

**RECEIVED**

By Alameda County Environmental Health at 9:53 am, Feb 28, 2013



February 27, 2013

Ms. Dilan Roe  
Alameda County  
Environmental Health Services  
1131 Harbor Bay Parkway, Suite 250  
Oakland, California 94502

Subject: Fuel Leak Case#RO0000346

Site Location: 3519 Castro Valley Boulevard, Castro Valley

Dear Ms. Roe:

SOMA's "First Semi-Annual 2013 Groundwater Monitoring Report" for the subject site has been uploaded to the State's GeoTracker database and to the Alameda County ftp site for your review.

If you have any questions or comments, please do not hesitate to call me. Your time is greatly appreciated in reviewing our report.

Sincerely,

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

Mansour Sepehr, Ph.D., PE  
Principal Hydrogeologist

Enclosure

cc: Mr. Mirazim Shakoori w/enclosure



# **First Semi-Annual 2013 Groundwater Monitoring Report**

**Castro Valley Chevron  
3519 Castro Valley Boulevard  
Castro Valley, California**

**February 27, 2013**

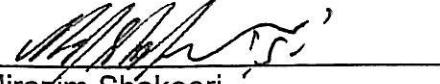
**Project 2761**

**Prepared for  
Mr. Mirazim Shakoori  
4313 Mansfield Drive  
Danville, California 94506**

PERJURY STATEMENT

Site Location: 3519 Castro Valley Boulevard, Castro Valley, CA

"I declare under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge".

  
\_\_\_\_\_  
Mirazim Shakoori  
4313 Mansfield Drive  
Danville, California 94506  
Responsible Party

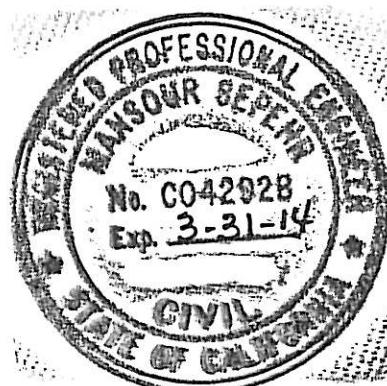
## CERTIFICATION

SOMA Environmental Engineering, Inc. has prepared this report on behalf of Mr. Mirazim Shakoori, property owner of 3519 Castro Valley Boulevard, Castro Valley, California to comply with requirements of Alameda County Environmental Health Services for the First Semi-Annual 2013 groundwater monitoring event.



---

Mansour Sepehr, PhD, PE  
Principal Hydrogeologist



## TABLE OF CONTENTS

CERTIFICATION .....	i
TABLE OF CONTENTS .....	ii
LIST OF TABLES.....	iii
LIST OF FIGURES .....	iii
LIST OF APPENDICES .....	iv
1. INTRODUCTION .....	1
1.1 Overview .....	1
1.2 Summary of Field Activities and Laboratory Analysis.....	1
1.2.1 Field Activities .....	1
1.2.2 Laboratory Analysis.....	2
2. RESULTS .....	2
2.1 Field Measurements for Shallow WBZ wells .....	2
2.2 Laboratory Analyses for Shallow WBZ Wells .....	2
2.3 Field Measurements for Semi-Confined WBZ Wells .....	4
2.4 Laboratory Analyses for Semi-Confined WBZ Wells .....	4
3. CONCLUSIONS AND RECOMMENDATIONS.....	5
3.1 Conclusions .....	5
3.2 Recommendations .....	6

## **LIST OF TABLES**

- Table 1: Historical Groundwater Elevations and Analytical Data  
TPH-g, BTEX, and MtBE
- Table 2: Historical Groundwater Analytical Data, Gasoline Oxygenates and Lead Scavengers

## **LIST OF FIGURES**

- Figure 1: Site Vicinity Map
- Figure 2: Site Map Showing Locations of Existing Monitoring Wells, Decommissioned Wells, Off-site Temporary Well Boreholes, Monitoring Wells Installed by SOMA, and Monitoring Wells Located at Neighboring Service Station
- Figure 3: Groundwater Elevation Contour Map for Shallow WBZ wells in Feet. January 9, 2013
- Figure 4: Contour Map of TPH-g Concentrations in Shallow WBZ wells. January 9 and 10, 2013
- Figure 5: Contour Map of Benzene Concentrations in Shallow WBZ wells. January 9 and 10, 2013
- Figure 6: Contour Map of MtBE Concentrations in Shallow WBZ wells. January 9 and 10, 2013
- Figure 7: Groundwater Elevation Contour Map for Semi-Confined WBZ wells in Feet. January 9, 2013
- Figure 8: Map of TPH-g, Benzene, and TBA Concentrations in Semi-Confined WBZ wells. January 9 and 10, 2013
- Figure 9: Contour Map of MtBE Concentrations in Semi-Confined WBZ wells. January 9 and 10, 2013

## **LIST OF APPENDICES**

- Appendix A: Standard Operating Procedures for Conducting Groundwater Monitoring Activities
- Appendix B: Table of Elevations and Coordinates for Monitoring Wells, Field Measurements of Groundwater Sample Properties and Groundwater Gradient Calculations
- Appendix C: Chain of Custody Form and Laboratory Report for the First Semi-Annual 2013 Monitoring Event

# **1. INTRODUCTION**

## **1.1 Overview**

SOMA Environmental Engineering, Inc. (SOMA) has prepared this report on behalf of Mr. Mirazim Shakoori, property owner of the former BP gasoline service station located at 3519 Castro Valley Boulevard, Castro Valley, California. The site is located in an area of primarily residential and commercial properties (Figure 1).

This report summarizes results of the First Semi-Annual 2013 groundwater monitoring event conducted at the site on January 9 and 10, 2013. Included are laboratory analytical results for groundwater samples and physical and chemical properties measured in the field for each groundwater sample including pH, temperature, and electrical conductivity (EC).

A joint monitoring event was conducted in coordination with the neighboring service station at 3459 Castro Valley Boulevard. However, this report does not include groundwater monitoring data and analytical results for the neighboring site as per correspondence from P&D Environmental Inc., dated September 24, 2008.

## **1.2 Summary of Field Activities and Laboratory Analysis**

### **1.2.1 Field Activities**

On January 9, 2013, ten on-site monitoring wells (five in Semi-Confining water-bearing zone [WBZ] including ESE-1R, ESE-2R, ESE-5R, MW-6R, SOMA-1; five in the Shallow WBZ including SOMA-5, SOMA-7, SOMA-8, OB-1, OB-2) and four off-site monitoring wells (two in the Semi-Confining WBZ including MW-7R, SOMA-4 and two in the Shallow WBZ including SOMA-2, SOMA-3) were measured for depth to groundwater. On January 9 and 10, 2013 additional field measurements and groundwater samples were collected from all monitoring wells. Figure 2 shows well locations.

Top of casing elevation data and depth to groundwater in each monitoring well were used to calculate groundwater elevation. The top of casing elevation was based on an elevation datum of 56.33 feet NAVD88. Appendix B includes survey data.

Activities were performed in accordance with general guidelines of California Regional Water Quality Control Board (CRWQCB) and Alameda County Environmental Health Services (ACEHS). Appendix A details standard procedures followed by SOMA during this monitoring event.

Purged groundwater from each well was temporarily stored on-site in two 55-gallon drums pending transport to an appropriate disposal facility.

### **1.2.2 Laboratory Analysis**

Curtis and Tompkins Laboratories, a California state-certified environmental 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); gasoline oxygenates, and lead scavengers. All samples were analyzed using EPA Method 8260B.

## **2. RESULTS**

Following are results of field measurements and laboratory analysis for the January 2013 groundwater monitoring event.

### **2.1 Field Measurements for Shallow WBZ wells**

Table 1 presents calculated groundwater elevation and depth to groundwater in each monitoring well. Depths to groundwater ranged from 6.58 feet in OB-1 to 9.63 feet in SOMA-2. Groundwater elevations ranged from 167.95 feet in SOMA-3 to 172.12 feet in OB-1. Table 1 also presents historical groundwater elevations in monitoring wells.

The groundwater elevation contour map is displayed in Figure 3. Groundwater flows southeasterly in the Shallow WBZ at an approximate gradient of 0.014 feet/feet. Groundwater gradient calculations are attached in Appendix B.

Since the previous monitoring event (July 2012), the groundwater flow direction has remained unchanged and the gradient has slightly increased. Refer to Table 1 for detailed historical groundwater elevation trends.

### **2.2 Laboratory Analyses for Shallow WBZ Wells**

Table 1 presents laboratory analytical results of groundwater samples for TPH-g, BTEX, and MtBE. Table 2 presents laboratory analytical results of groundwater samples for gasoline oxygenates and lead scavengers.

TPH-g was below the laboratory-reporting limit in groundwater samples from SOMA-2, SOMA-3, and SOMA-8. TPH-g was detected in concentrations ranging from 180 µg/L in SOMA-5 to 21,000 µg/L in OB-2. Figure 4 displays the contour map of TPH-g concentrations in groundwater. The highest TPH-g concentration

was observed in the vicinity of the former UST cavity at OB-2.

Since the previous monitoring event (July 2012), TPH-g increased in SOMA-5 and decreased in SOMA-7, OB-1 and OB-2. However, during the previous monitoring event, due to laboratory error, TPH-g was analyzed by EPA method 8015B instead of EPA method 8260B. Therefore, an accurate comparison cannot be made at this time.

The following BTEX analytes were observed during this monitoring event:

- In SOMA-2, SOMA-3, and SOMA-8, all BTEX analytes were below laboratory-reporting limits.
- In SOMA-5, toluene and total xylenes were below laboratory-reporting limits.
- In OB-1, benzene and toluene were below laboratory-reporting limits.
- In OB-2, toluene was below laboratory-reporting limit.
- Benzene was detected in concentrations ranging from 25 µg/L in SOMA-5 to 530 µg/L in OB-2. Toluene was detected in SOMA-7 only at 8.9 µg/L. Ethylbenzene was detected in concentrations ranging from 1.1 µg/L in OB-1 to 980 µg/L in OB-2. Total xylenes were detected in concentrations ranging from 1.2 µg/L in OB-1 to 1,258 µg/L in OB-2.

Figure 5 displays the contour map of benzene concentrations in groundwater. As illustrated, the highest benzene concentration was observed in the vicinity of the former UST cavity at OB-2. Since the previous monitoring event (July 2012), benzene increased in SOMA-5 and SOMA-7, and decreased in OB-1 and OB-2.

MtBE was below the laboratory-reporting limit in SOMA-2 and SOMA-8. Detectable MtBE concentrations ranged from 3.9 µg/L in SOMA-5 to 79 µg/L in OB-2. Figure 6 displays the contour map of MtBE concentrations in groundwater. Since the previous monitoring event (July 2012), MtBE increased in SOMA-3 and decreased in SOMA-5, SOMA-7, OB-1 and OB-2. As is evident from the observed concentrations in SOMA-3 and the southeasterly groundwater flow direction, MtBE has migrated off-site.

All gasoline oxygenate and lead scavenger analytes [Tertiary-butyl alcohol (TBA), Isopropyl ether (DIPE), ethyl tertiary-butyl ether (ETBE), tertiary-amyl methyl ether (TAME), ethanol, 1,2-dichloroethane (1,2-DCA), and 1,2-dibromoethane (EDB)] were below laboratory-reporting limits in all groundwater samples.

No comparison can be made for TBA concentrations since the previous monitoring event (July 2012) due to raised dilution and reporting limits during this monitoring event.

## **2.3 Field Measurements for Semi-Confining WBZ Wells**

Table 1 presents calculated groundwater elevation and depth to groundwater in each monitoring well. Depths to groundwater ranged from 8.06 feet in ESE-5R to 10.10 feet in SOMA-1. Groundwater elevations ranged from 168.42 feet in SOMA-4 to 171.84 feet in MW-6R. Table 1 also presents historical groundwater elevations in monitoring wells.

The groundwater elevation contour map is displayed in Figure 7. Groundwater flows southwesterly across the site at an approximate gradient of 0.011 feet/feet.

Since the previous monitoring event (January 2012), the groundwater flow direction has changed from southerly to southwesterly and the gradient has slightly decreased. Refer to Table 1 for detailed historical groundwater elevation trends.

## **2.4 Laboratory Analyses for Semi-Confining WBZ Wells**

Table 1 presents laboratory analytical results of groundwater samples for TPH-g, BTEX, and MtBE. Table 2 presents laboratory analytical results of groundwater samples for gasoline oxygenates and lead scavengers.

TPH-g was below the laboratory-reporting limit in groundwater samples from the Semi-Confining WBZ except at wells ESE-1R and ESE-5R, where TPH-g was detected at 69 µg/L and 74 µg/L, respectively. Figure 8 displays the map of TPH-g concentrations in groundwater.

Since the previous monitoring event (July 2012), TPH-g has decreased significantly in ESE-1R, increased in ESE-5R, and remained below the laboratory-reporting limit in other wells. However, during July 2012 monitoring event, due to laboratory error, TPH-g was analyzed by EPA method 8015B instead of EPA method 8260B. Therefore, an accurate comparison cannot be made at this time.

All BTEX analytes were below laboratory-reporting limits in Semi-Confining WBZ wells except for benzene which was detected in ESE-1R at 1.1 µg/L.

Figure 8 displays the map of benzene concentrations in groundwater. As illustrated, benzene has only minimally impacted groundwater in the Semi-Confining WBZ. Since the previous monitoring event (July 2012), BTEX analytes have decreased in ESE-1R.

MtBE was below the laboratory-reporting limit in ESE-2R, MW-6R, and MW-7R. Detectable MtBE concentrations ranged from 0.77 µg/L in SOMA-4 to 6.3 µg/L in

ESE-5R. Figure 9 displays the contour map of MtBE concentrations in groundwater. Since the previous monitoring event (July 2012), detectable MtBE concentrations increased in ESE-5R and SOMA-4 and decreased in ESE-1R, ESE-2R, MW-7R, and SOMA-1.

The following gasoline oxygenate and lead scavenger analytes were observed during this monitoring event.

- DIPE, ETBE, TAME, ethanol, 1,2-DCA, and EDB were below laboratory-reporting limits in all groundwater samples.
- TBA was detected in wells SOMA-1 at 22 µg/L. It was below the laboratory-reporting limit in other wells.

Figure 8 displays the map showing TBA concentrations in groundwater. As illustrated, TBA concentration was observed in the vicinity of the former UST cavity around SOMA-1. Since the previous monitoring event (July 2012), TBA and TAME have decreased in ESE-1R. TBA has also decreased in SOMA-1.

Refer to Tables 1 and 2 for detailed historical concentration trends. Appendix C includes the laboratory report and chain of custody form for the First Semi-Annual 2013 monitoring event.

### **3. CONCLUSIONS AND RECOMMENDATIONS**

#### **3.1 Conclusions**

Conclusions based on the First Semi-Annual 2013 groundwater monitoring event are summarized as follows:

- The groundwater flow direction was southeasterly in the Shallow WBZ and southwesterly in the Semi-Confining WBZ.
- In the Shallow WBZ, TPH-g, benzene, and MtBE plumes appear to be centrally located in the southern section of the site in the vicinity of the former UST cavity, at OB-2. Since the previous monitoring event (July 2012), TPH-g has increased in SOMA-5 and decreased in SOMA-7, OB-1 and OB-2; benzene has increased in SOMA-5 and SOMA-7, and decreased in OB-1 and OB-2. High TPH-g and BTEX concentrations suggest that this WBZ is significantly impacted by petroleum hydrocarbons. Due to its high mobility and the southeasterly groundwater flow direction across the site from the former UST cavity, MtBE has migrated off-site.
- Within the Semi-Confining WBZ, TPH-g, benzene, MtBE, and TBA contamination is present in southwestern section of the site around OB-1

and around the former UST cavity in the southern section of the site, around ESE-1R and SOMA-1. However, since the previous monitoring event (July 2012) TPH-g has decreased significantly in ESE-1R and increased in ESE-5R; benzene has decreased in ESE-1R; MtBE has increased in ESE-5R, SOMA-4 and decreased in ESE-1R, ESE-2R, MW-7R, and SOMA-1; and TBA has decreased in ESE-1R and SOMA-1.

- In the northern section of the site, at MW-6R, all tested constituents were at non-detectable levels.

### **3.2 Recommendations**

SOMA recommends the following:

- Conducting the next several monitoring events on a quarterly basis: Since Semi-Confined WBZ wells were reconstructed in 2010 and are no longer cross-screening the impacted shallow and deeper zones, at this time it is recommended to continue groundwater monitoring for several consecutive quarters to determine the concentration trends. In addition to standard monitoring, SOMA recommends evaluating pertinent natural attenuation indicators for this WBZ (e.g., DO, ORP,  $\text{Fe}^{+2}$ ,  $\text{NO}_3^-$ , and  $\text{SO}_4^{=2}$ ).
- Based on the ACEH directive dated January 3, 2013, SOMA has submitted a Draft Corrective Action Workplan for Soil Gas Study, Excavation Design and Implementation Activities. Upon receipt of approval from ACEH, SOMA will commence field activities and a report detailing field activities and results will be submitted upon completion of the work.

# Tables

**Table 1**  
**Historical Groundwater Elevations & Analytical Data**  
**TPH-g, BTEX, MtBE**  
**3519 Castro Valley Blvd, Castro Valley, CA**

Monitoring Well	Date	Top of casing elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	Observed Sheen	TPH-g (µg/L) 8260B	TPH-g (µg/L) 8015B	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MtBE (µg/L) 8260B
<b>Semi-Confining WBZ Wells</b>												
ESE-1	10/5/1992	177.69	11.22	166.47	-	2,100	NA	370	150	17	110	NA
	10/5/1992	177.69	NM	NM	-	2,300	NA	370	160	16	110	NA
	4/1/1993	177.69	8.79	168.90	-	5,900	NA	1500	410	110	390	NA
	6/29/1993	177.69	10.34	167.35	-	7,600	NA	2900	390	130	460	NA
	9/23/1993	177.69	10.91	166.78	-	2,000	NA	490	40	20	56	600
	9/23/1993	177.69	NM	NM	-	1,500	NA	420	39	19	56	550
	12/10/1993	177.69	9.93	167.76	-	1,800	NA	480	42	19	66	921
	12/10/1993	177.69	NM	NM	-	1,500	NA	380	38	17	55	770
	2/17/1994	177.69	9.64	168.05	-	1,900	NA	380	48	24	80	585
	2/17/1994	177.69	NM	NM	-	2,200	NA	430	42	19	65	491
	8/8/1994	177.69	11.72	165.97	-	2,100	NA	450	46	16	50	760
	10/12/1994	177.69	10.48	167.21	-	760	NA	240	16	51	39	230
	1/19/1995	177.69	7.77	169.92	-	840	NA	600	120	22	58	NA
	5/2/1995	177.69	8.69	169.00	-	2,000	NA	640	67	24	98	NA
	7/28/1995	177.69	10.12	167.57	-	190	NA	<0.50	<0.50	<0.50	<1.0	NA
	11/17/1995	177.69	10.57	167.12	-	200	NA	3.4	<1.0	1	<2.0	600
	2/7/1996	177.69	7.41	170.28	-	750	NA	370	23	21	64	680
	4/23/1996	177.69	9.12	168.57	-	310	NA	100	<1.0	<1.0	<1.0	1500
	7/9/1996	177.69	10.12	167.57	-	730	NA	230	74	13	63	750
	10/10/1996	177.69	10.80	166.89	-	420	NA	26	1.6	7.3	12	430
	1/20/1997	177.69	10.52	167.17	-	660	NA	290	4.2	13	36	450
	4/25/1997	177.69	9.77	167.92	-	410	NA	<0.5	<1.0	<1.0	<1.0	580
	7/18/1997	177.69	10.55	167.14	-	420	NA	<0.5	<1.0	<1.0	<1.0	370
	10/27/1997	177.69	10.36	167.33	-	300	NA	56	<1.0	6.5	<1.0	220

**Table 1**  
**Historical Groundwater Elevations & Analytical Data**  
**TPH-g, BTEX, MtBE**  
**3519 Castro Valley Blvd, Castro Valley, CA**

Monitoring Well	Date	Top of casing elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	Observed Sheen	TPH-g (µg/L) 8260B	TPH-g (µg/L) 8015B	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MtBE (µg/L) 8260B
<b>ESE-1 cont.</b>	1/22/1998	177.69	7.52	170.17	-	4,200	NA	440	9	15	17.7	1300
	4/23/1998	177.69	8.80	168.89	-	15,000	NA	3400	190	910	900	4900
	4/23/1998	177.69	NM	NM	-	15,000	NA	2800	140	730	730	4400
	7/29/1998	177.69	9.73	167.96	-	NA	NA	NA	NA	NA	NA	NA
	7/30/1998	177.69	NM	NM	-	15,000	NA	<2.5	<5.0	<5.0	<5.0	15000
	12/17/1998	177.69	9.51	168.18	-	2,400	NA	73	1	2.8	4.6	2000
	3/19/1999	177.69	8.65	169.04	-	4,700	NA	58	<1.0	<1.0	<1.0	4700
	6/23/1999	177.69	10.51	167.18	-	600	NA	170	<1.0	7.2	5	3900
	9/27/1999	177.69	10.32	167.37	-	920	NA	200	<25	<25	<25	4900
	12/9/1999	177.69	10.24	167.45	-	460	NA	130	1.2	5.2	1.5	5100
	3/9/2000	177.69	7.72	169.97	-	3,000	NA	1300	120	80	140	7300
	6/8/2000	177.69	9.40	168.29	-	2,900	NA	540	9.7	20	17	5200
	9/18/2000	177.69	10.05	167.64	-	890	NA	3.4	<0.5	1.4	<0.5	2800
	12/14/2000	177.69	8.20	169.49	-	1,600	NA	11.1	<0.5	<0.5	<0.5	2730
	3/21/2001	177.69	9.75	167.94	-	5,700	NA	2.28	<0.5	0.51	<1.5	6810
	6/18/2001	177.69	10.21	167.48	-	2,000	NA	152	0.669	3.62	2.34	1980
	9/18/2001	177.69	10.30	167.39	-	2,500	NA	57.1	<5.0	6.25	<15	2090
	12/13/2001	177.69	9.82	167.87	-	2,800	NA	208	6.05	8.54	9.66	2030
	3/14/2002	177.69	9.10	168.59	-	1,800	NA	140	6.31	4.5	9.41	1970
	6/19/2002	177.69	9.92	167.77	-	1,100	NA	220	2.02	4.23	3.8	1280
	9/10/2002	177.69	10.21	167.48	-	490	NA	39	2.9	<2.0	4.9	670
	12/16/2002	177.69	8.56	169.13	-	730	NA	140	6	3.2	9.1	670
	3/11/2003	177.69	9.40	168.29	-	1,700	NA	490	21	22	41	530
	6/17/2003	177.69	9.86	167.83	-	1,300	NA	140	<10	<10	<10	480
	12/9/2003	177.69	9.32	168.37	-	1,400	NA	390	12	14	26.1	260
	2/26/2004	177.69	7.71	169.98	-	3,200	NA	880	50	44	89	200
	5/21/2004	177.69	10.19	167.50	-	1,500	NA	370	10	14	25.2	140
	8/10/2004	180.24	10.41	169.83	-	460	NA	390	7	8.1	15.4	110
	10/19/2004	180.24	10.40	169.84	-	1,600	NA	490	13	12	25.3	110

**Table 1**  
**Historical Groundwater Elevations & Analytical Data**  
**TPH-g, BTEX, MtBE**  
**3519 Castro Valley Blvd, Castro Valley, CA**

Monitoring Well	Date	Top of casing elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	Observed Sheen	TPH-g (µg/L) 8260B	TPH-g (µg/L) 8015B	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MtBE (µg/L) 8260B
<b>ESE-1 cont.</b>	1/14/2005	180.24	8.26	171.98	-	790 Z	NA	420	26	19	52	91
	4/14/2005	180.24	8.77	171.47	-	3,020	NA	766	25.6	21.3	25.26	88.2
	7/7/2005	180.24	9.94	170.30	-	1,940	NA	440	15.5	15.7	21	80.6
	11/15/2005	180.24	10.21	170.03	-	1,260	NA	259	6.2	8.2	10.81	45.8
	2/8/2006	180.24	9.01	171.23	-	1,430	NA	332	13.6	18.1	25.03	43
	4/27/2006	180.24	9.14	171.10	-	1,600	NA	519	23.2	32.4	40.20	63.4
	8/1/2006	180.24	9.92	170.32	-	1,530	NA	395	11.8	25.4	28.01	40
	10/19/2006	180.24	10.34	169.90	-	1,230	NA	327	10.2	21.6	21.19	29.6
	1/12/2007	180.24	9.84	170.40	-	561	NA	153	7.18	14.4	14.95	30.9
	4/17/2007	180.24	9.78	170.46	-	467	NA	192	7.59	13.8	16.42	30.4
	7/17/2007	180.24	9.82	170.42	-	755	NA	271	8.6	17.8	22.06	26.7
	10/16/2007	180.24	8.99	171.25	-	164	NA	80.2	<2.0	5.24	2.47	16.6
	1/17/2008	180.24	9.35	170.89	-	70	NA	10.8	<2.0	<0.5	<2.0	19.3
	4/17/2008	180.24	9.80	170.44	-	687	NA	89.7	<2.0	4.01	5.30	8.79
	7/16/2008	180.24	10.17	170.07	-	1,400	NA	223	3.88	12.6	17.88	18.1
	10/14/2008	180.24	10.86	169.38	-	540	NA	95	2.7	7.7	18	15
	1/6/2009	180.24	10.10	170.14	-	500 Y	NA	130	3	8.8	17.1	13
	4/6/2009	180.24	10.05	170.19	-	910 Y	NA	230	2.4	11	12.1	17
	7/7/2009	180.24	10.42	169.82	-	850 Y	NA	89	1.9	7.8	15.1	15
	1/27/2010	180.24	7.94	172.30	-	1,600	NA	250	8.8	30	69	23
	7/26/2010	180.24	9.95	170.29	-	1,000	NA	96	1.2	4.2	6	17
<b>ESE-1R</b>	8/30/2010	180.20	10.17	170.03	-	2,100	NA	110	5.2	19	151	15
	11/16/2010	180.20	9.94	170.26	-	100	NA	5.8	<0.5	1	<0.5	16
	2/15/2011	180.20	10.12	170.08	-	1,400	NA	96	1.7	14	7.9	22
	7/19/2011	180.20	10.37	169.83	-	620	NA	30	0.76	4.4	0.96	21

**Table 1**  
**Historical Groundwater Elevations & Analytical Data**  
**TPH-g, BTEX, MtBE**  
**3519 Castro Valley Blvd, Castro Valley, CA**

Monitoring Well	Date	Top of casing elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	Observed Sheen	TPH-g (µg/L) 8260B	TPH-g (µg/L) 8015B	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MtBE (µg/L) 8260B
ESE-1R cont.	1/18/2012	180.20	10.78	169.42	-	1,800 <sup>Y</sup>	NA	18	<0.19	11	3.53	14
	7/10/2012	180.20	10.87	169.33	-	NA	1,100 <sup>Y</sup>	16	1.1	9.8	1.70	23
	1/10/2013	180.20	9.59	170.61	No Sheen	69	NA	1.1	<0.5	<0.5	<0.5	1.6
ESE-2	10/5/1992	178.23	11.68	166.55	-	300	NA	5.4	16	3.9	45	NA
	4/1/1993	178.23	9.17	169.06	-	240	NA	27	<0.5	17	2.6	123
	6/29/1993	178.23	10.88	167.35	-	1,700	NA	260	24	110	23	NA
	6/29/1993	178.23	NM	NM	-	1,300	NA	240	17	110	25	NA
	9/23/1993	178.23	11.56	166.67	-	240	NA	3.1	0.5	0.6	2.5	643
	12/10/1993	178.23	10.48	167.75	-	250	NA	2.4	2.4	1.5	11	940
	2/17/1994	178.23	10.06	168.17	-	900	NA	<0.5	<0.5	<0.5	<0.5	930
	8/8/1994	178.23	11.11	167.12	-	750	NA	<0.5	<0.5	<0.5	<0.5	1400
	10/12/1994	178.23	11.31	166.92	-	1,700	NA	<0.5	<0.5	<0.5	<0.5	3000
	1/19/1995	178.23	8.25	169.98	-	300	NA	2	0.9	0.7	1	NA
	5/2/1995	178.23	9.21	169.02	-	1,200	NA	4	<2.5	<2.5	<5	NA
	7/28/1995	178.23	10.64	167.59	-	2,000	NA	<2.5	<2.5	<2.5	<5	NA
	11/17/1995	178.23	11.13	167.10	-	3,600	NA	<25	<25	<25	<50	12000
	11/17/1995	178.23	NM	NM	-	3,400	NA	<25	<25	<25	<50	12000
	2/7/1996	178.23	7.94	170.29	-	450	NA	<0.5	<1	<1	<1	2300
	4/23/1996	178.23	9.73	168.50	-	260	NA	0.9	<1	<1	<1	8600
	7/9/1996	178.23	10.70	167.53	-	780	NA	<2.5	<5	<5	<5	13393
	10/10/1996	178.23	11.39	166.84	-	2,900	NA	<0.5	<1	<1	<1	12000
	1/20/1997	178.23	9.04	169.19	-	<250	NA	<2.5	<5	<5	<5	13000
	4/25/1997	178.23	10.31	167.92	-	2,700	NA	<0.5	<1	<1	<1	15000
	7/18/1997	178.23	11.02	167.21	-	11,000	NA	<5	<10	<10	<10	11000
	10/27/1997	178.23	10.93	167.30	-	6,100	NA	<2.5	<5.0	<5.0	<5.0	7100
	10/27/1997	178.23	NM	NM	-	6,600	NA	<2.5	<5.0	<5.0	<5.0	7400
	1/22/1998	178.23	7.93	170.30	-	13,000	NA	<0.5	<1	<1	<1	10000
	1/22/1998	178.23	NM	NM	-	13,000	NA	<0.5	<1	<1	<1	10000
	4/23/1998	178.23	9.34	168.89	-	19,000	NA	<5	<10	<10	<10	36000

**Table 1**  
**Historical Groundwater Elevations & Analytical Data**  
**TPH-g, BTEX, MtBE**  
**3519 Castro Valley Blvd, Castro Valley, CA**

Monitoring Well	Date	Top of casing elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	Observed Sheen	TPH-g (µg/L) 8260B	TPH-g (µg/L) 8015B	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MtBE (µg/L) 8260B
ESE-2 cont	7/29/1998	178.23	10.29	167.94	-	NA	NA	NA	NA	NA	NA	NA
	7/30/1998	178.23	NM	NM	-	19,000	NA	<5	<10	<10	<10	36000
	12/17/1998	178.23	10.20	168.03	-	12,000	NA	<5	<5	<5	<5	13000
	3/19/1999	178.23	9.02	169.21	-	18,000	NA	160	<1	<1	<1	18000
	6/23/1999	178.23	9.99	168.24	-	280	NA	<1	<1	<1	<1	16000
	9/27/1999	178.23	10.69	167.54	-	<500	NA	<25	<25	<25	<25	12000
	12/9/1999	178.23	11.26	166.97	-	<50	NA	<0.3	<0.3	<0.3	<0.6	12000
	3/9/2000	178.23	7.95	170.28	-	<50	NA	1.6	<0.5	<0.5	<0.5	7900
	6/8/2000	178.23	9.66	168.57	-	1,600	NA	<0.5	0.73	<0.5	2.2	9400
	12/14/2000	178.23	11.15	167.08	-	6,000	NA	0.75	<0.5	<0.5	<0.5	11200
	3/21/2001	178.23	10.35	167.88	-	6,900	NA	786	45.7	37.7	71.5	3790
	6/18/2001	178.23	11.24	166.99	-	6,400	NA	<2.5	<2.5	<2.5	<7.5	9320
	9/18/2001	178.23	11.35	166.88	-	4,800	NA	<12.5	<12.5	<12.5	<37.5	6960
	12/13/2001	178.23	10.97	167.26	-	59,000	NA	0.592	<0.5	<0.5	<1	5940
	3/14/2002	178.23	10.13	168.10	-	4,500	NA	76	<0.5	<0.5	<1	6660
	6/19/2002	178.23	10.91	167.32	-	250	NA	<12.5	<12.5	<12.5	<25	4900
	9/10/2002	178.23	10.82	167.41	-	1,500	NA	<5	<5	<5	6.3	3100
	12/16/2002	178.23	7.87	170.36	-	1,400	NA	<5	<5	<5	<5	2400
	3/11/2003	178.23	10.24	167.99	-	2,800	NA	<10	<10	<10	<10	4800
	6/17/2003	178.23	10.19	168.04	-	10,000	NA	<100	<100	<100	<100	4400
	12/9/2003	178.23	9.97	168.26	-	<50	NA	<0.5	<0.5	<0.5	<0.5	3400
	2/26/2004	178.23	7.89	170.34	-	<50	NA	<0.5	<0.5	<0.5	<0.5	3000
	5/21/2004	178.23	10.70	167.53	-	<50	NA	<0.5	<0.5	<0.5	<0.5	1100
	8/10/2004	180.79	10.99	169.80	-	<50	NA	<0.5	<0.5	<0.5	<0.5	550
	10/19/2004	180.79	10.46	170.33	-	<50	NA	<0.5	<0.5	<0.5	<0.5	410
	1/14/2005	180.79	8.66	172.13	-	<50	NA	<8.3	<8.3	<8.3	<8.3	1200
	4/14/2005	180.79	9.38	171.41	-	<860	NA	<2.15	<2.15	<2.15	<4.30	1020
	7/7/2005	180.79	10.46	170.33	-	<860	NA	<2.15	<8.60	<2.15	<4.30	378
	11/15/2005	180.79	10.55	170.24	-	<50	NA	<0.5	<2.0	<0.5	<1.0	210

**Table 1**  
**Historical Groundwater Elevations & Analytical Data**  
**TPH-g, BTEX, MtBE**  
**3519 Castro Valley Blvd, Castro Valley, CA**

Monitoring Well	Date	Top of casing elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	Observed Sheen	TPH-g (µg/L) 8260B	TPH-g (µg/L) 8015B	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MtBE (µg/L) 8260B
ESE-2 cont	2/8/2006	180.79	9.46	171.33	-	<215	NA	<2.15	<8.6	<2.15	<4.3	419
	4/27/2006	180.79	10.67	170.12	-	<100	NA	1.71	<4.0	<1.0	<2.0	432
	8/1/2006	180.79	10.29	170.50	-	<100	NA	2.83	<4.0	<1.0	<2.0	222
	10/19/2006	180.79	10.65	170.14	-	<50	NA	0.8	<2.0	<0.5	<1.0	221
	1/12/2007	180.79	NM	NM	-	NA	NA	NA	NA	NA	NA	NA
	4/17/2007	180.79	10.20	170.59	-	<50	NA	3.17	<2.0	4.49	<2.0	158
	7/17/2007	180.79	10.31	170.48	-	<50	NA	1.65	<2.0	<0.5	<2.0	105
	10/16/2007	180.79	9.22	171.57	-	<50	NA	5.67	<2.0	<0.5	<2.0	73.9
	1/17/2008	180.79	9.88	170.91	-	<50.0	NA	<0.50	<2.0	<0.50	<2.0	80.2
	4/17/2008	180.79	10.29	170.50	-	<50	NA	<0.5	<2.0	<0.5	<2.0	45
	7/16/2008	180.79	10.64	170.15	-	<50	NA	<0.5	<2.0	<0.5	<2.0	54
	10/14/2008	180.79	11.41	169.38	-	<50	NA	<0.5	<0.5	<0.5	<0.5	41
	1/6/2009	180.79	10.60	170.19	-	<50	NA	<0.5	<0.5	<0.5	<0.5	36
	4/6/2009	180.79	10.62	170.17	-	<50	NA	<0.5	<0.5	<0.5	<0.5	30
	7/7/2009	180.79	10.92	169.87	-	<50	NA	2.4	<0.5	<0.5	<0.5	32
	1/27/2010	180.79	8.36	172.43	-	<50	NA	<0.5	<0.5	<0.5	<0.5	26
	7/26/2010	180.79	10.44	170.35	-	<50	NA	<0.5	<0.5	<0.5	<0.5	13
ESE-2R	8/30/2010	180.7	10.61	170.09	-	200	NA	0.93	<0.5	1.3	13.5	16
	11/16/2010	180.7	10.33	170.37	-	<50	NA	<0.5	<0.5	<0.5	<0.5	18
	2/14/2011	180.70	10.50	170.20	-	<50	NA	<0.5	<0.5	<0.5	<0.5	12
	7/19/2011	180.70	10.62	170.08	-	<50	NA	<0.5	<0.5	<0.5	<0.5	8.3
	1/18/2012	180.70	10.92	169.78	-	<22	NA	<0.33	<0.19	<0.15	<0.20	1.1
	7/10/2012	180.70	11.17	169.53	-	NA	<50	<0.5	<0.5	<0.5	<0.5	5.1
ESE-3	1/10/2013	<b>180.70</b>	<b>10.00</b>	<b>170.70</b>	No Sheen	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5
	10/5/1992	178.20	10.58	167.62	-	430	NA	57	31	3.6	34	NA
	4/1/1993	178.20	8.14	170.06	-	2,400	NA	460	220	74	210	NA
	6/29/1993	178.20	9.72	168.48	-	280	NA	56	14	15	13	NA
	9/23/1993	178.20	10.46	167.74	-	72	NA	13	3.5	1.7	4.1	NA

**Table 1**  
**Historical Groundwater Elevations & Analytical Data**  
**TPH-g, BTEX, MtBE**  
**3519 Castro Valley Blvd, Castro Valley, CA**

Monitoring Well	Date	Top of casing elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	Observed Sheen	TPH-g (µg/L) 8260B	TPH-g (µg/L) 8015B	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MtBE (µg/L) 8260B
ESE-3 cont.	2/17/1994	178.20	8.97	169.23	-	520	NA	140	10	20	33	5.74
	8/8/1994	178.20	10.02	168.18	-	<50	NA	8.8	1.6	1.6	2.3	<5.0
	10/12/1994	178.20	10.32	167.88	-	470	NA	190	6.4	15	18	<5.0
	1/19/1995	178.20	7.40	170.80	-	330	NA	260	27	21	20	NA
	5/2/1995	178.20	8.26	169.94	-	530	NA	180	30	23	44	NA
	7/28/1995	178.20	9.54	168.66	-	<50	NA	<0.50	<0.50	<0.50	<1	NA
	11/17/1995	178.20	10.04	168.16	-	<50	NA	1.7	<0.50	<0.50	<1	<5.0
	2/7/1996	178.20	7.08	171.12	-	<50	NA	8.6	<1	<1	<1	<10
	4/1/1996	178.20	8.79	169.41	-	<50	NA	7.6	<1	<1	<1	65
	7/9/1996	178.20	10.09	168.11	-	<50	NA	12	2.6	2	3.9	26
	10/10/1996	178.20	10.48	167.72	-	NA	NA	NA	NA	NA	NA	NA
	10/11/1996	178.20	NM	NM	-	260	NA	140	<1	<1	2.6	<10
	1/20/1997	178.20	8.65	169.55	-	<50	NA	1.5	1.7	<1	<1	14
	4/25/1997	178.20	10.02	168.18	-	<50	NA	<0.5	<1	<1	<1	14
	7/18/1997	178.20	10.66	167.54	-	10,000	NA	1400	1400	300	1280	<250
	10/27/1997	178.20	9.83	168.37	-	<250	NA	<2.5	<5.0	<5.0	36	<50
	1/22/1998	178.20	7.06	171.14	-	130	NA	<0.5	<1.0	<1.0	<1.0	120
	4/23/1998	178.20	8.44	169.76	-	4,800	NA	560	<10	15	<10	4000
	7/29/1998	178.20	9.27	168.93	-	NA	NA	NA	NA	NA	NA	NA
	7/30/1998	178.20	NM	NM	-	1,800	NA	6.2	<5.0	<5.0	<5.0	1700
	12/17/1998	178.20	9.15	169.05	-	600	NA	54	<1.0	2.1	4.9	340/480
	3/19/1999	178.20	8.14	170.06	-	2,000	NA	260	4.4	13	28	870
	6/23/1999	178.20	9.44	168.76	-	290	NA	91	<1.0	8.3	16	240
	9/27/1999	178.20	9.69	168.51	-	130	NA	35	<1.0	2.7	3.8	100
	12/9/1999	178.20	10.99	167.21	-	380	NA	84	1.7	8.7	6.3	160
	3/9/2000	178.20	7.12	171.08	-	950	NA	190	4.6	39	62	350
	6/8/2000	178.20	10.92	167.28	-	300	NA	37	<0.5	2.3	1.3	400
	9/18/2000	178.20	11.12	167.08	-	920	NA	140	1.3	15	4.8	170
	12/14/2000	178.20	9.70	168.50	-	320	NA	64	<0.5	6.24	1.76	201

**Table 1**  
**Historical Groundwater Elevations & Analytical Data**  
**TPH-g, BTEX, MtBE**  
**3519 Castro Valley Blvd, Castro Valley, CA**

Monitoring Well	Date	Top of casing elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	Observed Sheen	TPH-g (µg/L) 8260B	TPH-g (µg/L) 8015B	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MtBE (µg/L) 8260B
ESE-3 cont.	3/21/2001	178.20	10.07	168.13	-	680	NA	80.5	0.546	21.1	18.2	398
	6/18/2001	178.20	11.42	166.78	-	380	NA	47	<0.5	3.11	<1.5	242
	9/18/2001	178.20	11.55	166.65	-	340	NA	54.8	<0.5	4.36	<1.5	79.7
	12/13/2001	178.20	10.12	168.08	-	270	NA	31.4	<0.5	1.31	2.24	129
	3/14/2002	178.20	9.84	168.36	-	670	NA	89.8	0.769	23.4	30.4	413
	6/19/2002	178.20	10.57	167.63	-	130	NA	18.6	<0.5	<0.5	<1	166
	9/10/2002	178.20	9.90	168.30	-	88	NA	12	<0.5	<0.5	<0.5	93
	12/16/2002	178.20	9.23	168.97	-	290	NA	55	17	3.7	14	78
	3/11/2003	178.20	9.05	169.15	-	100	NA	3.4	<0.5	0.54	<0.50	140
	6/17/2003	178.20	9.30	168.90	-	520	NA	17	<5	5.3	<5	130
ESE-4	10/5/1992	177.73	10.33	167.40	-	98	NA	7.2	1.3	1.1	6.1	NA
	4/1/1993	177.73	7.88	169.85	-	550	NA	93	20	23	33	NA
	6/29/1993	177.66	8.33	169.33	-	150	NA	23	0.6	5.4	0.5	54
	9/23/1993	177.66	10.05	167.61	-	110	NA	14	1.7	3.2	4.6	NA
	12/10/1993	177.66	8.95	168.71	-	110	NA	21	7.2	4.2	10	28.75
	2/17/1994	177.66	8.65	169.01	-	210	NA	26	1.2	4.7	11	113
	8/8/1994	177.66	9.76	167.90	-	76	NA	9.6	<0.5	2	<0.5	62
	10/12/1994	177.66	9.62	168.04	-	<50	NA	<0.5	<0.5	<0.5	<0.5	44
	1/19/1995	177.66	6.97	170.69	-	140	NA	56	14	24	23	NA
	5/2/1995	177.66	7.85	169.81	-	130	NA	21	2.8	8.6	8.2	NA
	7/28/1995	177.66	9.20	168.46	-	<50	NA	<0.5	<0.5	<0.5	<1	NA
	11/17/1995	177.66	9.68	167.98	-	<50	NA	<0.5	0.6	<0.5	<1	18
	2/7/1996	177.66	6.59	171.07	-	100	NA	2.6	<1	1.6	4.1	42
	4/23/1996	177.66	8.30	169.36	-	160	NA	37	15	16	31	43
	7/9/1996	177.66	9.21	168.45	-	60	NA	17	1.5	6.8	11.6	27
	10/10/1996	177.66	9.97	167.69	-	NA	NA	NA	NA	NA	NA	NA
	10/11/1996	177.66	NM	NM	-	<50	NA	<0.5	<1.0	<1.0	<1.0	18

**Table 1**  
**Historical Groundwater Elevations & Analytical Data**  
**TPH-g, BTEX, MtBE**  
**3519 Castro Valley Blvd, Castro Valley, CA**

Monitoring Well	Date	Top of casing elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	Observed Sheen	TPH-g (µg/L) 8260B	TPH-g (µg/L) 8015B	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MtBE (µg/L) 8260B
<b>ESE-4 cont.</b>	1/20/1997	177.66	7.68	169.98	-	<50	NA	<0.5	<1.0	<1.0	<1.0	130
	4/25/1997	177.66	9.15	168.51	-	<250	NA	<2.5	<5.0	<5.0	<5.0	<50
	7/18/1997	177.66	9.71	167.95	-	<50	NA	15	<10	<10	<10	<100
	10/27/1997	177.66	9.38	168.28	-	<250	NA	<2.5	<5.0	<5.0	<5.0	<50
	1/22/1998	177.66	6.59	171.07	-	<50	NA	<0.5	<1.0	<1.0	<1.0	<10
	4/23/1998	177.66	7.90	169.76	-	<250	NA	<2.5	<5.0	<5.0	<5.0	<50
	7/29/1998	177.66	8.96	168.70	-	NA	NA	NA	NA	NA	NA	NA
	7/30/1998	177.66	NM	NM	-	<50	NA	<0.5	<1.0	<1.0	<1.0	<10
	12/17/1998	177.66	8.32	169.34	-	NA	NA	NA	NA	NA	NA	NA
	3/19/1999	177.66	7.71	169.95	-	NA	NA	NA	NA	NA	NA	NA
	6/23/1999	177.66	8.78	168.88	-	NA	NA	NA	NA	NA	NA	NA
	9/27/1999	177.66	9.27	168.39	-	NA	NA	NA	NA	NA	NA	NA
	12/9/1999	177.66	9.21	168.45	-	NA	NA	NA	NA	NA	NA	NA
	3/9/2000	177.66	6.82	170.84	-	NA	NA	NA	NA	NA	NA	NA
	6/8/2000	177.66	8.72	168.94	-	NA	NA	NA	NA	NA	NA	NA
	9/18/2000	177.66	8.72	168.94	-	NA	NA	NA	NA	NA	NA	NA
	12/14/2000	177.66	8.61	169.05	-	NA	NA	NA	NA	NA	NA	NA
	3/21/2001	177.66	8.61	169.05	-	NA	NA	NA	NA	NA	NA	NA
	6/18/2001	177.66	9.24	168.42	-	NA	NA	NA	NA	NA	NA	NA
	9/18/2001	177.66	9.35	168.31	-	NA	NA	NA	NA	NA	NA	NA
	12/13/2001	177.66	8.53	169.13	-	NA	NA	NA	NA	NA	NA	NA
	3/14/2002	177.66	8.44	169.22	-	NA	NA	NA	NA	NA	NA	NA
	6/19/2002	177.66	10.97	166.69	-	NA	NA	NA	NA	NA	NA	NA
	9/10/2002	177.66	9.27	168.39	-	NA	NA	NA	NA	NA	NA	NA
	12/16/2002	177.66	6.90	170.76	-	NA	NA	NA	NA	NA	NA	NA
	3/11/2003	177.66	8.83	168.83	-	NA	NA	NA	NA	NA	NA	NA
	6/17/2003	177.66	8.84	168.82	-	NA	NA	NA	NA	NA	NA	NA

**Table 1**  
**Historical Groundwater Elevations & Analytical Data**  
**TPH-g, BTEX, MtBE**  
**3519 Castro Valley Blvd, Castro Valley, CA**

Monitoring Well	Date	Top of casing elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	Observed Sheen	TPH-g (µg/L) 8260B	TPH-g (µg/L) 8015B	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MtBE (µg/L) 8260B
ESE-5	10/5/1992	176.08	9.22	166.86	-	1,300	NA	200	3.8	1.2	18	NA
	4/1/1993	176.08	7.02	169.06	-	13,000	NA	2200	26	730	1000	NA
	4/1/1993	176.08	NM	NM	-	13,000	NA	2500	25	740	1100	NA
	6/29/1993	176.08	10.21	165.87	-	7,600	NA	1500	9.3	170	100	NA
	9/23/1993	176.08	10.64	165.44	-	560	NA	19	1.2	0.9	1.8	NA
	12/10/1993	176.08	9.42	166.66	-	1,700	NA	300	3	76	110	14.07
	2/7/1994	176.08	9.35	166.73	-	3,500	NA	640	7.8	90	130	45.13
	8/8/1994	176.08	8.76	167.32	-	2,600	NA	210	4.6	9.4	4.4	33
	8/8/1994	176.08	NM	NM	-	2,500	NA	230	4.6	13	4.8	32
	10/12/1994	176.08	8.95	167.13	-	5,600	NA	560	9.5	75	21	79.2
	10/12/1994	176.08	NM	NM	-	6,000	NA	550	10	78	22	77
	1/19/1995	176.08	5.40	170.68	-	1,900	NA	620	<5	95	15	NA
	1/19/1995	176.08	NM	NM	-	1,600	NA	620	<5	93	17	NA
	5/2/1995	176.08	6.48	169.60	-	5,700	NA	1100	<10	180	58	NA
	5/2/1995	176.08	NM	NM	-	5,300	NA	1100	<10	180	58	NA
	7/28/1995	176.08	7.97	168.11	-	520	NA	15	<0.50	1.7	1.3	NA
	7/28/1995	176.08	NM	NM	-	460	NA	7.2	<0.50	1.9	1.5	NA
	11/17/1995	176.08	8.39	167.69	-	850	NA	39	1.8	7.6	2.7	24
	2/7/1996	176.08	4.71	171.37	-	4,100	NA	670	6	190	140	<50
	4/23/1996	176.08	7.35	168.73	-	3,000	NA	570	<5	79	100	84
	7/9/1996	176.08	9.40	166.68	-	620	NA	150	1.7	9.3	6.4	25
	10/10/1996	176.08	9.04	167.04	-	1,100	NA	29	<5	<5	<5	<50
	10/10/1996	176.08	NM	NM	-	1,100	NA	31	<5	<5	<5	<50
	1/20/1997	176.08	5.82	170.26	-	2,100	NA	980	<25	280	80	<250
	1/20/1997	176.08	NM	NM	-	2,700	NA	910	8.8	280	84	180
	4/25/1997	176.08	7.24	168.84	-	NA	NA	NA	NA	NA	NA	NA

**Table 1**  
**Historical Groundwater Elevations & Analytical Data**  
**TPH-g, BTEX, MtBE**  
**3519 Castro Valley Blvd, Castro Valley, CA**

Monitoring Well	Date	Top of casing elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	Observed Sheen	TPH-g (µg/L) 8260B	TPH-g (µg/L) 8015B	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MtBE (µg/L) 8260B
<b>ESE-5 cont.</b>	4/28/1997	176.08	NM	NM	-	<250	NA	7.9	<5.0	<5.0	<5.0	<50
	7/18/1997	176.08	7.86	168.22	-	1200	NA	<5	<10	<10	<10	<100
	7/18/1997	176.08	NM	NM	-	630	NA	31	<5.0	<5.0	<5.0	130
	10/27/1997	176.08	7.91	168.17	-	<250	NA	5.4	<5.0	<5.0	<5.0	<50
	1/22/1998	176.08	4.64	171.44	-	170	NA	7.7	<1.0	<1.0	<1.0	130
	4/23/1998	176.08	6.31	169.77	-	720	NA	79	<5.0	9	<5.0	180
	7/29/1998	176.08	7.43	168.65	-	NA	NA	NA	NA	NA	NA	NA
	7/30/1998	176.08	NM	NM	-	840	NA	9.8	<1.0	4	<1.0	710
	12/17/1998	176.08	7.05	169.03	-	NA	NA	NA	NA	NA	NA	NA
	3/19/1999	176.08	5.00	171.08	-	<250	NA	<5.0	<5.0	<5.0	<5.0	<5.0
	6/23/1999	176.08	7.77	168.31	-	NA	NA	NA	NA	NA	NA	NA
	9/27/1999	176.08	8.11	167.97	-	450	NA	10	<5.0	6.3	<5.0	220
	12/9/1999	176.08	7.66	168.42	-	NA	NA	NA	NA	NA	NA	NA
	3/9/2000	176.08	5.08	171.00	-	1,700	NA	170	2.5	45	6.4	140
	6/8/2000	176.08	7.36	168.72	-	NA	NA	NA	NA	NA	NA	NA
	9/18/2000	176.08	7.71	168.37	-	130	NA	0.65	<0.50	0.71	<0.50	51
	12/14/2000	176.08	2.36	173.72	-	NA	NA	NA	NA	NA	NA	NA
	3/21/2001	176.08	7.42	168.66	-	1,000	NA	10.3	<2.5	11	<7.5	70.8
	6/18/2001	176.08	7.92	168.16	-	NA	NA	NA	NA	NA	NA	NA
	9/18/2001	176.26	8.23	168.03	-	200	NA	0.868	<0.50	0.55	<1.5	57.5
	12/13/2001	176.26	7.80	168.46	-	NA	NA	NA	NA	NA	NA	NA
	3/14/2002	176.26	6.55	169.71	-	1,300	NA	17.1	1.35	15.4	1.42	37.4
	6/19/2002	176.26	7.83	168.43	-	NA	NA	NA	NA	NA	NA	NA
	9/10/2002	176.26	8.22	168.04	-	680	NA	9.9	<5.0	<5.0	<5.0	44
	12/16/2002	176.26	6.58	169.68	-	NA	NA	NA	NA	NA	NA	NA
	3/11/2003	176.26	6.77	169.49	-	2,100	NA	14	<2.5	15	3	80
	6/17/2003	176.26	6.75	169.51	-	NA	NA	NA	NA	NA	NA	NA
	9/17/2003	176.26	8.48	167.78	-	970	NA	10 C	<0.5	<0.5	5.3	34
	12/9/2003	176.26	7.32	168.94	-	700	NA	6.5	<0.5	3.1	2.7 C	34

**Table 1**  
**Historical Groundwater Elevations & Analytical Data**  
**TPH-g, BTEX, MtBE**  
**3519 Castro Valley Blvd, Castro Valley, CA**

Monitoring Well	Date	Top of casing elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	Observed Sheen	TPH-g (µg/L) 8260B	TPH-g (µg/L) 8015B	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MtBE (µg/L) 8260B
ESE-5 cont.	2/26/2004	176.26	5.21	171.05	-	2,400 H	NA	41	2.8 C	18	2.4 C	29
	5/21/2004	176.26	7.50	168.76	-	1,500	NA	2.6 C	<0.5	2.1 C	2.1 C	25
	8/10/2004	178.80	8.28	170.52	-	680	NA	<0.5	<0.5	<0.5	<0.5	33
	10/19/2004	178.80	8.26	170.54	-	380	NA	<0.5	<0.5	<0.5	1.4	39
	1/14/2005	178.80	5.16	173.64	-	2,400	NA	18	1.4	22	2.1	26
	4/14/2005	178.80	6.13	172.67	-	4,800	NA	7.75	1.26	14.3	<1.0	23.1
	7/7/2005	178.80	7.52	171.28	-	3,240	NA	0.78	<2.0	1.18	<1.0	36.6
	11/15/2005	178.80	7.85	170.95	-	1,190	NA	0.51	<2.0	<0.5	<1.0	30
	2/8/2006	178.80	5.83	172.97	-	2,510	NA	1.91	<2.0	2.82	<1.0	20.7
	4/27/2006	178.80	5.71	173.09	-	4,700	NA	2.76	<2.0	4.77	<1.0	28.3
	8/1/2006	178.80	7.71	171.09	-	1,890	NA	0.7	<2.0	0.75	<1.0	24.7
	10/19/2006	178.80	8.00	170.80	-	474	NA	<0.5	<2.0	3.39	<1.0	29
	1/12/2007	178.80	7.41	171.39	-	868	NA	2.18	<2.0	2.66	<2.0	16.3
	4/17/2007	178.80	7.51	171.29	-	1,240	NA	10.2	<2.0	10.4	2.37	17.2
	7/17/2007	178.80	7.47	171.33	-	836	NA	3.1	<2.0	4.91	2.35	25.8
	10/16/2007	178.80	6.26	172.54	-	2,120	NA	2.5	<2.0	6.19	2.61	17.5
	1/17/2008	178.80	6.59	172.21	-	2,730	NA	5.74	<2.0	14.3	<2.0	13.1
	4/17/2008	178.80	6.81	171.99	-	2,770	NA	4.7	<2.0	15.9	<2.0	<0.5
	7/16/2008	178.80	7.76	171.04	-	2,160	NA	0.9	<2.0	1.1	<2.0	6.28
	10/14/2008	178.80	8.40	170.40	-	1,300	NA	<0.5	<0.5	0.6	<0.5	9.9
	1/6/2009	178.80	7.66	171.14	-	1,100 <sup>Y</sup>	NA	0.61	<0.5	1.6	<0.5	8
	4/6/2009	178.80	7.79	171.01	-	1,900 <sup>Y</sup>	NA	4.6	<0.5	9.3	0.59	5.3
	7/7/2009	178.80	7.84	170.96	-	2,700 <sup>Y</sup>	NA	3.0	<0.5	2.3	<0.5	6.6
	1/27/2010	178.80	4.82	173.98	-	1,300 <sup>Y</sup>	NA	0.76	<0.5	1.0	<0.5	3.5
	7/26/2010	178.80	7.01	171.79	-	1,800	NA	0.75	<0.5	1.8	<0.5	2
ESE-5R	8/30/2010	178.64	8.97	169.67	-	75	NA	<0.5	<0.5	<0.5	<0.5	7.3
	11/16/2010	178.64	10.46	168.18	-	74	NA	<0.5	<0.5	<0.5	<0.5	12
	2/15/2011	178.64	11.19	167.45	-	140	NA	<0.5	<0.5	<0.5	<0.5	9.6
	7/19/2011	178.64	7.92	170.72	-	140	NA	<0.5	<0.5	<0.5	<0.5	6.7

**Table 1**  
**Historical Groundwater Elevations & Analytical Data**  
**TPH-g, BTEX, MtBE**  
**3519 Castro Valley Blvd, Castro Valley, CA**

Monitoring Well	Date	Top of casing elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	Observed Sheen	TPH-g (µg/L) 8260B	TPH-g (µg/L) 8015B	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MtBE (µg/L) 8260B
ESE-5R cont	1/18/2012	178.64	8.84	169.80	-	68 <sup>Y</sup>	NA	<0.33	<0.19	<0.15	<0.2	7.3
	7/11/2012	178.64	8.85	169.79	-	NA	<50	<0.5	<0.5	<0.5	<0.5	6.1
	1/10/2013	178.64	8.06	170.58	No Sheen	74	NA	<0.5	<0.5	<0.5	<0.5	6.3
MW-6	7/28/1995	179.24	10.00	169.24	-	<50	NA	<0.50	<0.50	<0.50	<1.0	NA
	11/17/1995	179.24	10.44	168.80	-	<50	NA	<0.50	<0.50	<0.50	<1.0	<5.0
	2/7/1996	179.24	7.68	171.56	-	<50	NA	<0.5	<1.0	<1.0	<1.0	<10
	4/23/1996	179.24	9.33	169.91	-	<50	NA	<0.5	<1.0	<1.0	<1.0	<10
	7/9/1996	179.24	10.10	169.14	-	<50	NA	<0.5	<1.0	<1.0	<1.0	<10
	10/10/1996	179.24	11.00	168.24	-	<50	NA	<0.5	<1.0	<1.0	<1.0	<10
	1/20/1997	179.24	8.70	170.54	-	<50	NA	<0.5	<1.0	<1.0	<1.0	<10
	4/25/1997	179.24	10.16	169.08	-	<50	NA	<0.5	<1.0	<1.0	<1.0	<10
	7/18/1997	179.24	10.66	168.58	-	<50	NA	<0.5	<1.0	<1.0	<1.0	<10
	10/27/1997	179.24	10.25	168.99	-	<50	NA	<0.5	<1.0	<1.0	<1.0	<10
	1/22/1998	179.24	7.76	171.48	-	<50	NA	<0.5	<1.0	<1.0	<1.0	<10
	4/23/1998	179.24	9.10	170.14	-	<50	NA	<0.5	<1.0	<1.0	<1.0	<10
	7/29/1998	179.24	10.40	168.84	-	NA	NA	NA	NA	NA	NA	NA
	7/30/1998	179.24	NM	NM	-	<50	NA	<0.5	<1.0	<1.0	<1.0	<10
	12/17/1998	179.24	9.40	169.84	-	NA	NA	NA	NA	NA	NA	NA
	3/19/1999	179.24	9.10	170.14	-	NA	NA	NA	NA	NA	NA	NA
	6/23/1999	179.24	9.79	169.45	-	NA	NA	NA	NA	NA	NA	NA
	9/27/1999	179.24	10.10	169.14	-	NA	NA	NA	NA	NA	NA	NA
	12/9/1999	179.24	9.97	169.27	-	NA	NA	NA	NA	NA	NA	NA
	3/9/2000	179.24	8.56	170.68	-	NA	NA	NA	NA	NA	NA	NA
	6/8/2000	179.24	9.11	170.13	-	NA	NA	NA	NA	NA	NA	NA
	9/18/2000	179.24	9.77	169.47	-	NA	NA	NA	NA	NA	NA	NA
	12/14/2000	179.24	9.17	170.07	-	NA	NA	NA	NA	NA	NA	NA

**Table 1**  
**Historical Groundwater Elevations & Analytical Data**  
**TPH-g, BTEX, MtBE**  
**3519 Castro Valley Blvd, Castro Valley, CA**

Monitoring Well	Date	Top of casing elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	Observed Sheen	TPH-g (µg/L) 8260B	TPH-g (µg/L) 8015B	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MtBE (µg/L) 8260B
<b>MW-6 cont</b>	3/21/2001	179.24	9.82	169.42	-	NA	NA	NA	NA	NA	NA	NA
	6/18/2001	179.24	10.19	169.05	-	NA	NA	NA	NA	NA	NA	NA
	9/18/2001	179.24	10.25	168.99	-	NA	NA	NA	NA	NA	NA	NA
	12/13/2001	179.24	9.75	169.49	-	NA	NA	NA	NA	NA	NA	NA
	3/14/2002	179.24	9.53	169.71	-	NA	NA	NA	NA	NA	NA	NA
	6/19/2002	179.24	9.87	169.37	-	NA	NA	NA	NA	NA	NA	NA
	9/10/2002	179.24	9.49	169.75	-	NA	NA	NA	NA	NA	NA	NA
	12/16/2002	179.24	8.39	170.85	-	NA	NA	NA	NA	NA	NA	NA
	3/11/2003	179.24	9.40	169.84	-	NA	NA	NA	NA	NA	NA	NA
	6/17/2003	179.24	9.71	169.53	-	NA	NA	NA	NA	NA	NA	NA
	9/17/2003	179.24	10.21	169.03	-	<50	NA	<0.5	<0.5	<0.5	<0.5	<2.0
	12/9/2003	179.24	9.66	169.58	-	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5
	2/26/2004	179.24	7.83	171.41	-	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5
	5/21/2004	179.24	9.75	169.49	-	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5
	8/10/2004	181.80	10.28	171.52	-	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5
	10/19/2004	181.80	9.91	171.89	-	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5
	1/14/2005	181.80	8.40	173.40	-	<50	NA	0.6	<0.5	<0.5	<0.5	<0.5
	4/14/2005	181.80	9.04	172.76	-	<200	NA	<0.5	<0.5	<0.5	<1.0	<0.5
	7/7/2005	181.80	9.94	171.86	-	<200	NA	<0.5	<2.00	<0.5	<1.00	<0.5
	11/15/2005	181.80	9.98	171.82	-	<50	NA	<0.5	<2.0	<0.5	<1.0	<0.5
	2/8/2006	181.80	9.91	171.89	-	<50	NA	<0.5	<2.0	<0.5	<1.0	<0.5
	4/27/2006	181.80	9.54	172.26	-	<50	NA	<0.5	<2.0	<0.5	<1.0	<0.5
	8/1/2006	181.80	9.61	172.19	-	<50	NA	<0.5	<2.0	<0.5	<1.0	0.51
	10/19/2006	181.80	10.23	171.57	-	<50	NA	<0.5	<2.0	<0.5	<1.0	0.63
	1/12/2007	181.80	10.13	171.67	-	<50	NA	<0.5	<2.0	<0.5	<2.0	<0.5
	4/17/2007	181.80	10.22	171.58	-	<50	NA	<0.5	<2.0	<0.5	<2.0	<0.5
	7/17/2007	181.80	9.76	172.04	-	<50	NA	<0.5	<2.0	<0.5	<2.0	<0.5
	10/16/2007	181.80	9.82	171.98	-	<50	NA	<0.5	<2.0	<0.5	<2.0	<0.5

**Table 1**  
**Historical Groundwater Elevations & Analytical Data**  
**TPH-g, BTEX, MtBE**  
**3519 Castro Valley Blvd, Castro Valley, CA**

Monitoring Well	Date	Top of casing elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	Observed Sheen	TPH-g (µg/L) 8260B	TPH-g (µg/L) 8015B	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MtBE (µg/L) 8260B
MW-6 cont.	1/17/2008	181.80	9.43	172.37	-	<50	NA	<0.50	<2.0	<0.50	<2.0	<0.5
	4/17/2008	181.80	9.54	172.26	-	<50	NA	<0.5	<2.0	<0.5	<2.0	<0.5
	7/16/2008	181.80	9.80	172.00	-	<50	NA	<0.5	<2.0	<0.5	<2.0	<0.5
	10/14/2008	181.80	10.48	171.32	-	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5
	1/6/2009	181.80	10.01	171.79	-	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5
	4/6/2009	181.80	10.15	171.65	-	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5
	7/7/2009	181.80	10.28	171.52	-	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5
	1/27/2010	181.80	8.28	173.52	-	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5
	7/26/2010	181.80	9.64	172.16	-	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5
	8/30/2010	181.34	9.55	171.79	-	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5
MW-6R	11/15/2010	181.34	9.32	172.02	-	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5
	2/14/2011	181.34	9.79	171.55	-	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5
	7/19/2011	181.34	9.60	171.74	-	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5
	1/18/2012	181.34	10.08	171.26	-	<22	NA	<0.33	<0.19	<0.15	<0.2	<0.38
	7/10/2012	181.34	10.30	171.04	-	NA	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	1/9/2013	181.34	9.50	171.84	No Sheen	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5
MW-7	7/28/1995	176.55	9.25	167.30	-	<50	NA	0.54	0.54	<0.50	<1.0	NA
	11/17/1995	176.55	9.73	166.82	-	1100	NA	<10	<10	<10	<20	4000
	2/7/1996	176.55	6.48	170.07	-	610	NA	<0.50	<1.0	<1.0	<1.0	2500
	2/7/1996	176.55	NM	NM	-	280	NA	<0.50	<1.0	<1.0	<1.0	2600
	4/23/1996	176.55	8.37	168.18	-	110	NA	<0.50	<1.0	<1.0	<1.0	3500
	4/23/1996	176.55	NM	NM	-	230	NA	<0.50	<1.0	<1.0	<1.0	3500
	7/9/1996	176.55	9.24	167.31	-	230	NA	<0.50	<1.0	<1.0	<1.0	4296
	7/9/1996	176.55	NM	NM	-	220	NA	<0.50	<1.0	<1.0	<1.0	4400
	10/10/1996	176.55	10.05	166.50	-	NA	NA	NA	NA	NA	NA	NA
	10/11/1996	176.55	NM	NM	-	1600	NA	<0.50	<1.0	<1.0	<1.0	3000
	1/20/1997	176.55	7.51	169.04	-	<50	NA	0.63	<1.0	<1.0	<1.0	2600
	4/25/1997	176.55	8.79	167.76	-	NA	NA	NA	NA	NA	NA	NA

**Table 1**  
**Historical Groundwater Elevations & Analytical Data**  
**TPH-g, BTEX, MtBE**  
**3519 Castro Valley Blvd, Castro Valley, CA**

Monitoring Well	Date	Top of casing elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	Observed Sheen	TPH-g (µg/L) 8260B	TPH-g (µg/L) 8015B	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MtBE (µg/L) 8260B
<b>MW-7 cont.</b>	4/28/1997	176.55	NM	NM	-	1500	NA	<0.50	<1.0	<1.0	<1.0	3600
	4/28/1997	176.55	NM	NM	-	7700	NA	3500	<25	74	37	<250
	7/18/1997	176.55	9.50	167.05	-	1400	NA	<0.50	<1.0	<1.0	<1.0	2600
	10/27/1997	176.55	9.19	167.36	-	420	NA	<0.50	<1.0	<1.0	<1.0	560
	1/22/1998	176.55	6.45	170.10	-	3100	NA	<0.50	<1.0	<1.0	1.4	2300
	4/23/1998	176.55	8.02	168.53	-	3800	NA	<0.50	<1.0	<1.0	<1.0	3800
	7/29/1998	176.55	8.88	167.67	-	NA	NA	NA	NA	NA	NA	NA
	7/30/1998	176.55	NM	NM	-	500	NA	<2.5	<5.0	<5.0	<5.0	<50
	7/30/1998	176.55	NM	NM	-	4700	NA	<12	<25	<25	<25	4700
	12/17/1998	176.55	8.62	167.93	-	NA	NA	NA	NA	NA	NA	NA
	3/19/1999	176.55	7.52	169.03	-	3800	NA	<1.0	<1.0	<1.0	<1.0	3800
	6/23/1999	176.55	9.63	166.92	-	NA	NA	NA	NA	NA	NA	NA
	9/27/1999	176.55	9.39	167.16	-	140	NA	<10	<10	<10	<10	3800
	12/9/1999	176.55	9.94	166.61	-	NA	NA	NA	NA	NA	NA	NA
	3/9/2000	176.55	6.72	169.83	-	<50	NA	<0.50	<0.50	<0.50	<0.50	1400
	6/8/2000	176.55	7.38	169.17	-	NA	NA	NA	NA	NA	NA	NA
	9/18/2000	176.55	9.18	167.37	-	190	NA	<0.50	<0.50	<0.50	<0.50	580
	12/14/2000	176.55	8.13	168.42	-	NA	NA	NA	NA	NA	NA	NA
	3/21/2001	176.55	8.98	167.57	-	1300	NA	<0.50	<0.50	<0.50	<1.5	1460
	6/18/2001	176.55	9.68	166.87	-	NA	NA	NA	NA	NA	NA	NA
	9/18/2001	176.55	9.80	166.75	-	<0.50	NA	<0.50	<0.50	<0.50	<1.5	94.9
	12/13/2001	176.55	9.26	167.29	-	NA	NA	NA	NA	NA	NA	NA
	3/14/2002	176.55	8.69	167.86	-	800	NA	<0.50	<0.50	<0.50	<1.0	952
	6/19/2002	176.55	9.06	167.49	-	NA	NA	NA	NA	NA	NA	NA
	9/10/2002	176.55	9.23	167.32	-	260	NA	<2.0	<2.0	<2.0	<2.0	580
	12/16/2002	176.55	7.77	168.78	-	NA	NA	NA	NA	NA	NA	NA

**Table 1**  
**Historical Groundwater Elevations & Analytical Data**  
**TPH-g, BTEX, MtBE**  
**3519 Castro Valley Blvd, Castro Valley, CA**

Monitoring Well	Date	Top of casing elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	Observed Sheen	TPH-g (µg/L) 8260B	TPH-g (µg/L) 8015B	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MtBE (µg/L) 8260B
<b>MW-7 cont.</b>	3/11/2003	176.55	8.30	168.25	-	620	NA	<2.5	<2.5	<2.5	<2.5	1100
	6/17/2003	176.55	9.51	167.04	-	NA	NA	NA	NA	NA	NA	NA
	9/17/2003	176.55	9.52	167.03	-	<50	NA	<0.5	<0.5	<0.5	<0.5	460
	12/9/2003	176.55	8.99	167.56	-	<50	NA	<0.5	<0.5	<0.5	<0.5	420
	2/26/2004	176.55	6.55	170.00	-	<50	NA	<0.5	<0.5	<0.5	<0.5	330
	5/21/2004	176.55	8.90	167.65	-	<50	NA	<0.5	<0.5	<0.5	<0.5	630
	8/10/2004	179.11	9.58	169.53	-	<50	NA	<0.5	<0.5	<0.5	<0.5	750
	10/19/2004	179.11	9.20	169.91	-	<50	NA	<0.5	<0.5	<0.5	<0.5	550
	1/14/2005	179.11	7.25	171.86	-	<50	NA	<2.0	<2.0	<2.0	<2.0	250
	4/14/2005	179.11	7.94	171.17	-	<200	NA	<0.5	<0.5	<0.5	<1.0	285
	7/7/2005	179.11	9.08	170.03	-	<400	NA	<1.0	<4.0	<1.0	<2.0	452
	11/15/2005	179.11	9.14	169.97	-	<50	NA	<0.5	<2.0	<0.5	<1.0	110
	2/8/2006	179.11	7.93	171.18	-	<50	NA	<0.5	<2.0	<0.5	<1.0	101
	4/27/2006	179.11	8.40	170.71	-	<50	NA	<0.5	<2.0	<0.5	<1.0	131
	8/1/2006	179.11	8.89	170.22	-	<50	NA	<0.5	<2.0	<0.5	<1.0	68.6
	10/19/2006	179.11	9.44	169.67	-	<50	NA	<0.5	<2.0	<0.5	<1.0	65.5
	1/12/2007	179.11	8.91	170.20	-	<50	NA	<0.5	<2.0	<0.5	<2.0	38
	4/17/2007	179.11	8.58	170.53	-	<50	NA	<0.5	<2.0	<0.5	<2.0	24.7
	7/17/2007	179.11	9.04	170.07	-	<50	NA	2.07	<2.0	<0.5	<2.0	29.3
	10/6/2007	179.11	7.88	171.23	-	<50	NA	0.88	<2.0	<0.5	<2.0	5.26
	1/17/2008	179.11	NM	NM	-	NA	NA	NA	NA	NA	NA	NA
	4/17/2008	179.11	8.85	170.26	-	<50	NA	1.87	<2.0	<0.5	<2.0	21.6
	7/16/2008	179.11	9.34	169.77	-	<50	NA	<0.5	<2.0	<0.5	<2.0	11.4
	10/14/2008	179.11	10.06	169.05	-	<50	NA	0.78	<0.5	<0.5	<0.5	12
	1/6/2009	179.11	9.12	169.99	-	<50	NA	<0.5	<0.5	<0.5	<0.5	14
	4/6/2009	179.11	9.28	169.83	-	<50	NA	<0.5	<0.5	<0.5	<0.5	13
	7/7/2009	179.11	9.59	169.52	-	<50	NA	<0.5	<0.5	<0.5	<0.5	15
	1/27/2010	179.11	6.98	172.13	-	<50	NA	<0.5	<0.5	<0.5	<0.5	6.3
	7/26/2010	179.11	9.11	170.00	-	<50	NA	<0.5	<0.5	<0.5	<0.5	6

**Table 1**  
**Historical Groundwater Elevations & Analytical Data**  
**TPH-g, BTEX, MtBE**  
**3519 Castro Valley Blvd, Castro Valley, CA**

Monitoring Well	Date	Top of casing elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	Observed Sheen	TPH-g (µg/L) 8260B	TPH-g (µg/L) 8015B	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MtBE (µg/L) 8260B
MW-7R	8/30/2010	179.14	9.39	169.75	-	<50	NA	<0.5	<0.5	<0.5	<0.5	24
	11/16/2010	179.14	9.10	170.04	-	<50	NA	<0.5	<0.5	<0.5	<0.5	4.9
	2/14/2011	179.14	9.26	169.88	-	<50	NA	<0.5	<0.5	<0.5	<0.5	5.3
	7/19/2011	179.14	9.38	169.76	-	<50	NA	<0.5	<0.5	<0.5	<0.5	2.8
	1/18/2012	179.14	9.70	169.44	-	<22	NA	<0.33	<0.19	<0.15	<0.2	0.93
	7/10/2012	179.14	9.92	169.22	-	NA	<50	<0.5	<0.5	<0.5	<0.5	3.4
	1/9/2013	179.14	8.75	170.39	No Sheen	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5
MW-8	7/28/1995	176.34	7.80	168.54	-	1,100	NA	<2.5	<2.5	<2.5	<5.0	NA
	11/17/1995	176.34	8.29	168.05	-	8,300	NA	75	5.3	670	240	140
	2/7/1996	176.34	4.99	171.35	-	2,300	NA	33	<10	190	216	<100
	4/23/1996	176.34	6.09	170.25	-	2,000	NA	390	<10	150	26	<250
QC-2	4/1/1993	NM	NM	NM	-	<50	NA	<0.5	<0.5	<0.5	<0.5	NA
	6/29/1993	NM	NM	NM	-	<50	NA	<0.5	<0.5	<0.5	<0.5	NA
	9/23/1993	NM	NM	NM	-	<50	NA	<0.5	<0.5	<0.5	<0.5	NA
	12/10/1993	NM	NM	NM	-	<50	NA	<0.5	<0.5	<0.5	<0.5	<5.0
	2/17/1994	NM	NM	NM	-	<50	NA	<0.5	<0.5	<0.5	<0.5	NA
	8/8/1994	NM	NM	NM	-	<50	NA	<0.5	<0.5	<0.5	<0.5	NA
	10/12/1994	NM	NM	NM	-	<50	NA	<0.5	<0.5	<0.5	<0.5	NA
	1/19/1995	NM	NM	NM	-	<50	NA	<0.5	<0.5	<0.5	<1.0	NA
	5/2/1995	NM	NM	NM	-	<50	NA	<0.50	<0.50	<0.50	<1.0	NA
	7/28/1995	NM	NM	NM	-	<50	NA	<0.50	<0.50	<0.50	<1.0	NA
	11/17/1995	NM	NM	NM	-	<50	NA	<0.50	<0.50	<0.50	<1.0	<5.0
	2/7/1996	NM	NM	NM	-	<50	NA	<0.5	<1.0	<1.0	<1.0	<10
SOMA-1	4/23/1996	NM	NM	NM	-	<50	NA	<0.5	<1.0	<1.0	<1.0	<10
	7/9/1996	NM	NM	NM	-	<50	NA	<0.5	<1.0	<1.0	<1.0	<10
	8/10/2004	180.95	11.53	169.42	-	84	NA	<0.5	<0.5	1.5 C	2.2	2100
	10/19/2004	180.95	10.41	170.54	-	56	NA	<0.5	<0.5	1.3 C	1.4 C	1600

**Table 1**  
**Historical Groundwater Elevations & Analytical Data**  
**TPH-g, BTEX, MtBE**  
**3519 Castro Valley Blvd, Castro Valley, CA**

Monitoring Well	Date	Top of casing elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	Observed Sheen	TPH-g (µg/L) 8260B	TPH-g (µg/L) 8015B	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MtBE (µg/L) 8260B
SOMA-1 cont.	1/14/2005	180.95	9.68	171.27	-	58	NA	<3.1	<3.1	<3.1	<3.1	330
	4/14/2005	180.95	9.37	171.58	-	<2200	NA	<5.5	<5.5	<5.5	<11	668
	7/7/2005	180.95	10.21	170.74	-	<860	NA	<2.15	<8.6	<2.15	<4.3	591
	11/15/2005	180.95	10.70	170.25	-	<50	NA	<0.5	<2.0	1.1	<1.0	256
	2/8/2006	180.95	9.30	171.65	-	127	NA	1.56	<2.0	3.23	3.12	176
	4/27/2006	180.95	9.64	171.31	-	81.6	NA	1.14	<2.0	2.8	<1.0	189
	8/1/2006	180.95	10.25	170.70	-	<50	NA	1.07	<2.0	1.46	<1.0	122
	10/19/2006	180.95	10.73	170.22	-	<50	NA	0.68	<2.0	4.17	<1.0	116
	1/12/2007	180.95	10.38	170.57	-	<50	NA	<0.5	<2.0	<0.5	<2.0	68.7
	4/17/2007	180.95	10.09	170.86	-	<50	NA	5.76	<2.0	4.33	2.59	33.4
	7/17/2007	180.95	10.35	170.60	-	<50	NA	14.8	<2.0	4.63	3.32	39.4
	10/16/2007	180.95	9.71	171.24	-	<50	NA	5.7	<2.0	<0.5	<2.0	14.2
	1/17/2008	180.95	10.01	170.94	-	<50	NA	1.02	<2.0	<0.5	<2.0	12.8
	4/17/2008	180.95	10.17	170.78	-	<50	NA	3.13	<2.0	<0.5	<2.0	12.8
	7/16/2008	180.95	10.63	170.32	-	<50	NA	10.6	<2.0	<0.5	<2.0	15.8
	10/14/2008	180.95	11.36	169.59	-	<50	NA	1.1	<0.5	<0.5	<0.5	15
	1/6/2009	180.95	10.81	170.14	-	<50	NA	0.6	<0.5	<0.5	<0.5	14
	4/6/2009	180.95	10.69	170.26	-	<50	NA	<0.5	<0.5	<0.5	<0.5	12
	7/7/2009	180.95	11.01	169.94	-	<50	NA	0.57	<0.5	1.2	0.91	12
	1/27/2010	180.95	8.81	172.14	-	<50	NA	<0.5	<0.5	<0.5	<0.5	9.9
	7/26/2010	180.95	10.49	170.46	-	<50	NA	<0.5	<0.5	<0.5	<0.5	5.9
	11/16/2010	180.95	10.49	170.46	-	<50	NA	<0.5	<0.5	<0.5	<0.5	7.0
	2/15/2011	180.95	10.64	170.31	-	<50	NA	<0.5	<0.5	<0.5	<0.5	5.3
	7/19/2011	180.95	10.70	170.25	-	<50	NA	2.3	<0.5	<0.5	<0.5	5.2
	1/18/2012	180.95	10.90	170.05	-	77 <sup>Y</sup>	NA	<0.33	<0.19	<0.15	<0.2	4.0
	7/10/2012	180.95	11.25	169.70	-	NA	<50	<0.5	<0.5	<0.5	<0.5	3.7
	1/10/2013	180.95	10.10	170.85	No Sheen	<50	NA	<0.5	<0.5	<0.5	<0.5	2.2
SOMA-4	8/10/2004	176.94	9.44	167.50	-	140	NA	0.98	<0.5	7.8	<0.5	11
	10/19/2004	176.94	9.91	167.03	-	150	NA	<0.5	<0.5	10	<0.5	8.8

**Table 1**  
**Historical Groundwater Elevations & Analytical Data**  
**TPH-g, BTEX, MtBE**  
**3519 Castro Valley Blvd, Castro Valley, CA**

Monitoring Well	Date	Top of casing elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	Observed Sheen	TPH-g (µg/L) 8260B	TPH-g (µg/L) 8015B	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MtBE (µg/L) 8260B
SOMA-4 cont	1/14/2005	176.94	8.36	168.58	-	500	NA	3.7	<0.5	53	<0.5	7.6
	4/14/2005	176.94	7.89	169.05	-	<200	NA	0.74	<0.5	3.21	<1.0	5.65
	7/7/2005	176.94	11.62	165.32	-	<200	NA	<0.5	<2.0	0.56	<1.0	7.09
	11/15/2005	176.94	9.33	167.61	-	<50	NA	<0.5	<2.0	<0.5	<1.0	8.6
	2/8/2006	176.94	9.18	167.76	-	55.8	NA	<0.5	<2.0	0.85	<1.0	10.4
	4/27/2006	176.94	8.75	168.19	-	172	NA	1.35	<2.0	8.83	<1.0	11.7
	8/1/2006	176.94	9.52	167.42	-	<50	NA	0.52	<2.0	1.53	<1.0	14.1
	10/19/2006	176.94	9.51	167.43	-	<50	NA	<0.5	<2.0	<0.5	<1.0	19.2
	1/12/2007	176.94	8.98	167.96	-	<50	NA	<0.5	<2.0	<0.5	<2.0	20.4
	4/17/2007	176.94	8.96	167.98	-	<50	NA	<0.5	<2.0	4.33	<2.0	15.8
	7/17/2007	176.94	9.31	167.63	-	<50	NA	<0.5	<2.0	4.47	<2.0	13.3
	10/16/2007	176.94	8.96	167.98	-	<50	NA	<0.5	<2.0	4.5	<2.0	8.57
	1/17/2008	176.94	8.84	168.10	-	<50	NA	<0.5	<2.0	<0.5	<2.0	8.87
	4/17/2008	176.94	9.44	167.50	-	<50	NA	<0.5	<2.0	<0.5	<2.0	1.22
	7/16/2008	176.94	9.52	167.42	-	<50	NA	<0.5	<2.0	<0.5	<2.0	8.58
	10/14/2008	176.94	9.98	166.96	-	<50	NA	<0.5	<0.5	<0.5	<0.5	9.7
	1/6/2009	176.94	9.29	167.65	-	<50	NA	<0.5	<0.5	<0.5	<0.5	10
	4/6/2009	176.94	9.31	167.63	-	<50	NA	<0.5	<0.5	<0.5	<0.5	5.3
	7/7/2009	176.94	9.54	167.40	-	<50	NA	<0.5	<0.5	<0.5	<0.5	7
	1/27/2010	176.94	7.35	169.59	-	<50	NA	<0.5	<0.5	<0.5	<0.5	5.1
	7/26/2010	176.94	9.13	167.81	-	220	NA	<0.5	<0.5	<0.5	<0.5	2.3
	11/15/2010	176.94	8.85	168.09	-	75	NA	<0.5	<0.5	<0.5	<0.5	2.5
	2/14/2011	176.94	8.92	168.02	-	<50	NA	<0.5	<0.5	<0.5	<0.5	1.5
	7/19/2011	176.94	9.19	167.75	-	57	NA	<0.5	<0.5	<0.5	<0.5	0.97
	1/18/2012	176.94	9.61	167.33	-	<22	NA	<0.33	<0.19	<0.15	<0.2	1.2
	7/10/2012	176.94	9.71	167.23	-	NA	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	1/9/2013	176.94	8.52	168.42	No Sheen	<50	NA	<0.5	<0.5	<0.5	<0.5	0.77
<b>Shallow WBZ Wells</b>												
SOMA-2	8/10/2004	178.99	10.69	168.30	-	<50	NA	<0.5	<0.5	<0.5	<0.5	0.8
	10/19/2004	178.99	10.75	168.24	-	<50	NA	<0.5	<0.5	<0.5	<0.5	2.4

**Table 1**  
**Historical Groundwater Elevations & Analytical Data**  
**TPH-g, BTEX, MtBE**  
**3519 Castro Valley Blvd, Castro Valley, CA**

Monitoring Well	Date	Top of casing elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	Observed Sheen	TPH-g (µg/L) 8260B	TPH-g (µg/L) 8015B	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MtBE (µg/L) 8260B
SOMA-2 cont.	1/14/2005	178.99	9.45	169.54	-	<50	NA	<0.5	<0.5	<0.5	<0.5	1.1
	4/14/2005	178.99	10.46	168.53	-	<200	NA	<0.5	<0.5	<0.5	<1.0	<0.5
	7/7/2005	178.99	11.81	167.18	-	<200	NA	<0.5	<2.0	<0.5	<1.0	<0.5
	11/15/2005	178.99	12.02	166.97	-	<50	NA	<0.5	<2.0	<0.5	<1.0	1.61
	2/8/2006	178.99	11.88	167.11	-	<50	NA	<0.5	<2.0	<0.5	<1.0	<0.5
	4/27/2006	178.99	10.95	168.04	-	<50	NA	<0.5	<2.0	<0.5	<1.0	<0.5
	8/1/2006	178.99	11.85	167.14	-	<50	NA	<0.5	<2.0	<0.5	<1.0	1.11
	10/19/2006	178.99	10.62	168.37	-	<50	NA	<0.5	<2.0	<0.5	<1.0	1.36
	1/12/2007	178.99	10.26	168.73	-	<50	NA	<0.5	<2.0	<0.5	<2.0	<0.5
	4/17/2007	178.99	11.88	167.11	-	<50	NA	<0.5	<2.0	<0.5	<2.0	0.87
	7/17/2007	178.99	10.84	168.15	-	<50	NA	<0.5	<2.0	<0.5	<2.0	<0.5
	10/16/2007	178.99	9.69	169.30	-	<50	NA	<0.5	<2.0	<0.5	<2.0	<0.5
	1/17/2008	178.99	9.62	169.37	-	<50	NA	<0.5	<2.0	<0.5	<2.0	<0.5
	4/17/2008	178.99	10.06	168.93	-	<50	NA	<0.5	<2.0	<0.5	<2.0	<0.5
	7/16/2008	178.99	10.63	168.36	-	<50	NA	<0.5	<2.0	<0.5	<2.0	<0.5
	10/14/2008	178.99	11.26	167.73	-	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5
	1/6/2009	178.99	10.22	168.77	-	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5
	4/6/2009	178.99	10.38	168.61	-	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5
	7/7/2009	178.99	10.40	168.59	-	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5
	1/27/2010	178.99	8.19	170.80	-	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5
	7/26/2010	178.99	10.24	168.75	-	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5
	11/15/2010	178.99	10.04	168.95	-	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5
	2/14/2011	178.99	9.95	169.04	-	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5
	7/19/2011	178.99	10.20	168.79	-	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5
	1/18/2012	178.99	10.56	168.43	-	<22	NA	<0.33	<0.19	<0.15	<0.2	<0.38
	7/10/2012	178.99	10.45	168.54	-	NA	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	1/9/2013	178.99	9.63	169.36	No Sheen	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5
SOMA-3	8/10/2004	176.81	9.97	166.84	-	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5
	10/19/2004	176.81	9.59	167.22	-	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5

**Table 1**  
**Historical Groundwater Elevations & Analytical Data**  
**TPH-g, BTEX, MtBE**  
**3519 Castro Valley Blvd, Castro Valley, CA**

Monitoring Well	Date	Top of casing elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	Observed Sheen	TPH-g (µg/L) 8260B	TPH-g (µg/L) 8015B	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MtBE (µg/L) 8260B
SOMA-3 cont.	1/14/2005	176.81	8.23	168.58	-	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5
	4/14/2005	176.81	8.64	168.17	-	<200	NA	<0.5	<0.5	<0.5	<1.0	<0.5
	7/7/2005	176.81	9.60	167.21	-	<200	NA	<0.5	<2.0	<0.5	<1.0	<0.5
	11/15/2005	176.81	10.01	166.80	-	<50	NA	<0.5	<2.0	<0.5	<1.0	5.1
	2/8/2006	176.81	8.80	168.01	-	<50	NA	<0.5	<2.0	<0.5	<1.0	7.16
	4/27/2006	176.81	9.00	167.81	-	<50	NA	<0.5	<2.0	<0.5	<1.0	14.2
	8/1/2006	176.81	9.91	166.90	-	<50	NA	<0.5	<2.0	<0.5	<1.0	7.29
	10/19/2006	176.81	10.21	166.60	-	<50	NA	<0.5	<2.0	<0.5	<1.0	41.4
	1/12/2007	176.81	9.73	167.08	-	<50	NA	<0.5	<2.0	<0.5	<2.0	20.9
	4/17/2007	176.81	9.81	167.00	-	<50	NA	<0.5	<2.0	<0.5	<2.0	32.1
	7/17/2007	176.81	10.06	166.75	-	<50	NA	<0.5	<2.0	<0.5	<2.0	23.6
	10/16/2007	176.81	9.54	167.27	-	<50	NA	<0.5	<2.0	<0.5	<2.0	22.3
	1/17/2008	176.81	9.06	167.75	-	<50	NA	<0.5	<2.0	<0.5	<2.0	11.1
	4/17/2008	176.81	9.57	167.24	-	<50	NA	<0.5	<2.0	<0.5	<2.0	23.7
	7/16/2008	176.81	10.25	166.56	-	<50	NA	<0.5	<2.0	<0.5	<2.0	10.6
	10/14/2008	176.81	10.76	166.05	-	<50	NA	<0.5	<0.5	<0.5	<0.5	19
	1/6/2009	176.81	9.53	167.28	-	<50	NA	<0.5	<0.5	<0.5	<0.5	1.1
	4/6/2009	176.81	9.65	167.16	-	<50	NA	<0.5	<0.5	<0.5	<0.5	5.7
	7/7/2009	176.81	10.19	166.62	-	<50	NA	<0.5	<0.5	<0.5	<0.5	6
	1/27/2010	176.81	7.80	169.01	-	<50	NA	<0.5	<0.5	<0.5	<0.5	56
	7/26/2010	176.81	9.67	167.14	-	<50	NA	<0.5	<0.5	<0.5	<0.5	9.8
	11/15/2010	176.81	9.35	167.46	-	<50	NA	<0.5	<0.5	<0.5	<0.5	30
	2/14/2011	176.81	10.57	166.24	-	<50	NA	<0.5	<0.5	<0.5	<0.5	32
	7/19/2011	176.81	9.74	167.07	-	<50	NA	<0.5	<0.5	<0.5	<0.5	17
	1/18/2012	176.81	10.14	166.67	-	<22	NA	<0.33	<0.19	<0.15	<0.2	24
	7/10/2012	176.81	9.99	166.82	-	NA	<50	<0.5	<0.5	<0.5	<0.5	1.6
	1/9/2013	176.81	8.86	167.95	No Sheen	<50	NA	<0.5	<0.5	<0.5	<0.5	6.9

**Table 1**  
**Historical Groundwater Elevations & Analytical Data**  
**TPH-g, BTEX, MtBE**  
**3519 Castro Valley Blvd, Castro Valley, CA**

Monitoring Well	Date	Top of casing elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	Observed Sheen	TPH-g (µg/L) 8260B	TPH-g (µg/L) 8015B	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MtBE (µg/L) 8260B
SOMA-5  pre-MPE	1/27/2010	180.31	7.94	172.37	-	14,000	NA	2,600	1.5	800	914	190
	7/26/2010	180.31	9.99	170.32	-	14,000	NA	3,300	<20	1,100	1,340	150
	11/15/2010	180.31	10.01	170.30	-	11,000	NA	2,400	3.3	920	733	130
	2/15/2011	180.31	10.22	170.09	-	4,900	NA	1,600	<13	430	84	94
	6/16/2011	180.31	NM	NC	-	6,400	NA	2,500	<20	670	160	150
	7/19/2011	180.31	9.95	170.36	-	1,300	NA	470	<3.6	<3.6	212	8.8
	1/18/2012	180.31	10.16	170.15	-	600 <sup>Y</sup>	NA	160	<0.19	27	<0.2	6.5
	7/10/2012	180.31	10.16	170.15	-	NA	<50	3.6	<0.5	<0.5	<0.5	4.6
	1/10/2013	<b>180.31</b>	<b>9.21</b>	<b>171.10</b>	<b>No Sheen</b>	<b>180</b>	<b>NA</b>	<b>25.0</b>	<b>&lt;0.5</b>	<b>28</b>	<b>&lt;0.5</b>	<b>3.9</b>
SOMA-7  pre-MPE	8/30/2010	178.54	7.63	170.91	-	2,900	NA	190	3.7	74	19.80	8.4
	11/16/2010	178.54	7.89	170.65	-	1,500	NA	190	2.1	41	8.30	5.7
	2/15/2011	178.54	7.33	171.21	-	1,900	NA	380	4	27	5.50	5.2
	6/16/2011	178.54	NM	NC	-	1,900	NA	330	4.3	24	5.20	4.7
	7/19/2011	178.54	7.89	170.65	-	7,600	NA	1,100	15	200	61	12
	1/18/2012	178.54	8.74	169.80	-	1,300 <sup>Y</sup>	NA	190	2.2	29	5.2	<1.7
	7/11/2012	178.54	8.66	169.88	-	NA	5,600	390	5.5	45	9.1	5.2
	1/10/2013	<b>178.54</b>	<b>6.72</b>	<b>171.82</b>	<b>Rainbow Sheen</b>	<b>4,400</b>	<b>NA</b>	<b>500</b>	<b>8.9</b>	<b>66</b>	<b>11</b>	<b>4.1</b>
SOMA-8	8/30/2010	181.57	9.89	171.68	-	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5
	11/15/2010	181.57	9.37	172.20	-	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5
	2/14/2011	181.57	9.89	171.68	-	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5
	7/19/2011	181.57	9.67	171.90	-	<50	NA	<0.5	<0.5	<0.5	<0.5	<0.5
	1/18/2012	181.57	10.29	171.28	-	<22	NA	<0.33	<0.19	<0.15	<0.2	<0.38
	7/10/2012	181.57	10.31	171.26	-	NA	<50	<0.5	<0.5	<0.5	<0.5	<0.5
	1/9/2013	<b>181.57</b>	<b>9.62</b>	<b>171.95</b>	<b>No Sheen</b>	<b>&lt;50</b>	<b>NA</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>

**Table 1**  
**Historical Groundwater Elevations & Analytical Data**  
**TPH-g, BTEX, MtBE**  
**3519 Castro Valley Blvd, Castro Valley, CA**

Monitoring Well	Date	Top of casing elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	Observed Sheen	TPH-g (µg/L) 8260B	TPH-g (µg/L) 8015B	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MtBE (µg/L) 8260B
OB-1 pre-MPE	6/16/2011	178.7	NM	NC	-	1,900	NA	9.3	<0.5	3.7	5.80	23
	7/19/2011	178.7	7.89	170.81	-	250	NA	1.9	<0.5	0.63	0.78	4.1
	1/18/2012	178.7	8.72	169.98	-	2,400 <sup>Y</sup>	NA	12	<0.19	3.0	6.35	16
	7/11/2012	178.7	7.96	170.74	-	NA	2,100 <sup>Y</sup>	12	0.5	0.7	2.50	18
	<b>1/10/2013</b>	<b>178.7</b>	<b>6.58</b>	<b>172.12</b>	<b>No Sheen</b>	<b>500</b>	<b>NA</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>1.1</b>	<b>1.20</b>	<b>6.8</b>
OB-2 pre-MPE	6/16/2011	180.23	NM	NC	-	12,000	NA	870	18	590	1,140	310
	7/19/2011	180.23	9.76	170.47	-	30,000	NA	1,000	31	1,300	3,020	310
	1/18/2012	180.23	9.92	170.31	-	22,000 <sup>Y</sup>	NA	930	13	1,300	2,100	<3.3
	7/11/2012	180.23	10.34	169.89	-	NA	46,000	580	11	1,300	2,130	94
	<b>1/10/2012</b>	<b>180.23</b>	<b>9.18</b>	<b>171.05</b>	<b>Rainbow Sheen</b>	<b>21,000</b>	<b>NA</b>	<b>530</b>	<b>&lt;7.1</b>	<b>980</b>	<b>1,258</b>	<b>79</b>
Equipment Blanks												
EB-PMP	1/17/2008	NA	NA	NA		<50	NA	<0.5	<2.0	<0.5	<2.0	<0.5
EB-PRB	1/17/2008	NA	NA	NA		<50	NA	<0.5	<2.0	<0.5	<2.0	<0.5
EB-PMP2	1/17/2008	NA	NA	NA		<50	NA	<0.5	<2.0	<0.5	<2.0	<0.5
EB-PRB2	1/17/2008	NA	NA	NA		<50	NA	<0.5	<2.0	<0.5	<2.0	<0.5

Notes:

< : Not detected above laboratory reporting limit.

1 Top of Casing Elevations were resurveyed by Kier & Wright Engineers Surveyors of Pleasanton, CA on June 21, 2004.

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

H: Heavier hydrocarbons contributed to the quantitation.

NA: Not Applicable/Not Analyzed. Due to construction activities in the Third Quarter 2003, which consisted of the replacement of the USTs and dispensers, wells ESE-1 & ESE-2 were inaccessible. Well ESE-2 also inaccessible during the First Quarter 2007. Well MW-7 had a car parked over it and was inaccessible during the First Quarter 2008 monitoring event

NM: Not Measured

Well ESE-2 was covered over with dirt during the First Quarter 2007 monitoring event.

Well MW-7 had a car parked over it and was inaccessible during the First Quarter 2008 monitoring event.

**Table 1**  
**Historical Groundwater Elevations & Analytical Data**  
**TPH-g, BTEX, MtBE**  
**3519 Castro Valley Blvd, Castro Valley, CA**

Monitoring Well	Date	Top of casing elevation <sup>1</sup> (feet)	Depth to Groundwater (feet)	Groundwater Elevation (feet)	Observed Sheen	TPH-g (µg/L) 8260B	TPH-g (µg/L) 8015B	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MtBE (µg/L) 8260B
-----------------	------	---	-----------------------------	------------------------------	----------------	--------------------	--------------------	----------------	----------------	----------------------	----------------------	-------------------

Equipment Blanks (EB-PRB & EB-PMP) were done to make sure decon efforts were adequate.

Z: Sample exhibits unknown single peak or peaks.

- The Third Quarter 2003 was the first time that SOMA analyzed groundwater samples at the site.
- The Third Quarter 2004 was the first time that SOMA analyzed groundwater samples at wells SOMA-1 to SOMA-4.
- August 2010, reconstruct ESE-1R, ESE-2R, ESE-5R, MW-6R, MW-7R; install SOMA-7, SOMA-8. 8/30/10 investigation sampling
- pre-MPE sampling conducted on 6/16/2011 prior to start of MPE pilot testing from June 20 to July 1, 2011
- In July 2012, TPH-g was analyzed by method EPA 8015B due to laboratory error instead of EPA 8260B

**Table 2**  
**Historical Groundwater Analytical Data**  
**Gasoline Oxygenates & Lead Scavengers**  
**3519 Castro Valley Blvd, Castro Valley, CA**

Monitoring Well	Date	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	ETHANOL (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)
<b>Semi-Confining WBZ Wells</b>								
ESE-1	6/17/2003	<400	<10	<10	18	NA	NA	NA
	9/17/2003	NA	NA	NA	NA	NA	NA	NA
	12/9/2003	290	<1.0	<1.0	9.5	<2,000	<1.0	<1.0
	2/26/2004	410	<0.5	<0.5	9.7	<1000	<0.5	<0.5
	5/21/2004	190	<0.5	<0.5	<0.5	<1000	<0.5	<0.5
	8/10/2004	180	<0.5	<0.5	<0.5	<1000	<0.5	<0.5
	10/19/2004	270	<0.7	<0.7	4.4	<1400	9.9	<0.7
	1/14/2005	280	<1.3	<1.3	<1.3	<2,500	<1.3	<1.3
	4/14/2005	144	<2.15	<2.15	<8.6	<4300	<2.15	<2.15
	7/7/2005	119	<2.15	<2.15	<8.6	<4300	<2.15	<2.15
	11/15/2005	107	<0.5	<0.5	<2.0	<1000	<0.5	<0.5
	2/8/2006	181	<2.15	<2.15	<8.6	<4300	<2.15	<2.15
	4/27/2006	261	<2.15	<2.15	<8.6	<4300	<2.15	<2.15
	8/1/2006	165	<1.0	<1.0	<4.0	<2000	<1.0	<1.0
	10/19/2006	154	<1.0	<1.0	<4.0	<2000	<1.0	<1.0
	1/12/2007	103	<0.5	<0.5	<2.0	<1000	<0.5	<0.5
	4/17/2007	80.5	<0.5	<0.5	<2.0	<1000	<0.5	<0.5
	7/17/2007	128	<0.5	<0.5	<2.0	<1000	<0.5	<0.5
	10/16/2007	98.7	<0.5	<0.5	<2.0	<1000	<0.5	<0.5
ESE-1R	1/17/2008	61.5	<0.5	<0.5	2.52	<1000	<0.5	<0.5
	4/17/2008	76.4	<0.5	<0.5	<2.0	<1000	59.2	<0.5
	7/16/2008	179	<0.5	<0.5	<2.0	<1000	<0.5	<0.5
	10/14/2008	87	<0.5	<0.5	2.6	<1000	<0.5	<0.5
	1/6/2009	93	<1.0	<1.0	<1.0	<2000	<1.0	<1.0
	4/6/2009	130	<1.0	<1.0	<1.0	<2000	<1.0	<1.0
	7/7/2009	100	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/27/2010	200	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	7/26/2010	110	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	8/30/2010	83	<0.71	<0.71	3.4	<1,400	<0.71	<0.71
ESE-2	11/16/2010	64	<0.5	<0.5	0.94	<1,000	<0.5	<0.5
	2/15/2011	130	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	7/19/2011	82	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/18/2012	79	<0.36	<0.4	<0.32	<100	<0.28	<0.19
	7/10/2012	110	<0.5	<0.5	1.6	<1,000	<0.5	<0.5
	1/10/2013	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5

**Table 2**  
**Historical Groundwater Analytical Data**  
**Gasoline Oxygenates & Lead Scavengers**  
**3519 Castro Valley Blvd, Castro Valley, CA**

Monitoring Well	Date	TBA ( $\mu\text{g/L}$ )	DIPE ( $\mu\text{g/L}$ )	ETBE ( $\mu\text{g/L}$ )	TAME ( $\mu\text{g/L}$ )	ETHANOL ( $\mu\text{g/L}$ )	1,2-DCA ( $\mu\text{g/L}$ )	EDB ( $\mu\text{g/L}$ )
ESE-2R cont.	1/14/2005	470	<8.3	<8.3	28	<17,000	<8.3	<8.3
	4/14/2005	<10.8	<2.15	<2.15	17.9	<4,300	<2.15	<2.15
	7/7/2005	109	<2.15	<2.15	9.7	<4,300	<2.15	<2.15
	11/15/2005	64.7	<0.5	<0.5	3.43	<1,000	<0.5	<0.5
	2/8/2006	46.4	<2.15	<2.15	11	<4,300	<2.15	<2.15
	4/27/2006	47.7	<1.0	<1.0	8.29	<2,000	<1.0	<1.0
	8/1/2006	20.6	<1.0	<1.0	4.67	<2,000	<1.0	<1.0
	10/19/2006	28.9	<0.5	<0.5	4.55	<1,000	<0.5	<0.5
	1/12/2007	NA	NA	NA	NA	NA	NA	NA
	4/17/2007	60.8	<0.5	<0.5	3.85	<1,000	<0.5	<0.5
	7/17/2007	62.3	<0.5	<0.5	2.95	<1,000	<0.5	<0.5
	10/16/2007	46	<0.5	<0.5	2.21	<1,000	<0.5	<0.5
	1/17/2008	18.8	<0.5	<0.5	3.38	<1,000	<0.5	<0.5
	4/17/2008	18.8	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
ESE-2R	7/16/2008	9.95	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	10/14/2008	<10	<0.5	<0.5	0.85	<1,000	<0.5	<0.5
	1/6/2009	27	<0.5	<0.5	0.83	<1,000	<0.5	<0.5
	4/6/2009	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	7/7/2009	18	<0.5	<0.5	0.56	<1,000	<0.5	<0.5
	1/27/2010	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
ESE-2R	7/26/2010	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	8/30/2010	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	11/16/2010	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	2/14/2011	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	7/19/2011	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/18/2012	<1.5	<0.36	<0.4	<0.32	<100	<0.28	<0.19
ESE-3	7/10/2012	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/10/2013	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
ESE-5	9/17/2003	<10	<0.5	<0.5	<0.5	<1000	<0.5	<0.5
	12/9/2003	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	2/26/2004	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	5/21/2004	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	8/10/2004	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	10/19/2004	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/14/2005	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	4/14/2005	17	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	7/7/2005	<10	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	11/15/2005	<10	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5

**Table 2**  
**Historical Groundwater Analytical Data**  
**Gasoline Oxygenates & Lead Scavengers**  
**3519 Castro Valley Blvd, Castro Valley, CA**

Monitoring Well	Date	TBA ( $\mu\text{g/L}$ )	DIPE ( $\mu\text{g/L}$ )	ETBE ( $\mu\text{g/L}$ )	TAME ( $\mu\text{g/L}$ )	ETHANOL ( $\mu\text{g/L}$ )	1,2-DCA ( $\mu\text{g/L}$ )	EDB ( $\mu\text{g/L}$ )
ESE-5 cont.	2/8/2006	<10	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	4/27/2006	<10	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	8/1/2006	<10	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	10/19/2006	<10	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	1/12/2007	<2.0	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	4/17/2007	8.7	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	7/17/2007	15.4	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	10/16/2007	11.5	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	1/17/2008	17.2	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	4/17/2008	<2.0	<0.5	<0.5	<2.0	<1,000	5.44	<0.5
	7/16/2008	<2.0	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	10/14/2008	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/6/2009	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	4/6/2009	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	7/7/2009	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
ESE-5R	1/27/2010	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	7/26/2010	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	8/30/2010	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	11/16/2010	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	2/15/2011	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	7/19/2011	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
MW-6	1/18/2012	<1.5	<0.36	<0.4	<0.32	<100	<0.28	<0.19
	7/11/2012	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/10/2013	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	9/17/2003	<10	<0.5	<0.5	<0.5	<1000	<0.5	<0.5
	12/9/2003	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	2/26/2004	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	5/21/2004	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	8/10/2004	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	10/19/2004	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/14/2005	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	4/14/2005	<2.5	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	7/7/2005	<10	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	11/15/2005	<10	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	2/8/2006	<10	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	4/27/2006	<10	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	8/1/2006	<10	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	10/19/2006	<10	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	1/12/2007	<2.0	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	4/17/2007	<2.0	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	7/17/2007	<2.0	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	10/16/2007	<2.0	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5

**Table 2**  
**Historical Groundwater Analytical Data**  
**Gasoline Oxygenates & Lead Scavengers**  
**3519 Castro Valley Blvd, Castro Valley, CA**

Monitoring Well	Date	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	ETHANOL (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)
MW-6 contd.	1/17/2008	<2.0	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	4/17/2008	<2.0	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	7/16/2008	<2.0	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	10/14/2008	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/6/2009	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	4/6/2009	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	7/7/2009	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/27/2010	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	7/26/2010	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	8/30/2010	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
MW-6R	11/15/2010	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	2/14/2011	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	7/19/2011	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/18/2012	<1.5	<0.36	<0.4	<0.32	<100	<0.28	<0.19
	7/10/2012	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/9/2013	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
MW-7	9/17/2003	<10	<0.5	<0.5	9.8	<1,000	<0.5	<0.5
	12/9/2003	<25	<1.3	<1.3	8.1	<2,500	<1.3	<1.3
	2/26/2004	<10	<0.5	<0.5	9.9	<1,000	<0.5	<0.5
	5/21/2004	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	8/10/2004	<25	<1.3	<1.3	19	<2,500	<1.3	<1.3
	10/19/2004	<100	<5.0	<5.0	11	<10,000	<5.0	<5.0
	1/14/2005	<40	<2.0	<2.0	5.1	<4,000	<2.0	<2.0
	4/14/2005	2.62	<0.5	<0.5	4.57	<1,000	<0.5	<0.5
	7/7/2005	55.6	<1.0	<1.0	10.2	<2,000	<1.0	<1.0
	11/15/2005	10.6	<0.5	<0.5	2.07	<1,000	<0.5	<0.5
	2/8/2006	<10	<0.5	<0.5	2.19	<1,000	<0.5	<0.5
	4/27/2006	<10	<0.5	<0.5	2.63	<1,000	<0.5	<0.5
	8/1/2006	<10	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	10/19/2006	<10	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	1/12/2007	<2.0	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	4/17/2007	11.6	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	7/17/2007	13.3	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	10/16/2007	<2.0	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	1/17/2008	NA	NA	NA	NA	NA	NA	NA
	4/17/2008	8.63	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	7/16/2008	<2.0	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	10/14/2008	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/6/2009	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	4/6/2009	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	7/7/2009	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/27/2010	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	7/26/2010	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
MW-7R	8/30/2010	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	11/16/2010	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	2/14/2011	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	7/19/2011	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/18/2012	<1.5	<0.36	<0.4	<0.32	<100	<0.28	<0.19
	7/10/2012	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/9/2013	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5

**Table 2**  
**Historical Groundwater Analytical Data**  
**Gasoline Oxygenates & Lead Scavengers**  
**3519 Castro Valley Blvd, Castro Valley, CA**

Monitoring Well	Date	TBA ( $\mu\text{g/L}$ )	DIPE ( $\mu\text{g/L}$ )	ETBE ( $\mu\text{g/L}$ )	TAME ( $\mu\text{g/L}$ )	ETHANOL ( $\mu\text{g/L}$ )	1,2-DCA ( $\mu\text{g/L}$ )	EDB ( $\mu\text{g/L}$ )
<b>SOMA-1</b>								
	8/10/2004	2300	<6.3	<6.3	53	<13,000	<6.3	<6.3
	10/19/2004	2400	<13	<13	36	<25,000	<13	<13
	1/14/2005	530	<3.1	<3.1	7.1	<6,300	<3.1	<3.1
	4/14/2005	<27.5	<5.5	<5.5	<22	<11,000	<5.5	<5.5
	7/7/2005	2180	<2.15	<2.15	12.9	<4,300	<2.15	<2.15
	11/15/2005	792	<0.5	<0.5	5.01	<1,000	<0.5	<0.5
	2/8/2006	618	<0.5	<0.5	3.67	<1,000	<0.5	<0.5
	4/27/2006	983	<0.5	<0.5	3.48	<1,000	<0.5	<0.5
	8/1/2006	639	<0.5	<0.5	2.27	<1,000	<0.5	<0.5
	10/19/2006	603	<0.5	<0.5	2.25	<1,000	<0.5	<0.5
	1/12/2007	396	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	4/17/2007	148	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	7/17/2007	555	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	10/16/2007	65	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	1/17/2008	29.6	<0.5	<0.5	2.06	<1,000	<0.5	<0.5
	4/17/2008	339	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	7/16/2008	264	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	10/14/2008	250	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/6/2009	180	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	4/6/2009	120	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	7/7/2009	250	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/27/2010	310	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	7/26/2010	68	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	11/16/2010	84	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	2/15/2011	120	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	7/19/2011	130	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/18/2012	150	<0.36	<0.4	<0.32	<100	<0.28	<0.19
	7/10/2012	79	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/10/2013	22	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
<b>SOMA-4</b>								
	8/10/2004	<10	<0.5	<0.5	<0.5	<1000	<0.5	<0.5
	10/19/2004	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/14/2005	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	4/14/2005	<2.5	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	7/7/2005	<10	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	11/15/2005	<10	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	2/8/2006	<10	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	4/27/2006	<10	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	8/1/2006	<10	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	10/19/2006	<10	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	1/12/2007	<2.0	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	4/17/2007	3.98	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	7/17/2007	6.31	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	10/16/2007	<2.0	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5

**Table 2**  
**Historical Groundwater Analytical Data**  
**Gasoline Oxygenates & Lead Scavengers**  
**3519 Castro Valley Blvd, Castro Valley, CA**

Monitoring Well	Date	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	ETHANOL (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)
SOMA-4 contd	1/17/2008	<2.0	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	4/17/2008	<2.0	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	7/16/2008	<2.0	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	10/14/2008	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/6/2009	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	4/6/2009	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	7/7/2009	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/27/2010	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	7/26/2010	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	11/15/2010	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	2/14/2011	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	7/19/2011	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/18/2012	<1.5	<0.36	<0.4	<0.32	<100	<0.28	<0.19
	7/10/2012	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/9/2013	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
<b>Shallow WBZ Wells</b>								
SOMA-2	8/10/2004	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	10/19/2004	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/14/2005	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	4/14/2005	<2.5	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	7/7/2005	<10	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	11/15/2005	<10	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	2/8/2006	<10	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	4/27/2006	<10	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	8/1/2006	<10	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	10/19/2006	<10	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	1/12/2007	<2.0	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	4/17/2007	14.6	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	7/17/2007	2.58	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	10/16/2007	<2.0	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	1/17/2008	<2.0	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	4/17/2008	<2.0	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	7/16/2008	<2.0	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	10/14/2008	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/6/2009	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	4/6/2009	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	7/7/2009	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/27/2010	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	7/26/2010	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	11/15/2010	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	2/14/2011	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	7/19/2011	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/18/2012	<1.5	<0.36	<0.4	<0.32	<100	<0.28	<0.19
	7/10/2012	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/9/2013	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
SOMA-3	8/10/2004	<10	<0.5	<0.5	<0.5	<1000	<0.5	<0.5
	10/19/2004	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5

**Table 2**  
**Historical Groundwater Analytical Data**  
**Gasoline Oxygenates & Lead Scavengers**  
**3519 Castro Valley Blvd, Castro Valley, CA**

Monitoring Well	Date	TBA ( $\mu\text{g/L}$ )	DIPE ( $\mu\text{g/L}$ )	ETBE ( $\mu\text{g/L}$ )	TAME ( $\mu\text{g/L}$ )	ETHANOL ( $\mu\text{g/L}$ )	1,2-DCA ( $\mu\text{g/L}$ )	EDB ( $\mu\text{g/L}$ )
SOMA-3 cont.	1/14/2005	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	4/14/2005	<2.5	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	7/7/2005	<10	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	11/15/2005	<10	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	2/8/2006	<10	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	4/27/2006	<10	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	8/1/2006	<10	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	10/19/2006	<10	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	1/12/2007	<2.0	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	4/17/2007	6.72	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	7/17/2007	7.6	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	10/16/2007	9.96	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	1/17/2008	<2.0	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	4/17/2008	6.05	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	7/16/2008	<2.0	<0.5	<0.5	<2.0	<1,000	<0.5	<0.5
	10/14/2008	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/6/2009	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	4/6/2009	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	7/7/2009	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/27/2010	<10	<0.5	<0.5	0.8	<1,000	<0.5	<0.5
	7/26/2010	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	11/15/2010	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	2/14/2011	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	7/19/2011	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/18/2012	<1.5	<0.36	<0.4	<0.32	<100	<0.28	<0.19
	7/10/2012	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/9/2013	<b>&lt;10</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;1,000</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>
SOMA-5	1/27/2010	500	<13	<13	<13	<25,000	<13	<13
	7/26/2010	<400	<20	<20	<20	<40,000	<20	<20
	11/15/2010	480	<2.0	<2.0	<2.0	<4,000	<2.0	<2.0
	2/15/2011	390	<13	<13	<13	<25,000	<13	<13
	6/16/2011	450	<20	<20	<20	NA	<20	<20
	7/19/2011	<71	<3.6	<3.6	<3.6	<7,100	<3.6	<3.6
	1/18/2012	11	<0.36	<0.4	<0.32	<100	<0.28	<0.19
	7/10/2012	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/10/2013	<b>&lt;10</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;1,000</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>
SOMA-7	8/30/2010	<33	<1.7	<1.7	<1.7	<3,300	<1.7	<1.7
	11/16/2010	<25	<1.3	<1.3	<1.3	<2,500	<1.3	<1.3
	2/15/2011	<25	<1.3	<1.3	<1.3	<2,500	<1.3	<1.3
	6/16/2011	<33	<1.7	<1.7	<1.7	NA	<1.7	<1.7
	7/19/2011	<25	<1.3	<1.3	<1.3	<2,500	<1.3	<1.3
	1/18/2012	<6.6	<1.6	<1.7	<1.4	<440	<1.2	<0.86
	7/11/2012	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/10/2013	<b>&lt;71</b>	<b>&lt;3.6</b>	<b>&lt;3.6</b>	<b>&lt;3.6</b>	<b>&lt;7,100</b>	<b>&lt;3.6</b>	<b>&lt;3.6</b>
SOMA-8	8/30/2010	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	11/15/2010	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	2/14/2011	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	7/19/2011	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/18/2012	<1.5	<0.36	<0.4	<0.32	<100	<0.28	<0.19
	7/10/2012	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/9/2013	<b>&lt;10</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;1,000</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>

**Table 2**  
**Historical Groundwater Analytical Data**  
**Gasoline Oxygenates & Lead Scavengers**  
**3519 Castro Valley Blvd, Castro Valley, CA**

Monitoring Well	Date	TBA ( $\mu\text{g/L}$ )	DIPE ( $\mu\text{g/L}$ )	ETBE ( $\mu\text{g/L}$ )	TAME ( $\mu\text{g/L}$ )	ETHANOL ( $\mu\text{g/L}$ )	1,2-DCA ( $\mu\text{g/L}$ )	EDB ( $\mu\text{g/L}$ )
OB-1 pre-MPE	6/16/2011	20	<0.5	<0.5	<0.5	NA	<0.5	<0.5
	7/19/2011	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/18/2012	<1.5	<0.36	<0.4	<0.32	<100	<0.28	<0.19
	7/11/2012	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
	1/10/2013	<10	<0.5	<0.5	<0.5	<1,000	<0.5	<0.5
OB-2 pre-MPE	6/16/2011	220	<5.0	<5.0	<5.0	NA	<5.0	<5.0
	7/19/2011	260	<10	<10	<10	<20,000	<10	<10
	1/18/2012	94	<3.2	<3.5	<2.8	<880	<2.4	<1.7
	7/11/2012	44	<0.5	<0.5	20	<1,000	0.6	<0.5
	1/10/2013	<140	<7.1	<7.1	<7.1	<14,000	<7.1	<7.1
<b>Equipment Blanks</b>								
EB-PMP	1/17/2008	<2.0	<0.5	<0.5	<2.0	<1000	<0.5	<0.5
EB-PRB	1/17/2008	<2.0	<0.5	<0.5	<2.0	<1000	<0.5	<0.5
EB-PMP2	1/17/2008	<2.0	<0.5	<0.5	<2.0	<1000	<0.5	<0.5
EB-PRB2	1/17/2008	<2.0	<0.5	<0.5	<2.0	<1000	<0.5	<0.5

Notes:

< : Not detected above laboratory reporting limit.

NA: Not Analyzed.

Well ESE-2 was inaccessible during the First Quarter 2007, dirt was covered over well

Well MW-7 had a car parked over it and was inaccessible during the First Quarter 2008 monitoring event.

The Third Quarter 2003 was the first time that SOMA analyzed groundwater samples at the Site.

The Third Quarter 2004 was the first time that SOMA analyzed groundwater samples at wells SOMA-1 to SOMA-4.

Gasoline Oxygenates:

TBA: tertiary butyl alcohol

DIPE: isopropyl ether

ETBE: ethyl tertiary butyl ether

TAME: methyl tertiary amyl ether

Ethanol

Lead Scavengers:

1,2-DCA: 1,2-Dichloroethane

EDB: 1,2-Dibromoethane

August 2010, reconstruct ESE-1R, ESE-2R, ESE-5R, MW-6R, MW-7R; install SOMA-7, SOMA-8. 8/30/10 investigation sampling

# Figures

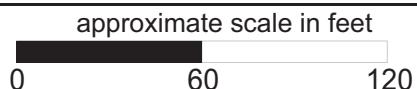
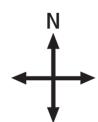
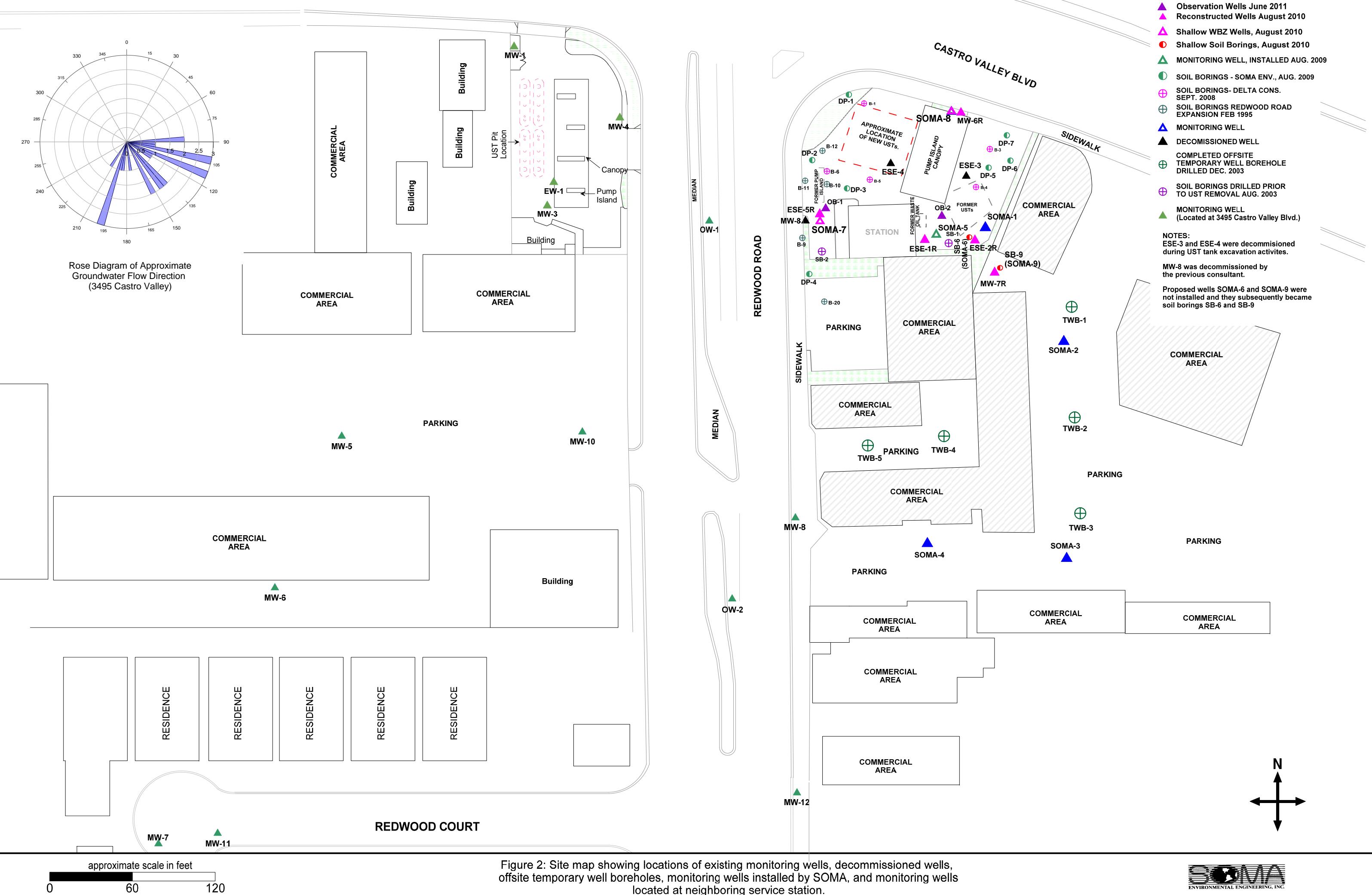
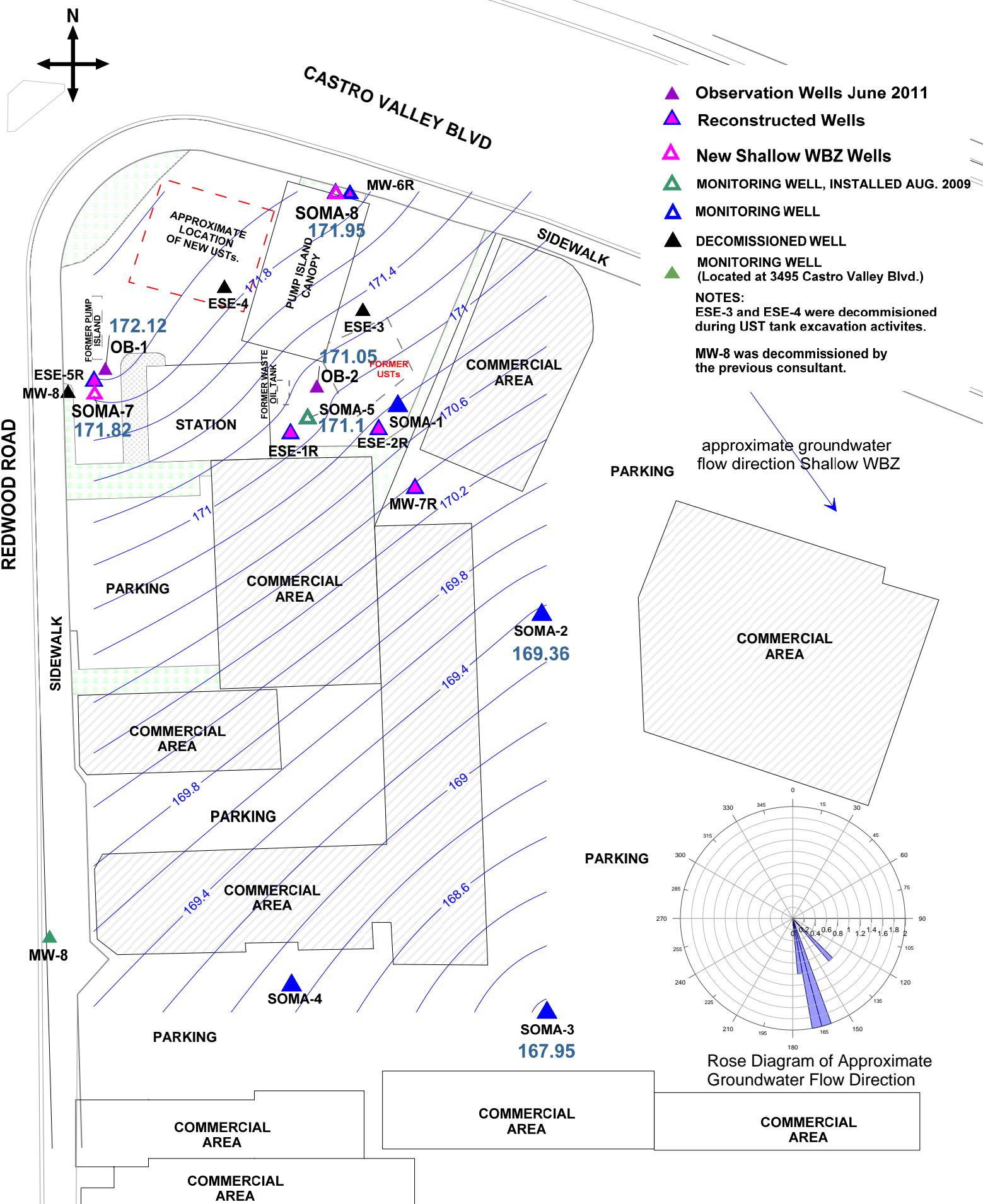


Figure 1: Site vicinity map.





approximate scale in feet

A horizontal scale bar with numerical markings at 0, 40, and 80.

Figure 3: Groundwater Elevation Contour Map for Shallow WBZ Wells in Feet.January 9, 2013



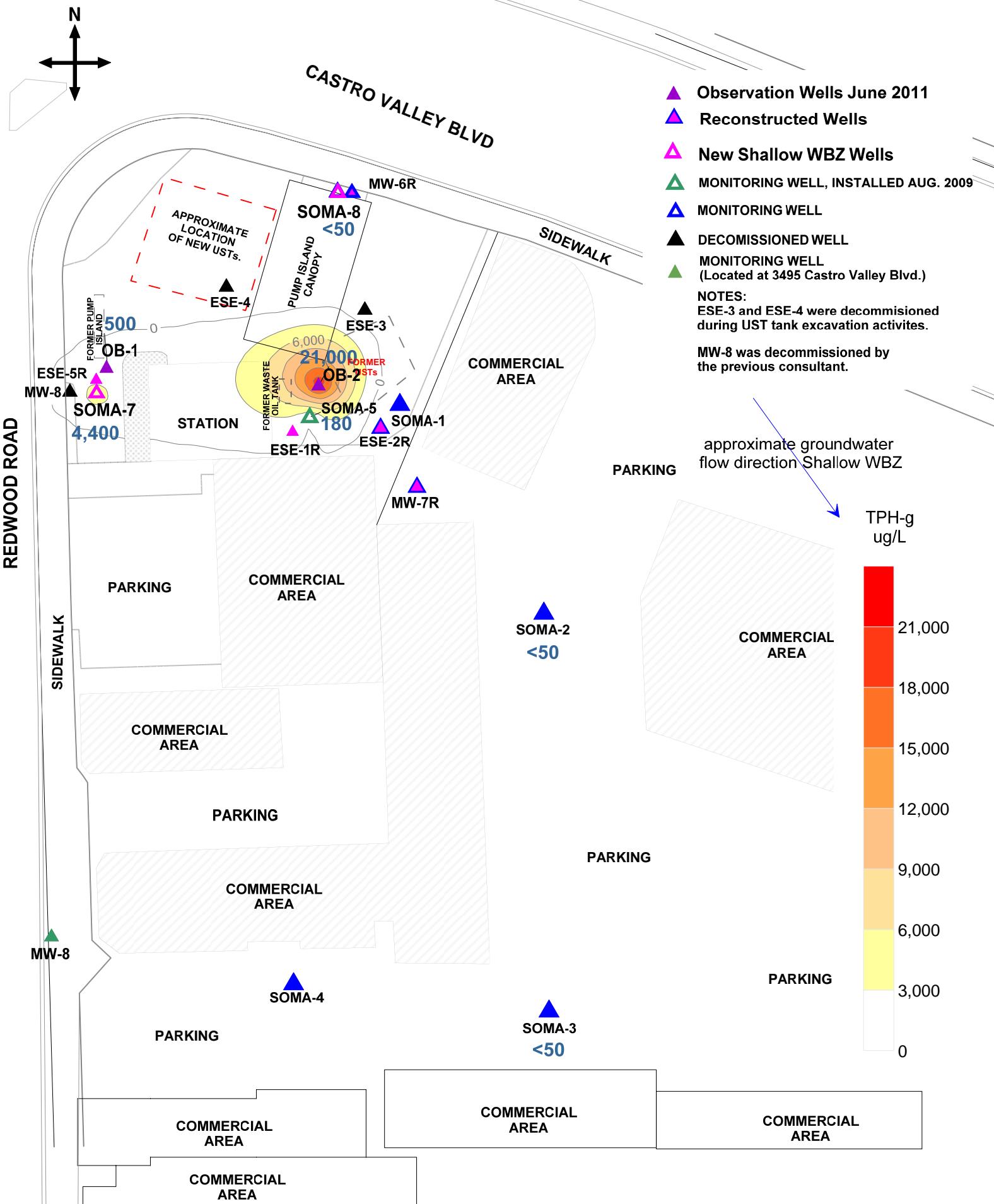


Figure 4: Contour Map of TPH-g Concentrations in Shallow WBZ Wells in Feet. January 9 and 10, 2013

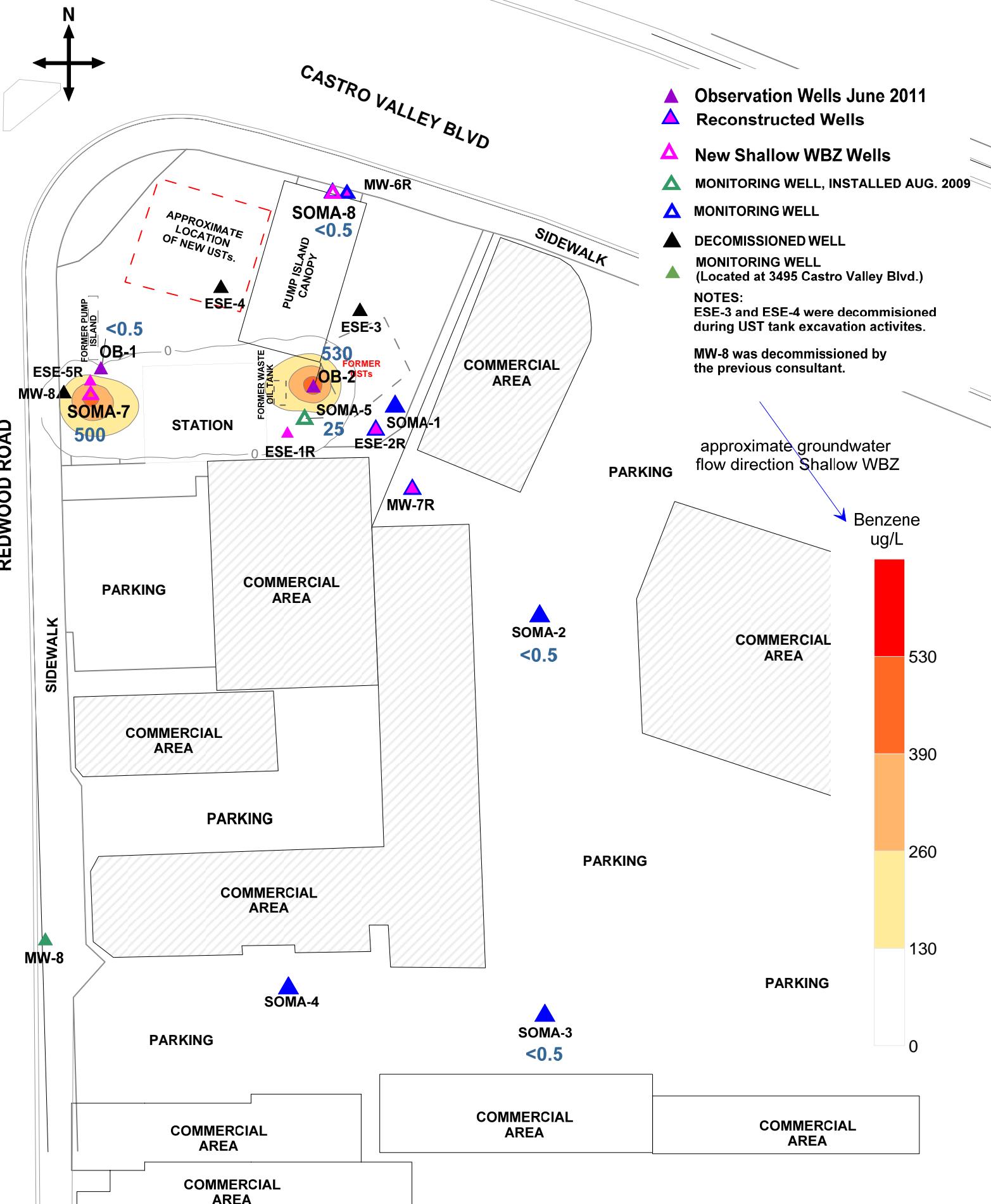
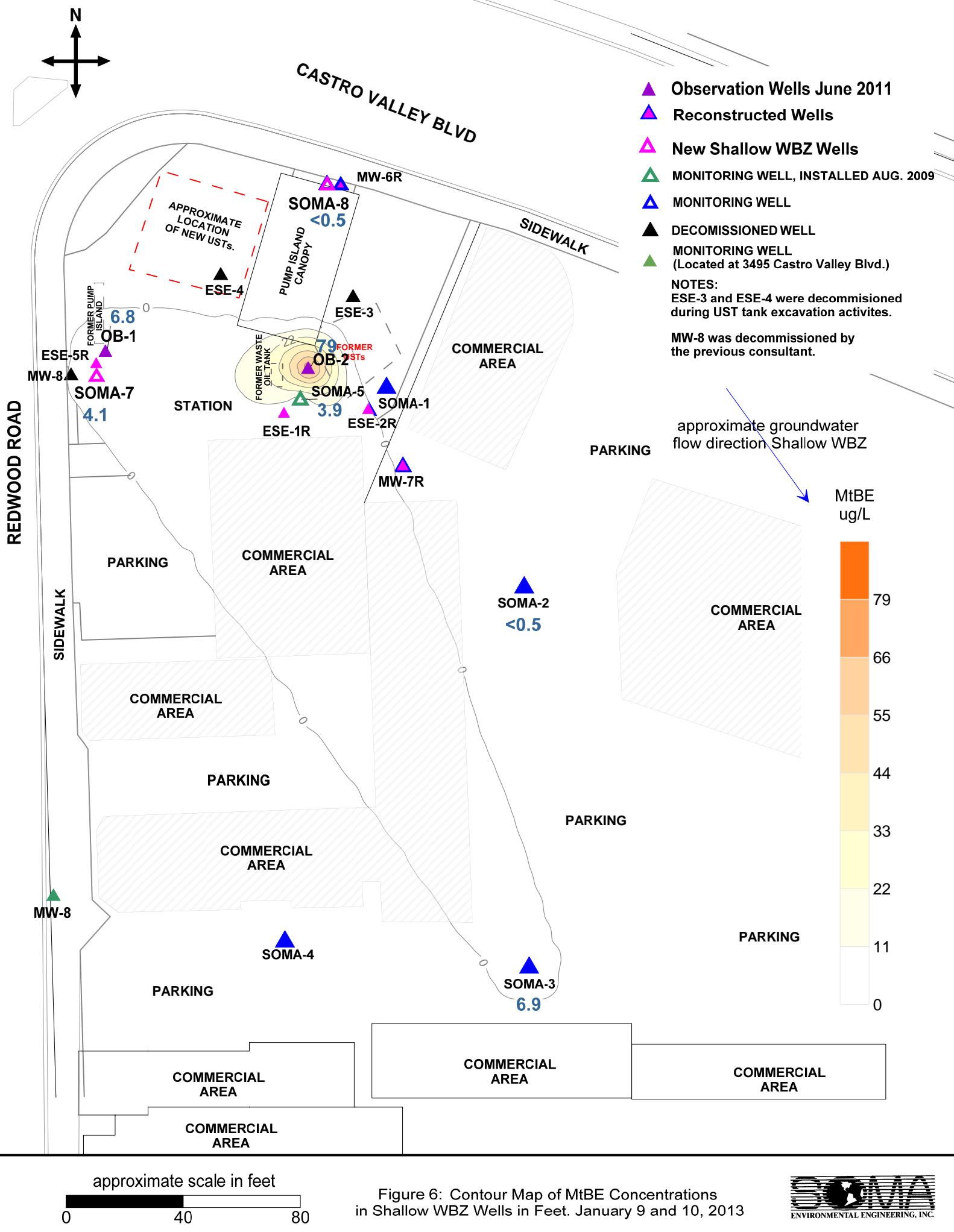


Figure 5: Contour Map of Benzene Concentrations in Shallow WBZ Wells in Feet. January 9 and 10, 2013



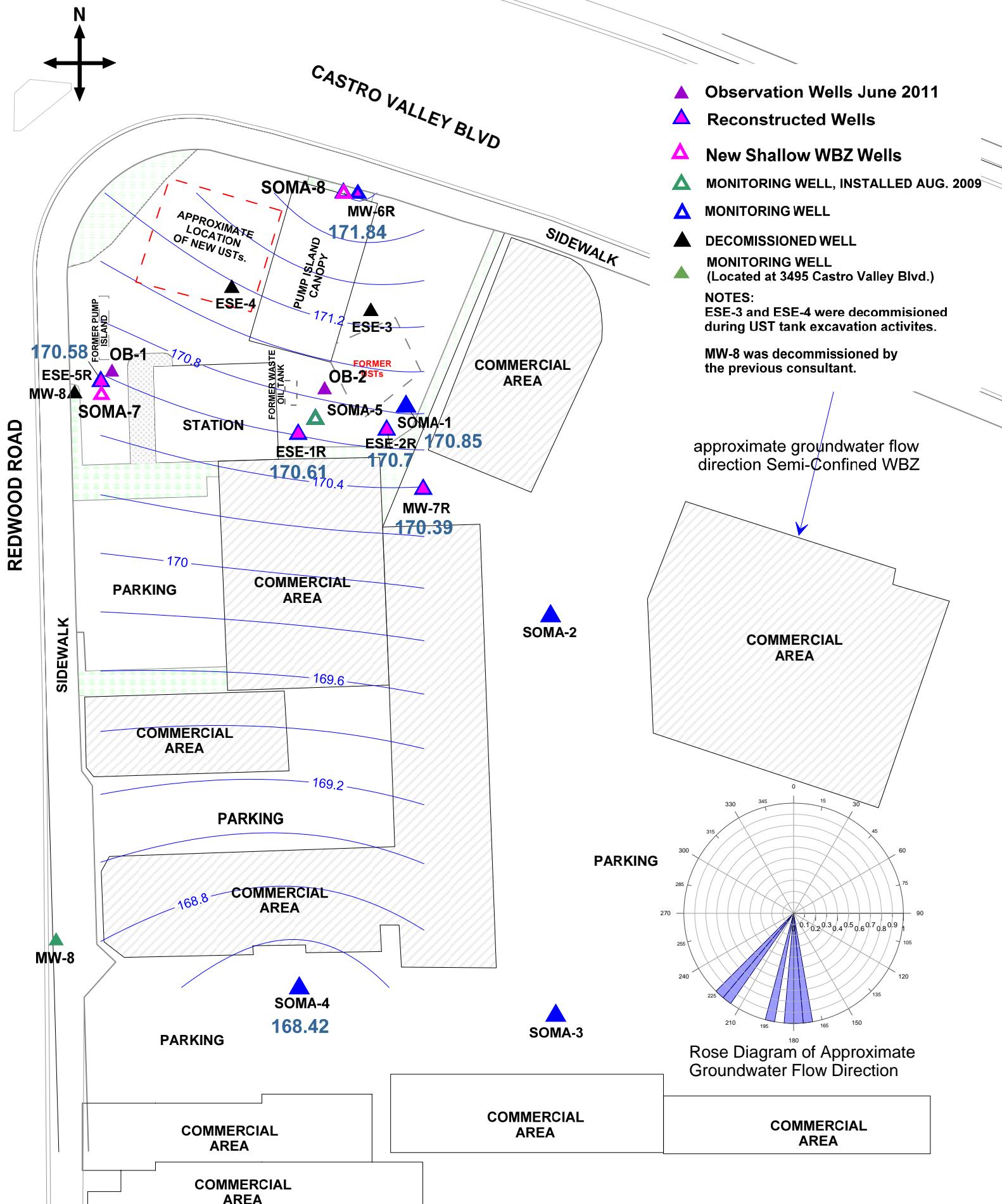
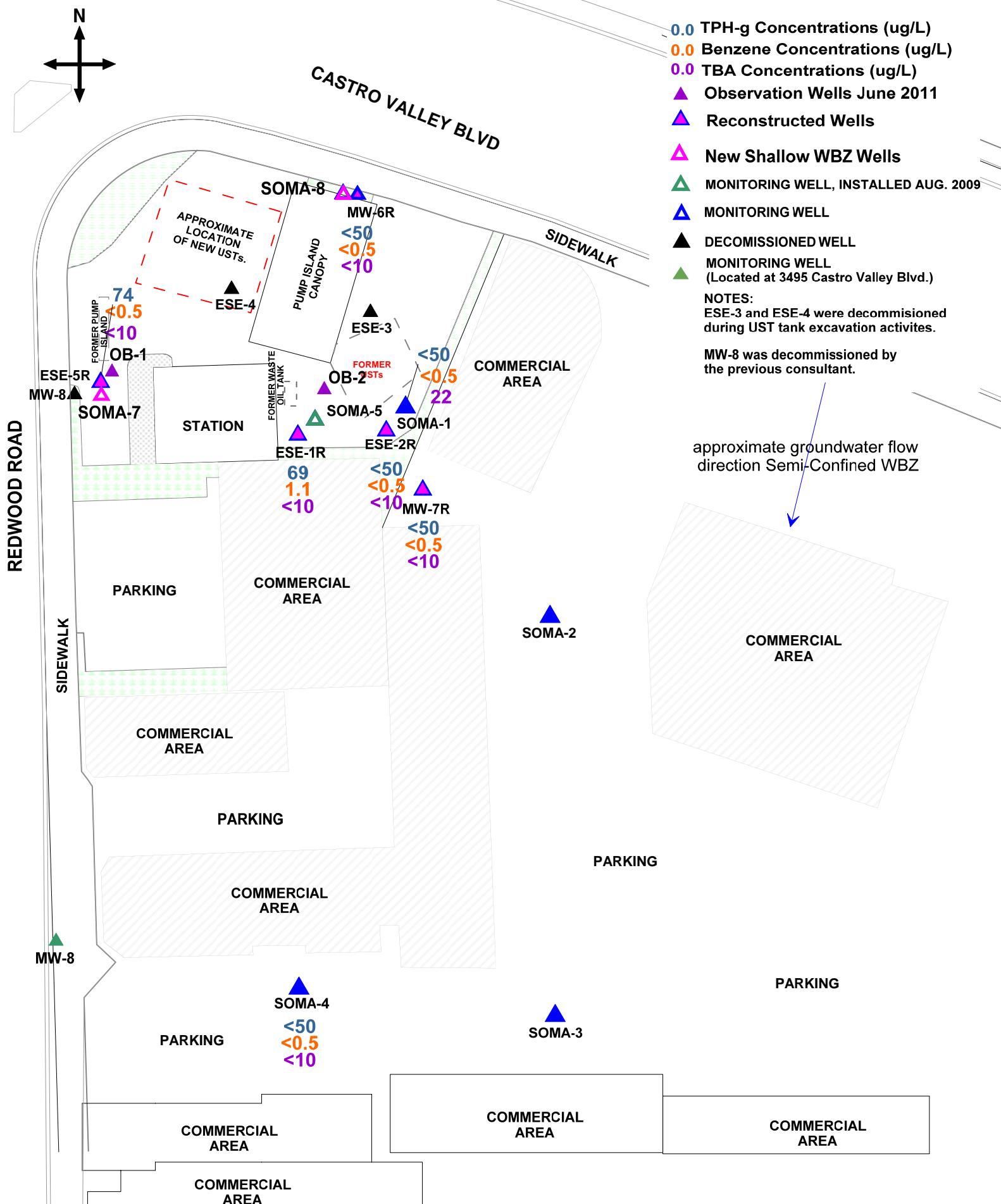


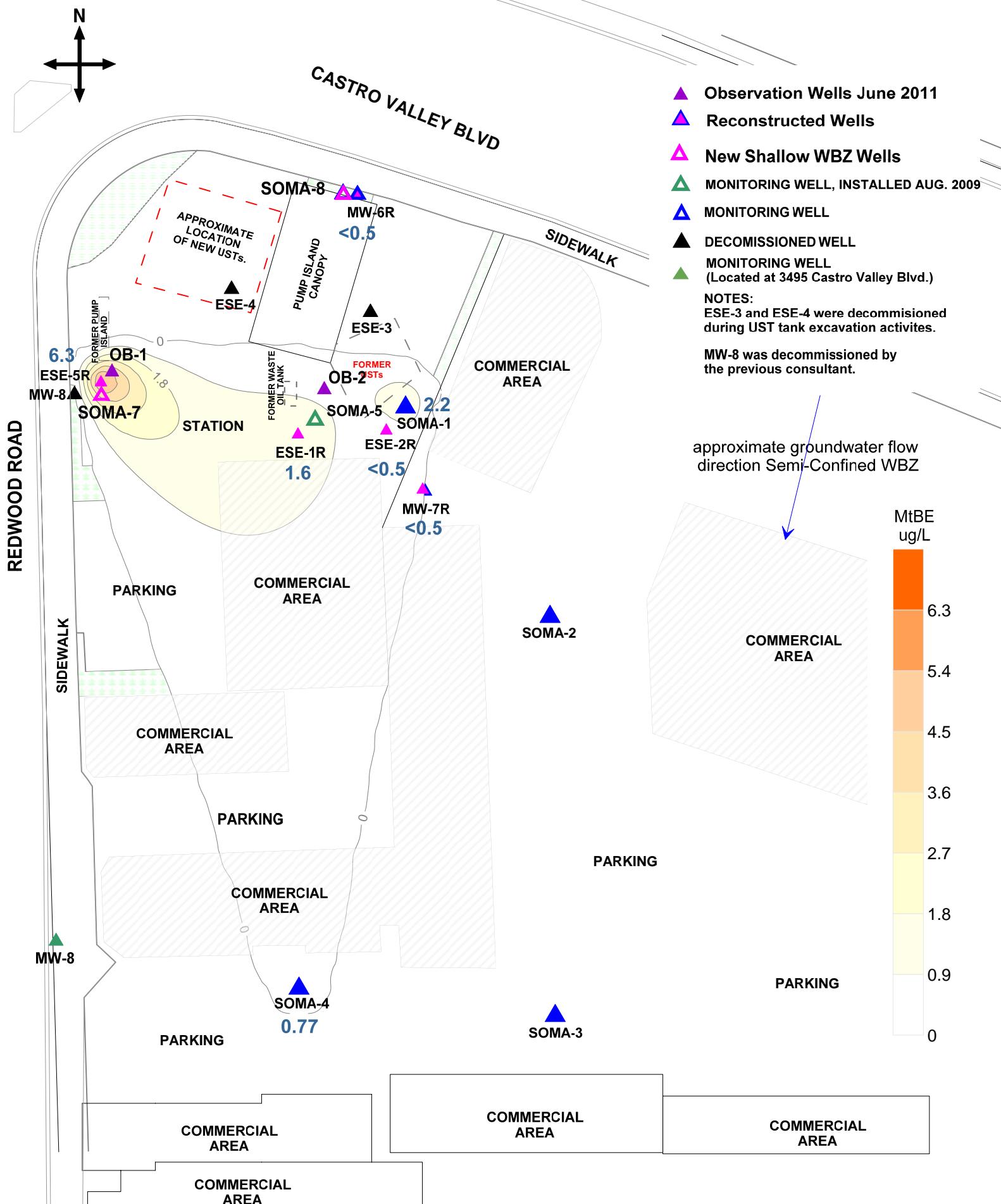
Figure 7: Groundwater Elevation Contour Map  
for Semi-Confin ed WBZ Wells in Feet. January 9, 2013



approximate scale in feet

0 40 80

Figure 8: Map of TPH-g, Benzene and TBA Concentrations in Semi-Confined WBZ Wells. January 9 and 10, 2013



approximate scale in feet  
 0 40 80

Figure 9: Contour Map of MtBE Concentrations in Semi-Confined WBZ Wells. January 9 and 10, 2013

# Appendix A

## Standard Operating Procedures for Conducting Groundwater Monitoring Activities

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

## **Water Level Measurements**

Prior to measurement of groundwater depth at each monitoring 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 in each monitoring well is measured from the top of the casing to the nearest 0.01 foot using an electric sounder.

## **Purging and Field Measurements**

Prior to sample collection, each monitoring well is purged using a battery-operated, 2-inch-diameter pump (Model ES-60 DC). To ensure that final samples are in equilibrium with, and representative of, the surrounding groundwater, during purging several samples are taken for field measurements of pH, temperature and electrical conductivity (EC). These parameters are measured with a Hanna pH, conductivity, and temperature meter. Equipment is calibrated on-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.

Purging continues until these parameters stabilize or three casing volumes are purged.

## **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 to 40-mL VOA vials and preserved with hydrochloric acid. The vials are sealed to prevent air bubbles from forming within the headspace. For TPH-d analysis, groundwater samples are collected using 1-L, amber, nonpreserved 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

Table of Elevations and Coordinates for  
Monitoring Wells,  
Field Measurements of Groundwater Sample  
Properties,  
and Groundwater Gradient Calculations

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

SOMA ENVIRONMENTAL  
3519 CASTRO VALLEY BLVD., CASTRO VALLEY

WELL ID #	NORTHING (FT.) / LATITUDE (D.M.S.)	EASTING (FT.) / LONGITUDE (D.M.S.)	ELEVATION (FT.)	DESCRIPTION
ESE-1	2079361.15 N 37° 41' 42.07112"	6106465.13 W 122° 04' 24.07899"	180.24 180.71 180.69	2" PVC, NOTVH N. SIDE SET PUNCH NORTH SIDE RIM PAVEMENT NORTH SIDE
ESE-2	2079361.30 N 37° 41' 42.07873"	6106501.97 W 122° 04' 23.62071"	180.79 181.16 181.14	2" PVC, NOTVH N. SIDE SET PUNCH NORTH SIDE RIM CONC. NORTH SIDE
ESE-5	2079381.46 N 37° 41' 42.25902"	6106387.63 W 122° 04' 25.04739"	178.80 179.07 179.10	2" PVC, NOTVH N. SIDE FELT X ON NORTH SIDE RIM CONC. NORTH SIDE
MW-6	2079451.94 N 37° 41' 42.97323"	6106492.77 W 122° 04' 23.75412"	181.80 181.97 181.88	2" PVC, NOTVH N. SIDE SET PUNCH NORTH SIDE RIM GROUND NORTH SIDE
MW-7	2079337.18 N 37° 41' 41.84264"	6106516.12 W 122° 04' 23.43963"	179.11 179.55 179.49	2" PVC, NOTVH N. SIDE SET PUNCH NORTH SIDE RIM CONC. NORTH SIDE
SOMA-1	2079370.39 N 37° 41' 42.16939"	6106506.79 W 122° 04' 23.56265"	180.95 181.25 181.22	2" PVC, NOTVH N. SIDE SET PUNCH NORTH SIDE RIM CONC. NORTH SIDE
SOMA-2	2079297.44 N 37° 41' 41.45825"	6106567.02 W 122° 04' 22.79809"	178.99 179.29 179.28	2" PVC, NOTVH N. SIDE SET PUNCH NORTH SIDE RIM CONC. NORTH SIDE
SOMA-3	2079130.83 N 37° 41' 39.81129"	6106567.48 W 122° 04' 22.75752"	176.81 177.18 177.12	2" PVC, NOTVH N. SIDE SET PUNCH NORTH SIDE RIM PAVEMENT NORTH SIDE
SOMA-4	2079141.57 N 37° 41' 39.9003"	6106464.22 W 122° 04' 24.04438"	176.94 177.43 177.44	2" PVC, NOTVH N. SIDE SET PUNCH NORTH SIDE RIM PAVEMENT NORTH SIDE

**Kier & Wright Engineers Surveyors, Inc.**

6/21/2005  
10:19 AM  
3519 Castro Valley

1233 Quarry Lane, Suite 145, Pleasanton, CA 94566  
Phone (925) 249-6555,  
Fax (925) 249-6563

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

SOMA ENVIRONMENTAL  
3519 CASTRO VALLEY BLVD., CASTRO VALLEY

**ADDITIONAL POINTS**

PT#	NORTHING (FT.)	EASTING (FT.)	ELEVATION (FT.)	DESCRIPTION
320	2079386.87	6106408.85	N/A	BL. INTX
321	2079387.18	6106455.22	N/A	BL. INTX
331	2079351.06	6106409.27	N/A	BL<
318	2079384.55	6106369.10	N/A	DWY
329	2079106.74	6106368.58	N/A	DWY
330	2079148.74	6106368.66	N/A	DWY
317	2079424.72	6106369.39	N/A	DWY E-C
315	2079481.34	6106432.38	N/A	DWY PCC
310	2079415.57	6106624.48	N/A	DWY POC
311	2079423.23	6106606.56	N/A	DWY POC
312	2079447.91	6106542.76	N/A	DWY POC
313	2079461.36	6106504.01	N/A	DWY POC
314	2079472.67	6106468.07	N/A	DWY POC
316	2079466.76	6106389.18	N/A	HCRMP POC
319	2079237.38	6106368.78	N/A	TC

**BENCH MARK:** NGS Bench mark No.PID# HT0223

THE STATION IS LOCATED IN THE CITY OF HAYWARD AT THE RAILROAD CROSSING OF THE SOUTHERN PACIFIC RAIL-ROAD AND BLOSSOM WAY, IN THE TOP OF THE NORTHWEST CURB OF BLOSSOM WAY.

TO REACH THE STATION FROM THE JUNCTION OF U S HIGHWAY 880 ON WEST A STREET, GO SOUTHEAST ON WEST A STREET FOR 0.2 MILES TO A CROSSROAD, HATHAWAY AVE ON THE LEFT, SANTA CLARA STREET ON THE RIGHT. TURN LEFT, NORTH, ON HATHAWAY AVENUE AND CONTINUE FOR 0.7 MILES TO WEST BLOSSOM WAY. TURN RIGHT, NORTH, ON WEST BLOSSOM WAY AND CONTINUE FOR 0.25 MILES TO THE STATION ON THE LEFT, JUST PAST THE RAIL-ROAD TRACKS.

THE STATION IS 48.95 M (160.6 FT) NORTHEAST OF THE NORTHEAST RAIL,  
7.01 M NORTHWEST OF THE CENTER OF BLOSSOM WAY, 0.24 M (0.8 FT)  
NORTH OF THE NORTH CORNER OF A STEEL GRATE IN THE STREET, 5.6 M  
(18.5 FT) SOUTHWEST OF A POWER POLE AND 0.12 M (0.4 FT) HIGHER THAN  
THE STREET.

Elevation =56.33 FEET NAVD88 Datum  
ADJUSTED

**HORIZONTAL CONTROL:**

**PID - HT0223**

NORTHING =2,072,670.26 , EASTING = 6,095,650.79 FEET; EPOCH DATE = 1998.50

**PID - HT 2583**

**Kier & Wright Engineers Surveyors, Inc.**

6/21/2005  
10:19 AM  
3519 Castro Valley

1233 Quarry Lane, Suite 145, Pleasanton, CA 94566  
Phone (925) 249-6555,  
Fax (925) 249-6563

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

SOMA ENVIRONMENTAL  
3519 CASTRO VALLEY BLVD., CASTRO VALLEY

NORTHING =2,082,510.30 , EASTING = 6,116,892.13 FEET; EPOCH DATE = 1991.35

Coordinate values are based on the California Coordinate System, Zone III NAD 83 Datum.

**Kier & Wright Engineers Surveyors, Inc.**

6/21/2005  
10:19 AM  
3519 Castro Valley

1233 Quarry Lane, Suite 145, Pleasanton, CA 94566  
Phone (925) 249-6555,  
Fax (925) 249-6563

3 OF 3

***Ben Harrington PLS***

***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  
6620 Owens Dr  
Suite A  
Pleasanton Ca. 94588**

**Sept 04, 2009**

**Attn: Elena  
Job # 2903**

**Ref: 3519 Castro Valley Blvd. Castro Valley Ca.**

**HORIZONTAL CONTROL, NAD 83:**

**Survey based previous survey dated 6/21/04 by Kier & Wright Surveyors on California Coordinate System, Zone 3, NAD 83.**

**ESE-1 NOTCH IN TOP OF 2" PVC, NORTH 2,079,361.15 EAST 6,106,465.13 LAT. N37°41'42.17112" W122°04"24.07899", NAVD 88, ELEV. 180.24.**

**ESE-2 NOTCH IN TOP OF 2" PVC, NORTH 2,079,361.30 EAST 6,106,501.97, LAT. N37°41'42.07873" W122°04'23.62071", NAVD 88, ELEV. 180.79.**

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

**EPOCH DATE 2007.00**

**OBSERVATION: EPOCH=180.**

**FIELD SURVEY: 9-04-09.**

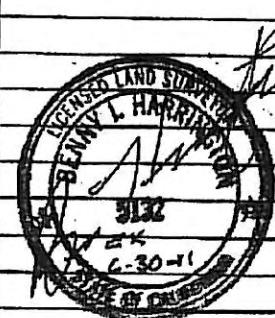
**Ben Harrington  
PLS 5132**



**NEW MONITORING WELL  
3519 CASTRO VALLEY BLVD.  
CASTRO VALLEY CA.**

**BEN HARRINGTON PLS  
2278 LARKEY LANE  
WALNUT CREEK CA 94597**

JOB # 2913  
DATE: 09/04/09



DATE: 08/30/2010  
JOB# 10022

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

SOMA ENVIRONMENTAL ENGINEERING  
3519 CASTRO VALLEY  
CASTRO VALLEY, CA

WELL ID #	NORTHING (FT.) / LATITUDE (D.DEG.)	EASTING (FT.) / LONGITUDE (D.DEG.)	ELEVATION (FT.)	DESCRIPTION
ESE-1R	2079361.109 37.695019649N	6106465.242 122.073354886W	180.20 180.72 180.69	2" PVC NOTCH NORTH SIDE SET PUNCH NORTH SIDE RIM CONCRETE NORTH SIDE
ESE-2R	2079361.241 37.695021715N	6106502.129 122.073227422W	180.70 181.20 181.16	2" PVC NOTCH NORTH SIDE SET PUNCH NORTH SIDE RIM CONCRETE NORTH SIDE
ESE-5R	2079381.529 37.695072144N	6106387.748 122.073623872W	178.64 179.14 179.12	2" PVC NOTCH NORTH SIDE SET PUNCH NORTH SIDE RIM PAVEMENT NORTH SIDE
MW-6R	2079451.45 37.695268993N	6106492.729 122.073265147W	181.34 182.10 182.01	2" PVC NOTCH NORTH SIDE SET PUNCH NORTH SIDE RIM GROUND NORTH SIDE
SOMA-7	2079374.578 37.695053058N	6106387.784 122.073623344W	178.54 179.09 179.06	2" PVC NOTCH NORTH SIDE SET PUNCH NORTH SIDE RIM PAVEMENT NORTH SIDE
MW-7R	2079337.204 37.694956360N	6106516.216 122.073177344W	179.14 179.71 179.70	2" PVC NOTCH NORTH SIDE SET PUNCH NORTH SIDE RIM PAVEMENT NORTH SIDE
SOMA-8	2079453.231 37.695273676N	6106488.22 122.073280832W	181.57 182.03 181.92	2" PVC NOTCH NORTH SIDE SET PUNCH NORTH SIDE RIM GROUND NORTH SIDE

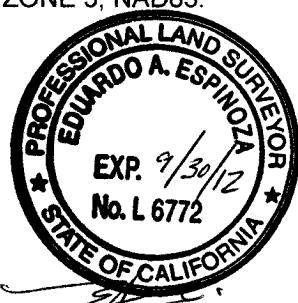
HORIZONTAL AND VERTICAL CONTROL

SURVEY BASED ON PREVIOUS SURVEY BY KIER & WRIGHT ENGINEERS SURVEYORS, INC. DATED:  
6/21/2005

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

SOMA-1, NOTCH  
NORTHING 2,079,370.39, EASTING 6,106,506.79  
ELEVATION 180.95

SOMA-2, NOTCH  
NORTHING 2,079,297.44, EASTING 6,106,567.02  
ELEVATION 178.99



**Eduardo A. Espinoza**  
Land Surveying and Mapping  
1374 Garland Avenue, Clovis, CA 93612  
Phone (559) 906-3554 Fax (559) 292-0560  
email: edgis@aol.com

**Edgis Land Surveying**  
Land Surveying and Mapping  
1374 Garland Avenue, Clovis, CA 93612  
Phone (559) 803-2679 Fax (559) 292-0560  
email: [edgis@aol.com](mailto:edgis@aol.com)



ENVIRONMENTAL ENGINEERING, INC

Well No.: ESE-1R Project No.: 2761  
Casing Diameter: 2 inches Address: 3519 Castro Valley Blvd  
Depth of Well: 24.53 feet Castro Valley, CA  
Top of Casing Elevation: 180.20 feet Date: January 10, 2013  
Depth to Groundwater: 9.59 feet Sampler: Lizzie Hightower  
Groundwater Elevation: 170.61 feet  
Water Column Height: 14.94 feet  
Purged Volume: 8 gallons

Purging Method: Bailer  Pump   
Sampling Method: Bailer  Pump   
Color: No  Yes  Describe: Dark Gray  
Sheen: No  Yes  Describe:  
Odor: No  Yes  Describe: Petro Odor

Field Measurements:

Time	Vol (gallons)	pH	Temp (°C)	E.C. (μs/cm)
10:51	Started purging well			
10:52	2	6.56	16.6	860
10:53	4	6.54	17.7	980
10:54	6	6.56	18.0	1010
10:55	8	6.53	18.2	1000
11:00	Sampled			



ENVIRONMENTAL ENGINEERING, INC

Well No.: ESE-2R Project No.: 2761  
Casing Diameter: 2 inches Address: 3519 Castro Valley Blvd  
Depth of Well: 27.54 feet Castro Valley, CA  
Top of Casing Elevation: 180.70 feet Date: January 10, 2013  
Depth to Groundwater: 10.00 feet Sampler: Lizzie Hightower  
Groundwater Elevation: 170.70 feet  
Water Column Height: 17.54 feet  
Purged Volume: 8 gallons

Purging Method: Bailer  Pump

Sampling Method: Bailer  Pump

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

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

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

Field Measurements:

Time	Vol (gallons)	pH	Temp (°C)	E.C. (µs/cm)
10:27	Started purging well			
10:28	2	6.65	18.00	800
10:29	4	6.62	18.4	790
10:30	6	6.60	18.7	790
10:31	8	6.60	18.8	780
10:36	Sampled			



ENVIRONMENTAL ENGINEERING, INC

Well No.: ESE-5R  
Casing Diameter: 2 inches  
Depth of Well: 23.54 feet  
Top of Casing Elevation: 178.64 feet  
Depth to Groundwater: 8.06 feet  
Groundwater Elevation: 170.58 feet  
Water Column Height: 15.48 feet  
Purged Volume: 8 gallons

Project No.: 2761  
Address: 3519 Castro Valley Blvd  
Castro Valley, CA  
Date: January 10, 2013  
Sampler: Lizzie Hightower

Purging Method: Bailer  Pump

Sampling Method: Bailer  Pump

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

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

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

Field Measurements:

Time	Vol (gallons)	pH	Temp (°C)	E.C. (µs/cm)
12:20	Started purging well			
12:21	2	7.03	18.8	780
12:22	4	7.06	19.0	820
12:23	6	6.87	19.2	860
12:24	8	6.85	19.5	900
12:29	Sampled			



ENVIRONMENTAL ENGINEERING, INC

Well No.: MW-6 R  
Casing Diameter: 2 inches  
Depth of Well: 27.57 feet  
Top of Casing Elevation: 181.34 feet  
Depth to Groundwater: 9.50 feet  
Groundwater Elevation: 171.84 feet  
Water Column Height: 18.07 feet  
Purged Volume: 8 gallons

Project No.: 2761  
Address: 3519 Castro Valley Blvd  
Castro Valley, CA  
Date: January 9, 2013  
Sampler: Lizzie Hightower

Purging Method: Bailer  Pump   
Sampling Method: Bailer  Pump

Color: No  Yes  Describe: \_\_\_\_\_  
Sheen: No  Yes  Describe: \_\_\_\_\_  
Odor: No  Yes  Describe: \_\_\_\_\_

Field Measurements:

Time	Vol (gallons)	pH	Temp (°C)	E.C. (µs/cm)
14:35	Started purging well			
14:36	2	6.77	17.9	500
14:37	4	6.66	18.1	560
14:38	6	6.64	18.3	600
14:39	8	6.62	18.7	610
14:44	Sampled			



ENVIRONMENTAL ENGINEERING, INC

Well No.: MW-7R Project No.: 2761  
Casing Diameter: 2 inches Address: 3519 Castro Valley Blvd  
Depth of Well: 29.59 feet Castro Valley, CA  
Top of Casing Elevation: 179.14 feet Date: January 9, 2013  
Depth to Groundwater: 8.75 feet Sampler: Lizzie Hightower  
Groundwater Elevation: 170.39 feet  
Water Column Height: 20.84 feet  
Purged Volume: 10 gallons

Purging Method: Bailer  Pump   
Sampling Method: Bailer  Pump   
  
Color: No  Yes  Describe: Cloudy  
Sheen: No  Yes  Describe:  
Odor: No  Yes  Describe:

## Field Measurements:

Time	Vol (gallons)	pH	Temp (°C)	E.C. (µs/cm)
11:13	Started purging well			
11:14	2	6.67	19.4	700
11:15	4	6.54	18.0	690
11:17	8	6.52	18.2	690
11:18	10	6.50	18.3	700
11:23	Sampled			



ENVIRONMENTAL ENGINEERING, INC

Well No.: SDMA-1 Project No.: 2761  
Casing Diameter: 2 inches Address: 3519 Castro Valley Blvd  
Depth of Well: 29.74 feet Castro Valley, CA  
Top of Casing Elevation: 180.95 feet Date: January 17, 2013  
Depth to Groundwater: 10.10 feet Sampler: Lizzie Hightower  
Groundwater Elevation: 170.85 feet  
Water Column Height: 19.64 feet  
Purged Volume: 10 gallons

Purging Method: Bailer  Pump   
Sampling Method: Bailer  Pump   
  
Color: No  Yes  Describe: \_\_\_\_\_  
Sheen: No  Yes  Describe: \_\_\_\_\_  
Odor: No  Yes  Describe: \_\_\_\_\_

Field Measurements:

Time	Vol (gallons)	pH	Temp (°C)	E.C. (µs/cm)
09:53	Started purging well			
09:54	2	6.38	16.9	780
09:55	4	6.40	17.6	800
09:57	8	6.43	18.1	800
09:58	10	6.45	18.1	800
10:03	Sampled			



ENVIRONMENTAL ENGINEERING, INC

Well No.: SOMA-4 Project No.: 2761  
Casing Diameter: 2 inches Address: 3519 Castro Valley Blvd  
Depth of Well: 22.65 feet Castro Valley, CA  
Top of Casing Elevation: 1716.94 feet Date: January 9, 2013  
Depth to Groundwater: 8.52 feet Sampler: Lizzie Hightower  
Groundwater Elevation: 1638.42 feet  
Water Column Height: 14.13 feet  
Purged Volume: 8 gallons

Purging Method: Bailer  Pump   
Sampling Method: Bailer  Pump   
  
Color: No  Yes  Describe: \_\_\_\_\_  
Sheen: No  Yes  Describe: \_\_\_\_\_  
Odor: No  Yes  Describe: \_\_\_\_\_

Field Measurements:

Time	Vol (gallons)	pH	Temp (°C)	E.C. (μs/cm)
12:16	Started purging well			
12:17	2	6.61	18.9	570
12:18	4	6.54	19.7	580
12:19	6	6.52	20.4	600
12:20	8	6.51	20.5	610
12:25	Sampled			



ENVIRONMENTAL ENGINEERING, INC

Well No.: SOMA-2  
Casing Diameter: 2 inches  
Depth of Well: 14.70 feet  
Top of Casing Elevation: 178.99 feet  
Depth to Groundwater: 9.63 feet  
Groundwater Elevation: 169.36 feet  
Water Column Height: 5.07 feet  
Purged Volume: 2.5 gallons

Project No.: 2761  
Address: 3519 Castro Valley Blvd  
Castro Valley, CA  
Date: January 9, 2013  
Sampler: Lizzie Hightower

Purging Method: Bailer  Pump

Sampling Method: Bailer  Pump

Color: No  Yes  Describe: Cloudy/Brown

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

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

Field Measurements:

Time	Vol (gallons)	pH	Temp (°C)	E.C. (µs/cm)
11:42	Started purging well			
11:44	1	6.99	17.7	600
11:48	2	6.88	18.6	610
11:51	2.5	6.88	19.0	610
11:56	Sampled			



ENVIRONMENTAL ENGINEERING, INC

Well No.: SOMA-3  
Casing Diameter: 2 inches  
Depth of Well: 14.70 feet  
Top of Casing Elevation: 176.81 feet  
Depth to Groundwater: 8.86 feet  
Groundwater Elevation: 167.95 feet  
Water Column Height: 5.84 feet  
Purged Volume: 2.5 gallons

Project No.: 2761  
Address: 3519 Castro Valley Blvd  
Castro Valley, CA  
Date: January 9, 2013  
Sampler: Lizzie Hightower

Purging Method: Bailer  Pump   
Sampling Method: Bailer  Pump   
Color: No  Yes  Describe: Cloudy/Brownish  
Sheen: No  Yes  Describe: \_\_\_\_\_  
Odor: No  Yes  Describe: \_\_\_\_\_

Field Measurements:

Time	Vol (gallons)	pH	Temp (°C)	E.C. (µs/cm)
14:02	Started purging well			
14:04	1	6.80	18.8	800
14:07	2	6.70	20.1	830
14:10	2.5	6.69	20.3	830
14:15	Sampled			



ENVIRONMENTAL ENGINEERING, INC

Well No.: SOMA-5  
Casing Diameter: 2 inches  
Depth of Well: 14.87 feet  
Top of Casing Elevation: 180.31 feet  
Depth to Groundwater: 9.21 feet  
Groundwater Elevation: 171.10 feet  
Water Column Height: 5.66 feet  
Purged Volume: 2.5 gallons

Project No.: 2761  
Address: 3519 Castro Valley Blvd  
Castro Valley, CA  
Date: January 10, 2013  
Sampler: Lizzie Hightower

Purging Method: Bailer  Pump

Sampling Method: Bailer  Pump

Color: No  Yes  Describe: Cloudy / Brown

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

Odor: No  Yes  Describe: Slight Petro

Field Measurements:

Time	Vol (gallons)	pH	Temp (°C)	E.C. (µs/cm)
13:32	Started purging well			
13:34	1	6.80	16.4	1430
13:37	2	6.79	17.6	1440
13:39	2.5	6.81	17.8	1440
13:44	Sampled			



ENVIRONMENTAL ENGINEERING, INC

Well No.: SOMA-7 Project No.: 2761  
Casing Diameter: 2 inches Address: 3519 Castro Valley Blvd  
Depth of Well: 14.89 feet Castro Valley, CA  
Top of Casing Elevation: 178.54 feet Date: January 10, 2013  
Depth to Groundwater: 6.72 feet Sampler: Lizzie Hightower  
Groundwater Elevation: 171.82 feet  
Water Column Height: 8.17 feet  
Purged Volume: 4 gallons

Purging Method: Bailer  Pump   
Sampling Method: Bailer  Pump   
  
Color: No  Yes  Describe: Cloudy/Gray  
Sheen: No  Yes  Describe: Rainbow Sheen  
Odor: No  Yes  Describe: Petro Odor

## Field Measurements:

Time	Vol (gallons)	pH	Temp (°C)	E.C. (µs/cm)
12:39	Started			
12:41	1	6.71	18.4	1140
12:43	2	6.72	18.8	1140
12:47	3	6.76	18.8	1130
12:50	4	6.77	19.0	1090
12:55	Sampled			



ENVIRONMENTAL ENGINEERING, INC

Well No.: SOMA -8 Project No.: 2761  
Casing Diameter: 2 inches Address: 3519 Castro Valley Blvd  
Depth of Well: 14.89 feet Castro Valley, CA  
Top of Casing Elevation: 181.57 feet Date: January 9, 2013  
Depth to Groundwater: 9.62 feet Sampler: Lizzie Hightower  
Groundwater Elevation: 171.95 feet  
Water Column Height: 5.27 feet  
Purged Volume: 2.5 gallons

Purging Method: Bailer  Pump   
Sampling Method: Bailer  Pump   
Color: No  Yes  Describe: Cloudy | Brown  
Sheen: No  Yes  Describe: \_\_\_\_\_  
Odor: No  Yes  Describe: \_\_\_\_\_

Field Measurements:

Time	Vol (gallons)	pH	Temp (°C)	E.C. (µs/cm)
14:55	Started purging well			
14:57	1	6.82	16.9	880
15:04	2	6.80	18.0	910
15:06	2.5	6.82	18.3	910
15:11	Sampled			



ENVIRONMENTAL ENGINEERING, INC

Well No.: OB-1 Project No.: 2761  
Casing Diameter: 2 inches Address: 3519 Castro Valley Blvd  
Depth of Well: 15.59 feet Castro Valley, CA  
Top of Casing Elevation: 178.70 feet Date: January 10, 2013  
Depth to Groundwater: 6.58 feet Sampler: Lizzie Hightower  
Groundwater Elevation: 172.12 feet  
Water Column Height: 9.01 feet  
Purged Volume: 4 gallons

Purging Method: Bailer  Pump   
Sampling Method: Bailer  Pump

Color: No  Yes  Describe: Cloudy / Brown  
Sheen: No  Yes  Describe: \_\_\_\_\_  
Odor: No  Yes  Describe: \_\_\_\_\_

Field Measurements:

Time	Vol (gallons)	pH	Temp (°C)	E.C. (µs/cm)
13:08	Started purging well			
13:10	1	6.72	17.9	1110
13:12	2	6.68	18.7	1090
13:14	3	6.68	19.1	1060
13:17	4	6.70	19.2	1050
13:22	Sampled			



ENVIRONMENTAL ENGINEERING, INC

Well No.: OB-2 Project No.: 2761  
Casing Diameter: 2 inches Address: 3519 Castro Valley Blvd  
Depth of Well: 16.49 feet Castro Valley, CA  
Top of Casing Elevation: 180.23 feet Date: January 10, 2013  
Depth to Groundwater: 9.18 feet Sampler: Lizzie Hightower  
Groundwater Elevation: 171.05 feet  
Water Column Height: 7.31 feet  
Purged Volume: 3.5 gallons

Purging Method: Bailer  Pump

Sampling Method: Bailer  Pump

Color: No  Yes  Describe: Cloudy/Brown

Sheen: No  Yes  Describe: Rainbow Sheen

Odor: No  Yes  Describe: Petro Odor

Field Measurements:

Time	Vol (gallons)	pH	Temp (°C)	E.C. (µs/cm)
13:56	Started purging well			
13:58	1	6.73	16.7	1050
14:00	2	6.70	18.0	1080
14:03	3	6.68	18.4	1040
14:04	3.5	6.67	18.3	1040
14:09	Sampled			

## 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

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

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

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

...

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

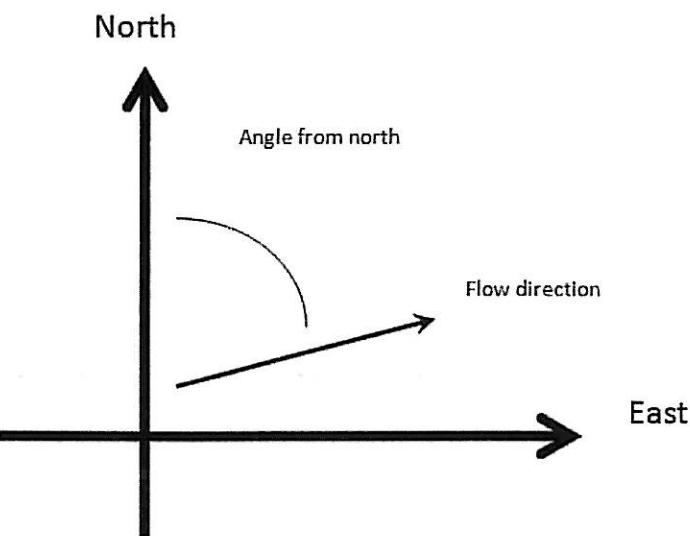
where  $(x_i, y_i)$  are the coordinates of the well and

$h_i$  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 Calculate Clear

Save Data Recall Data Go Back

Site Name   
 Date  Current Date

Calculation basis

Coordinates

I.D.	x-coordinate	y-coordinate	head	ft
1) SOMA-2	337.5997649	211.223775	169.36	
2) SOMA-3	339.7877931	53.66065088	167.95	
3) SOMA-5	245.7025814	289.2758782	171.10	
4) SOMA-7	160.3694824	298.0293851	171.82	
5) SOMA-8	256.6427223	378.9993239	171.95	
6) OB-1	165.0323759	308.9034515	172.12	
7) OB-2	248.9533418	301.9534748	171.05	
8)				
9)				
10)				
11)				
12)				
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	7
Max. Difference Between Head Values	1.271
Gradient Magnitude (i)	0.01349
Flow direction as degrees from North (positive y axis)	136.7
Coefficient of Determination ( $R^2$ )	0.996

WCMS

Last updated on 1/10/2013

## 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

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

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

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

...

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

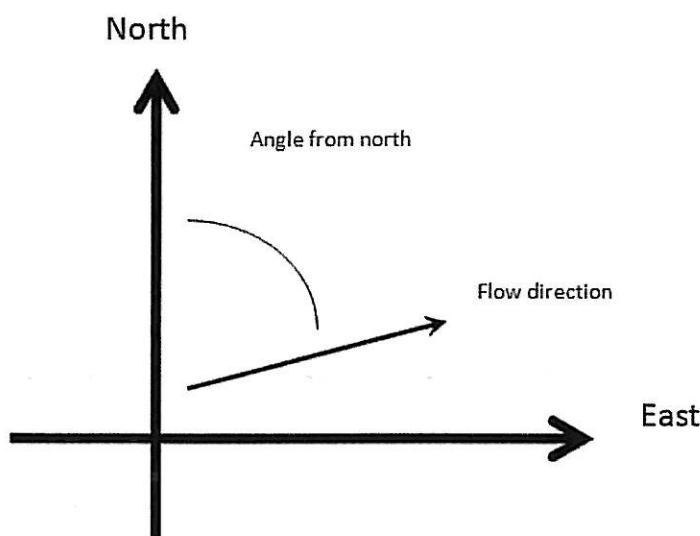
where  $(x_i, y_i)$  are the coordinates of the well and

$h_i$  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](#) [Calculate](#) [Clear](#)

[Save Data](#) [Recall Data](#) [Go Back](#)

Site Name   
 Date  Current Date  
 Calculation basis

Coordinates

I.D.

	x-coordinate	y-coordinate	head	ft
1) ESE-1R	238.4091541	283.4402069	170.61	
2) ESE-2R	273.417605	284.8991247	170.70	
3) ESE-5R	160.3694824	304.5945152	170.58	
4) MW-6R	261.7481214	378.269865	171.84	
5) MW-7R	288.0044595	261.5564397	170.39	
6) SOMA-1	280.7110322	294.3820905	170.85	
7) SOMA-4	239.1384968	64.6025345	168.42	
8)				
9)				
10)				
11)				
12)				
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	7
Max. Difference Between Head Values	1.042
Gradient Magnitude (i)	0.01078
Flow direction as degrees from North (positive y axis)	194.5
Coefficient of Determination ( $R^2$ )	0.991

WCMS

Last updated on 1/16/2013

# Appendix C

Chain of Custody Form and Laboratory Report  
for the  
First Semi-Annual 2013 Monitoring Event



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

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

**Laboratory Job Number 242351  
ANALYTICAL REPORT**

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

Project : 2761  
Location : 3519 Castro Valley Blvd.  
Level : II

<u>Sample ID</u>	<u>Lab ID</u>
ESE-1R	242351-001
ESE-2R	242351-002
ESE-5R	242351-003
MW-6R	242351-004
MW-7R	242351-005
SOMA-1	242351-006
SOMA-2	242351-007
SOMA-3	242351-008
SOMA-4	242351-009
SOMA-5	242351-010
SOMA-7	242351-011
SOMA-8	242351-012
OB-1	242351-013
OB-2	242351-014

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: 01/17/2013

Tracy Babjar  
Project Manager  
(510) 204-2226

NELAP # 01107CA

**CASE NARRATIVE**

Laboratory number: **242351**  
Client: **SOMA Environmental Engineering Inc.**  
Project: **2761**  
Location: **3519 Castro Valley Blvd.**  
Request Date: **01/11/13**  
Samples Received: **01/11/13**

This data package contains sample and QC results for fourteen water samples, requested for the above referenced project on 01/11/13. The samples were received cold and intact.

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

Low recoveries were observed for tert-butyl alcohol (TBA) in the MS/MSD for batch 194651; the parent sample was not a project sample, the BS/BSD were within limits, and the associated RPD was within limits. 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

Project No: 2761

C&T LOGIN # 242351

Project Name: 3519 Castro Valley Blvd., Castro Valley Company : SOMA Environmental

Turnaround Time: Standard Telephone: 925-734-6400

Fax: 925-734-6401

## Analyses

		Matrix				Preservative				Gasoline Oxygenates & Lead Scavengers			
Lab No.	Sample ID.	Sampling Date	Time	Soil	Water	Waste	# of Containers	HCl	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	ICE	Ethanol	
1	ESE-1R	1/10/13	11:00	*			4-VOAs	*		*		*	
2	ESE-2R	1/10/13	10:36	*			4-VOAs	*		*		*	
3	ESE-5R	1/10/13	12:29	*			4-VOAs	*		*		*	
4	MW-6R	1/9/13	14:44	*			4-VOAs	*		*		*	
5	MW-7R	1/9/13	11:23	*			4-VOAs	*		*		*	
6	SOMA-1	1/10/13	10:03	*			4-VOAs	*		*		*	
7	SOMA-2	1/9/13	12:25	*			4-VOAs	*		*		*	
8	SOMA-3	1/9/13	11:56	*			4-VOAs	*		*		*	
9	SOMA-4	1/9/13	14:15	*			4-VOAs	*		*		*	
10	SOMA-5	1/10/13	13:44	*			4-VOAs	*		*		*	
11	SOMA-7	1/10/13	12:55	*			4-VOAs	*		*		*	
12	SOMA-8	1/9/13	15:11	*			4-VOAs	*		*		*	
13	OB-1	1/10/13	13:22	*			4-VOAs	*		*		*	
14	OB-2	1/10/13	14:09	*			4-VOAs	*		*		*	

Notes: EDF OUTPUT REQUIRED

RELINQUISHED BY:

L Hightower 1/11/13 9:50 DATE/TIME

J. Hightower 1/11/13 15:10 DATE/TIME

RECEIVED BY:

1/11/13 9:50 DATE/TIME

1/11/13 15:10 DATE/TIME

DATE/TIME

DATE/TIME

# COOLER RECEIPT CHECKLIST



Curtis & Tompkins, Ltd.

Login # 242351 Date Received 1/11/13 Number of coolers 1  
 Client SUMA Project 2761

Date Opened 1/11/13 By (print) EL (sign) E. Levy  
 Date Logged in ↓ 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) \_\_\_\_\_  
 Samples Received on ice & cold without a temperature blank; temp taken with 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? \_\_\_\_\_ 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

(3) Times on some labels do not agree w/ coc, and are as follows: -007:1225, -008:1415,  
 -W9:1225

### Purgeable Organics by GC/MS

Lab #:	242351	Location:	3519 Castro Valley Blvd.
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2761	Analysis:	EPA 8260B
Field ID:	ESE-1R	Batch#:	194555
Lab ID:	242351-001	Sampled:	01/10/13
Matrix:	Water	Received:	01/11/13
Units:	ug/L	Analyzed:	01/14/13
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	69	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	1.6	0.50
1,2-Dichloroethane	ND	0.50
Benzene	1.1	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	80-127
1,2-Dichloroethane-d4	108	69-148
Toluene-d8	96	80-120
Bromofluorobenzene	97	80-121

ND= Not Detected

RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	242351	Location:	3519 Castro Valley Blvd.
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2761	Analysis:	EPA 8260B
Field ID:	ESE-2R	Batch#:	194555
Lab ID:	242351-002	Sampled:	01/10/13
Matrix:	Water	Received:	01/11/13
Units:	ug/L	Analyzed:	01/14/13
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	92	80-127
1,2-Dichloroethane-d4	102	69-148
Toluene-d8	96	80-120
Bromofluorobenzene	98	80-121

ND= Not Detected

RL= Reporting Limit

Page 1 of 1

4.0

### Purgeable Organics by GC/MS

Lab #:	242351	Location:	3519 Castro Valley Blvd.
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2761	Analysis:	EPA 8260B
Field ID:	ESE-5R	Batch#:	194555
Lab ID:	242351-003	Sampled:	01/10/13
Matrix:	Water	Received:	01/11/13
Units:	ug/L	Analyzed:	01/14/13
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	74	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	6.3	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	80-127
1,2-Dichloroethane-d4	107	69-148
Toluene-d8	95	80-120
Bromofluorobenzene	97	80-121

ND= Not Detected

RL= Reporting Limit

Page 1 of 1

5.0

### Purgeable Organics by GC/MS

Lab #:	242351	Location:	3519 Castro Valley Blvd.
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2761	Analysis:	EPA 8260B
Field ID:	MW-6R	Batch#:	194555
Lab ID:	242351-004	Sampled:	01/09/13
Matrix:	Water	Received:	01/11/13
Units:	ug/L	Analyzed:	01/14/13
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	92	80-127
1,2-Dichloroethane-d4	113	69-148
Toluene-d8	96	80-120
Bromofluorobenzene	95	80-121

ND= Not Detected

RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	242351	Location:	3519 Castro Valley Blvd.
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2761	Analysis:	EPA 8260B
Field ID:	MW-7R	Batch#:	194555
Lab ID:	242351-005	Sampled:	01/09/13
Matrix:	Water	Received:	01/11/13
Units:	ug/L	Analyzed:	01/14/13
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	80-127
1,2-Dichloroethane-d4	110	69-148
Toluene-d8	96	80-120
Bromofluorobenzene	97	80-121

ND= Not Detected

RL= Reporting Limit

Page 1 of 1

7.0

### Purgeable Organics by GC/MS

Lab #:	242351	Location:	3519 Castro Valley Blvd.
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2761	Analysis:	EPA 8260B
Field ID:	SOMA-1	Batch#:	194555
Lab ID:	242351-006	Sampled:	01/10/13
Matrix:	Water	Received:	01/11/13
Units:	ug/L	Analyzed:	01/14/13
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	ND	50
tert-Butyl Alcohol (TBA)	22	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	2.2	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	80-127
1,2-Dichloroethane-d4	109	69-148
Toluene-d8	95	80-120
Bromofluorobenzene	98	80-121

ND= Not Detected

RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	242351	Location:	3519 Castro Valley Blvd.
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2761	Analysis:	EPA 8260B
Field ID:	SOMA-2	Batch#:	194555
Lab ID:	242351-007	Sampled:	01/09/13
Matrix:	Water	Received:	01/11/13
Units:	ug/L	Analyzed:	01/14/13
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	80-127
1,2-Dichloroethane-d4	109	69-148
Toluene-d8	96	80-120
Bromofluorobenzene	95	80-121

ND= Not Detected

RL= Reporting Limit

Page 1 of 1

9.0

**Purgeable Organics by GC/MS**

Lab #:	242351	Location:	3519 Castro Valley Blvd.
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2761	Analysis:	EPA 8260B
Field ID:	SOMA-3	Batch#:	194555
Lab ID:	242351-008	Sampled:	01/09/13
Matrix:	Water	Received:	01/11/13
Units:	ug/L	Analyzed:	01/14/13
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	6.9	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	80-127
1,2-Dichloroethane-d4	113	69-148
Toluene-d8	94	80-120
Bromofluorobenzene	97	80-121

ND= Not Detected

RL= Reporting Limit

Page 1 of 1

10.0

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

Lab #:	242351	Location:	3519 Castro Valley Blvd.
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2761	Analysis:	EPA 8260B
Field ID:	SOMA-4	Batch#:	194555
Lab ID:	242351-009	Sampled:	01/09/13
Matrix:	Water	Received:	01/11/13
Units:	ug/L	Analyzed:	01/14/13
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	0.77	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	80-127
1,2-Dichloroethane-d4	114	69-148
Toluene-d8	94	80-120
Bromofluorobenzene	99	80-121

ND= Not Detected

RL= Reporting Limit

Page 1 of 1

11.0

### Purgeable Organics by GC/MS

Lab #:	242351	Location:	3519 Castro Valley Blvd.
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2761	Analysis:	EPA 8260B
Field ID:	SOMA-5	Diln Fac:	1.000
Lab ID:	242351-010	Sampled:	01/10/13
Matrix:	Water	Received:	01/11/13
Units:	ug/L		

Analyte	Result	RL	Batch#	Analyzed
Gasoline C7-C12	180	50	194558	01/14/13
tert-Butyl Alcohol (TBA)	ND	10	194651	01/16/13
Isopropyl Ether (DIPE)	ND	0.50	194651	01/16/13
Ethyl tert-Butyl Ether (ETBE)	ND	0.50	194651	01/16/13
Methyl tert-Amyl Ether (TAME)	ND	0.50	194651	01/16/13
Ethanol	ND	1,000	194651	01/16/13
MTBE	3.9	0.50	194651	01/16/13
1,2-Dichloroethane	ND	0.50	194651	01/16/13
Benzene	25	0.50	194651	01/16/13
Toluene	ND	0.50	194651	01/16/13
1,2-Dibromoethane	ND	0.50	194651	01/16/13
Ethylbenzene	28	0.50	194651	01/16/13
m,p-Xylenes	ND	0.50	194651	01/16/13
o-Xylene	ND	0.50	194651	01/16/13

Surrogate	%REC	Limits	Batch#	Analyzed
Dibromofluoromethane	96	80-127	194651	01/16/13
1,2-Dichloroethane-d4	94	69-148	194651	01/16/13
Toluene-d8	104	80-120	194651	01/16/13
Bromofluorobenzene	104	80-121	194651	01/16/13

ND= Not Detected

RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	242351	Location:	3519 Castro Valley Blvd.
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2761	Analysis:	EPA 8260B
Field ID:	SOMA-7	Batch#:	194613
Lab ID:	242351-011	Sampled:	01/10/13
Matrix:	Water	Received:	01/11/13
Units:	ug/L	Analyzed:	01/15/13
Diln Fac:	7.143		

Analyte	Result	RL
Gasoline C7-C12	4,400	360
tert-Butyl Alcohol (TBA)	ND	71
Isopropyl Ether (DIPE)	ND	3.6
Ethyl tert-Butyl Ether (ETBE)	ND	3.6
Methyl tert-Amyl Ether (TAME)	ND	3.6
Ethanol	ND	7,100
MTBE	4.1	3.6
1,2-Dichloroethane	ND	3.6
Benzene	500	3.6
Toluene	8.9	3.6
1,2-Dibromoethane	ND	3.6
Ethylbenzene	66	3.6
m,p-Xylenes	11	3.6
o-Xylene	ND	3.6

Surrogate	%REC	Limits
Dibromofluoromethane	94	80-127
1,2-Dichloroethane-d4	87	69-148
Toluene-d8	101	80-120
Bromofluorobenzene	107	80-121

ND= Not Detected

RL= Reporting Limit

Page 1 of 1

13.0

### Purgeable Organics by GC/MS

Lab #:	242351	Location:	3519 Castro Valley Blvd.
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2761	Analysis:	EPA 8260B
Field ID:	SOMA-8	Batch#:	194555
Lab ID:	242351-012	Sampled:	01/09/13
Matrix:	Water	Received:	01/11/13
Units:	ug/L	Analyzed:	01/14/13
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	95	80-127
1,2-Dichloroethane-d4	112	69-148
Toluene-d8	96	80-120
Bromofluorobenzene	99	80-121

ND= Not Detected

RL= Reporting Limit

Page 1 of 1

14.0

### Purgeable Organics by GC/MS

Lab #:	242351	Location:	3519 Castro Valley Blvd.
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2761	Analysis:	EPA 8260B
Field ID:	OB-1	Batch#:	194555
Lab ID:	242351-013	Sampled:	01/10/13
Matrix:	Water	Received:	01/11/13
Units:	ug/L	Analyzed:	01/14/13
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	500	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	6.8	0.50
1,2-Dichloroethane	ND	0.50
Benzene	ND	0.50
Toluene	ND	0.50
1,2-Dibromoethane	ND	0.50
Ethylbenzene	1.1	0.50
m,p-Xylenes	1.2	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	96	80-127
1,2-Dichloroethane-d4	107	69-148
Toluene-d8	94	80-120
Bromofluorobenzene	95	80-121

ND= Not Detected

RL= Reporting Limit

### Purgeable Organics by GC/MS

Lab #:	242351	Location:	3519 Castro Valley Blvd.
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2761	Analysis:	EPA 8260B
Field ID:	OB-2	Batch#:	194613
Lab ID:	242351-014	Sampled:	01/10/13
Matrix:	Water	Received:	01/11/13
Units:	ug/L	Analyzed:	01/15/13
Diln Fac:	14.29		

Analyte	Result	RL
Gasoline C7-C12	21,000	710
tert-Butyl Alcohol (TBA)	ND	140
Isopropyl Ether (DIPE)	ND	7.1
Ethyl tert-Butyl Ether (ETBE)	ND	7.1
Methyl tert-Amyl Ether (TAME)	ND	7.1
Ethanol	ND	14,000
MTBE	79	7.1
1,2-Dichloroethane	ND	7.1
Benzene	530	7.1
Toluene	ND	7.1
1,2-Dibromoethane	ND	7.1
Ethylbenzene	980	7.1
m,p-Xylenes	1,200	7.1
o-Xylene	58	7.1

Surrogate	%REC	Limits
Dibromofluoromethane	97	80-127
1,2-Dichloroethane-d4	88	69-148
Toluene-d8	103	80-120
Bromofluorobenzene	106	80-121

ND= Not Detected

RL= Reporting Limit

Page 1 of 1

16.0

## Batch QC Report

## Purgeable Organics by GC/MS

Lab #:	242351	Location:	3519 Castro Valley Blvd.
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2761	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	194555
Units:	ug/L	Analyzed:	01/14/13
Diln Fac:	1.000		

Type: BS Lab ID: QC672860

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	125.0	117.7	94	46-138
Isopropyl Ether (DIPE)	25.00	22.63	91	53-132
Ethyl tert-Butyl Ether (ETBE)	25.00	24.59	98	61-132
Methyl tert-Amyl Ether (TAME)	25.00	24.25	97	65-120
MTBE	25.00	24.01	96	59-120
1,2-Dichloroethane	25.00	28.88	116	72-139
Benzene	25.00	28.04	112	80-123
Toluene	25.00	26.05	104	80-120
1,2-Dibromoethane	25.00	24.84	99	80-120
Ethylbenzene	25.00	26.77	107	80-123
m,p-Xylenes	50.00	55.97	112	80-123
o-Xylene	25.00	26.55	106	80-122

Surrogate	%REC	Limits
Dibromofluoromethane	93	80-127
1,2-Dichloroethane-d4	101	69-148
Toluene-d8	94	80-120
Bromofluorobenzene	99	80-121

Type: BSD Lab ID: QC672861

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	125.0	122.0	98	46-138	4	24
Isopropyl Ether (DIPE)	25.00	22.17	89	53-132	2	20
Ethyl tert-Butyl Ether (ETBE)	25.00	24.02	96	61-132	2	20
Methyl tert-Amyl Ether (TAME)	25.00	24.36	97	65-120	0	20
MTBE	25.00	23.90	96	59-120	0	20
1,2-Dichloroethane	25.00	28.06	112	72-139	3	20
Benzene	25.00	26.98	108	80-123	4	20
Toluene	25.00	25.62	102	80-120	2	20
1,2-Dibromoethane	25.00	25.78	103	80-120	4	20
Ethylbenzene	25.00	27.44	110	80-123	2	20
m,p-Xylenes	50.00	56.71	113	80-123	1	20
o-Xylene	25.00	26.48	106	80-122	0	20

Surrogate	%REC	Limits
Dibromofluoromethane	93	80-127
1,2-Dichloroethane-d4	101	69-148
Toluene-d8	97	80-120
Bromofluorobenzene	96	80-121

RPD= Relative Percent Difference

Page 1 of 1

17.0

## Batch QC Report

## Purgeable Organics by GC/MS

Lab #:	242351	Location:	3519 Castro Valley Blvd.
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2761	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	194555
Units:	ug/L	Analyzed:	01/14/13
Diln Fac:	1.000		

Type: BS Lab ID: QC672862

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	894.3	89	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	94	80-127
1,2-Dichloroethane-d4	102	69-148
Toluene-d8	95	80-120
Bromofluorobenzene	95	80-121

Type: BSD Lab ID: QC672863

Analyte	Spiked	Result	%REC	Limits	RPD Lim
Gasoline C7-C12	1,000	884.5	88	80-120	1 20

Surrogate	%REC	Limits
Dibromofluoromethane	91	80-127
1,2-Dichloroethane-d4	102	69-148
Toluene-d8	96	80-120
Bromofluorobenzene	96	80-121

RPD= Relative Percent Difference

Page 1 of 1

18.0

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

Lab #:	242351	Location:	3519 Castro Valley Blvd.
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2761	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC672864	Batch#:	194555
Matrix:	Water	Analyzed:	01/14/13
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	92	80-127
1,2-Dichloroethane-d4	102	69-148
Toluene-d8	97	80-120
Bromofluorobenzene	95	80-121

ND= Not Detected

RL= Reporting Limit

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

Lab #:	242351	Location:	3519 Castro Valley Blvd.
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2761	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC672873	Batch#:	194558
Matrix:	Water	Analyzed:	01/14/13
Units:	ug/L		

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

Surrogate	%REC	Limits
Dibromofluoromethane	91	80-127
1,2-Dichloroethane-d4	99	69-148
Toluene-d8	96	80-120
Bromofluorobenzene	97	80-121

NA= Not Analyzed

ND= Not Detected

RL= Reporting Limit

## Batch QC Report

## Purgeable Organics by GC/MS

Lab #:	242351	Location:	3519 Castro Valley Blvd.
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2761	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	194558
Units:	ug/L	Analyzed:	01/14/13
Diln Fac:	1.000		

Type: BS Lab ID: QC672874

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	1,023	102	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	102	80-127
1,2-Dichloroethane-d4	108	69-148
Toluene-d8	101	80-120
Bromofluorobenzene	97	80-121

Type: BSD Lab ID: QC672875

Analyte	Spiked	Result	%REC	Limits	RPD Lim
Gasoline C7-C12	1,000	975.2	98	80-120	5 20

Surrogate	%REC	Limits
Dibromofluoromethane	100	80-127
1,2-Dichloroethane-d4	106	69-148
Toluene-d8	101	80-120
Bromofluorobenzene	95	80-121

RPD= Relative Percent Difference

Page 1 of 1

22.0

## Batch QC Report

## Purgeable Organics by GC/MS

Lab #:	242351	Location:	3519 Castro Valley Blvd.
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2761	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	194613
Units:	ug/L	Analyzed:	01/15/13
Diln Fac:	1.000		

Type: BS Lab ID: QC673047

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	125.0	115.1	92	46-138
Isopropyl Ether (DIPE)	25.00	23.90	96	53-132
Ethyl tert-Butyl Ether (ETBE)	25.00	24.07	96	61-132
Methyl tert-Amyl Ether (TAME)	25.00	22.95	92	65-120
MTBE	25.00	22.36	89	59-120
1,2-Dichloroethane	25.00	27.05	108	72-139
Benzene	25.00	27.45	110	80-123
Toluene	25.00	26.00	104	80-120
1,2-Dibromoethane	25.00	26.32	105	80-120
Ethylbenzene	25.00	27.01	108	80-123
m,p-Xylenes	50.00	53.98	108	80-123
o-Xylene	25.00	26.45	106	80-122

Surrogate	%REC	Limits
Dibromofluoromethane	99	80-127
1,2-Dichloroethane-d4	99	69-148
Toluene-d8	98	80-120
Bromofluorobenzene	100	80-121

Type: BSD Lab ID: QC673048

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	125.0	131.5	105	46-138	13	24
Isopropyl Ether (DIPE)	25.00	24.18	97	53-132	1	20
Ethyl tert-Butyl Ether (ETBE)	25.00	24.96	100	61-132	4	20
Methyl tert-Amyl Ether (TAME)	25.00	23.64	95	65-120	3	20
MTBE	25.00	23.60	94	59-120	5	20
1,2-Dichloroethane	25.00	26.73	107	72-139	1	20
Benzene	25.00	26.33	105	80-123	4	20
Toluene	25.00	26.29	105	80-120	1	20
1,2-Dibromoethane	25.00	27.54	110	80-120	5	20
Ethylbenzene	25.00	26.93	108	80-123	0	20
m,p-Xylenes	50.00	53.77	108	80-123	0	20
o-Xylene	25.00	26.33	105	80-122	0	20

Surrogate	%REC	Limits
Dibromofluoromethane	101	80-127
1,2-Dichloroethane-d4	101	69-148
Toluene-d8	99	80-120
Bromofluorobenzene	101	80-121

RPD= Relative Percent Difference

Page 1 of 1

23.0

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

Lab #:	242351	Location:	3519 Castro Valley Blvd.
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2761	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC673049	Batch#:	194613
Matrix:	Water	Analyzed:	01/15/13
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	80-127
1,2-Dichloroethane-d4	92	69-148
Toluene-d8	103	80-120
Bromofluorobenzene	105	80-121

ND= Not Detected

RL= Reporting Limit

## Batch QC Report

## Purgeable Organics by GC/MS

Lab #:	242351	Location:	3519 Castro Valley Blvd.
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2761	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	194613
Units:	ug/L	Analyzed:	01/15/13
Diln Fac:	1.000		

Type: BS Lab ID: QC673090

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	984.0	98	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	102	80-127
1,2-Dichloroethane-d4	101	69-148
Toluene-d8	100	80-120
Bromofluorobenzene	106	80-121

Type: BSD Lab ID: QC673091

Analyte	Spiked	Result	%REC	Limits	RPD Lim
Gasoline C7-C12	1,000	944.4	94	80-120	4 20

Surrogate	%REC	Limits
Dibromofluoromethane	95	80-127
1,2-Dichloroethane-d4	88	69-148
Toluene-d8	102	80-120
Bromofluorobenzene	107	80-121

RPD= Relative Percent Difference

Page 1 of 1

25.0

## Batch QC Report

## Purgeable Organics by GC/MS

Lab #:	242351	Location:	3519 Castro Valley Blvd.
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2761	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	194651
Units:	ug/L	Analyzed:	01/16/13
Diln Fac:	1.000		

Type: BS Lab ID: QC673193

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	125.0	125.0	100	46-138
Isopropyl Ether (DIPE)	25.00	24.83	99	53-132
Ethyl tert-Butyl Ether (ETBE)	25.00	25.20	101	61-132
Methyl tert-Amyl Ether (TAME)	25.00	24.06	96	65-120
MTBE	25.00	23.79	95	59-120
1,2-Dichloroethane	25.00	26.70	107	72-139
Benzene	25.00	27.27	109	80-123
Toluene	25.00	26.76	107	80-120
1,2-Dibromoethane	25.00	26.90	108	80-120
Ethylbenzene	25.00	27.39	110	80-123
m,p-Xylenes	50.00	55.18	110	80-123
o-Xylene	25.00	27.19	109	80-122

Surrogate	%REC	Limits
Dibromofluoromethane	101	80-127
1,2-Dichloroethane-d4	101	69-148
Toluene-d8	102	80-120
Bromofluorobenzene	102	80-121

Type: BSD Lab ID: QC673194

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	125.0	126.4	101	46-138	1	24
Isopropyl Ether (DIPE)	25.00	24.34	97	53-132	2	20
Ethyl tert-Butyl Ether (ETBE)	25.00	24.92	100	61-132	1	20
Methyl tert-Amyl Ether (TAME)	25.00	24.24	97	65-120	1	20
MTBE	25.00	23.82	95	59-120	0	20
1,2-Dichloroethane	25.00	27.16	109	72-139	2	20
Benzene	25.00	27.04	108	80-123	1	20
Toluene	25.00	26.59	106	80-120	1	20
1,2-Dibromoethane	25.00	27.48	110	80-120	2	20
Ethylbenzene	25.00	26.71	107	80-123	2	20
m,p-Xylenes	50.00	53.57	107	80-123	3	20
o-Xylene	25.00	26.49	106	80-122	3	20

Surrogate	%REC	Limits
Dibromofluoromethane	101	80-127
1,2-Dichloroethane-d4	101	69-148
Toluene-d8	101	80-120
Bromofluorobenzene	102	80-121

RPD= Relative Percent Difference

Page 1 of 1

26.0

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

Lab #:	242351	Location:	3519 Castro Valley Blvd.
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2761	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC673195	Batch#:	194651
Matrix:	Water	Analyzed:	01/16/13
Units:	ug/L		

Analyte	Result	RL
Gasoline C7-C12	NA	
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	80-127
1,2-Dichloroethane-d4	93	69-148
Toluene-d8	103	80-120
Bromofluorobenzene	106	80-121

NA= Not Analyzed

ND= Not Detected

RL= Reporting Limit

## Batch QC Report

## Purgeable Organics by GC/MS

Lab #:	242351	Location:	3519 Castro Valley Blvd.
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	2761	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Batch#:	194651
MSS Lab ID:	242421-011	Sampled:	01/10/13
Matrix:	Water	Received:	01/15/13
Units:	ug/L	Analyzed:	01/16/13
Diln Fac:	1.000		

Type: MS Lab ID: QC673265

Analyte	MSS	Result	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	<2.239	125.0	70.03	56 *	59-150	
Isopropyl Ether (DIPE)	<0.1000	25.00	22.82	91	68-120	
Ethyl tert-Butyl Ether (ETBE)	<0.1000	25.00	21.63	87	74-123	
Methyl tert-Amyl Ether (TAME)	<0.1002	25.00	20.40	82	73-120	
MTBE	<0.1119	25.00	18.51	74	68-120	
1,2-Dichloroethane	<0.1071	25.00	25.83	103	80-129	
Benzene	<0.1000	25.00	28.26	113	80-121	
Toluene	<0.1000	25.00	27.81	111	80-120	
1,2-Dibromoethane	<0.1341	25.00	23.52	94	80-120	
Ethylbenzene	<0.1000	25.00	28.91	116	80-120	
m,p-Xylenes	<0.1454	50.00	57.37	115	80-120	
o-Xylene	<0.1000	25.00	27.73	111	80-120	

Surrogate	%REC	Limits
Dibromofluoromethane	98	80-127
1,2-Dichloroethane-d4	95	69-148
Toluene-d8	103	80-120
Bromofluorobenzene	103	80-121

Type: MSD Lab ID: QC673266

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	125.0	70.04	56 *	59-150	0	26
Isopropyl Ether (DIPE)	25.00	23.52	94	68-120	3	20
Ethyl tert-Butyl Ether (ETBE)	25.00	22.02	88	74-123	2	20
Methyl tert-Amyl Ether (TAME)	25.00	20.40	82	73-120	0	20
MTBE	25.00	19.11	76	68-120	3	20
1,2-Dichloroethane	25.00	25.71	103	80-129	0	20
Benzene	25.00	28.00	112	80-121	1	20
Toluene	25.00	27.50	110	80-120	1	20
1,2-Dibromoethane	25.00	23.14	93	80-120	2	20
Ethylbenzene	25.00	28.93	116	80-120	0	20
m,p-Xylenes	50.00	56.22	112	80-120	2	20
o-Xylene	25.00	27.67	111	80-120	0	20

Surrogate	%REC	Limits
Dibromofluoromethane	96	80-127
1,2-Dichloroethane-d4	94	69-148
Toluene-d8	101	80-120
Bromofluorobenzene	103	80-121

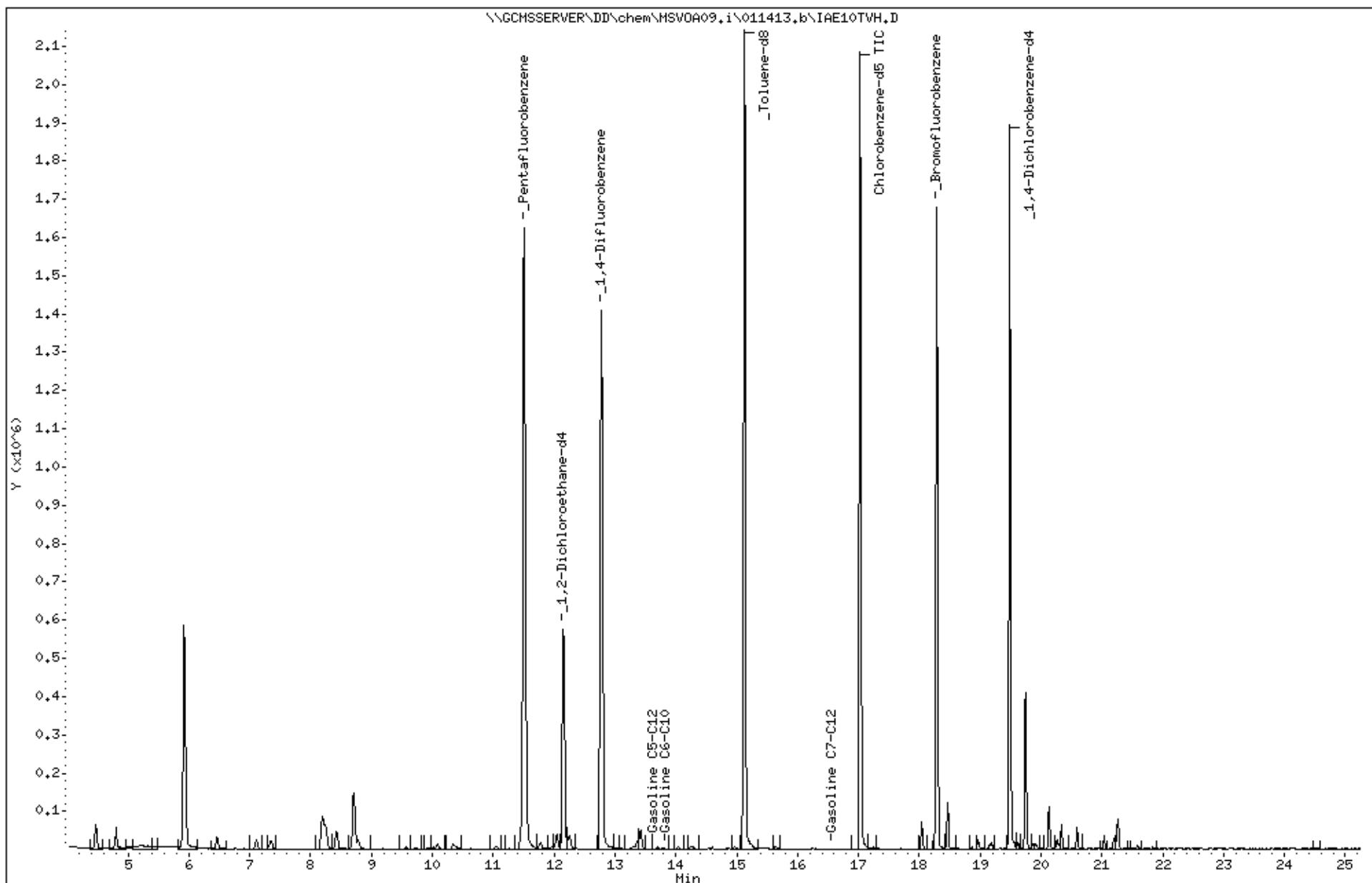
\*= Value outside of QC limits; see narrative

RPD= Relative Percent Difference

Data File: \\GCHSSERVER\\DD\\chem\\MSV0A09.i\\011413.b\\IAE10TVH.D  
Date : 14-JAN-2013 13:36  
Client ID: DYNAP&T  
Sample Info: S,242351-001

Instrument: MSV0A09.i  
Operator: VOC  
Column diameter: 2.00

Column phase:

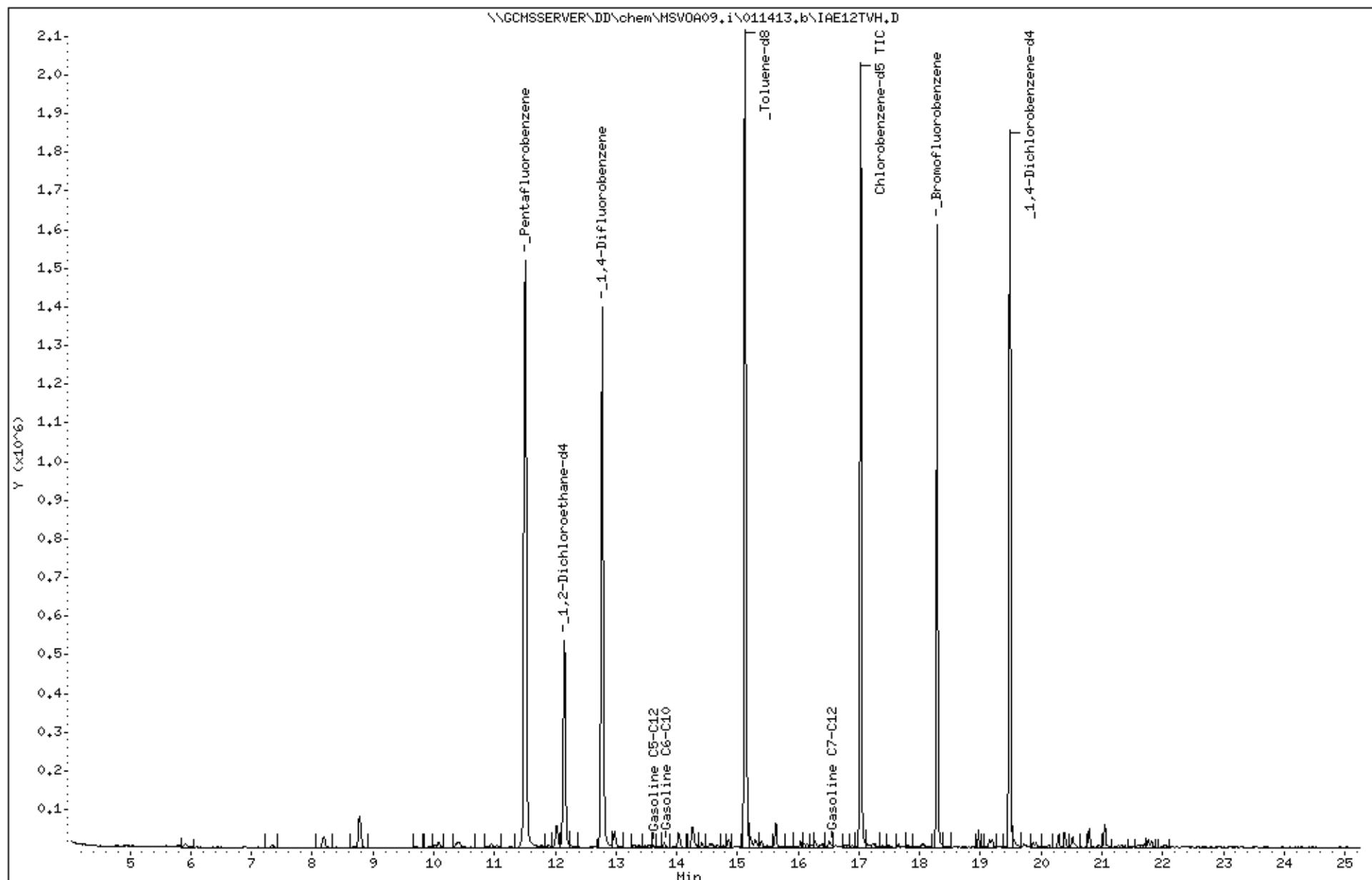


Data File: \\GCHSSERVER\DD\chem\MSV0A09.i\011413.b\IAE12TVH.D  
Date : 14-JAN-2013 14:43  
Client ID: DYNAP&T  
Sample Info: S,242351-003

Instrument: MSV0A09.i

Operator: VOC  
Column diameter: 2.00

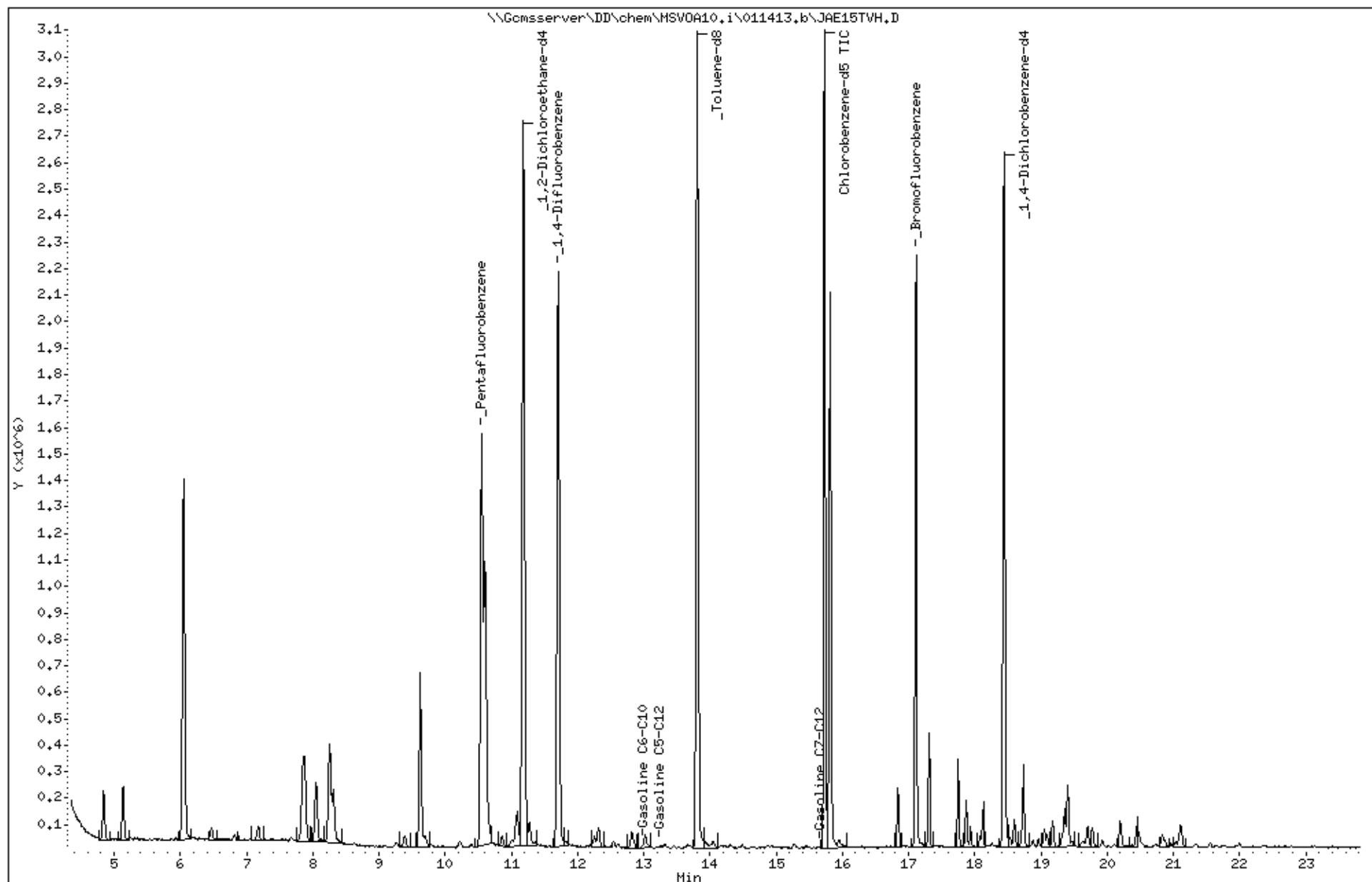
Column phase:



Data File: \\Gomsserver\DD\chem\MSVOA10.i\011413.b\JAE15TVH.D  
Date : 14-JAN-2013 19:16  
Client ID: DYNAP&T  
Sample Info: s,242351-010

Instrument: MSVOA10.i

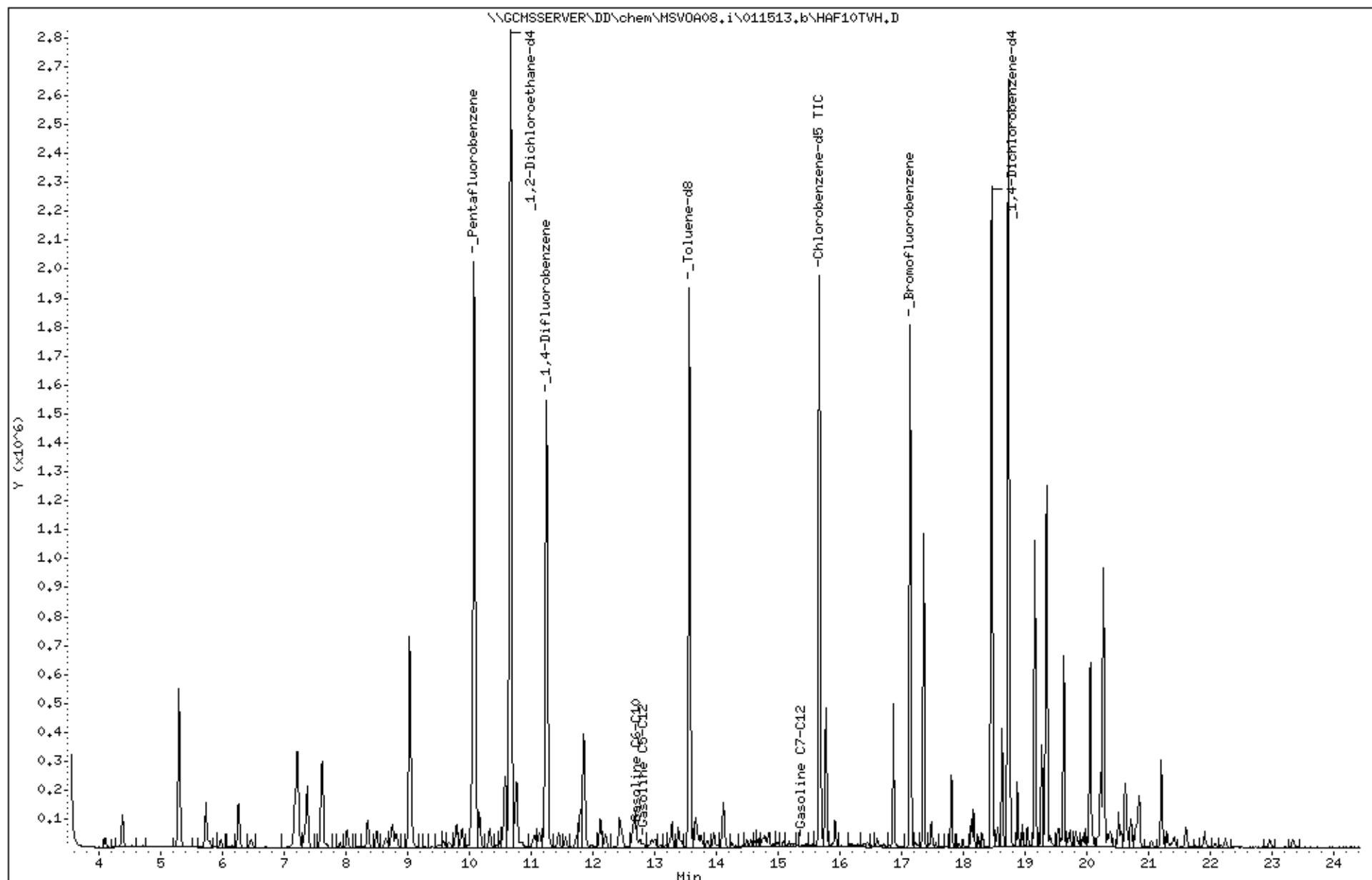
Column phase:

Operator: VOA  
Column diameter: 2.00

Data File: \\GCHSSERVER\DD\chem\MSV0A08.i\011513.b\HAF10TVH.D  
Date : 15-JAN-2013 15:16  
Client ID: DYNAP&T  
Sample Info: S,242351-011

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

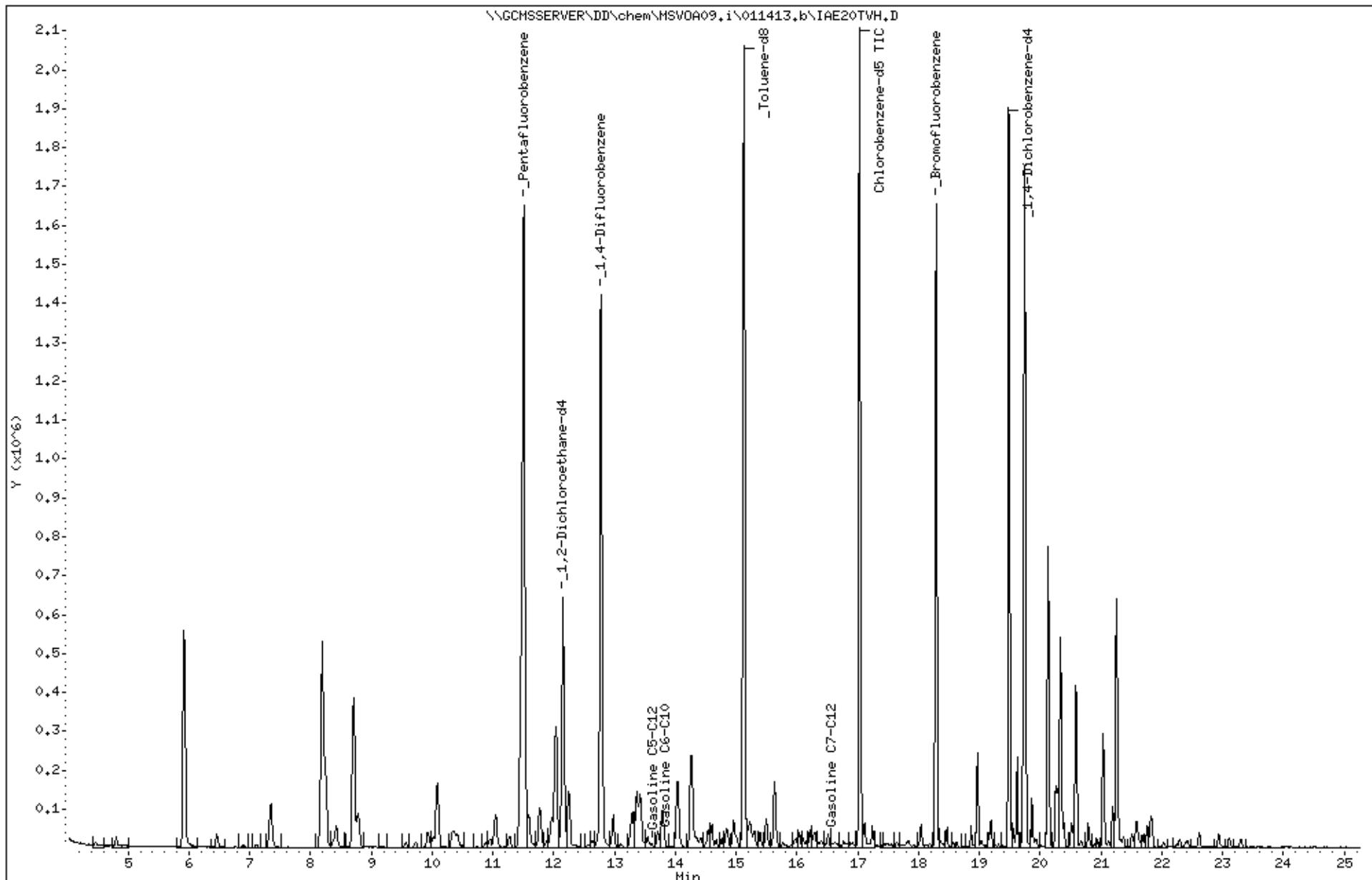
Column phase:



Data File: \\GCHSSERVER\DD\chem\MSV0A09.i\011413.b\IAE20TVH.D  
Date : 14-JAN-2013 19:13  
Client ID: DYNAP&T  
Sample Info: S,242351-013

Instrument: MSV0A09.i  
Operator: VOC  
Column diameter: 2.00

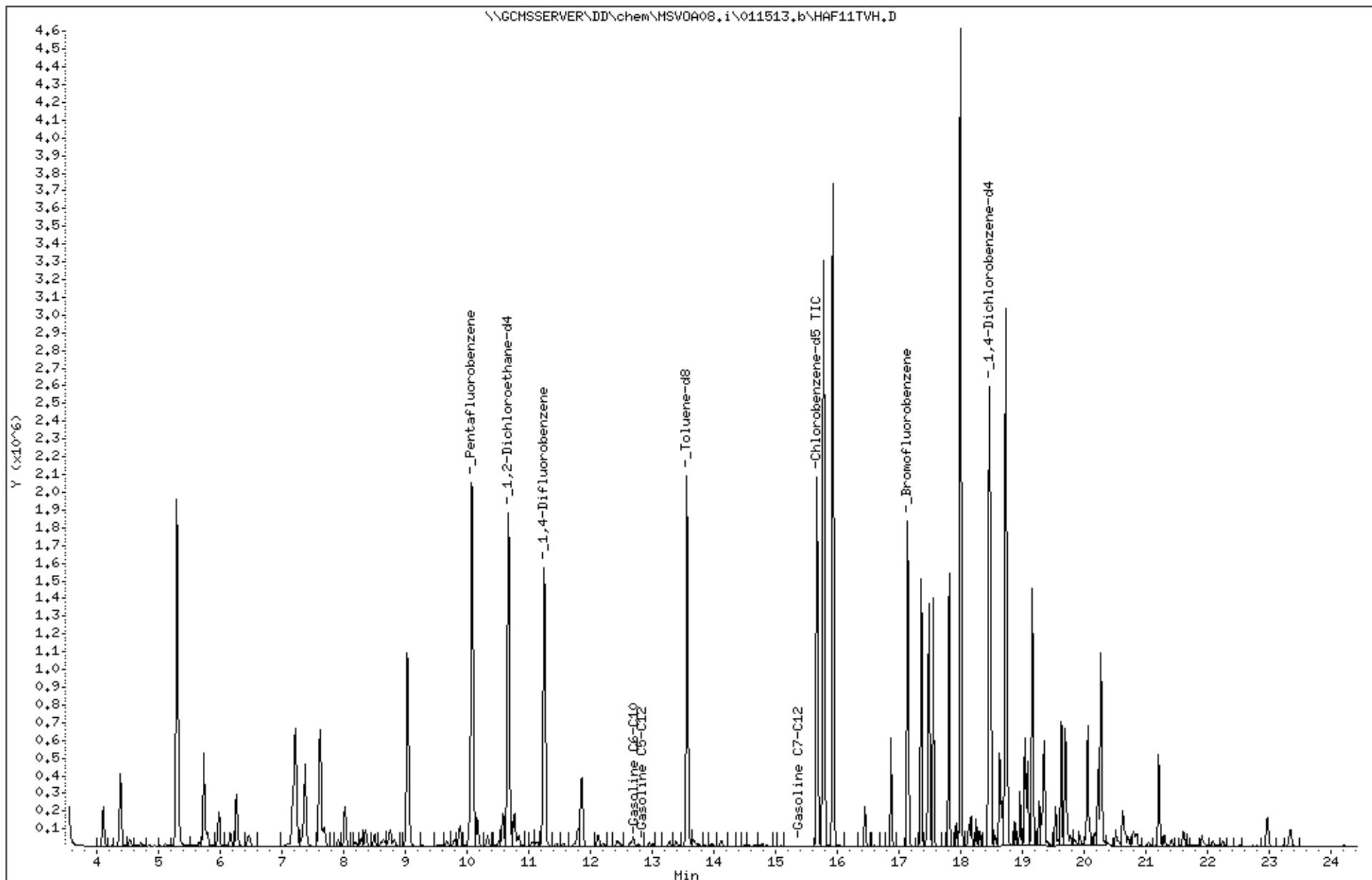
Column phase:



Data File: \\GCHSSERVER\DD\chem\MSV0A08.i\011513.b\HAF11TVH.D  
Date : 15-JAN-2013 15:52  
Client ID: DYNAP&T  
Sample Info: S,242351-014

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

Column phase:



Data File: \\GCHSSERVER\DD\chem\MSV0A08.i\011513.b\HAF06TVH.D  
Date : 15-JAN-2013 12:52  
Client ID: DYNAP&T  
Sample Info: BS, QC673090, 194613, S21242, .01/100

Column phase:

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

