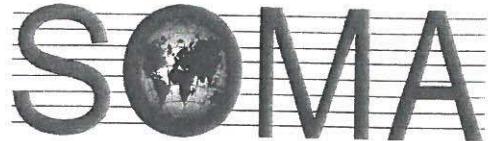


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By Alameda County Environmental Health 3:03 pm, Apr 05, 2017



**ENVIRONMENTAL ENGINEERING, INC.**  
6620 Owens Drive, Suite A • Pleasanton, CA 94588  
TEL (925)734-6400 • FAX (925)734-6401  
[www.somaenv.com](http://www.somaenv.com)

April 5, 2017

Mr. Mark Detterman, PG, CEG  
Alameda County Health Care Services Agency  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502-6577

Subject: Freedom Food and Gas (Formerly Freedom ARCO Mini-Mart)  
Site Address: 15101 Freedom Avenue, San Leandro, California  
**STID 4473/RO0000473**

Dear Mr. Detterman:

SOMA's "First Quarter 2017 Groundwater Monitoring and Remediation Progress Report" for the subject property has been uploaded to the State's GeoTracker database and Alameda County's FTP site for your review.

Thank you for your time in reviewing our report. Please do not hesitate to call me at (925) 734-6400, if you have questions or comments.

Sincerely,

A handwritten signature in black ink, appearing to read "Mansour Sepehr".

Mansour Sepehr, Ph.D.,PE  
Principal Hydrogeologist

cc: Mr. Mohammad Pazdel w/report enclosure



**First Quarter 2017  
Groundwater Monitoring and  
Remediation Progress Report**

**Freedom Food and Gas  
15101 Freedom Avenue  
San Leandro, California**

**April 5, 2017**

**Project 2551/2553**

**Prepared for**

**Mr. Mohammad Pazdel  
1770 Pistacia Court  
Fairfield, California**

## ACKNOWLEDGEMENT STATEMENT

**Site Location:** 15101 Freedom Avenue, San Leandro, CA

"I have read and acknowledge the content, recommendations and/or conclusions contained in the attached document or report submitted on my behalf to ACDEH's FTP server and the SWRCB's Geotracker website."



---

Mohammad Pazdel  
1770 Pistacia Court  
Fairfield, California 94533  
Responsible Party

## CERTIFICATION

SOMA Environmental Engineering, Inc. has prepared this report on behalf of the responsible party, Mr. Mohammad Pazdel, for property located at 15101 Freedom Avenue, San Leandro, California, to comply with Alameda County Health Care Services requirements for the First Quarter 2017 groundwater monitoring event.

  
\_\_\_\_\_  
Mansour Sepehr, PhD, PE  
Principal Hydrogeologist



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- Appendix A: Standard Operating Procedures for Conducting Groundwater Monitoring Activities
- Appendix B: Elevations and Coordinates on Monitoring Wells, Field Measurements of Physical and Chemical Parameters of Groundwater Samples, and Groundwater Gradient Calculations
- Appendix C: Laboratory Reports and Chain of Custody Forms for the First Quarter 2017 Monitoring Event

## **1. INTRODUCTION**

SOMA Environmental Engineering, Inc. (SOMA) has prepared this report on behalf of the responsible party, Mr. Mohammad Pazdel, for property located at 15101 Freedom Avenue, San Leandro, California. The site is located in an area of primarily residential properties and adjacent commercial areas (Figure 1). The property was formerly owned by Mr. Mohammad Pazdel. In late 2009, the property was sold to DDH, LLC, Assignee and in early 2010 it was sold to Mr. Mohammad Mashhoon. Under the new management, the site is currently operational with the business name “Freedom Food and Gas” (formerly “Freedom Arco Mini-Mart”).

This report summarizes results of the First Quarter 2017 groundwater monitoring event conducted on March 13 and 14, 2017 and results of groundwater sampling, conducted in January and February 2017 for two monitoring wells (MW-3 and MW-10R). It includes physical and chemical properties measured in the field and laboratory analysis results for each groundwater sample.

It also presents the remediation progress report for First Quarter 2017, which includes a summary of historical multi-phase extraction events and a status update of groundwater extraction and treatment system.

### **1.1 Field Activities**

On January 18, 2017 and February 24, 2017, groundwater sampling was conducted for monitoring wells MW-3 and MW-10R as approved by ACDEH's directive dated January 6, 2017.

In March 2017, SOMA's field crew conducted a groundwater monitoring event in accordance with procedures and guidelines of Alameda County Health Care Services (ACHCS) and the California Regional Water Quality Control Board (CRWQCB). Figure 2 shows well locations.

On March 13, 2017, the following wells were measured for depth to groundwater: five on-site monitoring wells (MW-1 to MW-5) and four off-site wells (MW-6, MW-7, MW-10 and MW-11) in the First water-bearing zone (WBZ); one extraction well (EX-1), and two MPE wells (MPE-1 and MPE-2). On March 13 and 14, 2017, additional field measurements and groundwater samples were collected from all First WBZ monitoring and remediation wells except EX-2. No sample could be retrieved from EX-2 due to the presence of a downhole pump inside the well. Free product (FP) was not observed in any well during this monitoring event. Properties measured include pH, temperature, and electrical conductivity (EC).

Groundwater monitoring of Second WBZ has been discontinued based on ACEH's directive dated October 28, 2015. Therefore, MW-1D, MW-3D, and MW-

4D were not measured for depth to water or sampled during this monitoring event.

## **1.2 Laboratory Analysis**

Curtis & Tompkins Laboratories, a California state-certified laboratory, analyzed groundwater samples for the following: total petroleum hydrocarbons as gasoline (TPH-g); benzene, toluene, ethylbenzene, total xylenes (collectively termed BTEX); methyl tertiary-butyl ether (MtBE); and gasoline oxygenates, ethanol and lead scavengers. Samples were prepared using EPA Method 5030B and analyzed using EPA Method 8260B.

# **2. RESULTS**

Following are results of field measurements and laboratory analysis for the First Quarter 2017 groundwater monitoring event.

## **2.1 Field Measurements, First WBZ Wells**

Table 1 presents calculated groundwater elevations and depths to groundwater for each monitoring well. Depths to groundwater ranged from 10.34 feet in MW-11 to 20.95 feet in MW-1. As mentioned above in Section 1.1, no FP was observed in any First WBZ well. Appendix A includes the procedure for FP measurement.

Corresponding groundwater elevations ranged from 28.57 feet in MW-6 to 33.91 feet in MW-2 (Table 1).

Figure 3 displays the contour map of groundwater elevations. As illustrated, groundwater flows southwesterly, at a gradient of 0.017 feet/feet. No capture zone can be seen in the figure because the downhole pumps in the extraction wells (EX-1 and EX-2) have not been operating based on comments received from the UST Cleanup Fund. Since the previous monitoring event, groundwater flow direction has remained the same and gradient has increased. Groundwater gradient calculations are attached in Appendix B.

Field measurements recorded during this monitoring event and the sampling events of January and February 2017, are included in Appendix B.

## **2.2 Laboratory Analysis, First WBZ Wells**

Appendix C includes the laboratory report and chain-of-custody form for this monitoring event and the sampling events of January and February 2017.

Table 1 presents TPH-g, BTEX, and MtBE analysis results for the current and historical groundwater monitoring events.

TPH-g was below laboratory reporting-limit in MW-1, MW-2, MW-11, EX-1 and MPE-1 and was detected in concentrations ranging from 79 µg/L in MW-4 to 7,700 µg/L in MPE-2. Since the previous monitoring event (Fourth Quarter 2016), TPH-g has increased in MW-3 and MPE-2, decreased in MW-1, MW-2, MW-4, MW-6, MW-7, MW-10R, and MW-11, and remained the same in MW-5. The decrease is significant in MW-6, MW-7, and MW-10R.

Figure 4 displays the contour map of TPH-g concentrations in groundwater. As illustrated, the highest TPH-g impact is observed in the northeast section of the site in the vicinity of MPE-2.

The following BTEX concentrations were observed:

- All BTEX analytes were below laboratory reporting-limits in MW-1, MW-2, MW-7, MW-11, EX-1, and MPE-1.
- Benzene was also below laboratory-reporting limits in MW-10R. Detectable benzene concentrations ranged from 0.76 µg/L in MW-6 to 1,000 µg/L in MPE-2.
- Toluene was below laboratory-reporting limits in all samples except MPE-2 where it was detected at 6.6 µg/L.
- Ethylbenzene was below laboratory-reporting limits in MW-4 and MW-6 and was detected in concentrations ranging from 0.68 µg/L in MW-5 to 180 µg/L in MPE-2.
- Total xylenes were below laboratory-reporting limits in MW-4, MW-5 and MW-6. Detectable concentrations ranged from 6.2 µg/L in MW-10R to 67 µg/L in MW-3.

Figure 5 displays the contour map of benzene in groundwater. The highest benzene impact is in the northeast corner of the site in the vicinity of MPE-2. Since the previous monitoring event (Fourth Quarter 2016), detectable benzene concentrations have increased in MW-3, MW-5, and MPE-2 and decreased in MW-4, MW-6, and MPE-1.

MtBE was below the laboratory-reporting limit in MW-1, MW-2, MW-5, MW-6, MW-7, MW-10R, MW-11, EX-1, and MPE-1. MtBE was detected in MW-3, MW-4, and MPE-2 at 1.0 µg/L, 3.20 µg/L, and 12 µg/L in MPE-2. Figure 6 displays the contour map of MtBE concentrations in groundwater. Since the previous monitoring event (Fourth Quarter 2016), MtBE has increased in MW-3 and MPE-2 and decreased in MW-4, MW-5, MW-7, and EX-1 and remained below laboratory-reporting limit in MW-1, MW-2, MW-6, MW-10R, MW-11, and MPE-1.

As mentioned previously, on-site well MW-3 and off-site well MW-10R were sampled monthly during the First Quarter 2017 according to the approved

workplan of November 22, 2016. As shown in Table 1, in MW-3, TPH-g, benzene, and ethylbenzene showed a slightly increasing concentration trend whereas in MW-10R, TPH-g, ethylbenzene and total xylenes showed a decrease concentration trend. There was no sheen observed in both these wells and the contaminant concentrations are significantly below the concentrations that would indicate the presence of any free-product. According to 'Technical Justification for Media Specific Criteria' (March 2012), if TPH-g concentration is greater than 20,000 µg/L or benzene concentration is greater than 3,000 µg/L, this could indicate the presence of free-product.

Laboratory report and chain-of-custody form are attached in Appendix C.

Table 2 shows analysis results for gasoline oxygenate and lead scavenger concentrations for the current as well as historical events.

The following gasoline oxygenate and lead scavenger concentrations were observed:

- In MW-1, MW-2, MW-3, MW-4, MW-6, MW-7, MW-11, EX-1, and MPE-1 all gasoline oxygenates and lead scavengers were below laboratory-reporting limits.
- tertiary-butyl alcohol (TBA) was detected in MW-5, MW-10R, and MPE-2 at 52 µg/L, 10 µg/L, and 130 µg/L, respectively. Figure 7 shows a map of TBA concentrations in First WBZ wells. Since the previous monitoring event (Fourth Quarter 2016), TBA increased in MW-5 and decreased in MW-4, EX-1, and MPE-2.
- Methyl ter-amyl ether (TAME) was detected in MPE-2 at 3.80 µg/L and was below laboratory-reporting limit in other wells. Figure 7 shows the map of TAME concentrations in First WBZ wells. Since the previous monitoring event (Fourth Quarter 2016), TAME slightly increased in MPE-2.
- Ethyl tertiary-butyl ether (ETBE), 1,2-dichloroethane (1,2-DCA), Isopropyl ether (DIPE), 1,2-dibromoethane (EDB), and ethanol were below laboratory-reporting limits in all groundwater samples. Analysis results for ethanol are shown in Appendix C.

### **3. OPERATION OF TREATMENT SYSTEM**

SOMA installed a groundwater treatment system at the site in December 2009. The system includes two extraction wells (EX-1 and EX-2), trenching containing influent and effluent lines and electrical conduits, and the treatment system compound. During system operation, extracted groundwater is pumped from extraction wells through underground piping to a fenced treatment compound, adjacent to the existing service station building.

In the treatment compound, groundwater is treated using granular activated carbon (GAC) and subsequently discharged to the sanitary sewer. Two GAC vessels are connected in series. The first unit (1,000 gallons) serves as the primary treatment unit, and the second (55 gallons) polishing drum provides an additional safety buffer prior to discharge. Effectiveness of the GAC units is monitored by collection and analysis of samples from the system discharge, including a sample collected from water that has passed only through the first GAC unit. When analytical results indicate that the first GAC unit is no longer effectively treating groundwater, the vessel will be removed from the treatment line and refurbished with new carbon. The polishing unit was replaced on June 16, 2014.

Since the system began discharging, approximately 3,973,478 gallons of groundwater have been treated and discharged at the site (as of September 22, 2016). Since March 7, 2016, the treatment system has not been operating actively. The treatment system operated on August 5, 2016 and September 22, 2016 to process MPE and monitoring water. Both these times the extraction wells (EX-1 and EX-2) remained inoperative.

The treatment system operates under discharge permit issued by Oro Loma Sanitary District (OLSD) in May 2009. This discharge permit was most recently renewed in May 2016. Treated groundwater has been discharging to the OLSD sewer since December 9, 2009. Figure 8 shows the schematic diagram of the groundwater treatment system. Treatment system effluent is sampled each month of operation to comply with OLSD discharge permit requirements. Table 3 includes analytical results and operational history of the treatment system. As shown in Table 4, as of August 4, 2016, cumulative masses of TPH-g and BTEX extracted from groundwater were approximately 40.57 pounds, 1.52 pounds, 0.37 pounds, 1.00 pounds, and 5.17 pounds, respectively. Since the treatment system was not operational, therefore no effluent samples were collected during First Quarter 2017.

#### **4. MULTI-PHASE EXTRACTION EVENTS**

No MPE events were performed during the First Quarter 2017. The overall estimated total mass of VOCs extracted by previous and the current MPE events is 3,629 pounds. This includes the following:

Event	Mass Removed (pounds)
November 2007 (Pilot Test)	106
October 2009	243
November 2009	72
December 2009	97
February 2010	17

March 2010	11
June 2010	30
August 2010	30
October 2010	79
April 2011	27
August 2011	94
May 2013	300
August 2013	841
October 2013	790
September 2014	565
November 2015	280
August 2016	47

Figure 9 shows the cumulative extracted mass of VOCs during different MPE events at the site.

## 5. CONCLUSIONS AND RECOMMENDATIONS

First Quarter 2017 groundwater monitoring and MPE events results are summarized below.

- No FP was observed during this monitoring event.
- Groundwater flows southwesterly across the site in First WBZ. The downhole pumps in the extraction wells (EX-1 and EX-2) have been offline since March 7, 2016 based on comments received from the UST Cleanup Fund.
- The highest TPH-g and benzene concentrations were observed in the northeast section of the site in the vicinity of MPE-2.
- Since the previous monitoring event (Third Quarter 2016), TPH-g has increased in MW-3 and MPE-2, decreased in MW-1, MW-2, MW-4, MW-6, MW-7, MW-10R, and MW-11, and remained the same in MW-5; detectable benzene concentrations have increased in MW-3, MW-5, and MPE-2 and decreased in MW-4, MW-6, and MPE-1.
- During the monthly sampling events in First quarter 2017, TPH-g, benzene, and ethylbenzene showed a slightly increasing concentration trend in MW-3 whereas in MW-10R, TPH-g, ethylbenzene and total xylenes showed a decreasing concentration trend. There was no sheen observed in both these wells and all contaminant concentrations are significantly below the concentrations that would indicate the presence of any free-product.
- The total mass of hydrocarbon removed by MPE operations (as of August 2016) at the site is estimated to be 3,629 pounds.

Based on results of the First Quarter 2017 groundwater monitoring event, no sheen was observed in MW-3, MW-10R, or any other monitoring/remediation well. Also, all contaminant concentrations were significantly below the concentrations that would indicate the presence of any free-product.

## **Recommendations**

First Quarter 2017 monitoring results were compared to the LTCP (Low Threat Closure Policy) Groundwater Specific Criteria. It appears that the benzene plume is currently close to 260 ft in length with the highest concentration of 1,000 µg/L in MPE-2. In order to satisfy scenario 4 of the LTCP's Groundwater specific criteria, SOMA proposes to conduct one more round of groundwater monitoring for the most impacted wells (MW-3, MPE-1, MPE-2, MW-6, and MW-10R) to find out if the benzene concentrations are decreasing to below 1,000 µg/L for case closure.

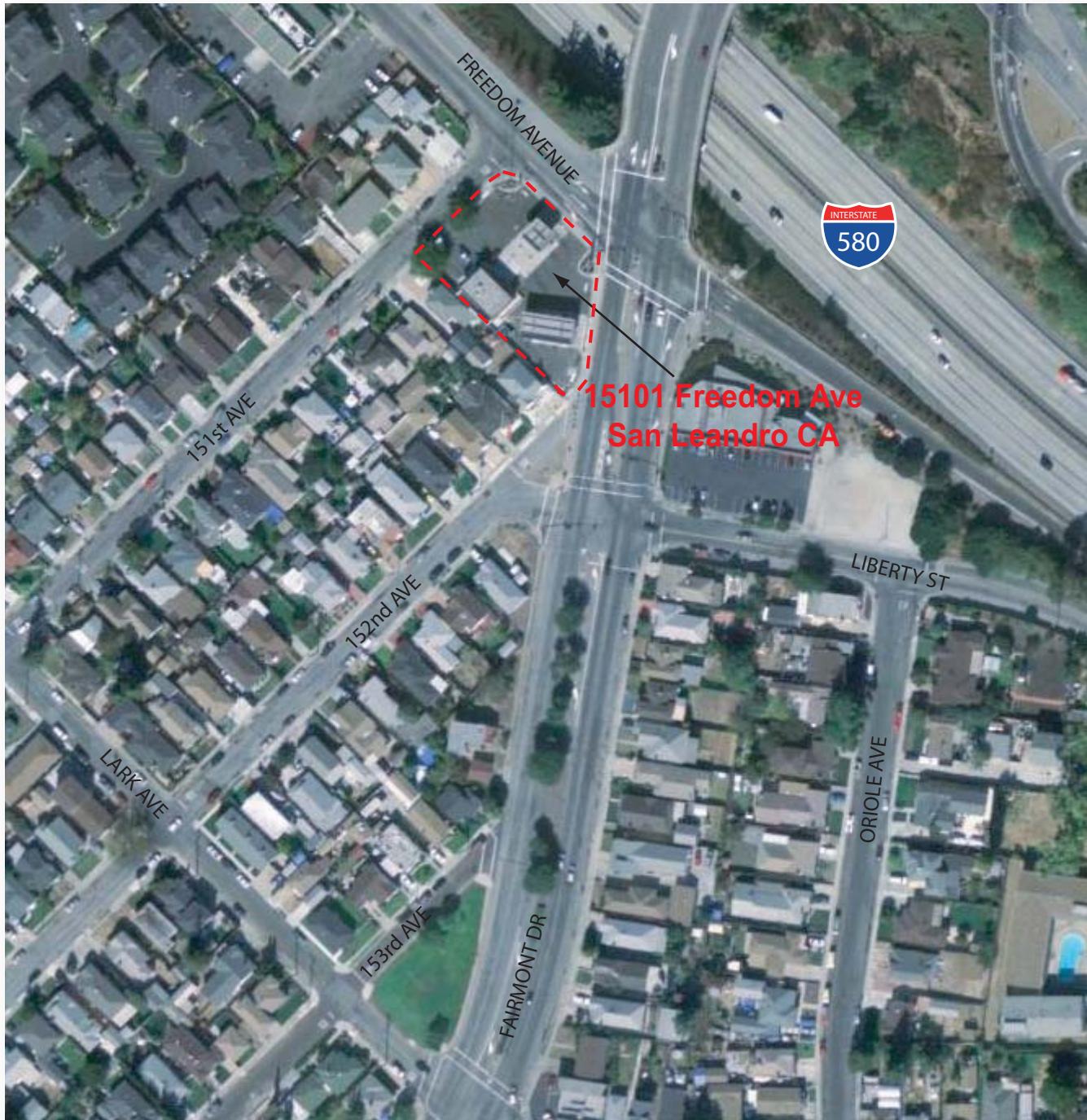
SOMA has drafted a public notice to be distributed to property owners in the site vicinity in order to identify domestic wells in the neighborhood. Upon receipt of a mailing list from the ACDEH and approval of public notice, these notices will be distributed to downgradient properties within 2,046 feet of the site as suggested in the ACDEH's directive dated January 6, 2017. At the end of public notification and upon receipt of comments and replies from property/well owners, SOMA will conduct sampling of any identified residential wells.

## **6. REPORT LIMITATIONS**

This report is the summary of work done by SOMA, including observations and descriptions of site conditions. It includes analysis results produced by Curtis & Tompkins Laboratories for the current groundwater monitoring event. Quantities and locations of wells were selected to provide the required information, but may not be representative of entire site conditions. All conclusions and recommendations are based on laboratory analysis results. Conclusions beyond those specifically stated in this document should not be inferred from this report.

SOMA warrants that services were provided in accordance with generally accepted practices in the environmental engineering and consulting field at the time of this sampling.

# **Figures**



approximate scale in feet

0 150 300

Figure 1: Site vicinity map.

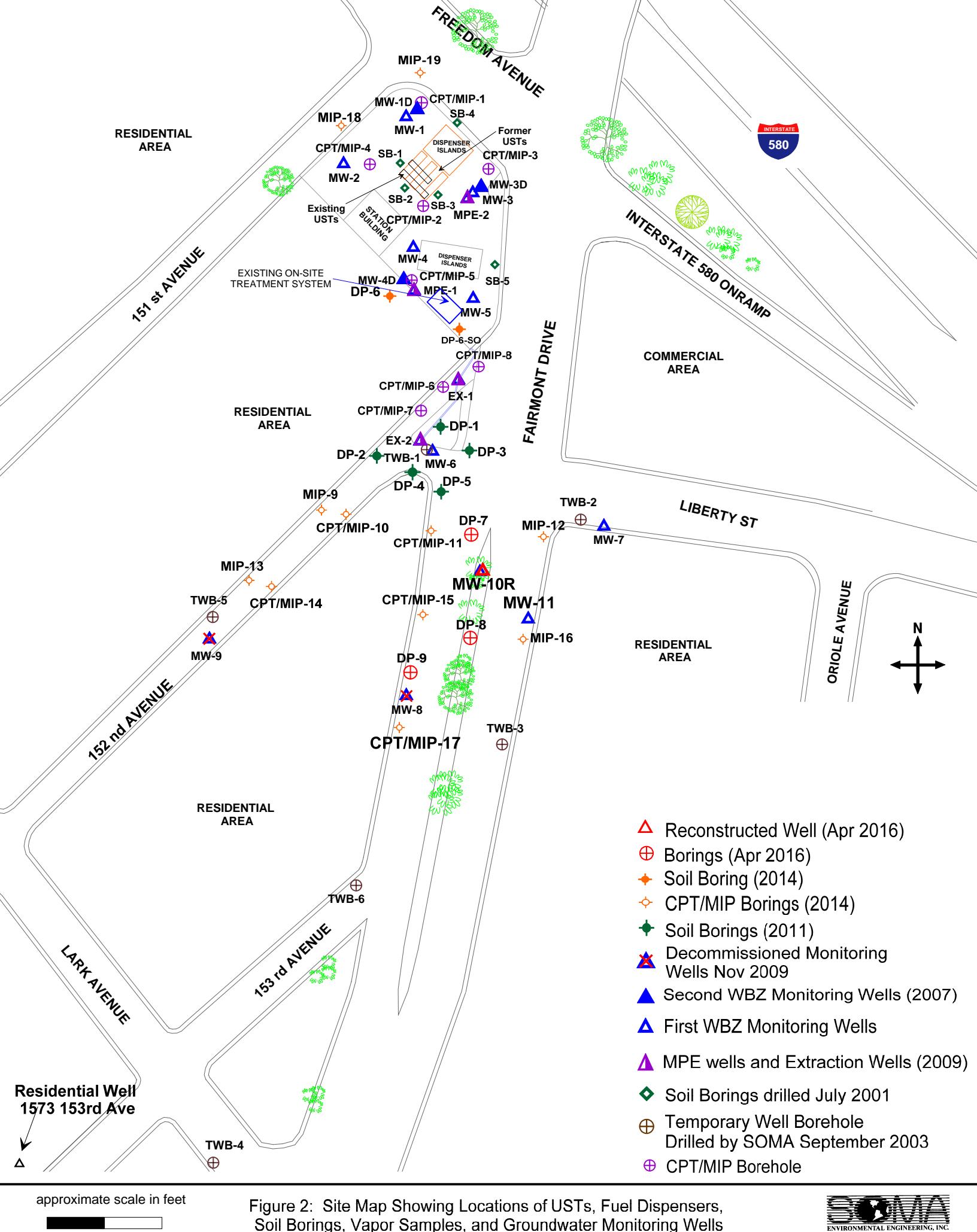


Figure 2: Site Map Showing Locations of USTs, Fuel Dispensers, Soil Borings, Vapor Samples, and Groundwater Monitoring Wells



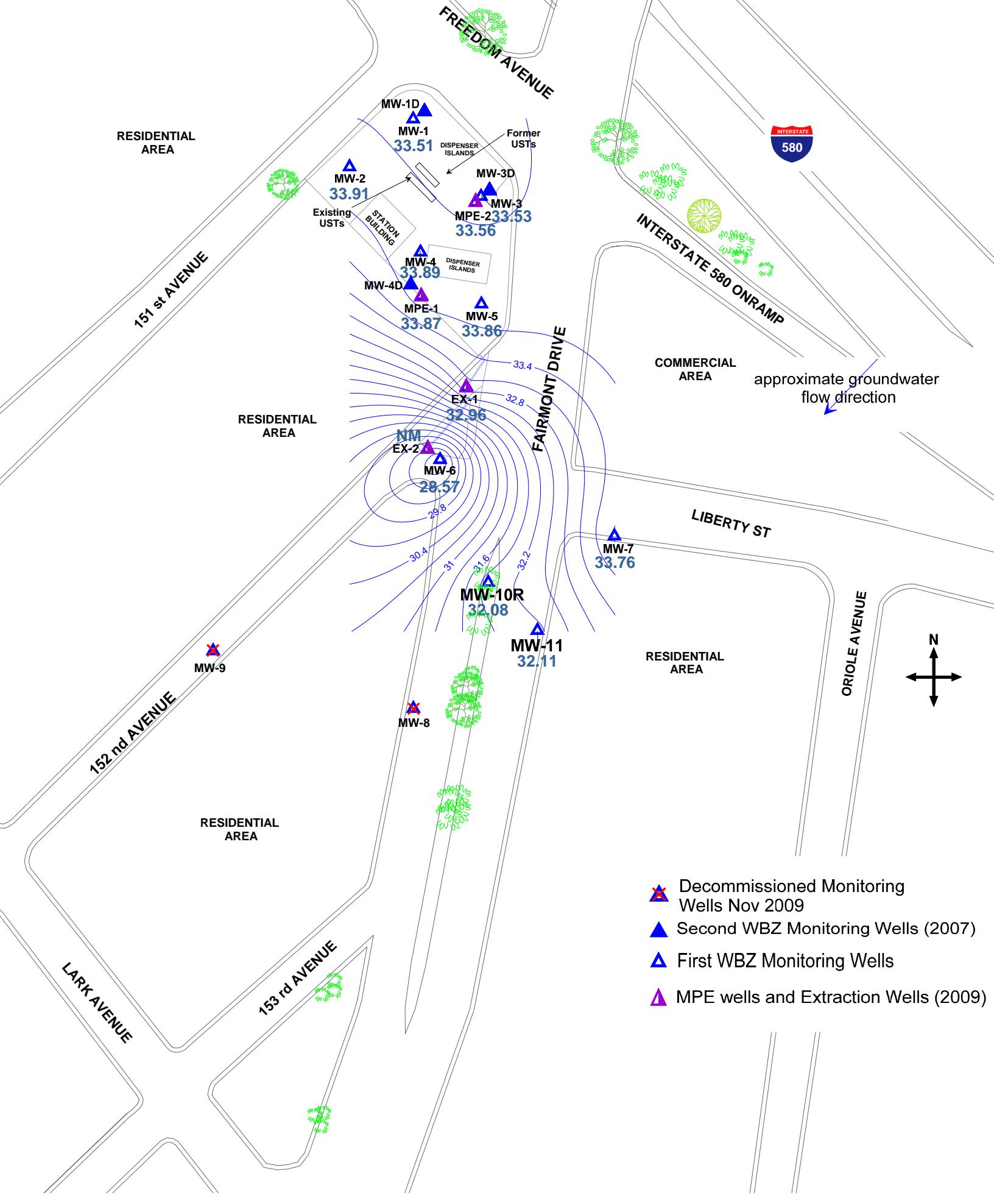
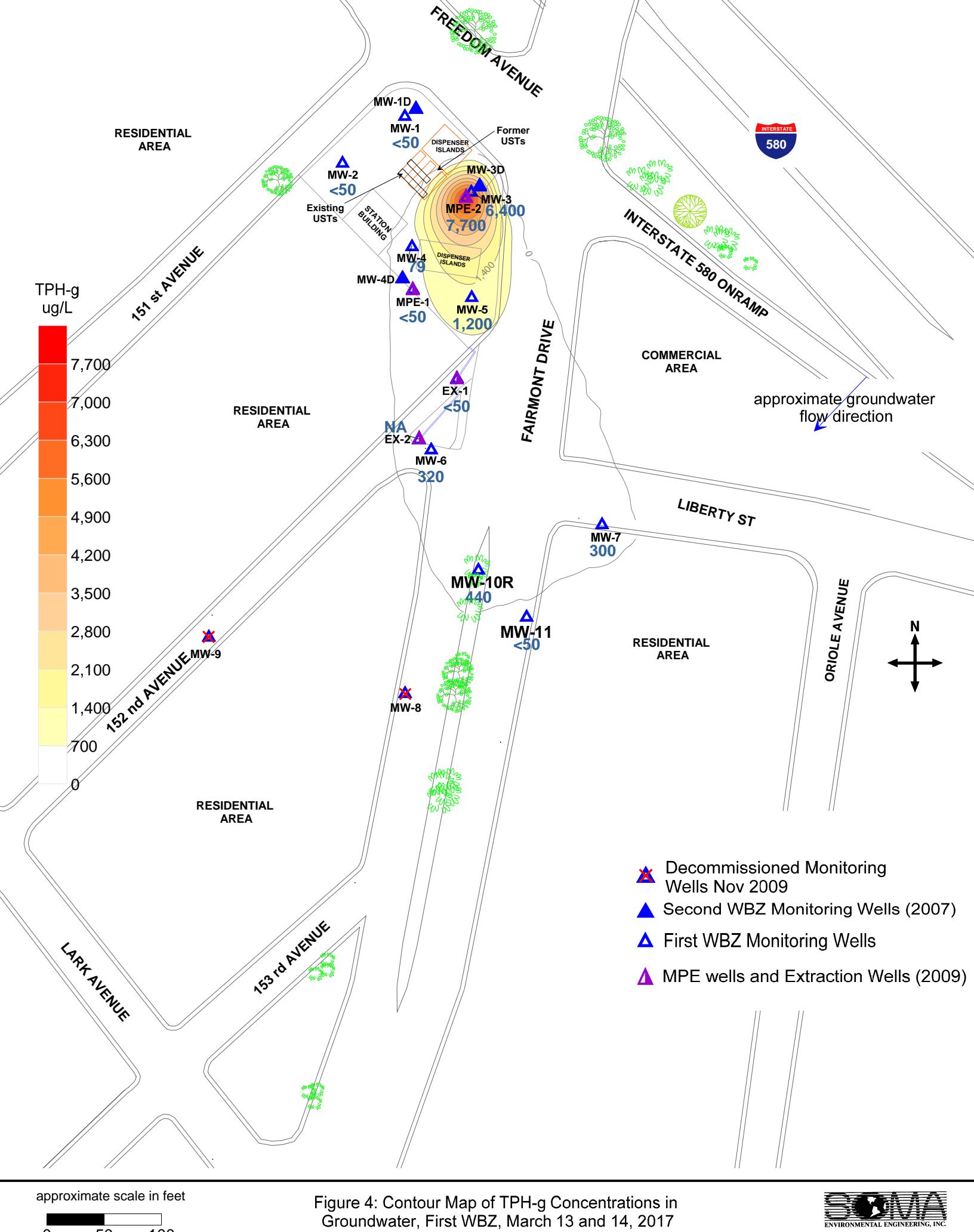
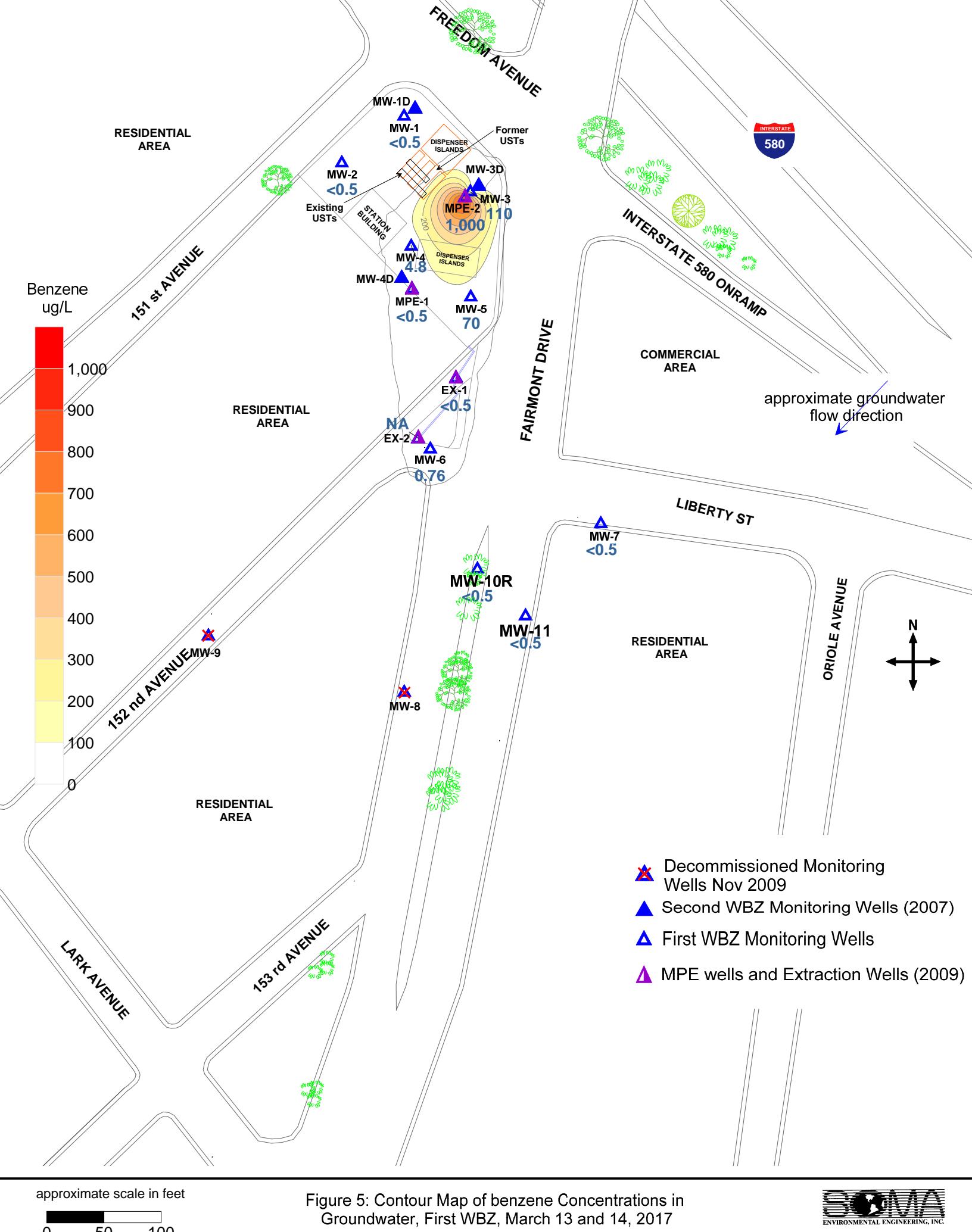
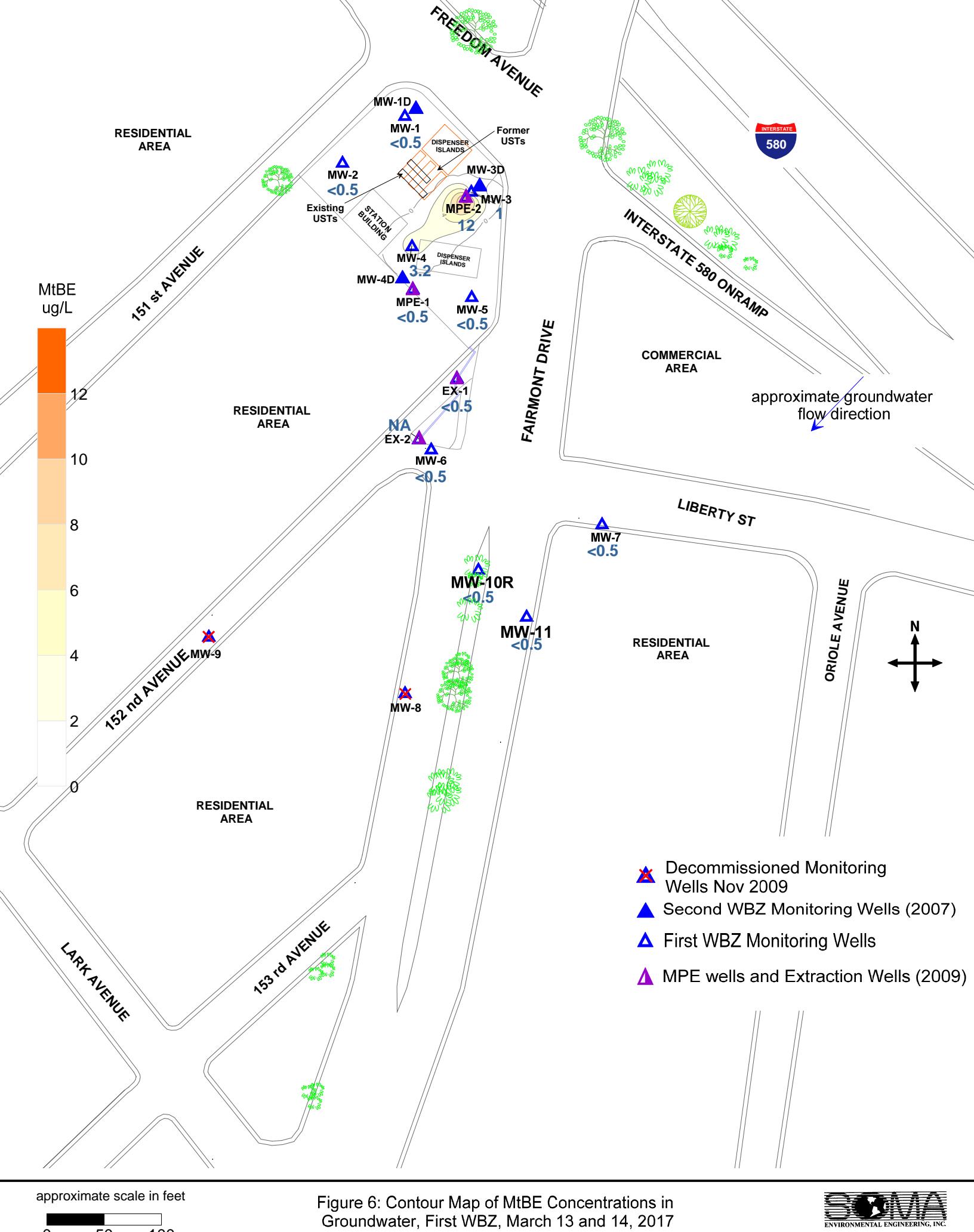
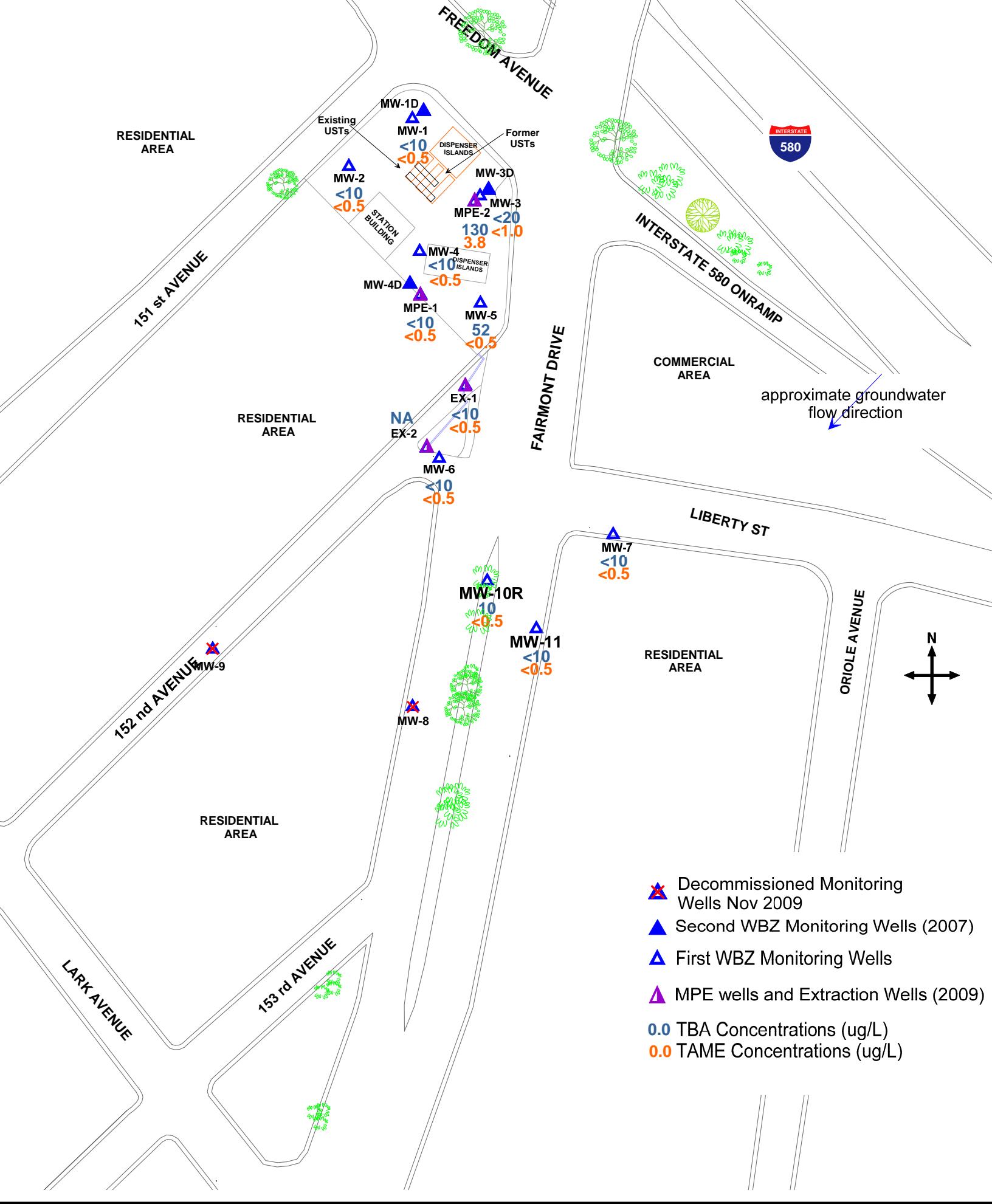


Figure 3: Groundwater Elevation Contour Map in Feet,  
First WBZ, March 13, 2017









approximate scale in feet

0 50 100

Figure 7: Map Showing TBA and TAME Concentrations in Groundwater, March 13 and 14, 2017

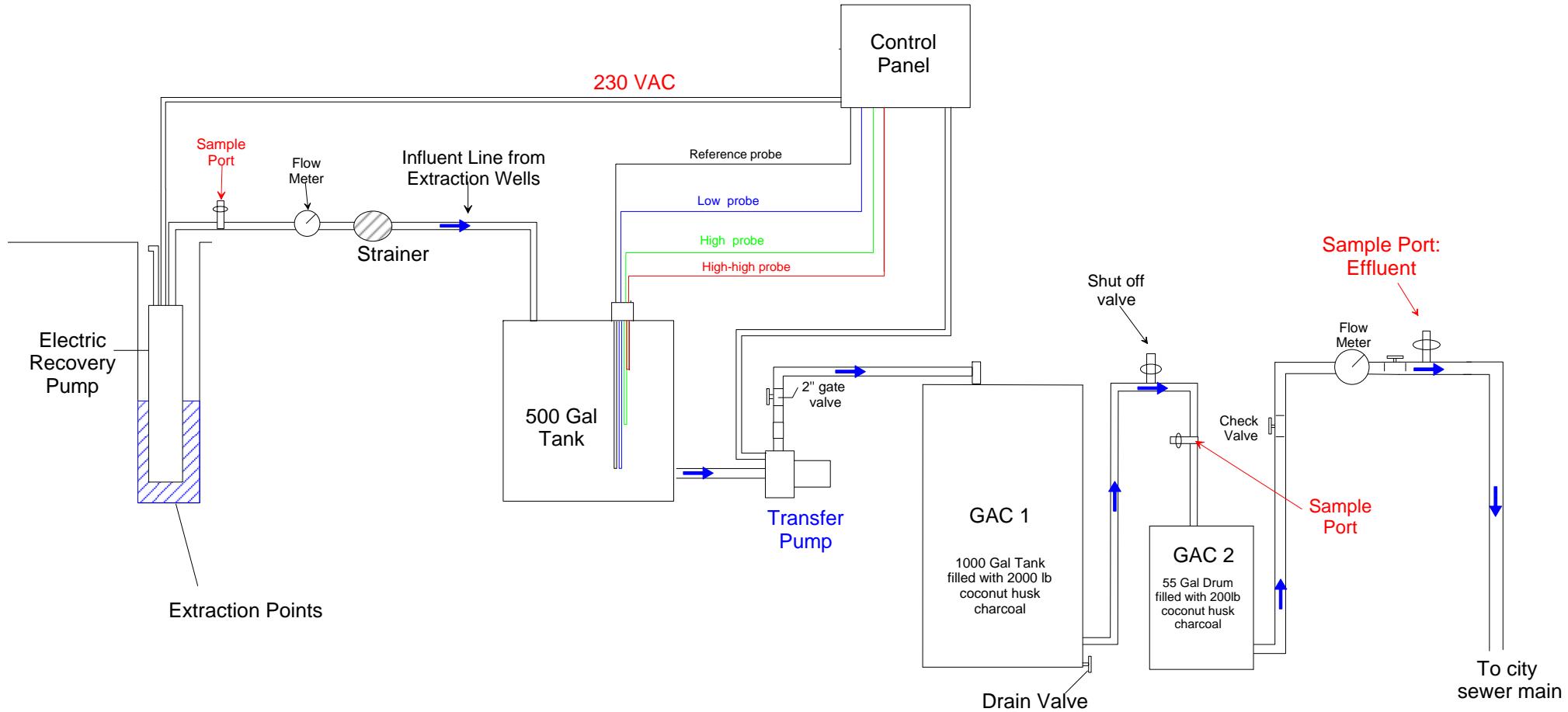
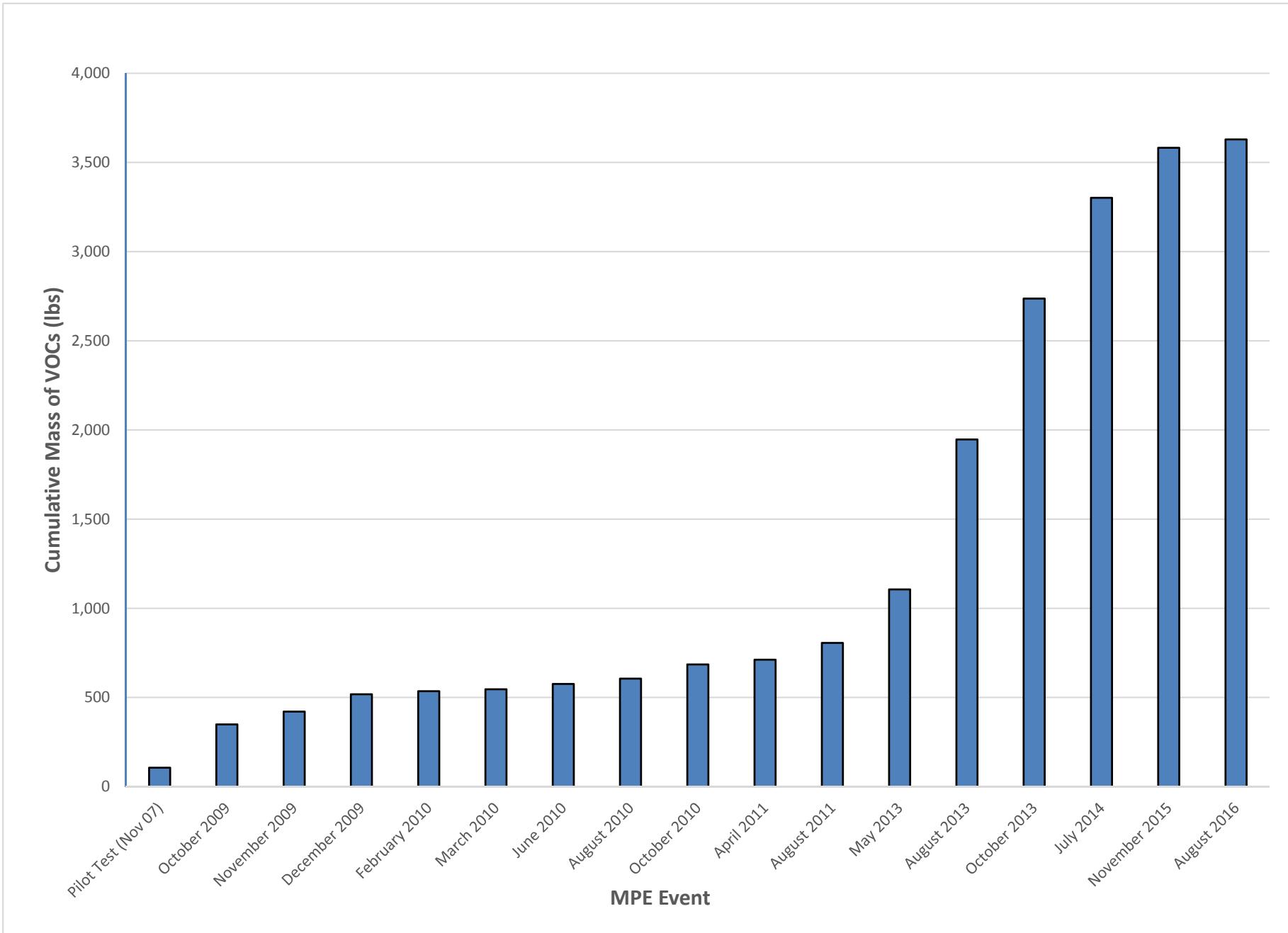


Figure 8: Schematic diagram of Groundwater Remediation System



**Figure 9: Cumulative Mass of VOCs Removed**

# **Tables**

**Table 1**  
**Historical Groundwater Elevation Data and Analytical Results**  
**15101 Freedom Avenue, San Leandro, CA**

Monitoring Well	Date	Casing Elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Free-Product (feet)/Sheen (Y/N)	Groundwater Elevation (feet)	TPH-g ( $\mu\text{g/L}$ )	Benzene ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Ethylbenzene ( $\mu\text{g/L}$ )	Total Xylenes ( $\mu\text{g/L}$ )	MtBE 8260B <sup>2</sup> ( $\mu\text{g/L}$ )
1st WBZ											
MW-1	5/10/2002	51.71	22.85	-	28.86	5,700	360	4.5	340	450	2
	8/8/2002	51.71	23.31	-	28.40	9,100	590	2.6	830	362	<1.3
	11/8/2002	51.71	23.58	-	28.13	7,900	570	3.1	680	392	<1.0
	2/21/2003	51.71	22.62	-	29.09	2,900	160	1.6 C	170	211	<0.5
	5/28/2003	51.71	22.43	-	29.28	1,700	55	<0.5	90	115	2.00
	8/12/2003	51.71	21.30	-	30.41	2,600	2.5	<0.5	190	130	<0.5
	10/9/2003	51.71	23.49	-	28.22	9,200	560.0	2.7 C	670	648	<1.0
	1/15/2004	51.71	22.43	-	29.28	5,500	190	<1.0	220	124.4	<0.5
	5/25/2004	51.71	22.94	-	28.77	8,000	400	1.50	420	393	3.40
	9/21/2004	54.46	23.49	-	30.97	9,300	580	9.30	690	683	4.60
	12/14/2004	54.46	23.01	-	31.45	7,360	337	<4.3	731	633	<4.3
	3/11/2005	54.46	21.48	-	32.98	2,510	45.2	<0.5	23.2	39.63	2.80
	6/15/2005	54.46	22.42	-	32.04	1,690	36.3	<2.0	59.5	28.73	2.01
	8/26/2005	54.46	23.00	-	31.46	7,310	318	<8.60	475	316	5.15
	11/11/2005	54.46	21.40	-	33.06	9,640	341	<8.6	467	329.7	6.04
	2/9/2006	54.46	21.81	-	32.65	775	14	<2.0	12.6	10.32	4.01
	5/9/2006	54.46	21.68	-	32.78	444	7.80	<2.0	12.1	6.31	1.75
	8/10/2006	54.46	22.79	-	31.67	5,090	324	<8.60	108	59.9	8.24
	10/26/2006	54.46	23.19	-	31.27	6,950	556	<4.0	190	136.09	8.61
	1/25/2007	54.46	22.82	-	31.64	2,640	196	<2.0	105	25.5	7.92
	4/26/2007	54.46	22.67	-	31.79	861	95.5	<2.0	17	6.36	4.00
	7/25/2007	54.46	23.25	-	31.21	4,520	412	<4.0	182	77.9	7.48
	10/23/2007	54.46	23.42	-	31.04	3,900	117	<2.0	87.1	23.87	4.54

**Table 1**  
**Historical Groundwater Elevation Data and Analytical Results**  
**15101 Freedom Avenue, San Leandro, CA**

<b>Monitoring Well</b>	<b>Date</b>	<b>Casing Elevation<sup>1</sup> (feet)</b>	<b>Depth to Groundwater (feet)</b>	<b>Free-Product (feet)/Sheen (Y/N)</b>	<b>Groundwater Elevation (feet)</b>	<b>TPH-g (µg/L)</b>	<b>Benzene (µg/L)</b>	<b>Toluene (µg/L)</b>	<b>Ethylbenzene (µg/L)</b>	<b>Total Xylenes (µg/L)</b>	<b>MtBE 8260B<sup>2</sup> (µg/L)</b>
<b>MW-1 cont.</b>	1/22/2008	54.46	22.59	-	31.87	2,260	81.3	<2.0	17.5	<2.0	4.23
	4/16/2008	54.46	22.89	-	31.57	2,320	248	<2.0	54.1	37.3	<0.5
	7/3/2008	54.46	23.33	-	31.13	5,240	414	<2.0	168	94	6.56
	10/15/2008	54.46	23.76	-	30.70	4,500 <sup>y</sup>	260	<1.0	150	130	3.40
	1/7/2009	54.46	23.25	-	31.21	4,800	140	<1.3	48	32	1.70
	4/14/2009	54.46	22.52	-	31.94	1,800 <sup>y</sup>	78	<0.5	35	18	2.50
	8/27/2009	54.46	23.6	-	30.86	4,500	330	<2.0	97	42	4.60
	12/2/2009	54.46	23.43	-	31.03	3,800 <sup>y</sup>	250	<2.0	110	25	2.50
	3/17/2010	54.46	22.32	-	32.14	1,100	33	<0.50	46	18	1.70
	6/3/2010	54.46	22.88	-	31.58	10,000	330	4.3	680	841.5	5.20
	9/2/2010	54.46	23.28	-	31.18	8,900	440	<5.0	510	310	<5.0
	12/2/2010	54.46	23.21	-	31.25	7,400	250	<3.1	390	180	<3.1
	3/4/2011	54.46	21.95	N	32.51	2,400	67	<0.5	45	8.4	2.20
	5/20/2011	54.46	22.8	N	31.66	9,500	260	6.2	970	480	<3.6
	9/9/2011	54.46	22.81	N	31.65	6,400	220	<1.3	380	160	2.30
	12/2/2011	54.46	21.97	N	32.49	4,700 <sup>x</sup>	96	<1.7	310	200	<3.3
	3/2/2012	54.46	22.82	N	31.64	6,800	320	<2.5	430	120	<2.5
	6/7/2012	54.46	22.92	N	31.54	5,600	130	<2.5	360	160	2.9
	9/21/2012	54.46	23.56	N	30.90	8,000	300	<2.5	410	340	2.6
	12/14/2012	54.46	22.77	N	31.69	5,900	130	<2.5	320	97	<2.5
	3/28/2013	54.46	23.15	N	31.31	5,100	230	<2.5	280	48	3.6
	6/11/2013	54.46	23.48	N	30.98	6,800	200	<2.5	300	120	<2.5
	9/17/2013	54.46	23.84	N	30.62	7,500	120	<2.5	410	260	<2.5
	12/6/2013	54.46	24.16	N	30.30	5,300	71	<1.7	240	84	<1.7

**Table 1**  
**Historical Groundwater Elevation Data and Analytical Results**  
**15101 Freedom Avenue, San Leandro, CA**

Monitoring Well	Date	Casing Elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Free-Product (feet)/ Sheen (Y/N)	Groundwater Elevation (feet)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MtBE 8260B <sup>2</sup> (µg/L)
MW-1 cont.	3/13/2014	54.46	23.47	N	30.99	2,800	16	<0.5	74	15	1.4
	6/6/2014	54.46	23.46	N	31.00	5,000	47	<0.5	240	58	0.9
	9/23/2014	54.46	24.49	N	29.97	6,700	44	<1.7	200	71	<1.7
	12/23/2014	54.46	21.52	N	32.94	730	2.2	<0.5	0.84	<0.5	<0.5
	3/20/2015	54.46	22.83	N	31.63	1,200	8.6	1.9	17	<0.5	0.59
	6/4/2015	54.46	23.22	N	31.24	5,100	23	<0.71	110	3.6	0.73
	9/11/2015	54.46	23.76	N	30.70	4,200	3.3	<1.7	18	<1.7	<1.7
	12/28/2015	54.46	23.39	N	31.07	590	<0.5	<0.5	1.4	0.55	<0.5
	3/23/2016	54.46	21.38	N	33.08	98	<0.5	<0.5	<0.5	<0.5	<0.5
	6/15/2016	54.46	21.41	N	33.05	1,300	37	<0.5	99	9.3	0.79
MW-2	9/21/2016	54.46	23.53	N	30.93	4,800	47	0.57	74	0.62	<0.5
	12/14/2016	54.46	22.87	N	31.59	180	<0.5	<0.5	<0.5	<0.5	<0.5
	3/13/2017	54.46	20.95	N	33.51	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	5/10/2002	49.66	22.83	-	26.83 *	3,100	67	8	250	215	56
	8/8/2002	49.66	21.41	-	28.25	2,700	4.6	<0.5	310	140	<0.5
	11/8/2002	49.66	21.79	-	27.87	3,400	4.6	<0.5	310	160	<0.5
	2/21/2003	49.66	20.51	-	29.15	890	1.7 C	0.80 C	68	38.92 C	<0.5
	5/28/2003	49.66	20.33	-	29.33	2,700	5.2 C	<0.5	120	140	1.2
	8/12/2003	49.66	23.18	-	26.48*	8,500	640	<2.5	560	659	<0.8
	10/9/2003	49.66	21.71	-	27.95	3100 H	4.3 C	<0.5	210	160	<0.5
MW-2	1/15/2004	49.66	20.31	-	29.35	660 H	1.5 C	<0.5	8.9	25	<0.5
	5/25/2004	49.66	21.09	-	28.57	4,500	5.1 C	<0.5	190	230	0.70
	9/21/2004	52.41	21.71	-	30.70	370	0.76 C	<0.5	25	16	0.50
	12/14/2004	52.41	21.20	-	31.21	880	1.0	<0.5	66	52	<0.5
	3/11/2005	52.41	19.15	-	33.26	564	<0.5	<0.5	21	11.9	<0.5
	6/15/2005	52.41	20.30	-	32.11	2,040	1.2	<2.0	78.2	22	<0.5
	8/26/2005	52.41	20.97	-	31.44	1,500	0.930	<2.00	87.6	21	0.86
	11/11/2005	52.41	25.30	-	27.11	2,140	1.08	<2.0	104	29	0.79
	2/9/2006	52.41	19.41	-	33.00	1,410	<0.5	<2.0	99.6	21.4	0.72
	5/9/2006	52.41	19.41	-	33.00	1,100	<0.5	<2.0	86.5	17	<0.5
	8/10/2006	52.41	20.8	-	31.61	3,180	2.87	<2.0	88.9	24.8	<0.50
	10/26/2006	52.41	21.22	-	31.19	1,200	<0.5	<2.0	23.5	4.79	0.6

**Table 1**  
**Historical Groundwater Elevation Data and Analytical Results**  
**15101 Freedom Avenue, San Leandro, CA**

Monitoring Well	Date	Casing Elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Free-Product (feet)/Sheen (Y/N)	Groundwater Elevation (feet)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MtBE 8260B <sup>2</sup> (µg/L)
MW-2 cont.	1/25/2007	52.41	20.89	-	31.52	623	0.64	<2.0	42.4	4.37	0.66
	4/26/2007	52.41	20.65	-	31.76	169	<0.5	<2.0	15.2	2.3	<0.5
	7/25/2007	52.41	21.43	-	30.98	276	0.78	<2.0	22.1	4.04	<0.5
	10/23/2007	52.41	21.59	-	30.82	535	<0.5	<2.0	18	5.11	<0.5
	1/22/2008	52.31	20.45	-	31.86	132	<0.5	<2.0	12.2	<2.0	<0.5
	4/15/2008	52.41	20.89	-	31.52	852	<0.5	<2.0	27.2	4.78	<0.5
	7/2/2008	52.41	21.5	-	30.91	98.3	<0.5	<2.0	2.76	<2.0	<0.5
	10/15/2008	52.41	22.06	-	30.35	1,400 <sup>Y</sup>	<0.5	<0.5	60	17	<0.5
	1/7/2009	52.41	21.35	-	31.06	93	<0.5	<0.5	2.1	0.74	<0.5
	4/13/2009	52.41	20.52	-	31.89	480 <sup>Y</sup>	<0.5	<0.5	20	5.5	<0.5
	8/27/2009	52.41	21.85	-	30.56	130	<0.5	<0.5	2.5	0.61	<0.5
	12/1/2009	52.41	21.59	-	30.82	760 <sup>Y</sup>	<0.5	<0.5	14	1.5	<0.5
	3/17/2010	52.41	20.11	-	32.30	480	<0.5	<0.5	30	6.9	<0.5
	6/3/2010	52.41	21	-	31.41	690	<0.5	<0.5	14	2.6	<0.5
	9/2/2010	52.41	21.42	-	30.99	470	<0.5	<0.5	7.6	1	<0.5
	12/2/2010	52.41	21.44	-	30.97	470	<0.5	<0.5	7.6	3.3	<0.5
	3/4/2011	52.41	19.65	N	32.76	240	<0.5	<0.5	6.6	0.8	<0.5
	5/20/2011	52.41	20.75	N	31.66	310	<0.5	<0.5	4.8	<0.5	<0.5
	9/9/2011	52.41	21.05	N	31.36	1,000	<0.5	<0.5	12	0.76	<0.5
	12/2/2011	52.41	20.14	N	32.27	900 <sup>X</sup>	<2.9	<1.7	14	1.9	<3.3
	3/2/2012	52.41	19.98	N	32.43	880	<0.5	<0.5	5.3	0.58	<0.5
	6/7/2012	52.41	21.04	N	31.37	720	<0.5	<0.5	7.9	0.79	<0.5
	9/21/2012	52.41	21.78	N	30.63	1,400	<0.5	<0.5	11	<0.5	<0.5
	12/14/2012	52.41	20.71	N	31.70	760	<0.5	<0.5	10	1.5	<0.5

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**Historical Groundwater Elevation Data and Analytical Results**  
**15101 Freedom Avenue, San Leandro, CA**

Monitoring Well	Date	Casing Elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Free-Product (feet)/ Sheen (Y/N)	Groundwater Elevation (feet)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MtBE 8260B <sup>2</sup> (µg/L)
MW-2 cont.	3/28/2013	52.41	21.24	N	31.17	890	<0.5	<0.5	4.3	<0.5	<0.5
	6/11/2013	52.41	21.67	N	30.74	510	150	<0.5	15	12.3	3.1
	9/16/2013	52.41	22.15	N	30.26	210	<0.5	<0.5	1.1	<0.5	<0.5
	12/6/2013	52.41	22.52	N	29.89	290	1.4	<0.5	1.1	<0.5	<0.5
	3/13/2014	52.41	21.56	N	30.85	190	<0.5	<0.5	<0.5	<0.5	<0.5
	6/6/2014	52.41	21.7	N	30.71	97	<0.5	<0.5	<0.5	<0.5	<0.5
	9/23/2014	52.41	22.95	N	29.46	80	<0.5	<0.5	<0.5	<0.5	<0.5
	12/23/2014	52.41	18.91	N	33.50	140	<0.5	0.7	1.8	<0.5	<0.5
	3/20/2015	52.41	20.76	N	31.65	380	<0.5	0.8	0.86	<0.5	<0.5
	6/4/2015	52.41	21.3	N	31.11	700	<0.5	<0.5	0.72	<0.5	<0.5
	9/11/2015	52.41	21.95	N	30.46	1,900	<1.0	<1.0	2.3	<1.0	<1.0
	12/28/2015	52.41	21.38	N	31.03	170	<0.5	<0.5	0.51	<0.5	<0.5
	3/23/2016	52.41	18.88	N	33.53	170	<0.5	<0.5	<0.5	<0.5	<0.5
	6/15/2016	52.41	18.91	N	33.50	380	<0.5	<0.5	<0.5	<0.5	<0.5
	9/21/2016	52.41	21.71	N	30.70	680	<0.5	<0.5	<0.5	<0.5	<0.5
	12/14/2016	52.41	20.73	N	31.68	110	<0.5	<0.5	<0.5	<0.5	<0.5
	3/13/2017	52.41	18.5	N	33.91	<50	<0.5	<0.5	<0.5	<0.5	<0.5
MW-3	5/10/2002	51.16	22.28	-	28.88	44,000	6,000	900	1,500	6,200	2,400
	8/8/2002	51.16	22.88	-	28.28	40,000	5,800	1,100	1,600	6,500	1,300
	11/8/2002	51.16	23.19	-	27.97	47,000	5,300	1,200	2,200	8,600	1,000
	2/21/2003	51.16	22.02	-	29.14	39,000	5,500	1,500	2,000	8,600	1,300
	5/28/2003	51.16	21.89	-	29.27	52,000	7,300	3,000	2,800	12,700	2,100
	8/12/2003	51.16	22.66	-	28.50	31,000	6,100	860	1,500	6,900	1,200
	10/9/2003	51.16	23.06	-	28.10	41,000	6,100	1,100	2,200	10,200	960
	1/15/2004	51.16	21.85	-	29.31	51,000	4,100	1,100	2,000	8,400	590
	5/25/2004	51.16	22.55	-	28.61	65,000	4,300	1,300	2,500	10,500	720
	9/21/2004	53.91	23.08	-	30.83	42,000	4,900	890	2,200	8,700	480
	12/14/2004	53.91	22.52	-	31.39	35,151	4,066	972	2,942	13,032	491
	3/11/2005	53.91	20.90	-	33.01	42,600	3,040	1,100	1,530	6,670	968
	6/15/2005	53.91	21.85	-	32.06	84,100	5,110	2,160	3,030	8,800	2,670
	8/26/2005	53.91	22.49	-	31.42	43,500	3,630	1,080	2,500	6,830	1,440
	11/11/2005	53.91	22.81	-	31.10	47,700	4,240	520	2,170	6,320	1,390

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**Historical Groundwater Elevation Data and Analytical Results**  
**15101 Freedom Avenue, San Leandro, CA**

<b>Monitoring Well</b>	<b>Date</b>	<b>Casing Elevation<sup>1</sup> (feet)</b>	<b>Depth to Groundwater (feet)</b>	<b>Free-Product (feet)/Sheen (Y/N)</b>	<b>Groundwater Elevation (feet)</b>	<b>TPH-g (µg/L)</b>	<b>Benzene (µg/L)</b>	<b>Toluene (µg/L)</b>	<b>Ethylbenzene (µg/L)</b>	<b>Total Xylenes (µg/L)</b>	<b>MtBE 8260B<sup>2</sup> (µg/L)</b>
<b>MW-3 cont.</b>	2/9/2006	53.91	21.12	-	32.79	44,500	5,070	1360	1,920	4,840	3,280
	5/9/2006	53.91	21.09	-	32.82	48,100	2,510	1,140	1,950	5,030	2,210
	8/10/2006	53.91	22.26	-	31.65	42,100	3,450	869	1,760	5,650	3,570
	10/26/2006	53.91	22.73	-	31.18	33,400	4,800	331	1,170	3,510	4,790
	1/25/2007	53.91	22.34	-	31.57	19,300	4,820	167	1,540	3,740	3,430
	4/26/2007	53.91	22.24	-	31.67	30,700	2,350	158	1,470	4,320	1,330
	7/25/2007	53.91	22.83	-	31.08	34,900	5,400	364	2,080	6,360	1,980
	10/23/2007	53.91	23.01	-	30.9	22,600	4,070	<86	1,120	3,095	970
	1/22/2008	53.96	22.04	-	31.92	22,100	1,280	453	1,330	3,520	490
	4/16/2008	53.91	22.4	-	31.51	20,700	2,790	182	860	3,389	263
	7/3/2008	53.91	22.9	-	31.01	48,500	3,760	346	3,130	12,980	573
	10/16/2008	53.91	23.36	-	30.55	50,000	3,900	300	3,100	11,000	460
	1/8/2009	53.91	22.82	-	31.09	54,000	2,600	180	2,500	8,800	220
	4/13/2009	53.91	22.06	-	31.85	49,000	2,900	170	2,100	8,100	490
	8/27/2009	53.91	23.11	-	30.80	43,000	2,500	160	1,900	7,000	210
	12/2/2009	53.91	23.00	-	30.91	30,000	2,100	180	1,600	5,600	91
	3/17/2010	53.91	21.90	-	32.01	24,000	970	81	1,100	3,700	38
	6/3/2010	53.91	22.49	-	31.42	31,000	1,200	110	1,300	4,400	34
	9/2/2010	53.91	22.76	-	31.15	26,000	1,100	81	1,200	3,810	26
	12/2/2010	53.91	22.86	-	31.05	18,000	830	47	780	2,360	14
	3/4/2011	53.91	21.44	N	32.47	18,000	410	32	850	2,480	16
	5/20/2011	53.91	22.36	N	31.55	12,000	710	24	620	1,460	11
	9/9/2011	53.91	22.44	N	31.47	11,000	1,100	26	580	1,430	7.8
	12/2/2011	53.91	21.60	N	32.31	5,100 <sup>x</sup>	280	12	370	740	<1.7

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**Historical Groundwater Elevation Data and Analytical Results**  
**15101 Freedom Avenue, San Leandro, CA**

Monitoring Well	Date	Casing Elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Free-Product (feet)/ Sheen (Y/N)	Groundwater Elevation (feet)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MtBE 8260B <sup>2</sup> (µg/L)
<b>MW-3 cont.</b>	3/2/2012	53.91	22.39	N	31.52	13,000	440	23	690	1,570	<5.0
	6/7/2012	53.91	22.50	N	31.41	9,000	290	9.3	520	900	<5.0
	9/21/2012	53.91	23.17	N	30.74	12,000	710	26	630	1,230	8.2
	12/14/2012	53.91	22.32	Y	31.59	8,500	350	8.7	550	1,003	<5
	3/28/2013	53.91	22.69	Y	31.22	9,300	790	8.2	760	974	8.7
	6/11/2013	53.91	23.06	Y	30.85	14,000	700	26	860	1,630	6.1
	9/17/2013	53.91	23.41	Y	30.50	28,000	570	37	1,800	3,560	<10
	12/6/2013	53.91	23.76	Y	30.15	23,000	360	26	1,700	3,330	<10
	3/12/2014	53.91	23.13	22.98	30.88	FP	FP	FP	FP	FP	FP
	6/5/2014	53.91	23.08	23.06	30.84	FP	FP	FP	FP	FP	FP
	9/23/2014	53.91	24.16	Y	29.75	41,000	230	84	1,000	4,500	<10
	12/23/20014	53.91	20.83	N	33.08	13,000	64	28	250	1,250	<3.6
	3/20/2015	53.91	22.32	Y	31.59	18,000	140	24	730	1,870	<3.6
	6/4/2015	53.91	22.77	Y	31.14	32,000	200	17	680	1,820	<6.3
	9/11/2015	53.91	23.31	Y	30.60	24,000	260	<6.3	380	1,144	<6.3
	12/29/2015	53.91	22.95	Y	30.96	13,000	74	<5.0	220	628	<5.0
	3/24/2016	53.91	20.75	Y	33.16	7,600	180	2	130	263	3.2
	6/16/2016	53.91	20.78	Y	33.13	10,000	98	2.6	250	507	1.7
	9/21/2016	53.91	23.12	N	30.79	12,000	380	<2.5	250	424	<2.5
	12/14/2016	53.91	22.4	N	31.51	3,300	30	<0.71	63	94.6	<0.71
<b>1/18/2017</b>	<b>53.91</b>	<b>20.82</b>	<b>N</b>	<b>33.09</b>	<b>1,700</b>	<b>20</b>	<b>&lt;0.5</b>	<b>32</b>	<b>46.1</b>	<b>&lt;0.5</b>	
<b>2/24/2017</b>	<b>53.91</b>	<b>19.35</b>	<b>N</b>	<b>34.56</b>	<b>3,200</b>	<b>110</b>	<b>&lt;0.71</b>	<b>69</b>	<b>47.5</b>	<b>1.90</b>	
<b>3/13/2017</b>	<b>53.91</b>	<b>20.38</b>	<b>N</b>	<b>33.53</b>	<b>6,400</b>	<b>110</b>	<b>&lt;1.0</b>	<b>120</b>	<b>67</b>	<b>1.00</b>	
<b>MW-4</b>	5/10/2002	50.54	21.78	-	28.76	880	25	1.0C	110	52	12,000
	8/8/2002	50.54	22.50	-	28.04	3,800	70	<5.0	300	115	4,800
	11/8/2002	50.54	22.81	-	27.73	5,100	150	10	460	258	2,400
	2/21/2003	50.54	21.48	-	29.06	3,200	98	66	220	360	6,600
	5/28/2003	50.54	21.24	-	29.30	6,200	140	46	200	790	2,300
	8/12/2003	50.54	22.32	-	28.22	7,500	180	57	220	1450	1,900
	10/9/2003	50.54	22.74	-	27.80	5,800	250	32	300	970	7,800
	1/15/2004	50.54	21.19	-	29.35	5,900	270	17 C	150	640	7,300
	5/25/2004	50.54	22.03	-	28.51	9,100	210	51	200	1190	1800
	9/21/2004	53.31	22.76	-	30.55	5,200	290	12	370	600	7300
	12/14/2004	53.31	21.99	-	31.32	8,937	538	114	416	2379	5021

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**Historical Groundwater Elevation Data and Analytical Results**  
**15101 Freedom Avenue, San Leandro, CA**

<b>Monitoring Well</b>	<b>Date</b>	<b>Casing Elevation<sup>1</sup> (feet)</b>	<b>Depth to Groundwater (feet)</b>	<b>Free- Product (feet)/ Sheen (Y/N)</b>	<b>Groundwater Elevation (feet)</b>	<b>TPH-g (µg/L)</b>	<b>Benzene (µg/L)</b>	<b>Toluene (µg/L)</b>	<b>Ethyl- benzene (µg/L)</b>	<b>Total Xylenes (µg/L)</b>	<b>MtBE 8260B<sup>2</sup> (µg/L)</b>
<b>MW-4 cont.</b>	3/11/2005	53.31	20.01	-	33.30	12,300	225	39.6	80.1	1465	3870
	6/15/2005	53.31	21.25	-	32.06	7,690	114	32.6	77.1	555	1150
	8/26/2005	53.31	22.03	-	31.28	8,850	175	24.6	150	851	1380
	11/11/2005	53.31	22.43	-	30.88	9,990	356	<43	196	700	3,640
	2/9/2006	53.31	20.31	-	33.00	6,850	205	<43	67.2	255.2	5,120
	5/9/2006	53.31	20.33	-	32.98	1,290	18.1	<8.6	12.9	25.87	799
	8/10/2006	53.31	21.74	-	31.57	7,830	118	<8.60	25.3	174.6	919
	10/26/2006	53.31	22.29	-	31.02	1,540	81.9	<43	96	46.4	3,610
	1/25/2007	53.31	21.86	-	31.45	4,370	163	<8.6	85.1	269.1	1,050
	4/26/2007	53.31	21.63	-	31.68	4,380	140	<8.6	67	276.8	576
	7/25/2007	53.31	22.49	-	30.82	4,970	220	<8.60	198	241.5	1,040
	10/23/2007	53.31	22.69	-	30.62	4,200	267	<8.6	147	155.5	1,220
	1/22/2008	53.36	21.39	-	31.97	2,180	133	<22.0	43.1	32.2	1,800
	4/15/2008	53.31	21.9	-	31.41	4,240	90.4	<22.0	107	380	674
	7/2/2008	53.31	22.55	-	30.76	2,300	193	<22.0	212	183	4,050
	10/16/2008	53.31	23.13	-	30.18	8,900	320	3.7	430	1,160	450
	1/8/2009	53.31	22.42	-	30.89	19,000	430	44	590	3,380	440
	4/13/2009	53.31	21.51	-	31.80	21,000	400	38	450	2,880	330
	8/27/2009	53.31	22.94	-	30.37	16,000	960	64	560	2,120	290
	12/2/2009	53.31	22.36	-	30.95	4,400	480	6	170	640	110
	3/17/2010	53.31	21.39	-	31.92	14,000	260	6	230	1,220	93
	6/3/2010	53.31	22.23	-	31.08	18,000	240	4	310	770	41
	9/2/2010	53.31	22.51	-	30.80	1,800	800	<3.6	150	25	33
	12/2/2010	53.31	22.71	-	30.60	3,800	1,500	<10	200	115	29

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**Historical Groundwater Elevation Data and Analytical Results**  
**15101 Freedom Avenue, San Leandro, CA**

Monitoring Well	Date	Casing Elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Free-Product (feet)/Sheen (Y/N)	Groundwater Elevation (feet)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MtBE 8260B <sup>2</sup> (µg/L)
MW-4 cont.	3/3/2011	53.31	20.64	N	32.67	2,400	28	<0.71	28	17	3
	5/19/2011	53.31	21.84	N	31.47	1,800	27	<0.5	29	11.2	4.8
	9/8/2011	53.31	22.11	N	31.20	3,600	300	2.6	270	68.5	59
	12/1/2011	53.31	21.38	N	31.93	1,400 <sup>x</sup>	370	<0.84	110	30.6	110
	3/2/2012	53.31	22.02	N	31.29	3,100	780	<2.0	150	59.6	50
	6/7/2012	53.31	22.24	N	31.07	2,000	290	<2.5	66	23	29
	9/21/2012	53.31	22.87	N	30.44	2,900	820	<2.5	75	17	72
	12/14/2012	53.31	21.84	N	31.47	840	48	<0.5	14	4.5	2.5
	3/28/2013	53.31	22.24	N	31.07	790	650	<5.0	26	<5.0	15
	6/11/2013	53.31	22.71	N	30.60	1,100	860	<5.0	64	<5.0	35
	9/17/2013	53.31	23.23	N	30.08	<1,000	1,300	<10	22	<10	44
	12/6/2013	53.31	23.6	N	29.71	2,300	3,300	<10	78	199	42
	3/13/2014	53.31	22.6	N	30.71	<630	600	<6.3	7.0	21	6.8
	6/6/2014	53.31	22.97	N	30.34	<630	710	<6.3	21	<6.3	17.0
	9/23/2014	53.31	24.22	N	29.09	<630	1,100	<6.3	10	6.6	7.5
	12/23/2014	53.31	19.78	N	33.53	<50	0.95	<0.5	<0.5	<0.5	<0.5
MW-5	3/20/2015	53.31	21.75	N	31.56	56	1.8	<0.5	2.00	<0.5	8.7
	6/4/2015	53.31	22.29	N	31.02	210	35	<0.5	4.10	0.54	12
	9/11/2015	53.31	23.02	N	30.29	1,200	140	1.1	7.30	19	39
	12/29/2015	53.31	24.5	N	28.81	440	91	<0.5	0.84	0.74	17
	3/23/2016	53.31	19.81	N	33.50	62	12	<0.5	<0.5	<0.5	7.4
	6/16/2016	53.31	19.84	N	33.47	120	18	0.75	0.53	<0.5	4.1
	9/21/2016	53.31	22.72	N	30.59	620	87	<0.5	5	9.90	35
	12/14/2016	53.31	21.75	N	31.56	460	23	<0.5	<0.5	4.80	4.60
	3/13/2017	53.31	19.42	N	33.89	79	4.8	<0.5	<0.5	<0.5	3.20
MW-5	5/10/2002	47.79	19.02	-	28.77	25,000	1,000	1200	1,100	3,060	1,800
	8/8/2002	47.79	19.80	-	27.99	18,000	1,000	660	950	1,720	1,500
	11/8/2002	47.79	20.14	-	27.65	16,000	1,300	380	930	1,550	1,200
	2/21/2003	47.79	18.70	-	29.09	12,000	390	71	770	1,100	860
	5/28/2003	47.79	18.52	-	29.27	9,100	210	31	560	790	600
	8/12/2003	47.79	19.54	-	28.25	12,000	660	75	660	1,110	1,000
	10/9/2003	47.79	20.06	-	27.73	15,000	1,000	130	1,000	1,430	1,700

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**15101 Freedom Avenue, San Leandro, CA**

<b>Monitoring Well</b>	<b>Date</b>	<b>Casing Elevation<sup>1</sup> (feet)</b>	<b>Depth to Groundwater (feet)</b>	<b>Free- Product (feet)/ Sheen (Y/N)</b>	<b>Groundwater Elevation (feet)</b>	<b>TPH-g (µg/L)</b>	<b>Benzene (µg/L)</b>	<b>Toluene (µg/L)</b>	<b>Ethyl- benzene (µg/L)</b>	<b>Total Xylenes (µg/L)</b>	<b>MtBE 8260B<sup>2</sup> (µg/L)</b>
<b>MW-5 cont.</b>	1/15/2004	47.79	18.42	-	29.37	9,900	450 C	16	500	431	1,100
	5/25/2004	47.79	19.30	-	28.49	9,200	380	24	490	536	720
	9/21/2004	50.53	20.15	-	30.38	10,000	980	71	560	770	1200
	12/14/2004	50.53	19.30	-	31.23	10,502	587	64	1040	1133	1015
	3/11/2005	50.53	17.20	-	33.33	8,390	407	<5.5	83	42.5	1530
	6/15/2005	50.53	18.54	-	31.99	9,350	147	18.3	435	146.2	573
	8/26/2005	50.53	19.31	-	31.22	9,500	261	<22	726	321.3	749
	11/11/2005	50.53	19.75	-	30.78	10,000	443	41.5	527	278.5	1,430
	2/9/2006	50.53	17.58	-	32.95	7,640	237	<22	187	50.2	2,050
	5/9/2006	50.53	17.54	-	32.99	8,360	111	<8.6	300	75.84	566
	8/10/2006	50.53	19.02	-	31.51	16,100	250	<22	455	187.4	1,590
	10/26/2006	50.53	19.61	-	30.92	10,100	430	<22	375	192.6	3,060
	1/25/2007	50.53	19.19	-	31.34	3,960	340	<22	323	150.1	1,740
	4/26/2007	50.53	18.89	-	31.64	4,590	187	<8.6	307	116.5	861
	7/25/2007	50.53	19.81	-	30.72	6,490	419	21.8	413	223.2	913
	10/23/2007	50.53	19.98	-	30.55	6,120	550	11	284	141.4	433
	1/22/2008	50.18	18.69	-	31.49	9,810	572	22	574	184.1	126
	4/15/2008	50.18	19.16	-	31.02	8,890	335	15.1	477	397.5	136
	7/3/2008	50.53	19.88	-	30.65	13,100	949	34.4	875	825.5	176
	10/16/2008	50.53	20.45	-	30.08	11,000	870	25	820	668	160
	1/8/2009	50.53	19.72	-	30.81	12,000	490	21	690	456	76
	4/13/2009	50.53	18.81	-	31.72	9,000 Y	200	11	390	198	44
	8/27/2009	50.53	21.30	-	29.23	7,400	610	15	320	185	66
	12/2/2009	50.53	20.00	-	30.53	8,400 Y	400	12	540	296	45

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Monitoring Well	Date	Casing Elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Free-Product (feet)/Sheen (Y/N)	Groundwater Elevation (feet)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MtBE 8260B <sup>2</sup> (µg/L)
MW-5 cont.	3/17/2010	50.53	18.73	-	31.80	4,800	120	8.7	120	107	14
	6/4/2010	50.53	19.60	-	30.93	7,200	160	5.7	190	149.2	24
	9/2/2010	50.53	19.82	-	30.71	9,200	110	12	270	318	35
	12/2/2010	50.53	20.10	-	30.43	9,100	170	6.7	350	442	23
	3/4/2011	50.53	18.00	N	32.53	2,600	18	0.62	54	18.1	3
	5/20/2011	50.53	19.18	N	31.35	4,000	91	8.5	110	106	33
	8/4/2011	50.53	NM	-	NC	3,000	23	0.95	92	43.7	5.4
	9/9/2011	50.53	19.41	N	31.12	4,200	120	2.8	140	61.1	22
	12/2/2011	50.53	18.59	N	31.94	6,900 <sup>x</sup>	96	12	220	104	32
	3/2/2012	50.53	19.30	N	31.23	5,400	43	1.8	110	85	7
Pre-MPE	6/7/2012	50.53	19.45	N	31.08	3,700	32	<1.0	100	59	4.4
	9/21/2012	50.53	20.17	N	30.36	3,900	68	1.5	140	88.5	9.8
	12/14/2012	50.53	19.12	N	31.41	3,100	48	6.7	100	62.3	5.2
	3/28/2013	50.53	19.47	N	31.06	1,900	30	<1.0	59	48.4	4.5
	6/11/2013	50.53	20.03	N	30.50	2,900	22	3.9	110	131	3.0
	9/17/2013	50.53	20.54	N	29.99	4,200	55	7.9	180	229	5.2
	12/6/2013	50.53	20.86	N	29.67	3,600	35	2.1	160	241	2.5
	3/13/2014	50.53	19.91	N	30.62	2,100	23	<1.0	130	73	1.4
	6/6/2014	50.53	20.27	N	30.26	1,700	8.2	0.56	63	40.2	0.75
	9/23/2014	50.53	21.61	N	28.92	1,700	38	0.52	45	29.8	1.60
	12/23/2014	50.53	17.12	N	33.41	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	3/20/2015	50.53	18.91	N	31.62	130	<0.5	<0.5	4.5	3.4	<0.5
	6/4/2015	50.53	19.49	N	31.04	340	0.7	<0.5	4	3.7	<0.5
	9/11/2015	50.53	20.29	N	30.24	1,300	3.1	<0.5	13	13	<0.5
	12/29/2015	50.53	19.89	N	30.64	260	1.5	<0.5	1.1	0.89	<0.5
	3/23/2016	50.53	17.07	N	33.46	300	<0.5	<0.5	<0.5	<0.5	<0.5
	6/16/2016	50.53	17.10	N	33.43	520	0.68	<0.5	<0.5	<0.5	<0.5
	9/21/2016	50.53	19.97	N	30.56	590	0.73	<0.5	<0.5	<0.5	1.90
	12/14/2016	50.53	19.12	N	31.41	1,200	1.4	<0.5	1.8	<0.5	0.87
	3/13/2017	50.53	16.67	N	33.86	1,200	70	<0.5	0.68	<0.5	<0.5
MW-6	9/21/2004	45.82	17.64	-	28.18	34,000	150	130	2200	8100	0.6
	12/14/2004	45.82	15.75	-	30.07	5,161	137	7	436	1136	<5.5

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MW-6 cont.	3/11/2005	45.82	13.80	-	32.02	6,040	125	3.22	260	722.1	4.94
	6/15/2005	45.82	14.78	-	31.04	5,590	44.3	6.60	272	382	5.85
	8/26/2005	45.82	15.91	-	29.91	6,130	99	<8.6	378	492.9	5.66
	11/11/2005	45.82	16.55	-	29.27	11,400	101	<8.6	645	834.7	4.33
	2/9/2006	45.82	13.92	-	31.90	2,790	32.3	<8.6	131	131.22	7.30
	5/9/2006	45.82	13.95	-	31.87	3,730	25	<2.0	213	207.82	5.87
	8/10/2006	45.82	15.28	-	30.54	4,800	41.9	<2.0	201	189	10.4
	10/26/2006	45.82	16.11	-	29.71	6,080	37.4	<2.0	116	183	9.78
	1/25/2007	45.82	15.76	-	30.06	3,220	25.2	<2.0	219	174	14.7
	4/26/2007	45.82	15.18	-	30.64	3,110	28	<2.0	165	138.47	14.6
	7/25/2007	45.82	16.82	-	29.00	4,960	54.1	<2.0	199	255.87	8.05
	10/23/2007	45.82	16.91	-	28.91	9,610	64.3	<2.0	188	302.6	5.81
	1/21/2008	45.82	15.36	-	30.46	3,290	33	<2.0	149	131.31	3.86
	4/15/2008	45.82	15.73	-	30.09	2,070	10.8	<2.0	51.1	67	<0.5
	7/2/2008	45.82	16.9	-	28.92	7,900	42.4	<2.0	194	296	3.58
	10/15/2008	45.82	17.21	-	28.61	18,000 <sup>Y</sup>	42	1.4	320	673	1.7
	1/7/2009	45.82	17.08	-	28.74	13,000	47	<3.1	210	425	<3.1
	4/13/2009	45.82	15.52	-	30.30	7,200 <sup>Y</sup>	26	<1.3	170	312.6	2.6
	8/26/2009	45.82	17.82	-	28.00	10,000 <sup>Y</sup>	25	<2.0	130	294	2.2
	12/1/2009	45.82	17.34	-	28.48	11,000 <sup>Y</sup>	31	6.1	220	539	<2.0
	3/16/2010	45.82	14.81	-	31.01	31,000	63	140	970	4,200	64
	6/3/2010	45.82	15.72	-	30.10	27,000	22	67	840	3,100	32
	9/1/2010	45.82	16.86	-	28.96	33,000	24	34	1,100	3,780	12
	12/2/2010	45.82	16.98	-	28.84	70,000	32	55	1,700	5,670	18
	3/3/2011	45.82	14.35	Y	31.47	7,000	18	<2.5	97	237	11
	5/20/2011	45.82	14.95	Y	30.87	14,000	14	<2.5	300	823	7.2
	9/8/2011	45.82	16.14	Y	29.68	23,000	28	<2.5	360	812	3.4
	12/1/2011	45.82	16.17	16.15	29.66	FP	FP	FP	FP	FP	FP

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<b>MW-6 cont.</b>	3/2/2012	45.82	16.11	Y	29.71	14,000	23	<4.2	400	694.4	<4.2
	6/6/2012	45.82	16.31	Y	29.51	9,200	12	<1.7	210	320	<1.7
	9/20/2012*	45.82	17.36	17.32	28.49	FP	FP	FP	FP	FP	FP
	12/13/2012	45.82	15.46	Y	30.36	13,000	22	<0.71	83	62.8	5.1
	3/27/2013	45.82	16.3	Y	29.52	7,400	27	<1.3	190	221.8	<1.3
	6/10/2013	45.82	17.37	Y	28.45	12,000	20	<2.5	280	230	<2.5
	9/16/2013	45.82	18.11	18.06	27.74	FP	FP	FP	FP	FP	FP
	12/5/2013	45.82	18.75	Y	27.07	18,000	220	330	460	2,030	6.1
	3/12/2014	45.82	17	Y	28.82	8,900	42	5.4	290	760	<2.5
	6/5/2014	45.82	18.15	Y	27.67	9,600	29	<2.5	370	295	<2.5
	9/22/2014	45.82	19.33	Y	26.49	31,000	140	140	1,600	3,590	4.3
	12/22/2014	45.82	13.43	Y	32.39	2,700	20	<0.5	70	55.4	0.63
	3/19/2015	45.82	16.1	N	29.72	2,900	8.2	<0.5	48	3.6	<0.5
	6/3/2015	45.82	17.21	N	28.61	4,600	13	<0.5	53	3.4	<0.5
	9/10/2015	45.82	18.25	N	27.57	4,200	8.8	<5.0	27	<5.0	<5.0
	12/28/2015	45.82	16.64	N	29.18	4,600	27	<1.0	160	24	<1.0
	3/24/2016	45.82	14.35	N	31.47	700	3.4	<0.5	4.4	2.64	<0.5
	6/16/2016	45.82	14.38	N	31.44	2,900	9.7	<0.5	18	17	<0.5
	9/21/2016	45.82	17.57	N	28.25	2,600	8.5	<1.0	1.9	<1.0	<1.0
	12/15/2016	45.82	15.5	N	30.32	1,600	4.1	<0.5	1.2	2.1	<0.5
	3/13/2017	45.82	17.25	N	28.57	320	0.76	<0.5	<0.5	<0.5	<0.5
<b>MW-7</b>	9/21/2004	44.74	15.21	-	29.53	2,900	<0.5	<0.5	52	61	8.1
	12/14/2004	44.74	13.90	-	30.84	<50	1.6	<0.5	29	58	6.0
	3/11/2005	44.74	11.46	-	33.28	2,230	<2.5	<2.5	39.4	51.4	12.4
	6/15/2005	44.74	12.97	-	31.77	2,940	0.85	<2.0	50.6	31.9	13.7
	8/26/2005	44.74	14.10	-	30.64	2,310	<0.50	<2.0	55.7	29.6	4.01
	11/11/2005	44.74	14.59	-	30.15	3,030	<0.5	<2.0	66.5	42.3	9.76
	2/9/2006	44.74	NM	-	NM	NA	NA	NA	NA	NA	NA
	5/9/2006	44.74	12.02	-	32.72	1,400	<0.5	<2.0	19.8	12.4	2.30
	8/10/2006	44.74	13.72	-	31.02	604	<0.50	<2.0	6.2	4.63	1.42
	10/26/2006	44.74	14.38	-	30.36	1350	<0.50	<2.0	16.6	10.8	1.87

**Table 1**  
**Historical Groundwater Elevation Data and Analytical Results**  
**15101 Freedom Avenue, San Leandro, CA**

Monitoring Well	Date	Casing Elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Free-Product (feet)/Sheen (Y/N)	Groundwater Elevation (feet)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MtBE 8260B <sup>2</sup> (µg/L)
MW-7 cont.	1/25/2007	44.74	13.93	-	30.81	340	<0.5	<2.0	6.84	2.44	1.63
	4/26/2007	44.74	14.44	-	30.30	552	<0.5	<2.0	11.4	6.11	4.12
	7/25/2007	44.74	14.79	-	29.95	1,230	<0.5	<2.0	27	19.24	3.2
	10/23/2007	44.74	14.88	-	29.86	1,730	0.67	<2.0	20.7	17.31	8.44
	1/21/2008	44.74	13.34	-	31.40	610	1.15	<2.0	8.4	4.34	17.2
	4/15/2008	44.74	13.91	-	30.83	1,460	<0.5	<2.0	15.9	19.7	17.3
	7/2/2008	44.74	14.87	-	29.87	1,450	<0.5	<2.0	11	6.8	22.1
	10/15/2008	44.74	15.68	-	29.06	1,900 <sup>Y</sup>	0.56	1.2	27	39.5	55
	1/7/2009	44.74	14.72	-	30.02	2,700	1.2	2.9	11	25	39
	4/13/2009	44.74	13.54	-	31.20	2,300 <sup>Y</sup>	<0.5	<0.5	15	6.3	63
	8/26/2009	44.74	15.84	-	28.90	2,700 <sup>Y</sup>	<0.5	<0.5	48	53	140
	12/1/2009	44.74	15.03	-	29.71	1,800 <sup>Y</sup>	<0.5	<0.5	22	15	120
	3/16/2010	44.74	12.56	-	32.18	1,100	<0.5	<0.5	3.2	1.4	65
	6/3/2010	44.74	13.80	-	30.94	740	<0.5	<0.5	1.8	0.62	28
	9/1/2010	44.74	14.84	-	29.90	1,200	<0.5	<0.5	10	3.2	29
	12/2/2010	44.74	14.74	-	30.00	1,400	<0.5	<0.5	8	0.74	21
	3/3/2011	44.74	13.31	N	31.43	1,000	<0.5	<0.5	1.8	<0.5	16
	5/19/2011	44.74	13.43	N	31.31	810	<0.5	<0.5	2.2	0.79	7.8
	9/8/2011	44.74	14.38	N	30.36	1,000	<0.5	<0.5	8.3	2.9	5.4
	12/1/2011	44.74	13.57	N	31.17	1,500 <sup>X</sup>	<0.33	<0.19	12	5.7	13
	3/2/2012	44.74	14.16	N	30.58	1,000	<0.5	<0.5	4	1.1	5.1
	6/6/2012	44.74	14.00	N	30.74	780	<0.5	<0.5	2.9	1.0	2.6
	9/20/2012	44.74	15.26	N	29.48	1,200	<0.5	<0.5	4.3	0.92	2.7
	12/13/2012	44.74	13.34	N	31.40	1,100	<0.5	<0.5	0.99	<0.5	3.4
	3/27/2013	44.74	14.30	N	30.44	680	<0.5	<0.5	1.8	<0.5	4.2
	6/10/2013	44.74	15.06	N	29.68	890	<0.5	<0.5	2.6	<0.5	2.3
	9/16/2013	44.74	15.78	N	28.96	1,400	<0.5	<0.5	7.9	2.7	4.1
	12/5/2013	44.74	16.21	N	28.53	1,800	<0.5	<0.5	8	3.1	5.7

**Table 1**  
**Historical Groundwater Elevation Data and Analytical Results**  
**15101 Freedom Avenue, San Leandro, CA**

Monitoring Well	Date	Casing Elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Free-Product (feet)/Sheen (Y/N)	Groundwater Elevation (feet)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MtBE 8260B <sup>2</sup> (µg/L)
<b>MW-7 cont.</b>	3/12/2014	44.74	14.56	N	30.18	920	<0.5	<0.5	3.7	1.5	4.6
	6/5/2014	44.74	15.18	N	29.56	1,600	<0.5	<0.5	11	3.0	5.7
	9/22/2014	44.74	16.63	N	28.11	1,900	<0.5	<0.5	9.6	3.5	5.3
	12/22/2014	44.74	11.37	N	33.37	320	<0.5	<0.5	2.2	2.3	1.7
	3/19/2015	44.74	13.82	N	30.92	1,400	<0.5	<0.5	4.6	2.0	4.7
	6/3/2015	44.74	14.53	N	30.21	2,000	<0.5	<0.5	12	5.4	4.4
	9/10/2015	44.74	15.62	N	29.12	2,200	<1.7	<1.7	9.9	1.7	4.0
	12/28/2015	44.74	14.75	N	29.99	2,500	<0.5	<0.5	5.2	4.0	3.1
	3/24/2016	44.74	11.46	N	33.28	1,800	<0.5	<0.5	1.7	<0.5	3.1
	6/16/2016	44.74	11.49	N	33.25	2,400	<0.5	<0.5	2.3	<0.5	1.4
	9/21/2016	44.74	16.32	N	28.42	2,000	1.9	0.63	11	12.1	<0.5
	12/15/2016	44.74	13.78	N	30.96	1,800	<0.5	<0.5	3.4	1.9	1.4
	3/14/2017	44.74	10.98	N	33.76	300	<0.5	<0.5	<0.5	<0.5	<0.5
<b>MW-8</b>	9/21/2004	41.14	12.98	-	28.16	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	12/14/2004	41.14	11.22	-	29.92	<50	<0.5	<0.5	<0.5	<1.0	<0.5
	3/11/2005	41.14	NM	-	NM	NA	NA	NA	NA	NA	NA
	6/15/2005	41.14	10.46	-	30.68	<200	0.53	<2.0	<0.5	<1.0	<0.5
	8/26/2005	41.14	11.53	-	29.61	<50	<0.50	<2.0	<0.50	<1.0	<0.50
	11/11/2005	41.14	11.92	-	29.22	<50	<0.5	<2.0	1.36	1.8	<0.5
	2/9/2006	41.14	9.74	-	31.40	<50	<0.50	<2.0	<0.50	<1.0	<0.50
	5/9/2006	41.14	9.90	-	31.24	<50	<0.50	<2.0	<0.50	<1.0	<0.50
	8/10/2006	41.14	10.9	-	30.24	<50	<0.50	<2.0	<0.50	<1.0	<0.50
	10/26/2006	41.14	11.68	-	29.46	<50	<0.50	<2.0	3.37	<1.0	<0.50
	1/25/2007	41.14	11.44	-	29.70	<50	<0.5	<2.0	<0.5	<2.0	<0.5
	4/26/2007	41.14	10.81	-	30.33	<50	<0.5	<2.0	4.29	<2.0	<0.5
	7/25/2007	41.14	12.31	-	28.83	<50	<0.5	<2.0	4.39	<2.0	<0.5
	10/23/2007	41.14	12.37	-	28.77	<50	<0.5	<2.0	4.31	<2.0	<0.5
	1/21/2008	41.14	11.02	-	30.12	<50	<0.5	<2.0	<0.5	<2.0	<0.5
	4/15/2008	41.14	11.44	-	29.70	<50	<0.5	<2.0	<0.5	<2.0	<0.5
	7/2/2008	41.14	12.39	-	28.75	94.8	<0.5	<2.0	1.0	<2.0	<0.5
	10/15/2008	41.14	13.42	-	27.72	<50	<0.5	<0.5	<0.5	<0.5	<0.5

**Table 1**  
**Historical Groundwater Elevation Data and Analytical Results**  
**15101 Freedom Avenue, San Leandro, CA**

Monitoring Well	Date	Casing Elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Free-Product (feet)/ Sheen (Y/N)	Groundwater Elevation (feet)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MtBE 8260B <sup>2</sup> (µg/L)
<b>MW-8 cont.</b>	1/7/2009	41.14	12.50	-	28.64	<50	<0.5	<0.5	<0.5	0.6	<0.5
	4/13/2009	41.14	11.23	-	29.91	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	8/27/2009	41.14	13.24	-	27.90	<50	<0.5	<0.5	<0.5	<0.5	<0.5
Well Decommissioned 11/13/2009											
<b>MW-9</b>	9/21/2004	40.26	12.18	-	28.08	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	12/14/2004	40.26	10.91	-	29.35	<50	<0.5	<0.5	<0.5	<1.0	<0.5
	3/11/2005	40.26	10.52	-	29.74	<200	<0.5	<0.5	<0.5	<1.0	<0.5
	6/15/2005	40.26	14.73	-	25.53	<200	<0.5	<2.0	<0.5	<1.0	<0.5
	8/26/2005	40.26	10.59	-	29.67	<50	<0.50	<2.0	<0.50	<1.0	<0.50
	11/11/2005	40.26	11.25	-	29.01	<50	<0.5	<2.0	<0.5	<1.0	<0.5
	2/9/2006	40.26	10.05	-	30.21	<50	<0.50	<2.0	<0.50	<1.0	<0.50
	5/9/2006	40.26	9.06	-	31.20	<50	<0.50	<2.0	<0.50	<1.0	<0.50
	8/10/2006	40.26	10.01	-	30.25	<50	<0.50	<2.0	<0.50	<1.0	<0.50
	10/26/2006	40.26	10.81	-	29.45	<50	<0.50	<2.0	<0.50	<1.0	<0.50
	1/25/2007	40.26	10.67	-	29.59	<50	<0.5	<2.0	<0.5	<2.0	<0.5
	4/26/2007	40.26	10.05	-	30.21	<50	<0.5	<2.0	<0.5	<2.0	<0.5
	7/25/2007	40.26	11.44	-	28.82	<50	<0.5	<2.0	<0.5	<2.0	<0.5
	10/23/2007	40.26	11.59	-	28.67	<50	<0.5	<2.0	<0.5	<2.0	<0.5
	1/21/2008	40.26	10.37	-	29.89	<50	<0.5	<2.0	<0.5	<2.0	<0.5
	4/15/2008	40.26	10.56	-	29.70	<50	<0.5	<2.0	<0.5	<2.0	<0.5
	7/2/2008	40.26	11.95	-	28.31	161	<0.5	<2.0	2.15	<2.0	<0.5
	10/15/2008	40.26	12.64	-	27.62	<50	<0.5	<0.5	<0.5	<0.5	<0.5
Well Decommissioned 11/13/2009											

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**Historical Groundwater Elevation Data and Analytical Results**  
**15101 Freedom Avenue, San Leandro, CA**

Monitoring Well	Date	Casing Elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Free-Product (feet)/Sheen (Y/N)	Groundwater Elevation (feet)	TPH-g ( $\mu\text{g/L}$ )	Benzene ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Ethylbenzene ( $\mu\text{g/L}$ )	Total Xylenes ( $\mu\text{g/L}$ )	MtBE 8260B <sup>2</sup> ( $\mu\text{g/L}$ )
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MW-10	9/22/2014	44.66	17.84	N	26.82	23,000	<10	<10	1200	2,610	<10
	12/22/2014	44.66	12.33	N	32.33	6,000	<2.5	<2.5	390	802	<2.5
	3/19/2015	44.66	15.01	N	29.65	3,500	<1.0	<1.0	130	279	<1.0
	6/3/2015	44.66	15.81	N	28.85	24,000	<5.0	<5.0	870	1,358	<5.0
	9/10/2015	44.66	17.03	N	27.63	28,000	<10	<10	1,200	2,173	<10
	12/28/2015	44.66	15.18	N	29.48	22,000	<10	<10	930	1,737	<10
	3/24/2016	44.66	13.1	N	31.56	22,000	<5	<5	620	1,038	<5
MW-10R Post MPE	6/15/2016	45.13	13.6	N	31.53	28,000	<10	<10	720	1,454	<10
	8/8/2016	45.13	NA	N	NA	8,100	<4.2	<4.2	150	267.1	<4.2
	9/21/2016	45.13	16.84	N	28.29	10,000	9.6	<2.0	340	432	<2.0
	12/15/2016	45.13	14.92	N	30.21	5,200	<2.0	<2.0	170	206.5	<2.0
	1/18/2017	45.13	13.32	N	31.81	6,500	<2.5	<2.5	160	214.1	<2.5
	2/24/2017	45.13	11.44	N	33.69	3,300	<2.5	<2.5	100	100.2	<2.5
	3/14/2017	45.13	13.05	N	32.08	440	<0.5	<0.5	4.9	6.2	<0.5
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MW-11	9/22/2014	42.45	15.52	N	26.93	2,100	<0.5	<0.5	2.7	4.5	<0.5
	12/22/2014	42.45	10.08	N	32.37	310	<0.5	<0.5	1.8	2.7	<0.5
	3/19/2015	42.45	12.77	N	29.68	870	<0.5	<0.5	1.4	2.2	<0.5
	6/3/2015	42.45	13.5	N	28.95	330	<0.5	<0.5	2.0	3.1	<0.5
	9/10/2015	42.45	14.79	N	27.66	78	<0.5	<0.5	<0.5	<0.5	<0.5
	12/28/2015	42.45	13.07	N	29.38	170	<0.5	<0.5	3.0	4.2	<0.5
	3/23/2016	42.45	10.48	N	31.97	110	<0.5	<0.5	<0.5	<0.5	<0.5
	6/16/2016	42.45	10.51	N	31.94	100	<0.5	<0.5	<0.5	<0.5	<0.5
	9/21/2016	42.45	14.05	N	28.40	75	<0.5	<0.5	1.5	1.7	<0.5
	12/15/2016	42.45	12.3	N	30.15	65	<0.5	<0.5	1.4	1.7	<0.5
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EX-1	12/2/2009	47.36	17.02	-	30.34	2,900	120	4	64	410	25
	3/16/2010	47.36	19.08	-	28.28	2,200	150	18	94	326	210
	6/3/2010	47.36	17.02	-	30.34	3,600	180	6.3	150	428	83
	9/1/2010	47.36	16.88	-	30.48	550	6.5	0.5	6.9	31.7	38
	12/2/2010	47.36	19.84	-	27.52	<200	3.1	<2.0	<2.0	<2.0	210
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**Table 1**  
**Historical Groundwater Elevation Data and Analytical Results**  
**15101 Freedom Avenue, San Leandro, CA**

Monitoring Well	Date	Casing Elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Free-Product (feet)/Sheen (Y/N)	Groundwater Elevation (feet)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MtBE 8260B <sup>2</sup> (µg/L)
EX-1 cont.	3/3/2011	47.36	14.96	N	32.4	530	51	0.94	15	31.3	110
	5/19/2011	47.36	16.12	N	31.24	370	42	<0.71	7.6	17.2	110
	9/8/2011	47.36	16.47	N	30.89	110	5	<0.5	2.2	6.4	12
	12/1/2011	47.36	16.1	N	31.26	780 <sup>x</sup>	91	3	29	85	150
	3/2/2012	47.36	16.35	N	31.01	140	6	<0.5	3.5	8	14
	6/6/2012	47.36	24.76	N	22.6	250	22	<0.5	4.7	20	71
	9/20/2012	47.36	17.26	N	30.1	95	24	<0.5	<0.5	2.61	36
	12/13/2012	47.36	16.55	N	30.81	1,000	73	2.3	47	110	48
	3/27/2013	47.36	16.15	N	31.21	69	4.1	<0.5	3.3	10	1.8
	6/10/2013	47.36	24.25	N	23.11	340	37	<0.5	5.9	15.1	62
	9/16/2013	47.36	22.54	N	24.82	97	14	<0.5	<0.5	<0.5	65
	12/5/2013	47.36	22.53	N	24.83	390	42	2.5	9.8	32.6	76
	3/12/2014	47.36	21.15	N	26.21	250	12	<0.5	4.7	17.2	40
	6/5/2014	47.36	21.31	N	26.05	1,700	70	11	92	208	40
	9/22/2014	47.36	21.15	N	26.21	1,500	23	1.3	73	161	51
	12/22/2014	47.36	19.74	N	27.62	530	8.6	<0.5	3.2	29.3	11
EX-2	3/19/2015	47.36	15.59	N	31.77	<50	1.2	<0.5	<0.5	1.0	<0.5
	6/3/2015	47.36	22.89	N	24.47	770	31	<0.5	8.2	17.1	22
	9/10/2015	47.36	22.57	N	24.79	<50	0.66	<0.5	<0.5	1.53	<0.5
	12/28/2015	47.36	22.7	N	24.66	400	27	<0.5	4.6	10.9	21
	3/24/2016	47.36	13.45	N	33.91	57	3.9	<0.5	<0.5	<0.5	3.5
EX-2	6/15/2016	47.36	13.83	N	33.53	140	9.1	<0.5	<0.5	<0.5	<0.5
	9/21/2016	47.36	16.75	N	30.61	260	1.2	<0.5	5.3	1.7	<0.5
	12/14/2016	47.36	15.9	N	31.46	<50	<0.5	<0.5	<0.5	<0.5	2.1
	3/14/2017	47.36	14.4	N	32.96	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	12/2/2009	45.96	17.56	-	28.4	7,100 <sup>y</sup>	9.3	3.2	440	770	<3.1
EX-2	3/16/2010	45.96	19.65	-	26.31	13,000	600	360	770	2,250	15
	6/3/2010	45.96	17.10	-	28.86	16,000	590	400	700	2,500	9.5
	9/1/2010	45.96	16.99	-	28.97	6,100	230	74	200	890	11
	12/2/2010	45.96	20.87	-	25.09	14,000	510	270	640	2,170	15

**Table 1**  
**Historical Groundwater Elevation Data and Analytical Results**  
**15101 Freedom Avenue, San Leandro, CA**

Monitoring Well	Date	Casing Elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Free-Product (feet)/Sheen (Y/N)	Groundwater Elevation (feet)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MtBE 8260B <sup>2</sup> (µg/L)
EX-2 cont.	3/3/2011	45.96	14.61	N	31.35	8,600	340	52	460	1,350	13
	5/19/2011	45.96	15.08	N	30.88	7,500	260	65	390	1,080	11
	9/8/2011	45.96	16.34	N	29.62	3,400	190	28	160	451	5.4
	12/1/2011	45.96	22.60	N	23.36	9,900 <sup>x</sup>	630	200	690	1,760	<3.3
	3/2/2012	45.96	16.48	N	29.48	5,000	220	25	200	600	7.1
	6/6/2012	45.96	18.90	N	27.06	6,900	290	97	310	790	5.2
	9/20/2012	45.96	17.49	N	28.47	1,800	170	14	62	204	5.0
	12/13/2012	45.96	15.96	N	30	7,300	490	180	610	1,290	5.2
	3/27/2013	45.96	16.59	N	29.37	2,200	130	9.6	100	288	4.3
	6/10/2013	45.96	23.11	N	22.85	2,600	190	20	100	248	6.8
	9/20/2013	45.96	23.11	N	22.85	3,900	210	37	170	450	6.3
	12/5/2013	45.96	23.28	N	22.68	3,700	160	46	110	394	7.2
	3/12/2014	45.96	22.04	N	23.92	3,700	100	9.8	220	498	5.7
	6/5/2014	45.96	23.41	N	22.55	4,400	120	37	280	590	5.4
	9/22/2014	45.96	23.20	N	22.76	2,200	63	8.8	88	240	7.1
	12/22/2014	45.96	20.22	N	25.74	1,600	42	4.2	94	148	6.0
	3/19/2015	45.96	16.46	N	29.50	890	42	<0.5	54	10.5	<0.5
	6/3/2015	45.96	21.06	N	24.90	4,700	100	8.7	120	311	1.9
	9/10/2015	45.96	21.15	N	24.81	670	8.1	<1.0	13	27.4	<1.0
	12/28/2015	45.96	20.75	N	25.21	3,500	46	6	120	266	4.5
	3/24/2016	45.96	13.97	N	31.99	1,500	22	0.86	42	75	1.7
	6/15/2016	45.96	14.00	-	31.96	NA	NA	NA	NA	NA	NA
<b>MPE Wells</b>											
MPE-1	12/1/2009	51.96	21.41	-	30.55	NA	NA	NA	NA	NA	NA
	3/16/2010	51.96	20.22	-	31.74	NA	NA	NA	NA	NA	NA
	6/3/2010	51.96	21.18	-	30.78	NA	NA	NA	NA	NA	NA
	9/1/2010	51.96	21.25	-	30.71	NA	NA	NA	NA	NA	NA
	12/2/2010	51.96	21.64	-	30.32	NA	NA	NA	NA	NA	NA

**Table 1**  
**Historical Groundwater Elevation Data and Analytical Results**  
**15101 Freedom Avenue, San Leandro, CA**

Monitoring Well	Date	Casing Elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Free-Product (feet)/ Sheen (Y/N)	Groundwater Elevation (feet)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MtBE 8260B <sup>2</sup> (µg/L)
<b>MPE-1 cont.</b>	3/3/2011	51.96	19.33	-	32.63	NA	NA	NA	NA	NA	NA
	5/19/2011	51.96	20.6	-	31.36	NA	NA	NA	NA	NA	NA
<b>Pre-MPE</b>	8/4/2011	51.96	NM	-	NC	49,000	210	100	840	7,070	45
	9/8/2011	51.96	20.83	-	31.13	NA	NA	NA	NA	NA	NA
<b>Post-MPE</b>	9/26/2011	51.96	20.94	Y	31.02	62,000	6,300	3,700	1,800	9,400	1,200
	12/2/2011	51.96	20.14	Y	31.82	56,000	9,000	7,700	2,200	10,800	2,600
	3/2/2012	51.96	20.73	Y	31.23	97,000	11,000	11,000	2,600	12,600	2,700
	6/6/2012	51.96	20.96	Y	31.00	78,000	4,500	4,900	2,300	10,700	750
	9/20/2012	51.96	21.58	Y	30.38	89,000	8,600	9,200	3,400	14,800	1,900
	12/14/2012	51.96	20.57	Y	31.39	98,000	7,400	9,600	2,900	13,300	1,300
	3/27/2013	51.96	20.91	Y	31.05	61,000	6,600	4,500	2,200	9,400	1,500
	6/10/2013	51.96	21.47	Y	30.49	42,000	1,900	980	630	4,400	670
	9/17/2013	51.96	21.98	Y	29.98	45,000	2,400	1,400	1,200	8,000	150
	12/6/2013	51.96	22.41	Y	29.55	27,000	1,600	220	990	5,000	110
	3/13/2014	51.96	21.33	Y	30.63	67,000	1,800	3,500	1,800	10,100	170
	6/5/2014	51.96	21.89	21.8	30.13	FP	FP	FP	FP	FP	FP
	9/23/2014	51.96	23.12	Y	28.84	12,000	380	31	100	1,630	39
	12/23/2014	51.96	18.3	Y	33.66	3,100	23	24	23	220	<1.0
	3/20/2015	51.96	20.14	Y	31.82	9,700	58	43	77	1,000	<2.5
	6/4/2015	51.96	21.00	Y	30.96	14,000	110	49	66	620	10
	9/11/2015	51.96	21.77	Y	30.19	9,600	590	150	83	590	50
	12/29/2015	51.96	21.13	Y	30.83	3,100	24	11	8.2	237	0.88
	3/24/2016	51.96	18.22	N	33.74	98	<0.5	<0.5	<0.5	0.79	<0.5
	6/16/2016	51.96	18.45	Y	33.51	310	8.6	<0.5	1.2	16.10	0.68
	9/21/2016	51.96	21.31	N	30.65	1,200	35	<0.5	3.2	6.10	1.50
	12/14/2016	51.96	20.32	N	31.64	<50	0.68	<0.5	<0.5	0.82	<0.5
	<b>3/13/2017</b>	<b>51.96</b>	<b>18.09</b>	<b>N</b>	<b>33.87</b>	<b>&lt;50</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>
<hr/>											
<b>MPE-2</b>	12/1/2009	53.72	22.87	-	30.85	NA	NA	NA	NA	NA	NA
	3/16/2010	53.72	21.7	-	32.02	NA	NA	NA	NA	NA	NA
	6/3/2010	53.72	22.35	-	31.37	NA	NA	NA	NA	NA	NA
	9/1/2010	53.72	23.7	-	30.02	NA	NA	NA	NA	NA	NA
	12/2/2010	53.72	22.7	-	31.02	NA	NA	NA	NA	NA	NA

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**15101 Freedom Avenue, San Leandro, CA**

Monitoring Well	Date	Casing Elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Free-Product (feet)/Sheen (Y/N)	Groundwater Elevation (feet)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MtBE 8260B <sup>2</sup> (µg/L)
<b>MPE-2 cont.</b>	3/3/2011	53.72	21.25	-	32.47	NA	NA	NA	NA	NA	NA
	5/19/2011	53.72	22.19	-	31.53	NA	NA	NA	NA	NA	NA
<b>Pre-MPE</b>	8/4/2011	53.72	NM	-	NC	46,000	2,100	80	1,900	5,300	75
	9/8/2011	53.72	22.31	-	31.41	NA	NA	NA	NA	NA	NA
<b>Post-MPE</b>	9/26/2011	53.72	22.38	N	31.34	37,000	1,800	33	1,700	2,760	<17
	12/2/2011	53.72	21.44	N	32.28	26,000	1,600	43	1,800	3,370	<17
	3/2/2012	53.72	22.24	N	31.48	36,000	1,100	19	1,700	2,970	<17
	6/7/2012	53.72	22.35	N	31.37	33,000	1,800	27	1,600	2,700	29
	9/21/2012	53.72	23.03	N	30.69	31,000	1,700	13	1,900	2,747	14
	12/14/2012	53.72	22.17	N	31.55	31,000	1,700	20	1,800	2,490	16
	3/28/2013	53.72	22.53	N	31.19	20,000	2,200	<20	1,300	960	<20
	6/11/2013	53.72	22.9	N	30.82	26,000	920	<13	1,500	1,352	<13
	9/17/2013	53.72	23.29	N	30.43	23,000	680	15	1,400	1,059	<13
	12/5/2013	53.72	23.73	23.61	30.07	FP	FP	FP	FP	FP	FP
	3/12/2014	53.72	22.89	22.85	30.86	FP	FP	FP	FP	FP	FP
	6/5/2014	53.72	22.96	22.94	30.77	FP	FP	FP	FP	FP	FP
	9/23/2014	53.72	24.05	Y	29.67	22,000	550	340	760	2,760	<6.3
	12/23/2014	53.72	20.65	N	33.07	12,000	430	77	420	1,670	4.6
	3/20/2015	53.72	22.16	Y	31.56	14,000	670	21	630	1,150	6.9
	6/4/2015	53.72	22.6	Y	31.12	27,000	730	6.5	930	1,343	6.9
	9/11/2015	53.72	23.15	Y	30.57	21,000	1,000	<7.1	1,200	760	9.3
	12/29/2015	53.72	22.86	Y	30.86	16,000	220	10	210	990	<6.3
	3/24/2016	53.72	20.55	Y	33.17	9,500	960	<6.3	180	370	11
	6/16/2016	53.72	20.58	Y	33.14	13,000	570	<5.0	350	351	7.0
	9/21/2016	53.72	22.96	N	30.76	12,000	630	<6.3	300	190	<6.3
	12/14/2016	53.72	22.22	N	31.50	7,100	490	<3.1	230	140	6.0
	<b>3/13/2017</b>	<b>53.72</b>	<b>20.16</b>	<b>N</b>	<b>33.56</b>	<b>7,700</b>	<b>1,000</b>	<b>6.6</b>	<b>180</b>	<b>32.7</b>	<b>12.0</b>
2nd WBZ											
<b>MW-1D</b>	1/3/2008	54.42		-	-	<50	<0.50	<2.0	<0.50	<2.0	<0.50
	1/22/2008	54.42	22.85	-	31.57	<50	<0.50	<2.0	<0.50	<2.0	<0.50
	4/16/2008	54.42	23.10	-	31.32	<50	<0.5	<2.0	<0.5	<2.0	<0.5
	7/3/2008	54.42	23.44	-	30.98	75.9	<0.5	<2.0	0.54	<2.0	<0.5
	10/15/2008	54.42	23.82	-	30.60	120	1.6	<0.5	2.8	3.6	<0.5

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**15101 Freedom Avenue, San Leandro, CA**

Monitoring Well	Date	Casing Elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Free-Product (feet)/Sheen (Y/N)	Groundwater Elevation (feet)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MtBE 8260B <sup>2</sup> (µg/L)
<b>MW-1D cont.</b>	1/8/2009	54.42	23.44	-	30.98	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	4/14/2009	54.42	23.06	-	31.36	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	8/26/2009	54.42	23.73	-	30.69	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	12/1/2009	54.42	23.59	-	30.83	330 <sup>Y</sup>	<0.5	<0.5	1.3	2.2	<0.5
	3/16/2010	54.42	22.60	-	31.82	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	6/4/2010	54.42	23.10	-	31.32	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	9/1/2010	54.42	23.51	-	30.91	<50	<0.5	<0.5	0.52	1.8	<0.5
	12/3/2010	54.42	23.41	-	31.01	61	<0.5	<0.5	1.0	3.73	<0.5
	3/3/2011	54.42	22.27	N	32.15	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	5/19/2011	54.42	22.89	N	31.53	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	9/8/2011	54.42	23.08	N	31.34	220	<0.5	<0.5	0.6	1.4	<0.5
	12/1/2011	54.42	22.26	N	32.16	<22	<0.33	<0.19	<0.15	<0.20	<0.38
	3/2/2012	54.42	23.01	N	31.41	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	6/6/2012	54.42	23.18	N	31.24	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	9/20/2012	54.42	23.76	N	30.66	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	12/13/2012	54.42	23.04	N	31.38	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	3/27/2013	54.42	23.34	N	31.08	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	6/10/2013	54.42	23.69	N	30.73	110	<0.5	<0.5	0.55	<0.5	<0.5
	9/16/2013	54.42	24.02	N	30.40	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	12/5/2013	54.42	24.31	N	30.11	<50	<0.5	<0.5	<0.5	1.3	<0.5
	3/12/2014	54.42	23.68	N	30.74	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	6/5/2014	54.42	23.68	N	30.74	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	9/22/2014	54.42	24.65	N	29.77	<50	<0.5	<0.5	<0.5	0.88	<0.5
	12/23/2014	54.42	21.84	N	32.58	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	3/19/2015	54.42	23.04	N	31.38	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	6/3/2015	54.42	23.43	N	30.99	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	9/10/2015	54.42	23.91	N	30.51	<50	<0.5	<0.5	<0.5	<0.5	<0.5

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Monitoring Well	Date	Casing Elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Free-Product (feet)/ Sheen (Y/N)	Groundwater Elevation (feet)	TPH-g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MtBE 8260B <sup>2</sup> (µg/L)
<b>MW-3D</b>	1/3/2008	54.10		-	-	<50	<0.50	<2.0	<0.50	<2.0	87.6
	1/22/2008	54.10	22.31	-	31.79	<50	<0.50	<2.0	<0.50	<2.0	88.3
	4/16/2008	54.10	22.64	-	31.46	<50	<0.5	<2.0	<0.5	<2.0	71.1
	7/3/2008	54.10	23.17	-	30.93	<50	<0.5	<2.0	<0.5	<2.0	67.4
	10/16/2008	54.10	23.62	-	30.48	<50	<0.5	<0.5	<0.5	<0.5	37
	1/8/2009	54.10	23.07	-	31.03	<50	<0.5	<0.5	<0.5	<0.5	29
	4/14/2009	54.10	22.36	-	31.74	<50	<0.5	<0.5	<0.5	<0.5	44
	8/26/2009	54.10	23.41	-	30.69	<50	<0.5	<0.5	<0.5	<0.5	20
	12/1/2009	54.10	23.27	-	30.83	110 Y	<0.5	<0.5	<0.5	0.52	24
	3/16/2010	54.10	22.10	-	32.00	<50	<0.5	<0.5	<0.5	<0.5	7.1
	6/4/2010	54.10	22.70	-	31.40	<50	<0.5	<0.5	<0.5	<0.5	17
	9/1/2010	54.10	23.09	-	31.01	78	<0.5	<0.5	1.1	4.71	24
	12/3/2010	54.10	22.90	-	31.20	<50	<0.5	<0.5	0.56	1.4	13
	3/3/2011	54.10	21.66	N	32.44	<50	1.3	<0.5	<0.5	0.59	14
	5/19/2011	54.10	22.61	N	31.49	<50	<0.5	<0.5	<0.5	<0.5	5.2
	9/8/2011	54.10	22.68	N	31.42	69	<0.5	<0.5	<0.5	0.62	4.8
	12/1/2011	54.10	22.86	N	31.24	<22	<0.33	<0.19	<0.15	<0.20	10
	3/2/2012	54.10	22.60	N	31.50	<50	<0.5	<0.5	<0.5	<0.5	4.2
	6/6/2012	54.10	22.77	N	31.33	<50	<0.5	<0.5	<0.5	<0.5	4.8
	9/20/2012	54.10	23.42	N	30.68	<50	<0.5	<0.5	<0.5	<0.5	5.1
	12/13/2012	54.10	22.57	N	31.53	<50	<0.5	<0.5	<0.5	<0.5	4.4
	3/27/2013	54.10	22.87	N	31.23	<50	<0.5	<0.5	<0.5	<0.5	4.4
	6/10/2013	54.10	23.27	N	30.83	<50	<0.5	<0.5	<0.5	<0.5	3.5
	9/16/2013	54.10	23.65	N	30.45	<50	<0.5	<0.5	<0.5	<0.5	2.1
	12/5/2013	54.10	23.97	N	30.13	<50	<0.5	<0.5	<0.5	0.53	1.6
	3/13/2014	54.10	23.22	N	30.88	130	<0.5	2.9	2.5	16.6	0.97
	6/5/2014	54.10	23.33	N	30.77	<50	<0.5	<0.5	<0.5	0.77	1.5
	9/22/2014	54.10	24.40	N	29.70	<50	<0.5	<0.5	<0.5	<0.5	0.96
	12/23/2014	54.10	21.09	N	33.01	<50	<0.5	<0.5	<0.5	<0.5	1

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<b>MW-3D cont.</b>	3/19/2015	54.10	22.50	N	31.60	<50	<0.5	<0.5	<0.5	<0.5	1.6
	6/3/2015	54.10	22.85	N	31.25	<50	<0.5	<0.5	<0.5	<0.5	1.6
	9/10/2015	54.10	23.53	N	30.57	<50	<0.5	<0.5	<0.5	<0.5	1.4
<b>MW-4D</b>	1/4/2008	53.12	-	-	-	<50	<0.50	<2.0	<0.50	<2.0	<0.50
	1/22/2008	53.12	21.11	-	32.01	91.5	18.7	<2.0	7.08	11.42	219
	4/15/2008	53.12	21.67	-	31.45	<50	<0.5	<2.0	<0.5	<2.0	27
	7/3/2008	53.12	22.39	-	30.73	<50	<0.5	<2.0	<0.5	<2.0	6.27
	10/16/2008	53.12	22.98	-	30.14	<50	<0.5	<0.5	<0.5	<0.5	1.9
	1/8/2009	53.12	22.25	-	30.87	<50	<0.5	<0.5	<0.5	<0.5	2
	4/14/2009	53.12	21.34	-	31.78	<50	<0.5	<0.5	<0.5	<0.5	2.2
	8/27/2009	53.12	22.79	-	30.33	<50	<0.5	<0.5	<0.5	<0.5	2.2
	12/1/2009	53.12	22.49	-	30.63	120 <sup>Y</sup>	<0.5	<0.5	1.4	2.3	2.3
	3/16/2010	53.12	21.02	-	32.10	<50	<0.5	<0.5	<0.5	<0.5	0.65
	6/4/2010	53.12	21.93	-	31.19	<50	<0.5	<0.5	<0.5	<0.5	1.1
	9/1/2010	53.12	23.32	-	29.80	<50	<0.5	<0.5	0.85	3.76	2.2
	12/3/2010	53.12	22.46	-	30.66	<50	<0.5	<0.5	<0.5	0.67	<0.5
	3/3/2011	53.12	20.45	N	32.67	<50	<0.5	<0.5	<0.5	<0.5	0.58
	5/19/2011	53.12	21.57	N	31.55	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	9/8/2011	53.12	21.92	N	31.20	59	<0.5	<0.5	<0.5	0.51	1.7
	12/1/2011	53.12	21.19	N	31.93	<22	<0.33	<0.19	<0.15	<0.20	4.2
	3/2/2012	53.12	21.8	N	31.32	<50	<0.5	<0.5	0.85	1.2	2.7
	6/6/2012	53.12	22.00	N	31.12	<50	<0.5	<0.5	<0.5	<0.5	1.3
	9/20/2012	53.12	22.67	N	30.45	<50	<0.5	<0.5	<0.5	<0.5	1.6
	12/13/2012	53.12	21.55	N	31.57	<50	<0.5	<0.5	<0.5	<0.5	0.94
	3/27/2013	53.12	21.98	N	31.14	<50	<0.5	<0.5	<0.5	<0.5	2.1
	6/10/2013	53.12	22.55	N	30.57	<50	<0.5	<0.5	<0.5	<0.5	1.7
	9/16/2013	53.12	23.05	N	30.07	<50	<0.5	<0.5	<0.5	<0.5	4.6
	12/6/2013	53.12	23.43	N	29.69	<50	<0.5	<0.5	<0.5	<0.5	3.4

**Table 1**  
**Historical Groundwater Elevation Data and Analytical Results**  
**15101 Freedom Avenue, San Leandro, CA**

Monitoring Well	Date	Casing Elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Free-Product (feet)/Sheen (Y/N)	Groundwater Elevation (feet)	TPH-g ( $\mu\text{g/L}$ )	Benzene ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Ethylbenzene ( $\mu\text{g/L}$ )	Total Xylenes ( $\mu\text{g/L}$ )	MtBE 8260B <sup>2</sup> ( $\mu\text{g/L}$ )
<b>MW-4D cont.</b>	3/13/2014	53.12	22.38	N	30.74	<50	<0.5	<0.5	<0.5	<0.5	4.0
	6/6/2014	53.12	22.78	N	30.34	<50	<0.5	<0.5	<0.5	<0.5	1.8
	9/23/2014	53.12	24.05	N	29.07	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	12/23/2014	53.12	19.66	N	33.46	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	3/19/2015	53.12	21.54	N	31.58	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	6/3/2015	53.12	22.10	N	31.02	75	<0.5	<0.5	<0.5	<0.5	<0.5
	9/10/2015	53.12	22.89	N	30.23	<50	<0.5	<0.5	<0.5	<0.5	<0.5
<b>1573 153 RD</b>	1/3/2008	NS	NM	-	NC	<50	<0.5	<2.0	<0.5	<2.0	<0.5
	7/2/2008	NS	NM	-	NC	<50	<0.5	<2.0	<0.5	<2.0	<0.5
	10/16/2008	NS	NM	-	NC	<50	<0.5	<0.5	<0.5	<0.5	<0.5
<b>Equipment Blanks</b>											
<b>EB-PMP</b>	1/21/2008	-	-	-	-	<50	<0.50	<2.0	<0.50	<2.0	<0.50
<b>EB-PRB</b>	1/21/2008	-	-	-	-	<50	<0.50	<2.0	<0.50	<2.0	<0.50
<b>EB-PMP2</b>	1/22/2008	-	-	-	-	<50	<0.50	<2.0	<0.50	<2.0	<0.50
<b>EB-PRB2</b>	1/22/2008	-	-	-	-	<50	<0.50	<2.0	<0.50	<2.0	<0.50
<b>ESL (ug/L)</b>	-	-	-	-	-	100	1	40	13	20	5

Notes:

The first time SOMA monitored this Site was in May 2002.

\*: Due to minimal recharge rates in well MW-2, the groundwater elevation recorded on these dates did not match the overall site conditions, May 2002 & August 2003.

NC: Not Calculated

<sup>1</sup>: Top of casing elevations were surveyed to a datum of 67.07 M.S.L by Kier & Wright Civil Engineers & Land Surveyors on May 7, 2002.

On October 11, 2004, the site was re-surveyed by Harrington Surveys, Inc. of Walnut Creek, CA to a datum of California Coordinate System, Zone 3, NAD 83.

<sup>2</sup>: MBE analyzed by EPA Method 8021B, and confirmed by EPA Method 8260B.

<: Not detected above the laboratory reporting limit.

Y: Sample exhibits chromatographic pattern which does not resemble standard

c: Presence confirmed, but confirmation concentration differed by more than a factor of two.

C: Presence confirmed, but RPD between columns exceeds 40%.

H: Heavier hydrocarbons contributed to the quantitation.

x: Does not match pattern of reference Gasoline Standard. Hydrocarbons in the range of C5-C12 quantified as gasoline (possibly aged gasoline)

NA: Not Analyzed. Well MW-8 was inaccessible during the First Quarter 2005, car was parked over well.

Not Analyzed. Well MW-7 was inaccessible during the First Quarter 2006, car was parked over well.

NM: Not Measured. Well MW-8 was inaccessible during the First Quarter 2005, car was parked over well.

Not Measured. Well MW-7 was inaccessible during the First Quarter 2006, car was parked over well.

The first time SOMA monitored wells MW-6 to MW-9 was in September 2004.

**Table 1**  
**Historical Groundwater Elevation Data and Analytical Results**  
**15101 Freedom Avenue, San Leandro, CA**

Monitoring Well	Date	Casing Elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Free-Product (feet)/Sheen (Y/N)	Groundwater Elevation (feet)	TPH-g ( $\mu\text{g}/\text{L}$ )	Benzene ( $\mu\text{g}/\text{L}$ )	Toluene ( $\mu\text{g}/\text{L}$ )	Ethyl-benzene ( $\mu\text{g}/\text{L}$ )	Total Xylenes ( $\mu\text{g}/\text{L}$ )	MtBE 8260B <sup>2</sup> ( $\mu\text{g}/\text{L}$ )
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EB-PMP/EB-PRB: Equipment Blanks for Pump and Probe

ESL: Environmental Screening Levels per CRWQCB SF Bay Region (Revised February 2016)

Tier 1 ESL (Groundwater Screening Levels (groundwater is a drinking water resource)

MW-8 and MW-9 were decommissioned November 13, 2009

FP: Groundwater not sampled due to presence of free-product

Groundwater elevation corrected upon presence of FP as follows:

Corrected depth to groundwater is equal to (measured depth) - 0.68(free product thickness)

The correction factor is derived by the following: specific gravity of gas at 20 °C is 0.68, then specific gravity is multiplied by the thickness of free product

**Table 2**  
**Historical Gasoline Oxygenates Results**  
**15101 Freedom Avenue, San Leandro, CA**

Monitoring Well	Date	TBA ( $\mu\text{g/L}$ )	DIPE ( $\mu\text{g/L}$ )	ETBE ( $\mu\text{g/L}$ )	TAME ( $\mu\text{g/L}$ )	1,2-DCA ( $\mu\text{g/L}$ )	EDB ( $\mu\text{g/L}$ )
1st WBZ							
MW-1	8/8/2002	78	<1.3	<1.3	<1.3	NA	NA
	11/1/2002	42	<1.0	<1.0	<1.0	NA	NA
	2/21/2003	47	<0.5	<0.5	<0.5	NA	NA
	5/28/2003	25	<0.5	<0.5	<0.5	NA	NA
	8/12/2003	<10	<0.5	<0.5	<0.5	NA	NA
	10/9/2003	70	<1.0	<1.0	<1.0	NA	NA
	1/15/2004	55	<0.5	<0.5	<0.5	NA	NA
	5/25/2004	62	<0.7	<0.7	<0.7	NA	NA
	9/21/2004	<10	<0.5	<0.5	<0.5	NA	NA
	12/14/2004	<21.5	<4.3	<4.3	<17.2	NA	NA
	3/11/2005	81	<0.5	<0.5	<2.0	NA	NA
	6/15/2005	<10	<0.5	<0.5	<2.0	NA	NA
	8/26/2005	68.9	<2.15	<2.15	<8.6	NA	NA
	11/11/2005	46	<2.15	<2.15	<8.6	NA	NA
	2/9/2006	11.3	<0.5	<0.5	<2.0	NA	NA
	5/9/2006	<10	<0.5	<0.5	<2.0	0.51	<0.5
	8/10/2006	<43	<2.15	<2.15	<8.60	3.37	<2.15
	10/26/2006	39.4	<1.0	<1.0	<4.0	2.92	<1.0
	1/25/2007	41.4	<0.5	<0.5	<2.0	1.36	<0.5
	4/26/2007	39.6	<0.5	<0.5	<2.0	<0.5	<0.5
	7/25/2007	46.5	<1.0	<1.0	<4.0	<1.0	<1.0
	10/23/2007	53.7	<0.5	<0.5	<2.0	<0.5	<0.5
	1/22/2008	23.8	<0.5	<0.5	2.16	<0.5	<0.5
	4/16/2008	8.36	<0.5	<0.5	<2.0	164	<0.5
	7/3/2008	30.5	<0.5	<0.5	<2.0	1.08	<0.5
	10/15/2008	<20	<1.0	<1.0	<1.0	<1.0	<1.0
	1/7/2009	<25	<1.3	<1.3	<1.3	<1.3	<1.3
	4/14/2009	15	<0.5	<0.5	<0.5	<0.5	<0.5
	8/27/2009	<40	<2.0	<2.0	<2.0	<2.0	<2.0
	12/2/2009	<40	<2.0	<2.0	<2.0	<2.0	<2.0
	3/17/2010	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	6/3/2010	26	<0.5	<0.5	<0.5	<0.5	<0.5
	9/2/2010	<100	<5.0	<5.0	<5.0	<5.0	<5.0
	12/2/2010	<63	<3.1	<3.1	<3.1	<3.1	<3.1
	3/4/2011	40	<0.5	<0.5	<0.5	<0.5	<0.5
	5/20/2011	<71	<3.6	<3.6	<3.6	<3.6	<3.6
	9/9/2011	33	<1.3	<1.3	<1.3	<1.3	<1.3
	12/2/2011	49	<3.2	<3.5	<2.8	<2.4	<1.7
	3/2/2012	<50	<2.5	<2.5	<2.5	<2.5	<2.5
	6/7/2012	<50	<2.5	<2.5	<2.5	<2.5	<2.5
	9/21/2012	<50	<2.5	<2.5	<2.5	<2.5	<2.5
	12/14/2012	<50	<2.5	<2.5	<2.5	<2.5	<2.5
	3/28/2013	<50	<2.5	<2.5	<2.5	<2.5	<2.5
	6/11/2013	<50	<2.5	<2.5	<2.5	<2.5	<2.5
	9/17/2013	<50	<2.5	<2.5	<2.5	<2.5	<2.5
	12/6/2013	<33	<1.7	<1.7	<1.7	<1.7	<1.7
	3/13/2014	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	6/6/2014	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	9/23/2014	<33	<1.7	<1.7	<1.7	<1.7	<1.7
	12/23/2014	4.7 J	<0.5	<0.5	<0.5	<0.5	<0.5
	3/20/2015	11	<0.5	<0.5	<0.5	<0.5	<0.5
	6/4/2015	14 J	<0.71	<0.71	<0.71	<0.71	<0.71
	9/11/2015	<33	<1.7	<1.7	<1.7	<1.7	<1.7
	12/2/2015	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	3/23/2016	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	6/15/2016	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	9/21/2016	17	<0.5	<0.5	<0.5	<0.5	<0.5
	12/14/2016	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	3/13/2017	<10	<0.5	<0.5	<0.5	<0.5	<0.5
MW-2	8/8/2002	21	<0.5	<0.5	<0.5	NA	NA
	11/1/2002	15	<0.5	<0.5	<0.5	NA	NA
	2/21/2003	12	<0.5	<0.5	<0.5	NA	NA
	5/28/2003	31	<0.5	<0.5	<0.5	NA	NA
	8/12/2003	69	<0.8	<0.8	<0.8	NA	NA
	10/9/2003	12	<0.5	<0.5	<0.5	NA	NA

**Table 2**  
**Historical Gasoline Oxygenates Results**  
**15101 Freedom Avenue, San Leandro, CA**

Monitoring Well	Date	TBA ( $\mu\text{g/L}$ )	DIPE ( $\mu\text{g/L}$ )	ETBE ( $\mu\text{g/L}$ )	TAME ( $\mu\text{g/L}$ )	1,2-DCA ( $\mu\text{g/L}$ )	EDB ( $\mu\text{g/L}$ )
MW-2 cont.	1/15/2004	<10	<0.5	<0.5	<0.5	NA	NA
	5/25/2004	14	<0.5	<0.5	<0.5	NA	NA
	9/21/2004	<10	<0.5	<0.5	<0.5	NA	NA
	12/14/2004	<2.5	<0.5	<0.5	<2.0	NA	NA
	3/11/2005	<2.5	<0.5	<0.5	<2.0	NA	NA
	6/15/2005	<10	<0.5	<0.5	<2.0	NA	NA
	8/26/2005	<10	<0.5	<0.5	<2.0	NA	NA
	11/11/2005	<10	<0.5	<0.5	<2.0	NA	NA
	2/9/2006	<10	<0.5	<0.5	<2.0	NA	NA
	5/9/2006	<10	<0.5	<0.5	<2.0	<0.5	<0.5
	8/10/2006	<10	<0.5	<0.5	<2.0	<0.5	<0.5
	10/26/2006	<10	<0.5	<0.5	<2.0	<0.5	<0.5
	1/25/2007	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
	4/26/2007	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
	7/25/2007	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
	10/23/2007	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
	1/22/2008	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
	4/15/2008	<2.0	<0.5	<0.5	<2.0	2.44	<0.5
	7/2/2008	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
	10/15/2008	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	1/7/2009	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	4/13/2009	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	8/27/2009	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	12/1/2009	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	3/17/2010	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	6/3/2010	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	9/2/2010	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	12/2/2010	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	3/4/2011	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	5/20/2011	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	9/9/2011	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	12/2/2011	<13	<3.2	<3.5	<2.8	<2.4	<1.7
	3/2/2012	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	6/7/2012	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	9/21/2012	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	12/14/2012	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	3/28/2013	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	6/11/2013	150	<0.5	1.6	<0.5	<0.5	<0.5
	9/16/2013	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	12/6/2013	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	3/13/2014	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	6/6/2014	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	9/23/2014	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	12/23/2014	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	3/20/2015	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	6/4/2015	<1.7	<0.5	<0.5	<0.5	<0.5	<0.5
	9/11/2015	<20	<1.0	<1.0	<1.0	<1.0	<1.0
	12/2/2015	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	3/23/2016	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	6/15/2016	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	9/21/2016	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	12/14/2016	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	3/13/2017	<10	<0.5	<0.5	<0.5	<0.5	<0.5
MW-3	8/8/2002	<330	<8.3	<8.3	330	NA	NA
	11/1/2002	85	<1.3	<1.3	220	NA	NA
	2/21/2003	140	<5.0	<5.0	320	NA	NA
	5/28/2003	520	<10	<10	530	NA	NA
	8/12/2003	180	<4.2	<4.2	270	NA	NA
	10/9/2003	<170	<8.3	<8.3	200	NA	NA
	1/15/2004	<100	<5.0	<5.0	150	NA	NA
	5/25/2004	<100	<5.0	<5.0	270	NA	NA
	9/21/2004	<140	<7.1	<7.1	110	NA	NA
	12/14/2004	<100	<20	<20	154	NA	NA
	3/11/2005	<215	<43	<43	256	NA	NA
	6/15/2005	<215	<10.8	<10.8	374	NA	NA
	8/26/2005	699	<21.5	<21.5	277	NA	NA
	11/11/2005	<430	<21.5	<21.5	171	NA	NA

**Table 2**  
**Historical Gasoline Oxygenates Results**  
**15101 Freedom Avenue, San Leandro, CA**

Monitoring Well	Date	TBA ( $\mu\text{g/L}$ )	DIPE ( $\mu\text{g/L}$ )	ETBE ( $\mu\text{g/L}$ )	TAME ( $\mu\text{g/L}$ )	1,2-DCA ( $\mu\text{g/L}$ )	EDB ( $\mu\text{g/L}$ )
MW-3 cont.	2/9/2006	<430	<21.5	620	NA	NA	
	5/9/2006	367	<10.8	594	<10.8	<10.8	
	8/10/2006	365	<10.8	727	<10.8	<10.8	
	10/26/2006	591	<10.8	899	<10.8	<10.8	
	1/25/2007	711	<10.8	768	<10.8	<10.8	
	4/26/2007	690	<10.8	369	<10.8	<10.8	
	7/25/2007	1,340	<10.8	565	<10.8	<10.8	
	10/23/2007	1,050	<21.5	301	<21.5	<21.5	
	1/22/2008	373	<10.8	170	<0.5	<0.5	
	4/16/2008	881	<5.50	<22.0	1,850	12.1	
	7/3/2008	426	<10.8	124	<10.8	<10.8	
	10/16/2008	<400	<20	<20	<20	<20	
	1/8/2009	<500	<25	<25	<25	<25	
	4/13/2009	<500	<25	<25	<25	<25	
	8/27/2009	<500	<25	<25	<25	<25	
	12/2/2009	270	<13	<13	<13	<13	
	3/17/2010	<250	<13	<13	<13	<13	
	6/3/2010	<250	<13	<13	<13	<13	
	9/2/2010	<250	<13	<13	<13	<13	
	12/2/2010	<130	<6.3	<6.3	<6.3	<6.3	
	3/4/2011	<170	<8.3	<8.3	<8.3	<8.3	
	5/20/2011	<130	<6.3	<6.3	<6.3	<6.3	
	9/9/2011	<140	<7.1	<7.1	<7.1	<7.1	
	12/2/2011	<6.6	<1.6	<1.7	<1.4	<1.2	<0.86
	3/2/2012	<100	<5.0	<5.0	<5.0	<5.0	<5.0
	6/7/2012	<100	<5.0	<5.0	<5.0	<5.0	<5.0
	9/21/2012	<100	<5.0	<5.0	<5.0	<5.0	<5.0
	12/14/2012	<100	<5.0	<5.0	<5.0	<5.0	<5.0
	3/28/2013	<100	<5.0	<5.0	<5.0	<5.0	<5.0
	6/11/2013	<100	<5.0	<5.0	<5.0	<5.0	<5.0
	9/17/2013	<200	<10	<10	<10	<10	<10
	12/6/2013	<200	<10	<10	<10	<10	<10
	3/12/2014	FP	FP	FP	FP	FP	
	6/5/2014	FP	FP	FP	FP	FP	
	9/23/2014	<200	<10	<10	<10	<10	<10
	12/23/2014	<71	<3.6	<3.6	<3.6	<3.6	<3.6
	3/20/2015	29 J	<3.6	<3.6	<3.6	<3.6	<3.6
	6/4/2015	<17	<6.3	<6.3	<6.3	<6.3	<6.3
	9/11/2015	<130	<6.3	<6.3	<6.3	<6.3	<6.3
	12/29/2015	<100	<5	<5	<5	<5	<5
	3/24/2016	60	<1.3	<1.3	<1.3	<1.3	<1.3
	6/16/2016	38	<0.5	<0.5	<0.5	<0.5	<0.5
	9/21/2016	140	<2.5	<2.5	<2.5	<2.5	<2.5
	12/14/2016	<14	<0.71	<0.71	<0.71	<0.71	<0.71
	1/18/2017	11	<0.5	<0.5	<0.5	<0.5	<0.5
	2/24/2017	38	<0.71	<0.71	<0.71	<0.71	<0.71
	3/13/2017	<20	<1.0	<1.0	<1.0	<1.0	<1.0
MW-4	8/8/2002	1500	<17	<17	18	NA	NA
	11/1/2002	580	<5.0	6	13	NA	NA
	2/21/2003	1600	<20	22	<20	NA	NA
	5/28/2003	690	<8.3	<8.3	17	NA	NA
	8/12/2003	550	<7.1	7.3	18	NA	NA
	10/9/2003	1400	<31	50	<31	NA	NA
	1/15/2004	1,300	<20	25	21	NA	NA
	5/25/2004	560	<8.3	<8.3	24	NA	NA
	9/21/2004	1,300	<50	<50	<50	NA	NA
	12/14/2004	826	<10.75	21	49	NA	NA
	3/11/2005	1,110	<10.8	12.1	<43	NA	NA
	6/15/2005	<110	<5.5	<5.5	22.9	NA	NA
	8/26/2005	902	<5.50	<5.50	37.4	NA	NA
	11/11/2005	884	<10.8	<10.8	<43	NA	NA
MW-4	2/9/2006	769	<10.8	16.4	45.6	NA	NA
	5/9/2006	405	<2.15	2.95	31.3	<2.15	<2.15
	8/10/2006	306	<2.15	<2.15	35.3	<2.15	<2.15
	10/26/2006	3430	<10.8	13.8	<43	<10.8	<10.8
	1/25/2007	822	<2.15	2.4	28	2.25	<2.15
	4/26/2007	556	<2.15	2.28	29.2	<2.15	<2.15
	7/25/2007	1,860	<2.15	9.94	24	<2.15	<2.15
	10/23/2007	3,400	<2.15	18.4	25.9	<2.15	<2.15

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**Historical Gasoline Oxygenates Results**  
**15101 Freedom Avenue, San Leandro, CA**

Monitoring Well	Date	TBA ( $\mu\text{g/L}$ )	DIPE ( $\mu\text{g/L}$ )	ETBE ( $\mu\text{g/L}$ )	TAME ( $\mu\text{g/L}$ )	1,2-DCA ( $\mu\text{g/L}$ )	EDB ( $\mu\text{g/L}$ )
MW-4 cont.	1/22/2008	2,580	<5.0	64.7	<22	<0.5	<0.5
	4/15/2008	1,100	<5.50	11.7	<22	39.9	<5.50
	7/2/2008	8,720	<5.50	75.2	<22	<5.50	<5.50
	10/16/2008	700	<3.6	4.2	37	5.4	<3.6
	1/8/2009	1,500	<3.6	9.9	41	3.6	<3.6
	4/13/2009	1,100	<8.3	<8.3	28	<8.3	<8.3
	8/27/2009	4,900	<5.0	24	<5.0	<5.0	<5.0
	12/2/2009	6,800	<5.0	69	<5.0	<5.0	<5.0
	3/17/2010	1,900	<3.6	18	<3.6	<3.6	<3.6
	6/3/2010	930	<3.6	7.7	<3.6	<3.6	<3.6
	9/2/2010	7,200	<3.6	57	<3.6	<3.6	<3.6
	12/2/2010	3,800	<10	30	<10	<10	<10
	3/3/2011	410	<0.71	3.2	<0.71	<0.71	<0.71
	5/19/2011	130	<0.5	1.4	<0.5	<0.5	<0.5
	9/8/2011	380	<0.5	3.5	<0.5	1.1	<0.5
	12/1/2011	790	<1.6	5.4	8.2	<1.2	<0.86
	3/2/2012	920	<2.0	5.9	24	<2.0	<2.0
	6/7/2012	1,000	<2.5	13	<2.5	<2.5	<2.5
	9/21/2012	1,300	<2.5	14	<2.5	<2.5	<2.5
	12/14/2012	36	<0.5	0.65	<0.5	<0.5	<0.5
	3/28/2013	2,500	<5.0	29	<5.0	<5.0	<5.0
	6/11/2013	890	<5.0	12	<5.0	<5.0	<5.0
	9/17/2013	1,100	<10	<10	<10	<10	<10
	12/6/2013	1,500	<10	<10	<10	<10	<10
	3/13/2014	190	<6.3	<6.3	<6.3	<6.3	<6.3
	6/6/2014	360	<6.3	<6.3	<6.3	<6.3	<6.3
	9/23/2014	1,100	<6.3	6.3	<6.3	<6.3	<6.3
	12/23/2014	8.1 J	<0.5	<0.5	<0.5	<0.5	<0.5
	3/20/2015	29	<0.5	<0.5	<0.5	<0.5	<0.5
	6/4/2015	62	<0.5	0.62	<0.5	<0.5	<0.5
	9/11/2015	82	<1.0	<1.0	<1.0	<1.0	<1.0
	12/29/2015	32	<0.5	<0.5	1.4	<0.5	<0.5
	3/23/2016	14	<0.5	<0.5	0.88	<0.5	<0.5
	6/16/2016	230	<0.5	4.7	<0.5	<0.5	<0.5
	9/21/2016	130	<0.5	2.0	4.7	<0.5	<0.5
	12/14/2016	16	<0.5	<0.5	<0.5	<0.5	<0.5
	3/13/2017	<10	<0.5	<0.5	<0.5	<0.5	<0.5
MW-5	8/8/2002	<250	<6.3	<6.3	510	NA	NA
	11/1/2002	66	<2.0	<2.0	560	NA	NA
	2/21/2003	<63	<3.1	<3.1	280	NA	NA
	5/28/2003	<33	<1.7	<1.7	110	NA	NA
	8/12/2003	130	<3.6	<3.6	270	NA	NA
	10/9/2003	<100	<5.0	<5.0	740	NA	NA
	1/15/2004	<63	<3.1	<3.1	300	NA	NA
	5/25/2004	<100	<5.0	<5.0	210	NA	NA
	9/21/2004	<130	<6.3	<6.3	550	NA	NA
	12/14/2004	40	<5.5	<5.5	444	NA	NA
	3/11/2005	88.8	<5.5	<5.5	448	NA	NA
	6/15/2005	<43	<2.15	<2.15	88.1	NA	NA
	8/26/2005	274	<5.50	<5.50	195	NA	NA
	11/11/2005	192	<5.50	<5.50	360	NA	NA
	2/9/2006	218	<5.50	<5.50	523	NA	NA
	5/9/2006	91.8	<2.15	<2.15	163	<2.15	<2.15
	8/10/2006	138	<5.50	<5.50	342	<5.50	<5.50
	10/26/2006	322	<5.50	<5.50	712	<5.50	<5.50
	1/25/2007	878	<5.50	<5.50	552	<5.50	<5.50
	4/26/2007	708	<2.15	<2.15	310	<2.15	<2.15
	7/25/2007	1,020	<2.15	<2.15	356	<2.15	<2.15
	10/23/2007	1,510	<2.15	<2.15	181	<2.15	<2.15
	1/22/2008	470	<0.5	4.56	62.1	<0.5	<0.5
	4/15/2008	566	<1.0	<1.0	29.6	231	5.66
	7/3/2008	2,320	<2.15	<2.15	53.3	<2.15	<2.15
	10/16/2008	990	<5.0	<5.0	82	<5.0	<5.0
	1/8/2009	360	<6.3	<6.3	51	<6.3	<6.3
	4/13/2009	280	<3.1	<3.1	<3.1	<3.1	<3.1
	8/27/2009	1,300	<5.0	<5.0	<5.0	<5.0	<5.0
	12/2/2009	320	<5.0	<5.0	25	<5.0	<5.0

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<b>MW-5 cont.</b>							
Pre- MPE	3/17/2010 6/4/2010 9/2/2010 12/2/2010	570 340 320 200	<1.0 <1.0 <2.5 <3.1	<1.0 <1.0 <2.5 <3.1	<1.0 <1.0 13 <3.1	<1.0 <1.0 <2.5 <3.1	<1.0 <1.0 <2.5 <3.1
	3/4/2011 5/20/2011 8/4/2011 9/9/2011 12/2/2011	180 480 110 260 95	<0.5 <1.0 <0.71 <1.0 <3.2	<0.5 <1.0 <0.71 <1.0 <3.5	<0.5 <1.0 2.6 11 14	<0.5 <1.0 <0.71 <1.0 <2.4	<0.5 <1.0 <0.71 <1.0 <1.7
	3/2/2012 6/7/2012 9/21/2012 12/14/2012	59 22 66 <20	<1.0 <1.0 <1.0 <1.0	<1.0 <1.0 <1.0 <1.0	4.1 2.8 <1.0 4.2	<1.0 <1.0 <1.0 <1.0	<1.0 <1.0 <1.0 <1.0
	3/28/2013 6/11/2013 9/17/2013 12/6/2013	<20 <20 20 <20	<1.0 <1.0 <1.0 <1.0	<1.0 <1.0 <1.0 <1.0	<1.0 2.5 5.7 3.9	<1.0 <1.0 <1.0 <1.0	<1.0 <1.0 <1.0 <1.0
	3/13/2014 6/6/2014 9/23/2014 12/23/2014	<20 <10 <10 <10	<1.0 <0.5 <0.5 <0.5	<1.0 <0.5 <0.5 <0.5	2.2 0.81 <0.5 <0.5	<1.0 <0.5 <0.5 <0.5	<1.0 <0.5 <0.5 <0.5
	3/20/2015 6/4/2015 9/11/2015 12/29/2015	3.1 J <1.3 <10 <10	<0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5
	3/23/2016 6/16/2016 9/21/2016 12/14/2016	19 <10 <10 <10	<0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5	<0.5 <0.5 0.94 <0.5	<0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5
	3/13/2017	52	<0.5	<0.5	<0.5	<0.5	<0.5
<b>MW-6</b>							
	9/21/2004 12/14/2004	<10 <5.5	<0.5 <5.5	<0.5 <5.5	<0.5 <22	NA	NA
	3/11/2005 6/15/2005 8/26/2005 11/11/2005	2.54 <20 <43 <43	<0.5 <1.0 <2.15 <2.15	<0.5 <1.0 <2.15 <2.15	<2.0 <4.0 <8.6 <8.6	NA	NA
	2/9/2006 5/9/2006 8/10/2006 10/26/2006	<43 <10 <10 <10	<2.15 <0.5 <0.5 <0.5	<2.15 <0.5 <0.5 <0.5	<8.6 <2.0 <2.0 <2.0	NA	NA
	1/25/2007 4/26/2007 7/25/2007 10/23/2007	<2.0 7.21 5.66 6.68	<0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5	<2.0 <2.0 <2.0 <2.0	<0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5
	1/21/2008 4/15/2008 7/2/2008 10/15/2008	13.9 <2.0 4.54 <10	<0.5 <0.5 <0.5 <0.5	<0.5 <0.5 <0.5 <0.5	<2.0 <2.0 <2.0 <2.0	<0.5 6.78 <0.5 <0.5	<0.5 1.49 <0.5 <0.5
	1/7/2009 4/13/2009 8/26/2009 12/1/2009	<63 <25 <40 <40	<3.1 <1.3 <2.0 <2.0	<3.1 <1.3 <2.0 <2.0	<3.1 <1.3 <2.0 <2.0	<3.1 <1.3 <2.0 <2.0	<3.1 <1.3 <2.0 <2.0
	3/16/2010 6/3/2010 9/1/2010 12/2/2010	<40 <40 <200 <330	<2.0 <2.0 <10 <17	<2.0 <2.0 <10 <17	<2.0 <2.0 <10 <17	<2.0 <2.0 <10 <17	<2.0 <2.0 <10 <17
	3/3/2011 5/20/2011 9/8/2011 12/1/2011	<50 <50 <50 NA	<2.5 <2.5 <2.5 NA	<2.5 <2.5 <2.5 NA	<2.5 <2.5 <2.5 NA	<2.5 <2.5 <2.5 NA	<2.5 <2.5 <2.5 NA
	3/2/2012 6/6/2012 9/20/2012 12/13/2012	<83 <33 NA 29	<4.2 <1.7 NA <0.71	<4.2 <1.7 NA <0.71	<4.2 <1.7 NA <0.71	<4.2 <1.7 NA <0.71	<4.2 <1.7 NA <0.71

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<b>MW-6 cont.</b>	3/27/2013	<25	<1.3	<1.3	<1.3	<1.3	<1.3
	6/10/2013	<50	<2.5	<2.5	<2.5	<2.5	<2.5
	9/16/2013	FP	FP	FP	FP	FP	FP
	12/5/2013	270	<2.5	<2.5	<2.5	<2.5	<2.5
	3/12/2014	<50	<2.5	<2.5	<2.5	<2.5	<2.5
	6/5/2014	<50	<2.5	<2.5	<2.5	<2.5	<2.5
	9/22/2014	160	<2.5	<2.5	<2.5	<2.5	<2.5
	12/22/2014	13 J	<0.5	<0.5	<0.5	<0.5	<0.5
	3/19/2015	4.1 J	<0.5	<0.5	<0.5	<0.5	<0.5
	6/3/2015	<1.3	<0.5	<0.5	<0.5	<0.5	<0.5
	9/10/2015	<100	<5.0	<5.0	<5.0	<5.0	<5.0
	12/28/2015	<20	<1.0	<1.0	<1.0	<1.0	<1.0
	3/24/2016	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	6/16/2016	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	9/21/2016	<20	<1.0	<1.0	<1.0	<1.0	<1.0
	12/15/2016	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	3/13/2017	<10	<0.5	<0.5	<0.5	<0.5	<0.5
<b>MW-7</b>	9/21/2004	<10	<0.5	<0.5	1.5	NA	NA
	12/14/2004	<2.5	<0.5	<0.5	<2.0	NA	NA
	3/11/2005	<12.5	<2.5	<2.5	<10	NA	NA
	6/15/2005	<10	<0.5	<0.5	2.23	NA	NA
	8/26/2005	<10	<0.5	<0.5	<2.0	NA	NA
	11/11/2005	<10	<0.5	<0.5	<2.0	NA	NA
	2/9/2006	NA	NA	NA	NA	NA	NA
	5/9/2006	<10	<0.5	<0.5	<2.0	<0.5	<0.5
	8/10/2006	<10	<0.5	<0.5	<2.0	<0.5	<0.5
	10/26/2006	<10	<0.5	<0.5	<2.0	<0.5	<0.5
	1/25/2007	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
	4/26/2007	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
	7/25/2007	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
	10/23/2007	6.49	<0.5	<0.5	2.58	<0.5	<0.5
	1/21/2008	<2.0	<0.5	<0.5	6.01	<0.5	<0.5
	4/15/2008	8.8	<0.5	<0.5	<2.0	<0.5	1.26
	7/2/2008	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
	10/15/2008	<10	<0.5	<0.5	14	<0.5	<0.5
	1/7/2009	<10	<0.5	<0.5	11	<0.5	<0.5
	4/13/2009	<10	<0.5	<0.5	16	<0.5	<0.5
	8/26/2009	<33	<0.5	<0.5	33	<0.5	<0.5
	12/1/2009	<10	<0.5	<0.5	30	<0.5	<0.5
	3/16/2010	11	<0.5	<0.5	<0.5	<0.5	<0.5
	6/3/2010	20	<0.5	<0.5	7.1	<0.5	<0.5
	9/1/2010	47	<0.5	<0.5	7.2	<0.5	<0.5
	12/2/2010	22	<0.5	<0.5	4.9	<0.5	<0.5
	3/4/2011	14	<0.5	<0.5	4.0	<0.5	<0.5
	5/19/2011	<10	<0.5	<0.5	2.1	<0.5	<0.5
	9/8/2011	<10	<0.5	<0.5	1.6	<0.5	<0.5
	12/1/2011	15	<0.36	<0.40	2.4	<0.28	<0.19
	3/2/2012	<10	<0.5	<0.5	0.82	<0.5	<0.5
	6/6/2012	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	9/20/2012	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	12/13/2012	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	3/27/2013	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	6/10/2013	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	9/16/2013	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	12/5/2013	<10	<0.5	<0.5	0.73	<0.5	<0.5
	3/12/2014	<10	<0.5	<0.5	0.64	<0.5	<0.5
	6/5/2014	<10	<0.5	<0.5	0.76	<0.5	<0.5
	9/22/2014	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	12/22/2014	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	3/19/2015	3.0 J	<0.5	<0.5	0.68	<0.5	<0.5
	6/3/2015	<1.3	<0.5	<0.5	<0.5	<0.5	<0.5
	9/10/2015	<33	<1.7	<1.7	<1.7	<1.7	<1.7
	12/28/2015	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	3/24/2016	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	6/16/2016	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	9/21/2016	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	12/15/2016	<10	<0.5	<0.5	<0.5	<0.5	<0.5

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MW-7 cont.	3/14/2017	<10	<0.5	<0.5	<0.5	<0.5	<0.5
<b>MW-8</b>							
9/21/2004	<10	<0.5	<0.5	<0.5	NA	NA	
12/14/2004	<2.5	<0.5	<0.5	<2.0	NA	NA	
3/11/2005	NA	NA	NA	NA	NA	NA	
6/15/2005	<10	<0.5	<0.5	<2.0	NA	NA	
8/26/2005	<10	<0.5	<0.5	<2.0	NA	NA	
11/11/2005	<10	<0.5	<0.5	<2.0	NA	NA	
2/9/2006	<10	<0.5	<0.5	<2.0	NA	NA	
5/9/2006	<10	<0.5	<0.5	<2.0	<0.5	<0.5	
8/10/2006	<10	<0.5	<0.5	<2.0	<0.5	<0.5	
10/26/2006	<10	<0.5	<0.5	<2.0	<0.5	<0.5	
1/25/2007	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5	
4/26/2007	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5	
7/25/2007	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5	
10/23/2007	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5	
1/21/2008	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5	
4/15/2008	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5	
7/2/2008	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5	
10/15/2008	<10	<0.5	<0.5	<0.5	<0.5	<0.5	
1/7/2009	<10	<0.5	<0.5	<0.5	<0.5	<0.5	
4/13/2009	<10	<0.5	<0.5	<0.5	<0.5	<0.5	
8/27/2009	<10	<0.5	<0.5	<0.5	<0.5	<0.5	
Well Decommissioned 11/13/2009							
<b>MW-9</b>							
9/21/2004	<10	<0.5	<0.5	<0.5	NA	NA	
12/14/2004	<2.5	<0.5	<0.5	<2.0	NA	NA	
3/11/2005	<2.5	<0.5	<0.5	<2.0	NA	NA	
6/15/2005	<10	<0.5	<0.5	<2.0	NA	NA	
8/26/2005	<10	<0.5	<0.5	<2.0	NA	NA	
11/11/2005	<10	<0.5	<0.5	<2.0	NA	NA	
2/9/2006	<10	<0.5	<0.5	<2.0	NA	NA	
5/9/2006	<10	<0.5	<0.5	<2.0	2.8	<0.5	
8/10/2006	<10	<0.5	<0.5	<2.0	1.83	<0.5	
10/26/2006	<10	<0.5	<0.5	<2.0	3.07	<0.5	
1/25/2007	<2.0	<0.5	<0.5	<2.0	2.92	<0.5	
4/26/2007	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5	
7/25/2007	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5	
10/23/2007	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5	
1/21/2008	<2.0	<0.5	<0.5	<2.0	1.18	<0.5	
4/15/2008	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5	
7/2/2008	<2.0	<0.5	<0.5	<2.0	2.07	<0.5	
10/15/2008	<10	<0.5	<0.5	<0.5	1.5	<0.5	
1/7/2009	<10	<0.5	<0.5	<0.5	1.4	<0.5	
4/13/2009	<10	<0.5	<0.5	<0.5	0.97	<0.5	
8/26/2009	<10	<0.5	<0.5	<0.5	2.6	<0.5	
Well Decommissioned 11/13/2009							
<b>MW-10</b>							
9/22/2014	<200	<10	<10	<10	<10	<10	<10
12/22/2014	30 J	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
3/19/2015	85	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
6/3/2015	170 J	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0
9/10/2015	<200	<10	<10	<10	<10	<10	<10
12/28/2015	<200	<10	<10	<10	<10	<10	<10
3/24/2016	140	<5	<5	<5	<5	<5	<5
<b>MW-10R</b>							
6/15/2016	<200	<10	<10	<10	<10	<10	<10
8/8/2016	91	<4.2	<4.2	<4.2	<4.2	<4.2	<4.2
9/21/2016	100	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
12/15/2016	<40	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1/18/2017	85	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
2/24/2017	<50	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5
3/14/2017	10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
<b>MW-11</b>							
9/22/2014	69	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
12/22/2014	15	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
3/19/2015	3.5 J	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
6/3/2015	<2.1	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
9/10/2015	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
12/28/2015	<10	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5

**Table 2**  
**Historical Gasoline Oxygenates Results**  
**15101 Freedom Avenue, San Leandro, CA**

Monitoring Well	Date	TBA ( $\mu\text{g/L}$ )	DIPE ( $\mu\text{g/L}$ )	ETBE ( $\mu\text{g/L}$ )	TAME ( $\mu\text{g/L}$ )	1,2-DCA ( $\mu\text{g/L}$ )	EDB ( $\mu\text{g/L}$ )
MW-11 cont.	3/23/2016	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	6/16/2016	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	9/21/2016	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	12/15/2016	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	3/14/2017	<10	<0.5	<0.5	<0.5	<0.5	<0.5
<hr/>							
EX-1	12/2/2009	150	<1.3	<1.3	<1.3	<1.3	<1.3
	3/16/2010	980	<1.3	2.4	27	<1.3	<1.3
	6/3/2010	570	<1.3	1.9	<1.3	<1.3	<1.3
	9/1/2010	470	<0.5	1.4	2	<0.5	<0.5
	12/2/2010	1,300	<2.0	3.6	15	<2.0	<2.0
	3/3/2011	690	<0.71	2.5	12	<0.71	<0.71
	5/19/2011	370	<0.71	1.9	13	<0.71	<0.71
	9/8/2011	32	<0.5	<0.5	0.53	<0.5	<0.5
	12/1/2011	1,200	<1.6	8.3	6.8	<1.2	<0.86
	3/2/2012	31	<0.5	<0.5	<0.5	<0.5	<0.5
	6/6/2012	390	<0.5	2.9	4.8	0.57	<0.5
	9/20/2012	170	<0.5	1.5	<0.5	<0.5	<0.5
	12/13/2012	210	<0.5	2.7	5.2	<0.5	<0.5
	3/27/2013	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	6/10/2013	280	<0.5	4.0	1.6	<0.5	<0.5
	9/16/2013	450	<0.5	2.4	1.9	<0.5	<0.5
	12/5/2013	230	<0.5	1.7	5.5	<0.5	<0.5
	3/12/2014	48	<0.5	0.77	3.1	<0.5	<0.5
	6/5/2014	70	<0.5	1.1	3.9	0.69	<0.5
	9/22/2014	96	<0.5	0.94	5.6	<0.5	<0.5
	12/22/2014	91	<0.5	0.84	<0.5	<0.5	<0.5
	3/19/2015	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	6/3/2015	35	<0.5	1.4	<0.5	<0.5	<0.5
	9/10/2015	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	12/28/2015	38	<0.5	0.7	2.4	<0.5	<0.5
	3/24/2016	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	6/15/2016	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	9/21/2016	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	12/14/2016	15	<0.5	0.81	<0.5	<0.5	<0.5
	3/14/2017	<10	<0.5	<0.5	<0.5	<0.5	<0.5
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EX-2	12/2/2009	<63	<3.1	<3.1	<3.1	<3.1	<3.1
	3/16/2010	<100	<5.0	<5.0	<5.0	<5.0	<5.0
	6/3/2010	<100	<5.0	<5.0	<5.0	<5.0	<5.0
	9/1/2010	<50	<2.5	<2.5	<2.5	<2.5	<2.5
	12/2/2010	<100	<5.0	<5.0	<5.0	<5.0	<5.0
	3/3/2011	<100	<5.0	<5.0	<5.0	<5.0	<5.0
	5/19/2011	<100	<5.0	<5.0	<5.0	<5.0	<5.0
	9/8/2011	<25	<1.3	<1.3	<1.3	<1.3	<1.3
	12/1/2011	74	<3.2	<3.5	<2.8	<2.4	<1.7
	3/2/2012	<25	<1.3	<1.3	<1.3	<1.3	<1.3
	6/6/2012	<33	<1.7	<1.7	<1.7	<1.7	<1.7
	9/20/2012	<33	<1.7	<1.7	<1.7	<1.7	<1.7
	12/13/2012	<71	<3.6	<3.6	<3.6	<3.6	<3.6
	3/27/2013	<20	<1.0	<1.0	<1.0	<1.0	<1.0
	6/10/2013	32	<1.0	<1.0	<1.0	<1.0	<1.0
	9/20/2013	<20	<1.0	<1.0	<1.0	1.4	<1.0
	12/5/2013	30	<1.0	<1.0	<1.0	1.2	<1.0
	3/12/2014	<40	<2.0	<2.0	<2.0	<2.0	<2.0
	6/5/2014	<40	<2.0	<2.0	<2.0	<2.0	<2.0
	9/22/2014	<10	<0.5	<0.5	<0.5	1.1	<0.5
	12/22/2014	37	<0.5	<0.5	<0.5	0.8	<0.5
	3/19/2015	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	6/3/2015	17 J	<1.0	<1.0	<1.0	<1.0	<1.0
	9/10/2015	<20	<1.0	<1.0	<1.0	<1.0	<1.0
	12/28/2015	<20	<1.0	<1.0	<1.0	<1.0	<1.0
	3/24/2016	<10	<0.5	<0.5	<0.5	<0.5	<0.5
<hr/>							
MPE Wells							
MPE-1	8/4/2011	<500	<25	<25	<25	<25	<25
	9/26/2011	<500	<25	<25	600	<25	<25
	12/2/2011	830	<32	<35	750	<24	<17

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MPE-1 cont.	3/2/2012	<710	<36	<36	1,200	<36	<36
	6/6/2012	<630	<31	<31	430	<31	<31
	9/20/2012	<1,300	<63	<63	1,200	<63	<63
	12/14/2012	<1,300	<63	<63	940	<63	<63
	3/27/2013	<710	<36	<36	890	<36	<36
	6/10/2013	660	<13	<13	380	<13	<13
	9/17/2013	1,400	<13	<13	<13	<13	<13
	12/6/2013	1,500	<20	<20	30	<20	<20
	3/13/2014	1,100	<20	<20	160	<20	<20
	6/5/2014	FP	FP	FP	FP	FP	FP
	9/23/2014	420	<3.6	3.7	24	<3.6	<3.6
	12/23/2014	<20	<1.0	<1.0	<1.0	<1.0	<1.0
	3/20/2015	<50	<2.5	<2.5	<2.5	<2.5	<2.5
	6/4/2015	<13	<5.0	<5.0	9.2	<5.0	<5.0
	9/11/2015	<100	<5.0	<5.0	85	<5.0	<5.0
	12/29/2015	<10	<0.5	<0.5	1.6	<0.5	<0.5
	3/24/2016	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	6/16/2016	<10	<0.5	<0.5	0.67	<0.5	<0.5
	9/21/2016	<10	<0.5	<0.5	1.10	<0.5	<0.5
	12/14/2016	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	3/13/2017	<10	<0.5	<0.5	<0.5	<0.5	<0.5
MPE-2	8/4/2011	<330	<17	<17	<17	<17	<17
	9/26/2011	<330	<17	<17	<17	<17	<17
	12/2/2011	<66	<16	<17	<14	<12	<8.6
	3/2/2012	<330	<17	<17	<17	<17	<17
	6/7/2012	<250	<13	<13	<13	<13	<13
	9/21/2012	<250	<13	<13	<13	<13	<13
	12/14/2012	<250	<13	<13	<13	<13	<13
	3/28/2013	<400	<20	<20	<20	<20	<20
	6/11/2013	<250	<13	<13	<13	<13	<13
	9/17/2013	<250	<13	<13	<13	<13	<13
	12/5/2013	FP	FP	FP	FP	FP	FP
	3/12/2014	FP	FP	FP	FP	FP	FP
	6/5/2014	FP	FP	FP	FP	FP	FP
	9/23/2014	<130	<6.3	<6.3	<6.3	<6.3	<6.3
	12/23/2014	23 J	<4.2	<4.2	<4.2	<4.2	<4.2
	3/20/2015	57 J	<4.2	<4.2	5.2	<4.2	<4.2
	6/4/2015	66 J	<5.0	<5.0	<5.0	<5.0	<5.0
	9/11/2015	<140	<7.1	<7.1	<7.1	<7.1	<7.1
	12/29/2015	<130	<6.3	<6.3	<6.3	<6.3	<6.3
	3/24/2016	250	<6.3	<6.3	<6.3	<6.3	<6.3
	6/16/2016	130	<5.0	<5.0	<5.0	<5.0	<5.0
	9/21/2016	210	<6.3	<6.3	<6.3	<6.3	<6.3
	12/14/2016	150	<3.1	<3.1	<3.1	<3.1	<3.1
	3/13/2017	130	<3.1	<3.1	3.8	<3.1	<3.1
2nd WBZ							
MW-1D	1/3/2008	111	<0.5	<0.5	<2.0	NA	NA
	1/22/2008	12.9	<0.5	<0.5	<2.0	<0.5	<0.5
	4/16/2008	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
	7/3/2008	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
	10/15/2008	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	1/8/2009	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	4/14/2009	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	8/26/2009	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	12/1/2009	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	3/16/2010	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	6/4/2010	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	9/1/2010	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	12/3/2010	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	3/3/2011	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	5/19/2011	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	9/8/2011	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	12/1/2011	<1.5	<0.36	<0.40	<0.32	<0.28	<0.19
	3/2/2012	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	6/6/2012	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	9/20/2012	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	12/13/2012	<10	<0.5	<0.5	<0.5	<0.5	<0.5

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MW-1D cont.	3/27/2013	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	6/10/2013	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	9/16/2013	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	12/5/2013	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	3/12/2014	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	6/5/2014	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	9/22/2014	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	12/23/2014	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	3/19/2015	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	6/3/2015	<2.1	<0.5	<0.5	<0.5	<0.5	<0.5
	9/10/2015	<10	<0.5	<0.5	<0.5	<0.5	<0.5
MW-3D	1/3/2008	37.3	<0.5	3.12	15.3	NA	NA
	1/22/2008	15.6	<0.5	3.1	15.3	<0.5	<0.5
	4/16/2008	17.7	<0.5	<0.5	<2.0	<0.5	<0.5
	7/3/2008	<2.0	<0.5	<0.5	7.45	<0.5	<0.5
	10/16/2008	<10	<0.5	<0.5	4.7	<0.5	<0.5
	1/8/2009	<10	<0.5	<0.5	3.4	<0.5	<0.5
	4/14/2009	<10	<0.5	<0.5	5	<0.5	<0.5
	8/26/2009	<10	<0.5	<0.5	1.6	<0.5	<0.5
	12/1/2009	<10	<0.5	<0.5	2.2	<0.5	<0.5
	3/16/2010	<10	<0.5	<0.5	0.65	<0.5	<0.5
	6/4/2010	<10	<0.5	<0.5	1.8	<0.5	<0.5
	9/1/2010	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	12/3/2010	<10	<0.5	<0.5	0.93	<0.5	<0.5
	3/3/2011	<10	<0.5	<0.5	1.0	<0.5	<0.5
	5/19/2011	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	9/8/2011	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	12/1/2011	<1.5	<0.36	<0.40	0.52	<0.28	<0.19
	3/2/2012	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	6/6/2012	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	9/20/2012	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	12/13/2012	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	3/27/2013	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	6/10/2013	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	9/16/2013	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	12/5/2013	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	3/13/2014	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	6/5/2014	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	9/22/2014	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	12/23/2014	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	3/19/2015	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	6/3/2015	<2.1	<0.5	<0.5	<0.5	<0.5	<0.5
	9/10/2015	<10	<0.5	<0.5	<0.5	<0.5	<0.5
MW-4D	1/4/2008	25	<0.5	<0.5	<2.0	NA	NA
	1/22/2008	124	<0.5	4.9	3.32	<0.5	<0.5
	4/15/2008	25.7	<0.5	<0.5	<2.0	<0.5	<0.5
	7/3/2008	3.38	<0.5	<0.5	<2.0	<0.5	<0.5
	10/16/2008	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	1/8/2009	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	4/14/2009	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	8/27/2009	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	12/1/2009	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	3/16/2010	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	6/4/2010	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	9/1/2010	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	12/3/2010	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	3/3/2011	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	5/19/2011	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	9/8/2011	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	12/1/2011	<1.5	<0.36	<0.40	<0.32	<0.28	<0.19
	3/2/2012	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	6/6/2012	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	9/20/2012	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	12/13/2012	<10	<0.5	<0.5	<0.5	<0.5	<0.5

**Table 2**  
**Historical Gasoline Oxygenates Results**  
**15101 Freedom Avenue, San Leandro, CA**

Monitoring Well	Date	TBA ( $\mu\text{g/L}$ )	DIPE ( $\mu\text{g/L}$ )	ETBE ( $\mu\text{g/L}$ )	TAME ( $\mu\text{g/L}$ )	1,2-DCA ( $\mu\text{g/L}$ )	EDB ( $\mu\text{g/L}$ )
MW-4D cont.	3/27/2013	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	6/10/2013	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	9/16/2013	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	12/6/2013	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	3/13/2014	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	6/6/2014	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	9/23/2014	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	12/23/2014	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	3/19/2015	<10	<0.5	<0.5	<0.5	<0.5	<0.5
	6/3/2015	4.8 J	<0.5	<0.5	<0.5	<0.5	<0.5
	9/10/2015	<10	<0.5	<0.5	<0.5	<0.5	<0.5
1573 153 RD	1/3/2008	21	<0.5	<0.5	<2.0	<0.5	<2.0
	7/2/2008	<2.0	<0.5	<0.5	<2.0	<0.5	<0.5
	10/16/2008	<10	<0.5	<0.5	<0.5	<0.5	<0.5
ESL		12	NE	NE	NE	0.5	0.05

Notes:

August 8, 2002 was the first time that samples were analyzed for Gasoline Oxygenates

<: Not detected above the laboratory reporting limit.

NA: Not Analyzed. Well MW-8 was inaccessible during the 1Q05

& well MW-7 (1Q06) car was parked over each well.

NE: Not Established

TBA: tert-Butyl Alcohol

DIPE: Isopropyl Ether

ETBE: Ethyl tert-Butyl Ether

TAME: Methyl tert-Amyl Ether

ESL: Environmental Screening Levels per CRWQCB SFBay Region (Revised February 2016)

Tier 1 ESL (Groundwater Screening Levels (groundwater is a drinking water resource)

MW-8 and MW-9 were decommissioned November 13, 2009

FP: Groundwater not sampled due to presence of free-product in MW-6

**Table 3**  
**Effluent Chemical Analytical Results**  
**and Operational History of Remediation System**  
 15101 Freedom Ave, San Leandro, CA

Date	Volume (gallons)	TPH-g (µg/L)	TPH-d (µg/L)	TPH-mo (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylben- zene (µg/L)	Total Xylenes (µg/L)	COD (mg/L)	TSS (mg/L)	pH
<b>2009</b>											
8-Oct-2009	15,351	<50	120 <sup>Y</sup>	NA	NA	NA	NA	NA	NA	NA	NA
19-Nov-2009	8,287	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<10	<5	7.7
9-Dec-2009	0	Installation of GWETS									
16-Dec-2009	20,000	<50	<50	<300	<0.5	0.65 C	<0.5	0.84 C	<10	<5	7.4
<b>2010</b>											
18-Jan-2010	215,453	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<10	<5	7.4
15-Feb-2010	297,560	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	11	<5	6.7
15-Mar-2010	475,245	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<10	<5.0	6.5
19-Apr-2010	621,180	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<10	8	6.6
17-May-2010	705,770	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<10	8	6.7
16-Jun-2010	825,200	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	17	9	6.8
19-Jul-2010	910,652	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<10	8	6.6
16-Aug-2010	939,935	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<10	6	6.6
28-Sep-2010	970,450	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<10	10	6.8
26-Oct-2010	1,013,700	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<10	<5	7.2
15-Nov-2010	1,052,591	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<10	<5	6.5
7-Dec-2010	1,100,492	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<10	6	6.6
<b>2011</b>											
11-Jan-2011	1,179,075	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	12	6	6.6
10-Feb-2011	1,249,569	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<10	<5	6.6
14-Mar-2011	1,336,784	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<10	<5	6.5
11-Apr-2011	1,364,272	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<10	6	6.5
10-May-2011	1,466,472	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	12	7	6.6
7-Jun-2011	1,532,263	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<10	6	6.6

**Table 3**  
**Effluent Chemical Analytical Results**  
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 15101 Freedom Ave, San Leandro, CA

Date	Volume (gallons)	TPH-g (µg/L)	TPH-d (µg/L)	TPH-mo (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyben zene (µg/L)	Total Xylenes (µg/L)	COD (mg/L)	TSS (mg/L)	pH
28-Jul-2011	1,573,295	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<10	5	6.3
25-Aug-2011	1,613,935	77	<50	<300	<0.5	<0.5	<0.5	<0.5	<10	<5	7.1
23-Sep-2011	1,631,273	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<10	<5	6.7
27-Oct-2011	1,642,277	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<10	7	7.1
18-Nov-2011	1,676,170	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<10	<5	7.8
1-Dec-2011	1,694,889	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<10	<5	6.97
<b>2012</b>											
19-Jan-2012	1,715,163	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<10	<5	7.02
23-Feb-2012	1,794,185	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<10	<5	6.98
20-Mar-2012	1,803,832	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	<10	7	7.02
17-Apr-2012	1,876,439	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	NA	NA	6.95
29-May-2012	1,900,111	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	NA	NA	6.89
11-Jun-2012	1,914,130	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	NA	NA	7.1
12-Jul-2012	1,943,456	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	NA	NA	7.3
17-Aug-2012	1,955,438	<50	<52	<310	<0.5	<0.5	<0.5	<0.5	NA	NA	7.04
17-Sep-2012	1,979,852	<50	<54	<330	<0.5	<0.5	<0.5	<0.5	NA	NA	7.02
23-Oct-2012	1,989,022	<50	<49	<290	<0.5	<0.5	<0.5	<0.5	NA	NA	6.95
12-Nov-2012	1,995,170	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	NA	NA	6.90
4-Dec-2012	2,024,040	<50	<49	<290	<0.5	<0.5	<0.5	<0.5	NA	NA	6.86
<b>2013</b>											
7-Jan-2013	2,099,002	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	NA	NA	7.01
14-Feb-2013	2,186,595	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	NA	NA	7.08
14-Mar-2013	2,193,121	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	NA	NA	6.98
12-Apr-2013	2,198,793	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	NA	NA	6.83
10-Jun-2013	2,273,686	<50	<58	<350	<0.5	<0.5	<0.5	<0.5	NA	NA	6.91

**Table 3**  
**Effluent Chemical Analytical Results**  
**and Operational History of Remediation System**  
 15101 Freedom Ave, San Leandro, CA

Date	Volume (gallons)	TPH-g (µg/L)	TPH-d (µg/L)	TPH-mo (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyben zene (µg/L)	Total Xylenes (µg/L)	COD (mg/L)	TSS (mg/L)	pH
5-Jul-2013	2,282,444	<50	<49	<290	<0.5	<0.5	<0.5	<0.5	NA	NA	6.87
15-Aug-2013	2,403,250	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	NA	NA	6.64
24-Sep-2013	2,449,583	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	NA	NA	6.59
28-Oct-2013	2,551,538	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	NA	NA	6.71
14-Nov-2013	2,665,016	<50	<49	<290	<0.5	<0.5	<0.5	<0.5	NA	NA	6.53
6-Dec-2013	2,770,675	<50	<49	<290	<0.5	<0.5	<0.5	<0.5	NA	NA	6.44
<b>2014</b>											
9-Jan-2014	2,884,292	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	NA	NA	6.49
18-Feb-2014	2,953,173	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	NA	NA	6.66
14-Mar-2014	2,977,698	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	NA	NA	6.58
17-Apr-2014	3,035,679	89 Y	<50	<300	<0.5	<0.5	<0.5	<0.5	NA	NA	6.60
15-May-2014	3,054,723	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	NA	NA	6.19
16-Jun-2014	55-Gallon polishing drum replaced due to leak										
17-Jun-2014	3,070,826	<50	<49	<290	<0.5	<0.5	<0.5	<0.5	NA	NA	6.74
21-Jul-2014	3,136,493	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	NA	NA	6.92
13-Aug-2014	3,229,086	<50	<49	<290	<0.5	<0.5	<0.5	<0.5	NA	NA	6.50
9-Sep-2014	3,360,607	<50	<49	<290	<0.5	<0.5	<0.5	<0.5	NA	NA	6.44
13-Oct-2014	3,431,247	<50	<49	<290	<0.5	<0.5	<0.5	<0.5	NA	NA	6.39
18-Nov-2014	3,504,809	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	NA	NA	6.51
8-Dec-2014	3,544,218	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	NA	NA	6.65
<b>2015</b>											
13-Jan-2015	3,560,504	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	NA	NA	6.44
9-Feb-2015	3,560,780	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	NA	NA	6.22
20-Mar-2015	3,560,801	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	NA	NA	6.38
15-Apr-2015	3,575,395	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	NA	NA	6.40
21-May-2015	3,577,714	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	NA	NA	6.29
4-Jun-2015	3,580,407	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	NA	NA	6.66
14-Jul-2015	3,629,420	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	NA	NA	6.34
18-Aug-2015	3,672,646	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	NA	NA	6.21
23-Sep-2015	3,708,165	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	NA	NA	6.32

**Table 3**  
**Effluent Chemical Analytical Results**  
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 15101 Freedom Ave, San Leandro, CA

Date	Volume (gallons)	TPH-g (µg/L)	TPH-d (µg/L)	TPH-mo (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyben zene (µg/L)	Total Xylenes (µg/L)	COD (mg/L)	TSS (mg/L)	pH
27-Oct-2015	3,753,333	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	NA	NA	6.50
19-Nov-2015	3,782,192	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	NA	NA	6.43
14-Dec-2015	3,829,993	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	NA	NA	6.63
<b>2016</b>											
12-Jan-2016	3,863,743	<50	<51	<310	<0.5	<0.5	<0.5	<0.5	NA	NA	6.39
5-Feb-2016	3,917,264	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	NA	NA	6.32
7-Mar-2016	3,972,753	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	NA	NA	6.82
	System shut down										
4-Aug-2016	3,973,465	<50	<50	<300	<0.5	<0.5	<0.5	<0.5	NA	NA	<b>6.55</b>
	System shut down										
22-Sep-2016	3,973,478	<50	61 Y	<300	<0.5	<0.5	<0.5	<0.5	NA	NA	6.51
	System shut down										

Note:

NA: Not Available/Not Applicable

< : Less than Laboratory-reporting limit

Y: Sample exhibits chromatographic pattern which does not resemble standard

In October and November 2009 discharge occurred only during MPE events

GWETS and totalizer installed in December 2009.

Week # 1 sampling conducted on Oct 8, 2009

C: Presence confirmed, but RPD between column exceeds 40%

Volume discharged during the October 2009 MPE event was 18,669 gallons

Volume discharged during the November 2009 MPE event was 10,507 gallons

Volume discharged during the December 2009 MPE event was 20,298 gallons

Volume discharged during the February 2010 MPE event was 6,339 gallons

Volume discharged during the March 2010 MPE event was 3,810 gallons

Volume discharged during the June 2010 MPE event was 15, 600 gallons

Volume discharged during the August 2010 MPE event was 1,421 gallons

Volume discharged during the October 2010 MPE event was 13,282 gallons

SOMA ceased COD and TSS testing based on a request from OLSD dated April 5, 2012

**Table 4**  
**Cumulative Masses of Petroleum Hydrocarbons Removed from**  
**the Groundwater Since Installation of the Treatment System**  
 15101 Freedom Ave, San Leandro, CA

Date	Volume (gallons)	Influent Concentration ( $\mu\text{g/L}$ )					Mass removed (pounds)					
		TPH-g	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TPH-g	Benzene	Toluene	Ethyl-benzene	Total Xylenes	
<b>2009</b>												
9-Dec-2009	0		Installation of GWETS, began discharging treated groundwater to site sewer main									
<b>2010</b>												
18-Jan-2010	215,453	1,900	79	32.00	2.4	260	3.41	0.14	0.06	0.00	0.47	
19-Apr-2010	621,180	2,100	75	28	56	332	10.50	0.40	0.15	0.19	1.59	
19-Jul-2010	910,652	56 <sup>Y</sup>	<0.5	<0.5	<0.5	<0.5	10.64	0.40	0.15	0.19	1.59	
26-Oct-2010	1,013,700	2,600	200	25	68	405	12.87	0.57	0.17	0.25	1.94	
<b>2011</b>												
11-Jan-2011	1,179,075	1,700	80	19	50	295	15.21	0.68	0.20	0.32	2.34	
11-Apr-2011	1,364,272	1,200	41	3.3	23	185	17.06	0.75	0.20	0.36	2.63	
28-Jul-2011	1,573,295	540	21	2.8	5.4	49	18.00	0.78	0.21	0.37	2.71	
27-Oct-2011	1,642,277	<50	1.50	<0.5	<0.5	2.9	18.00	0.78	0.21	0.37	2.71	
<b>2012</b>												
19-Jan-2012	1,715,163	110 <sup>Y</sup>	<0.5	<0.5	<0.5	<0.5	18.07	0.78	0.21	0.37	2.71	
17-Apr-2012	1,876,439	1,100	60	6.8	24	161	19.54	0.87	0.22	0.40	2.93	
12-Jul-2012	1,943,456	320	30	1.6	15	34	19.72	0.88	0.22	0.41	2.95	
23-Oct-2012	1,989,022	1,400 <sup>Y</sup>	130	12	42	153	20.25	0.93	0.22	0.42	3.01	
<b>2013</b>												
7-Jan-2013	2,099,002	1,500	66	9.8	37	228	21.63	0.99	0.23	0.46	3.22	
12-Apr-2013	2,198,793	1,600	110	3.8	64	131	22.96	1.08	0.24	0.51	3.32	
5-Jul-2013	2,282,444	680	71	1.8	22	33.9	23.43	1.13	0.24	0.52	3.35	
28-Oct-2013	2,551,538	4,900	88	49	150	583	34.41	1.33	0.35	0.86	4.65	
<b>2014</b>												
9-Jan-2014	2,884,292	590	17	4.1	9.1	68	36.04	1.38	0.36	0.89	4.84	
17-Apr-2014	3,035,679	650	19	0.67	16	50.1	36.86	1.40	0.36	0.91	4.91	
21-Jul-2014	3,136,493	1,000	54	1.70	35	71.1	37.70	1.45	0.36	0.94	4.97	
13-Oct-2014	3,431,247	370	6.50	0.75	6.30	41	38.61	1.46	0.36	0.95	5.07	
<b>2015</b>												
13-Jan-2015	3,560,504	550	21	<0.5	23	19	39.20	1.48	0.36	0.98	5.09	
15-Apr-2015	3,575,395	1,300	46	3.30	52	136	39.36	1.49	0.36	0.98	5.10	
14-Jul-2015	3,629,420	1,000	31	4.90	24	94	39.81	1.50	0.37	0.99	5.15	
27-Oct-2015	3,753,333	420	9.50	0.73	3	24	40.24	1.51	0.37	1.00	5.17	
<b>2016</b>												
12-Jan-2016	3,863,743	79	2.20	<0.5	<0.5	<0.5	40.32	1.52	0.37	1.00	5.17	
4-Aug-2016	3,973,465	280	0.60	3.00	2.40	12.70	40.57	1.52	0.37	1.00	5.17	

Notes:

< : Below laboratory-reporting limit

Y : sample exhibits chromatographic pattern which does not resemble standard

# **Appendix A**

## **Standard Operating Procedures for Conducting Groundwater Monitoring Activities**

# **Standard Operating Procedures for Conducting Groundwater Monitoring Activities**

## **Water Level and Free-Product Measurements**

Prior to measurement of groundwater depth at each well, equalization with the surrounding aquifer must be achieved. Initially, the well cap is removed and the pressure is allowed to dissipate, creating a more stable water table level within the well. After about 10-15 minutes, once the water level in the well stabilizes, the depth to groundwater is measured from the top of the casing to the nearest 0.01 foot using an electric sounder.

For free-product (FP) measurement, an oil-water interface probe is used. When the probe is lowered into the FP, the oil/water light and beeper are continuously on at which point a reading for depth to FP is noted. The probe is lowered further into the well until the water signal is given (light flashes and beeps intermittently). Then the probe is carefully raised until the FP signal is given and the reading is noted. This gives the depth to interface of product and water.

## **Purging and Field Measurements**

Prior to sample collection, each well is purged using a battery-operated, 2-inch-diameter pump (Model ES-60 DC). During purging, groundwater is measured for parameters such as dissolved oxygen (DO), pH, temperature, electrical conductivity (EC), and oxygen-reduction potential (ORP) using a Hanna HI-9828 multi-parameter instrument. Turbidity is measured using a Hanna HI-98703 portable turbidimeter. The equipment is calibrated at the site using standard solutions and procedures provided by the manufacturer.

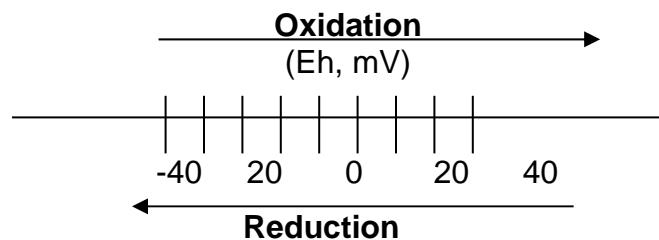
The pH of groundwater has an effect on the activity of microbial populations in the groundwater. The groundwater temperature affects the metabolic activity of bacteria. The groundwater EC is directly related to the concentration of total dissolved solids (TDS) in solution.

There is a strong correlation between the turbidity level and the biological oxygen demand of natural water bodies. The main purpose for checking the turbidity level is to provide a general overview of the extent of the suspended solids in the groundwater.

ORP is the measure of the potential for an oxidation or reduction process to occur. In the oxidation process, a molecule or ion loses one or several electrons. In the reduction process, a molecule or ion gains one or several electrons. The unit of the redox potential is the volt or millivolt. The most important redox reaction in petroleum-contaminated groundwater is the oxidation of petroleum hydrocarbons in the presence of bacteria and free molecular oxygen. Because the solubility of O<sub>2</sub> in water is low (9 mg/L at 25 °C and 11 mg/L at 5 °C), and

because the rate of O<sub>2</sub> replenishment in subsurface environments is limited, DO can be entirely consumed when the oxidation of only a small amount of petroleum hydrocarbons occurs.

Oxidation of petroleum hydrocarbons can still occur when all the dissolved O<sub>2</sub> in the groundwater is consumed; however, the oxidizing agents (i.e., the constituents that undergo reduction) now become NO<sub>3</sub><sup>-</sup>, MnO<sub>2</sub>, Fe(OH)<sub>3</sub>, SO<sub>4</sub><sup>2-</sup> and others (Freeze and Cherry, 1979). As these oxidizing agents are consumed, the groundwater environment becomes more and more reduced. If the process advances far enough, the environment may become so strongly reduced that the petroleum hydrocarbons undergo anaerobic degradation, resulting in the production of methane and carbon dioxide. The concept of oxidation and reduction in terms of changes in oxidation states is illustrated below.



Purging of wells continues until the parameters for DO, pH, temperature, EC, turbidity, and redox stabilize, or three casing volumes are purged.

Once stabilization occurs, the groundwater samples are also tested on-site for ferrous iron (Fe<sup>+2</sup>), nitrate (NO<sub>3</sub><sup>-</sup>), and sulfate (SO<sub>4</sub><sup>2-</sup>) concentrations.

Fe<sup>+2</sup>, NO<sub>3</sub><sup>-</sup>, and SO<sub>4</sub><sup>2-</sup> are measured colorimetrically using the Hach Colorimeter Model 890, a microprocessor-controlled photometer suitable for colorimetric testing in the laboratory or the field. The required reagents for each specific test are provided in AccuVac ampuls.

## Sampling

For sampling purposes, after purging a disposable polyethylene bailer is used to collect sufficient samples from each monitoring well for laboratory analyses. Groundwater samples are transferred into 40-mL VOA vials and preserved with hydrochloric acid. The vials are sealed to prevent air bubbles from developing within the headspace. For TPH-d analysis, groundwater samples are collected using 1-L, amber, non-preserved glass containers. Samples are placed in an ice-filled cooler and maintained at 4°C. A chain of custody form for all samples is prepared to accompany the samples, which are promptly delivered to a California state-certified analytical laboratory.

# **Appendix B**

Elevations and Coordinates on Monitoring Wells, Field Measurements of Physical and Chemical Parameters of Groundwater Samples, and Groundwater Gradient Calculations

# *Harrington Surveys Inc.*

## *Land Surveying & Mapping*

2278 Larkey Lane, Walnut Creek, Ca. 94596 Phone (925)935-7228 Fax (925)935-5118  
Cel (925)788-7359 E-Mail (ben5132@pacbell.net)

Soma Environmental Engineering  
2680 Bishop Dr. # 203  
San Ramon, Ca. 94583

Oct. 14, 2004

Attn: Elena Manzo  
Job # 2445

Ref: 15101 Freedom Ave, San Leandro, Ca.

### **HORIZONTAL CONTROL, NAD 88:**

Survey based on California Coordinate System, Zone 3, NAD 83.

CHABOT "B", NORTH 2,087,731.02 EAST 6,094,039.23 sft. LAT. N37°43'02.71762"  
W122°07'00.46339", NAVD 88, ELEV. 134.957.

CHABOT "A", NORTH 2,088,584.99 EAST 6,093,351.39 sft. LAT. N37°43'11.04190"  
W122°07'09.20691", NAVD 88, ELEV. 492.08.

### **VERTICAL CONTROL, NAVD 88:**

NGS 1974, STATION K 1256, NAVD 88 ELEV. 58.50.  
PID # HT1871

GPS: TRIMBLE 5800, LEICA TCA 1800, 1" HORZ. & VERT.

EPOCH DATE 1998.5

OBSERVATION: EPOCH=180.

FIELD SURVEY: OCT. 11, 2004.

  
Ben Harrington  
PLS 5132



**SURVEY REPORT  
15101 FREEDOM AVE  
SAN LEANDRO, CA.**

**HARRINGTON SURVEYS INC.**  
2278 LARKEY LANE  
WALNUT CREEK, CA. 94597  
925-935-7228 FAX. 935-5118

JOB NO. 2445  
DATE: OCT. 12, 2004



DATE: 1/08/2008  
JOB NUMBER 0208101  
DATE OF SURVEY 1/03/08  
INSTRUMENT LIECA SR520

TABLE OF ELEVATIONS & COORDINATES  
ON MONITORING WELLS

SOMA ENVIRONMENTAL, PROJECT 15101 FREEDOM DRIVE - SAN LEANDRO

WELL ID#	NORTHING (ft.) LATITUDE	EASTING (ft.) LONGITUDE	ELEVATION (ft.)	DESCRIPTION
MW-1D	2084371.23	6092127.90	54.42	MW-1D NOTCH
	37.708104856	122.123200912	54.94	MW-1D RIM
	37° 42' 29.1" N	122° 07' 23" W	54.74	PAVEMENT
MW-3D	2084303.98	6092183.53	54.10	MW-3D NOTCH
	37.707922851	122.123004590	54.56	MW-3D RIM
	37° 42' 28.5" N	122° 07' 22" W	54.47	PAVEMENT
MW-4D	2084222.77	6092116.37	53.12	MW-4D NOTCH
	37.707696648	122.123231858	53.37	MW-4D RIM
	37° 42' 27.7" N	122° 07' 23" W	53.39	PAVEMENT

BENCH MARK: NGS BENCH MARK NO. HT1871

3.0 KM (1.85 MI) NORTH FROM SAM LORENZO. 1.85 MILES NORTH ALONG INTERSTATE HIGHWAY 580 FROM THE JUNCTION OF STATE HIGHWAY 238 IN SAN LORENZO, IN THE WEST CORNER OF THE CROSSING OF 150TH AVENUE, IN TOP OF THE CONCRETE BRIDGE DECK, 15.5 FEET NORTHWEST OF THE SOUTHWEST BOUND LANES OF THE AVENUE, 10.9 FEET NORTHEAST OF THE SOUTH CORNER OF THE SOUTHWEST END OF THE NORTHWEST CONCRETE GUARDRAIL, 0.7 FOOT NORTHEAST OF THE SOUTHWEST EDGE OF THE DECK, 0.9 FOOT SOUTHEAST OF THE NORTHWEST CONCRETE GUARDRAIL, AND ABOUT LEVEL WITH THE HIGHWAY.

ELEVATION = 58.50 NAVD 88 DATUM

HORIZONTAL AND VERTICAL CONTROL BASED ON HARRINGTON SURVEY DATED 10-12-2004

FD CHABOT A, CALIFORNIA STATE PLAIN COORDINATE SYSTEM, NAD 83, ZONE 3. NORTH 2,088,584.99 EAST 6,093,351.39. LAT N 37°43'11.04190" LONG W 122°07'09.20691", ELEVATION 492.08 NAVD 88.

FD CHABOT B, CALIFORNIA STATE PLAIN COORDINATE SYSTEM, NAD 83, ZONE 3. NORTH 2,087,731.02 EAST 6,094,039.23. . LAT N 37°43'02.71762" LONG W 122°07'00.46339", ELEVATION 442.77 NAVD 88.

DATE: 12/11/2009

JOB# 09039

**TABLE OF ELEVATIONS & COORDINATES****ON MONITORING WELLS**

SOMA ENVIRONMENTAL ENGINEERING

15101 FREEDOM AVENUE

SAN LEANDRO, CA 94579

WELL ID #	NORTHING (FT.) / LATITUDE (D.DEG.)	EASTING (FT.) / LONGITUDE (D.DEG.)	ELEVATION (FT.)	DESCRIPTION
EX-1	2084135.454 37.707459134	6092163.720 122.123062972	47.36 47.61 47.60	4" PVC NOTCH NORTH SIDE SET PUNCH NORTH SIDE RIM PAVEMENT NORTH SIDE
EX-2	2084082.018 37.707310806	6092130.224 122.123175540	45.96 47.04 47.00	4" PVC NOTCH NORTH SIDE SET PUNCH NORTH SIDE RIM CONCRETE NORTH SIDE
MPE-1	2084213.168 37.707670702	6092125.258 122.123200567	51.96 52.49 52.51	4" PVC NOTCH NORTH SIDE SET PUNCH NORTH SIDE RIM CONCRETE NORTH SIDE
MPE-2	2084293.133 37.707892479	6092171.374 122.123045970	53.72 54.29 54.27	4" PVC NOTCH NORTH SIDE SET PUNCH NORTH SIDE RIM PAVEMENT NORTH SIDE

**HORIZONTAL AND VERTICAL CONTROL**

SURVEY BASED ON PREVIOUS SURVEY BY HARRINGTON SURVEY INC. DATED: 2/21/2008

COORDINATE VALUES ARE BASED ON THE CALIFORNIA COORDINATE SYSTEM, ZONE 3, NAD83.  
ELEVATIONS ARE NAVD 88 DATUM.

MW-2, PUNCH

NORTHING 2,084323.44, EASTING 6,092063.77, ELEVATION 52.92

MW-4 PUNCH

NORTHING 2,084250.55, EASTING 6,092124.46, ELEVATION 53.74

EQUIPMENT USED: TRIMBLE S6

Edgis Land Surveying  
 Land Surveying and mapping  
 1374 Garland Avenue, Clovis, CA 93612  
 Phone (559) 906-3554 Fax (559) 292-0560  
 email: edgis@aol.com



DATE: 5/07/2016

JOB#

**TABLE OF ELEVATIONS & COORDINATES  
ON MONITORING WELLS**

SOMA ENVIRONMENTAL ENGINEERING  
15101 FREEDOM AVENUE  
SAN LEANDRO, CA 94579

#### HORIZONTAL AND VERTICAL CONTROL

SURVEY BASED ON PREVIOUS SURVEY BY EDGIS LAND SURVEYING DATED: 9/14/2014

COORDINATE VALUES ARE BASED ON THE CALIFORNIA COORDINATE SYSTEM, ZONE 3, NAD83.

ELEVATIONS ARE NAVD 88 DATUM

## **EX-2 PUNCH**

NORTHING 2 084 082 266 EASTING 6 092 129 987 ELEVATION 47 04

MW-11 PUNCH

NORTHING 2 083 923 462 EASTING 6 092 214 817 ELEVATION 42 831

**EQUIPMENT USED: TRIMBLE S6**



**EDGIS LAND SURVEYING**  
Land Surveying and Mapping  
2519 W. Shaw Avenue, Ste. 111  
Fresno, CA 93711  
Phone (559) 803-2679  
email: [edgis@aol.com](mailto:edgis@aol.com)



## ENVIRONMENTAL ENGINEERING, INC

Well No.: MW-3  
Casing Diameter: 4 inches  
Depth of Well: 39.95 feet  
Top of Casing Elevation: 53.91 feet  
Depth to Groundwater: 20.82 feet  
Groundwater Elevation: 33.09 feet  
Water Column Height: 9.13 feet  
Purged Volume: 6 gallons

Project No.: 2551  
Address: 15101 Freedom Ave.  
San Leandro, CA  
Date: January 18, 2017  
Sampler: Davoud Bazrpash

Purging Method: Bailer  Pump

Sampling Method: Bailer  Pump

Color: Yes  No  Describe: \_\_\_\_\_

Sheen: Yes  No  Describe: \_\_\_\_\_

Odor: Yes  No  Describe: \_\_\_\_\_

## Field Measurements:

Time	Volume (gallons)	pH	Temp °C	E.C. (µS/cm)
START 11:15				
11:20	2	6.07	18.2	341
11:24	4	6.11	18.7	357
11:30	6	6.09	18.8	355
START SAMPLING				
11:40				



## ENVIRONMENTAL ENGINEERING, INC

Well No.: MW-10R Project No.: 2551  
Casing Diameter: 4 inches Address: 15101 Freedom Ave.  
Depth of Well: 35.85 feet San Leandro, CA  
Top of Casing Elevation: 45.13 feet Date: January 18, 2017  
Depth to Groundwater: 13.32 feet Sampler: Davoud Bazrpash  
Groundwater Elevation: 31.81 feet  
Water Column Height: 12.53 feet  
Purged Volume: 6 gallons

Purging Method: Bailer  Pump

Sampling Method: Bailer  Pump

Color: Yes  No  Describe: \_\_\_\_\_

Sheen: Yes  No  Describe: \_\_\_\_\_

Odor: Yes  No  Describe: \_\_\_\_\_

## Field Measurements:

Time	Volume (gallons)	pH	Temp °C	E.C. ( $\mu$ S/cm)
START				
12:05	2	6.41	17.7	941
12:09	4	6.44	18.0	939
12:14	6	6.47	18.7	940
START Sampling				
12:20				



## ENVIRONMENTAL ENGINEERING, INC

Well No.: MW-3  
Casing Diameter: 4 inches  
Depth of Well: 29.95 feet  
Top of Casing Elevation: 53.91 feet  
Depth to Groundwater: 19.35 feet  
Groundwater Elevation: 34.56 feet  
Water Column Height: 10.60 feet  
Purged Volume: 6 gallons

Project No.: 2551  
Address: 15101 Freedom Ave.  
San Leandro, CA  
Date: February 24, 2017  
Sampler: Davoud Bazrash

Purging Method: Bailer  Pump

Sampling Method: Bailer  Pump

Color: Yes  No  Describe: \_\_\_\_\_

Sheen: Yes  No  Describe: \_\_\_\_\_

Odor: Yes  No  Describe: \_\_\_\_\_

## Field Measurements:

Time	Volume (gallons)	pH	Temp °C	E.C. (µS/cm)
START				
10.20	10.2	6.15	22.8	415
10.23	4	6.11	21.7	391
10.27	6	6.07	21.4	402
START SAMPLING				
10.40				



## ENVIRONMENTAL ENGINEERING, INC

Well No.: MW-10R  
Casing Diameter: 4 inches  
Depth of Well: 25.95 feet  
Top of Casing Elevation: 45.13 feet  
Depth to Groundwater: 11.44 feet  
Groundwater Elevation: 33.69 feet  
Water Column Height: 14.51 feet  
Purged Volume: 6 gallons

Project No.: 2551  
Address: 15101 Freedom Ave.  
San Leandro, CA  
Date: February 24, 2017  
Sampler: Davoud Bazrpash

Purging Method: Bailer  Pump

Sampling Method: Bailer  Pump

Color: Yes  No  Describe: Cloudy

Sheen: Yes  No  Describe: \_\_\_\_\_

Odor: Yes  No  Describe: \_\_\_\_\_

## Field Measurements:

Time	Volume (gallons)	pH	Temp °C	E.C. (µS/cm)
START				
11:00	02	6.26	20.7	957
11:04	37	6.35	19.9	784
11:08	46	6.42	19.2	988
START SAMPLING				
11:18				



## ENVIRONMENTAL ENGINEERING, INC

Well No.: MW-1 Project No.: 2551  
Casing Diameter: 4 inches Address: 15101 Freedom Ave.  
Depth of Well: 30.20 feet San Leandro, CA  
Top of Casing Elevation: 54.46 feet Date: March 13, 2017  
Depth to Groundwater: 20.95 feet Sampler: Mansour Sepehr  
Groundwater Elevation: 33.51 feet  
Water Column Height: 9.25 feet  
Purged Volume: 4.5 gallons

Purging Method: Bailer  Pump   
Sampling Method: Bailer  Pump

Color: Yes  No  Describe: Clear  
Sheen: Yes  No  Describe: no Sheen  
Odor: Yes  No  Describe: no odor

## Field Measurements:

Time	Volume (gallons)	pH	Temp °C	E.C. (µS/cm)
11:50	1.5	6.35	22.6	137
11:58	4.5	6.36	22.7	135
Sampled:				
12:05				



## ENVIRONMENTAL ENGINEERING, INC

Well No.: MW-2  
Casing Diameter: 4 inches  
Depth of Well: 30.10 feet  
Top of Casing Elevation: 52.41 feet  
Depth to Groundwater: 18.50 feet  
Groundwater Elevation: 33.91 feet  
Water Column Height: 11.60 feet  
Purged Volume: 4.5 gallons

Project No.: 2551  
Address: 15101 Freedom Ave.  
San Leandro, CA  
Date: March 13, 2017  
Sampler: Mansour Sepehr

Purging Method: Bailer  Pump

Sampling Method: Bailer  Pump

Color: Yes  No  Describe: clear

Sheen: Yes  No  Describe: No Sheen

Odor: Yes  No  Describe: Very minor odor

## Field Measurements:

Time	Volume (gallons)	pH	Temp °C	E.C. (µS/cm)
12:15	1.5	5.41	23.7	160
12:22	3.0	5.41	22.4	181
12:26	4.5	5.68	21.9	200
Sampled at 12:30				



## ENVIRONMENTAL ENGINEERING, INC

Well No.: MW-3 Project No.: 2551  
Casing Diameter: 4" inches Address: 15101 Freedom Ave.  
Depth of Well: 29.90 feet San Leandro, CA  
Top of Casing Elevation: 53.91 feet Date: March 13, 2017  
Depth to Groundwater: 20.38 feet Sampler: Mansour Sepehr  
Groundwater Elevation: 33.53 feet  
Water Column Height: 9.52 feet  
Purged Volume: 5 gallons

Purging Method: Bailer  Pump

Sampling Method: Bailer  Pump

Color: Yes  No  Describe: cloudy

Sheen: Yes  No  Describe: no Sheen

Odor: Yes  No  Describe: odor -

## Field Measurements:

Time	Volume (gallons)	pH	Temp °C	E.C. (µS/cm)
1:25	1.5	6.45	24.3	286
1:29	3.0	6.36	23.2	649
1:36	5.0	6.43	22.7	660
Sampled at 1:40				



## ENVIRONMENTAL ENGINEERING, INC

Well No.: MW-4 Project No.: 2551  
Casing Diameter: 4" inches Address: 15101 Freedom Ave.  
Depth of Well: 30.20 feet San Leandro, CA  
Top of Casing Elevation: 53.31 feet Date: March 13, 2017  
Depth to Groundwater: 19.42 feet Sampler: Mansour Sepehr  
Groundwater Elevation: 33.89 feet  
Water Column Height: 10.78 feet  
Purged Volume: 5 gallons

Purging Method: Bailer  Pump

Sampling Method: Bailer  Pump

Color: Yes  No  Describe: clear

Sheen: Yes  No  Describe: No Sheen

Odor: Yes  No  Describe: No odor

## Field Measurements:

Time	Volume (gallons)	pH	Temp °C	E.C. (µS/cm)
12:35	2.0	6.69	22.1	386
12:40	4.0	6.72	21.6	793
12:44	5.0	6.76	21.2	806
Sampled 12:50				



## ENVIRONMENTAL ENGINEERING, INC

Well No.: MW-5  
Casing Diameter: 4" inches  
Depth of Well: 29.90 feet  
Top of Casing Elevation: 50.53 feet  
Depth to Groundwater: 16.67 feet  
Groundwater Elevation: 33.86 feet  
Water Column Height: 13.23 feet  
Purged Volume: 5 gallons

Project No.: 2551  
Address: 15101 Freedom Ave.  
San Leandro, CA  
Date: March 13, 2017  
Sampler: Mansour Sepehr

Purging Method: Bailer  Pump

Sampling Method: Bailer  Pump

Color: Yes  No  Describe: \_\_\_\_\_

Sheen: Yes  No  Describe: \_\_\_\_\_

Odor: Yes  No  Describe: \_\_\_\_\_

## Field Measurements:

Time	Volume (gallons)	pH	Temp °C	E.C. (µS/cm)
12:54	1.5	6.73	23.1	960
12:57	3.5	6.70	22.9	899
1:02	5.00	6.71	22.9	952
Sampled 1:06				



## ENVIRONMENTAL ENGINEERING, INC

Well No.: MW-6  
Casing Diameter: 4" inches  
Depth of Well: 27.45 feet  
Top of Casing Elevation: 45.82 feet  
Depth to Groundwater: 17.25 feet  
Groundwater Elevation: 28.57 feet  
Water Column Height: 10.20 feet  
Purged Volume: 6 gallons

Project No.: 2551  
Address: 15101 Freedom Ave.  
San Leandro, CA  
Date: March 13, 2017  
Sampler: Mansour Sepehr

Purging Method: Bailer  Pump

Sampling Method: Bailer  Pump

Color: Yes  No  Describe: clear

Sheen: Yes  No  Describe: \_\_\_\_\_

Odor: Yes  No  Describe: \_\_\_\_\_

## Field Measurements:

Time	Volume (gallons)	pH	Temp °C	E.C. (µS/cm)
2:55	2	6.71	24.5	775
2:59	4	6.75	22.6	765
3:04	6	6.77	21.9	757



## ENVIRONMENTAL ENGINEERING, INC

Well No.: MW-7  
Casing Diameter: 2" inches  
Depth of Well: 20.90 feet  
Top of Casing Elevation: 44.74 feet  
Depth to Groundwater: 10.98 feet  
Groundwater Elevation: 33.76 feet  
Water Column Height: 9.92 feet  
Purged Volume: 5 gallons

Project No.: 2551  
Address: 15101 Freedom Ave.  
San Leandro, CA  
Date: March 14, 2017  
Sampler: Mansour Sepehr

Purging Method: Bailer  Pump

Sampling Method: Bailer  Pump

Color: Yes  No  Describe: \_\_\_\_\_

Sheen: Yes  No  Describe: \_\_\_\_\_

Odor: Yes  No  Describe: \_\_\_\_\_

## Field Measurements:

Time	Volume (gallons)	pH	Temp °C	E.C. (µS/cm)
10:59	1.5	6.42	21.0	876
11:2	3	6.47	19.9	885
11:05	5	6.50	19.5	914



ENVIRONMENTAL ENGINEERING, INC

Well No.: MW-10R Project No.: 2551  
Casing Diameter: 4 inches Address: 15101 Freedom Ave.  
Depth of Well: 25.70 feet San Leandro, CA  
Top of Casing Elevation: 45.13 feet Date: March 14, 2017  
Depth to Groundwater: 13.05 feet Sampler: Mansour Sepehr  
Groundwater Elevation: 32.08 feet  
Water Column Height: 12.65 feet  
Purged Volume: 6 gallons

Purging Method: Bailer  Pump

Sampling Method: Bailer  Pump

Color: Yes  No  Describe: cloudy

Sheen: Yes  No  Describe: \_\_\_\_\_

Odor: Yes  No  Describe: \_\_\_\_\_

Field Measurements:

Time	Volume (gallons)	pH	Temp °C	E.C. (µS/cm)
10.03	2	6.61	21.7	10.01
10.07	4	6.64	21.2	10.09
10.10	6	6.70	20.8	10.17



## ENVIRONMENTAL ENGINEERING, INC

Well No.: MW-11 Project No.: 2551  
Casing Diameter: 2 1/2 inches Address: 15101 Freedom Ave.  
Depth of Well: 28.30 feet San Leandro, CA  
Top of Casing Elevation: 42.45 feet Date: March 14, 2017  
Depth to Groundwater: 10.34 feet Sampler: Mansour Sepehr  
Groundwater Elevation: 32.11 feet  
Water Column Height: 17.96 feet  
Purged Volume: 5 gallons

Purging Method: Bailer  Pump

Sampling Method: Bailer  Pump

Color: Yes  No  Describe: cloudy

Sheen: Yes  No  Describe: \_\_\_\_\_

Odor: Yes  No  Describe: \_\_\_\_\_

## Field Measurements:

Time	Volume (gallons)	pH	Temp °C	E.C. (µS/cm)
10:30	1.5	6.82	20.2	702
10:33	3	6.85	19.5	695
10:37	5	6.85	19.2	696



## ENVIRONMENTAL ENGINEERING, INC

Well No.: EX-1  
Casing Diameter: 4" inches  
Depth of Well: 29.20 feet  
Top of Casing Elevation: 47.36 feet  
Depth to Groundwater: 13.30 feet  
Groundwater Elevation: 32.96 feet  
Water Column Height: 14.80 feet  
Purged Volume: 6 gallons

Project No.: 2551  
Address: 15101 Freedom Ave.  
San Leandro, CA  
Date: March 14, 2017  
Sampler: Mansour Sepahr

Purging Method: Bailer  Pump

Sampling Method: Bailer  Pump

Color: Yes  No  Describe: cloudy

Sheen: Yes  No  Describe: \_\_\_\_\_

Odor: Yes  No  Describe: \_\_\_\_\_

## Field Measurements:

Time	Volume (gallons)	pH	Temp °C	E.C. (µS/cm)
9:30 AM	2	6.87	21.3	615
9:34	4	6.92	21.7	608
9:37	6	6.94	21.8	611

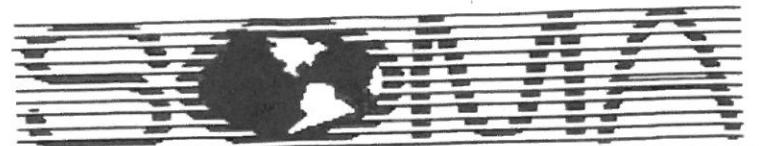


## ENVIRONMENTAL ENGINEERING, INC

Well No.:	<u>EX-2</u>		Project No.:	2551
Casing Diameter:	<u>4</u>	inches	Address:	15101 Freedom Ave.
Depth of Well:	<u>-</u> feet		San Leandro, CA	
Top of Casing Elevation:	<u>45.96</u> feet		Date:	March 13, 2017
Depth to Groundwater:	<u>-</u> feet		Sampler:	Mansour Sepehr
Groundwater Elevation:	<u>-</u> feet			
Water Column Height:	<u>-</u> feet			
Purged Volume:	<u>-</u> gallons			
Purging Method:	Bailer	<input type="checkbox"/>	Pump	<input type="checkbox"/> Not Purged
Sampling Method:	Bailer	<input type="checkbox"/>	Pump	<input type="checkbox"/> Not Sampled
Color:	Yes	<input type="checkbox"/>	No	<input type="checkbox"/> Describe: <u>Unknown</u>
Sheen:	Yes	<input type="checkbox"/>	No	<input type="checkbox"/> Describe: <u>Unknown</u>
Odor:	Yes	<input type="checkbox"/>	No	<input type="checkbox"/> Describe: <u>Unknown</u>

## Field Measurements:

Time	Volume (gallons)	pH	Temp °C	E.C. ( $\mu$ S/cm)
Groundwater	inaccessible due to the presence of downhole pump in the well. This well is a part of existing groundwater extraction & treatment system which is currently inoperational.			



## ENVIRONMENTAL ENGINEERING, INC

Well No.: MPE-1  
Casing Diameter: 4" inches  
Depth of Well: 29.80 feet  
Top of Casing Elevation: 51.96 feet  
Depth to Groundwater: 18.89 feet  
Groundwater Elevation: 33.87 feet  
Water Column Height: 11.71 feet  
Purged Volume: 6 gallons

Project No.: 2551  
Address: 15101 Freedom Ave.  
San Leandro, CA  
Date: March 13, 2017  
Sampler: Mansour Sepehr

Purging Method: Bailer  Pump

Sampling Method: Bailer  Pump

Color: Yes  No  Describe: \_\_\_\_\_

Sheen: Yes  No  Describe: \_\_\_\_\_

Odor: Yes  No  Describe: \_\_\_\_\_

## Field Measurements:

Time	Volume (gallons)	pH	Temp °C	E.C. (µS/cm)
2:11	2	7.13	22.04	681
2:21	4	7.17	20.08	685
2:25	6	7.14	21.04	707



## ENVIRONMENTAL ENGINEERING, INC

Well No.: MPE-2 Project No.: 2551  
Casing Diameter: 4 1/1 inches Address: 15101 Freedom Ave.  
Depth of Well: 30.00 feet San Leandro, CA  
Top of Casing Elevation: 53.72 feet Date: March 13, 2017  
Depth to Groundwater: 20.16 feet Sampler: Mansour Sepehr  
Groundwater Elevation: 33.56 feet  
Water Column Height: 9.84 feet  
Purged Volume: 5 gallons

Purging Method: Bailer  Pump

Sampling Method: Bailer  Pump

Color: Yes  No  Describe: Clear

Sheen: Yes  No  Describe: No Sheen

Odor: Yes  No  Describe: Strong odor

## Field Measurements:

Time	Volume (gallons)	pH	Temp °C	E.C. (µS/cm)
1:47	2	6.74	22.8	989
2:53	4	6.73	22.6	983
1:56	5	6.75	22.7	982
sampled a				
2:00				

## EPA On-line Tools for Site Assessment Calculation

### Hydraulic Gradient -- Magnitude and Direction

**Gradient Calculation** from fitting a plane to as many as thirty points

$$a x_1 + b y_1 + c = h_1$$

$$a x_2 + b y_2 + c = h_2$$

$$a x_3 + b y_3 + c = h_3$$

...

$$a x_{30} + b y_{30} + c = h_{30}$$

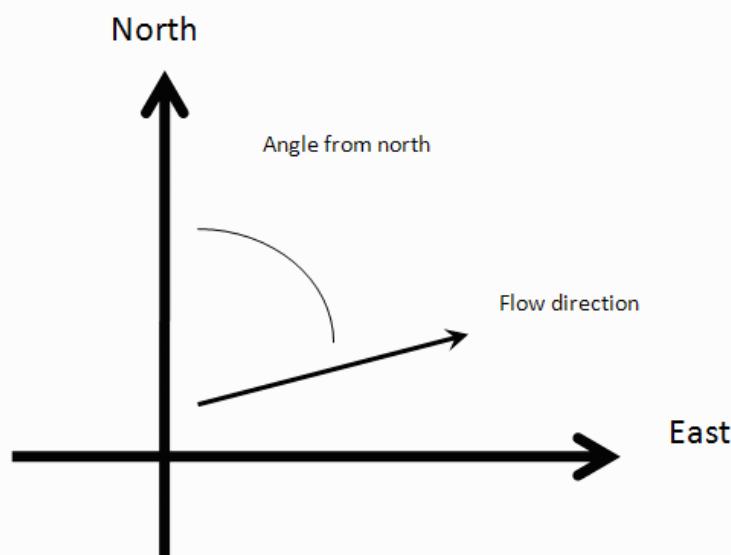
where  $(x_i, y_i)$  are the coordinates of the well and

$h_i$  is the head

$i = 1, 2, 3, \dots, 30$

The coefficients a, b, and c are calculated by a least-squares fitting of the data to a plane

The gradient is calculated from the square root of  $(a^2 + b^2)$  and the angle from the arctangent of a/b or b/a depending on the quadrant



### Inputs

Example Data Set 1	Example Data Set 2	<input type="button" value="Calculate"/>	<input type="button" value="Clear"/>
<input type="button" value="Save Data"/>	<input type="button" value="Recall Data"/>	<input type="button" value="Go Back"/>	
Site Name	15101 Freedom Ave, San L		
Date	March 13, 2017	<input type="button" value="Current Date"/>	
Calculation basis	Head		
Coordinates	ft		
I.D.	x-coordinate	y-coordinate	head ft
1) MW-1	6092119.016	2084364.691	33.51
2) MW-2	6092063.978	2084323.224	33.91
3) MW-3	6092176.317	2084298.343	33.53
4) MW-4	6092124.294	2084251.598	33.89
5) MW-5	6092177.071	2084206.361	33.86
6) MW-6	6092140.881	2084072.911	28.57
7) MW-7	6092290.918	2084008.071	33.76
8) MW-10R	6092182.374	2083967.53	32.08
9) MW-11	6092224.568	2083926.493	32.11
10) EX-1	6092163.5	2084133.982	32.96
11) MPE-1	6092125.048	2084212.393	33.87
12) MPE-2	6092171.793	2084292.312	33.56
13)			
14)			
15)			
16)			

17)		
18)		
19)		
20)		
21)		
22)		
23)		
24)		
25)		
26)		
27)		
28)		
29)		
30)		

### Results

Number of Points Used in Calculation	12
Max. Difference Between Head Values	1.628
Gradient Magnitude (i)	0.01710
Flow direction as degrees from North (positive y axis)	238.5
Coefficient of Determination ( $R^2$ )	0.406

WCMS

Last updated on 2/23/2016

# **Appendix C**

**Laboratory Reports and Chain of Custody Forms  
for the First Quarter 2017 Monitoring Event**



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

**Laboratory Job Number 285165**  
**ANALYTICAL REPORT**

SOMA Environmental Engineering Inc.  
6620 Owens Dr.  
Pleasanton, CA 94588

Project : 2551  
Location : 15101 Freedom Avenue San Leandro  
Level : II

<u>Sample ID</u>	<u>Lab ID</u>
MW-3	285165-001
MW-10R	285165-002

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: \_\_\_\_\_

Date: 01/25/2017

Will Rice  
Project Manager  
will.rice@ctberk.com  
(510) 204-2221 Ext 13102

CA ELAP# 2896, NELAP# 4044-001

**CASE NARRATIVE**

Laboratory number: **285165**  
Client: **SOMA Environmental Engineering Inc.**  
Project: **2551**  
Location: **15101 Freedom Avenue San Leandro**  
Request Date: **01/18/17**  
Samples Received: **01/18/17**

This data package contains sample and QC results for two water samples, requested for the above referenced project on 01/18/17. The samples were received cold and intact.

**Volatile Organics by GC/MS (EPA 8260B):**

MW-10R (lab # 285165-002) was diluted due to high non-target analytes. No other analytical problems were encountered.

## **CHAIN OF CUSTODY**

**Curtis & Tompkins, Ltd.**

**Analytical Laboratory Since 1878**  
2323 Fifth Street  
Berkeley, CA 94710  
(510)486-0900 Phone  
(510)486-0532 Fax

C&T LOGIN # 285165

Sampler: Davoud Bazrash

Project No: 2551

Project Name: 15101 Freedo

## Turnaround Time: Standard

## **Notes: EDF OUTPUT REQUIRED**

## Ethanol

REINQUISHED BY:

1, 18, 17 ~~18~~ 13:05

1/18/17 13:05 DATE/TIME

*Catwoman* 11/18/17 13:10 DATE/TIME

DATE/TIME \_\_\_\_\_ DATE/TIME \_\_\_\_\_  
DATE/TIME \_\_\_\_\_ DATE/TIME \_\_\_\_\_

## Analyses

Page \_\_\_\_\_ of \_\_\_\_\_

## COOLER RECEIPT CHECKLIST



Curtis &amp; Tompkins, Ltd.

Login # 285165 Date Received 11/8/17 Number of coolers 0  
 Client SOMA ENVIRONMENTS Project 15101 FREEDOM AVE, SAN LEANDRO

Date Opened 11/8/17 By (print) VPS (sign) V. Serebry  
 Date Logged in 11/8/17 By (print) DTN (sign) dt guy  
 Date Labeled 11/8/17 By (print) ↓ (sign) ↓

1. Did cooler come with a shipping slip (airbill, etc) \_\_\_\_\_ YES  NO  
 Shipping info \_\_\_\_\_

2A. Were custody seals present? ....  YES (circle) on cooler on samples  NO  
 How many \_\_\_\_\_ Name \_\_\_\_\_ Date \_\_\_\_\_

2B. Were custody seals intact upon arrival? \_\_\_\_\_ YES NO N/A

3. Were custody papers dry and intact when received? \_\_\_\_\_ YES NO

4. Were custody papers filled out properly (ink, signed, etc)? \_\_\_\_\_ YES NO

5. Is the project identifiable from custody papers? (If so fill out top of form) \_\_\_\_\_ YES NO

6. Indicate the packing in cooler: (if other, describe) \_\_\_\_\_

Bubble Wrap  Foam blocks  Bags  None  
 Cloth material  Cardboard  Styrofoam  Paper towels

7. Temperature documentation: \* Notify PM if temperature exceeds 6°C

Type of ice used:  Wet  Blue/Gel  None Temp(°C) \_\_\_\_\_

Temperature blank(s) included?  Thermometer# \_\_\_\_\_  IR Gun# \_\_\_\_\_

Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? \_\_\_\_\_ YES  NO  
 If YES, what time were they transferred to freezer? \_\_\_\_\_

9. Did all bottles arrive unbroken/unopened? \_\_\_\_\_ YES NO

10. Are there any missing / extra samples? \_\_\_\_\_ YES NO

11. Are samples in the appropriate containers for indicated tests? \_\_\_\_\_ YES NO

12. Are sample labels present, in good condition and complete? \_\_\_\_\_ YES NO

13. Do the sample labels agree with custody papers? \_\_\_\_\_ YES NO

14. Was sufficient amount of sample sent for tests requested? \_\_\_\_\_ YES NO

15. Are the samples appropriately preserved? \_\_\_\_\_ YES NO N/A

16. Did you check preservatives for all bottles for each sample? \_\_\_\_\_ YES NO N/A

17. Did you document your preservative check? (pH strip lot# \_\_\_\_\_) YES NO N/A

18. Did you change the hold time in LIMS for unpreserved VOAs? \_\_\_\_\_ YES NO N/A

19. Did you change the hold time in LIMS for preserved terracores? \_\_\_\_\_ YES NO N/A

20. Are bubbles > 6mm absent in VOA samples? \_\_\_\_\_ YES NO N/A

21. Was the client contacted concerning this sample delivery? \_\_\_\_\_ YES NO

If YES, Who was called? \_\_\_\_\_ By \_\_\_\_\_ Date: \_\_\_\_\_

## COMMENTS

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Curtis & Tompkins, Ltd.

## Detections Summary for 285165

Results for any subcontracted analyses are not included in this summary.

Client : SOMA Environmental Engineering Inc.  
Project : 2551  
Location : 15101 Freedom Avenue San Leandro

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	1,700		50	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
tert-Butyl Alcohol (TBA)	11		10	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
Benzene	20		0.50	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
Ethylbenzene	32		0.50	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
m,p-Xylenes	45		0.50	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
o-Xylene	1.1		0.50	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	6,500		250	ug/L	As Recd	5.000	EPA 8260B	EPA 5030B
tert-Butyl Alcohol (TBA)	85		50	ug/L	As Recd	5.000	EPA 8260B	EPA 5030B
Ethylbenzene	160		2.5	ug/L	As Recd	5.000	EPA 8260B	EPA 5030B
m,p-Xylenes	210		2.5	ug/L	As Recd	5.000	EPA 8260B	EPA 5030B
o-Xylene	4.1		2.5	ug/L	As Recd	5.000	EPA 8260B	EPA 5030B

### Purgeable Organics by GC/MS

Lab #:	285165	Location:	15101 Freedom Avenue San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Field ID:	MW-3	Batch#:	243582
Lab ID:	285165-001	Sampled:	01/18/17
Matrix:	Water	Received:	01/18/17
Units:	ug/L	Analyzed:	01/20/17
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	1,700	50
tert-Butyl Alcohol (TBA)	11	10
Isopropyl Ether (DIPE)	ND	0.50
Ethyl tert-Butyl Ether (ETBE)	ND	0.50
Methyl tert-Amyl Ether (TAME)	ND	0.50
Ethanol	ND	1,000
MTBE	ND	0.50
1,2-Dichloroethane	ND	0.50
Benzene	20	0.50
Toluene	ND	0.50
1,2-Dibromoethane	ND	0.50
Ethylbenzene	32	0.50
m,p-Xylenes	45	0.50
o-Xylene	1.1	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	101	80-128
1,2-Dichloroethane-d4	112	75-139
Toluene-d8	102	80-120
Bromofluorobenzene	107	80-120

ND= Not Detected

RL= Reporting Limit

### **Purgeable Organics by GC/MS**

Lab #:	285165	Location:	15101 Freedom Avenue San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Field ID:	MW-10R	Batch#:	243535
Lab ID:	285165-002	Sampled:	01/18/17
Matrix:	Water	Received:	01/18/17
Units:	ug/L	Analyzed:	01/19/17
Diln Fac:	5.000		

Analyte	Result	RL
Gasoline C7-C12	6,500	250
tert-Butyl Alcohol (TBA)	85	50
Isopropyl Ether (DIPE)	ND	2.5
Ethyl tert-Butyl Ether (ETBE)	ND	2.5
Methyl tert-Amyl Ether (TAME)	ND	2.5
Ethanol	ND	5,000
MTBE	ND	2.5
1,2-Dichloroethane	ND	2.5
Benzene	ND	2.5
Toluene	ND	2.5
1,2-Dibromoethane	ND	2.5
Ethylbenzene	160	2.5
m,p-Xylenes	210	2.5
o-Xylene	4.1	2.5

Surrogate	%REC	Limits
Dibromofluoromethane	102	80-128
1,2-Dichloroethane-d4	108	75-139
Toluene-d8	101	80-120
Bromofluorobenzene	104	80-120

ND= Not Detected

RL= Reporting Limit

**Batch QC Report**
**Purgeable Organics by GC/MS**

Lab #:	285165	Location:	15101 Freedom Avenue San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC869097	Batch#:	243535
Matrix:	Water	Analyzed:	01/19/17
Units:	ug/L		

Analyte	Result	RL
Gasoline C7-C12	ND	50
tert-Butyl Alcohol (TBA)	ND	10
Isopropyl Ether (DIPE)	ND	0.50
Ethyl tert-Butyl Ether (ETBE)	ND	0.50
Methyl tert-Amyl Ether (TAME)	ND	0.50
Ethanol	ND	1,000
MTBE	ND	0.50
1,2-Dichloroethane	ND	0.50
Benzene	ND	0.50
Toluene	ND	0.50
1,2-Dibromoethane	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	104	80-128
1,2-Dichloroethane-d4	112	75-139
Toluene-d8	102	80-120
Bromofluorobenzene	109	80-120

ND= Not Detected

RL= Reporting Limit

## Batch QC Report

## Purgeable Organics by GC/MS

Lab #:	285165	Location:	15101 Freedom Avenue San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	243535
Units:	ug/L	Analyzed:	01/19/17
Diln Fac:	1.000		

Type: BS Lab ID: QC869098

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	62.50	69.26	111	32-155
Isopropyl Ether (DIPE)	12.50	14.07	113	57-128
Ethyl tert-Butyl Ether (ETBE)	12.50	15.04	120	62-120
Methyl tert-Amyl Ether (TAME)	12.50	14.83	119	69-120
MTBE	12.50	14.05	112	65-120
1,2-Dichloroethane	12.50	14.24	114	74-133
Benzene	12.50	14.07	113	80-123
Toluene	12.50	13.95	112	80-121
1,2-Dibromoethane	12.50	13.29	106	80-120
Ethylbenzene	12.50	14.35	115	80-123
m,p-Xylenes	25.00	28.28	113	80-126
o-Xylene	12.50	14.46	116	80-126

Surrogate	%REC	Limits
Dibromofluoromethane	100	80-128
1,2-Dichloroethane-d4	111	75-139
Toluene-d8	101	80-120
Bromofluorobenzene	104	80-120

Type: BSD Lab ID: QC869099

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	62.50	71.87	115	32-155	4	33
Isopropyl Ether (DIPE)	12.50	13.81	110	57-128	2	20
Ethyl tert-Butyl Ether (ETBE)	12.50	14.73	118	62-120	2	20
Methyl tert-Amyl Ether (TAME)	12.50	14.64	117	69-120	1	20
MTBE	12.50	13.83	111	65-120	2	22
1,2-Dichloroethane	12.50	14.10	113	74-133	1	20
Benzene	12.50	13.59	109	80-123	3	20
Toluene	12.50	13.61	109	80-121	2	20
1,2-Dibromoethane	12.50	13.87	111	80-120	4	20
Ethylbenzene	12.50	13.87	111	80-123	3	21
m,p-Xylenes	25.00	27.44	110	80-126	3	21
o-Xylene	12.50	14.00	112	80-126	3	20

Surrogate	%REC	Limits
Dibromofluoromethane	101	80-128
1,2-Dichloroethane-d4	109	75-139
Toluene-d8	102	80-120
Bromofluorobenzene	106	80-120

RPD= Relative Percent Difference

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## Batch QC Report

## Purgeable Organics by GC/MS

Lab #:	285165	Location:	15101 Freedom Avenue San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	243535
Units:	ug/L	Analyzed:	01/19/17
Diln Fac:	1.000		

Type: BS Lab ID: QC869100

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	1,144	114	76-120

Surrogate	%REC	Limits
Dibromofluoromethane	101	80-128
1,2-Dichloroethane-d4	112	75-139
Toluene-d8	103	80-120
Bromofluorobenzene	108	80-120

Type: BSD Lab ID: QC869101

Analyte	Spiked	Result	%REC	Limits	RPD Lim
Gasoline C7-C12	1,000	1,101	110	76-120	4 20

Surrogate	%REC	Limits
Dibromofluoromethane	102	80-128
1,2-Dichloroethane-d4	116	75-139
Toluene-d8	102	80-120
Bromofluorobenzene	108	80-120

RPD= Relative Percent Difference

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## Batch QC Report

## Purgeable Organics by GC/MS

Lab #:	285165	Location:	15101 Freedom Avenue San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Batch#:	243535
MSS Lab ID:	285091-003	Sampled:	01/16/17
Matrix:	Water	Received:	01/16/17
Units:	ug/L	Analyzed:	01/19/17
Diln Fac:	1.000		

Type: MS Lab ID: QC869222

Analyte	MSS	Result	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)		<1.343	125.0	159.7	128	49-155
Isopropyl Ether (DIPE)		<0.1000	25.00	27.45	110	65-122
Ethyl tert-Butyl Ether (ETBE)		<0.1000	25.00	29.31	117	69-120
Methyl tert-Amyl Ether (TAME)		<0.1000	25.00	29.29	117	74-120
MTBE		0.1608	25.00	29.19	116	71-120
1,2-Dichloroethane		<0.1000	25.00	29.93	120	80-130
Benzene		<0.1000	25.00	28.09	112	80-120
Toluene		<0.1000	25.00	28.98	116	80-120
1,2-Dibromoethane		<0.1000	25.00	28.83	115	80-120
Ethylbenzene		<0.1022	25.00	28.86	115	80-120
m,p-Xylenes		<0.1357	50.00	55.95	112	80-121
o-Xylene		<0.1322	25.00	29.08	116	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	102	80-128
1,2-Dichloroethane-d4	106	75-139
Toluene-d8	103	80-120
Bromofluorobenzene	103	80-120

Type: MSD Lab ID: QC869223

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	125.0	151.9	122	49-155	5	33
Isopropyl Ether (DIPE)	25.00	26.48	106	65-122	4	22
Ethyl tert-Butyl Ether (ETBE)	25.00	28.59	114	69-120	2	20
Methyl tert-Amyl Ether (TAME)	25.00	29.61	118	74-120	1	20
MTBE	25.00	28.12	112	71-120	4	20
1,2-Dichloroethane	25.00	29.81	119	80-130	0	20
Benzene	25.00	27.96	112	80-120	0	20
Toluene	25.00	27.99	112	80-120	3	21
1,2-Dibromoethane	25.00	28.60	114	80-120	1	20
Ethylbenzene	25.00	28.91	116	80-120	0	25
m,p-Xylenes	50.00	56.82	114	80-121	2	23
o-Xylene	25.00	28.49	114	80-120	2	25

Surrogate	%REC	Limits
Dibromofluoromethane	100	80-128
1,2-Dichloroethane-d4	109	75-139
Toluene-d8	102	80-120
Bromofluorobenzene	102	80-120

RPD= Relative Percent Difference

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**Batch QC Report**
**Purgeable Organics by GC/MS**

Lab #:	285165	Location:	15101 Freedom Avenue San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC869292	Batch#:	243582
Matrix:	Water	Analyzed:	01/20/17
Units:	ug/L		

Analyte	Result	RL
Gasoline C7-C12	ND	50
tert-Butyl Alcohol (TBA)	ND	10
Isopropyl Ether (DIPE)	ND	0.50
Ethyl tert-Butyl Ether (ETBE)	ND	0.50
Methyl tert-Amyl Ether (TAME)	ND	0.50
Ethanol	ND	1,000
MTBE	ND	0.50
1,2-Dichloroethane	ND	0.50
Benzene	ND	0.50
Toluene	ND	0.50
1,2-Dibromoethane	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	104	80-128
1,2-Dichloroethane-d4	114	75-139
Toluene-d8	102	80-120
Bromofluorobenzene	111	80-120

ND= Not Detected

RL= Reporting Limit

**Batch QC Report**
**Purgeable Organics by GC/MS**

Lab #:	285165	Location:	15101 Freedom Avenue San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	243582
Units:	ug/L	Analyzed:	01/20/17
Diln Fac:	1.000		

Type: BS Lab ID: QC869293

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	62.50	70.06	112	32-155
Isopropyl Ether (DIPE)	12.50	12.96	104	57-128
Ethyl tert-Butyl Ether (ETBE)	12.50	14.01	112	62-120
Methyl tert-Amyl Ether (TAME)	12.50	14.01	112	69-120
MTBE	12.50	13.44	108	65-120
1,2-Dichloroethane	12.50	14.75	118	74-133
Benzene	12.50	13.59	109	80-123
Toluene	12.50	13.48	108	80-121
1,2-Dibromoethane	12.50	13.29	106	80-120
Ethylbenzene	12.50	14.15	113	80-123
m,p-Xylenes	25.00	27.74	111	80-126
o-Xylene	12.50	14.10	113	80-126

Surrogate	%REC	Limits
Dibromofluoromethane	99	80-128
1,2-Dichloroethane-d4	111	75-139
Toluene-d8	102	80-120
Bromofluorobenzene	103	80-120

Type: BSD Lab ID: QC869294

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	62.50	71.21	114	32-155	2	33
Isopropyl Ether (DIPE)	12.50	13.17	105	57-128	2	20
Ethyl tert-Butyl Ether (ETBE)	12.50	14.33	115	62-120	2	20
Methyl tert-Amyl Ether (TAME)	12.50	14.23	114	69-120	2	20
MTBE	12.50	13.96	112	65-120	4	22
1,2-Dichloroethane	12.50	14.55	116	74-133	1	20
Benzene	12.50	13.20	106	80-123	3	20
Toluene	12.50	13.48	108	80-121	0	20
1,2-Dibromoethane	12.50	13.47	108	80-120	1	20
Ethylbenzene	12.50	13.06	104	80-123	8	21
m,p-Xylenes	25.00	26.87	107	80-126	3	21
o-Xylene	12.50	13.86	111	80-126	2	20

Surrogate	%REC	Limits
Dibromofluoromethane	103	80-128
1,2-Dichloroethane-d4	110	75-139
Toluene-d8	103	80-120
Bromofluorobenzene	104	80-120

RPD= Relative Percent Difference

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10.0

## Batch QC Report

## Purgeable Organics by GC/MS

Lab #:	285165	Location:	15101 Freedom Avenue San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	243582
Units:	ug/L	Analyzed:	01/20/17
Diln Fac:	1.000		

Type: BS Lab ID: QC869295

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	750.0	831.2	111	76-120

Surrogate	%REC	Limits
Dibromofluoromethane	102	80-128
1,2-Dichloroethane-d4	113	75-139
Toluene-d8	104	80-120
Bromofluorobenzene	106	80-120

Type: BSD Lab ID: QC869296

Analyte	Spiked	Result	%REC	Limits	RPD Lim
Gasoline C7-C12	750.0	855.9	114	76-120	3 20

Surrogate	%REC	Limits
Dibromofluoromethane	102	80-128
1,2-Dichloroethane-d4	110	75-139
Toluene-d8	105	80-120
Bromofluorobenzene	107	80-120

RPD= Relative Percent Difference

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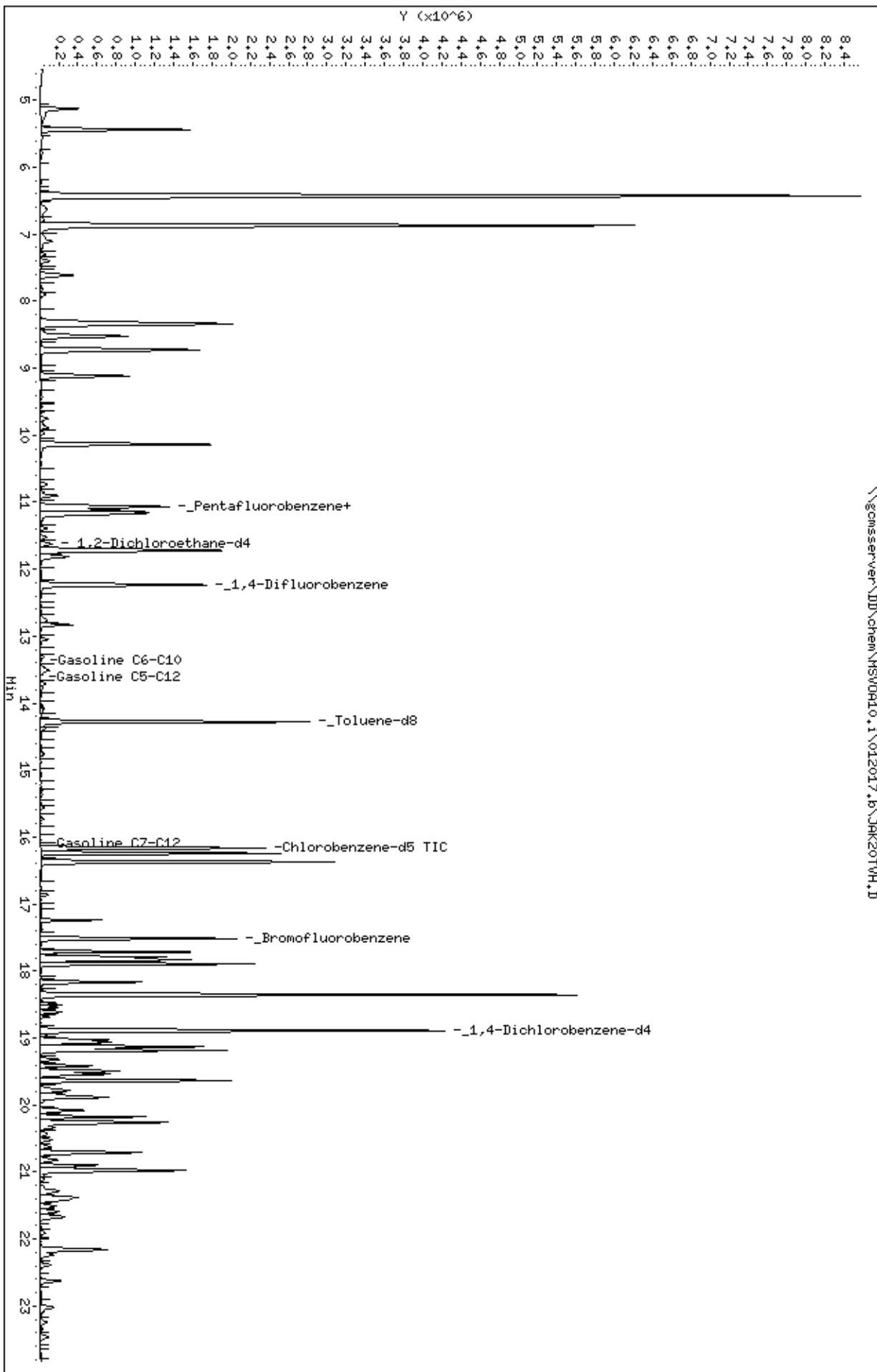
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Client ID:  
Sample Info: S.285165-001

Column phase:

Instrument: MSWD10.i  
Operator: VOC  
Column diameter: 2.00

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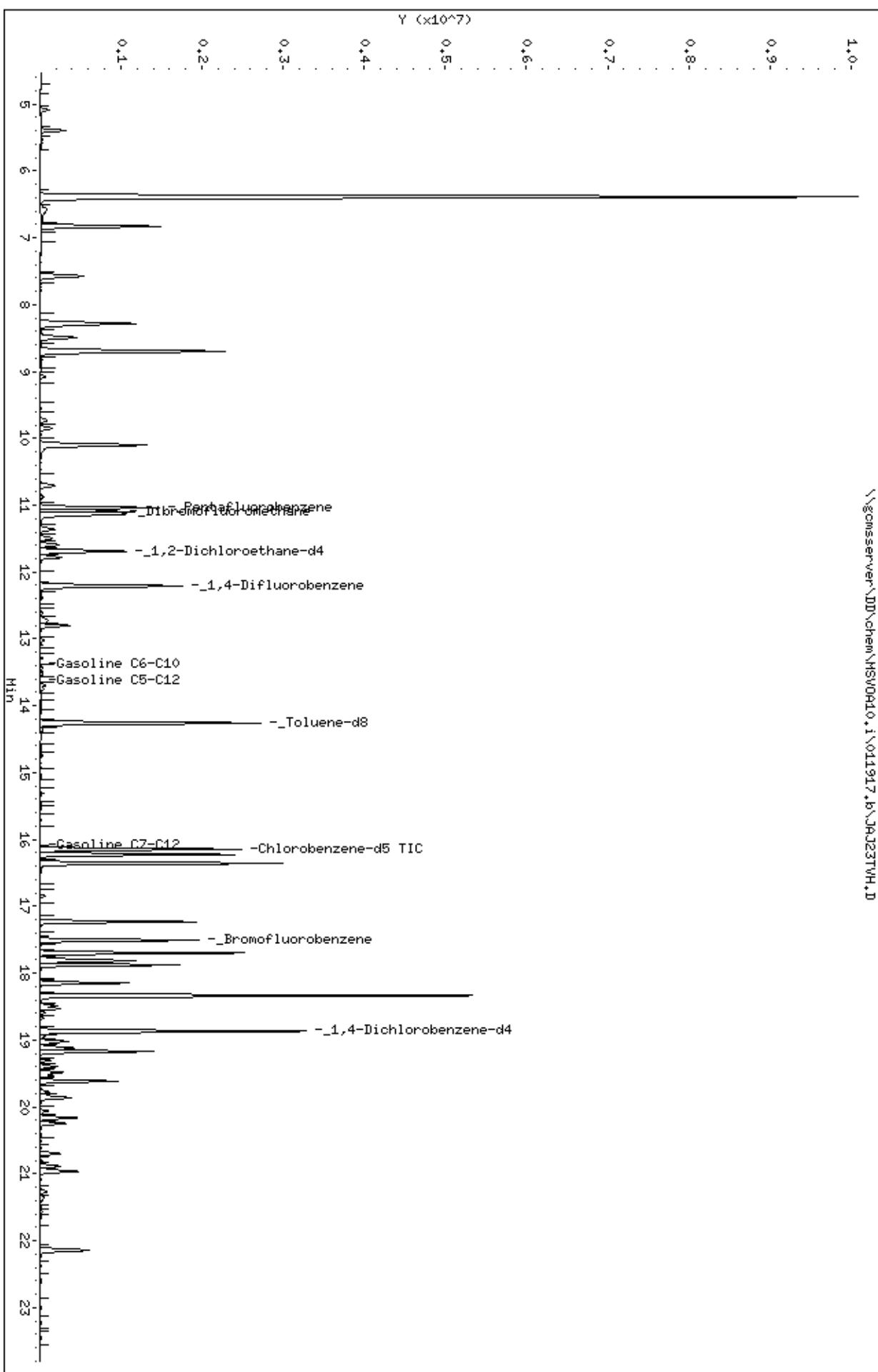


Client ID:  
Sample Info: S\_285165-002

Column phase:

Instrument: MSW0A10.i  
Operator: VOC  
Column diameter: 2.00

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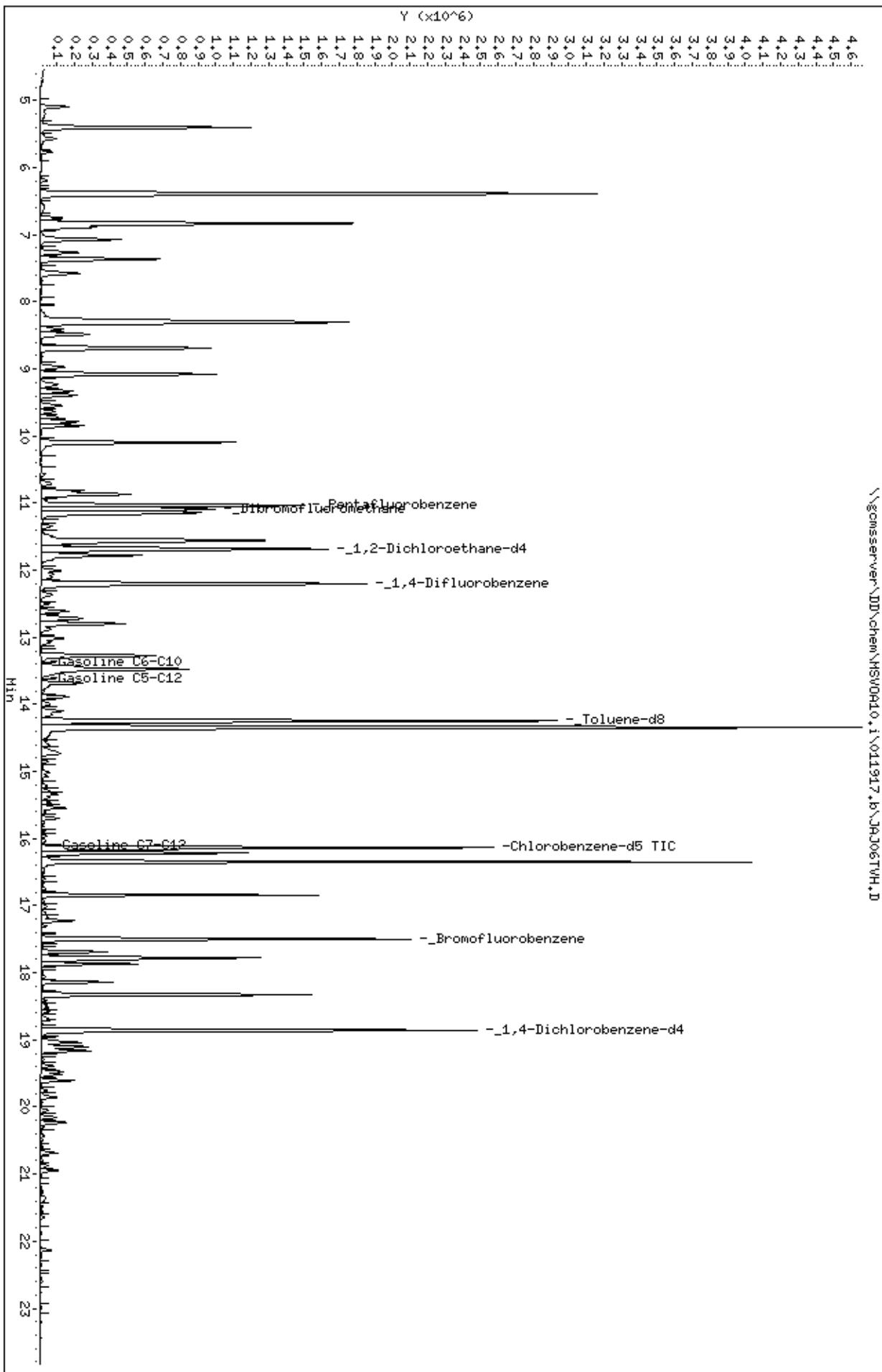


Client ID:  
Sample Info: cov\bs\qc869100,243535,s31872,.01\100,

Column phase:

Instrument: MSWD10.i  
Operator: VOC  
Column diameter: 2.00

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Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

**Laboratory Job Number 286368  
ANALYTICAL REPORT**

SOMA Environmental Engineering Inc.  
6620 Owens Dr.  
Pleasanton, CA 94588

Project : 2551  
Location : 15101 Freedom Avenue San Leandro  
Level : II

<u>Sample ID</u>	<u>Lab ID</u>
MW-3	286368-001
MW-10R	286368-002

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: 

Date: 03/03/2017

Tracy Babjar  
Project Manager  
[tracy.babjar@ctberk.com](mailto:tracy.babjar@ctberk.com)  
(510) 204-2226 Ext 13107

CA ELAP# 2896, NELAP# 4044-001

**CASE NARRATIVE**

Laboratory number: **286368**  
Client: **SOMA Environmental Engineering Inc.**  
Project: **2551**  
Location: **15101 Freedom Avenue San Leandro**  
Request Date: **02/24/17**  
Samples Received: **02/24/17**

This data package contains sample and QC results for two water samples, requested for the above referenced project on 02/24/17. The samples were received cold and intact.

**Volatile Organics by GC/MS (EPA 8260B):**

MW-10R (lab # 286368-002) was diluted due to high non-target analytes. No other analytical problems were encountered.

# **CHAIN OF CUSTODY**

Page \_\_\_\_\_ of \_\_\_\_\_

## **Curtis & Tompkins, Ltd.**

Analytical Laboratory Since 1878

2323 Fifth Street

Berkeley, CA 94710

(510)486-0900 Phone

(510)486-0532 Fax

Project No: 2551

C&T LOGIN # 284368

**Sampler: Davoud Bazrpash**

**Report To:** Joyce Bobek

**Project Name: 15101 Freedom Ave., San Leandro, CA**

Company : SOMA Environmental

## Turnaround Time: Standard

**Telephone:** 925-734-6400

**Fax:** 925-734-6401

**Notes: EDF OUTPUT REQUIRED**

### Ethanol

**RELINQUISHED BY:**

2/24/17 12:07 2/24  
DATE/TIME

RECEIVED BY:

E *Tan Ringer* 12/07 2/24 DATE/TIME

E *1/29/2020* DATE/TIME

DATE/TIME

## **COOLER RECEIPT CHECKLIST**



Curtis & Tompkins, Ltd.

Login # 2B0368 Date Received 2/24/17 Number of coolers 0  
Client SOMA ENVIRONMENTAL Project 15101 FREEDOM AVE, SAN  
FRANCISCO

1. Did cooler come with a shipping slip (airbill, etc) \_\_\_\_\_ YES NO  
 Shipping info \_\_\_\_\_

2A. Were custody seals present? ....  YES (circle) on cooler on samples  NO  
 How many \_\_\_\_\_ Name \_\_\_\_\_ Date \_\_\_\_\_

2B. Were custody seals intact upon arrival? \_\_\_\_\_ YES NO N/A

3. Were custody papers dry and intact when received?  YES NO

4. Were custody papers filled out properly (ink, signed, etc)?  YES NO

5. Is the project identifiable from custody papers? (If so fill out top of form)  YES NO

6. Indicate the packing in cooler: (if other, describe) \_\_\_\_\_

<input type="checkbox"/> Bubble Wrap	<input checked="" type="checkbox"/> Foam blocks	<input type="checkbox"/> Bags	<input type="checkbox"/> None
<input type="checkbox"/> Cloth material	<input type="checkbox"/> Cardboard	<input type="checkbox"/> Styrofoam	<input type="checkbox"/> Paper towels

7. Temperature documentation: \* Notify PM if temperature exceeds 6°C

Type of ice used:  Wet  Blue/Gel  None Temp(°C) \_\_\_\_\_

Temperature blank(s) included?  Thermometer# \_\_\_\_\_  IR Gun# \_\_\_\_\_

Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? \_\_\_\_\_ YES NO  
 If YES, what time were they transferred to freezer? \_\_\_\_\_

9. Did all bottles arrive unbroken/unopened? \_\_\_\_\_ YES NO

10. Are there any missing / extra samples? \_\_\_\_\_ YES NO

11. Are samples in the appropriate containers for indicated tests? \_\_\_\_\_ YES NO

12. Are sample labels present, in good condition and complete? \_\_\_\_\_ YES NO

13. Do the sample labels agree with custody papers? \_\_\_\_\_ YES NO

14. Was sufficient amount of sample sent for tests requested? \_\_\_\_\_ YES NO

15. Are the samples appropriately preserved? \_\_\_\_\_ YES NO N/A

16. Did you check preservatives for all bottles for each sample? \_\_\_\_\_ YES NO N/A

17. Did you document your preservative check? (pH strip lot# \_\_\_\_\_ ) YES NO N/A

18. Did you change the hold time in LIMS for unpreserved VOA's? \_\_\_\_\_ YES NO N/A

19. Did you change the hold time in LIMS for preserved terracores? \_\_\_\_\_ YES NO N/A

20. Are bubbles > 6mm absent in VOA samples? \_\_\_\_\_ YES NO N/A

1. Was the client contacted concerning this sample delivery? \_\_\_\_\_ YES NO  
 If YES, Who was called? \_\_\_\_\_ By \_\_\_\_\_ Date: \_\_\_\_\_

## COMMENTS

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Curtis & Tompkins, Ltd.

## Detections Summary for 286368

Results for any subcontracted analyses are not included in this summary.

Client : SOMA Environmental Engineering Inc.  
Project : 2551  
Location : 15101 Freedom Avenue San Leandro

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	3,200		71	ug/L	As Recd	1.429	EPA 8260B	EPA 5030B
tert-Butyl Alcohol (TBA)	38		14	ug/L	As Recd	1.429	EPA 8260B	EPA 5030B
MTBE	1.9		0.71	ug/L	As Recd	1.429	EPA 8260B	EPA 5030B
Benzene	110		0.71	ug/L	As Recd	1.429	EPA 8260B	EPA 5030B
Ethylbenzene	69		0.71	ug/L	As Recd	1.429	EPA 8260B	EPA 5030B
m,p-Xylenes	45		0.71	ug/L	As Recd	1.429	EPA 8260B	EPA 5030B
o-Xylene	2.5		0.71	ug/L	As Recd	1.429	EPA 8260B	EPA 5030B

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	3,300		250	ug/L	As Recd	5.000	EPA 8260B	EPA 5030B
Ethylbenzene	100		2.5	ug/L	As Recd	5.000	EPA 8260B	EPA 5030B
m,p-Xylenes	95		2.5	ug/L	As Recd	5.000	EPA 8260B	EPA 5030B
o-Xylene	5.2		2.5	ug/L	As Recd	5.000	EPA 8260B	EPA 5030B

### Purgeable Organics by GC/MS

Lab #:	286368	Location:	15101 Freedom Avenue San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Field ID:	MW-3	Batch#:	244893
Lab ID:	286368-001	Sampled:	02/24/17
Matrix:	Water	Received:	02/24/17
Units:	ug/L	Analyzed:	02/26/17
Diln Fac:	1.429		

Analyte	Result	RL
Gasoline C7-C12	3,200	71
tert-Butyl Alcohol (TBA)	38	14
Isopropyl Ether (DIPE)	ND	0.71
Ethyl tert-Butyl Ether (ETBE)	ND	0.71
Methyl tert-Amyl Ether (TAME)	ND	0.71
Ethanol	ND	1,400
MTBE	1.9	0.71
1,2-Dichloroethane	ND	0.71
Benzene	110	0.71
Toluene	ND	0.71
1,2-Dibromoethane	ND	0.71
Ethylbenzene	69	0.71
m,p-Xylenes	45	0.71
o-Xylene	2.5	0.71

Surrogate	%REC	Limits
Dibromofluoromethane	97	80-120
1,2-Dichloroethane-d4	104	73-136
Toluene-d8	96	80-120
Bromofluorobenzene	103	80-120

ND= Not Detected

RL= Reporting Limit

### **Purgeable Organics by GC/MS**

Lab #:	286368	Location:	15101 Freedom Avenue San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Field ID:	MW-10R	Batch#:	244893
Lab ID:	286368-002	Sampled:	02/24/17
Matrix:	Water	Received:	02/24/17
Units:	ug/L	Analyzed:	02/26/17
Diln Fac:	5.000		

Analyte	Result	RL
Gasoline C7-C12	3,300	250
tert-Butyl Alcohol (TBA)	ND	50
Isopropyl Ether (DIPE)	ND	2.5
Ethyl tert-Butyl Ether (ETBE)	ND	2.5
Methyl tert-Amyl Ether (TAME)	ND	2.5
Ethanol	ND	5,000
MTBE	ND	2.5
1,2-Dichloroethane	ND	2.5
Benzene	ND	2.5
Toluene	ND	2.5
1,2-Dibromoethane	ND	2.5
Ethylbenzene	100	2.5
m,p-Xylenes	95	2.5
o-Xylene	5.2	2.5

Surrogate	%REC	Limits
Dibromofluoromethane	96	80-120
1,2-Dichloroethane-d4	107	73-136
Toluene-d8	96	80-120
Bromofluorobenzene	100	80-120

ND= Not Detected

RL= Reporting Limit

## Batch QC Report

## Purgeable Organics by GC/MS

Lab #:	286368	Location:	15101 Freedom Avenue San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	244893
Units:	ug/L	Analyzed:	02/26/17
Diln Fac:	1.000		

Type: BS Lab ID: QC874366

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	62.50	58.76	94	42-149
Isopropyl Ether (DIPE)	12.50	12.21	98	57-128
Ethyl tert-Butyl Ether (ETBE)	12.50	13.08	105	67-124
Methyl tert-Amyl Ether (TAME)	12.50	13.06	104	71-120
MTBE	12.50	12.65	101	63-120
1,2-Dichloroethane	12.50	12.48	100	66-130
Benzene	12.50	12.69	101	78-123
Toluene	12.50	12.94	104	80-120
1,2-Dibromoethane	12.50	12.52	100	76-120
Ethylbenzene	12.50	13.26	106	80-122
m,p-Xylenes	25.00	26.34	105	79-123
o-Xylene	12.50	13.38	107	77-120

Surrogate	%REC	Limits
Dibromofluoromethane	96	80-120
1,2-Dichloroethane-d4	99	73-136
Toluene-d8	100	80-120
Bromofluorobenzene	99	80-120

Type: BSD Lab ID: QC874367

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	62.50	65.94	105	42-149	12	38
Isopropyl Ether (DIPE)	12.50	12.09	97	57-128	1	20
Ethyl tert-Butyl Ether (ETBE)	12.50	13.31	107	67-124	2	20
Methyl tert-Amyl Ether (TAME)	12.50	13.09	105	71-120	0	20
MTBE	12.50	12.86	103	63-120	2	20
1,2-Dichloroethane	12.50	12.70	102	66-130	2	20
Benzene	12.50	11.90	95	78-123	6	20
Toluene	12.50	12.42	99	80-120	4	20
1,2-Dibromoethane	12.50	12.55	100	76-120	0	20
Ethylbenzene	12.50	12.79	102	80-122	4	20
m,p-Xylenes	25.00	25.52	102	79-123	3	20
o-Xylene	12.50	13.06	104	77-120	2	20

Surrogate	%REC	Limits
Dibromofluoromethane	97	80-120
1,2-Dichloroethane-d4	100	73-136
Toluene-d8	96	80-120
Bromofluorobenzene	100	80-120

RPD= Relative Percent Difference

Page 1 of 1

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**Batch QC Report**
**Purgeable Organics by GC/MS**

Lab #:	286368	Location:	15101 Freedom Avenue San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC874368	Batch#:	244893
Matrix:	Water	Analyzed:	02/26/17
Units:	ug/L		

Analyte	Result	RL
Gasoline C7-C12	ND	50
tert-Butyl Alcohol (TBA)	ND	10
Isopropyl Ether (DIPE)	ND	0.50
Ethyl tert-Butyl Ether (ETBE)	ND	0.50
Methyl tert-Amyl Ether (TAME)	ND	0.50
Ethanol	ND	1,000
MTBE	ND	0.50
1,2-Dichloroethane	ND	0.50
Benzene	ND	0.50
Toluene	ND	0.50
1,2-Dibromoethane	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	97	80-120
1,2-Dichloroethane-d4	101	73-136
Toluene-d8	97	80-120
Bromofluorobenzene	104	80-120

ND= Not Detected

RL= Reporting Limit

## Batch QC Report

**Purgeable Organics by GC/MS**

Lab #:	286368	Location:	15101 Freedom Avenue San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	244893
Units:	ug/L	Analyzed:	02/26/17
Diln Fac:	1.000		

Type: BS Lab ID: QC874369

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	910.9	91	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	95	80-120
1,2-Dichloroethane-d4	101	73-136
Toluene-d8	96	80-120
Bromofluorobenzene	100	80-120

Type: BSD Lab ID: QC874370

Analyte	Spiked	Result	%REC	Limits	RPD Lim
Gasoline C7-C12	1,000	924.3	92	80-120	1 20

Surrogate	%REC	Limits
Dibromofluoromethane	96	80-120
1,2-Dichloroethane-d4	101	73-136
Toluene-d8	95	80-120
Bromofluorobenzene	101	80-120

RPD= Relative Percent Difference

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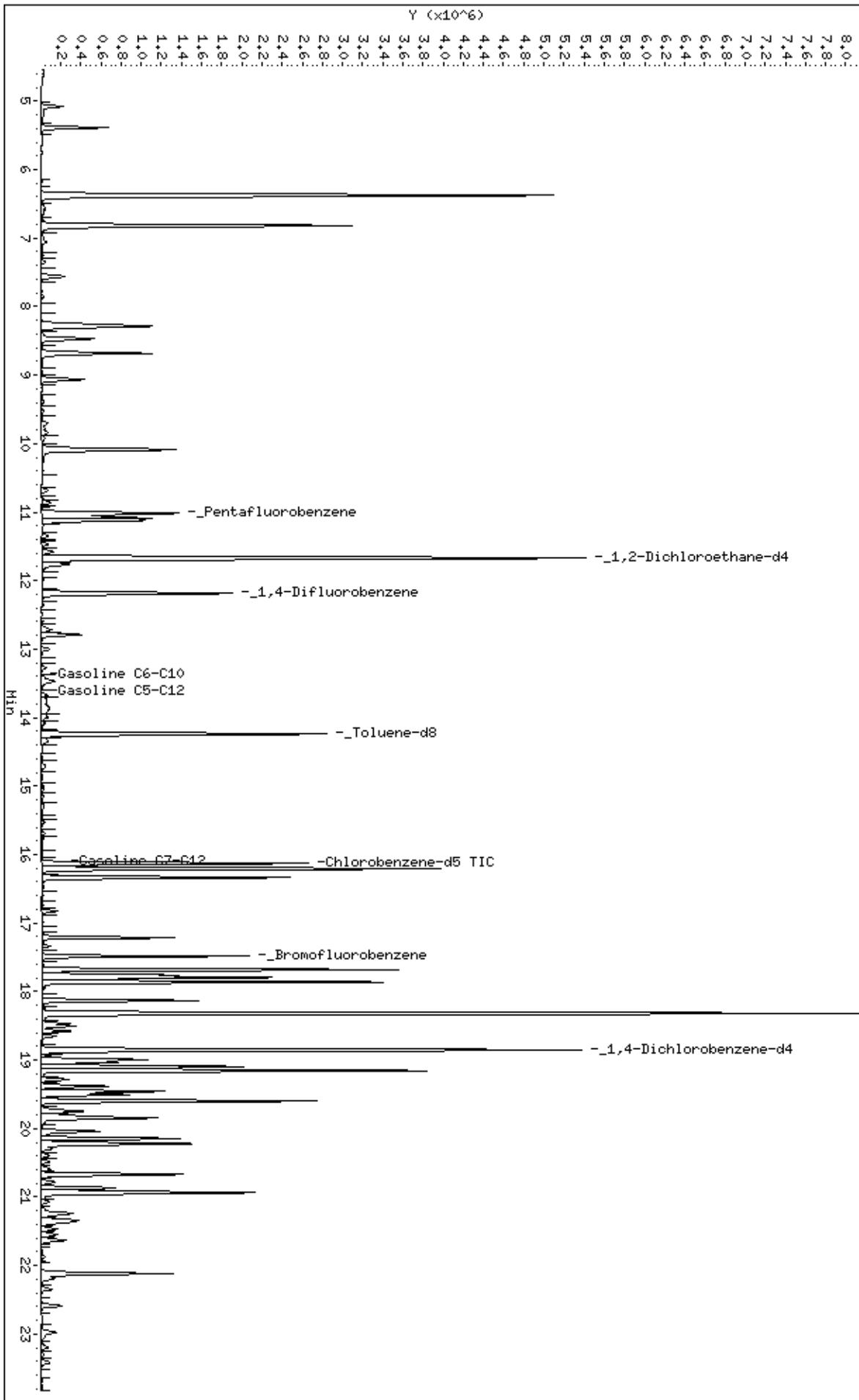
Client ID:

Sample Info: s\_286368-001

Column phase:

Instrument: MSOA10.i  
Operator: VOC  
Column diameter: 2.00

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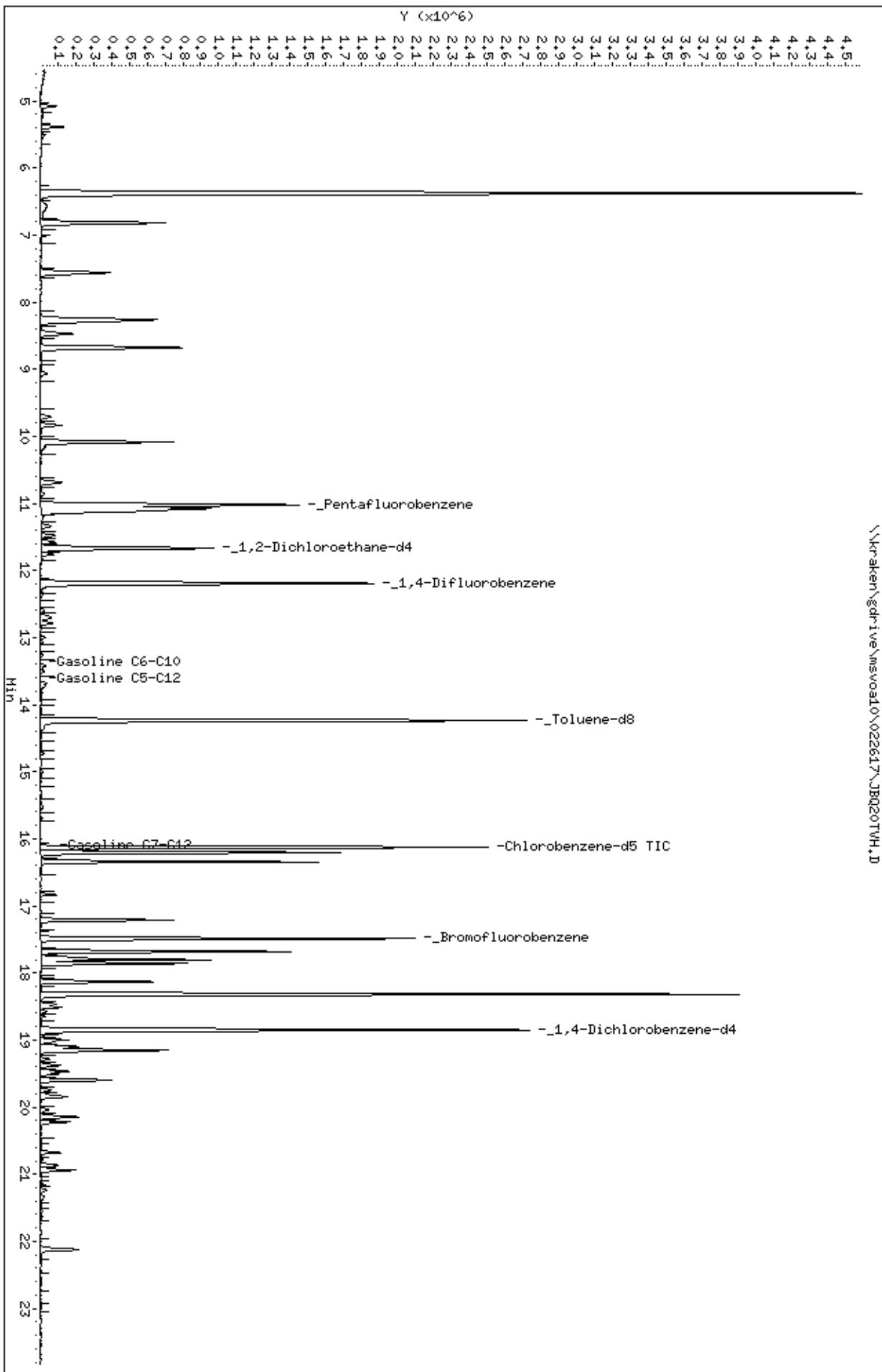


Client ID:  
Sample Info: s\_286368-002

Column phase:

Instrument: MSQDA10.i  
Operator: VOC  
Column diameter: 2.00

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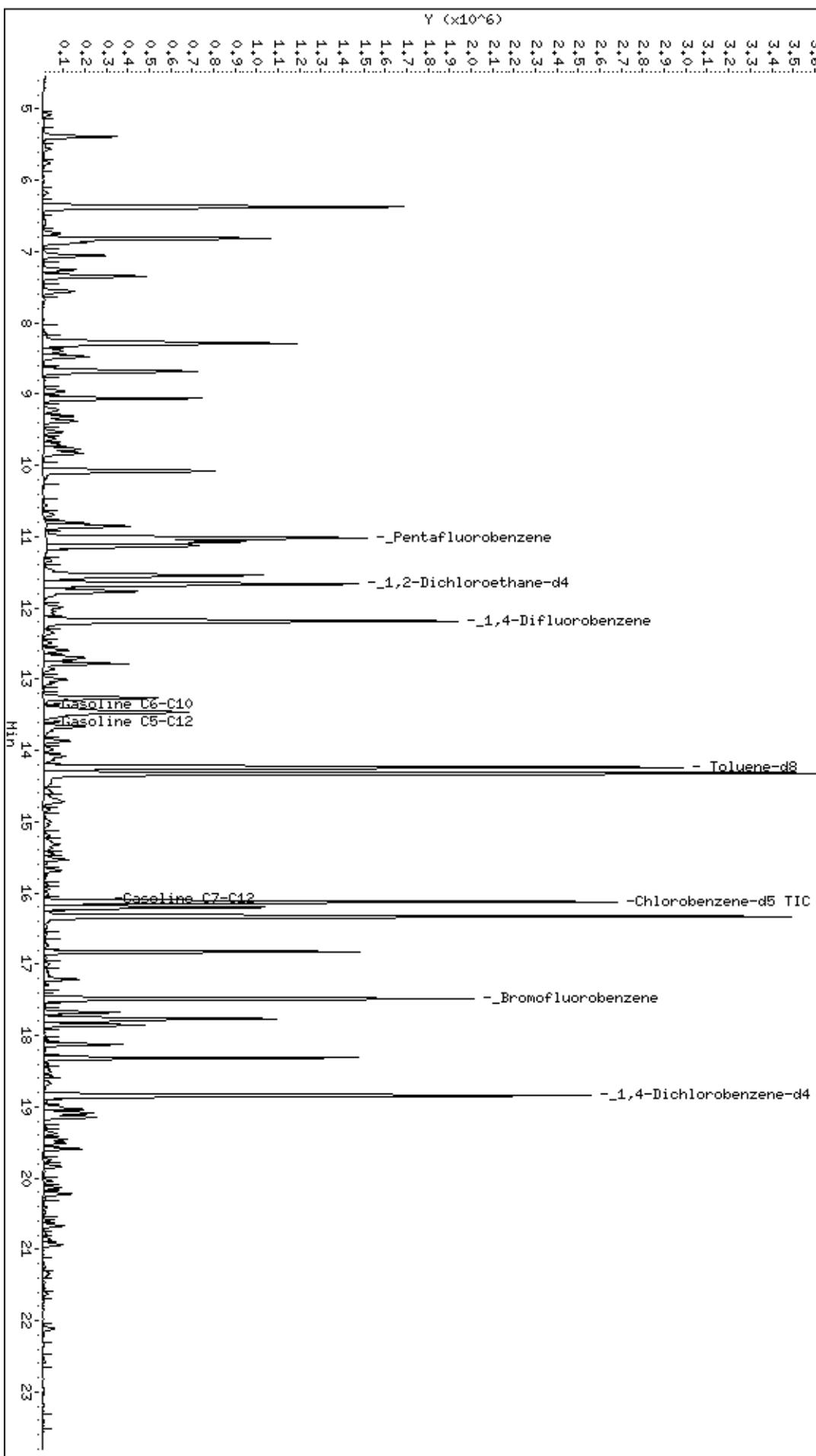
Client ID:

Sample Info: cov/ba,apc874368,244893,

Column phase:

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Instrument: MSWD10.i  
Operator: VOC  
Column diameter: 2.00





Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

**Laboratory Job Number 286963  
ANALYTICAL REPORT**

SOMA Environmental Engineering Inc.  
6620 Owens Dr.  
Pleasanton, CA 94588

Project : 2551  
Location : 15101 Freedom Avenue San Leandro  
Level : II

<u>Sample ID</u>	<u>Lab ID</u>
MW-1	286963-001
MW-2	286963-002
MW-3	286963-003
MW-4	286963-004
MW-5	286963-005
MW-6	286963-006
MW-7	286963-007
MW-10R	286963-008
MW-11	286963-009
MPE-1	286963-010
MPE-2	286963-011
EX-1	286963-012

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: Tracy Babjar

Date: 03/23/2017

Tracy Babjar  
Project Manager  
tracy.babjar@ctberk.com  
(510) 204-2226 Ext 13107

CA ELAP# 2896, NELAP# 4044-001

**CASE NARRATIVE**

Laboratory number: **286963**  
Client: **SOMA Environmental Engineering Inc.**  
Project: **2551**  
Location: **15101 Freedom Avenue San Leandro**  
Request Date: **03/14/17**  
Samples Received: **03/14/17**

This data package contains sample and QC results for twelve water samples, requested for the above referenced project on 03/14/17. The samples were received cold and intact.

**Volatile Organics by GC/MS (EPA 8260B):**

High response was observed for gasoline C7-C12 in the CCV analyzed 03/15/17 15:56; this analyte was not detected at or above the RL in the associated samples, and affected data was qualified with "b". High recovery was observed for gasoline C7-C12 in the BS for batch 245538; this analyte was not detected at or above the RL in the associated samples. High RPD was also observed for gasoline C7-C12 in the BS/BSD for batch 245538; this analyte was not detected at or above the RL in the associated samples. Responses exceeding the instrument's linear range were observed for MTBE in the MS/MSD for batch 245539; affected data was qualified with "b". No other analytical problems were encountered.

# CHAIN OF CUSTODY

Page 1 of 1

## Curtis & Tompkins, Ltd.

Analytical Laboratory Since 1878

2323 Fifth Street  
Berkeley, CA 94710  
(510)486-0900 Phone  
(510)486-0532 Fax

C&T LOGIN # 286963

## Analyses

Project No: 2551

Sampler: Davoud Bazrpash

Report To: Joyce Bobek

Project Name: 15101 Freedom Ave., San Leandro Company : SOMA Environmental

Turnaround Time: Standard

Telephone: 925-734-6400

Fax: 925-734-6401

Lab No.	Sample ID.	Sampling Date Time	Matrix			Preservative		
			Soil	Water	Waste	# of Containers	HCL	H <sub>2</sub> SO <sub>4</sub>
	MW-1	3/13/17 12:05	*			3-VOAs	*	*
	MW-2	3/13/17 12:30	*			3-VOAs	*	*
	MW-3	3/13/17 13:40	*			3-VOAs	*	*
	MW-4	3/13/17 12:50	*			3-VOAs	*	*
	MW-5	3/13/17 13:05	*			3-VOAs	*	*
	MW-6	3/13/17 15:10	*			3-VOAs	*	*
	MW-7	3/14/17 11:15	*			3-VOAs	*	*
	MW-10R	3/14/17 10:17	*			3-VOAs	*	*
	MW-11	3/14/17 10:45	*			3-VOAs	*	*
	MPE-1	3/13/17 2:35	*			3-VOAs	*	*
	MPE-2	3/13/17 2:06	*			3-VOAs	*	*
	EX-1	3/14/17 9:50	*			3-VOAs	*	*
	EX-2		*			3-VOAs	*	*

Notes: EDF OUTPUT REQUIRED

Ethanol

RELINQUISHED BY:

*[Signature]* 3/14/17 12:16  
DATE/TIME

RECEIVED BY:

*[Signature]* 3/14/17 12:16  
DATE/TIME

DATE/TIME

DATE/TIME

DATE/TIME

DATE/TIME

## COOLER RECEIPT CHECKLIST



Curtis &amp; Tompkins, Ltd.

Login # 286963Client SOMADate Received 3/14/17Number of coolers 0Project 2551

Date Opened 3/14 By (print) DTN (sign) Language  
 Date Logged in ✓ By (print) ✓ (sign) ✓  
 Date Labeled ✓ By (print) ✓ (sign) ✓

1. Did cooler come with a shipping slip (airbill, etc) \_\_\_\_\_ YES NO  
 Shipping info \_\_\_\_\_

2A. Were custody seals present? ....  YES (circle) on cooler  on samples  NO  
 How many \_\_\_\_\_ Name \_\_\_\_\_ Date \_\_\_\_\_

2B. Were custody seals intact upon arrival? \_\_\_\_\_ YES NO N/A

3. Were custody papers dry and intact when received? \_\_\_\_\_ YES NO

4. Were custody papers filled out properly (ink, signed, etc)? \_\_\_\_\_ YES NO

5. Is the project identifiable from custody papers? (If so fill out top of form) YES NO

6. Indicate the packing in cooler: (if other, describe) \_\_\_\_\_

Bubble Wrap  Foam blocks  Bags  None  
 Cloth material  Cardboard  Styrofoam  Paper towels

7. Temperature documentation: \* Notify PM if temperature exceeds 6°C

Type of ice used:  Wet  Blue/Gel  None Temp(°C) \_\_\_\_\_

Temperature blank(s) included?  Thermometer# \_\_\_\_\_  IR Gun# \_\_\_\_\_

Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? \_\_\_\_\_ YES NO  
 If YES, what time were they transferred to freezer? \_\_\_\_\_

9. Did all bottles arrive unbroken/unopened? \_\_\_\_\_ YES NO

10. Are there any missing / extra samples? \_\_\_\_\_ YES NO

11. Are samples in the appropriate containers for indicated tests? \_\_\_\_\_ YES NO

12. Are sample labels present, in good condition and complete? \_\_\_\_\_ YES NO

13. Do the sample labels agree with custody papers? \_\_\_\_\_ YES NO

14. Was sufficient amount of sample sent for tests requested? \_\_\_\_\_ YES NO

15. Are the samples appropriately preserved? \_\_\_\_\_ YES NO N/A

16. Did you check preservatives for all bottles for each sample? \_\_\_\_\_ YES NO N/A

17. Did you document your preservative check? (pH strip lot# \_\_\_\_\_) YES NO N/A

18. Did you change the hold time in LIMS for unpreserved VOAs? \_\_\_\_\_ YES NO N/A

19. Did you change the hold time in LIMS for preserved terracores? \_\_\_\_\_ YES NO N/A

20. Are bubbles > 6mm absent in VOA samples? \_\_\_\_\_ YES NO N/A

21. Was the client contacted concerning this sample delivery? \_\_\_\_\_ YES NO  
 If YES, Who was called? \_\_\_\_\_ By \_\_\_\_\_ Date: \_\_\_\_\_

## COMMENTS

10. Did not receive any container w/ sample ID "EX-2"

20. 1/3 VOAs received w/ bubble for sample 3/11



Curtis & Tompkins, Ltd.

## Detections Summary for 286963

Results for any subcontracted analyses are not included in this summary.

Client : SOMA Environmental Engineering Inc.  
Project : 2551  
Location : 15101 Freedom Avenue San Leandro

## No Detections

Laboratory Sample ID :

286963-002

## No Detections

Laboratory Sample ID :

286963-003

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	6,400		170	ug/L	As Recd	3.333	EPA 8260B	EPA 5030B
MTBE	1.0		1.0	ug/L	As Recd	2.000	EPA 8260B	EPA 5030B
Benzene	110		1.0	ug/L	As Recd	2.000	EPA 8260B	EPA 5030B
Ethylbenzene	120		1.0	ug/L	As Recd	2.000	EPA 8260B	EPA 5030B
m,p-Xylenes	64		1.0	ug/L	As Recd	2.000	EPA 8260B	EPA 5030B
o-Xylene	3.0		1.0	ug/L	As Recd	2.000	EPA 8260B	EPA 5030B

Laboratory Sample ID :

286963-004

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	79		50	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
MTBE	3.2		0.50	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
Benzene	4.8		0.50	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B

Laboratory Sample ID :

286963-005

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	1,200		50	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
tert-Butyl Alcohol (TBA)	52		10	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
Benzene	70		0.50	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
Ethylbenzene	0.68		0.50	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B

Laboratory Sample ID :

286963-006

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	320		50	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
Benzene	0.76		0.50	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B



Curtis & Tompkins, Ltd.

Client Sample ID : MW-7

Laboratory Sample ID :

286963-007

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep	Method
Gasoline C7-C12	300		50	ug/L	As Recd	1.000	EPA 8260B	EPA	5030B

Client Sample ID : MW-10R

Laboratory Sample ID :

286963-008

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	440		50	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
tert-Butyl Alcohol (TBA)	10		10	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
Ethylbenzene	4.9		0.50	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B
m,p-Xylenes	6.2		0.50	ug/L	As Recd	1.000	EPA 8260B	EPA 5030B

Client Sample ID : MW-11

Laboratory Sample ID :

286963-009

## No Detections

Client Sample ID : MPE-1

Laboratory Sample ID :

286963-010

## No Detections

Client Sample ID : MPE-2

Laboratory Sample ID :

286963-011

Analyte	Result	Flags	RL	Units	Basis	IDF	Method	Prep Method
Gasoline C7-C12	7,700		310	ug/L	As Recd	6.250	EPA 8260B	EPA 5030B
tert-Butyl Alcohol (TBA)	130		63	ug/L	As Recd	6.250	EPA 8260B	EPA 5030B
Methyl tert-Amyl Ether (TAME)	3.8		3.1	ug/L	As Recd	6.250	EPA 8260B	EPA 5030B
MTBE	12		3.1	ug/L	As Recd	6.250	EPA 8260B	EPA 5030B
Benzene	1,000		6.3	ug/L	As Recd	12.50	EPA 8260B	EPA 5030B
Toluene	6.6		3.1	ug/L	As Recd	6.250	EPA 8260B	EPA 5030B
Ethylbenzene	180		3.1	ug/L	As Recd	6.250	EPA 8260B	EPA 5030B
m,p-Xylenes	28		3.1	ug/L	As Recd	6.250	EPA 8260B	EPA 5030B
o-Xylene	4.7		3.1	ug/L	As Recd	6.250	EPA 8260B	EPA 5030B

Client Sample ID : EX-1

Laboratory Sample ID :

286963-012

## No Detections

### Purgeable Organics by GC/MS

Lab #:	286963	Location:	15101 Freedom Avenue San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Field ID:	MW-1	Batch#:	245585
Lab ID:	286963-001	Sampled:	03/13/17
Matrix:	Water	Received:	03/14/17
Units:	ug/L	Analyzed:	03/16/17
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	ND	50
tert-Butyl Alcohol (TBA)	ND	10
Isopropyl Ether (DIPE)	ND	0.50
Ethyl tert-Butyl Ether (ETBE)	ND	0.50
Methyl tert-Amyl Ether (TAME)	ND	0.50
Ethanol	ND	1,000
MTBE	ND	0.50
1,2-Dichloroethane	ND	0.50
Benzene	ND	0.50
Toluene	ND	0.50
1,2-Dibromoethane	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	93	80-120
1,2-Dichloroethane-d4	105	73-136
Toluene-d8	96	80-120
Bromofluorobenzene	94	80-120

ND= Not Detected

RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	286963	Location:	15101 Freedom Avenue San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Field ID:	MW-2	Batch#:	245585
Lab ID:	286963-002	Sampled:	03/13/17
Matrix:	Water	Received:	03/14/17
Units:	ug/L	Analyzed:	03/16/17
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	ND	50
tert-Butyl Alcohol (TBA)	ND	10
Isopropyl Ether (DIPE)	ND	0.50
Ethyl tert-Butyl Ether (ETBE)	ND	0.50
Methyl tert-Amyl Ether (TAME)	ND	0.50
Ethanol	ND	1,000
MTBE	ND	0.50
1,2-Dichloroethane	ND	0.50
Benzene	ND	0.50
Toluene	ND	0.50
1,2-Dibromoethane	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	93	80-120
1,2-Dichloroethane-d4	105	73-136
Toluene-d8	96	80-120
Bromofluorobenzene	95	80-120

ND= Not Detected

RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	286963	Location:	15101 Freedom Avenue San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Field ID:	MW-3	Units:	ug/L
Lab ID:	286963-003	Sampled:	03/13/17
Matrix:	Water	Received:	03/14/17

Analyte	Result	RL	Diln Fac	Batch#	Analyzed
Gasoline C7-C12	6,400	170	3.333	245667	03/20/17
tert-Butyl Alcohol (TBA)	ND	20	2.000	245585	03/16/17
Isopropyl Ether (DIPE)	ND	1.0	2.000	245585	03/16/17
Ethyl tert-Butyl Ether (ETBE)	ND	1.0	2.000	245585	03/16/17
Methyl tert-Amyl Ether (TAME)	ND	1.0	2.000	245585	03/16/17
Ethanol	ND	2,000	2.000	245585	03/16/17
MTBE	1.0	1.0	2.000	245585	03/16/17
1,2-Dichloroethane	ND	1.0	2.000	245585	03/16/17
Benzene	110	1.0	2.000	245585	03/16/17
Toluene	ND	1.0	2.000	245585	03/16/17
1,2-Dibromoethane	ND	1.0	2.000	245585	03/16/17
Ethylbenzene	120	1.0	2.000	245585	03/16/17
m,p-Xylenes	64	1.0	2.000	245585	03/16/17
o-Xylene	3.0	1.0	2.000	245585	03/16/17

Surrogate	%REC	Limits	Diln Fac	Batch#	Analyzed
Dibromofluoromethane	93	80-120	2.000	245585	03/16/17
1,2-Dichloroethane-d4	104	73-136	2.000	245585	03/16/17
Toluene-d8	95	80-120	2.000	245585	03/16/17
Bromofluorobenzene	86	80-120	2.000	245585	03/16/17

ND= Not Detected

RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	286963	Location:	15101 Freedom Avenue San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Field ID:	MW-4	Batch#:	245585
Lab ID:	286963-004	Sampled:	03/13/17
Matrix:	Water	Received:	03/14/17
Units:	ug/L	Analyzed:	03/16/17
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	79	50
tert-Butyl Alcohol (TBA)	ND	10
Isopropyl Ether (DIPE)	ND	0.50
Ethyl tert-Butyl Ether (ETBE)	ND	0.50
Methyl tert-Amyl Ether (TAME)	ND	0.50
Ethanol	ND	1,000
MTBE	3.2	0.50
1,2-Dichloroethane	ND	0.50
Benzene	4.8	0.50
Toluene	ND	0.50
1,2-Dibromoethane	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	98	80-120
1,2-Dichloroethane-d4	106	73-136
Toluene-d8	97	80-120
Bromofluorobenzene	99	80-120

ND= Not Detected

RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	286963	Location:	15101 Freedom Avenue San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Field ID:	MW-5	Batch#:	245585
Lab ID:	286963-005	Sampled:	03/13/17
Matrix:	Water	Received:	03/14/17
Units:	ug/L	Analyzed:	03/16/17
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	1,200	50
tert-Butyl Alcohol (TBA)	52	10
Isopropyl Ether (DIPE)	ND	0.50
Ethyl tert-Butyl Ether (ETBE)	ND	0.50
Methyl tert-Amyl Ether (TAME)	ND	0.50
Ethanol	ND	1,000
MTBE	ND	0.50
1,2-Dichloroethane	ND	0.50
Benzene	70	0.50
Toluene	ND	0.50
1,2-Dibromoethane	ND	0.50
Ethylbenzene	0.68	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	98	80-120
1,2-Dichloroethane-d4	104	73-136
Toluene-d8	97	80-120
Bromofluorobenzene	99	80-120

ND= Not Detected

RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	286963	Location:	15101 Freedom Avenue San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Field ID:	MW-6	Batch#:	245585
Lab ID:	286963-006	Sampled:	03/13/17
Matrix:	Water	Received:	03/14/17
Units:	ug/L	Analyzed:	03/16/17
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	320	50
tert-Butyl Alcohol (TBA)	ND	10
Isopropyl Ether (DIPE)	ND	0.50
Ethyl tert-Butyl Ether (ETBE)	ND	0.50
Methyl tert-Amyl Ether (TAME)	ND	0.50
Ethanol	ND	1,000
MTBE	ND	0.50
1,2-Dichloroethane	ND	0.50
Benzene	0.76	0.50
Toluene	ND	0.50
1,2-Dibromoethane	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	95	80-120
1,2-Dichloroethane-d4	106	73-136
Toluene-d8	97	80-120
Bromofluorobenzene	95	80-120

ND= Not Detected

RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	286963	Location:	15101 Freedom Avenue San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Field ID:	MW-7	Batch#:	245585
Lab ID:	286963-007	Sampled:	03/14/17
Matrix:	Water	Received:	03/14/17
Units:	ug/L	Analyzed:	03/16/17
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	300	50
tert-Butyl Alcohol (TBA)	ND	10
Isopropyl Ether (DIPE)	ND	0.50
Ethyl tert-Butyl Ether (ETBE)	ND	0.50
Methyl tert-Amyl Ether (TAME)	ND	0.50
Ethanol	ND	1,000
MTBE	ND	0.50
1,2-Dichloroethane	ND	0.50
Benzene	ND	0.50
Toluene	ND	0.50
1,2-Dibromoethane	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	95	80-120
1,2-Dichloroethane-d4	106	73-136
Toluene-d8	96	80-120
Bromofluorobenzene	94	80-120

ND= Not Detected

RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	286963	Location:	15101 Freedom Avenue San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Field ID:	MW-10R	Batch#:	245539
Lab ID:	286963-008	Sampled:	03/14/17
Matrix:	Water	Received:	03/14/17
Units:	ug/L	Analyzed:	03/21/17
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	440	50
tert-Butyl Alcohol (TBA)	10	10
Isopropyl Ether (DIPE)	ND	0.50
Ethyl tert-Butyl Ether (ETBE)	ND	0.50
Methyl tert-Amyl Ether (TAME)	ND	0.50
Ethanol	ND	1,000
MTBE	ND	0.50
1,2-Dichloroethane	ND	0.50
Benzene	ND	0.50
Toluene	ND	0.50
1,2-Dibromoethane	ND	0.50
Ethylbenzene	4.9	0.50
m,p-Xylenes	6.2	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	101	80-120
1,2-Dichloroethane-d4	77	73-136
Toluene-d8	102	80-120
Bromofluorobenzene	99	80-120

ND= Not Detected

RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	286963	Location:	15101 Freedom Avenue San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Field ID:	MW-11	Batch#:	245538
Lab ID:	286963-009	Sampled:	03/14/17
Matrix:	Water	Received:	03/14/17
Units:	ug/L	Analyzed:	03/16/17
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	ND b	50
tert-Butyl Alcohol (TBA)	ND	10
Isopropyl Ether (DIPE)	ND	0.50
Ethyl tert-Butyl Ether (ETBE)	ND	0.50
Methyl tert-Amyl Ether (TAME)	ND	0.50
Ethanol	ND	1,000
MTBE	ND	0.50
1,2-Dichloroethane	ND	0.50
Benzene	ND	0.50
Toluene	ND	0.50
1,2-Dibromoethane	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	94	80-120
1,2-Dichloroethane-d4	109	73-136
Toluene-d8	96	80-120
Bromofluorobenzene	94	80-120

b= See narrative

ND= Not Detected

RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	286963	Location:	15101 Freedom Avenue San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Field ID:	MPE-1	Batch#:	245538
Lab ID:	286963-010	Sampled:	03/13/17
Matrix:	Water	Received:	03/14/17
Units:	ug/L	Analyzed:	03/16/17
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	ND b	50
tert-Butyl Alcohol (TBA)	ND	10
Isopropyl Ether (DIPE)	ND	0.50
Ethyl tert-Butyl Ether (ETBE)	ND	0.50
Methyl tert-Amyl Ether (TAME)	ND	0.50
Ethanol	ND	1,000
MTBE	ND	0.50
1,2-Dichloroethane	ND	0.50
Benzene	ND	0.50
Toluene	ND	0.50
1,2-Dibromoethane	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	94	80-120
1,2-Dichloroethane-d4	112	73-136
Toluene-d8	96	80-120
Bromofluorobenzene	94	80-120

b= See narrative

ND= Not Detected

RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	286963	Location:	15101 Freedom Avenue San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Field ID:	MPE-2	Units:	ug/L
Lab ID:	286963-011	Sampled:	03/13/17
Matrix:	Water	Received:	03/14/17

Analyte	Result	RL	Diln Fac	Batch#	Analyzed
Gasoline C7-C12	7,700	310	6.250	245585	03/16/17
tert-Butyl Alcohol (TBA)	130	63	6.250	245585	03/16/17
Isopropyl Ether (DIPE)	ND	3.1	6.250	245585	03/16/17
Ethyl tert-Butyl Ether (ETBE)	ND	3.1	6.250	245585	03/16/17
Methyl tert-Amyl Ether (TAME)	3.8	3.1	6.250	245585	03/16/17
Ethanol	ND	6,300	6.250	245585	03/16/17
MTBE	12	3.1	6.250	245585	03/16/17
1,2-Dichloroethane	ND	3.1	6.250	245585	03/16/17
Benzene	1,000	6.3	12.50	245667	03/20/17
Toluene	6.6	3.1	6.250	245585	03/16/17
1,2-Dibromoethane	ND	3.1	6.250	245585	03/16/17
Ethylbenzene	180	3.1	6.250	245585	03/16/17
m,p-Xylenes	28	3.1	6.250	245585	03/16/17
o-Xylene	4.7	3.1	6.250	245585	03/16/17

Surrogate	%REC	Limits	Diln Fac	Batch#	Analyzed
Dibromofluoromethane	92	80-120	6.250	245585	03/16/17
1,2-Dichloroethane-d4	90	73-136	6.250	245585	03/16/17
Toluene-d8	94	80-120	6.250	245585	03/16/17
Bromofluorobenzene	93	80-120	6.250	245585	03/16/17

ND= Not Detected

RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	286963	Location:	15101 Freedom Avenue San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Field ID:	EX-1	Batch#:	245585
Lab ID:	286963-012	Sampled:	03/14/17
Matrix:	Water	Received:	03/14/17
Units:	ug/L	Analyzed:	03/16/17
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	ND	50
tert-Butyl Alcohol (TBA)	ND	10
Isopropyl Ether (DIPE)	ND	0.50
Ethyl tert-Butyl Ether (ETBE)	ND	0.50
Methyl tert-Amyl Ether (TAME)	ND	0.50
Ethanol	ND	1,000
MTBE	ND	0.50
1,2-Dichloroethane	ND	0.50
Benzene	ND	0.50
Toluene	ND	0.50
1,2-Dibromoethane	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	94	80-120
1,2-Dichloroethane-d4	107	73-136
Toluene-d8	97	80-120
Bromofluorobenzene	94	80-120

ND= Not Detected

RL= Reporting Limit

**Batch QC Report**
**Purgeable Organics by GC/MS**

Lab #:	286963	Location:	15101 Freedom Avenue San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	245538
Units:	ug/L	Analyzed:	03/15/17
Diln Fac:	1.000		

Type: BS Lab ID: QC876971

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	62.50	62.77	100	42-149
Isopropyl Ether (DIPE)	12.50	12.43	99	57-128
Ethyl tert-Butyl Ether (ETBE)	12.50	12.32	99	67-124
Methyl tert-Amyl Ether (TAME)	12.50	11.15	89	71-120
MTBE	12.50	11.40	91	63-120
1,2-Dichloroethane	12.50	12.62	101	66-130
Benzene	12.50	12.30	98	78-123
Toluene	12.50	12.27	98	80-120
1,2-Dibromoethane	12.50	10.27	82	76-120
Ethylbenzene	12.50	12.62	101	80-122
m,p-Xylenes	25.00	25.02	100	79-123
o-Xylene	12.50	11.55	92	77-120

Surrogate	%REC	Limits
Dibromofluoromethane	99	80-120
1,2-Dichloroethane-d4	107	73-136
Toluene-d8	97	80-120
Bromofluorobenzene	98	80-120

Type: BSD Lab ID: QC876972

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	62.50	59.84	96	42-149	5	38
Isopropyl Ether (DIPE)	12.50	12.19	98	57-128	2	20
Ethyl tert-Butyl Ether (ETBE)	12.50	12.00	96	67-124	3	20
Methyl tert-Amyl Ether (TAME)	12.50	10.84	87	71-120	3	20
MTBE	12.50	11.20	90	63-120	2	20
1,2-Dichloroethane	12.50	12.36	99	66-130	2	20
Benzene	12.50	12.01	96	78-123	2	20
Toluene	12.50	11.89	95	80-120	3	20
1,2-Dibromoethane	12.50	10.25	82	76-120	0	20
Ethylbenzene	12.50	12.37	99	80-122	2	20
m,p-Xylenes	25.00	24.16	97	79-123	3	20
o-Xylene	12.50	11.33	91	77-120	2	20

Surrogate	%REC	Limits
Dibromofluoromethane	98	80-120
1,2-Dichloroethane-d4	108	73-136
Toluene-d8	98	80-120
Bromofluorobenzene	97	80-120

RPD= Relative Percent Difference

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## Batch QC Report

## Purgeable Organics by GC/MS

Lab #:	286963	Location:	15101 Freedom Avenue San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	245538
Units:	ug/L	Analyzed:	03/15/17
Diln Fac:	1.000		

Type: BS Lab ID: QC876973

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	1,279 b	128 *	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	98	80-120
1,2-Dichloroethane-d4	108	73-136
Toluene-d8	97	80-120
Bromofluorobenzene	98	80-120

Type: BSD Lab ID: QC876974

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	1,000	1,000 b	100	80-120	24 *	20

Surrogate	%REC	Limits
Dibromofluoromethane	98	80-120
1,2-Dichloroethane-d4	105	73-136
Toluene-d8	97	80-120
Bromofluorobenzene	98	80-120

\*= Value outside of QC limits; see narrative

b= See narrative

RPD= Relative Percent Difference

## Batch QC Report

## Purgeable Organics by GC/MS

Lab #:	286963	Location:	15101 Freedom Avenue San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC876975	Batch#:	245538
Matrix:	Water	Analyzed:	03/15/17
Units:	ug/L		

Analyte	Result	RL
Gasoline C7-C12	ND b	50
tert-Butyl Alcohol (TBA)	ND	10
Isopropyl Ether (DIPE)	ND	0.50
Ethyl tert-Butyl Ether (ETBE)	ND	0.50
Methyl tert-Amyl Ether (TAME)	ND	0.50
Ethanol	ND	1,000
MTBE	ND	0.50
1,2-Dichloroethane	ND	0.50
Benzene	ND	0.50
Toluene	ND	0.50
1,2-Dibromoethane	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	97	80-120
1,2-Dichloroethane-d4	106	73-136
Toluene-d8	97	80-120
Bromofluorobenzene	99	80-120

b= See narrative

ND= Not Detected

RL= Reporting Limit

## Batch QC Report

## Purgeable Organics by GC/MS

Lab #:	286963	Location:	15101 Freedom Avenue San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC876976	Batch#:	245539
Matrix:	Water	Analyzed:	03/21/17
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	62.50	69.36	111	42-149
Isopropyl Ether (DIPE)	12.50	14.25	114	57-128
Ethyl tert-Butyl Ether (ETBE)	12.50	13.61	109	67-124
Methyl tert-Amyl Ether (TAME)	12.50	12.45	100	71-120
MTBE	12.50	12.66	101	63-120
1,2-Dichloroethane	12.50	9.503	76	66-130
Benzene	12.50	14.52	116	78-123
Toluene	12.50	13.78	110	80-120
1,2-Dibromoethane	12.50	11.84	95	76-120
Ethylbenzene	12.50	13.63	109	80-122
m,p-Xylenes	25.00	28.95	116	79-123
o-Xylene	12.50	14.34	115	77-120

Surrogate	%REC	Limits
Dibromofluoromethane	102	80-120
1,2-Dichloroethane-d4	76	73-136
Toluene-d8	101	80-120
Bromofluorobenzene	100	80-120

## Batch QC Report

## Purgeable Organics by GC/MS

Lab #:	286963	Location:	15101 Freedom Avenue San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	245539
Units:	ug/L	Analyzed:	03/21/17
Diln Fac:	1.000		

Type: BS Lab ID: QC876978

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	858.9	86	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	100	80-120
1,2-Dichloroethane-d4	78	73-136
Toluene-d8	101	80-120
Bromofluorobenzene	101	80-120

Type: BSD Lab ID: QC876979

Analyte	Spiked	Result	%REC	Limits	RPD Lim
Gasoline C7-C12	1,000	915.6	92	80-120	6 20

Surrogate	%REC	Limits
Dibromofluoromethane	101	80-120
1,2-Dichloroethane-d4	78	73-136
Toluene-d8	102	80-120
Bromofluorobenzene	98	80-120

RPD= Relative Percent Difference

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**Batch QC Report**
**Purgeable Organics by GC/MS**

Lab #:	286963	Location:	15101 Freedom Avenue San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC876980	Batch#:	245539
Matrix:	Water	Analyzed:	03/21/17
Units:	ug/L		

Analyte	Result	RL
Gasoline C7-C12	ND	50
tert-Butyl Alcohol (TBA)	ND	10
Isopropyl Ether (DIPE)	ND	0.50
Ethyl tert-Butyl Ether (ETBE)	ND	0.50
Methyl tert-Amyl Ether (TAME)	ND	0.50
Ethanol	ND	1,000
MTBE	ND	0.50
1,2-Dichloroethane	ND	0.50
Benzene	ND	0.50
Toluene	ND	0.50
1,2-Dibromoethane	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	102	80-120
1,2-Dichloroethane-d4	78	73-136
Toluene-d8	104	80-120
Bromofluorobenzene	109	80-120

ND= Not Detected

RL= Reporting Limit

## Batch QC Report

## Purgeable Organics by GC/MS

Lab #:	286963	Location:	15101 Freedom Avenue San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC877176	Batch#:	245585
Matrix:	Water	Analyzed:	03/16/17
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	62.50	60.80	97	42-149
Isopropyl Ether (DIPE)	12.50	12.89	103	57-128
Ethyl tert-Butyl Ether (ETBE)	12.50	12.79	102	67-124
Methyl tert-Amyl Ether (TAME)	12.50	11.59	93	71-120
MTBE	12.50	11.79	94	63-120
1,2-Dichloroethane	12.50	13.13	105	66-130
Benzene	12.50	12.58	101	78-123
Toluene	12.50	12.15	97	80-120
1,2-Dibromoethane	12.50	10.22	82	76-120
Ethylbenzene	12.50	12.61	101	80-122
m,p-Xylenes	25.00	25.03	100	79-123
o-Xylene	12.50	11.63	93	77-120

Surrogate	%REC	Limits
Dibromofluoromethane	100	80-120
1,2-Dichloroethane-d4	111	73-136
Toluene-d8	97	80-120
Bromofluorobenzene	98	80-120

**Batch QC Report**
**Purgeable Organics by GC/MS**

Lab #:	286963	Location:	15101 Freedom Avenue San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC877177	Batch#:	245585
Matrix:	Water	Analyzed:	03/16/17
Units:	ug/L		

Analyte	Result	RL
Gasoline C7-C12	ND	50
tert-Butyl Alcohol (TBA)	ND	10
Isopropyl Ether (DIPE)	ND	0.50
Ethyl tert-Butyl Ether (ETBE)	ND	0.50
Methyl tert-Amyl Ether (TAME)	ND	0.50
Ethanol	ND	1,000
MTBE	ND	0.50
1,2-Dichloroethane	ND	0.50
Benzene	ND	0.50
Toluene	ND	0.50
1,2-Dibromoethane	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	97	80-120
1,2-Dichloroethane-d4	106	73-136
Toluene-d8	98	80-120
Bromofluorobenzene	98	80-120

ND= Not Detected

RL= Reporting Limit

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**Batch QC Report**
**Purgeable Organics by GC/MS**

Lab #:	286963	Location:	15101 Freedom Avenue San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	245585
Units:	ug/L	Analyzed:	03/16/17
Diln Fac:	1.000		

Type: BS Lab ID: QC877191

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	1,142	114	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	99	80-120
1,2-Dichloroethane-d4	111	73-136
Toluene-d8	97	80-120
Bromofluorobenzene	98	80-120

Type: BSD Lab ID: QC877192

Analyte	Spiked	Result	%REC	Limits	RPD Lim
Gasoline C7-C12	1,000	1,087	109	80-120	5 20

Surrogate	%REC	Limits
Dibromofluoromethane	97	80-120
1,2-Dichloroethane-d4	107	73-136
Toluene-d8	98	80-120
Bromofluorobenzene	97	80-120

RPD= Relative Percent Difference

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**Batch QC Report**
**Purgeable Organics by GC/MS**

Lab #:	286963	Location:	15101 Freedom Avenue San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Batch#:	245585
MSS Lab ID:	286985-003	Sampled:	03/14/17
Matrix:	Water	Received:	03/14/17
Units:	ug/L	Analyzed:	03/17/17
Diln Fac:	1.000		

Type: MS Lab ID: QC877251

Analyte	MSS	Result	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)		<2.239	125.0	162.0	130	58-153
Isopropyl Ether (DIPE)		<0.1000	25.00	23.90	96	67-124
Ethyl tert-Butyl Ether (ETBE)		<0.1000	25.00	25.10	100	75-123
Methyl tert-Amyl Ether (TAME)		<0.1002	25.00	24.83	99	78-120
MTBE		9.127	25.00	34.59	102	70-124
1,2-Dichloroethane		<0.1071	25.00	24.83	99	75-127
Benzene		<0.1000	25.00	25.35	101	79-124
Toluene		<0.1000	25.00	25.05	100	80-120
1,2-Dibromoethane		<0.1341	25.00	23.96	96	80-120
Ethylbenzene		<0.1000	25.00	26.27	105	80-123
m,p-Xylenes		<0.1454	50.00	54.42	109	78-122
o-Xylene		<0.1000	25.00	25.18	101	77-120

Surrogate	%REC	Limits
Dibromofluoromethane	93	80-120
1,2-Dichloroethane-d4	99	73-136
Toluene-d8	95	80-120
Bromofluorobenzene	93	80-120

Type: MSD Lab ID: QC877252

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	125.0	152.8	122	58-153	6	37
Isopropyl Ether (DIPE)	25.00	22.92	92	67-124	4	20
Ethyl tert-Butyl Ether (ETBE)	25.00	23.89	96	75-123	5	20
Methyl tert-Amyl Ether (TAME)	25.00	23.99	96	78-120	3	20
MTBE	25.00	33.05	96	70-124	5	20
1,2-Dichloroethane	25.00	23.29	93	75-127	6	20
Benzene	25.00	23.67	95	79-124	7	20
Toluene	25.00	23.64	95	80-120	6	20
1,2-Dibromoethane	25.00	22.75	91	80-120	5	20
Ethylbenzene	25.00	24.86	99	80-123	6	20
m,p-Xylenes	50.00	51.71	103	78-122	5	20
o-Xylene	25.00	23.85	95	77-120	5	20

Surrogate	%REC	Limits
Dibromofluoromethane	92	80-120
1,2-Dichloroethane-d4	98	73-136
Toluene-d8	95	80-120
Bromofluorobenzene	94	80-120

RPD= Relative Percent Difference

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## Batch QC Report

**Purgeable Organics by GC/MS**

Lab #:	286963	Location:	15101 Freedom Avenue San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Matrix:	Water	Diln Fac:	1.000
Units:	ug/L	Batch#:	245667

Type: BS Analyzed: 03/20/17  
 Lab ID: QC877483

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	1,142	114	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	95	80-120
1,2-Dichloroethane-d4	104	73-136
Toluene-d8	95	80-120
Bromofluorobenzene	95	80-120

Type: BSD Analyzed: 03/21/17  
 Lab ID: QC877484

Analyte	Spiked	Result	%REC	Limits	RPD Lim
Gasoline C7-C12	1,000	1,050	105	80-120	8 20

Surrogate	%REC	Limits
Dibromofluoromethane	92	80-120
1,2-Dichloroethane-d4	102	73-136
Toluene-d8	95	80-120
Bromofluorobenzene	91	80-120

RPD= Relative Percent Difference

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**Batch QC Report**
**Purgeable Organics by GC/MS**

Lab #:	286963	Location:	15101 Freedom Avenue San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC877485	Batch#:	245667
Matrix:	Water	Analyzed:	03/20/17
Units:	ug/L		

Analyte	Result	RL
Gasoline C7-C12	ND	50
tert-Butyl Alcohol (TBA)	ND	10
Isopropyl Ether (DIPE)	ND	0.50
Ethyl tert-Butyl Ether (ETBE)	ND	0.50
Methyl tert-Amyl Ether (TAME)	ND	0.50
Ethanol	ND	1,000
MTBE	ND	0.50
1,2-Dichloroethane	ND	0.50
Benzene	ND	0.50
Toluene	ND	0.50
1,2-Dibromoethane	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	96	80-120
1,2-Dichloroethane-d4	108	73-136
Toluene-d8	95	80-120
Bromofluorobenzene	96	80-120

ND= Not Detected

RL= Reporting Limit

**Batch QC Report**
**Purgeable Organics by GC/MS**

Lab #:	286963	Location:	15101 Freedom Avenue San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	245667
Units:	ug/L	Analyzed:	03/20/17
Diln Fac:	1.000		

Type: BS Lab ID: QC877782

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	62.50	66.18	106	42-149
Isopropyl Ether (DIPE)	12.50	11.89	95	57-128
Ethyl tert-Butyl Ether (ETBE)	12.50	11.71	94	67-124
Methyl tert-Amyl Ether (TAME)	12.50	10.85	87	71-120
MTBE	12.50	11.16	89	63-120
1,2-Dichloroethane	12.50	12.87	103	66-130
Benzene	12.50	12.38	99	78-123
Toluene	12.50	12.20	98	80-120
1,2-Dibromoethane	12.50	10.62	85	76-120
Ethylbenzene	12.50	12.66	101	80-122
m,p-Xylenes	25.00	25.37	101	79-123
o-Xylene	12.50	11.95	96	77-120

Surrogate	%REC	Limits
Dibromofluoromethane	98	80-120
1,2-Dichloroethane-d4	106	73-136
Toluene-d8	96	80-120
Bromofluorobenzene	94	80-120

Type: BSD Lab ID: QC877783

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	62.50	63.59	102	42-149	4	38
Isopropyl Ether (DIPE)	12.50	11.42	91	57-128	4	20
Ethyl tert-Butyl Ether (ETBE)	12.50	11.77	94	67-124	0	20
Methyl tert-Amyl Ether (TAME)	12.50	11.07	89	71-120	2	20
MTBE	12.50	11.12	89	63-120	0	20
1,2-Dichloroethane	12.50	12.81	102	66-130	1	20
Benzene	12.50	12.41	99	78-123	0	20
Toluene	12.50	12.40	99	80-120	2	20
1,2-Dibromoethane	12.50	11.10	89	76-120	4	20
Ethylbenzene	12.50	12.68	101	80-122	0	20
m,p-Xylenes	25.00	25.82	103	79-123	2	20
o-Xylene	12.50	12.08	97	77-120	1	20

Surrogate	%REC	Limits
Dibromofluoromethane	95	80-120
1,2-Dichloroethane-d4	101	73-136
Toluene-d8	95	80-120
Bromofluorobenzene	95	80-120

RPD= Relative Percent Difference

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## Batch QC Report

## Purgeable Organics by GC/MS

Lab #:	286963	Location:	15101 Freedom Avenue San Leandro
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2551	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Batch#:	245539
MSS Lab ID:	287069-003	Sampled:	03/14/17
Matrix:	Water	Received:	03/16/17
Units:	ug/L	Analyzed:	03/22/17
Diln Fac:	400.0		

Type: MS Lab ID: QC877964

Analyte	MSS Result	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	<537.3	50,000	55,630	111	58-153
Isopropyl Ether (DIPE)	<40.00	10,000	10,970	110	67-124
Ethyl tert-Butyl Ether (ETBE)	<40.00	10,000	10,340	103	75-123
Methyl tert-Amyl Ether (TAME)	218.1	10,000	9,604	94	78-120
MTBE	35,880	10,000	47,350 >LR b	115	70-124
1,2-Dichloroethane	<40.00	10,000	7,795	78	75-127
Benzene	55.68	10,000	11,550	115	79-124
Toluene	<40.00	10,000	11,140	111	80-120
1,2-Dibromoethane	<40.00	10,000	9,966	100	80-120
Ethylbenzene	44.48	10,000	10,950	109	80-123
m,p-Xylenes	82.76	20,000	23,900	119	78-122
o-Xylene	<52.87	10,000	11,600	116	77-120

Surrogate	%REC	Limits
Dibromofluoromethane	100	80-120
1,2-Dichloroethane-d4	77	73-136
Toluene-d8	104	80-120
Bromofluorobenzene	99	80-120

Type: MSD Lab ID: QC877965

Analyte	Spiked	Result	%REC	Limits	RPD Lim
tert-Butyl Alcohol (TBA)	50,000	57,200	114	58-153	3 37
Isopropyl Ether (DIPE)	10,000	9,739	97	67-124	12 20
Ethyl tert-Butyl Ether (ETBE)	10,000	9,473	95	75-123	9 20
Methyl tert-Amyl Ether (TAME)	10,000	9,576	94	78-120	0 20
MTBE	10,000	44,760 >LR b	89	70-124	NC 20
1,2-Dichloroethane	10,000	7,681	77	75-127	1 20
Benzene	10,000	11,090	110	79-124	4 20
Toluene	10,000	10,570	106	80-120	5 20
1,2-Dibromoethane	10,000	10,220	102	80-120	3 20
Ethylbenzene	10,000	10,410	104	80-123	5 20
m,p-Xylenes	20,000	22,690	113	78-122	5 20
o-Xylene	10,000	11,510	115	77-120	1 20

Surrogate	%REC	Limits
Dibromofluoromethane	97	80-120
1,2-Dichloroethane-d4	78	73-136
Toluene-d8	100	80-120
Bromofluorobenzene	97	80-120

b= See narrative

NC= Not Calculated

&gt;LR= Response exceeds instrument's linear range

RPD= Relative Percent Difference

Data File: \\gcmsserver\DD\chem\MSWD08.i\032017\HCK15TWH.D  
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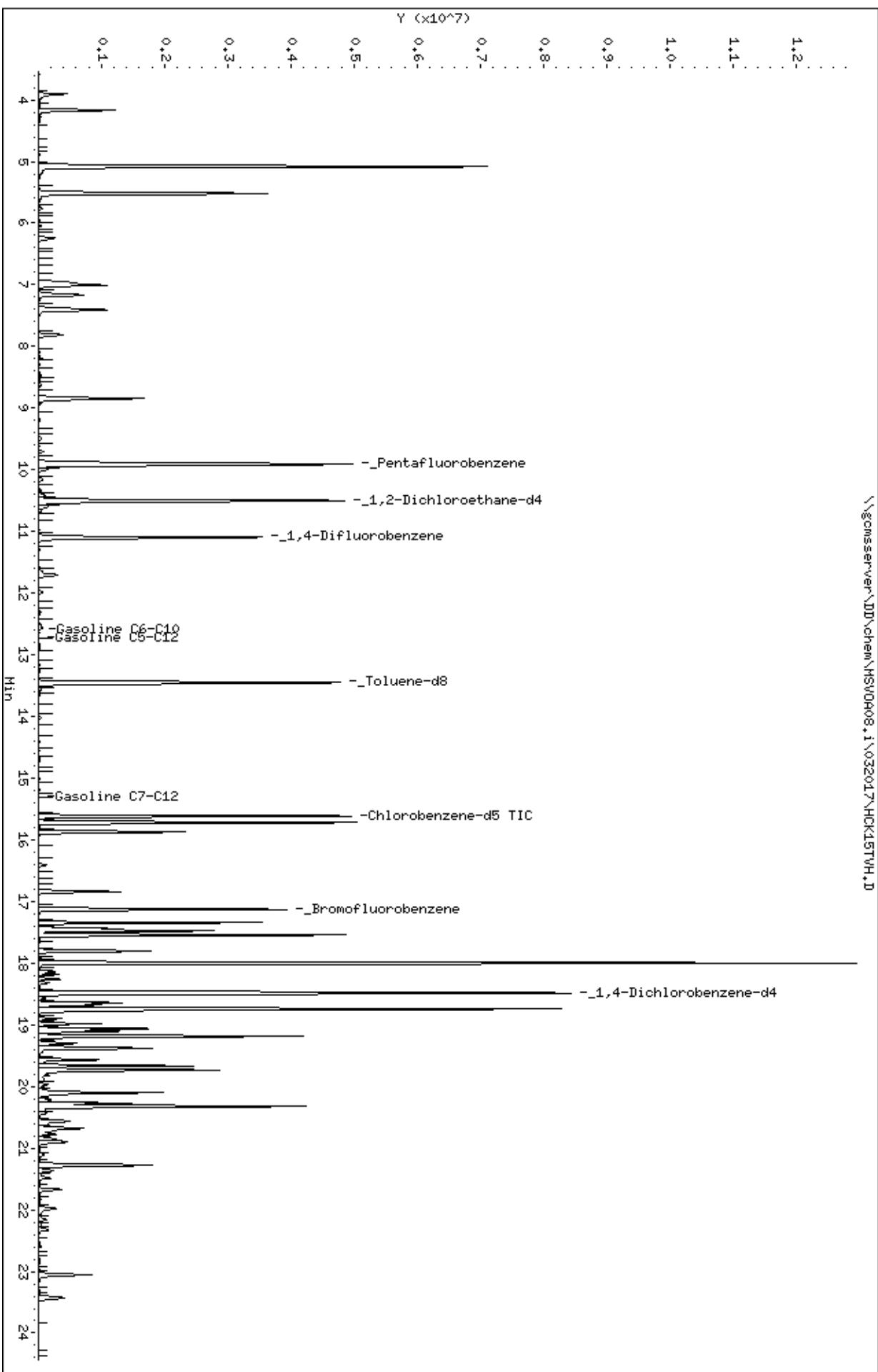
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Sample Info: s,287963-003

Column phase:

Page 2

Instrument: MSWD08.i  
Operator: VOC  
Column diameter: 2.00

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Client ID:

Sample Info: s\_286963-004

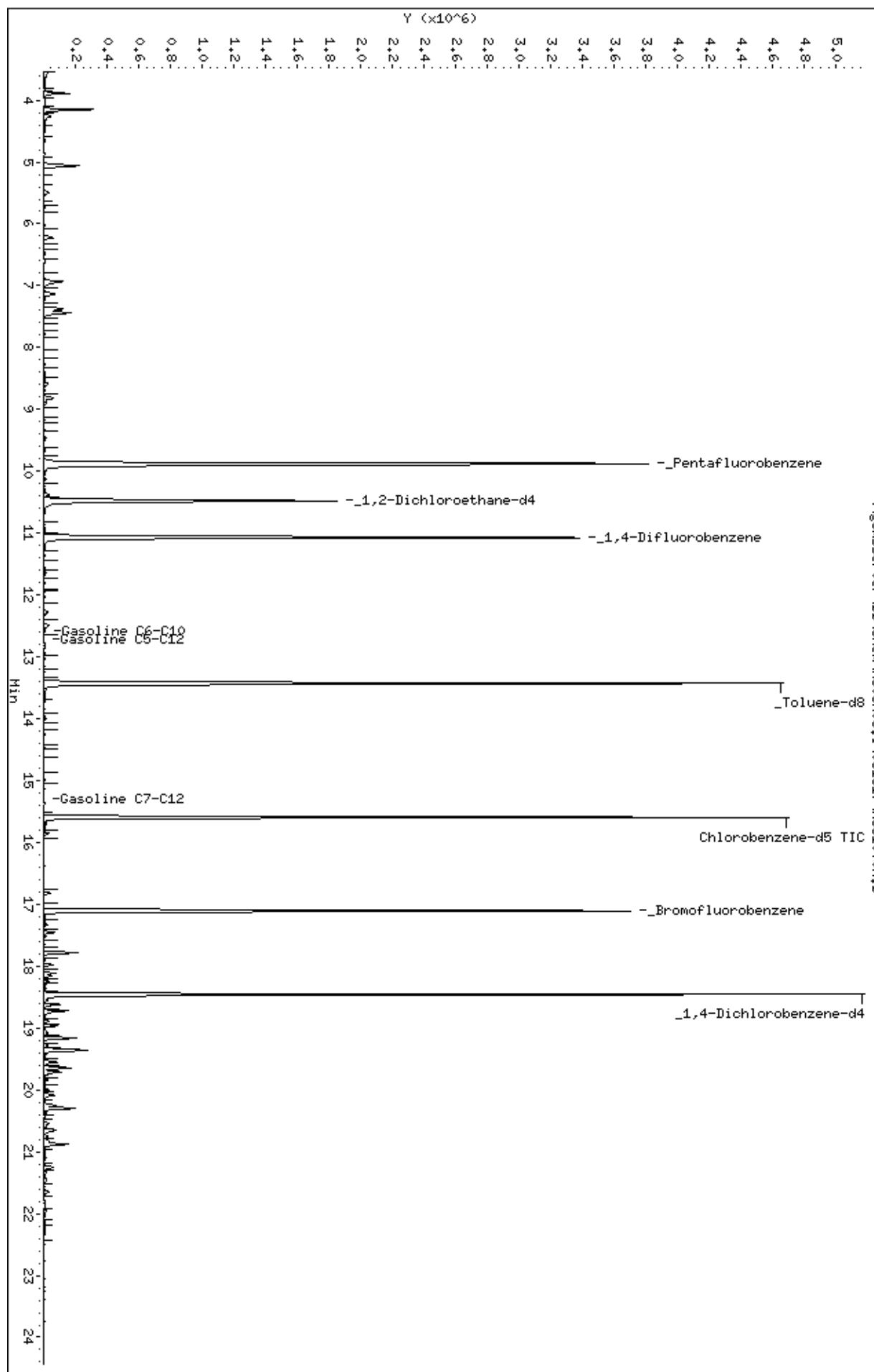
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Operator: VOC

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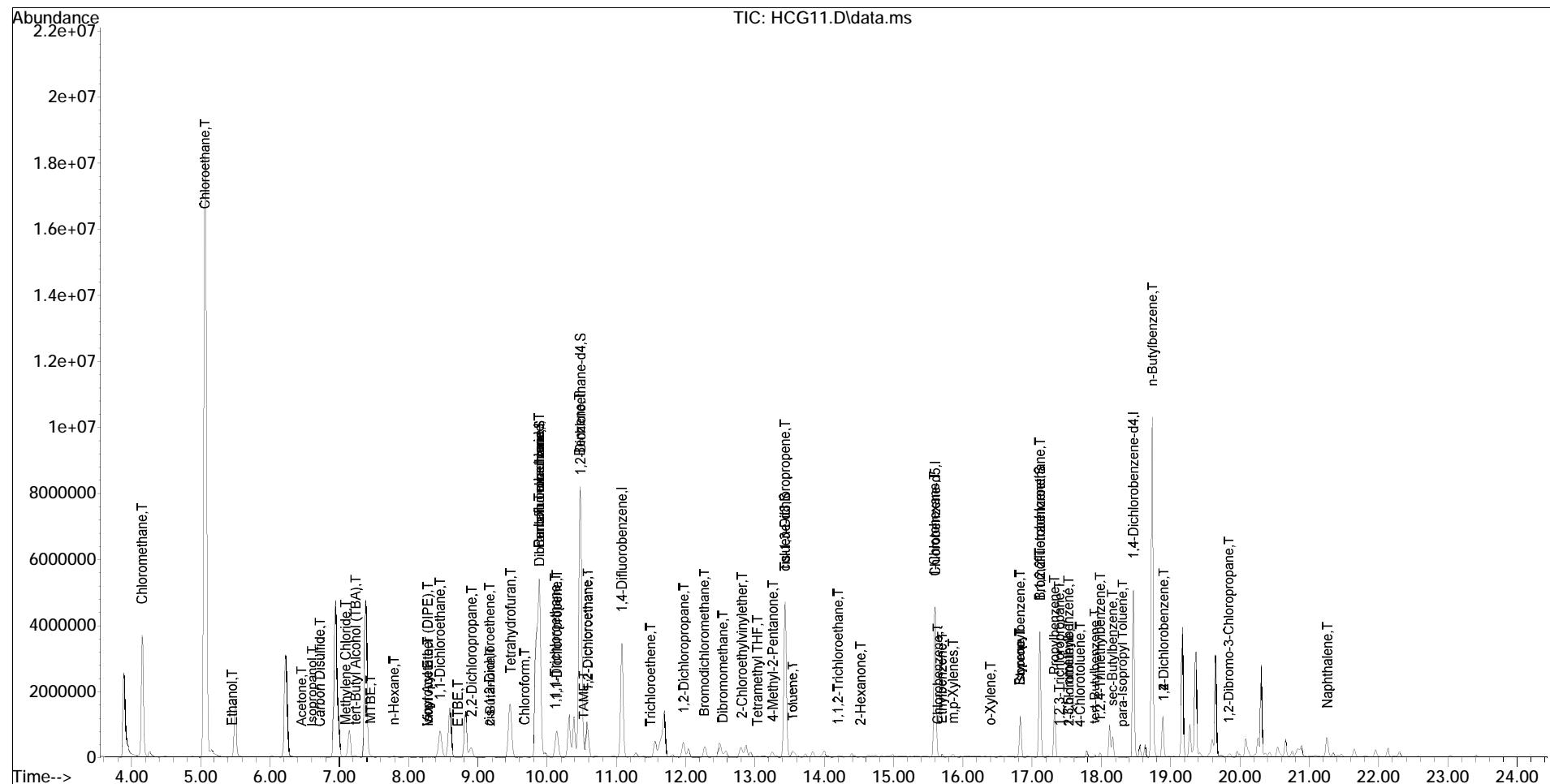
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## Quantitation Report (QT Reviewed)

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Data File : HCG11.D  
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Operator :  
Sample : s\_286963-005  
Misc : 245585,1/1  
ALS Vial : 11 Sample Multiplier: 1

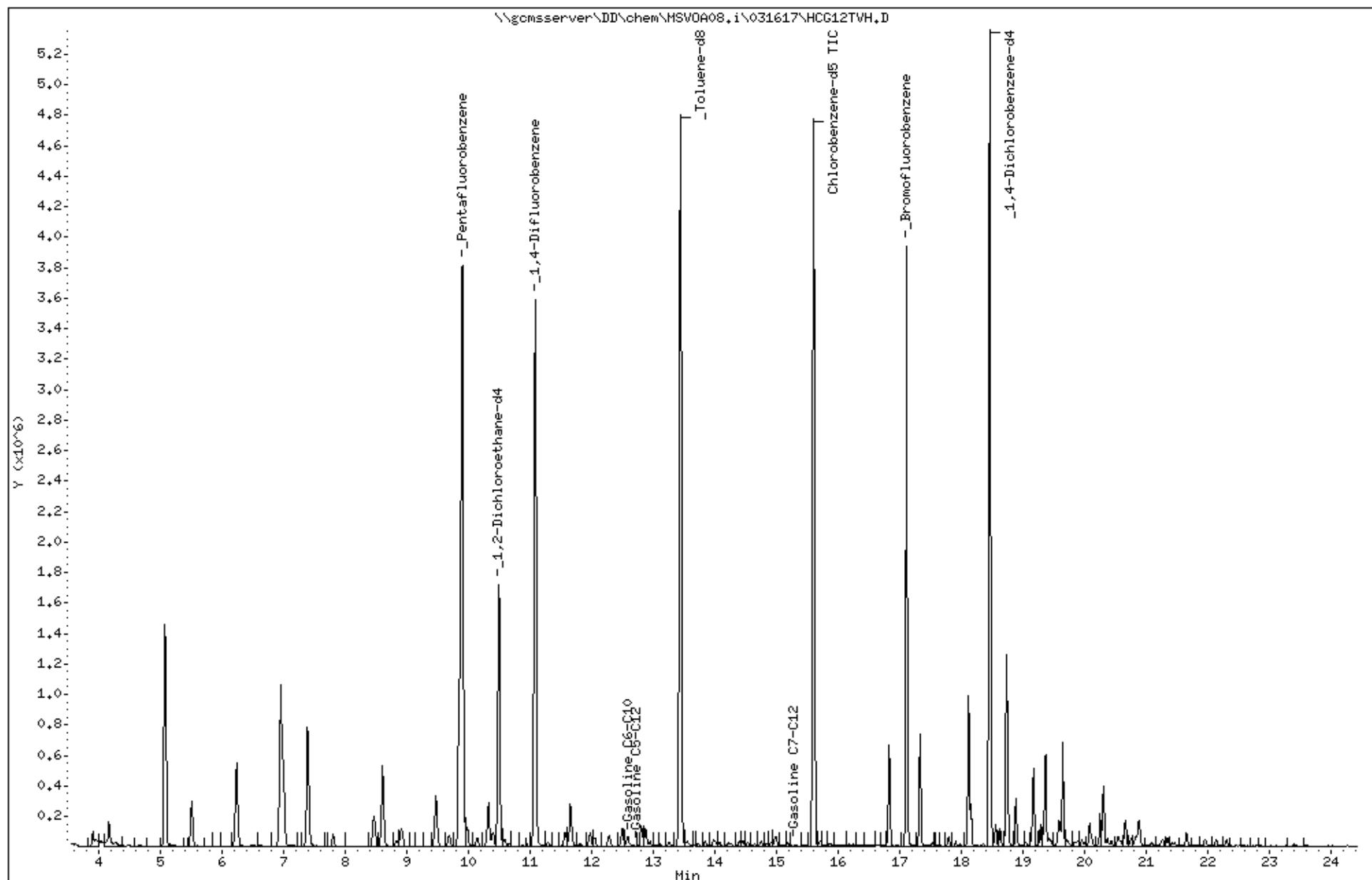
Quant Time: Mar 23 12:18:50 2017  
Quant Method : C:\msdchem\1\METHODS\8260X08W.M  
Quant Title : MSVOA08 MSVOA WATER  
QLast Update : Wed Feb 01 16:01:39 2017  
Response via : Initial Calibration



Data File: \\gomsserver\DD\chem\MSV0A08.i\031617\HCG12TVH.D  
Date : 16-MAR-2017 19:15  
Client ID:  
Sample Info: s,286963-006

Instrument: MSV0A08.i

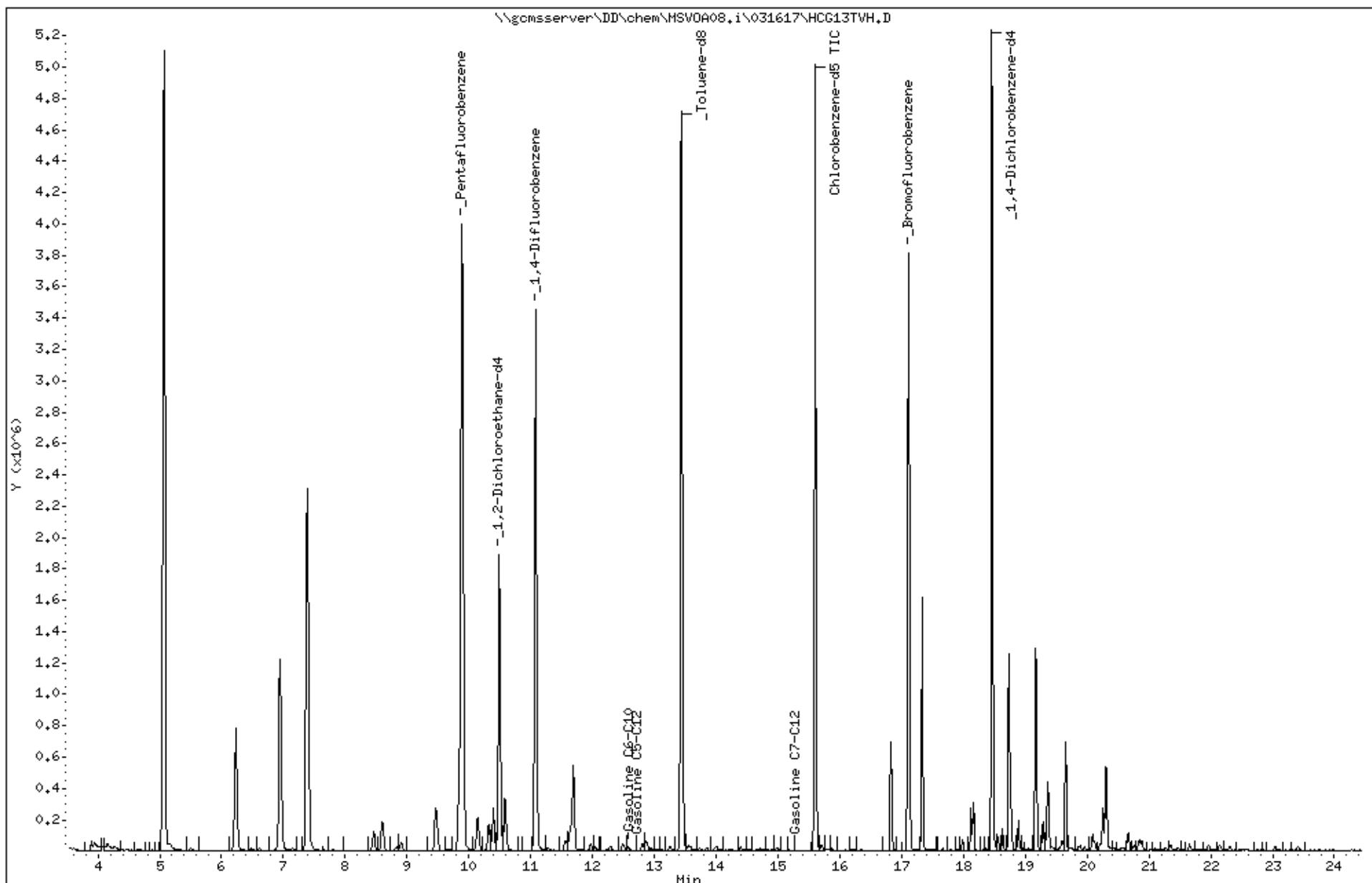
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Operator: VOC  
Column diameter: 2.00

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Date : 16-MAR-2017 19:48  
Client ID:  
Sample Info: s,286963-007

Instrument: MSV0A08.i  
Operator: VOC  
Column diameter: 2.00

Column phase:



Data File: \\gomsserver\DD\chem\MSV0A10.i\032117\JCL10TVH.D

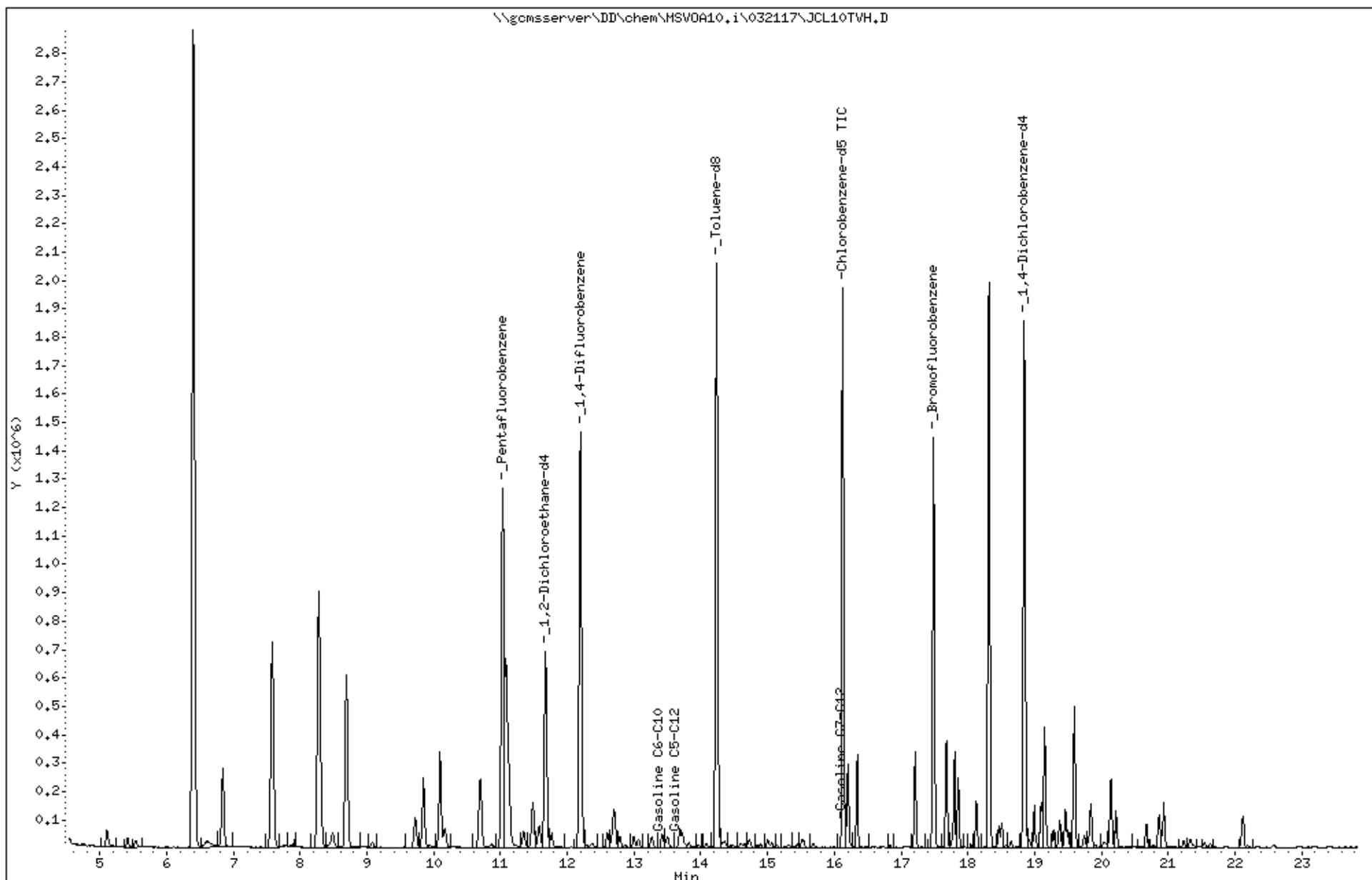
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Client ID:

Sample Info: s,286963-008

Instrument: MSV0A10.i

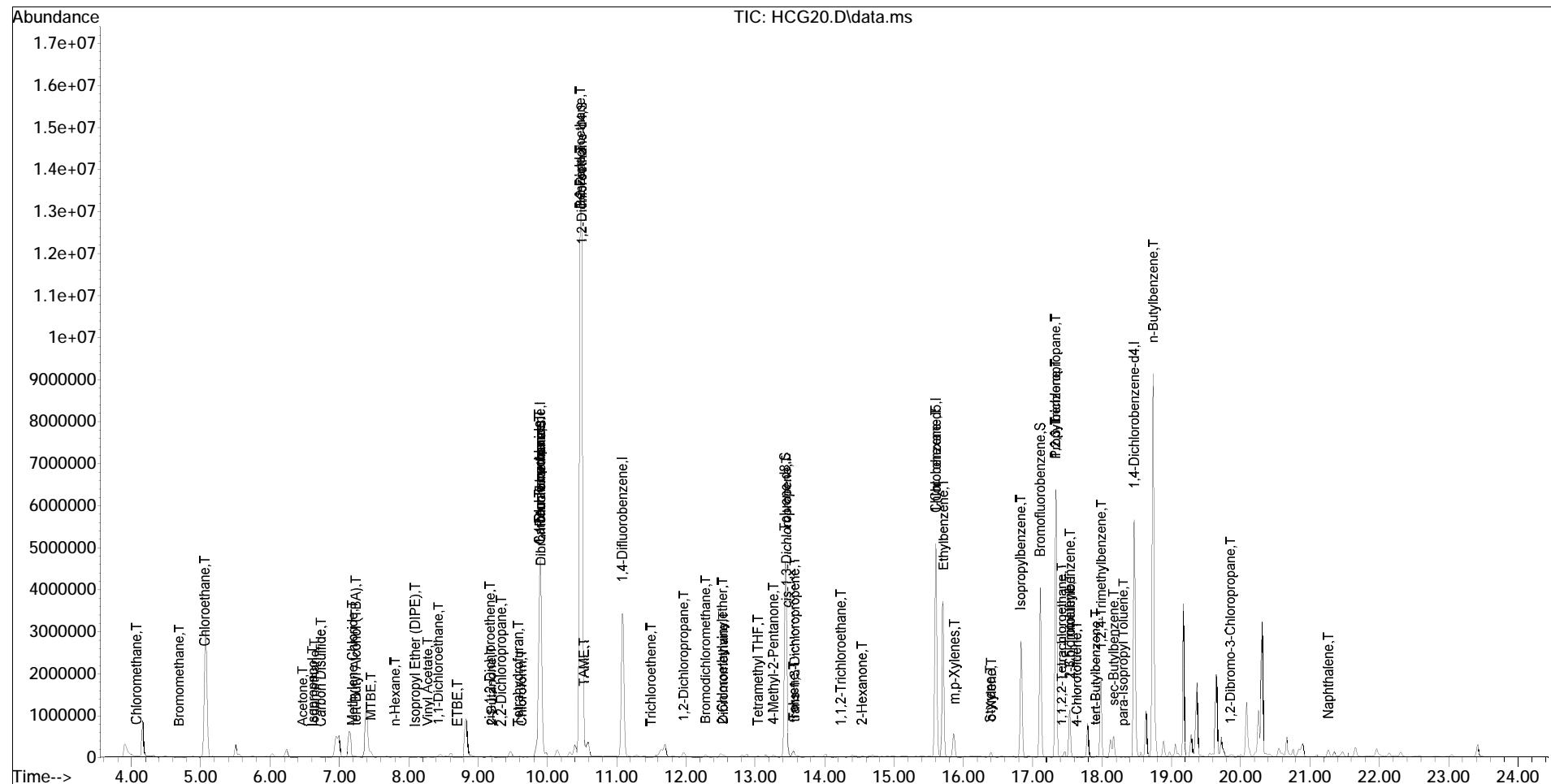
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## Quantitation Report (QT Reviewed)

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 Data File : HCG20.D  
 Acq On : 16 Mar 2017 11:40 pm  
 Operator :  
 Sample : s,286963-011  
 Misc : 245585,8/50  
 ALS Vial : 20 Sample Multiplier: 1

Quant Time: Mar 23 12:24:24 2017  
 Quant Method : C:\msdchem\1\METHODS\8260X08W.M  
 Quant Title : MSVOA08 MSVOA WATER  
 QLast Update : Wed Feb 01 16:01:39 2017  
 Response via : Initial Calibration



Data File: \\gomsserver\DD\chem\MSV0A08.i\031517\HCF08TVH.D  
Date : 15-MAR-2017 15:56  
Client ID:  
Sample Info: cov\bs\_qc876973,245538,s31872,.01/100

Instrument: MSV0A08.i  
Operator: VOC  
Column diameter: 2.00

Column phase:

