L		84	70 - 130	1	20
1,1-Dichloropropene	ND		1250	1360		ug/L		109	64 - 130	2	20
1,2,3-Trichlorobenzene	ND		1250	1330		ug/L		107	60 - 140	3	20
1,2,3-Trichloropropane	ND		1250	1120		ug/L		90	60 - 130	8	30
1,2,4-Trichlorobenzene	ND		1250	1530		ug/L		123	60 - 140	3	20
1,2,4-Trimethylbenzene	ND		1250	1280		ug/L		102	70 - 130	2	25
1,2-Dibromo-3-Chloropropane	ND		1250	1000		ug/L		80	48 - 140	9	30
1,2-Dibromoethane (EDB)	ND		1250	1130		ug/L		90	70 - 131	6	25
1,2-Dichlorobenzene	ND		1250	1330		ug/L		106	70 - 130	2	20
1,2-Dichloroethane	95		1250	1340		ug/L		100	56 - 146	10	20
1,2-Dichloropropane	ND		1250	1300		ug/L		104	69 - 130	1	20
1,3,5-Trimethylbenzene	ND		1250	1230		ug/L		99	70 - 130	2	20
1,3-Dichlorobenzene	ND		1250	1300		ug/L		104	70 - 130	0	20
1,3-Dichloropropane	ND		1250	1140		ug/L		91	70 - 130	0	25
1,4-Dichlorobenzene	ND		1250	1220		ug/L		97	70 - 130	2	20
2,2-Dichloropropane	ND		1250	1410		ug/L		113	69 - 138	12	25
2-Chlorotoluene	ND		1250	1170		ug/L		94	70 - 130	1	20
4-Chlorotoluene	ND		1250	1300		ug/L		104	70 - 130	2	20
Acetone	ND		1250	1330		ug/L		107	10 - 150	2	35
Benzene	ND		1250	1290		ug/L		103	66 - 130	0	20
Bromobenzene	ND		1250	1140		ug/L		92	70 - 130	2	20
Bromochloromethane	ND		1250	1260		ug/L		101	70 - 130	1	25
Bromodichloromethane	ND		1250	1310		ug/L		105	70 - 138	5	20
Bromoform	ND		1250	1120		ug/L		90	59 - 150	2	25
Bromomethane	ND		1250	1020		ug/L		82	62 - 131	1	25
Carbon tetrachloride	ND		1250	1180		ug/L		94	60 - 150	10	25
Chlorobenzene	ND		1250	1200		ug/L		96	70 - 130	0	20
Chloroethane	ND		1250	1030		ug/L		82	68 - 130	4	25
Chloroform	380		1250	1570		ug/L		95	70 - 130	3	20
Chloromethane	ND		1250	963		ug/L		77	39 - 144	4	25
cis-1,2-Dichloroethene	ND		1250	1350		ug/L		108	70 - 130	2	20
cis-1,3-Dichloropropene	ND		1250	1350		ug/L		108	70 - 133	4	20
Dibromochloromethane	ND		1250	1220		ug/L		97	70 - 148	7	25
Dibromomethane	ND		1250	1240		ug/L		99	70 - 130	4	25
Dichlorodifluoromethane	ND		1250	855		ug/L		68	25 - 142	5	30
Ethylbenzene	ND		1250	1350		ug/L		108	70 - 130	2	20
Hexachlorobutadiene	ND		1250	1360		ug/L		109	10 - 150	4	20
Isopropyl alcohol	ND		12500	12900	J	ug/L		103	46 - 142	1	40
Isopropylbenzene	ND		1250	1290		ug/L		104	70 - 132	3	20
m,p-Xylene	ND		1250	1240		ug/L		99	70 - 133	2	25
Methylene Chloride	110	J	1250	1200		ug/L		87	52 - 130	2	20
Methyl-t-Butyl Ether (MTBE)	ND		1250	1270		ug/L		101	70 - 130	4	25

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

Lab Sample ID: 440-233274-A-6 MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 530231

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Naphthalene	ND		1250	1170		ug/L		94	60 - 140	8	30
n-Butylbenzene	ND		1250	1350		ug/L		108	61 - 149	2	20
N-Propylbenzene	ND		1250	1320		ug/L		105	66 - 135	2	20
o-Xylene	ND		1250	1260		ug/L		100	70 - 133	1	20
p-Isopropyltoluene	ND		1250	1400		ug/L		112	70 - 130	2	20
sec-Butylbenzene	ND		1250	1190		ug/L		96	67 - 134	1	20
Styrene	ND		1250	1210		ug/L		97	29 - 150	1	35
tert-Butylbenzene	ND		1250	1200		ug/L		96	70 - 130	3	20
Tetrachloroethene	4700	F1	1250	5450	E F1	ug/L		63	70 - 137	6	20
Toluene	ND		1250	1310		ug/L		105	70 - 130	2	20
trans-1,2-Dichloroethene	ND		1250	1300		ug/L		104	70 - 130	1	20
trans-1,3-Dichloropropene	ND		1250	1200		ug/L		96	70 - 138	4	25
Trichloroethene	230		1250	1540		ug/L		105	70 - 130	3	20
Trichlorofluoromethane	76		1250	987		ug/L		73	60 - 150	7	25
Vinyl chloride	ND		1250	935		ug/L		75	50 - 137	4	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*
Dibromofluoromethane (Surr)	*104*		*76 - 132*
Toluene-d8 (Surr)	*98*		*80 - 128*

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

Lab Sample ID: MB 440-529836/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 530058 — **Prep Batch: 529836**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.442	J	0.50	0.10	ug/L		02/20/19 11:33	02/21/19 16:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*57*		*27 - 120*	*02/20/19 11:33*	*02/21/19 16:04*	*1*

Lab Sample ID: LCS 440-529836/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 530058 — **Prep Batch: 529836**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,4-Dioxane			2.00	1.65		ug/L		83	36 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,4-Dioxane-d8 (Surr)	*66*		*27 - 120*

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

Lab Sample ID: LCSD 440-529836/3-A
Matrix: Water
Analysis Batch: 530058

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 529836

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dioxane			2.00	1.58		ug/L		79	36 - 120	4	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,4-Dioxane-d8 (Surr)	*58*		*27 - 120*

QC Association Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-2019 Semi-annual GWM Feb.

TestAmerica Job ID: 440-233429-1
SDG: Whittier, CA

GC/MS VOA

Analysis Batch: 530231

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-233429-1	OC_GW_OW-13B_20190213	Total/NA	Water	8260B	
440-233429-2	OC_GW_OW-13B_20190213N	Total/NA	Water	8260B	
MB 440-530231/4	Method Blank	Total/NA	Water	8260B	
LCS 440-530231/1003	Lab Control Sample	Total/NA	Water	8260B	
LCS 440-530231/5	Lab Control Sample	Total/NA	Water	8260B	
440-233274-A-6 MS	Matrix Spike	Total/NA	Water	8260B	
440-233274-A-6 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 529836

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-233429-1	OC_GW_OW-13B_20190213	Total/NA	Water	3520C	
MB 440-529836/1-A	Method Blank	Total/NA	Water	3520C	
LCS 440-529836/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 440-529836/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	

Analysis Batch: 530058

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-233429-1	OC_GW_OW-13B_20190213	Total/NA	Water	8270C SIM	529836
MB 440-529836/1-A	Method Blank	Total/NA	Water	8270C SIM	529836
LCS 440-529836/2-A	Lab Control Sample	Total/NA	Water	8270C SIM	529836
LCSD 440-529836/3-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM	529836

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.
E	Result exceeded calibration range.
F1	MS and/or MSD Recovery is outside acceptance limits.

GC/MS VOA TICs

Qualifier	Qualifier Description
J	Indicates an Estimated Value for TICs
T	Result is a tentatively identified compound (TIC) and an estimated value.

GC/MS Semi VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
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: Jacob & Hefner Associates P.C. TestAmerica Job ID: 440-233429-1
Project/Site: Omega Chemical-2019 Semi-annual GWM Feb. SDG: Whittier, CA

Laboratory: TestAmerica Irvine

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
California	State Program	9	CA ELAP 2706	06-30-19

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8260B		Water	1,1,2-Trichloro-1,2,2-trifluoroethane
8260B		Water	m,p-Xylene
8270C SIM	3520C	Water	1,4-Dioxane

TestAmerica Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614
phone 949.261.1022 fax

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.

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

Client Contact	Project Manager: Trent Henderson	Site Contact: Khalid Azhar	Date: 2/13/19	COC No:
De Maximis - Jaime Dinello	Tel/Fax: (949) 453-1045 / (949) 453-1047	Lab Contact: Danielle Roberts	Carrier:	____ of ____ COCs
1322 Scott St., Suite 104	Analysis Turnaround Time			Sampler:
San Diego, CA 92106	☐CALENDAR DAYS ☐WORKING DAYS			For Lab Use Only:
(562) 756-8149	TAT if different from Below ___STD___			Walk-in Client.
	☐ 2 weeks			Lab Sampling.
Project Name: Omega Chem. - 2019 Semi-Ann. GWM Feb	☐ 1 week			
Site: Omega Chemical	☐ 2 days			Job / SDG No.:
P O #: 3139G/E742	☐ 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 + Freons	EPA 8270C - 1,4 Dioxane	Sample Specific Notes.
OC_GW_OW-13B_20190213	2/13/2019	10:23	Grab	GW	5			x	x	
OC_GW_OW-13B_20190213N	2/13/2019	12:00			3			x		

440-233429 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 | 43509 | Cooler Temp. (°C): Obs'd: .6 Corr'd. 1.0 | Therm ID No.: 39

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	JAD	2/13/19 1220	[signature]	TA IRV	2/13/19 1220
Relinquished by: [signature]	Company: TA IRV	Date/Time: 2/13/19 1445	Received by: [signature]	Company	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by: [signature]	Company: TA IRV	Date/Time: 2/13/19 1445

Login Sample Receipt Checklist

Client: Jacob & Hefner Associates P.C.

Job Number: 440-233429-1
SDG Number: Whittier, CA

Login Number: 233429
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	

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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: 440-233430-1
TestAmerica Sample Delivery Group: Whittier, CA
Client Project/Site: Omega Chemical-2019 Semi-Annual GWM Feb

For:
Jacob & Hefner Associates P.C.
15375 Barranca Parkway, J-101
Irvine, California 92618

Attn: Trent Henderson

Authorized for release by:
2/26/2019 2:12:28 PM

Danielle Roberts, Senior Project Manager
(949)261-1022
danielle.roberts@testamericainc.com

LINKS

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

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

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

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Sample Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-2019 Semi-Annual GWM Feb

TestAmerica Job ID: 440-233430-1
SDG: Whittier, CA

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-233430-1	OC_GW_DPE-7D_20190213	Water	02/13/19 11:42	02/13/19 14:45
440-233430-2	OC_TB_20190213	Water	02/13/19 07:00	02/13/19 14:45

Job ID: 440-233430-1

Laboratory: TestAmerica Irvine

Narrative

Job Narrative
440-233430-1

Comments
No additional comments.

Receipt
The samples were received on 2/13/2019 2:45 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.0º 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 SIM: The method blank for preparation batch 440-529836 and analytical batch 440-530058 contained 1,4-Dioxane above the method detection limit. This target analyte concentration was less than the reporting limit (RL); therefore, re-extraction and/or re-analysis of samples was not performed.

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

Organic Prep
Method(s) 3520C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 440-529257. 8270-SIM-1,4-Dioxane. LCS was performed in duplicate to provide precision of data.

Method(s) 3520C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 440-529836. LCS was performed in duplicate to maintain precision of data. 8270 1,4 DXN

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

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

Detection Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-2019 Semi-Annual GWM Feb

TestAmerica Job ID: 440-233430-1
SDG: Whittier, CA

Client Sample ID: OC_GW_DPE-7D_20190213 — Lab Sample ID: 440-233430-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,2-Trichloro-1,2,2-trifluoroethane	15		5.0	0.50	ug/L	1		8260B	Total/NA
1,1-Dichloroethene	15		1.0	0.25	ug/L	1		8260B	Total/NA
Tetrachloroethene	71		1.0	0.25	ug/L	1		8260B	Total/NA
Trichloroethene	31		1.0	0.25	ug/L	1		8260B	Total/NA
Trichlorofluoromethane	5.4		1.0	0.25	ug/L	1		8260B	Total/NA
1,4-Dioxane	0.31	J B	0.49	0.099	ug/L	1		8270C SIM	Total/NA

Client Sample ID: OC_TB_20190213 — Lab Sample ID: 440-233430-2

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-2019 Semi-Annual GWM Feb

TestAmerica Job ID: 440-233430-1
SDG: Whittier, CA

Client Sample ID: OC_GW_DPE-7D_20190213

Lab Sample ID: 440-233430-1

Date Collected: 02/13/19 11:42
Matrix: Water
Date Received: 02/13/19 14:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/22/19 16:49	1
1,1,1-Trichloroethane	ND		1.0	0.25	ug/L			02/22/19 16:49	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/22/19 16:49	1
1,1,2-Trichloro-1,2,2-trifluoroethane	**15**		5.0	0.50	ug/L			02/22/19 16:49	1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L			02/22/19 16:49	1
1,1-Dichloroethane	ND		1.0	0.25	ug/L			02/22/19 16:49	1
1,1-Dichloroethene	**15**		1.0	0.25	ug/L			02/22/19 16:49	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			02/22/19 16:49	1
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L			02/22/19 16:49	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			02/22/19 16:49	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			02/22/19 16:49	1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			02/22/19 16:49	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			02/22/19 16:49	1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			02/22/19 16:49	1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			02/22/19 16:49	1
1,2-Dichloroethane	ND		1.0	0.25	ug/L			02/22/19 16:49	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			02/22/19 16:49	1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			02/22/19 16:49	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			02/22/19 16:49	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			02/22/19 16:49	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			02/22/19 16:49	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			02/22/19 16:49	1
2-Chlorotoluene	ND		1.0	0.25	ug/L			02/22/19 16:49	1
4-Chlorotoluene	ND		1.0	0.25	ug/L			02/22/19 16:49	1
Acetone	ND		10	10	ug/L			02/22/19 16:49	1
Benzene	ND		0.50	0.25	ug/L			02/22/19 16:49	1
Bromobenzene	ND		1.0	0.25	ug/L			02/22/19 16:49	1
Bromochloromethane	ND		1.0	0.25	ug/L			02/22/19 16:49	1
Bromodichloromethane	ND		1.0	0.25	ug/L			02/22/19 16:49	1
Bromoform	ND		1.0	0.40	ug/L			02/22/19 16:49	1
Bromomethane	ND		1.0	0.25	ug/L			02/22/19 16:49	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			02/22/19 16:49	1
Chlorobenzene	ND		1.0	0.25	ug/L			02/22/19 16:49	1
Chloroethane	ND		1.0	0.40	ug/L			02/22/19 16:49	1
Chloroform	ND		1.0	0.25	ug/L			02/22/19 16:49	1
Chloromethane	ND		1.0	0.25	ug/L			02/22/19 16:49	1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			02/22/19 16:49	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/22/19 16:49	1
Dibromochloromethane	ND		1.0	0.25	ug/L			02/22/19 16:49	1
Dibromomethane	ND		1.0	0.25	ug/L			02/22/19 16:49	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			02/22/19 16:49	1
Ethylbenzene	ND		1.0	0.25	ug/L			02/22/19 16:49	1
Hexachlorobutadiene	ND		1.0	0.25	ug/L			02/22/19 16:49	1
Isopropyl alcohol	ND		250	180	ug/L			02/22/19 16:49	1
Isopropylbenzene	ND		1.0	0.25	ug/L			02/22/19 16:49	1
m,p-Xylene	ND		1.0	0.50	ug/L			02/22/19 16:49	1
Methylene Chloride	ND		5.0	0.88	ug/L			02/22/19 16:49	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			02/22/19 16:49	1

Client Sample ID: OC_GW_DPE-7D_20190213

Lab Sample ID: 440-233430-1

Date Collected: 02/13/19 11:42
Matrix: Water
Date Received: 02/13/19 14:45

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			02/22/19 16:49	1
n-Butylbenzene	ND		1.0	0.40	ug/L			02/22/19 16:49	1
N-Propylbenzene	ND		1.0	0.25	ug/L			02/22/19 16:49	1
o-Xylene	ND		1.0	0.25	ug/L			02/22/19 16:49	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			02/22/19 16:49	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			02/22/19 16:49	1
Styrene	ND		1.0	0.25	ug/L			02/22/19 16:49	1
tert-Butylbenzene	ND		1.0	0.25	ug/L			02/22/19 16:49	1
Tetrachloroethene	**71**		1.0	0.25	ug/L			02/22/19 16:49	1
Toluene	ND		1.0	0.25	ug/L			02/22/19 16:49	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			02/22/19 16:49	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/22/19 16:49	1
Trichloroethene	**31**		1.0	0.25	ug/L			02/22/19 16:49	1
Trichlorofluoromethane	**5.4**		1.0	0.25	ug/L			02/22/19 16:49	1
Vinyl chloride	ND		0.50	0.25	ug/L			02/22/19 16:49	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*830*	*T J*	*ug/L*		*1.49*			*02/22/19 16:49*	*1*
Unknown	*11*	*T J*	*ug/L*		*5.25*			*02/22/19 16:49*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*		*02/22/19 16:49*	*1*
Dibromofluoromethane (Surr)	*113*		*76 - 132*		*02/22/19 16:49*	*1*
Toluene-d8 (Surr)	*104*		*80 - 128*		*02/22/19 16:49*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**0.31**	**J B**	0.49	0.099	ug/L		02/20/19 11:33	02/21/19 19:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*65*		*27 - 120*	*02/20/19 11:33*	*02/21/19 19:57*	*1*

Client Sample ID: OC_TB_20190213

Lab Sample ID: 440-233430-2

Date Collected: 02/13/19 07:00
Matrix: Water
Date Received: 02/13/19 14:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/22/19 17:15	1
1,1,1-Trichloroethane	ND		1.0	0.25	ug/L			02/22/19 17:15	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/22/19 17:15	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	0.50	ug/L			02/22/19 17:15	1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L			02/22/19 17:15	1
1,1-Dichloroethane	ND		1.0	0.25	ug/L			02/22/19 17:15	1
1,1-Dichloroethene	ND		1.0	0.25	ug/L			02/22/19 17:15	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			02/22/19 17:15	1
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L			02/22/19 17:15	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			02/22/19 17:15	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			02/22/19 17:15	1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			02/22/19 17:15	1

Client Sample Results

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-2019 Semi-Annual GWM Feb

TestAmerica Job ID: 440-233430-1
SDG: Whittier, CA

Client Sample ID: OC_TB_20190213

Lab Sample ID: 440-233430-2

Date Collected: 02/13/19 07:00
Matrix: Water
Date Received: 02/13/19 14:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			02/22/19 17:15	1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			02/22/19 17:15	1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			02/22/19 17:15	1
1,2-Dichloroethane	ND		1.0	0.25	ug/L			02/22/19 17:15	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			02/22/19 17:15	1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			02/22/19 17:15	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			02/22/19 17:15	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			02/22/19 17:15	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			02/22/19 17:15	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			02/22/19 17:15	1
2-Chlorotoluene	ND		1.0	0.25	ug/L			02/22/19 17:15	1
4-Chlorotoluene	ND		1.0	0.25	ug/L			02/22/19 17:15	1
Acetone	ND		10	10	ug/L			02/22/19 17:15	1
Benzene	ND		0.50	0.25	ug/L			02/22/19 17:15	1
Bromobenzene	ND		1.0	0.25	ug/L			02/22/19 17:15	1
Bromochloromethane	ND		1.0	0.25	ug/L			02/22/19 17:15	1
Bromodichloromethane	ND		1.0	0.25	ug/L			02/22/19 17:15	1
Bromoform	ND		1.0	0.40	ug/L			02/22/19 17:15	1
Bromomethane	ND		1.0	0.25	ug/L			02/22/19 17:15	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			02/22/19 17:15	1
Chlorobenzene	ND		1.0	0.25	ug/L			02/22/19 17:15	1
Chloroethane	ND		1.0	0.40	ug/L			02/22/19 17:15	1
Chloroform	ND		1.0	0.25	ug/L			02/22/19 17:15	1
Chloromethane	ND		1.0	0.25	ug/L			02/22/19 17:15	1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			02/22/19 17:15	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/22/19 17:15	1
Dibromochloromethane	ND		1.0	0.25	ug/L			02/22/19 17:15	1
Dibromomethane	ND		1.0	0.25	ug/L			02/22/19 17:15	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			02/22/19 17:15	1
Ethylbenzene	ND		1.0	0.25	ug/L			02/22/19 17:15	1
Hexachlorobutadiene	ND		1.0	0.25	ug/L			02/22/19 17:15	1
Isopropyl alcohol	ND		250	180	ug/L			02/22/19 17:15	1
Isopropylbenzene	ND		1.0	0.25	ug/L			02/22/19 17:15	1
m,p-Xylene	ND		1.0	0.50	ug/L			02/22/19 17:15	1
Methylene Chloride	ND		5.0	0.88	ug/L			02/22/19 17:15	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			02/22/19 17:15	1
Naphthalene	ND		1.0	0.40	ug/L			02/22/19 17:15	1
n-Butylbenzene	ND		1.0	0.40	ug/L			02/22/19 17:15	1
N-Propylbenzene	ND		1.0	0.25	ug/L			02/22/19 17:15	1
o-Xylene	ND		1.0	0.25	ug/L			02/22/19 17:15	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			02/22/19 17:15	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			02/22/19 17:15	1
Styrene	ND		1.0	0.25	ug/L			02/22/19 17:15	1
tert-Butylbenzene	ND		1.0	0.25	ug/L			02/22/19 17:15	1
Tetrachloroethene	ND		1.0	0.25	ug/L			02/22/19 17:15	1
Toluene	ND		1.0	0.25	ug/L			02/22/19 17:15	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			02/22/19 17:15	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/22/19 17:15	1
Trichloroethene	ND		1.0	0.25	ug/L			02/22/19 17:15	1

Client Sample Results

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-2019 Semi-Annual GWM Feb

TestAmerica Job ID: 440-233430-1
SDG: Whittier, CA

Client Sample ID: OC_TB_20190213

Lab Sample ID: 440-233430-2

Date Collected: 02/13/19 07:00
Matrix: Water
Date Received: 02/13/19 14:45

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Trichlorofluoromethane	ND		1.0	0.25	ug/L			02/22/19 17:15	1
Vinyl chloride	ND		0.50	0.25	ug/L			02/22/19 17:15	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*90*	*T J*	*ug/L*		*1.47*			*02/22/19 17:15*	*1*
Unknown	*11*	*T J*	*ug/L*		*5.25*			*02/22/19 17:15*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*		*02/22/19 17:15*	*1*
Dibromofluoromethane (Surr)	*113*		*76 - 132*		*02/22/19 17:15*	*1*
Toluene-d8 (Surr)	*106*		*80 - 128*		*02/22/19 17:15*	*1*

Surrogate Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-2019 Semi-Annual GWM Feb

TestAmerica Job ID: 440-233430-1
SDG: Whittier, CA

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

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(80-120)	(76-132)	(80-128)
440-233274-A-6 MS	Matrix Spike	95	106	100
440-233274-A-6 MSD	Matrix Spike Duplicate	96	104	98
440-233430-1	OC_GW_DPE-7D_20190213	96	113	104
440-233430-2	OC_TB_20190213	94	113	106
LCS 440-530231/1003	Lab Control Sample	94	101	105
LCS 440-530231/5	Lab Control Sample	100	104	99
MB 440-530231/4	Method Blank	99	108	104

Surrogate Legend

BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

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

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
		DXE
Lab Sample ID	Client Sample ID	(27-120)
440-233430-1	OC_GW_DPE-7D_20190213	65
LCS 440-529836/2-A	Lab Control Sample	66
LCSD 440-529836/3-A	Lab Control Sample Dup	58
MB 440-529836/1-A	Method Blank	57

Surrogate Legend

DXE = 1,4-Dioxane-d8 (Surr)

Method Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-2019 Semi-Annual GWM Feb

TestAmerica Job ID: 440-233430-1
SDG: Whittier, CA

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL IRV
8270C SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL IRV
3520C	Liquid-Liquid Extraction (Continuous)	SW846	TAL IRV
5030B	Purge and Trap	SW846	TAL IRV

Protocol References:

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: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-2019 Semi-Annual GWM Feb

TestAmerica Job ID: 440-233430-1
SDG: Whittier, CA

Client Sample ID: OC_GW_DPE-7D_20190213 — Lab Sample ID: 440-233430-1

Date Collected: 02/13/19 11:42 — **Matrix: Water**
Date Received: 02/13/19 14:45

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	530231	02/22/19 16:49	RM	TAL IRV
Total/NA	Prep	3520C			1015 mL	1.0 mL	529836	02/20/19 11:33	JAA	TAL IRV
Total/NA	Analysis	8270C SIM		1			530058	02/21/19 19:57	L1B	TAL IRV

Client Sample ID: OC_TB_20190213 — Lab Sample ID: 440-233430-2

Date Collected: 02/13/19 07:00 — **Matrix: Water**
Date Received: 02/13/19 14:45

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	530231	02/22/19 17:15	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 440-530231/4
Matrix: Water
Analysis Batch: 530231

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/22/19 07:53	1
1,1,1-Trichloroethane	ND		1.0	0.25	ug/L			02/22/19 07:53	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/22/19 07:53	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	0.50	ug/L			02/22/19 07:53	1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L			02/22/19 07:53	1
1,1-Dichloroethane	ND		1.0	0.25	ug/L			02/22/19 07:53	1
1,1-Dichloroethene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L			02/22/19 07:53	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			02/22/19 07:53	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			02/22/19 07:53	1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			02/22/19 07:53	1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			02/22/19 07:53	1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
1,2-Dichloroethane	ND		1.0	0.25	ug/L			02/22/19 07:53	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			02/22/19 07:53	1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			02/22/19 07:53	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			02/22/19 07:53	1
2-Chlorotoluene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
4-Chlorotoluene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
Acetone	ND		10	10	ug/L			02/22/19 07:53	1
Benzene	ND		0.50	0.25	ug/L			02/22/19 07:53	1
Bromobenzene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
Bromochloromethane	ND		1.0	0.25	ug/L			02/22/19 07:53	1
Bromodichloromethane	ND		1.0	0.25	ug/L			02/22/19 07:53	1
Bromoform	ND		1.0	0.40	ug/L			02/22/19 07:53	1
Bromomethane	ND		1.0	0.25	ug/L			02/22/19 07:53	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			02/22/19 07:53	1
Chlorobenzene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
Chloroethane	ND		1.0	0.40	ug/L			02/22/19 07:53	1
Chloroform	ND		1.0	0.25	ug/L			02/22/19 07:53	1
Chloromethane	ND		1.0	0.25	ug/L			02/22/19 07:53	1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/22/19 07:53	1
Dibromochloromethane	ND		1.0	0.25	ug/L			02/22/19 07:53	1
Dibromomethane	ND		1.0	0.25	ug/L			02/22/19 07:53	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			02/22/19 07:53	1
Ethylbenzene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
Hexachlorobutadiene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
Isopropyl alcohol	ND		250	180	ug/L			02/22/19 07:53	1
Isopropylbenzene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
m,p-Xylene	ND		1.0	0.50	ug/L			02/22/19 07:53	1
Methylene Chloride	ND		5.0	0.88	ug/L			02/22/19 07:53	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			02/22/19 07:53	1

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

Lab Sample ID: MB 440-530231/4
Matrix: Water
Analysis Batch: 530231

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		1.0	0.40	ug/L			02/22/19 07:53	1
n-Butylbenzene	ND		1.0	0.40	ug/L			02/22/19 07:53	1
N-Propylbenzene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
o-Xylene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
Styrene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
tert-Butylbenzene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
Tetrachloroethene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
Toluene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/22/19 07:53	1
Trichloroethene	ND		1.0	0.25	ug/L			02/22/19 07:53	1
Trichlorofluoromethane	ND		1.0	0.25	ug/L			02/22/19 07:53	1
Vinyl chloride	ND		0.50	0.25	ug/L			02/22/19 07:53	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*56.0*	*T J*	*ug/L*		*1.48*			*02/22/19 07:53*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene (Surr)	*99*		*80 - 120*		*02/22/19 07:53*	*1*
Dibromofluoromethane (Surr)	*108*		*76 - 132*		*02/22/19 07:53*	*1*
Toluene-d8 (Surr)	*104*		*80 - 128*		*02/22/19 07:53*	*1*

Lab Sample ID: LCS 440-530231/1003
Matrix: Water
Analysis Batch: 530231

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Isopropyl alcohol	250	235	J	ug/L		94	49 - 142

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*
Dibromofluoromethane (Surr)	*101*		*76 - 132*
Toluene-d8 (Surr)	*105*		*80 - 128*

Lab Sample ID: LCS 440-530231/5
Matrix: Water
Analysis Batch: 530231

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	24.3		ug/L		97	60 - 141
1,1,1-Trichloroethane	25.0	26.0		ug/L		104	70 - 130
1,1,2,2-Tetrachloroethane	25.0	22.4		ug/L		89	63 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	21.2		ug/L		85	60 - 140
1,1,2-Trichloroethane	25.0	22.5		ug/L		90	70 - 130

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

Lab Sample ID: LCS 440-530231/5
Matrix: Water
Analysis Batch: 530231

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1-Dichloroethane	25.0	24.2		ug/L		97	64 - 130
1,1-Dichloroethene	25.0	22.6		ug/L		91	70 - 130
1,1-Dichloropropene	25.0	27.0		ug/L		108	70 - 130
1,2,3-Trichlorobenzene	25.0	26.2		ug/L		105	60 - 140
1,2,3-Trichloropropane	25.0	23.6		ug/L		94	63 - 130
1,2,4-Trichlorobenzene	25.0	30.1		ug/L		120	60 - 140
1,2,4-Trimethylbenzene	25.0	26.2		ug/L		105	70 - 135
1,2-Dibromo-3-Chloropropane	25.0	22.4		ug/L		90	52 - 140
1,2-Dibromoethane (EDB)	25.0	23.2		ug/L		93	70 - 130
1,2-Dichlorobenzene	25.0	25.9		ug/L		104	70 - 130
1,2-Dichloroethane	25.0	26.6		ug/L		106	57 - 138
1,2-Dichloropropane	25.0	25.6		ug/L		102	67 - 130
1,3,5-Trimethylbenzene	25.0	25.6		ug/L		102	70 - 136
1,3-Dichlorobenzene	25.0	26.2		ug/L		105	70 - 130
1,3-Dichloropropane	25.0	23.1		ug/L		92	70 - 130
1,4-Dichlorobenzene	25.0	24.3		ug/L		97	70 - 130
2,2-Dichloropropane	25.0	29.6		ug/L		118	68 - 141
2-Chlorotoluene	25.0	24.3		ug/L		97	70 - 130
4-Chlorotoluene	25.0	26.5		ug/L		106	70 - 130
Acetone	25.0	26.3		ug/L		105	10 - 150
Benzene	25.0	25.4		ug/L		102	68 - 130
Bromobenzene	25.0	23.8		ug/L		95	70 - 130
Bromochloromethane	25.0	25.4		ug/L		101	70 - 130
Bromodichloromethane	25.0	26.4		ug/L		105	70 - 132
Bromoform	25.0	24.1		ug/L		96	60 - 148
Bromomethane	25.0	20.0		ug/L		80	64 - 139
Carbon tetrachloride	25.0	25.6		ug/L		102	60 - 150
Chlorobenzene	25.0	23.6		ug/L		95	70 - 130
Chloroethane	25.0	19.9		ug/L		79	64 - 135
Chloroform	25.0	25.1		ug/L		100	70 - 130
Chloromethane	25.0	18.5		ug/L		74	47 - 140
cis-1,2-Dichloroethene	25.0	26.5		ug/L		106	70 - 133
cis-1,3-Dichloropropene	25.0	26.5		ug/L		106	70 - 133
Dibromochloromethane	25.0	25.0		ug/L		100	69 - 145
Dibromomethane	25.0	25.2		ug/L		101	70 - 130
Dichlorodifluoromethane	25.0	16.8		ug/L		67	29 - 150
Ethylbenzene	25.0	26.8		ug/L		107	70 - 130
Hexachlorobutadiene	25.0	27.9		ug/L		112	10 - 150
Isopropylbenzene	25.0	25.5		ug/L		102	70 - 136
m,p-Xylene	25.0	24.6		ug/L		98	70 - 130
Methylene Chloride	25.0	21.7		ug/L		87	52 - 130
Methyl-t-Butyl Ether (MTBE)	25.0	26.6		ug/L		107	63 - 131
Naphthalene	25.0	24.5		ug/L		98	60 - 140
n-Butylbenzene	25.0	26.9		ug/L		108	65 - 150
N-Propylbenzene	25.0	27.2		ug/L		109	67 - 139
o-Xylene	25.0	24.6		ug/L		98	70 - 130
p-Isopropyltoluene	25.0	28.5		ug/L		114	70 - 132
sec-Butylbenzene	25.0	24.7		ug/L		99	70 - 138

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

Lab Sample ID: LCS 440-530231/5
Matrix: Water
Analysis Batch: 530231

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Styrene	25.0	23.0		ug/L		92	70 - 134
tert-Butylbenzene	25.0	25.1		ug/L		100	70 - 130
Tetrachloroethene	25.0	24.2		ug/L		97	70 - 130
Toluene	25.0	26.1		ug/L		105	70 - 130
trans-1,2-Dichloroethene	25.0	25.6		ug/L		102	70 - 130
trans-1,3-Dichloropropene	25.0	23.9		ug/L		96	70 - 132
Trichloroethene	25.0	26.7		ug/L		107	70 - 130
Trichlorofluoromethane	25.0	20.5		ug/L		82	60 - 150
Vinyl chloride	25.0	18.3		ug/L		73	59 - 133

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*
Dibromofluoromethane (Surr)	*104*		*76 - 132*
Toluene-d8 (Surr)	*99*		*80 - 128*

Lab Sample ID: 440-233274-A-6 MS
Matrix: Water
Analysis Batch: 530231

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
1,1,1,2-Tetrachloroethane	ND		1250	1200		ug/L		96	60 - 149
1,1,1-Trichloroethane	ND		1250	1290		ug/L		103	70 - 130
1,1,2,2-Tetrachloroethane	ND		1250	1060		ug/L		84	63 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	180	J	1250	1190		ug/L		81	60 - 140
1,1,2-Trichloroethane	ND		1250	1140		ug/L		91	70 - 130
1,1-Dichloroethane	ND		1250	1220		ug/L		97	65 - 130
1,1-Dichloroethene	400		1250	1460		ug/L		85	70 - 130
1,1-Dichloropropene	ND		1250	1390		ug/L		111	64 - 130
1,2,3-Trichlorobenzene	ND		1250	1290		ug/L		103	60 - 140
1,2,3-Trichloropropane	ND		1250	1040		ug/L		83	60 - 130
1,2,4-Trichlorobenzene	ND		1250	1480		ug/L		119	60 - 140
1,2,4-Trimethylbenzene	ND		1250	1250		ug/L		100	70 - 130
1,2-Dibromo-3-Chloropropane	ND		1250	913		ug/L		73	48 - 140
1,2-Dibromoethane (EDB)	ND		1250	1200		ug/L		96	70 - 131
1,2-Dichlorobenzene	ND		1250	1300		ug/L		104	70 - 130
1,2-Dichloroethane	95		1250	1490		ug/L		111	56 - 146
1,2-Dichloropropane	ND		1250	1290		ug/L		103	69 - 130
1,3,5-Trimethylbenzene	ND		1250	1210		ug/L		97	70 - 130
1,3-Dichlorobenzene	ND		1250	1290		ug/L		103	70 - 130
1,3-Dichloropropane	ND		1250	1140		ug/L		91	70 - 130
1,4-Dichlorobenzene	ND		1250	1190		ug/L		95	70 - 130
2,2-Dichloropropane	ND		1250	1590		ug/L		127	69 - 138
2-Chlorotoluene	ND		1250	1160		ug/L		93	70 - 130
4-Chlorotoluene	ND		1250	1270		ug/L		102	70 - 130
Acetone	ND		1250	1310		ug/L		105	10 - 150
Benzene	ND		1250	1290		ug/L		103	66 - 130
Bromobenzene	ND		1250	1120		ug/L		90	70 - 130

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

Lab Sample ID: 440-233274-A-6 MS
Matrix: Water
Analysis Batch: 530231

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
Bromochloromethane	ND		1250	1280		ug/L		102	70 - 130
Bromodichloromethane	ND		1250	1370		ug/L		110	70 - 138
Bromoform	ND		1250	1090		ug/L		88	59 - 150
Bromomethane	ND		1250	1020		ug/L		81	62 - 131
Carbon tetrachloride	ND		1250	1300		ug/L		104	60 - 150
Chlorobenzene	ND		1250	1200		ug/L		96	70 - 130
Chloroethane	ND		1250	986		ug/L		79	68 - 130
Chloroform	380		1250	1620		ug/L		99	70 - 130
Chloromethane	ND		1250	926		ug/L		74	39 - 144
cis-1,2-Dichloroethene	ND		1250	1370		ug/L		110	70 - 130
cis-1,3-Dichloropropene	ND		1250	1400		ug/L		112	70 - 133
Dibromochloromethane	ND		1250	1300		ug/L		104	70 - 148
Dibromomethane	ND		1250	1290		ug/L		103	70 - 130
Dichlorodifluoromethane	ND		1250	813		ug/L		65	25 - 142
Ethylbenzene	ND		1250	1330		ug/L		106	70 - 130
Hexachlorobutadiene	ND		1250	1300		ug/L		104	10 - 150
Isopropyl alcohol	ND		12500	12800	J	ug/L		102	46 - 142
Isopropylbenzene	ND		1250	1260		ug/L		101	70 - 132
m,p-Xylene	ND		1250	1220		ug/L		97	70 - 133
Methylene Chloride	110	J	1250	1220		ug/L		89	52 - 130
Methyl-t-Butyl Ether (MTBE)	ND		1250	1310		ug/L		105	70 - 130
Naphthalene	ND		1250	1090		ug/L		87	60 - 140
n-Butylbenzene	ND		1250	1320		ug/L		106	61 - 149
N-Propylbenzene	ND		1250	1290		ug/L		103	66 - 135
o-Xylene	ND		1250	1240		ug/L		99	70 - 133
p-Isopropyltoluene	ND		1250	1370		ug/L		110	70 - 130
sec-Butylbenzene	ND		1250	1190		ug/L		95	67 - 134
Styrene	ND		1250	1200		ug/L		96	29 - 150
tert-Butylbenzene	ND		1250	1160		ug/L		93	70 - 130
Tetrachloroethene	4700	F1	1250	5770	E	ug/L		89	70 - 137
Toluene	ND		1250	1330		ug/L		107	70 - 130
trans-1,2-Dichloroethene	ND		1250	1280		ug/L		102	70 - 130
trans-1,3-Dichloropropene	ND		1250	1250		ug/L		100	70 - 138
Trichloroethene	230		1250	1590		ug/L		109	70 - 130
Trichlorofluoromethane	76		1250	1060		ug/L		79	60 - 150
Vinyl chloride	ND		1250	899		ug/L		72	50 - 137

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*
Dibromofluoromethane (Surr)	*106*		*76 - 132*
Toluene-d8 (Surr)	*100*		*80 - 128*

Lab Sample ID: 440-233274-A-6 MSD
Matrix: Water
Analysis Batch: 530231

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
1,1,1,2-Tetrachloroethane	ND		1250	1170		ug/L		94	60 - 149	3	20

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

Lab Sample ID: 440-233274-A-6 MSD
Matrix: Water
Analysis Batch: 530231

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
1,1,1-Trichloroethane	ND		1250	1200		ug/L		96	70 - 130	7	20
1,1,2,2-Tetrachloroethane	ND		1250	1110		ug/L		89	63 - 130	5	30
1,1,2-Trichloro-1,2,2-trifluoroethane	180	J	1250	1170		ug/L		79	60 - 140	2	20
1,1,2-Trichloroethane	ND		1250	1100		ug/L		88	70 - 130	3	25
1,1-Dichloroethane	ND		1250	1180		ug/L		94	65 - 130	3	20
1,1-Dichloroethene	400		1250	1450		ug/L		84	70 - 130	1	20
1,1-Dichloropropene	ND		1250	1360		ug/L		109	64 - 130	2	20
1,2,3-Trichlorobenzene	ND		1250	1330		ug/L		107	60 - 140	3	20
1,2,3-Trichloropropane	ND		1250	1120		ug/L		90	60 - 130	8	30
1,2,4-Trichlorobenzene	ND		1250	1530		ug/L		123	60 - 140	3	20
1,2,4-Trimethylbenzene	ND		1250	1280		ug/L		102	70 - 130	2	25
1,2-Dibromo-3-Chloropropane	ND		1250	1000		ug/L		80	48 - 140	9	30
1,2-Dibromoethane (EDB)	ND		1250	1130		ug/L		90	70 - 131	6	25
1,2-Dichlorobenzene	ND		1250	1330		ug/L		106	70 - 130	2	20
1,2-Dichloroethane	95		1250	1340		ug/L		100	56 - 146	10	20
1,2-Dichloropropane	ND		1250	1300		ug/L		104	69 - 130	1	20
1,3,5-Trimethylbenzene	ND		1250	1230		ug/L		99	70 - 130	2	20
1,3-Dichlorobenzene	ND		1250	1300		ug/L		104	70 - 130	0	20
1,3-Dichloropropane	ND		1250	1140		ug/L		91	70 - 130	0	25
1,4-Dichlorobenzene	ND		1250	1220		ug/L		97	70 - 130	2	20
2,2-Dichloropropane	ND		1250	1410		ug/L		113	69 - 138	12	25
2-Chlorotoluene	ND		1250	1170		ug/L		94	70 - 130	1	20
4-Chlorotoluene	ND		1250	1300		ug/L		104	70 - 130	2	20
Acetone	ND		1250	1330		ug/L		107	10 - 150	2	35
Benzene	ND		1250	1290		ug/L		103	66 - 130	0	20
Bromobenzene	ND		1250	1140		ug/L		92	70 - 130	2	20
Bromochloromethane	ND		1250	1260		ug/L		101	70 - 130	1	25
Bromodichloromethane	ND		1250	1310		ug/L		105	70 - 138	5	20
Bromoform	ND		1250	1120		ug/L		90	59 - 150	2	25
Bromomethane	ND		1250	1020		ug/L		82	62 - 131	1	25
Carbon tetrachloride	ND		1250	1180		ug/L		94	60 - 150	10	25
Chlorobenzene	ND		1250	1200		ug/L		96	70 - 130	0	20
Chloroethane	ND		1250	1030		ug/L		82	68 - 130	4	25
Chloroform	380		1250	1570		ug/L		95	70 - 130	3	20
Chloromethane	ND		1250	963		ug/L		77	39 - 144	4	25
cis-1,2-Dichloroethene	ND		1250	1350		ug/L		108	70 - 130	2	20
cis-1,3-Dichloropropene	ND		1250	1350		ug/L		108	70 - 133	4	20
Dibromochloromethane	ND		1250	1220		ug/L		97	70 - 148	7	25
Dibromomethane	ND		1250	1240		ug/L		99	70 - 130	4	25
Dichlorodifluoromethane	ND		1250	855		ug/L		68	25 - 142	5	30
Ethylbenzene	ND		1250	1350		ug/L		108	70 - 130	2	20
Hexachlorobutadiene	ND		1250	1360		ug/L		109	10 - 150	4	20
Isopropyl alcohol	ND		12500	12900	J	ug/L		103	46 - 142	1	40
Isopropylbenzene	ND		1250	1290		ug/L		104	70 - 132	3	20
m,p-Xylene	ND		1250	1240		ug/L		99	70 - 133	2	25
Methylene Chloride	110	J	1250	1200		ug/L		87	52 - 130	2	20
Methyl-t-Butyl Ether (MTBE)	ND		1250	1270		ug/L		101	70 - 130	4	25

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

Lab Sample ID: 440-233274-A-6 MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 530231

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Naphthalene	ND		1250	1170		ug/L		94	60 - 140	8	30
n-Butylbenzene	ND		1250	1350		ug/L		108	61 - 149	2	20
N-Propylbenzene	ND		1250	1320		ug/L		105	66 - 135	2	20
o-Xylene	ND		1250	1260		ug/L		100	70 - 133	1	20
p-Isopropyltoluene	ND		1250	1400		ug/L		112	70 - 130	2	20
sec-Butylbenzene	ND		1250	1190		ug/L		96	67 - 134	1	20
Styrene	ND		1250	1210		ug/L		97	29 - 150	1	35
tert-Butylbenzene	ND		1250	1200		ug/L		96	70 - 130	3	20
Tetrachloroethene	4700	F1	1250	5450	E F1	ug/L		63	70 - 137	6	20
Toluene	ND		1250	1310		ug/L		105	70 - 130	2	20
trans-1,2-Dichloroethene	ND		1250	1300		ug/L		104	70 - 130	1	20
trans-1,3-Dichloropropene	ND		1250	1200		ug/L		96	70 - 138	4	25
Trichloroethene	230		1250	1540		ug/L		105	70 - 130	3	20
Trichlorofluoromethane	76		1250	987		ug/L		73	60 - 150	7	25
Vinyl chloride	ND		1250	935		ug/L		75	50 - 137	4	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*
Dibromofluoromethane (Surr)	*104*		*76 - 132*
Toluene-d8 (Surr)	*98*		*80 - 128*

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

Lab Sample ID: MB 440-529836/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 530058 — **Prep Batch: 529836**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	0.442	J	0.50	0.10	ug/L		02/20/19 11:33	02/21/19 16:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*57*		*27 - 120*	*02/20/19 11:33*	*02/21/19 16:04*	*1*

Lab Sample ID: LCS 440-529836/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 530058 — **Prep Batch: 529836**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,4-Dioxane			2.00	1.65		ug/L		83	36 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,4-Dioxane-d8 (Surr)	*66*		*27 - 120*

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

Lab Sample ID: LCSD 440-529836/3-A
Matrix: Water
Analysis Batch: 530058

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 529836

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dioxane			2.00	1.58		ug/L		79	36 - 120	4	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,4-Dioxane-d8 (Surr)	*58*		*27 - 120*

QC Association Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-2019 Semi-Annual GWM Feb

TestAmerica Job ID: 440-233430-1
SDG: Whittier, CA

GC/MS VOA

Analysis Batch: 530231

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-233430-1	OC_GW_DPE-7D_20190213	Total/NA	Water	8260B	
440-233430-2	OC_TB_20190213	Total/NA	Water	8260B	
MB 440-530231/4	Method Blank	Total/NA	Water	8260B	
LCS 440-530231/1003	Lab Control Sample	Total/NA	Water	8260B	
LCS 440-530231/5	Lab Control Sample	Total/NA	Water	8260B	
440-233274-A-6 MS	Matrix Spike	Total/NA	Water	8260B	
440-233274-A-6 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 529836

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-233430-1	OC_GW_DPE-7D_20190213	Total/NA	Water	3520C	
MB 440-529836/1-A	Method Blank	Total/NA	Water	3520C	
LCS 440-529836/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 440-529836/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	

Analysis Batch: 530058

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-233430-1	OC_GW_DPE-7D_20190213	Total/NA	Water	8270C SIM	529836
MB 440-529836/1-A	Method Blank	Total/NA	Water	8270C SIM	529836
LCS 440-529836/2-A	Lab Control Sample	Total/NA	Water	8270C SIM	529836
LCSD 440-529836/3-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM	529836

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.
E	Result exceeded calibration range.
F1	MS and/or MSD Recovery is outside acceptance limits.

GC/MS VOA TICs

Qualifier	Qualifier Description
J	Indicates an Estimated Value for TICs
T	Result is a tentatively identified compound (TIC) and an estimated value.

GC/MS Semi VOA

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
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: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-2019 Semi-Annual GWM Feb

TestAmerica Job ID: 440-233430-1
SDG: Whittier, CA

Laboratory: TestAmerica Irvine

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
California	State Program	9	CA ELAP 2706	06-30-19

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8260B		Water	1,1,2-Trichloro-1,2,2-trifluoroethane
8260B		Water	m,p-Xylene
8270C SIM	3520C	Water	1,4-Dioxane

TestAmerica Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614
phone 949.261.1022 fax

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.

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

Client Contact	Project Manager: Trent Henderson	Site Contact: Khalid Azhar	Date: 2/13/19	COC No:
De Maximis - Jaime Dinello	Tel/Fax: (949) 453-1045 / (949) 453-1047	Lab Contact: Danielle Roberts	Carrier:	____ of ____ COCs
1322 Scott St., Suite 104	Analysis Turnaround Time			Sampler:
San Diego, CA 92106	☐CALENDAR DAYS ☐WORKING DAYS			For Lab Use Only:
(562) 756-8149	TAT if different from Below ___STD___			Walk-in Client:
	☐ 2 weeks			Lab Sampling:
Project Name: Omega Chem. - 2019 Semi-Ann. GWM Feb	☐ 1 week			
Site: Omega Chemical	☐ 2 days			Job / SDG No.:
P O #: 3139G/E742	☐ 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 + Freons	EPA 8270C - 1,4 Dioxane	Sample Specific Notes:
OC_GW_DPE-7D_20190213	2/13/2019	11:42	Grab	GW	5			x	x	
OC_TB_20190213	2/13/2019	07:00			2			x		

440-233430 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 | 43509 | Cooler Temp. (°C). Obs'd: 1.4 Corr'd. 1.0 Therm ID No.: 64

Relinquished by:	Company: JBA	Date/Time: 2/13/19 1120	Received by:	Company: TA IRV	Date/Time: 2/13/19 1720
Relinquished by:	Company: TA IRV	Date/Time: 2/13/19 1445	Received by:	Company:	Date/Time:
Relinquished by	Company:	Date/Time:	Received in Laboratory by:	Company: TA IRV	Date/Time: 2/13/19 1445

AS 2/13

Login Sample Receipt Checklist

Client: Jacob & Hefner Associates P.C.

Job Number: 440-233430-1
SDG Number: Whittier, CA

Login Number: 233430
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	

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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: 440-233700-1
TestAmerica Sample Delivery Group: Whittier
Client Project/Site: Omega Chemical -24 hour Compostie

For:
Jacob & Hefner Associates P.C.
15375 Barranca Parkway, J-101
Irvine, California 92618

Attn: Trent Henderson

Authorized for release by:
3/5/2019 11:15:34 AM

Danielle Roberts, Senior Project Manager
(949)261-1022
danielle.roberts@testamericainc.com

LINKS

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Visit us at: www.testamericainc.com

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

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

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

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Sample Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical -24 hour Compostie

TestAmerica Job ID: 440-233700-1
SDG: Whittier

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-233700-1	Composite	Water	02/15/19 10:00	02/15/19 13:50
440-233700-2	Grab	Water	02/15/19 10:10	02/15/19 13:50

Job ID: 440-233700-1

Laboratory: TestAmerica Irvine

Narrative

Job Narrative
440-233700-1

Comments
No additional comments.

Receipt
The samples were received on 2/15/2019 1:50 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.4º C.

GC/MS VOA
No analytical or quality issues were noted, other than those described 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.

Field Service / Mobile Lab
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 matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 440-529631 and analytical batch 440-529658 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
Method(s) 3520C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 440-529541. 8270C-SIM-1,4-DXN. LCS was performed in duplicate to provide precision of data.

Method(s) 3520C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 440-529545. 8270-REG. LCS was performed in duplicate to provide precision of data.

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

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

Detection Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical -24 hour Compostie

TestAmerica Job ID: 440-233700-1
SDG: Whittier

Client Sample ID: Composite — Lab Sample ID: 440-233700-1

No Detections.

Client Sample ID: Grab — Lab Sample ID: 440-233700-2

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	20		0.53		ug/L	1		8270C SIM	Total/NA
pH	8.6	HF	0.1		SU	1		SM 4500 H+ B	Total/NA
Field pH	8.62				SU	1		Field Sampling	Total/NA
Field Temperature	16.1				Celsius	1		Field Sampling	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical -24 hour Compostie

TestAmerica Job ID: 440-233700-1
SDG: Whittier

Client Sample ID: Composite

Lab Sample ID: 440-233700-1
Matrix: Water

Date Collected: 02/15/19 10:00
Date Received: 02/15/19 13:50

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		1.1	mg/L			02/22/19 17:10	1
Chemical Oxygen Demand	ND		20	mg/L			03/01/19 15:56	1

Client Sample ID: Grab

Lab Sample ID: 440-233700-2
Matrix: Water

Date Collected: 02/15/19 10:10
Date Received: 02/15/19 13:50

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	ug/L			02/21/19 09:27	1
1,1,1-Trichloroethane	ND		1.0	ug/L			02/21/19 09:27	1
2-Chloroethyl vinyl ether	ND		2.0	ug/L			02/20/19 12:48	1
1,1,2,2-Tetrachloroethane	ND		1.0	ug/L			02/21/19 09:27	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	ug/L			02/21/19 09:27	1
Acrolein	ND		5.0	ug/L			02/20/19 12:48	1
1,1,2-Trichloroethane	ND		1.0	ug/L			02/21/19 09:27	1
Acrylonitrile	ND		2.0	ug/L			02/20/19 12:48	1
1,1-Dichloroethane	ND		1.0	ug/L			02/21/19 09:27	1
1,1-Dichloroethene	ND		1.0	ug/L			02/21/19 09:27	1
1,1-Dichloropropene	ND		1.0	ug/L			02/21/19 09:27	1
Total Volatile Organic Compounds	ND		150	ug/L			02/20/19 12:48	1
1,2,3-Trichlorobenzene	ND		1.0	ug/L			02/21/19 09:27	1
1,2,3-Trichloropropane	ND		1.0	ug/L			02/21/19 09:27	1
1,2,4-Trichlorobenzene	ND		1.0	ug/L			02/21/19 09:27	1
1,2,4-Trimethylbenzene	ND		1.0	ug/L			02/21/19 09:27	1
1,2-Dibromo-3-Chloropropane	ND		5.0	ug/L			02/21/19 09:27	1
1,2-Dibromoethane (EDB)	ND		1.0	ug/L			02/21/19 09:27	1
1,2-Dichlorobenzene	ND		1.0	ug/L			02/21/19 09:27	1
1,2-Dichloroethane	ND		1.0	ug/L			02/21/19 09:27	1
1,2-Dichloropropane	ND		1.0	ug/L			02/21/19 09:27	1
1,3,5-Trimethylbenzene	ND		1.0	ug/L			02/21/19 09:27	1
1,3-Dichlorobenzene	ND		1.0	ug/L			02/21/19 09:27	1
1,3-Dichloropropane	ND		1.0	ug/L			02/21/19 09:27	1
1,4-Dichlorobenzene	ND		1.0	ug/L			02/21/19 09:27	1
2,2-Dichloropropane	ND		1.0	ug/L			02/21/19 09:27	1
2-Chlorotoluene	ND		1.0	ug/L			02/21/19 09:27	1
4-Chlorotoluene	ND		1.0	ug/L			02/21/19 09:27	1
Acetone	ND		10	ug/L			02/21/19 09:27	1
Benzene	ND		0.50	ug/L			02/21/19 09:27	1
Bromobenzene	ND		1.0	ug/L			02/21/19 09:27	1
Bromochloromethane	ND		1.0	ug/L			02/21/19 09:27	1
Bromodichloromethane	ND		1.0	ug/L			02/21/19 09:27	1
Bromoform	ND		1.0	ug/L			02/21/19 09:27	1
Bromomethane	ND		1.0	ug/L			02/21/19 09:27	1
Carbon tetrachloride	ND		0.50	ug/L			02/21/19 09:27	1
Chlorobenzene	ND		1.0	ug/L			02/21/19 09:27	1
Chloroethane	ND		1.0	ug/L			02/21/19 09:27	1
Chloroform	ND		1.0	ug/L			02/21/19 09:27	1
Chloromethane	ND		1.0	ug/L			02/21/19 09:27	1

Client Sample Results

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical -24 hour Compostie

TestAmerica Job ID: 440-233700-1
SDG: Whittier

Client Sample ID: Grab

Date Collected: 02/15/19 10:10
Date Received: 02/15/19 13:50

Lab Sample ID: 440-233700-2

Matrix: Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.0		ug/L			02/21/19 09:27	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			02/21/19 09:27	1
Dibromochloromethane	ND		1.0		ug/L			02/21/19 09:27	1
Dibromomethane	ND		1.0		ug/L			02/21/19 09:27	1
Dichlorodifluoromethane	ND		1.0		ug/L			02/21/19 09:27	1
Ethylbenzene	ND		1.0		ug/L			02/21/19 09:27	1
Hexachlorobutadiene	ND		1.0		ug/L			02/21/19 09:27	1
Isopropyl alcohol	ND		250		ug/L			02/21/19 09:27	1
Isopropylbenzene	ND		1.0		ug/L			02/21/19 09:27	1
m,p-Xylene	ND		1.0		ug/L			02/21/19 09:27	1
Methylene Chloride	ND		5.0		ug/L			02/21/19 09:27	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0		ug/L			02/21/19 09:27	1
Naphthalene	ND		1.0		ug/L			02/21/19 09:27	1
n-Butylbenzene	ND		1.0		ug/L			02/21/19 09:27	1
N-Propylbenzene	ND		1.0		ug/L			02/21/19 09:27	1
o-Xylene	ND		1.0		ug/L			02/21/19 09:27	1
p-Isopropyltoluene	ND		1.0		ug/L			02/21/19 09:27	1
sec-Butylbenzene	ND		1.0		ug/L			02/21/19 09:27	1
Styrene	ND		1.0		ug/L			02/21/19 09:27	1
tert-Butylbenzene	ND		1.0		ug/L			02/21/19 09:27	1
Tetrachloroethene	ND		1.0		ug/L			02/21/19 09:27	1
Toluene	ND		1.0		ug/L			02/21/19 09:27	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			02/21/19 09:27	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			02/21/19 09:27	1
Trichloroethene	ND		1.0		ug/L			02/21/19 09:27	1
Trichlorofluoromethane	ND		1.0		ug/L			02/21/19 09:27	1
Vinyl chloride	ND		0.50		ug/L			02/21/19 09:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*		*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*70 - 130*			*02/20/19 12:48*	*1*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*			*02/20/19 12:48*	*1*
Dibromofluoromethane (Surr)	*98*		*76 - 132*			*02/20/19 12:48*	*1*
Toluene-d8 (Surr)	*103*		*80 - 128*			*02/20/19 12:48*	*1*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 130*			*02/21/19 09:27*	*1*
4-Bromofluorobenzene (Surr)	*91*		*80 - 120*			*02/21/19 09:27*	*1*
Dibromofluoromethane (Surr)	*108*		*76 - 132*			*02/21/19 09:27*	*1*
Toluene-d8 (Surr)	*103*		*80 - 128*			*02/21/19 09:27*	*1*

Method: 8270C SIM - 1,4 Dioxane by SIM

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**20**		0.53		ug/L		02/19/19 11:32	02/21/19 17:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*		*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*67*		*27 - 120*		*02/19/19 11:32*	*02/21/19 17:14*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
1,2-Dichlorobenzene	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1

Client Sample ID: Grab

Date Collected: 02/15/19 10:10
Date Received: 02/15/19 13:50

Lab Sample ID: 440-233700-2

Matrix: Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,2-Diphenylhydrazine(as Azobenzene)	ND		21		ug/L		02/19/19 11:42	02/21/19 17:00	1
1,3-Dichlorobenzene	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
1,4-Dichlorobenzene	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
2,4,5-Trichlorophenol	ND		21		ug/L		02/19/19 11:42	02/21/19 17:00	1
2,4,6-Trichlorophenol	ND		21		ug/L		02/19/19 11:42	02/21/19 17:00	1
2,4-Dichlorophenol	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
2,4-Dimethylphenol	ND		21		ug/L		02/19/19 11:42	02/21/19 17:00	1
2,4-Dinitrophenol	ND		42		ug/L		02/19/19 11:42	02/21/19 17:00	1
2,4-Dinitrotoluene	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
2,6-Dinitrotoluene	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
2-Chloronaphthalene	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
2-Chlorophenol	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
2-Methylnaphthalene	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
2-Methylphenol	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
2-Nitroaniline	ND		21		ug/L		02/19/19 11:42	02/21/19 17:00	1
2-Nitrophenol	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
3,3'-Dichlorobenzidine	ND		42		ug/L		02/19/19 11:42	02/21/19 17:00	1
3-Methylphenol + 4-Methylphenol	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
3-Nitroaniline	ND		21		ug/L		02/19/19 11:42	02/21/19 17:00	1
4,6-Dinitro-2-methylphenol	ND		21		ug/L		02/19/19 11:42	02/21/19 17:00	1
4-Bromophenyl phenyl ether	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
4-Chloro-3-methylphenol	ND		21		ug/L		02/19/19 11:42	02/21/19 17:00	1
4-Chloroaniline	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
4-Chlorophenyl phenyl ether	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
4-Nitroaniline	ND		21		ug/L		02/19/19 11:42	02/21/19 17:00	1
4-Nitrophenol	ND		21		ug/L		02/19/19 11:42	02/21/19 17:00	1
Acenaphthene	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
Acenaphthylene	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
Aniline	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
Anthracene	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
Benzidine	ND		42		ug/L		02/19/19 11:42	02/21/19 17:00	1
Benzo[a]anthracene	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
Benzo[a]pyrene	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
Benzo[b]fluoranthene	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
Benzo[g,h,i]perylene	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
Benzo[k]fluoranthene	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
Benzoic acid	ND		21		ug/L		02/19/19 11:42	02/21/19 17:00	1
Benzyl alcohol	ND		21		ug/L		02/19/19 11:42	02/21/19 17:00	1
bis (2-chloroisopropyl) ether	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
Bis(2-chloroethoxy)methane	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
Bis(2-chloroethyl)ether	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
Bis(2-ethylhexyl) phthalate	ND		21		ug/L		02/19/19 11:42	02/21/19 17:00	1
Butyl benzyl phthalate	ND		21		ug/L		02/19/19 11:42	02/21/19 17:00	1
Chrysene	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
Dibenz(a,h)anthracene	ND		21		ug/L		02/19/19 11:42	02/21/19 17:00	1
Dibenzofuran	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
Diethyl phthalate	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
Dimethyl phthalate	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1

Client Sample Results

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical -24 hour Compostie

TestAmerica Job ID: 440-233700-1
SDG: Whittier

Client Sample ID: Grab

Date Collected: 02/15/19 10:10
Date Received: 02/15/19 13:50

Lab Sample ID: 440-233700-2

Matrix: Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Di-n-butyl phthalate	ND		21		ug/L		02/19/19 11:42	02/21/19 17:00	1
Di-n-octyl phthalate	ND		21		ug/L		02/19/19 11:42	02/21/19 17:00	1
Fluoranthene	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
Fluorene	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
Hexachlorobenzene	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
Hexachlorobutadiene	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
Hexachlorocyclopentadiene	ND		21		ug/L		02/19/19 11:42	02/21/19 17:00	1
Hexachloroethane	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
Indeno[1,2,3-cd]pyrene	ND		21		ug/L		02/19/19 11:42	02/21/19 17:00	1
Isophorone	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
Naphthalene	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
Nitrobenzene	ND		21		ug/L		02/19/19 11:42	02/21/19 17:00	1
N-Nitrosodimethylamine	ND		21		ug/L		02/19/19 11:42	02/21/19 17:00	1
N-Nitrosodi-n-propylamine	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
N-Nitrosodiphenylamine	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
Pentachlorophenol	ND		21		ug/L		02/19/19 11:42	02/21/19 17:00	1
Phenanthrene	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
Phenol	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
Pyrene	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*		*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*98*		*40 - 120*		*02/19/19 11:42*	*02/21/19 17:00*	*1*
2-Fluorobiphenyl	*85*		*50 - 120*		*02/19/19 11:42*	*02/21/19 17:00*	*1*
2-Fluorophenol (Surr)	*65*		*30 - 120*		*02/19/19 11:42*	*02/21/19 17:00*	*1*
Nitrobenzene-d5 (Surr)	*80*		*45 - 120*		*02/19/19 11:42*	*02/21/19 17:00*	*1*
Phenol-d6 (Surr)	*65*		*35 - 120*		*02/19/19 11:42*	*02/21/19 17:00*	*1*
Terphenyl-d14 (Surr)	*112*		*10 - 150*		*02/19/19 11:42*	*02/21/19 17:00*	*1*

General Chemistry

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.6**	**HF**	0.1		SU			02/20/19 17:52	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Sulfide, Dissolved	ND	HF	0.050		mg/L		02/19/19 15:46	02/19/19 16:52	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**8.62**				SU			02/15/19 10:10	1
Field Temperature	**16.1**				Celsius			02/15/19 10:10	1

Surrogate Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical -24 hour Compostie

TestAmerica Job ID: 440-233700-1
SDG: Whittier

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

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(70-130)	(80-120)	(76-132)	(80-128)
440-233507-A-7 MS	Matrix Spike	98	95	96	98
440-233507-A-7 MSD	Matrix Spike Duplicate	99	96	97	99
440-233700-2	Grab	97	94	98	103
440-233700-2	Grab	100	91	108	103
440-233700-2 MS	Grab	95	95	100	97
440-233700-2 MSD	Grab	94	96	100	97
LCS 440-529768/5	Lab Control Sample	98	96	97	99
LCS 440-530007/5	Lab Control Sample	96	98	106	98
LCS 440-530007/6	Lab Control Sample	93	93	104	105
MB 440-529768/4	Method Blank	99	94	101	104
MB 440-530007/4	Method Blank	100	95	106	103

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

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

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
		TBP	FBP	2FP	NBZ	PHL6	TPHL
Lab Sample ID	Client Sample ID	(40-120)	(50-120)	(30-120)	(45-120)	(35-120)	(10-150)
440-233700-2	Grab	98	85	65	80	65	112
LCS 440-529545/2-A	Lab Control Sample	99	89	58	84	69	101
LCSD 440-529545/3-A	Lab Control Sample Dup	99	91	59	83	72	105
MB 440-529545/1-A	Method Blank	93	89	70	86	74	107

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)
FBP = 2-Fluorobiphenyl
2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
PHL6 = Phenol-d6 (Surr)
TPHL = Terphenyl-d14 (Surr)

Method: 8270C SIM - 1,4 Dioxane by SIM

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
		DXE
Lab Sample ID	Client Sample ID	(27-120)
440-233700-2	Grab	67
LCS 440-529541/3-A	Lab Control Sample	56
LCSD 440-529541/4-A	Lab Control Sample Dup	60
MB 440-529541/1-A	Method Blank	59

Surrogate Legend

DXE = 1,4-Dioxane-d8 (Surr)

Method Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical -24 hour Compostie

TestAmerica Job ID: 440-233700-1
SDG: Whittier

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL IRV
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL IRV
8270C SIM	1,4 Dioxane by SIM	SW846	TAL IRV
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL IRV
SM 4500 H+ B	pH	SM	TAL IRV
SM 4500 S2 D	Sulfide, Total	SM	TAL IRV
SM 5220D	COD	SM	TAL IRV
Field Sampling	Field Sampling	EPA	TAL IRV
3520C	Liquid-Liquid Extraction (Continuous)	SW846	TAL IRV
5030B	Purge and Trap	SW846	TAL IRV
SM 4500 S2 B	Sulfide, Separation of Soluble and Insoluble	SM	TAL IRV

Protocol References:

EPA = US Environmental Protection Agency

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: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical -24 hour Compostie

TestAmerica Job ID: 440-233700-1
SDG: Whittier

Client Sample ID: Composite

Lab Sample ID: 440-233700-1
Date Collected: 02/15/19 10:00
Matrix: Water
Date Received: 02/15/19 13:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540D		1	950 mL	1000 mL	530391	02/22/19 17:10	KM	TAL IRV
Total/NA	Analysis	SM 5220D		1	2.5 mL	2.5 mL	531898	03/01/19 15:56	KYP	TAL IRV

Client Sample ID: Grab

Lab Sample ID: 440-233700-2
Date Collected: 02/15/19 10:10
Matrix: Water
Date Received: 02/15/19 13:50

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	529768	02/20/19 12:48	JB	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	530007	02/21/19 09:27	TCN	TAL IRV
Total/NA	Prep	3520C			955 mL	2.0 mL	529545	02/19/19 11:42	AJP	TAL IRV
Total/NA	Analysis	8270C		1			530101	02/21/19 17:00	HN	TAL IRV
Total/NA	Prep	3520C			950 mL	1.0 mL	529541	02/19/19 11:32	AJP	TAL IRV
Total/NA	Analysis	8270C SIM		1			530058	02/21/19 17:14	L1B	TAL IRV
Total/NA	Analysis	SM 4500 H+ B		1			529946	02/20/19 17:52	ST	TAL IRV
Dissolved	Prep	SM 4500 S2 B			7.5 mL	7.5 mL	529631	02/19/19 15:46	KMY	TAL IRV
Dissolved	Analysis	SM 4500 S2 D		1	7.5 mL	7.5 mL	529658	02/19/19 16:52	KMY	TAL IRV
Total/NA	Analysis	Field Sampling		1			529424	02/15/19 10:10	PS	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 440-529768/4
Matrix: Water
Analysis Batch: 529768

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

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
2-Chloroethyl vinyl ether	ND		2.0		ug/L			02/20/19 08:36	1
Acrolein	ND		5.0		ug/L			02/20/19 08:36	1
Acrylonitrile	ND		2.0		ug/L			02/20/19 08:36	1
Total Volatile Organic Compounds	ND		150		ug/L			02/20/19 08:36	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 130*		*02/20/19 08:36*	*1*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*		*02/20/19 08:36*	*1*
Dibromofluoromethane (Surr)	*101*		*76 - 132*		*02/20/19 08:36*	*1*
Toluene-d8 (Surr)	*104*		*80 - 128*		*02/20/19 08:36*	*1*

Lab Sample ID: LCS 440-529768/5
Matrix: Water
Analysis Batch: 529768

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Chloroethyl vinyl ether	25.0	20.6		ug/L		82	37 - 150
Acrolein	25.0	17.9		ug/L		71	10 - 145
Acrylonitrile	250	210		ug/L		84	48 - 140
Total Volatile Organic Compounds	4730	3580		ug/L		76	60 - 140

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*98*		*70 - 130*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*
Dibromofluoromethane (Surr)	*97*		*76 - 132*
Toluene-d8 (Surr)	*99*		*80 - 128*

Lab Sample ID: 440-233507-A-7 MS
Matrix: Water
Analysis Batch: 529768

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
2-Chloroethyl vinyl ether	ND		250	88.6		ug/L		35	10 - 140
Acrolein	ND		250	207		ug/L		83	10 - 147
Acrylonitrile	ND		2500	2070		ug/L		83	38 - 144
Total Volatile Organic Compounds	ND		47300	36300		ug/L		77	

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*98*		*70 - 130*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*
Dibromofluoromethane (Surr)	*96*		*76 - 132*
Toluene-d8 (Surr)	*98*		*80 - 128*

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

Lab Sample ID: 440-233507-A-7 MSD
Matrix: Water
Analysis Batch: 529768

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
2-Chloroethyl vinyl ether	ND		250	62.1		ug/L		25	10 - 140	35	35
Acrolein	ND		250	201		ug/L		80	10 - 147	3	40
Acrylonitrile	ND		2500	2060		ug/L		82	38 - 144	0	40
Total Volatile Organic Compounds	ND		47300	36300		ug/L		77		0	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 130*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*
Dibromofluoromethane (Surr)	*97*		*76 - 132*
Toluene-d8 (Surr)	*99*		*80 - 128*

Lab Sample ID: MB 440-530007/4
Matrix: Water
Analysis Batch: 530007

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

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			02/21/19 08:09	1
1,1,1-Trichloroethane	ND		1.0		ug/L			02/21/19 08:09	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			02/21/19 08:09	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0		ug/L			02/21/19 08:09	1
1,1,2-Trichloroethane	ND		1.0		ug/L			02/21/19 08:09	1
1,1-Dichloroethane	ND		1.0		ug/L			02/21/19 08:09	1
1,1-Dichloroethene	ND		1.0		ug/L			02/21/19 08:09	1
1,1-Dichloropropene	ND		1.0		ug/L			02/21/19 08:09	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			02/21/19 08:09	1
1,2,3-Trichloropropane	ND		1.0		ug/L			02/21/19 08:09	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			02/21/19 08:09	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			02/21/19 08:09	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			02/21/19 08:09	1
1,2-Dibromoethane (EDB)	ND		1.0		ug/L			02/21/19 08:09	1
1,2-Dichlorobenzene	ND		1.0		ug/L			02/21/19 08:09	1
1,2-Dichloroethane	ND		1.0		ug/L			02/21/19 08:09	1
1,2-Dichloropropane	ND		1.0		ug/L			02/21/19 08:09	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			02/21/19 08:09	1
1,3-Dichlorobenzene	ND		1.0		ug/L			02/21/19 08:09	1
1,3-Dichloropropane	ND		1.0		ug/L			02/21/19 08:09	1
1,4-Dichlorobenzene	ND		1.0		ug/L			02/21/19 08:09	1
2,2-Dichloropropane	ND		1.0		ug/L			02/21/19 08:09	1
2-Chlorotoluene	ND		1.0		ug/L			02/21/19 08:09	1
4-Chlorotoluene	ND		1.0		ug/L			02/21/19 08:09	1
Acetone	ND		10		ug/L			02/21/19 08:09	1
Benzene	ND		0.50		ug/L			02/21/19 08:09	1
Bromobenzene	ND		1.0		ug/L			02/21/19 08:09	1
Bromochloromethane	ND		1.0		ug/L			02/21/19 08:09	1
Bromodichloromethane	ND		1.0		ug/L			02/21/19 08:09	1
Bromoform	ND		1.0		ug/L			02/21/19 08:09	1
Bromomethane	ND		1.0		ug/L			02/21/19 08:09	1

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

Lab Sample ID: MB 440-530007/4
Matrix: Water
Analysis Batch: 530007

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		0.50	ug/L			02/21/19 08:09	1
Chlorobenzene	ND		1.0	ug/L			02/21/19 08:09	1
Chloroethane	ND		1.0	ug/L			02/21/19 08:09	1
Chloroform	ND		1.0	ug/L			02/21/19 08:09	1
Chloromethane	ND		1.0	ug/L			02/21/19 08:09	1
cis-1,2-Dichloroethene	ND		1.0	ug/L			02/21/19 08:09	1
cis-1,3-Dichloropropene	ND		0.50	ug/L			02/21/19 08:09	1
Dibromochloromethane	ND		1.0	ug/L			02/21/19 08:09	1
Dibromomethane	ND		1.0	ug/L			02/21/19 08:09	1
Dichlorodifluoromethane	ND		1.0	ug/L			02/21/19 08:09	1
Ethylbenzene	ND		1.0	ug/L			02/21/19 08:09	1
Hexachlorobutadiene	ND		1.0	ug/L			02/21/19 08:09	1
Isopropyl alcohol	ND		250	ug/L			02/21/19 08:09	1
Isopropylbenzene	ND		1.0	ug/L			02/21/19 08:09	1
m,p-Xylene	ND		1.0	ug/L			02/21/19 08:09	1
Methylene Chloride	ND		5.0	ug/L			02/21/19 08:09	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	ug/L			02/21/19 08:09	1
Naphthalene	ND		1.0	ug/L			02/21/19 08:09	1
n-Butylbenzene	ND		1.0	ug/L			02/21/19 08:09	1
N-Propylbenzene	ND		1.0	ug/L			02/21/19 08:09	1
o-Xylene	ND		1.0	ug/L			02/21/19 08:09	1
p-Isopropyltoluene	ND		1.0	ug/L			02/21/19 08:09	1
sec-Butylbenzene	ND		1.0	ug/L			02/21/19 08:09	1
Styrene	ND		1.0	ug/L			02/21/19 08:09	1
tert-Butylbenzene	ND		1.0	ug/L			02/21/19 08:09	1
Tetrachloroethene	ND		1.0	ug/L			02/21/19 08:09	1
Toluene	ND		1.0	ug/L			02/21/19 08:09	1
trans-1,2-Dichloroethene	ND		1.0	ug/L			02/21/19 08:09	1
trans-1,3-Dichloropropene	ND		0.50	ug/L			02/21/19 08:09	1
Trichloroethene	ND		1.0	ug/L			02/21/19 08:09	1
Trichlorofluoromethane	ND		1.0	ug/L			02/21/19 08:09	1
Vinyl chloride	ND		0.50	ug/L			02/21/19 08:09	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 130*		*02/21/19 08:09*	*1*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*		*02/21/19 08:09*	*1*
Dibromofluoromethane (Surr)	*106*		*76 - 132*		*02/21/19 08:09*	*1*
Toluene-d8 (Surr)	*103*		*80 - 128*		*02/21/19 08:09*	*1*

Lab Sample ID: LCS 440-530007/5
Matrix: Water
Analysis Batch: 530007

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	25.0		ug/L		100	60 - 141
1,1,1-Trichloroethane	25.0	25.7		ug/L		103	70 - 130
1,1,2,2-Tetrachloroethane	25.0	25.8		ug/L		103	63 - 130

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

Lab Sample ID: LCS 440-530007/5
Matrix: Water
Analysis Batch: 530007

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	23.1		ug/L		92	60 - 140
1,1,2-Trichloroethane	25.0	23.6		ug/L		94	70 - 130
1,1-Dichloroethane	25.0	25.7		ug/L		103	64 - 130
1,1-Dichloroethene	25.0	24.3		ug/L		97	70 - 130
1,1-Dichloropropene	25.0	27.8		ug/L		111	70 - 130
1,2,3-Trichlorobenzene	25.0	30.6		ug/L		123	60 - 140
1,2,3-Trichloropropane	25.0	26.6		ug/L		106	63 - 130
1,2,4-Trichlorobenzene	25.0	34.4		ug/L		137	60 - 140
1,2,4-Trimethylbenzene	25.0	28.0		ug/L		112	70 - 135
1,2-Dibromo-3-Chloropropane	25.0	25.9		ug/L		103	52 - 140
1,2-Dibromoethane (EDB)	25.0	24.9		ug/L		99	70 - 130
1,2-Dichlorobenzene	25.0	29.3		ug/L		117	70 - 130
1,2-Dichloroethane	25.0	26.0		ug/L		104	57 - 138
1,2-Dichloropropane	25.0	26.6		ug/L		106	67 - 130
1,3,5-Trimethylbenzene	25.0	27.1		ug/L		109	70 - 136
1,3-Dichlorobenzene	25.0	28.8		ug/L		115	70 - 130
1,3-Dichloropropane	25.0	23.4		ug/L		94	70 - 130
1,4-Dichlorobenzene	25.0	27.0		ug/L		108	70 - 130
2,2-Dichloropropane	25.0	31.5		ug/L		126	68 - 141
2-Chlorotoluene	25.0	25.6		ug/L		102	70 - 130
4-Chlorotoluene	25.0	28.3		ug/L		113	70 - 130
Acetone	25.0	22.9		ug/L		92	10 - 150
Benzene	25.0	26.5		ug/L		106	68 - 130
Bromobenzene	25.0	25.4		ug/L		102	70 - 130
Bromochloromethane	25.0	27.6		ug/L		110	70 - 130
Bromodichloromethane	25.0	26.6		ug/L		106	70 - 132
Bromoform	25.0	25.8		ug/L		103	60 - 148
Bromomethane	25.0	21.8		ug/L		87	64 - 139
Carbon tetrachloride	25.0	25.2		ug/L		101	60 - 150
Chlorobenzene	25.0	24.6		ug/L		98	70 - 130
Chloroethane	25.0	22.0		ug/L		88	64 - 135
Chloroform	25.0	25.4		ug/L		102	70 - 130
Chloromethane	25.0	22.1		ug/L		88	47 - 140
cis-1,2-Dichloroethene	25.0	28.5		ug/L		114	70 - 133
cis-1,3-Dichloropropene	25.0	27.3		ug/L		109	70 - 133
Dibromochloromethane	25.0	25.8		ug/L		103	69 - 145
Dibromomethane	25.0	26.7		ug/L		107	70 - 130
Dichlorodifluoromethane	25.0	20.9		ug/L		83	29 - 150
Ethylbenzene	25.0	27.3		ug/L		109	70 - 130
Hexachlorobutadiene	25.0	30.5		ug/L		122	10 - 150
Isopropylbenzene	25.0	27.0		ug/L		108	70 - 136
m,p-Xylene	25.0	26.1		ug/L		104	70 - 130
Methylene Chloride	25.0	22.6		ug/L		90	52 - 130
Methyl-t-Butyl Ether (MTBE)	25.0	28.4		ug/L		113	63 - 131
Naphthalene	25.0	28.1		ug/L		112	60 - 140
n-Butylbenzene	25.0	29.7		ug/L		119	65 - 150
N-Propylbenzene	25.0	29.2		ug/L		117	67 - 139

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

Lab Sample ID: LCS 440-530007/5
Matrix: Water
Analysis Batch: 530007

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
o-Xylene	25.0	25.5		ug/L		102	70 - 130
p-Isopropyltoluene	25.0	31.0		ug/L		124	70 - 132
sec-Butylbenzene	25.0	26.9		ug/L		108	70 - 138
Styrene	25.0	24.6		ug/L		98	70 - 134
tert-Butylbenzene	25.0	27.1		ug/L		108	70 - 130
Tetrachloroethene	25.0	24.8		ug/L		99	70 - 130
Toluene	25.0	26.6		ug/L		106	70 - 130
trans-1,2-Dichloroethene	25.0	27.7		ug/L		111	70 - 130
trans-1,3-Dichloropropene	25.0	24.2		ug/L		97	70 - 132
Trichloroethene	25.0	27.6		ug/L		111	70 - 130
Trichlorofluoromethane	25.0	22.5		ug/L		90	60 - 150
Vinyl chloride	25.0	20.8		ug/L		83	59 - 133

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*96*		*70 - 130*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*
Dibromofluoromethane (Surr)	*106*		*76 - 132*
Toluene-d8 (Surr)	*98*		*80 - 128*

Lab Sample ID: LCS 440-530007/6
Matrix: Water
Analysis Batch: 530007

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Isopropyl alcohol	250	239	J	ug/L		96	49 - 142

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*93*		*70 - 130*
4-Bromofluorobenzene (Surr)	*93*		*80 - 120*
Dibromofluoromethane (Surr)	*104*		*76 - 132*
Toluene-d8 (Surr)	*105*		*80 - 128*

Lab Sample ID: 440-233700-2 MS
Matrix: Water
Analysis Batch: 530007

Client Sample ID: Grab
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	ND		25.0	24.9		ug/L		99	60 - 149
1,1,1-Trichloroethane	ND		25.0	26.3		ug/L		105	70 - 130
1,1,2,2-Tetrachloroethane	ND		25.0	23.7		ug/L		95	63 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		25.0	23.9		ug/L		96	60 - 140
1,1,2-Trichloroethane	ND		25.0	23.1		ug/L		92	70 - 130
1,1-Dichloroethane	ND		25.0	25.9		ug/L		104	65 - 130
1,1-Dichloroethene	ND		25.0	25.5		ug/L		102	70 - 130
1,1-Dichloropropene	ND		25.0	30.3		ug/L		121	64 - 130
1,2,3-Trichlorobenzene	ND		25.0	28.4		ug/L		114	60 - 140
1,2,3-Trichloropropane	ND		25.0	23.9		ug/L		96	60 - 130

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

Lab Sample ID: 440-233700-2 MS
Matrix: Water
Analysis Batch: 530007

Client Sample ID: Grab
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	ND		25.0	33.7		ug/L		135	60 - 140
1,2,4-Trimethylbenzene	ND		25.0	27.1		ug/L		109	70 - 130
1,2-Dibromo-3-Chloropropane	ND		25.0	22.9		ug/L		92	48 - 140
1,2-Dibromoethane (EDB)	ND		25.0	23.9		ug/L		96	70 - 131
1,2-Dichlorobenzene	ND		25.0	28.5		ug/L		114	70 - 130
1,2-Dichloroethane	ND		25.0	26.2		ug/L		105	56 - 146
1,2-Dichloropropane	ND		25.0	27.7		ug/L		111	69 - 130
1,3,5-Trimethylbenzene	ND		25.0	26.4		ug/L		106	70 - 130
1,3-Dichlorobenzene	ND		25.0	27.8		ug/L		111	70 - 130
1,3-Dichloropropane	ND		25.0	23.3		ug/L		93	70 - 130
1,4-Dichlorobenzene	ND		25.0	25.7		ug/L		103	70 - 130
2,2-Dichloropropane	ND		25.0	32.5		ug/L		130	69 - 138
2-Chlorotoluene	ND		25.0	25.2		ug/L		101	70 - 130
4-Chlorotoluene	ND		25.0	27.5		ug/L		110	70 - 130
Acetone	ND		25.0	32.5		ug/L		130	10 - 150
Benzene	ND		25.0	27.5		ug/L		110	66 - 130
Bromobenzene	ND		25.0	24.5		ug/L		98	70 - 130
Bromochloromethane	ND		25.0	27.3		ug/L		109	70 - 130
Bromodichloromethane	ND		25.0	27.3		ug/L		109	70 - 138
Bromoform	ND		25.0	25.3		ug/L		101	59 - 150
Bromomethane	ND		25.0	22.5		ug/L		90	62 - 131
Carbon tetrachloride	ND		25.0	26.0		ug/L		104	60 - 150
Chlorobenzene	ND		25.0	25.0		ug/L		100	70 - 130
Chloroethane	ND		25.0	22.2		ug/L		89	68 - 130
Chloroform	ND		25.0	25.9		ug/L		104	70 - 130
Chloromethane	ND		25.0	22.2		ug/L		89	39 - 144
cis-1,2-Dichloroethene	ND		25.0	29.4		ug/L		118	70 - 130
cis-1,3-Dichloropropene	ND		25.0	27.6		ug/L		110	70 - 133
Dibromochloromethane	ND		25.0	25.1		ug/L		100	70 - 148
Dibromomethane	ND		25.0	26.6		ug/L		106	70 - 130
Dichlorodifluoromethane	ND		25.0	21.2		ug/L		85	25 - 142
Ethylbenzene	ND		25.0	28.1		ug/L		113	70 - 130
Hexachlorobutadiene	ND		25.0	30.0		ug/L		120	10 - 150
Isopropyl alcohol	ND		250	251		ug/L		101	46 - 142
Isopropylbenzene	ND		25.0	27.0		ug/L		108	70 - 132
m,p-Xylene	ND		25.0	25.7		ug/L		103	70 - 133
Methylene Chloride	ND		25.0	23.7		ug/L		95	52 - 130
Methyl-t-Butyl Ether (MTBE)	ND		25.0	28.7		ug/L		115	70 - 130
Naphthalene	ND		25.0	26.5		ug/L		106	60 - 140
n-Butylbenzene	ND		25.0	29.0		ug/L		116	61 - 149
N-Propylbenzene	ND		25.0	28.5		ug/L		114	66 - 135
o-Xylene	ND		25.0	25.9		ug/L		104	70 - 133
p-Isopropyltoluene	ND		25.0	30.1		ug/L		120	70 - 130
sec-Butylbenzene	ND		25.0	26.1		ug/L		104	67 - 134
Styrene	ND		25.0	25.3		ug/L		101	29 - 150
tert-Butylbenzene	ND		25.0	25.8		ug/L		103	70 - 130
Tetrachloroethene	ND		25.0	26.1		ug/L		104	70 - 137
Toluene	ND		25.0	27.5		ug/L		110	70 - 130

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

Lab Sample ID: 440-233700-2 MS
Matrix: Water
Analysis Batch: 530007

Client Sample ID: Grab
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
trans-1,2-Dichloroethene	ND		25.0	29.2		ug/L		117	70 - 130
trans-1,3-Dichloropropene	ND		25.0	24.7		ug/L		99	70 - 138
Trichloroethene	ND		25.0	28.5		ug/L		114	70 - 130
Trichlorofluoromethane	ND		25.0	22.4		ug/L		90	60 - 150
Vinyl chloride	ND		25.0	21.1		ug/L		84	50 - 137

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*95*		*70 - 130*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*
Dibromofluoromethane (Surr)	*100*		*76 - 132*
Toluene-d8 (Surr)	*97*		*80 - 128*

Lab Sample ID: 440-233700-2 MSD
Matrix: Water
Analysis Batch: 530007

Client Sample ID: Grab
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	ND		25.0	25.1		ug/L		100	60 - 149	1	20
1,1,1-Trichloroethane	ND		25.0	26.7		ug/L		107	70 - 130	1	20
1,1,2,2-Tetrachloroethane	ND		25.0	24.2		ug/L		97	63 - 130	2	30
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		25.0	24.5		ug/L		98	60 - 140	2	20
1,1,2-Trichloroethane	ND		25.0	23.1		ug/L		93	70 - 130	0	25
1,1-Dichloroethane	ND		25.0	25.9		ug/L		104	65 - 130	0	20
1,1-Dichloroethene	ND		25.0	26.3		ug/L		105	70 - 130	3	20
1,1-Dichloropropene	ND		25.0	30.7		ug/L		123	64 - 130	1	20
1,2,3-Trichlorobenzene	ND		25.0	29.4		ug/L		118	60 - 140	3	20
1,2,3-Trichloropropane	ND		25.0	25.6		ug/L		102	60 - 130	7	30
1,2,4-Trichlorobenzene	ND		25.0	34.8		ug/L		139	60 - 140	3	20
1,2,4-Trimethylbenzene	ND		25.0	27.6		ug/L		110	70 - 130	2	25
1,2-Dibromo-3-Chloropropane	ND		25.0	23.9		ug/L		95	48 - 140	4	30
1,2-Dibromoethane (EDB)	ND		25.0	23.6		ug/L		95	70 - 131	1	25
1,2-Dichlorobenzene	ND		25.0	28.8		ug/L		115	70 - 130	1	20
1,2-Dichloroethane	ND		25.0	26.3		ug/L		105	56 - 146	1	20
1,2-Dichloropropane	ND		25.0	27.1		ug/L		108	69 - 130	2	20
1,3,5-Trimethylbenzene	ND		25.0	27.1		ug/L		108	70 - 130	2	20
1,3-Dichlorobenzene	ND		25.0	28.0		ug/L		112	70 - 130	1	20
1,3-Dichloropropane	ND		25.0	23.2		ug/L		93	70 - 130	1	25
1,4-Dichlorobenzene	ND		25.0	26.2		ug/L		105	70 - 130	2	20
2,2-Dichloropropane	ND		25.0	33.8		ug/L		135	69 - 138	4	25
2-Chlorotoluene	ND		25.0	25.7		ug/L		103	70 - 130	2	20
4-Chlorotoluene	ND		25.0	27.7		ug/L		111	70 - 130	1	20
Acetone	ND		25.0	32.9		ug/L		132	10 - 150	1	35
Benzene	ND		25.0	28.0		ug/L		112	66 - 130	2	20
Bromobenzene	ND		25.0	24.7		ug/L		99	70 - 130	1	20
Bromochloromethane	ND		25.0	26.9		ug/L		108	70 - 130	1	25
Bromodichloromethane	ND		25.0	27.3		ug/L		109	70 - 138	0	20
Bromoform	ND		25.0	24.7		ug/L		99	59 - 150	3	25

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

Lab Sample ID: 440-233700-2 MSD
Matrix: Water
Analysis Batch: 530007

Client Sample ID: Grab
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bromomethane	ND		25.0	22.9		ug/L		92	62 - 131	2	25
Carbon tetrachloride	ND		25.0	26.6		ug/L		106	60 - 150	2	25
Chlorobenzene	ND		25.0	24.8		ug/L		99	70 - 130	1	20
Chloroethane	ND		25.0	22.3		ug/L		89	68 - 130	1	25
Chloroform	ND		25.0	25.9		ug/L		104	70 - 130	0	20
Chloromethane	ND		25.0	22.9		ug/L		92	39 - 144	3	25
cis-1,2-Dichloroethene	ND		25.0	29.0		ug/L		116	70 - 130	1	20
cis-1,3-Dichloropropene	ND		25.0	27.8		ug/L		111	70 - 133	1	20
Dibromochloromethane	ND		25.0	25.0		ug/L		100	70 - 148	0	25
Dibromomethane	ND		25.0	26.3		ug/L		105	70 - 130	1	25
Dichlorodifluoromethane	ND		25.0	22.0		ug/L		88	25 - 142	3	30
Ethylbenzene	ND		25.0	28.3		ug/L		113	70 - 130	0	20
Hexachlorobutadiene	ND		25.0	31.3		ug/L		125	10 - 150	4	20
Isopropyl alcohol	ND		250	291		ug/L		116	46 - 142	14	40
Isopropylbenzene	ND		25.0	27.4		ug/L		110	70 - 132	2	20
m,p-Xylene	ND		25.0	26.4		ug/L		105	70 - 133	2	25
Methylene Chloride	ND		25.0	23.9		ug/L		96	52 - 130	1	20
Methyl-t-Butyl Ether (MTBE)	ND		25.0	28.1		ug/L		112	70 - 130	2	25
Naphthalene	ND		25.0	27.6		ug/L		110	60 - 140	4	30
n-Butylbenzene	ND		25.0	29.7		ug/L		119	61 - 149	2	20
N-Propylbenzene	ND		25.0	29.1		ug/L		116	66 - 135	2	20
o-Xylene	ND		25.0	26.1		ug/L		104	70 - 133	1	20
p-Isopropyltoluene	ND		25.0	30.7		ug/L		123	70 - 130	2	20
sec-Butylbenzene	ND		25.0	26.5		ug/L		106	67 - 134	2	20
Styrene	ND		25.0	24.8		ug/L		99	29 - 150	2	35
tert-Butylbenzene	ND		25.0	26.7		ug/L		107	70 - 130	3	20
Tetrachloroethene	ND		25.0	25.8		ug/L		103	70 - 137	1	20
Toluene	ND		25.0	27.4		ug/L		110	70 - 130	0	20
trans-1,2-Dichloroethene	ND		25.0	28.9		ug/L		116	70 - 130	1	20
trans-1,3-Dichloropropene	ND		25.0	24.2		ug/L		97	70 - 138	2	25
Trichloroethene	ND		25.0	28.6		ug/L		114	70 - 130	0	20
Trichlorofluoromethane	ND		25.0	23.1		ug/L		92	60 - 150	3	25
Vinyl chloride	ND		25.0	21.6		ug/L		87	50 - 137	2	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*94*		*70 - 130*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*
Dibromofluoromethane (Surr)	*100*		*76 - 132*
Toluene-d8 (Surr)	*97*		*80 - 128*

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

Lab Sample ID: MB 440-529545/1-A
Matrix: Water
Analysis Batch: 530101

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 529545

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		10		ug/L		02/19/19 11:42	02/21/19 13:35	1

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

Lab Sample ID: MB 440-529545/1-A
Matrix: Water
Analysis Batch: 530101

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 529545

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	ND		10		ug/L		02/19/19 11:42	02/21/19 13:35	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		20		ug/L		02/19/19 11:42	02/21/19 13:35	1
1,3-Dichlorobenzene	ND		10		ug/L		02/19/19 11:42	02/21/19 13:35	1
1,4-Dichlorobenzene	ND		10		ug/L		02/19/19 11:42	02/21/19 13:35	1
2,4,5-Trichlorophenol	ND		20		ug/L		02/19/19 11:42	02/21/19 13:35	1
2,4,6-Trichlorophenol	ND		20		ug/L		02/19/19 11:42	02/21/19 13:35	1
2,4-Dichlorophenol	ND		10		ug/L		02/19/19 11:42	02/21/19 13:35	1
2,4-Dimethylphenol	ND		20		ug/L		02/19/19 11:42	02/21/19 13:35	1
2,4-Dinitrophenol	ND		40		ug/L		02/19/19 11:42	02/21/19 13:35	1
2,4-Dinitrotoluene	ND		10		ug/L		02/19/19 11:42	02/21/19 13:35	1
2,6-Dinitrotoluene	ND		10		ug/L		02/19/19 11:42	02/21/19 13:35	1
2-Chloronaphthalene	ND		10		ug/L		02/19/19 11:42	02/21/19 13:35	1
2-Chlorophenol	ND		10		ug/L		02/19/19 11:42	02/21/19 13:35	1
2-Methylnaphthalene	ND		10		ug/L		02/19/19 11:42	02/21/19 13:35	1
2-Methylphenol	ND		10		ug/L		02/19/19 11:42	02/21/19 13:35	1
2-Nitroaniline	ND		20		ug/L		02/19/19 11:42	02/21/19 13:35	1
2-Nitrophenol	ND		10		ug/L		02/19/19 11:42	02/21/19 13:35	1
3,3'-Dichlorobenzidine	ND		40		ug/L		02/19/19 11:42	02/21/19 13:35	1
3-Methylphenol + 4-Methylphenol	ND		10		ug/L		02/19/19 11:42	02/21/19 13:35	1
3-Nitroaniline	ND		20		ug/L		02/19/19 11:42	02/21/19 13:35	1
4,6-Dinitro-2-methylphenol	ND		20		ug/L		02/19/19 11:42	02/21/19 13:35	1
4-Bromophenyl phenyl ether	ND		10		ug/L		02/19/19 11:42	02/21/19 13:35	1
4-Chloro-3-methylphenol	ND		20		ug/L		02/19/19 11:42	02/21/19 13:35	1
4-Chloroaniline	ND		10		ug/L		02/19/19 11:42	02/21/19 13:35	1
4-Chlorophenyl phenyl ether	ND		10		ug/L		02/19/19 11:42	02/21/19 13:35	1
4-Nitroaniline	ND		20		ug/L		02/19/19 11:42	02/21/19 13:35	1
4-Nitrophenol	ND		20		ug/L		02/19/19 11:42	02/21/19 13:35	1
Acenaphthene	ND		10		ug/L		02/19/19 11:42	02/21/19 13:35	1
Acenaphthylene	ND		10		ug/L		02/19/19 11:42	02/21/19 13:35	1
Aniline	ND		10		ug/L		02/19/19 11:42	02/21/19 13:35	1
Anthracene	ND		10		ug/L		02/19/19 11:42	02/21/19 13:35	1
Benzidine	ND		40		ug/L		02/19/19 11:42	02/21/19 13:35	1
Benzo[a]anthracene	ND		10		ug/L		02/19/19 11:42	02/21/19 13:35	1
Benzo[a]pyrene	ND		10		ug/L		02/19/19 11:42	02/21/19 13:35	1
Benzo[b]fluoranthene	ND		10		ug/L		02/19/19 11:42	02/21/19 13:35	1
Benzo[g,h,i]perylene	ND		10		ug/L		02/19/19 11:42	02/21/19 13:35	1
Benzo[k]fluoranthene	ND		10		ug/L		02/19/19 11:42	02/21/19 13:35	1
Benzoic acid	ND		20		ug/L		02/19/19 11:42	02/21/19 13:35	1
Benzyl alcohol	ND		20		ug/L		02/19/19 11:42	02/21/19 13:35	1
bis (2-chloroisopropyl) ether	ND		10		ug/L		02/19/19 11:42	02/21/19 13:35	1
Bis(2-chloroethoxy)methane	ND		10		ug/L		02/19/19 11:42	02/21/19 13:35	1
Bis(2-chloroethyl)ether	ND		10		ug/L		02/19/19 11:42	02/21/19 13:35	1
Bis(2-ethylhexyl) phthalate	ND		20		ug/L		02/19/19 11:42	02/21/19 13:35	1
Butyl benzyl phthalate	ND		20		ug/L		02/19/19 11:42	02/21/19 13:35	1
Chrysene	ND		10		ug/L		02/19/19 11:42	02/21/19 13:35	1
Dibenz(a,h)anthracene	ND		20		ug/L		02/19/19 11:42	02/21/19 13:35	1
Dibenzofuran	ND		10		ug/L		02/19/19 11:42	02/21/19 13:35	1

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

Lab Sample ID: MB 440-529545/1-A
Matrix: Water
Analysis Batch: 530101

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 529545

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diethyl phthalate	ND		10	ug/L		02/19/19 11:42	02/21/19 13:35	1
Dimethyl phthalate	ND		10	ug/L		02/19/19 11:42	02/21/19 13:35	1
Di-n-butyl phthalate	ND		20	ug/L		02/19/19 11:42	02/21/19 13:35	1
Di-n-octyl phthalate	ND		20	ug/L		02/19/19 11:42	02/21/19 13:35	1
Fluoranthene	ND		10	ug/L		02/19/19 11:42	02/21/19 13:35	1
Fluorene	ND		10	ug/L		02/19/19 11:42	02/21/19 13:35	1
Hexachlorobenzene	ND		10	ug/L		02/19/19 11:42	02/21/19 13:35	1
Hexachlorobutadiene	ND		10	ug/L		02/19/19 11:42	02/21/19 13:35	1
Hexachlorocyclopentadiene	ND		20	ug/L		02/19/19 11:42	02/21/19 13:35	1
Hexachloroethane	ND		10	ug/L		02/19/19 11:42	02/21/19 13:35	1
Indeno[1,2,3-cd]pyrene	ND		20	ug/L		02/19/19 11:42	02/21/19 13:35	1
Isophorone	ND		10	ug/L		02/19/19 11:42	02/21/19 13:35	1
Naphthalene	ND		10	ug/L		02/19/19 11:42	02/21/19 13:35	1
Nitrobenzene	ND		20	ug/L		02/19/19 11:42	02/21/19 13:35	1
N-Nitrosodimethylamine	ND		20	ug/L		02/19/19 11:42	02/21/19 13:35	1
N-Nitrosodi-n-propylamine	ND		10	ug/L		02/19/19 11:42	02/21/19 13:35	1
N-Nitrosodiphenylamine	ND		10	ug/L		02/19/19 11:42	02/21/19 13:35	1
Pentachlorophenol	ND		20	ug/L		02/19/19 11:42	02/21/19 13:35	1
Phenanthrene	ND		10	ug/L		02/19/19 11:42	02/21/19 13:35	1
Phenol	ND		10	ug/L		02/19/19 11:42	02/21/19 13:35	1
Pyrene	ND		10	ug/L		02/19/19 11:42	02/21/19 13:35	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*93*		*40 - 120*	*02/19/19 11:42*	*02/21/19 13:35*	*1*
2-Fluorobiphenyl	*89*		*50 - 120*	*02/19/19 11:42*	*02/21/19 13:35*	*1*
2-Fluorophenol (Surr)	*70*		*30 - 120*	*02/19/19 11:42*	*02/21/19 13:35*	*1*
Nitrobenzene-d5 (Surr)	*86*		*45 - 120*	*02/19/19 11:42*	*02/21/19 13:35*	*1*
Phenol-d6 (Surr)	*74*		*35 - 120*	*02/19/19 11:42*	*02/21/19 13:35*	*1*
Terphenyl-d14 (Surr)	*107*		*10 - 150*	*02/19/19 11:42*	*02/21/19 13:35*	*1*

Lab Sample ID: LCS 440-529545/2-A
Matrix: Water
Analysis Batch: 530101

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 529545

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	100	70.9		ug/L		71	25 - 84
1,2-Dichlorobenzene	100	64.3		ug/L		64	24 - 85
1,2-Diphenylhydrazine(as Azobenzene)	100	102		ug/L		102	44 - 113
1,3-Dichlorobenzene	100	62.0		ug/L		62	20 - 80
1,4-Dichlorobenzene	100	60.3		ug/L		60	22 - 81
2,4,5-Trichlorophenol	100	95.4		ug/L		95	24 - 121
2,4,6-Trichlorophenol	100	95.6		ug/L		96	20 - 121
2,4-Dichlorophenol	100	87.3		ug/L		87	23 - 113
2,4-Dimethylphenol	100	82.0		ug/L		82	39 - 94
2,4-Dinitrophenol	200	189		ug/L		95	23 - 134
2,4-Dinitrotoluene	100	105		ug/L		105	54 - 115
2,6-Dinitrotoluene	100	98.4		ug/L		98	50 - 115

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

Lab Sample ID: LCS 440-529545/2-A
Matrix: Water
Analysis Batch: 530101

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 529545

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Chloronaphthalene	100	86.4		ug/L		86	34 - 102
2-Chlorophenol	100	67.2		ug/L		67	20 - 106
2-Methylnaphthalene	100	85.1		ug/L		85	34 - 98
2-Methylphenol	100	83.2		ug/L		83	36 - 103
2-Nitroaniline	100	104		ug/L		104	48 - 111
2-Nitrophenol	100	85.8		ug/L		86	20 - 117
3,3'-Dichlorobenzidine	100	72.0		ug/L		72	22 - 97
3-Methylphenol + 4-Methylphenol	100	84.8		ug/L		85	35 - 106
3-Nitroaniline	100	70.1		ug/L		70	51 - 116
4,6-Dinitro-2-methylphenol	200	216		ug/L		108	28 - 139
4-Bromophenyl phenyl ether	100	92.8		ug/L		93	42 - 113
4-Chloro-3-methylphenol	100	97.2		ug/L		97	44 - 110
4-Chloroaniline	100	76.1		ug/L		76	42 - 109
4-Chlorophenyl phenyl ether	100	95.6		ug/L		96	38 - 115
4-Nitroaniline	100	115		ug/L		115	50 - 116
4-Nitrophenol	200	189		ug/L		95	26 - 132
Acenaphthene	100	92.9		ug/L		93	37 - 107
Acenaphthylene	100	92.5		ug/L		92	39 - 107
Aniline	100	81.6		ug/L		82	27 - 115
Anthracene	100	95.4		ug/L		95	42 - 120
Benzidine	100	29.0	J	ug/L		29	5 - 150
Benzo[a]anthracene	100	89.2		ug/L		89	42 - 115
Benzo[a]pyrene	100	97.5		ug/L		98	41 - 117
Benzo[b]fluoranthene	100	96.1		ug/L		96	36 - 113
Benzo[g,h,i]perylene	100	93.2		ug/L		93	37 - 115
Benzo[k]fluoranthene	100	95.1		ug/L		95	42 - 122
Benzoic acid	100	88.2		ug/L		88	15 - 121
Benzyl alcohol	100	81.5		ug/L		81	39 - 106
bis (2-chloroisopropyl) ether	100	76.2		ug/L		76	38 - 104
Bis(2-chloroethoxy)methane	100	89.7		ug/L		90	47 - 104
Bis(2-chloroethyl)ether	100	74.6		ug/L		75	42 - 99
Bis(2-ethylhexyl) phthalate	100	97.0		ug/L		97	43 - 124
Butyl benzyl phthalate	100	99.6		ug/L		100	44 - 122
Chrysene	100	93.3		ug/L		93	42 - 118
Dibenz(a,h)anthracene	100	95.6		ug/L		96	40 - 114
Dibenzofuran	100	96.4		ug/L		96	37 - 113
Diethyl phthalate	100	100		ug/L		100	51 - 120
Dimethyl phthalate	100	100		ug/L		100	49 - 113
Di-n-butyl phthalate	100	96.2		ug/L		96	47 - 125
Di-n-octyl phthalate	100	98.1		ug/L		98	42 - 125
Fluoranthene	100	93.9		ug/L		94	44 - 119
Fluorene	100	97.3		ug/L		97	39 - 116
Hexachlorobenzene	100	93.2		ug/L		93	43 - 112
Hexachlorobutadiene	100	62.5		ug/L		62	14 - 77
Hexachlorocyclopentadiene	100	52.0		ug/L		52	10 - 77
Hexachloroethane	100	57.2		ug/L		57	13 - 75
Indeno[1,2,3-cd]pyrene	100	95.8		ug/L		96	35 - 116
Isophorone	100	94.6		ug/L		95	48 - 107

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

Lab Sample ID: LCS 440-529545/2-A
Matrix: Water
Analysis Batch: 530101

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 529545

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Naphthalene	100	76.8		ug/L		77	33 - 95
Nitrobenzene	100	79.9		ug/L		80	42 - 99
N-Nitrosodimethylamine	100	67.7		ug/L		68	35 - 96
N-Nitrosodi-n-propylamine	100	93.1		ug/L		93	44 - 111
N-Nitrosodiphenylamine	100	95.3		ug/L		95	46 - 116
Pentachlorophenol	200	178		ug/L		89	26 - 136
Phenanthrene	100	94.0		ug/L		94	43 - 120
Phenol	100	68.1		ug/L		68	25 - 99
Pyrene	100	97.3		ug/L		97	43 - 119

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*99*		*40 - 120*
2-Fluorobiphenyl	*89*		*50 - 120*
2-Fluorophenol (Surr)	*58*		*30 - 120*
Nitrobenzene-d5 (Surr)	*84*		*45 - 120*
Phenol-d6 (Surr)	*69*		*35 - 120*
Terphenyl-d14 (Surr)	*101*		*10 - 150*

Lab Sample ID: LCSD 440-529545/3-A
Matrix: Water
Analysis Batch: 530101

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 529545

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	100	73.4		ug/L		73	25 - 84	3	35
1,2-Dichlorobenzene	100	67.8		ug/L		68	24 - 85	5	35
1,2-Diphenylhydrazine(as Azobenzene)	100	105		ug/L		105	44 - 113	3	35
1,3-Dichlorobenzene	100	64.4		ug/L		64	20 - 80	4	35
1,4-Dichlorobenzene	100	61.7		ug/L		62	22 - 81	2	35
2,4,5-Trichlorophenol	100	96.9		ug/L		97	24 - 121	2	35
2,4,6-Trichlorophenol	100	96.0		ug/L		96	20 - 121	0	35
2,4-Dichlorophenol	100	88.3		ug/L		88	23 - 113	1	35
2,4-Dimethylphenol	100	82.8		ug/L		83	39 - 94	1	35
2,4-Dinitrophenol	200	182		ug/L		91	23 - 134	4	35
2,4-Dinitrotoluene	100	109		ug/L		109	54 - 115	4	35
2,6-Dinitrotoluene	100	99.5		ug/L		99	50 - 115	1	35
2-Chloronaphthalene	100	90.9		ug/L		91	34 - 102	5	35
2-Chlorophenol	100	72.3		ug/L		72	20 - 106	7	35
2-Methylnaphthalene	100	87.4		ug/L		87	34 - 98	3	35
2-Methylphenol	100	84.1		ug/L		84	36 - 103	1	35
2-Nitroaniline	100	105		ug/L		105	48 - 111	1	35
2-Nitrophenol	100	84.6		ug/L		85	20 - 117	1	35
3,3'-Dichlorobenzidine	100	86.9		ug/L		87	22 - 97	19	35
3-Methylphenol + 4-Methylphenol	100	86.1		ug/L		86	35 - 106	2	35
3-Nitroaniline	100	75.2		ug/L		75	51 - 116	7	35
4,6-Dinitro-2-methylphenol	200	245		ug/L		122	28 - 139	12	35
4-Bromophenyl phenyl ether	100	94.4		ug/L		94	42 - 113	2	35
4-Chloro-3-methylphenol	100	99.9		ug/L		100	44 - 110	3	35

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

Lab Sample ID: LCSD 440-529545/3-A
Matrix: Water
Analysis Batch: 530101

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 529545

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4-Chloroaniline			100	78.9		ug/L		79	42 - 109	4	35
4-Chlorophenyl phenyl ether			100	94.8		ug/L		95	38 - 115	1	35
4-Nitroaniline			100	116		ug/L		116	50 - 116	1	35
4-Nitrophenol			200	187		ug/L		94	26 - 132	1	35
Acenaphthene			100	92.8		ug/L		93	37 - 107	0	35
Acenaphthylene			100	94.2		ug/L		94	39 - 107	2	35
Aniline			100	88.2		ug/L		88	27 - 115	8	35
Anthracene			100	99.1		ug/L		99	42 - 120	4	35
Benzidine			100	35.1	J	ug/L		35	5 - 150	19	35
Benzo[a]anthracene			100	95.8		ug/L		96	42 - 115	7	35
Benzo[a]pyrene			100	102		ug/L		102	41 - 117	4	35
Benzo[b]fluoranthene			100	103		ug/L		103	36 - 113	7	35
Benzo[g,h,i]perylene			100	102		ug/L		102	37 - 115	9	35
Benzo[k]fluoranthene			100	99.6		ug/L		100	42 - 122	5	35
Benzoic acid			100	99.9		ug/L		100	15 - 121	12	35
Benzyl alcohol			100	64.7		ug/L		65	39 - 106	23	35
bis (2-chloroisopropyl) ether			100	78.7		ug/L		79	38 - 104	3	35
Bis(2-chloroethoxy)methane			100	89.2		ug/L		89	47 - 104	1	35
Bis(2-chloroethyl)ether			100	77.5		ug/L		77	42 - 99	4	35
Bis(2-ethylhexyl) phthalate			100	106		ug/L		106	43 - 124	9	35
Butyl benzyl phthalate			100	101		ug/L		101	44 - 122	2	35
Chrysene			100	99.4		ug/L		99	42 - 118	6	35
Dibenz(a,h)anthracene			100	101		ug/L		101	40 - 114	6	35
Dibenzofuran			100	97.7		ug/L		98	37 - 113	1	35
Diethyl phthalate			100	103		ug/L		103	51 - 120	3	35
Dimethyl phthalate			100	101		ug/L		101	49 - 113	1	35
Di-n-butyl phthalate			100	102		ug/L		102	47 - 125	6	35
Di-n-octyl phthalate			100	109		ug/L		109	42 - 125	10	35
Fluoranthene			100	100		ug/L		100	44 - 119	6	35
Fluorene			100	98.7		ug/L		99	39 - 116	1	35
Hexachlorobenzene			100	99.2		ug/L		99	43 - 112	6	35
Hexachlorobutadiene			100	65.6		ug/L		66	14 - 77	5	35
Hexachlorocyclopentadiene			100	53.0		ug/L		53	10 - 77	2	35
Hexachloroethane			100	60.6		ug/L		61	13 - 75	6	35
Indeno[1,2,3-cd]pyrene			100	103		ug/L		103	35 - 116	7	35
Isophorone			100	97.0		ug/L		97	48 - 107	2	35
Naphthalene			100	78.4		ug/L		78	33 - 95	2	35
Nitrobenzene			100	83.6		ug/L		84	42 - 99	5	35
N-Nitrosodimethylamine			100	67.4		ug/L		67	35 - 96	0	35
N-Nitrosodi-n-propylamine			100	96.4		ug/L		96	44 - 111	4	35
N-Nitrosodiphenylamine			100	97.2		ug/L		97	46 - 116	2	35
Pentachlorophenol			200	185		ug/L		93	26 - 136	4	35
Phenanthrene			100	99.2		ug/L		99	43 - 120	5	35
Phenol			100	80.1		ug/L		80	25 - 99	16	35
Pyrene			100	101		ug/L		101	43 - 119	4	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*99*		*40 - 120*

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

Lab Sample ID: LCSD 440-529545/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 530101 — **Prep Batch: 529545**

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2-Fluorobiphenyl	91		50 - 120
2-Fluorophenol (Surr)	59		30 - 120
Nitrobenzene-d5 (Surr)	83		45 - 120
Phenol-d6 (Surr)	72		35 - 120
Terphenyl-d14 (Surr)	105		10 - 150

Method: 8270C SIM - 1,4 Dioxane by SIM

Lab Sample ID: MB 440-529541/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 530058 — **Prep Batch: 529541**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.50		ug/L		02/19/19 11:32	02/21/19 14:53	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	59		27 - 120	02/19/19 11:32	02/21/19 14:53	1

Lab Sample ID: LCS 440-529541/3-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 530058 — **Prep Batch: 529541**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,4-Dioxane			2.00	1.21		ug/L		60	36 - 120		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,4-Dioxane-d8 (Surr)	56		27 - 120

Lab Sample ID: LCSD 440-529541/4-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 530058 — **Prep Batch: 529541**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dioxane			2.00	1.22		ug/L		61	36 - 120	1	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,4-Dioxane-d8 (Surr)	60		27 - 120

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 440-530391/1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 530391

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		1.0		mg/L			02/22/19 17:10	1

Method: SM 2540D - Solids, Total Suspended (TSS) (Continued)

Lab Sample ID: LCS 440-530391/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 530391

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Suspended Solids			1000	983		mg/L		98	85 - 115		

Lab Sample ID: 440-233693-B-1 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 530391

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Suspended Solids	200			213		mg/L				6	10

Method: SM 4500 H+ B - pH

Lab Sample ID: 440-233473-A-1 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 529946

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
pH	6.9			6.9		SU				0.1	2

Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MB 440-529631/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 529658 — **Prep Batch: 529631**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Sulfide, Dissolved	ND		0.050		mg/L		02/19/19 15:46	02/19/19 16:51	1

Lab Sample ID: LCS 440-529631/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 529658 — **Prep Batch: 529631**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Sulfide, Dissolved			0.500	0.489		mg/L		98	80 - 120		

Lab Sample ID: 440-233286-N-1-B MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 529658 — **Prep Batch: 529631**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Sulfide, Dissolved	ND	HF F1	0.500	0.262	HF F1	mg/L		52	70 - 130		

Lab Sample ID: 440-233286-N-1-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 529658 — **Prep Batch: 529631**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfide, Dissolved	ND	HF F1	0.500	0.302	HF F1	mg/L		60	70 - 130	14	30

QC Sample Results

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical -24 hour Compostie

TestAmerica Job ID: 440-233700-1
SDG: Whittier

Method: SM 5220D - COD

Lab Sample ID: MB 440-531898/3
Matrix: Water
Analysis Batch: 531898

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

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		20		mg/L			03/01/19 15:55	1

Lab Sample ID: LCS 440-531898/4
Matrix: Water
Analysis Batch: 531898

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		102	90 - 110		

Lab Sample ID: 440-234793-A-1 MS
Matrix: Water
Analysis Batch: 531898

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	59		200	242		mg/L		92	70 - 120		

Lab Sample ID: 440-234793-A-1 MSD
Matrix: Water
Analysis Batch: 531898

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	59		200	239		mg/L		90	70 - 120	1	15

Lab Sample ID: 440-234793-A-1 DU
Matrix: Water
Analysis Batch: 531898

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	59			57.3		mg/L				3	15

QC Association Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical -24 hour Compostie

TestAmerica Job ID: 440-233700-1
SDG: Whittier

GC/MS VOA

Analysis Batch: 529768

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-233700-2	Grab	Total/NA	Water	8260B	
MB 440-529768/4	Method Blank	Total/NA	Water	8260B	
LCS 440-529768/5	Lab Control Sample	Total/NA	Water	8260B	
440-233507-A-7 MS	Matrix Spike	Total/NA	Water	8260B	
440-233507-A-7 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

Analysis Batch: 530007

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-233700-2	Grab	Total/NA	Water	8260B	
MB 440-530007/4	Method Blank	Total/NA	Water	8260B	
LCS 440-530007/5	Lab Control Sample	Total/NA	Water	8260B	
LCS 440-530007/6	Lab Control Sample	Total/NA	Water	8260B	
440-233700-2 MS	Grab	Total/NA	Water	8260B	
440-233700-2 MSD	Grab	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 529541

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-233700-2	Grab	Total/NA	Water	3520C	
MB 440-529541/1-A	Method Blank	Total/NA	Water	3520C	
LCS 440-529541/3-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 440-529541/4-A	Lab Control Sample Dup	Total/NA	Water	3520C	

Prep Batch: 529545

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-233700-2	Grab	Total/NA	Water	3520C	
MB 440-529545/1-A	Method Blank	Total/NA	Water	3520C	
LCS 440-529545/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 440-529545/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	

Analysis Batch: 530058

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-233700-2	Grab	Total/NA	Water	8270C SIM	529541
MB 440-529541/1-A	Method Blank	Total/NA	Water	8270C SIM	529541
LCS 440-529541/3-A	Lab Control Sample	Total/NA	Water	8270C SIM	529541
LCSD 440-529541/4-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM	529541

Analysis Batch: 530101

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-233700-2	Grab	Total/NA	Water	8270C	529545
MB 440-529545/1-A	Method Blank	Total/NA	Water	8270C	529545
LCS 440-529545/2-A	Lab Control Sample	Total/NA	Water	8270C	529545
LCSD 440-529545/3-A	Lab Control Sample Dup	Total/NA	Water	8270C	529545

General Chemistry

Prep Batch: 529631

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-233700-2	Grab	Dissolved	Water	SM 4500 S2 B	

General Chemistry (Continued)

Prep Batch: 529631 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 440-529631/1-A	Method Blank	Dissolved	Water	SM 4500 S2 B	
LCS 440-529631/2-A	Lab Control Sample	Dissolved	Water	SM 4500 S2 B	
440-233286-N-1-B MS	Matrix Spike	Dissolved	Water	SM 4500 S2 B	
440-233286-N-1-C MSD	Matrix Spike Duplicate	Dissolved	Water	SM 4500 S2 B	

Analysis Batch: 529658

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-233700-2	Grab	Dissolved	Water	SM 4500 S2 D	529631
MB 440-529631/1-A	Method Blank	Dissolved	Water	SM 4500 S2 D	529631
LCS 440-529631/2-A	Lab Control Sample	Dissolved	Water	SM 4500 S2 D	529631
440-233286-N-1-B MS	Matrix Spike	Dissolved	Water	SM 4500 S2 D	529631
440-233286-N-1-C MSD	Matrix Spike Duplicate	Dissolved	Water	SM 4500 S2 D	529631

Analysis Batch: 529946

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-233700-2	Grab	Total/NA	Water	SM 4500 H+ B	
440-233473-A-1 DU	Duplicate	Total/NA	Water	SM 4500 H+ B	

Analysis Batch: 530391

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-233700-1	Composite	Total/NA	Water	SM 2540D	
MB 440-530391/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 440-530391/2	Lab Control Sample	Total/NA	Water	SM 2540D	
440-233693-B-1 DU	Duplicate	Total/NA	Water	SM 2540D	

Analysis Batch: 531898

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-233700-1	Composite	Total/NA	Water	SM 5220D	
MB 440-531898/3	Method Blank	Total/NA	Water	SM 5220D	
LCS 440-531898/4	Lab Control Sample	Total/NA	Water	SM 5220D	
440-234793-A-1 MS	Matrix Spike	Total/NA	Water	SM 5220D	
440-234793-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 5220D	
440-234793-A-1 DU	Duplicate	Total/NA	Water	SM 5220D	

Field Service / Mobile Lab

Analysis Batch: 529424

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-233700-2	Grab	Total/NA	Water	Field Sampling	

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 Semi VOA

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

General Chemistry

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.

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: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical -24 hour Compostie

TestAmerica Job ID: 440-233700-1
SDG: Whittier

Laboratory: TestAmerica Irvine

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
California	State Program	9	CA ELAP 2706	06-30-19

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8260B		Water	1,1,2-Trichloro-1,2,2-trifluoroethane
8260B		Water	m,p-Xylene
8260B		Water	Total Volatile Organic Compounds
8270C	3520C	Water	2-Methylphenol
8270C	3520C	Water	3-Methylphenol + 4-Methylphenol
8270C	3520C	Water	4-Chloroaniline
8270C	3520C	Water	Benzidine
8270C SIM	3520C	Water	1,4-Dioxane
Field Sampling		Water	Field pH
Field Sampling		Water	Field Temperature

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

Chain of Custody Record

TestAmerica

Client Information	Sampler: Felipe Reyes	Lab PM: Roberts, Danielle C	Carrier Tracking No(s):	COC No: 440-158742-28792 1
Client Contact: Pamela Henriksen	Phone: 714-651-2862	E-Mail: danielle.roberts@testamericainc.com		Page: Page 1 of 1
Company: Jacob & Hefner Associates P C				Job #
Address: 15375 Barranca Parkway, J-101	Due Date Requested:			
City: Irvine	TAT Requested (days):			
State Zip: CA, 92618				
Phone: 949-453-1045(Tel) 949-453-1047(Fax)	PO #: Omega Chemical Wastewater			
Email: phenriksen@jacobandhefner.com	WO #			
Project Name: Omega Chemical ISCO	Project #: 44003641			
Site: California	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)	5220D - COD	2540D - TSS	SM4500_S2_D - Dissolved Sulfide	8260B_LL - VOCs+Oxys+Ks+F113-LL	8270C, 8270C_SIM	SM4500_H+ - pH	8260B_LL - A+A+2CVE	Total Number of containers	Special Instructions/Note:
			Preservation Code:				S	N	B	A	N	N	N		
Composite	2-15-19	10:00	C	Water			X	X						2	Isco Set up 2/15/19
Grab	2-15-19	10:10	G	Water					X	X	X	X	X	12	2-14-19 9:30 = 7284815
															2-15-19 9:30 = 7295003
															Field pH = 8.62 Temp: 16.1° C

440-233700 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	Company	Received by	Date/Time	Company
	2-15-19 13:50	B-F			
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	2/15/19 1350	TA IRV

Custody Seals Intact: Δ Yes Δ No

Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: Temp 3.0/3.4 1293

Ver: 08/04/2016

Login Sample Receipt Checklist

Client: Jacob & Hefner Associates P.C.

Job Number: 440-233700-1
SDG Number: Whittier

Login Number: 233700
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: 440-234227-1
TestAmerica Sample Delivery Group: Omega Chemical
Client Project/Site: Omega Chemical-GWCS Monthly

For:
Jacob & Hefner Associates P.C.
15375 Barranca Parkway, J-101
Irvine, California 92618

Attn: Trent Henderson

Authorized for release by:
2/28/2019 2:28:19 PM

Danielle Roberts, Senior Project Manager
(949)261-1022
danielle.roberts@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

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

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

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

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Sample Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-GWCS Monthly

TestAmerica Job ID: 440-234227-1
SDG: Omega Chemical

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-234227-1	OC_SP220B_EFF_022019	Water	02/20/19 13:20	02/21/19 12:55
440-234227-2	OC_SP210_INF_022019	Water	02/20/19 13:25	02/21/19 12:55
440-234227-3	OC_TB_022019	Water	02/20/19 13:00	02/21/19 12:55

Job ID: 440-234227-1

Laboratory: TestAmerica Irvine

Narrative

Job Narrative
440-234227-1

Comments
No additional comments.

Receipt
The samples were received on 2/21/2019 12:55 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.1º C.

GC/MS VOA
Method(s) 8260B: The continuing calibration verification (CCV) associated with batch 440-531002 recovered above the upper control limit for 2,2-Dichloropropane. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The following samples are impacted: OC_SP220B_EFF_022019 (440-234227-1), OC_SP210_INF_022019 (440-234227-2), OC_TB_022019 (440-234227-3) and (CCVIS 440-531002/2).

Method(s) 8260B: The following volatile sample was received and analyzed with significant headspace in the sample container(s): OC_TB_022019 (440-234227-3). Significant headspace is defined as a bubble greater than 6 mm in diameter.

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

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

Organic Prep
Method(s) 3520C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 440-530523. LCS was performed in duplicate to maintain precision of data. 8270 1,4 NDMA

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

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

Detection Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-GWCS Monthly

TestAmerica Job ID: 440-234227-1
SDG: Omega Chemical

Client Sample ID: OC_SP220B_EFF_022019 — Lab Sample ID: 440-234227-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	13		0.50	0.099	ug/L	1		8270C SIM	Total/NA

Client Sample ID: OC_SP210_INF_022019 — Lab Sample ID: 440-234227-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1-Dichloroethane	0.55	J	1.0	0.25	ug/L	1		8260B	Total/NA
1,1-Dichloroethene	44		1.0	0.25	ug/L	1		8260B	Total/NA
1,2-Dichloroethane	4.1		1.0	0.25	ug/L	1		8260B	Total/NA
Chloroform	19		1.0	0.25	ug/L	1		8260B	Total/NA
Trichloroethene	37		1.0	0.25	ug/L	1		8260B	Total/NA
Trichlorofluoromethane	21		1.0	0.25	ug/L	1		8260B	Total/NA
1,1,2-Trichloro-1,2,2-trifluoroethane - DL	110		50	5.0	ug/L	10		8260B	Total/NA
Tetrachloroethene - DL	320		10	2.5	ug/L	10		8260B	Total/NA

Client Sample ID: OC_TB_022019 — Lab Sample ID: 440-234227-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acetone - RA	12		10	10	ug/L	1		8260B	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-GWCS Monthly

TestAmerica Job ID: 440-234227-1
SDG: Omega Chemical

Client Sample ID: OC_SP220B_EFF_022019

Lab Sample ID: 440-234227-1

Date Collected: 02/20/19 13:20
Matrix: Water
Date Received: 02/21/19 12:55

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/27/19 01:24	1
1,1,1-Trichloroethane	ND		1.0	0.25	ug/L			02/27/19 01:24	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/27/19 01:24	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	0.50	ug/L			02/27/19 01:24	1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L			02/27/19 01:24	1
1,1-Dichloroethane	ND		1.0	0.25	ug/L			02/27/19 01:24	1
1,1-Dichloroethene	ND		1.0	0.25	ug/L			02/27/19 01:24	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			02/27/19 01:24	1
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L			02/27/19 01:24	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			02/27/19 01:24	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			02/27/19 01:24	1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			02/27/19 01:24	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			02/27/19 01:24	1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			02/27/19 01:24	1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			02/27/19 01:24	1
1,2-Dichloroethane	ND		1.0	0.25	ug/L			02/27/19 01:24	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			02/27/19 01:24	1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			02/27/19 01:24	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			02/27/19 01:24	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			02/27/19 01:24	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			02/27/19 01:24	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			02/27/19 01:24	1
2-Chlorotoluene	ND		1.0	0.25	ug/L			02/27/19 01:24	1
4-Chlorotoluene	ND		1.0	0.25	ug/L			02/27/19 01:24	1
Acetone	ND		10	10	ug/L			02/27/19 01:24	1
Benzene	ND		0.50	0.25	ug/L			02/27/19 01:24	1
Bromobenzene	ND		1.0	0.25	ug/L			02/27/19 01:24	1
Bromochloromethane	ND		1.0	0.25	ug/L			02/27/19 01:24	1
Bromodichloromethane	ND		1.0	0.25	ug/L			02/27/19 01:24	1
Bromoform	ND		1.0	0.40	ug/L			02/27/19 01:24	1
Bromomethane	ND		1.0	0.25	ug/L			02/27/19 01:24	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			02/27/19 01:24	1
Chlorobenzene	ND		1.0	0.25	ug/L			02/27/19 01:24	1
Chloroethane	ND		1.0	0.40	ug/L			02/27/19 01:24	1
Chloroform	ND		1.0	0.25	ug/L			02/27/19 01:24	1
Chloromethane	ND		1.0	0.25	ug/L			02/27/19 01:24	1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			02/27/19 01:24	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/27/19 01:24	1
Dibromochloromethane	ND		1.0	0.25	ug/L			02/27/19 01:24	1
Dibromomethane	ND		1.0	0.25	ug/L			02/27/19 01:24	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			02/27/19 01:24	1
Ethylbenzene	ND		1.0	0.25	ug/L			02/27/19 01:24	1
Hexachlorobutadiene	ND		1.0	0.25	ug/L			02/27/19 01:24	1
Isopropyl alcohol	ND		250	180	ug/L			02/27/19 01:24	1
Isopropylbenzene	ND		1.0	0.25	ug/L			02/27/19 01:24	1
m,p-Xylene	ND		1.0	0.50	ug/L			02/27/19 01:24	1
Methylene Chloride	ND		5.0	0.88	ug/L			02/27/19 01:24	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			02/27/19 01:24	1
Naphthalene	ND		1.0	0.40	ug/L			02/27/19 01:24	1

Client Sample ID: OC_SP220B_EFF_022019 — Lab Sample ID: 440-234227-1

Date Collected: 02/20/19 13:20 — **Matrix: Water**
Date Received: 02/21/19 12:55

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	ND		1.0	0.40	ug/L			02/27/19 01:24	1
N-Propylbenzene	ND		1.0	0.25	ug/L			02/27/19 01:24	1
o-Xylene	ND		1.0	0.25	ug/L			02/27/19 01:24	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			02/27/19 01:24	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			02/27/19 01:24	1
Styrene	ND		1.0	0.25	ug/L			02/27/19 01:24	1
tert-Butylbenzene	ND		1.0	0.25	ug/L			02/27/19 01:24	1
Tetrachloroethene	ND		1.0	0.25	ug/L			02/27/19 01:24	1
Toluene	ND		1.0	0.25	ug/L			02/27/19 01:24	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			02/27/19 01:24	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/27/19 01:24	1
Trichloroethene	ND		1.0	0.25	ug/L			02/27/19 01:24	1
Trichlorofluoromethane	ND		1.0	0.25	ug/L			02/27/19 01:24	1
Vinyl chloride	ND		0.50	0.25	ug/L			02/27/19 01:24	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*124*		*70 - 130*		*02/27/19 01:24*	*1*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*		*02/27/19 01:24*	*1*
Dibromofluoromethane (Surr)	*117*		*76 - 132*		*02/27/19 01:24*	*1*
Toluene-d8 (Surr)	*102*		*80 - 128*		*02/27/19 01:24*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**13**		0.50	0.099	ug/L		02/24/19 12:49	02/25/19 17:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*38*		*27 - 120*	*02/24/19 12:49*	*02/25/19 17:14*	*1*

Client Sample ID: OC_SP210_INF_022019 — Lab Sample ID: 440-234227-2

Date Collected: 02/20/19 13:25 — **Matrix: Water**
Date Received: 02/21/19 12:55

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/27/19 01:50	1
1,1,1-Trichloroethane	ND		1.0	0.25	ug/L			02/27/19 01:50	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/27/19 01:50	1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L			02/27/19 01:50	1
1,1-Dichloroethane	**0.55**	**J**	1.0	0.25	ug/L			02/27/19 01:50	1
1,1-Dichloroethene	**44**		1.0	0.25	ug/L			02/27/19 01:50	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			02/27/19 01:50	1
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L			02/27/19 01:50	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			02/27/19 01:50	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			02/27/19 01:50	1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			02/27/19 01:50	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			02/27/19 01:50	1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			02/27/19 01:50	1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			02/27/19 01:50	1
1,2-Dichloroethane	**4.1**		1.0	0.25	ug/L			02/27/19 01:50	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			02/27/19 01:50	1

Client Sample ID: OC_SP210_INF_022019

Lab Sample ID: 440-234227-2

Date Collected: 02/20/19 13:25

Matrix: Water

Date Received: 02/21/19 12:55

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			02/27/19 01:50	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			02/27/19 01:50	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			02/27/19 01:50	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			02/27/19 01:50	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			02/27/19 01:50	1
2-Chlorotoluene	ND		1.0	0.25	ug/L			02/27/19 01:50	1
4-Chlorotoluene	ND		1.0	0.25	ug/L			02/27/19 01:50	1
Acetone	ND		10	10	ug/L			02/27/19 01:50	1
Benzene	ND		0.50	0.25	ug/L			02/27/19 01:50	1
Bromobenzene	ND		1.0	0.25	ug/L			02/27/19 01:50	1
Bromochloromethane	ND		1.0	0.25	ug/L			02/27/19 01:50	1
Bromodichloromethane	ND		1.0	0.25	ug/L			02/27/19 01:50	1
Bromoform	ND		1.0	0.40	ug/L			02/27/19 01:50	1
Bromomethane	ND		1.0	0.25	ug/L			02/27/19 01:50	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			02/27/19 01:50	1
Chlorobenzene	ND		1.0	0.25	ug/L			02/27/19 01:50	1
Chloroethane	ND		1.0	0.40	ug/L			02/27/19 01:50	1
Chloroform	**19**		1.0	0.25	ug/L			02/27/19 01:50	1
Chloromethane	ND		1.0	0.25	ug/L			02/27/19 01:50	1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			02/27/19 01:50	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/27/19 01:50	1
Dibromochloromethane	ND		1.0	0.25	ug/L			02/27/19 01:50	1
Dibromomethane	ND		1.0	0.25	ug/L			02/27/19 01:50	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			02/27/19 01:50	1
Ethylbenzene	ND		1.0	0.25	ug/L			02/27/19 01:50	1
Hexachlorobutadiene	ND		1.0	0.25	ug/L			02/27/19 01:50	1
Isopropyl alcohol	ND		250	180	ug/L			02/27/19 01:50	1
Isopropylbenzene	ND		1.0	0.25	ug/L			02/27/19 01:50	1
m,p-Xylene	ND		1.0	0.50	ug/L			02/27/19 01:50	1
Methylene Chloride	ND		5.0	0.88	ug/L			02/27/19 01:50	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			02/27/19 01:50	1
Naphthalene	ND		1.0	0.40	ug/L			02/27/19 01:50	1
n-Butylbenzene	ND		1.0	0.40	ug/L			02/27/19 01:50	1
N-Propylbenzene	ND		1.0	0.25	ug/L			02/27/19 01:50	1
o-Xylene	ND		1.0	0.25	ug/L			02/27/19 01:50	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			02/27/19 01:50	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			02/27/19 01:50	1
Styrene	ND		1.0	0.25	ug/L			02/27/19 01:50	1
tert-Butylbenzene	ND		1.0	0.25	ug/L			02/27/19 01:50	1
Toluene	ND		1.0	0.25	ug/L			02/27/19 01:50	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			02/27/19 01:50	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/27/19 01:50	1
Trichloroethene	**37**		1.0	0.25	ug/L			02/27/19 01:50	1
Trichlorofluoromethane	**21**		1.0	0.25	ug/L			02/27/19 01:50	1
Vinyl chloride	ND		0.50	0.25	ug/L			02/27/19 01:50	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*1100*	*T J*	*ug/L*		*1.48*			*02/27/19 01:50*	*1*
Unknown	*4.0*	*T J*	*ug/L*		*8.10*			*02/27/19 01:50*	*1*

Client Sample ID: OC_SP210_INF_022019 — Lab Sample ID: 440-234227-2

Date Collected: 02/20/19 13:25 — **Matrix: Water**
Date Received: 02/21/19 12:55

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

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	13	T J	ug/L		9.99			02/27/19 01:50	1
Unknown	3.0	T J	ug/L		10.71			02/27/19 01:50	1
Unknown	13	T J	ug/L		12.10			02/27/19 01:50	1
Unknown	8.9	T J	ug/L		13.84			02/27/19 01:50	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	121		70 - 130		02/27/19 01:50	1
4-Bromofluorobenzene (Surr)	98		80 - 120		02/27/19 01:50	1
Dibromofluoromethane (Surr)	118		76 - 132		02/27/19 01:50	1
Toluene-d8 (Surr)	102		80 - 128		02/27/19 01:50	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,2-Trichloro-1,2,2-trifluoroethane	110		50	5.0	ug/L			02/27/19 02:16	10
Tetrachloroethene	320		10	2.5	ug/L			02/27/19 02:16	10

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	3600	T J	ug/L		1.48			02/27/19 02:16	10
Unknown	79	T J	ug/L		9.99			02/27/19 02:16	10
Unknown	35	T J	ug/L		12.10			02/27/19 02:16	10
Unknown	30	T J	ug/L		13.84			02/27/19 02:16	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	122		70 - 130		02/27/19 02:16	10
4-Bromofluorobenzene (Surr)	98		80 - 120		02/27/19 02:16	10
Dibromofluoromethane (Surr)	118		76 - 132		02/27/19 02:16	10
Toluene-d8 (Surr)	100		80 - 128		02/27/19 02:16	10

Client Sample ID: OC_TB_022019 — Lab Sample ID: 440-234227-3

Date Collected: 02/20/19 13:00 — **Matrix: Water**
Date Received: 02/21/19 12:55

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/27/19 02:43	1
1,1,1-Trichloroethane	ND		1.0	0.25	ug/L			02/27/19 02:43	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/27/19 02:43	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	0.50	ug/L			02/27/19 02:43	1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L			02/27/19 02:43	1
1,1-Dichloroethane	ND		1.0	0.25	ug/L			02/27/19 02:43	1
1,1-Dichloroethene	ND		1.0	0.25	ug/L			02/27/19 02:43	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			02/27/19 02:43	1
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L			02/27/19 02:43	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			02/27/19 02:43	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			02/27/19 02:43	1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			02/27/19 02:43	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			02/27/19 02:43	1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			02/27/19 02:43	1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			02/27/19 02:43	1

Client Sample Results

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-GWCS Monthly

TestAmerica Job ID: 440-234227-1
SDG: Omega Chemical

Client Sample ID: OC_TB_022019

Date Collected: 02/20/19 13:00
Date Received: 02/21/19 12:55

Lab Sample ID: 440-234227-3

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		1.0	0.25	ug/L			02/27/19 02:43	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			02/27/19 02:43	1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			02/27/19 02:43	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			02/27/19 02:43	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			02/27/19 02:43	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			02/27/19 02:43	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			02/27/19 02:43	1
2-Chlorotoluene	ND		1.0	0.25	ug/L			02/27/19 02:43	1
4-Chlorotoluene	ND		1.0	0.25	ug/L			02/27/19 02:43	1
Benzene	ND		0.50	0.25	ug/L			02/27/19 02:43	1
Bromobenzene	ND		1.0	0.25	ug/L			02/27/19 02:43	1
Bromochloromethane	ND		1.0	0.25	ug/L			02/27/19 02:43	1
Bromodichloromethane	ND		1.0	0.25	ug/L			02/27/19 02:43	1
Bromoform	ND		1.0	0.40	ug/L			02/27/19 02:43	1
Bromomethane	ND		1.0	0.25	ug/L			02/27/19 02:43	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			02/27/19 02:43	1
Chlorobenzene	ND		1.0	0.25	ug/L			02/27/19 02:43	1
Chloroethane	ND		1.0	0.40	ug/L			02/27/19 02:43	1
Chloroform	ND		1.0	0.25	ug/L			02/27/19 02:43	1
Chloromethane	ND		1.0	0.25	ug/L			02/27/19 02:43	1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			02/27/19 02:43	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/27/19 02:43	1
Dibromochloromethane	ND		1.0	0.25	ug/L			02/27/19 02:43	1
Dibromomethane	ND		1.0	0.25	ug/L			02/27/19 02:43	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			02/27/19 02:43	1
Ethylbenzene	ND		1.0	0.25	ug/L			02/27/19 02:43	1
Hexachlorobutadiene	ND		1.0	0.25	ug/L			02/27/19 02:43	1
Isopropylbenzene	ND		1.0	0.25	ug/L			02/27/19 02:43	1
m,p-Xylene	ND		1.0	0.50	ug/L			02/27/19 02:43	1
Methylene Chloride	ND		5.0	0.88	ug/L			02/27/19 02:43	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			02/27/19 02:43	1
Naphthalene	ND		1.0	0.40	ug/L			02/27/19 02:43	1
n-Butylbenzene	ND		1.0	0.40	ug/L			02/27/19 02:43	1
N-Propylbenzene	ND		1.0	0.25	ug/L			02/27/19 02:43	1
o-Xylene	ND		1.0	0.25	ug/L			02/27/19 02:43	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			02/27/19 02:43	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			02/27/19 02:43	1
Styrene	ND		1.0	0.25	ug/L			02/27/19 02:43	1
tert-Butylbenzene	ND		1.0	0.25	ug/L			02/27/19 02:43	1
Tetrachloroethene	ND		1.0	0.25	ug/L			02/27/19 02:43	1
Toluene	ND		1.0	0.25	ug/L			02/27/19 02:43	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			02/27/19 02:43	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/27/19 02:43	1
Trichloroethene	ND		1.0	0.25	ug/L			02/27/19 02:43	1
Trichlorofluoromethane	ND		1.0	0.25	ug/L			02/27/19 02:43	1
Vinyl chloride	ND		0.50	0.25	ug/L			02/27/19 02:43	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*100*	*T J*	*ug/L*		*1.47*			*02/27/19 02:43*	*1*

Client Sample ID: OC_TB_022019

Lab Sample ID: 440-234227-3

Date Collected: 02/20/19 13:00

Matrix: Water

Date Received: 02/21/19 12:55

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

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	4.5	T J	ug/L		3.84			02/27/19 02:43	1
Unknown	13	T J	ug/L		10.00			02/27/19 02:43	1
Unknown	21	T J	ug/L		12.10			02/27/19 02:43	1
Unknown	24	T J	ug/L		13.84			02/27/19 02:43	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	122		70 - 130		02/27/19 02:43	1
4-Bromofluorobenzene (Surr)	96		80 - 120		02/27/19 02:43	1
Dibromofluoromethane (Surr)	119		76 - 132		02/27/19 02:43	1
Toluene-d8 (Surr)	100		80 - 128		02/27/19 02:43	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	12		10	10	ug/L			02/27/19 09:06	1
Isopropyl alcohol	ND		250	180	ug/L			02/27/19 09:06	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	10	T J	ug/L		12.07			02/27/19 09:06	1
Unknown	12	T J	ug/L		13.93			02/27/19 09:06	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	106		70 - 130		02/27/19 09:06	1
4-Bromofluorobenzene (Surr)	113		80 - 120		02/27/19 09:06	1
Dibromofluoromethane (Surr)	112		76 - 132		02/27/19 09:06	1
Toluene-d8 (Surr)	109		80 - 128		02/27/19 09:06	1

Surrogate Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-GWCS Monthly

TestAmerica Job ID: 440-234227-1
SDG: Omega Chemical

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

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(70-130)	(80-120)	(76-132)	(80-128)
440-233747-B-2 MS	Matrix Spike	106	106	110	99
440-233747-B-2 MSD	Matrix Spike Duplicate	104	108	109	103
440-234219-A-14 MS	Matrix Spike	106	96	106	96
440-234219-A-14 MSD	Matrix Spike Duplicate	114	98	108	91
440-234227-1	OC_SP220B_EFF_022019	124	94	117	102
440-234227-2	OC_SP210_INF_022019	121	98	118	102
440-234227-2 - DL	OC_SP210_INF_022019	122	98	118	100
440-234227-3	OC_TB_022019	122	96	119	100
440-234227-3 - RA	OC_TB_022019	106	113	112	109
LCS 440-531002/1026	Lab Control Sample	110	97	107	100
LCS 440-531002/5	Lab Control Sample	108	100	108	101
LCS 440-531118/1003	Lab Control Sample	111	108	112	107
LCS 440-531118/5	Lab Control Sample	105	111	109	102
MB 440-531002/27	Method Blank	116	95	111	101
MB 440-531118/4	Method Blank	109	111	111	107

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

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

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
		DXE
Lab Sample ID	Client Sample ID	(27-120)
440-234227-1	OC_SP220B_EFF_022019	38
LCS 440-530523/3-A	Lab Control Sample	60
LCSD 440-530523/4-A	Lab Control Sample Dup	56
MB 440-530523/1-A	Method Blank	50

Surrogate Legend

DXE = 1,4-Dioxane-d8 (Surr)

Method Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-GWCS Monthly

TestAmerica Job ID: 440-234227-1
SDG: Omega Chemical

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL IRV
8270C SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL IRV
3520C	Liquid-Liquid Extraction (Continuous)	SW846	TAL IRV
5030B	Purge and Trap	SW846	TAL IRV

Protocol References:

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: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-GWCS Monthly

TestAmerica Job ID: 440-234227-1
SDG: Omega Chemical

Client Sample ID: OC_SP220B_EFF_022019 — Lab Sample ID: 440-234227-1

Date Collected: 02/20/19 13:20 — **Matrix: Water**
Date Received: 02/21/19 12:55

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	531002	02/27/19 01:24	OH1	TAL IRV
Total/NA	Prep	3520C			1010 mL	1 mL	530523	02/24/19 12:49	AJP	TAL IRV
Total/NA	Analysis	8270C SIM		1			530603	02/25/19 17:14	L1B	TAL IRV

Client Sample ID: OC_SP210_INF_022019 — Lab Sample ID: 440-234227-2

Date Collected: 02/20/19 13:25 — **Matrix: Water**
Date Received: 02/21/19 12:55

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	531002	02/27/19 01:50	OH1	TAL IRV
Total/NA	Analysis	8260B	DL	10	10 mL	10 mL	531002	02/27/19 02:16	OH1	TAL IRV

Client Sample ID: OC_TB_022019 — Lab Sample ID: 440-234227-3

Date Collected: 02/20/19 13:00 — **Matrix: Water**
Date Received: 02/21/19 12:55

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	531118	02/27/19 09:06	TCN	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	531002	02/27/19 02:43	OH1	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 440-531002/27
Matrix: Water
Analysis Batch: 531002

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/26/19 20:36	1
1,1,1-Trichloroethane	ND		1.0	0.25	ug/L			02/26/19 20:36	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			02/26/19 20:36	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	0.50	ug/L			02/26/19 20:36	1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L			02/26/19 20:36	1
1,1-Dichloroethane	ND		1.0	0.25	ug/L			02/26/19 20:36	1
1,1-Dichloroethene	ND		1.0	0.25	ug/L			02/26/19 20:36	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			02/26/19 20:36	1
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L			02/26/19 20:36	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			02/26/19 20:36	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			02/26/19 20:36	1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			02/26/19 20:36	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			02/26/19 20:36	1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			02/26/19 20:36	1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			02/26/19 20:36	1
1,2-Dichloroethane	ND		1.0	0.25	ug/L			02/26/19 20:36	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			02/26/19 20:36	1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			02/26/19 20:36	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			02/26/19 20:36	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			02/26/19 20:36	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			02/26/19 20:36	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			02/26/19 20:36	1
2-Chlorotoluene	ND		1.0	0.25	ug/L			02/26/19 20:36	1
4-Chlorotoluene	ND		1.0	0.25	ug/L			02/26/19 20:36	1
Acetone	ND		10	10	ug/L			02/26/19 20:36	1
Benzene	ND		0.50	0.25	ug/L			02/26/19 20:36	1
Bromobenzene	ND		1.0	0.25	ug/L			02/26/19 20:36	1
Bromochloromethane	ND		1.0	0.25	ug/L			02/26/19 20:36	1
Bromodichloromethane	ND		1.0	0.25	ug/L			02/26/19 20:36	1
Bromoform	ND		1.0	0.40	ug/L			02/26/19 20:36	1
Bromomethane	ND		1.0	0.25	ug/L			02/26/19 20:36	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			02/26/19 20:36	1
Chlorobenzene	ND		1.0	0.25	ug/L			02/26/19 20:36	1
Chloroethane	ND		1.0	0.40	ug/L			02/26/19 20:36	1
Chloroform	ND		1.0	0.25	ug/L			02/26/19 20:36	1
Chloromethane	ND		1.0	0.25	ug/L			02/26/19 20:36	1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			02/26/19 20:36	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/26/19 20:36	1
Dibromochloromethane	ND		1.0	0.25	ug/L			02/26/19 20:36	1
Dibromomethane	ND		1.0	0.25	ug/L			02/26/19 20:36	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			02/26/19 20:36	1
Ethylbenzene	ND		1.0	0.25	ug/L			02/26/19 20:36	1
Hexachlorobutadiene	ND		1.0	0.25	ug/L			02/26/19 20:36	1
Isopropyl alcohol	ND		250	180	ug/L			02/26/19 20:36	1
Isopropylbenzene	ND		1.0	0.25	ug/L			02/26/19 20:36	1
m,p-Xylene	ND		1.0	0.50	ug/L			02/26/19 20:36	1
Methylene Chloride	ND		5.0	0.88	ug/L			02/26/19 20:36	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			02/26/19 20:36	1

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

Lab Sample ID: MB 440-531002/27
Matrix: Water
Analysis Batch: 531002

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		1.0	0.40	ug/L			02/26/19 20:36	1
n-Butylbenzene	ND		1.0	0.40	ug/L			02/26/19 20:36	1
N-Propylbenzene	ND		1.0	0.25	ug/L			02/26/19 20:36	1
o-Xylene	ND		1.0	0.25	ug/L			02/26/19 20:36	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			02/26/19 20:36	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			02/26/19 20:36	1
Styrene	ND		1.0	0.25	ug/L			02/26/19 20:36	1
tert-Butylbenzene	ND		1.0	0.25	ug/L			02/26/19 20:36	1
Tetrachloroethene	ND		1.0	0.25	ug/L			02/26/19 20:36	1
Toluene	ND		1.0	0.25	ug/L			02/26/19 20:36	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			02/26/19 20:36	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			02/26/19 20:36	1
Trichloroethene	ND		1.0	0.25	ug/L			02/26/19 20:36	1
Trichlorofluoromethane	ND		1.0	0.25	ug/L			02/26/19 20:36	1
Vinyl chloride	ND		0.50	0.25	ug/L			02/26/19 20:36	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*02/26/19 20:36*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*116*		*70 - 130*		*02/26/19 20:36*	*1*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*		*02/26/19 20:36*	*1*
Dibromofluoromethane (Surr)	*111*		*76 - 132*		*02/26/19 20:36*	*1*
Toluene-d8 (Surr)	*101*		*80 - 128*		*02/26/19 20:36*	*1*

Lab Sample ID: LCS 440-531002/1026
Matrix: Water
Analysis Batch: 531002

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Isopropyl alcohol			250	251		ug/L		100	49 - 142		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*110*		*70 - 130*
4-Bromofluorobenzene (Surr)	*97*		*80 - 120*
Dibromofluoromethane (Surr)	*107*		*76 - 132*
Toluene-d8 (Surr)	*100*		*80 - 128*

Lab Sample ID: LCS 440-531002/5
Matrix: Water
Analysis Batch: 531002

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	25.2		ug/L		101	60 - 141		
1,1,1-Trichloroethane			25.0	28.3		ug/L		113	70 - 130		
1,1,2,2-Tetrachloroethane			25.0	18.2		ug/L		73	63 - 130		

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

Lab Sample ID: LCS 440-531002/5
Matrix: Water
Analysis Batch: 531002

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	22.6		ug/L		90	60 - 140
1,1,2-Trichloroethane	25.0	21.0		ug/L		84	70 - 130
1,1-Dichloroethane	25.0	26.4		ug/L		106	64 - 130
1,1-Dichloroethene	25.0	23.8		ug/L		95	70 - 130
1,1-Dichloropropene	25.0	28.2		ug/L		113	70 - 130
1,2,3-Trichlorobenzene	25.0	24.8		ug/L		99	60 - 140
1,2,3-Trichloropropane	25.0	20.4		ug/L		82	63 - 130
1,2,4-Trichlorobenzene	25.0	29.4		ug/L		118	60 - 140
1,2,4-Trimethylbenzene	25.0	25.0		ug/L		100	70 - 135
1,2-Dibromo-3-Chloropropane	25.0	18.7		ug/L		75	52 - 140
1,2-Dibromoethane (EDB)	25.0	21.7		ug/L		87	70 - 130
1,2-Dichlorobenzene	25.0	25.0		ug/L		100	70 - 130
1,2-Dichloroethane	25.0	28.7		ug/L		115	57 - 138
1,2-Dichloropropane	25.0	26.0		ug/L		104	67 - 130
1,3,5-Trimethylbenzene	25.0	24.6		ug/L		98	70 - 136
1,3-Dichlorobenzene	25.0	25.6		ug/L		102	70 - 130
1,3-Dichloropropane	25.0	21.8		ug/L		87	70 - 130
1,4-Dichlorobenzene	25.0	23.6		ug/L		94	70 - 130
2,2-Dichloropropane	25.0	33.8		ug/L		135	68 - 141
2-Chlorotoluene	25.0	24.0		ug/L		96	70 - 130
4-Chlorotoluene	25.0	25.5		ug/L		102	70 - 130
Acetone	25.0	23.9		ug/L		96	10 - 150
Benzene	25.0	26.4		ug/L		105	68 - 130
Bromobenzene	25.0	22.8		ug/L		91	70 - 130
Bromochloromethane	25.0	25.7		ug/L		103	70 - 130
Bromodichloromethane	25.0	28.1		ug/L		112	70 - 132
Bromoform	25.0	24.1		ug/L		97	60 - 148
Bromomethane	25.0	22.2		ug/L		89	64 - 139
Carbon tetrachloride	25.0	28.8		ug/L		115	60 - 150
Chlorobenzene	25.0	24.0		ug/L		96	70 - 130
Chloroethane	25.0	21.8		ug/L		87	64 - 135
Chloroform	25.0	26.7		ug/L		107	70 - 130
Chloromethane	25.0	21.3		ug/L		85	47 - 140
cis-1,2-Dichloroethene	25.0	27.7		ug/L		111	70 - 133
cis-1,3-Dichloropropene	25.0	27.7		ug/L		111	70 - 133
Dibromochloromethane	25.0	25.7		ug/L		103	69 - 145
Dibromomethane	25.0	25.4		ug/L		102	70 - 130
Dichlorodifluoromethane	25.0	21.0		ug/L		84	29 - 150
Ethylbenzene	25.0	26.8		ug/L		107	70 - 130
Hexachlorobutadiene	25.0	28.0		ug/L		112	10 - 150
Isopropylbenzene	25.0	26.2		ug/L		105	70 - 136
m,p-Xylene	25.0	24.9		ug/L		100	70 - 130
Methylene Chloride	25.0	22.8		ug/L		91	52 - 130
Methyl-t-Butyl Ether (MTBE)	25.0	26.2		ug/L		105	63 - 131
Naphthalene	25.0	20.9		ug/L		84	60 - 140
n-Butylbenzene	25.0	25.5		ug/L		102	65 - 150
N-Propylbenzene	25.0	25.4		ug/L		101	67 - 139

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

Lab Sample ID: LCS 440-531002/5
Matrix: Water
Analysis Batch: 531002

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
o-Xylene	25.0	24.6		ug/L		98	70 - 130
p-Isopropyltoluene	25.0	27.4		ug/L		109	70 - 132
sec-Butylbenzene	25.0	23.3		ug/L		93	70 - 138
Styrene	25.0	23.7		ug/L		95	70 - 134
tert-Butylbenzene	25.0	23.9		ug/L		96	70 - 130
Tetrachloroethene	25.0	24.9		ug/L		100	70 - 130
Toluene	25.0	26.2		ug/L		105	70 - 130
trans-1,2-Dichloroethene	25.0	27.3		ug/L		109	70 - 130
trans-1,3-Dichloropropene	25.0	24.3		ug/L		97	70 - 132
Trichloroethene	25.0	27.9		ug/L		112	70 - 130
Trichlorofluoromethane	25.0	23.3		ug/L		93	60 - 150
Vinyl chloride	25.0	21.1		ug/L		85	59 - 133

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*108*		*70 - 130*
4-Bromofluorobenzene (Surr)	*100*		*80 - 120*
Dibromofluoromethane (Surr)	*108*		*76 - 132*
Toluene-d8 (Surr)	*101*		*80 - 128*

Lab Sample ID: 440-234219-A-14 MS
Matrix: Water
Analysis Batch: 531002

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
1,1,1,2-Tetrachloroethane	ND		25.0	25.1		ug/L		100	60 - 149
1,1,1-Trichloroethane	ND		25.0	28.2		ug/L		113	70 - 130
1,1,2,2-Tetrachloroethane	ND		25.0	20.9		ug/L		84	63 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		25.0	22.0		ug/L		88	60 - 140
1,1,2-Trichloroethane	ND		25.0	21.4		ug/L		86	70 - 130
1,1-Dichloroethane	ND		25.0	24.7		ug/L		99	65 - 130
1,1-Dichloroethene	ND		25.0	23.3		ug/L		93	70 - 130
1,1-Dichloropropene	ND		25.0	29.3		ug/L		117	64 - 130
1,2,3-Trichlorobenzene	0.65	J	25.0	26.5		ug/L		103	60 - 140
1,2,3-Trichloropropane	ND		25.0	22.2		ug/L		89	60 - 130
1,2,4-Trichlorobenzene	ND		25.0	30.9		ug/L		123	60 - 140
1,2,4-Trimethylbenzene	ND		25.0	24.6		ug/L		98	70 - 130
1,2-Dibromo-3-Chloropropane	ND		25.0	23.9		ug/L		96	48 - 140
1,2-Dibromoethane (EDB)	ND		25.0	22.5		ug/L		90	70 - 131
1,2-Dichlorobenzene	ND		25.0	25.7		ug/L		103	70 - 130
1,2-Dichloroethane	ND		25.0	28.4		ug/L		113	56 - 146
1,2-Dichloropropane	ND		25.0	25.4		ug/L		102	69 - 130
1,3,5-Trimethylbenzene	ND		25.0	24.5		ug/L		98	70 - 130
1,3-Dichlorobenzene	ND		25.0	25.5		ug/L		102	70 - 130
1,3-Dichloropropane	ND		25.0	21.4		ug/L		85	70 - 130
1,4-Dichlorobenzene	ND		25.0	23.5		ug/L		94	70 - 130
2,2-Dichloropropane	ND	F1	25.0	33.9		ug/L		135	69 - 138
2-Chlorotoluene	ND		25.0	23.6		ug/L		95	70 - 130

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

Lab Sample ID: 440-234219-A-14 MS
Matrix: Water
Analysis Batch: 531002

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
4-Chlorotoluene	ND		25.0	25.0		ug/L		100	70 - 130
Acetone	ND	F1	25.0	33.9		ug/L		136	10 - 150
Benzene	ND		25.0	25.8		ug/L		103	66 - 130
Bromobenzene	ND		25.0	22.0		ug/L		88	70 - 130
Bromochloromethane	ND		25.0	26.0		ug/L		104	70 - 130
Bromodichloromethane	ND		25.0	27.7		ug/L		111	70 - 138
Bromoform	ND		25.0	25.5		ug/L		102	59 - 150
Bromomethane	ND		25.0	19.4		ug/L		78	62 - 131
Carbon tetrachloride	ND		25.0	28.6		ug/L		114	60 - 150
Chlorobenzene	ND		25.0	23.2		ug/L		93	70 - 130
Chloroethane	ND		25.0	19.8		ug/L		79	68 - 130
Chloroform	ND		25.0	25.9		ug/L		103	70 - 130
Chloromethane	ND		25.0	17.4		ug/L		70	39 - 144
cis-1,2-Dichloroethene	51		25.0	77.7		ug/L		107	70 - 130
cis-1,3-Dichloropropene	ND		25.0	26.0		ug/L		104	70 - 133
Dibromochloromethane	ND		25.0	25.2		ug/L		101	70 - 148
Dibromomethane	ND		25.0	25.6		ug/L		102	70 - 130
Dichlorodifluoromethane	ND		25.0	15.4		ug/L		62	25 - 142
Ethylbenzene	ND		25.0	26.6		ug/L		107	70 - 130
Hexachlorobutadiene	0.31	J	25.0	29.0		ug/L		115	10 - 150
Isopropyl alcohol	ND		250	300		ug/L		120	46 - 142
Isopropylbenzene	ND		25.0	25.8		ug/L		103	70 - 132
m,p-Xylene	ND		25.0	24.2		ug/L		97	70 - 133
Methylene Chloride	ND		25.0	21.9		ug/L		88	52 - 130
Methyl-t-Butyl Ether (MTBE)	ND		25.0	26.4		ug/L		106	70 - 130
Naphthalene	ND		25.0	24.1		ug/L		96	60 - 140
n-Butylbenzene	ND		25.0	26.0		ug/L		104	61 - 149
N-Propylbenzene	ND		25.0	25.4		ug/L		102	66 - 135
o-Xylene	ND		25.0	24.5		ug/L		98	70 - 133
p-Isopropyltoluene	ND		25.0	27.4		ug/L		110	70 - 130
sec-Butylbenzene	ND		25.0	23.6		ug/L		94	67 - 134
Styrene	ND		25.0	22.7		ug/L		91	29 - 150
tert-Butylbenzene	0.29	J	25.0	23.9		ug/L		94	70 - 130
Tetrachloroethene	ND		25.0	24.7		ug/L		99	70 - 137
Toluene	ND		25.0	25.4		ug/L		102	70 - 130
trans-1,2-Dichloroethene	4.5		25.0	31.3		ug/L		107	70 - 130
trans-1,3-Dichloropropene	ND		25.0	23.4		ug/L		94	70 - 138
Trichloroethene	0.59	J	25.0	28.0		ug/L		110	70 - 130
Trichlorofluoromethane	ND		25.0	21.5		ug/L		86	60 - 150
Vinyl chloride	20		25.0	35.6		ug/L		64	50 - 137

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*106*		*70 - 130*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*
Dibromofluoromethane (Surr)	*106*		*76 - 132*
Toluene-d8 (Surr)	*96*		*80 - 128*

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

Lab Sample ID: 440-234219-A-14 MSD
Matrix: Water
Analysis Batch: 531002

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
1,1,1,2-Tetrachloroethane	ND		25.0	24.8		ug/L		99	60 - 149	1	20
1,1,1-Trichloroethane	ND		25.0	30.1		ug/L		120	70 - 130	6	20
1,1,2,2-Tetrachloroethane	ND		25.0	22.1		ug/L		89	63 - 130	6	30
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		25.0	22.4		ug/L		90	60 - 140	2	20
1,1,2-Trichloroethane	ND		25.0	21.7		ug/L		87	70 - 130	1	25
1,1-Dichloroethane	ND		25.0	26.5		ug/L		106	65 - 130	7	20
1,1-Dichloroethene	ND		25.0	24.9		ug/L		100	70 - 130	6	20
1,1-Dichloropropene	ND		25.0	31.6		ug/L		126	64 - 130	7	20
1,2,3-Trichlorobenzene	0.65	J	25.0	27.4		ug/L		107	60 - 140	4	20
1,2,3-Trichloropropane	ND		25.0	24.3		ug/L		97	60 - 130	9	30
1,2,4-Trichlorobenzene	ND		25.0	31.9		ug/L		127	60 - 140	3	20
1,2,4-Trimethylbenzene	ND		25.0	25.8		ug/L		103	70 - 130	5	25
1,2-Dibromo-3-Chloropropane	ND		25.0	25.8		ug/L		103	48 - 140	8	30
1,2-Dibromoethane (EDB)	ND		25.0	23.8		ug/L		95	70 - 131	5	25
1,2-Dichlorobenzene	ND		25.0	26.5		ug/L		106	70 - 130	3	20
1,2-Dichloroethane	ND		25.0	31.7		ug/L		127	56 - 146	11	20
1,2-Dichloropropane	ND		25.0	27.8		ug/L		111	69 - 130	9	20
1,3,5-Trimethylbenzene	ND		25.0	25.4		ug/L		102	70 - 130	4	20
1,3-Dichlorobenzene	ND		25.0	26.3		ug/L		105	70 - 130	3	20
1,3-Dichloropropane	ND		25.0	22.7		ug/L		91	70 - 130	6	25
1,4-Dichlorobenzene	ND		25.0	24.5		ug/L		98	70 - 130	4	20
2,2-Dichloropropane	ND	F1	25.0	34.8	F1	ug/L		139	69 - 138	3	25
2-Chlorotoluene	ND		25.0	24.5		ug/L		98	70 - 130	4	20
4-Chlorotoluene	ND		25.0	26.4		ug/L		106	70 - 130	6	20
Acetone	ND	F1	25.0	40.2	F1	ug/L		161	10 - 150	17	35
Benzene	ND		25.0	28.1		ug/L		112	66 - 130	9	20
Bromobenzene	ND		25.0	23.6		ug/L		94	70 - 130	7	20
Bromochloromethane	ND		25.0	27.5		ug/L		110	70 - 130	6	25
Bromodichloromethane	ND		25.0	30.0		ug/L		120	70 - 138	8	20
Bromoform	ND		25.0	26.7		ug/L		107	59 - 150	5	25
Bromomethane	ND		25.0	20.9		ug/L		83	62 - 131	7	25
Carbon tetrachloride	ND		25.0	30.0		ug/L		120	60 - 150	5	25
Chlorobenzene	ND		25.0	24.4		ug/L		98	70 - 130	5	20
Chloroethane	ND		25.0	20.9		ug/L		84	68 - 130	5	25
Chloroform	ND		25.0	28.1		ug/L		112	70 - 130	8	20
Chloromethane	ND		25.0	19.0		ug/L		76	39 - 144	9	25
cis-1,2-Dichloroethene	51		25.0	78.2		ug/L		109	70 - 130	1	20
cis-1,3-Dichloropropene	ND		25.0	27.9		ug/L		112	70 - 133	7	20
Dibromochloromethane	ND		25.0	26.6		ug/L		107	70 - 148	5	25
Dibromomethane	ND		25.0	28.0		ug/L		112	70 - 130	9	25
Dichlorodifluoromethane	ND		25.0	16.4		ug/L		65	25 - 142	6	30
Ethylbenzene	ND		25.0	27.0		ug/L		108	70 - 130	1	20
Hexachlorobutadiene	0.31	J	25.0	29.9		ug/L		118	10 - 150	3	20
Isopropyl alcohol	ND		250	289		ug/L		116	46 - 142	4	40
Isopropylbenzene	ND		25.0	25.9		ug/L		104	70 - 132	0	20
m,p-Xylene	ND		25.0	24.9		ug/L		100	70 - 133	3	25
Methylene Chloride	ND		25.0	24.0		ug/L		96	52 - 130	9	20

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

Lab Sample ID: 440-234219-A-14 MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 531002

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Methyl-t-Butyl Ether (MTBE)	ND		25.0	29.3		ug/L		117	70 - 130	10	25
Naphthalene	ND		25.0	25.2		ug/L		101	60 - 140	4	30
n-Butylbenzene	ND		25.0	26.6		ug/L		106	61 - 149	2	20
N-Propylbenzene	ND		25.0	26.9		ug/L		107	66 - 135	6	20
o-Xylene	ND		25.0	24.4		ug/L		98	70 - 133	0	20
p-Isopropyltoluene	ND		25.0	28.7		ug/L		115	70 - 130	5	20
sec-Butylbenzene	ND		25.0	24.3		ug/L		97	67 - 134	3	20
Styrene	ND		25.0	23.3		ug/L		93	29 - 150	3	35
tert-Butylbenzene	0.29	J	25.0	25.2		ug/L		99	70 - 130	5	20
Tetrachloroethene	ND		25.0	25.5		ug/L		102	70 - 137	3	20
Toluene	ND		25.0	25.9		ug/L		104	70 - 130	2	20
trans-1,2-Dichloroethene	4.5		25.0	32.3		ug/L		111	70 - 130	3	20
trans-1,3-Dichloropropene	ND		25.0	25.4		ug/L		101	70 - 138	8	25
Trichloroethene	0.59	J	25.0	31.0		ug/L		122	70 - 130	10	20
Trichlorofluoromethane	ND		25.0	23.2		ug/L		93	60 - 150	8	25
Vinyl chloride	20		25.0	36.7		ug/L		69	50 - 137	3	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*114*		*70 - 130*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*
Dibromofluoromethane (Surr)	*108*		*76 - 132*
Toluene-d8 (Surr)	*91*		*80 - 128*

Lab Sample ID: MB 440-531118/4 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 531118

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		10	10	ug/L			02/27/19 08:13	1
Isopropyl alcohol	ND		250	180	ug/L			02/27/19 08:13	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*					*02/27/19 08:13*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*109*		*70 - 130*		*02/27/19 08:13*	*1*
4-Bromofluorobenzene (Surr)	*111*		*80 - 120*		*02/27/19 08:13*	*1*
Dibromofluoromethane (Surr)	*111*		*76 - 132*		*02/27/19 08:13*	*1*
Toluene-d8 (Surr)	*107*		*80 - 128*		*02/27/19 08:13*	*1*

Lab Sample ID: LCS 440-531118/1003 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 531118

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Isopropyl alcohol	250	223	J	ug/L		89	49 - 142

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

Lab Sample ID: LCS 440-531118/1003
Matrix: Water
Analysis Batch: 531118

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

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*111*		*70 - 130*
4-Bromofluorobenzene (Surr)	*108*		*80 - 120*
Dibromofluoromethane (Surr)	*112*		*76 - 132*
Toluene-d8 (Surr)	*107*		*80 - 128*

Lab Sample ID: LCS 440-531118/5
Matrix: Water
Analysis Batch: 531118

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	26.0		ug/L		104	10 - 150

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*105*		*70 - 130*
4-Bromofluorobenzene (Surr)	*111*		*80 - 120*
Dibromofluoromethane (Surr)	*109*		*76 - 132*
Toluene-d8 (Surr)	*102*		*80 - 128*

Lab Sample ID: 440-233747-B-2 MS
Matrix: Water
Analysis Batch: 531118

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	ND		25.0	26.0		ug/L		104	10 - 150
Isopropyl alcohol	ND		250	238	J	ug/L		95	46 - 142

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*106*		*70 - 130*
4-Bromofluorobenzene (Surr)	*106*		*80 - 120*
Dibromofluoromethane (Surr)	*110*		*76 - 132*
Toluene-d8 (Surr)	*99*		*80 - 128*

Lab Sample ID: 440-233747-B-2 MSD
Matrix: Water
Analysis Batch: 531118

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	ND		25.0	26.8		ug/L		107	10 - 150	3	35
Isopropyl alcohol	ND		250	234	J	ug/L		93	46 - 142	2	40

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*104*		*70 - 130*
4-Bromofluorobenzene (Surr)	*108*		*80 - 120*
Dibromofluoromethane (Surr)	*109*		*76 - 132*
Toluene-d8 (Surr)	*103*		*80 - 128*

QC Sample Results

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-GWCS Monthly

TestAmerica Job ID: 440-234227-1
SDG: Omega Chemical

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

Lab Sample ID: MB 440-530523/1-A
Matrix: Water
Analysis Batch: 530603

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 530523

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.50	0.10	ug/L		02/24/19 12:49	02/25/19 16:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*50*		*27 - 120*	*02/24/19 12:49*	*02/25/19 16:04*	*1*

Lab Sample ID: LCS 440-530523/3-A
Matrix: Water
Analysis Batch: 530603

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 530523

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,4-Dioxane			2.00	1.27		ug/L		63	36 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,4-Dioxane-d8 (Surr)	*60*		*27 - 120*

Lab Sample ID: LCSD 440-530523/4-A
Matrix: Water
Analysis Batch: 530603

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 530523

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dioxane			2.00	1.17		ug/L		59	36 - 120	8	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,4-Dioxane-d8 (Surr)	*56*		*27 - 120*

QC Association Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-GWCS Monthly

TestAmerica Job ID: 440-234227-1
SDG: Omega Chemical

GC/MS VOA

Analysis Batch: 531002

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-234227-1	OC_SP220B_EFF_022019	Total/NA	Water	8260B	
440-234227-2	OC_SP210_INF_022019	Total/NA	Water	8260B	
440-234227-2 - DL	OC_SP210_INF_022019	Total/NA	Water	8260B	
440-234227-3	OC_TB_022019	Total/NA	Water	8260B	
MB 440-531002/27	Method Blank	Total/NA	Water	8260B	
LCS 440-531002/1026	Lab Control Sample	Total/NA	Water	8260B	
LCS 440-531002/5	Lab Control Sample	Total/NA	Water	8260B	
440-234219-A-14 MS	Matrix Spike	Total/NA	Water	8260B	
440-234219-A-14 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

Analysis Batch: 531118

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-234227-3 - RA	OC_TB_022019	Total/NA	Water	8260B	
MB 440-531118/4	Method Blank	Total/NA	Water	8260B	
LCS 440-531118/1003	Lab Control Sample	Total/NA	Water	8260B	
LCS 440-531118/5	Lab Control Sample	Total/NA	Water	8260B	
440-233747-B-2 MS	Matrix Spike	Total/NA	Water	8260B	
440-233747-B-2 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 530523

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-234227-1	OC_SP220B_EFF_022019	Total/NA	Water	3520C	
MB 440-530523/1-A	Method Blank	Total/NA	Water	3520C	
LCS 440-530523/3-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 440-530523/4-A	Lab Control Sample Dup	Total/NA	Water	3520C	

Analysis Batch: 530603

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-234227-1	OC_SP220B_EFF_022019	Total/NA	Water	8270C SIM	530523
MB 440-530523/1-A	Method Blank	Total/NA	Water	8270C SIM	530523
LCS 440-530523/3-A	Lab Control Sample	Total/NA	Water	8270C SIM	530523
LCSD 440-530523/4-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM	530523

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
F1	MS and/or MSD Recovery is outside acceptance limits.

GC/MS VOA TICs

Qualifier	Qualifier Description
J	Indicates an Estimated Value for TICs
T	Result is a tentatively identified compound (TIC) and an estimated value.

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: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical-GWCS Monthly

TestAmerica Job ID: 440-234227-1
SDG: Omega Chemical

Laboratory: TestAmerica Irvine

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
California	State Program	9	CA ELAP 2706	06-30-19

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8260B		Water	1,1,2-Trichloro-1,2,2-trifluoroethane
8260B		Water	m,p-Xylene
8270C SIM	3520C	Water	1,4-Dioxane

TestAmerica Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614
phone 949.261 1022 fax

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.

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

Client Contact	Project Manager: Trent Henderson	Site Contact: Khalid Azhar	Date: 2/20/2019	COC No:
De Maximis - Jaime Dinello	Tel/Fax: (949) 453-1045 / (949) 453-1047	Lab Contact: Danielle Roberts	Carrier:	1 of 1 COCs
1322 Scott St., Suite 104	Analysis Turnaround Time			Sampler:
San Diego, CA 92106	☐CALENDAR DAYS ☐WORKING DAYS			For Lab Use Only:
(562) 756-8149	TAT if different from Below STD			Walk-in Client:
	☐ 2 weeks			Lab Sampling:
Project Name: Omega Chemical - GWCS Monthly	☐ 1 week			
Site: Omega Chemical	☐ 2 days			Job / SDG No.:
P O #:	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	EPA 8260B - VOCs + Freons	EPA 8270C - 1,4-Dioxane	Sample Specific Notes:
OC_SP220B_EFF_022019	2/20/2019	1320	Grab	GW	5			x	x	
OC_SP210_INF_022019	2/20/2019	1325	Grab	GW	3			x		
OC_TB_022019	2/20/2019	1300		H2O	2			x		

2/21 1119
[illegible]

440-234227 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: 4.6 Corr'd: 4.9 | Therm ID No.: IR-9

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	JHA	2/21/19 1150	[signature]	TA-IRV	2/21/19 11:50
[signature]	TA-IRV 1255	2/21/19			
			Received in Laboratory by: [signature]	TA IRV	2/21/19 1255

Login Sample Receipt Checklist

Client: Jacob & Hefner Associates P.C.

Job Number: 440-234227-1
SDG Number: Omega Chemical

Login Number: 234227
List Number: 1
Creator: Avila, Stephanie 1

List Source: TestAmerica Irvine

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

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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: 440-236408-1
TestAmerica Sample Delivery Group: Omega Chemical
Client Project/Site: Omega Chemical - GWCS Monthly

For:
Jacob & Hefner Associates P.C.
15375 Barranca Parkway, J-101
Irvine, California 92618

Attn: Trent Henderson

Authorized for release by:
3/29/2019 1:29:24 PM

Danielle Roberts, Senior Project Manager
(949)261-1022
danielle.roberts@testamericainc.com

LINKS

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

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

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

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Sample Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical - GWCS Monthly

TestAmerica Job ID: 440-236408-1
SDG: Omega Chemical

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-236408-1	OC_SP220B_EFF_031319	Water	03/13/19 09:20	03/15/19 16:01
440-236408-2	OC_SP210_INF_031319	Water	03/13/19 09:28	03/15/19 16:01
440-236408-3	OC_TB_031319	Water	03/13/19 09:00	03/15/19 16:01

Job ID: 440-236408-1

Laboratory: TestAmerica Irvine

Narrative

Job Narrative
440-236408-1

Comments
No additional comments.

Receipt
The samples were received on 3/15/2019 4:01 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.5º C.

Receipt Exceptions

The Field Sampler was not listed on the Chain of Custody.

GC/MS VOA

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.

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.

Detection Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical - GWCS Monthly

TestAmerica Job ID: 440-236408-1
SDG: Omega Chemical

Client Sample ID: OC_SP220B_EFF_031319 — Lab Sample ID: 440-236408-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	9.7		0.49	0.098	ug/L	1		8270C SIM	Total/NA

Client Sample ID: OC_SP210_INF_031319 — Lab Sample ID: 440-236408-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
1,1,1-Trichloroethane	0.66	J	2.0	0.50	ug/L	2		8260B	Total/NA
1,1,2-Trichloro-1,2,2-trifluoroethane	150		10	1.0	ug/L	2		8260B	Total/NA
1,1-Dichloroethene	45		2.0	0.50	ug/L	2		8260B	Total/NA
1,2-Dichloroethane	2.5		2.0	0.50	ug/L	2		8260B	Total/NA
Chloroform	16		2.0	0.50	ug/L	2		8260B	Total/NA
Trichloroethene	40		2.0	0.50	ug/L	2		8260B	Total/NA
Trichlorofluoromethane	23		2.0	0.50	ug/L	2		8260B	Total/NA
Tetrachloroethene - DL	340		10	2.5	ug/L	10		8260B	Total/NA

Client Sample ID: OC_TB_031319 — Lab Sample ID: 440-236408-3

No Detections.

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical - GWCS Monthly

TestAmerica Job ID: 440-236408-1
SDG: Omega Chemical

Client Sample ID: OC_SP220B_EFF_031319

Lab Sample ID: 440-236408-1

Date Collected: 03/13/19 09:20
Matrix: Water
Date Received: 03/15/19 16:01

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			03/26/19 10:13	1
1,1,1-Trichloroethane	ND		1.0	0.25	ug/L			03/26/19 10:13	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			03/26/19 10:13	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	0.50	ug/L			03/26/19 10:13	1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L			03/26/19 10:13	1
1,1-Dichloroethane	ND		1.0	0.25	ug/L			03/26/19 10:13	1
1,1-Dichloroethene	ND		1.0	0.25	ug/L			03/26/19 10:13	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			03/26/19 10:13	1
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L			03/26/19 10:13	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			03/26/19 10:13	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			03/26/19 10:13	1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			03/26/19 10:13	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			03/26/19 10:13	1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			03/26/19 10:13	1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			03/26/19 10:13	1
1,2-Dichloroethane	ND		1.0	0.25	ug/L			03/26/19 10:13	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			03/26/19 10:13	1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			03/26/19 10:13	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			03/26/19 10:13	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			03/26/19 10:13	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			03/26/19 10:13	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			03/26/19 10:13	1
2-Chlorotoluene	ND		1.0	0.25	ug/L			03/26/19 10:13	1
4-Chlorotoluene	ND		1.0	0.25	ug/L			03/26/19 10:13	1
Acetone	ND	F1	10	10	ug/L			03/26/19 10:13	1
Benzene	ND		0.50	0.25	ug/L			03/26/19 10:13	1
Bromobenzene	ND		1.0	0.25	ug/L			03/26/19 10:13	1
Bromochloromethane	ND		1.0	0.25	ug/L			03/26/19 10:13	1
Bromodichloromethane	ND		1.0	0.25	ug/L			03/26/19 10:13	1
Bromoform	ND		1.0	0.40	ug/L			03/26/19 10:13	1
Bromomethane	ND		1.0	0.25	ug/L			03/26/19 10:13	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			03/26/19 10:13	1
Chlorobenzene	ND		1.0	0.25	ug/L			03/26/19 10:13	1
Chloroethane	ND		1.0	0.40	ug/L			03/26/19 10:13	1
Chloroform	ND		1.0	0.25	ug/L			03/26/19 10:13	1
Chloromethane	ND		1.0	0.25	ug/L			03/26/19 10:13	1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			03/26/19 10:13	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/26/19 10:13	1
Dibromochloromethane	ND		1.0	0.25	ug/L			03/26/19 10:13	1
Dibromomethane	ND		1.0	0.25	ug/L			03/26/19 10:13	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			03/26/19 10:13	1
Ethylbenzene	ND		1.0	0.25	ug/L			03/26/19 10:13	1
Hexachlorobutadiene	ND		1.0	0.25	ug/L			03/26/19 10:13	1
Isopropyl alcohol	ND		250	180	ug/L			03/26/19 10:13	1
Isopropylbenzene	ND		1.0	0.25	ug/L			03/26/19 10:13	1
m,p-Xylene	ND		1.0	0.50	ug/L			03/26/19 10:13	1
Methylene Chloride	ND		5.0	0.88	ug/L			03/26/19 10:13	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			03/26/19 10:13	1
Naphthalene	ND		1.0	0.40	ug/L			03/26/19 10:13	1

Client Sample ID: OC_SP220B_EFF_031319

Lab Sample ID: 440-236408-1
Date Collected: 03/13/19 09:20
Matrix: Water
Date Received: 03/15/19 16:01

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
n-Butylbenzene	ND		1.0	0.40	ug/L			03/26/19 10:13	1
N-Propylbenzene	ND		1.0	0.25	ug/L			03/26/19 10:13	1
o-Xylene	ND		1.0	0.25	ug/L			03/26/19 10:13	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			03/26/19 10:13	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			03/26/19 10:13	1
Styrene	ND		1.0	0.25	ug/L			03/26/19 10:13	1
tert-Butylbenzene	ND		1.0	0.25	ug/L			03/26/19 10:13	1
Tetrachloroethene	ND		1.0	0.25	ug/L			03/26/19 10:13	1
Toluene	ND		1.0	0.25	ug/L			03/26/19 10:13	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			03/26/19 10:13	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/26/19 10:13	1
Trichloroethene	ND		1.0	0.25	ug/L			03/26/19 10:13	1
Trichlorofluoromethane	ND		1.0	0.25	ug/L			03/26/19 10:13	1
Vinyl chloride	ND		0.50	0.25	ug/L			03/26/19 10:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*87*		*70 - 130*		*03/26/19 10:13*	*1*
4-Bromofluorobenzene (Surr)	*93*		*80 - 120*		*03/26/19 10:13*	*1*
Dibromofluoromethane (Surr)	*101*		*76 - 132*		*03/26/19 10:13*	*1*
Toluene-d8 (Surr)	*97*		*80 - 128*		*03/26/19 10:13*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**9.7**		0.49	0.098	ug/L		03/17/19 14:46	03/18/19 16:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*46*		*27 - 120*	*03/17/19 14:46*	*03/18/19 16:36*	*1*

Client Sample ID: OC_SP210_INF_031319

Lab Sample ID: 440-236408-2
Date Collected: 03/13/19 09:28
Matrix: Water
Date Received: 03/15/19 16:01

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		2.0	0.50	ug/L			03/26/19 12:40	2
1,1,1-Trichloroethane	**0.66**	**J**	2.0	0.50	ug/L			03/26/19 12:40	2
1,1,2,2-Tetrachloroethane	ND		2.0	0.50	ug/L			03/26/19 12:40	2
1,1,2-Trichloro-1,2,2-trifluoroethane	**150**		10	1.0	ug/L			03/26/19 12:40	2
1,1,2-Trichloroethane	ND		2.0	0.50	ug/L			03/26/19 12:40	2
1,1-Dichloroethane	ND		2.0	0.50	ug/L			03/26/19 12:40	2
1,1-Dichloroethene	**45**		2.0	0.50	ug/L			03/26/19 12:40	2
1,1-Dichloropropene	ND		2.0	0.50	ug/L			03/26/19 12:40	2
1,2,3-Trichlorobenzene	ND		2.0	0.80	ug/L			03/26/19 12:40	2
1,2,3-Trichloropropane	ND		2.0	0.80	ug/L			03/26/19 12:40	2
1,2,4-Trichlorobenzene	ND		2.0	0.80	ug/L			03/26/19 12:40	2
1,2,4-Trimethylbenzene	ND		2.0	0.50	ug/L			03/26/19 12:40	2
1,2-Dibromo-3-Chloropropane	ND		10	1.0	ug/L			03/26/19 12:40	2
1,2-Dibromoethane (EDB)	ND		2.0	0.50	ug/L			03/26/19 12:40	2
1,2-Dichlorobenzene	ND		2.0	0.50	ug/L			03/26/19 12:40	2
1,2-Dichloroethane	**2.5**		2.0	0.50	ug/L			03/26/19 12:40	2

Client Sample ID: OC_SP210_INF_031319

Lab Sample ID: 440-236408-2

Date Collected: 03/13/19 09:28
Matrix: Water
Date Received: 03/15/19 16:01

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichloropropane	ND		2.0	0.50	ug/L			03/26/19 12:40	2
1,3,5-Trimethylbenzene	ND		2.0	0.50	ug/L			03/26/19 12:40	2
1,3-Dichlorobenzene	ND		2.0	0.50	ug/L			03/26/19 12:40	2
1,3-Dichloropropane	ND		2.0	0.50	ug/L			03/26/19 12:40	2
1,4-Dichlorobenzene	ND		2.0	0.50	ug/L			03/26/19 12:40	2
2,2-Dichloropropane	ND		2.0	0.80	ug/L			03/26/19 12:40	2
2-Chlorotoluene	ND		2.0	0.50	ug/L			03/26/19 12:40	2
4-Chlorotoluene	ND		2.0	0.50	ug/L			03/26/19 12:40	2
Acetone	ND		20	20	ug/L			03/26/19 12:40	2
Benzene	ND		1.0	0.50	ug/L			03/26/19 12:40	2
Bromobenzene	ND		2.0	0.50	ug/L			03/26/19 12:40	2
Bromochloromethane	ND		2.0	0.50	ug/L			03/26/19 12:40	2
Bromodichloromethane	ND		2.0	0.50	ug/L			03/26/19 12:40	2
Bromoform	ND		2.0	0.80	ug/L			03/26/19 12:40	2
Bromomethane	ND		2.0	0.50	ug/L			03/26/19 12:40	2
Carbon tetrachloride	ND		1.0	0.50	ug/L			03/26/19 12:40	2
Chlorobenzene	ND		2.0	0.50	ug/L			03/26/19 12:40	2
Chloroethane	ND		2.0	0.80	ug/L			03/26/19 12:40	2
Chloroform	**16**		2.0	0.50	ug/L			03/26/19 12:40	2
Chloromethane	ND		2.0	0.50	ug/L			03/26/19 12:40	2
cis-1,2-Dichloroethene	ND		2.0	0.50	ug/L			03/26/19 12:40	2
cis-1,3-Dichloropropene	ND		1.0	0.50	ug/L			03/26/19 12:40	2
Dibromochloromethane	ND		2.0	0.50	ug/L			03/26/19 12:40	2
Dibromomethane	ND		2.0	0.50	ug/L			03/26/19 12:40	2
Dichlorodifluoromethane	ND		2.0	0.80	ug/L			03/26/19 12:40	2
Ethylbenzene	ND		2.0	0.50	ug/L			03/26/19 12:40	2
Hexachlorobutadiene	ND		2.0	0.50	ug/L			03/26/19 12:40	2
Isopropyl alcohol	ND		500	350	ug/L			03/26/19 12:40	2
Isopropylbenzene	ND		2.0	0.50	ug/L			03/26/19 12:40	2
m,p-Xylene	ND		2.0	1.0	ug/L			03/26/19 12:40	2
Methylene Chloride	ND		10	1.8	ug/L			03/26/19 12:40	2
Methyl-t-Butyl Ether (MTBE)	ND		2.0	0.50	ug/L			03/26/19 12:40	2
Naphthalene	ND		2.0	0.80	ug/L			03/26/19 12:40	2
n-Butylbenzene	ND		2.0	0.80	ug/L			03/26/19 12:40	2
N-Propylbenzene	ND		2.0	0.50	ug/L			03/26/19 12:40	2
o-Xylene	ND		2.0	0.50	ug/L			03/26/19 12:40	2
p-Isopropyltoluene	ND		2.0	0.50	ug/L			03/26/19 12:40	2
sec-Butylbenzene	ND		2.0	0.50	ug/L			03/26/19 12:40	2
Styrene	ND		2.0	0.50	ug/L			03/26/19 12:40	2
tert-Butylbenzene	ND		2.0	0.50	ug/L			03/26/19 12:40	2
Toluene	ND		2.0	0.50	ug/L			03/26/19 12:40	2
trans-1,2-Dichloroethene	ND		2.0	0.50	ug/L			03/26/19 12:40	2
trans-1,3-Dichloropropene	ND		1.0	0.50	ug/L			03/26/19 12:40	2
Trichloroethene	**40**		2.0	0.50	ug/L			03/26/19 12:40	2
Trichlorofluoromethane	**23**		2.0	0.50	ug/L			03/26/19 12:40	2
Vinyl chloride	ND		1.0	0.50	ug/L			03/26/19 12:40	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*89*		*70 - 130*		*03/26/19 12:40*	*2*
4-Bromofluorobenzene (Surr)	*88*		*80 - 120*		*03/26/19 12:40*	*2*

Client Sample ID: OC_SP210_INF_031319

Lab Sample ID: 440-236408-2
Date Collected: 03/13/19 09:28
Matrix: Water
Date Received: 03/15/19 16:01

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

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane (Surr)	*102*		*76 - 132*		*03/26/19 12:40*	*2*
Toluene-d8 (Surr)	*95*		*80 - 128*		*03/26/19 12:40*	*2*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Tetrachloroethene	**340**		10	2.5	ug/L			03/26/19 13:05	10

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*86*		*70 - 130*		*03/26/19 13:05*	*10*
4-Bromofluorobenzene (Surr)	*89*		*80 - 120*		*03/26/19 13:05*	*10*
Dibromofluoromethane (Surr)	*101*		*76 - 132*		*03/26/19 13:05*	*10*
Toluene-d8 (Surr)	*95*		*80 - 128*		*03/26/19 13:05*	*10*

Client Sample ID: OC_TB_031319

Lab Sample ID: 440-236408-3
Date Collected: 03/13/19 09:00
Matrix: Water
Date Received: 03/15/19 16:01

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			03/26/19 13:29	1
1,1,1-Trichloroethane	ND		1.0	0.25	ug/L			03/26/19 13:29	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			03/26/19 13:29	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	0.50	ug/L			03/26/19 13:29	1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L			03/26/19 13:29	1
1,1-Dichloroethane	ND		1.0	0.25	ug/L			03/26/19 13:29	1
1,1-Dichloroethene	ND		1.0	0.25	ug/L			03/26/19 13:29	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			03/26/19 13:29	1
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L			03/26/19 13:29	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			03/26/19 13:29	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			03/26/19 13:29	1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			03/26/19 13:29	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			03/26/19 13:29	1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			03/26/19 13:29	1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			03/26/19 13:29	1
1,2-Dichloroethane	ND		1.0	0.25	ug/L			03/26/19 13:29	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			03/26/19 13:29	1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			03/26/19 13:29	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			03/26/19 13:29	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			03/26/19 13:29	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			03/26/19 13:29	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			03/26/19 13:29	1
2-Chlorotoluene	ND		1.0	0.25	ug/L			03/26/19 13:29	1
4-Chlorotoluene	ND		1.0	0.25	ug/L			03/26/19 13:29	1
Acetone	ND		10	10	ug/L			03/26/19 13:29	1
Benzene	ND		0.50	0.25	ug/L			03/26/19 13:29	1
Bromobenzene	ND		1.0	0.25	ug/L			03/26/19 13:29	1
Bromochloromethane	ND		1.0	0.25	ug/L			03/26/19 13:29	1
Bromodichloromethane	ND		1.0	0.25	ug/L			03/26/19 13:29	1
Bromoform	ND		1.0	0.40	ug/L			03/26/19 13:29	1
Bromomethane	ND		1.0	0.25	ug/L			03/26/19 13:29	1

Client Sample ID: OC_TB_031319

Lab Sample ID: 440-236408-3

Date Collected: 03/13/19 09:00

Matrix: Water

Date Received: 03/15/19 16:01

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			03/26/19 13:29	1
Chlorobenzene	ND		1.0	0.25	ug/L			03/26/19 13:29	1
Chloroethane	ND		1.0	0.40	ug/L			03/26/19 13:29	1
Chloroform	ND		1.0	0.25	ug/L			03/26/19 13:29	1
Chloromethane	ND		1.0	0.25	ug/L			03/26/19 13:29	1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			03/26/19 13:29	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/26/19 13:29	1
Dibromochloromethane	ND		1.0	0.25	ug/L			03/26/19 13:29	1
Dibromomethane	ND		1.0	0.25	ug/L			03/26/19 13:29	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			03/26/19 13:29	1
Ethylbenzene	ND		1.0	0.25	ug/L			03/26/19 13:29	1
Hexachlorobutadiene	ND		1.0	0.25	ug/L			03/26/19 13:29	1
Isopropyl alcohol	ND		250	180	ug/L			03/26/19 13:29	1
Isopropylbenzene	ND		1.0	0.25	ug/L			03/26/19 13:29	1
m,p-Xylene	ND		1.0	0.50	ug/L			03/26/19 13:29	1
Methylene Chloride	ND		5.0	0.88	ug/L			03/26/19 13:29	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			03/26/19 13:29	1
Naphthalene	ND		1.0	0.40	ug/L			03/26/19 13:29	1
n-Butylbenzene	ND		1.0	0.40	ug/L			03/26/19 13:29	1
N-Propylbenzene	ND		1.0	0.25	ug/L			03/26/19 13:29	1
o-Xylene	ND		1.0	0.25	ug/L			03/26/19 13:29	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			03/26/19 13:29	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			03/26/19 13:29	1
Styrene	ND		1.0	0.25	ug/L			03/26/19 13:29	1
tert-Butylbenzene	ND		1.0	0.25	ug/L			03/26/19 13:29	1
Tetrachloroethene	ND		1.0	0.25	ug/L			03/26/19 13:29	1
Toluene	ND		1.0	0.25	ug/L			03/26/19 13:29	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			03/26/19 13:29	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/26/19 13:29	1
Trichloroethene	ND		1.0	0.25	ug/L			03/26/19 13:29	1
Trichlorofluoromethane	ND		1.0	0.25	ug/L			03/26/19 13:29	1
Vinyl chloride	ND		0.50	0.25	ug/L			03/26/19 13:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*88*		*70 - 130*		*03/26/19 13:29*	*1*
4-Bromofluorobenzene (Surr)	*88*		*80 - 120*		*03/26/19 13:29*	*1*
Dibromofluoromethane (Surr)	*102*		*76 - 132*		*03/26/19 13:29*	*1*
Toluene-d8 (Surr)	*95*		*80 - 128*		*03/26/19 13:29*	*1*

Surrogate Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical - GWCS Monthly

TestAmerica Job ID: 440-236408-1
SDG: Omega Chemical

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

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(70-130)	(80-120)	(76-132)	(80-128)
440-236408-1	OC_SP220B_EFF_031319	87	93	101	97
440-236408-1 MS	OC_SP220B_EFF_031319	87	88	102	94
440-236408-1 MSD	OC_SP220B_EFF_031319	86	90	100	93
440-236408-2	OC_SP210_INF_031319	89	88	102	95
440-236408-2 - DL	OC_SP210_INF_031319	86	89	101	95
440-236408-3	OC_TB_031319	88	88	102	95
LCS 440-536454/1003	Lab Control Sample	84	88	100	95
LCS 440-536454/5	Lab Control Sample	87	89	101	94
MB 440-536454/4	Method Blank	88	88	103	94

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

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

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
		DXE
Lab Sample ID	Client Sample ID	(27-120)
440-236207-A-4-A MS	Matrix Spike	50
440-236207-A-4-B MSD	Matrix Spike Duplicate	55
440-236408-1	OC_SP220B_EFF_031319	46
LCS 440-534766/3-A	Lab Control Sample	46
MB 440-534766/1-A	Method Blank	46

Surrogate Legend

DXE = 1,4-Dioxane-d8 (Surr)

Method Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical - GWCS Monthly

TestAmerica Job ID: 440-236408-1
SDG: Omega Chemical

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL IRV
8270C SIM	Semivolatile Organic Compounds (GC/MS SIM)	SW846	TAL IRV
3520C	Liquid-Liquid Extraction (Continuous)	SW846	TAL IRV
5030B	Purge and Trap	SW846	TAL IRV

Protocol References:

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: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical - GWCS Monthly

TestAmerica Job ID: 440-236408-1
SDG: Omega Chemical

Client Sample ID: OC_SP220B_EFF_031319 — Lab Sample ID: 440-236408-1

Date Collected: 03/13/19 09:20 — **Matrix: Water**
Date Received: 03/15/19 16:01

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	536454	03/26/19 10:13	TCN	TAL IRV
Total/NA	Prep	3520C			1020 mL	1.0 mL	534766	03/17/19 14:46	AJP	TAL IRV
Total/NA	Analysis	8270C SIM		1			534889	03/18/19 16:36	HN	TAL IRV

Client Sample ID: OC_SP210_INF_031319 — Lab Sample ID: 440-236408-2

Date Collected: 03/13/19 09:28 — **Matrix: Water**
Date Received: 03/15/19 16:01

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		2	10 mL	10 mL	536454	03/26/19 12:40	TCN	TAL IRV
Total/NA	Analysis	8260B	DL	10	10 mL	10 mL	536454	03/26/19 13:05	TCN	TAL IRV

Client Sample ID: OC_TB_031319 — Lab Sample ID: 440-236408-3

Date Collected: 03/13/19 09:00 — **Matrix: Water**
Date Received: 03/15/19 16:01

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	536454	03/26/19 13:29	TCN	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 440-536454/4
Matrix: Water
Analysis Batch: 536454

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	0.25	ug/L			03/26/19 08:09	1
1,1,1-Trichloroethane	ND		1.0	0.25	ug/L			03/26/19 08:09	1
1,1,2,2-Tetrachloroethane	ND		1.0	0.25	ug/L			03/26/19 08:09	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	0.50	ug/L			03/26/19 08:09	1
1,1,2-Trichloroethane	ND		1.0	0.25	ug/L			03/26/19 08:09	1
1,1-Dichloroethane	ND		1.0	0.25	ug/L			03/26/19 08:09	1
1,1-Dichloroethene	ND		1.0	0.25	ug/L			03/26/19 08:09	1
1,1-Dichloropropene	ND		1.0	0.25	ug/L			03/26/19 08:09	1
1,2,3-Trichlorobenzene	ND		1.0	0.40	ug/L			03/26/19 08:09	1
1,2,3-Trichloropropane	ND		1.0	0.40	ug/L			03/26/19 08:09	1
1,2,4-Trichlorobenzene	ND		1.0	0.40	ug/L			03/26/19 08:09	1
1,2,4-Trimethylbenzene	ND		1.0	0.25	ug/L			03/26/19 08:09	1
1,2-Dibromo-3-Chloropropane	ND		5.0	0.50	ug/L			03/26/19 08:09	1
1,2-Dibromoethane (EDB)	ND		1.0	0.25	ug/L			03/26/19 08:09	1
1,2-Dichlorobenzene	ND		1.0	0.25	ug/L			03/26/19 08:09	1
1,2-Dichloroethane	ND		1.0	0.25	ug/L			03/26/19 08:09	1
1,2-Dichloropropane	ND		1.0	0.25	ug/L			03/26/19 08:09	1
1,3,5-Trimethylbenzene	ND		1.0	0.25	ug/L			03/26/19 08:09	1
1,3-Dichlorobenzene	ND		1.0	0.25	ug/L			03/26/19 08:09	1
1,3-Dichloropropane	ND		1.0	0.25	ug/L			03/26/19 08:09	1
1,4-Dichlorobenzene	ND		1.0	0.25	ug/L			03/26/19 08:09	1
2,2-Dichloropropane	ND		1.0	0.40	ug/L			03/26/19 08:09	1
2-Chlorotoluene	ND		1.0	0.25	ug/L			03/26/19 08:09	1
4-Chlorotoluene	ND		1.0	0.25	ug/L			03/26/19 08:09	1
Acetone	ND		10	10	ug/L			03/26/19 08:09	1
Benzene	ND		0.50	0.25	ug/L			03/26/19 08:09	1
Bromobenzene	ND		1.0	0.25	ug/L			03/26/19 08:09	1
Bromochloromethane	ND		1.0	0.25	ug/L			03/26/19 08:09	1
Bromodichloromethane	ND		1.0	0.25	ug/L			03/26/19 08:09	1
Bromoform	ND		1.0	0.40	ug/L			03/26/19 08:09	1
Bromomethane	ND		1.0	0.25	ug/L			03/26/19 08:09	1
Carbon tetrachloride	ND		0.50	0.25	ug/L			03/26/19 08:09	1
Chlorobenzene	ND		1.0	0.25	ug/L			03/26/19 08:09	1
Chloroethane	ND		1.0	0.40	ug/L			03/26/19 08:09	1
Chloroform	ND		1.0	0.25	ug/L			03/26/19 08:09	1
Chloromethane	ND		1.0	0.25	ug/L			03/26/19 08:09	1
cis-1,2-Dichloroethene	ND		1.0	0.25	ug/L			03/26/19 08:09	1
cis-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/26/19 08:09	1
Dibromochloromethane	ND		1.0	0.25	ug/L			03/26/19 08:09	1
Dibromomethane	ND		1.0	0.25	ug/L			03/26/19 08:09	1
Dichlorodifluoromethane	ND		1.0	0.40	ug/L			03/26/19 08:09	1
Ethylbenzene	ND		1.0	0.25	ug/L			03/26/19 08:09	1
Hexachlorobutadiene	ND		1.0	0.25	ug/L			03/26/19 08:09	1
Isopropyl alcohol	ND		250	180	ug/L			03/26/19 08:09	1
Isopropylbenzene	ND		1.0	0.25	ug/L			03/26/19 08:09	1
m,p-Xylene	ND		1.0	0.50	ug/L			03/26/19 08:09	1
Methylene Chloride	ND		5.0	0.88	ug/L			03/26/19 08:09	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	0.25	ug/L			03/26/19 08:09	1

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

Lab Sample ID: MB 440-536454/4
Matrix: Water
Analysis Batch: 536454

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		1.0	0.40	ug/L			03/26/19 08:09	1
n-Butylbenzene	ND		1.0	0.40	ug/L			03/26/19 08:09	1
N-Propylbenzene	ND		1.0	0.25	ug/L			03/26/19 08:09	1
o-Xylene	ND		1.0	0.25	ug/L			03/26/19 08:09	1
p-Isopropyltoluene	ND		1.0	0.25	ug/L			03/26/19 08:09	1
sec-Butylbenzene	ND		1.0	0.25	ug/L			03/26/19 08:09	1
Styrene	ND		1.0	0.25	ug/L			03/26/19 08:09	1
tert-Butylbenzene	ND		1.0	0.25	ug/L			03/26/19 08:09	1
Tetrachloroethene	ND		1.0	0.25	ug/L			03/26/19 08:09	1
Toluene	ND		1.0	0.25	ug/L			03/26/19 08:09	1
trans-1,2-Dichloroethene	ND		1.0	0.25	ug/L			03/26/19 08:09	1
trans-1,3-Dichloropropene	ND		0.50	0.25	ug/L			03/26/19 08:09	1
Trichloroethene	ND		1.0	0.25	ug/L			03/26/19 08:09	1
Trichlorofluoromethane	ND		1.0	0.25	ug/L			03/26/19 08:09	1
Vinyl chloride	ND		0.50	0.25	ug/L			03/26/19 08:09	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*88*		*70 - 130*		*03/26/19 08:09*	*1*
4-Bromofluorobenzene (Surr)	*88*		*80 - 120*		*03/26/19 08:09*	*1*
Dibromofluoromethane (Surr)	*103*		*76 - 132*		*03/26/19 08:09*	*1*
Toluene-d8 (Surr)	*94*		*80 - 128*		*03/26/19 08:09*	*1*

Lab Sample ID: LCS 440-536454/1003
Matrix: Water
Analysis Batch: 536454

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Isopropyl alcohol	250	303		ug/L		121	49 - 142

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*84*		*70 - 130*
4-Bromofluorobenzene (Surr)	*88*		*80 - 120*
Dibromofluoromethane (Surr)	*100*		*76 - 132*
Toluene-d8 (Surr)	*95*		*80 - 128*

Lab Sample ID: LCS 440-536454/5
Matrix: Water
Analysis Batch: 536454

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	10.0	10.7		ug/L		107	60 - 141
1,1,1-Trichloroethane	10.0	8.91		ug/L		89	70 - 130
1,1,2,2-Tetrachloroethane	10.0	10.1		ug/L		101	63 - 130
1,1,2-Trichloroethane	10.0	9.81		ug/L		98	70 - 130
1,1-Dichloroethane	10.0	9.47		ug/L		95	64 - 130
1,1-Dichloroethene	10.0	9.55		ug/L		96	70 - 130
1,1-Dichloropropene	10.0	9.04		ug/L		90	70 - 130
1,2,3-Trichlorobenzene	10.0	9.69		ug/L		97	60 - 140

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

Lab Sample ID: LCS 440-536454/5
Matrix: Water
Analysis Batch: 536454

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	10.0	9.77		ug/L		98	63 - 130
1,2,4-Trichlorobenzene	10.0	9.98		ug/L		100	60 - 140
1,2,4-Trimethylbenzene	10.0	9.55		ug/L		96	70 - 135
1,2-Dibromo-3-Chloropropane	10.0	8.36		ug/L		84	52 - 140
1,2-Dibromoethane (EDB)	10.0	10.5		ug/L		105	70 - 130
1,2-Dichlorobenzene	10.0	10.1		ug/L		101	70 - 130
1,2-Dichloroethane	10.0	8.30		ug/L		83	57 - 138
1,2-Dichloropropane	10.0	10.4		ug/L		104	67 - 130
1,3,5-Trimethylbenzene	10.0	9.61		ug/L		96	70 - 136
1,3-Dichlorobenzene	10.0	10.2		ug/L		102	70 - 130
1,3-Dichloropropane	10.0	9.77		ug/L		98	70 - 130
1,4-Dichlorobenzene	10.0	9.98		ug/L		100	70 - 130
2,2-Dichloropropane	10.0	9.15		ug/L		91	68 - 141
2-Chlorotoluene	10.0	9.15		ug/L		92	70 - 130
4-Chlorotoluene	10.0	9.18		ug/L		92	70 - 130
Acetone	10.0	ND		ug/L		86	10 - 150
Benzene	10.0	10.1		ug/L		101	68 - 130
Bromobenzene	10.0	10.4		ug/L		104	70 - 130
Bromochloromethane	10.0	11.4		ug/L		114	70 - 130
Bromodichloromethane	10.0	9.84		ug/L		98	70 - 132
Bromoform	10.0	11.6		ug/L		116	60 - 148
Bromomethane	10.0	9.81		ug/L		98	64 - 139
Carbon tetrachloride	10.0	9.63		ug/L		96	60 - 150
Chlorobenzene	10.0	10.1		ug/L		101	70 - 130
Chloroethane	10.0	8.81		ug/L		88	64 - 135
Chloroform	10.0	9.74		ug/L		97	70 - 130
Chloromethane	10.0	6.67		ug/L		67	47 - 140
cis-1,2-Dichloroethene	10.0	10.1		ug/L		101	70 - 133
cis-1,3-Dichloropropene	10.0	10.0		ug/L		100	70 - 133
Dibromochloromethane	10.0	10.9		ug/L		109	69 - 145
Dibromomethane	10.0	10.4		ug/L		104	70 - 130
Dichlorodifluoromethane	10.0	6.54		ug/L		65	29 - 150
Ethylbenzene	10.0	9.28		ug/L		93	70 - 130
Hexachlorobutadiene	10.0	10.2		ug/L		102	10 - 150
Isopropylbenzene	10.0	10.1		ug/L		101	70 - 136
m,p-Xylene	10.0	9.65		ug/L		96	70 - 130
Methylene Chloride	10.0	8.77		ug/L		88	52 - 130
Methyl-t-Butyl Ether (MTBE)	10.0	9.20		ug/L		92	63 - 131
Naphthalene	10.0	9.14		ug/L		91	60 - 140
n-Butylbenzene	10.0	9.47		ug/L		95	65 - 150
N-Propylbenzene	10.0	9.46		ug/L		95	67 - 139
o-Xylene	10.0	10.1		ug/L		101	70 - 130
p-Isopropyltoluene	10.0	10.3		ug/L		103	70 - 132
sec-Butylbenzene	10.0	10.1		ug/L		101	70 - 138
Styrene	10.0	9.12		ug/L		91	70 - 134
tert-Butylbenzene	10.0	9.61		ug/L		96	70 - 130
Tetrachloroethene	10.0	10.4		ug/L		104	70 - 130
Toluene	10.0	9.51		ug/L		95	70 - 130

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

Lab Sample ID: LCS 440-536454/5
Matrix: Water
Analysis Batch: 536454

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
trans-1,2-Dichloroethene	10.0	9.91		ug/L		99	70 - 130
trans-1,3-Dichloropropene	10.0	9.40		ug/L		94	70 - 132
Trichloroethene	10.0	10.8		ug/L		108	70 - 130
Trichlorofluoromethane	10.0	9.02		ug/L		90	60 - 150
Vinyl chloride	10.0	7.39		ug/L		74	59 - 133

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*87*		*70 - 130*
4-Bromofluorobenzene (Surr)	*89*		*80 - 120*
Dibromofluoromethane (Surr)	*101*		*76 - 132*
Toluene-d8 (Surr)	*94*		*80 - 128*

Lab Sample ID: 440-236408-1 MS
Matrix: Water
Analysis Batch: 536454

Client Sample ID: OC_SP220B_EFF_031319
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	ND		10.0	10.5		ug/L		105	60 - 149
1,1,1-Trichloroethane	ND		10.0	9.50		ug/L		95	70 - 130
1,1,2,2-Tetrachloroethane	ND		10.0	9.21		ug/L		92	63 - 130
1,1,2-Trichloroethane	ND		10.0	9.43		ug/L		94	70 - 130
1,1-Dichloroethane	ND		10.0	9.43		ug/L		94	65 - 130
1,1-Dichloroethene	ND		10.0	11.6		ug/L		116	70 - 130
1,1-Dichloropropene	ND		10.0	10.3		ug/L		103	64 - 130
1,2,3-Trichlorobenzene	ND		10.0	9.74		ug/L		97	60 - 140
1,2,3-Trichloropropane	ND		10.0	8.68		ug/L		87	60 - 130
1,2,4-Trichlorobenzene	ND		10.0	10.0		ug/L		100	60 - 140
1,2,4-Trimethylbenzene	ND		10.0	9.69		ug/L		97	70 - 130
1,2-Dibromo-3-Chloropropane	ND		10.0	8.15		ug/L		81	48 - 140
1,2-Dibromoethane (EDB)	ND		10.0	9.74		ug/L		97	70 - 131
1,2-Dichlorobenzene	ND		10.0	9.75		ug/L		98	70 - 130
1,2-Dichloroethane	ND		10.0	7.98		ug/L		80	56 - 146
1,2-Dichloropropane	ND		10.0	10.1		ug/L		101	69 - 130
1,3,5-Trimethylbenzene	ND		10.0	9.72		ug/L		97	70 - 130
1,3-Dichlorobenzene	ND		10.0	10.1		ug/L		101	70 - 130
1,3-Dichloropropane	ND		10.0	8.89		ug/L		89	70 - 130
1,4-Dichlorobenzene	ND		10.0	9.69		ug/L		97	70 - 130
2,2-Dichloropropane	ND		10.0	9.66		ug/L		97	69 - 138
2-Chlorotoluene	ND		10.0	9.24		ug/L		92	70 - 130
4-Chlorotoluene	ND		10.0	9.22		ug/L		92	70 - 130
Acetone	ND	F1	10.0	11.1		ug/L		111	10 - 150
Benzene	ND		10.0	10.2		ug/L		102	66 - 130
Bromobenzene	ND		10.0	9.61		ug/L		96	70 - 130
Bromochloromethane	ND		10.0	10.9		ug/L		109	70 - 130
Bromodichloromethane	ND		10.0	9.55		ug/L		95	70 - 138
Bromoform	ND		10.0	11.0		ug/L		110	59 - 150
Bromomethane	ND		10.0	9.88		ug/L		99	62 - 131
Carbon tetrachloride	ND		10.0	10.5		ug/L		105	60 - 150

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

Lab Sample ID: 440-236408-1 MS
Matrix: Water
Analysis Batch: 536454

Client Sample ID: OC_SP220B_EFF_031319
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chlorobenzene	ND		10.0	9.87		ug/L		99	70 - 130
Chloroethane	ND		10.0	9.30		ug/L		93	68 - 130
Chloroform	ND		10.0	9.54		ug/L		95	70 - 130
Chloromethane	ND		10.0	7.02		ug/L		70	39 - 144
cis-1,2-Dichloroethene	ND		10.0	10.4		ug/L		104	70 - 130
cis-1,3-Dichloropropene	ND		10.0	9.67		ug/L		97	70 - 133
Dibromochloromethane	ND		10.0	10.5		ug/L		105	70 - 148
Dibromomethane	ND		10.0	9.60		ug/L		96	70 - 130
Dichlorodifluoromethane	ND		10.0	7.83		ug/L		78	25 - 142
Ethylbenzene	ND		10.0	9.56		ug/L		96	70 - 130
Hexachlorobutadiene	ND		10.0	10.0		ug/L		100	10 - 150
Isopropyl alcohol	ND		250	237	J	ug/L		95	46 - 142
Isopropylbenzene	ND		10.0	10.4		ug/L		104	70 - 132
m,p-Xylene	ND		10.0	9.97		ug/L		100	70 - 133
Methylene Chloride	ND		10.0	7.81		ug/L		78	52 - 130
Methyl-t-Butyl Ether (MTBE)	ND		10.0	8.21		ug/L		82	70 - 130
Naphthalene	ND		10.0	9.32		ug/L		93	60 - 140
n-Butylbenzene	ND		10.0	9.71		ug/L		97	61 - 149
N-Propylbenzene	ND		10.0	9.79		ug/L		98	66 - 135
o-Xylene	ND		10.0	9.97		ug/L		100	70 - 133
p-Isopropyltoluene	ND		10.0	10.7		ug/L		107	70 - 130
sec-Butylbenzene	ND		10.0	10.4		ug/L		104	67 - 134
Styrene	ND		10.0	9.24		ug/L		92	29 - 150
tert-Butylbenzene	ND		10.0	9.85		ug/L		98	70 - 130
Tetrachloroethene	ND		10.0	11.0		ug/L		110	70 - 137
Toluene	ND		10.0	9.68		ug/L		97	70 - 130
trans-1,2-Dichloroethene	ND		10.0	10.3		ug/L		103	70 - 130
trans-1,3-Dichloropropene	ND		10.0	9.04		ug/L		90	70 - 138
Trichloroethene	ND		10.0	11.6		ug/L		116	70 - 130
Trichlorofluoromethane	ND		10.0	9.90		ug/L		99	60 - 150
Vinyl chloride	ND		10.0	8.00		ug/L		80	50 - 137

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*87*		*70 - 130*
4-Bromofluorobenzene (Surr)	*88*		*80 - 120*
Dibromofluoromethane (Surr)	*102*		*76 - 132*
Toluene-d8 (Surr)	*94*		*80 - 128*

Lab Sample ID: 440-236408-1 MSD
Matrix: Water
Analysis Batch: 536454

Client Sample ID: OC_SP220B_EFF_031319
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	ND		10.0	10.2		ug/L		102	60 - 149	3	20
1,1,1-Trichloroethane	ND		10.0	9.19		ug/L		92	70 - 130	3	20
1,1,2,2-Tetrachloroethane	ND		10.0	10.1		ug/L		101	63 - 130	9	30
1,1,2-Trichloroethane	ND		10.0	9.49		ug/L		95	70 - 130	1	25
1,1-Dichloroethane	ND		10.0	9.42		ug/L		94	65 - 130	0	20

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

Lab Sample ID: 440-236408-1 MSD
Matrix: Water
Analysis Batch: 536454

Client Sample ID: OC_SP220B_EFF_031319
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1-Dichloroethene	ND		10.0	11.5		ug/L		115	70 - 130	1	20
1,1-Dichloropropene	ND		10.0	10.1		ug/L		101	64 - 130	3	20
1,2,3-Trichlorobenzene	ND		10.0	10.6		ug/L		106	60 - 140	8	20
1,2,3-Trichloropropane	ND		10.0	9.41		ug/L		94	60 - 130	8	30
1,2,4-Trichlorobenzene	ND		10.0	10.9		ug/L		109	60 - 140	9	20
1,2,4-Trimethylbenzene	ND		10.0	9.60		ug/L		96	70 - 130	1	25
1,2-Dibromo-3-Chloropropane	ND		10.0	8.55		ug/L		85	48 - 140	5	30
1,2-Dibromoethane (EDB)	ND		10.0	10.1		ug/L		101	70 - 131	3	25
1,2-Dichlorobenzene	ND		10.0	9.95		ug/L		99	70 - 130	2	20
1,2-Dichloroethane	ND		10.0	7.87		ug/L		79	56 - 146	1	20
1,2-Dichloropropane	ND		10.0	9.97		ug/L		100	69 - 130	2	20
1,3,5-Trimethylbenzene	ND		10.0	9.88		ug/L		99	70 - 130	2	20
1,3-Dichlorobenzene	ND		10.0	10.1		ug/L		101	70 - 130	0	20
1,3-Dichloropropane	ND		10.0	8.98		ug/L		90	70 - 130	1	25
1,4-Dichlorobenzene	ND		10.0	9.89		ug/L		99	70 - 130	2	20
2,2-Dichloropropane	ND		10.0	8.85		ug/L		88	69 - 138	9	25
2-Chlorotoluene	ND		10.0	9.34		ug/L		93	70 - 130	1	20
4-Chlorotoluene	ND		10.0	9.28		ug/L		93	70 - 130	1	20
Acetone	ND	F1	10.0	ND	F1	ug/L		0	10 - 150	NC	35
Benzene	ND		10.0	10.0		ug/L		100	66 - 130	2	20
Bromobenzene	ND		10.0	10.1		ug/L		101	70 - 130	5	20
Bromochloromethane	ND		10.0	11.0		ug/L		110	70 - 130	0	25
Bromodichloromethane	ND		10.0	9.67		ug/L		97	70 - 138	1	20
Bromoform	ND		10.0	11.3		ug/L		113	59 - 150	2	25
Bromomethane	ND		10.0	9.40		ug/L		94	62 - 131	5	25
Carbon tetrachloride	ND		10.0	10.0		ug/L		100	60 - 150	4	25
Chlorobenzene	ND		10.0	9.75		ug/L		98	70 - 130	1	20
Chloroethane	ND		10.0	8.75		ug/L		88	68 - 130	6	25
Chloroform	ND		10.0	9.38		ug/L		94	70 - 130	2	20
Chloromethane	ND		10.0	6.63		ug/L		66	39 - 144	6	25
cis-1,2-Dichloroethene	ND		10.0	10.0		ug/L		100	70 - 130	4	20
cis-1,3-Dichloropropene	ND		10.0	9.62		ug/L		96	70 - 133	1	20
Dibromochloromethane	ND		10.0	10.2		ug/L		102	70 - 148	3	25
Dibromomethane	ND		10.0	9.75		ug/L		98	70 - 130	2	25
Dichlorodifluoromethane	ND		10.0	7.35		ug/L		74	25 - 142	6	30
Ethylbenzene	ND		10.0	9.41		ug/L		94	70 - 130	2	20
Hexachlorobutadiene	ND		10.0	10.5		ug/L		105	10 - 150	5	20
Isopropyl alcohol	ND		250	251		ug/L		100	46 - 142	6	40
Isopropylbenzene	ND		10.0	10.1		ug/L		101	70 - 132	3	20
m,p-Xylene	ND		10.0	9.63		ug/L		96	70 - 133	3	25
Methylene Chloride	ND		10.0	7.75		ug/L		78	52 - 130	1	20
Methyl-t-Butyl Ether (MTBE)	ND		10.0	8.35		ug/L		83	70 - 130	2	25
Naphthalene	ND		10.0	10.1		ug/L		101	60 - 140	8	30
n-Butylbenzene	ND		10.0	9.78		ug/L		98	61 - 149	1	20
N-Propylbenzene	ND		10.0	9.80		ug/L		98	66 - 135	0	20
o-Xylene	ND		10.0	9.61		ug/L		96	70 - 133	4	20
p-Isopropyltoluene	ND		10.0	10.9		ug/L		109	70 - 130	2	20
sec-Butylbenzene	ND		10.0	10.4		ug/L		104	67 - 134	1	20

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

Lab Sample ID: 440-236408-1 MSD — **Client Sample ID: OC_SP220B_EFF_031319**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 536454

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Styrene	ND		10.0	9.27		ug/L		93	29 - 150	0	35
tert-Butylbenzene	ND		10.0	9.87		ug/L		99	70 - 130	0	20
Tetrachloroethene	ND		10.0	10.7		ug/L		107	70 - 137	3	20
Toluene	ND		10.0	9.54		ug/L		95	70 - 130	1	20
trans-1,2-Dichloroethene	ND		10.0	10.3		ug/L		103	70 - 130	0	20
trans-1,3-Dichloropropene	ND		10.0	9.27		ug/L		93	70 - 138	2	25
Trichloroethene	ND		10.0	11.1		ug/L		111	70 - 130	4	20
Trichlorofluoromethane	ND		10.0	9.46		ug/L		95	60 - 150	5	25
Vinyl chloride	ND		10.0	7.52		ug/L		75	50 - 137	6	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*86*		*70 - 130*
4-Bromofluorobenzene (Surr)	*90*		*80 - 120*
Dibromofluoromethane (Surr)	*100*		*76 - 132*
Toluene-d8 (Surr)	*93*		*80 - 128*

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

Lab Sample ID: MB 440-534766/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 534889 — **Prep Batch: 534766**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.50	0.10	ug/L		03/17/19 14:46	03/18/19 13:30	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*46*		*27 - 120*	*03/17/19 14:46*	*03/18/19 13:30*	*1*

Lab Sample ID: LCS 440-534766/3-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 534889 — **Prep Batch: 534766**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dioxane	2.00	0.944		ug/L		47	36 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,4-Dioxane-d8 (Surr)	*46*		*27 - 120*

Lab Sample ID: 440-236207-A-4-A MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 534889 — **Prep Batch: 534766**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,4-Dioxane	ND		1.96	0.975		ug/L		50	10 - 150

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,4-Dioxane-d8 (Surr)	*50*		*27 - 120*

QC Sample Results

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical - GWCS Monthly

TestAmerica Job ID: 440-236408-1
SDG: Omega Chemical

Lab Sample ID: 440-236207-A-4-B MSD
Matrix: Water
Analysis Batch: 534889

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 534766

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dioxane	ND		1.95	1.11		ug/L		57	10 - 150	13	35

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,4-Dioxane-d8 (Surr)	*55*		*27 - 120*

QC Association Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical - GWCS Monthly

TestAmerica Job ID: 440-236408-1
SDG: Omega Chemical

GC/MS VOA

Analysis Batch: 536454

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-236408-1	OC_SP220B_EFF_031319	Total/NA	Water	8260B	
440-236408-2	OC_SP210_INF_031319	Total/NA	Water	8260B	
440-236408-2 - DL	OC_SP210_INF_031319	Total/NA	Water	8260B	
440-236408-3	OC_TB_031319	Total/NA	Water	8260B	
MB 440-536454/4	Method Blank	Total/NA	Water	8260B	
LCS 440-536454/1003	Lab Control Sample	Total/NA	Water	8260B	
LCS 440-536454/5	Lab Control Sample	Total/NA	Water	8260B	
440-236408-1 MS	OC_SP220B_EFF_031319	Total/NA	Water	8260B	
440-236408-1 MSD	OC_SP220B_EFF_031319	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 534766

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-236408-1	OC_SP220B_EFF_031319	Total/NA	Water	3520C	
MB 440-534766/1-A	Method Blank	Total/NA	Water	3520C	
LCS 440-534766/3-A	Lab Control Sample	Total/NA	Water	3520C	
440-236207-A-4-A MS	Matrix Spike	Total/NA	Water	3520C	
440-236207-A-4-B MSD	Matrix Spike Duplicate	Total/NA	Water	3520C	

Analysis Batch: 534889

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-236408-1	OC_SP220B_EFF_031319	Total/NA	Water	8270C SIM	534766
MB 440-534766/1-A	Method Blank	Total/NA	Water	8270C SIM	534766
LCS 440-534766/3-A	Lab Control Sample	Total/NA	Water	8270C SIM	534766
440-236207-A-4-A MS	Matrix Spike	Total/NA	Water	8270C SIM	534766
440-236207-A-4-B MSD	Matrix Spike Duplicate	Total/NA	Water	8270C SIM	534766

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

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: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical - GWCS Monthly

TestAmerica Job ID: 440-236408-1
SDG: Omega Chemical

Laboratory: TestAmerica Irvine

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
California	State Program	9	CA ELAP 2706	06-30-19

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8260B		Water	1,1,2-Trichloro-1,2,2-trifluoroethane
8260B		Water	m,p-Xylene
8270C SIM	3520C	Water	1,4-Dioxane

TestAmerica Irvine
17461 Derian Ave
Suite 100
Irvine, CA 92614
phone 949.261.1022 fax

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING
TestAmerica Laboratories, Inc.

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

Client Contact	Project Manager: Trent Henderson	Site Contact: Khalid Azhar	Date: 3/13/2019	COC No:
De Maximis - Jaime Dinello	Tel/Fax: (949) 453-1045 / (949) 453-1047	Lab Contact: Danielle Roberts	Carrier:	1 of 1 COCs
1322 Scott St., Suite 104	Analysis Turnaround Time			Sampler:
San Diego, CA 92106	☐ CALENDAR DAYS ☐ WORKING DAYS			For Lab Use Only:
(562) 756-8149	TAT if different from Below STD			Walk-in Client:
	☐ 2 weeks			Lab Sampling:
Project Name: Omega Chemical - GWCS Monthly	☐ 1 week			
Site: Omega Chemical	☐ 2 days			Job / SDG No :
P O #:	☐ 1 day			

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y / N)	Perform MS / MSD (Y / N)	EPA 8260B - VOCs + Freons	EPA 8270C - 1,4-Dioxane	Sample Specific Notes:
OC_SP220B_EFF_031319	3/13/2019	0920	Grab	GW	5			x	x	
OC_SP210_INF_031319	3/13/2019	0928	Grab	GW	3			x		
OC_TB_031319	3/13/2019	0900		H2O	2			x		

440-236408 Chain of Custody

3/16/19

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: 4.1 Corr'd: 4.5 | Therm ID No.: IR-73

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	JHD	3/15/19 1213		TA IRV	3/15/19 1215
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:
	TA IRV	3/15/19 1601		TA IRV	03/15/19 1601

Login Sample Receipt Checklist

Client: Jacob & Hefner Associates P.C.

Job Number: 440-236408-1
SDG Number: Omega Chemical

Login Number: 236408
List Number: 1
Creator: Escalante, Maria I

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	
Sample custody seals, if present, are intact.	N/A	
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?	False	Refer to Job Narrative for details.
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	

ATTACHMENT D

Sanitation Districts of Los Angeles County
Industrial Wastewater Self-Monitoring Report

OMEGA CHEMICAL SITE PRP ORGANIZED GROUP
1322 Scott Street,
Suite 104
San Diego, CA 92106
Office :(619)-546-8377, fax: (619) 546-9980
e-mail: edm@demaximis.com

April 15, 2019

Ms. Grace Robinson Hyde
Chief Engineer and General Manager
County Sanitation Districts of Los Angeles County
1955 Workman Mill Road
Whittier, CA 90601-1400

Subject: Self-Monitoring Report – 1st Quarter 2019
Permit Number 20039, Surcharge Account Number 2113183

Dear Ms. Grace Robinson Hyde,

This letter transmits the 1st Quarter 2019 Self-Monitoring Report (SMR) for the Omega Chemical Site located at 12520 East Whittier Blvd., Whittier, California. Feel free to contact me if you need any additional information.

Sincerely,

Omega Chemical Site PRP Organized Group

Edward Modiano
Project Coordinator

SANITATION DISTRICTS OF LOS ANGELES COUNTY

GRACE ROBINSON HYDE
CHIEF ENGINEER
AND GENERAL MANAGER

For information, please call Loretta Benites
(562) 699-7411 Ext. 2927

Permit Number: 20039
Facility ID: 2113183

INDUSTRIAL WASTEWATER SELF MONITORING REPORT

Reporting Period From: 01/01/2019 To: 03/31/2019 Report Due No Later Than : 04/15/2019

Company Name: **Omega Chemical Site PRP Group LLC**
Wastewater Discharge Address: **12520 WHITTIER Blvd Whittier, CA, 90602**
Sample Location: **20039A**
Mailing Address: **1322 Scott Street # 104 San Diego, CA, 92106**
Industrial Wastewater Contact Name and Phone Number: **Mr. Ravi Subramanian** **949-752-5452 x277 - Business**

Has Ownership or Occupancy Changed Since the Last Report? ☐ Yes ■ No

(Print) Name of Company Collecting Wastewater Sample: Test America

(Print) Sample Date: 2/15/2019

Daily Wastewater Discharge for Reporting Period
Average: 7,817 GPD
Maximum: 10,089 GPD

Method For Determining Wastewater Flow for Sampling Day
■ Direct Measurement
☐ Adjusted Metered Water Supply
☐ No Discharge During Reporting Period

Type of Composite Sample
■ Time Composite
☐ Flow Proportioned Composite

Comments:

Parameter (1)	Sample Method (2)	Permit Limit (3)	Test Results (4)	Reporting Limit (5)	Unit (6)	Lab ID Code (7)
Z02 Sample Day Peak Flow			19.9		gpm	10256
Z01 Sample Day Total Flow			9,750		GPD	10256
101 pH	GRAB	Federal Daily Minimum 5.0 S.U. Local Daily Minimum 6.0 S.U.	8.6		S.U.	10256
151 Solids, Suspended	COMPOSITE		ND	1.1	mg/L	10256
252 Sulfide, Soluble	GRAB	Local At Any Time 0.1 mg/L	ND	0.050	mg/L	10256
403 COD, Total	COMPOSITE		ND	20	mg/L	10256
696 1,4-Dioxane	GRAB		20		ug/L	10256
T09 TTO, Volatile	GRAB	Local At Any Time 1000 ug/L	LACSD calculates this value.		ug/L	
601 Methylene Chloride	GRAB		ND	5.0	ug/L	10256
602 Chloroform	GRAB		ND	1.0	ug/L	10256
603 1,1,1-Trichloroethane	GRAB		ND	1.0	ug/L	10256
604 Carbon Tetrachloride	GRAB		ND	0.50	ug/L	10256
605 1,1-Dichloroethene	GRAB		ND	1.0	ug/L	10256
606 Trichloroethylene	GRAB		ND	1.0	ug/L	10256
607 Tetrachloroethylene	GRAB		ND	1.0	ug/L	10256
608 Bromodichloromethane	GRAB		ND	1.0	ug/L	10256
609 Dibromochloromethane	GRAB		ND	1.0	ug/L	10256
610 Bromoform	GRAB		ND	1.0	ug/L	10256
611 Chlorobenzene	GRAB		ND	1.0	ug/L	10256
612 Vinyl Chloride	GRAB		ND	0.50	ug/L	10256
613 o-Dichlorobenzene	GRAB		ND	1.0	ug/L	10256
614 m-Dichlorobenzene	GRAB		ND	1.0	ug/L	10256

Please submit this report to: Sanitation Districts of Los Angeles County - Industrial Waste Section P.O. Box 4998 Whittier, CA 90607-4998

INDUSTRIAL WASTEWATER SELF MONITORING REPORT

Report due no later than : 04/15/2019

Permit Number: 20039
Facility ID: 2113183

Company Name: **Omega Chemical Site PRP Group LLC**

Sample Location: **20039A** Reporting Period From: **01/01/2019** To: **03/31/2019**

Parameter (1)	Sample Method (2)	Permit Limit (3)	Test Results (4)	Reporting Limit (5)	Unit (6)	Lab ID Code (7)
615 p-Dichlorobenzene	GRAB		ND	1.0	ug/L	10256
616 1,1-Dichloroethane	GRAB		ND	1.0	ug/L	10256
618 1,1,2-Trichloroethane	GRAB		ND	1.0	ug/L	10256
619 1,2-Dichloroethane	GRAB		ND	1.0	ug/L	10256
620 Benzene	GRAB		ND	0.50	ug/L	10256
621 Toluene	GRAB		ND	1.0	ug/L	10256
624 Ethyl Benzene	GRAB		ND	1.0	ug/L	10256
645 trans-1,2-Dichloroethylene	GRAB		ND	1.0	ug/L	10256
646 Bromomethane	GRAB		ND	1.0	ug/L	10256
647 Chloroethane	GRAB		ND	1.0	ug/L	10256
648 2-Chloroethylvinylether	GRAB		ND	2.0	ug/L	10256
649 Chloromethane	GRAB		ND	1.0	ug/L	10256
650 1,2-Dichloropropane	GRAB		ND	1.0	ug/L	10256
651 cis-1,3-Dichloropropene	GRAB		ND	0.50	ug/L	10256
652 trans-1,3-Dichloropropene	GRAB		ND	0.50	ug/L	10256
653 1,1,2,2-Tetrachloroethane	GRAB		ND	1.0	ug/L	10256
T10 TTO, Semi-Volatile	GRAB	Local At Any Time 1000 ug/L	LACSD calculates this value.		ug/L	
800 Acenaphthene	GRAB		ND	10	ug/L	10256
801 Acenaphthylene	GRAB		ND	10	ug/L	10256
802 Anthracene	GRAB		ND	10	ug/L	10256
803 Benzidine	GRAB		ND	42	ug/L	10256
804 Benzo(a)anthracene	GRAB		ND	10	ug/L	10256
805 Benzo(a)pyrene	GRAB		ND	10	ug/L	10256
806 Benzo(b)fluoranthene	GRAB		ND	10	ug/L	10256
807 Benzo(g.h.i.)perylene	GRAB		ND	10	ug/L	10256
808 Benzo(k)fluoranthene	GRAB		ND	10	ug/L	10256
809 Bis(2-cl-ethoxy)methane	GRAB		ND	10	ug/L	10256
810 Bis(2-chloroethyl)ether	GRAB		ND	10	ug/L	10256
811 Bis(2-cl-isopropyl)ether	GRAB		ND	10	ug/L	10256
812 bis(2-ethylhexyl) Phthalate	GRAB		ND	21	ug/L	10256
813 4-bromophenyl Phenylether	GRAB		ND	10	ug/L	10256
814 butylbenzyl Phthalate	GRAB		ND	21	ug/L	10256
815 2-Chloronaphthalene	GRAB		ND	10	ug/L	10256
816 4-Chlorophenylphenylether	GRAB		ND	10	ug/L	10256
817 Chrysene	GRAB		ND	10	ug/L	10256
818 dibenzo(a,h)Anthracene	GRAB		ND	21	ug/L	10256
822 3,3-Dichlorobenzidine	GRAB		ND	42	ug/L	10256
823 diethyl Phthalate	GRAB		ND	10	ug/L	10256

INDUSTRIAL WASTEWATER SELF MONITORING REPORT

Report due no later than : 04/15/2019

Permit Number: 20039
Facility ID: 2113183

Company Name: **Omega Chemical Site PRP Group LLC**

Sample Location: **20039A** Reporting Period From: **01/01/2019** To: **03/31/2019**

Parameter (1)	Sample Method (2)	Permit Limit (3)	Test Results (4)	Reporting Limit (5)	Unit (6)	Lab ID Code (7)
824 dimethyl Phthalate	GRAB		ND	10	ug/L	10256
825 di-n-butyl Phthalate	GRAB		ND	21	ug/L	10256
826 2,4-Dinitrotoluene	GRAB		ND	10	ug/L	10256
827 2,6-Dinitrotoluene	GRAB		ND	10	ug/L	10256
828 di-n-octyl Phthalate	GRAB		ND	21	ug/L	10256
829 1,2-Diphenylhydrazine	GRAB		ND	21	ug/L	10256
830 Fluoranthene	GRAB		ND	10	ug/L	10256
831 Fluorene	GRAB		ND	10	ug/L	10256
832 Hexachlorobenzene	GRAB		ND	10	ug/L	10256
833 Hexachlorobutadiene	GRAB		ND	10	ug/L	10256
834 Hexachlorocyclopentadiene	GRAB		ND	21	ug/L	10256
835 Hexachloroethane	GRAB		ND	10	ug/L	10256
836 Indeno(1,2,3-c,d)Pyrene	GRAB		ND	21	ug/L	10256
837 Isophorone	GRAB		ND	10	ug/L	10256
838 Naphthalene	GRAB		ND	10	ug/L	10256
839 Nitrobenzene	GRAB		ND	21	ug/L	10256
840 n-Nitrosodimethylamine	GRAB		ND	21	ug/L	10256
841 n-Nitrosodi-n-Propylamine	GRAB		ND	10	ug/L	10256
842 Phenanthrene	GRAB		ND	10	ug/L	10256
843 Pyrene	GRAB		ND	10	ug/L	10256
845 2-Chlorophenol (Organic-BNA)	GRAB		ND	10	ug/L	10256
846 1,2,4-Trichlorobenzene	GRAB		ND	10	ug/L	10256
847 2,4-Dichlorophenol (Organic-BNA)	GRAB		ND	10	ug/L	10256
848 2,4-Dimethylphenol (Organic-BNA)	GRAB		ND	21	ug/L	10256
849 2,4-Dinitrophenol	GRAB		ND	42	ug/L	10256
850 2-methyl-4,6-dinitrophenol	GRAB		ND	21	ug/L	10256
851 2-Nitrophenol	GRAB		ND	10	ug/L	10256
852 4-Nitrophenol	GRAB		ND	21	ug/L	10256
853 4-chloro-3-Methylphenol (Organic-BNA)	GRAB		ND	21	ug/L	10256
854 Pentachlorophenol (Organic-BNA)	GRAB		ND	21	ug/L	10256
855 Phenol	GRAB		ND	10	ug/L	10256
856 2,4,6-Trichlorophenol	GRAB		ND	21	ug/L	10256
857 n-Nitrosodiphenylamine	GRAB		ND	10	ug/L	10256

INDUSTRIAL WASTEWATER SELF MONITORING REPORT

Report due no later than : 04/15/2019

Permit Number: 20039

Facility ID: 2113183

Company Name: **Omega Chemical Site PRP Group LLC**

Sample Location: **20039A** Reporting Period From: **01/01/2019** To: **03/31/2019**

(1) Report the test results from the most recent sample collected within the reporting period and include all laboratory test sheets with the selfmonitoring report form.

(2) Test results are valid only if the correct sampling method is observed and the laboratory analysis is performed by a State or Sanitation Districts approved laboratory.

(3) Permit limits are included on this form for convenience. For a full list of all applicable permit limits, refer to your Permit Data Sheet.

(4) Enter "ND" (Non Detect) for any result less than (<) the reporting limit.

(5) If the test result is "ND", enter the reporting limit; otherwise leave blank. The reporting limit can be found in your laboratory test sheet.

(6) Default units are listed. Cross out and write in applicable units if laboratory did not report results with these same units.

(7) Indicate the appropriate laboratory certification I.D. code for each testing parameter.

CERTIFICATION BY PERMITTEE

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

Signature of responsible company official: Nicole Bradley Date: 4/15/2019

Print name of official: Nicole Bradley Title: Project Manager on Behalf of OPOG

LACSD USE ONLY

Monitoring ID: 558543

Lab Report? ☐ Yes ☐ No Signature? ☐ Yes ☐ No Date Received: _____ Initials: _____

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: 440-233700-1
TestAmerica Sample Delivery Group: Whittier
Client Project/Site: Omega Chemical -24 hour Compostie

For:
Jacob & Hefner Associates P.C.
15375 Barranca Parkway, J-101
Irvine, California 92618

Attn: Trent Henderson

Authorized for release by:
3/5/2019 11:15:34 AM

Danielle Roberts, Senior Project Manager
(949)261-1022
danielle.roberts@testamericainc.com

LINKS

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www.testamericainc.com

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

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

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

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Sample Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical -24 hour Compostie

TestAmerica Job ID: 440-233700-1
SDG: Whittier

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-233700-1	Composite	Water	02/15/19 10:00	02/15/19 13:50
440-233700-2	Grab	Water	02/15/19 10:10	02/15/19 13:50

Job ID: 440-233700-1

Laboratory: TestAmerica Irvine

Narrative

Job Narrative
440-233700-1

Comments
No additional comments.

Receipt
The samples were received on 2/15/2019 1:50 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.4º C.

GC/MS VOA
No analytical or quality issues were noted, other than those described 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.

Field Service / Mobile Lab
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 matrix spike / matrix spike duplicate (MS/MSD) recoveries for preparation batch 440-529631 and analytical batch 440-529658 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
Method(s) 3520C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 440-529541. 8270C-SIM-1,4-DXN. LCS was performed in duplicate to provide precision of data.

Method(s) 3520C: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 440-529545. 8270-REG. LCS was performed in duplicate to provide precision of data.

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

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

Detection Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical -24 hour Compostie

TestAmerica Job ID: 440-233700-1
SDG: Whittier

Client Sample ID: Composite — Lab Sample ID: 440-233700-1

No Detections.

Client Sample ID: Grab — Lab Sample ID: 440-233700-2

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
1,4-Dioxane	20		0.53		ug/L	1		8270C SIM	Total/NA
pH	8.6	HF	0.1		SU	1		SM 4500 H+ B	Total/NA
Field pH	8.62				SU	1		Field Sampling	Total/NA
Field Temperature	16.1				Celsius	1		Field Sampling	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample Results

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical -24 hour Compostie

TestAmerica Job ID: 440-233700-1
SDG: Whittier

Client Sample ID: Composite

Lab Sample ID: 440-233700-1
Matrix: Water

Date Collected: 02/15/19 10:00
Date Received: 02/15/19 13:50

General Chemistry

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		1.1	mg/L			02/22/19 17:10	1
Chemical Oxygen Demand	ND		20	mg/L			03/01/19 15:56	1

Client Sample ID: Grab

Lab Sample ID: 440-233700-2
Matrix: Water

Date Collected: 02/15/19 10:10
Date Received: 02/15/19 13:50

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0	ug/L			02/21/19 09:27	1
1,1,1-Trichloroethane	ND		1.0	ug/L			02/21/19 09:27	1
2-Chloroethyl vinyl ether	ND		2.0	ug/L			02/20/19 12:48	1
1,1,2,2-Tetrachloroethane	ND		1.0	ug/L			02/21/19 09:27	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0	ug/L			02/21/19 09:27	1
Acrolein	ND		5.0	ug/L			02/20/19 12:48	1
1,1,2-Trichloroethane	ND		1.0	ug/L			02/21/19 09:27	1
Acrylonitrile	ND		2.0	ug/L			02/20/19 12:48	1
1,1-Dichloroethane	ND		1.0	ug/L			02/21/19 09:27	1
1,1-Dichloroethene	ND		1.0	ug/L			02/21/19 09:27	1
1,1-Dichloropropene	ND		1.0	ug/L			02/21/19 09:27	1
Total Volatile Organic Compounds	ND		150	ug/L			02/20/19 12:48	1
1,2,3-Trichlorobenzene	ND		1.0	ug/L			02/21/19 09:27	1
1,2,3-Trichloropropane	ND		1.0	ug/L			02/21/19 09:27	1
1,2,4-Trichlorobenzene	ND		1.0	ug/L			02/21/19 09:27	1
1,2,4-Trimethylbenzene	ND		1.0	ug/L			02/21/19 09:27	1
1,2-Dibromo-3-Chloropropane	ND		5.0	ug/L			02/21/19 09:27	1
1,2-Dibromoethane (EDB)	ND		1.0	ug/L			02/21/19 09:27	1
1,2-Dichlorobenzene	ND		1.0	ug/L			02/21/19 09:27	1
1,2-Dichloroethane	ND		1.0	ug/L			02/21/19 09:27	1
1,2-Dichloropropane	ND		1.0	ug/L			02/21/19 09:27	1
1,3,5-Trimethylbenzene	ND		1.0	ug/L			02/21/19 09:27	1
1,3-Dichlorobenzene	ND		1.0	ug/L			02/21/19 09:27	1
1,3-Dichloropropane	ND		1.0	ug/L			02/21/19 09:27	1
1,4-Dichlorobenzene	ND		1.0	ug/L			02/21/19 09:27	1
2,2-Dichloropropane	ND		1.0	ug/L			02/21/19 09:27	1
2-Chlorotoluene	ND		1.0	ug/L			02/21/19 09:27	1
4-Chlorotoluene	ND		1.0	ug/L			02/21/19 09:27	1
Acetone	ND		10	ug/L			02/21/19 09:27	1
Benzene	ND		0.50	ug/L			02/21/19 09:27	1
Bromobenzene	ND		1.0	ug/L			02/21/19 09:27	1
Bromochloromethane	ND		1.0	ug/L			02/21/19 09:27	1
Bromodichloromethane	ND		1.0	ug/L			02/21/19 09:27	1
Bromoform	ND		1.0	ug/L			02/21/19 09:27	1
Bromomethane	ND		1.0	ug/L			02/21/19 09:27	1
Carbon tetrachloride	ND		0.50	ug/L			02/21/19 09:27	1
Chlorobenzene	ND		1.0	ug/L			02/21/19 09:27	1
Chloroethane	ND		1.0	ug/L			02/21/19 09:27	1
Chloroform	ND		1.0	ug/L			02/21/19 09:27	1
Chloromethane	ND		1.0	ug/L			02/21/19 09:27	1

Client Sample Results

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical -24 hour Compostie

TestAmerica Job ID: 440-233700-1
SDG: Whittier

Client Sample ID: Grab

Date Collected: 02/15/19 10:10
Date Received: 02/15/19 13:50

Lab Sample ID: 440-233700-2

Matrix: Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
cis-1,2-Dichloroethene	ND		1.0		ug/L			02/21/19 09:27	1
cis-1,3-Dichloropropene	ND		0.50		ug/L			02/21/19 09:27	1
Dibromochloromethane	ND		1.0		ug/L			02/21/19 09:27	1
Dibromomethane	ND		1.0		ug/L			02/21/19 09:27	1
Dichlorodifluoromethane	ND		1.0		ug/L			02/21/19 09:27	1
Ethylbenzene	ND		1.0		ug/L			02/21/19 09:27	1
Hexachlorobutadiene	ND		1.0		ug/L			02/21/19 09:27	1
Isopropyl alcohol	ND		250		ug/L			02/21/19 09:27	1
Isopropylbenzene	ND		1.0		ug/L			02/21/19 09:27	1
m,p-Xylene	ND		1.0		ug/L			02/21/19 09:27	1
Methylene Chloride	ND		5.0		ug/L			02/21/19 09:27	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0		ug/L			02/21/19 09:27	1
Naphthalene	ND		1.0		ug/L			02/21/19 09:27	1
n-Butylbenzene	ND		1.0		ug/L			02/21/19 09:27	1
N-Propylbenzene	ND		1.0		ug/L			02/21/19 09:27	1
o-Xylene	ND		1.0		ug/L			02/21/19 09:27	1
p-Isopropyltoluene	ND		1.0		ug/L			02/21/19 09:27	1
sec-Butylbenzene	ND		1.0		ug/L			02/21/19 09:27	1
Styrene	ND		1.0		ug/L			02/21/19 09:27	1
tert-Butylbenzene	ND		1.0		ug/L			02/21/19 09:27	1
Tetrachloroethene	ND		1.0		ug/L			02/21/19 09:27	1
Toluene	ND		1.0		ug/L			02/21/19 09:27	1
trans-1,2-Dichloroethene	ND		1.0		ug/L			02/21/19 09:27	1
trans-1,3-Dichloropropene	ND		0.50		ug/L			02/21/19 09:27	1
Trichloroethene	ND		1.0		ug/L			02/21/19 09:27	1
Trichlorofluoromethane	ND		1.0		ug/L			02/21/19 09:27	1
Vinyl chloride	ND		0.50		ug/L			02/21/19 09:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*		*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*70 - 130*			*02/20/19 12:48*	*1*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*			*02/20/19 12:48*	*1*
Dibromofluoromethane (Surr)	*98*		*76 - 132*			*02/20/19 12:48*	*1*
Toluene-d8 (Surr)	*103*		*80 - 128*			*02/20/19 12:48*	*1*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 130*			*02/21/19 09:27*	*1*
4-Bromofluorobenzene (Surr)	*91*		*80 - 120*			*02/21/19 09:27*	*1*
Dibromofluoromethane (Surr)	*108*		*76 - 132*			*02/21/19 09:27*	*1*
Toluene-d8 (Surr)	*103*		*80 - 128*			*02/21/19 09:27*	*1*

Method: 8270C SIM - 1,4 Dioxane by SIM

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	**20**		0.53		ug/L		02/19/19 11:32	02/21/19 17:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*		*Prepared*	*Analyzed*	*Dil Fac*
1,4-Dioxane-d8 (Surr)	*67*		*27 - 120*		*02/19/19 11:32*	*02/21/19 17:14*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
1,2-Dichlorobenzene	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1

Client Sample ID: Grab

Date Collected: 02/15/19 10:10
Date Received: 02/15/19 13:50

Lab Sample ID: 440-233700-2

Matrix: Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,2-Diphenylhydrazine(as Azobenzene)	ND		21		ug/L		02/19/19 11:42	02/21/19 17:00	1
1,3-Dichlorobenzene	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
1,4-Dichlorobenzene	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
2,4,5-Trichlorophenol	ND		21		ug/L		02/19/19 11:42	02/21/19 17:00	1
2,4,6-Trichlorophenol	ND		21		ug/L		02/19/19 11:42	02/21/19 17:00	1
2,4-Dichlorophenol	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
2,4-Dimethylphenol	ND		21		ug/L		02/19/19 11:42	02/21/19 17:00	1
2,4-Dinitrophenol	ND		42		ug/L		02/19/19 11:42	02/21/19 17:00	1
2,4-Dinitrotoluene	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
2,6-Dinitrotoluene	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
2-Chloronaphthalene	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
2-Chlorophenol	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
2-Methylnaphthalene	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
2-Methylphenol	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
2-Nitroaniline	ND		21		ug/L		02/19/19 11:42	02/21/19 17:00	1
2-Nitrophenol	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
3,3'-Dichlorobenzidine	ND		42		ug/L		02/19/19 11:42	02/21/19 17:00	1
3-Methylphenol + 4-Methylphenol	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
3-Nitroaniline	ND		21		ug/L		02/19/19 11:42	02/21/19 17:00	1
4,6-Dinitro-2-methylphenol	ND		21		ug/L		02/19/19 11:42	02/21/19 17:00	1
4-Bromophenyl phenyl ether	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
4-Chloro-3-methylphenol	ND		21		ug/L		02/19/19 11:42	02/21/19 17:00	1
4-Chloroaniline	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
4-Chlorophenyl phenyl ether	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
4-Nitroaniline	ND		21		ug/L		02/19/19 11:42	02/21/19 17:00	1
4-Nitrophenol	ND		21		ug/L		02/19/19 11:42	02/21/19 17:00	1
Acenaphthene	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
Acenaphthylene	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
Aniline	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
Anthracene	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
Benzidine	ND		42		ug/L		02/19/19 11:42	02/21/19 17:00	1
Benzo[a]anthracene	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
Benzo[a]pyrene	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
Benzo[b]fluoranthene	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
Benzo[g,h,i]perylene	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
Benzo[k]fluoranthene	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
Benzoic acid	ND		21		ug/L		02/19/19 11:42	02/21/19 17:00	1
Benzyl alcohol	ND		21		ug/L		02/19/19 11:42	02/21/19 17:00	1
bis (2-chloroisopropyl) ether	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
Bis(2-chloroethoxy)methane	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
Bis(2-chloroethyl)ether	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
Bis(2-ethylhexyl) phthalate	ND		21		ug/L		02/19/19 11:42	02/21/19 17:00	1
Butyl benzyl phthalate	ND		21		ug/L		02/19/19 11:42	02/21/19 17:00	1
Chrysene	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
Dibenz(a,h)anthracene	ND		21		ug/L		02/19/19 11:42	02/21/19 17:00	1
Dibenzofuran	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
Diethyl phthalate	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
Dimethyl phthalate	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1

Client Sample Results

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical -24 hour Compostie

TestAmerica Job ID: 440-233700-1
SDG: Whittier

Client Sample ID: Grab

Date Collected: 02/15/19 10:10
Date Received: 02/15/19 13:50

Lab Sample ID: 440-233700-2

Matrix: Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Di-n-butyl phthalate	ND		21		ug/L		02/19/19 11:42	02/21/19 17:00	1
Di-n-octyl phthalate	ND		21		ug/L		02/19/19 11:42	02/21/19 17:00	1
Fluoranthene	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
Fluorene	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
Hexachlorobenzene	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
Hexachlorobutadiene	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
Hexachlorocyclopentadiene	ND		21		ug/L		02/19/19 11:42	02/21/19 17:00	1
Hexachloroethane	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
Indeno[1,2,3-cd]pyrene	ND		21		ug/L		02/19/19 11:42	02/21/19 17:00	1
Isophorone	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
Naphthalene	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
Nitrobenzene	ND		21		ug/L		02/19/19 11:42	02/21/19 17:00	1
N-Nitrosodimethylamine	ND		21		ug/L		02/19/19 11:42	02/21/19 17:00	1
N-Nitrosodi-n-propylamine	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
N-Nitrosodiphenylamine	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
Pentachlorophenol	ND		21		ug/L		02/19/19 11:42	02/21/19 17:00	1
Phenanthrene	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
Phenol	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1
Pyrene	ND		10		ug/L		02/19/19 11:42	02/21/19 17:00	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*		*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*98*		*40 - 120*		*02/19/19 11:42*	*02/21/19 17:00*	*1*
2-Fluorobiphenyl	*85*		*50 - 120*		*02/19/19 11:42*	*02/21/19 17:00*	*1*
2-Fluorophenol (Surr)	*65*		*30 - 120*		*02/19/19 11:42*	*02/21/19 17:00*	*1*
Nitrobenzene-d5 (Surr)	*80*		*45 - 120*		*02/19/19 11:42*	*02/21/19 17:00*	*1*
Phenol-d6 (Surr)	*65*		*35 - 120*		*02/19/19 11:42*	*02/21/19 17:00*	*1*
Terphenyl-d14 (Surr)	*112*		*10 - 150*		*02/19/19 11:42*	*02/21/19 17:00*	*1*

General Chemistry

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
pH	**8.6**	**HF**	0.1		SU			02/20/19 17:52	1

General Chemistry - Dissolved

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Sulfide, Dissolved	ND	HF	0.050		mg/L		02/19/19 15:46	02/19/19 16:52	1

Method: Field Sampling - Field Sampling

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Field pH	**8.62**				SU			02/15/19 10:10	1
Field Temperature	**16.1**				Celsius			02/15/19 10:10	1

Surrogate Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical -24 hour Compostie

TestAmerica Job ID: 440-233700-1
SDG: Whittier

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

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(70-130)	(80-120)	(76-132)	(80-128)
440-233507-A-7 MS	Matrix Spike	98	95	96	98
440-233507-A-7 MSD	Matrix Spike Duplicate	99	96	97	99
440-233700-2	Grab	97	94	98	103
440-233700-2	Grab	100	91	108	103
440-233700-2 MS	Grab	95	95	100	97
440-233700-2 MSD	Grab	94	96	100	97
LCS 440-529768/5	Lab Control Sample	98	96	97	99
LCS 440-530007/5	Lab Control Sample	96	98	106	98
LCS 440-530007/6	Lab Control Sample	93	93	104	105
MB 440-529768/4	Method Blank	99	94	101	104
MB 440-530007/4	Method Blank	100	95	106	103

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane (Surr)
TOL = Toluene-d8 (Surr)

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

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)					
		TBP	FBP	2FP	NBZ	PHL6	TPHL
Lab Sample ID	Client Sample ID	(40-120)	(50-120)	(30-120)	(45-120)	(35-120)	(10-150)
440-233700-2	Grab	98	85	65	80	65	112
LCS 440-529545/2-A	Lab Control Sample	99	89	58	84	69	101
LCSD 440-529545/3-A	Lab Control Sample Dup	99	91	59	83	72	105
MB 440-529545/1-A	Method Blank	93	89	70	86	74	107

Surrogate Legend

TBP = 2,4,6-Tribromophenol (Surr)
FBP = 2-Fluorobiphenyl
2FP = 2-Fluorophenol (Surr)
NBZ = Nitrobenzene-d5 (Surr)
PHL6 = Phenol-d6 (Surr)
TPHL = Terphenyl-d14 (Surr)

Method: 8270C SIM - 1,4 Dioxane by SIM

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)
		DXE
Lab Sample ID	Client Sample ID	(27-120)
440-233700-2	Grab	67
LCS 440-529541/3-A	Lab Control Sample	56
LCSD 440-529541/4-A	Lab Control Sample Dup	60
MB 440-529541/1-A	Method Blank	59

Surrogate Legend

DXE = 1,4-Dioxane-d8 (Surr)

Method Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical -24 hour Compostie

TestAmerica Job ID: 440-233700-1
SDG: Whittier

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL IRV
8270C	Semivolatile Organic Compounds (GC/MS)	SW846	TAL IRV
8270C SIM	1,4 Dioxane by SIM	SW846	TAL IRV
SM 2540D	Solids, Total Suspended (TSS)	SM	TAL IRV
SM 4500 H+ B	pH	SM	TAL IRV
SM 4500 S2 D	Sulfide, Total	SM	TAL IRV
SM 5220D	COD	SM	TAL IRV
Field Sampling	Field Sampling	EPA	TAL IRV
3520C	Liquid-Liquid Extraction (Continuous)	SW846	TAL IRV
5030B	Purge and Trap	SW846	TAL IRV
SM 4500 S2 B	Sulfide, Separation of Soluble and Insoluble	SM	TAL IRV

Protocol References:

EPA = US Environmental Protection Agency

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: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical -24 hour Compostie

TestAmerica Job ID: 440-233700-1
SDG: Whittier

Client Sample ID: Composite

Lab Sample ID: 440-233700-1
Date Collected: 02/15/19 10:00
Matrix: Water
Date Received: 02/15/19 13:50

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 2540D		1	950 mL	1000 mL	530391	02/22/19 17:10	KM	TAL IRV
Total/NA	Analysis	SM 5220D		1	2.5 mL	2.5 mL	531898	03/01/19 15:56	KYP	TAL IRV

Client Sample ID: Grab

Lab Sample ID: 440-233700-2
Date Collected: 02/15/19 10:10
Matrix: Water
Date Received: 02/15/19 13:50

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	529768	02/20/19 12:48	JB	TAL IRV
Total/NA	Analysis	8260B		1	10 mL	10 mL	530007	02/21/19 09:27	TCN	TAL IRV
Total/NA	Prep	3520C			955 mL	2.0 mL	529545	02/19/19 11:42	AJP	TAL IRV
Total/NA	Analysis	8270C		1			530101	02/21/19 17:00	HN	TAL IRV
Total/NA	Prep	3520C			950 mL	1.0 mL	529541	02/19/19 11:32	AJP	TAL IRV
Total/NA	Analysis	8270C SIM		1			530058	02/21/19 17:14	L1B	TAL IRV
Total/NA	Analysis	SM 4500 H+ B		1			529946	02/20/19 17:52	ST	TAL IRV
Dissolved	Prep	SM 4500 S2 B			7.5 mL	7.5 mL	529631	02/19/19 15:46	KMY	TAL IRV
Dissolved	Analysis	SM 4500 S2 D		1	7.5 mL	7.5 mL	529658	02/19/19 16:52	KMY	TAL IRV
Total/NA	Analysis	Field Sampling		1			529424	02/15/19 10:10	PS	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 440-529768/4
Matrix: Water
Analysis Batch: 529768

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

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
2-Chloroethyl vinyl ether	ND		2.0		ug/L			02/20/19 08:36	1
Acrolein	ND		5.0		ug/L			02/20/19 08:36	1
Acrylonitrile	ND		2.0		ug/L			02/20/19 08:36	1
Total Volatile Organic Compounds	ND		150		ug/L			02/20/19 08:36	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 130*		*02/20/19 08:36*	*1*
4-Bromofluorobenzene (Surr)	*94*		*80 - 120*		*02/20/19 08:36*	*1*
Dibromofluoromethane (Surr)	*101*		*76 - 132*		*02/20/19 08:36*	*1*
Toluene-d8 (Surr)	*104*		*80 - 128*		*02/20/19 08:36*	*1*

Lab Sample ID: LCS 440-529768/5
Matrix: Water
Analysis Batch: 529768

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Chloroethyl vinyl ether	25.0	20.6		ug/L		82	37 - 150
Acrolein	25.0	17.9		ug/L		71	10 - 145
Acrylonitrile	250	210		ug/L		84	48 - 140
Total Volatile Organic Compounds	4730	3580		ug/L		76	60 - 140

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*98*		*70 - 130*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*
Dibromofluoromethane (Surr)	*97*		*76 - 132*
Toluene-d8 (Surr)	*99*		*80 - 128*

Lab Sample ID: 440-233507-A-7 MS
Matrix: Water
Analysis Batch: 529768

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
2-Chloroethyl vinyl ether	ND		250	88.6		ug/L		35	10 - 140
Acrolein	ND		250	207		ug/L		83	10 - 147
Acrylonitrile	ND		2500	2070		ug/L		83	38 - 144
Total Volatile Organic Compounds	ND		47300	36300		ug/L		77	

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*98*		*70 - 130*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*
Dibromofluoromethane (Surr)	*96*		*76 - 132*
Toluene-d8 (Surr)	*98*		*80 - 128*

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

Lab Sample ID: 440-233507-A-7 MSD
Matrix: Water
Analysis Batch: 529768

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
2-Chloroethyl vinyl ether	ND		250	62.1		ug/L		25	10 - 140	35	35
Acrolein	ND		250	201		ug/L		80	10 - 147	3	40
Acrylonitrile	ND		2500	2060		ug/L		82	38 - 144	0	40
Total Volatile Organic Compounds	ND		47300	36300		ug/L		77		0	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*99*		*70 - 130*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*
Dibromofluoromethane (Surr)	*97*		*76 - 132*
Toluene-d8 (Surr)	*99*		*80 - 128*

Lab Sample ID: MB 440-530007/4
Matrix: Water
Analysis Batch: 530007

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

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,1,1,2-Tetrachloroethane	ND		1.0		ug/L			02/21/19 08:09	1
1,1,1-Trichloroethane	ND		1.0		ug/L			02/21/19 08:09	1
1,1,2,2-Tetrachloroethane	ND		1.0		ug/L			02/21/19 08:09	1
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		5.0		ug/L			02/21/19 08:09	1
1,1,2-Trichloroethane	ND		1.0		ug/L			02/21/19 08:09	1
1,1-Dichloroethane	ND		1.0		ug/L			02/21/19 08:09	1
1,1-Dichloroethene	ND		1.0		ug/L			02/21/19 08:09	1
1,1-Dichloropropene	ND		1.0		ug/L			02/21/19 08:09	1
1,2,3-Trichlorobenzene	ND		1.0		ug/L			02/21/19 08:09	1
1,2,3-Trichloropropane	ND		1.0		ug/L			02/21/19 08:09	1
1,2,4-Trichlorobenzene	ND		1.0		ug/L			02/21/19 08:09	1
1,2,4-Trimethylbenzene	ND		1.0		ug/L			02/21/19 08:09	1
1,2-Dibromo-3-Chloropropane	ND		5.0		ug/L			02/21/19 08:09	1
1,2-Dibromoethane (EDB)	ND		1.0		ug/L			02/21/19 08:09	1
1,2-Dichlorobenzene	ND		1.0		ug/L			02/21/19 08:09	1
1,2-Dichloroethane	ND		1.0		ug/L			02/21/19 08:09	1
1,2-Dichloropropane	ND		1.0		ug/L			02/21/19 08:09	1
1,3,5-Trimethylbenzene	ND		1.0		ug/L			02/21/19 08:09	1
1,3-Dichlorobenzene	ND		1.0		ug/L			02/21/19 08:09	1
1,3-Dichloropropane	ND		1.0		ug/L			02/21/19 08:09	1
1,4-Dichlorobenzene	ND		1.0		ug/L			02/21/19 08:09	1
2,2-Dichloropropane	ND		1.0		ug/L			02/21/19 08:09	1
2-Chlorotoluene	ND		1.0		ug/L			02/21/19 08:09	1
4-Chlorotoluene	ND		1.0		ug/L			02/21/19 08:09	1
Acetone	ND		10		ug/L			02/21/19 08:09	1
Benzene	ND		0.50		ug/L			02/21/19 08:09	1
Bromobenzene	ND		1.0		ug/L			02/21/19 08:09	1
Bromochloromethane	ND		1.0		ug/L			02/21/19 08:09	1
Bromodichloromethane	ND		1.0		ug/L			02/21/19 08:09	1
Bromoform	ND		1.0		ug/L			02/21/19 08:09	1
Bromomethane	ND		1.0		ug/L			02/21/19 08:09	1

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

Lab Sample ID: MB 440-530007/4
Matrix: Water
Analysis Batch: 530007

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

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Carbon tetrachloride	ND		0.50	ug/L			02/21/19 08:09	1
Chlorobenzene	ND		1.0	ug/L			02/21/19 08:09	1
Chloroethane	ND		1.0	ug/L			02/21/19 08:09	1
Chloroform	ND		1.0	ug/L			02/21/19 08:09	1
Chloromethane	ND		1.0	ug/L			02/21/19 08:09	1
cis-1,2-Dichloroethene	ND		1.0	ug/L			02/21/19 08:09	1
cis-1,3-Dichloropropene	ND		0.50	ug/L			02/21/19 08:09	1
Dibromochloromethane	ND		1.0	ug/L			02/21/19 08:09	1
Dibromomethane	ND		1.0	ug/L			02/21/19 08:09	1
Dichlorodifluoromethane	ND		1.0	ug/L			02/21/19 08:09	1
Ethylbenzene	ND		1.0	ug/L			02/21/19 08:09	1
Hexachlorobutadiene	ND		1.0	ug/L			02/21/19 08:09	1
Isopropyl alcohol	ND		250	ug/L			02/21/19 08:09	1
Isopropylbenzene	ND		1.0	ug/L			02/21/19 08:09	1
m,p-Xylene	ND		1.0	ug/L			02/21/19 08:09	1
Methylene Chloride	ND		5.0	ug/L			02/21/19 08:09	1
Methyl-t-Butyl Ether (MTBE)	ND		1.0	ug/L			02/21/19 08:09	1
Naphthalene	ND		1.0	ug/L			02/21/19 08:09	1
n-Butylbenzene	ND		1.0	ug/L			02/21/19 08:09	1
N-Propylbenzene	ND		1.0	ug/L			02/21/19 08:09	1
o-Xylene	ND		1.0	ug/L			02/21/19 08:09	1
p-Isopropyltoluene	ND		1.0	ug/L			02/21/19 08:09	1
sec-Butylbenzene	ND		1.0	ug/L			02/21/19 08:09	1
Styrene	ND		1.0	ug/L			02/21/19 08:09	1
tert-Butylbenzene	ND		1.0	ug/L			02/21/19 08:09	1
Tetrachloroethene	ND		1.0	ug/L			02/21/19 08:09	1
Toluene	ND		1.0	ug/L			02/21/19 08:09	1
trans-1,2-Dichloroethene	ND		1.0	ug/L			02/21/19 08:09	1
trans-1,3-Dichloropropene	ND		0.50	ug/L			02/21/19 08:09	1
Trichloroethene	ND		1.0	ug/L			02/21/19 08:09	1
Trichlorofluoromethane	ND		1.0	ug/L			02/21/19 08:09	1
Vinyl chloride	ND		0.50	ug/L			02/21/19 08:09	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*100*		*70 - 130*		*02/21/19 08:09*	*1*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*		*02/21/19 08:09*	*1*
Dibromofluoromethane (Surr)	*106*		*76 - 132*		*02/21/19 08:09*	*1*
Toluene-d8 (Surr)	*103*		*80 - 128*		*02/21/19 08:09*	*1*

Lab Sample ID: LCS 440-530007/5
Matrix: Water
Analysis Batch: 530007

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	25.0		ug/L		100	60 - 141
1,1,1-Trichloroethane	25.0	25.7		ug/L		103	70 - 130
1,1,2,2-Tetrachloroethane	25.0	25.8		ug/L		103	63 - 130

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

Lab Sample ID: LCS 440-530007/5
Matrix: Water
Analysis Batch: 530007

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,2-Trichloro-1,2,2-trifluoroethane	25.0	23.1		ug/L		92	60 - 140
1,1,2-Trichloroethane	25.0	23.6		ug/L		94	70 - 130
1,1-Dichloroethane	25.0	25.7		ug/L		103	64 - 130
1,1-Dichloroethene	25.0	24.3		ug/L		97	70 - 130
1,1-Dichloropropene	25.0	27.8		ug/L		111	70 - 130
1,2,3-Trichlorobenzene	25.0	30.6		ug/L		123	60 - 140
1,2,3-Trichloropropane	25.0	26.6		ug/L		106	63 - 130
1,2,4-Trichlorobenzene	25.0	34.4		ug/L		137	60 - 140
1,2,4-Trimethylbenzene	25.0	28.0		ug/L		112	70 - 135
1,2-Dibromo-3-Chloropropane	25.0	25.9		ug/L		103	52 - 140
1,2-Dibromoethane (EDB)	25.0	24.9		ug/L		99	70 - 130
1,2-Dichlorobenzene	25.0	29.3		ug/L		117	70 - 130
1,2-Dichloroethane	25.0	26.0		ug/L		104	57 - 138
1,2-Dichloropropane	25.0	26.6		ug/L		106	67 - 130
1,3,5-Trimethylbenzene	25.0	27.1		ug/L		109	70 - 136
1,3-Dichlorobenzene	25.0	28.8		ug/L		115	70 - 130
1,3-Dichloropropane	25.0	23.4		ug/L		94	70 - 130
1,4-Dichlorobenzene	25.0	27.0		ug/L		108	70 - 130
2,2-Dichloropropane	25.0	31.5		ug/L		126	68 - 141
2-Chlorotoluene	25.0	25.6		ug/L		102	70 - 130
4-Chlorotoluene	25.0	28.3		ug/L		113	70 - 130
Acetone	25.0	22.9		ug/L		92	10 - 150
Benzene	25.0	26.5		ug/L		106	68 - 130
Bromobenzene	25.0	25.4		ug/L		102	70 - 130
Bromochloromethane	25.0	27.6		ug/L		110	70 - 130
Bromodichloromethane	25.0	26.6		ug/L		106	70 - 132
Bromoform	25.0	25.8		ug/L		103	60 - 148
Bromomethane	25.0	21.8		ug/L		87	64 - 139
Carbon tetrachloride	25.0	25.2		ug/L		101	60 - 150
Chlorobenzene	25.0	24.6		ug/L		98	70 - 130
Chloroethane	25.0	22.0		ug/L		88	64 - 135
Chloroform	25.0	25.4		ug/L		102	70 - 130
Chloromethane	25.0	22.1		ug/L		88	47 - 140
cis-1,2-Dichloroethene	25.0	28.5		ug/L		114	70 - 133
cis-1,3-Dichloropropene	25.0	27.3		ug/L		109	70 - 133
Dibromochloromethane	25.0	25.8		ug/L		103	69 - 145
Dibromomethane	25.0	26.7		ug/L		107	70 - 130
Dichlorodifluoromethane	25.0	20.9		ug/L		83	29 - 150
Ethylbenzene	25.0	27.3		ug/L		109	70 - 130
Hexachlorobutadiene	25.0	30.5		ug/L		122	10 - 150
Isopropylbenzene	25.0	27.0		ug/L		108	70 - 136
m,p-Xylene	25.0	26.1		ug/L		104	70 - 130
Methylene Chloride	25.0	22.6		ug/L		90	52 - 130
Methyl-t-Butyl Ether (MTBE)	25.0	28.4		ug/L		113	63 - 131
Naphthalene	25.0	28.1		ug/L		112	60 - 140
n-Butylbenzene	25.0	29.7		ug/L		119	65 - 150
N-Propylbenzene	25.0	29.2		ug/L		117	67 - 139

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

Lab Sample ID: LCS 440-530007/5
Matrix: Water
Analysis Batch: 530007

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
o-Xylene	25.0	25.5		ug/L		102	70 - 130
p-Isopropyltoluene	25.0	31.0		ug/L		124	70 - 132
sec-Butylbenzene	25.0	26.9		ug/L		108	70 - 138
Styrene	25.0	24.6		ug/L		98	70 - 134
tert-Butylbenzene	25.0	27.1		ug/L		108	70 - 130
Tetrachloroethene	25.0	24.8		ug/L		99	70 - 130
Toluene	25.0	26.6		ug/L		106	70 - 130
trans-1,2-Dichloroethene	25.0	27.7		ug/L		111	70 - 130
trans-1,3-Dichloropropene	25.0	24.2		ug/L		97	70 - 132
Trichloroethene	25.0	27.6		ug/L		111	70 - 130
Trichlorofluoromethane	25.0	22.5		ug/L		90	60 - 150
Vinyl chloride	25.0	20.8		ug/L		83	59 - 133

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*96*		*70 - 130*
4-Bromofluorobenzene (Surr)	*98*		*80 - 120*
Dibromofluoromethane (Surr)	*106*		*76 - 132*
Toluene-d8 (Surr)	*98*		*80 - 128*

Lab Sample ID: LCS 440-530007/6
Matrix: Water
Analysis Batch: 530007

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Isopropyl alcohol	250	239	J	ug/L		96	49 - 142

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*93*		*70 - 130*
4-Bromofluorobenzene (Surr)	*93*		*80 - 120*
Dibromofluoromethane (Surr)	*104*		*76 - 132*
Toluene-d8 (Surr)	*105*		*80 - 128*

Lab Sample ID: 440-233700-2 MS
Matrix: Water
Analysis Batch: 530007

Client Sample ID: Grab
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1,2-Tetrachloroethane	ND		25.0	24.9		ug/L		99	60 - 149
1,1,1-Trichloroethane	ND		25.0	26.3		ug/L		105	70 - 130
1,1,2,2-Tetrachloroethane	ND		25.0	23.7		ug/L		95	63 - 130
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		25.0	23.9		ug/L		96	60 - 140
1,1,2-Trichloroethane	ND		25.0	23.1		ug/L		92	70 - 130
1,1-Dichloroethane	ND		25.0	25.9		ug/L		104	65 - 130
1,1-Dichloroethene	ND		25.0	25.5		ug/L		102	70 - 130
1,1-Dichloropropene	ND		25.0	30.3		ug/L		121	64 - 130
1,2,3-Trichlorobenzene	ND		25.0	28.4		ug/L		114	60 - 140
1,2,3-Trichloropropane	ND		25.0	23.9		ug/L		96	60 - 130

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

Lab Sample ID: 440-233700-2 MS
Matrix: Water
Analysis Batch: 530007

Client Sample ID: Grab
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	ND		25.0	33.7		ug/L		135	60 - 140
1,2,4-Trimethylbenzene	ND		25.0	27.1		ug/L		109	70 - 130
1,2-Dibromo-3-Chloropropane	ND		25.0	22.9		ug/L		92	48 - 140
1,2-Dibromoethane (EDB)	ND		25.0	23.9		ug/L		96	70 - 131
1,2-Dichlorobenzene	ND		25.0	28.5		ug/L		114	70 - 130
1,2-Dichloroethane	ND		25.0	26.2		ug/L		105	56 - 146
1,2-Dichloropropane	ND		25.0	27.7		ug/L		111	69 - 130
1,3,5-Trimethylbenzene	ND		25.0	26.4		ug/L		106	70 - 130
1,3-Dichlorobenzene	ND		25.0	27.8		ug/L		111	70 - 130
1,3-Dichloropropane	ND		25.0	23.3		ug/L		93	70 - 130
1,4-Dichlorobenzene	ND		25.0	25.7		ug/L		103	70 - 130
2,2-Dichloropropane	ND		25.0	32.5		ug/L		130	69 - 138
2-Chlorotoluene	ND		25.0	25.2		ug/L		101	70 - 130
4-Chlorotoluene	ND		25.0	27.5		ug/L		110	70 - 130
Acetone	ND		25.0	32.5		ug/L		130	10 - 150
Benzene	ND		25.0	27.5		ug/L		110	66 - 130
Bromobenzene	ND		25.0	24.5		ug/L		98	70 - 130
Bromochloromethane	ND		25.0	27.3		ug/L		109	70 - 130
Bromodichloromethane	ND		25.0	27.3		ug/L		109	70 - 138
Bromoform	ND		25.0	25.3		ug/L		101	59 - 150
Bromomethane	ND		25.0	22.5		ug/L		90	62 - 131
Carbon tetrachloride	ND		25.0	26.0		ug/L		104	60 - 150
Chlorobenzene	ND		25.0	25.0		ug/L		100	70 - 130
Chloroethane	ND		25.0	22.2		ug/L		89	68 - 130
Chloroform	ND		25.0	25.9		ug/L		104	70 - 130
Chloromethane	ND		25.0	22.2		ug/L		89	39 - 144
cis-1,2-Dichloroethene	ND		25.0	29.4		ug/L		118	70 - 130
cis-1,3-Dichloropropene	ND		25.0	27.6		ug/L		110	70 - 133
Dibromochloromethane	ND		25.0	25.1		ug/L		100	70 - 148
Dibromomethane	ND		25.0	26.6		ug/L		106	70 - 130
Dichlorodifluoromethane	ND		25.0	21.2		ug/L		85	25 - 142
Ethylbenzene	ND		25.0	28.1		ug/L		113	70 - 130
Hexachlorobutadiene	ND		25.0	30.0		ug/L		120	10 - 150
Isopropyl alcohol	ND		250	251		ug/L		101	46 - 142
Isopropylbenzene	ND		25.0	27.0		ug/L		108	70 - 132
m,p-Xylene	ND		25.0	25.7		ug/L		103	70 - 133
Methylene Chloride	ND		25.0	23.7		ug/L		95	52 - 130
Methyl-t-Butyl Ether (MTBE)	ND		25.0	28.7		ug/L		115	70 - 130
Naphthalene	ND		25.0	26.5		ug/L		106	60 - 140
n-Butylbenzene	ND		25.0	29.0		ug/L		116	61 - 149
N-Propylbenzene	ND		25.0	28.5		ug/L		114	66 - 135
o-Xylene	ND		25.0	25.9		ug/L		104	70 - 133
p-Isopropyltoluene	ND		25.0	30.1		ug/L		120	70 - 130
sec-Butylbenzene	ND		25.0	26.1		ug/L		104	67 - 134
Styrene	ND		25.0	25.3		ug/L		101	29 - 150
tert-Butylbenzene	ND		25.0	25.8		ug/L		103	70 - 130
Tetrachloroethene	ND		25.0	26.1		ug/L		104	70 - 137
Toluene	ND		25.0	27.5		ug/L		110	70 - 130

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

Lab Sample ID: 440-233700-2 MS
Matrix: Water
Analysis Batch: 530007

Client Sample ID: Grab
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
trans-1,2-Dichloroethene	ND		25.0	29.2		ug/L		117	70 - 130
trans-1,3-Dichloropropene	ND		25.0	24.7		ug/L		99	70 - 138
Trichloroethene	ND		25.0	28.5		ug/L		114	70 - 130
Trichlorofluoromethane	ND		25.0	22.4		ug/L		90	60 - 150
Vinyl chloride	ND		25.0	21.1		ug/L		84	50 - 137

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*95*		*70 - 130*
4-Bromofluorobenzene (Surr)	*95*		*80 - 120*
Dibromofluoromethane (Surr)	*100*		*76 - 132*
Toluene-d8 (Surr)	*97*		*80 - 128*

Lab Sample ID: 440-233700-2 MSD
Matrix: Water
Analysis Batch: 530007

Client Sample ID: Grab
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,1,1,2-Tetrachloroethane	ND		25.0	25.1		ug/L		100	60 - 149	1	20
1,1,1-Trichloroethane	ND		25.0	26.7		ug/L		107	70 - 130	1	20
1,1,2,2-Tetrachloroethane	ND		25.0	24.2		ug/L		97	63 - 130	2	30
1,1,2-Trichloro-1,2,2-trifluoroethane	ND		25.0	24.5		ug/L		98	60 - 140	2	20
1,1,2-Trichloroethane	ND		25.0	23.1		ug/L		93	70 - 130	0	25
1,1-Dichloroethane	ND		25.0	25.9		ug/L		104	65 - 130	0	20
1,1-Dichloroethene	ND		25.0	26.3		ug/L		105	70 - 130	3	20
1,1-Dichloropropene	ND		25.0	30.7		ug/L		123	64 - 130	1	20
1,2,3-Trichlorobenzene	ND		25.0	29.4		ug/L		118	60 - 140	3	20
1,2,3-Trichloropropane	ND		25.0	25.6		ug/L		102	60 - 130	7	30
1,2,4-Trichlorobenzene	ND		25.0	34.8		ug/L		139	60 - 140	3	20
1,2,4-Trimethylbenzene	ND		25.0	27.6		ug/L		110	70 - 130	2	25
1,2-Dibromo-3-Chloropropane	ND		25.0	23.9		ug/L		95	48 - 140	4	30
1,2-Dibromoethane (EDB)	ND		25.0	23.6		ug/L		95	70 - 131	1	25
1,2-Dichlorobenzene	ND		25.0	28.8		ug/L		115	70 - 130	1	20
1,2-Dichloroethane	ND		25.0	26.3		ug/L		105	56 - 146	1	20
1,2-Dichloropropane	ND		25.0	27.1		ug/L		108	69 - 130	2	20
1,3,5-Trimethylbenzene	ND		25.0	27.1		ug/L		108	70 - 130	2	20
1,3-Dichlorobenzene	ND		25.0	28.0		ug/L		112	70 - 130	1	20
1,3-Dichloropropane	ND		25.0	23.2		ug/L		93	70 - 130	1	25
1,4-Dichlorobenzene	ND		25.0	26.2		ug/L		105	70 - 130	2	20
2,2-Dichloropropane	ND		25.0	33.8		ug/L		135	69 - 138	4	25
2-Chlorotoluene	ND		25.0	25.7		ug/L		103	70 - 130	2	20
4-Chlorotoluene	ND		25.0	27.7		ug/L		111	70 - 130	1	20
Acetone	ND		25.0	32.9		ug/L		132	10 - 150	1	35
Benzene	ND		25.0	28.0		ug/L		112	66 - 130	2	20
Bromobenzene	ND		25.0	24.7		ug/L		99	70 - 130	1	20
Bromochloromethane	ND		25.0	26.9		ug/L		108	70 - 130	1	25
Bromodichloromethane	ND		25.0	27.3		ug/L		109	70 - 138	0	20
Bromoform	ND		25.0	24.7		ug/L		99	59 - 150	3	25

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

Lab Sample ID: 440-233700-2 MSD
Matrix: Water
Analysis Batch: 530007

Client Sample ID: Grab
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Bromomethane	ND		25.0	22.9		ug/L		92	62 - 131	2	25
Carbon tetrachloride	ND		25.0	26.6		ug/L		106	60 - 150	2	25
Chlorobenzene	ND		25.0	24.8		ug/L		99	70 - 130	1	20
Chloroethane	ND		25.0	22.3		ug/L		89	68 - 130	1	25
Chloroform	ND		25.0	25.9		ug/L		104	70 - 130	0	20
Chloromethane	ND		25.0	22.9		ug/L		92	39 - 144	3	25
cis-1,2-Dichloroethene	ND		25.0	29.0		ug/L		116	70 - 130	1	20
cis-1,3-Dichloropropene	ND		25.0	27.8		ug/L		111	70 - 133	1	20
Dibromochloromethane	ND		25.0	25.0		ug/L		100	70 - 148	0	25
Dibromomethane	ND		25.0	26.3		ug/L		105	70 - 130	1	25
Dichlorodifluoromethane	ND		25.0	22.0		ug/L		88	25 - 142	3	30
Ethylbenzene	ND		25.0	28.3		ug/L		113	70 - 130	0	20
Hexachlorobutadiene	ND		25.0	31.3		ug/L		125	10 - 150	4	20
Isopropyl alcohol	ND		250	291		ug/L		116	46 - 142	14	40
Isopropylbenzene	ND		25.0	27.4		ug/L		110	70 - 132	2	20
m,p-Xylene	ND		25.0	26.4		ug/L		105	70 - 133	2	25
Methylene Chloride	ND		25.0	23.9		ug/L		96	52 - 130	1	20
Methyl-t-Butyl Ether (MTBE)	ND		25.0	28.1		ug/L		112	70 - 130	2	25
Naphthalene	ND		25.0	27.6		ug/L		110	60 - 140	4	30
n-Butylbenzene	ND		25.0	29.7		ug/L		119	61 - 149	2	20
N-Propylbenzene	ND		25.0	29.1		ug/L		116	66 - 135	2	20
o-Xylene	ND		25.0	26.1		ug/L		104	70 - 133	1	20
p-Isopropyltoluene	ND		25.0	30.7		ug/L		123	70 - 130	2	20
sec-Butylbenzene	ND		25.0	26.5		ug/L		106	67 - 134	2	20
Styrene	ND		25.0	24.8		ug/L		99	29 - 150	2	35
tert-Butylbenzene	ND		25.0	26.7		ug/L		107	70 - 130	3	20
Tetrachloroethene	ND		25.0	25.8		ug/L		103	70 - 137	1	20
Toluene	ND		25.0	27.4		ug/L		110	70 - 130	0	20
trans-1,2-Dichloroethene	ND		25.0	28.9		ug/L		116	70 - 130	1	20
trans-1,3-Dichloropropene	ND		25.0	24.2		ug/L		97	70 - 138	2	25
Trichloroethene	ND		25.0	28.6		ug/L		114	70 - 130	0	20
Trichlorofluoromethane	ND		25.0	23.1		ug/L		92	60 - 150	3	25
Vinyl chloride	ND		25.0	21.6		ug/L		87	50 - 137	2	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*94*		*70 - 130*
4-Bromofluorobenzene (Surr)	*96*		*80 - 120*
Dibromofluoromethane (Surr)	*100*		*76 - 132*
Toluene-d8 (Surr)	*97*		*80 - 128*

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

Lab Sample ID: MB 440-529545/1-A
Matrix: Water
Analysis Batch: 530101

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 529545

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	ND		10		ug/L		02/19/19 11:42	02/21/19 13:35	1

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

Lab Sample ID: MB 440-529545/1-A
Matrix: Water
Analysis Batch: 530101

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 529545

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,2-Dichlorobenzene	ND		10		ug/L		02/19/19 11:42	02/21/19 13:35	1
1,2-Diphenylhydrazine(as Azobenzene)	ND		20		ug/L		02/19/19 11:42	02/21/19 13:35	1
1,3-Dichlorobenzene	ND		10		ug/L		02/19/19 11:42	02/21/19 13:35	1
1,4-Dichlorobenzene	ND		10		ug/L		02/19/19 11:42	02/21/19 13:35	1
2,4,5-Trichlorophenol	ND		20		ug/L		02/19/19 11:42	02/21/19 13:35	1
2,4,6-Trichlorophenol	ND		20		ug/L		02/19/19 11:42	02/21/19 13:35	1
2,4-Dichlorophenol	ND		10		ug/L		02/19/19 11:42	02/21/19 13:35	1
2,4-Dimethylphenol	ND		20		ug/L		02/19/19 11:42	02/21/19 13:35	1
2,4-Dinitrophenol	ND		40		ug/L		02/19/19 11:42	02/21/19 13:35	1
2,4-Dinitrotoluene	ND		10		ug/L		02/19/19 11:42	02/21/19 13:35	1
2,6-Dinitrotoluene	ND		10		ug/L		02/19/19 11:42	02/21/19 13:35	1
2-Chloronaphthalene	ND		10		ug/L		02/19/19 11:42	02/21/19 13:35	1
2-Chlorophenol	ND		10		ug/L		02/19/19 11:42	02/21/19 13:35	1
2-Methylnaphthalene	ND		10		ug/L		02/19/19 11:42	02/21/19 13:35	1
2-Methylphenol	ND		10		ug/L		02/19/19 11:42	02/21/19 13:35	1
2-Nitroaniline	ND		20		ug/L		02/19/19 11:42	02/21/19 13:35	1
2-Nitrophenol	ND		10		ug/L		02/19/19 11:42	02/21/19 13:35	1
3,3'-Dichlorobenzidine	ND		40		ug/L		02/19/19 11:42	02/21/19 13:35	1
3-Methylphenol + 4-Methylphenol	ND		10		ug/L		02/19/19 11:42	02/21/19 13:35	1
3-Nitroaniline	ND		20		ug/L		02/19/19 11:42	02/21/19 13:35	1
4,6-Dinitro-2-methylphenol	ND		20		ug/L		02/19/19 11:42	02/21/19 13:35	1
4-Bromophenyl phenyl ether	ND		10		ug/L		02/19/19 11:42	02/21/19 13:35	1
4-Chloro-3-methylphenol	ND		20		ug/L		02/19/19 11:42	02/21/19 13:35	1
4-Chloroaniline	ND		10		ug/L		02/19/19 11:42	02/21/19 13:35	1
4-Chlorophenyl phenyl ether	ND		10		ug/L		02/19/19 11:42	02/21/19 13:35	1
4-Nitroaniline	ND		20		ug/L		02/19/19 11:42	02/21/19 13:35	1
4-Nitrophenol	ND		20		ug/L		02/19/19 11:42	02/21/19 13:35	1
Acenaphthene	ND		10		ug/L		02/19/19 11:42	02/21/19 13:35	1
Acenaphthylene	ND		10		ug/L		02/19/19 11:42	02/21/19 13:35	1
Aniline	ND		10		ug/L		02/19/19 11:42	02/21/19 13:35	1
Anthracene	ND		10		ug/L		02/19/19 11:42	02/21/19 13:35	1
Benzidine	ND		40		ug/L		02/19/19 11:42	02/21/19 13:35	1
Benzo[a]anthracene	ND		10		ug/L		02/19/19 11:42	02/21/19 13:35	1
Benzo[a]pyrene	ND		10		ug/L		02/19/19 11:42	02/21/19 13:35	1
Benzo[b]fluoranthene	ND		10		ug/L		02/19/19 11:42	02/21/19 13:35	1
Benzo[g,h,i]perylene	ND		10		ug/L		02/19/19 11:42	02/21/19 13:35	1
Benzo[k]fluoranthene	ND		10		ug/L		02/19/19 11:42	02/21/19 13:35	1
Benzoic acid	ND		20		ug/L		02/19/19 11:42	02/21/19 13:35	1
Benzyl alcohol	ND		20		ug/L		02/19/19 11:42	02/21/19 13:35	1
bis (2-chloroisopropyl) ether	ND		10		ug/L		02/19/19 11:42	02/21/19 13:35	1
Bis(2-chloroethoxy)methane	ND		10		ug/L		02/19/19 11:42	02/21/19 13:35	1
Bis(2-chloroethyl)ether	ND		10		ug/L		02/19/19 11:42	02/21/19 13:35	1
Bis(2-ethylhexyl) phthalate	ND		20		ug/L		02/19/19 11:42	02/21/19 13:35	1
Butyl benzyl phthalate	ND		20		ug/L		02/19/19 11:42	02/21/19 13:35	1
Chrysene	ND		10		ug/L		02/19/19 11:42	02/21/19 13:35	1
Dibenz(a,h)anthracene	ND		20		ug/L		02/19/19 11:42	02/21/19 13:35	1
Dibenzofuran	ND		10		ug/L		02/19/19 11:42	02/21/19 13:35	1

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

Lab Sample ID: MB 440-529545/1-A
Matrix: Water
Analysis Batch: 530101

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 529545

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Diethyl phthalate	ND		10	ug/L		02/19/19 11:42	02/21/19 13:35	1
Dimethyl phthalate	ND		10	ug/L		02/19/19 11:42	02/21/19 13:35	1
Di-n-butyl phthalate	ND		20	ug/L		02/19/19 11:42	02/21/19 13:35	1
Di-n-octyl phthalate	ND		20	ug/L		02/19/19 11:42	02/21/19 13:35	1
Fluoranthene	ND		10	ug/L		02/19/19 11:42	02/21/19 13:35	1
Fluorene	ND		10	ug/L		02/19/19 11:42	02/21/19 13:35	1
Hexachlorobenzene	ND		10	ug/L		02/19/19 11:42	02/21/19 13:35	1
Hexachlorobutadiene	ND		10	ug/L		02/19/19 11:42	02/21/19 13:35	1
Hexachlorocyclopentadiene	ND		20	ug/L		02/19/19 11:42	02/21/19 13:35	1
Hexachloroethane	ND		10	ug/L		02/19/19 11:42	02/21/19 13:35	1
Indeno[1,2,3-cd]pyrene	ND		20	ug/L		02/19/19 11:42	02/21/19 13:35	1
Isophorone	ND		10	ug/L		02/19/19 11:42	02/21/19 13:35	1
Naphthalene	ND		10	ug/L		02/19/19 11:42	02/21/19 13:35	1
Nitrobenzene	ND		20	ug/L		02/19/19 11:42	02/21/19 13:35	1
N-Nitrosodimethylamine	ND		20	ug/L		02/19/19 11:42	02/21/19 13:35	1
N-Nitrosodi-n-propylamine	ND		10	ug/L		02/19/19 11:42	02/21/19 13:35	1
N-Nitrosodiphenylamine	ND		10	ug/L		02/19/19 11:42	02/21/19 13:35	1
Pentachlorophenol	ND		20	ug/L		02/19/19 11:42	02/21/19 13:35	1
Phenanthrene	ND		10	ug/L		02/19/19 11:42	02/21/19 13:35	1
Phenol	ND		10	ug/L		02/19/19 11:42	02/21/19 13:35	1
Pyrene	ND		10	ug/L		02/19/19 11:42	02/21/19 13:35	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2,4,6-Tribromophenol (Surr)	*93*		*40 - 120*	*02/19/19 11:42*	*02/21/19 13:35*	*1*
2-Fluorobiphenyl	*89*		*50 - 120*	*02/19/19 11:42*	*02/21/19 13:35*	*1*
2-Fluorophenol (Surr)	*70*		*30 - 120*	*02/19/19 11:42*	*02/21/19 13:35*	*1*
Nitrobenzene-d5 (Surr)	*86*		*45 - 120*	*02/19/19 11:42*	*02/21/19 13:35*	*1*
Phenol-d6 (Surr)	*74*		*35 - 120*	*02/19/19 11:42*	*02/21/19 13:35*	*1*
Terphenyl-d14 (Surr)	*107*		*10 - 150*	*02/19/19 11:42*	*02/21/19 13:35*	*1*

Lab Sample ID: LCS 440-529545/2-A
Matrix: Water
Analysis Batch: 530101

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 529545

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
1,2,4-Trichlorobenzene	100	70.9		ug/L		71	25 - 84
1,2-Dichlorobenzene	100	64.3		ug/L		64	24 - 85
1,2-Diphenylhydrazine(as Azobenzene)	100	102		ug/L		102	44 - 113
1,3-Dichlorobenzene	100	62.0		ug/L		62	20 - 80
1,4-Dichlorobenzene	100	60.3		ug/L		60	22 - 81
2,4,5-Trichlorophenol	100	95.4		ug/L		95	24 - 121
2,4,6-Trichlorophenol	100	95.6		ug/L		96	20 - 121
2,4-Dichlorophenol	100	87.3		ug/L		87	23 - 113
2,4-Dimethylphenol	100	82.0		ug/L		82	39 - 94
2,4-Dinitrophenol	200	189		ug/L		95	23 - 134
2,4-Dinitrotoluene	100	105		ug/L		105	54 - 115
2,6-Dinitrotoluene	100	98.4		ug/L		98	50 - 115

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

Lab Sample ID: LCS 440-529545/2-A
Matrix: Water
Analysis Batch: 530101

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 529545

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2-Chloronaphthalene	100	86.4		ug/L		86	34 - 102
2-Chlorophenol	100	67.2		ug/L		67	20 - 106
2-Methylnaphthalene	100	85.1		ug/L		85	34 - 98
2-Methylphenol	100	83.2		ug/L		83	36 - 103
2-Nitroaniline	100	104		ug/L		104	48 - 111
2-Nitrophenol	100	85.8		ug/L		86	20 - 117
3,3'-Dichlorobenzidine	100	72.0		ug/L		72	22 - 97
3-Methylphenol + 4-Methylphenol	100	84.8		ug/L		85	35 - 106
3-Nitroaniline	100	70.1		ug/L		70	51 - 116
4,6-Dinitro-2-methylphenol	200	216		ug/L		108	28 - 139
4-Bromophenyl phenyl ether	100	92.8		ug/L		93	42 - 113
4-Chloro-3-methylphenol	100	97.2		ug/L		97	44 - 110
4-Chloroaniline	100	76.1		ug/L		76	42 - 109
4-Chlorophenyl phenyl ether	100	95.6		ug/L		96	38 - 115
4-Nitroaniline	100	115		ug/L		115	50 - 116
4-Nitrophenol	200	189		ug/L		95	26 - 132
Acenaphthene	100	92.9		ug/L		93	37 - 107
Acenaphthylene	100	92.5		ug/L		92	39 - 107
Aniline	100	81.6		ug/L		82	27 - 115
Anthracene	100	95.4		ug/L		95	42 - 120
Benzidine	100	29.0	J	ug/L		29	5 - 150
Benzo[a]anthracene	100	89.2		ug/L		89	42 - 115
Benzo[a]pyrene	100	97.5		ug/L		98	41 - 117
Benzo[b]fluoranthene	100	96.1		ug/L		96	36 - 113
Benzo[g,h,i]perylene	100	93.2		ug/L		93	37 - 115
Benzo[k]fluoranthene	100	95.1		ug/L		95	42 - 122
Benzoic acid	100	88.2		ug/L		88	15 - 121
Benzyl alcohol	100	81.5		ug/L		81	39 - 106
bis (2-chloroisopropyl) ether	100	76.2		ug/L		76	38 - 104
Bis(2-chloroethoxy)methane	100	89.7		ug/L		90	47 - 104
Bis(2-chloroethyl)ether	100	74.6		ug/L		75	42 - 99
Bis(2-ethylhexyl) phthalate	100	97.0		ug/L		97	43 - 124
Butyl benzyl phthalate	100	99.6		ug/L		100	44 - 122
Chrysene	100	93.3		ug/L		93	42 - 118
Dibenz(a,h)anthracene	100	95.6		ug/L		96	40 - 114
Dibenzofuran	100	96.4		ug/L		96	37 - 113
Diethyl phthalate	100	100		ug/L		100	51 - 120
Dimethyl phthalate	100	100		ug/L		100	49 - 113
Di-n-butyl phthalate	100	96.2		ug/L		96	47 - 125
Di-n-octyl phthalate	100	98.1		ug/L		98	42 - 125
Fluoranthene	100	93.9		ug/L		94	44 - 119
Fluorene	100	97.3		ug/L		97	39 - 116
Hexachlorobenzene	100	93.2		ug/L		93	43 - 112
Hexachlorobutadiene	100	62.5		ug/L		62	14 - 77
Hexachlorocyclopentadiene	100	52.0		ug/L		52	10 - 77
Hexachloroethane	100	57.2		ug/L		57	13 - 75
Indeno[1,2,3-cd]pyrene	100	95.8		ug/L		96	35 - 116
Isophorone	100	94.6		ug/L		95	48 - 107

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

Lab Sample ID: LCS 440-529545/2-A
Matrix: Water
Analysis Batch: 530101

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 529545

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Naphthalene	100	76.8		ug/L		77	33 - 95
Nitrobenzene	100	79.9		ug/L		80	42 - 99
N-Nitrosodimethylamine	100	67.7		ug/L		68	35 - 96
N-Nitrosodi-n-propylamine	100	93.1		ug/L		93	44 - 111
N-Nitrosodiphenylamine	100	95.3		ug/L		95	46 - 116
Pentachlorophenol	200	178		ug/L		89	26 - 136
Phenanthrene	100	94.0		ug/L		94	43 - 120
Phenol	100	68.1		ug/L		68	25 - 99
Pyrene	100	97.3		ug/L		97	43 - 119

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*99*		*40 - 120*
2-Fluorobiphenyl	*89*		*50 - 120*
2-Fluorophenol (Surr)	*58*		*30 - 120*
Nitrobenzene-d5 (Surr)	*84*		*45 - 120*
Phenol-d6 (Surr)	*69*		*35 - 120*
Terphenyl-d14 (Surr)	*101*		*10 - 150*

Lab Sample ID: LCSD 440-529545/3-A
Matrix: Water
Analysis Batch: 530101

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 529545

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,2,4-Trichlorobenzene	100	73.4		ug/L		73	25 - 84	3	35
1,2-Dichlorobenzene	100	67.8		ug/L		68	24 - 85	5	35
1,2-Diphenylhydrazine(as Azobenzene)	100	105		ug/L		105	44 - 113	3	35
1,3-Dichlorobenzene	100	64.4		ug/L		64	20 - 80	4	35
1,4-Dichlorobenzene	100	61.7		ug/L		62	22 - 81	2	35
2,4,5-Trichlorophenol	100	96.9		ug/L		97	24 - 121	2	35
2,4,6-Trichlorophenol	100	96.0		ug/L		96	20 - 121	0	35
2,4-Dichlorophenol	100	88.3		ug/L		88	23 - 113	1	35
2,4-Dimethylphenol	100	82.8		ug/L		83	39 - 94	1	35
2,4-Dinitrophenol	200	182		ug/L		91	23 - 134	4	35
2,4-Dinitrotoluene	100	109		ug/L		109	54 - 115	4	35
2,6-Dinitrotoluene	100	99.5		ug/L		99	50 - 115	1	35
2-Chloronaphthalene	100	90.9		ug/L		91	34 - 102	5	35
2-Chlorophenol	100	72.3		ug/L		72	20 - 106	7	35
2-Methylnaphthalene	100	87.4		ug/L		87	34 - 98	3	35
2-Methylphenol	100	84.1		ug/L		84	36 - 103	1	35
2-Nitroaniline	100	105		ug/L		105	48 - 111	1	35
2-Nitrophenol	100	84.6		ug/L		85	20 - 117	1	35
3,3'-Dichlorobenzidine	100	86.9		ug/L		87	22 - 97	19	35
3-Methylphenol + 4-Methylphenol	100	86.1		ug/L		86	35 - 106	2	35
3-Nitroaniline	100	75.2		ug/L		75	51 - 116	7	35
4,6-Dinitro-2-methylphenol	200	245		ug/L		122	28 - 139	12	35
4-Bromophenyl phenyl ether	100	94.4		ug/L		94	42 - 113	2	35
4-Chloro-3-methylphenol	100	99.9		ug/L		100	44 - 110	3	35

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

Lab Sample ID: LCSD 440-529545/3-A
Matrix: Water
Analysis Batch: 530101

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 529545

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
4-Chloroaniline			100	78.9		ug/L		79	42 - 109	4	35
4-Chlorophenyl phenyl ether			100	94.8		ug/L		95	38 - 115	1	35
4-Nitroaniline			100	116		ug/L		116	50 - 116	1	35
4-Nitrophenol			200	187		ug/L		94	26 - 132	1	35
Acenaphthene			100	92.8		ug/L		93	37 - 107	0	35
Acenaphthylene			100	94.2		ug/L		94	39 - 107	2	35
Aniline			100	88.2		ug/L		88	27 - 115	8	35
Anthracene			100	99.1		ug/L		99	42 - 120	4	35
Benzidine			100	35.1	J	ug/L		35	5 - 150	19	35
Benzo[a]anthracene			100	95.8		ug/L		96	42 - 115	7	35
Benzo[a]pyrene			100	102		ug/L		102	41 - 117	4	35
Benzo[b]fluoranthene			100	103		ug/L		103	36 - 113	7	35
Benzo[g,h,i]perylene			100	102		ug/L		102	37 - 115	9	35
Benzo[k]fluoranthene			100	99.6		ug/L		100	42 - 122	5	35
Benzoic acid			100	99.9		ug/L		100	15 - 121	12	35
Benzyl alcohol			100	64.7		ug/L		65	39 - 106	23	35
bis (2-chloroisopropyl) ether			100	78.7		ug/L		79	38 - 104	3	35
Bis(2-chloroethoxy)methane			100	89.2		ug/L		89	47 - 104	1	35
Bis(2-chloroethyl)ether			100	77.5		ug/L		77	42 - 99	4	35
Bis(2-ethylhexyl) phthalate			100	106		ug/L		106	43 - 124	9	35
Butyl benzyl phthalate			100	101		ug/L		101	44 - 122	2	35
Chrysene			100	99.4		ug/L		99	42 - 118	6	35
Dibenz(a,h)anthracene			100	101		ug/L		101	40 - 114	6	35
Dibenzofuran			100	97.7		ug/L		98	37 - 113	1	35
Diethyl phthalate			100	103		ug/L		103	51 - 120	3	35
Dimethyl phthalate			100	101		ug/L		101	49 - 113	1	35
Di-n-butyl phthalate			100	102		ug/L		102	47 - 125	6	35
Di-n-octyl phthalate			100	109		ug/L		109	42 - 125	10	35
Fluoranthene			100	100		ug/L		100	44 - 119	6	35
Fluorene			100	98.7		ug/L		99	39 - 116	1	35
Hexachlorobenzene			100	99.2		ug/L		99	43 - 112	6	35
Hexachlorobutadiene			100	65.6		ug/L		66	14 - 77	5	35
Hexachlorocyclopentadiene			100	53.0		ug/L		53	10 - 77	2	35
Hexachloroethane			100	60.6		ug/L		61	13 - 75	6	35
Indeno[1,2,3-cd]pyrene			100	103		ug/L		103	35 - 116	7	35
Isophorone			100	97.0		ug/L		97	48 - 107	2	35
Naphthalene			100	78.4		ug/L		78	33 - 95	2	35
Nitrobenzene			100	83.6		ug/L		84	42 - 99	5	35
N-Nitrosodimethylamine			100	67.4		ug/L		67	35 - 96	0	35
N-Nitrosodi-n-propylamine			100	96.4		ug/L		96	44 - 111	4	35
N-Nitrosodiphenylamine			100	97.2		ug/L		97	46 - 116	2	35
Pentachlorophenol			200	185		ug/L		93	26 - 136	4	35
Phenanthrene			100	99.2		ug/L		99	43 - 120	5	35
Phenol			100	80.1		ug/L		80	25 - 99	16	35
Pyrene			100	101		ug/L		101	43 - 119	4	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2,4,6-Tribromophenol (Surr)	*99*		*40 - 120*

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

Lab Sample ID: LCSD 440-529545/3-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 530101 — **Prep Batch: 529545**

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2-Fluorobiphenyl	91		50 - 120
2-Fluorophenol (Surr)	59		30 - 120
Nitrobenzene-d5 (Surr)	83		45 - 120
Phenol-d6 (Surr)	72		35 - 120
Terphenyl-d14 (Surr)	105		10 - 150

Method: 8270C SIM - 1,4 Dioxane by SIM

Lab Sample ID: MB 440-529541/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 530058 — **Prep Batch: 529541**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1,4-Dioxane	ND		0.50		ug/L		02/19/19 11:32	02/21/19 14:53	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,4-Dioxane-d8 (Surr)	59		27 - 120	02/19/19 11:32	02/21/19 14:53	1

Lab Sample ID: LCS 440-529541/3-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 530058 — **Prep Batch: 529541**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
1,4-Dioxane			2.00	1.21		ug/L		60	36 - 120		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
1,4-Dioxane-d8 (Surr)	56		27 - 120

Lab Sample ID: LCSD 440-529541/4-A — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 530058 — **Prep Batch: 529541**

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,4-Dioxane			2.00	1.22		ug/L		61	36 - 120	1	35

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
1,4-Dioxane-d8 (Surr)	60		27 - 120

Method: SM 2540D - Solids, Total Suspended (TSS)

Lab Sample ID: MB 440-530391/1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 530391

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Total Suspended Solids	ND		1.0		mg/L			02/22/19 17:10	1

Method: SM 2540D - Solids, Total Suspended (TSS) (Continued)

Lab Sample ID: LCS 440-530391/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 530391

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Total Suspended Solids			1000	983		mg/L		98	85 - 115		

Lab Sample ID: 440-233693-B-1 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 530391

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Suspended Solids	200			213		mg/L				6	10

Method: SM 4500 H+ B - pH

Lab Sample ID: 440-233473-A-1 DU — **Client Sample ID: Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 529946

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
pH	6.9			6.9		SU				0.1	2

Method: SM 4500 S2 D - Sulfide, Total

Lab Sample ID: MB 440-529631/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 529658 — **Prep Batch: 529631**

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Sulfide, Dissolved	ND		0.050		mg/L		02/19/19 15:46	02/19/19 16:51	1

Lab Sample ID: LCS 440-529631/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 529658 — **Prep Batch: 529631**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Sulfide, Dissolved			0.500	0.489		mg/L		98	80 - 120		

Lab Sample ID: 440-233286-N-1-B MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 529658 — **Prep Batch: 529631**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Sulfide, Dissolved	ND	HF F1	0.500	0.262	HF F1	mg/L		52	70 - 130		

Lab Sample ID: 440-233286-N-1-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Dissolved**
Analysis Batch: 529658 — **Prep Batch: 529631**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfide, Dissolved	ND	HF F1	0.500	0.302	HF F1	mg/L		60	70 - 130	14	30

QC Sample Results

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical -24 hour Compostie

TestAmerica Job ID: 440-233700-1
SDG: Whittier

Method: SM 5220D - COD

Lab Sample ID: MB 440-531898/3
Matrix: Water
Analysis Batch: 531898

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

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Chemical Oxygen Demand	ND		20		mg/L			03/01/19 15:55	1

Lab Sample ID: LCS 440-531898/4
Matrix: Water
Analysis Batch: 531898

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		102	90 - 110		

Lab Sample ID: 440-234793-A-1 MS
Matrix: Water
Analysis Batch: 531898

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	59		200	242		mg/L		92	70 - 120		

Lab Sample ID: 440-234793-A-1 MSD
Matrix: Water
Analysis Batch: 531898

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	59		200	239		mg/L		90	70 - 120	1	15

Lab Sample ID: 440-234793-A-1 DU
Matrix: Water
Analysis Batch: 531898

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	59			57.3		mg/L				3	15

QC Association Summary

Client: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical -24 hour Compostie

TestAmerica Job ID: 440-233700-1
SDG: Whittier

GC/MS VOA

Analysis Batch: 529768

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-233700-2	Grab	Total/NA	Water	8260B	
MB 440-529768/4	Method Blank	Total/NA	Water	8260B	
LCS 440-529768/5	Lab Control Sample	Total/NA	Water	8260B	
440-233507-A-7 MS	Matrix Spike	Total/NA	Water	8260B	
440-233507-A-7 MSD	Matrix Spike Duplicate	Total/NA	Water	8260B	

Analysis Batch: 530007

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-233700-2	Grab	Total/NA	Water	8260B	
MB 440-530007/4	Method Blank	Total/NA	Water	8260B	
LCS 440-530007/5	Lab Control Sample	Total/NA	Water	8260B	
LCS 440-530007/6	Lab Control Sample	Total/NA	Water	8260B	
440-233700-2 MS	Grab	Total/NA	Water	8260B	
440-233700-2 MSD	Grab	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 529541

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-233700-2	Grab	Total/NA	Water	3520C	
MB 440-529541/1-A	Method Blank	Total/NA	Water	3520C	
LCS 440-529541/3-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 440-529541/4-A	Lab Control Sample Dup	Total/NA	Water	3520C	

Prep Batch: 529545

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-233700-2	Grab	Total/NA	Water	3520C	
MB 440-529545/1-A	Method Blank	Total/NA	Water	3520C	
LCS 440-529545/2-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 440-529545/3-A	Lab Control Sample Dup	Total/NA	Water	3520C	

Analysis Batch: 530058

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-233700-2	Grab	Total/NA	Water	8270C SIM	529541
MB 440-529541/1-A	Method Blank	Total/NA	Water	8270C SIM	529541
LCS 440-529541/3-A	Lab Control Sample	Total/NA	Water	8270C SIM	529541
LCSD 440-529541/4-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM	529541

Analysis Batch: 530101

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-233700-2	Grab	Total/NA	Water	8270C	529545
MB 440-529545/1-A	Method Blank	Total/NA	Water	8270C	529545
LCS 440-529545/2-A	Lab Control Sample	Total/NA	Water	8270C	529545
LCSD 440-529545/3-A	Lab Control Sample Dup	Total/NA	Water	8270C	529545

General Chemistry

Prep Batch: 529631

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-233700-2	Grab	Dissolved	Water	SM 4500 S2 B	

General Chemistry (Continued)

Prep Batch: 529631 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 440-529631/1-A	Method Blank	Dissolved	Water	SM 4500 S2 B	
LCS 440-529631/2-A	Lab Control Sample	Dissolved	Water	SM 4500 S2 B	
440-233286-N-1-B MS	Matrix Spike	Dissolved	Water	SM 4500 S2 B	
440-233286-N-1-C MSD	Matrix Spike Duplicate	Dissolved	Water	SM 4500 S2 B	

Analysis Batch: 529658

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-233700-2	Grab	Dissolved	Water	SM 4500 S2 D	529631
MB 440-529631/1-A	Method Blank	Dissolved	Water	SM 4500 S2 D	529631
LCS 440-529631/2-A	Lab Control Sample	Dissolved	Water	SM 4500 S2 D	529631
440-233286-N-1-B MS	Matrix Spike	Dissolved	Water	SM 4500 S2 D	529631
440-233286-N-1-C MSD	Matrix Spike Duplicate	Dissolved	Water	SM 4500 S2 D	529631

Analysis Batch: 529946

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-233700-2	Grab	Total/NA	Water	SM 4500 H+ B	
440-233473-A-1 DU	Duplicate	Total/NA	Water	SM 4500 H+ B	

Analysis Batch: 530391

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-233700-1	Composite	Total/NA	Water	SM 2540D	
MB 440-530391/1	Method Blank	Total/NA	Water	SM 2540D	
LCS 440-530391/2	Lab Control Sample	Total/NA	Water	SM 2540D	
440-233693-B-1 DU	Duplicate	Total/NA	Water	SM 2540D	

Analysis Batch: 531898

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-233700-1	Composite	Total/NA	Water	SM 5220D	
MB 440-531898/3	Method Blank	Total/NA	Water	SM 5220D	
LCS 440-531898/4	Lab Control Sample	Total/NA	Water	SM 5220D	
440-234793-A-1 MS	Matrix Spike	Total/NA	Water	SM 5220D	
440-234793-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	SM 5220D	
440-234793-A-1 DU	Duplicate	Total/NA	Water	SM 5220D	

Field Service / Mobile Lab

Analysis Batch: 529424

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-233700-2	Grab	Total/NA	Water	Field Sampling	

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 Semi VOA

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

General Chemistry

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.

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: Jacob & Hefner Associates P.C.
Project/Site: Omega Chemical -24 hour Compostie

TestAmerica Job ID: 440-233700-1
SDG: Whittier

Laboratory: TestAmerica Irvine

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
California	State Program	9	CA ELAP 2706	06-30-19

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
8260B		Water	1,1,2-Trichloro-1,2,2-trifluoroethane
8260B		Water	m,p-Xylene
8260B		Water	Total Volatile Organic Compounds
8270C	3520C	Water	2-Methylphenol
8270C	3520C	Water	3-Methylphenol + 4-Methylphenol
8270C	3520C	Water	4-Chloroaniline
8270C	3520C	Water	Benzidine
8270C SIM	3520C	Water	1,4-Dioxane
Field Sampling		Water	Field pH
Field Sampling		Water	Field Temperature

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

Chain of Custody Record

TestAmerica

Client Information	Sampler: Felipe Reyes	Lab PM: Roberts, Danielle C	Carrier Tracking No(s):	COC No: 440-158742-28792 1
Client Contact: Pamela Henriksen	Phone: 714-651-2862	E-Mail: danielle.roberts@testamericainc.com		Page: Page 1 of 1
Company: Jacob & Hefner Associates P C				Job #
Address: 15375 Barranca Parkway, J-101	Due Date Requested:			
City: Irvine	TAT Requested (days):			
State, Zip: CA, 92618				
Phone: 949-453-1045(Tel) 949-453-1047(Fax)	PO #: Omega Chemical Wastewater			
Email: phenriksen@jacobandhefner.com	WO #			
Project Name: Omega Chemical ISCO	Project #: 44003641			
Site: California	SSOW#			

Analysis Requested

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

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)	5220D - COD	2540D - TSS	SM4500_S2_D - Dissolved Sulfide	8260B_LL - VOCs+Oxys+Ks+F113-LL	8270C, 8270C_SIM	SM4500_H+ - pH	8260B_LL - A+A+2CVE	Total Number of containers	Special Instructions/Note:
			Preservation Code:				S	N	B	A	N	N	N		
Composite	2-15-19	10:00	C	Water			X	X						2	Isco Set up 2/15/19
Grab	2-15-19	10:10	G	Water					X	X	X	X	X	12	2-14-19 9:30 = 7284815
															2-15-19 9:30 = 7295003
															Field pH = 8.62 Temp: 16.1° C

440-233700 Chain of Custody

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	Company	Received by	Date/Time	Company
	2-15-19 13:50	B-F			
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	2/15/19 1350	TA IRV

Custody Seals Intact: Δ Yes Δ No
Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks: Temp 3.0/3.4 1293

Ver: 08/04/2016

Login Sample Receipt Checklist

Client: Jacob & Hefner Associates P.C.

Job Number: 440-233700-1
SDG Number: Whittier

Login Number: 233700
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	

ATTACHMENT E

PSVP Piezometric and Water Quality Data

Attachment E, Table E-1
Piezometric Monitoring Data
OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
1st Quarter 2019

Well No.	Top of Casing Elevation (feet MSL)	Screen Interval (feet MSL)	Date	Depth To Water (feet btoc)	Groundwater Elevation (feet MSL)
EW-1	198.96	114.94 - 129.94	2/11/2019	86.29	112.67
EW-2	197.87	113.77 - 128.77	2/12/2019	84.21	113.66
EW-3	196.78	114.59 - 129.59	2/13/2019	82.53	114.25
EW-4	195.79	112.73 - 127.73	2/11/2019	81.08	114.71
EW-5	194.19	111.96 - 126.96	2/12/2019	71.16	123.03
PZ-1	200.26	112.65 - 132.65	2/13/2019	86.93	113.33
PZ-2	201.48	118.02 - 138.02	2/11/2019	Dry	Dry
PZ-3	203.72	114.40 - 134.40	2/13/2019	Dry	Dry
PZ-4	196.26	106.66 - 126.66	2/13/2019	71.62	124.64
OW1A	212.53	132.47 - 147.47	2/13/2019	Dry	Dry
OW1B	207.22	87.42 - 97.42	2/11/2019	95.67	111.55
OW2	202.33	123.23 - 143.23	2/13/2019	Dry	Dry
OW3A	198.58	116.13 - 136.13	2/11/2019	80.95	117.63
OW3B	197.38	75.79 - 85.79	2/11/2019	96.25	101.13
OW7	214.29	124.69 - 144.69	2/13/2019	Dry	Dry
OW8A	200.66	121.33 - 140.93	2/13/2019	78.85	121.81
OW8B	200.84	75.39 - 85.39	2/13/2019	99.35	101.49
OW9	198.07	108.42 - 128.42	2/12/2019	86.41	111.66
OW10	195.54	106.46 - 126.46	2/12/2019	78.33	117.21
OW12	208.42	108.97 - 128.97	2/12/2019	91.37	117.05

Notes:
Elevation data per California Coordinate System NADV88
btoc = below top of casing
Dry = No water detected, water detected below the screen interval, or water detected at or near total depth of well
MSL = mean sea level

Attachment E, Table E-2
PSVP Groundwater Analytical Summary
OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
First Quarter 2019

Well ID / Screen Interval[1]	Sample Date	Sample Type	PCE	TCE	1,4DIOX	1,1,1-TCA	1,1-DCE	1,2-DCA	Freon 113	Freon 11	Freon 12
EW-1 (72 - 87)	Dry - NS	Dry - NS	Dry - NS	Dry - NS	Dry - NS	Dry - NS	Dry - NS	Dry - NS	Dry - NS	Dry - NS	Dry - NS
EW-2 (72 - 87)	Dry - NS	Dry - NS	Dry - NS	Dry - NS	Dry - NS	Dry - NS	Dry - NS	Dry - NS	Dry - NS	Dry - NS	Dry - NS
EW-3 (70 - 85)	2/13/2019	ORIG	13	1.3	0.51 UJ	1.0 U	1.5	1.0 U	3.9 J	0.74 J	1.0 U
EW-4 (71 - 86)	2/11/2019	ORIG	25	3.0	0.33 J-	1.0 U	29	1.0 U	14	8.7	1.0 UJ
EW-5 (70 - 85)	2/12/2019	ORIG	12	1.7	0.59 J-	1.0 U	8.4	1.0 U	51	32	1.0 UJ
OW1A (62.5 - 77.5)	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry
OW1B (110 - 120)	2/12/2019	ORIG	5.3	1.0 U	0.69 J-	1.0 U	1.0 U	1.0 U	4.3 J	1.7	1.0 UJ
OW2 (60 - 80)	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry
OW3A (63 - 83)	Dry - NS	Dry - NS	Dry - NS	Dry - NS	Dry - NS	Dry - NS	Dry - NS	Dry - NS	Dry - NS	Dry - NS	Dry - NS
OW3B (112 - 122)	2/11/2019	ORIG	7.8	1.0 U	0.49 UJ	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 UJ
OW7 (70.9 - 90.9)	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry	Dry
OW8A (60.4 - 80)	Dry - NS	Dry - NS	Dry - NS	Dry - NS	Dry - NS	Dry - NS	Dry - NS	Dry - NS	Dry - NS	Dry - NS	Dry - NS
OW8B (116 - 126)	2/13/2019	ORIG	21	1.0 U	0.49 UJ	1.0 U	1.0 U	1.0 U	5.0 U	1.0 U	1.0 UJ
OW9 (70 - 90)	2/12/2019	ORIG	4700	240	620 J-	10 U	410	85	180	74	10 UJ
	2/12/2019	DUP	4900	250	610 J-	10 U	440	91	190	74	10 UJ
OW10 (69.5 - 89.5)	2/12/2019	ORIG	19	1.3	0.66 J-	1.0 U	13	1.0 U	3.5 J	2.0	1.0 UJ
	2/12/2019	DUP	22	1.6	0.12 J-	1.0 U	15	1.0 U	3.8 J	2.4	1.0 UJ
OW12 (80 - 100)	2/12/2019	ORIG	5600	1000	8.7 J-	210	340	13 J	3900	140	20 UJ

Notes:

1. The screen interval units are feet below top of casing.

All results are in micrograms per liter (ug/L)

U = not detected above reporting limit listed

UJ = analyte was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.

J = results are qualified as estimated

J- = result is an estimated quantity, but the result may be biased low.

See data validation report in Attachment C.

PCE = Tetrachloroethene; TCE = Trichloroethene; TCA = Trichloroethane; DCE = Dichloroethene;

Freon 113 = 1,1,2-Trichloro-1,2,2-trifluoroethane; Freon 11 = Trichlorofluoromethane;

Freon 12 = Dichlorodifluoromethane; DCA = Dichloroethane; 1,4DIOX = 1,4-dioxane

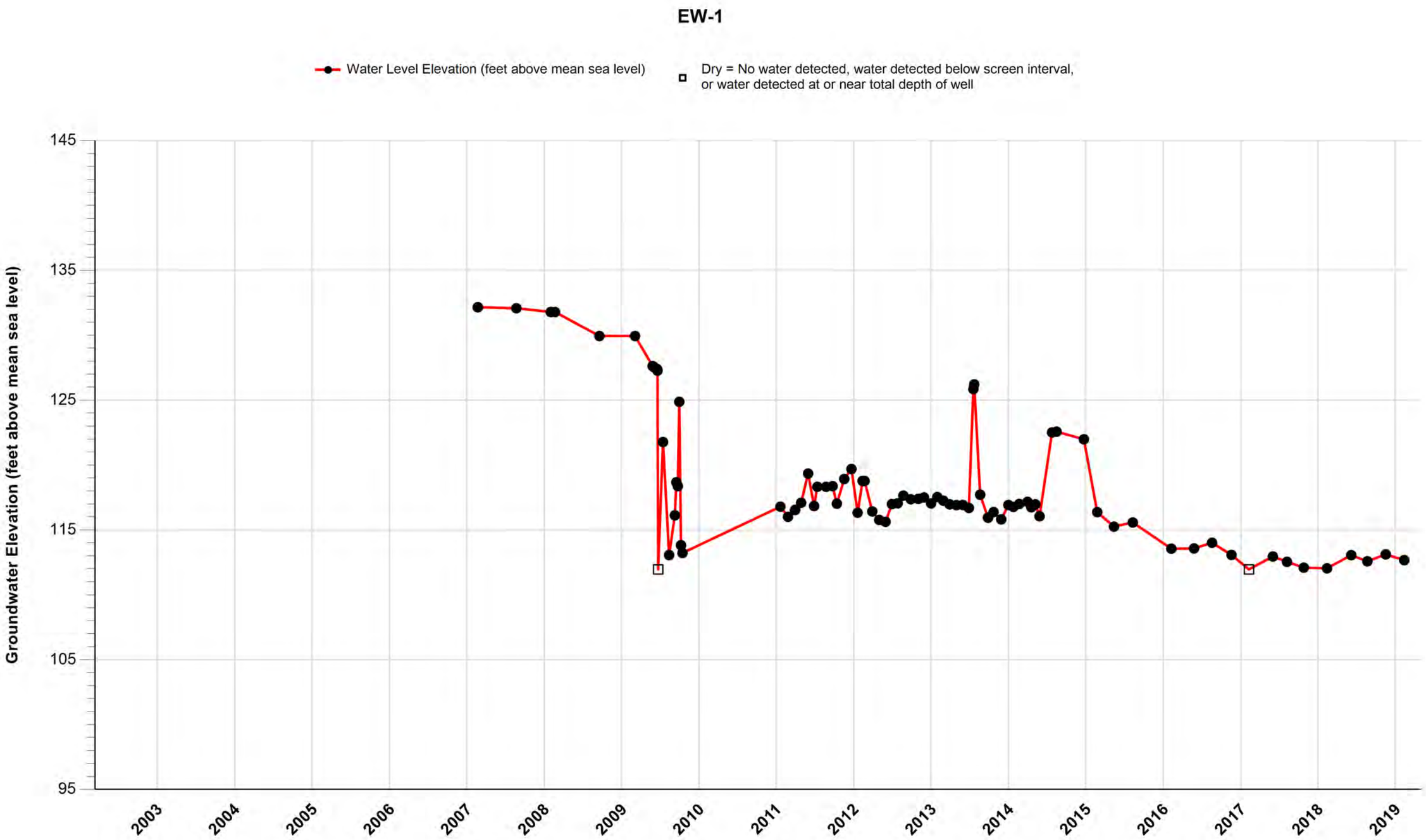
Dry = No water detected, water detected below the screen interval, or water detected at or near total depth of well

Dry - NS = insufficient water to sample

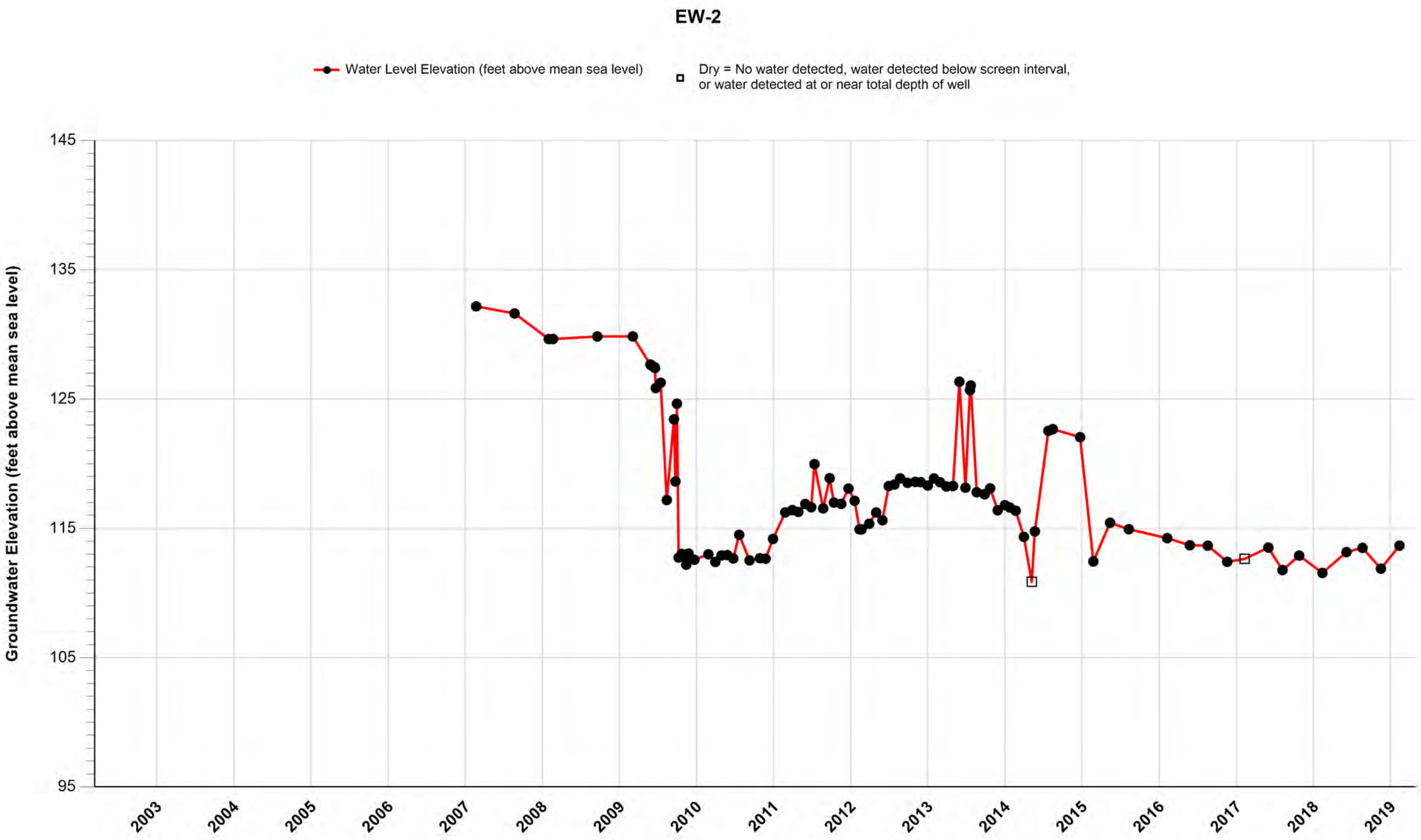
ORIG = primary sample

DUP = duplicate sample

Attachment E, Figure E-1
OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
PSVP Piezometric Data



Attachment E, Figure E-2
OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
PSVP Piezometric Data



Attachment E, Figure E-3
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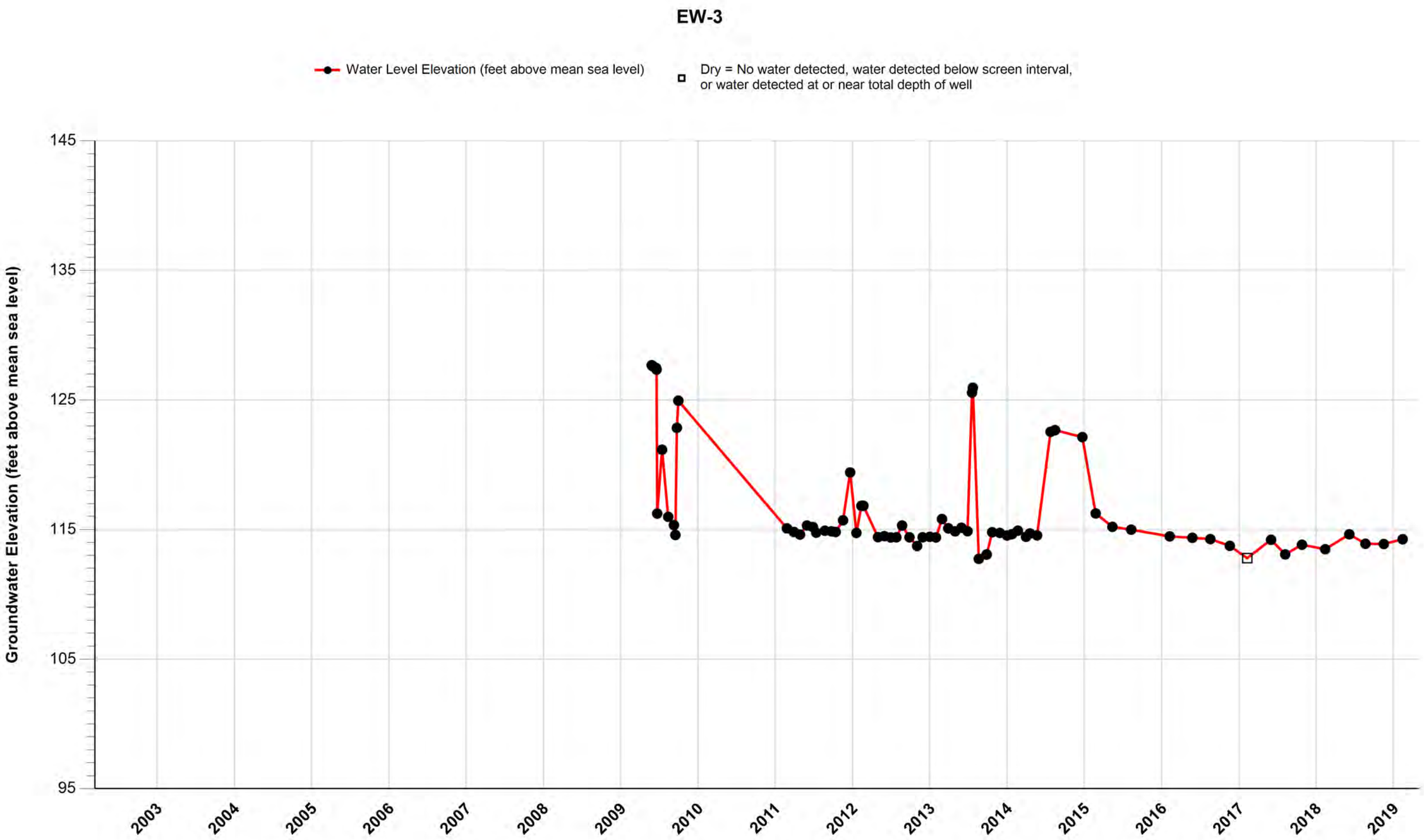

Attachment E, Figure E-4
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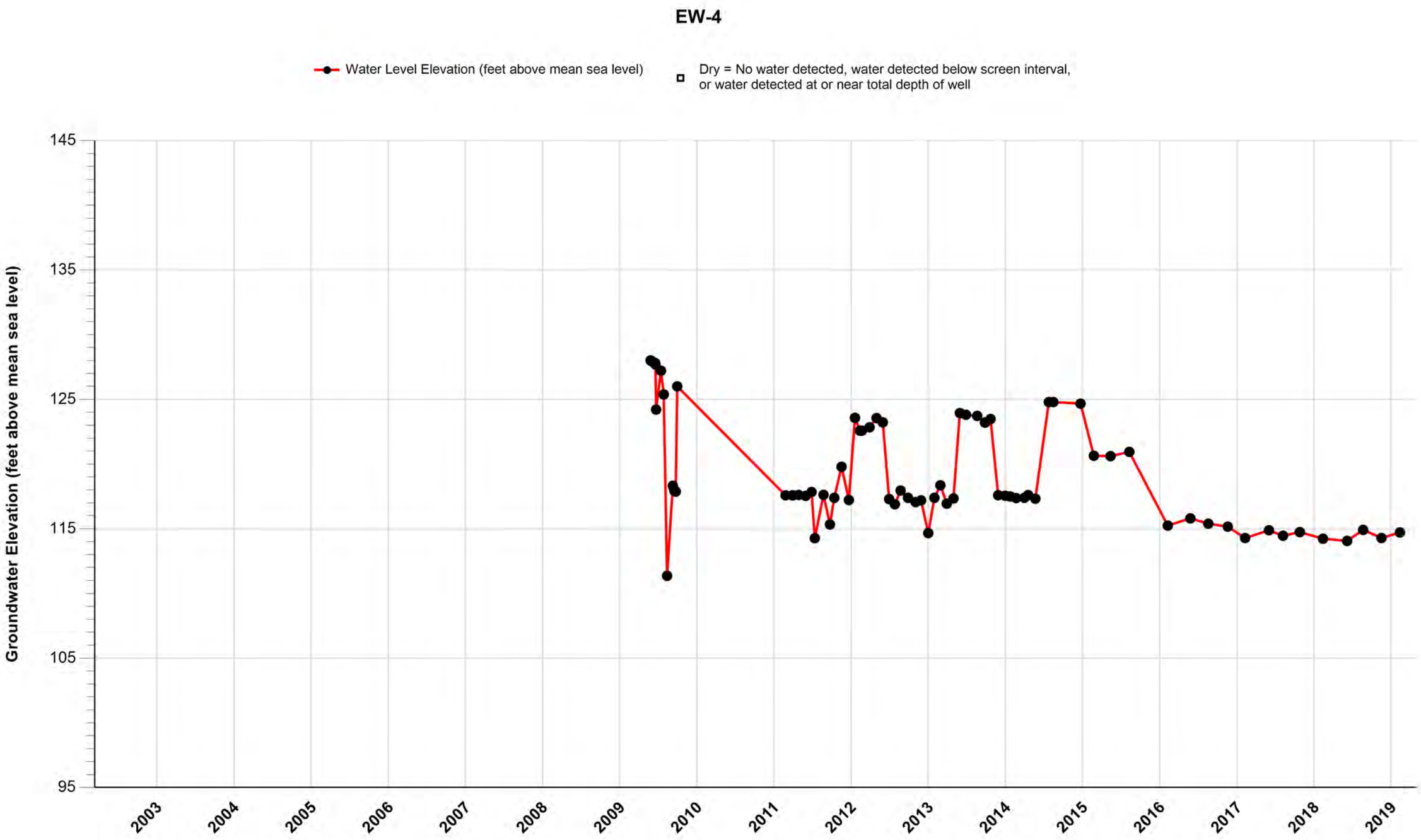

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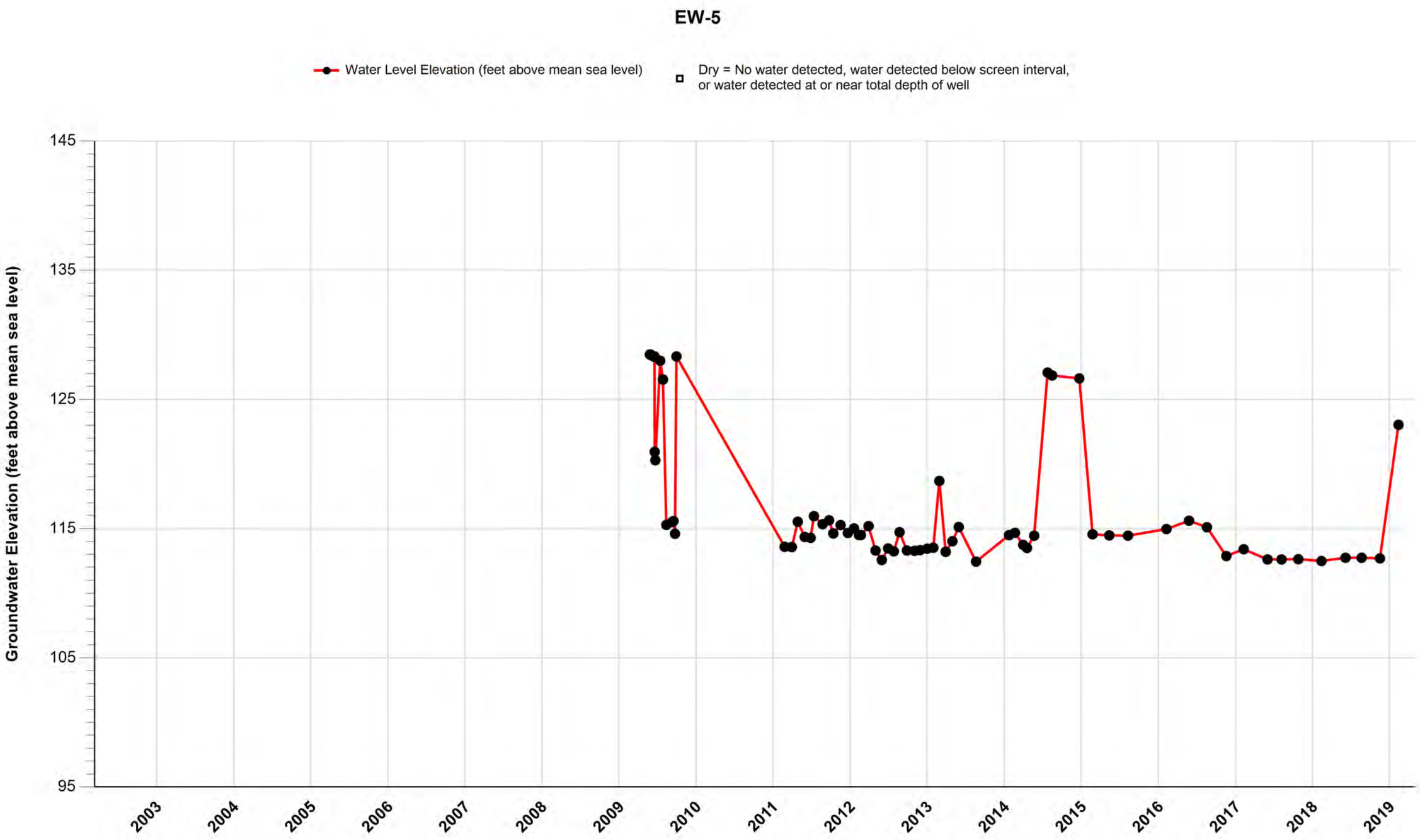

Attachment E, Figure E-6
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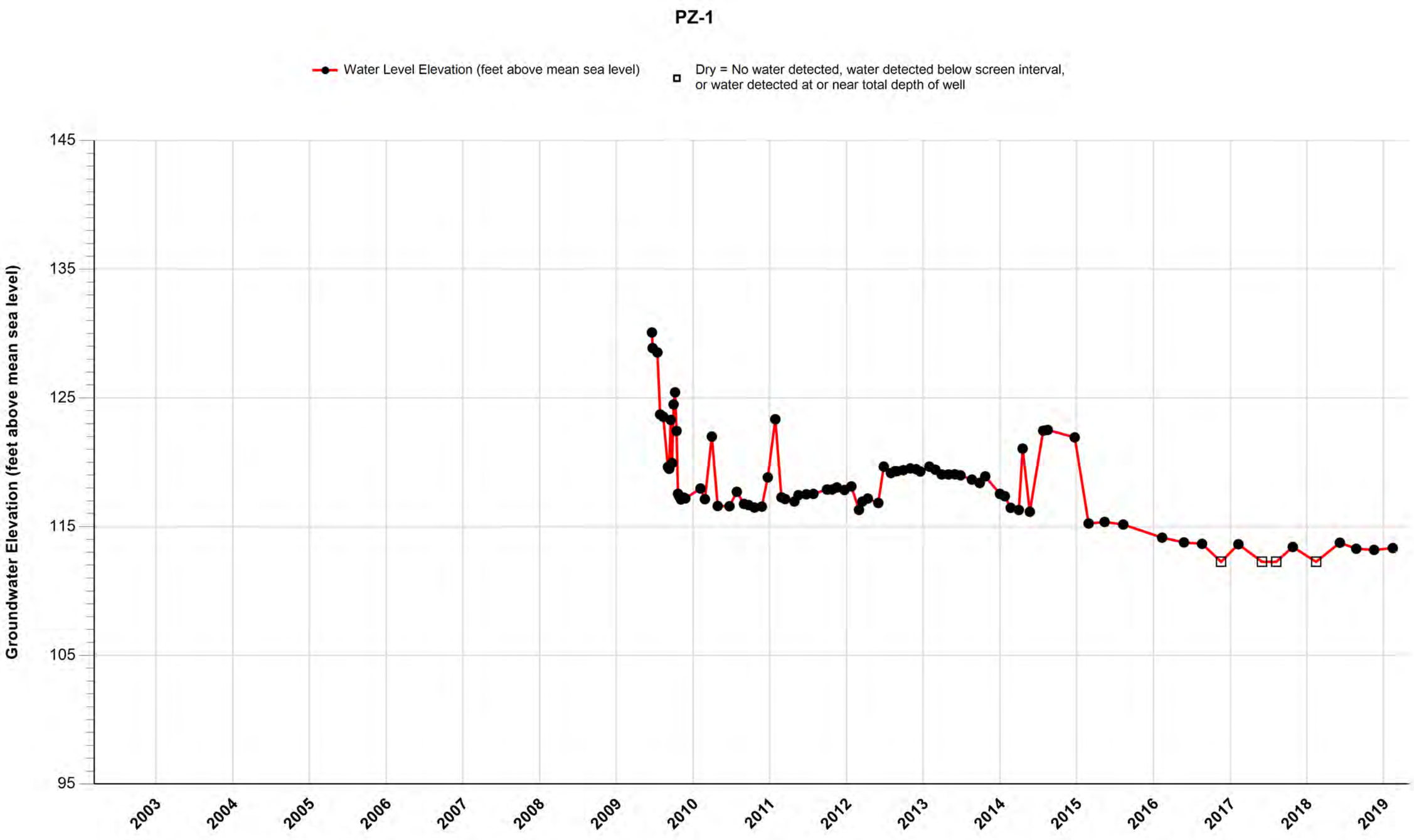

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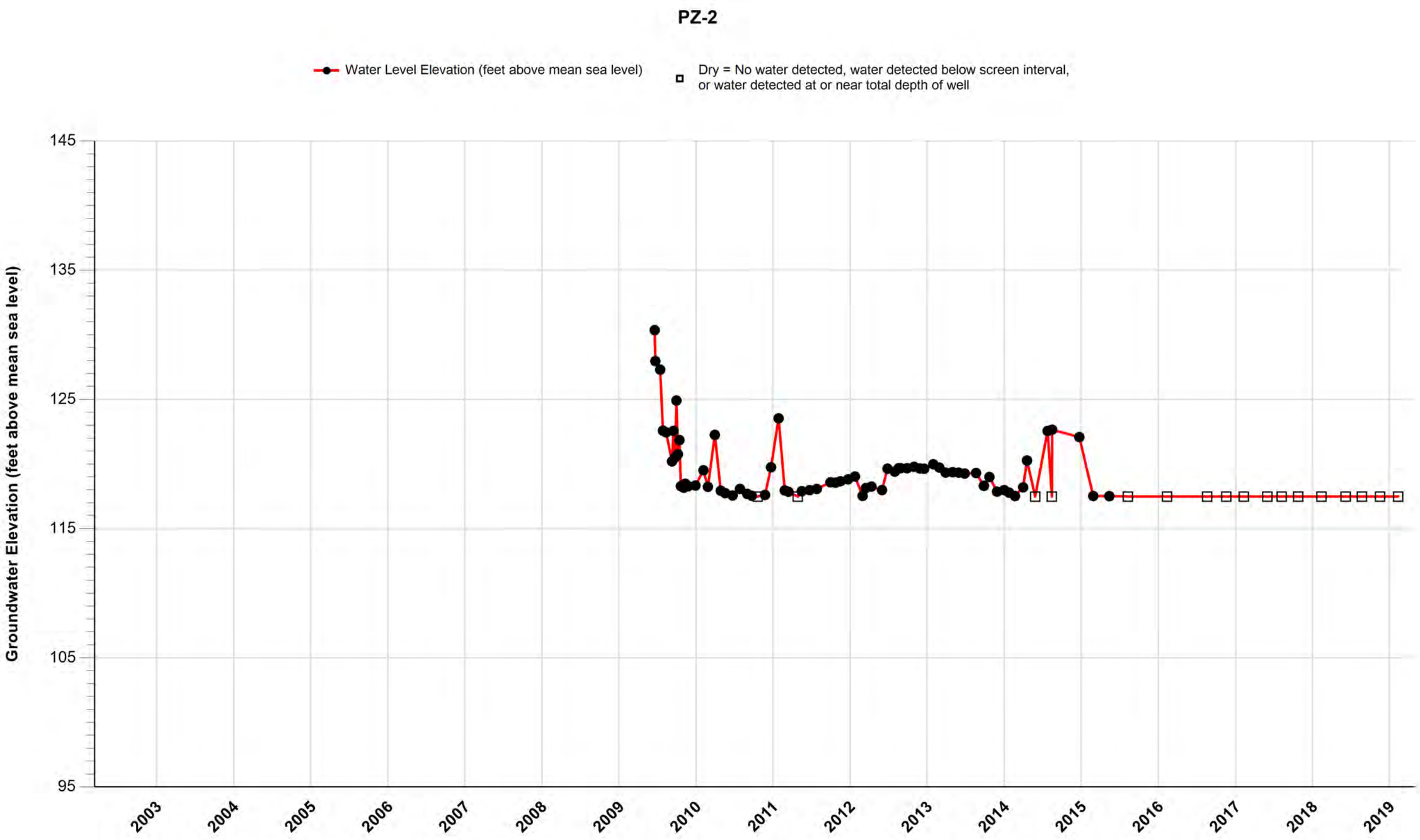

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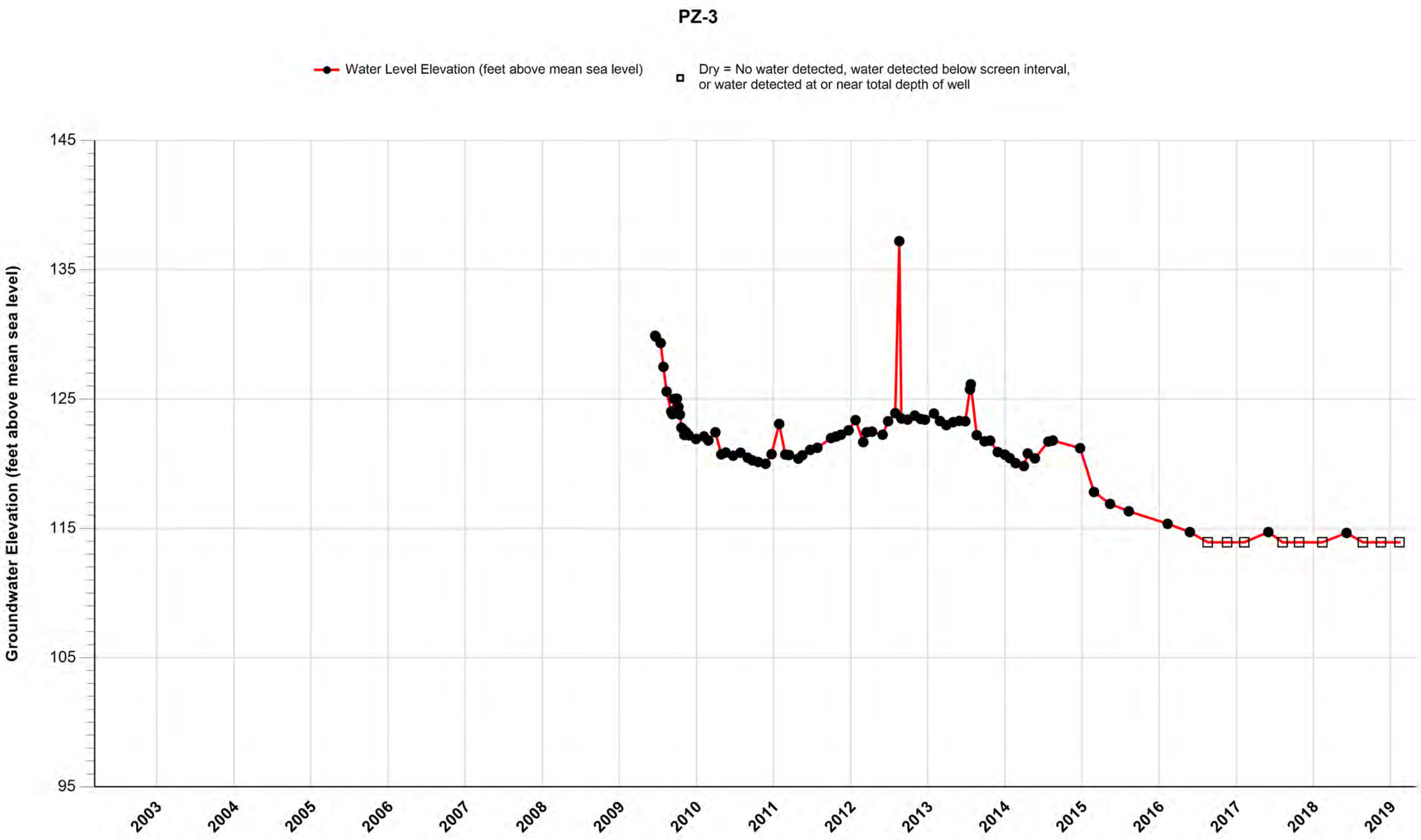

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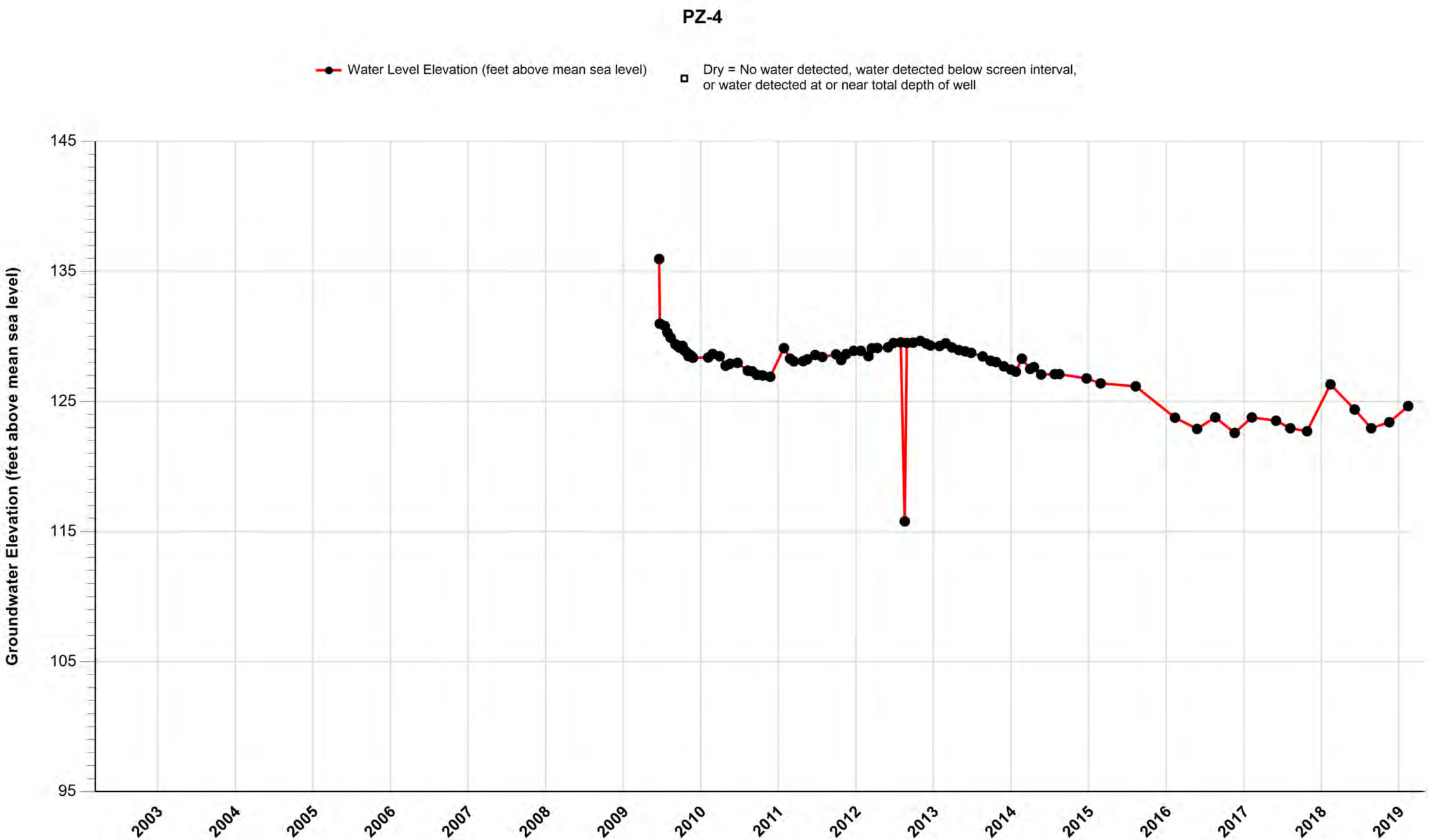

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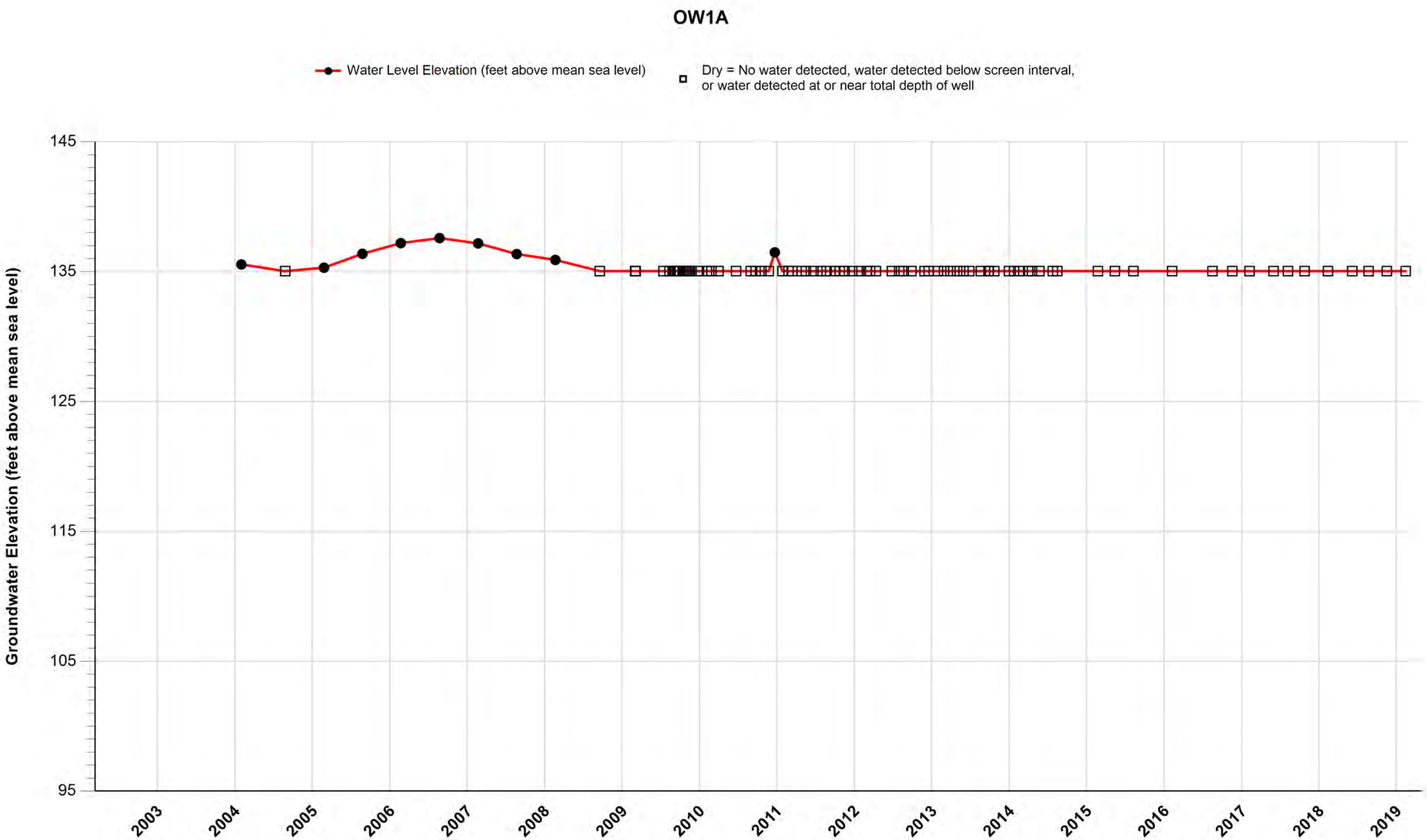

Attachment E, Figure E-11
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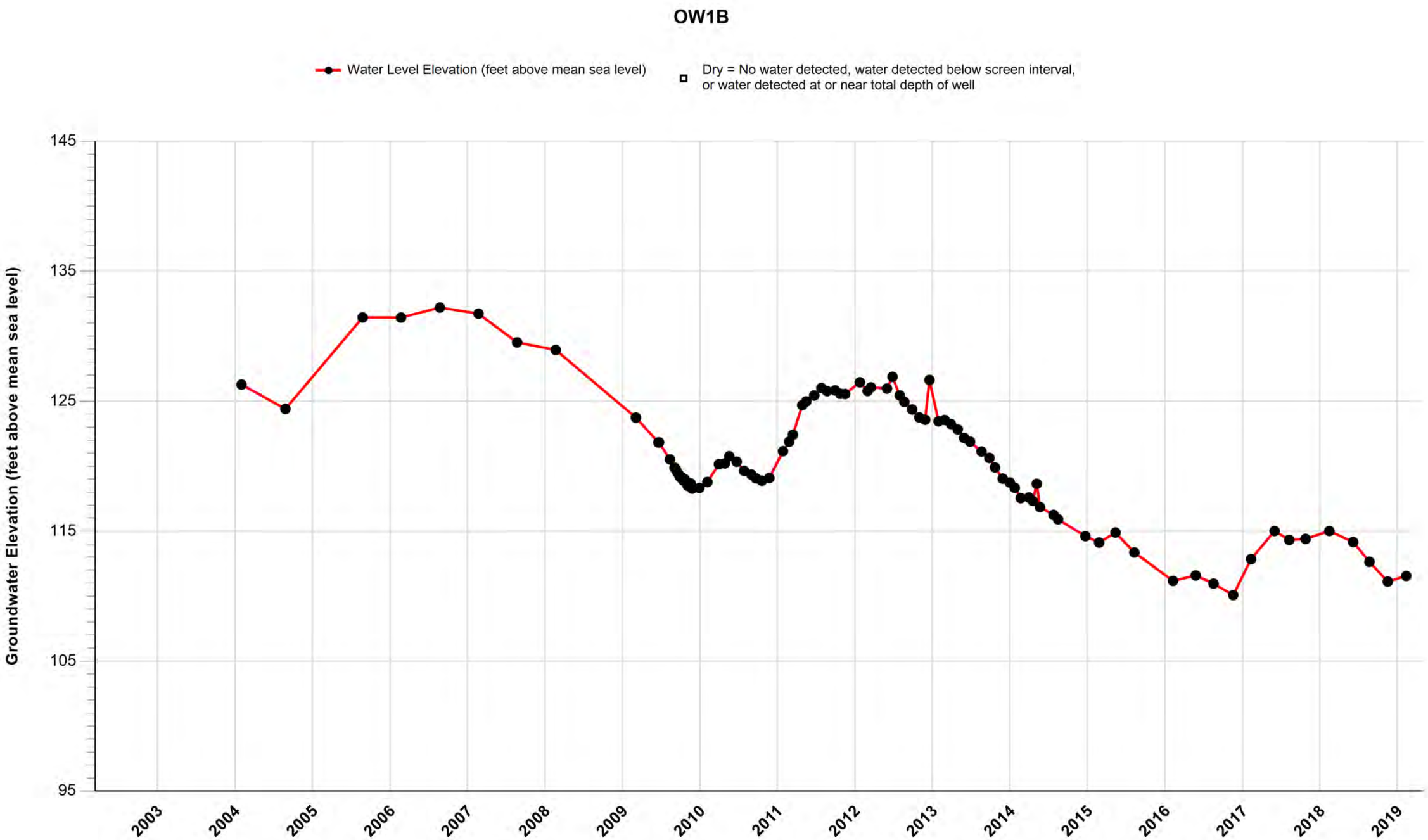

Attachment E, Figure E-12
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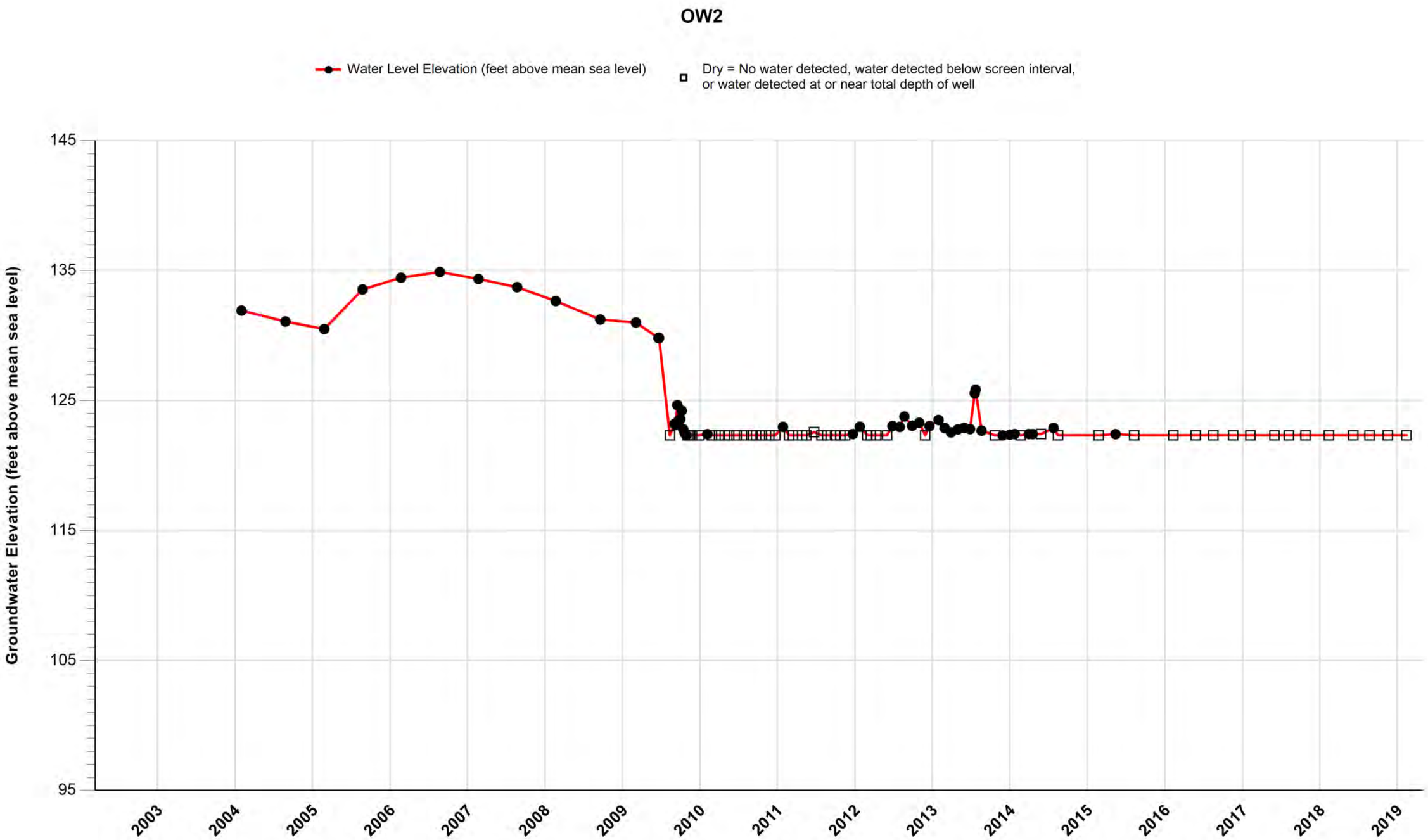

Attachment E, Figure E-13
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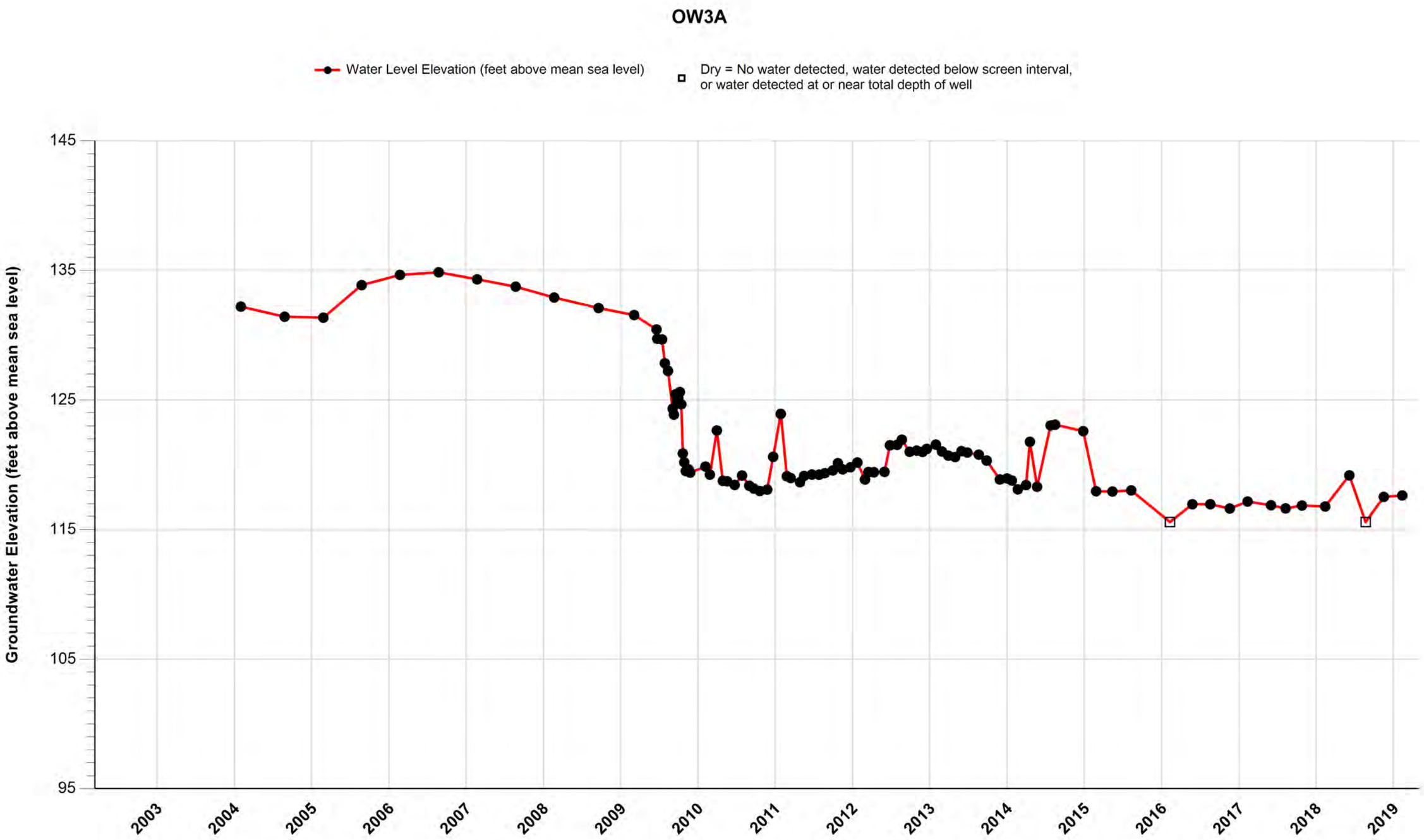

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OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
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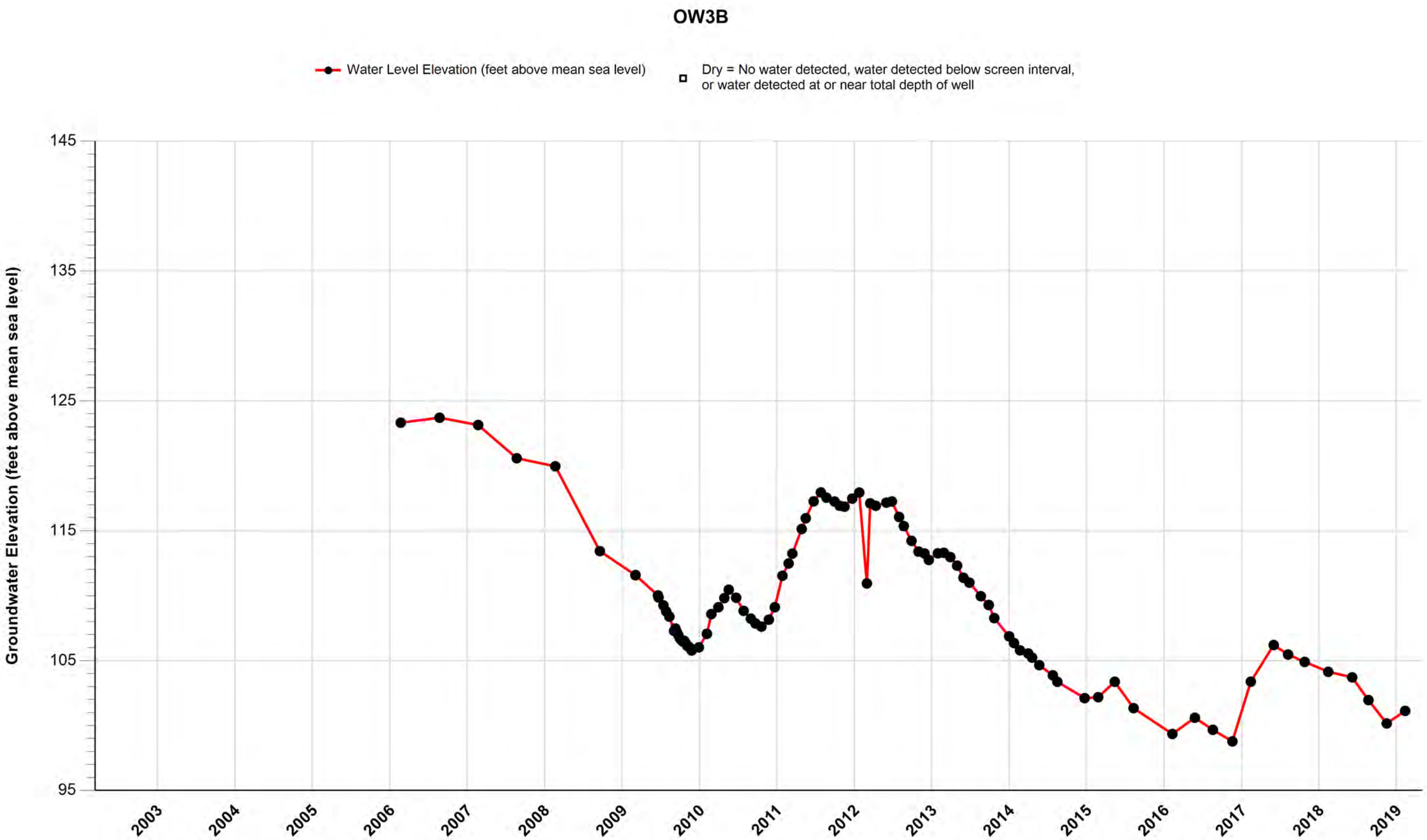

Attachment E, Figure E-15
OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
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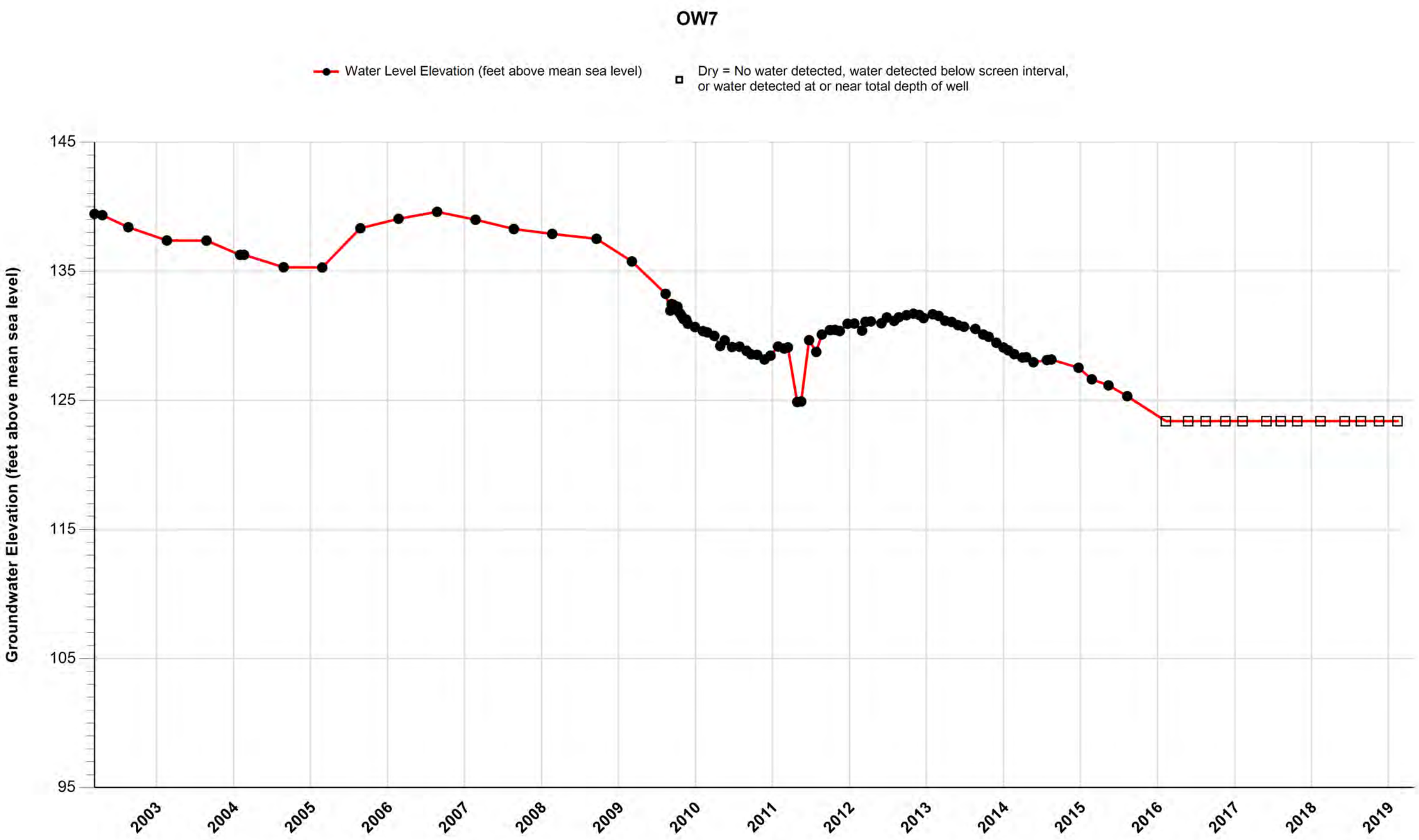

Attachment E, Figure E-16
OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
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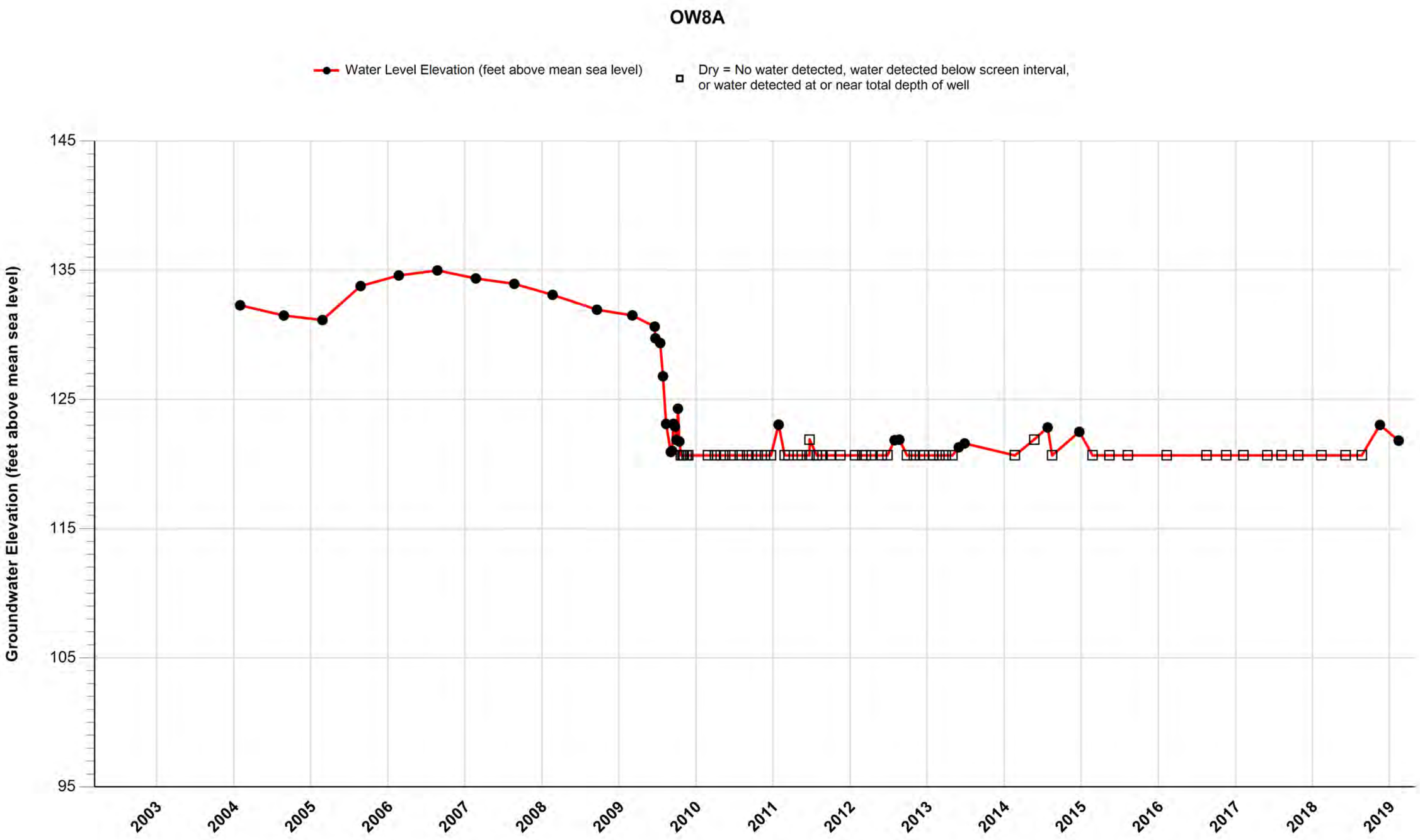

Attachment E, Figure E-17
OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
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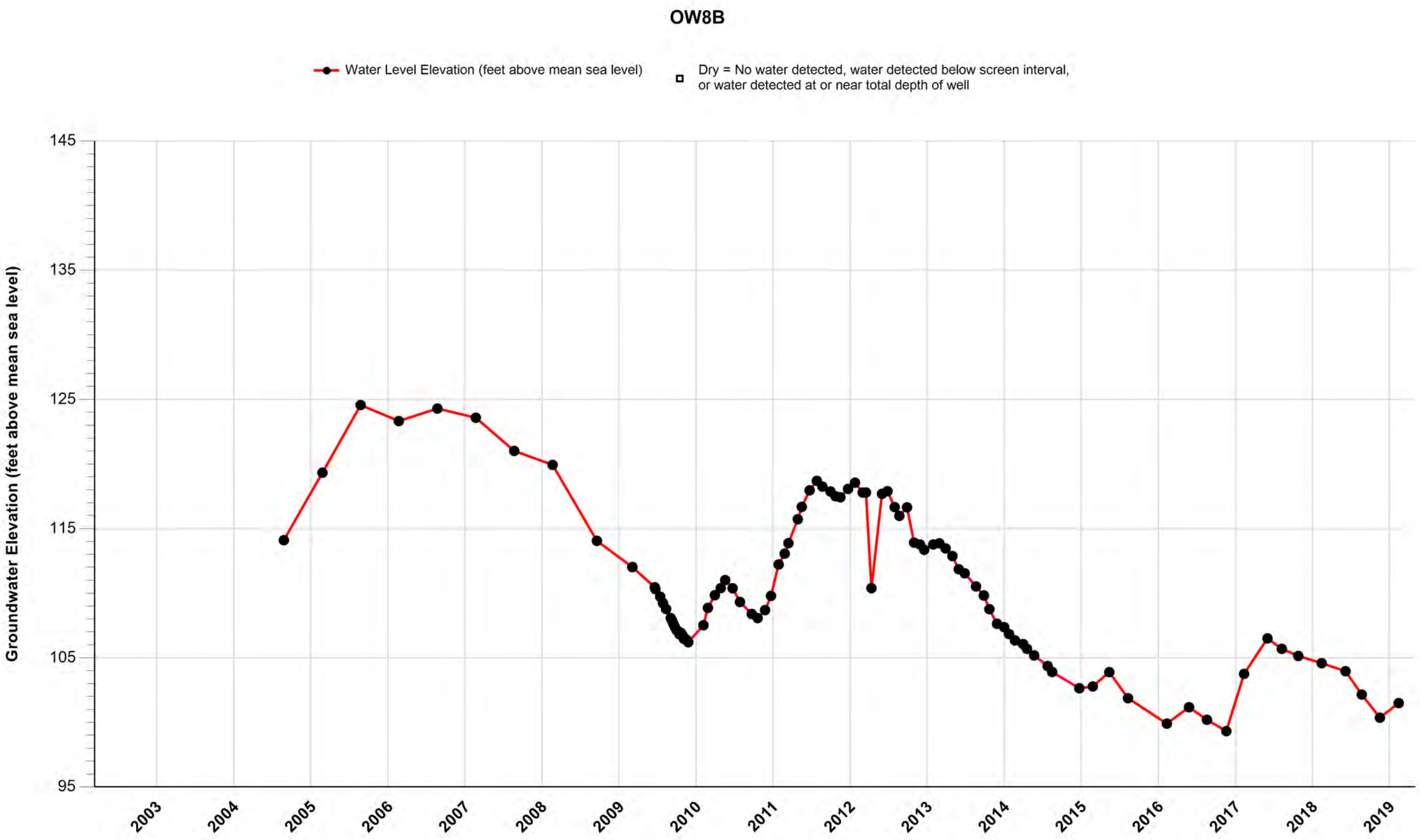

Attachment E, Figure E-18
OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
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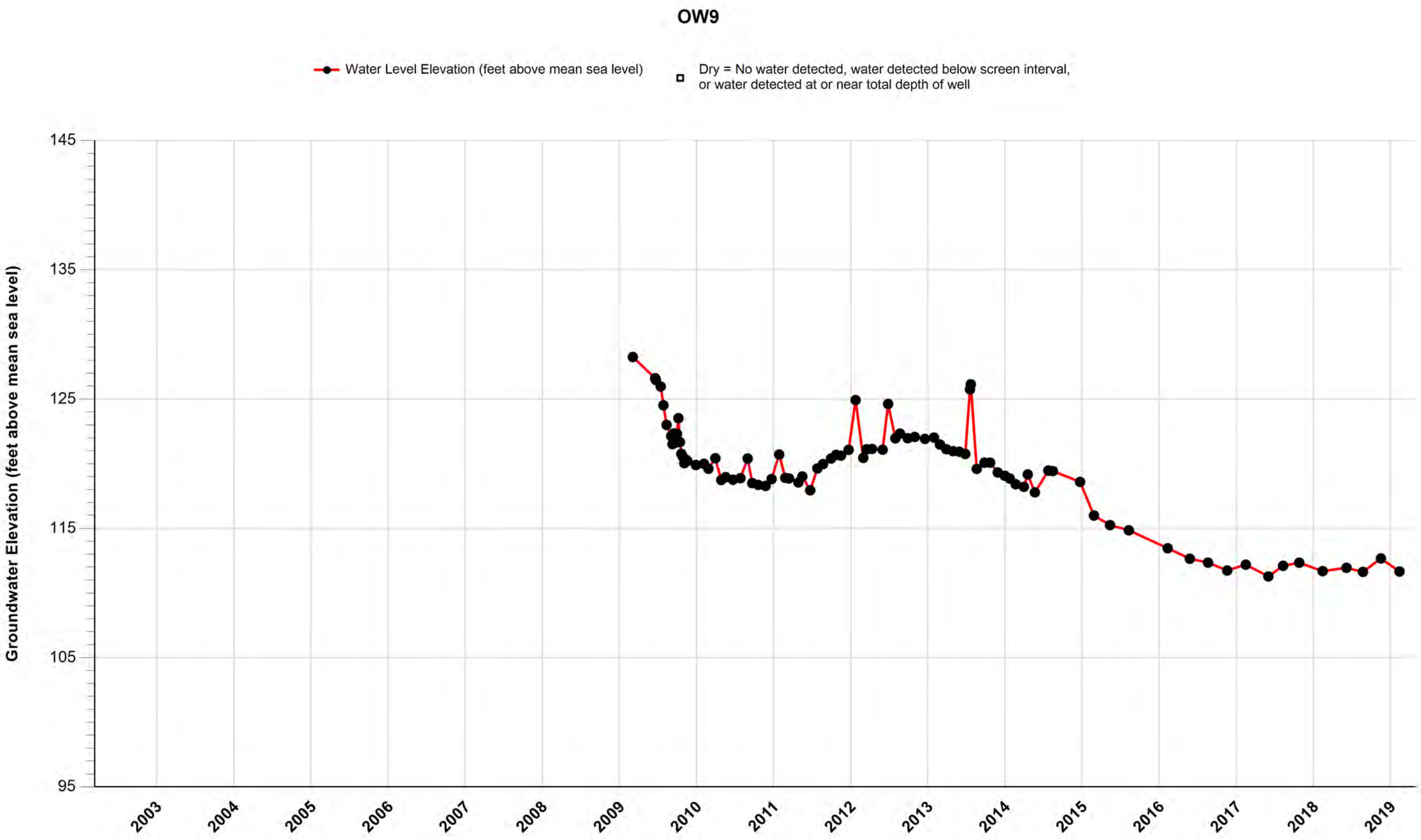

Attachment E, Figure E-19
OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
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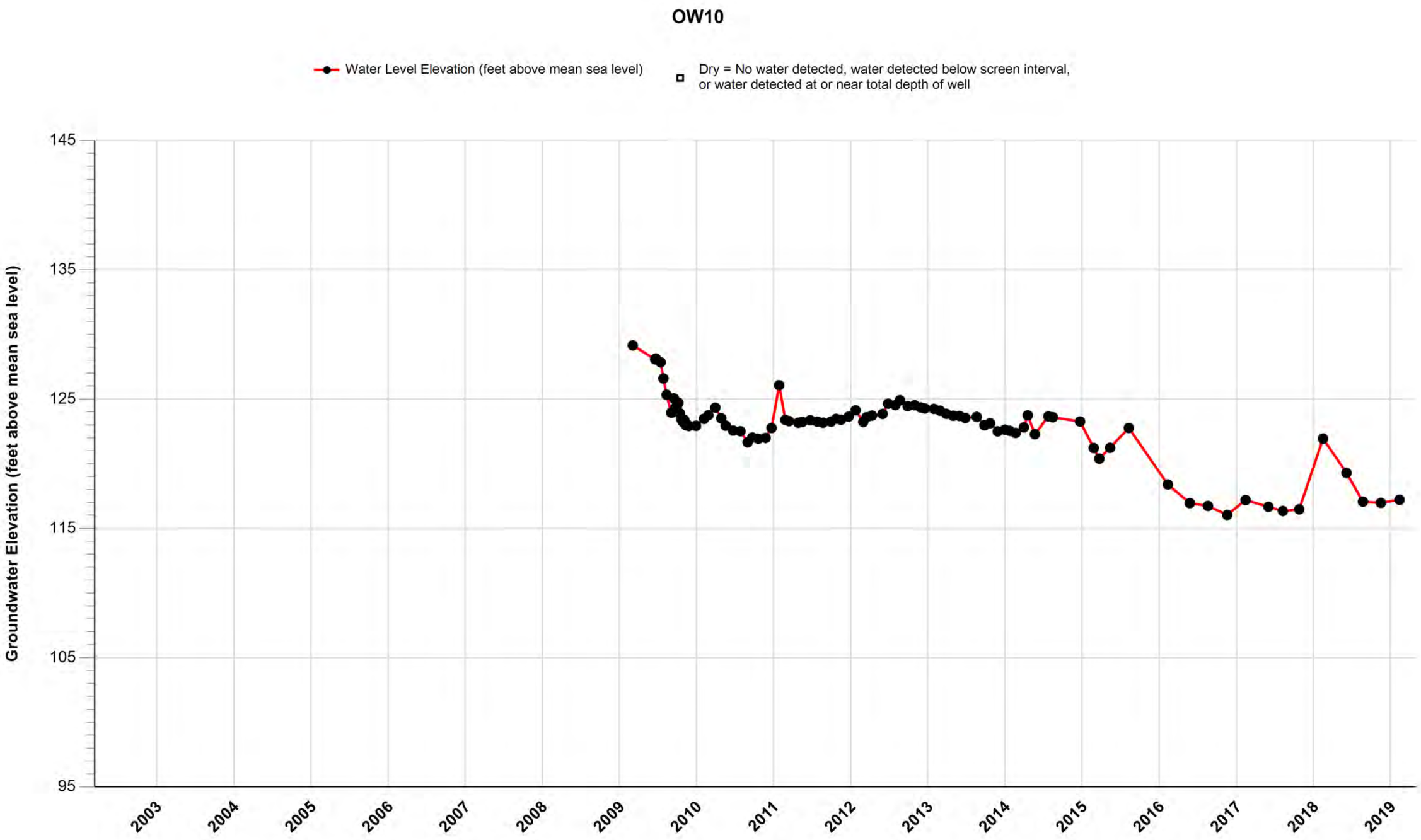

Attachment E, Figure E-20
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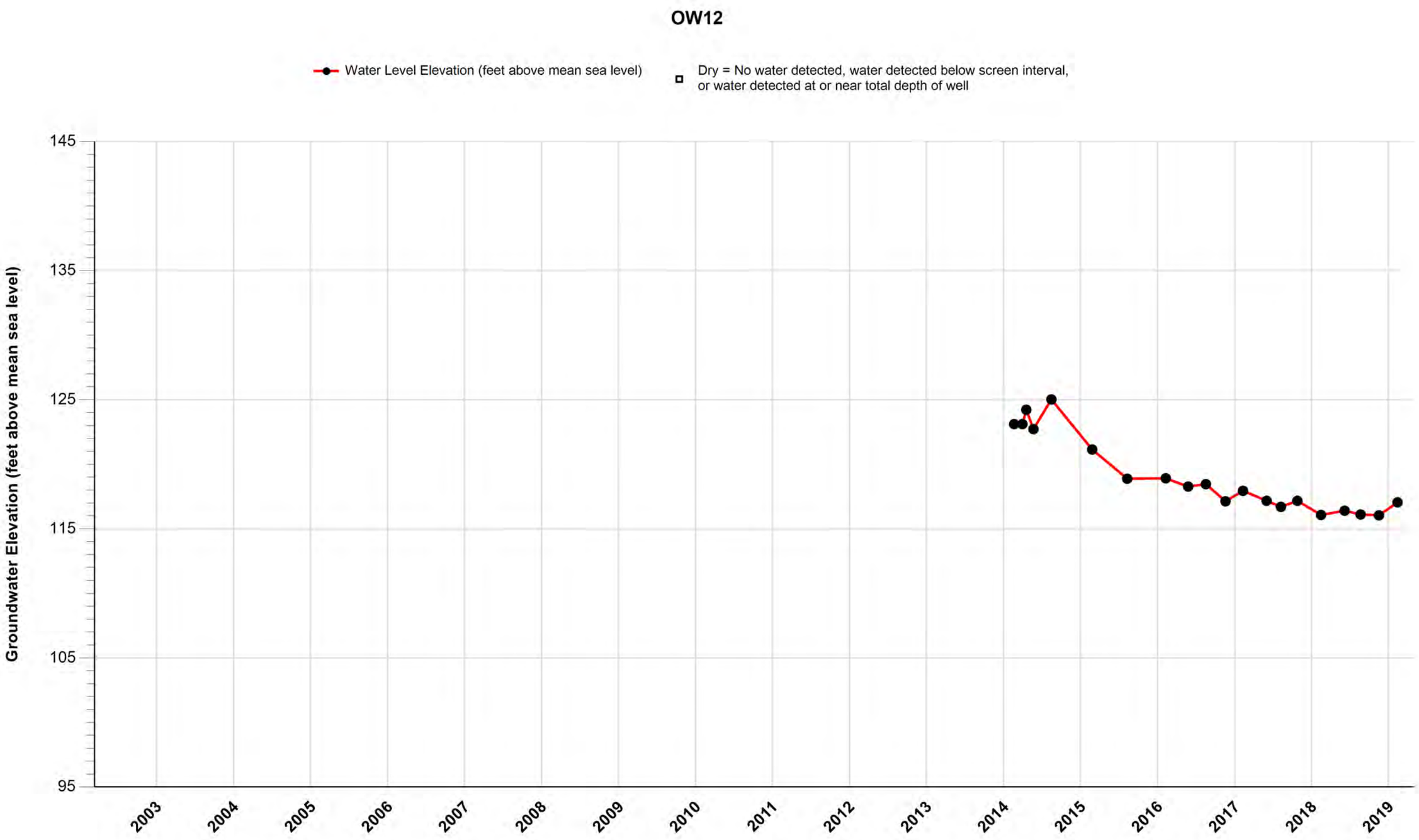
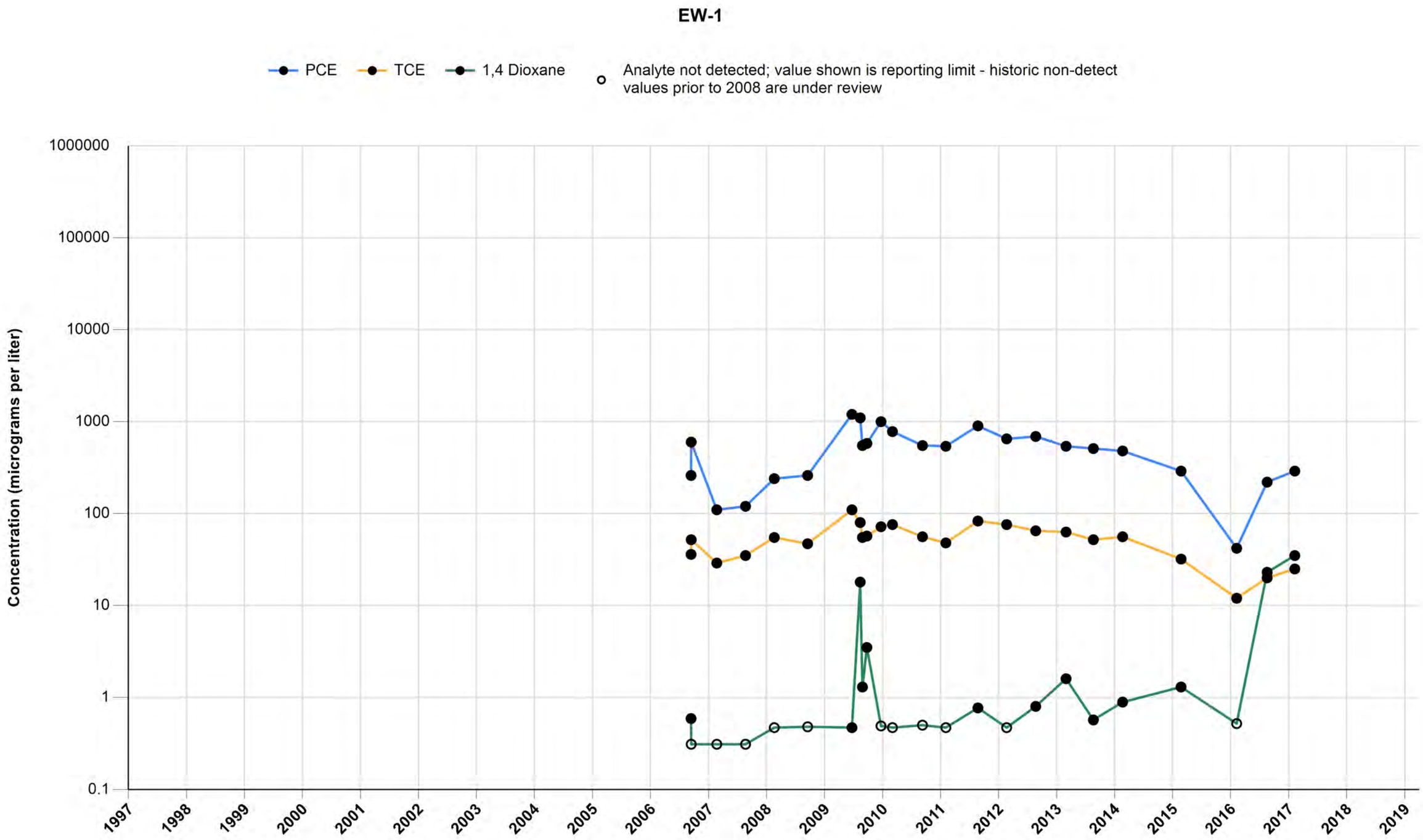


Attachment E, Figure E-21
OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
Groundwater Analytical (PCE, TCE and 1,4-Dioxane)



Attachment E, Figure E-22
OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
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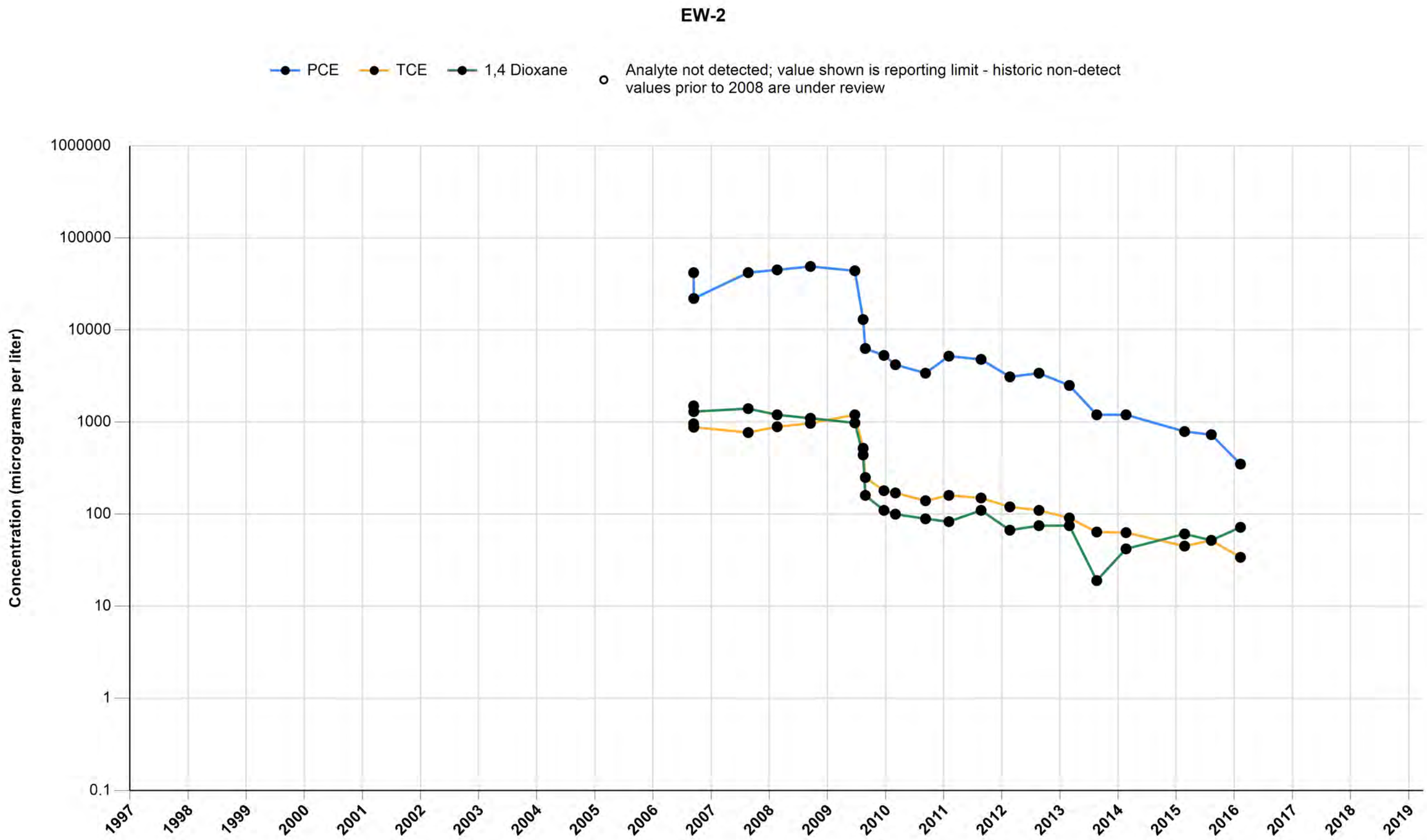

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OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
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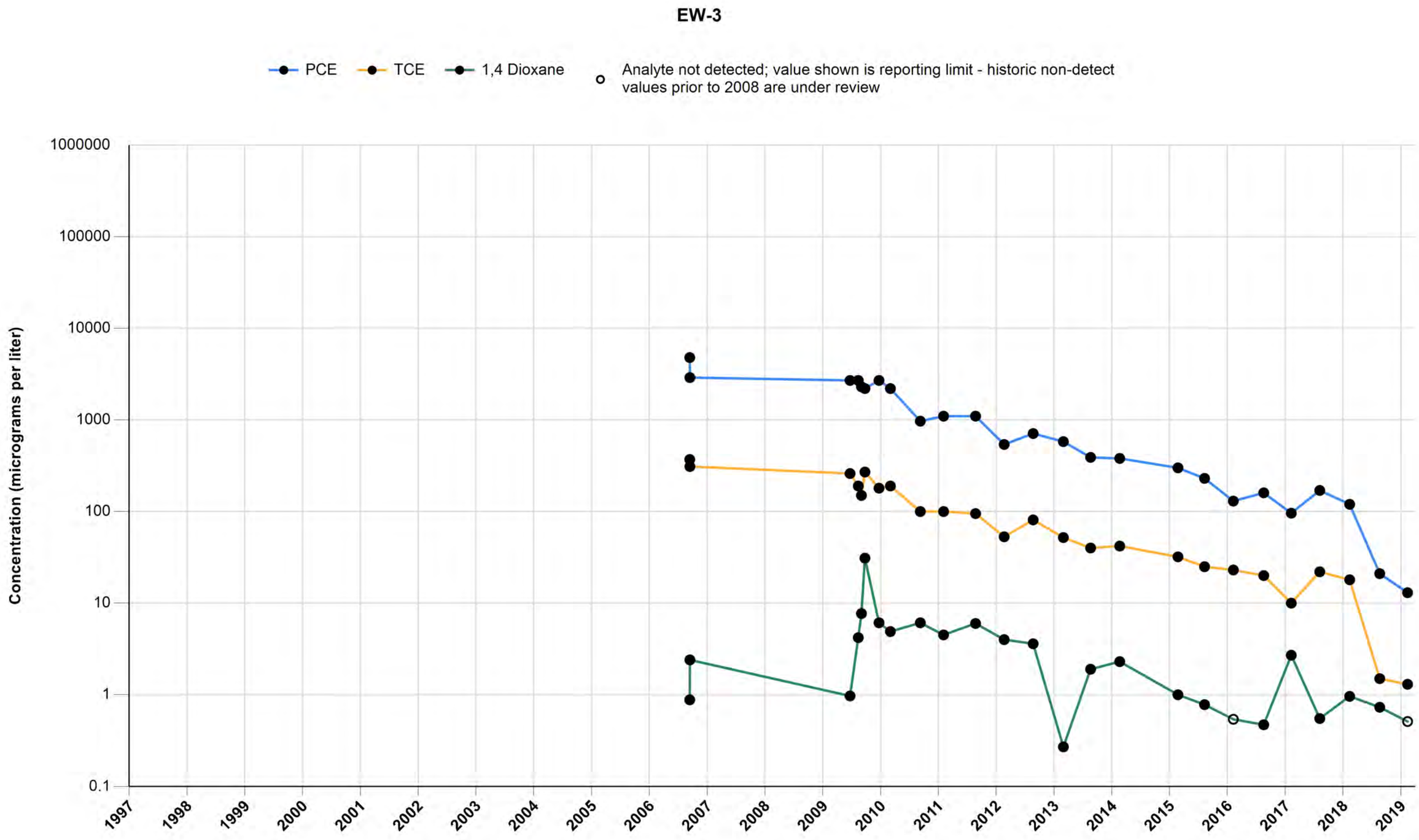

Attachment E, Figure E-24
OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
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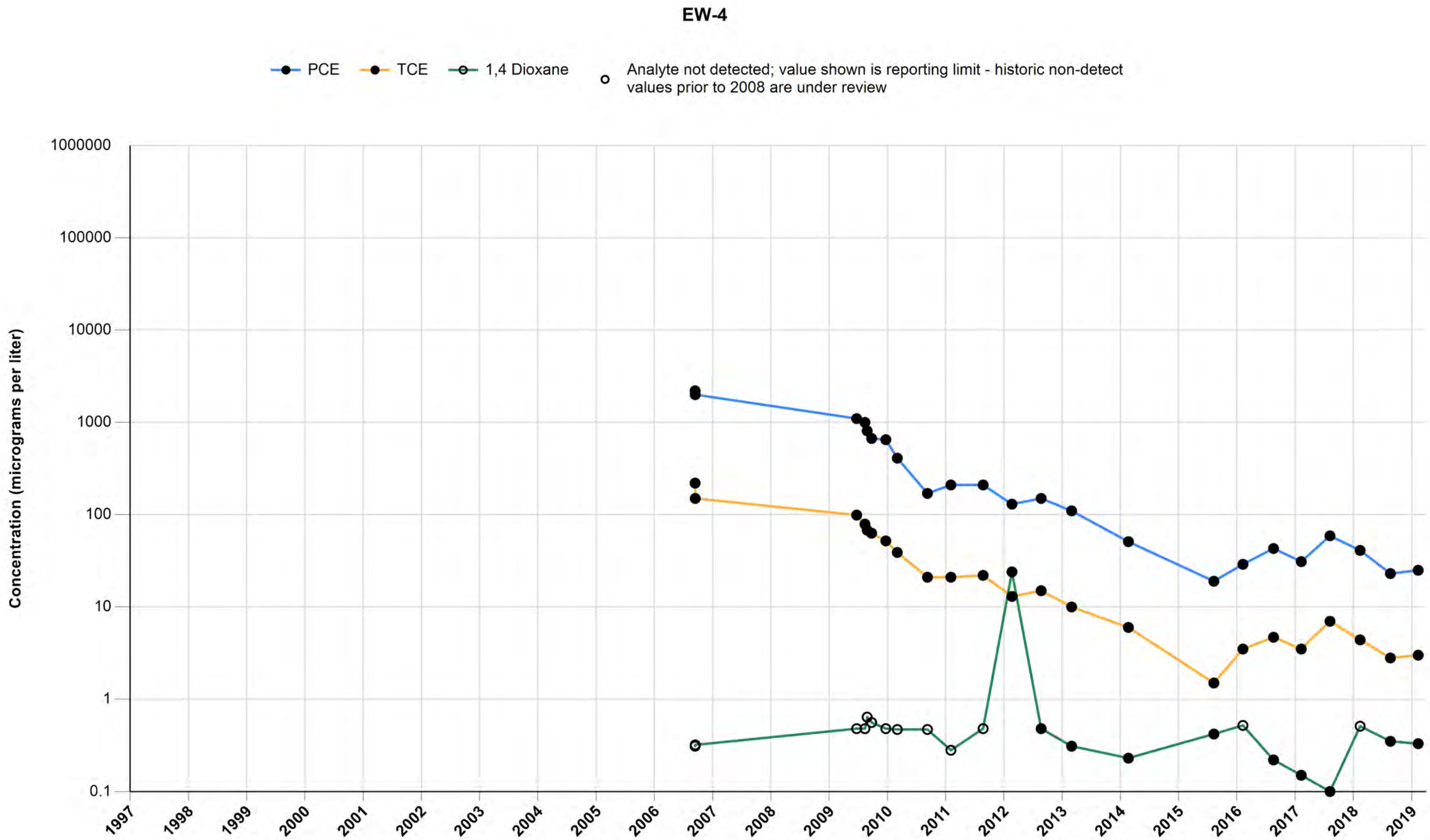

Attachment E, Figure E-25
OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
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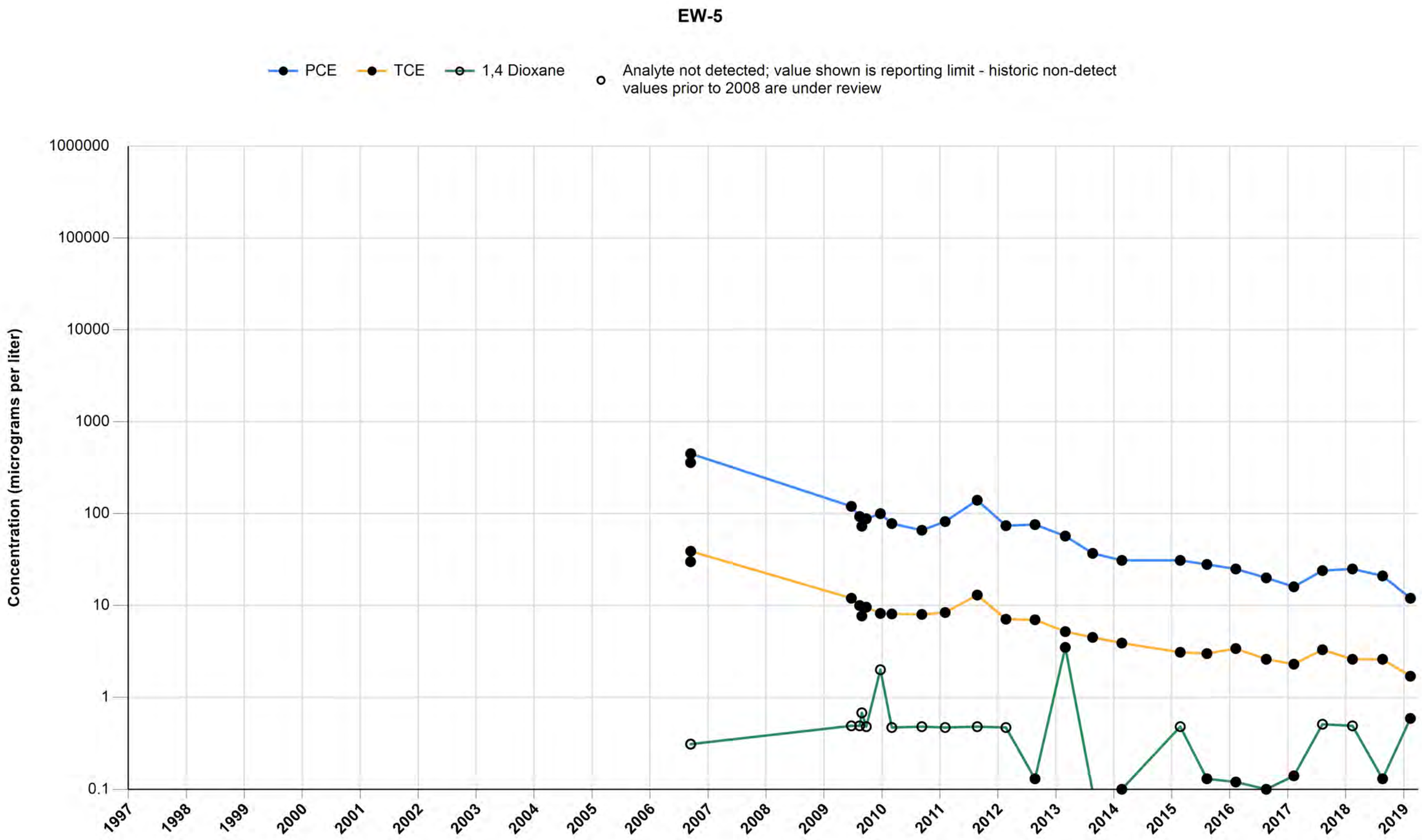

Attachment E, Figure E-26
OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
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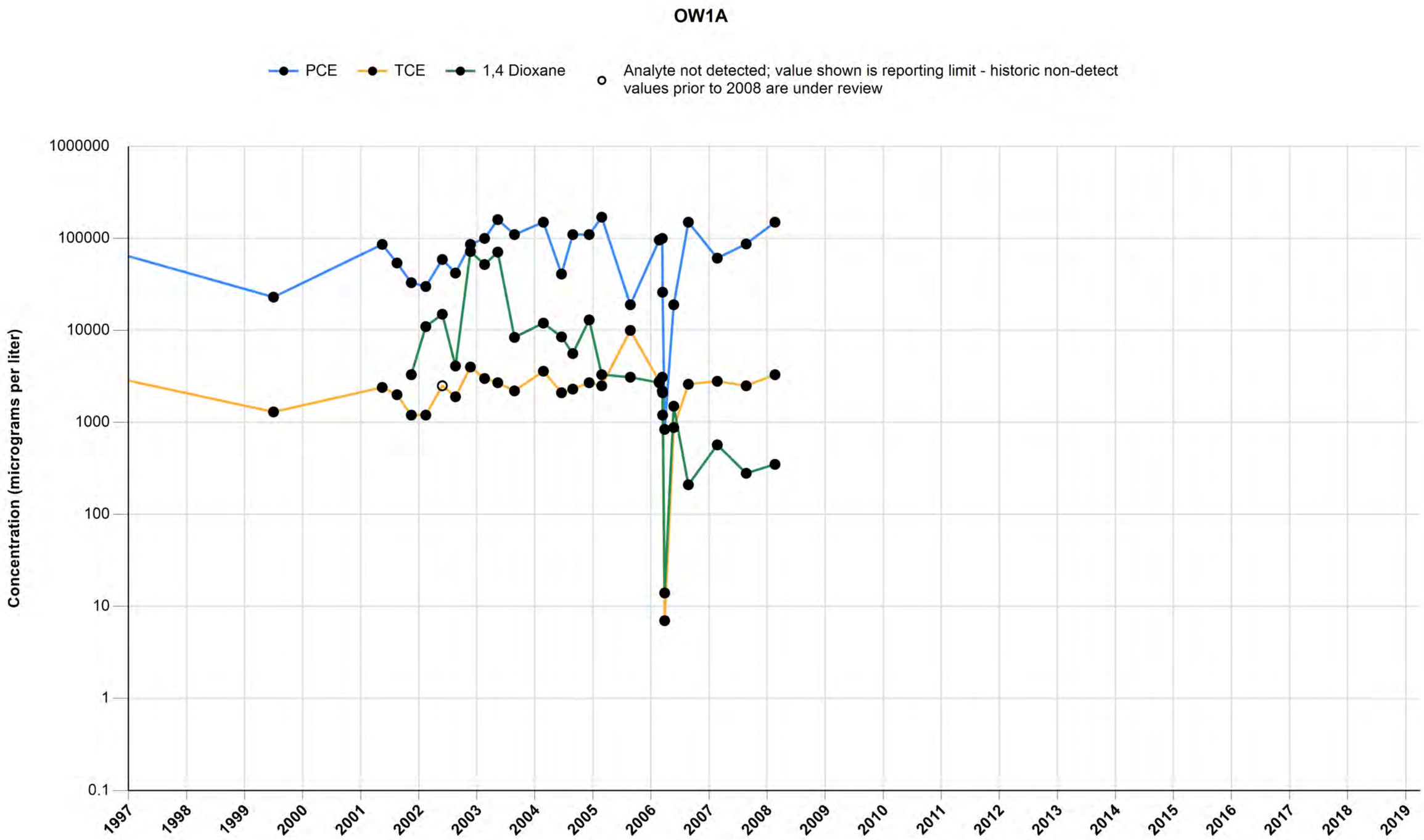
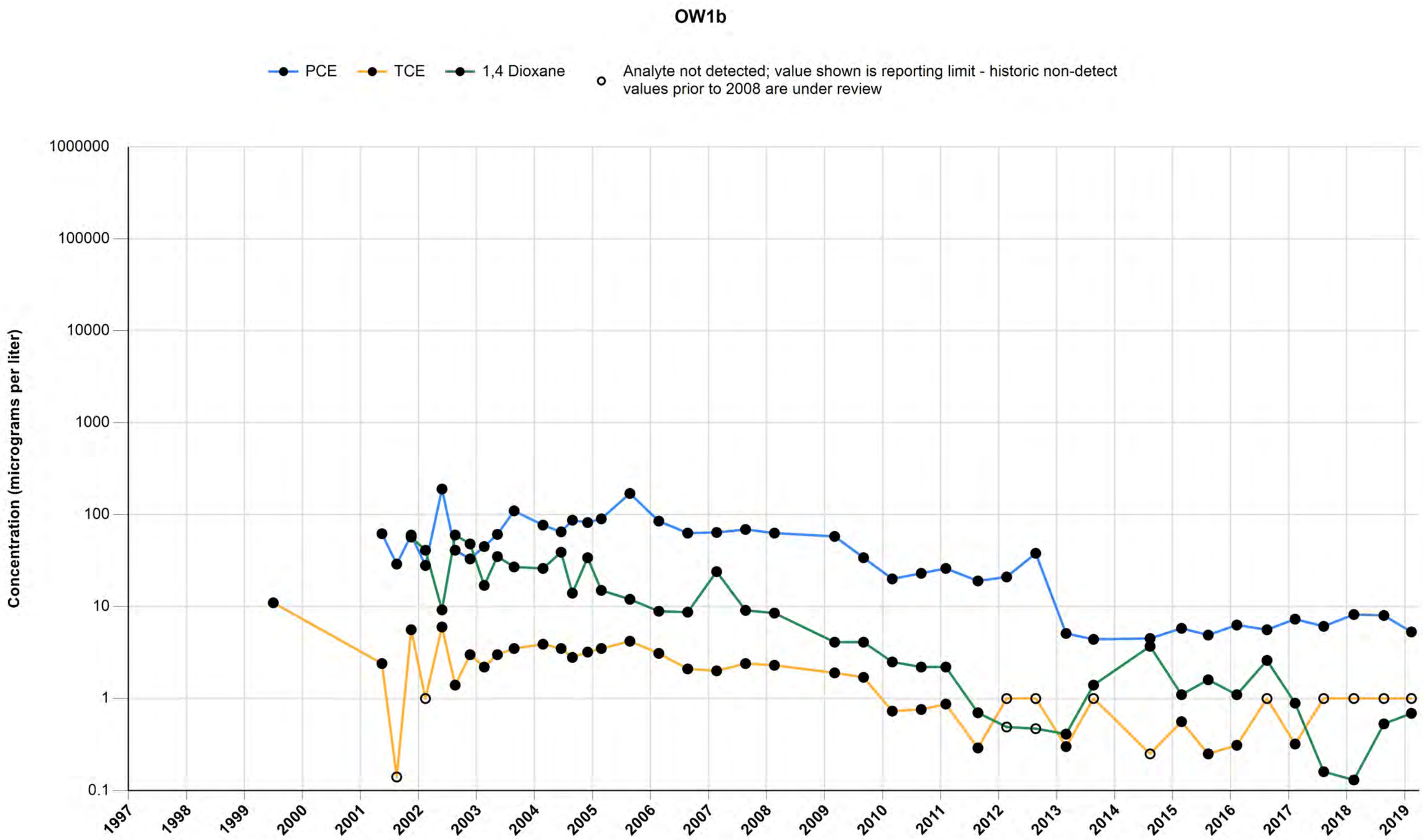
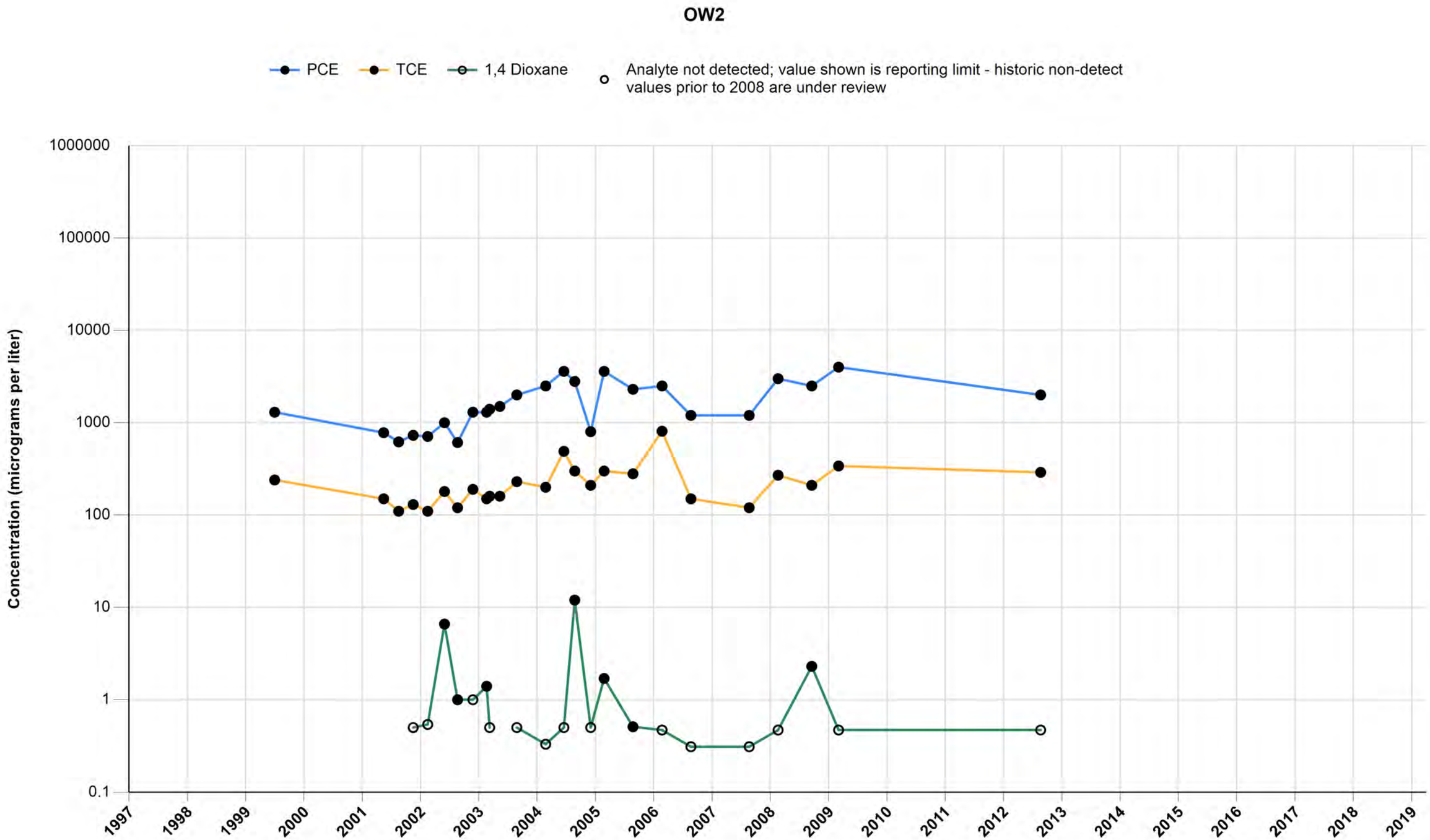


Attachment E, Figure E-27
OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
Groundwater Analytical (PCE, TCE and 1,4-Dioxane)



Attachment E, Figure E-28
OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
Groundwater Analytical (PCE, TCE and 1,4-Dioxane)



Attachment E, Figure E-29
OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
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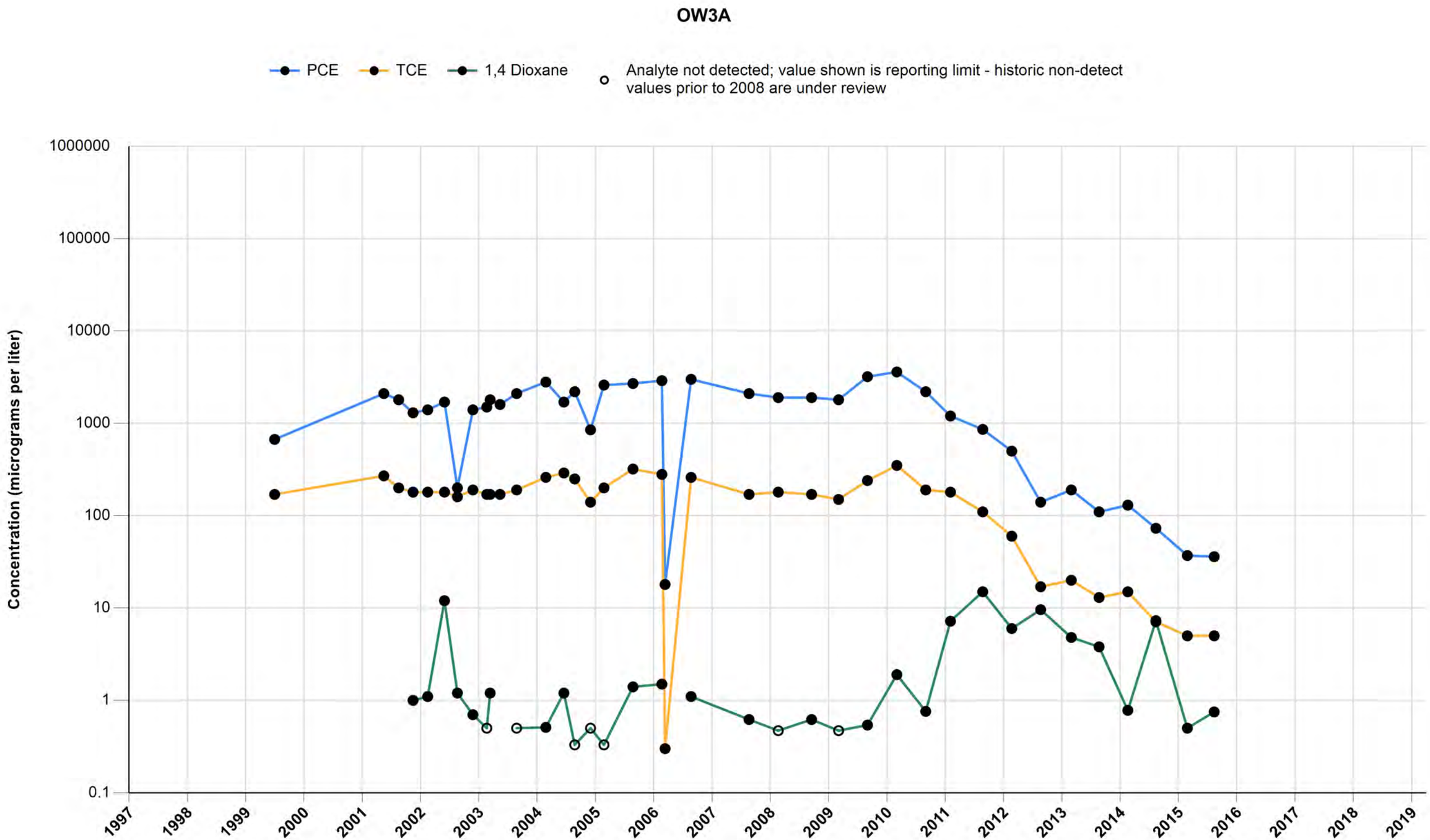

Attachment E, Figure E-30
OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
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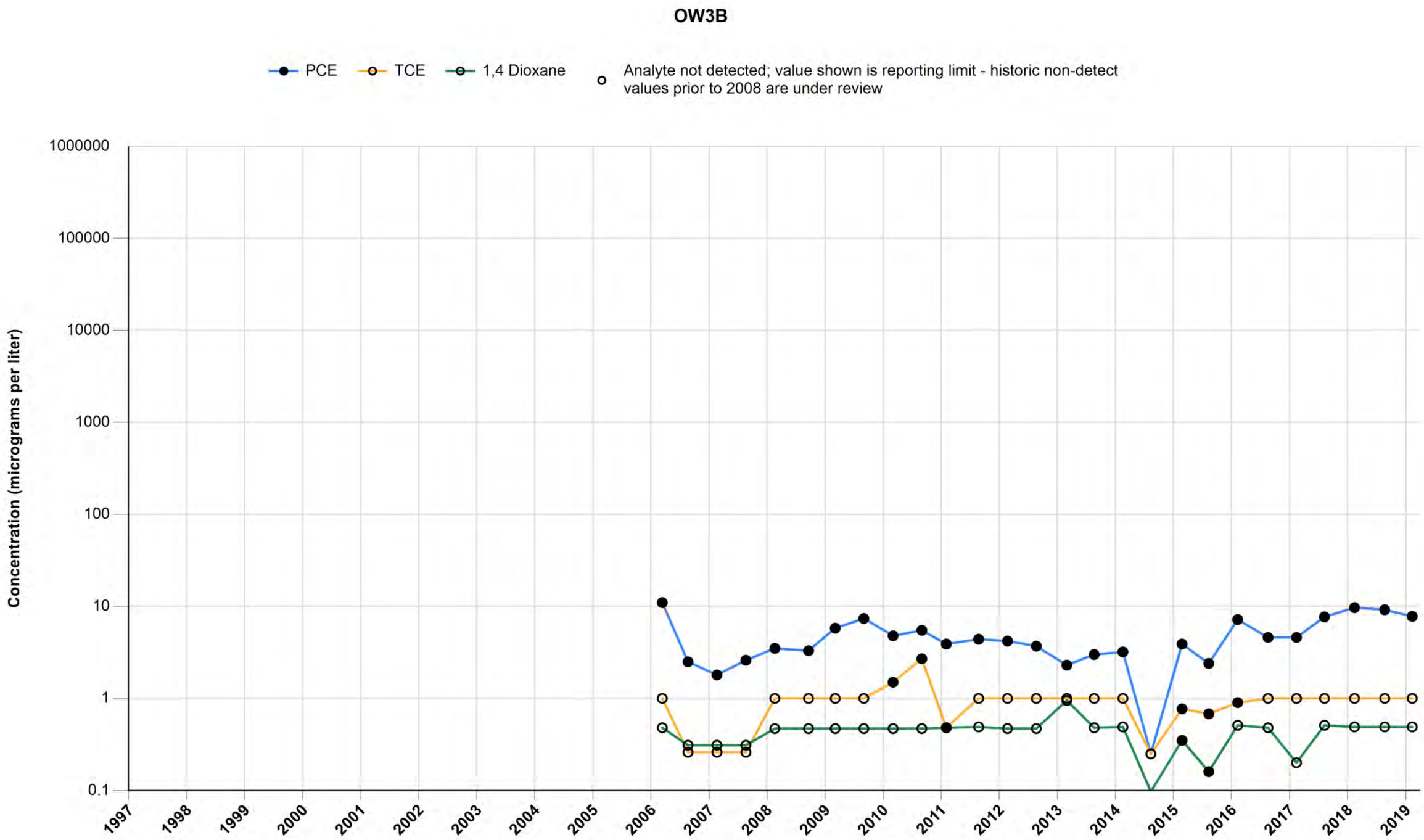
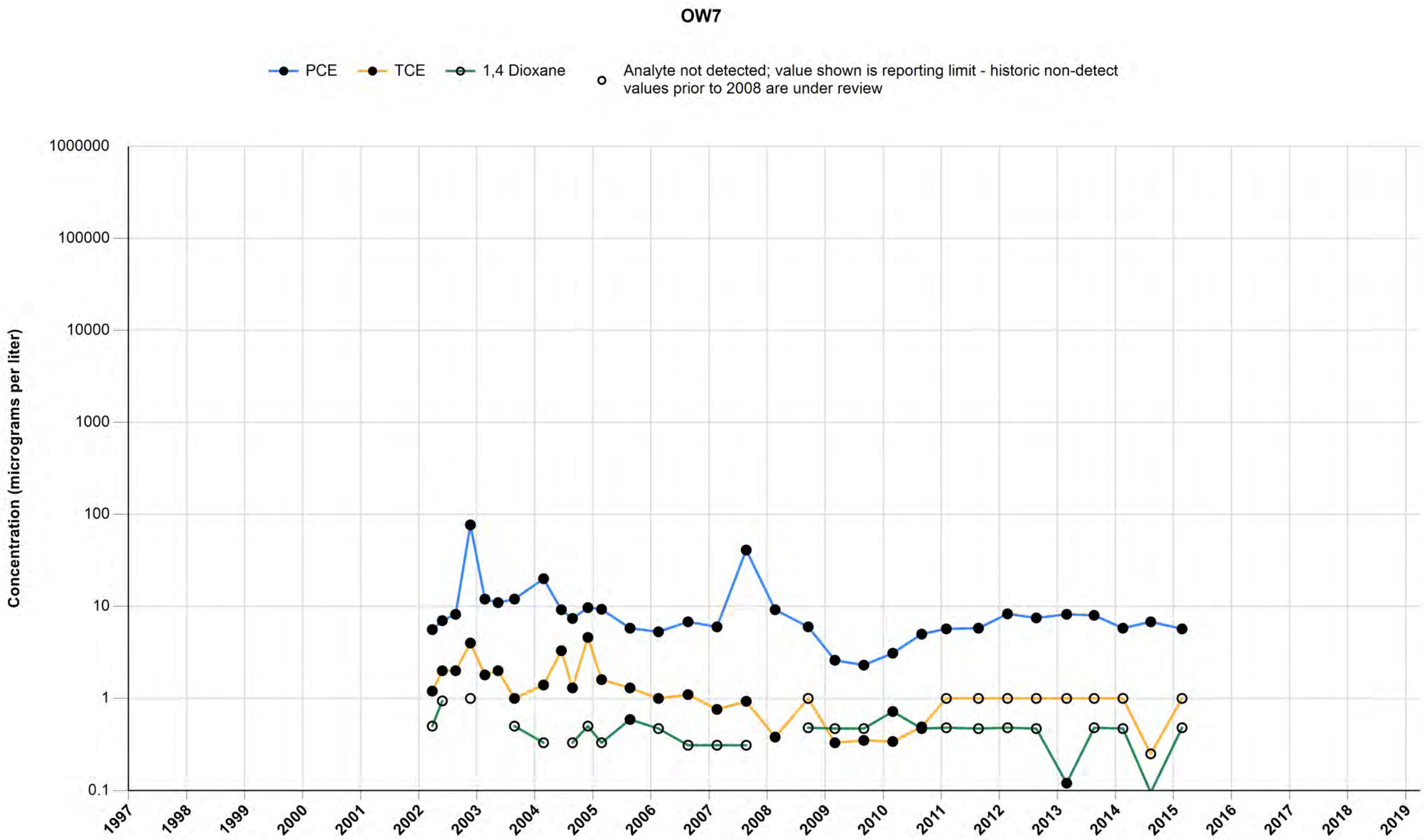


Attachment E, Figure E-31
OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
Groundwater Analytical (PCE, TCE and 1,4-Dioxane)



Attachment E, Figure E-32
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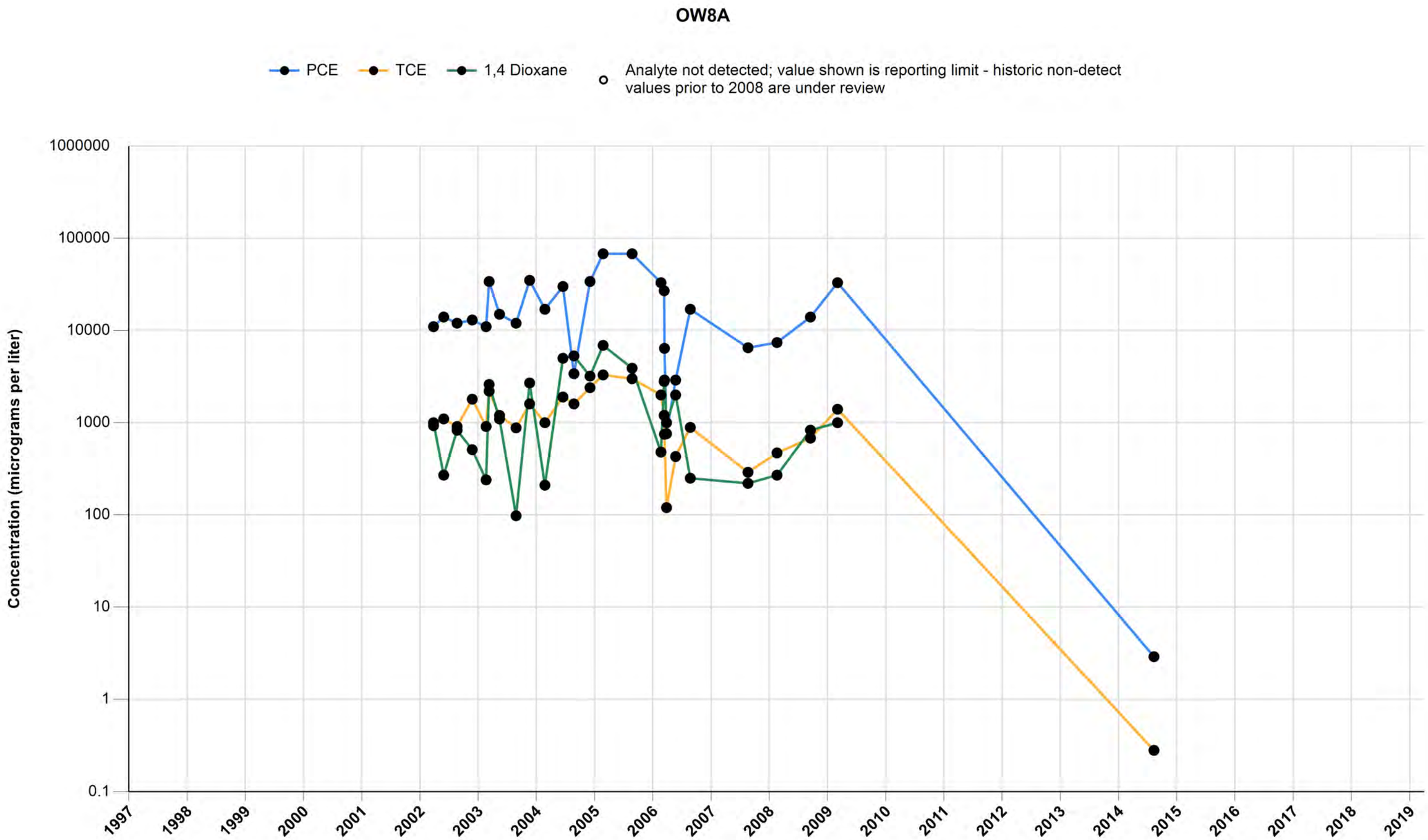
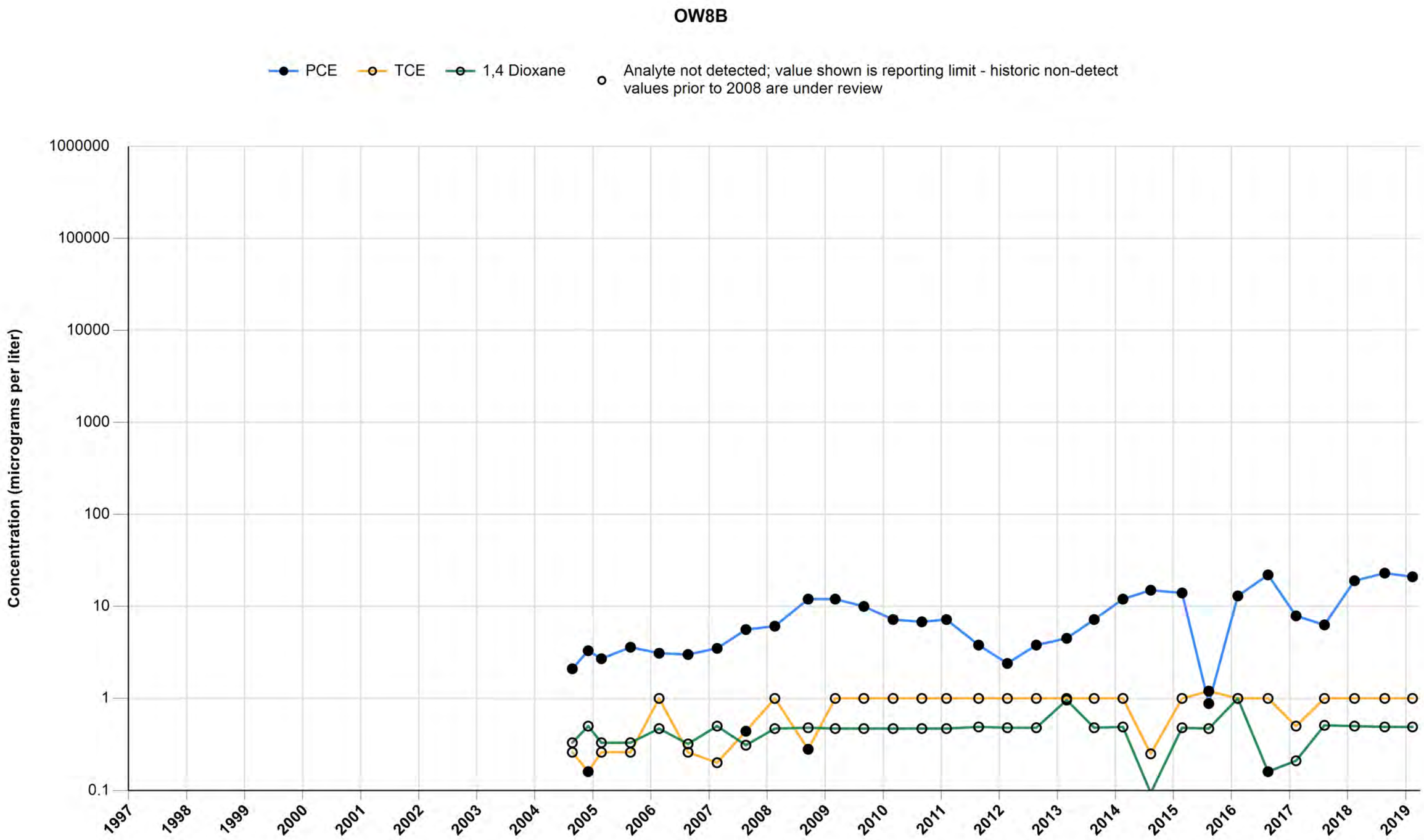


Attachment E, Figure E-33
OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
Groundwater Analytical (PCE, TCE and 1,4-Dioxane)



Attachment E, Figure E-34
OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
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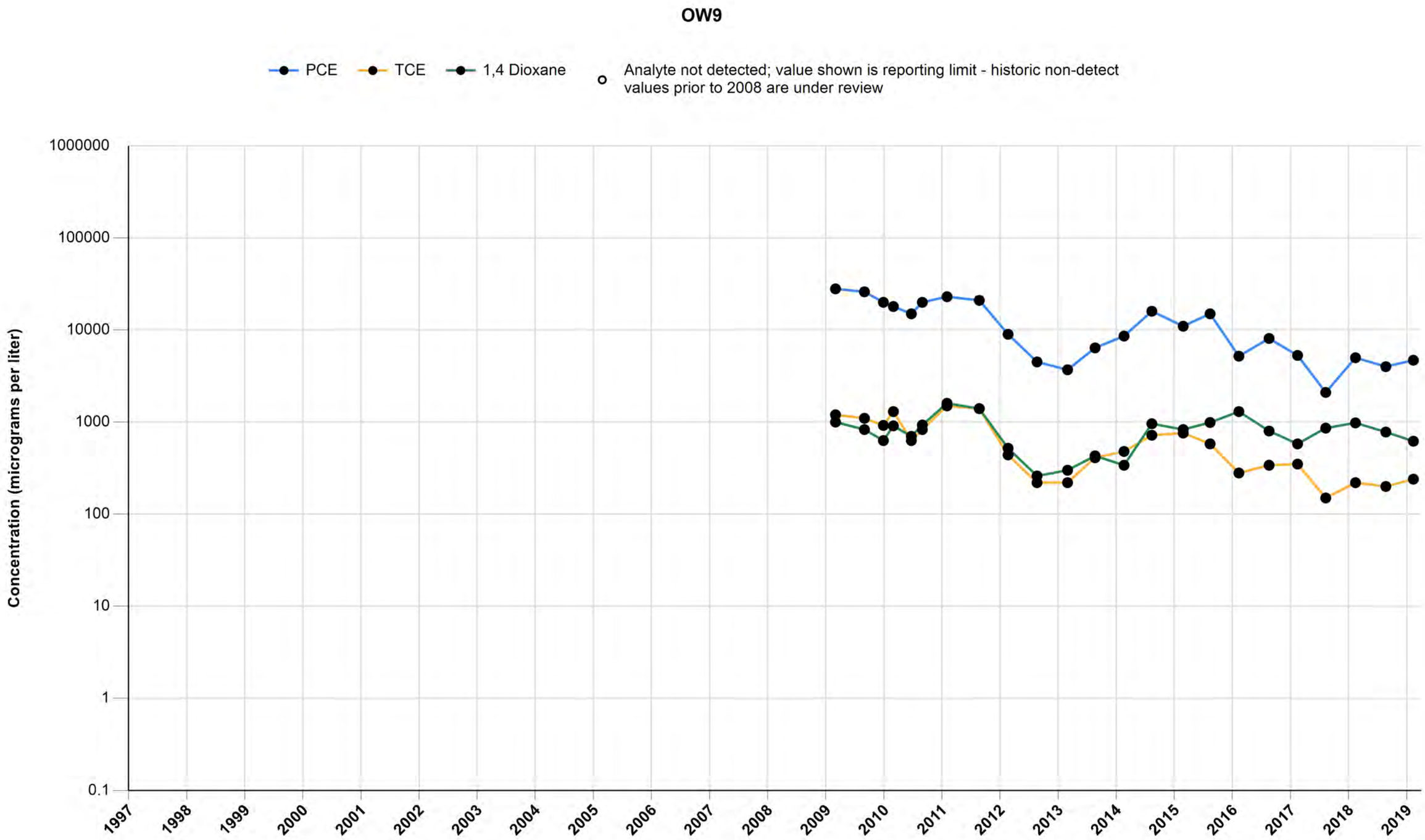
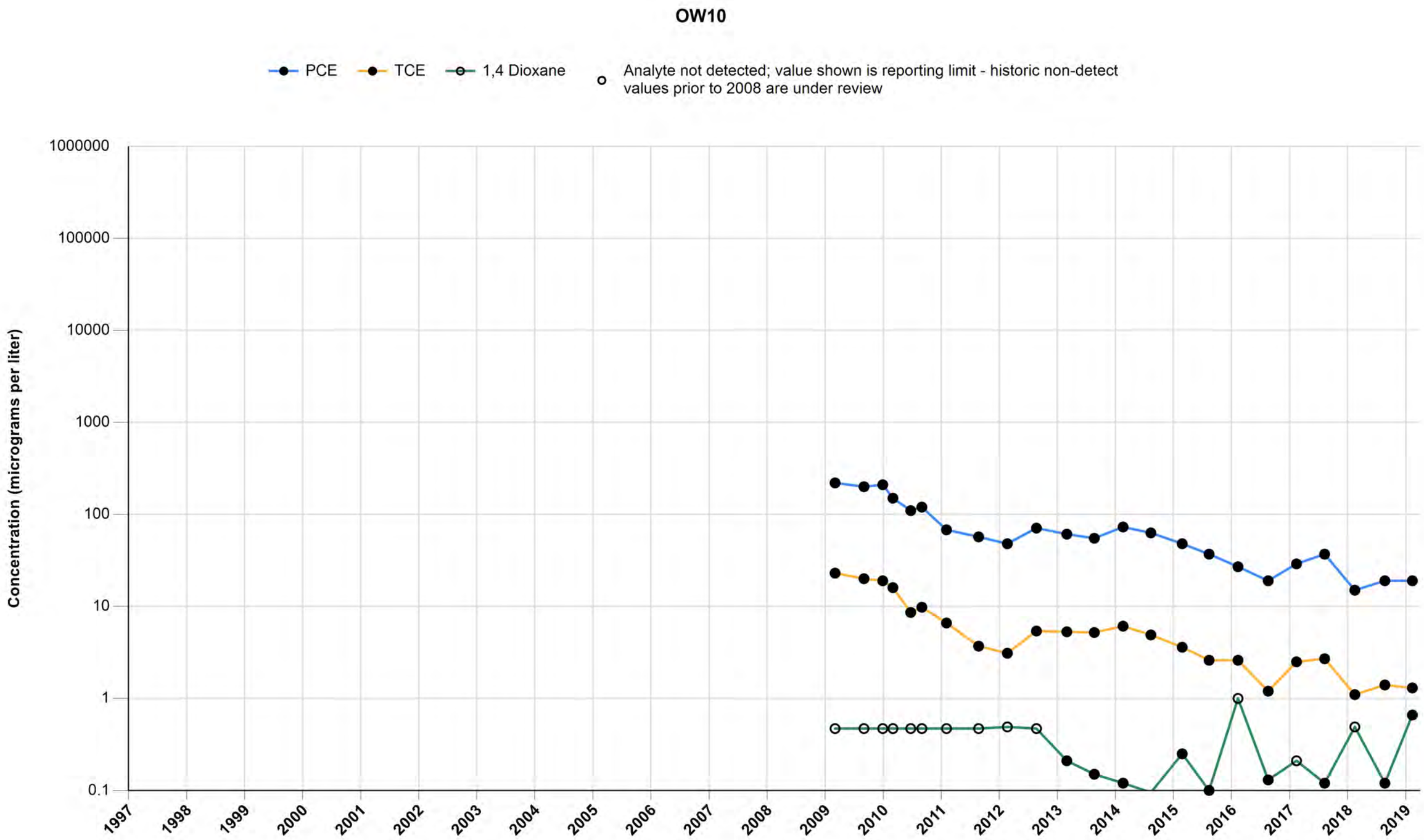
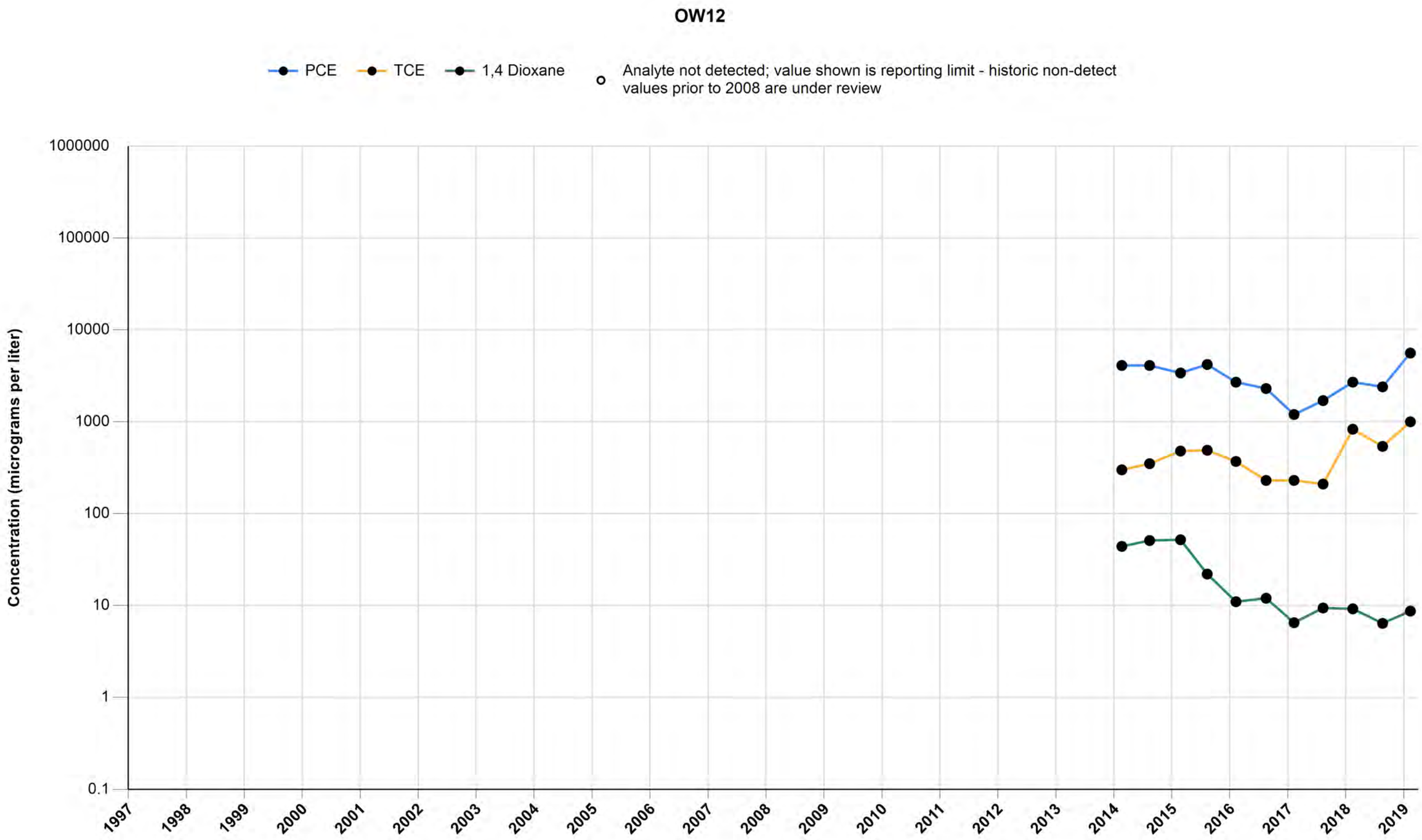


Attachment E, Figure E-35
OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
Groundwater Analytical (PCE, TCE and 1,4-Dioxane)



Attachment E, Figure E-36
OU-1 Groundwater Containment Remedy, Omega Chemical Superfund Site
Groundwater Analytical (PCE, TCE and 1,4-Dioxane)



ATTACHMENT F

Quarterly Groundwater Containment Review

Memorandum

To: *Jaime Dinello, de maximis, inc.*

From: *Matt Gamache, CDM Smith*

Date: *March 29, 2019*

Subject: *Omega Operable Unit 1 EE/CA Remedy*
Quarterly Groundwater Containment Review – February 11-13, 2019

This memorandum provides and discusses the first quarter 2019 (1Q2019) groundwater elevation contours based on the February 11-13, 2019 groundwater monitoring gauging activities, and the response of the local groundwater table to the Omega Operable Unit (OU)-1 Groundwater Containment Remedy (GCR) operation. The purpose of the GCR is to hydraulically contain the highest levels of contamination dissolved in groundwater within OU-1. Extraction wells (EWs) located along Putman Street are designed to provide a hydraulic barrier at the down-gradient boundary of OU-1 (Figure F-1). In addition to operation of the GCR hydraulic containment extraction wells, other groundwater extraction is occurring within OU-1. Seven dual-phase extraction (DPE) wells are also operating and extracting groundwater within OU-1. These DPE wells were constructed in June through December 2014 as part of the Full Scale On-Site (OU-1) Soil Remedy under the 2010 Consent Decree between the USEPA and OPOG. These soil remedy wells are DPE-3, DPE-4, DPE-5, DPE-8, DPE-9, VE-7D, and VE-10D, and are also shown on Figure F-1. Although installed as part of the OU-1 soil remedy to increase subsurface vapor removal, the DPE wells are currently extracting the majority of the water treated by the GCR groundwater treatment plant.

On February 11-13, 2019, in accordance with the approved Performance Standards Verification Plan (PSVP; CDM, 2007) for the GCR, water level elevations were measured for the purposes of demonstrating hydraulic containment of groundwater within OU-1. The majority of the monitoring points used in this evaluation lie within the boundaries of OU-1. However, selected monitoring points immediately adjacent to OU-1 (e.g. PZ-3, OW-9, and OW-11) are also used to assess the performance of the OU-1 groundwater remedy. All PSVP-required locations were measured during 1Q2019. These data are plotted along with interpreted water level elevation contours (1-foot interval) on Figure F-1 and demonstrate that OU-1 groundwater is contained.

The water-level contour map (Figure F-1) demonstrates that flow from the former Omega Chemical property located at 12504 and 12515 Whittier Blvd. Whittier, California (property) is primarily converging east of the Putnam Street GCR boundary wells EW-1, EW-2, and EW-3, around the OU-1 Soil

Remedy well DPE-5 and west of Putnam Street around the OU-1 Soil Remedy wells VE-7D and VE-10D. The total average extraction rate associated with the February 11-13, 2019 water level data is 5.35 gpm, resulting in a similar capture zone to 3Q2018 and 4Q2018.

Horizontal gradients within OU-1 are variable, at approximately 0.04 ft/ft from the property toward Putnam Street with 1Q2019 results. The horizontal gradients between OW-3A and DPE-9 and between OW-9 and VE-10D (along and to the west of Putnam Street) were 0.02 ft/ft and 0.11 ft/ft, respectively on February 11-13, 2019, which are also consistent with those recorded in 4Q2018.

Vertical gradients are examined at one well triplet and two well pairs: OW-1A/OW-12/OW-1B, OW-3A/OW-3B, and OW-8A/OW-8B, the locations of which are shown on Figure F-2. For each set of wells, the 'A' well is screened in the A-zone and the 'B' well is screened in the B-zone. OW-12 is also screened in the A-zone in-between OW-1A and OW-1B. The A-zone, essentially the water table aquifer, is currently being pumped by the GCR EWs and the OU-1 Soil Remedy DPE wells. The A-zone is the principal zone impacted by VOCs at the site.

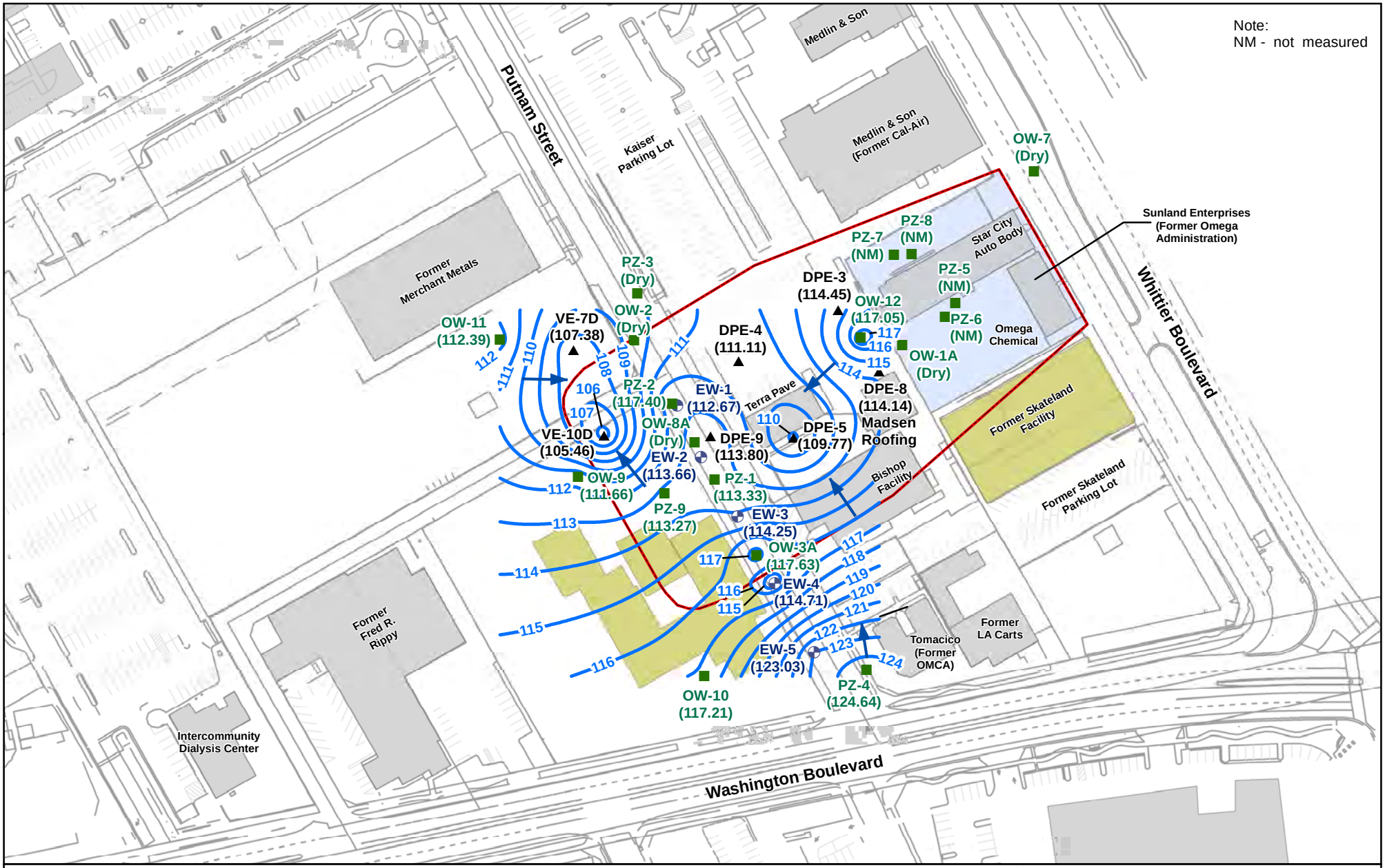
The A and B-zones show minimal hydraulic connection as evidenced by the significant difference in head between them. The lithologic data demonstrate the presence of a 30-foot thick layer of clayey silt or silty clay that underlies the A-zone and acts as a confining unit between these zones, as shown on cross sections A-A' and B-B', further illustrating this hydraulic and physical vertical separation. The locations of both sections are shown in Figure F-3 and the cross sections themselves are shown in Figures F-4 (A-A') and A-5 (B-B'). In Figure F-4, the well screens of OW-3B and OW-8B are shown to be below the confining unit that underlies the A-zone. In Figure F-5, the lithology around OW-1A, OW-12, and OW-1B varies from what is observed at the other well pairs. In this instance, OW-1A is partially screened within a sand layer, but the area around the OW-12 and OW-1B well screens has been classified as clayey silt or silty clay. Since there are no lithological markers differentiating the two lower-screened wells (OW-12 and OW-1B), the groundwater elevations must be used to infer the degree of hydraulic connection/separation. Hydrographs of the water levels over time at these three wells are shown in Figure F-6. Although OW-1A has been dry for most of the OW-12 data collection period, vertical (downward) gradients can be seen between these two wells in the few instances where water was found at OW-1A since 2013. Vertical (downward) gradients between OW-12 and OW-1B are also present for all synoptic rounds of data except for August 2017, when groundwater elevations are approximately 117 feet MSL at both wells. Despite these similar elevations in August 2017 and again on February 2018, the units screened by these two wells are still considered to be hydraulically separated. This is similar to what has been observed at OW-3A/OW-3B (Figure F-7) and OW-8A/OW-8B (Figure F-8).

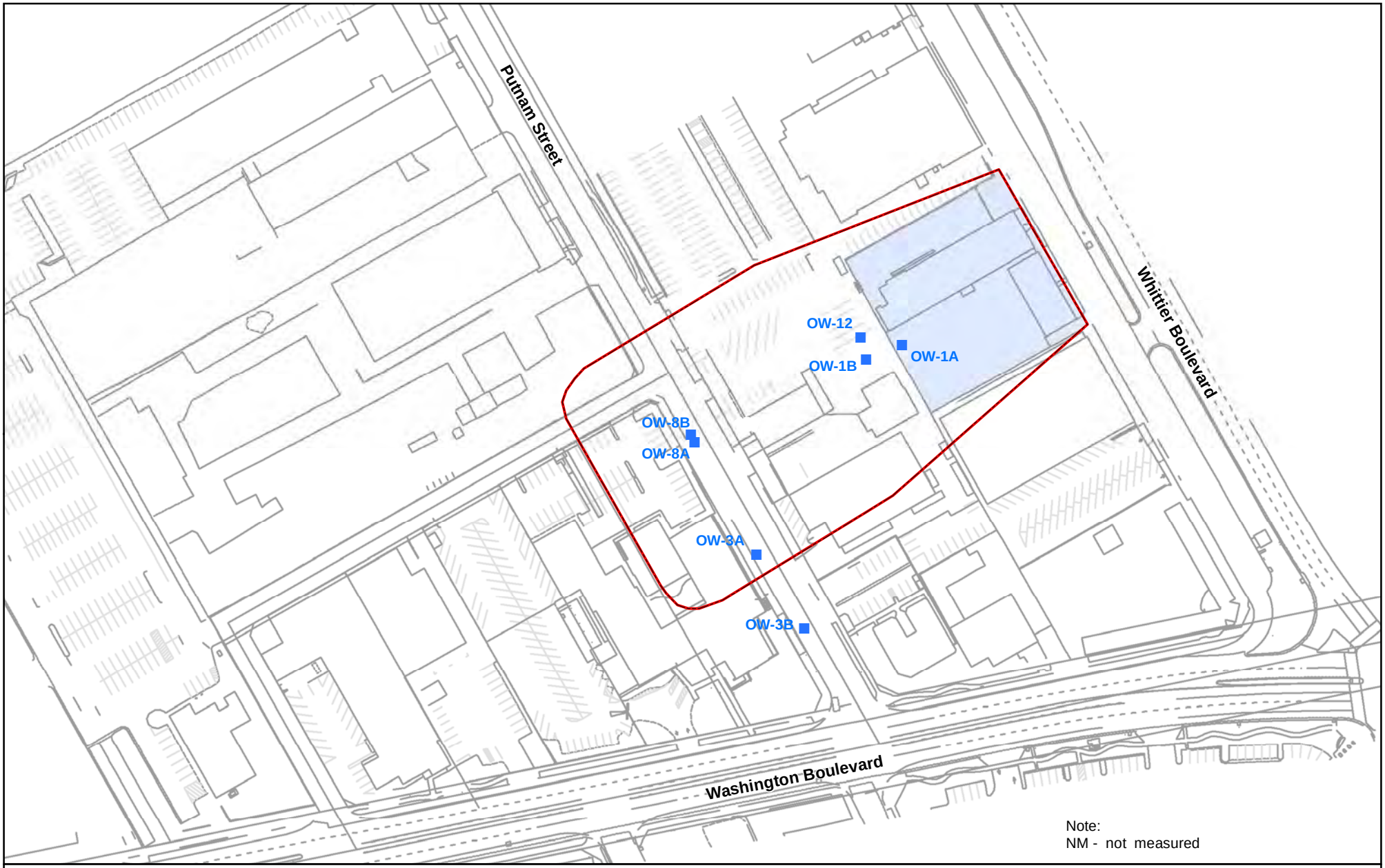
The area covered by the cone of depression in 1Q2019 is similar to what was observed and documented in 4Q2018 (CDM Smith, 2019) due to relatively consistent overall pumping. The combination of GCR extraction, OU-1 Soil Remedy extraction, and the regional drought conditions has essentially dewatered the A-Zone aquifer. As demonstrated on Figure F-1, containment of the OU-1 groundwater is attained.

References

CDM, 2007. *Performance Standards Verification Plan for Phase 1a Area Groundwater Treatment System*. April 19, 2007.

CDM Smith, 2019. *Omega Operable Unit 1 EE/CA Remedy Quarterly Groundwater Containment Review – November 16, 2018*. January 7, 2019.


Note:
NM - not measured
Putnam Street
Kaiser Parking Lot
Medlin & Son
Medlin & Son (Former Cal-Air)
Former Merchant Metals
Sunland Enterprises (Former Omega Administration)
Star City Auto Body
Omega Chemical
Whittier Boulevard
Former Skateland Facility
Former Skateland Parking Lot
Bishop Facility
Terra Pave
Madsen Roofing
Former Fred R. Rippy
Intercommunity Dialysis Center
Washington Boulevard
Tomacico (Former OMCA)
Former LA Carts
OW-7 (Dry)
PZ-8 (NM)
PZ-7 (NM)
PZ-5 (NM)
PZ-6 (NM)
OW-1A (Dry)
OW-12 (117.05)
DPE-3 (114.45)
DPE-8 (114.14)
DPE-5 (109.77)
DPE-9 (113.80)
DPE-4 (111.11)
PZ-3 (Dry)
OW-2 (Dry)
OW-11 (112.39)
VE-7D (107.38)
VE-10D (105.46)
PZ-2 (117.40)
EW-1 (112.67)
OW-8A (Dry)
EW-2 (113.66)
OW-9 (111.66)
PZ-9 (113.27)
PZ-1 (113.33)
EW-3 (114.25)
OW-3A (117.63)
EW-4 (114.71)
EW-5 (123.03)
OW-10 (117.21)
PZ-4 (124.64)
106
107
108
109
110
111
112
113
114
115
116
117
118
119
120
121
122
123
124
Legend
Phase Ia Area
Former Omega Chemical Property
Existing Building
Former Building
Groundwater Elevation Contour - Dashed where Inferred (Feet above mean sea level)
Groundwater Flow Direction
Extraction Well
Shallow Observation Well / Piezometer
Dual Phase Extraction Well Location
N
75 0 75
Feet
CDM Smith
Omega Chemical
Shallow Zone
Groundwater Contour Map
February 11 - 13, 2019
Figure F-1



Note:
NM - not measured

Legend

- Phase Ia Area
- Former Omega Chemical Property
- Observation Well Pair (A-zone/B-zone)

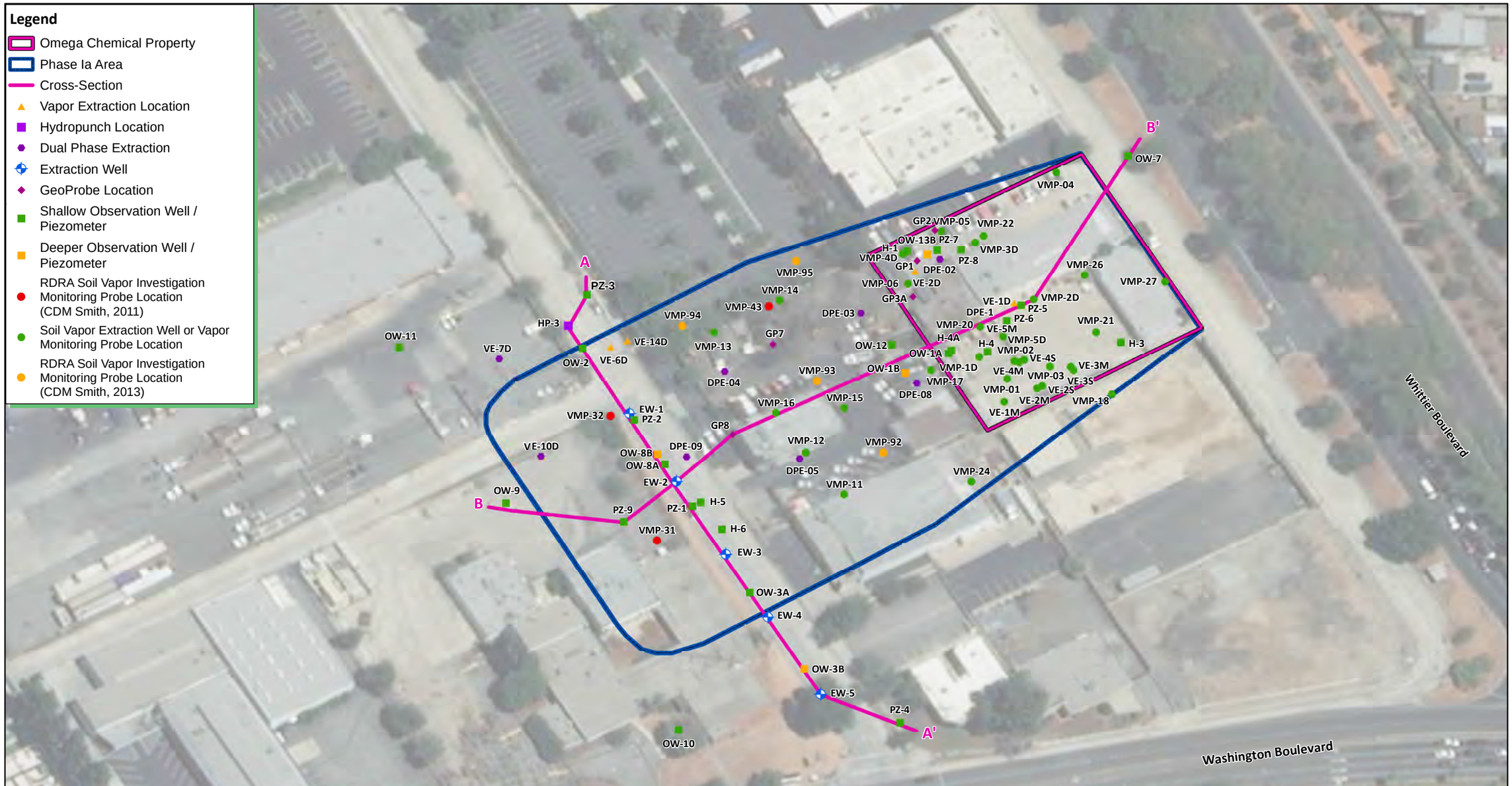
N

75 0 75
Feet

Omega Chemical
A-zone/B-zone Well Pairs

Figure F-2

CDM Smith



N

125 0 125

Feet

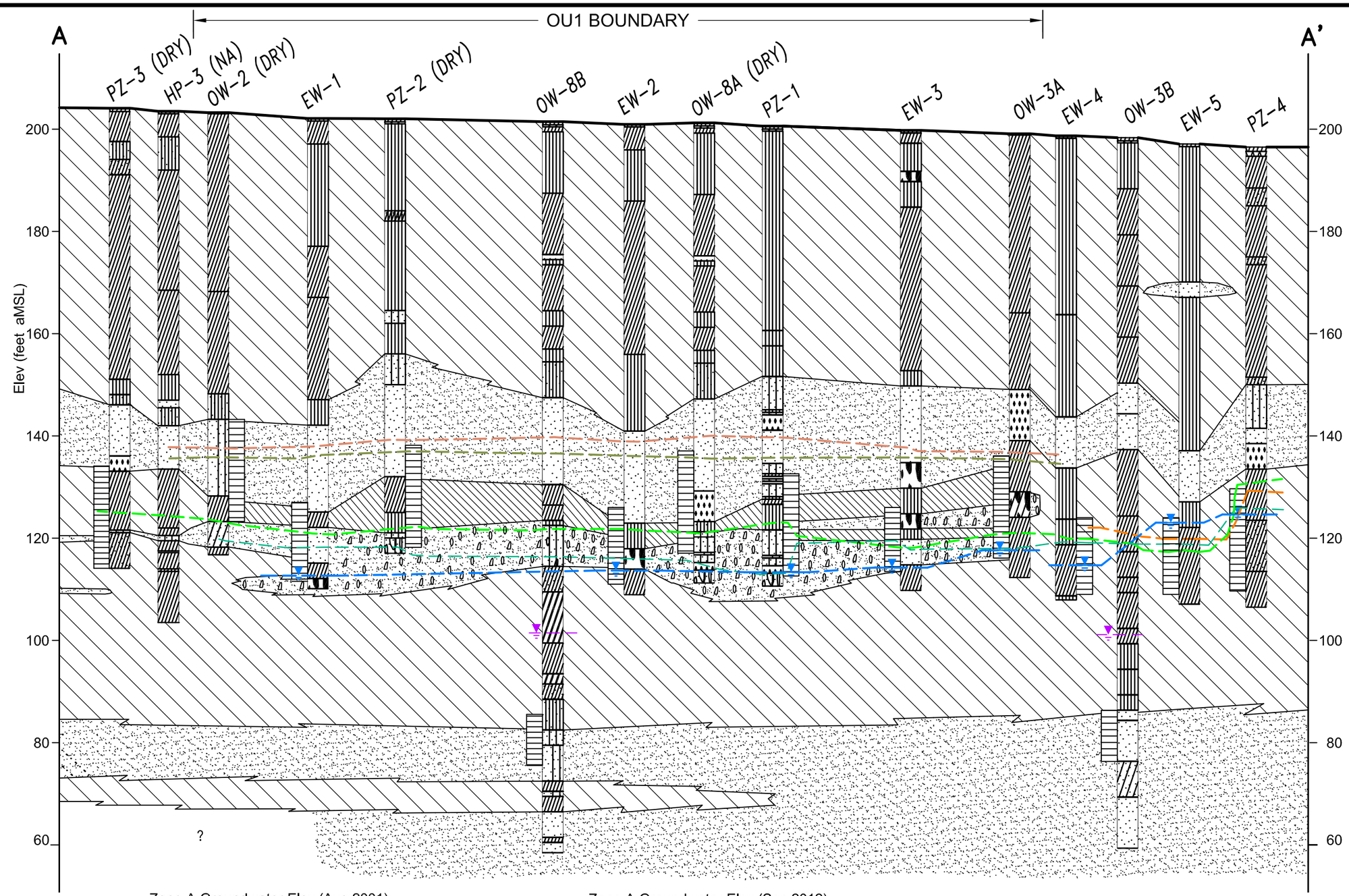
Omega Chemical

Cross-Section Plan View

Figure F-3

CDM Smith

Schellerka G:\GIS\10500_Omega\2018\ASSIST\Miscellaneous\FigureA-3_Cross-SectionPlanView.mxd 5/3/2018



1" = 20'

10 0 20

Zone A Groundwater Elev (Aug 2001)
Zone A Groundwater Elev (Aug 2005)
Zone A Groundwater Elev (Sep 2009)
Zone A Groundwater Elev (Sep 2012)
Zone A Groundwater Elev (Aug 2016)
Zone A Groundwater Elev (Feb 2019)

aMSL - above Mean Sea Level
NA - Not analyzed

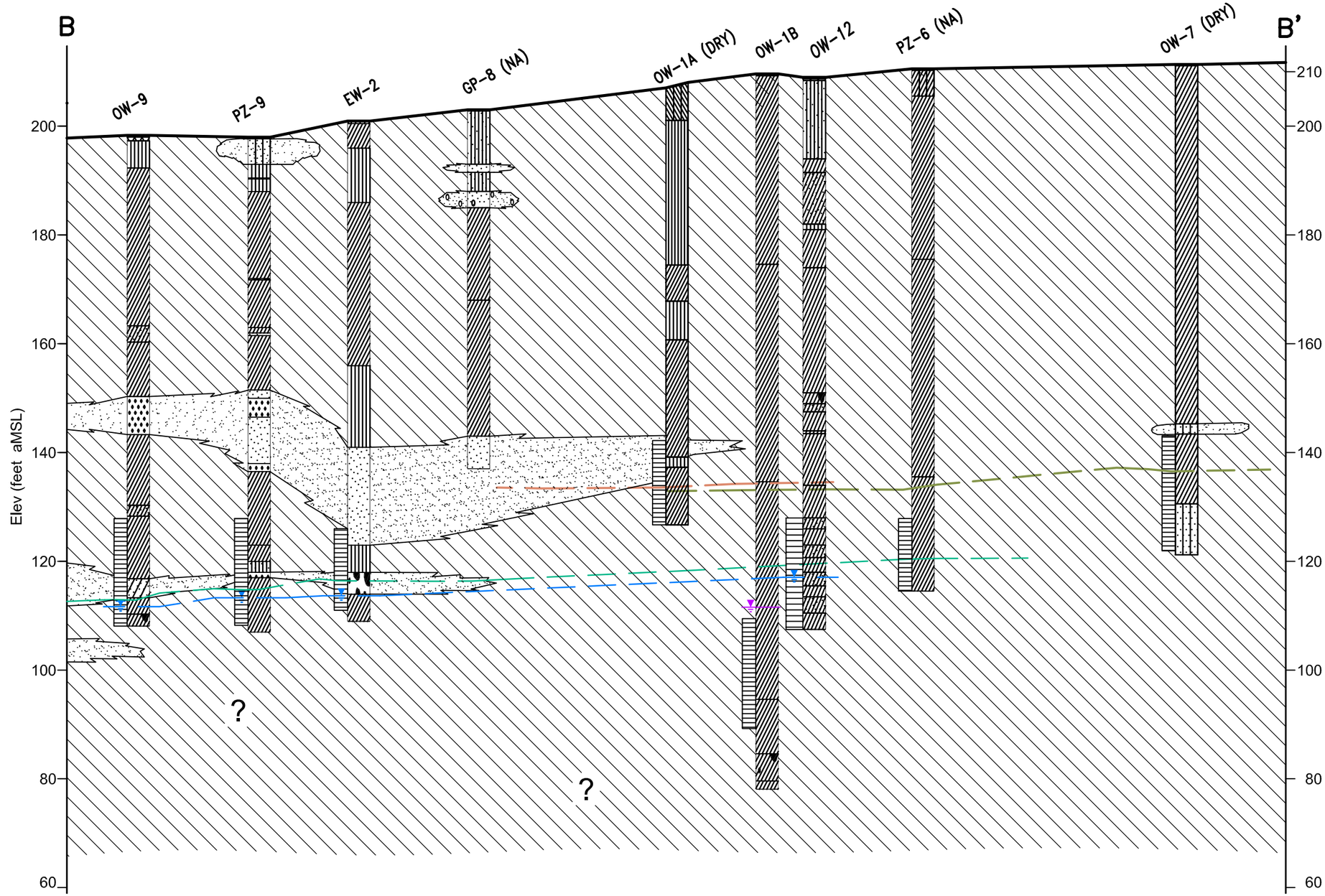
CDM Smith
46 Discovery, Suite 250
Irvine, California 92618
Tel (949) 752-5452
Fax (949) 725-3790

LEGEND

Gravel
Clayey Gravel
Poorly Graded Sand
Silt
Silty Sand
Clayey Silt or Silty Clay
Zone A Water Level (Feb 2019)
Zone B Water Level (Feb 2019)
Gravelly Clay
Clay
Well Graded Sand
Gravelly Sand
Clayey Sand
Well Screen

OMEGA
LITHOLOGIC CROSS-SECTION
A TO A'
Figure F-4

DATE: Mar 27, 2019 12:54pm
DWG: C:\cdmxm\nahhasom\d1750197\Section A-A' (WTR) Feb 2019.dwg
XREFS:
USER: NahhasOM



1" = 20'

10 0 20

Zone A Groundwater Elev (Aug 2001)
Zone A Groundwater Elev (Aug 2005)
Zone A Groundwater Elev (Aug 2016)
Zone A Groundwater Elev (Feb 2019)

aMSL - above Mean Sea Level
NA - Not analyzed

CDM Smith
46 Discovery, Suite 250
Irvine, California 92618
Tel (949) 752-5452
Fax (949) 725-3790

LEGEND

Gravel
Clayey Gravel
Poorly Graded Sand
Silt
Silty Sand
Clayey Silt or Silty Clay
Zone A Water Level (Feb 2019)
Zone B Water Level (Feb 2019)
Gravelly Clay
Clay
Well Graded Sand
Gravelly Sand
Clayey Sand
Well Screen

OMEGA
LITHOLOGIC CROSS-SECTION
B TO B'
Figure F-5

DATE: Mar 27, 2019 12:00pm
DWG: C:\cdmxm\nahhasom\d1750197\Section B-B' (WTR) Feb 2019.dwg
XREFS:
USER: NahhasOM

Figure F-6
Omega Chemical Superfund Site
OW-1A, OW-1B, and OW-12 Well Hydrographs
2004 to 2019

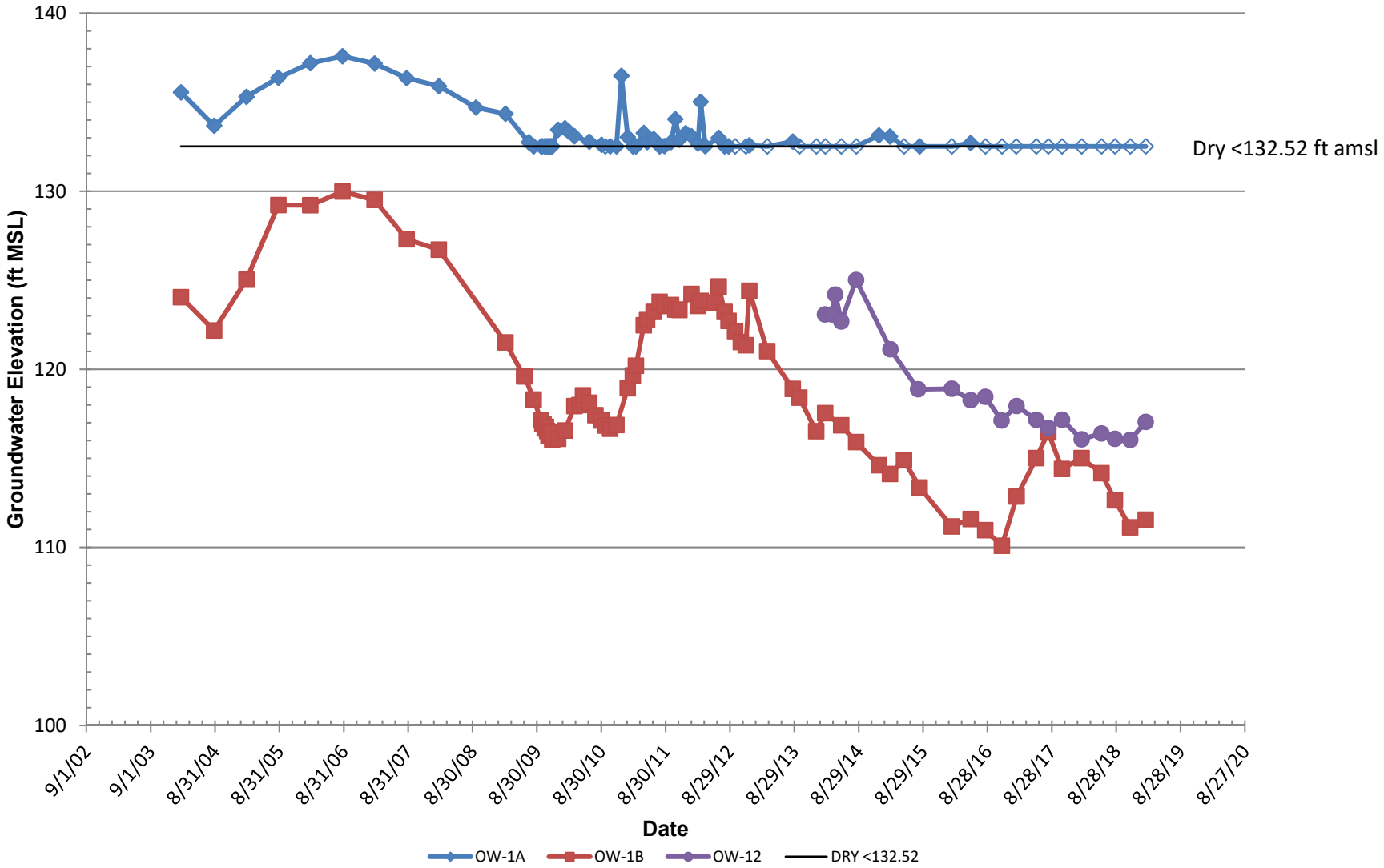


Figure F-7
Omega Chemical Superfund Site
OW-3A and OW-3B Well Hydrographs
2004 to 2019

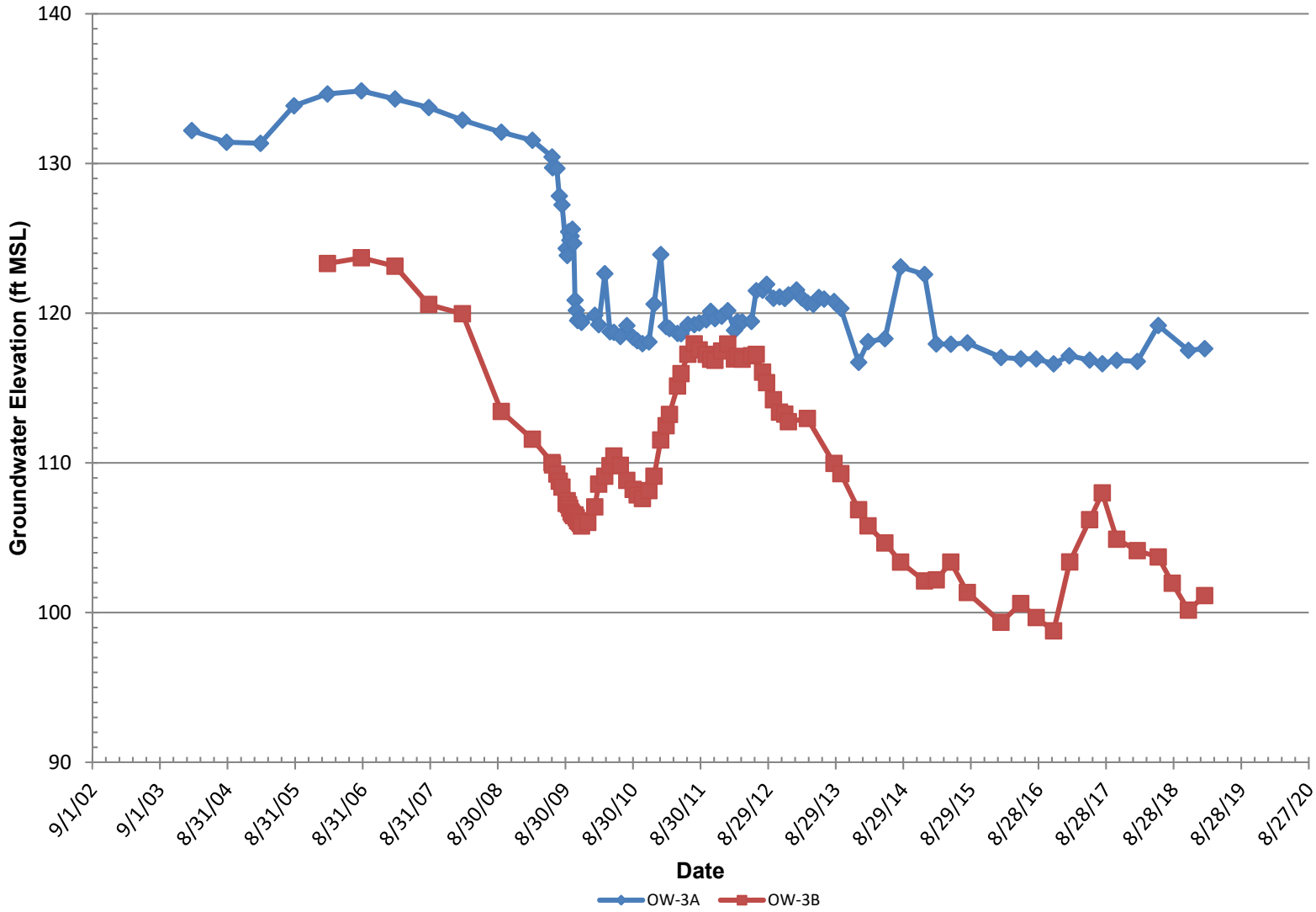
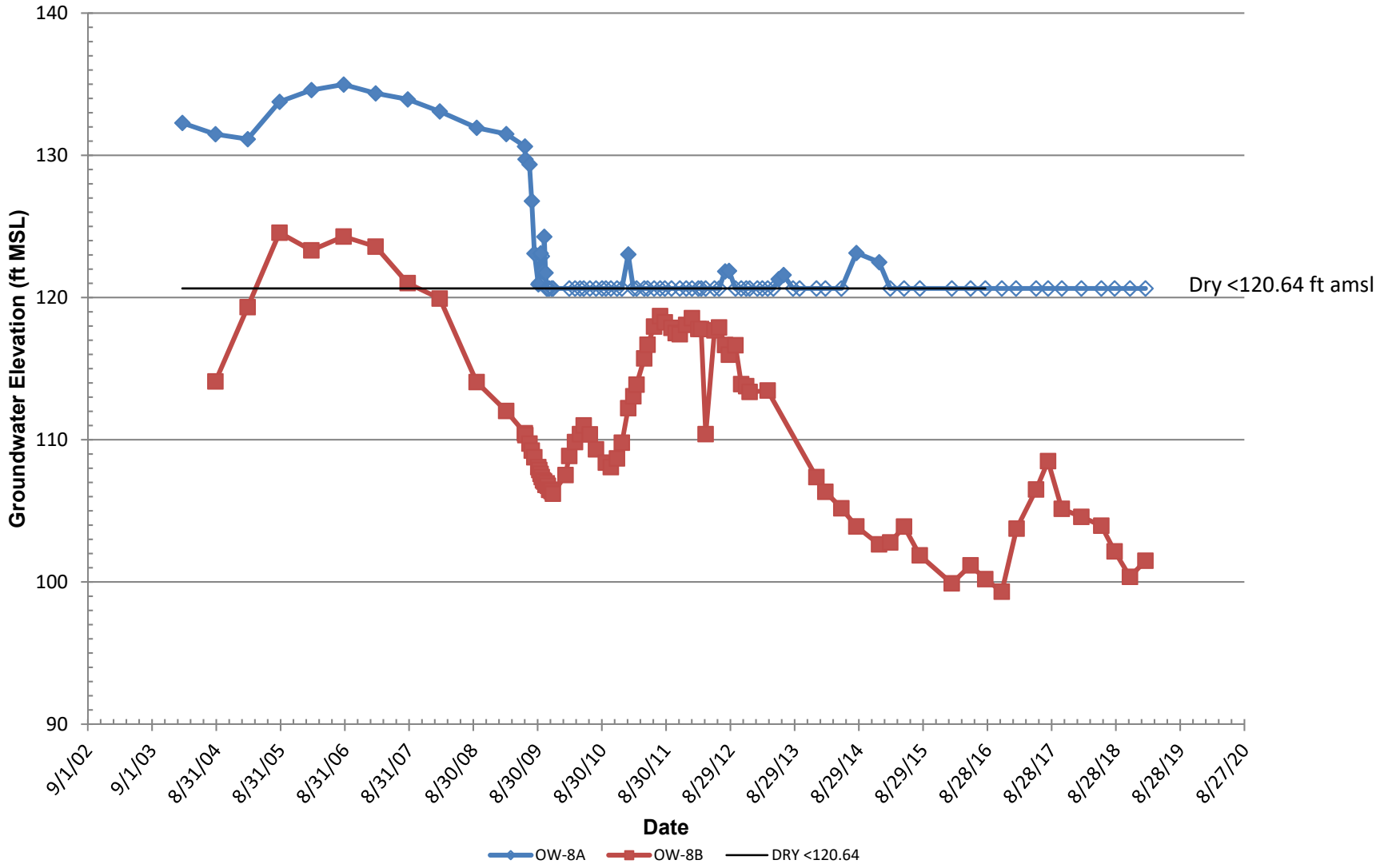


Figure F-8
Omega Chemical Superfund Site
OW-8A and OW-8B Well Hydrographs
2004 to 2019



ATTACHMENT G

Annual Groundwater Model Update and Particle Tracking Figures

(Not completed this quarter)

ATTACHMENT H

Field Forms

OMEGA
DAILY FIELD REPORT

Project Name: Omega Chemical	**Project #:** E742	**Date:** 2/11/19
Personnel: K. Acho, C. Johnson	**Sub Contractors:** —	
Arrival Time: 0630	**Departure Time:** 1445	**Hours on Site:** 8.25
Odometer (Start): —	**Odometer (End):** —	**Total Miles:** —
Task Description:	**OU-1 SVE OMM** ☐ **AOC SVE OMM** ☐ **GWCS OMM** ☐	
1st Qtr GWM Event		

Equipment List:

☐ Vacuum Meter	Type: Extech Manometer	Serial #: 2147350
☐ Vacuum Meter	Type: Fluke 922 Low-Range	Serial #: 98040163
☑ PID/FID	Type: MiniRAE 3000 OPOG or rental?	Serial #: 594-907978
☐ Sample Pump	Type: Thomas Pump/Lung Box	Serial #: 061000166406/003689
☐ Flow Meter	Type: Velocicalc 9565	Serial #: 9565P1531034
☑ Water Level Meter	Type: Solinst 101	Serial #: 48231
☑ Water Quality Meter	Type: Horiba U-52	Serial #:
☑ Generator/Battery	Type:	Serial #:
☑ Other(s): Hand Tools, 2" Grundfos Redi Flo Pump w/ Control Box		

Description of Work Performed: (Summarize all field activities in a chronological sequence. Include tailgate health and safety meeting, personnel/visitors at site, calibration times and methods.)

0630 Arrive ansite. H+S. Get paperwork ready.
0700 Mobilize GWM equipment. Calibrate PID (2000 ppb): 0 ppb / 1001 ppb Isobutylene.
0740 Nalco ansite to deliver anti-scalant.
0750 Start GWM @ OW-3B.
1415 Finish GWM for the day. Go to GWCS compound. Demobilize equipment.

Client Signature (if applicable): _____ **Date:** _____

DAILY FIELD REPORT

Project Name: Omega Chemical	Project #: E742	Date: 2/11/19

Collect equipment blank.
1445 Clean up off site.
1500 Join conf call about AOC SUG restart.
1545 Finish call. Discuss operations more w/ Alessandra and Trent.

JHA ENVIRONMENTAL

DAILY SAFETY MEETING

Project Name: Omega Chemical **Date:** 2/11/19

Project Number: E742 **Presented by:** K. Azhar

Check the Topics/Information Reviewed:

- ☑ Safety is everyone's responsibility
- ☑ Accidents can be costly
- ☑ No horseplay
- ☑ Site health and safety plan reviewed
- ☑ Review emergency protocol
- ☑ Directions to hospital (P/H)
- ☑ Employee Right-To-Know/SDS location
- ☑ First aid, safety, and PPE location
- ☑ Safety glasses, hard hat, safety boots
- ☑ Fire extinguisher locations
- ☑ Daily work scope reviewed
- ☑ Strains and sprains
- ☑ Slips, trips, and falls
- ☑ Eye wash station locations
- ☑ Electrical ground fault
- ☑ Vehicle safety and driving/road conditions
- ☑ Public safety and fences
- ☑ Heat and cold stress
- ☑ Equipment and machinery familiarization
- ☐ Excavator swing and loading
- ☑ Decontamination steps
- ☑ Portable tool safety and awareness
- ☑ Orderly site and housekeeping
- ☑ Smoking in designated areas
- ☑ Parking and lay down area
- ☑ Leather gloves for protection
- ☑ Vehicle backing up hazards
- ☑ Sharp object, rebar, and scrap metal hazards
- ☑ Effects of the night before?
- ☑ Weather conditions (rain/snow)
- ☑ Latex gloves inner/nitrile gloves outer
- ☑ Vibration related injuries
- ☑ Open pits, excavations, and trenching hazards
- ☑ Noise hazards
- ☑ Dust and vapor control
- ☐ Excavation/trenching inspections/documentation
- ☐ Confined space entry – permit required
- ☐ Confined space entry – non-permit required
- ☐ Refueling procedures
- ☐ Full face respirators with proper cartridges
- ☐ Hot work permits
- ☑ Flying debris hazards
- ☐ Overhead utility locations cleared.
- ☑ Poison ivy/oak/sumac/insects/animals
- ☐ Upgrade to Level C at: PID (___ eV) >___ ppmv
- ☐ Work stoppage at: PID (___ eV) >___ ppmv, % LEL > 10%
- ☐ All underground utilities cleared?
- ☑ Flex-N-Stretch performed
- ☑ Anticipated visitors
- ☐ Temporary Power Lines
- ☐ Overhead Utilities
- ☐ Excavations/Trenches (competent person)
- ☐ Heavy Equipment Operations
- ☐ Overloaded Equipment (tipping)
- ☑ Heavy Lifting
- ☑ Traffic
- ☑ Exclusion Zones
- ☑ Uneven Terrain
- ☑ Chemicals
- ☑ Flammability
- ☑ Wet Surfaces
- ☑ Ladder Safety
- ☑ Pinch Points
- ☐ Unexploded Ordnance (UXO) Hazard
- ☑ Daily Vehicle Walkaround/Instpection

Other Discussion Items/Comments/Follow-up Actions: Stay hydrated

JHA Site Health and Safety Officer (SHSO) of the day: Khalid Azhar

NAME	SIGNATURE	COMPANY
CHAD JOHNSON	C Johnson	JHA
Khalid Azhar	KA	JHA

Instructions:

- Conduct a daily safety meeting prior to beginning each day's site activities
- Complete form, obtain signatures, and file with the Daily Summary
- Follow-up on any noted items and document resolution of any action items.

OMEGA
DAILY FIELD REPORT

Project Name: Omega Chemical	**Project #:** E742	**Date:** 2/12/19
Personnel: K.Azlo, C. Johnson	**Sub Contractors:** —	
Arrival Time: 0630	**Departure Time:** 1500	**Hours on Site:** 8.5
Odometer (Start): —	**Odometer (End):** —	**Total Miles:** —
Task Description:	OU-1 SVE OMM ☐ AOC SVE OMM ☐ GWCS OMM ☐	
1st Qtr GWM Event		

Equipment List:

☐	Vacuum Meter	Type: Extech Manometer	Serial #: 2147350
☐	Vacuum Meter	Type: Fluke 922 Low-Range	Serial #: 98040163
☑	PID/FID	Type: MiniRAE 3000 ~~OPGG~~ or rental?	Serial #: 594-907978
☐	Sample Pump	Type: Thomas Pump/Lung Box	Serial #: 061000166406/003689
☐	Flow Meter	Type: Velocicalc 9565	Serial #: 9565P1531034
☑	Water Level Meter	Type: Solinst 101	Serial #: 48231
☑	Water Quality Meter	Type: Horiba U-52	Serial #:
☑	Generator/Battery	Type: Honda 2000i	Serial #:
☑	Other(s): Hand tools		

Description of Work Performed: (Summarize all field activities in a chronological sequence. Include tailgate health and safety meeting, personnel/visitors at site, calibration times and methods.)

0630 Arrive onsite. H+S. Get paperwork ready. Send out GWM update to team.
0715 Mobilize equipment. Calibrate PID (0.004 ppb): Ø ppb / 1013 ppb Isobutylene. Calibrate Horiba U-52: 4.00 pH, 4.58 mS/cm, 0.0 NTU
2/11 Horiba U-52 calibration: 4.01 pH, 4.61 mS/cm, 0.0 NTU.
0745 Go to OW-12. Start GWM.
1145 Go to McMaster to p/u new pressure switch for AOC SVE.

Client Signature (if applicable): _____ **Date:** _____

DAILY FIELD REPORT

Project Name: Omega Chemical	Project #: E742	Date: 2/12/19

1230 Back onsite. Continue GWM.

1345 Go to GWCS compound. Demobilize equipment. Collect equipment blank. Send GWM update to team. QC samples.

1430 First America courier onsite. Finish paperwork.

1500 Set delineators by OW-8A/8B & EW-3. Off site.

JHA ENVIRONMENTAL

DAILY SAFETY MEETING

Project Name: Omega Chemical **Date:** 2/12/19

Project Number: E742 **Presented by:** K. Azhar

Check the Topics/Information Reviewed:

- ☑ Safety is everyone's responsibility
- ☑ Accidents can be costly
- ☑ No horseplay
- ☑ Site health and safety plan reviewed
- ☑ Review emergency protocol
- ☑ Directions to hospital (P14)
- ☑ Employee Right-To-Know/SDS location
- ☑ First aid, safety, and PPE location
- ☑ Safety glasses, hard hat, safety boots
- ☑ Fire extinguisher locations
- ☑ Daily work scope reviewed
- ☑ Strains and sprains
- ☑ Slips, trips, and falls
- ☑ Eye wash station locations
- ☑ Electrical ground fault
- ☑ Vehicle safety and driving/road conditions
- ☑ Public safety and fences
- ☑ Heat and cold stress
- ☑ Equipment and machinery familiarization
- ☐ Excavator swing and loading
- ☑ Decontamination steps
- ☑ Portable tool safety and awareness
- ☑ Orderly site and housekeeping
- ☑ Smoking in designated areas
- ☑ Parking and lay down area
- ☑ Leather gloves for protection
- ☑ Vehicle backing up hazards
- ☑ Sharp object, rebar, and scrap metal hazards
- ☑ Effects of the night before?
- ☑ Weather conditions (rain/snow)
- ☑ Latex gloves inner/nitrile gloves outer
- ☑ Vibration related injuries
- ☑ Open pits, excavations, and trenching hazards
- ☑ Noise hazards
- ☑ Dust and vapor control
- ☐ Excavation/trenching inspections/documentation
- ☐ Confined space entry – permit required
- ☐ Confined space entry – non-permit required
- ☐ Refueling procedures
- ☐ Full face respirators with proper cartridges
- ☐ Hot work permits
- ☑ Flying debris hazards
- ☐ Overhead utility locations cleared.
- ☑ Poison ivy/oak/sumac/insects/animals
- ☐ Upgrade to Level C at: PID (___ eV) >___ ppmv
- ☐ Work stoppage at: PID (___ eV) >___ ppmv, % LEL > 10%
- ☐ All underground utilities cleared?
- ☑ Flex-N-Stretch performed
- ☑ Anticipated visitors
- ☐ Temporary Power Lines
- ☐ Overhead Utilities
- ☐ Excavations/Trenches (competent person)
- ☐ Heavy Equipment Operations
- ☐ Overloaded Equipment (tipping)
- ☑ Heavy Lifting
- ☑ Traffic
- ☑ Exclusion Zones
- ☑ Uneven Terrain
- ☑ Chemicals
- ☑ Flammability
- ☑ Wet Surfaces
- ☑ Ladder Safety
- ☑ Pinch Points
- ☐ Unexploded Ordnance (UXO) Hazard
- ☑ Daily Vehicle Walkaround/Instpection

Other Discussion Items/Comments/Follow-up Actions: Stay hydrated

JHA Site Health and Safety Officer (SHSO) of the day: Khalid Azhar

NAME	SIGNATURE	COMPANY
CHAD JOHNSON	C Johnson	JHA
Khalid Azhar	[illegible]	JHA

Instructions:

- Conduct a daily safety meeting prior to beginning each day's site activities
- Complete form, obtain signatures, and file with the Daily Summary
- Follow-up on any noted items and document resolution of any action items.

OMEGA
DAILY FIELD REPORT

Project Name: Omega Chemical	**Project #:** E742	**Date:** 2/13/19
Personnel: K. Arthur, C. Johnson	**Sub Contractors:** —	
Arrival Time: 0600	**Departure Time:** 1400	**Hours on Site:** 8.0
Odometer (Start): —	**Odometer (End):** —	**Total Miles:** —
Task Description:	OU-1 SVE OMM ☐ AOC SVE OMM ☐ GWCS OMM ☐	
1st Qtr GWM Event		

Equipment List:

☐ Vacuum Meter	Type: Extech Manometer	Serial #: 2147350
☐ Vacuum Meter	Type: Fluke 922 Low-Range	Serial #: 98040163
☑ PID/FID	Type: MiniRAE 3000 OPOG or rental?	Serial #: 594-907978
☐ Sample Pump	Type: Thomas Pump/Lung Box	Serial #: 061000166406/003689
☐ Flow Meter	Type: Velocicalc 9565	Serial #: 9565P1531034
☑ Water Level Meter	Type: Solinst 101	Serial #: 48231
☑ Water Quality Meter	Type: Horiba U-52	Serial #: 044251 (Pine rented)
☑ Generator/Battery	Type: Honda 2000i	Serial #:
☑ Other(s): Hand tools		

Description of Work Performed: (Summarize all field activities in a chronological sequence. Include tailgate health and safety meeting, personnel/visitors at site, calibration times and methods.)

0600 Arrive onsite. H+S. Get paperwork ready.
0645 Calibrate PID (0ppb): Ø ppb /1000 ppb Isobutylene. Mobilize equipment.
0655 Start GWM. Calibrate Horiba U-52: 4.00 pH, 4.51 mS/cm, Ø NTU. Start GWM.
1230 Finish GWM. Test American courier onsite. Demobilize equipment. Process

Client Signature (if applicable): _____ **Date:** _____

DAILY FIELD REPORT

Project Name: Omega Chemical	Project #: E742	Date: 2/13/19

Purge water through GWCS.
1400 off site.

JHA ENVIRONMENTAL

DAILY SAFETY MEETING

Project Name: Omega Chemical **Date:** 2/13/19

Project Number: E742 **Presented by:** K Azhar

Check the Topics/Information Reviewed:

- ☑ Safety is everyone's responsibility
- ☑ Accidents can be costly
- ☑ No horseplay
- ☑ Site health and safety plan reviewed
- ☑ Review emergency protocol
- ☑ Directions to hospital (Pilot)
- ☑ Employee Right-To-Know/SDS location
- ☑ First aid, safety, and PPE location
- ☑ Safety glasses, hard hat, safety boots
- ☑ Fire extinguisher locations
- ☑ Daily work scope reviewed
- ☑ Strains and sprains
- ☑ Slips, trips, and falls
- ☑ Eye wash station locations
- ☑ Electrical ground fault
- ☑ Vehicle safety and driving/road conditions
- ☑ Public safety and fences
- ☑ Heat and cold stress
- ☑ Equipment and machinery familiarization
- ☐ Excavator swing and loading
- ☑ Decontamination steps
- ☑ Portable tool safety and awareness
- ☑ Orderly site and housekeeping
- ☑ Smoking in designated areas
- ☑ Parking and lay down area
- ☑ Leather gloves for protection
- ☑ Vehicle backing up hazards
- ☑ Sharp object, rebar, and scrap metal hazards
- ☑ Effects of the night before?
- ☑ Weather conditions (rain/snow)
- ☑ Latex gloves inner/nitrile gloves outer
- ☑ Vibration related injuries
- ☑ Open pits, excavations, and trenching hazards
- ☑ Noise hazards
- ☑ Dust and vapor control
- ☐ Excavation/trenching inspections/documentation
- ☐ Confined space entry – permit required
- ☐ Confined space entry – non-permit required
- ☐ Refueling procedures
- ☐ Full face respirators with proper cartridges
- ☐ Hot work permits
- ☑ Flying debris hazards
- ☐ Overhead utility locations cleared.
- ☑ Poison ivy/oak/sumac/insects/animals
- ☐ Upgrade to Level C at: PID (___ eV) >___ ppmv
- ☐ Work stoppage at: PID (___ eV) >___ ppmv, % LEL > 10%
- ☐ All underground utilities cleared?
- ☑ Flex-N-Stretch performed
- ☑ Anticipated visitors
- ☐ Temporary Power Lines
- ☐ Overhead Utilities
- ☐ Excavations/Trenches (competent person)
- ☐ Heavy Equipment Operations
- ☐ Overloaded Equipment (tipping)
- ☑ Heavy Lifting
- ☑ Traffic
- ☑ Exclusion Zones
- ☑ Uneven Terrain
- ☑ Chemicals
- ☑ Flammability
- ☑ Wet Surfaces
- ☑ Ladder Safety
- ☑ Pinch Points
- ☐ Unexploded Ordnance (UXO) Hazard
- ☑ Daily Vehicle Walkaround/Instpection

Other Discussion Items/Comments/Follow-up Actions: stay hydrated

JHA Site Health and Safety Officer (SHSO) of the day: Khalid Azhar

NAME	SIGNATURE	COMPANY
Khalid Azhar	[illegible]	JHA

Instructions:

- Conduct a daily safety meeting prior to beginning each day's site activities
- Complete form, obtain signatures, and file with the Daily Summary
- Follow-up on any noted items and document resolution of any action items.

GROUNDWATER GAUGING FORM
OMEGA CHEMICAL GROUNDWATER TREATMENT SYSTEM
WHITTIER, CA

DATE: 2/11/19 TECHNICIAN(S): K. Azhar, C. Johnson

Well ID	Well Diameter	Time (hh:mm)	PID (ppm)	Depth to Water (ft btoc)	Previous Depth to Water 4th QTR 2018 (ft btoc)	Total Depth (ft btoc)	Previous Total Depth 4th QTR 2018 (ft btoc)	Screen Interval (ft btoc)	
EW-1	6	1007	Ø	86.39/86.29 (HMI)	85.85	NM	–	72-87	
EW-2	6	2/12 0909	0.769	84.67/84.21 (HMI)	85.99	NM	–	72-87	
EW-3	6	2/13 0748	Ø	82.63/82.53 (HMI)	82.9	NM	–	70-85	
EW-4	6	0947	Ø	81.08 (HMI)	81.51	NM	–	71-86	81.26
EW-5	6	2/12 0745	Ø	71.37/71.16 (HMI)	81.5	NM	–	70-85	
PZ-1	2	2/13 1135	5.869	86.93	87.07	87.25	87.3	68-88	
PZ-2	2	0958	2.752	84.01*	DRY	84.40	84.4	64-84	* WL below bottom screen
PZ-3	2	2/13 0700	Ø	DRY	DRY	89.0	89	69.8-89.8	
PZ-4	2	2/13 1130	1.208	71.62	72.86	89.0	89.04	70-90	
PZ-9	2	2/12 1053	4.828	84.70	84.85	90.0	90	70-90	
OW-1a	4	2/13 0930	3.216	79.13*	DRY	82.57	82.55	62.5-77.5	* WL below bottom screen
OW-1b	4	1221	11.99	95.67	96.1	118.11	118.13	110-120	
OW-2	4	2/13 0705	Ø	DRY	DRY	79.55	79.55	60-80	
OW-3a	4	0923	5.598	80.95	81.06	82.10	81.15	63-83	
OW-3b	4	0746	10.37	96.25	97.22	122.0	121.95	112-122	
OW-7	4	2/13 0655	0.206	DRY	DRY	89.10	89.1	70.9-90.9	
OW-8a	4	2/13 0711	Ø	78.85	77.64	79.05	79.05	60.4-80	
OW-8b	4	2/13 0715	0.081	99.35	100.48	126.0	126	116-126	
OW-9	4	2/12 1001	2.674	86.41	85.4	89.71	89.71	70-90	
OW-10	4	2/12 0948	0.369	78.33	78.57	89.19	89.19	69.5-89.5	
OW-11	4	1006	5.375	87.67	86.83	98.80	98.77	80-100	
OW-12	4	2/12 0755	3.745	91.37	92.38	100.0	100	80-100	
DPE-3	4	1300	3.121	92.74/92.31 (HMI)	92.45	NM	NM	40-100	
DPE-4	4	1350	6.211	91.86/91.86 (HMI)	91.86	NM	NM	40-100	
DPE-5	4	1337	1.069	92.00/92.00 (HMI)	91.76	NM	NM	40-100	
DPE-8	4	1239	1.764	90.42/90.73 (HMI)	90.89	NM	NM	40-100	
DPE-9	4	2/12 0852	15.73	85.34/85.26 (HMI)	85.92	NM	NM	40-100	
DPE-7D	4	2/13 1140	0.236	93.28/92.73 (HMI)	92.69	NM	NM	40-100	
DPE-10D	4	2/12 1030	0.684	93.72/93.34 (HMI)	94.13	NM	NM	40-100	

JHA ENVIRONMENTAL

GROUNDWATER GAUGING FORM
OMEGA CHEMICAL GROUNDWATER TREATMENT SYSTEM
WHITTIER, CA

OW-13B	4	2/13 0854	132.0	99.62	99.8	140.0	140	40-140

JHA ENVIRONMENTAL

JHA ENVIRONMENTAL

Groundwater Monitoring Data Form

Well Information	Purging Information	Project Information	Well Information
Well ID #: DPE-3	**Date:** 2/11/19	**Site:** Omega	**Survey Monitoring Point (MP); TOC (N)**
Well Total Depth: 100'	**Sampling Event:** 1st Qtr GWM 2019	**Client Nam** De Maximis	
Well Diameter: 4"	**Purge Equip:** Dedicated Pump	**Project #:** E742	Pump Information :
Screen Interval: 40'-100'	**Purging Method:** Grab sample	**Consultant:** JHA Env. Inc.	**Pump Model:** –
Pump Depth: –	**Sampling Equipment:** –	**Sampler:** KA, CJ	**Single System Volume:** –

LNAPL PRESENT?	NAPL THICKNESS	DEPTH TO LNAPL (ft)	DEPTH TO BOTTOM (ft) A	DEPTH TO WATER (ft) B	HEIGHT OF WATER COLUMN A-B=C C	GALLONS PER FOOT D				ONE CASING VOLUME C X D = E E	THREE CASING VOLUMES E X 3
–	–	–	–	92.31 (HMI) 92.74	–	Well Dia	0.75"	2"	4"	6"	–	–
						Gals/ft	0.02	0.16	0.65	1.47	N/A	N/A

TIME (HH:MM)	Casing/ Screen	Flow Rate (gpm)	VOLUME (gallons)	DEPTH TO WATER (FT-BMP)	TEMP (deg C)	pH	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Comments
1300	–	~3.0	–	92.74	22.33	7.34	1.36	4.14	3.5	154	clear

TOC N = Top Of Casing North Side
FT-BMP = Feet Below Measuring Point

Purge Start Time	Purge End Time	Average Flow (gpm)	Total Gallons Purged	Total Casing Volumes Purged	80% Recovery DTW	Sampling Water Level	Control Box Settings	
							Pump Speed: NA	**Typ Flow:** NA
1300	1305	~3.0	<1	–	–	–	Primary Sample ID= OC_GW_DPE-3_20190219	
							Primary Sample Time: (hh:mm) 1302	

JHA ENVIRONMENTAL

Groundwater Monitoring Data Form

Well Information	Purging Information	Project Information	Well Information
Well ID #: DPE-4	**Date:** 2/11/19	**Site:** Omega	**Survey Monitoring Point (MP); TOC (N)**
Well Total Depth: 100'	**Sampling Event:** 1st QW GWM 2019	**Client Nam** De Maximis	
Well Diameter: 4"	**Purge Equip:** Dedicated Pump	**Project #:** E742	Pump Information:
Screen Interval: 40'-100'	**Purging Method:** Grab sample	**Consultant:** JHA Env. Inc.	**Pump Model:** Grundfos Rediflo
Pump Depth: -	**Sampling Equipment:** —	**Sampler:** EA, CJ	**Single System Volume:** —

LNAPL PRESENT?	NAPL THICKNESS	DEPTH TO LNAPL (ft)	A DEPTH TO BOTTOM (ft)	B DEPTH TO WATER (ft)	C HEIGHT OF WATER COLUMN A-B=C	GALLONS PER FOOT D				E ONE CASING VOLUME C X D = E	THREE CASING VOLUMES E X 3
-	-	-	-	91.86 (HM1) 91.86	-	Well Dia	0.75"	2"	4" 6"	-	-
						Gals/ft	0.02	0.16	0.65 1.47	N/A	N/A

TIME (HH:MM)	Casing/ Screen	Flow Rate (gpm)	VOLUME (gallons)	DEPTH TO WATER (FT-BMP)	TEMP (deg C)	pH	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Comments
1350	—	~2.0	—	91.86	23.31	7.44	1.20	8.93	17.8	207	clear

TOC N = Top Of Casing North Side
FT-BMP = Feet Below Measuring Point

Purge Start Time	Purge End Time	Average Flow (gpm)	Total Gallons Purged	Total Casing Volumes Purged	80% Recovery DTW	Sampling Water Level	Control Box Settings	
1348	1353	~2.0	<1	—	—	91.86	Pump Speed: NA	Typ Flow: [redacted]
							Primary Sample ID= OL-GW-DPE-4-2019 0211	
							Primary Sample Time: (hh:mm) 1348	

JHA ENVIRONMENTAL

Groundwater Monitoring Data Form

Well Information	Purging Information	Project Information	Well Information
Well ID #: DPE-5	**Date:** 2/11/19	**Site:** Omega	**Survey Monitoring Point (MP); TOC (N)**
Well Total Depth: 100'	**Sampling Event:** 1st Qtr GWM 2019	**Client Name:** De Maximis	
Well Diameter: 4"	**Purge Equip:** Dedicated Pump	**Project #:** E742	Pump Information:
Screen Interval: 40'-100'	**Purging Method:** Grab sample	**Consultant:** JHA Env. Inc.	**Pump Model:** -
Pump Depth: -	**Sampling Equipment:** -	**Sampler:** KA, CJ	**Single System Volume:** -

LNAPL PRESENT?	NAPL THICKNESS	DEPTH TO LNAPL (ft)	A DEPTH TO BOTTOM (ft)	B DEPTH TO WATER (ft)	C HEIGHT OF WATER COLUMN A-B=C	D GALLONS PER FOOT				E ONE CASING VOLUME C X D = E	THREE CASING VOLUMES E X 3
-	-	-	-	92.00 (HMI)	-	Well Dia	0.75"	2"	4" 6"	-	-
				92.00		Gals/ft	0.02	0.16	0.65 1.47	N/A	N/A

TIME (HH:MM)	Casing/ Screen	Flow Rate (gpm)	VOLUME (gallons)	DEPTH TO WATER (FT-BMP)	TEMP (deg C)	pH	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Comments
1337	-	~2.5	-	92.00	22.52	7.32	1.37	5.08	3.4	194	clear

TOC N = Top Of Casing North Side
FT-BMP = Feet Below Measuring Point

Purge Start Time	Purge End Time	Average Flow (gpm)	Total Gallons Purged	Total Casing Volumes Purged	80% Recovery DTW	Sampling Water Level	Control Box Settings	
							Pump Speed: NA	Typ Flow: NA
1337	1338	~2.5	<1	-	-	-	Primary Sample ID= OC_GW_DPE-5_20190211	
							Primary Sample Time: (hh:mm) 1325	

JHA ENVIRONMENTAL

Groundwater Monitoring Data Form

Well Information	Purging Information	Project Information	Well Information
Well ID #: DIE-7D	**Date:** 2/13/19	**Site:** Omega	**Survey Monitoring Point (MP); TOC (N)**
Well Total Depth: –	**Sampling Event:** 1st Qtr GWM 2019	**Client Nam** De Maximis	
Well Diameter: 4"	**Purge Equip:** Dedicated Pump	**Project #:** E742	Pump Information:
Screen Interval: 40'-100'	**Purging Method:** Grab Sample	**Consultant:** JHA Env. Inc.	**Pump Model:** –
Pump Depth: –	**Sampling Equipment:** –	**Sampler:** KA, CJ	**Single System Volume:** –

LNAPL PRESENT?	NAPL THICKNESS	DEPTH TO LNAPL (ft)	A DEPTH TO BOTTOM (ft)	B DEPTH TO WATER (ft)	C HEIGHT OF WATER COLUMN A-B=C	D GALLONS PER FOOT				E ONE CASING VOLUME C X D = E	THREE CASING VOLUMES E X 3
–	–	–	–	93.28	–	Well Dia	0.75"	2"	4"	6"	–	–
						Gals/ft	0.02	0.16	0.65	1.47	N/A	N/A

TIME (HH:MM)	Casing/ Screen	Flow Rate (gpm)	VOLUME (gallons)	DEPTH TO WATER (FT-BMP)	TEMP (deg C)	pH	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Comments
1140	–	~2.0	–	93.28	21.94	7.25	1.37	9.03	9.3	253	clear

TOC N = Top Of Casing North Side
FT-BMP = Feet Below Measuring Point

Purge Start Time	Purge End Time	Average Flow (gpm)	Total Gallons Purged	Total Casing Volumes Purged	80% Recovery DTW	Sampling Water Level	Control Box Settings	
							Pump Speed: N/A	Typ Flow: ~2.0
1140	1148	~2.0	< 1	–	–	93.28	Primary Sample ID= OC_GW_DIE-7D_20190213	
							Primary Sample Time: (hh:mm) 1142	

JHA ENVIRONMENTAL

Groundwater Monitoring Data Form

Well Information	Purging Information	Project Information	Well Information
Well ID #: DPE-8	**Date:** 2/11/19	**Site:** Omega	**Survey Monitoring Point (MP); TOC (N)**
Well Total Depth: 100'	**Sampling Event:** 1st Qtr GWM 2019	**Client Name:** De Maximis	
Well Diameter: 4"	**Purge Equip:** Dedicated Pump	**Project #:** E742	Pump Information :
Screen Interval: 40'-100'	**Purging Method:** Grab Sample	**Consultant:** JHA Env. Inc.	**Pump Model:** -
Pump Depth: -	**Sampling Equipment:** -	**Sampler:** KA, CJ	**Single System Volume:** -

LNAPL PRESENT?	NAPL THICKNESS	DEPTH TO LNAPL (ft)	A DEPTH TO BOTTOM (ft)	B DEPTH TO WATER (ft)	C HEIGHT OF WATER COLUMN A-B=C	D GALLONS PER FOOT				E ONE CASING VOLUME C X D = E	THREE CASING VOLUMES E X 3
-	-	-	-	90.42 90.73 (HMI)	-	Well Dia	0.75"	2"	4"	6"	-	-
						Gals/ft	0.02	0.16	0.65	1.47	N/A	N/A

TIME (HH:MM)	Casing/ Screen	Flow Rate (gpm)	VOLUME (gallons)	DEPTH TO WATER (FT-BMP)	TEMP (deg C)	pH	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Comments
1239	-	~2.0	-	90.42	21.57	7.27	1.20	4.98	1.0	264	clear

TOC N = Top Of Casing North Side
FT-BMP = Feet Below Measuring Point

Purge Start Time	Purge End Time	Average Flow (gpm)	Total Gallons Purged	Total Casing Volumes Purged	80% Recovery DTW	Sampling Water Level	Control Box Settings	
1239	1245	~2.0	<1	-	-	-	Pump Speed: NA	Typ Flow: NA
							Primary Sample ID= OC_GW_DPE-8_20190211	
							Primary Sample Time: (hh:mm) 1243	

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Groundwater Monitoring Data Form

Well Information		Purging Information		Project Information		Well Information	
Well ID #:	DPE-9	Date:	2/12/19	Site: Omega		Survey Monitoring Point (MP); TOC (N)	
Well Total Depth:	100'	Sampling Event:	1st Qtr GWM 2019	Client Name:	De Maximis		
Well Diameter:	4"	Purge Equip:	Dedicated Pump	Project #:	E742	Pump Information:	
Screen Interval:	40'-100'	Purging Method:	Grab sample	Consultant:	JHA Env. Inc.	Pump Model:	–
Pump Depth:	–	Sampling Equipment:	–	Sampler:	KA, CJ	Single System Volume:	–

LNAPL PRESENT?	NAPL THICKNESS	DEPTH TO LNAPL (ft)	A DEPTH TO BOTTOM (ft)	B DEPTH TO WATER (ft)	C HEIGHT OF WATER COLUMN A-B=C	D GALLONS PER FOOT				E ONE CASING VOLUME C X D = E	THREE CASING VOLUMES E X 3
–	–	–	–	85.34 85.26(HMI)	–	Well Dia	0.75"	2"	4"	6"	–	–
						Gals/ft	0.02	0.16	0.65	1.47	N/A	N/A

TIME (HH:MM)	Casing/ Screen	Flow Rate (gpm)	VOLUME (gallons)	DEPTH TO WATER (FT-BMP)	TEMP (deg C)	pH	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Comments
0858	–	~2.5	–	85.34	21.08	7.72	1.28	4.15	15.2	200	

TOC N = Top Of Casing North Side
FT-BMP = Feet Below Measuring Point

Purge Start Time	Purge End Time	Average Flow (gpm)	Total Gallons Purged	Total Casing Volumes Purged	80% Recovery DTW	Sampling Water Level	Control Box Settings	
0855	0900	~2.5	~1	–	–	85.34	Pump Speed: NA	Typ Flow: ~2.5
							Primary Sample ID= OC_GW_DPE-9_20190212	
							Primary Sample Time: (hh:mm) 0856	

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Groundwater Monitoring Data Form

Well Information		Purging Information		Project Information		Well Information	
Well ID #: DPE-10D		**Date:** 2/12/19		**Site:** Omega		**Survey Monitoring Point (MP); TOC (N)**	
Well Total Depth: 100'		**Sampling Event:** 1st Qtr GWM 2019		**Client Nam** De Maximis			
Well Diameter: 4"		**Purge Equip:** Dedicated Pump		**Project #:**	E742	Pump Information :	
Screen Interval: 40'-100'		**Purging Method:** Grab sample		**Consultant:** JHA Env. Inc.		**Pump Model:**	—
Pump Depth: —		**Sampling Equipment:** —		**Sampler:** RA, CJ		**Single System Volume:** —	

LNAPL PRESENT?	NAPL THICKNESS	DEPTH TO LNAPL (ft)	A DEPTH TO BOTTOM (ft)	B DEPTH TO WATER (ft)	C HEIGHT OF WATER COLUMN A-B=C	GALLONS PER FOOT				D ONE CASING VOLUME C X D = E	E THREE CASING VOLUMES E X 3
						Well Dia	0.75"	2"	4"	6"	
—	—	—	—	93.72 93.34 (1st Qtr)	—	Gals/ft	0.02	0.16	0.65	1.47	N/A N/A

TIME (HH:MM)	Casing/ Screen	Flow Rate (gpm)	VOLUME (gallons)	DEPTH TO WATER (FT-BMP)	TEMP (deg C)	pH	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Comments
1030	—	~2.0	—	93.72	23.76	7.70	1.33	8.03	128	242	clear

TOC N = Top Of Casing North Side
FT-BMP = Feet Below Measuring Point

Purge Start Time	Purge End Time	Average Flow (gpm)	Total Gallons Purged	Total Casing Volumes Purged	80% Recovery DTW	Sampling Water Level	Control Box Settings	
							Pump Speed: NA	**Typ Flow:** ~2.0
1030	1033	~2.0	~1	—	—	93.72	Primary Sample ID= OC_GW_DPE-10D_20190212	
							Primary Sample Time: (hh:mm) 1030	

JHA ENVIRONMENTAL

Groundwater Monitoring Data Form

Well Information		Purging Information		Project Information		Well Information	
Well ID #:	EW-1	**Date:**	2/11/19	**Site:**	Omega	**Survey Monitoring Point (MP); TOC (N)**	
Well Total Depth:	-	**Sampling Event:**	1st Qtr GWM 2019	**Client Nam**	De Maximis		
Well Diameter:	6"	**Purge Equip:**	Dedicated Pump	**Project #:**	E742	Pump Information :	
Screen Interval:	72'-87'	**Purging Method:**	Grab sample	**Consultant:**	JHA Env. Inc.	**Pump Model:**	-
Pump Depth:	-	**Sampling Equipment:**	-	**Sampler:**	KA, CJ	**Single System Volume:**	-

LNAPL PRESENT?	NAPL THICKNESS	DEPTH TO LNAPL (ft)	A DEPTH TO BOTTOM (ft)	B DEPTH TO WATER (ft)	C HEIGHT OF WATER COLUMN A-B=C	D GALLONS PER FOOT					E ONE CASING VOLUME C X D = E	THREE CASING VOLUMES E X 3
-	-	-	-	(HMI) 86.29 86.39	-	Well Dia	0.75"	2"	4"	6"	-	-
						Gals/ft	0.02	0.16	0.65	1.47	N/A	N/A

TIME (HH:MM)	Casing/ Screen	Flow Rate (gpm)	VOLUME (gallons)	DEPTH TO WATER (FT-BMP)	TEMP (deg C)	pH	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Comments
1007			INSUFFICIENT AMOUNT of WATER IN WELL. PUMP IS NOT								
			MOVING ANY WATER.								

TOC N = Top Of Casing North Side
FT-BMP = Feet Below Measuring Point

Purge Start Time	Purge End Time	Average Flow (gpm)	Total Gallons Purged	Total Casing Volumes Purged	80% Recovery DTW	Sampling Water Level	Control Box Settings	
							Pump Speed: NA	Typ Flow: NA
-	-	-	-	-	-	-	Primary Sample ID= -	
							Primary Sample Time: (hh:mm) -	

JHA ENVIRONMENTAL

Groundwater Monitoring Data Form

Well Information		Purging Information		Project Information		Well Information	
Well ID #: EW-2		Date: 2/12/19		Site: Omega		Survey Monitoring Point (MP); TOC (N)	
Well Total Depth: -		Sampling Event: 1st Qtr GWM 2019		Client Nam De Maximis			
Well Diameter: 6"		Purge Equip: Dedicated Pump		Project #:	E742	Pump Information :	
Screen Interval: 72'-87'		Purging Method: Grab sample		Consultant: JHA Env. Inc.		Pump Model:	-
Pump Depth: -		Sampling Equipment: -		Sampler: KA, CJ		Single System Volume: -	

LNAPL PRESENT?	NAPL THICKNESS	DEPTH TO LNAPL (ft)	A DEPTH TO BOTTOM (ft)	B DEPTH TO WATER (ft)	C HEIGHT OF WATER COLUMN A-B=C	GALLONS PER FOOT				D ONE CASING VOLUME C X D = E	E THREE CASING VOLUMES E X 3
-	-	-	-		-	Well Dia	0.75"	2"	4"	6"	-	-
						Gals/ft	0.02	0.16	0.65	1.47	N/A	N/A

TIME (HH:MM)	Casing/ Screen	Flow Rate (gpm)	VOLUME (gallons)	DEPTH TO WATER (FT-BMP)	TEMP (deg C)	pH	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Comments
0912			NO WATER IN WELL								

TOC N = Top Of Casing North Side
FT-BMP = Feet Below Measuring Point

Purge Start Time	Purge End Time	Average Flow (gpm)	Total Gallons Purged	Total Casing Volumes Purged	80% Recovery DTW	Sampling Water Level	Control Box Settings	
-	-	-	-	-	-	-	Pump Speed: -	Typ Flow: -
							Primary Sample ID= -	
							Primary Sample Time: (hh:mm) -	

JHA ENVIRONMENTAL

Groundwater Monitoring Data Form

Well Information		Purging Information		Project Information		Well Information	
Well ID #: EW-3		**Date:** 2/13/19		**Site:** Omega		**Survey Monitoring Point (MP); TOC (N)**	
Well Total Depth: –		**Sampling Event:** 1st Qtr GWM 2019		**Client Nam** De Maximis			
Well Diameter: 6"		**Purge Equip:** Dedicated Pump		**Project #:**	E742	Pump Information:	
Screen Interval: 70'-85'		**Purging Method:** Grab sample		**Consultant:** JHA Env. Inc.		**Pump Model:**	–
Pump Depth: –		**Sampling Equipment:** –		**Sampler:** KD, CJ		**Single System Volume:**	–

LNAPL PRESENT?	NAPL THICKNESS	DEPTH TO LNAPL (ft)	A DEPTH TO BOTTOM (ft)	B DEPTH TO WATER (ft)	C HEIGHT OF WATER COLUMN A-B=C	GALLONS PER FOOT					E ONE CASING VOLUME C X D = E	THREE CASING VOLUMES E X 3
–	–	–	–	82.63 82.53(AM1)	–	Well Dia	0.75"	2"	4"	6"	–	–
						Gals/ft	0.02	0.16	0.65	1.47	N/A	N/A

TIME (HH:MM)	Casing/ Screen	Flow Rate (gpm)	VOLUME (gallons)	DEPTH TO WATER (FT-BMP)	TEMP (deg C)	pH	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Comments
0838	–	–	–	82.68	22.13	7.30	1.13	3.20	0.0	244	clear

TOC N = Top Of Casing North Side
FT-BMP = Feet Below Measuring Point

Purge Start Time	Purge End Time	Average Flow (gpm)	Total Gallons Purged	Total Casing Volumes Purged	80% Recovery DTW	Sampling Water Level	Control Box Settings	
–	–	–	–	–	–	–	**Pump Speed:** –	**Typ Flow:** –
							Primary Sample ID= OC_GW_EW-3_20190213	
							Primary Sample Time: (hh:mm) 0836	

JHA ENVIRONMENTAL

Groundwater Monitoring Data Form

Well Information		Purging Information		Project Information		Well Information	
Well ID #: EW-4		**Date:** 2/11/19		**Site: Omega**		**Survey Monitoring Point (MP); TOC (N)**	
Well Total Depth: –		**Sampling Event:** 1st QtR GWM 2019		**Client Nam** De Maximis			
Well Diameter: 6"		**Purge Equip:** Dedicated Pump		**Project #:**	E742	Pump Information :	
Screen Interval: 71'-86'		**Purging Method:** Grab Sample		**Consultant: JHA Env. Inc.**		**Pump Model:**	–
Pump Depth: –		**Sampling Equipment:** –		**Sampler:** KA, CJ		**Single System Volume:**	–

LNAPL PRESENT?	NAPL THICKNESS	DEPTH TO LNAPL (ft)	A DEPTH TO BOTTOM (ft)	B DEPTH TO WATER (ft)	C HEIGHT OF WATER COLUMN A-B=C	GALLONS PER FOOT					D ONE CASING VOLUME C X D = E	E THREE CASING VOLUMES E X 3
–	–	–	–	(HMI) 81.08 81.26	–	Well Dia	0.75"	2"	4"	6"	–	–
						Gals/ft	0.02	0.16	0.65	1.47	N/A	N/A

TIME (HH:MM)	Casing/ Screen	Flow Rate (gpm)	VOLUME (gallons)	DEPTH TO WATER (FT-BMP) 81.08	TEMP (deg C)	pH	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Comments
0947	–	~5.0	–	~~20.79~~	20.79	7.57	1.29	4.88	0.2	246	clear

TOC N = Top Of Casing North Side
FT-BMP = Feet Below Measuring Point

Purge Start Time	Purge End Time	Average Flow (gpm)	Total Gallons Purged	Total Casing Volumes Purged	80% Recovery DTW	Sampling Water Level	Control Box Settings	
0947	0951	~5.0	~1	–	–	81.08	**Pump Speed:** ND	**Typ Flow:** ~5.0 gpm
							Primary Sample ID= OC-GW_EW-4_20190211	
							Primary Sample Time: (hh:mm) 0948	

JHA ENVIRONMENTAL

Groundwater Monitoring Data Form

Well Information		Purging Information		Project Information		Well Information	
Well ID #: EW-5		**Date:** 2/11/19		**Site:** Omega		**Survey Monitoring Point (MP); TOC (N)**	
Well Total Depth: –		**Sampling Event:** 1st Qtr GWM 2019		**Client Name** De Maximis			
Well Diameter: 6"		**Purge Equip:** Dedicated Pump		**Project #:**	E742	Pump Information :	
Screen Interval: 70'-85'		**Purging Method:** Grab Sample		**Consultant:** JHA Env. Inc.		**Pump Model:**	–
Pump Depth: –		**Sampling Equipment:** –		**Sampler:** KD CJ		**Single System Volume:** –	

LNAPL PRESENT?	NAPL THICKNESS	DEPTH TO LNAPL (ft)	DEPTH TO BOTTOM (ft) A	DEPTH TO WATER (ft) B	HEIGHT OF WATER COLUMN A-B=C C	GALLONS PER FOOT D				ONE CASING VOLUME C X D = E E	THREE CASING VOLUMES E X 3
–	–	–	–	(HMI) 81.52	–	Well Dia	0.75"	2"	4"	6"	–	–
						Gals/ft	0.02	0.16	0.65	1.47	N/A	N/A

TIME (HH:MM)	Casing/ Screen	Flow Rate (gpm)	VOLUME (gallons)	DEPTH TO WATER (FT-BMP)	TEMP (deg C)	pH	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Comments
0854	–	~5.0	–	81.52	21.75	7.54	1.32	4.67	74.5	214	

TOC N = Top Of Casing North Side
FT-BMP = Feet Below Measuring Point

Purge Start Time	Purge End Time	Average Flow (gpm)	Total Gallons Purged	Total Casing Volumes Purged	80% Recovery DTW	Sampling Water Level	Control Box Settings	
							Pump Speed: NA.	Typ Flow: NA
0853	0900	~5.0	~1	–	–	71.37	Primary Sample ID= OC-GW-EW-5-20190212	
Only able to partially fill sample containers. Will return to fill up the rest of the bottles.							Primary Sample Time: (hh:mm) 0745	

JHA ENVIRONMENTAL

Groundwater Monitoring Data Form

Well Information	Purging Information	Project Information	Well Information
Well ID #: OW-1A	**Date:** 2/13/19	**Site:** Omega	**Survey Monitoring Point (MP); TOC (N)**
Well Total Depth: 82.57'	**Sampling Event:** 1st Qtr GWM 2019	**Client Nam** De Maximis	
Well Diameter: 4"	**Purge Equip:** –	**Project #:** E742	Pump Information :
Screen Interval: 62.5'-77.6'	**Purging Method:** –	**Consultant:** JHA Env. Inc.	**Pump Model:** –
Pump Depth: –	**Sampling Equipment:** –	**Sampler:** KA, CJ	**Single System Volume:** –

LNAPL PRESENT?	NAPL THICKNESS	DEPTH TO LNAPL (ft)	A DEPTH TO BOTTOM (ft)	B DEPTH TO WATER (ft)	C HEIGHT OF WATER COLUMN A-B=C	D GALLONS PER FOOT				E ONE CASING VOLUME C X D = E	THREE CASING VOLUMES E X 3
–	–	–	82.57	79.13	–	Well Dia	0.75"	2"	4"	6"	–	–
						Gals/ft	0.02	0.16	0.65	1.47	N/A	N/A

TIME (HH:MM)	Casing/ Screen	Flow Rate (gpm)	VOLUME (gallons)	DEPTH TO WATER (FT-BMP)	TEMP (deg C)	pH	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Comments
0930				WL IS BELOW BOTTOM SCREEN.							

TOC N = Top Of Casing North Side
FT-BMP = Feet Below Measuring Point

Purge Start Time	Purge End Time	Average Flow (gpm)	Total Gallons Purged	Total Casing Volumes Purged	80% Recovery DTW	Sampling Water Level	Control Box Settings	
–	–	–	–	–	–	–	**Pump Speed:** –	**Typ Flow:** –
							Primary Sample ID= –	
							Primary Sample Time: (hh:mm) –	

JHA ENVIRONMENTAL

Groundwater Monitoring Data Form

Well Information		Purging Information		Project Information		Well Information	
Well ID #:	OW-1B	Date:	2/11/19	Site: Omega		Survey Monitoring Point (MP); TOC (N)	
Well Total Depth:	118.11	Sampling Event:	1st Qtr GWM 2019	Client Name:	De Maximis		
Well Diameter:	4"	Purge Equip:	2" Grundfos Rediflo	Project #:	E742	Pump Information:	
Screen Interval:	110'-120'	Purging Method:	3 casing vol.	Consultant:	JHA Env. Inc.	Pump Model:	Grundfos Rediflo
Pump Depth:	116' → 117'	Sampling Equipment:	–	Sampler:	KA, CJ	Single System Volume:	–

LNAPL PRESENT?	NAPL THICKNESS	DEPTH TO LNAPL (ft)	A DEPTH TO BOTTOM (ft)	B DEPTH TO WATER (ft)	C HEIGHT OF WATER COLUMN A-B=C	GALLONS PER FOOT					D ONE CASING VOLUME C X D = E	E THREE CASING VOLUMES E X 3
–	–	–	118.11	95.67	22.44	Well Dia	0.75"	2"	4" (1.3)	6"	29.2	87.6
						Gals/ft	0.02	0.16	~~0.65~~	1.47	N/A	N/A

TIME (HH:MM)	Casing/ Screen	Flow Rate (gpm)	VOLUME (gallons)	DEPTH TO WATER (FT-BMP)	TEMP (deg C)	pH	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Comments
1248	–	~1.0	20	109.32	23.16	8.41	0.362	1.83	40.9	-21	clear
1308	–	~1.0	40	114.45	22.80	7.59	0.40	2.36	83.2	134	"
1326	–	~1.0	54 ~~60~~	117.02	well dryed						
			80								
			87.6								

TOC N = Top Of Casing North Side
FT-BMP = Feet Below Measuring Point

Purge Start Time	Purge End Time	Average Flow (gpm)	Total Gallons Purged	Total Casing Volumes Purged	80% Recovery DTW	Sampling Water Level	Control Box Settings	
1228	1326	~1	54	~1.5	100.16	95.71	Pump Speed: 242 HZ → 255HZ	Typ Flow: ~1.0 gpm
							Primary Sample ID= OC_GW_OW-1B_20190212	
							Primary Sample Time: (hh:mm) 0815	

Lowered pump to bottom of well before it dried out.
2/12/19 – Bailed rot sample.

JHA ENVIRONMENTAL

Groundwater Monitoring Data Form

Well Information		Purging Information		Project Information		Well Information	
Well ID #:	OW-2	**Date:**	2/13/19	**Site:** Omega		**Survey Monitoring Point (MP); TOC (N)**	
Well Total Depth:	79.55'	**Sampling Event:**	1st Qtr GWM 2019	**Client Nam**	De Maximis		
Well Diameter:	4"	**Purge Equip:**	–	**Project #:**	E742	Pump Information :	
Screen Interval:	60'-80'	**Purging Method:**	–	**Consultant:** JHA Env. Inc.		**Pump Model:**	–
Pump Depth:	–	**Sampling Equipment:**	–	**Sampler:** KD, CJ		**Single System Volume:**	–

LNAPL PRESENT?	NAPL THICKNESS	DEPTH TO LNAPL (ft)	A DEPTH TO BOTTOM (ft)	B DEPTH TO WATER (ft)	C HEIGHT OF WATER COLUMN A-B=C	D GALLONS PER FOOT				E ONE CASING VOLUME C X D = E	THREE CASING VOLUMES E X 3
						Well Dia	0.75"	2"	4"	6"	
–	–	–	79.55	DRY	–	Gals/ft	0.02	0.16	0.65	1.47	N/A	N/A

TIME (HH:MM)	Casing/ Screen	Flow Rate (gpm)	VOLUME (gallons)	DEPTH TO WATER (FT-BMP)	TEMP (deg C)	pH	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Comments
0705				WELL	IS	DRY					

TOC N = Top Of Casing North Side
FT-BMP = Feet Below Measuring Point

Purge Start Time	Purge End Time	Average Flow (gpm)	Total Gallons Purged	Total Casing Volumes Purged	80% Recovery DTW	Sampling Water Level	Control Box Settings	
–	–	–	–	–	–	–	**Pump Speed:** –	**Typ Flow:** –
							Primary Sample ID= –	
							Primary Sample Time: (hh:mm) –	

JHA ENVIRONMENTAL

Groundwater Monitoring Data Form

Well Information		Purging Information		Project Information		Well Information
Well ID #: OW-3		**Date:** 2/4/19		**Site:** Omega		**Survey Monitoring Point (MP); TOC (N)**
Well Total Depth: 82.10		**Sampling Event:** 1st Qtr GWM 2019		**Client Name:** De Maximis		
Well Diameter: 4"		**Purge Equip:** Bailer		**Project #:**	E742	Pump Information:
Screen Interval: 63'-83'		**Purging Method:** 3 casing vol.		**Consultant:** JHA Env. Inc.		**Pump Model:** ~~Grundfos Rediflo~~
Pump Depth: -		**Sampling Equipment:** -		**Sampler:** KD, CJ		**Single System Volume:** -

LNAPL PRESENT?	NAPL THICKNESS	DEPTH TO LNAPL (ft)	A DEPTH TO BOTTOM (ft)	B DEPTH TO WATER (ft)	C HEIGHT OF WATER COLUMN A-B=C	GALLONS PER FOOT					D ONE CASING VOLUME C X D = E	E THREE CASING VOLUMES E X 3
						Well Dia	0.75"	2"	4"	6"		
-	-	-	82.10	80.95	1.15	Gals/ft	0.02	0.16	0.65 (1.3)	1.47	1.50	4.50
											N/A	N/A

TIME (HH:MM)	Casing/ Screen	Flow Rate (gpm)	VOLUME (gallons)	DEPTH TO WATER (FT-BMP)	TEMP (deg C)	pH	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Comments
0930		INSUFFICIENT AMOUNT of WATER. MADE SEVERAL ATTEMPTS to BAIL									
		OUT WATER. A LOT of DEBRIS @ BOTTOM of WELL.									

TOC N = Top Of Casing North Side
FT-BMP = Feet Below Measuring Point

Purge Start Time	Purge End Time	Average Flow (gpm)	Total Gallons Purged	Total Casing Volumes Purged	80% Recovery DTW	Sampling Water Level	Control Box Settings	
							Pump Speed: -	Typ Flow: -
-	-	-	-	-	-	-	Primary Sample ID= -	
							Primary Sample Time: (hh:mm) -	

JHA ENVIRONMENTAL

Groundwater Monitoring Data Form

Page: 1 of 1

Well Information		Purging Information		Project Information		Well Information
Well ID #:	OW-3B	**Date:**	2/11/19	**Site:** Omega		**Survey Monitoring Point (MP); TOC (N)**
Well Total Depth:	122.0	**Sampling Event:**	1st Qtr GWM 2019	**Client Name**	De Maximis	
Well Diameter:	4"	**Purge Equip:**	2" Grundfos Redi flo	**Project #:**	E742	Pump Information:
Screen Interval:	112'-122'	**Purging Method:**	3 casing vol.	**Consultant:** JHA Env. Inc.		**Pump Model:** Grundfos Redi flo 2"
Pump Depth:	120'	**Sampling Equipment:**	–	**Sampler:** KA, CJ		**Single System Volume:** –

LNAPL PRESENT?	NAPL THICKNESS	DEPTH TO LNAPL (ft)	A DEPTH TO BOTTOM (ft)	B DEPTH TO WATER (ft)	C HEIGHT OF WATER COLUMN A-B=C	GALLONS PER FOOT				D	E ONE CASING VOLUME C X D = E	THREE CASING VOLUMES E X 3
–	–	–	122.0	96.25	25.75	Well Dia	0.75"	2"	4"	6"	33.5	100.5
						Gals/ft	0.02	0.16	0.65 1.3	1.47	N/A	N/A

TIME (HH:MM)	Casing/ Screen	Flow Rate (gpm)	VOLUME (gallons)	DEPTH TO WATER (FT-BMP)	TEMP (deg C)	pH	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Comments
0816		~2	20	100.00	20.58	7.18	1.28	9.90	13.8	347	clear
0826		~2	40	100.05	21.32	7.49	1.28	9.07	6.5	297	"
0836		~2	60	100.05	21.84	7.50	1.28	9.03	1.7	293	"
0846		~2	80	100.11	22.00	7.51	1.29	9.02	1.9	292	"
0856		~2	100.5	100.14	22.23	7.53	1.27	9.02	1.0	289	"

TOC N = Top Of Casing North Side
FT-BMP = Feet Below Measuring Point

Purge Start Time	Purge End Time	Average Flow (gpm)	Total Gallons Purged	Total Casing Volumes Purged	80% Recovery DTW	Sampling Water Level	Control Box Settings	
0806	0900	2	~102	3	–	100.14	Pump Speed: 253 Hz	Typ Flow: 2 gpm
							Primary Sample ID= OC_GW_OW-3B_20190211	
							Primary Sample Time: (hh:mm) 0858	

JHA ENVIRONMENTAL

Groundwater Monitoring Data Form

Well Information		Purging Information		Project Information		Well Information	
Well ID #:	OW-7	**Date:**	2/13/19	**Site:**	Omega	**Survey Monitoring Point (MP); TOC (N)**	
Well Total Depth:	89.10	**Sampling Event:**	1st Qtr GWM 2019	**Client Nam**	De Maximis		
Well Diameter:	4"	**Purge Equip:**	–	**Project #:**	E742	**Pump Information :**	
Screen Interval:	70.9' - 90.9'	**Purging Method:**	–	**Consultant:**	JHA Env. Inc.	**Pump Model:**	–
Pump Depth:	–	**Sampling Equipment:**	–	**Sampler:**	KA, CJ	**Single System Volume:**	–

LNAPL PRESENT?	NAPL THICKNESS	DEPTH TO LNAPL (ft)	A DEPTH TO BOTTOM (ft)	B DEPTH TO WATER (ft)	C HEIGHT OF WATER COLUMN A-B=C	D GALLONS PER FOOT				E ONE CASING VOLUME C X D = E	THREE CASING VOLUMES E X 3
–	–	–	89.10	DRY	–	Well Dia	0.75"	2"	4"	6"	–	–
						Gals/ft	0.02	0.16	0.65	1.47	N/A	N/A

TIME (HH:MM)	Casing/ Screen	Flow Rate (gpm)	VOLUME (gallons)	DEPTH TO WATER (FT-BMP)	TEMP (deg C)	pH	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Comments
0655				WELL IS	DRY						

TOC N = Top Of Casing North Side
FT-BMP = Feet Below Measuring Point

Purge Start Time	Purge End Time	Average Flow (gpm)	Total Gallons Purged	Total Casing Volumes Purged	80% Recovery DTW	Sampling Water Level	Control Box Settings	
–	–	–	–	–	–	–	**Pump Speed:** –	**Typ Flow:** –
							Primary Sample ID= –	
							Primary Sample Time: (hh:mm) –	

JHA ENVIRONMENTAL

Groundwater Monitoring Data Form

Well Information	Purging Information	Project Information	Well Information
Well ID #: OW-8A	**Date:** 2/13/19	**Site:** Omega	**Survey Monitoring Point (MP); TOC (N)**
Well Total Depth: 79.05'	**Sampling Event:** 1st QTR GWM 2019	**Client Name:** De Maximis	
Well Diameter: 4"	**Purge Equip:** –	**Project #:** E742	Pump Information:
Screen Interval: 60.4'-80'	**Purging Method:** –	**Consultant:** JHA Env. Inc.	**Pump Model:** –
Pump Depth: –	**Sampling Equipment:** –	**Sampler:** KA, CJ	**Single System Volume:** –

LNAPL PRESENT?	NAPL THICKNESS	DEPTH TO LNAPL (ft)	A DEPTH TO BOTTOM (ft)	B DEPTH TO WATER (ft)	C HEIGHT OF WATER COLUMN A-B=C	D GALLONS PER FOOT				E ONE CASING VOLUME C X D = E	THREE CASING VOLUMES E X 3
–	–	–	79.05	78.85	–	Well Dia	0.75"	2"	4"	6"	–	–
						Gals/ft	0.02	0.16	0.65	1.47	N/A	N/A

TIME (HH:MM)	Casing/ Screen	Flow Rate (gpm)	VOLUME (gallons)	DEPTH TO WATER (FT-BMP)	TEMP (deg C)	pH	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Comments
0711			INSUFFICIENT AMOUNT of WATER								

TOC N = Top Of Casing North Side
FT-BMP = Feet Below Measuring Point

Purge Start Time	Purge End Time	Average Flow (gpm)	Total Gallons Purged	Total Casing Volumes Purged	80% Recovery DTW	Sampling Water Level	Control Box Settings	
–	–	–	–	–	–	–	**Pump Speed:** –	**Typ Flow:** –
							Primary Sample ID= –	
							Primary Sample Time: (hh:mm) –	

JHA ENVIRONMENTAL

Groundwater Monitoring Data Form

Well Information		Purging Information		Project Information		Well Information
Well ID #:	OW-8B	**Date:**	2/13/19	**Site:** Omega		**Survey Monitoring Point (MP); TOC (N)**
Well Total Depth:	126.0	**Sampling Event:**	1st Qtr GWM 2019	**Client Nam**	De Maximis	
Well Diameter:	4"	**Purge Equip:**	2" Grundfos Rediflo	**Project #:**	E742	**Pump Information**
Screen Interval:	116'-126'	**Purging Method:**	3 casing Vol.	**Consultant:** JHA Env. Inc.		**Pump Model:** Grundfos Rediflo
Pump Depth:	125'	**Sampling Equipment:**	–	**Sampler:** KA, CJ		**Single System Volume:** –

LNAPL PRESENT?	NAPL THICKNESS	DEPTH TO LNAPL (ft)	A DEPTH TO BOTTOM (ft)	B DEPTH TO WATER (ft)	C HEIGHT OF WATER COLUMN A-B=C	D GALLONS PER FOOT				E ONE CASING VOLUME C X D = E	THREE CASING VOLUMES E X 3
–	–	–	126.0	99.35	26.65	Well Dia	0.75"	2"	4" 6"	34.6	104
						Gals/ft	0.02	0.16	0.65 1.47	N/A	N/A

TIME (HH:MM)	Casing/ Screen	Flow Rate (gpm)	VOLUME (gallons)	DEPTH TO WATER (FT-BMP)	TEMP (deg C)	pH	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Comments
0734	–	~2.0	20	100.65	20.42	6.52	1.04	4.51	23.0	285	clear
0744	–	~2.0	40	100.65	21.58	7.28	1.10	4.00	8.1	249	"
0754	–	~2.0	60	100.69	21.89	7.30	1.13	4.34	0.2	242	"
0804	–	~2.0	80	100.69	22.21	7.30	1.13	4.30	0.0	244	"
0816	–	~2.0	104	100.69	22.13	7.30	1.13	3.70	0.0	244	"

TOC N = Top Of Casing North Side
FT-BMP = Feet Below Measuring Point

Purge Start Time	Purge End Time	Average Flow (gpm)	Total Gallons Purged	Total Casing Volumes Purged	80% Recovery DTW	Sampling Water Level	Control Box Settings	
0724	0820	~2.0	~105	3	–	100.69	Pump Speed: 267 Hz	Typ Flow: ~2.0 gpm
							Primary Sample ID= OC-GW-OW-8B-20190213	
							Primary Sample Time: (hh:mm) 0817	

JHA ENVIRONMENTAL

Groundwater Monitoring Data Form

Well Information	Purging Information	Project Information	Well Information
Well ID #: OW-9	Date: 2/12/19	Site: Omega	Survey Monitoring Point (MP); TOC (N)
Well Total Depth: 89.71'	Sampling Event: 1st Qtr GWM 2019	Client Name: De Maximis	
Well Diameter: 4"	Purge Equip: 2" Bailer	Project #: E742	Pump Information:
Screen Interval: 70'-90'	Purging Method: 3 casing Vol.	Consultant: JHA Env. Inc.	Pump Model: –
Pump Depth: 89'	Sampling Equipment: –	Sampler: KT, CJ	Single System Volume: –

LNAPL PRESENT?	NAPL THICKNESS	DEPTH TO LNAPL (ft)	A DEPTH TO BOTTOM (ft)	B DEPTH TO WATER (ft)	C HEIGHT OF WATER COLUMN A-B=C	D GALLONS PER FOOT				E ONE CASING VOLUME C X D = E	THREE CASING VOLUMES E X 3
						Well Dia	0.75"	2"	4" 6"	4.3	12.9
–	–	–	89.71	86.41	3.3	Gals/ft	0.02	0.16	~~0.65~~ 1.3 1.47	N/A	N/A

TIME (HH:MM)	Casing/ Screen	Flow Rate (gpm)	VOLUME (gallons)	DEPTH TO WATER (FT-BMP)	TEMP (deg C)	pH	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Comments
1016	–	–	3	87.64	23.78	7.42	1.44	8.69	289	239	clear
1028	–	–	6	88.42	23.81	7.42	1.44	7.11	476	244	very turbid, brown
1042	–	–	9	88.88	23.94	7.46	1.42	8.25	Ø**	249	" "
1050	–	–	12.9	WELL	WENT	DRY					

TOC N = Top Of Casing North Side
FT-BMP = Feet Below Measuring Point

Purge Start Time	Purge End Time	Average Flow (gpm)	Total Gallons Purged	Total Casing Volumes Purged	80% Recovery DTW	Sampling Water Level
1010	1050	–	~10	~2	87.07	86.43

Ø** turbidity at 9 meters range

Control Box Settings

Pump Speed: –

Typ Flow: –

Primary Sample ID= OC_GW_OW-9_20190212, OC_GW_OW-9_20190212K

Primary Sample Time: (hh:mm) 1315 1320

JHA ENVIRONMENTAL

Groundwater Monitoring Data Form

Well Information		Purging Information		Project Information		Well Information	
Well ID #:	OW-10	Date:	2/12/19	Site: Omega		Survey Monitoring Point (MP); TOC (N)	
Well Total Depth:	89.19	Sampling Event:	1st QtR GWM	Client Name:	De Maximis		
Well Diameter:	4"	Purge Equip:	2" Grundfos Redi flo	Project #:	E742	Pump Information:	
Screen Interval:	69.5'-89.5'	Purging Method:	3 casing vol.	Consultant:	JHA Env. Inc.	Pump Model:	Grundfos Redi flo
Pump Depth:	87' → 88'	Sampling Equipment:	–	Sampler:	KD, CJ	Single System Volume:	–

LNAPL PRESENT?	NAPL THICKNESS	DEPTH TO LNAPL (ft)	A DEPTH TO BOTTOM (ft)	B DEPTH TO WATER (ft)	C HEIGHT OF WATER COLUMN A-B=C	D GALLONS PER FOOT					E ONE CASING VOLUME C X D = E	THREE CASING VOLUMES E X 3
–	–	–	89.19	78.33	10.86	Well Dia	0.75"	2"	4"	6"	14.1	42.3
						Gals/ft	0.02	0.16	~~0.65~~ 1.3	1.47	N/A	N/A

TIME (HH:MM)	Casing/ Screen	Flow Rate (gpm)	VOLUME (gallons)	DEPTH TO WATER (FT-BMP)	TEMP (deg C)	pH	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Comments
0948	–	~0.5	10	88.05	24.13	7.28	1.44	8.02	285	124	clear
0955			20	well dried out							
			30								
			42.3								

TOC N = Top Of Casing North Side
FT-BMP = Feet Below Measuring Point

Purge Start Time	Purge End Time	Average Flow (gpm)	Total Gallons Purged	Total Casing Volumes Purged	80% Recovery DTW	Sampling Water Level	Control Box Settings	
							Pump Speed: 218 Hz → 232 Hz	Typ Flow: ~0.5
0928	0955	~0.5	~10	<1	80.5	80.39	Primary Sample ID= OC_GW_OW-10_20190212, OC_GW_OW-10_20190212K	
Lowered pump to bottom and raised pump speed to 232 Hz							Primary Sample Time: (hh:mm) 1245	1250

0948 - Flow dropped to ~0.25 gpm

JHA ENVIRONMENTAL

Groundwater Monitoring Data Form

Well Information	Purging Information	Project Information	Well Information
Well ID #: OW-11	**Date:** 2/11/19	**Site:** Omega	**Survey Monitoring Point (MP); TOC (N)**
Well Total Depth: 98.80	**Sampling Event:** 1st Qtr GWM 2019	**Client Name:** De Maximis	
Well Diameter: 4"	**Purge Equip:** 2" Grundfos Redi flo	**Project #:** E742	Pump Information:
Screen Interval: 80-100'	**Purging Method:** 3 casing vol.	**Consultant:** JHA Env. Inc.	**Pump Model:** Grundfos Redi flo
Pump Depth: 97'	**Sampling Equipment:** –	**Sampler:** KA, CJ	**Single System Volume:** –

LNAPL PRESENT?	NAPL THICKNESS	DEPTH TO LNAPL (ft)	A DEPTH TO BOTTOM (ft)	B DEPTH TO WATER (ft)	C HEIGHT OF WATER COLUMN A-B=C	D GALLONS PER FOOT					E ONE CASING VOLUME C X D = E	THREE CASING VOLUMES E X 3
–	–	–	98.80	87.67	11.13	Well Dia	0.75"	2"	4"	6"	14.5	43.5
						Gals/ft	0.02	0.16	0.65	1.47	N/A	N/A

TIME (HH:MM)	Casing/ Screen	Flow Rate (gpm)	VOLUME (gallons)	DEPTH TO WATER (FT-BMP)	TEMP (deg C)	pH	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Comments
1031		~1.0	10	97.10	22.93	7.32	1.31	4.46	296	150	
1041		~1.0	20	97.10	23.30	7.36	1.32	4.02	85.2	190	
1051		~1.0	30	97.10	23.63	7.36	1.32	4.16	31.1	174	
1101		~1.0	40	97.12	23.74	7.37	1.30	4.34	16.4	175	
1105		~1.0	43.5	97.15	23.87	7.34	1.30	4.36	15.5	170	

TOC N = Top Of Casing North Side
FT-BMP = Feet Below Measuring Point

Purge Start Time	Purge End Time	Average Flow (gpm)	Total Gallons Purged	Total Casing Volumes Purged	80% Recovery DTW	Sampling Water Level	Control Box Settings	
1021	1110	~1.0	~45	3	–	97.15	Pump Speed: 247 Hz	Typ Flow: ~1 gpm
							Primary Sample ID= OC_GW_OW-11_20190211	
							Primary Sample Time: (hh:mm) 1107	

JHA ENVIRONMENTAL

Groundwater Monitoring Data Form

Well Information		Purging Information		Project Information		Well Information	
Well ID #:	OW-12	Date:	2/12/19	Site: Omega		Survey Monitoring Point (MP); TOC (N)	
Well Total Depth:	100'	Sampling Event:	1st Qtr GWM 2019	Client Name:	De Maximis		
Well Diameter:	4"	Purge Equip:	2" Grundfos Rediflo	Project #:	E742	Pump Information:	
Screen Interval:	80-100	Purging Method:	3 casing vol.	Consultant:	JHA Env. Inc.	Pump Model:	Grundfos Rediflo
Pump Depth:	99'	Sampling Equipment:	–	Sampler:	KA, CJ	Single System Volume:	

LNAPL PRESENT?	NAPL THICKNESS	DEPTH TO LNAPL (ft)	A DEPTH TO BOTTOM (ft)	B DEPTH TO WATER (ft)	C HEIGHT OF WATER COLUMN A-B=C	GALLONS PER FOOT					D ONE CASING VOLUME C X D = E	E THREE CASING VOLUMES E X 3
						Well Dia	0.75"	2"	4"	6"		
–	–	–	100.0	91.37	8.63	Gals/ft	0.02	0.16	1.3 ~~0.65~~	1.47	11.2	33.6
											N/A	N/A

TIME (HH:MM)	Casing/ Screen	Flow Rate (gpm)	VOLUME (gallons)	DEPTH TO WATER (FT-BMP)	TEMP (deg C)	pH	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Comments
0815		~0.5	6	97.85	19.65	6.74	1.14	3.16	49.0	287	
0827		~0.5	~~12~~ 11	WELL	DRIED		OUT				
			18								
			24								
			30								
			33.6								

TOC N = Top Of Casing North Side
FT-BMP = Feet Below Measuring Point

Purge Start Time	Purge End Time	Average Flow (gpm)	Total Gallons Purged	Total Casing Volumes Purged	80% Recovery DTW	Sampling Water Level	Control Box Settings	
							Pump Speed: 233 Hz	Typ Flow: ~0.5 gpm
0803	0827	~0.5	11	1	93.1	91.40	Primary Sample ID= OC_GW_OW-12_20190212	
							Primary Sample Time: (hh:mm) 1340	

Lowered pump to bottom of well before it dried out, will return to collect sample.

JHA ENVIRONMENTAL

Groundwater Monitoring Data Form

Well Information	Purging Information	Project Information	Well Information
Well ID #: OW-13B	Date: 2/13/19	Site: Omega	Survey Monitoring Point (MP); TOC (N)
Well Total Depth: 140'	Sampling Event: 1st Qtr GWM 2019	Client Name: De Maximis	
Well Diameter: 4"	Purge Equip: 2" Grundfos Rediflo	Project #: E742	Pump Information:
Screen Interval: 40'-140'	Purging Method: 3 casing vol.	Consultant: JHA Env. Inc.	Pump Model: Grundfos Rediflo
Pump Depth: 138'	Sampling Equipment: -	Sampler: KA, CJ	Single System Volume: -

LNAPL PRESENT?	NAPL THICKNESS	DEPTH TO LNAPL (ft)	A DEPTH TO BOTTOM (ft)	B DEPTH TO WATER (ft)	C HEIGHT OF WATER COLUMN A-B=C	D GALLONS PER FOOT					E ONE CASING VOLUME C X D = E	THREE CASING VOLUMES E X 3
-	-	-	140.0	99.62	40.38	Well Dia	0.75"	2"	4"	6"	52.5	157.5
						Gals/ft	0.02	0.16	0.65	1.47	N/A	N/A

TIME (HH:MM)	Casing/ Screen	Flow Rate (gpm)	VOLUME (gallons)	DEPTH TO WATER (FT-BMP)	TEMP (deg C)	pH	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Comments
0918	-	~2.0	30	121.05	21.03	7.29	1.13	7.96	1.6	254	clear
0933	-	~2.0	60	NM	21.37	7.30	1.16	3.08	0.0	237	"
0948	-	~2.0	90	125.08	22.38	7.29	1.17	4.11	0.0	232	"
1003	-	~2.0	120	125.25	22.74	7.28	1.17	3.55	0.0	230	"
1018	-	~2.0	157.5	126.95	22.26	7.30	1.17	4.47	0.0	234	"

TOC N = Top Of Casing North Side
FT-BMP = Feet Below Measuring Point

Purge Start Time	Purge End Time	Average Flow (gpm)	Total Gallons Purged	Total Casing Volumes Purged	80% Recovery DTW	Sampling Water Level	Control Box Settings	
							Pump Speed: 27.7 Hz	Typ Flow: ~2.0
0903	1025	22.0	~168	3	-	126.95	Primary Sample ID= OC_GW_OW-13B_20190213	
							Primary Sample Time: (hh:mm) 1023	

JHA ENVIRONMENTAL

Groundwater Monitoring Data Form

Well Information	Purging Information	Project Information	Well Information
Well ID #: PZ-3	**Date:** 2/13/19	**Site:** Omega	**Survey Monitoring Point (MP); TOC (N)**
Well Total Depth: 89.0	**Sampling Event:** 1st Qtr GWM 2019	**Client Name:** De Maximis	
Well Diameter: 2"	**Purge Equip:** –	**Project #:** E742	Pump Information:
Screen Interval: 69.8'-89.8'	**Purging Method:** –	**Consultant:** JHA Env. Inc.	**Pump Model:** –
Pump Depth: –	**Sampling Equipment:** –	**Sampler:** KA, CJ	**Single System Volume:** –

LNAPL PRESENT?	NAPL THICKNESS	DEPTH TO LNAPL (ft)	A DEPTH TO BOTTOM (ft)	B DEPTH TO WATER (ft)	C HEIGHT OF WATER COLUMN A-B=C	D GALLONS PER FOOT				E ONE CASING VOLUME C X D = E	THREE CASING VOLUMES E X 3
–	–	–	89.0	DRY	–	Well Dia	0.75"	2"	4"	6"	–	–
						Gals/ft	0.02	0.16	0.65	1.47	N/A	N/A

TIME (HH:MM)	Casing/ Screen	Flow Rate (gpm)	VOLUME (gallons)	DEPTH TO WATER (FT-BMP)	TEMP (deg C)	pH	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Comments
0700				WELL IS DRY							

TOC N = Top Of Casing North Side
FT-BMP = Feet Below Measuring Point

Purge Start Time	Purge End Time	Average Flow (gpm)	Total Gallons Purged	Total Casing Volumes Purged	80% Recovery DTW	Sampling Water Level	Control Box Settings	
–	–	–	–	–	–	–	**Pump Speed:** –	**Typ Flow:** –
							Primary Sample ID= –	
							Primary Sample Time: (hh:mm) –	

JHA ENVIRONMENTAL

Groundwater Monitoring Data Form

Well Information	Purging Information	Project Information	Well Information
Well ID #: PZ-9	Date: 2/12/19	Site: Omega	Survey Monitoring Point (MP); TOC (N)
Well Total Depth: 90'	Sampling Event: 1st Qtr GWM 2019	Client Name: De Maximis	
Well Diameter: 2"	Purge Equip: 2" Grundfos Redi flo	Project #: E742	Pump Information:
Screen Interval: 70'-90'	Purging Method: 3 casing vol.	Consultant: JHA Env. Inc.	Pump Model: Grundfos Redi flo
Pump Depth: ~~89~~ 89.5'	Sampling Equipment: -	Sampler: KA, CJ	Single System Volume: –

LNAPL PRESENT?	NAPL THICKNESS	DEPTH TO LNAPL (ft)	A DEPTH TO BOTTOM (ft)	B DEPTH TO WATER (ft)	C HEIGHT OF WATER COLUMN A-B=C	D GALLONS PER FOOT					E ONE CASING VOLUME C X D = E	THREE CASING VOLUMES E X 3
						Well Dia	0.75"	2"	4"	6"		
-	-	-	90.0	84.70	5.3	Gals/ft	0.02	~~0.16~~ 0.32	0.65	1.47	1.7	5.1
											N/A	N/A

TIME (HH:MM)	Casing/ Screen	Flow Rate (gpm)	VOLUME (gallons)	DEPTH TO WATER (FT-BMP)	TEMP (deg C)	pH	Conductivity (mS/cm)	Dissolved Oxygen (mg/L)	Turbidity (NTU)	ORP (mV)	Comments
1107		~0.25	1	88.72	23.60	7.74	1.20	6.39	0**	204	very turbid
1111		~0.25	2	NA*	24.98	7.53	1.26	4.83	1000+	201	"
1115		~0.25	3	NA*	25.28	7.50	1.29	4.91	1000+	199	
1117		~0.25	4	NA*	25.22	7.50	1.29	4.18	849	201	
1118			5.1	WELL WOULD NOT DRY							

TOC N = Top Of Casing North Side
FT-BMP = Feet Below Measuring Point

Purge Start Time	Purge End Time	Average Flow (gpm)	Total Gallons Purged	Total Casing Volumes Purged	80% Recovery DTW	Sampling Water Level	Control Box Settings	
1103	1118	~0.25	~4	2+	85.76	~~86.40~~ 84.77	Pump Speed: 218.5 Hz	Typ Flow: ~0.25 gpm
							Primary Sample ID= OC_GW_PZ-9_20120212	
							Primary Sample Time: (hh:mm) 1307	

0** out of meters range (also shows 1000+)

DTW cannot be obtained since pump is in the way