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Alameda County  
Environmental Health

March 7, 2012



Mr. Jerry Wickham  
Alameda County Department of  
Environmental Health  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502-6577

Subject: **Fuel Leak Case#RO0000276**  
Site Located at 2844 Mountain Boulevard, Oakland, California

Dear Mr. Wickham:

SOMA's "First Quarter 2012 Groundwater Monitoring Report" for the subject property has been uploaded to the State's GeoTracker database and Alameda County's FTP site for your review.

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

Sincerely,

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

Mansour Sepehr, Ph.D., PE  
Principal Hydrogeologist

cc: Mr. Tejindar Singh w/enclosure



**First Quarter 2012  
Groundwater Monitoring Report**

**2844 Mountain Boulevard  
Oakland, California**

**March 7, 2012**

**Project 5081**

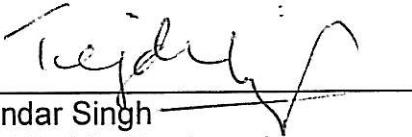
**Prepared for**

**Tejindar Singh  
6400 Dublin Blvd.  
Dublin, California, 94568**

PERJURY STATEMENT

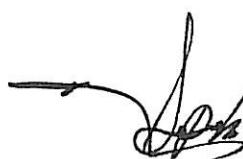
Site Location: 2844 Mountain Boulevard, Oakland, California

"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".

  
\_\_\_\_\_  
Tejinder Singh  
6400 Dublin Boulevard  
Dublin, California 94568  
Responsible Party

## CERTIFICATION

SOMA Environmental Engineering, Inc. has prepared this report on behalf Tejinder Singh, property owner of 2844 Mountain Blvd., Oakland, California, to comply with requirements of the Alameda County Environmental Health Department (ACEH) for the First Quarter 2012 groundwater monitoring event.



Mansour Sepehr, PhD, PE  
Principal Hydrogeologist



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## **1. INTRODUCTION**

SOMA Environmental Engineering, Inc. (SOMA) has prepared this report on behalf of Mr. Tejindar Singh, property owner of 2844 Mountain Blvd., Oakland, California. The site is located east of Highway 13 and west of Joaquin Miller Park (Figure 1). Former underground storage tank (UST) locations and site features are shown in Figure 2.

This report summarizes results of the First Quarter 2012 groundwater monitoring event conducted at the site on February 8, 2012. It includes physical and chemical properties measured in the field for each groundwater sample and laboratory analytical results for groundwater samples.

### **1.1 Previous Activities**

In March 1989 soil contamination was identified during replacement of product lines. Analytical results for a soil sample collected from the southern edge of a premium unleaded tank reported total petroleum hydrocarbons (TPHs) as gasoline (TPH-g) concentration of 8,400 mg/kg. Samples from beneath the lines near the pump islands reported TPH concentrations of less than 100 mg/kg.

In July 1989, contaminated soil was excavated and from the area of the southern end of the premium unleaded UST disposed of. Analysis of 12 soil samples collected from the sides of the excavation reported TPH concentrations ranging between ND to 3,300 mg/kg.

In May 1990, further site investigation including installation of four monitoring wells (RS-1 through RS-4) was conducted. Analysis of soil samples collected above the water table reported TPH concentrations ranging from 1 to 240 mg/kg. Hydrocarbons were detected in groundwater samples collected from all the wells; the highest concentration was found in a sample monitoring well RS-2.

In June 1991 soil vapor extraction began in June 1991. Groundwater remediation began in October 1992. Remediation was suspended in 1992, apparently due to responsible party financial issues.

In April 1994, one 280-gallon waste oil UST was removed with approximately 280 gallons of fluid and rinsate. The site operated as a retail gasoline station. Three USTs, two pump islands and an office/garage building were among the site features. The USTs contained various grades of unleaded gasoline and diesel with storage capacities of 3,000, 4,000, and 10,000 gallons.

In 1996 free product was reported in RS-1.

In July 1998, one 4,000-gallon gasoline UST was excavated and disposed of off-site.

Between July 29 and August 18, 2011, two USTs, one 10,000 gallon and one 3,000 gallon capacity, were excavated and disposed of off-site. The site is currently fenced in, which limits public access to the property.

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

### **1.2.1 Field Activities**

On February 8, 2012, four monitoring wells (RS-1, RS-2, RS-3, and RS-4) were measured for depth to groundwater. Additional field measurements and groundwater samples were collected from all four wells. Properties measured in the field were pH, temperature, and electrical conductivity (EC). This monitoring event was conducted in accordance with procedures and guidelines of Alameda County Environmental Health Department (ACEHD).

Figure 2 shows well locations. Appendix A details groundwater monitoring procedures followed during this event.

Purged groundwater was temporarily stored on-site in a 55-gallon drum.

### **1.2.2 Laboratory Analysis**

Torrent Laboratory, Inc., a California state-certified laboratory, analyzed groundwater samples for the following: TPH-g, and TPH as diesel (TPH-d) and as motor oil (TPH-mo); BTEX (benzene, toluene, ethylbenzene, and total xylenes), and volatile organic compounds (VOCs) (8260 B full list) including gasoline oxygenates. TPH-g, BTEX, and VOC samples were analyzed using EPA Method 8260 and TPH-d and TPH-mo samples were analyzed using EPA Method 8015B.

## **2. RESULTS**

Results of field measurements and laboratory analyses for the groundwater monitoring event conducted on February 8, 2012 follow below.

### **2.1 Field Measurements**

Monitoring wells RS-1 through RS-4 were measured for depth to groundwater (Table 1). Depths ranged from 5.52 feet in RS-2 to 8.11 feet in RS-4. Groundwater elevations ranged from 667.31 feet in RS-4 to 670.51 feet in RS-3.

Figure 3 displays the groundwater elevation contour map. The groundwater flow direction is southwesterly toward RS-4 at a gradient of approximately 0.044 feet/feet. Groundwater flow direction is consistent with the historical flow direction. Appendix B shows field measurements.

## 2.2 Laboratory Analysis

Groundwater analytical data for this monitoring event is shown in Table 1. Appendix C includes the laboratory report and chain of custody form. No measurable floating product was observed during this monitoring event, though, some product globules could be seen in the groundwater sample from RS-4.

Detectable TPH-g ranged from 130 µg/L in RS-3 to 140,000 µg/L in RS-4. Since the previous monitoring event in 1999, TPH-g has increased significantly in RS-4. Figure 4 shows a contour map of TPH-g concentrations in groundwater. The TPH-g plume appears to be centered southeast of the pump islands in the vicinity of RS-4.

TPH-d was below laboratory reporting-limit in RS-3, and detectable concentrations ranged from 6,800 µg/L in RS-2 to 130,000 µg/L in RS-4. Figure 5 shows a contour map of TPH-d concentrations in groundwater. TPH-d plume appears to be centered southeast of the pump islands in the vicinity of RS-4.

TPH-mo was below laboratory-reporting limit in all groundwater samples.

During analytical testing of TPH-g and TPH-d, samples exhibited chromatographic pattern that did not resemble standard. For details of analysis and testing, refer to the laboratory analytical report in Appendix C.

The following BTEX concentrations were observed during this monitoring event:

- Toluene was below laboratory reporting-limit in RS-1 and RS-2.
- Benzene was below laboratory reporting-limit in RS-3. The highest benzene concentration was observed south of the UST cavity in RS-1 at 790 µg/L. Figure 6 shows a contour map of benzene concentrations in groundwater.
- The highest concentrations of toluene, ethylbenzene, and total xylenes were detected in RS-4 at 2,600 µg/L, 4,700 µg/L, and 28,200 µg/L respectively. Since the previous monitoring event in 1999, BTEX concentrations have increased significantly in RS-4.

Methyl tertiary-butyl ether (MtBE) was detected in concentrations ranging from 7.9 µg/L in RS-3 to 65,000 µg/L in RS-1. Since the previous monitoring event in 1999, MtBE has increase significantly in RS-4 and decreased significantly in RS-2 and RS-3. Figure 7 shows a contour map of MtBE concentrations in

groundwater. The MtBE plume appears to be centered south of the UST cavity around RS-1. High MtBE concentrations were also detected in the southeast corner of pump islands around RS-4.

Tertiary-butyl alcohol (TBA) was below laboratory reporting-limit in RS-3 and was detected in concentrations ranging from 41,000 µg/L in RS-1 to 100,000 µg/L in RS-4. Figure 8 shows a contour map of TBA concentrations in groundwater. The highest TBA concentrations were detected in the southeast corner of the pump islands around RS-4.

Tertiary amyl methyl ether (TAME) was below laboratory reporting-limit in RS-3 and was detected in concentrations ranging from 420 µg/L in RS-2 to 5,100 µg/L in RS-1. Figure 9 shows a contour map of TAME concentrations in groundwater. The highest TAME concentrations were detected south of the UST cavity around RS-1.

A few additional VOCs were detected in concentrations ranging from 0.72 µg/L to 7,600 µg/L. Refer to laboratory analytical report in Appendix C and Table 2 for detections of additional VOCs.

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

Conclusions and recommendations based on results of First Quarter 2012 groundwater monitoring are summarized below.

- In general, the groundwater flow direction is southwesterly at a gradient of 0.044 feet/feet.
- No free/floating product was observed in any monitoring wells during this monitoring event.
- Since the previous monitoring event in 1999, all contaminant concentrations have increased significantly in RS-4. The highest TPH-g, TPH-d, and TBA concentrations were detected to the southeast of pump islands in RS-4.
- The highest MtBE, TAME, and benzene concentrations were detected south of the UST cavity around RS-1.
- The contaminant plume does not concur with the groundwater flow direction as illustrated in Figures 4 through 9. This incoherence is due to data insufficiency and will be evaluated during the upcoming site investigation as mentioned below.
- SOMA recommends conducting quarterly groundwater monitoring events at the site.

SOMA is currently scheduling field activities for conducting a site investigation and preparing a source removal plan, as requested by ACEHD directive dated November 28, 2011.

#### **4. REPORT LIMITATIONS**

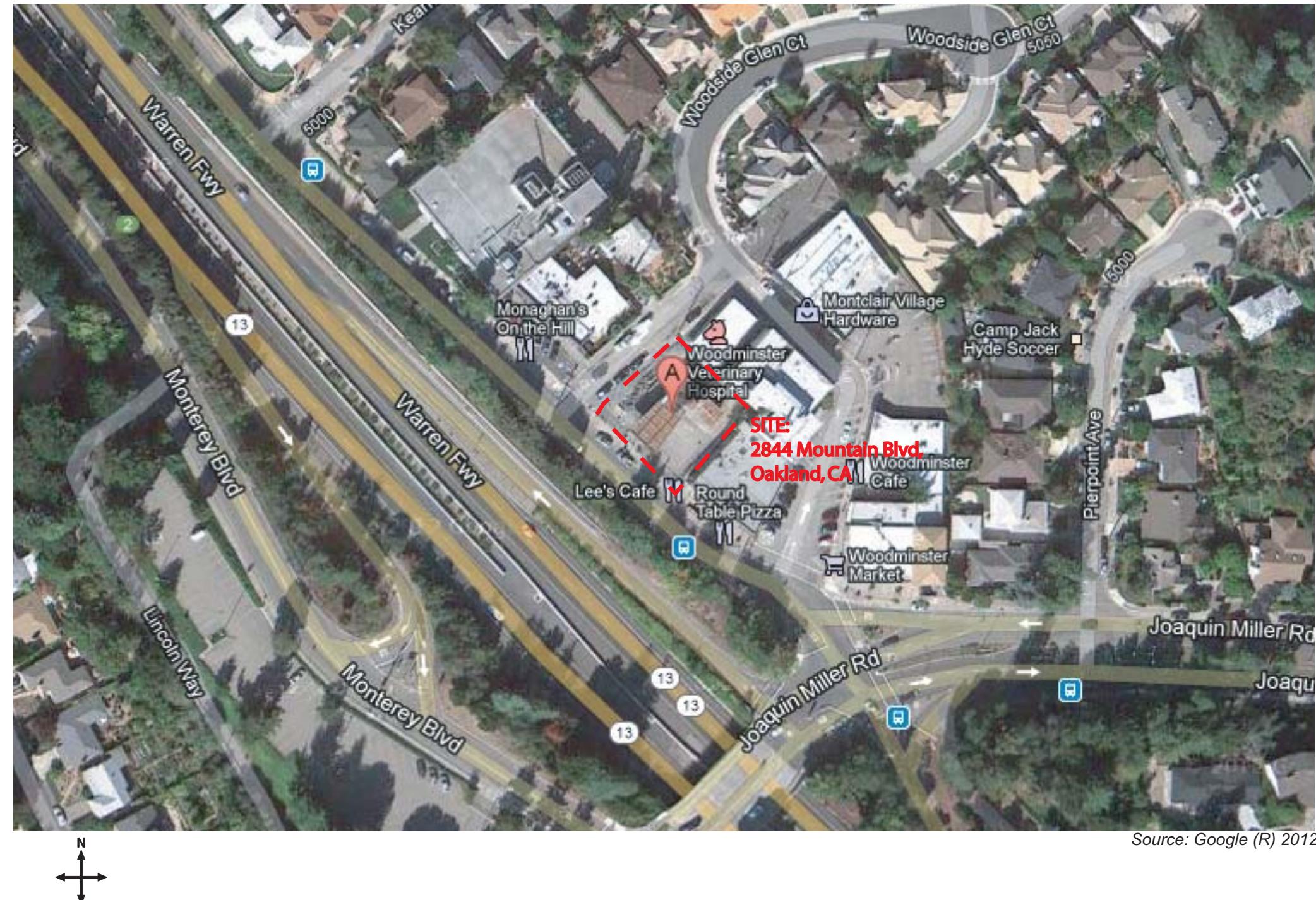
This report is the summary of work done by SOMA, including observations and descriptions of site conditions. It includes analytical results produced by Torrent Laboratory, Inc. for the current groundwater monitoring event. Quantities and locations of wells were selected to provide the required information,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

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

# **Figures**

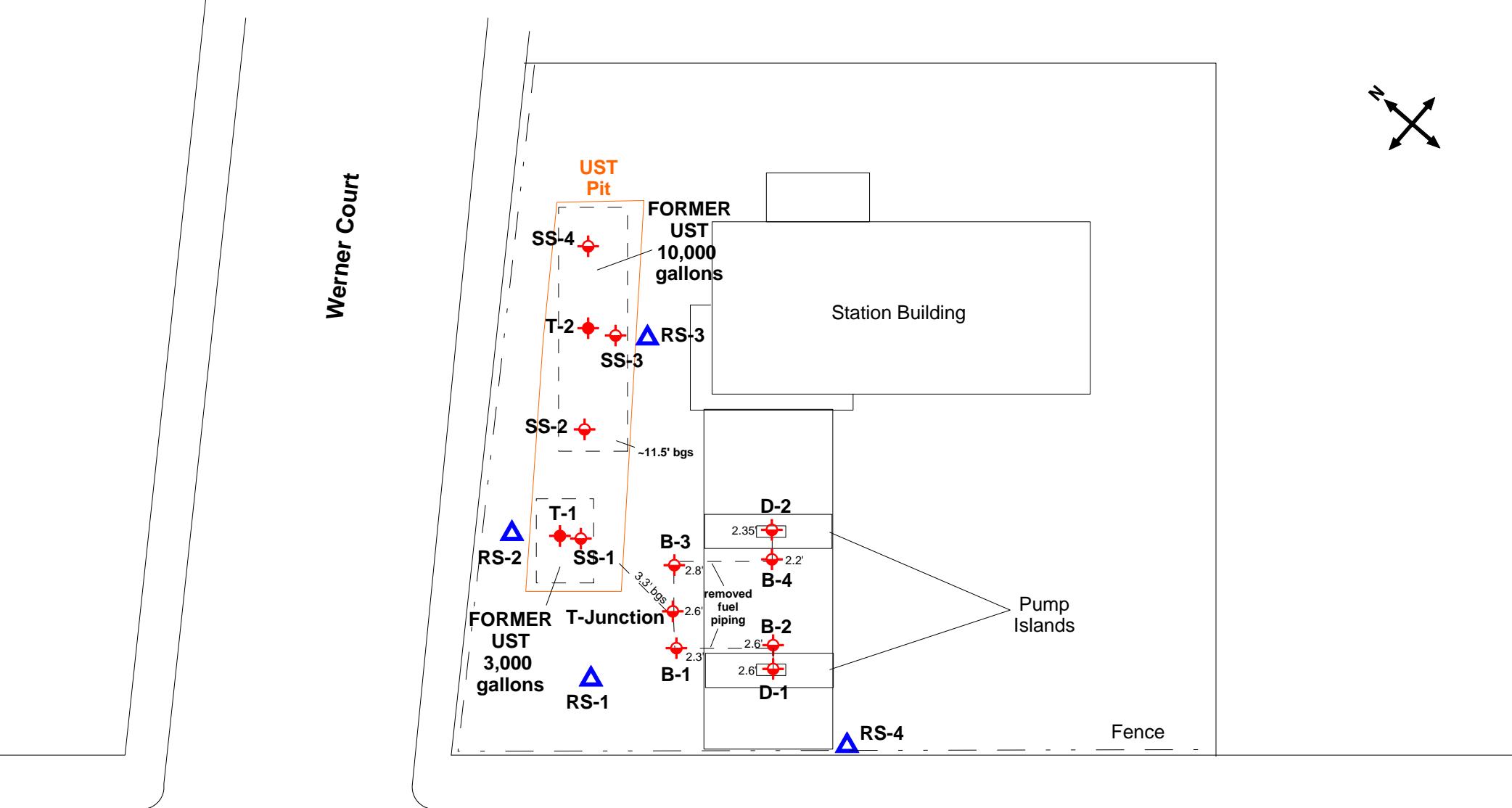
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First Quarter 2012 Groundwater Monitoring Event



approximate scale in feet  
0 100 200

Figure 1: Site Vicinity Map

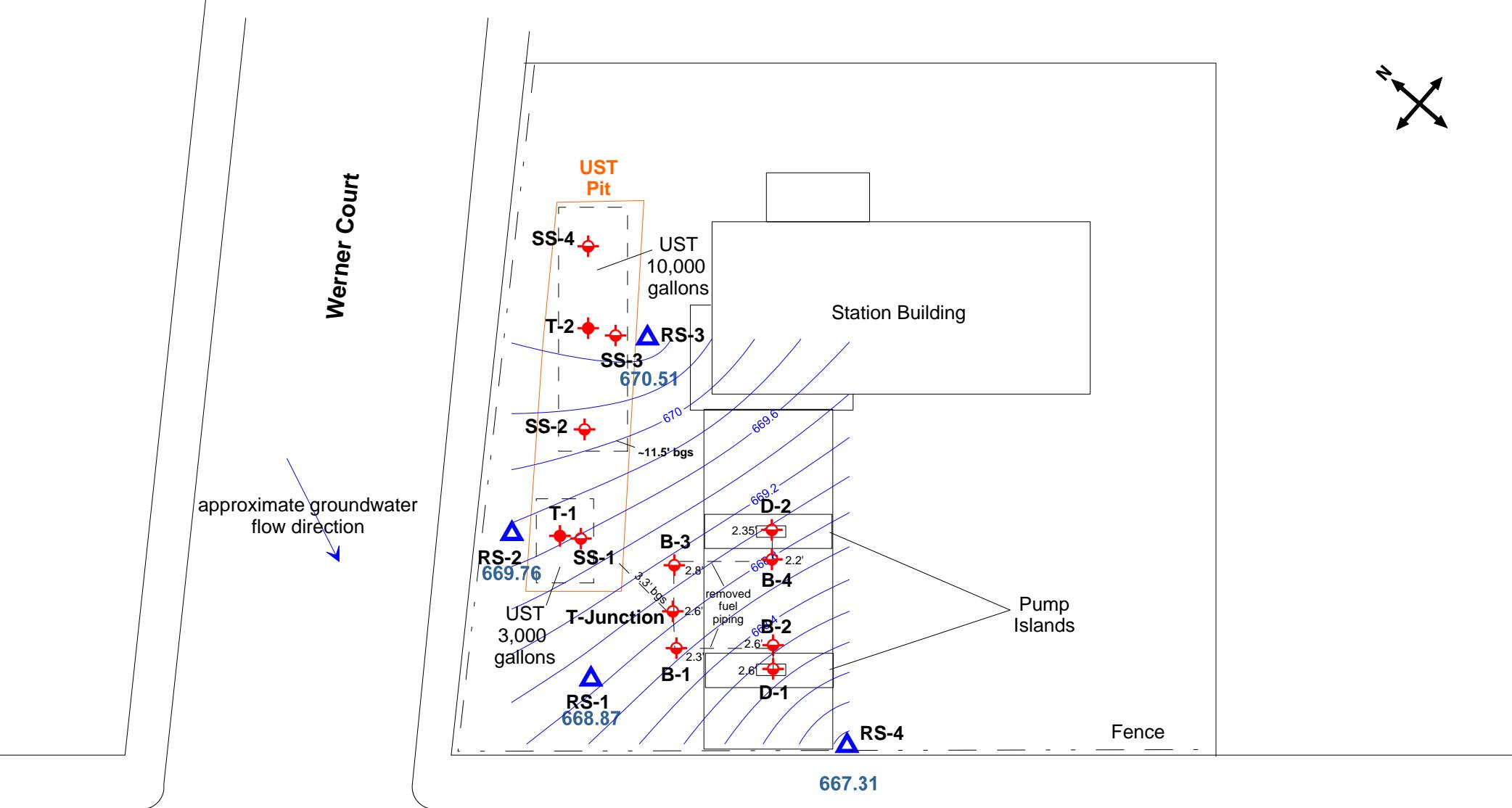


- ▲ Groundwater monitoring wells installed in 1990
- ◆ Confirmation soil samples
- ◆ Confirmation groundwater samples

Mountain Boulevard

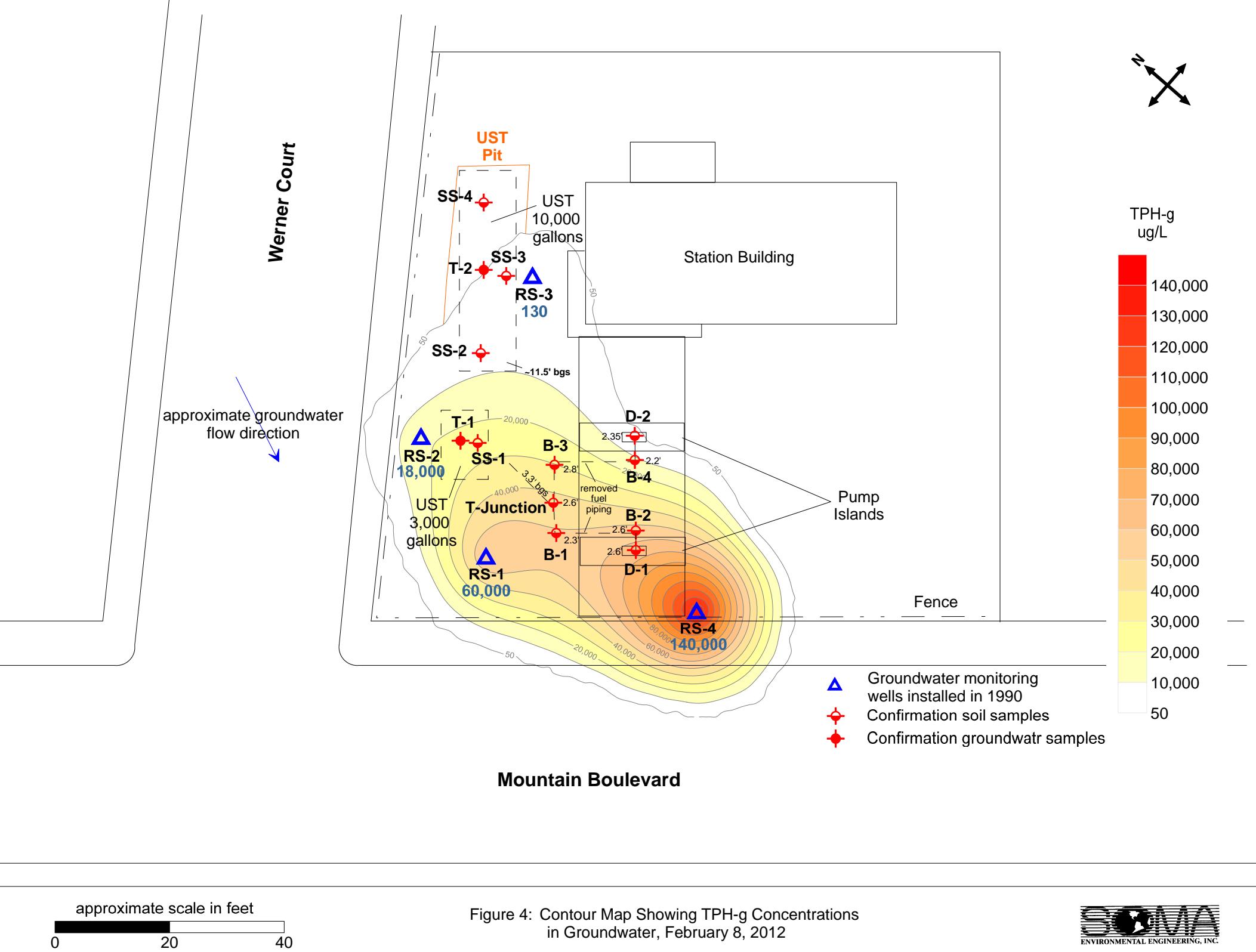
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0 20 40

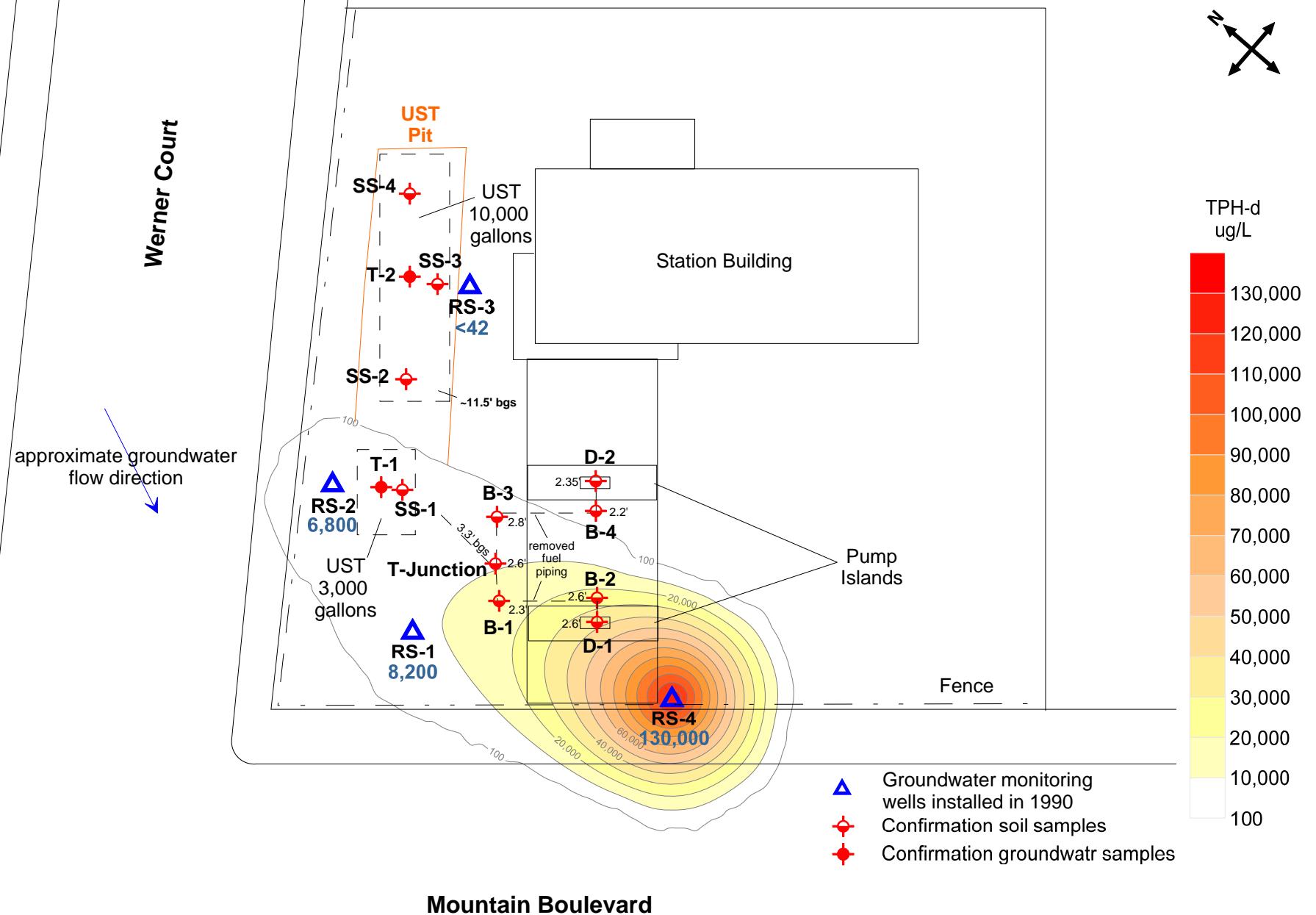
Figure 2: Site map showing location of former USTs, Soil Borings, soil and Groundwater Monitoring Wells



- ▲ Groundwater monitoring wells installed in 1990
- ◆ Confirmation soil samples
- ◆ Confirmation groundwater samples

Figure 3: Groundwater Elevation Contour Map in Feet, February 8, 2012



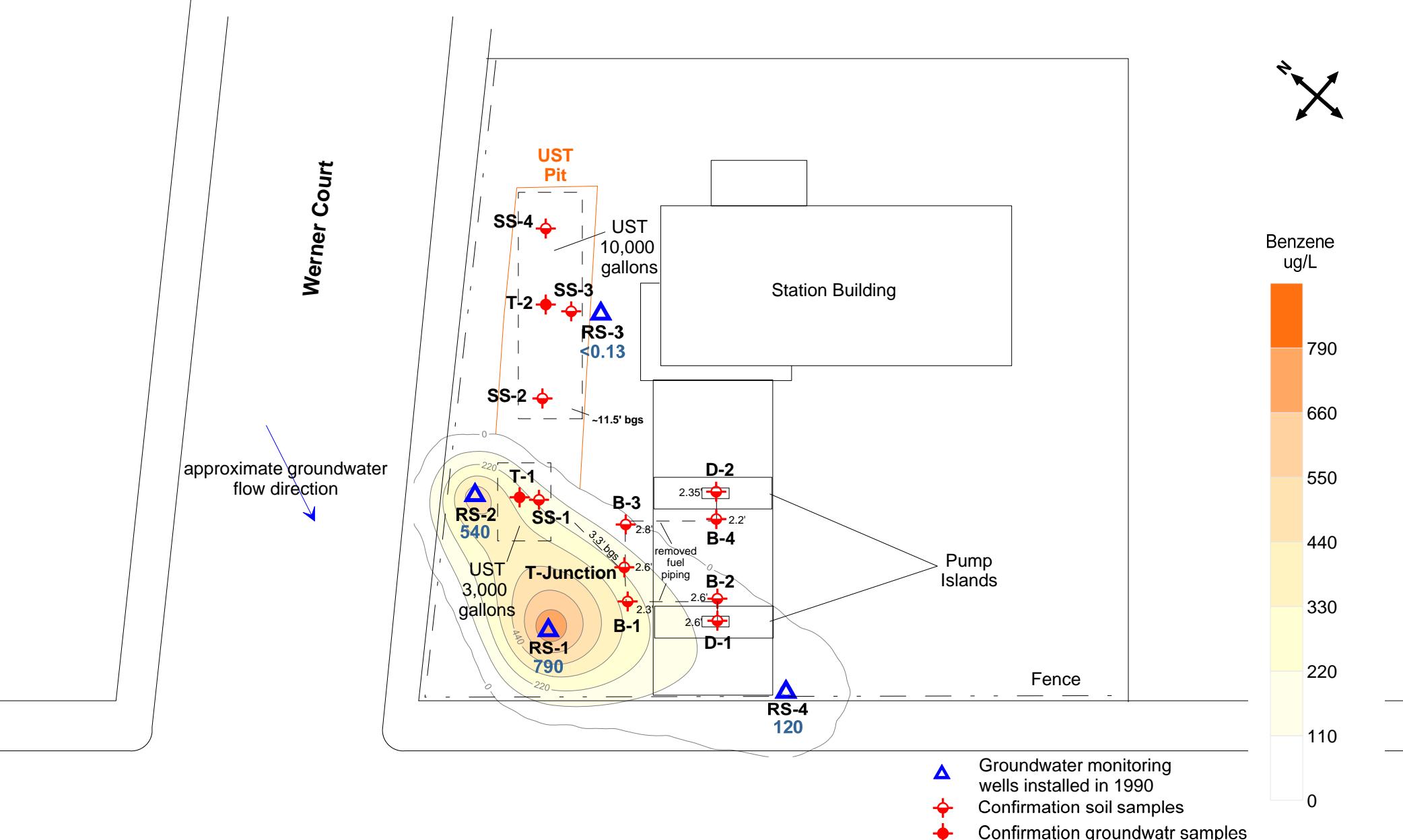


approximate scale in feet

A horizontal scale bar with numerical markings at 0, 20, and 40. The segment between 0 and 20 is filled with black, while the segments beyond 0 and beyond 40 are white.

Figure 5: Contour Map Showing TPH-d Concentrations in Groundwater, February 8, 2012





approximate scale in feet

A horizontal scale bar consisting of a thin black line with three numerical labels: '0' at the left end, '20' in the middle, and '40' at the right end.

Figure 6: Contour Map Showing benzene Concentrations in Groundwater, February 8, 2012



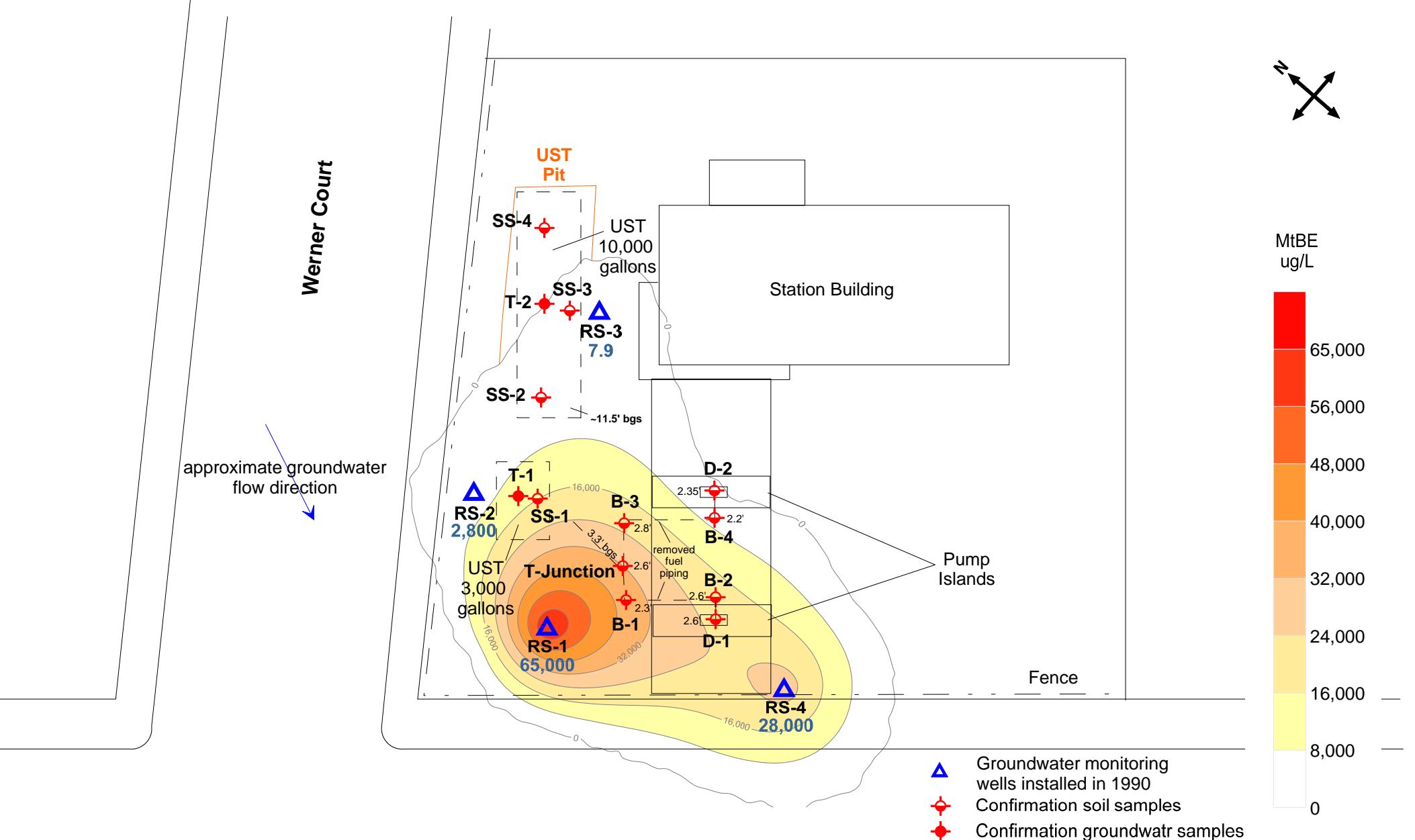


Figure 7: Contour Map Showing MtBE Concentrations in Groundwater, February 8, 2012

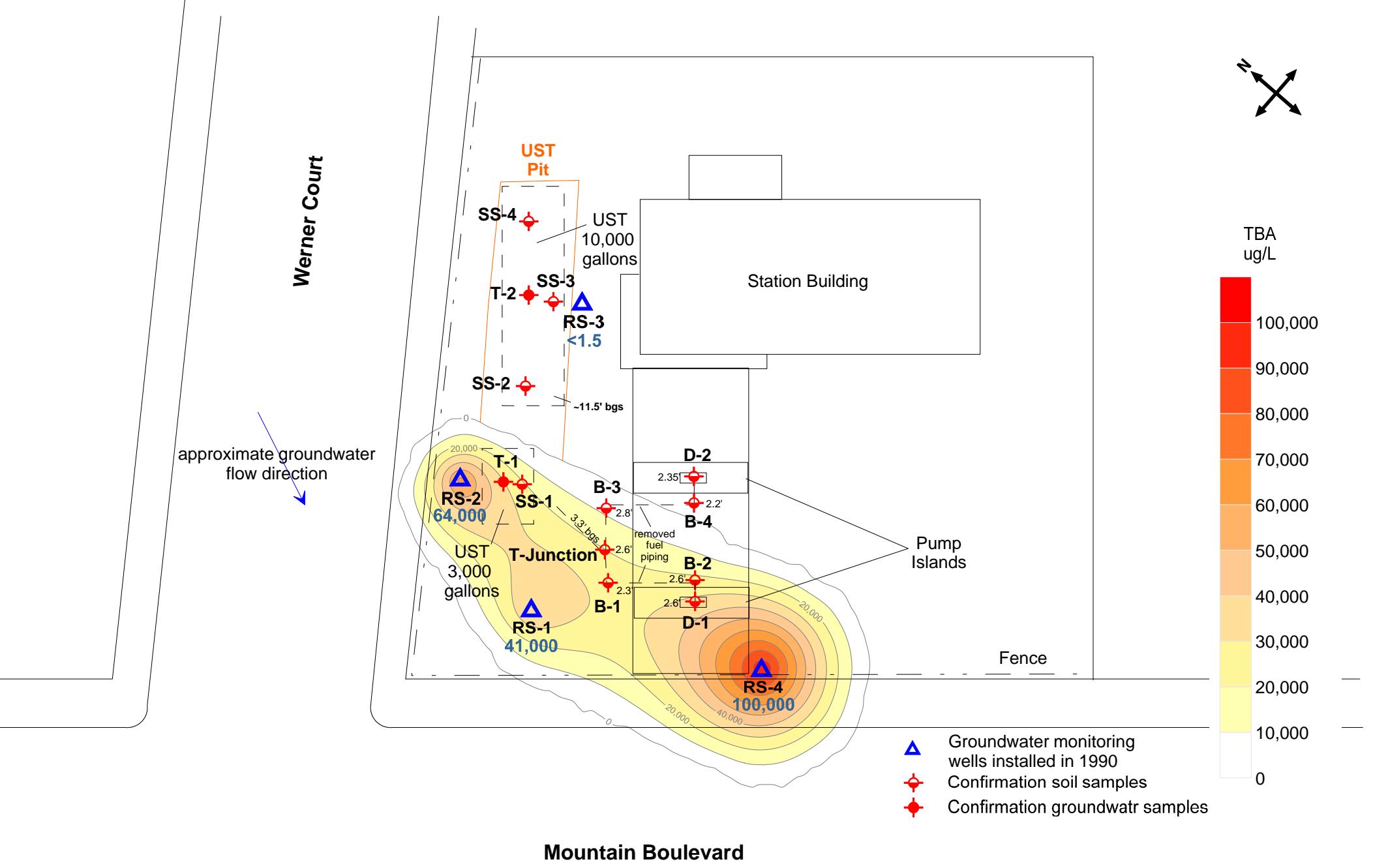


Figure 8: Contour Map Showing TBA Concentrations in Groundwater, February 8, 2012

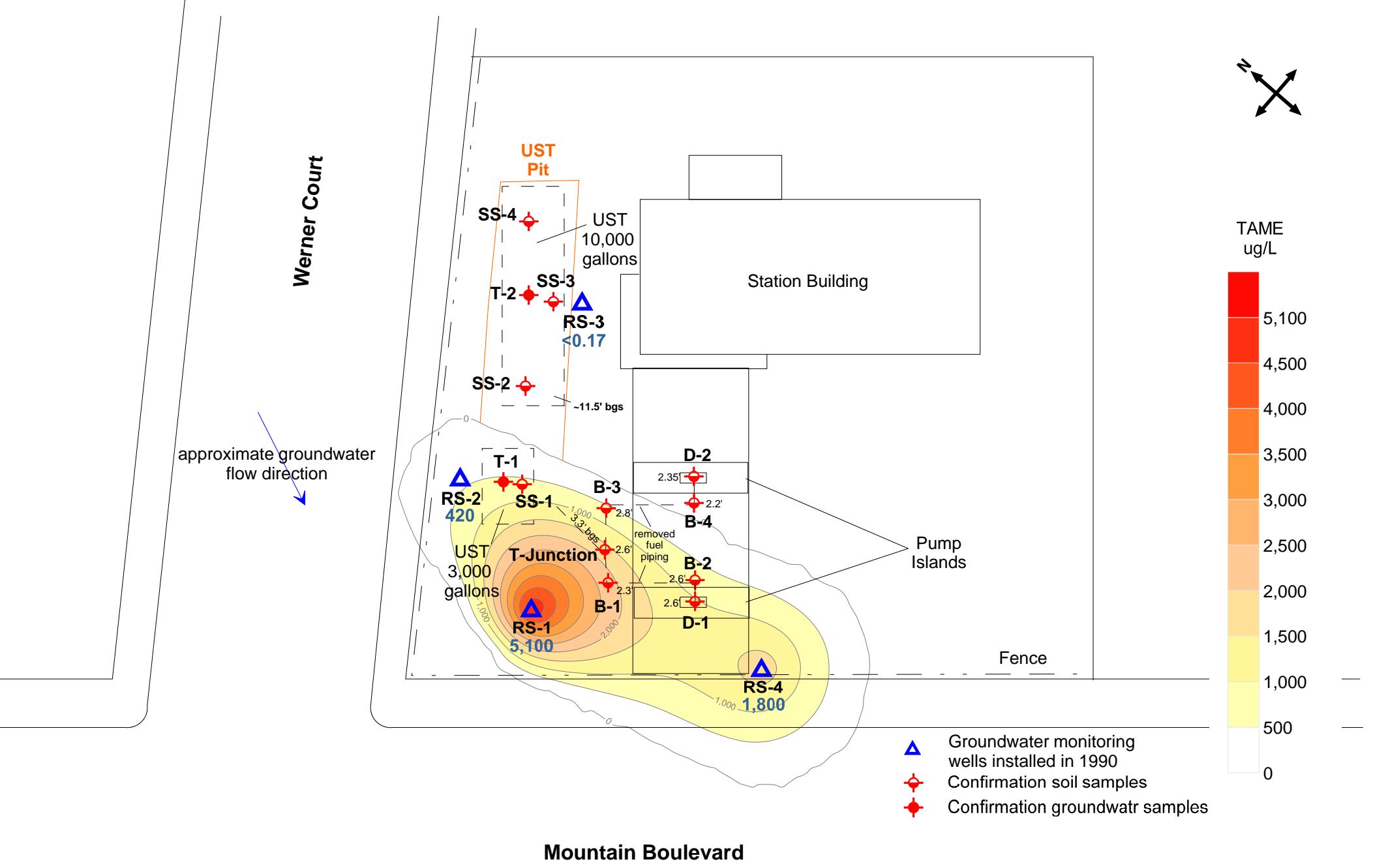


Figure 9: Contour Map Showing TAME Concentrations in Groundwater, February 8, 2012

# **Tables**

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First Quarter 2012 Groundwater Monitoring Event

**Table 1**  
**Groundwater Analytical Results**  
**2844 Mountain Boulevard, Oakland, CA**

Monitoring Well	Date	Casing Elevation (Ft.)	Depth to Top Fluid (Ft.)	Depth to Groundwater (Ft.)	Free-Product Thickness	Groundwater Elevation	TPH-g µg/L	TPH-d µg/L	TPH-mo µg/L	Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Xylenes µg/L	MtBE µg/L	TBA µg/L	TAME µg/L
RS-1	May-90	675.63	7.20	7.20	0.00	668.43	2,700			370	420	40	320			
	May-91	675.63	8.35	8.35	0.00	667.28	1,300			580	130	62	240			
	Oct-91	675.63	10.22	10.22	0.00	665.41	1,100			140	100	45	210			
	Jan-92	675.63	8.06	8.06	0.00	667.57	1,700			9.9	31	9.7	170			
	Jan-93	675.63	5.30	5.30	0.00	670.33	3,700			650	9.2	51	170			
	Aug-93	675.63	8.56	8.56	0.00	667.07	900			14	0.6	2.1	8			
	Nov-93	675.63	8.44	8.44	0.00	667.19	1,400			9.6	ND	0.9	5			
	Jan-94	675.63	6.88	6.88	0.00	668.75	4,200			95	3.1	58	130			
	May-94	675.63	7.87	7.87	0.00	667.76	7,500			270	11	37	96			
	Aug-94	675.63	16.28	16.28	0.00	659.35	130			12	0.5	2.6	5			
	Nov-94	675.63	8.02	8.02	0.00	667.61	270			4.7	0.7	0.6	15			
	Feb-95	675.63	6.51	6.51	0.00	669.12	12,000			81	2.3	1	12			
	Jun-95	675.63	7.34	7.34	0.00	668.29	37,000			460	ND	ND	ND	63,000		
	Nov-95	675.63	8.71	8.71	0.00	666.92	ND			660	16	140	330	31,000		
	Feb-96	675.63	6.95	6.95	0.00	668.68	66,000			110	ND	12	21	84,000		
	9/18/1996	675.63	8.44	8.52	0.08	667.17	1 INCH FLOATING PRODUCT									
	12/11/1996	675.63	6.42	6.62	0.20	669.17	79,000			4,000	37,000	8,000	45,000	220,000		
	2/21/1997	675.63	6.88	6.92	0.04	668.74	1/2 INCH FLOATING PRODUCT									
	5/28/1997	675.63	7.88	7.96	0.08	667.73	156,000			9,400	51,000	7,000	45,000	112,000		
	9/2/1997	675.63	8.34	8.38	0.04	667.28	1/2 INCH FLOATING PRODUCT									
	11/24/1997	675.63	6.98	7.00	0.02	668.65	1/4 INCH FLOATING PRODUCT									
	2/25/1998	675.63	3.51	3.52	0.01	672.12	1/8 INCH FLOATING PRODUCT									
	5/27/1998	675.63	7.31	7.31	0.00	668.32	40,000			2,200	4,000	2,300	19,000	350,000		
	9/16/1998	675.63	8.10	8.10	0.00	667.53	62,000			2,400	2,300	2,100	14,000	250,000		
	11/23/1998	675.63	7.10	7.10	0.00	668.53	99,000			2,600	5,800	2,500	18,000	130,000		
	2/23/1999	675.67	4.82	4.87	0.05	670.84	5/8 INCH FLOATING PRODUCT									
	5/5/1999	675.67	6.86	6.90	0.04	668.80	FLOATING PRODUCT									
	8/24/1999	675.67	7.87	7.90	0.03	667.80	FLOATING PRODUCT									
	<b>2/8/2012</b>	<b>675.67</b>	<b>6.80</b>	<b>6.80</b>	<b>0.00</b>	<b>668.87</b>	<b>60,000 x</b>	<b>8,200 x</b>	<b>&lt;936</b>	<b>790</b>	<b>&lt;6.4</b>	<b>2,000</b>	<b>430</b>	<b>65,000</b>	<b>41,000</b>	<b>5,100</b>
RS-2	May-90	689.00	7.06	7.06	0.00	681.94	23,000			7,200	4,800	300	3,300			
	May-91	689.00	7.14	7.14	0.00	681.86	26,000			14,000	1,800	750	2,900			
	Oct-91	688.89	8.84	8.84	0.00	680.05	13,000			4,300	910	300	2,300			
	Jan-92	688.89	7.34	7.34	0.00	681.55	8,300			1,800	920	140	1,700			
	Jan-93	688.89	4.10	4.10	0.00	684.79	41,000			7,000	210	1,200	4,200			
	Aug-93	688.89	7.32	7.32	0.00	681.57	19,000			5,300	62	810	1,600			
	Nov-93	688.89	7.34	7.34	0.00	681.55	9,300			2,400	3.90	46	800			
	Jan-94	688.89	5.52	5.52	0.00	683.37	30,000			4,900	ND	880	2,600			
	May-94	675.25	6.40	6.40	0.00	668.85	120,000			3,300	330	ND	2,200			
	Aug-94	675.25	22.11	22.11	0.00	653.14	510			7.30	3.80	3.50	32			
	Nov-94	675.25	9.82	9.82	0.00	665.43	620			6.60	3.90	1.10	47			
	Feb-95	675.25	4.81	4.81	0.00	670.44	22,000			228	80	2	463			
	Jun-95	675.25	5.80	5.80	0.00	669.45	49,000			1,300	160	200	1,600	71,000		
	Nov-95	675.25	7.64	7.64	0.00	667.61	ND			670	25	150	360	65,000		

**Table 1**  
**Groundwater Analytical Results**  
**2844 Mountain Boulevard, Oakland, CA**

Monitoring Well	Date	Casing Elevation (Ft.)	Depth to Top Fluid (Ft.)	Depth to Groundwater (Ft.)	Free-Product Thickness	Groundwater Elevation	TPH-g µg/L	TPH-d µg/L	TPH-mo µg/L	Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Xylenes µg/L	MtBE µg/L	TBA µg/L	TAME µg/L
RS-2 cont.	Feb-96	675.25	4.69	4.69	0.00	670.56	75,000			1,400	170	59	460	71,000		
	9/18/1996	675.25	7.34	7.34	0.00	667.91	6,300			2,000	48	350	570	160,000		
	12/11/1996	675.25	5.08	5.08	0.00	670.17	16,000			2,000	840	200	3,200	180,000		
	2/21/1997	675.25	5.42	5.42	0.00	669.83	22,000			2,100	1,300	600	5,100	56,000		
	5/28/1997	675.25	6.40	6.40	0.00	668.85	156,000			4,200	89	1,000	6,900	390,000		
	9/2/1997	675.25	6.93	6.93	0.00	668.32	<50			1,300	25	360	1,400	180,000		
	11/24/1997	675.25	5.93	5.93	0.00	669.32	<50			600	ND	ND	ND	610,000		
	2/25/1998	675.25	4.59	4.59	0.00	670.66	11,000			1,100	<50	320	2,400	330,000		
	5/27/1998	675.25	5.61	5.61	0.00	669.64	13,000			2,000	150	600	2,700	380,000		
	9/16/1998	675.25	6.84	6.84	0.00	668.41	11,000			1,600	20	1,600	1,600	280,000		
	11/23/1998	675.25	6.24	6.24	0.00	669.01	12,000			1,200	84	<5	960	140,000		
	2/23/1999	675.28	4.62	4.62	0.00	670.66	8,800			1,500	650	640	1,500	450,000		
	5/5/1999	675.28	7.55	7.55	0.00	667.73	29,000			2,000	1,300	500	3,700	270,000		
	8/24/1999	675.28	6.62	6.62	0.00	668.66	12,000			1,900	20	370	980	340,000		
	2/8/2012	675.28	5.52	5.52	0.00	669.76	18,000 x	6,800 x	<378	540	<6.4	120	710	2,800	64,000	420
RS-3	May-90	670.00	6.00	6.00	0.00	664.00	330			2	1	1	150			
	May-91	670.00	6.76	6.76	0.00	663.24	ND			0.40	ND	0.80	8			
	Oct-91	670.00	8.98	8.98	0.00	661.02	ND			ND	ND	ND	ND			
	Jan-92	670.00	6.81	6.81	0.00	663.19	ND			2.20	7.20	0.60	4			
	Jan-93	670.00	4.05	4.05	0.00	665.95	ND			ND	ND	ND	ND			
	Aug-93	670.00	7.19	7.19	0.00	662.81	ND			30	6	2.40	5			
	Nov-93	670.00	7.12	7.12	0.00	662.88	ND			4.80	0.40	0.60	2			
	Jan-94	670.00	5.42	5.42	0.00	664.58	330			25	3.20	3.90	12			
	May-94	676.20	5.78	5.78	0.00	670.42	670			34	4	28	70			
	Aug-94	676.20	5.86	5.86	0.00	670.34	ND			ND	ND	ND	ND			
	Nov-94	676.20	5.08	5.08	0.00	671.12	69			2.50	3.10	1	4			
	Feb-95	676.20	4.51	4.51	0.00	671.69	ND			0.30	0.40	ND	1			
	Jun-95	676.20	5.29	5.29	0.00	670.91	ND			ND	ND	ND	ND	66		
	Nov-95	676.20	7.10	7.10	0.00	669.10	ND			ND	ND	ND	ND	44		
	Feb-96	676.20	4.48	4.48	0.00	671.72	120			ND	ND	ND	ND	110		
	9/18/1996	676.20	6.92	6.92	0.00	669.28	1,000			13	8.60	10	17	33		
	12/11/1996	676.20	4.90	4.90	0.00	671.30	85			20	2	<0.5	14	4,700		
	2/21/1997	676.20	4.94	4.94	0.00	671.26	120			5	2	2	6	850		
	5/28/1997	676.20	7.92	7.92	0.00	668.28	<50			6	<0.5	<0.5	<2	2,400		
	9/2/1997	676.20	6.60	6.60	0.00	669.60	<50			0.90	<0.5	<0.5	<2	8,600		
	11/24/1997	676.20	5.89	5.89	0.00	670.31	140			13	2	1	12	3,600		
	2/25/1998	676.20	4.29	4.29	0.00	671.91	<50			<0.5	<0.5	<0.5	4	850		
	5/27/1998	676.20	5.01	5.01	0.00	671.19	<50			7	<0.5	<0.5	11	940		
	9/16/1998	676.20	6.21	6.21	0.00	669.99	<50			2	2	2	10	670		
	11/24/1998	676.20	5.58	5.58	0.00	670.62	85			9	23	<0.5	19	180		

**Table 1**  
**Groundwater Analytical Results**  
**2844 Mountain Boulevard, Oakland, CA**

Monitoring Well	Date	Casing Elevation (Ft.)	Depth to Top Fluid (Ft.)	Depth to Groundwater (Ft.)	Free-Product Thickness	Groundwater Elevation	TPH-g µg/L	TPH-d µg/L	TPH-mo µg/L	Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Xylenes µg/L	MtBE µg/L	TBA µg/L	TAME µg/L	
RS-3 cont.	2/24/1999	676.23	4.30	4.30	0.00	671.93	<50			<0.5	0.90	<0.5	<1.0	150			
	5/5/1999	676.23	4.92	4.92	0.00	671.31	<50			1	2	1	6	130			
	8/24/1999	676.23	6.64	6.64	0.00	669.59	80			0.80	<0.5	0.60	<1	300			
	<b>2/8/2012</b>	<b>676.23</b>	<b>5.72</b>	<b>5.72</b>	<b>0.00</b>	<b>670.51</b>	<b>130 x</b>	<b>&lt;42</b>	<b>&lt;94</b>	<b>&lt;0.13</b>	<b>0.59</b>	<b>2.90</b>	<b>18.1</b>	<b>7.9</b>	<b>&lt;1.5</b>	<b>&lt;0.17</b>	
<b>RS-4</b>	May-90	675.38	8.34	8.34	0.00	667.04	440			9	11	9	49				
	May-91	675.38	9.50	9.50	0.00	665.88	ND			8	4	3	5				
	Oct-91	675.38	10.82	10.82	0.00	664.56	830			280	120	24	170				
	Jan-92	675.38	9.31	9.31	0.00	666.07	620			34	8.30	2.10	21				
	Jan-93	675.38	6.89	6.89	0.00	668.49	150			32	1.70	5.80	13				
	Aug-93	675.38	9.68	9.68	0.00	665.70	ND			0.90	0.70	ND	0				
	Nov-93	675.38	9.83	9.83	0.00	665.55	ND			ND	ND	ND	ND				
	Jan-94	675.38	8.17	8.17	0.00	667.21	ND			1.70	ND	0.81	2				
	May-94	675.38	8.69	8.69	0.00	666.69	ND			ND	ND	ND	1				
	Aug-94	675.38	9.04	9.04	0.00	666.34	420			6.50	4.10	1.90	40				
	Nov-94	675.38	8.00	8.00	0.00	667.38	130			4.10	0.70	1.70	8				
	Feb-95	675.38	7.93	7.93	0.00	667.45	ND			6	1.20	3.50	13				
	Jun-95	675.38	8.61	8.61	0.00	666.77	ND			ND	ND	ND	ND	69			
	Nov-95	675.38	10.43	10.43	0.00	664.95	ND			ND	ND	ND	ND	47			
	Feb-96	675.38	7.44	7.44	0.00	667.94	960			ND	ND	ND	ND	80			
	9/18/1996	675.38	9.58	9.58	0.00	665.80	<50			<0.5	<0.5	<0.5	<2	200			
	12/11/1996	675.38	7.50	7.50	0.00	667.88	75			<0.5	0.60	<0.5	<0.5	104			
	2/21/1997	675.38	8.26	8.26	0.00	667.12	<50			1	1	<0.5	1	190			
	5/28/1997	675.38	8.92	8.92	0.00	666.46	<50			6	<0.5	<0.5	<2	110			
	9/2/1997	675.38	9.39	9.39	0.00	665.99	100			3	<0.5	<0.5	<2	39			
	11/24/1997	675.38	8.22	8.22	0.00	667.16	41			<0.5	2	<0.5	<2	210			
	2/25/1998	675.38	7.19	7.19	0.00	668.19	<50			3	<0.5	<0.5	<1	5,600			
	5/27/1998	675.38	8.40	8.40	0.00	666.98	<50			<0.5	<0.5	<0.5	<1	2,400			
	9/16/1998	675.38	9.26	9.26	0.00	666.12	<50			<0.5	<0.5	<0.5	<1	230			
	11/24/1998	675.38	8.50	8.50	0.00	666.88	<50			2	<0.5	<0.5	<1	100			
	2/24/1999	675.42	7.20	7.20	0.00	668.22	<50			2	3	0.80	5	670			
	5/5/1999	675.42	8.37	8.37	0.00	667.05	100			<0.5	<0.5	<0.5	<1	440			
	8/24/1999	675.42	8.36	8.36	0.00	667.06	<50			<0.5	<0.5	<0.5	<1	<500			
	<b>2/8/2012</b>	<b>675.42</b>	<b>8.11</b>	<b>8.11</b>	<b>0.00</b>	<b>667.31</b>	<b>140,000</b>	<b>130,000 x</b>	<b>&lt;9,360</b>	<b>120</b>	<b>2,600</b>	<b>4,700</b>	<b>28,200</b>	<b>28,000</b>	<b>100,000</b>	<b>1,800</b>	
ESLs (µg/L)	Groundwater							100	100	100	1.00	40	30	20	5.00	12	NL
	Vapor Intrusion							Use soil gas	Use soil gas	Use soil gas	540	380,000	170,000	160,000	24,000	Use soil gas	NL

**Table 1**  
**Groundwater Analytical Results**  
**2844 Mountain Boulevard, Oakland, CA**

Monitoring Well	Date	Casing Elevation (Ft.)	Depth to Top Fluid (Ft.)	Depth to Groundwater (Ft.)	Free-Product Thickness	Groundwater Elevation	TPH-g µg/L	TPH-d µg/L	TPH-mo µg/L	Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Xylenes µg/L	MtBE µg/L	TBA µg/L	TAME µg/L
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Note:

< : Below Laboratory Reporting Limit (Method Detection Limit)

x : Does not match pattern of reference Gasoline standard/ Not typical of diesel standard pattern (possibly fuel lighter than diesel)

ESL: Environmental Screening Level by California Regional Water Quality Control Board San Francisco Bay Region Interim Final

revised May 2008 (Table-F1a, groundwater is a current or potential drinking water source)

NL: Not Listed

**Table 2**  
**Additional VOC Detections**  
**2844 Mountain Boulevard, Oakland, CA**

Monitoring Well	Date	Isopropylbenzene µg/L	n-Propylbenzene µg/L	1,3,5-Trimethylbenzene µg/L	1,2,4-Trimethylbenzene µg/L	p-Isopropyltoluene µg/L	n-Butylbenzene µg/L	Naphthalene µg/L
RS-1	2/8/2012	110	340	97	600	<4.1	25	460
RS-2	2/8/2012	56	130	340	800	<4.1	<3.6	200
RS-3	2/8/2012	<0.097	0.85	4.3	13	<0.093	<0.081	0.72
RS-4	2/8/2012	290	880	2,700	7,600	130	110	290

Note:

< : Below Laboratory Reporting Limit (Method Detection Limit)

# **Appendix A**

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

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First Quarter 2012 Groundwater Monitoring Event

# **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 and TPH-mo 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**

## **Field Measurements of Physical and Chemical Parameters of the Groundwater Samples**

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First Quarter 2012 Groundwater Monitoring Event



## ENVIRONMENTAL ENGINEERING, INC

Well No.: RS-1  
Casing Diameter: 4 inches  
Depth of Well: 29.87 feet  
Top of Casing Elevation: 675.67 feet  
Depth to Groundwater: 6.80 feet  
Groundwater Elevation: 668.87 feet  
Water Column Height: 23.07 feet  
Purged Volume: 12 gallons

Project No.: 5081  
Address: 2844 Mountain Blvd.  
Oakland, CA  
Date: February 8, 2012  
Sampler: Lizzie Hightower

Purging Method: Bailer  Pump

Sampling Method: Bailer  Pump

Color: Yes  No

Describe: Cloudy w/ black particles

Sheen: Yes  No

Describe: Rainbow Sheen

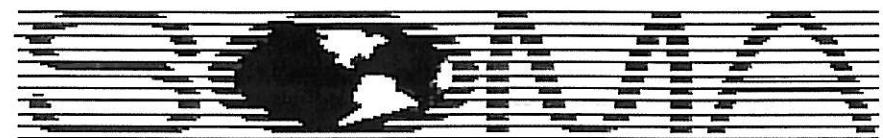
Odor: Yes  No

Describe: Petro Odor

## Field Measurements:

Time	Vol (gallons)	pH	Temp (°C)	E.C. (μs/cm)
13:57	Started purging well			
13:58	2	6.92	19.9	890
14:00	6	6.90	18.0	900
14:02	10	6.88	17.9	920
14:03	12	6.85	18.1	930
14:08	Sampled			

Notes:



## ENVIRONMENTAL ENGINEERING, INC

Well No.: RS-2  
Casing Diameter: 4 inches  
Depth of Well: 25.00 feet  
Top of Casing Elevation: 675.28 feet  
Depth to Groundwater: 5.52 feet  
Groundwater Elevation: 669.76 feet  
Water Column Height: 19.48 feet  
Purged Volume: 12 gallons

Project No.: 5081  
Address: 2844 Mountain Blvd.  
Oakland, CA  
Date: February 8, 2012  
Sampler: Lizzie Hightower

Purging Method: Bailer  Pump

Sampling Method: Bailer  Pump

Color: Yes  No  Describe: Cloudy

Sheen: Yes  No  Describe: Rainbow Sheen

Odor: Yes  No  Describe: Petro Odor

## Field Measurements:

Time	Vol (gallons)	pH	Temp (°C)	E.C. (μs/cm)
12:46	Started purging well			
12:47	2	6.86	17.3	1170
12:49	6	6.83	17.7	1190
12:51	10	6.82	17.5	1190
12:52	12	6.82	17.5	1200
12:57	Sampled			

Notes:



ENVIRONMENTAL ENGINEERING, INC

Well No.: RS-3

Casing Diameter: 4 inches

Depth of Well: 24.49 feet

Top of Casing Elevation: 676.23 feet

Depth to Groundwater: 5.72 feet

Groundwater Elevation: 670.51 feet

Water Column Height: 18.77 feet

Purged Volume: 12 gallons

Project No.: 5081

Address: 2844 Mountain Blvd.  
Oakland, CA

Date: February 8, 2012

Sampler: Lizzie Hightower

Purging Method: Bailer  Pump

Sampling Method: Bailer  Pump

Color: Yes  No  Describe: Cloudy w/ black floaters

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

Odor: Yes  No  Describe: Slight Petro

Field Measurements:

Time	Vol (gallons)	pH	Temp (°C)	E.C. (μs/cm)
12:16	Started purging well			
12:17	2	7.34	16.9	800
12:19	6	7.29	16.8	790
12:21	10	7.27	16.5	790
12:22	12	7.26	16.3	790
12:27	Sampled			

Notes:



ENVIRONMENTAL ENGINEERING, INC

Well No.: RS - 4

Casing Diameter: 4 inches

Depth of Well: 25.54 feet

Top of Casing Elevation: 675.42 feet

Depth to Groundwater: 8.11 feet

Groundwater Elevation: 661.31 feet

Water Column Height: 17.43 feet

Purged Volume: 12 gallons

Project No.: 5081

Address: 2844 Mountain Blvd.  
Oakland, CA

Date: February 8, 2012

Sampler: Lizzie Hightower

Purging Method: Bailer  Pump

Sampling Method: Bailer  Pump

Color: Yes  No  Describe:

Sheen: Yes  No  Describe: Product globs in water

Odor: Yes  No  Describe: Stink Petro Odor

Field Measurements:

Time	Vol (gallons)	pH	Temp (°C)	E.C. (µs/cm)
11:41	Started purging well			
11:42	2	6.70	20.0	1250
11:44	6	6.97	19.4	1240
11:46	10	6.97	19.0	1220
11:47	12	6.94	18.7	1190
11:52	Sampled			

Notes:

# **Appendix C**

Laboratory Report and Chain of Custody Form



Soma Environmental  
6620 Owens Dr. Suite A  
Pleasanton, California 94588  
Tel: 925-734-6400  
Fax: 925-734-6401  
RE: 2844 Mountain Blvd., Oakland

Work Order No.: 1202033

Dear Joyce Bobek:

Torrent Laboratory, Inc. received 4 sample(s) on February 09, 2012 for the analyses presented in the following Report.

All data for associated QC met EPA or laboratory specification(s) except where noted in the case narrative.

Torrent Laboratory, Inc. is certified by the State of California, ELAP #1991. If you have any questions regarding these test results, please feel free to contact the Project Management Team at (408)263-5258; ext 204.

A handwritten signature in blue ink, appearing to read "G. Gueorguieva".

---

G.Gueorguieva  
Sr. Project Manager

---

February 16, 2012

Date



**Date:** 2/16/2012

---

**Client:** Soma Environmental

**Project:** 2844 Mountain Blvd., Oakland

**Work Order:** 1202033

### CASE NARRATIVE

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No issues encountered with the receiving, preparation, analysis or reporting of the results associated with this work order.

Unless otherwise indicated in the following narrative, no results have been method and/or field blank corrected.

Reported results relate only to the items/samples tested by the laboratory.



## Sample Result Summary

**Report prepared for:** Joyce Bobek  
Soma Environmental

**Date Received:** 02/09/12

**Date Reported:** 02/16/12

1202033-001

RS-1

<b>Parameters:</b>	<b>Analysis Method</b>	<b>DF</b>	<b>MDL</b>	<b>PQL</b>	<b>Results</b>	<b>Unit</b>
MTBE	SW8260B	440	76	220	65000	ug/L
tert-Butanol	SW8260B	440	680	2200	41000	ug/L
Benzene	SW8260B	44	5.6	22	790	ug/L
TAME	SW8260B	44	7.7	22	5100	ug/L
Ethyl Benzene	SW8260B	44	6.7	22	2000	ug/L
m,p-Xylene	SW8260B	44	5.9	44	430	ug/L
Isopropyl Benzene	SW8260B	44	4.2	22	110	ug/L
n-Propylbenzene	SW8260B	44	3.4	22	340	ug/L
1,3,5-Trimethylbenzene	SW8260B	44	3.3	22	97	ug/L
1,2,4-Trimethylbenzene	SW8260B	44	3.6	22	600	ug/L
n-Butylbenzene	SW8260B	44	3.6	22	25	ug/L
Naphthalene	SW8260B	44	6.0	22	460	ug/L
TPH(Gasoline)	8260TPH	44	1400	2200	60000	ug/L
TPH as Diesel	SW8015B(M)	10	0.416	1.0	8.2	mg/L



## Sample Result Summary

**Report prepared for:** Joyce Bobek **Date Received:** 02/09/12

Soma Environmental

**Date Reported:** 02/16/12

1202033-002

RS-2

<u>Parameters:</u>	<u>Analysis Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Results</u>	<u>Unit</u>
tert-Butanol	SW8260B	146.7	230	730	64000	ug/L
MTBE	SW8260B	44	7.6	22	2800	ug/L
Benzene	SW8260B	44	5.6	22	540	ug/L
TAME	SW8260B	44	7.7	22	420	ug/L
Ethyl Benzene	SW8260B	44	6.7	22	120	ug/L
m,p-Xylene	SW8260B	44	5.9	44	570	ug/L
o-Xylene	SW8260B	44	6.7	22	140	ug/L
Isopropyl Benzene	SW8260B	44	4.2	22	56	ug/L
n-Propylbenzene	SW8260B	44	3.4	22	130	ug/L
1,3,5-Trimethylbenzene	SW8260B	44	3.3	22	340	ug/L
1,2,4-Trimethylbenzene	SW8260B	44	3.6	22	800	ug/L
Naphthalene	SW8260B	44	6.0	22	200	ug/L
TPH(Gasoline)	8260TPH	44	1400	2200	18000	ug/L
TPH as Diesel	SW8015B(M)	4	0.168	0.42	6.8	mg/L

RS-3

1202033-003

<u>Parameters:</u>	<u>Analysis Method</u>	<u>DF</u>	<u>MDL</u>	<u>PQL</u>	<u>Results</u>	<u>Unit</u>
TPH(Gasoline)	8260TPH	1	22	50	130	ug/L
MTBE	SW8260B	1	0.17	0.50	7.9	ug/L
Toluene	SW8260B	1	0.14	0.50	0.59	ug/L
Ethyl Benzene	SW8260B	1	0.15	0.50	2.9	ug/L
m,p-Xylene	SW8260B	1	0.13	1.0	15	ug/L
o-Xylene	SW8260B	1	0.15	0.50	3.1	ug/L
n-Propylbenzene	SW8260B	1	0.078	0.50	0.85	ug/L
1,3,5-Trimethylbenzene	SW8260B	1	0.074	0.50	4.3	ug/L
1,2,4-Trimethylbenzene	SW8260B	1	0.083	0.50	13	ug/L
Naphthalene	SW8260B	1	0.14	0.50	0.72	ug/L



## Sample Result Summary

**Report prepared for:** Joyce Bobek  
Soma Environmental

**Date Received:** 02/09/12

**Date Reported:** 02/16/12

1202033-004

RS-4

<b>Parameters:</b>	<b>Analysis Method</b>	<b>DF</b>	<b>MDL</b>	<b>PQL</b>	<b>Results</b>	<b>Unit</b>
MTBE	SW8260B	440	76	220	28000	ug/L
tert-Butanol	SW8260B	440	680	2200	100000	ug/L
m,p-Xylene	SW8260B	440	59	440	23000	ug/L
TPH(Gasoline)	8260TPH	440	14000	22000	140000	ug/L
Benzene	SW8260B	44	5.6	22	120	ug/L
TAME	SW8260B	44	7.7	22	1800	ug/L
Toluene	SW8260B	44	6.4	22	2600	ug/L
Ethyl Benzene	SW8260B	44	6.7	22	4700	ug/L
o-Xylene	SW8260B	44	6.7	22	5200	ug/L
Isopropyl Benzene	SW8260B	44	4.2	22	290	ug/L
n-Propylbenzene	SW8260B	44	3.4	22	880	ug/L
1,3,5-Trimethylbenzene	SW8260B	44	3.3	22	2700	ug/L
1,2,4-Trimethylbenzene	SW8260B	44	3.6	22	7600	ug/L
p-Isopropyltoluene	SW8260B	44	4.1	22	130	ug/L
n-Butylbenzene	SW8260B	44	3.6	22	110	ug/L
Naphthalene	SW8260B	44	6.0	22	290	ug/L
TPH as Diesel	SW8015B(M)	100	4.16	10	130	mg/L



## SAMPLE RESULTS

**Report prepared for:** Joyce Bobek  
Soma Environmental **Date Received:** 02/09/12  
**Date Reported:** 02/16/12

<b>Client Sample ID:</b>	RS-1	<b>Lab Sample ID:</b>	1202033-001A
<b>Project Name/Location:</b>	2844 Mountain Blvd., Oakland	<b>Sample Matrix:</b>	Groundwater
<b>Project Number:</b>			
<b>Date/Time Sampled:</b>	02/08/12 / 14:08		
<b>Tag Number:</b>	2844 Mountain Blvd., Oakland		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
MTBE	SW8260B	NA	02/15/12	440	76	220	65000		ug/L	408465	NA
tert-Butanol	SW8260B	NA	02/15/12	440	680	2200	41000		ug/L	408465	NA
(S) Dibromofluoromethane	SW8260B	NA	02/15/12	440	61.2	131	98.3	%	408465	NA	
(S) Dibromofluoromethane	SW8260B	NA	02/15/12	440	75.1	127	105	%	408465	NA	
(S) Dibromofluoromethane	SW8260B	NA	02/15/12	440	64.1	120	101	%	408465	NA	
Dichlorodifluoromethane	SW8260B	NA	02/10/12	44	7.9	22	ND		ug/L	408430	NA
Chloromethane	SW8260B	NA	02/10/12	44	7.0	22	ND		ug/L	408430	NA
Vinyl Chloride	SW8260B	NA	02/10/12	44	6.9	22	ND		ug/L	408430	NA
Bromomethane	SW8260B	NA	02/10/12	44	8.0	22	ND		ug/L	408430	NA
Trichlorofluoromethane	SW8260B	NA	02/10/12	44	8.1	22	ND		ug/L	408430	NA
1,1-Dichloroethene	SW8260B	NA	02/10/12	44	6.7	22	ND		ug/L	408430	NA
Freon 113	SW8260B	NA	02/10/12	44	8.5	22	ND		ug/L	408430	NA
Methylene Chloride	SW8260B	NA	02/10/12	44	10	220	ND		ug/L	408430	NA
trans-1,2-Dichloroethene	SW8260B	NA	02/10/12	44	8.5	22	ND		ug/L	408430	NA
Diisopropyl ether (DIPE)	SW8260B	NA	02/10/12	44	5.6	22	ND		ug/L	408430	NA
1,1-Dichloroethane	SW8260B	NA	02/10/12	44	5.7	22	ND		ug/L	408430	NA
ETBE	SW8260B	NA	02/10/12	44	7.7	22	ND		ug/L	408430	NA
cis-1,2-Dichloroethene	SW8260B	NA	02/10/12	44	8.5	22	ND		ug/L	408430	NA
2,2-Dichloropropane	SW8260B	NA	02/10/12	44	6.8	22	ND		ug/L	408430	NA
Bromochloromethane	SW8260B	NA	02/10/12	44	9.0	22	ND		ug/L	408430	NA
Chloroform	SW8260B	NA	02/10/12	44	5.6	22	ND		ug/L	408430	NA
Carbon Tetrachloride	SW8260B	NA	02/10/12	44	6.7	22	ND		ug/L	408430	NA
1,1,1-Trichloroethane	SW8260B	NA	02/10/12	44	4.2	22	ND		ug/L	408430	NA
1,1-Dichloropropene	SW8260B	NA	02/10/12	44	6.7	22	ND		ug/L	408430	NA
Benzene	SW8260B	NA	02/10/12	44	5.6	22	790		ug/L	408430	NA
TAME	SW8260B	NA	02/10/12	44	7.7	22	5100		ug/L	408430	NA
1,2-Dichloroethane	SW8260B	NA	02/10/12	44	6.4	22	ND		ug/L	408430	NA
Trichloroethylene	SW8260B	NA	02/10/12	44	5.6	22	ND		ug/L	408430	NA
Dibromomethane	SW8260B	NA	02/10/12	44	6.5	22	ND		ug/L	408430	NA
1,2-Dichloropropane	SW8260B	NA	02/10/12	44	7.7	22	ND		ug/L	408430	NA
Bromodichloromethane	SW8260B	NA	02/10/12	44	5.6	22	ND		ug/L	408430	NA
cis-1,3-Dichloropropene	SW8260B	NA	02/10/12	44	4.2	22	ND		ug/L	408430	NA
Toluene	SW8260B	NA	02/10/12	44	6.4	22	ND		ug/L	408430	NA
Tetrachloroethylene	SW8260B	NA	02/10/12	44	6.4	22	ND		ug/L	408430	NA
trans-1,3-Dichloropropene	SW8260B	NA	02/10/12	44	10	22	ND		ug/L	408430	NA
1,1,2-Trichloroethane	SW8260B	NA	02/10/12	44	6.4	22	ND		ug/L	408430	NA



## SAMPLE RESULTS

**Report prepared for:** Joyce Bobek  
Soma Environmental **Date Received:** 02/09/12  
**Date Reported:** 02/16/12

<b>Client Sample ID:</b>	RS-1	<b>Lab Sample ID:</b>	1202033-001A
<b>Project Name/Location:</b>	2844 Mountain Blvd., Oakland	<b>Sample Matrix:</b>	Groundwater
<b>Project Number:</b>			
<b>Date/Time Sampled:</b>	02/08/12 / 14:08		
<b>Tag Number:</b>	2844 Mountain Blvd., Oakland		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Dibromochloromethane	SW8260B	NA	02/10/12	44	4.2	22	ND		ug/L	408430	NA
1,3-Dichloropropane	SW8260B	NA	02/10/12	44	4.5	22	ND		ug/L	408430	NA
1,2-Dibromoethane	SW8260B	NA	02/10/12	44	8.5	22	ND		ug/L	408430	NA
Chlorobenzene	SW8260B	NA	02/10/12	44	6.4	22	ND		ug/L	408430	NA
Ethyl Benzene	SW8260B	NA	02/10/12	44	6.7	22	2000		ug/L	408430	NA
1,1,1,2-Tetrachloroethane	SW8260B	NA	02/10/12	44	4.2	22	ND		ug/L	408430	NA
m,p-Xylene	SW8260B	NA	02/10/12	44	5.9	44	430		ug/L	408430	NA
o-Xylene	SW8260B	NA	02/10/12	44	6.7	22	ND		ug/L	408430	NA
Styrene	SW8260B	NA	02/10/12	44	9.3	22	ND		ug/L	408430	NA
Bromoform	SW8260B	NA	02/10/12	44	9.3	44	ND		ug/L	408430	NA
Isopropyl Benzene	SW8260B	NA	02/10/12	44	4.2	22	110		ug/L	408430	NA
Bromobenzene	SW8260B	NA	02/10/12	44	6.7	22	ND		ug/L	408430	NA
1,1,2,2-Tetrachloroethane	SW8260B	NA	02/10/12	44	4.7	22	ND		ug/L	408430	NA
n-Propylbenzene	SW8260B	NA	02/10/12	44	3.4	22	340		ug/L	408430	NA
2-Chlorotoluene	SW8260B	NA	02/10/12	44	3.3	22	ND		ug/L	408430	NA
1,3,5-Trimethylbenzene	SW8260B	NA	02/10/12	44	3.3	22	97		ug/L	408430	NA
4-Chlorotoluene	SW8260B	NA	02/10/12	44	3.9	22	ND		ug/L	408430	NA
tert-Butylbenzene	SW8260B	NA	02/10/12	44	3.6	22	ND		ug/L	408430	NA
1,2,3-Trichloropropane	SW8260B	NA	02/10/12	44	6.2	22	ND		ug/L	408430	NA
1,2,4-Trimethylbenzene	SW8260B	NA	02/10/12	44	3.6	22	600		ug/L	408430	NA
sec-Butyl Benzene	SW8260B	NA	02/10/12	44	4.0	22	ND		ug/L	408430	NA
p-Isopropyltoluene	SW8260B	NA	02/10/12	44	4.1	22	ND		ug/L	408430	NA
1,3-Dichlorobenzene	SW8260B	NA	02/10/12	44	4.6	22	ND		ug/L	408430	NA
1,4-Dichlorobenzene	SW8260B	NA	02/10/12	44	3.0	22	ND		ug/L	408430	NA
n-Butylbenzene	SW8260B	NA	02/10/12	44	3.6	22	25		ug/L	408430	NA
1,2-Dichlorobenzene	SW8260B	NA	02/10/12	44	2.5	22	ND		ug/L	408430	NA
1,2-Dibromo-3-Chloropropane	SW8260B	NA	02/10/12	44	6.8	22	ND		ug/L	408430	NA
Hexachlorobutadiene	SW8260B	NA	02/10/12	44	8.6	22	ND		ug/L	408430	NA
1,2,4-Trichlorobenzene	SW8260B	NA	02/10/12	44	5.3	22	ND		ug/L	408430	NA
Naphthalene	SW8260B	NA	02/10/12	44	6.0	22	460		ug/L	408430	NA
1,2,3-Trichlorobenzene	SW8260B	NA	02/10/12	44	10	22	ND		ug/L	408430	NA
(S) Dibromofluoromethane	SW8260B	NA	02/10/12	44	61.2	131	104		%	408430	NA
(S) Dibromofluoromethane	SW8260B	NA	02/10/12	44	75.1	127	98.5		%	408430	NA
(S) Dibromofluoromethane	SW8260B	NA	02/10/12	44	64.1	120	98.1		%	408430	NA



## SAMPLE RESULTS

**Report prepared for:** Joyce Bobek  
Soma Environmental **Date Received:** 02/09/12  
**Date Reported:** 02/16/12

<b>Client Sample ID:</b>	RS-1	<b>Lab Sample ID:</b>	1202033-001A
<b>Project Name/Location:</b>	2844 Mountain Blvd., Oakland	<b>Sample Matrix:</b>	Groundwater
<b>Project Number:</b>			
<b>Date/Time Sampled:</b>	02/08/12 / 14:08		
<b>Tag Number:</b>	2844 Mountain Blvd., Oakland		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH(Gasoline)	8260TPH	2/10/12	02/10/12	44	1400	2200	60000	x	ug/L	408430	4714
(S) 4-Bromofluorobenzene	8260TPH	2/10/12	02/10/12	44	41.5	125	100		%	408430	4714

**NOTE:** x - Does not match pattern of reference Gasoline standard. Reported TPH value includes amount due to discrete peaks.



## SAMPLE RESULTS

**Report prepared for:** Joyce Bobek  
Soma Environmental

**Date Received:** 02/09/12  
**Date Reported:** 02/16/12

<b>Client Sample ID:</b>	RS-1	<b>Lab Sample ID:</b>	1202033-001B
<b>Project Name/Location:</b>	2844 Mountain Blvd., Oakland	<b>Sample Matrix:</b>	Groundwater
<b>Project Number:</b>			
<b>Date/Time Sampled:</b>	02/08/12 / 14:08		
<b>Tag Number:</b>	2844 Mountain Blvd., Oakland		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH as Diesel	SW8015B(M)	2/14/12	02/15/12	10	0.416	1.0	8.2	x	mg/L	408470	4711
TPH as Motor Oil	SW8015B(M)	2/14/12	02/15/12	10	0.936	2.1	ND		mg/L	408470	4711
Pentacosane (S)	SW8015B(M)	2/14/12	02/15/12	10	64.2	123	96.7		%	408470	4711

**NOTE:** x- Not typical of Diesel standard pattern (possibly fuel lighter than diesel)



## SAMPLE RESULTS

**Report prepared for:** Joyce Bobek  
Soma Environmental **Date Received:** 02/09/12  
**Date Reported:** 02/16/12

<b>Client Sample ID:</b>	RS-2	<b>Lab Sample ID:</b>	1202033-002A
<b>Project Name/Location:</b>	2844 Mountain Blvd., Oakland	<b>Sample Matrix:</b>	Groundwater
<b>Project Number:</b>			
<b>Date/Time Sampled:</b>	02/08/12 / 12:57		
<b>Tag Number:</b>	2844 Mountain Blvd., Oakland		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
tert-Butanol	SW8260B	NA	02/15/12	146.7	230	730	64000		ug/L	408465	NA
(S) Dibromofluoromethane	SW8260B	NA	02/15/12	146.7	61.2	131	103		%	408465	NA
(S) Dibromofluoromethane	SW8260B	NA	02/15/12	146.7	75.1	127	104		%	408465	NA
(S) Dibromofluoromethane	SW8260B	NA	02/15/12	146.7	64.1	120	102		%	408465	NA
Dichlorodifluoromethane	SW8260B	NA	02/10/12	44	7.9	22	ND		ug/L	408430	NA
Chloromethane	SW8260B	NA	02/10/12	44	7.0	22	ND		ug/L	408430	NA
Vinyl Chloride	SW8260B	NA	02/10/12	44	6.9	22	ND		ug/L	408430	NA
Bromomethane	SW8260B	NA	02/10/12	44	8.0	22	ND		ug/L	408430	NA
Trichlorofluoromethane	SW8260B	NA	02/10/12	44	8.1	22	ND		ug/L	408430	NA
1,1-Dichloroethene	SW8260B	NA	02/10/12	44	6.7	22	ND		ug/L	408430	NA
Freon 113	SW8260B	NA	02/10/12	44	8.5	22	ND		ug/L	408430	NA
Methylene Chloride	SW8260B	NA	02/10/12	44	10	220	ND		ug/L	408430	NA
trans-1,2-Dichloroethene	SW8260B	NA	02/10/12	44	8.5	22	ND		ug/L	408430	NA
MTBE	SW8260B	NA	02/10/12	44	7.6	22	2800		ug/L	408430	NA
Diisopropyl ether (DIPE)	SW8260B	NA	02/10/12	44	5.6	22	ND		ug/L	408430	NA
1,1-Dichloroethane	SW8260B	NA	02/10/12	44	5.7	22	ND		ug/L	408430	NA
ETBE	SW8260B	NA	02/10/12	44	7.7	22	ND		ug/L	408430	NA
cis-1,2-Dichloroethene	SW8260B	NA	02/10/12	44	8.5	22	ND		ug/L	408430	NA
2,2-Dichloropropane	SW8260B	NA	02/10/12	44	6.8	22	ND		ug/L	408430	NA
Bromochloromethane	SW8260B	NA	02/10/12	44	9.0	22	ND		ug/L	408430	NA
Chloroform	SW8260B	NA	02/10/12	44	5.6	22	ND		ug/L	408430	NA
Carbon Tetrachloride	SW8260B	NA	02/10/12	44	6.7	22	ND		ug/L	408430	NA
1,1,1-Trichloroethane	SW8260B	NA	02/10/12	44	4.2	22	ND		ug/L	408430	NA
1,1-Dichloropropene	SW8260B	NA	02/10/12	44	6.7	22	ND		ug/L	408430	NA
Benzene	SW8260B	NA	02/10/12	44	5.6	22	540		ug/L	408430	NA
TAME	SW8260B	NA	02/10/12	44	7.7	22	420		ug/L	408430	NA
1,2-Dichloroethane	SW8260B	NA	02/10/12	44	6.4	22	ND		ug/L	408430	NA
Trichloroethylene	SW8260B	NA	02/10/12	44	5.6	22	ND		ug/L	408430	NA
Dibromomethane	SW8260B	NA	02/10/12	44	6.5	22	ND		ug/L	408430	NA
1,2-Dichloropropane	SW8260B	NA	02/10/12	44	7.7	22	ND		ug/L	408430	NA
Bromodichloromethane	SW8260B	NA	02/10/12	44	5.6	22	ND		ug/L	408430	NA
cis-1,3-Dichloropropene	SW8260B	NA	02/10/12	44	4.2	22	ND		ug/L	408430	NA
Toluene	SW8260B	NA	02/10/12	44	6.4	22	ND		ug/L	408430	NA
Tetrachloroethylene	SW8260B	NA	02/10/12	44	6.4	22	ND		ug/L	408430	NA
trans-1,3-Dichloropropene	SW8260B	NA	02/10/12	44	10	22	ND		ug/L	408430	NA
1,1,2-Trichloroethane	SW8260B	NA	02/10/12	44	6.4	22	ND		ug/L	408430	NA



## SAMPLE RESULTS

**Report prepared for:** Joyce Bobek  
Soma Environmental **Date Received:** 02/09/12  
**Date Reported:** 02/16/12

<b>Client Sample ID:</b>	RS-2	<b>Lab Sample ID:</b>	1202033-002A
<b>Project Name/Location:</b>	2844 Mountain Blvd., Oakland	<b>Sample Matrix:</b>	Groundwater
<b>Project Number:</b>			
<b>Date/Time Sampled:</b>	02/08/12 / 12:57		
<b>Tag Number:</b>	2844 Mountain Blvd., Oakland		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Dibromochloromethane	SW8260B	NA	02/10/12	44	4.2	22	ND		ug/L	408430	NA
1,3-Dichloropropane	SW8260B	NA	02/10/12	44	4.5	22	ND		ug/L	408430	NA
1,2-Dibromoethane	SW8260B	NA	02/10/12	44	8.5	22	ND		ug/L	408430	NA
Chlorobenzene	SW8260B	NA	02/10/12	44	6.4	22	ND		ug/L	408430	NA
Ethyl Benzene	SW8260B	NA	02/10/12	44	6.7	22	120		ug/L	408430	NA
1,1,1,2-Tetrachloroethane	SW8260B	NA	02/10/12	44	4.2	22	ND		ug/L	408430	NA
m,p-Xylene	SW8260B	NA	02/10/12	44	5.9	44	570		ug/L	408430	NA
o-Xylene	SW8260B	NA	02/10/12	44	6.7	22	140		ug/L	408430	NA
Styrene	SW8260B	NA	02/10/12	44	9.3	22	ND		ug/L	408430	NA
Bromoform	SW8260B	NA	02/10/12	44	9.3	44	ND		ug/L	408430	NA
Isopropyl Benzene	SW8260B	NA	02/10/12	44	4.2	22	56		ug/L	408430	NA
Bromobenzene	SW8260B	NA	02/10/12	44	6.7	22	ND		ug/L	408430	NA
1,1,2,2-Tetrachloroethane	SW8260B	NA	02/10/12	44	4.7	22	ND		ug/L	408430	NA
n-Propylbenzene	SW8260B	NA	02/10/12	44	3.4	22	130		ug/L	408430	NA
2-Chlorotoluene	SW8260B	NA	02/10/12	44	3.3	22	ND		ug/L	408430	NA
1,3,5-Trimethylbenzene	SW8260B	NA	02/10/12	44	3.3	22	340		ug/L	408430	NA
4-Chlorotoluene	SW8260B	NA	02/10/12	44	3.9	22	ND		ug/L	408430	NA
tert-Butylbenzene	SW8260B	NA	02/10/12	44	3.6	22	ND		ug/L	408430	NA
1,2,3-Trichloropropane	SW8260B	NA	02/10/12	44	6.2	22	ND		ug/L	408430	NA
1,2,4-Trimethylbenzene	SW8260B	NA	02/10/12	44	3.6	22	800		ug/L	408430	NA
sec-Butyl Benzene	SW8260B	NA	02/10/12	44	4.0	22	ND		ug/L	408430	NA
p-Isopropyltoluene	SW8260B	NA	02/10/12	44	4.1	22	ND		ug/L	408430	NA
1,3-Dichlorobenzene	SW8260B	NA	02/10/12	44	4.6	22	ND		ug/L	408430	NA
1,4-Dichlorobenzene	SW8260B	NA	02/10/12	44	3.0	22	ND		ug/L	408430	NA
n-Butylbenzene	SW8260B	NA	02/10/12	44	3.6	22	ND		ug/L	408430	NA
1,2-Dichlorobenzene	SW8260B	NA	02/10/12	44	2.5	22	ND		ug/L	408430	NA
1,2-Dibromo-3-Chloropropane	SW8260B	NA	02/10/12	44	6.8	22	ND		ug/L	408430	NA
Hexachlorobutadiene	SW8260B	NA	02/10/12	44	8.6	22	ND		ug/L	408430	NA
1,2,4-Trichlorobenzene	SW8260B	NA	02/10/12	44	5.3	22	ND		ug/L	408430	NA
Naphthalene	SW8260B	NA	02/10/12	44	6.0	22	200		ug/L	408430	NA
1,2,3-Trichlorobenzene	SW8260B	NA	02/10/12	44	10	22	ND		ug/L	408430	NA
(S) Dibromofluoromethane	SW8260B	NA	02/10/12	44	61.2	131	105		%	408430	NA
(S) Dibromofluoromethane	SW8260B	NA	02/10/12	44	75.1	127	100		%	408430	NA
(S) Dibromofluoromethane	SW8260B	NA	02/10/12	44	64.1	120	97.8		%	408430	NA



## SAMPLE RESULTS

**Report prepared for:** Joyce Bobek  
Soma Environmental **Date Received:** 02/09/12  
**Date Reported:** 02/16/12

<b>Client Sample ID:</b>	RS-2	<b>Lab Sample ID:</b>	1202033-002A
<b>Project Name/Location:</b>	2844 Mountain Blvd., Oakland	<b>Sample Matrix:</b>	Groundwater
<b>Project Number:</b>			
<b>Date/Time Sampled:</b>	02/08/12 / 12:57		
<b>Tag Number:</b>	2844 Mountain Blvd., Oakland		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH(Gasoline)	8260TPH	2/10/12	02/10/12	44	1400	2200	18000	x	ug/L	408430	4714
(S) 4-Bromofluorobenzene	8260TPH	2/10/12	02/10/12	44	41.5	125	103		%	408430	4714

**NOTE:** x - Does not match pattern of reference Gasoline standard. Reported TPH value includes amount due to discrete peaks and non-target heavy hydrocarbons within range of C5-C12 quantified as gasoline.



## SAMPLE RESULTS

**Report prepared for:** Joyce Bobek  
Soma Environmental

**Date Received:** 02/09/12  
**Date Reported:** 02/16/12

<b>Client Sample ID:</b>	RS-2	<b>Lab Sample ID:</b>	1202033-002B
<b>Project Name/Location:</b>	2844 Mountain Blvd., Oakland	<b>Sample Matrix:</b>	Groundwater
<b>Project Number:</b>			
<b>Date/Time Sampled:</b>	02/08/12 / 12:57		
<b>Tag Number:</b>	2844 Mountain Blvd., Oakland		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH as Diesel	SW8015B(M)	2/14/12	02/15/12	4	0.168	0.42	6.8	x	mg/L	408470	4711
TPH as Motor Oil	SW8015B(M)	2/14/12	02/15/12	4	0.378	0.84	ND		mg/L	408470	4711
Pentacosane (S)	SW8015B(M)	2/14/12	02/15/12	4	64.2	123	88.7		%	408470	4711

**NOTE:** x- Not typical of Diesel standard pattern (possibly fuel lighter than diesel)



## SAMPLE RESULTS

**Report prepared for:** Joyce Bobek  
Soma Environmental

**Date Received:** 02/09/12  
**Date Reported:** 02/16/12

<b>Client Sample ID:</b>	RS-3	<b>Lab Sample ID:</b>	1202033-003A
<b>Project Name/Location:</b>	2844 Mountain Blvd.,Oakland	<b>Sample Matrix:</b>	Groundwater
<b>Project Number:</b>			
<b>Date/Time Sampled:</b>	02/08/12 / 12:27		
<b>Tag Number:</b>	2844 Mountain Blvd.,Oakland		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Dichlorodifluoromethane	SW8260B	NA	02/15/12	1	0.18	0.50	ND		ug/L	408465	NA
Chloromethane	SW8260B	NA	02/15/12	1	0.16	0.50	ND		ug/L	408465	NA
Vinyl Chloride	SW8260B	NA	02/15/12	1	0.16	0.50	ND		ug/L	408465	NA
Bromomethane	SW8260B	NA	02/15/12	1	0.18	0.50	ND		ug/L	408465	NA
Trichlorofluoromethane	SW8260B	NA	02/15/12	1	0.18	0.50	ND		ug/L	408465	NA
1,1-Dichloroethene	SW8260B	NA	02/15/12	1	0.15	0.50	ND		ug/L	408465	NA
Freon 113	SW8260B	NA	02/15/12	1	0.19	0.50	ND		ug/L	408465	NA
Methylene Chloride	SW8260B	NA	02/15/12	1	0.23	5.0	ND		ug/L	408465	NA
trans-1,2-Dichloroethene	SW8260B	NA	02/15/12	1	0.19	0.50	ND		ug/L	408465	NA
MTBE	SW8260B	NA	02/15/12	1	0.17	0.50	7.9		ug/L	408465	NA
tert-Butanol	SW8260B	NA	02/15/12	1	1.5	5.0	ND		ug/L	408465	NA
Diisopropyl ether (DIPE)	SW8260B	NA	02/15/12	1	0.13	0.50	ND		ug/L	408465	NA
1,1-Dichloroethane	SW8260B	NA	02/15/12	1	0.13	0.50	ND		ug/L	408465	NA
ETBE	SW8260B	NA	02/15/12	1	0.17	0.50	ND		ug/L	408465	NA
cis-1,2-Dichloroethene	SW8260B	NA	02/15/12	1	0.19	0.50	ND		ug/L	408465	NA
2,2-Dichloropropane	SW8260B	NA	02/15/12	1	0.15	0.50	ND		ug/L	408465	NA
Bromochloromethane	SW8260B	NA	02/15/12	1	0.20	0.50	ND		ug/L	408465	NA
Chloroform	SW8260B	NA	02/15/12	1	0.13	0.50	ND		ug/L	408465	NA
Carbon Tetrachloride	SW8260B	NA	02/15/12	1	0.15	0.50	ND		ug/L	408465	NA
1,1,1-Trichloroethane	SW8260B	NA	02/15/12	1	0.097	0.50	ND		ug/L	408465	NA
1,1-Dichloropropene	SW8260B	NA	02/15/12	1	0.15	0.50	ND		ug/L	408465	NA
Benzene	SW8260B	NA	02/15/12	1	0.13	0.50	ND		ug/L	408465	NA
TAME	SW8260B	NA	02/15/12	1	0.17	0.50	ND		ug/L	408465	NA
1,2-Dichloroethane	SW8260B	NA	02/15/12	1	0.14	0.50	ND		ug/L	408465	NA
Trichloroethylene	SW8260B	NA	02/15/12	1	0.13	0.50	ND		ug/L	408465	NA
Dibromomethane	SW8260B	NA	02/15/12	1	0.15	0.50	ND		ug/L	408465	NA
1,2-Dichloropropane	SW8260B	NA	02/15/12	1	0.17	0.50	ND		ug/L	408465	NA
Bromodichloromethane	SW8260B	NA	02/15/12	1	0.13	0.50	ND		ug/L	408465	NA
cis-1,3-Dichloropropene	SW8260B	NA	02/15/12	1	0.096	0.50	ND		ug/L	408465	NA
Toluene	SW8260B	NA	02/15/12	1	0.14	0.50	0.59		ug/L	408465	NA
Tetrachloroethylene	SW8260B	NA	02/15/12	1	0.14	0.50	ND		ug/L	408465	NA
trans-1,3-Dichloropropene	SW8260B	NA	02/15/12	1	0.23	0.50	ND		ug/L	408465	NA
1,1,2-Trichloroethane	SW8260B	NA	02/15/12	1	0.14	0.50	ND		ug/L	408465	NA
Dibromochloromethane	SW8260B	NA	02/15/12	1	0.096	0.50	ND		ug/L	408465	NA
1,3-Dichloropropane	SW8260B	NA	02/15/12	1	0.10	0.50	ND		ug/L	408465	NA
1,2-Dibromoethane	SW8260B	NA	02/15/12	1	0.19	0.50	ND		ug/L	408465	NA



## SAMPLE RESULTS

**Report prepared for:** Joyce Bobek  
Soma Environmental

**Date Received:** 02/09/12  
**Date Reported:** 02/16/12

<b>Client Sample ID:</b>	RS-3	<b>Lab Sample ID:</b>	1202033-003A
<b>Project Name/Location:</b>	2844 Mountain Blvd.,Oakland	<b>Sample Matrix:</b>	Groundwater
<b>Project Number:</b>			
<b>Date/Time Sampled:</b>	02/08/12 / 12:27		
<b>Tag Number:</b>	2844 Mountain Blvd.,Oakland		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
Chlorobenzene	SW8260B	NA	02/15/12	1	0.14	0.50	ND		ug/L	408465	NA
Ethyl Benzene	SW8260B	NA	02/15/12	1	0.15	0.50	2.9		ug/L	408465	NA
1,1,1,2-Tetrachloroethane	SW8260B	NA	02/15/12	1	0.096	0.50	ND		ug/L	408465	NA
m,p-Xylene	SW8260B	NA	02/15/12	1	0.13	1.0	15		ug/L	408465	NA
o-Xylene	SW8260B	NA	02/15/12	1	0.15	0.50	3.1		ug/L	408465	NA
Styrene	SW8260B	NA	02/15/12	1	0.21	0.50	ND		ug/L	408465	NA
Bromoform	SW8260B	NA	02/15/12	1	0.21	1.0	ND		ug/L	408465	NA
Isopropyl Benzene	SW8260B	NA	02/15/12	1	0.097	0.50	ND		ug/L	408465	NA
Bromobenzene	SW8260B	NA	02/15/12	1	0.15	0.50	ND		ug/L	408465	NA
1,1,2,2-Tetrachloroethane	SW8260B	NA	02/15/12	1	0.11	0.50	ND		ug/L	408465	NA
n-Propylbenzene	SW8260B	NA	02/15/12	1	0.078	0.50	0.85		ug/L	408465	NA
2-Chlorotoluene	SW8260B	NA	02/15/12	1	0.076	0.50	ND		ug/L	408465	NA
1,3,5-Trimethylbenzene	SW8260B	NA	02/15/12	1	0.074	0.50	4.3		ug/L	408465	NA
4-Chlorotoluene	SW8260B	NA	02/15/12	1	0.088	0.50	ND		ug/L	408465	NA
tert-Butylbenzene	SW8260B	NA	02/15/12	1	0.081	0.50	ND		ug/L	408465	NA
1,2,3-Trichloropropane	SW8260B	NA	02/15/12	1	0.14	0.50	ND		ug/L	408465	NA
1,2,4-Trimethylbenzene	SW8260B	NA	02/15/12	1	0.083	0.50	13		ug/L	408465	NA
sec-Butyl Benzene	SW8260B	NA	02/15/12	1	0.092	0.50	ND		ug/L	408465	NA
p-Isopropyltoluene	SW8260B	NA	02/15/12	1	0.093	0.50	ND		ug/L	408465	NA
1,3-Dichlorobenzene	SW8260B	NA	02/15/12	1	0.10	0.50	ND		ug/L	408465	NA
1,4-Dichlorobenzene	SW8260B	NA	02/15/12	1	0.069	0.50	ND		ug/L	408465	NA
n-Butylbenzene	SW8260B	NA	02/15/12	1	0.081	0.50	ND		ug/L	408465	NA
1,2-Dichlorobenzene	SW8260B	NA	02/15/12	1	0.057	0.50	ND		ug/L	408465	NA
1,2-Dibromo-3-Chloropropane	SW8260B	NA	02/15/12	1	0.15	0.50	ND		ug/L	408465	NA
Hexachlorobutadiene	SW8260B	NA	02/15/12	1	0.19	0.50	ND		ug/L	408465	NA
1,2,4-Trichlorobenzene	SW8260B	NA	02/15/12	1	0.12	0.50	ND		ug/L	408465	NA
Naphthalene	SW8260B	NA	02/15/12	1	0.14	0.50	0.72		ug/L	408465	NA
1,2,3-Trichlorobenzene	SW8260B	NA	02/15/12	1	0.23	0.50	ND		ug/L	408465	NA
(S) Dibromofluoromethane	SW8260B	NA	02/15/12	1	61.2	131	96.8	%	408465	NA	
(S) Dibromofluoromethane	SW8260B	NA	02/15/12	1	75.1	127	105	%	408465	NA	
(S) Dibromofluoromethane	SW8260B	NA	02/15/12	1	64.1	120	102	%	408465	NA	



## SAMPLE RESULTS

**Report prepared for:** Joyce Bobek  
Soma Environmental **Date Received:** 02/09/12  
**Date Reported:** 02/16/12

<b>Client Sample ID:</b>	RS-3	<b>Lab Sample ID:</b>	1202033-003A
<b>Project Name/Location:</b>	2844 Mountain Blvd., Oakland	<b>Sample Matrix:</b>	Groundwater
<b>Project Number:</b>			
<b>Date/Time Sampled:</b>	02/08/12 / 12:27		
<b>Tag Number:</b>	2844 Mountain Blvd., Oakland		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH(Gasoline)	8260TPH	2/15/12	02/15/12	1	22	50	130	x	ug/L	408465	4730
(S) 4-Bromofluorobenzene	8260TPH	2/15/12	02/15/12	1	41.5	125	85.6	%		408465	4730

**NOTE:** x - Does not match pattern of reference Gasoline standard. Hydrocarbons in the range of C5-C12 quantified as Gasoline.



## SAMPLE RESULTS

**Report prepared for:** Joyce Bobek  
Soma Environmental **Date Received:** 02/09/12  
**Date Reported:** 02/16/12

<b>Client Sample ID:</b>	RS-3	<b>Lab Sample ID:</b>	1202033-003B
<b>Project Name/Location:</b>	2844 Mountain Blvd., Oakland	<b>Sample Matrix:</b>	Groundwater
<b>Project Number:</b>			
<b>Date/Time Sampled:</b>	02/08/12 / 12:27		
<b>Tag Number:</b>	2844 Mountain Blvd., Oakland		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH as Diesel	SW8015B(M)	2/14/12	02/13/12	1	0.0420	0.11	ND		mg/L	408469	4711
TPH as Motor Oil	SW8015B(M)	2/14/12	02/13/12	1	0.0945	0.21	ND		mg/L	408469	4711
Pentacosane (S)	SW8015B(M)	2/14/12	02/13/12	1	64.2	123	85.9		%	408469	4711



## SAMPLE RESULTS

**Report prepared for:** Joyce Bobek  
Soma Environmental **Date Received:** 02/09/12  
**Date Reported:** 02/16/12

<b>Client Sample ID:</b>	RS-4	<b>Lab Sample ID:</b>	1202033-004A
<b>Project Name/Location:</b>	2844 Mountain Blvd., Oakland	<b>Sample Matrix:</b>	Groundwater
<b>Project Number:</b>			
<b>Date/Time Sampled:</b>	02/08/12 / 11:52		
<b>Tag Number:</b>	2844 Mountain Blvd., Oakland		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
MTBE	SW8260B	NA	02/15/12	440	76	220	28000		ug/L	408465	NA
tert-Butanol	SW8260B	NA	02/15/12	440	680	2200	100000		ug/L	408465	NA
m,p-Xylene	SW8260B	NA	02/15/12	440	59	440	23000		ug/L	408465	NA
(S) Dibromofluoromethane	SW8260B	NA	02/15/12	440	61.2	131	104	%	408465	NA	
(S) Dibromofluoromethane	SW8260B	NA	02/15/12	440	75.1	127	107	%	408465	NA	
(S) Dibromofluoromethane	SW8260B	NA	02/15/12	440	64.1	120	108	%	408465	NA	
Dichlorodifluoromethane	SW8260B	NA	02/10/12	44	7.9	22	ND		ug/L	408430	NA
Chloromethane	SW8260B	NA	02/10/12	44	7.0	22	ND		ug/L	408430	NA
Vinyl Chloride	SW8260B	NA	02/10/12	44	6.9	22	ND		ug/L	408430	NA
Bromomethane	SW8260B	NA	02/10/12	44	8.0	22	ND		ug/L	408430	NA
Trichlorofluoromethane	SW8260B	NA	02/10/12	44	8.1	22	ND		ug/L	408430	NA
1,1-Dichloroethene	SW8260B	NA	02/10/12	44	6.7	22	ND		ug/L	408430	NA
Freon 113	SW8260B	NA	02/10/12	44	8.5	22	ND		ug/L	408430	NA
Methylene Chloride	SW8260B	NA	02/10/12	44	10	220	ND		ug/L	408430	NA
trans-1,2-Dichloroethene	SW8260B	NA	02/10/12	44	8.5	22	ND		ug/L	408430	NA
Diisopropyl ether (Dipe)	SW8260B	NA	02/10/12	44	5.6	22	ND		ug/L	408430	NA
1,1-Dichloroethane	SW8260B	NA	02/10/12	44	5.7	22	ND		ug/L	408430	NA
ETBE	SW8260B	NA	02/10/12	44	7.7	22	ND		ug/L	408430	NA
cis-1,2-Dichloroethene	SW8260B	NA	02/10/12	44	8.5	22	ND		ug/L	408430	NA
2,2-Dichloropropane	SW8260B	NA	02/10/12	44	6.8	22	ND		ug/L	408430	NA
Bromochloromethane	SW8260B	NA	02/10/12	44	9.0	22	ND		ug/L	408430	NA
Chloroform	SW8260B	NA	02/10/12	44	5.6	22	ND		ug/L	408430	NA
Carbon Tetrachloride	SW8260B	NA	02/10/12	44	6.7	22	ND		ug/L	408430	NA
1,1,1-Trichloroethane	SW8260B	NA	02/10/12	44	4.2	22	ND		ug/L	408430	NA
1,1-Dichloropropene	SW8260B	NA	02/10/12	44	6.7	22	ND		ug/L	408430	NA
Benzene	SW8260B	NA	02/10/12	44	5.6	22	120		ug/L	408430	NA
TAME	SW8260B	NA	02/10/12	44	7.7	22	1800		ug/L	408430	NA
1,2-Dichloroethane	SW8260B	NA	02/10/12	44	6.4	22	ND		ug/L	408430	NA
Trichloroethylene	SW8260B	NA	02/10/12	44	5.6	22	ND		ug/L	408430	NA
Dibromomethane	SW8260B	NA	02/10/12	44	6.5	22	ND		ug/L	408430	NA
1,2-Dichloropropene	SW8260B	NA	02/10/12	44	7.7	22	ND		ug/L	408430	NA
Bromodichloromethane	SW8260B	NA	02/10/12	44	5.6	22	ND		ug/L	408430	NA
cis-1,3-Dichloropropene	SW8260B	NA	02/10/12	44	4.2	22	ND		ug/L	408430	NA
Toluene	SW8260B	NA	02/10/12	44	6.4	22	2600		ug/L	408430	NA
Tetrachloroethylene	SW8260B	NA	02/10/12	44	6.4	22	ND		ug/L	408430	NA
trans-1,3-Dichloropropene	SW8260B	NA	02/10/12	44	10	22	ND		ug/L	408430	NA



## SAMPLE RESULTS

**Report prepared for:** Joyce Bobek  
Soma Environmental

**Date Received:** 02/09/12  
**Date Reported:** 02/16/12

<b>Client Sample ID:</b>	RS-4	<b>Lab Sample ID:</b>	1202033-004A
<b>Project Name/Location:</b>	2844 Mountain Blvd.,Oakland	<b>Sample Matrix:</b>	Groundwater
<b>Project Number:</b>			
<b>Date/Time Sampled:</b>	02/08/12 / 11:52		
<b>Tag Number:</b>	2844 Mountain Blvd.,Oakland		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
1,1,2-Trichloroethane	SW8260B	NA	02/10/12	44	6.4	22	ND		ug/L	408430	NA
Dibromochloromethane	SW8260B	NA	02/10/12	44	4.2	22	ND		ug/L	408430	NA
1,3-Dichloropropane	SW8260B	NA	02/10/12	44	4.5	22	ND		ug/L	408430	NA
1,2-Dibromoethane	SW8260B	NA	02/10/12	44	8.5	22	ND		ug/L	408430	NA
Chlorobenzene	SW8260B	NA	02/10/12	44	6.4	22	ND		ug/L	408430	NA
Ethyl Benzene	SW8260B	NA	02/10/12	44	6.7	22	4700		ug/L	408430	NA
1,1,1,2-Tetrachloroethane	SW8260B	NA	02/10/12	44	4.2	22	ND		ug/L	408430	NA
o-Xylene	SW8260B	NA	02/10/12	44	6.7	22	5200		ug/L	408430	NA
Styrene	SW8260B	NA	02/10/12	44	9.3	22	ND		ug/L	408430	NA
Bromoform	SW8260B	NA	02/10/12	44	9.3	44	ND		ug/L	408430	NA
Isopropyl Benzene	SW8260B	NA	02/10/12	44	4.2	22	290		ug/L	408430	NA
Bromobenzene	SW8260B	NA	02/10/12	44	6.7	22	ND		ug/L	408430	NA
1,1,2,2-Tetrachloroethane	SW8260B	NA	02/10/12	44	4.7	22	ND		ug/L	408430	NA
n-Propylbenzene	SW8260B	NA	02/10/12	44	3.4	22	880		ug/L	408430	NA
2-Chlorotoluene	SW8260B	NA	02/10/12	44	3.3	22	ND		ug/L	408430	NA
1,3,5-Trimethylbenzene	SW8260B	NA	02/10/12	44	3.3	22	2700		ug/L	408430	NA
4-Chlorotoluene	SW8260B	NA	02/10/12	44	3.9	22	ND		ug/L	408430	NA
tert-Butylbenzene	SW8260B	NA	02/10/12	44	3.6	22	ND		ug/L	408430	NA
1,2,3-Trichloropropane	SW8260B	NA	02/10/12	44	6.2	22	ND		ug/L	408430	NA
1,2,4-Trimethylbenzene	SW8260B	NA	02/10/12	44	3.6	22	7600		ug/L	408430	NA
sec-Butyl Benzene	SW8260B	NA	02/10/12	44	4.0	22	ND		ug/L	408430	NA
p-Isopropyltoluene	SW8260B	NA	02/10/12	44	4.1	22	130		ug/L	408430	NA
1,3-Dichlorobenzene	SW8260B	NA	02/10/12	44	4.6	22	ND		ug/L	408430	NA
1,4-Dichlorobenzene	SW8260B	NA	02/10/12	44	3.0	22	ND		ug/L	408430	NA
n-Butylbenzene	SW8260B	NA	02/10/12	44	3.6	22	110		ug/L	408430	NA
1,2-Dichlorobenzene	SW8260B	NA	02/10/12	44	2.5	22	ND		ug/L	408430	NA
1,2-Dibromo-3-Chloropropane	SW8260B	NA	02/10/12	44	6.8	22	ND		ug/L	408430	NA
Hexachlorobutadiene	SW8260B	NA	02/10/12	44	8.6	22	ND		ug/L	408430	NA
1,2,4-Trichlorobenzene	SW8260B	NA	02/10/12	44	5.3	22	ND		ug/L	408430	NA
Naphthalene	SW8260B	NA	02/10/12	44	6.0	22	290		ug/L	408430	NA
1,2,3-Trichlorobenzene	SW8260B	NA	02/10/12	44	10	22	ND		ug/L	408430	NA
(S) Dibromofluoromethane	SW8260B	NA	02/10/12	44	61.2	131	99.1		%	408430	NA
(S) Dibromofluoromethane	SW8260B	NA	02/10/12	44	75.1	127	100		%	408430	NA
(S) Dibromofluoromethane	SW8260B	NA	02/10/12	44	64.1	120	94.0		%	408430	NA



## SAMPLE RESULTS

**Report prepared for:** Joyce Bobek  
Soma Environmental **Date Received:** 02/09/12  
**Date Reported:** 02/16/12

<b>Client Sample ID:</b>	RS-4	<b>Lab Sample ID:</b>	1202033-004A
<b>Project Name/Location:</b>	2844 Mountain Blvd., Oakland	<b>Sample Matrix:</b>	Groundwater
<b>Project Number:</b>			
<b>Date/Time Sampled:</b>	02/08/12 / 11:52		
<b>Tag Number:</b>	2844 Mountain Blvd., Oakland		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH(Gasoline)	8260TPH	2/15/12	02/15/12	440	14000	22000	140000		ug/L	408465	4730
(S) 4-Bromofluorobenzene	8260TPH	2/15/12	02/15/12	440	41.5	125	85.8		%	408465	4730



## SAMPLE RESULTS

**Report prepared for:** Joyce Bobek  
Soma Environmental

**Date Received:** 02/09/12  
**Date Reported:** 02/16/12

<b>Client Sample ID:</b>	RS-4	<b>Lab Sample ID:</b>	1202033-004B
<b>Project Name/Location:</b>	2844 Mountain Blvd., Oakland	<b>Sample Matrix:</b>	Groundwater
<b>Project Number:</b>			
<b>Date/Time Sampled:</b>	02/08/12 / 11:52		
<b>Tag Number:</b>	2844 Mountain Blvd., Oakland		

Parameters:	Analysis Method	Prep Date	Date Analyzed	DF	MDL	PQL	Results	Lab Qualifier	Unit	Analytical Batch	Prep Batch
TPH as Diesel	SW8015B(M)	2/14/12	02/15/12	100	4.16	10	130	x	mg/L	408474	4711
TPH as Motor Oil	SW8015B(M)	2/14/12	02/15/12	100	9.36	21	ND		mg/L	408474	4711
Pentacosane (S)	SW8015B(M)	2/14/12	02/15/12	100	64.2	123	71.0		%	408474	4711

**NOTE:** x- Not typical of Diesel standard pattern (possibly fuel lighter than diesel)



## MB Summary Report

Work Order:	1202033	Prep Method:	NA	Prep Date:	NA	Prep Batch:	NA
Matrix:	Water	Analytical Method:	SW8260B	Analyzed Date:	02/10/12	Analytical Batch:	408430
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier	
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Dichlorodifluoromethane	0.18	0.50	ND	
Chloromethane	0.16	0.50	ND	
Vinyl Chloride	0.16	0.50	ND	
Bromomethane	0.18	0.50	ND	
Trichlorofluoromethane	0.18	0.50	ND	
1,1-Dichloroethene	0.15	0.50	ND	
Freon 113	0.19	0.50	ND	
Methylene Chloride	0.23	5.0	0.26	
trans-1,2-Dichloroethene	0.19	0.50	ND	
MTBE	0.17	0.50	ND	
tert-Butanol	1.5	5.0	3.6	
Diisopropyl ether (DIPE)	0.13	0.50	0.29	
1,1-Dichloroethane	0.13	0.50	ND	
ETBE	0.17	0.50	0.19	
cis-1,2-Dichloroethene	0.19	0.50	ND	
2,2-Dichloropropane	0.15	0.50	ND	
Bromochloromethane	0.20	0.50	ND	
Chloroform	0.13	0.50	ND	
Carbon Tetrachloride	0.15	0.50	ND	
1,1,1-Trichloroethane	0.097	0.50	ND	
1,1-Dichloropropene	0.15	0.50	ND	
Benzene	0.13	0.50	ND	
TAME	0.17	0.50	0.21	
1,2-Dichloroethane	0.14	0.50	ND	
Trichloroethylene	0.13	0.50	ND	
Dibromomethane	0.15	0.50	ND	
1,2-Dichloropropane	0.17	0.50	ND	
Bromodichloromethane	0.13	0.50	ND	
cis-1,3-Dichloropropene	0.097	0.50	ND	
Toluene	0.14	0.50	0.16	
Tetrachloroethylene	0.14	0.50	ND	
trans-1,3-Dichloropropene	0.23	0.50	ND	
1,1,2-Trichloroethane	0.14	0.50	ND	
Dibromochloromethane	0.097	0.50	ND	
1,3-Dichloropropane	0.10	0.50	ND	
1,2-Dibromoethane	0.19	0.50	ND	
Chlorobenzene	0.14	0.50	ND	
Ethyl Benzene	0.15	0.50	0.22	
1,1,1,2-Tetrachloroethane	0.097	0.50	ND	
m,p-Xylene	0.13	1.0	0.49	



## MB Summary Report

Work Order:	1202033	Prep Method:	NA	Prep Date:	NA	Prep Batch:	NA
Matrix:	Water	Analytical Method:	SW8260B	Analyzed Date:	02/10/12	Analytical Batch:	408430
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier	
o-Xylene	0.15	0.50	0.23		
Styrene	0.21	0.50	0.27		
Bromoform	0.21	1.0	ND		
Isopropyl Benzene	0.097	0.50	0.30		
Bromobenzene	0.15	0.50	ND		
1,1,2,2-Tetrachloroethane	0.11	0.50	0.13		
n-Propylbenzene	0.078	0.50	0.30		
2-Chlorotoluene	0.076	0.50	0.17		
1,3,5,-Trimethylbenzene	0.074	0.50	ND		
4-Chlorotoluene	0.088	0.50	0.21		
tert-Butylbenzene	0.081	0.50	0.39		
1,2,3-Trichloropropane	0.14	0.50	0.32		
1,2,4-Trimethylbenzene	0.083	0.50	0.35		
sec-Butylbenzene	0.092	0.50	ND		
p-Isopropylbenzene	0.093	0.50	ND		
1,3-Dichlorobenzene	0.10	0.50	0.20		
1,4-Dichlorobenzene	0.069	0.50	0.24		
n-Butylbenzene	0.081	0.50	0.49		
1,2-Dichlorobenzene	0.057	0.50	0.28		
1,2-Dibromo-3-Chloropropane	0.15	0.50	0.49		
Hexachlorobutadiene	0.19	0.50	ND		
1,2,4-Trichlorobenzene	0.12	0.50	0.45		
Naphthalene	0.14	0.50	0.28		
1,2,3-Trichlorobenzene	0.23	0.50	0.36		
(S) Dibromofluoromethane			102		
(S) Dibromofluoromethane			103		
(S) Dibromofluoromethane			98.6		
Ethanol	0.21	0.50	ND	TIC	



## MB Summary Report

Work Order:	1202033	Prep Method:	NA	Prep Date:	NA	Prep Batch:	NA
Matrix:	Water	Analytical Method:	SW8260B	Analyzed Date:	02/15/12	Analytical Batch:	408465
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier	
Dichlorodifluoromethane	0.18	0.50	ND		
Chloromethane	0.16	0.50	ND		
Vinyl Chloride	0.16	0.50	ND		
Bromomethane	0.18	0.50	ND		
Trichlorofluoromethane	0.18	0.50	ND		
1,1-Dichloroethene	0.15	0.50	ND		
Freon 113	0.19	0.50	ND		
Methylene Chloride	0.23	5.0	0.25		
trans-1,2-Dichloroethene	0.19	0.50	ND		
MTBE	0.17	0.50	ND		
tert-Butanol	1.5	5.0	ND		
Diisopropyl ether (DIPE)	0.13	0.50	ND		
1,1-Dichloroethane	0.13	0.50	ND		
ETBE	0.17	0.50	ND		
cis-1,2-Dichloroethene	0.19	0.50	ND		
2,2-Dichloropropane	0.15	0.50	ND		
Bromochloromethane	0.20	0.50	ND		
Chloroform	0.13	0.50	ND		
Carbon Tetrachloride	0.15	0.50	ND		
1,1,1-Trichloroethane	0.097	0.50	ND		
1,1-Dichloropropene	0.15	0.50	ND		
Benzene	0.13	0.50	ND		
TAME	0.17	0.50	ND		
1,2-Dichloroethane	0.14	0.50	ND		
Trichloroethylene	0.13	0.50	ND		
Dibromomethane	0.15	0.50	ND		
1,2-Dichloropropane	0.17	0.50	ND		
Bromodichloromethane	0.13	0.50	ND		
cis-1,3-Dichloropropene	0.096	0.50	ND		
Toluene	0.14	0.50	ND		
Tetrachloroethylene	0.14	0.50	ND		
trans-1,3-Dichloropropene	0.23	0.50	ND		
1,1,2-Trichloroethane	0.14	0.50	ND		
Dibromochloromethane	0.096	0.50	ND		
1,3-Dichloropropane	0.10	0.50	ND		
1,2-Dibromoethane	0.19	0.50	ND		
Chlorobenzene	0.14	0.50	ND		
Ethyl Benzene	0.15	0.50	ND		
1,1,1,2-Tetrachloroethane	0.096	0.50	ND		
m,p-Xylene	0.13	1.0	ND		
o-Xylene	0.15	0.50	ND		



## MB Summary Report

Work Order:	1202033	Prep Method:	NA	Prep Date:	NA	Prep Batch:	NA
Matrix:	Water	Analytical Method:	SW8260B	Analyzed Date:	02/15/12	Analytical Batch:	408465
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier	
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Styrene 0.21 0.50 ND  
Bromoform 0.21 1.0 ND  
Isopropyl Benzene 0.097 0.50 ND  
Bromobenzene 0.15 0.50 ND  
1,1,2,2-Tetrachloroethane 0.11 0.50 ND  
n-Propylbenzene 0.078 0.50 ND  
2-Chlorotoluene 0.076 0.50 ND  
1,3,5-Trimethylbenzene 0.074 0.50 ND  
4-Chlorotoluene 0.088 0.50 ND  
tert-Butylbenzene 0.081 0.50 ND  
1,2,3-Trichloropropane 0.14 0.50 ND  
1,2,4-Trimethylbenzene 0.083 0.50 ND  
sec-Butyl Benzene 0.092 0.50 ND  
p-Isopropyltoluene 0.093 0.50 ND  
1,3-Dichlorobenzene 0.10 0.50 ND  
1,4-Dichlorobenzene 0.069 0.50 ND  
n-Butylbenzene 0.081 0.50 ND  
1,2-Dichlorobenzene 0.057 0.50 ND  
1,2-Dibromo-3-Chloropropane 0.15 0.50 ND  
Hexachlorobutadiene 0.19 0.50 0.21  
1,2,4-Trichlorobenzene 0.12 0.50 ND  
Naphthalene 0.14 0.50 0.15  
1,2,3-Trichlorobenzene 0.23 0.50 ND  
(S) Dibromofluoromethane 101  
(S) Dibromofluoromethane 106  
(S) Dibromofluoromethane 103  
Ethanol 0.21 0.50 ND TIC

Work Order:	1202033	Prep Method:	3510_TPH	Prep Date:	02/14/12	Prep Batch:	4711
Matrix:	Water	Analytical Method:	SW8015B(M)	Analyzed Date:	02/13/12	Analytical Batch:	408469
Units:	mg/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier	
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TPH as Diesel 0.0440 0.10 ND  
TPH as Motor Oil 0.0920 0.20 ND  
Pentacosane (S) 80.1



## MB Summary Report

Work Order:	1202033	Prep Method:	5030	Prep Date:	02/10/12	Prep Batch:	4714
Matrix:	Water	Analytical Method:	8260TPH	Analyzed Date:	02/10/12	Analytical Batch:	408430
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier	
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TPH(Gasoline) 31 50 ND  
(S) 4-Bromofluorobenzene 90.0

Work Order:	1202033	Prep Method:	3545_TPH	Prep Date:	02/15/12	Prep Batch:	4717
Matrix:	Soil	Analytical Method:	SW8015B	Analyzed Date:	02/15/12	Analytical Batch:	408474
Units:	mg/Kg						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier	
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Diesel Range Organics (DRO) 570 1500 ND  
TPH as Bunker Oil 1350 3000 ND  
TPH as Fuel Oil 1350 3000 ND  
TPH as Diesel 575 1500 ND  
TPH as Heating Oil 2500 3000 ND  
TPH as Hydraulic Oil 1350 3000 ND  
TPH as Jet A 575 1500 ND  
TPH as Jet Fuel 570 1500 ND  
TPH as JP-4 575 1500 ND  
TPH as JP-5 575 1500 ND  
TPH as JP-7 575 1500 ND  
TPH as JP-8 575 1500 ND  
TPH as Kerosene 575 2500 ND  
TPH as Mineral Oil 1350 3000 ND  
TPH as Motor Oil 1400 3000 ND  
TPH as Naphtha 575 2500 ND  
TPH as Oil 1350 3000 ND  
TPH as Stoddard 575 2500 ND  
TPH as Transformer Oil 1350 3000 ND  
Creosote 575 2500 ND  
Pentacosane (S) 85.9



## MB Summary Report

Work Order:	1202033	Prep Method:	5030	Prep Date:	02/15/12	Prep Batch:	4730
Matrix:	Water	Analytical Method:	8260TPH	Analyzed Date:	02/15/12	Analytical Batch:	408465
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Lab Qualifier	
TPH(Gasoline) (S) 4-Bromofluorobenzene	31	50	ND 89.5		

TPH(Gasoline)  
(S) 4-Bromofluorobenzene



## LCS/LCSD Summary Report

*Raw values are used in quality control assessment.*

Work Order:	1202033	Prep Method:	NA	Prep Date:	NA	Prep Batch:	NA
Matrix:	Water	Analytical Method:	SW8260B	Analyzed Date:	02/10/12	Analytical Batch:	408430
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
1,1-Dichloroethene	0.14	0.50	ND	17.04	92.9	101	8.35	61.4 - 129	30	
Benzene	0.087	0.50	ND	17.04	90.3	99.8	9.88	66.9 - 140	30	
Trichloroethylene	0.057	0.50	ND	17.04	106	109	3.51	69.3 - 144	30	
Toluene	0.059	0.50	ND	17.04	104	101	2.39	76.6 - 123	30	
Chlorobenzene	0.068	0.50	ND	17.04	97.1	104	6.76	73.9 - 137	30	
(S) Dibromofluoromethane			ND	11.36	79.6	89.0		61.2 - 131		
(S) Toluene-d8			ND	11.36	97.6	95.5		75.1 - 127		
(S) 4-Bromofluorobenzene		0.26		11.36	90.1	89.1		64.1 - 120		

Work Order:	1202033	Prep Method:	NA	Prep Date:	NA	Prep Batch:	NA
Matrix:	Water	Analytical Method:	SW8260B	Analyzed Date:	02/15/12	Analytical Batch:	408465
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
1,1-Dichloroethene	0.14	0.50	ND	17.04	105	99.8	5.13	61.4 - 129	30	
Benzene	0.087	0.50	ND	17.04	104	104	0.328	66.9 - 140	30	
Trichloroethylene	0.057	0.50	ND	17.04	104	100	4.34	69.3 - 144	30	
Toluene	0.059	0.50	ND	17.04	105	102	2.78	76.6 - 123	30	
Chlorobenzene	0.068	0.50	ND	17.04	105	101	3.19	73.9 - 137	30	
(S) Dibromofluoromethane			ND	11.36	101	102		61.2 - 131		
(S) Toluene-d8			ND	11.36	105	103		75.1 - 127		
(S) 4-Bromofluorobenzene		0.25		11.36	103	104		64.1 - 120		

Work Order:	1202033	Prep Method:	3510_TPH	Prep Date:	02/14/12	Prep Batch:	4711
Matrix:	Water	Analytical Method:	SW8015B(M)	Analyzed Date:	02/13/12	Analytical Batch:	408469
Units:	mg/L						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
TPH as Diesel	0.0440	0.10	ND	1	84.1	75.5	10.8	50.3 - 125	30	
Pentacosane (S)			ND	100	79.1	82.8		57.9 - 125		



## LCS/LCSD Summary Report

Raw values are used in quality control assessment.

Work Order:	1202033	Prep Method:	5030	Prep Date:	02/10/12	Prep Batch:	4714
Matrix:	Water	Analytical Method:	8260TPH	Analyzed Date:	02/10/12	Analytical Batch:	408430
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
TPH(Gasoline)	31	50	ND	227.27	97.1	103	6.39	52.4 - 127	30	
(S) 4-Bromofluorobenzene				90.0	11.36	94.6	85.3		41.5 - 125	

Work Order:	1202033	Prep Method:	5030	Prep Date:	02/15/12	Prep Batch:	4730
Matrix:	Water	Analytical Method:	8260TPH	Analyzed Date:	02/15/12	Analytical Batch:	408465
Units:	ug/L						

Parameters	MDL	PQL	Method Blank Conc.	Spike Conc.	LCS % Recovery	LCSD % Recovery	LCS/LCSD % RPD	% Recovery Limits	% RPD Limits	Lab Qualifier
TPH(Gasoline)	31	50	ND	227.27	103	106	2.70	52.4 - 127	30	
(S) 4-Bromofluorobenzene				89.5	11.36	87.4	96.8		41.5 - 125	



## Laboratory Qualifiers and Definitions

### DEFINITIONS:

<b>Accuracy/Bias (% Recovery)</b> - The closeness of agreement between an observed value and an accepted reference value.
<b>Blank (Method/Preparation Blank)</b> -MB/PB - An analyte-free matrix to which all reagents are added in the same volumes/proportions as used in sample processing. The method blank is used to document contamination resulting from the analytical process.
<b>Duplicate</b> - a field sample and/or laboratory QC sample prepared in duplicate following all of the same processes and procedures used on the original sample (sample duplicate, LCSD, MSD)
<b>Laboratory Control Sample (LCS ad LCSD)</b> - A known matrix spiked with compounds representative of the target analyte(s). This is used to document laboratory performance.
<b>Matrix</b> - the component or substrate that contains the analyte of interest (e.g., - groundwater, sediment, soil, waste water, etc)
<b>Matrix Spike (MS/MSD)</b> - Client sample spiked with identical concentrations of target analyte (s). The spiking occurs prior to the sample preparation and analysis. They are used to document the precision and bias of a method in a given sample matrix.
<b>Method Detection Limit (MDL)</b> - the minimum concentration of a substance that can be measured and reported with a 99% confidence that the analyte concentration is greater than zero
<b>Practical Quantitation Limit (PQL)</b> - a laboratory determined value at 2 to 5 times above the MDL that can be reproduced in a manner that results in a 99% confidence level that the result is both accurate and precise. PQLs reflect all preparation factors and/or dilution factors that have been applied to the sample during the preparation and/or analytical processes.
<b>Precision (%RPD)</b> - The agreement among a set of replicate/duplicate measurements without regard to known value of the replicates
<b>Surrogate (S) or (Surr)</b> - An organic compound which is similar to the target analyte(s) in chemical composition and behavior in the analytical process, but which is not normally found in environmental samples. Surrogates are used in most organic analysis to demonstrate matrix compatibility with the chosen method of analysis
<b>Tentatively Identified Compound (TIC)</b> - A compound not contained within the analytical calibration standards but present in the GCMS library of defined compounds. When the library is searched for an unknown compound, it can frequently give a tentative identification to the compound based on retention time and primary and secondary ion match. TICs are reported as estimates and are candidates for further investigation.
<b>Units:</b> the unit of measure used to express the reported result - <b>mg/L</b> and <b>mg/Kg</b> (equivalent to PPM - parts per million in <b>liquid</b> and <b>solid</b> ), <b>ug/L</b> and <b>ug/Kg</b> (equivalent to PPB - parts per billion in <b>liquid</b> and <b>solid</b> ), <b>ug/m3</b> , <b>mg.m3</b> , <b>ppbv</b> and <b>ppmv</b> (all units of measure for reporting concentrations in air), % ( equivalent to 10000 ppm or 1,000,000 ppb), <b>ug/Wipe</b> (concentration found on the surface of a single Wipe usually taken over a 100cm <sup>2</sup> surface)

### LABORATORY QUALIFIERS:

<b>B</b> - Indicates when the analyte is found in the associated method or preparation blank
<b>D</b> - Surrogate is not recoverable due to the necessary dilution of the sample
<b>E</b> - Indicates the reportable value is outside of the calibration range of the instrument but within the linear range of the instrument (unless otherwise noted) Values reported with an E qualifier should be considered as estimated.
<b>H</b> - Indicates that the recommended holding time for the analyte or compound has been exceeded
<b>J</b> - Indicates a value between the method MDL and PQL and that the reported concentration should be considered as estimated rather than quantitative
<b>NA</b> - Not Analyzed
<b>N/A</b> - Not Applicable
<b>NR</b> - Not recoverable - a matrix spike concentration is not recoverable due to a concentration within the original sample that is greater than four times the spike concentration added
<b>R</b> - The % RPD between a duplicate set of samples is outside of the absolute values established by laboratory control charts
<b>S</b> - Spike recovery is outside of established method and/or laboratory control limits. Further explanation of the use of this qualifier should be included within a case narrative
<b>X</b> -Used to indicate that a value based on pattern identification is within the pattern range but not typical of the pattern found in standards. Further explanation may or may not be provided within the sample footnote and/or the case narrative.



## Sample Receipt Checklist

Client Name: Soma Environmental

Date and Time Received: 2/9/2012 9:58

Project Name: 2844 Mountain Blvd., Okland

Received By: NG

Work Order No.: 1202033

Physically Logged By: NG

Checklist Completed By: NG

Carrier Name: First Courier

### Chain of Custody (COC) Information

Chain of custody present? Yes

Chain of custody signed when relinquished and received? Yes

Chain of custody agrees with sample labels? Yes

Custody seals intact on sample bottles? Not Present

### Sample Receipt Information

Custody seals intact on shipping container/cooler? Not Present

Shipping Container/Cooler In Good Condition? Yes

Samples in proper container/bottle? Yes

Samples containers intact? Yes

Sufficient sample volume for indicated test? Yes

### Sample Preservation and Hold Time (HT) Information

All samples received within holding time? Yes

Container/Temp Blank temperature in compliance? Yes Temperature: 6 °C

Water-VOA vials have zero headspace? Yes

Water-pH acceptable upon receipt? N/A

pH Checked by: pH Adjusted by:

All samples present and correct.



## Login Summary Report

**Client ID:** TL5237      Soma Environmental

**QC Level:**

**Project Name:** 2844 Mountain Blvd., Oakland

**TAT Requested:** 5+ day:0

**Project # :**

**Date Received:** 2/9/2012

**Report Due Date:** 2/16/2012

**Time Received:** 9:58

**Comments:**

**Work Order # :** 1202033

<u>WO Sample ID</u>	<u>Client Sample ID</u>	<u>Collection Date/Time</u>	<u>Matrix</u>	<u>Scheduled Disposal</u>	<u>Sample On Hold</u>	<u>Test On Hold</u>	<u>Requested Tests</u>	<u>Subbed</u>
1202033-001A	RS-1	02/08/12 14:08	Water	03/25/12			EDF W_8260Full W_GCMS-GRO	
1202033-001B	RS-1	02/08/12 14:08	Water	03/25/12			W_TPHDO	
1202033-002A	RS-2	02/08/12 12:57	Water	03/25/12			W_8260Full W_GCMS-GRO	
1202033-002B	RS-2	02/08/12 12:57	Water	03/25/12			W_TPHDO	
1202033-003A	RS-3	02/08/12 12:27	Water	03/25/12			W_8260Full W_GCMS-GRO	
1202033-003B	RS-3	02/08/12 12:27	Water	03/25/12			W_TPHDO	
1202033-004A	RS-4	02/08/12 11:52	Water	03/25/12			W_8260Full W_GCMS-GRO	
1202033-004B	RS-4	02/08/12 11:52	Water	03/25/12			W_TPHDO	



483 Sinclair Frontage Road  
Milpitas, CA 95035  
Phone: 408.263.5258    **RESET**  
FAX: 408.263.8293  
www.torrentlab.com

### CHAIN OF CUSTODY

NOTE: SHADED AREAS ARE FOR TORRENT LAB USE ONLY.

LAB WORK ORDER NO.  
**7/202033**

Company Name: <b>SOMA Environmental Engineering, Inc.</b>	Location of Sampling: <b>2844 Mountain Blvd., Oakland</b>
Address: <b>6620 Owens Drive, Suite A</b>	
City: Pleasanton    State: CA    Zip Code: 94588	
Telephone: 925-734-6400    FAX: 925-734-6401	
REPORT TO: Joyce Bobek	SAMPLER: Lizzie Hightower
P.O. #: 5081	
EMAIL: jbobek@somaenv.com	

LAB ID	CLIENT'S SAMPLE I.D.	DATE / TIME SAMPLED	MATRIX	# OF CONT	CONT TYPE	SAMPLE TYPE:		REPORT FORMAT:		TPH-g 8260B	VOCs 8260B	Gas Ox 8260B	TPH-d 8015	TPH-no 8015	ANALYSIS REQUESTED	REMARKS
						<input type="checkbox"/> Storm Water	<input type="checkbox"/> Air	<input type="checkbox"/> QC Level IV	<input type="checkbox"/> Waste Water	<input type="checkbox"/> Other	<input checked="" type="checkbox"/> EDF	<input type="checkbox"/> Excel / EDD				
001A	RS-1	2/8/12 14:08	W	3	VOAs	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>								
001B		↓	W	2	1L											
002A	RS-2	12:57	W	3	VOAs	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>								
002B		↓	W	2	1L											
003A	RS-3	12:27	W	3	VOAs	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>								
003B		↓	W	2	1L											
004A	RS-4	11:52	W	3	VOAs	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>								Temp. 60°C
004B		↓	W	2	1L											

1 Relinquished By: <i>E. Hightower</i>	Print: <i>E. Hightower</i>	Date: <b>2/9/12</b>	Time: <b>09:17</b>	Received By: <i>C. Hawn</i>	Print: <i>C. Hawn</i>	Date: <b>2/9/12</b>	Time: <b>09:16</b>
2 Relinquished By: <i>C. Hawn</i>	Print: <i>C. Hawn</i>	Date: <b>2/9/12</b>	Time: <b>09:58</b>	Received By: <i>Ray Kaur</i>	Print: <i>Ray Kaur</i>	Date: <b>2/9/12</b>	Time: <b>09:58</b>

Were Samples Received in Good Condition?  Yes  No   Samples on Ice?  Yes  No   Method of Shipment \_\_\_\_\_  
Sample seals intact?  Yes  No  N/A

NOTE: Samples are discarded by the laboratory 30 days from date of receipt unless other arrangements are made.

Log In By: \_\_\_\_\_ Date: \_\_\_\_\_ Log In Reviewed By: \_\_\_\_\_ Date: \_\_\_\_\_ Page **1** of **1**

7/30/12  
10:30 AM