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March 25, 2015

Mr. Martin Musonge
Regional Water Quality Control Board
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, California 94612

RECEIVED

By Alameda County Environmental Health at 1:44 pm, Mar 25, 2015

Subject: **File No. 01-0098 (MYM)**
Site Located at 2844 Mountain Boulevard, Oakland, California

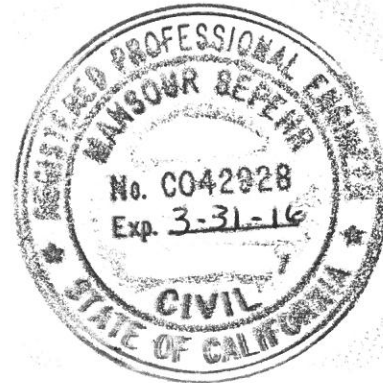
Dear Mr. Musonge:

Enclosed for your review is a copy of SOMA's "First Quarter 2015 Groundwater Monitoring Report" for the subject property. It has been uploaded to the State's GeoTracker database and Alameda County's FTP site.

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,

Mansour Sepehr, Ph.D., PE
Principal Hydrogeologist



cc: Mr. Tejindar Singh w/enclosure
Ms. Donna Drogos – Alameda County Env. Health

**First Quarter 2015
Groundwater Monitoring Report**

**2844 Mountain Boulevard
Oakland, California
Regional Board File Number 01-0098**

March 25, 2015

Project 5081

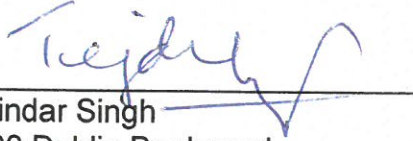
Prepared for

**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 of Tejindar Singh, property owner of 2844 Mountain Blvd., Oakland, California, to comply with requirements of the San Francisco Bay Regional Water Quality Control Board for the First Quarter 2015 groundwater monitoring event.



Mansour Sepehr, PhD, PE
Principal Hydrogeologist

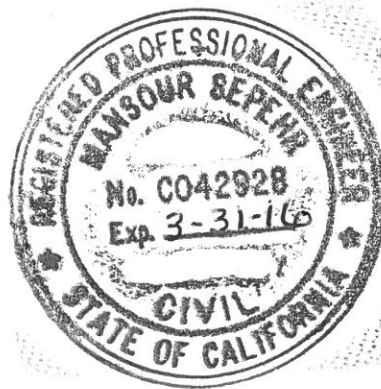


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- Appendix B Tables of Elevations and Coordinates on Wells, Field Measurements of Physical and Chemical Parameters of the Groundwater Samples and Groundwater Gradient Calculations
- Appendix C Laboratory Report and Chain of Custody Form
- Appendix D Non-Hazardous Waste Manifest

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 2015 groundwater monitoring event conducted at the site on February 12, 2015. 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.

Further soil and groundwater investigation was conducted at the site in March 2012. In October 2012, two wells (RS-1 and RS-2) were decommissioned in anticipation of excavation activities onsite. Excavation activities commenced on October 3, 2012, and an area of approximately 1,200 square feet was excavated to a depth of 15 feet. A total of 788.65 tons of waste soil was removed and replaced with clean fill material.

On May 9 and 10, 2013, two groundwater monitoring wells (MW-1 and MW-2) and soil and groundwater borings (DPT-5/5W) were installed as approved and requested by the San Francisco Bay Regional Water Quality Control Board (SFBRWQCB). All site wells were surveyed by a licensed surveyor on May 28, 2013.

Based on the success of a multi-phase extraction (MPE) pilot test conducted at the site in December 2013, SFRWQCB approved an extended MPE event. This event was conducted at the site from September 17, 2014 to November 5, 2014. Details and results of this event are documented in SOMA's report dated December 12, 2014.

1.2 Summary of Field Activities and Laboratory Analysis

1.2.1 Field Activities

On February 12, 2015, four monitoring wells (RS-3, RS-4, MW-1 and MW-2) were measured for depth to groundwater. Additional field measurements and groundwater samples were collected from RS-3, MW-1, and MW-2. Properties measured in the field were pH, temperature, and electrical conductivity (EC). Only a grab sample could be collected from RS-4 because of accessibility issues as this well is fitted with a compression cap that could not be unscrewed. This monitoring event was conducted in accordance with procedures and guidelines of SFBRWQCB.

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

Purged groundwater was temporarily stored and secured on-site in a 55-gallon drum pending transport to an appropriate disposal facility. One drum generated during the Fourth Quarter 2014 groundwater monitoring event (November 2014)

was transported to an appropriate disposal facility on January 10, 2015. Appendix D includes a waste manifest for the removal of purged groundwater.

1.2.2 Laboratory Analysis

Groundwater samples were submitted to a California state-certified laboratory Curtis and Tompkins Laboratories, for the following analysis:

- TPH-g (gasoline by EPA Method 8260), and TPH-d (diesel by EPA Method 8015);
- BTEX (benzene, toluene, ethylbenzene, and total xylenes), MtBE, gasoline oxygenates (by EPA Method 8260).

2. RESULTS

Results of field measurements and laboratory analyses for the groundwater monitoring event conducted on February 12, 2015 follow below.

2.1 Field Measurements

Monitoring wells MW-1, MW-2, RS-3 and RS-4 were measured for depth to groundwater (Table 1). Depths to groundwater ranged from 5.80 feet in MW-1 to 8.03 feet in RS-4. Groundwater elevations ranged from 667.24 feet in RS-4 to 670.13 feet in RS-3.

Figure 3 displays the groundwater elevation map. The groundwater flows southeasterly at a gradient of 0.059 ft/ft. Since the previous monitoring event (November 2014), the groundwater flow direction has remained southeasterly and the gradient has decreased. Groundwater gradient calculations are included in Appendix B.

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.

TPH-g was below laboratory-reporting limit in RS-3, RS-4, and MW-2 and was detected in in MW-1 at 4,300 µg/L. Since the previous monitoring event (November 2014), TPH-g concentrations decreased in RS-4 and MW-1 and remained below laboratory-reporting limits in RS-3. No comparison could be made for TPH-g in MW-2 due to raised dilution and reporting limits in groundwater sample from this well. Figure 4 shows a map of TPH-g concentrations in groundwater. The TPH-g plume appears to be centered to the southwest of the pump islands in the vicinity of MW-1.

TPH-d was detected in concentrations ranging from 56 µg/L in RS-3 to 11,000 µg/L in MW-1. Since the previous monitoring event (November 2014), TPH-d has increased in MW-1 and MW-2 and decreased in RS-3 and RS-4. Figure 5 shows a contour map of TPH-d concentrations in groundwater. TPH-d plume appears to be centered southwest of the pump islands in the vicinity of MW-1.

The following BTEX concentrations were observed during this monitoring event:

- All BTEX analytes were below laboratory-reporting limits in RS-3 and RS-4.
- Benzene was detected in MW-1 and MW-2 at 200 µg/L and 98 µg/L, respectively. Since the previous monitoring event (November 2014) benzene has decreased in MW-1 and MW-2. Figure 4 shows a map of benzene concentrations in groundwater. The benzene plume appears to be centered to the southwest of the pump islands in the vicinity of MW-1.
- Since the previous monitoring event (November 2014) toluene has remained below the laboratory-reporting limit in all wells.
- Ethylbenzene was detected in MW-1 and MW-2 at 200 µg/L and 58 µg/L, respectively. Since the previous monitoring event (November 2014) ethylbenzene has decreased in MW-1, increased in MW-2, and remained below laboratory-reporting limit in RS-3 and RS-4.
- Total xylenes was detected in MW-1 at 350 µg/L. Since the previous monitoring event (November 2014), total xylenes decreased in RS-4 and MW-1 and remained below laboratory-reporting limit in RS-3 and MW-2.

Methyl tertiary-butyl ether (MtBE) concentrations ranged from 19 µg/L in RS-3 to 6,300 µg/L in MW-2. Since the previous monitoring event (November 2014), MtBE has increased in MW-2, decreased in MW-1 and more significantly in RS-4, and remained the same in RS-3. Figure 6 shows a contour map of MtBE concentrations in groundwater. The MtBE plume appears to be centered in the vicinity of pump islands around MW-2.

Tertiary-butyl alcohol (TBA) was below laboratory-reporting limit in RS-3. Detectable TBA concentrations ranged from 14,000 µg/L in RS-4 to 42,000 µg/L in MW-2. Since the previous monitoring event (November 2014), TBA increased in MW-1 and significantly in MW-2, decreased in RS-4, and remained below laboratory-reporting limits in RS-3. Figure 7 shows a contour map of TBA concentrations in groundwater. The highest TBA concentrations were detected in the vicinity of the pump islands around MW-2.

Tertiary amyl methyl ether (TAME) was below laboratory-reporting limit in RS-3. Detectable TAME concentrations ranged from 25 µg/L in RS-4 to 610 µg/L in MW-2. Since the previous monitoring event (November 2014), TAME has increased in MW-2 and decreased in RS-3, RS-4, and MW-1. Figure 8 shows a contour map of TAME concentrations in groundwater. The highest TAME concentrations were detected in the vicinity of the pump islands around MW-2.

3. CONCLUSIONS AND RECOMMENDATIONS

Conclusions and recommendations based on results of First Quarter 2015 groundwater monitoring are summarized below.

- The groundwater flows southeasterly across the site.
- No free/floating product was observed in any monitoring wells during this monitoring event.
- The highest TPH-g, TPH-d, benzene, ethylbenzene, and total xylenes concentrations were detected to the southwest of the pump islands around MW-1. The highest MtBE, TBA, and TAME concentrations were detected in the vicinity of pump islands around MW-2.
- Since the previous monitoring event in November 2015, TPH-g decreased in RS-4 and MW-1, no comparison could be made for MW-2 due to raised dilution and reporting limits; TPH-d increased in MW-1 and MW-2 and decreased in RS-3 and RS-4; benzene decreased in MW-1 and MW-2; MtBE increased in MW-2, decreased in MW-1 and significantly in RS-4; TBA increased in MW-1, significantly in MW-2 and decreased in RS-4 and TAME increased in MW-2 and decreased in RS-3, RS-4, and MW-1.
- SOMA will continue conducting quarterly groundwater monitoring events at the site.
- As previously recommended in SOMA's reports dated December 12, 2014 and December 31, 2014, SOMA proposes to install a 4-inch diameter MPE/monitoring well in the vicinity of T-1 to be utilized during the next MPE event and to monitor elevated levels of chemicals in groundwater.

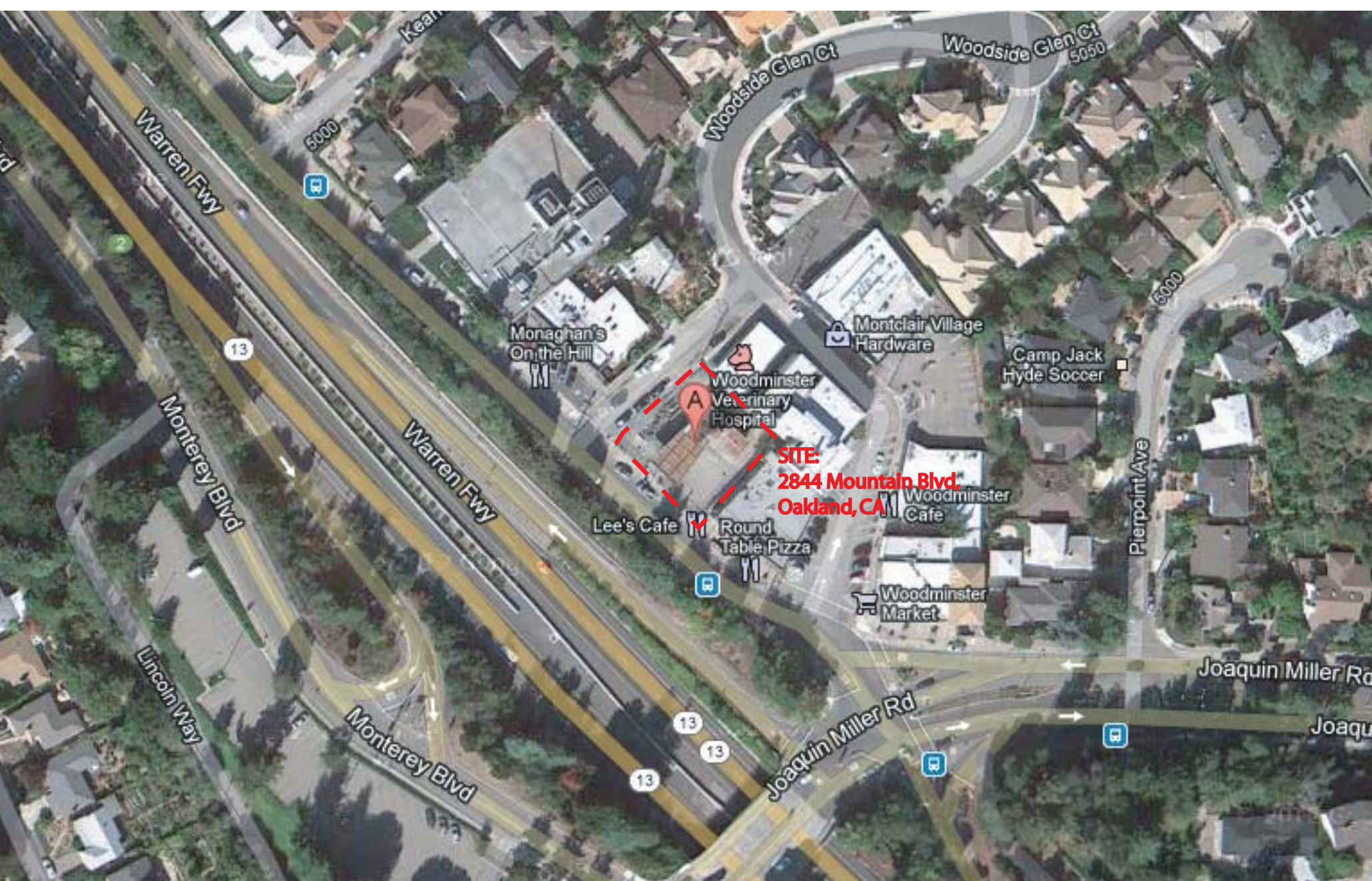
SOMA also proposes to conduct another MPE event at the site utilizing MW-1, MW-2, RS-4 and new well as proposed above as extraction wells in order to further reduce contaminant concentrations in the vicinity of these wells.

4. REPORT LIMITATIONS

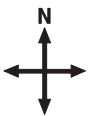
This report is the summary of work done by SOMA, including observations and descriptions of site conditions. It includes analytical results produced by Curtis and Tompkins, Laboratories for the current groundwater monitoring event. Quantities and locations of wells were selected to provide the required 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



Source: Google (R) 2012

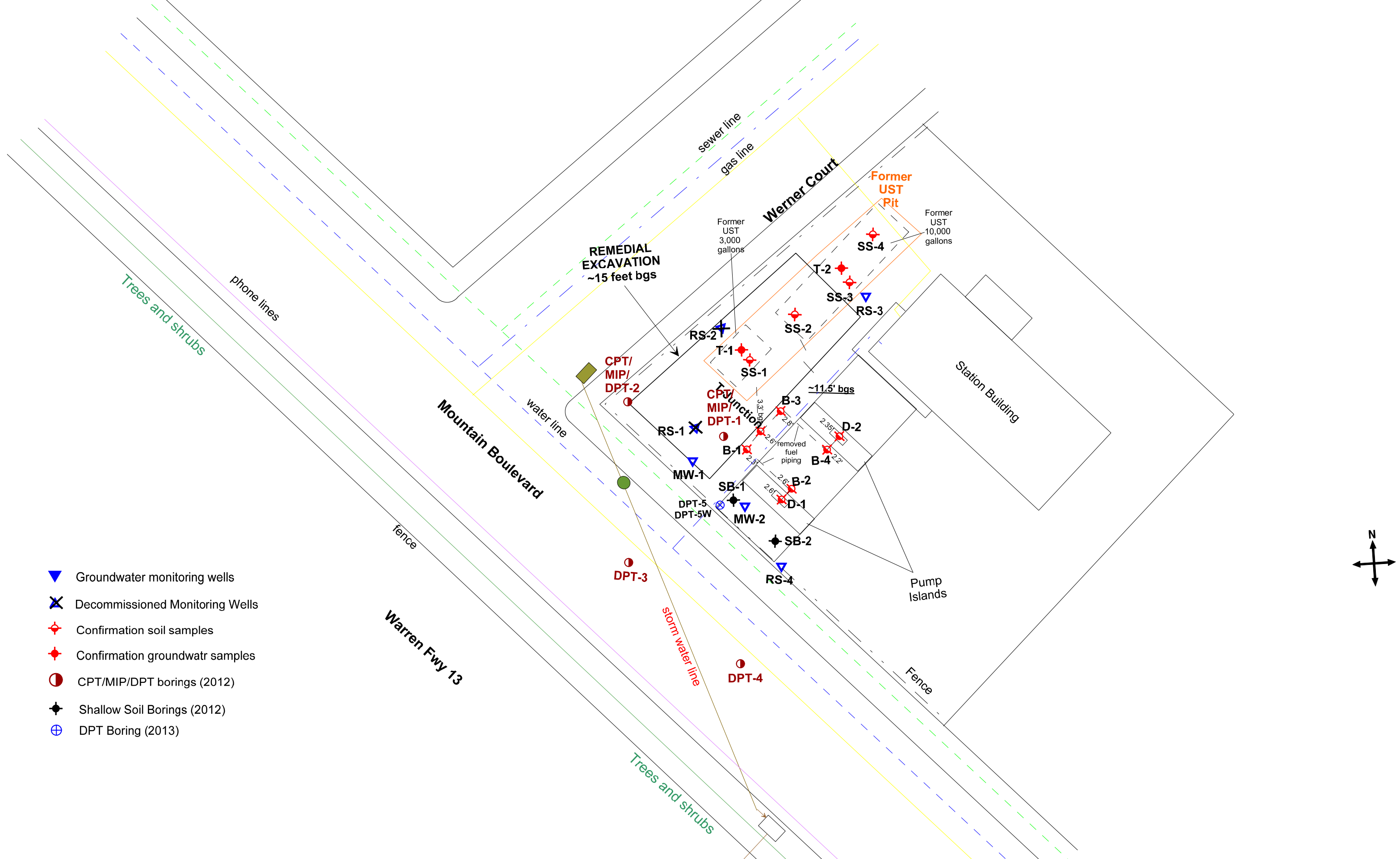


approximate scale in feet



Figure 1: Site Vicinity Map





- ▼ Groundwater monitoring wells
- ✕ Decommissioned Monitoring Wells
- ⊕ Confirmation soil samples
- ⊕ Confirmation groundwatr samples
- CPT/MIP/DPT borings (2012)
- ◆ Shallow Soil Borings (2012)
- ⊕ DPT Boring (2013)

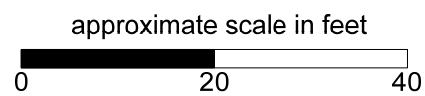


Figure 2: Site Map Showing Locations of Former USTs, Soil Borings, and Groundwater Monitoring Wells

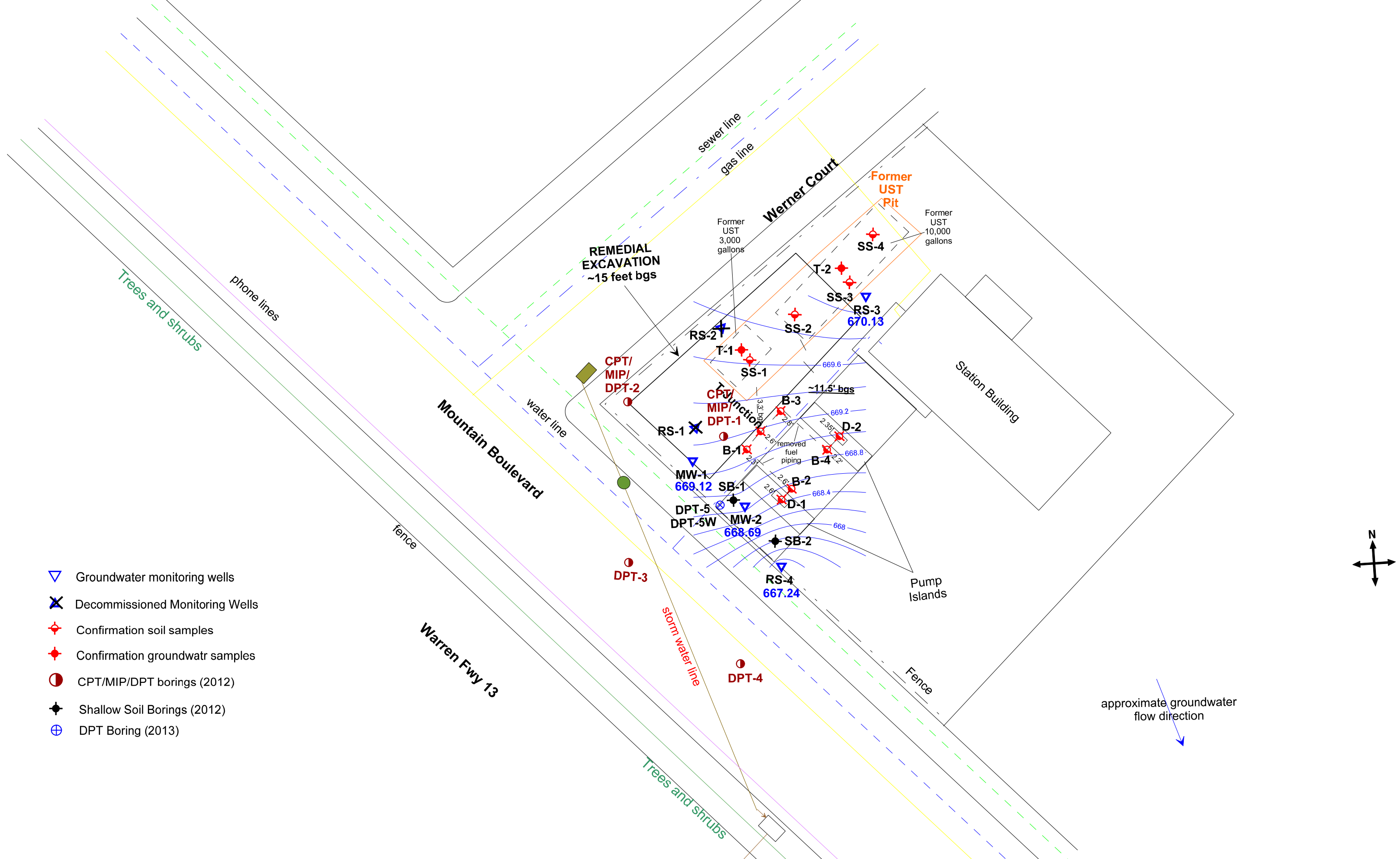


Figure 3: Groundwater Elevation Contour Map in feet, February 12, 2015

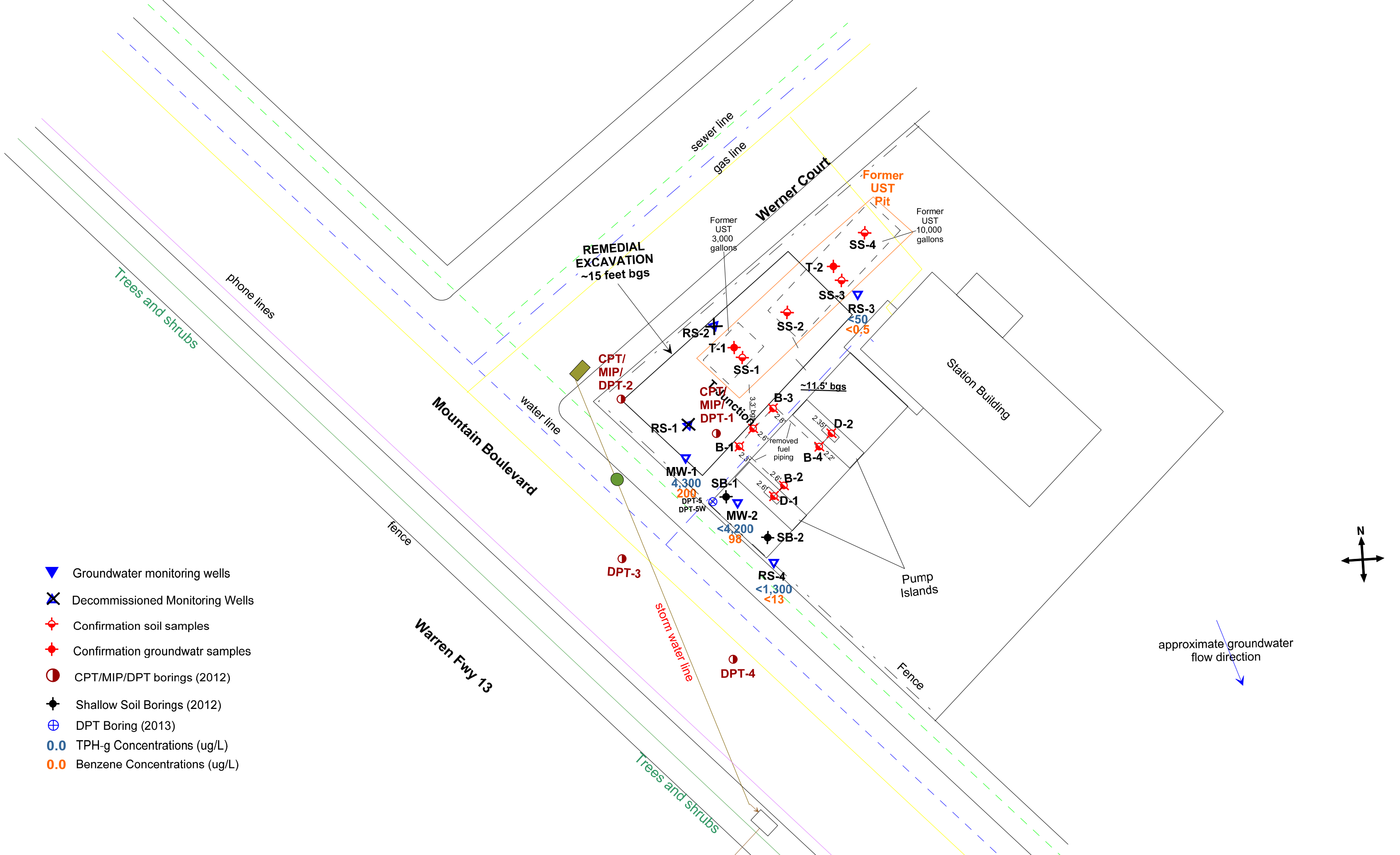
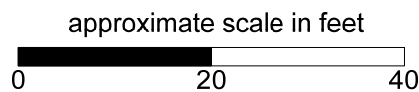


Figure 4: Map Showing TPH-g and Benzene Concentrations in Groundwater, February 12, 2015



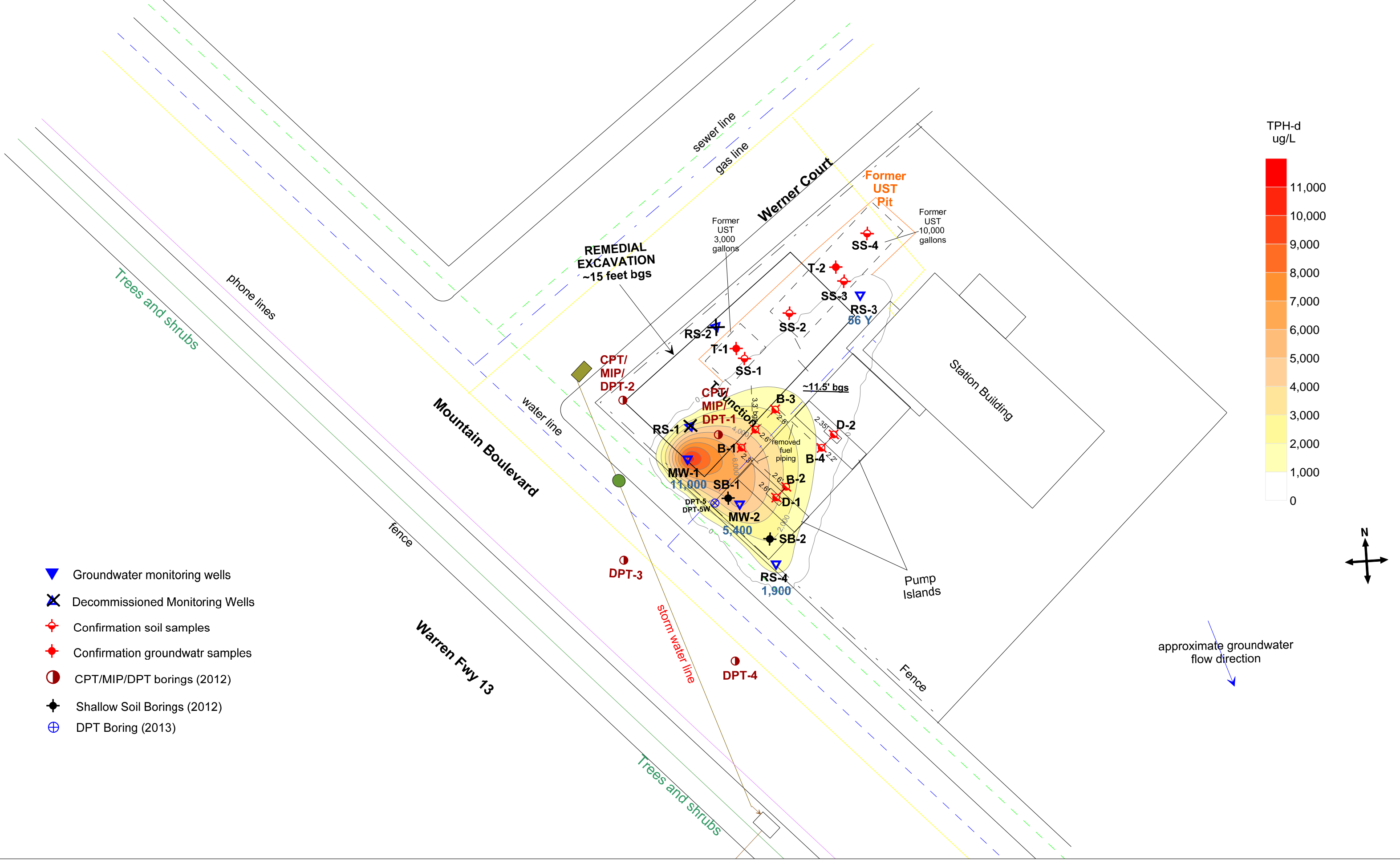
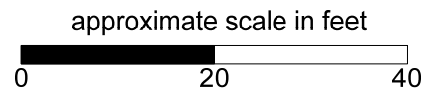


Figure 5: Contour Map Showing TPH-d Concentrations in Groundwater, February 12, 2015



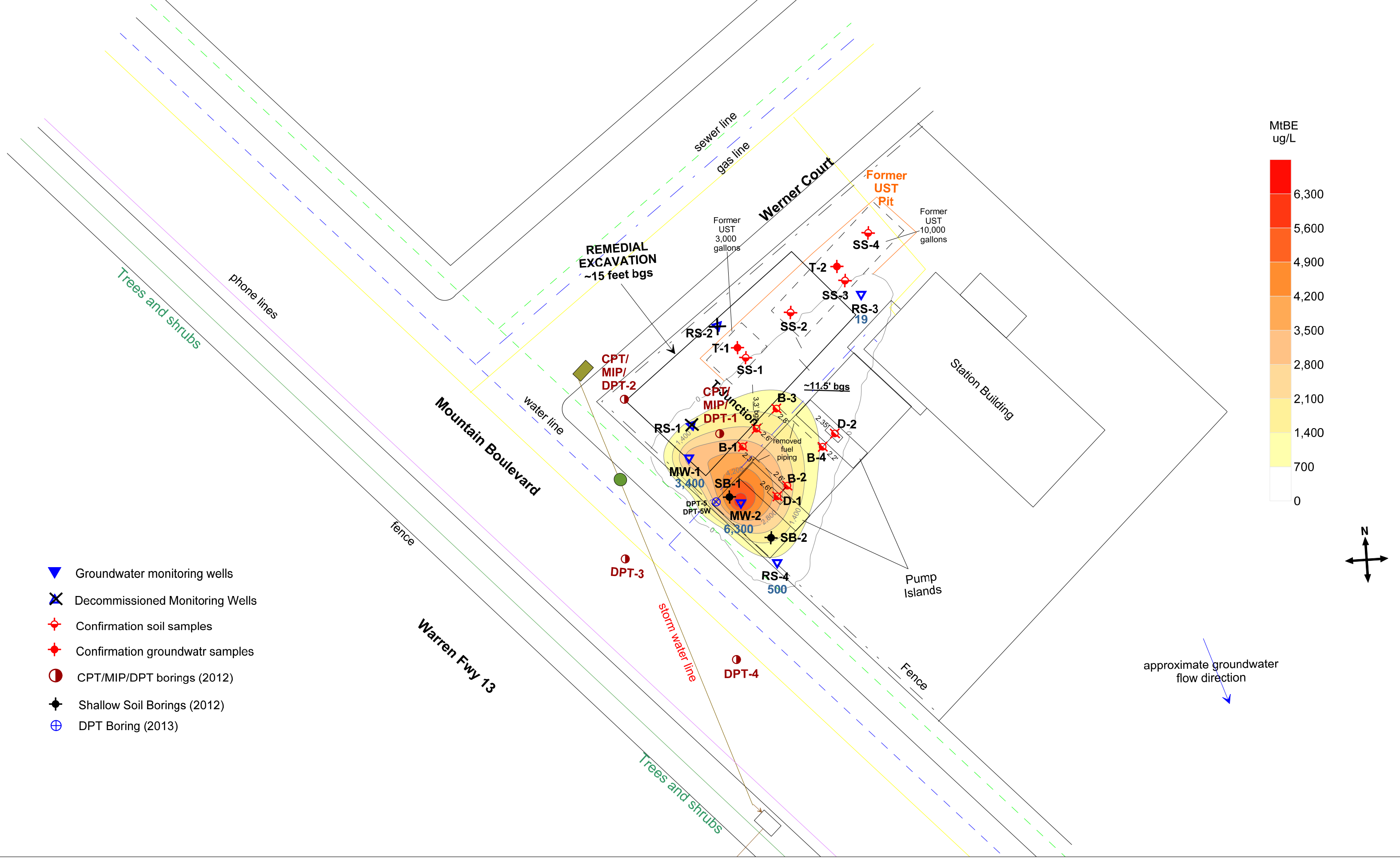


Figure 6: Contour Map Showing MtBE Concentrations in Groundwater, February 12, 2015

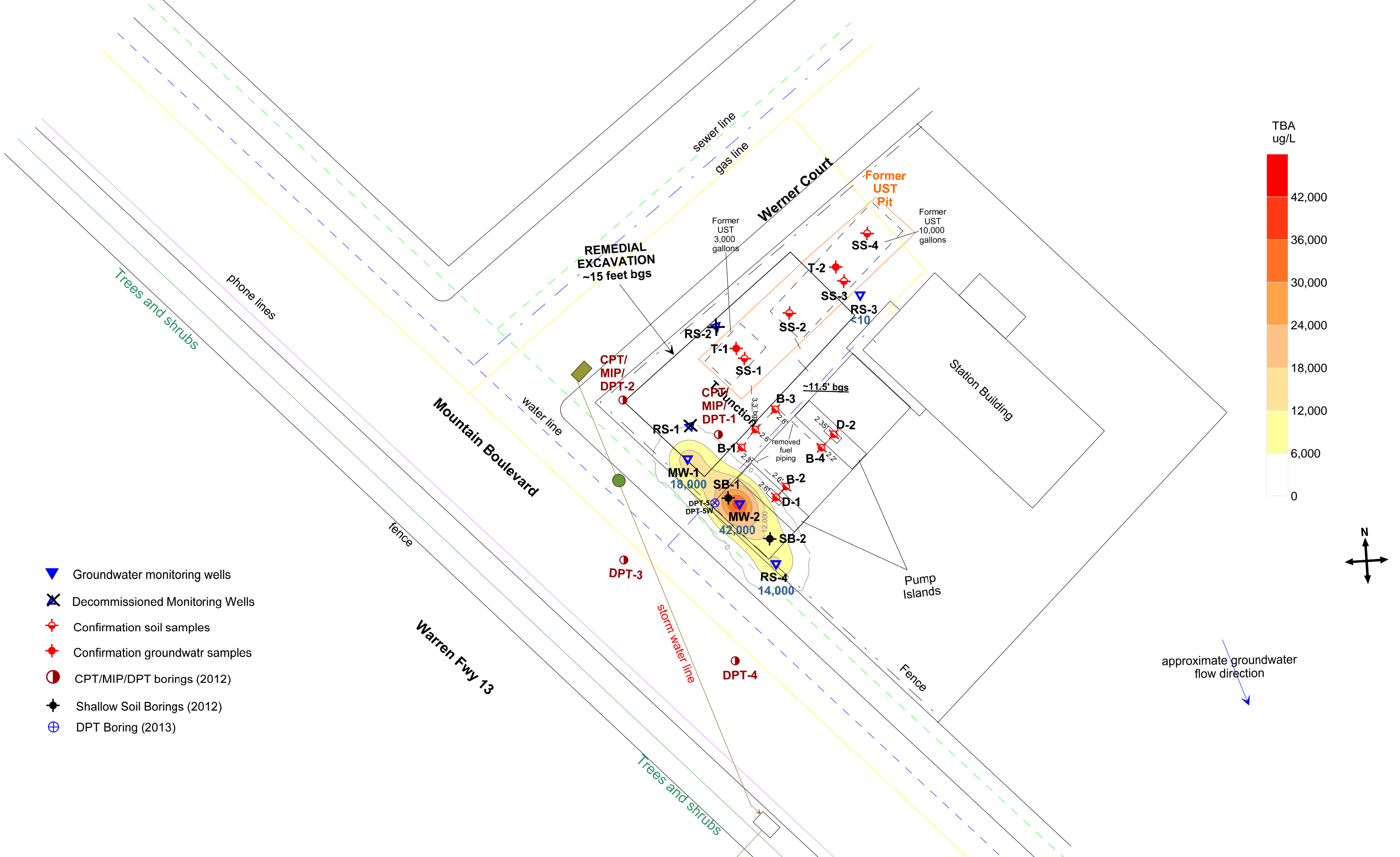


Figure 7: Contour Map Showing TBA Concentrations in Groundwater, February 12, 2015

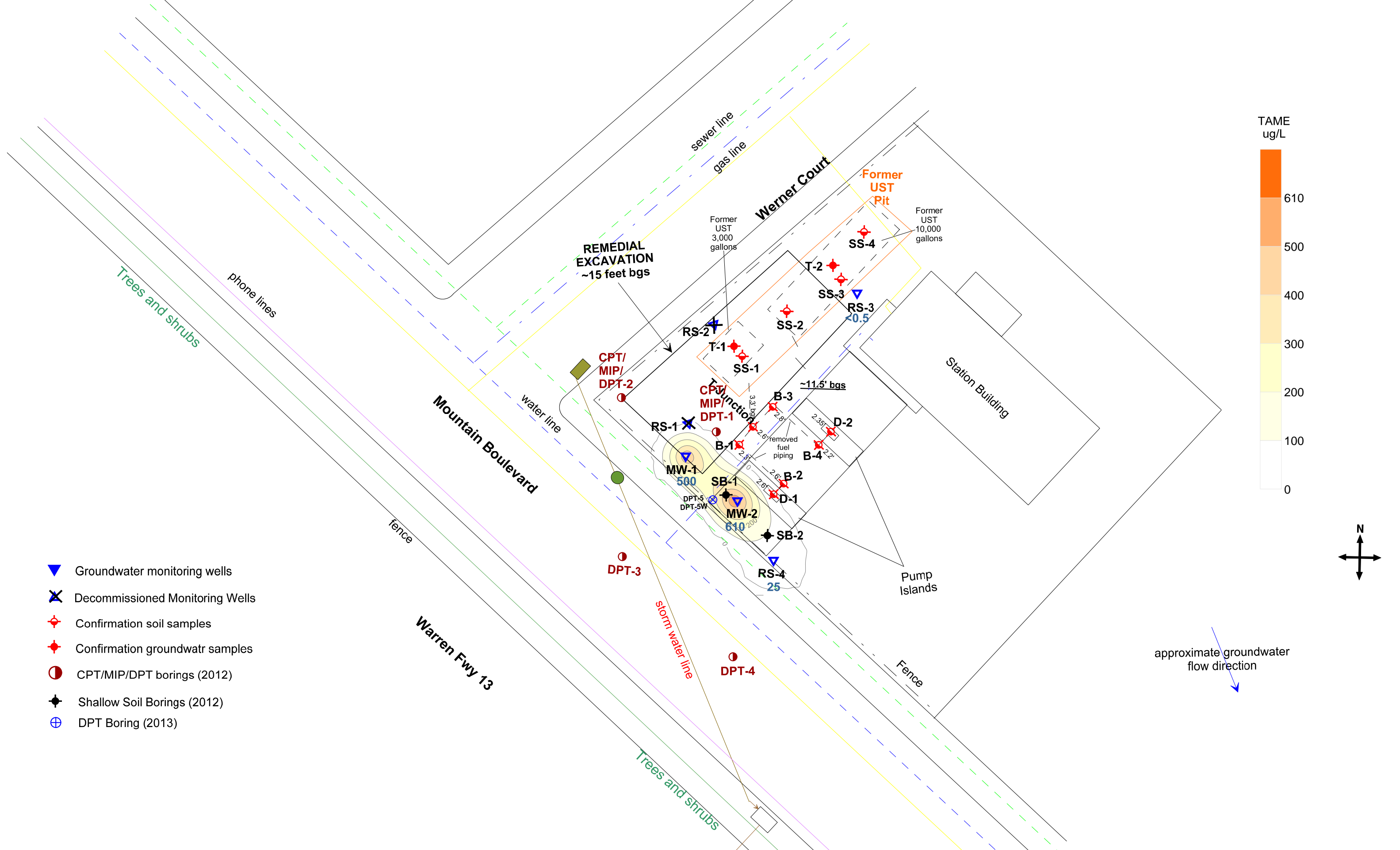
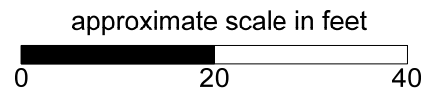


Figure 8: Contour Map Showing TAME Concentrations in Groundwater, February 12, 2015



Tables

Table 1
Historical 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	5/1/90	675.63	7.20	7.20	0.00	668.43	2,700			370	420	40	320			
	5/1/91	675.63	8.35	8.35	0.00	667.28	1,300			580	130	62	240			
	10/1/91	675.63	10.22	10.22	0.00	665.41	1,100			140	100	45	210			
	1/1/92	675.63	8.06	8.06	0.00	667.57	1,700			9.9	31	9.7	170			
	1/1/93	675.63	5.30	5.30	0.00	670.33	3,700			650	9.2	51	170			
	8/1/93	675.63	8.56	8.56	0.00	667.07	900			14	0.6	2.1	8			
	11/1/93	675.63	8.44	8.44	0.00	667.19	1,400			9.6	ND	0.9	5			
	1/1/94	675.63	6.88	6.88	0.00	668.75	4,200			95	3.1	58	130			
	5/1/94	675.63	7.87	7.87	0.00	667.76	7,500			270	11	37	96			
	8/1/94	675.63	16.28	16.28	0.00	659.35	130			12	0.5	2.6	5			
	11/1/94	675.63	8.02	8.02	0.00	667.61	270			4.7	0.7	0.6	15			
	2/1/95	675.63	6.51	6.51	0.00	669.12	12,000			81	2.3	1	12			
	6/1/95	675.63	7.34	7.34	0.00	668.29	37,000			460	ND	ND	ND	63,000		
	11/1/95	675.63	8.71	8.71	0.00	666.92	ND			660	16	140	330	31,000		
	2/1/96	675.63	6.95	6.95	0.00	668.68	66,000			110	ND	12	21	84,000		
	9/18/96	675.63	8.44	8.52	0.08	667.17	1 INCH FLOATING PRODUCT									
	12/11/96	675.63	6.42	6.62	0.20	669.17	79,000			4,000	37,000	8,000	45,000	220,000		
	2/21/97	675.63	6.88	6.92	0.04	668.74	1/2 INCH FLOATING PRODUCT									
	5/28/97	675.63	7.88	7.96	0.08	667.73	156,000			9,400	51,000	7,000	45,000	112,000		
	9/2/97	675.63	8.34	8.38	0.04	667.28	1/2 INCH FLOATING PRODUCT									
	11/24/97	675.63	6.98	7.00	0.02	668.65	1/4 INCH FLOATING PRODUCT									
	2/25/98	675.63	3.51	3.52	0.01	672.12	1/8 INCH FLOATING PRODUCT									
	5/27/98	675.63	7.31	7.31	0.00	668.32	40,000			2,200	4,000	2,300	19,000	350,000		
	9/16/98	675.63	8.10	8.10	0.00	667.53	62,000			2,400	2,300	2,100	14,000	250,000		
	11/23/98	675.63	7.10	7.10	0.00	668.53	99,000			2,600	5,800	2,500	18,000	130,000		
	2/23/99	675.67	4.82	4.87	0.05	670.84	5/8 INCH FLOATING PRODUCT									
5/5/99	675.67	6.86	6.90	0.04	668.80	FLOATING PRODUCT										
8/24/99	675.67	7.87	7.90	0.03	667.80	FLOATING PRODUCT										
2/8/12	675.67	6.80	6.80	0.00	668.87	60,000 x	8,200 x	<936	790	<6.4	2,000	430	65,000	41,000	5,100	
5/4/12	675.67	6.57	6.57	0.00	669.10	18,000	10,000	NA	600	<36	2,000	870	22,000	11,000	1,800	
8/6/12	675.67	7.61	7.61	0.00	668.06	16,000	12,000	NA	940	<130	2,000	560	42,000	35,000	3,400	
Well Destroyed October 1, 2012																
RS-2	5/1/90	689.00	7.06	7.06	0.00	681.94	23,000			7,200	4,800	300	3,300			
	5/1/91	689.00	7.14	7.14	0.00	681.86	26,000			14,000	1,800	750	2,900			
	10/1/91	688.89	8.84	8.84	0.00	680.05	13,000			4,300	910	300	2,300			
	1/1/92	688.89	7.34	7.34	0.00	681.55	8,300			1,800	920	140	1,700			
	1/1/93	688.89	4.10	4.10	0.00	684.79	41,000			7,000	210	1,200	4,200			
	8/1/93	688.89	7.32	7.32	0.00	681.57	19,000			5,300	62	810	1,600			
	11/1/93	688.89	7.34	7.34	0.00	681.55	9,300			2,400	3.90	46	800			

Table 1
Historical 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.	1/1/94	688.89	5.52	5.52	0.00	683.37	30,000			4,900	ND	880	2,600			
	5/1/94	675.25	6.40	6.40	0.00	668.85	120,000			3,300	330	ND	2,200			
	8/1/94	675.25			0.00	675.25	510			7.30	3.80	3.50	32			
	11/1/94	675.25	9.82	9.82	0.00	665.43	620			6.60	3.90	1.10	47			
	2/1/95	675.25	4.81	4.81	0.00	670.44	22,000			228	80	2	463			
	6/1/95	675.25	5.80	5.80	0.00	669.45	49,000			1,300	160	200	1,600	71,000		
	11/1/95	675.25	7.64	7.64	0.00	667.61	ND			670	25	150	360	65,000		
	2/1/96	675.25	4.69	4.69	0.00	670.56	75,000			1,400	170	59	460	71,000		
	9/18/96	675.25	7.34	7.34	0.00	667.91	6,300			2,000	48	350	570	160,000		
	12/11/96	675.25	5.08	5.08	0.00	670.17	16,000			2,000	840	200	3,200	180,000		
	2/21/97	675.25	5.42	5.42	0.00	669.83	22,000			2,100	1,300	600	5,100	56,000		
	5/28/97	675.25	6.40	6.40	0.00	668.85	156,000			4,200	89	1,000	6,900	390,000		
	9/2/97	675.25	6.93	6.93	0.00	668.32	<50			1,300	25	360	1,400	180,000		
	11/24/97	675.25	5.93	5.93	0.00	669.32	<50			600	ND	ND	ND	610,000		
	2/25/98	675.25	4.59	4.59	0.00	670.66	11,000			1,100	<50	320	2,400	330,000		
	5/27/98	675.25	5.61	5.61	0.00	669.64	13,000			2,000	150	600	2,700	380,000		
	9/16/98	675.25	6.84	6.84	0.00	668.41	11,000			1,600	20	1,600	1,600	280,000		
	11/23/98	675.25	6.24	6.24	0.00	669.01	12,000			1,200	84	<5	960	140,000		
	2/23/99	675.28	4.62	4.62	0.00	670.66	8,800			1,500	650	640	1,500	450,000		
	5/5/99	675.28	7.55	7.55	0.00	667.73	29,000			2,000	1,300	500	3,700	270,000		
	8/24/99	675.28	6.62	6.62	0.00	668.66	12,000			1,900	20	370	980	340,000		
	2/8/12	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
	5/4/12	675.28	5.18	5.18	0.00	670.10	16,000	13,000	NA	690	23	460	1,140	6,800	21,000	960
8/6/12	675.28	6.33	6.33	0.00	668.95	11,000	10,000	NA	810	<25	210	473	3,300	18,000	580	
Well Destroyed October 1, 2012																
RS-3	5/1/90	670.00	6.00	6.00	0.00	664.00	330			2	1	1	150			
	5/1/91	670.00	6.76	6.76	0.00	663.24	ND			0.40	ND	0.80	8			
	10/1/91	670.00	8.98	8.98	0.00	661.02	ND			ND	ND	ND	ND			
	1/1/92	670.00	6.81	6.81	0.00	663.19	ND			2.20	7.20	0.60	4			
	1/1/93	670.00	4.05	4.05	0.00	665.95	ND			ND	ND	ND	ND			
	8/1/93	670.00	7.19	7.19	0.00	662.81	ND			30	6	2.40	5			
	11/1/93	670.00	7.12	7.12	0.00	662.88	ND			4.80	0.40	0.60	2			
	1/1/94	670.00	5.42	5.42	0.00	664.58	330			25	3.20	3.90	12			
	5/1/94	676.20	5.78	5.78	0.00	670.42	670			34	4	28	70			
	8/1/94	676.20	5.86	5.86	0.00	670.34	ND			ND	ND	ND	ND			
	11/1/94	676.20	5.08	5.08	0.00	671.12	69			2.50	3.10	1	4			
	2/1/95	676.20	4.51	4.51	0.00	671.69	ND			0.30	0.40	ND	1			
	6/1/95	676.20	5.29	5.29	0.00	670.91	ND			ND	ND	ND	ND	66		
	11/1/95	676.20	7.10	7.10	0.00	669.10	ND			ND	ND	ND	ND	44		

Table 1
Historical 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.	2/1/96	676.20	4.48	4.48	0.00	671.72	120			ND	ND	ND	ND	110		
	9/18/96	676.20	6.92	6.92	0.00	669.28	1,000			13	8.60	10	17	33		
	12/11/96	676.20	4.90	4.90	0.00	671.30	85			20	2	<0.5	14	4,700		
	2/21/97	676.20	4.94	4.94	0.00	671.26	120			5	2	2	6	850		
	5/28/97	676.20	7.92	7.92	0.00	668.28	<50			6	<0.5	<0.5	<2	2,400		
	9/2/97	676.20	6.60	6.60	0.00	669.60	<50			0.90	<0.5	<0.5	<2	8,600		
	11/24/97	676.20	5.89	5.89	0.00	670.31	140			13	2	1	12	3,600		
	2/25/98	676.20	4.29	4.29	0.00	671.91	<50			<0.5	<0.5	<0.5	4	850		
	5/27/98	676.20	5.01	5.01	0.00	671.19	<50			7	<0.5	<0.5	11	940		
	9/16/98	676.20	6.21	6.21	0.00	669.99	<50			2	2	2	10	670		
	11/24/98	676.20	5.58	5.58	0.00	670.62	85			9	23	<0.5	19	180		
	2/24/99	676.23	4.30	4.30	0.00	671.93	<50			<0.5	0.90	<0.5	<1.0	150		
	5/5/99	676.23	4.92	4.92	0.00	671.31	<50			1	2	1	6	130		
	8/24/99	676.23	6.64	6.64	0.00	669.59	80			0.80	<0.5	0.60	<1	300		
	2/8/12	676.23	5.72	5.72	0.00	670.51	130 x	<42	<94	<0.13	0.59	2.90	18.1	7.9	<1.5	<0.17
	5/4/12	676.23	5.25	5.25	0.00	670.98	<50	330 Y	NA	<0.5	<0.5	<0.5	<0.5	10	18	2.4
	8/6/12	676.23	6.65	6.65	0.00	669.58	<50	390 Y	NA	<0.5	<0.5	<0.5	<0.5	13	<10	3.2
	3/29/13	676.23	6.01	6.01	0.00	670.22	<50	90 ^Y	NA	<0.5	<0.5	<0.5	<0.5	3.6	<10	<0.5
	6/6/13	676.08	6.45	6.45	0.00	669.63	<50	66 ^Y	NA	<0.5	<0.5	<0.5	<0.5	1.5	<10	<0.5
	9/4/13	676.08	6.91	6.91	0.00	669.17	<50	170 ^Y	NA	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<0.5
	12/30/13	676.08	7.21	7.21	0.00	668.87	<50	61 ^Y	NA	<0.5	<0.5	<0.5	<0.5	21	680	0.64
	3/10/14	676.08	5.68	5.68	0.00	670.40	<50	<50	NA	<0.5	<0.5	<0.5	<0.5	14	320	0.61
	6/3/14	676.08	6.72	6.72	0.00	669.36	<50	<50	NA	<0.5	<0.5	<0.5	<0.5	41	490	1.70
	8/27/14	676.08	7.10	7.10	0.00	668.98	<50	120 ^Y	NA	<0.5	<0.5	<0.5	<0.5	27	<10	1.20
	11/13/14	676.08	6.53	6.53	0.00	669.55	<50*	58 ^Y	NA	<0.5	<0.5	<0.5	<0.5	19	<10	0.60
	2/12/15	676.08	5.95	5.95	0.00	670.13	<50	56 ^Y	NA	<0.5	<0.5	<0.5	<0.5	19	<10	<0.5
	RS-4	5/1/90	675.38	8.34	8.34	0.00	667.04	440			9	11	9	49		
5/1/91		675.38	9.50	9.50	0.00	665.88	ND			8	4	3	5			
10/1/91		675.38	10.82	10.82	0.00	664.56	830			280	120	24	170			
1/1/92		675.38	9.31	9.31	0.00	666.07	620			34	8.30	2.10	21			
1/1/93		675.38	6.89	6.89	0.00	668.49	150			32	1.70	5.80	13			
8/1/93		675.38	9.68	9.68	0.00	665.70	ND			0.90	0.70	ND	0			
11/1/93		675.38	9.83	9.83	0.00	665.55	ND			ND	ND	ND	ND			
1/1/94		675.38	8.17	8.17	0.00	667.21	ND			1.70	ND	0.81	2			
5/1/94		675.38	8.69	8.69	0.00	666.69	ND			ND	ND	ND	1			
8/1/94		675.38	9.04	9.04	0.00	666.34	420			6.50	4.10	1.90	40			
11/1/94		675.38	8.00	8.00	0.00	667.38	130			4.10	0.70	1.70	8			
2/1/95		675.38	7.93	7.93	0.00	667.45	ND			6	1.20	3.50	13			
6/1/95		675.38	8.61	8.61	0.00	666.77	ND			ND	ND	ND	ND	69		
11/1/95		675.38	10.43	10.43	0.00	664.95	ND			ND	ND	ND	ND	47		
2/1/96		675.38	7.44	7.44	0.00	667.94	960			ND	ND	0.60	ND	80		
9/18/96		675.38	9.58	9.58	0.00	665.80	<50			<0.5	<0.5	<0.5	<2	200		
12/11/96		675.38	7.50	7.50	0.00	667.88	75			<0.5	0.60	<0.5	<0.5	104		
2/21/97		675.38	8.26	8.26	0.00	667.12	<50			1	1	<0.5	1	190		
5/28/97		675.38	8.92	8.92	0.00	666.46	<50			6	<0.5	<0.5	<2	110		
9/2/97	675.38	9.39	9.39	0.00	665.99	100			3	<0.5	<0.5	<2	39			
11/24/97	675.38	8.22	8.22	0.00	667.16	41			<0.5	2	<0.5	<2	210			

Table 1
Historical 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-4 cont.	2/25/98	675.38	7.19	7.19	0.00	668.19	<50			3	<0.5	<0.5	<1	5,600		
	5/27/98	675.38	8.40	8.40	0.00	666.98	<50			<0.5	<0.5	<0.5	<1	2,400		
	9/16/98	675.38	9.26	9.26	0.00	666.12	<50			<0.5	<0.5	<0.5	<1	230		
	11/24/98	675.38	8.50	8.50	0.00	666.88	<50			2	<0.5	<0.5	<1	100		
	2/24/99	675.42	7.20	7.20	0.00	668.22	<50			2	3	0.80	5	670		
	5/5/99	675.42	8.37	8.37	0.00	667.05	100			<0.5	<0.5	<0.5	<1	440		
	8/24/99	675.42	8.36	8.36	0.00	667.06	<50			<0.5	<0.5	<0.5	<1	<500		
	2/8/12	675.42	8.11	8.11	0.00	667.31	140,000	130,000 x	<9,360	120	2,600	4,700	28,200	28,000	100,000	1,800
	5/4/12	675.42	8.31	8.31	0.00	667.11	67,000	12,000 Y	NA	61	900	2,100	9,700	32,000	69,000	1,700
	8/6/12	675.42	9.01	9.01	0.00	666.41	49,000	8,900	NA	<130	350	1,700	8,100	19,000	90,000	1,300
	3/29/13	675.42	8.49	8.49	0.00	666.93	14,000	14,000	NA	<100	<100	440	1,340	14,000	110,000	590
	6/6/13	675.27	8.48	8.48	0.00	666.79	12,000	7,200	NA	11	<3.6	420	886	16,000	66,000	970
	9/4/13	675.27	9.39	9.39	0.00	665.88	20,000	5,100	NA	<100	<100	660	2,830	18,000	75,000	1,200
	12/30/13	675.27	9.57	9.57	0.00	665.70	<13,000	9,900	NA	<130	<130	<130	150	16,000	37,000	1,100
	3/10/14	675.27	7.65	7.65	0.00	667.62	<10,000	3,700	NA	<100	<100	<100	<100	11,000	38,000	640
	6/3/14	675.27	9.27	9.27	0.00	666.00	<3,600	4,400	NA	<36	<36	40	<36	3,700	27,000	260
	8/27/14	675.27	9.43	9.43	0.00	665.84	2,500	4,700	NA	<20	<20	40	<20	2,100	28,000	150
	11/13/14	675.27	9.56	9.56	0.00	665.71	2,200*	3,500	NA	<20	<20	<20	36	11,000	15,000	910
	2/12/15	675.27	8.03	8.03	0.00	667.24	<1,300	1,900	NA	<13	<13	<13	<13	500	14,000	25
MW-1	6/6/13	674.92	6.03	6.03	0.00	668.89	<17,000	13,000	NA	930	370	470	1,760	55,000	32,000	7,200
	9/4/13	674.92	7.10	7.10	0.00	667.82	<50,000	13,000	NA	2,000	<500	1,400	4,200	70,000	48,000	7,700
	12/30/13	674.92	7.27	7.27	0.00	667.65	34,000	13,000	NA	920	1,000	1,300	4,900	43,000	43,000	4,500
	3/10/14	674.92	5.51	5.51	0.00	669.41	<20,000	11,000	NA	720	<200	890	1,970	25,000	30,000	2,600
	6/3/14	674.92	6.74	6.74	0.00	668.18	8,900	7,400	NA	350	<83	550	1,420	11,000	28,000	1,300
	8/27/14	674.92	7.23	7.23	0.00	667.69	8,100	12,000	NA	640	<63	610	720	8,400	23,000	1,500
	11/13/14	674.92	7.36	7.36	0.00	667.56	7,400*	7,900	NA	270	<63	360	880	6,100	12,000	910
	2/12/15	674.92	5.80	5.80	0.00	669.12	4,300	11,000	NA	200	<25	200	350	3,400	18,000	500
MW-2	6/6/13	675.02	6.70	6.70	0.00	668.32	16,000	5,400	NA	910	<130	610	2,290	59,000	64,000	7,700
	9/4/13	675.02	7.79	7.79	0.00	667.23	<25,000	3,900	NA	860	<250	710	1,580	32,000	31,000	4,600
	12/30/13	675.02	8.05	8.05	0.00	666.97	<13,000	6,300	NA	180	<130	<130	330	18,000	53,000	1,800
	3/10/14	675.02	6.08	6.08	0.00	668.94	14,000	11,000	NA	210	<130	360	700	15,000	40,000	1,800
	6/3/14	675.02	7.54	7.54	0.00	667.48	<7,100	6,200	NA	170	<71	310	150	8,000	29,000	920
	8/27/14	675.02	7.90	7.90	0.00	667.12	3,400	5,000	NA	100	<8.3	120	88	2,300	25,000	310
	11/13/14	675.02	8.12	8.12	0.00	666.90	1,000*	4,700	NA	120	<8.3	11	<8.3	4,000	22,000	460
	2/12/15	675.02	6.33	6.33	0.00	668.69	<4,200	5,400	NA	98	<42	58	<42	6,300	42,000	610
ESLs (µg/L)	Ground-water						100	100	100	1.00	40	30	20	5.00	12	NL
	Vapor Intrusion						NV	NV	NV	27	95,000	310	37,000	9,900	NV	NL

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)

* : Laboratory instruments for EPA8260 were down. Therefore, TPH-g was analyzed by EPA8015B instead of EPA8260 for samples collected on 11/13/2014

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

December 2013 (Table-F1a, groundwater is a current or potential drinking water source)

NL: Not Listed

NV: No Value

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 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

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

DATE: 5/28/2013
JOB# 13004

**TABLE OF ELEVATIONS & COORDINATES
ON MONITORING WELLS**
SOMA ENVIRONMENTAL ENGINEERING
2844 MOUNTAIN BLVD
OAKLAND, CA 94602

WELL ID #	NORTHING (FT.) / LATITUDE (D.DEG.)	EASTING (FT.) / LONGITUDE (D.DEG.)	ELEVATION (FT.)	DESCRIPTION
MW-1	2122404.169	6071174.709	674.92	SET NOTCH N. SIDE 4" PVC
	N37.81151896	W122.1980061	675.50	SET PUNCH N. SIDE
			675.49	NORTH SIDE AC
MW-2	2122393.627	6071186.912	675.02	SET NOTCH N. SIDE 4" PVC
	N37.81149062	W122.1979632	675.53	SET PUNCH N. SIDE
			675.51	
RS-3	2122442.569	6071215.114	676.08	SET NOTCH N. SIDE 4" PVC
	N37.81162641	W122.1978687	676.47	SET PUNCH N. SIDE
			676.38	NORTH SIDE AC
RS-4	2122379.611	6071195.421	675.27	TOP 4" PVC
	N37.81145256	W122.1979329	675.70	SET PUNCH N. SIDE
			675.59	NORTH SIDE AC

HORIZONTAL CONTROL: CALIFORNIA COORDINATE SYSTEM ZONE 3, NAD83.

ELLIPSOID: WGS 1984
EPOCH: NAD_83 (2011) 2010.0000
GEOID MODEL: GEOID12A

VERTICAL CONTROL: BENCH MARK: CITY OF OAKLAND BM 2806
CINCH NAIL IN SOUTHWESTERLY CURB OF MOUNTAIN BLVD, 150' SOUTHEASTERLY FROM THE CENTERLINE OF KEARNEY AVE EXTENDED. NORTHING 2,122,547.687', EASTING 6,070,956.301' ELEVATION= 674.892' NAVD 88 DATUM



EQUIPMENT USED: TRIMBLE GPS-R8 & TS S6, TOPCON AT-G2 LEVEL

E. Espinoza
6/03/13

EDGIS LAND SURVEYING
LAND SURVEYING AND MAPPING
1374 Garland Avenue, Clovis, CA 93612
Phone (559) 803-2679
email: edgis@aol.com



ENVIRONMENTAL ENGINEERING, INC

Well No.: RS-3
 Casing Diameter: 4 inches
 Depth of Well: 24.99 feet
 Top of Casing Elevation: 676.08 feet
 Depth to Groundwater: 5.95 feet
 Groundwater Elevation: 670.13 feet
 Water Column Height: 19.04 feet
 Purged Volume: 12 gallons

Project No.: 5081
 Address: 2844 Mountain Blvd.
 Oakland, CA
 Date: February 12, 2015
 Sampler: Lizzie Hightower

Purging Method: Bailer Pump

Sampling Method: Bailer Pump

Color: Yes No Describe: _____

Sheen: Yes No Describe: _____

Odor: Yes No Describe: _____

Field Measurements:

Time	Vol (gallons)	pH	Temp (°C)	E.C. (µs/cm)
12:14	Started purging well			
12:15	3	7.02	21.1	719
12:16	6	6.96	19.8	705
12:17	9	6.93	19.3	710
12:18	12	6.94	19.0	711
12:23	Sampled			

Notes:



ENVIRONMENTAL ENGINEERING, INC

Well No.: RS-4
 Casing Diameter: 4 inches
 Depth of Well: 25.54 feet
 Top of Casing Elevation: 675.27 feet
 Depth to Groundwater: 8.03 feet
 Groundwater Elevation: 667.24 feet
 Water Column Height: 17.51 feet
 Purged Volume: - gallons

Project No.: 5081
 Address: 2844 Mountain Blvd.
 Oakland, CA
 Date: February 12, 2015
 Sampler: Lizzie Hightower

Purging Method: Not purged

Purging Method: Bailer Pump

Sampling Method: Bailer Pump

Color: Yes No Describe: _____

Sheen: Yes No Describe: _____

Odor: Yes No Describe: Slight Petro

Field Measurements:

Time	Vol (gallons)	pH	Temp (°C)	E.C. (µs/cm)
<u>13:45</u>	<u>Grab</u>	<u>Sample</u>		

Notes:



ENVIRONMENTAL ENGINEERING, INC

Well No.: MW-1
 Casing Diameter: 4 inches
 Depth of Well: 19.75 feet
 Top of Casing Elevation: 674.92 feet
 Depth to Groundwater: 5.80 feet
 Groundwater Elevation: 669.12 feet
 Water Column Height: 13.95 feet
 Purged Volume: 12 gallons

Project No.: 5081
 Address: 2844 Mountain Blvd.
 Oakland, CA
 Date: February 12, 2015
 Sampler: Lizzie Hightower

Purging Method: Bailer Pump

Sampling Method: Bailer Pump

Color: Yes No

Describe: _____

Sheen: Yes No

Describe: _____

Odor: Yes No

Describe: Slight Petro

Field Measurements:

Time	Vol (gallons)	pH	Temp (°C)	E.C. (µs/cm)
12:48	Started purging well			
12:49	3	7.07	19.9	719
12:50	6	6.90	19.8	709
12:51	9	6.87	19.6	709
12:52	12	6.88	19.7	714
12:57	Sampled			

Notes:



ENVIRONMENTAL ENGINEERING, INC

Well No.: MW-2
 Casing Diameter: 4 inches
 Depth of Well: 19.74 feet
 Top of Casing Elevation: 675.02 feet
 Depth to Groundwater: 6.33 feet
 Groundwater Elevation: 668.69 feet
 Water Column Height: 13.41 feet
 Purged Volume: 12 gallons

Project No.: 5081
 Address: 2844 Mountain Blvd.
 Oakland, CA
 Date: February 12, 2015
 Sampler: Lizzie Hightower

Purging Method: Bailer Pump

Sampling Method: Bailer Pump

Color: Yes No

Describe: Cloudy

Sheen: Yes No

Describe: _____

Odor: Yes No

Describe: Slight Petro

Field Measurements:

Time	Vol (gallons)	pH	Temp (°C)	E.C. (µs/cm)
13:18	started purging well			
13:19	3	7.21	20.9	825
13:20	6	7.16	20.4	833
13:21	9	7.15	20.1	837
13:22	12	7.15	20.1	836
13:27	Sampled			

Notes:



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

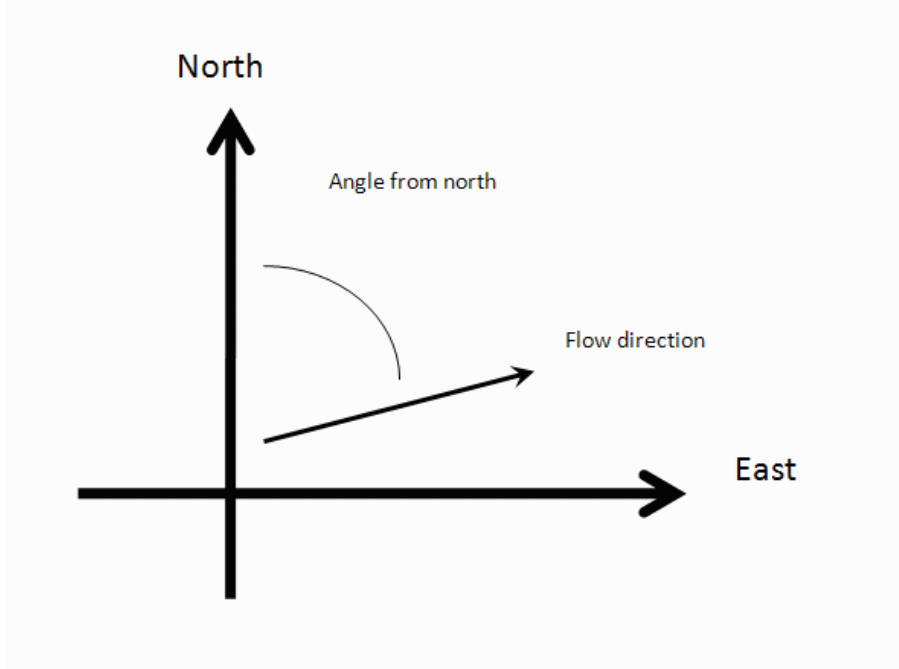
$$\begin{aligned}
 a x_1 + b y_1 + c &= h_1 \\
 a x_2 + b y_2 + c &= h_2 \\
 a x_3 + b y_3 + c &= h_3 \\
 &\dots \\
 a x_{30} + b y_{30} + c &= h_{30}
 \end{aligned}$$

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 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

Site Name

Date

Calculation basis

Coordinates

I.D.	x-coordinate	y-coordinate	head	ft
1) RS-3	6071215.111	2122442.671	670.13	
2) RS-4	6071195.458	2122379.324	667.24	
3) MW-1	6071174.931	2122404.178	669.12	
4) MW-2	6071186.39	2122393.492	668.69	
5)				
6)				
7)				
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	4
Max. Difference Between Head Values	0.8809
Gradient Magnitude (i)	0.05935
Flow direction as degrees from North (positive y axis)	151.6
Coefficient of Determination (R ²)	0.968

WCMS

Last updated on 1/10/2013

Appendix C

Laboratory Report and Chain of Custody Form



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

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

**Laboratory Job Number 264682
ANALYTICAL REPORT**

SOMA Environmental Engineering Inc. Project : 5081	Location : 2844 Mountain Blvd., Oakland
6620 Owens Dr.	Level : II
Pleasanton, CA 94588	

<u>Sample ID</u>	<u>Lab ID</u>
RS-3	264682-001
RS-4	264682-002
MW-1	264682-003
MW-2	264682-004

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

Signature: _____

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

Date: 02/26/2015

CA ELAP# 2896, NELAP# 4044-001

CASE NARRATIVE

Laboratory number: 264682
Client: SOMA Environmental Engineering Inc.
Project: 5081
Location: 2844 Mountain Blvd., Oakland
Request Date: 02/13/15
Samples Received: 02/13/15

This data package contains sample and QC results for four water samples, requested for the above referenced project on 02/13/15. The samples were received cold and intact.

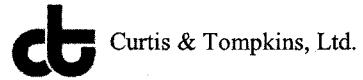
TPH-Extractables by GC (EPA 8015B):

No analytical problems were encountered.

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

High ICAL percent RSD (relative standard deviation) was observed for tert-butyl alcohol (TBA) in the calibration analyzed 02/03/15 16:16; affected data was qualified with "b". High recovery was observed for tert-butyl alcohol (TBA) in the MS for batch 220636; the parent sample was not a project sample, and the BS/BSD were within limits. High RPD was also observed for tert-butyl alcohol (TBA) in the MS/MSD for batch 220636; the RPD was acceptable in the BS/BSD. MW-1 (lab # 264682-003) had pH greater than 2. No other analytical problems were encountered.

COOLER RECEIPT CHECKLIST



Login # 224682 Date Received 2/13/15 Number of coolers 1
Client SOMMA Project 5081

Date Opened 2/13 By (print) [Signature] (sign) [Signature]
Date Logged in 2/13 By (print) [Signature] (sign) [Signature]

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) 7.2

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

Detections Summary for 264682

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

Client : SOMA Environmental Engineering Inc.
 Project : 5081
 Location : 2844 Mountain Blvd., Oakland

Client Sample ID : RS-3 Laboratory Sample ID : 264682-001

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	56	Y	50		ug/L	As Recd	1.000	EPA 8015B	EPA 3520C
MTBE	19		0.50		ug/L	As Recd	1.000	EPA 8260B	EPA 5030B

Client Sample ID : RS-4 Laboratory Sample ID : 264682-002

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	1,900		50		ug/L	As Recd	1.000	EPA 8015B	EPA 3520C
tert-Butyl Alcohol (TBA)	14,000		250	56	ug/L	As Recd	25.00	EPA 8260B	EPA 5030B
Methyl tert-Amyl Ether (TAME)	25		13		ug/L	As Recd	25.00	EPA 8260B	EPA 5030B
MTBE	500		13		ug/L	As Recd	25.00	EPA 8260B	EPA 5030B

Client Sample ID : MW-1 Laboratory Sample ID : 264682-003

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	11,000		50		ug/L	As Recd	1.000	EPA 8015B	EPA 3520C
Gasoline C7-C12	4,300		2,500		ug/L	As Recd	50.00	EPA 8260B	EPA 5030B
tert-Butyl Alcohol (TBA)	18,000		500	110	ug/L	As Recd	50.00	EPA 8260B	EPA 5030B
Methyl tert-Amyl Ether (TAME)	500		25		ug/L	As Recd	50.00	EPA 8260B	EPA 5030B
MTBE	3,400		25		ug/L	As Recd	50.00	EPA 8260B	EPA 5030B
Benzene	200		25		ug/L	As Recd	50.00	EPA 8260B	EPA 5030B
Ethylbenzene	200		25		ug/L	As Recd	50.00	EPA 8260B	EPA 5030B
m,p-Xylenes	350		25		ug/L	As Recd	50.00	EPA 8260B	EPA 5030B

Client Sample ID : MW-2 Laboratory Sample ID : 264682-004

Analyte	Result	Flags	RL	MDL	Units	Basis	IDF	Method	Prep Method
Diesel C10-C24	5,400		50		ug/L	As Recd	1.000	EPA 8015B	EPA 3520C
tert-Butyl Alcohol (TBA)	42,000		830	190	ug/L	As Recd	83.33	EPA 8260B	EPA 5030B
Methyl tert-Amyl Ether (TAME)	610		42		ug/L	As Recd	83.33	EPA 8260B	EPA 5030B
MTBE	6,300		42		ug/L	As Recd	83.33	EPA 8260B	EPA 5030B
Benzene	98		42		ug/L	As Recd	83.33	EPA 8260B	EPA 5030B
Ethylbenzene	58		42		ug/L	As Recd	83.33	EPA 8260B	EPA 5030B

Y = Sample exhibits chromatographic pattern which does not resemble standard

Batch QC Report

Total Extractable Hydrocarbons			
Lab #:	264682	Location:	2844 Mountain Blvd., Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 3520C
Project#:	5081	Analysis:	EPA 8015B
Matrix:	Water	Batch#:	220504
Units:	ug/L	Prepared:	02/17/15
Diln Fac:	1.000	Analyzed:	02/19/15

Type: BS Lab ID: QC777519

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	2,202	88	60-121

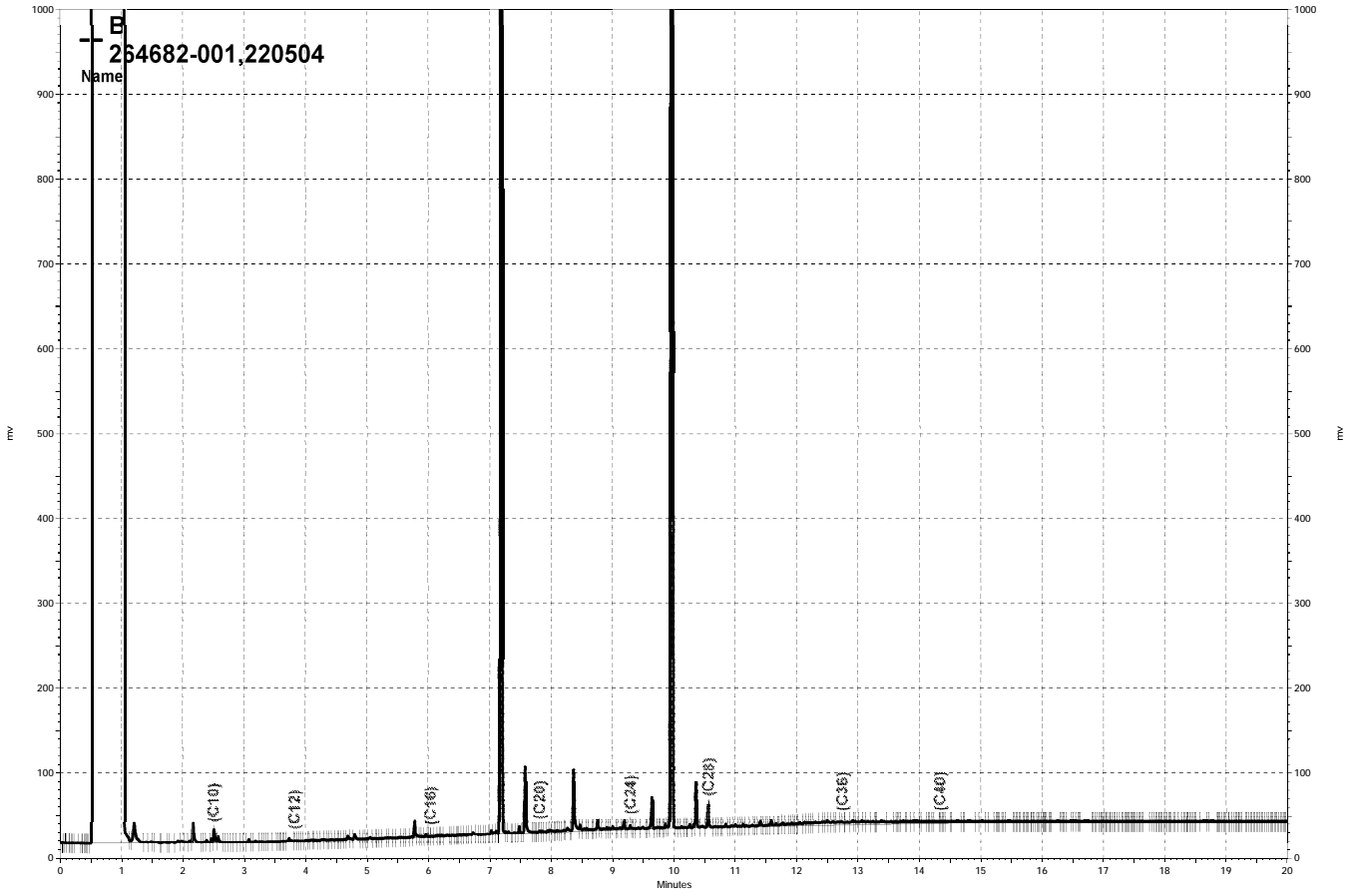
Surrogate	%REC	Limits
o-Terphenyl	106	67-136

Type: BSD Lab ID: QC777520

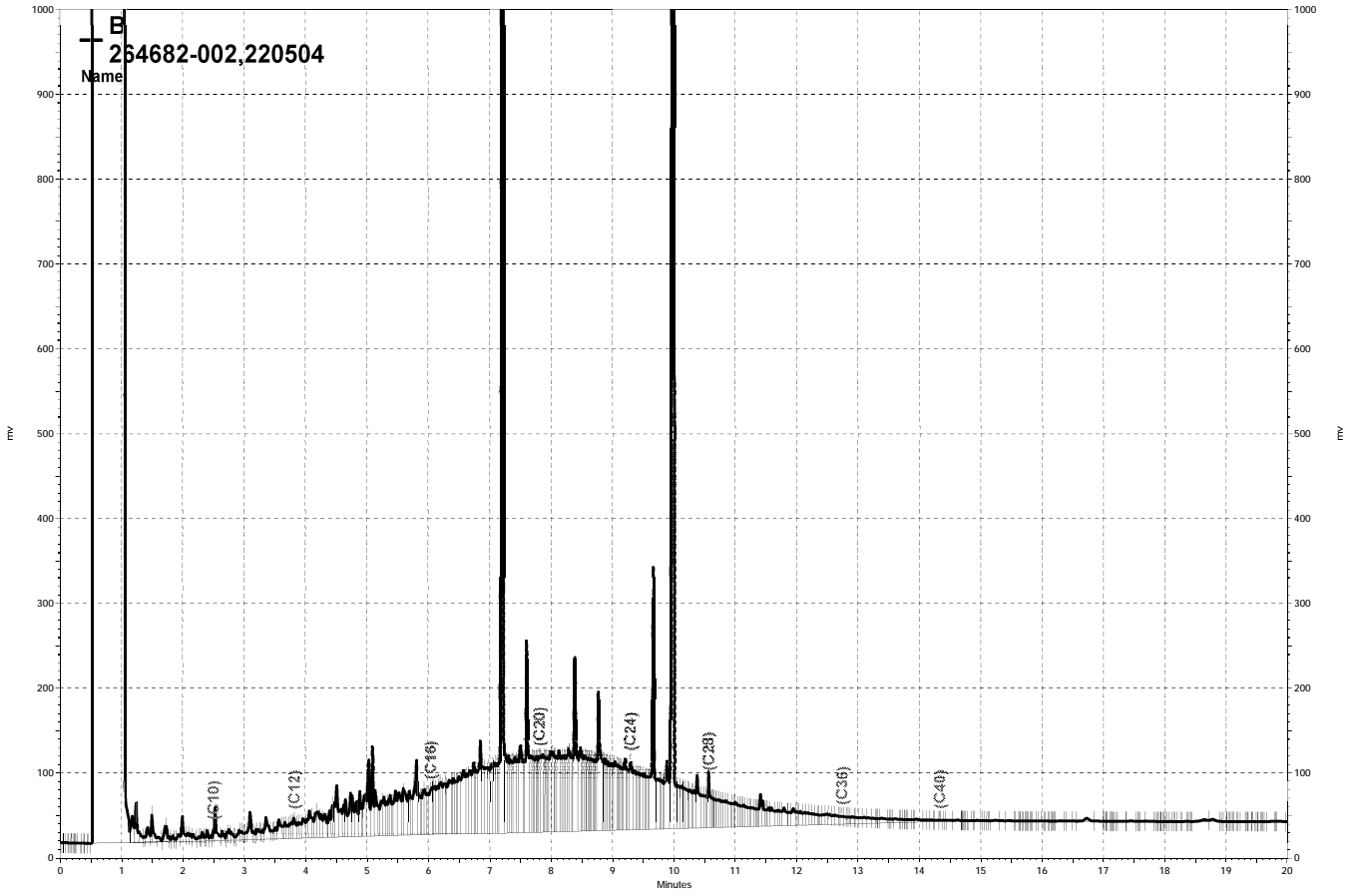
Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,500	2,432	97	60-121	10	32

Surrogate	%REC	Limits
o-Terphenyl	107	67-136

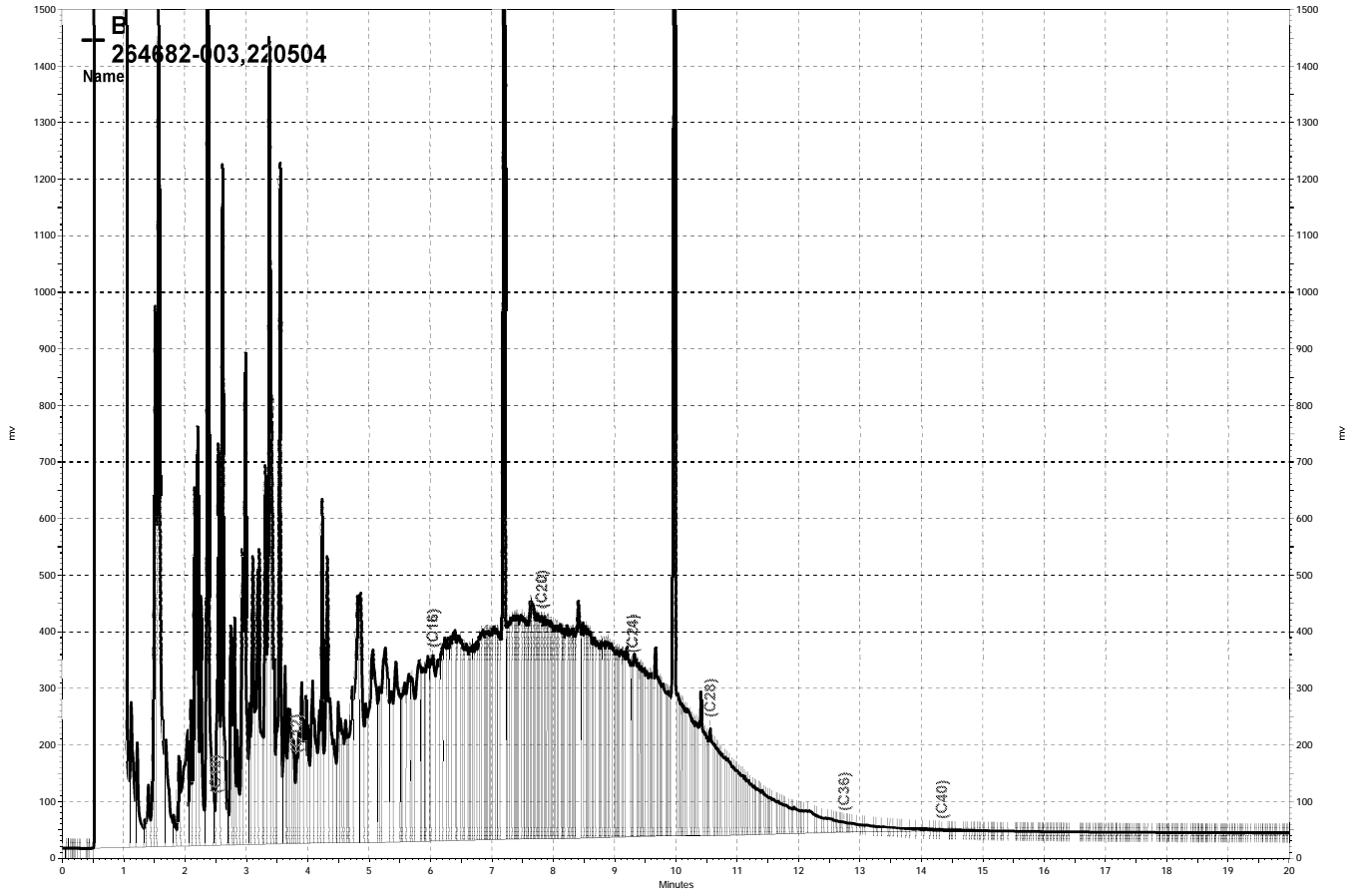
RPD= Relative Percent Difference



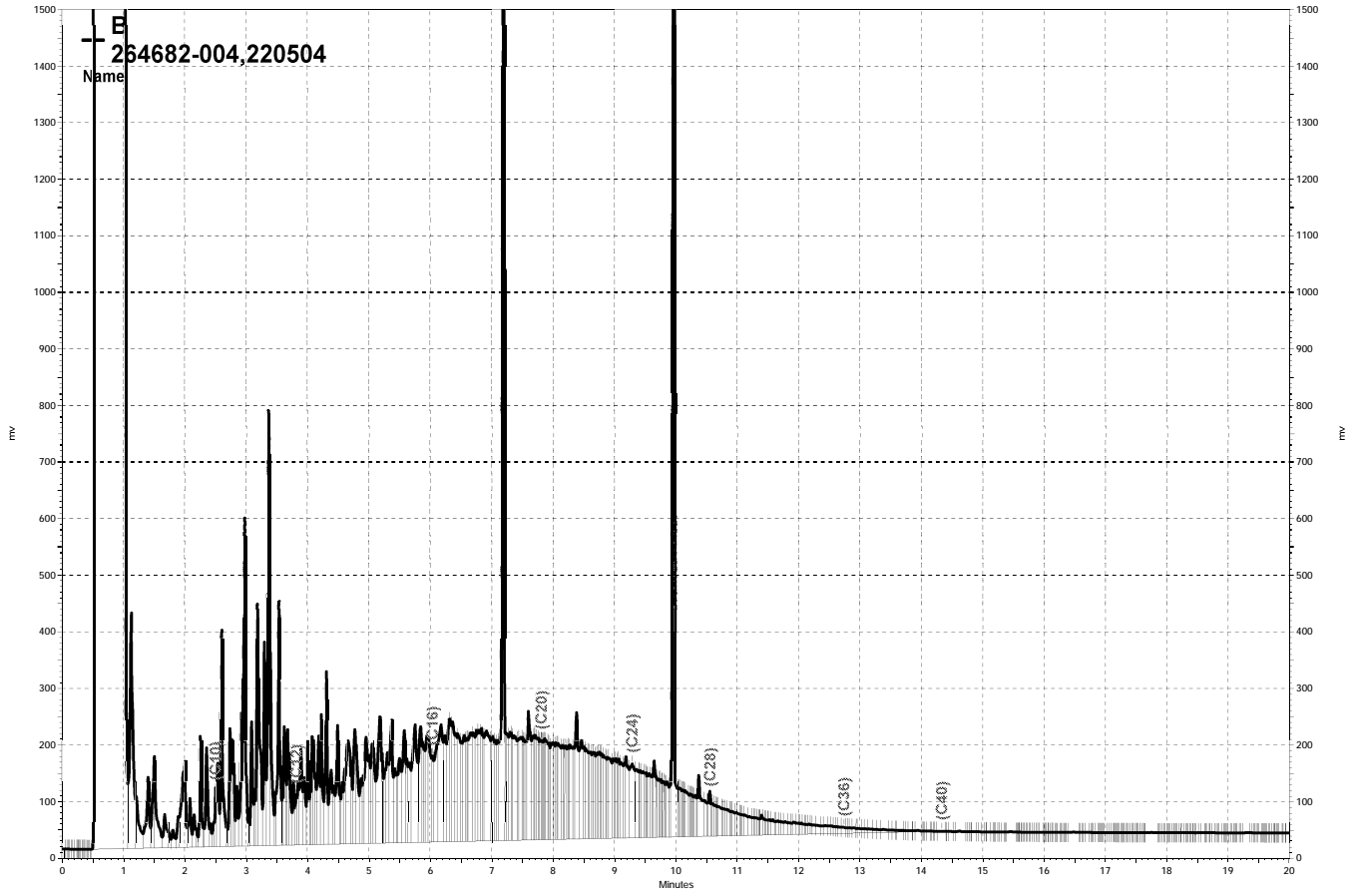
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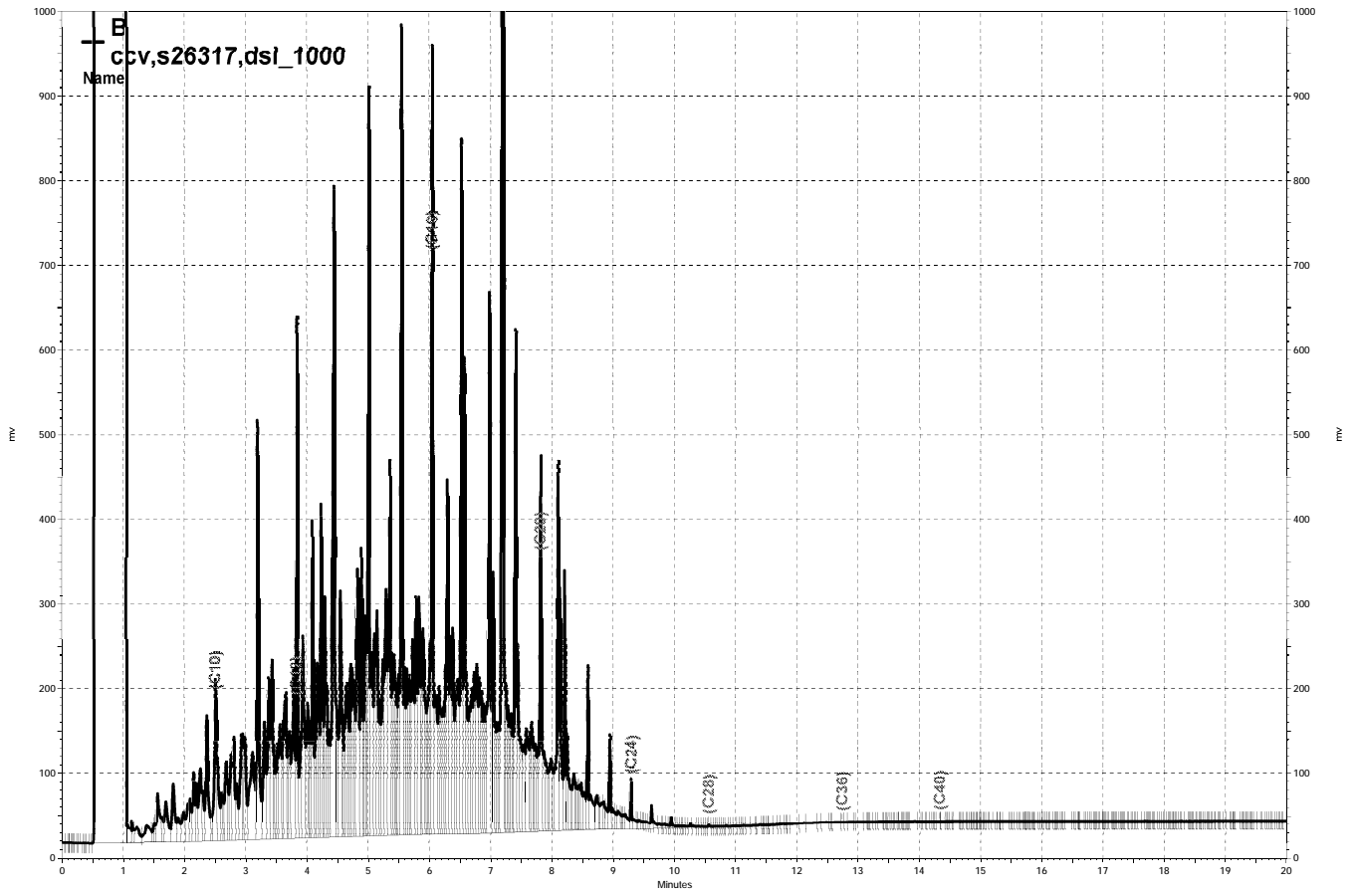
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— \\Lims\gdrive\ezchrom\Projects\GC15B\Data\049b013, B

Purgeable Organics by GC/MS

Lab #: 264682	Location: 2844 Mountain Blvd., Oakland
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 5081	Analysis: EPA 8260B
Field ID: RS-3	Diln Fac: 1.000
Lab ID: 264682-001	Sampled: 02/12/15
Matrix: Water	Received: 02/13/15
Units: ug/L	

Analyte	Result	RL	MDL	Batch#	Analyzed
Gasoline C7-C12	ND	50		220529	02/18/15
tert-Butyl Alcohol (TBA)	ND	10	2.2	220529	02/18/15
Isopropyl Ether (DIPE)	ND	0.50		220529	02/18/15
Ethyl tert-Butyl Ether (ETBE)	ND	0.50		220529	02/18/15
Methyl tert-Amyl Ether (TAME)	ND	0.50		220529	02/18/15
Ethanol	ND	1,000		220635	02/20/15
MTBE	19	0.50		220529	02/18/15
1,2-Dichloroethane	ND	0.50		220529	02/18/15
Benzene	ND	0.50		220529	02/18/15
Toluene	ND	0.50		220529	02/18/15
1,2-Dibromoethane	ND	0.50		220529	02/18/15
Ethylbenzene	ND	0.50		220529	02/18/15
m,p-Xylenes	ND	0.50		220529	02/18/15
o-Xylene	ND	0.50		220529	02/18/15

Surrogate	%REC	Limits	Batch#	Analyzed
Dibromofluoromethane	110	80-128	220529	02/18/15
1,2-Dichloroethane-d4	110	75-139	220529	02/18/15
Toluene-d8	101	80-120	220529	02/18/15
Bromofluorobenzene	103	80-120	220529	02/18/15

ND= Not Detected
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #:	264682	Location:	2844 Mountain Blvd., Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5081	Analysis:	EPA 8260B
Field ID:	RS-4	Diln Fac:	25.00
Lab ID:	264682-002	Sampled:	02/12/15
Matrix:	Water	Received:	02/13/15
Units:	ug/L		

Analyte	Result	RL	MDL	Batch#	Analyzed
Gasoline C7-C12	ND	1,300		220636	02/20/15
tert-Butyl Alcohol (TBA)	14,000	250	56	220636	02/20/15
Isopropyl Ether (DIPE)	ND	13		220636	02/20/15
Ethyl tert-Butyl Ether (ETBE)	ND	13		220636	02/20/15
Methyl tert-Amyl Ether (TAME)	25	13		220636	02/20/15
Ethanol	ND	25,000		220737	02/24/15
MTBE	500	13		220636	02/20/15
1,2-Dichloroethane	ND	13		220636	02/20/15
Benzene	ND	13		220636	02/20/15
Toluene	ND	13		220636	02/20/15
1,2-Dibromoethane	ND	13		220636	02/20/15
Ethylbenzene	ND	13		220636	02/20/15
m,p-Xylenes	ND	13		220636	02/20/15
o-Xylene	ND	13		220636	02/20/15

Surrogate	%REC	Limits	Batch#	Analyzed
Dibromofluoromethane	105	80-128	220636	02/20/15
1,2-Dichloroethane-d4	93	75-139	220636	02/20/15
Toluene-d8	95	80-120	220636	02/20/15
Bromofluorobenzene	99	80-120	220636	02/20/15

ND= Not Detected
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS			
Lab #:	264682	Location:	2844 Mountain Blvd., Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5081	Analysis:	EPA 8260B
Field ID:	MW-1	Diln Fac:	50.00
Lab ID:	264682-003	Sampled:	02/12/15
Matrix:	Water	Received:	02/13/15
Units:	ug/L		

Analyte	Result	RL	MDL	Batch#	Analyzed
Gasoline C7-C12	4,300	2,500		220581	02/19/15
tert-Butyl Alcohol (TBA)	18,000	500	110	220581	02/19/15
Isopropyl Ether (DIPE)	ND	25		220581	02/19/15
Ethyl tert-Butyl Ether (ETBE)	ND	25		220581	02/19/15
Methyl tert-Amyl Ether (TAME)	500	25		220581	02/19/15
Ethanol	ND	50,000		220635	02/20/15
MTBE	3,400	25		220581	02/19/15
1,2-Dichloroethane	ND	25		220581	02/19/15
Benzene	200	25		220581	02/19/15
Toluene	ND	25		220581	02/19/15
1,2-Dibromoethane	ND	25		220581	02/19/15
Ethylbenzene	200	25		220581	02/19/15
m,p-Xylenes	350	25		220581	02/19/15
o-Xylene	ND	25		220581	02/19/15

Surrogate	%REC	Limits	Batch#	Analyzed
Dibromofluoromethane	105	80-128	220581	02/19/15
1,2-Dichloroethane-d4	90	75-139	220581	02/19/15
Toluene-d8	94	80-120	220581	02/19/15
Bromofluorobenzene	101	80-120	220581	02/19/15

ND= Not Detected
 RL= Reporting Limit
 MDL= Method Detection Limit

Purgeable Organics by GC/MS

Lab #: 264682	Location: 2844 Mountain Blvd., Oakland
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 5081	Analysis: EPA 8260B
Field ID: MW-2	Diln Fac: 83.33
Lab ID: 264682-004	Sampled: 02/12/15
Matrix: Water	Received: 02/13/15
Units: ug/L	

Analyte	Result	RL	MDL	Batch#	Analyzed
Gasoline C7-C12	ND	4,200		220529	02/18/15
tert-Butyl Alcohol (TBA)	42,000	830	190	220529	02/18/15
Isopropyl Ether (DIPE)	ND	42		220529	02/18/15
Ethyl tert-Butyl Ether (ETBE)	ND	42		220529	02/18/15
Methyl tert-Amyl Ether (TAME)	610	42		220529	02/18/15
Ethanol	ND	83,000		220635	02/20/15
MTBE	6,300	42		220529	02/18/15
1,2-Dichloroethane	ND	42		220529	02/18/15
Benzene	98	42		220529	02/18/15
Toluene	ND	42		220529	02/18/15
1,2-Dibromoethane	ND	42		220529	02/18/15
Ethylbenzene	58	42		220529	02/18/15
m,p-Xylenes	ND	42		220529	02/18/15
o-Xylene	ND	42		220529	02/18/15

Surrogate	%REC	Limits	Batch#	Analyzed
Dibromofluoromethane	112	80-128	220529	02/18/15
1,2-Dichloroethane-d4	114	75-139	220529	02/18/15
Toluene-d8	100	80-120	220529	02/18/15
Bromofluorobenzene	102	80-120	220529	02/18/15

ND= Not Detected
 RL= Reporting Limit
 MDL= Method Detection Limit

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	264682	Location:	2844 Mountain Blvd., Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5081	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	220529
Units:	ug/L	Analyzed:	02/18/15
Diln Fac:	1.000		

Type: BS Lab ID: QC777609

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	62.50	82.43	132	32-155
Isopropyl Ether (DIPE)	12.50	13.11	105	57-128
Ethyl tert-Butyl Ether (ETBE)	12.50	12.73	102	62-120
Methyl tert-Amyl Ether (TAME)	12.50	11.67	93	69-120
MTBE	12.50	13.04	104	65-120
1,2-Dichloroethane	12.50	13.13	105	74-133
Benzene	12.50	13.25	106	80-123
Toluene	12.50	12.61	101	80-121
1,2-Dibromoethane	12.50	11.31	91	80-120
Ethylbenzene	12.50	12.62	101	80-123
m,p-Xylenes	25.00	26.17	105	80-126
o-Xylene	12.50	12.28	98	80-126

Surrogate	%REC	Limits
Dibromofluoromethane	109	80-128
1,2-Dichloroethane-d4	105	75-139
Toluene-d8	98	80-120
Bromofluorobenzene	96	80-120

Type: BSD Lab ID: QC777610

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	62.50	76.33	122	32-155	8	33
Isopropyl Ether (DIPE)	12.50	12.79	102	57-128	3	20
Ethyl tert-Butyl Ether (ETBE)	12.50	12.31	99	62-120	3	20
Methyl tert-Amyl Ether (TAME)	12.50	11.43	91	69-120	2	20
MTBE	12.50	12.49	100	65-120	4	22
1,2-Dichloroethane	12.50	12.67	101	74-133	4	20
Benzene	12.50	12.87	103	80-123	3	20
Toluene	12.50	12.21	98	80-121	3	20
1,2-Dibromoethane	12.50	11.40	91	80-120	1	20
Ethylbenzene	12.50	12.67	101	80-123	0	21
m,p-Xylenes	25.00	25.16	101	80-126	4	21
o-Xylene	12.50	12.07	97	80-126	2	20

Surrogate	%REC	Limits
Dibromofluoromethane	106	80-128
1,2-Dichloroethane-d4	104	75-139
Toluene-d8	100	80-120
Bromofluorobenzene	99	80-120

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	264682	Location:	2844 Mountain Blvd., Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5081	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC777611	Batch#:	220529
Matrix:	Water	Analyzed:	02/18/15
Units:	ug/L		

Analyte	Result	RL	MDL
Gasoline C7-C12	ND	50	
tert-Butyl Alcohol (TBA)	ND	10	2.2
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	109	80-128
1,2-Dichloroethane-d4	102	75-139
Toluene-d8	105	80-120
Bromofluorobenzene	100	80-120

ND= Not Detected
 RL= Reporting Limit
 MDL= Method Detection Limit

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	264682	Location:	2844 Mountain Blvd., Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5081	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	220529
Units:	ug/L	Analyzed:	02/18/15
Diln Fac:	1.000		

Type: BS Lab ID: QC777612

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	877.1	88	76-120

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

Type: BSD Lab ID: QC777613

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	1,000	886.9	89	76-120	1	20

Surrogate	%REC	Limits
Dibromofluoromethane	106	80-128
1,2-Dichloroethane-d4	100	75-139
Toluene-d8	101	80-120
Bromofluorobenzene	99	80-120

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	264682	Location:	2844 Mountain Blvd., Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5081	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	220581
Units:	ug/L	Analyzed:	02/19/15
Diln Fac:	1.000		

Type: BS Lab ID: QC777808

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	62.50	77.63	124	32-155
Isopropyl Ether (DIPE)	12.50	12.54	100	57-128
Ethyl tert-Butyl Ether (ETBE)	12.50	12.83	103	62-120
Methyl tert-Amyl Ether (TAME)	12.50	11.72	94	69-120
MTBE	12.50	12.85	103	65-120
1,2-Dichloroethane	12.50	12.27	98	74-133
Benzene	12.50	13.36	107	80-123
Toluene	12.50	13.46	108	80-121
1,2-Dibromoethane	12.50	12.15	97	80-120
Ethylbenzene	12.50	13.58	109	80-123
m,p-Xylenes	25.00	27.47	110	80-126
o-Xylene	12.50	13.58	109	80-126

Surrogate	%REC	Limits
Dibromofluoromethane	105	80-128
1,2-Dichloroethane-d4	92	75-139
Toluene-d8	97	80-120
Bromofluorobenzene	100	80-120

Type: BSD Lab ID: QC777809

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	62.50	73.44	118	32-155	6	33
Isopropyl Ether (DIPE)	12.50	12.32	99	57-128	2	20
Ethyl tert-Butyl Ether (ETBE)	12.50	12.39	99	62-120	3	20
Methyl tert-Amyl Ether (TAME)	12.50	11.96	96	69-120	2	20
MTBE	12.50	12.93	103	65-120	1	22
1,2-Dichloroethane	12.50	12.19	98	74-133	1	20
Benzene	12.50	13.47	108	80-123	1	20
Toluene	12.50	13.11	105	80-121	3	20
1,2-Dibromoethane	12.50	12.66	101	80-120	4	20
Ethylbenzene	12.50	13.26	106	80-123	2	21
m,p-Xylenes	25.00	27.08	108	80-126	1	21
o-Xylene	12.50	13.12	105	80-126	3	20

Surrogate	%REC	Limits
Dibromofluoromethane	106	80-128
1,2-Dichloroethane-d4	92	75-139
Toluene-d8	98	80-120
Bromofluorobenzene	100	80-120

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	264682	Location:	2844 Mountain Blvd., Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5081	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC777810	Batch#:	220581
Matrix:	Water	Analyzed:	02/19/15
Units:	ug/L		

Analyte	Result	RL	MDL
Gasoline C7-C12	ND	50	
tert-Butyl Alcohol (TBA)	ND	10	2.2
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	108	80-128
1,2-Dichloroethane-d4	94	75-139
Toluene-d8	97	80-120
Bromofluorobenzene	102	80-120

ND= Not Detected
 RL= Reporting Limit
 MDL= Method Detection Limit

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	264682	Location:	2844 Mountain Blvd., Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5081	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	220581
Units:	ug/L	Analyzed:	02/19/15
Diln Fac:	1.000		

Type: BS Lab ID: QC777811

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	890.3	89	76-120

Surrogate	%REC	Limits
Dibromofluoromethane	106	80-128
1,2-Dichloroethane-d4	93	75-139
Toluene-d8	95	80-120
Bromofluorobenzene	99	80-120

Type: BSD Lab ID: QC777812

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	1,000	874.5	87	76-120	2	20

Surrogate	%REC	Limits
Dibromofluoromethane	105	80-128
1,2-Dichloroethane-d4	93	75-139
Toluene-d8	97	80-120
Bromofluorobenzene	99	80-120

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	264682	Location:	2844 Mountain Blvd., Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5081	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	220635
Units:	ug/L	Analyzed:	02/20/15
Diln Fac:	1.000		

Type: BS Lab ID: QC778030

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	62.50	63.85 b	102	32-155
Isopropyl Ether (DIPE)	12.50	12.24	98	57-128
Ethyl tert-Butyl Ether (ETBE)	12.50	10.64	85	62-120
Methyl tert-Amyl Ether (TAME)	12.50	10.70	86	69-120
MTBE	12.50	11.24	90	65-120
1,2-Dichloroethane	12.50	12.84	103	74-133
Benzene	12.50	13.68	109	80-123
Toluene	12.50	13.71	110	80-121
1,2-Dibromoethane	12.50	13.32	107	80-120
Ethylbenzene	12.50	14.41	115	80-123
m,p-Xylenes	25.00	28.26	113	80-126
o-Xylene	12.50	13.60	109	80-126

Surrogate	%REC	Limits
Dibromofluoromethane	104	80-128
1,2-Dichloroethane-d4	101	75-139
Toluene-d8	97	80-120
Bromofluorobenzene	95	80-120

Type: BSD Lab ID: QC778031

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	62.50	66.54 b	106	32-155	4	33
Isopropyl Ether (DIPE)	12.50	12.78	102	57-128	4	20
Ethyl tert-Butyl Ether (ETBE)	12.50	11.33	91	62-120	6	20
Methyl tert-Amyl Ether (TAME)	12.50	11.63	93	69-120	8	20
MTBE	12.50	12.16	97	65-120	8	22
1,2-Dichloroethane	12.50	13.60	109	74-133	6	20
Benzene	12.50	14.05	112	80-123	3	20
Toluene	12.50	13.31	106	80-121	3	20
1,2-Dibromoethane	12.50	14.32	115	80-120	7	20
Ethylbenzene	12.50	14.13	113	80-123	2	21
m,p-Xylenes	25.00	27.69	111	80-126	2	21
o-Xylene	12.50	13.60	109	80-126	0	20

Surrogate	%REC	Limits
Dibromofluoromethane	103	80-128
1,2-Dichloroethane-d4	104	75-139
Toluene-d8	95	80-120
Bromofluorobenzene	95	80-120

b= See narrative
 RPD= Relative Percent Difference
 Page 1 of 1

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	264682	Location:	2844 Mountain Blvd., Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5081	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC778032	Batch#:	220635
Matrix:	Water	Analyzed:	02/20/15
Units:	ug/L		

Analyte	Result	RL	MDL
Gasoline C7-C12	NA		
tert-Butyl Alcohol (TBA)	ND	10	2.2
Isopropyl Ether (DIPE)	ND	0.50	
Ethyl tert-Butyl Ether (ETBE)	ND	0.50	
Methyl tert-Amyl Ether (TAME)	ND	0.50	
Ethanol	ND	1,000	
MTBE	ND	0.50	
1,2-Dichloroethane	ND	0.50	
Benzene	ND	0.50	
Toluene	ND	0.50	
1,2-Dibromoethane	ND	0.50	
Ethylbenzene	ND	0.50	
m,p-Xylenes	ND	0.50	
o-Xylene	ND	0.50	

Surrogate	%REC	Limits
Dibromofluoromethane	104	80-128
1,2-Dichloroethane-d4	113	75-139
Toluene-d8	98	80-120
Bromofluorobenzene	101	80-120

NA= Not Analyzed
 ND= Not Detected
 RL= Reporting Limit
 MDL= Method Detection Limit

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	264682	Location:	2844 Mountain Blvd., Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5081	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	220636
Units:	ug/L	Analyzed:	02/20/15
Diln Fac:	1.000		

Type: BS Lab ID: QC778033

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	62.50	78.24	125	32-155
Isopropyl Ether (DIPE)	12.50	11.52	92	57-128
Ethyl tert-Butyl Ether (ETBE)	12.50	11.37	91	62-120
Methyl tert-Amyl Ether (TAME)	12.50	10.83	87	69-120
MTBE	12.50	11.75	94	65-120
1,2-Dichloroethane	12.50	11.38	91	74-133
Benzene	12.50	12.12	97	80-123
Toluene	12.50	12.89	103	80-121
1,2-Dibromoethane	12.50	11.72	94	80-120
Ethylbenzene	12.50	12.47	100	80-123
m,p-Xylenes	25.00	25.45	102	80-126
o-Xylene	12.50	12.76	102	80-126

Surrogate	%REC	Limits
Dibromofluoromethane	104	80-128
1,2-Dichloroethane-d4	90	75-139
Toluene-d8	99	80-120
Bromofluorobenzene	100	80-120

Type: BSD Lab ID: QC778034

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	62.50	70.33	113	32-155	11	33
Isopropyl Ether (DIPE)	12.50	11.40	91	57-128	1	20
Ethyl tert-Butyl Ether (ETBE)	12.50	11.07	89	62-120	3	20
Methyl tert-Amyl Ether (TAME)	12.50	11.00	88	69-120	2	20
MTBE	12.50	12.08	97	65-120	3	22
1,2-Dichloroethane	12.50	11.17	89	74-133	2	20
Benzene	12.50	11.84	95	80-123	2	20
Toluene	12.50	11.82	95	80-121	9	20
1,2-Dibromoethane	12.50	11.75	94	80-120	0	20
Ethylbenzene	12.50	12.03	96	80-123	4	21
m,p-Xylenes	25.00	24.85	99	80-126	2	21
o-Xylene	12.50	12.07	97	80-126	6	20

Surrogate	%REC	Limits
Dibromofluoromethane	105	80-128
1,2-Dichloroethane-d4	93	75-139
Toluene-d8	97	80-120
Bromofluorobenzene	97	80-120

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	264682	Location:	2844 Mountain Blvd., Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5081	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC778035	Batch#:	220636
Matrix:	Water	Analyzed:	02/20/15
Units:	ug/L		

Analyte	Result	RL	MDL
Gasoline C7-C12	ND	50	
tert-Butyl Alcohol (TBA)	ND	10	2.2
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	105	80-128
1,2-Dichloroethane-d4	93	75-139
Toluene-d8	95	80-120
Bromofluorobenzene	98	80-120

ND= Not Detected
 RL= Reporting Limit
 MDL= Method Detection Limit

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	264682	Location:	2844 Mountain Blvd., Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5081	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	220636
Units:	ug/L	Analyzed:	02/20/15
Diln Fac:	1.000		

Type: BS Lab ID: QC778036

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	870.1	87	76-120

Surrogate	%REC	Limits
Dibromofluoromethane	104	80-128
1,2-Dichloroethane-d4	92	75-139
Toluene-d8	96	80-120
Bromofluorobenzene	98	80-120

Type: BSD Lab ID: QC778037

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	1,000	918.2	92	76-120	5	20

Surrogate	%REC	Limits
Dibromofluoromethane	103	80-128
1,2-Dichloroethane-d4	91	75-139
Toluene-d8	98	80-120
Bromofluorobenzene	97	80-120

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	264682	Location:	2844 Mountain Blvd., Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5081	Analysis:	EPA 8260B
Field ID:	ZZZZZZZZZZ	Batch#:	220636
MSS Lab ID:	264735-006	Sampled:	02/17/15
Matrix:	Water	Received:	02/17/15
Units:	ug/L	Analyzed:	02/20/15
Diln Fac:	1.000		

Type: MS Lab ID: QC778182

Analyte	MSS Result	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	<2.224	62.50	126.4	202 *	49-155
Isopropyl Ether (DIPE)	<0.1284	12.50	12.02	96	65-122
Ethyl tert-Butyl Ether (ETBE)	<0.1318	12.50	12.17	97	69-120
Methyl tert-Amyl Ether (TAME)	<0.1449	12.50	11.42	91	74-120
MTBE	<0.1190	12.50	12.55	100	71-120
1,2-Dichloroethane	<0.1071	12.50	12.72	102	80-130
Benzene	<0.1492	12.50	13.30	106	80-120
Toluene	<0.1147	12.50	13.37	107	80-120
1,2-Dibromoethane	<0.1000	12.50	13.24	106	80-120
Ethylbenzene	<0.1078	12.50	13.68	109	80-120
m,p-Xylenes	<0.1081	25.00	27.52	110	80-121
o-Xylene	<0.1543	12.50	13.61	109	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	107	80-128
1,2-Dichloroethane-d4	93	75-139
Toluene-d8	96	80-120
Bromofluorobenzene	100	80-120

Type: MSD Lab ID: QC778183

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	62.50	76.53	122	49-155	49 *	33
Isopropyl Ether (DIPE)	12.50	11.55	92	65-122	4	22
Ethyl tert-Butyl Ether (ETBE)	12.50	11.75	94	69-120	3	20
Methyl tert-Amyl Ether (TAME)	12.50	11.37	91	74-120	0	20
MTBE	12.50	12.29	98	71-120	2	20
1,2-Dichloroethane	12.50	11.75	94	80-130	8	20
Benzene	12.50	12.82	103	80-120	4	20
Toluene	12.50	12.92	103	80-120	3	21
1,2-Dibromoethane	12.50	12.54	100	80-120	5	20
Ethylbenzene	12.50	12.54	100	80-120	9	25
m,p-Xylenes	25.00	27.01	108	80-121	2	23
o-Xylene	12.50	12.85	103	80-120	6	25

Surrogate	%REC	Limits
Dibromofluoromethane	106	80-128
1,2-Dichloroethane-d4	92	75-139
Toluene-d8	99	80-120
Bromofluorobenzene	91	80-120

*= Value outside of QC limits; see narrative

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	264682	Location:	2844 Mountain Blvd., Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5081	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	220737
Units:	ug/L	Analyzed:	02/24/15
Diln Fac:	1.000		

Type: BS Lab ID: QC778427

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	62.50	56.41 b	90	32-155
Isopropyl Ether (DIPE)	12.50	12.21	98	57-128
Ethyl tert-Butyl Ether (ETBE)	12.50	10.46	84	62-120
Methyl tert-Amyl Ether (TAME)	12.50	10.81	87	69-120
MTBE	12.50	11.12	89	65-120
1,2-Dichloroethane	12.50	12.27	98	74-133
Benzene	12.50	13.28	106	80-123
Toluene	12.50	12.98	104	80-121
1,2-Dibromoethane	12.50	12.33	99	80-120
Ethylbenzene	12.50	13.70	110	80-123
m,p-Xylenes	25.00	27.56	110	80-126
o-Xylene	12.50	13.75	110	80-126

Surrogate	%REC	Limits
Dibromofluoromethane	99	80-128
1,2-Dichloroethane-d4	99	75-139
Toluene-d8	97	80-120
Bromofluorobenzene	95	80-120

Type: BSD Lab ID: QC778428

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	62.50	57.84 b	93	32-155	3	33
Isopropyl Ether (DIPE)	12.50	12.07	97	57-128	1	20
Ethyl tert-Butyl Ether (ETBE)	12.50	10.42	83	62-120	0	20
Methyl tert-Amyl Ether (TAME)	12.50	10.16	81	69-120	6	20
MTBE	12.50	11.35	91	65-120	2	22
1,2-Dichloroethane	12.50	11.95	96	74-133	3	20
Benzene	12.50	12.25	98	80-123	8	20
Toluene	12.50	12.83	103	80-121	1	20
1,2-Dibromoethane	12.50	12.62	101	80-120	2	20
Ethylbenzene	12.50	13.13	105	80-123	4	21
m,p-Xylenes	25.00	26.21	105	80-126	5	21
o-Xylene	12.50	13.03	104	80-126	5	20

Surrogate	%REC	Limits
Dibromofluoromethane	101	80-128
1,2-Dichloroethane-d4	97	75-139
Toluene-d8	96	80-120
Bromofluorobenzene	99	80-120

b= See narrative
 RPD= Relative Percent Difference
 Page 1 of 1

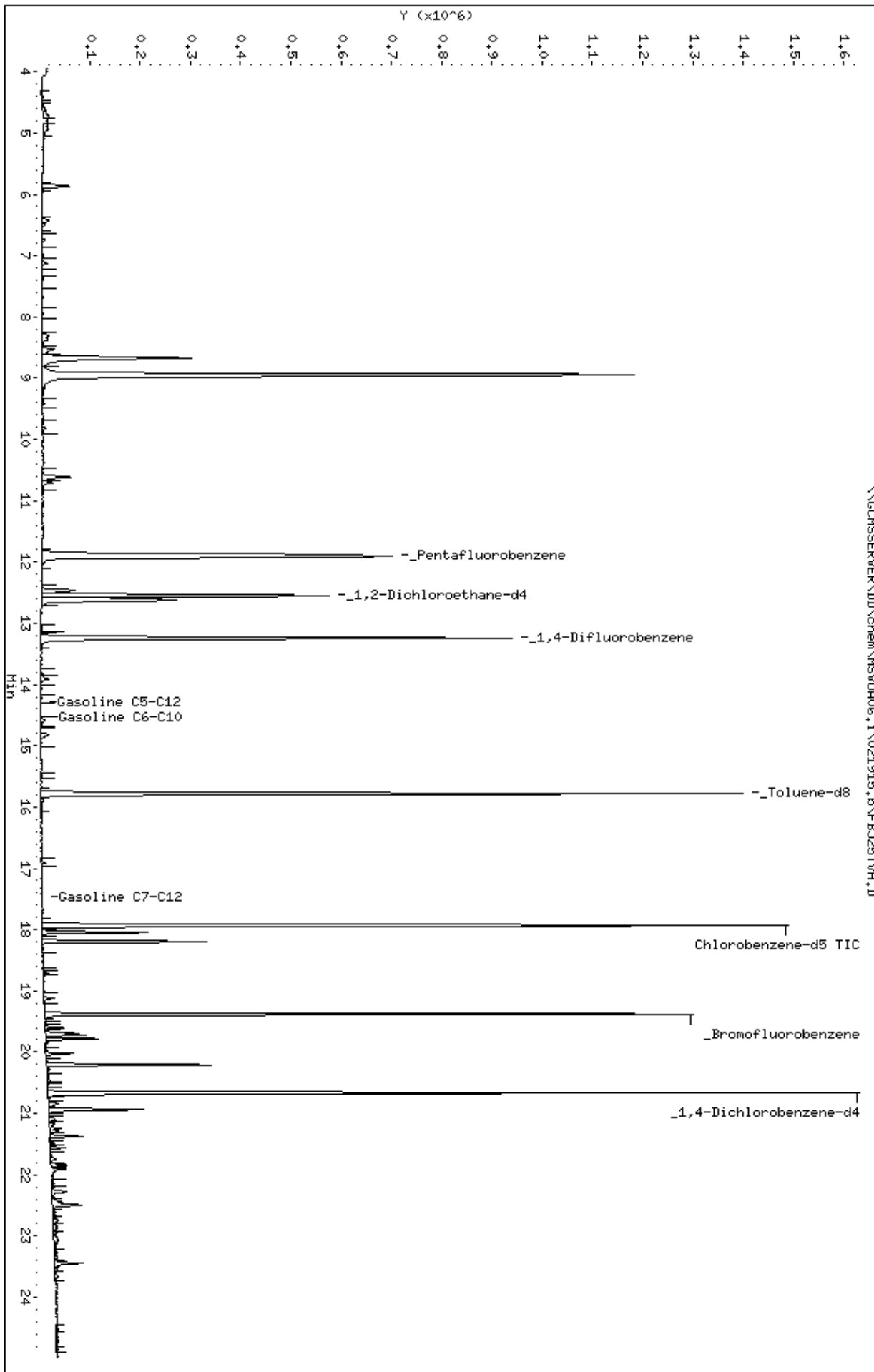
Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	264682	Location:	2844 Mountain Blvd., Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5081	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC778429	Batch#:	220737
Matrix:	Water	Analyzed:	02/24/15
Units:	ug/L		

Analyte	Result	RL	MDL
Gasoline C7-C12	NA		
tert-Butyl Alcohol (TBA)	ND	10	2.2
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	103	80-128
1,2-Dichloroethane-d4	108	75-139
Toluene-d8	95	80-120
Bromofluorobenzene	101	80-120

NA= Not Analyzed
 ND= Not Detected
 RL= Reporting Limit
 MDL= Method Detection Limit



Date : 18-FEB-2015 12:07

Client ID: DYNA P&T

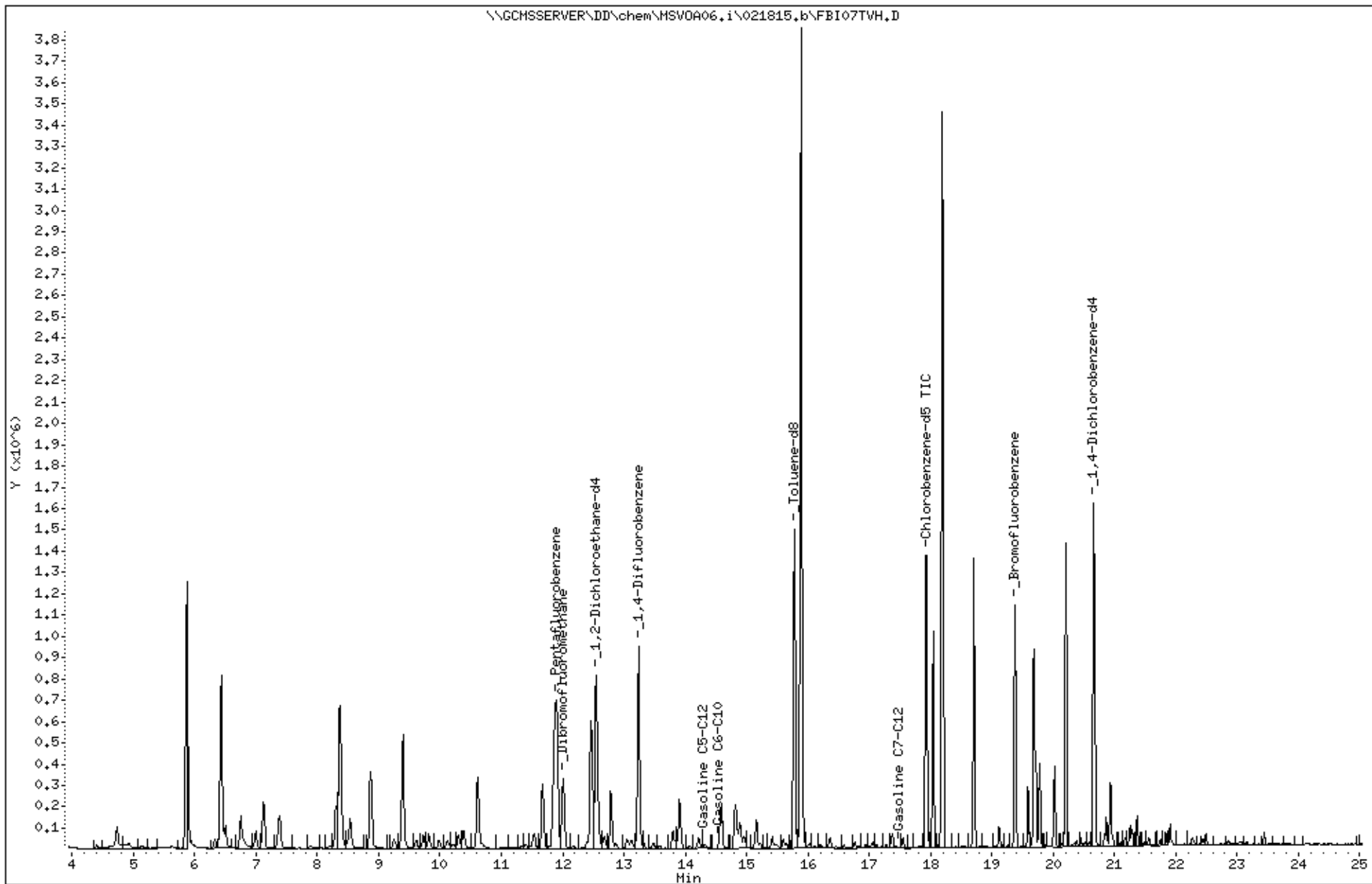
Sample Info: ccv/bs,qc777612,220529,s26208,

Instrument: MSV0A06.i

Operator: VOC

Column diameter: 2.00

Column phase:



Appendix D

Non-Hazardous Waste Removal

NON-HAZARDOUS WASTE MANIFEST

Please print or type (Form designed for use on elite (12 pitch) typewriter)

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No.		Manifest Document No.	2. Page 1 of
3. Generator's Name and Mailing Address		Desert Petroleum 2844 Mountain Blvd Oakland CA.		SOMA ENV	
4. Generator's Phone ()					
5. Transporter 1 Company Name		6. US EPA ID Number		A. State Transporter's ID	
INSAT INC				B. Transporter Phone (707) 374-3834	
7. Transporter 2 Company Name		8. US EPA ID Number		C. State Transporter's ID	
				D. Transporter 2 Phone	
9. Designated Facility Name and Site Address		10. US EPA ID Number		E. State Facility's ID	
INSTRIAT, INC. 1105 C AIRPORT RD. RIO VISTA, CA 94571				F. Facility's Phone (707) 374-3834	
11. WASTE DESCRIPTION			12. Containers	13. Total Quantity	14. Unit Wt./Vol.
			No.	Type	
a. Purge Water			1	DRM	40 gal
b.					
c.					
d.					
G. Additional Descriptions for Materials Listed Above			H. Handling Codes for Wastes Listed Above		
15. Special Handling Instructions and Additional Information					
16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.					
Printed/Typed Name				Signature	
17. Transporter 1 Acknowledgement of Receipt of Materials				Date	
Printed/Typed Name				Signature	
PATRICK McLaughlin				P. McLaughlin	
				Month Day Year	
				1 9 15	
18. Transporter 2 Acknowledgement of Receipt of Materials				Date	
Printed/Typed Name				Signature	
				Month Day Year	
19. Discrepancy Indication Space					
20. Facility Owner or Operator; Certification of receipt of the waste materials covered by this manifest, except as noted in item 19.					
Printed/Typed Name				Signature	
MICHAEL WHITEHEAD				Michael Whitehead	
				Date	
				Month Day Year	
				1 9 15	

NON-HAZARDOUS WASTE

GENERATOR

TRANSPORTER

FACILITY

