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September 22, 2014

RECEIVED

By Alameda County Environmental Health at 8:55 am, Sep 23, 2014

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

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 "Third Quarter 2014 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



**Third Quarter 2014
Groundwater Monitoring Report**

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

September 22, 2014

Project 5081

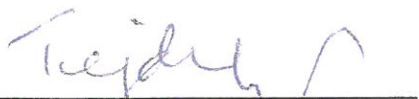
Prepared for

**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 Third Quarter 2014 groundwater monitoring event.



Mansour Sepehr, PhD, PE
Principal Hydrogeologist

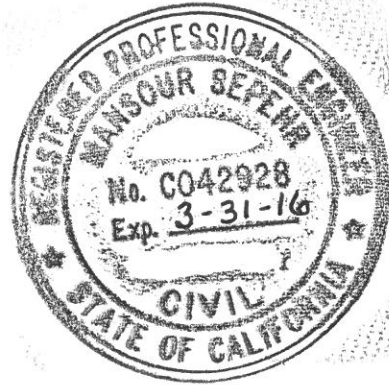


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- Appendix B Tables of Elevations and Coordinates on Wells, Field Measurements of Physical and Chemical Parameters of the Groundwater Samples and Groundwater Gradient Calculations
- Appendix C Laboratory Report and Chain of Custody Form
- Appendix 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 Third Quarter 2014 groundwater monitoring event conducted at the site on August 27, 2014. 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.

As approved by SFRWQCB, a multi-phase extraction (MPE) event was conducted at the site from December 2 to December 16, 2013. Details and results of this event are documented in a pilot testing report.

1.2 Summary of Field Activities and Laboratory Analysis

1.2.1 Field Activities

On August 27, 2014, 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. 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 on-site in a 55-gallon drum. On September 12, 2014, two drums generated during current and previous monitoring events (First, Second, and Third Quarter 2014) were transported to an appropriate disposal facility. Appendix D includes the waste manifest for removal of purged water from the site.

1.2.2 Laboratory Analysis

Curtis and Tompkins Laboratories, a California state-certified laboratory, analyzed groundwater samples for the following: TPH-g, and TPH as diesel (TPH-d); BTEX (benzene, toluene, ethylbenzene, and total xylenes), MtBE, gasoline oxygenates. All samples except TPH-d were analyzed using EPA Method 8260. TPH-d samples were analyzed using EPA Method 8015B.

2. RESULTS

Results of field measurements and laboratory analyses for the groundwater monitoring event conducted on August 27, 2014 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 7.10 feet in RS-3 to 9.43 feet in RS-4. Groundwater elevations ranged from 665.84 feet in RS-4 to 668.98 feet in RS-3.

Figure 3 displays the groundwater elevation map. The groundwater flows southeasterly at a gradient of 0.06 ft/ft. Since the previous monitoring event (June 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. Detectable concentrations ranged from 2,500 µg/L in RS-4 to 8,100 µg/L in MW-1. Since the previous monitoring event (June 2014), TPH-g concentration in MW-1 has decreased and remained below laboratory-reporting limits in RS-3. No comparison can be made for RS-4 and MW-2 due to high dilution and reporting limits during the previous monitoring event. Figure 4 shows a contour 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 120 µg/L in RS-3 to 12,000 µg/L in MW-1. Since the previous monitoring event (June 2014), TPH-d has increased in RS-3, RS-4, and MW-1 and decreased in MW-2. Figure 5 shows a

contour map of TPH-d concentrations in groundwater. TPH-d plume appears to be centered south 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.
- All BTEX analytes except ethylbenzene were below laboratory-reporting limits in RS-4.
- Benzene was detected in MW-1 and MW-2 at 640 µg/L and 100 µg/L, respectively. Since the previous monitoring event (June 2014) benzene has increased in MW-1 and decreased in 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 (June 2014) toluene has remained below the laboratory-reporting limit in all wells.
- Ethylbenzene was detected in RS-4, MW-1 and MW-2 at 40 µg/L, 610 µg/L and 120 µg/L, respectively. Since the previous monitoring event (June 2014) ethylbenzene has increased in MW-1, decreased in MW-2, and remained same in RS-4.
- Total xylenes was detected in MW-1 and MW-2 at 720 µg/L and 88 µg/L, respectively. Since the previous monitoring event (June 2014), total xylenes decreased in MW-1 and MW-2.

Methyl tertiary-butyl ether (MtBE) concentrations ranged from 27 µg/L in RS-3 to 8,400 µg/L in MW-1. Since the previous monitoring event (June 2014), MtBE has decreased in all site wells. Figure 6 shows a contour map of MtBE concentrations in groundwater. The MtBE plume appears to be centered to the southwest of the pump islands in the vicinity of MW-1.

Tertiary-butyl alcohol (TBA) was below laboratory-reporting limit in RS-3. Detectable TBA concentrations ranged from 23,000 µg/L in MW-1 to 28,000 µg/L in RS-4. Since the previous monitoring event (June 2014), TBA has increased in RS-4 and decreased in other site wells. 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 RS-4.

Tertiary amyl methyl ether (TAME) concentrations ranged from 1.20 µg/L in RS-3 to 1,500 µg/L in MW-1. Since the previous monitoring event (June 2014), TAME has increased in MW-1 and decreased in RS-3, RS-4, and MW-2. Figure 8 shows a contour map of TAME concentrations in groundwater. The highest TAME concentrations were detected to the southwest of the pump islands in the vicinity of MW-1.

3. CONCLUSIONS AND RECOMMENDATIONS

Conclusions and recommendations based on results of Third Quarter 2014 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.
- Since the previous monitoring event in June 2014, TPH-g in in MW-1 has decreased and remained below laboratory-reporting limits in RS-3; TPH-d increased in RS-3, RS-4, and MW-1 and decreased in MW-2; benzene increased in MW-1 and decreased in MW-2; MtBE decreased in all site wells; TBA increased in RS-4 and decreased in other site wells; and TAME increased in MW-1 and decreased in RS-3, RS-4, and MW-2.
- The highest TPH-g, TPH-d, benzene, ethylbenzene, total xylenes, MtBE, and TAME concentrations were detected to the southwest of the pump islands around MW-1. The highest TBA concentrations were detected in the vicinity of pump islands around RS-4.
- SOMA will continue conducting quarterly groundwater monitoring events at the site.

SOMA submitted a report documenting installation of soil borings and monitoring wells dated September 13, 2013. The report recommended installing a groundwater monitoring well in close proximity of boring SS-1 in order to monitor elevated levels of chemicals in groundwater.

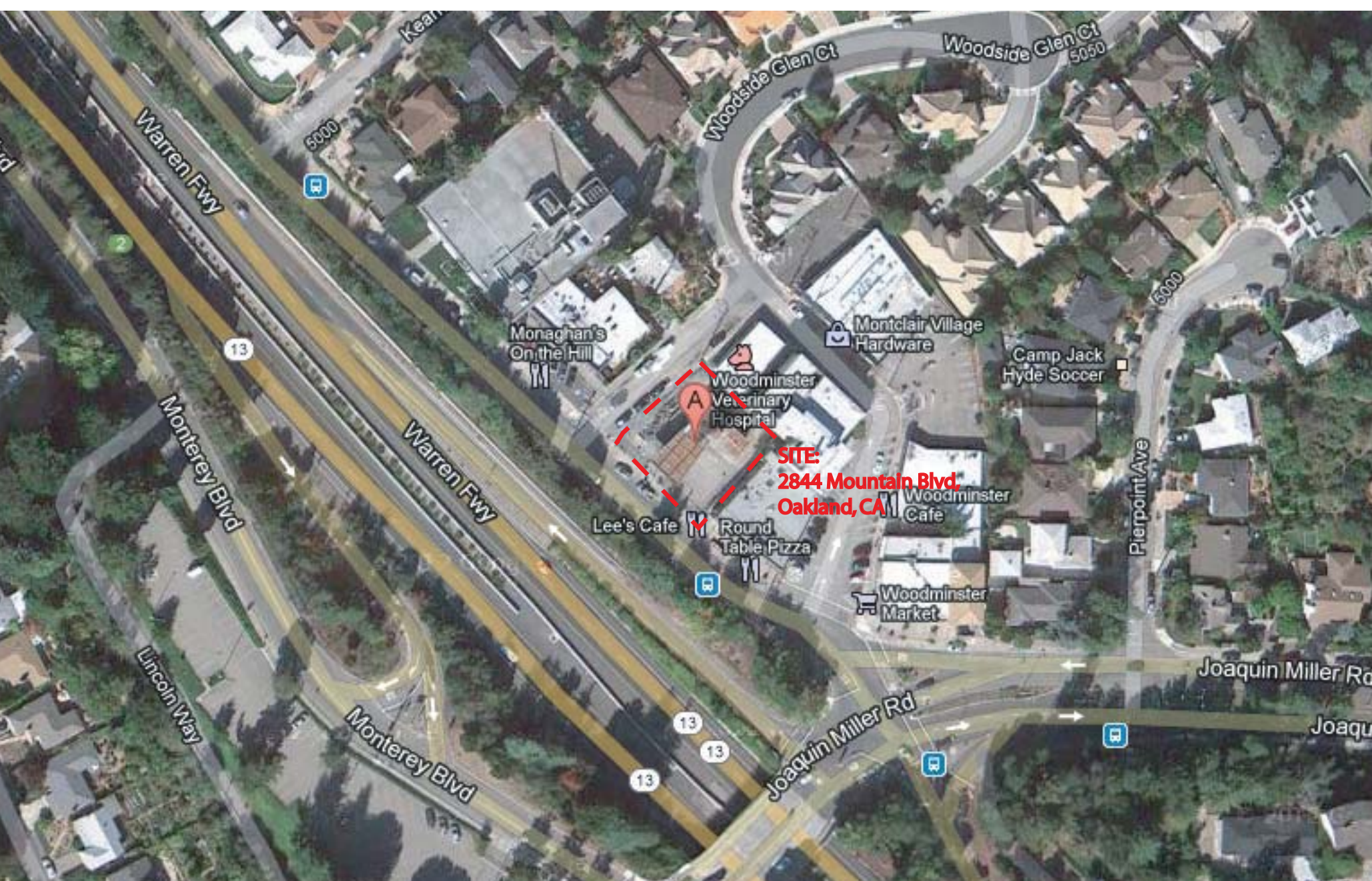
Based on SFBRWQCB's approval dated August 15, 2014, SOMA will shortly be commencing a multi-phase extraction (MPE) event at the site for a period of ten weeks. A report documenting implementation, results, and recommendations will be submitted after completion of this MPE event.

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

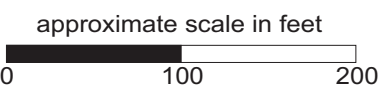
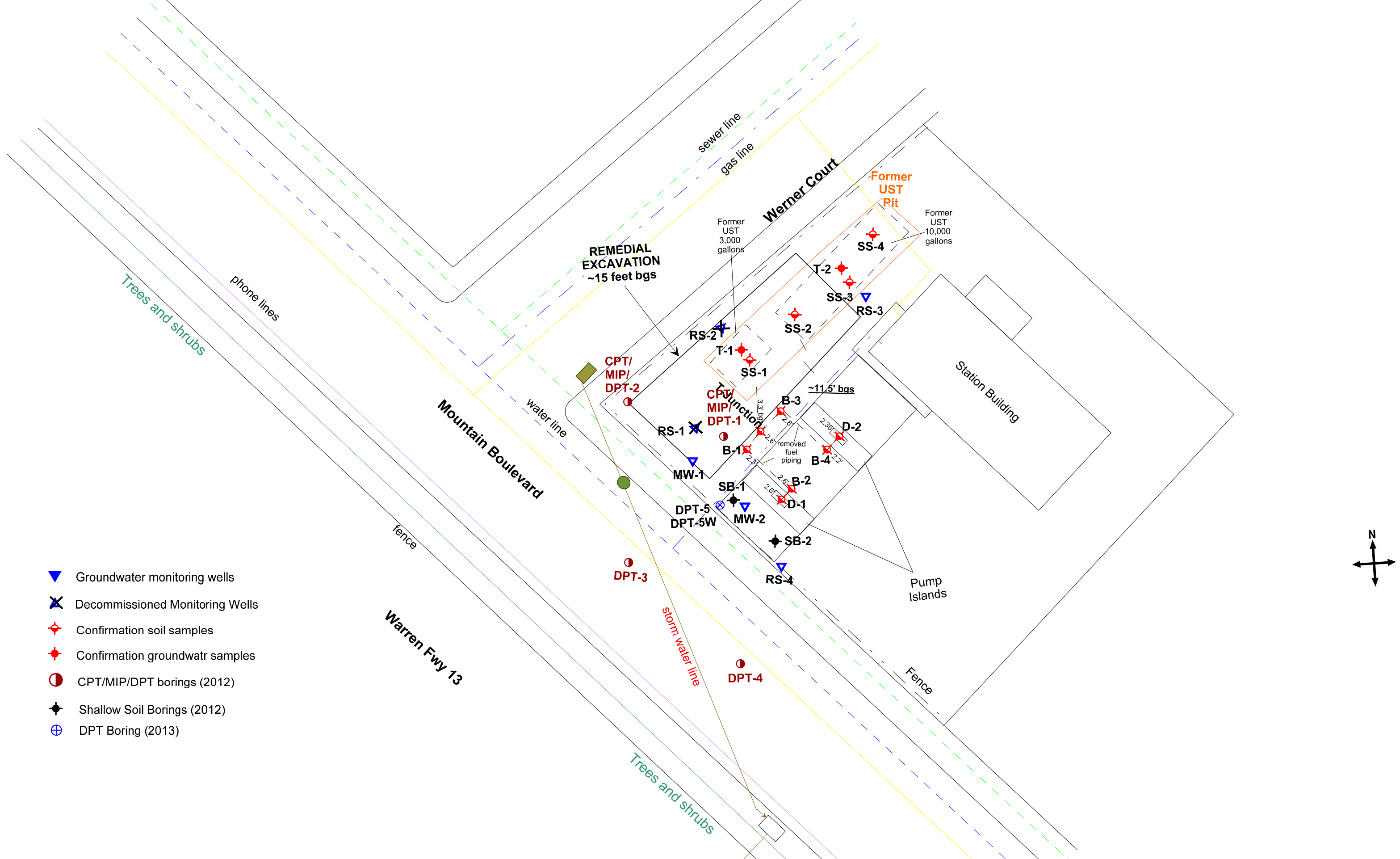









Figure 1: Site Vicinity Map





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

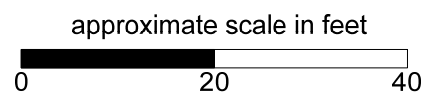


Figure 2: Site Map Showing Locations of Former USTs, Soil Borings, and Groundwater Monitoring Wells

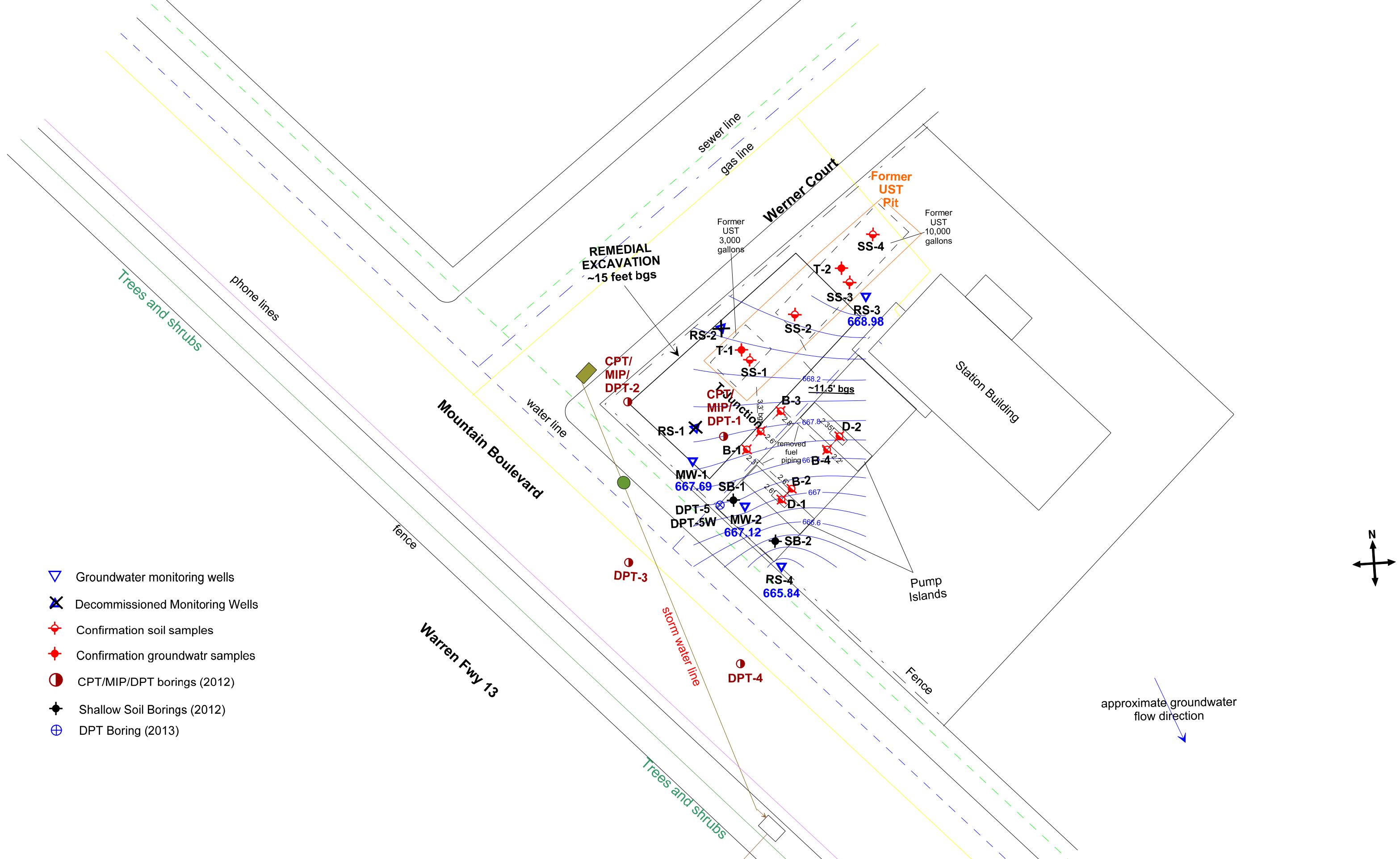
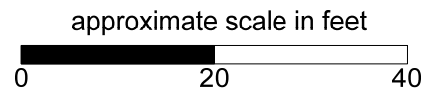


Figure 3: Groundwater Elevation Contour Map in feet, August 27, 2014



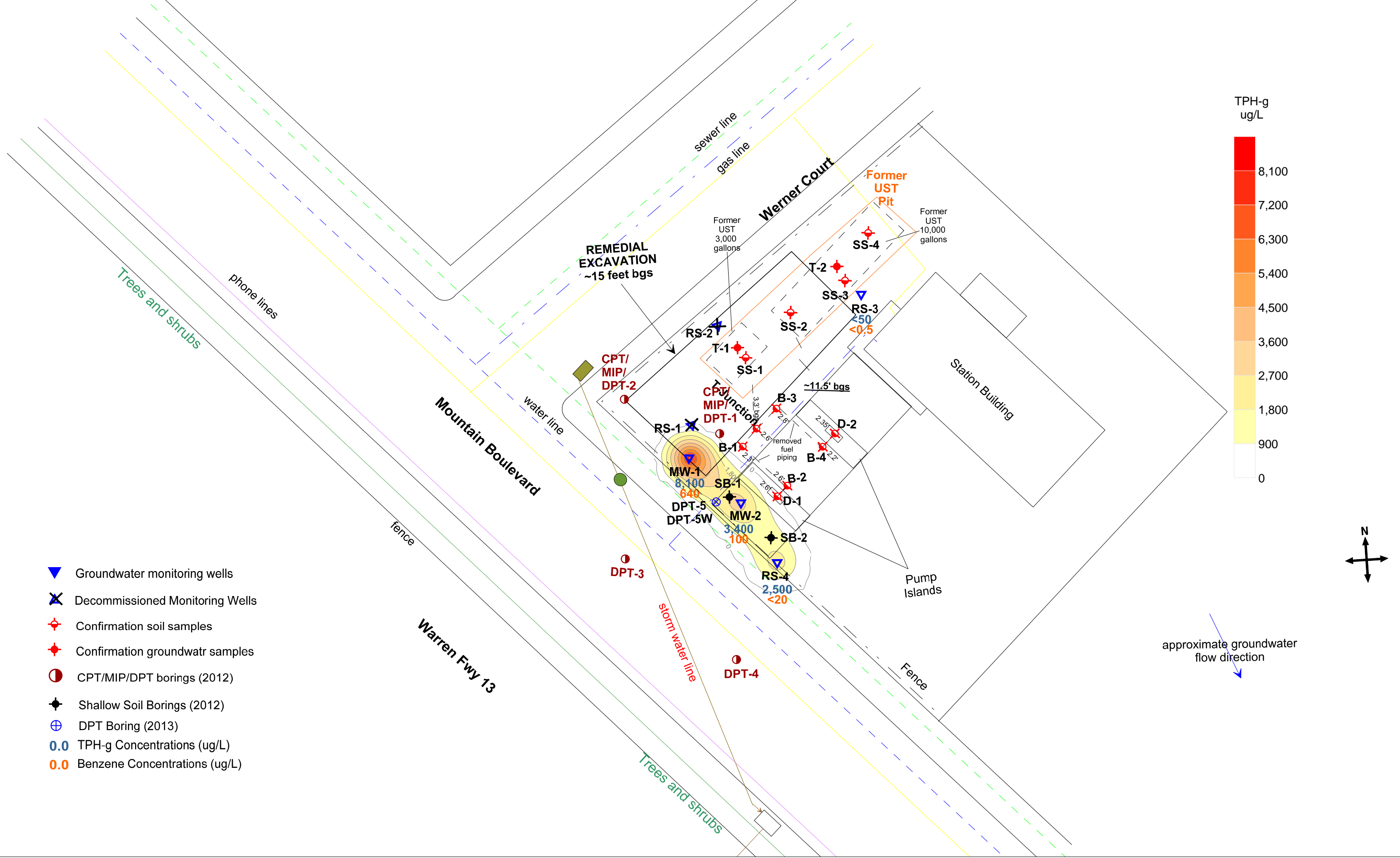
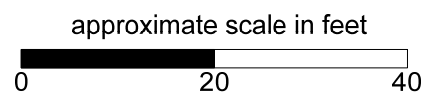


Figure 4: Contour Map Showing TPH-g Concentrations and Map of Benzene Concentrations in Groundwater, August 27, 2014



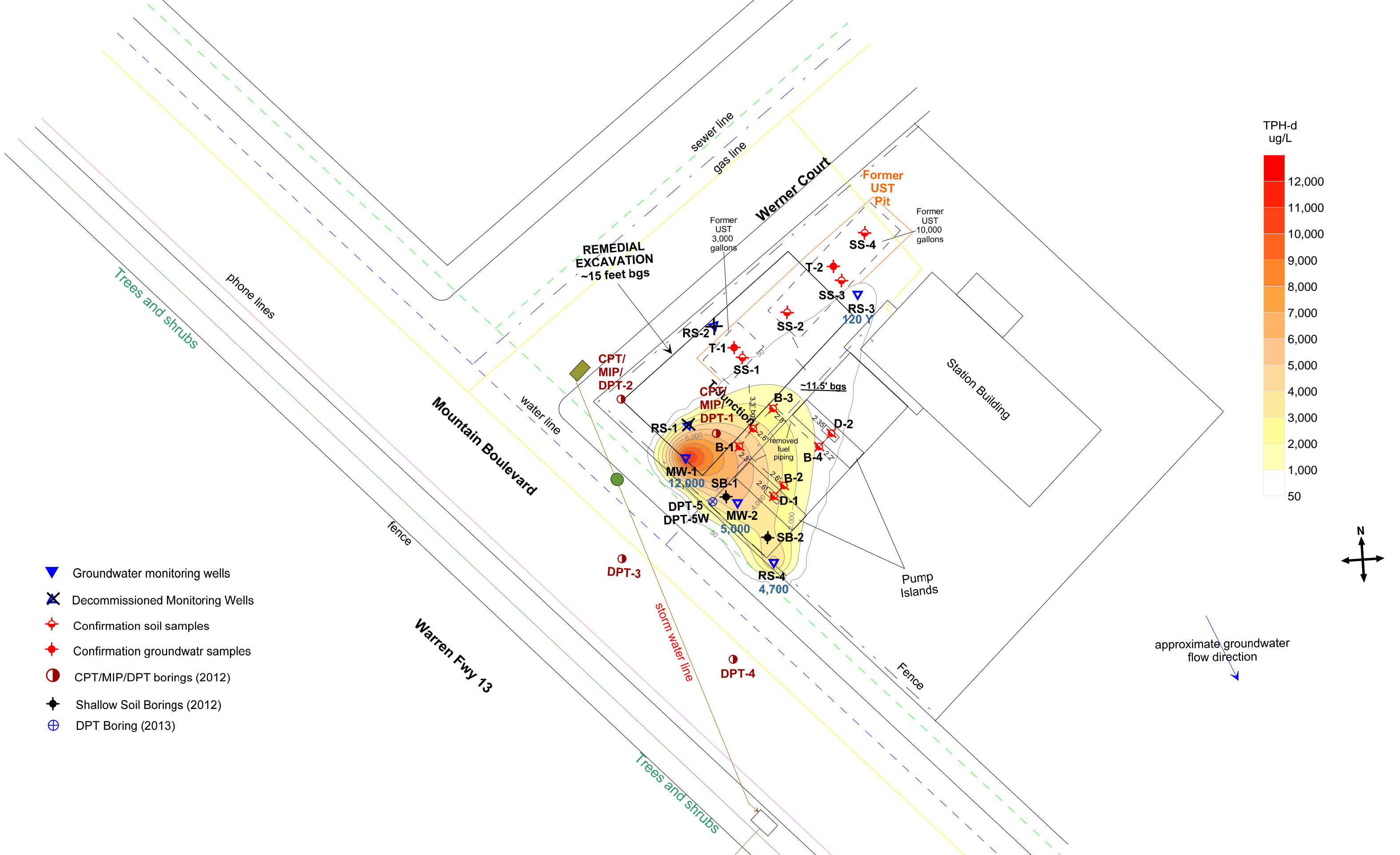


Figure 5: Contour Map Showing TPH-d Concentrations in Groundwater, August 27, 2014

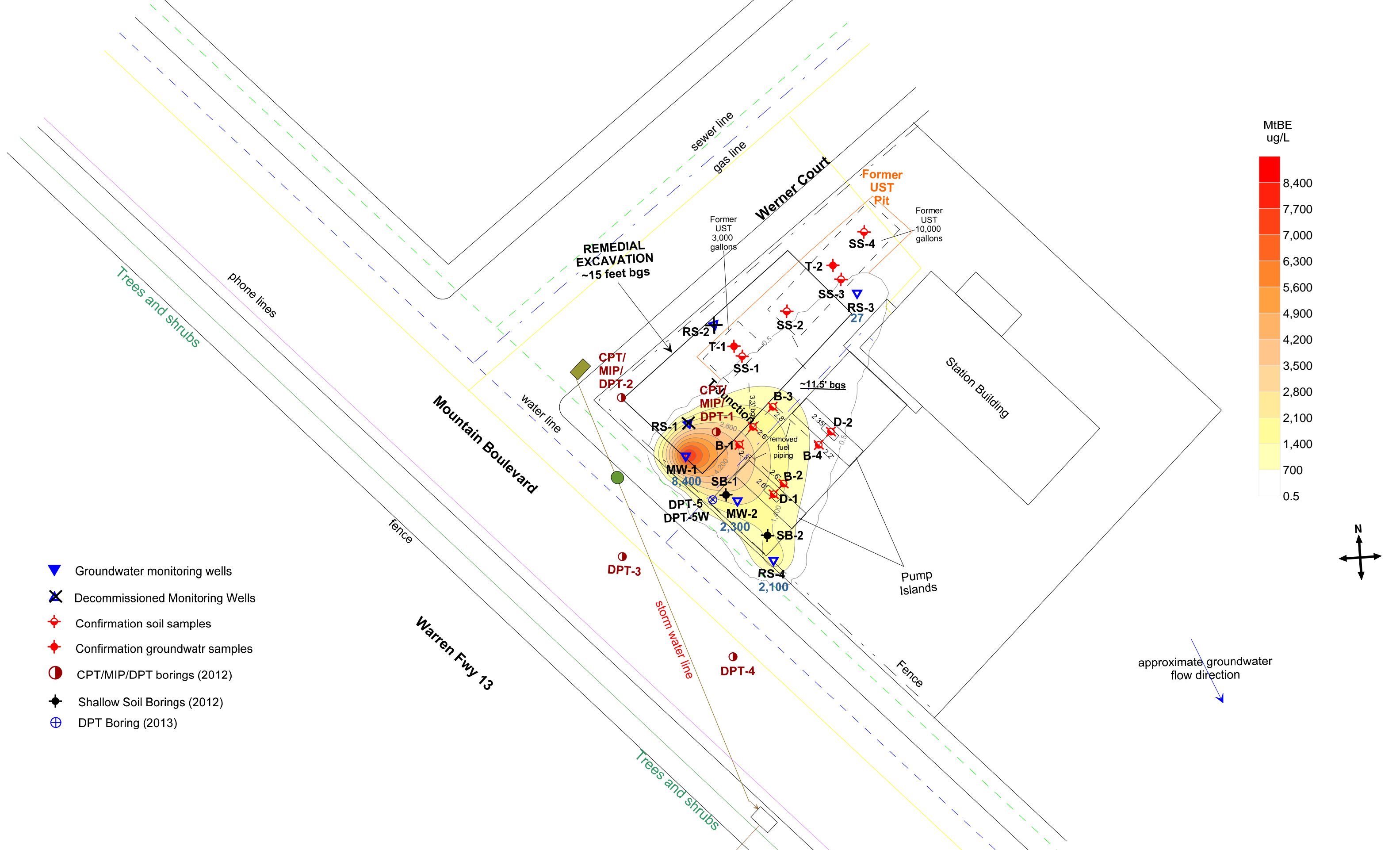
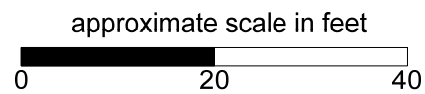


Figure 6: Contour Map Showing MtBE Concentrations in Groundwater, August 27, 2014



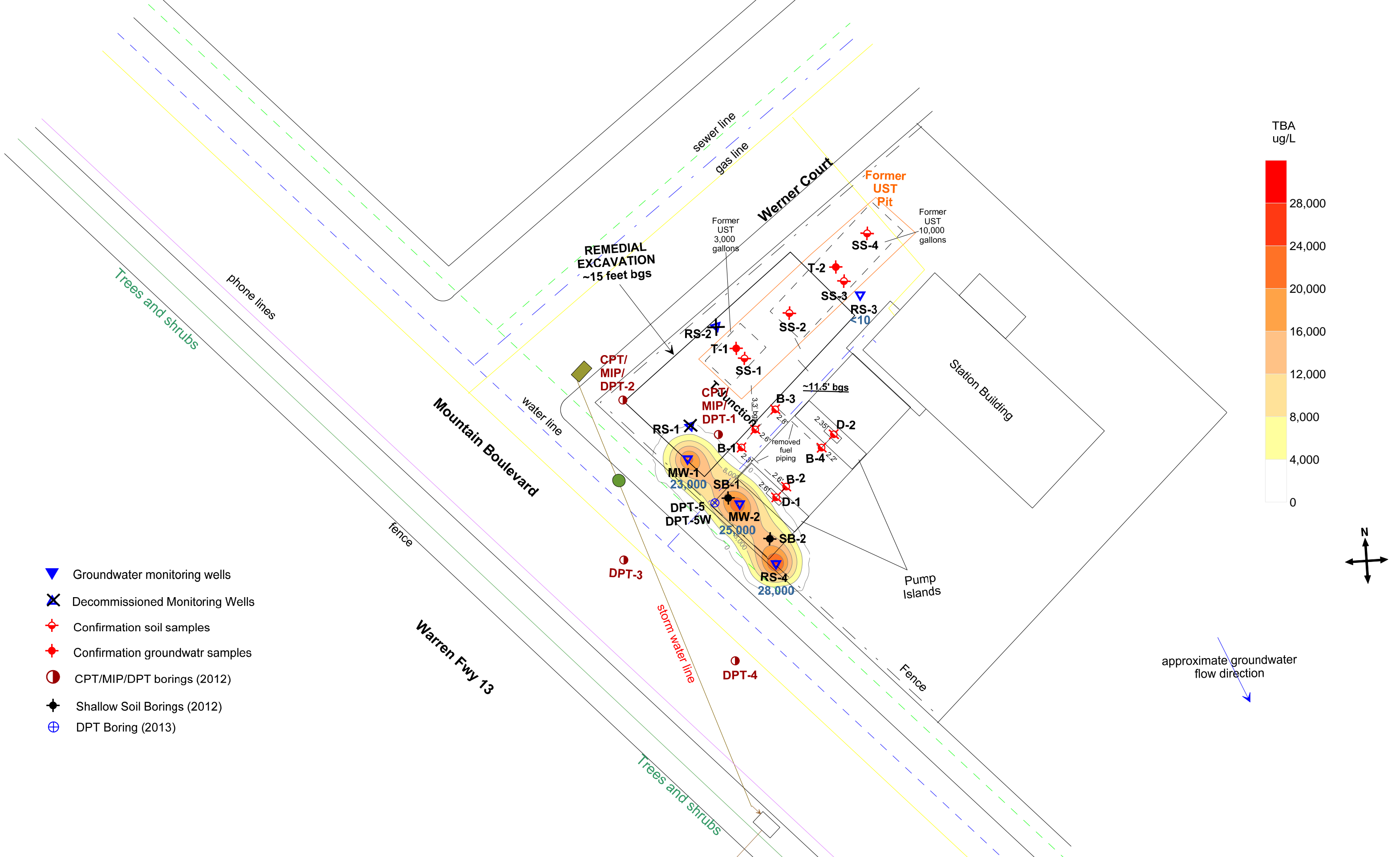
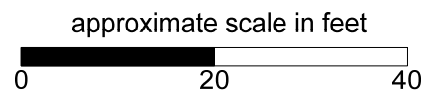


Figure 7: Contour Map Showing TBA Concentrations in Groundwater, August 27, 2014



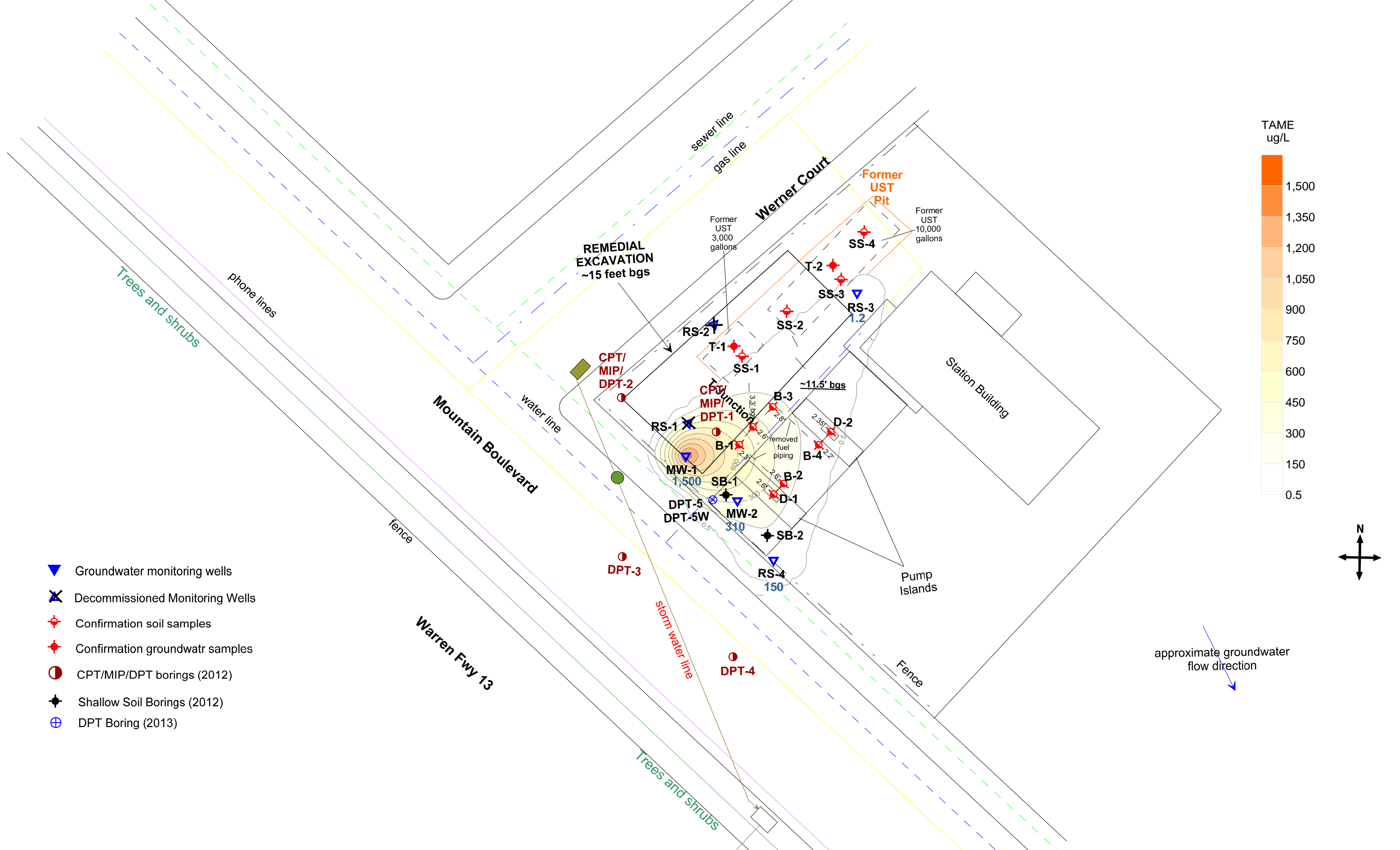
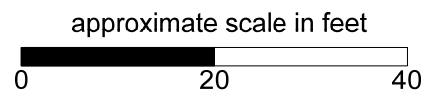


Figure 8: Contour Map Showing TAME Concentrations in Groundwater, August 27, 2014



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	
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	
	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	
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	
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)
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



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: 7.10 feet
 Groundwater Elevation: 668.98 feet
 Water Column Height: 17.89 feet
 Purged Volume: 9 gallons

Project No.: 5081
 Address: 2844 Mountain Blvd.
 Oakland, CA
 Date: August 27, 2014
 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)
08:15	Started purging well			
08:16	2.5	6.88	19.1	804
08:17	5	6.86	19.4	797
08:18	7.5	6.87	19.9	793
08:19	9	6.90	20.2	795
08:24	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: 9.43 feet
 Groundwater Elevation: 665.84 feet
 Water Column Height: 16.11 feet
 Purged Volume: - gallons

Project No.: 5081
 Address: 2844 Mountain Blvd.
 Oakland, CA
 Date: August 27, 2014
 Sampler: Lizzie Hightower

Not purged

Purging Method: Bailer Pump

Sampling Method: Bailer Pump

Color: Yes No Describe: _____

Sheen: Yes No Describe: _____

Odor: Yes No Describe: Petro odor

Field Measurements:

Time	Vol (gallons)	pH	Temp (°C)	E.C. (µs/cm)
<u>09:46</u>	<u>Grab 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: 7.23 feet
 Groundwater Elevation: 667.69 feet
 Water Column Height: 12.52 feet
 Purged Volume: 9 gallons

Project No.: 5081
 Address: 2844 Mountain Blvd.
 Oakland, CA
 Date: August 27, 2014
 Sampler: Lizzie Hightower

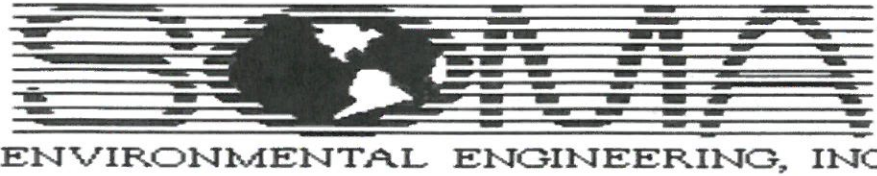
Purging Method: Bailer Pump
 Sampling Method: Bailer Pump

Color: Yes No Describe: _____
 Sheen: Yes No Describe: _____
 Odor: Yes No Describe: Petro odor

Field Measurements:

Time	Vol (gallons)	pH	Temp (°C)	E.C. (µs/cm)
08:50	Started purging well			
08:51	2.5	6.30	19.3	837
08:52	5	6.54	20.5	800
08:53	7.5	6.55	21.6	781
08:54	9	6.57	21.8	801
08:59	Sampled			

Notes:



Well No.: MW-2
 Casing Diameter: 4 inches
 Depth of Well: 19.74 feet
 Top of Casing Elevation: 675.02 feet
 Depth to Groundwater: 7.90 feet
 Groundwater Elevation: 667.12 feet
 Water Column Height: 11.84 feet
 Purged Volume: 9 gallons

Project No.: 5081
 Address: 2844 Mountain Blvd.
 Oakland, CA
 Date: August 27, 2014
 Sampler: Lizzie Hightower

Purging Method: Bailer Pump
 Sampling Method: Bailer Pump

Color: Yes No Describe: cloudy
 Sheen: Yes No Describe: _____
 Odor: Yes No Describe: Petro odor

Field Measurements:

Time	Vol (gallons)	pH	Temp (°C)	E.C. (µs/cm)
09:20	Started purging well			
09:21	2.5	7.00	19.8	896
09:22	5	6.96	20.3	885
09:23	7.5	6.99	21.1	878
09:24	9	7.00	21.3	885
09:29	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

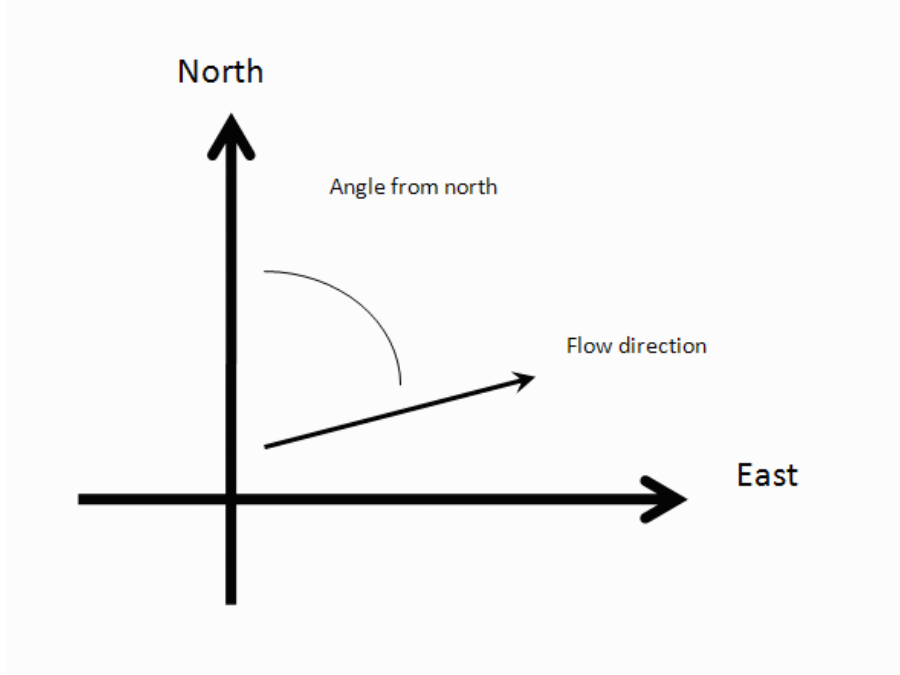
$$\begin{aligned}
 a x_1 + b y_1 + c &= h_1 \\
 a x_2 + b y_2 + c &= h_2 \\
 a x_3 + b y_3 + c &= h_3 \\
 &\dots \\
 a x_{30} + b y_{30} + c &= h_{30}
 \end{aligned}$$

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	<input type="text" value="ft"/>
1) RS-3	6071215.111	2122442.671	668.98	
2) RS-4	6071195.458	2122379.324	665.84	
3) MW-1	6071174.931	2122404.178	667.69	
4) MW-2	6071186.39	2122393.492	667.12	
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	0.9571
Gradient Magnitude (i)	0.05994
Flow direction as degrees from North (positive y axis)	157.4
Coefficient of Determination (R^2)	0.989

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 260328
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	260328-001
RS-4	260328-002
MW-1	260328-003
MW-2	260328-004

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: 09/05/2014

CASE NARRATIVE

Laboratory number: 260328
Client: SOMA Environmental Engineering Inc.
Project: 5081
Location: 2844 Mountain Blvd., Oakland
Request Date: 08/28/14
Samples Received: 08/28/14

This data package contains sample and QC results for four water samples, requested for the above referenced project on 08/28/14. 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):

No analytical problems were encountered.

COOLER RECEIPT CHECKLIST



Login # 260328 Date Received 08/28/14 Number of coolers 1
Client SOMA Env. Project 5081

Date Opened 08/28 By (print) MC (sign) [Signature]
Date Logged in [Signature] 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) 4.7

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

Y = Sample exhibits chromatographic pattern which does not resemble standard

Batch QC Report

Total Extractable Hydrocarbons			
Lab #:	260328	Location:	2844 Mountain Blvd., Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 3520C
Project#:	5081	Analysis:	EPA 8015B
Matrix:	Water	Batch#:	214954
Units:	ug/L	Prepared:	08/29/14
Diln Fac:	1.000	Analyzed:	09/02/14

Type: BS Cleanup Method: EPA 3630C
 Lab ID: QC755754

Analyte	Spiked	Result	%REC	Limits
Diesel C10-C24	2,500	2,410	96	61-120

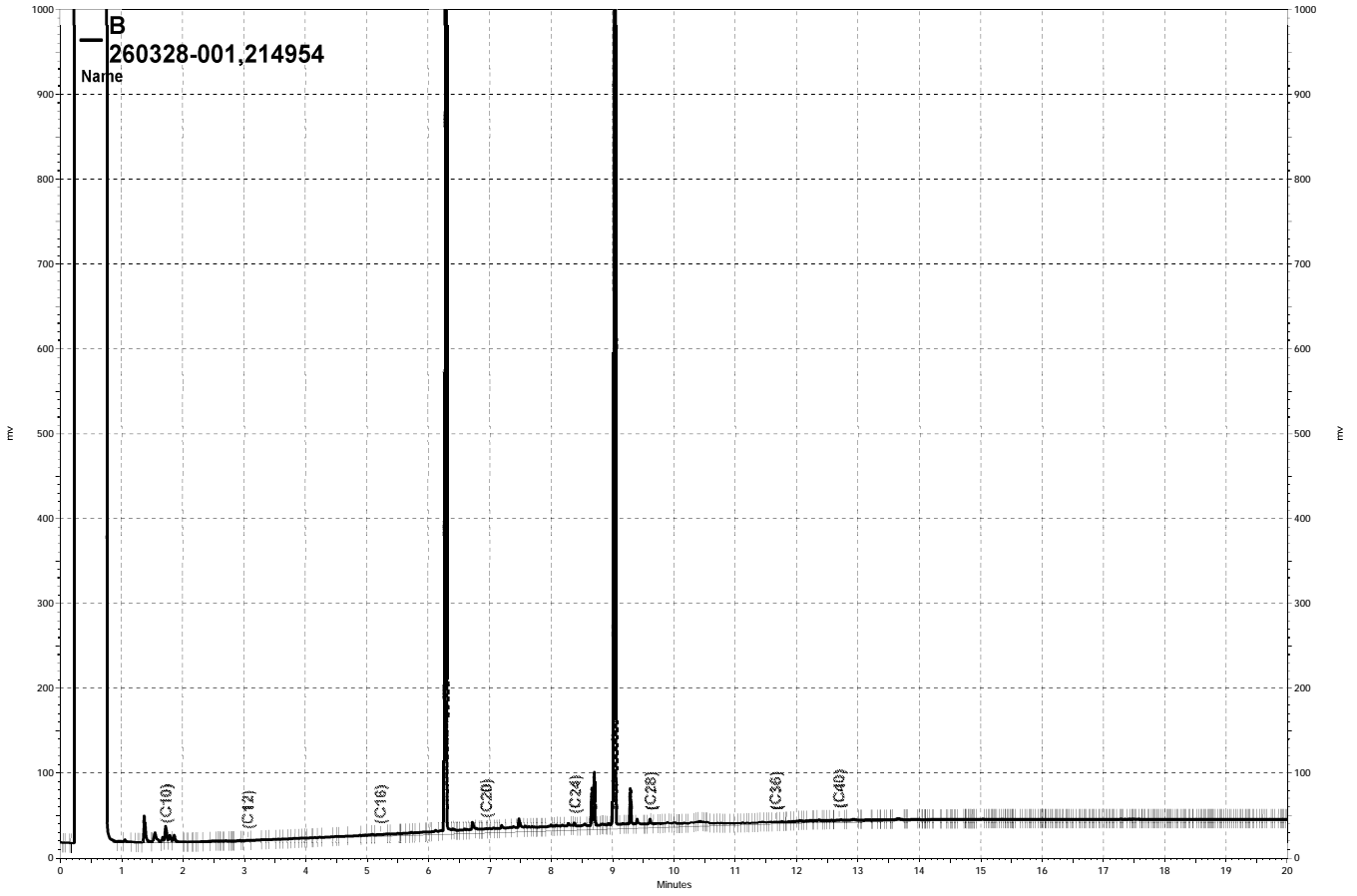
Surrogate	%REC	Limits
o-Terphenyl	111	66-129

Type: BSD Cleanup Method: EPA 3630C
 Lab ID: QC755755

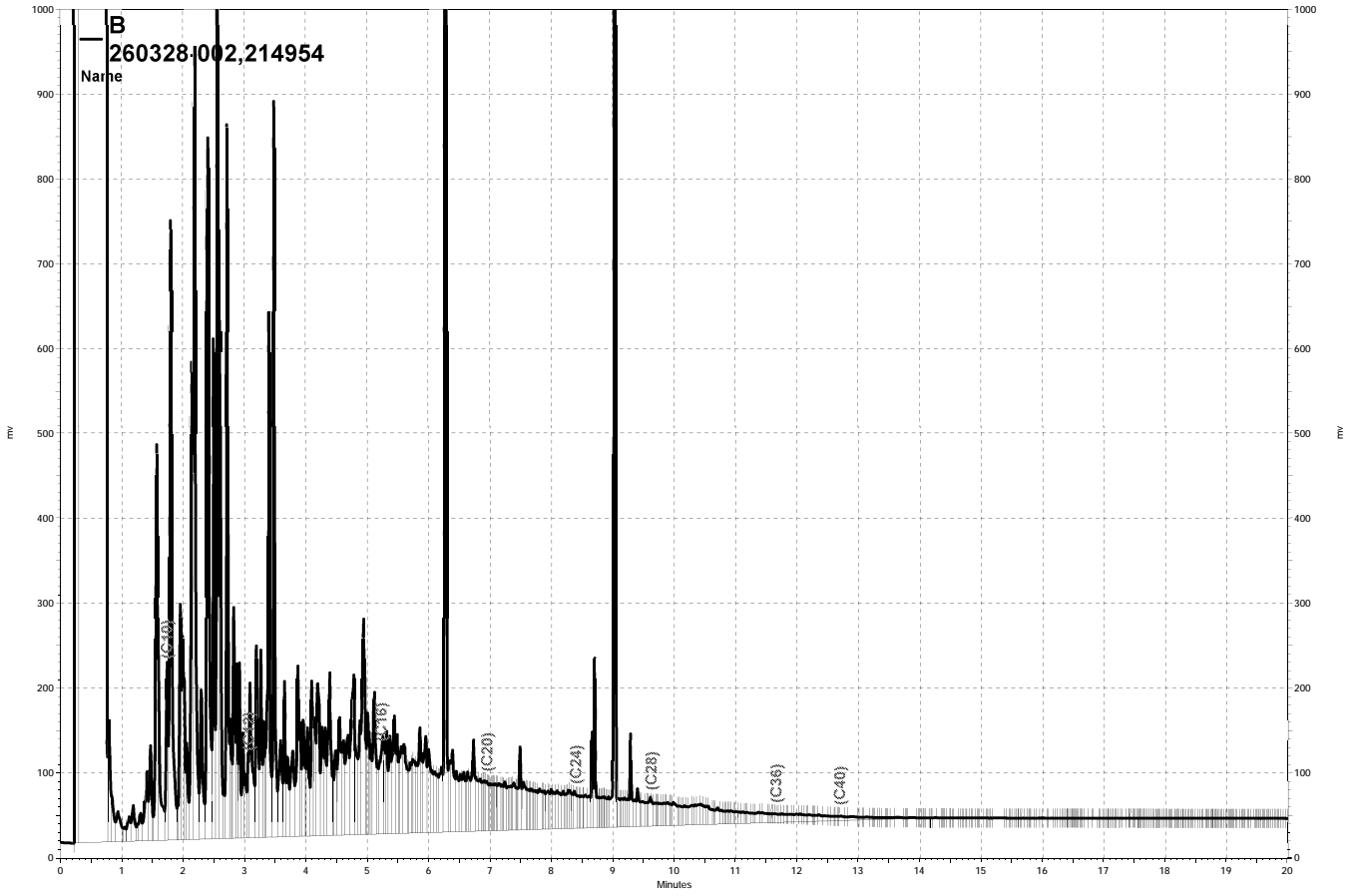
Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Diesel C10-C24	2,500	2,662	106	61-120	10	45

Surrogate	%REC	Limits
o-Terphenyl	117	66-129

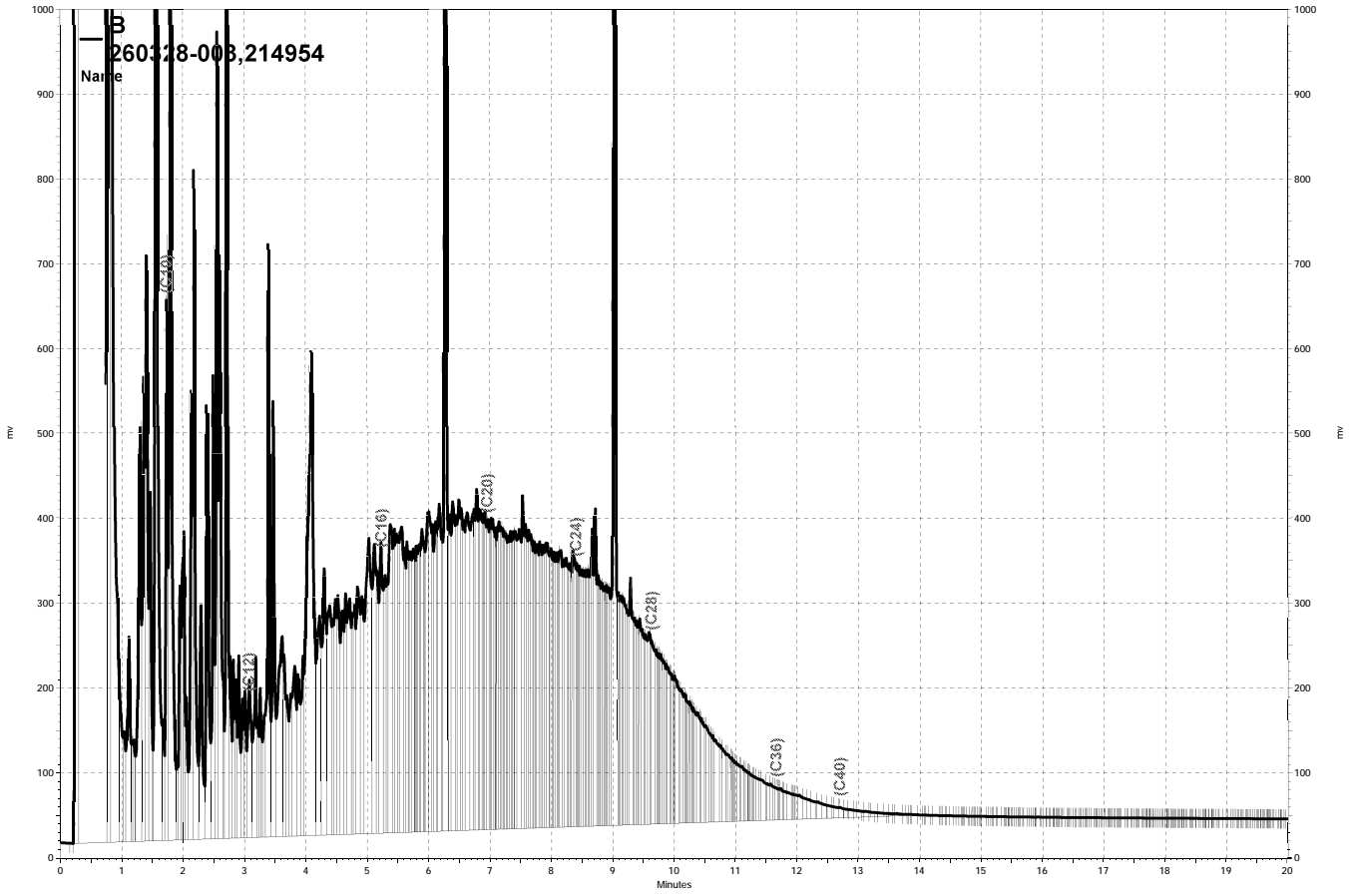
RPD= Relative Percent Difference



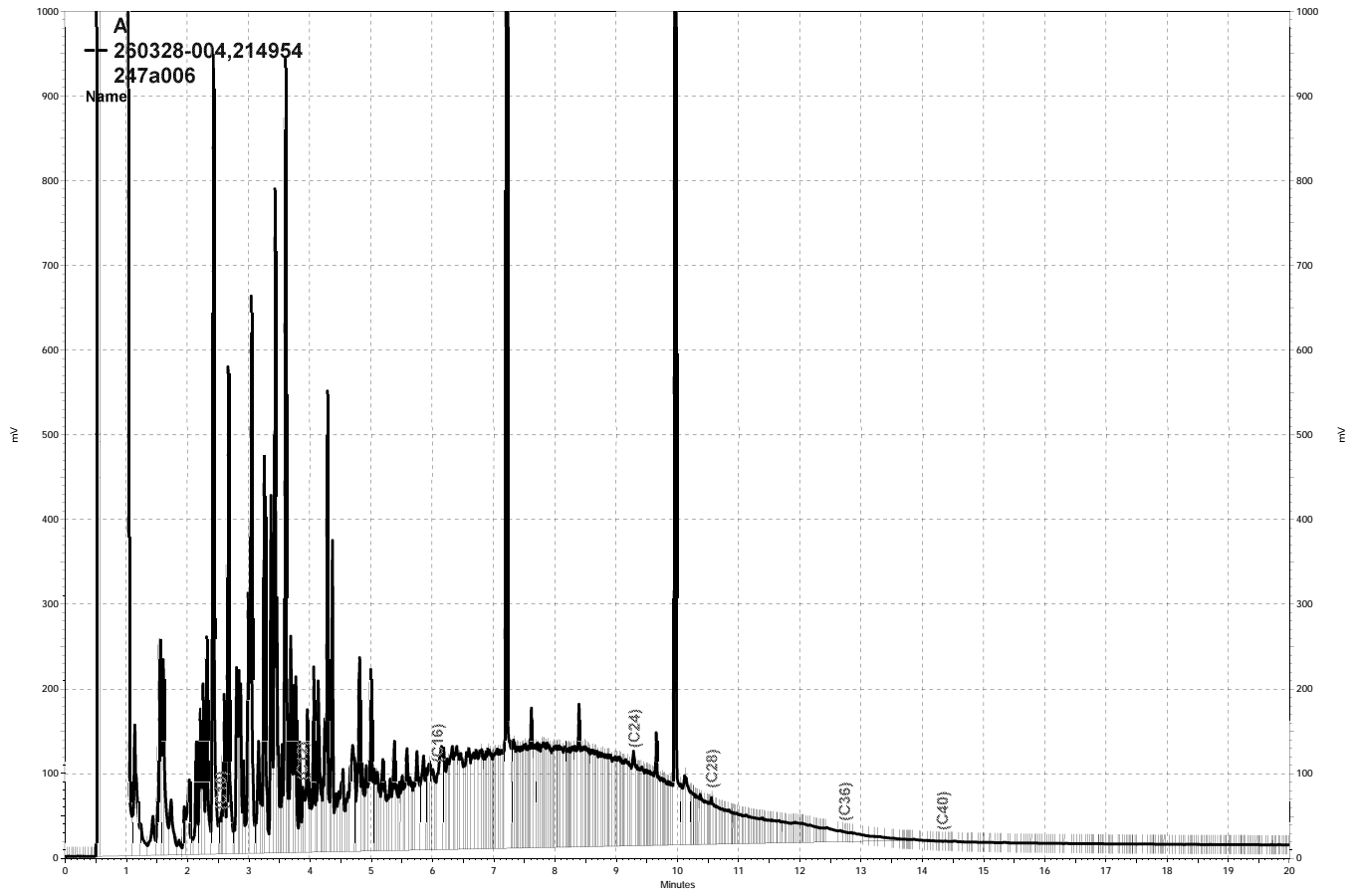
— \\Lims\gdrive\ezchrom\Projects\GC15B\Data\246a011, B



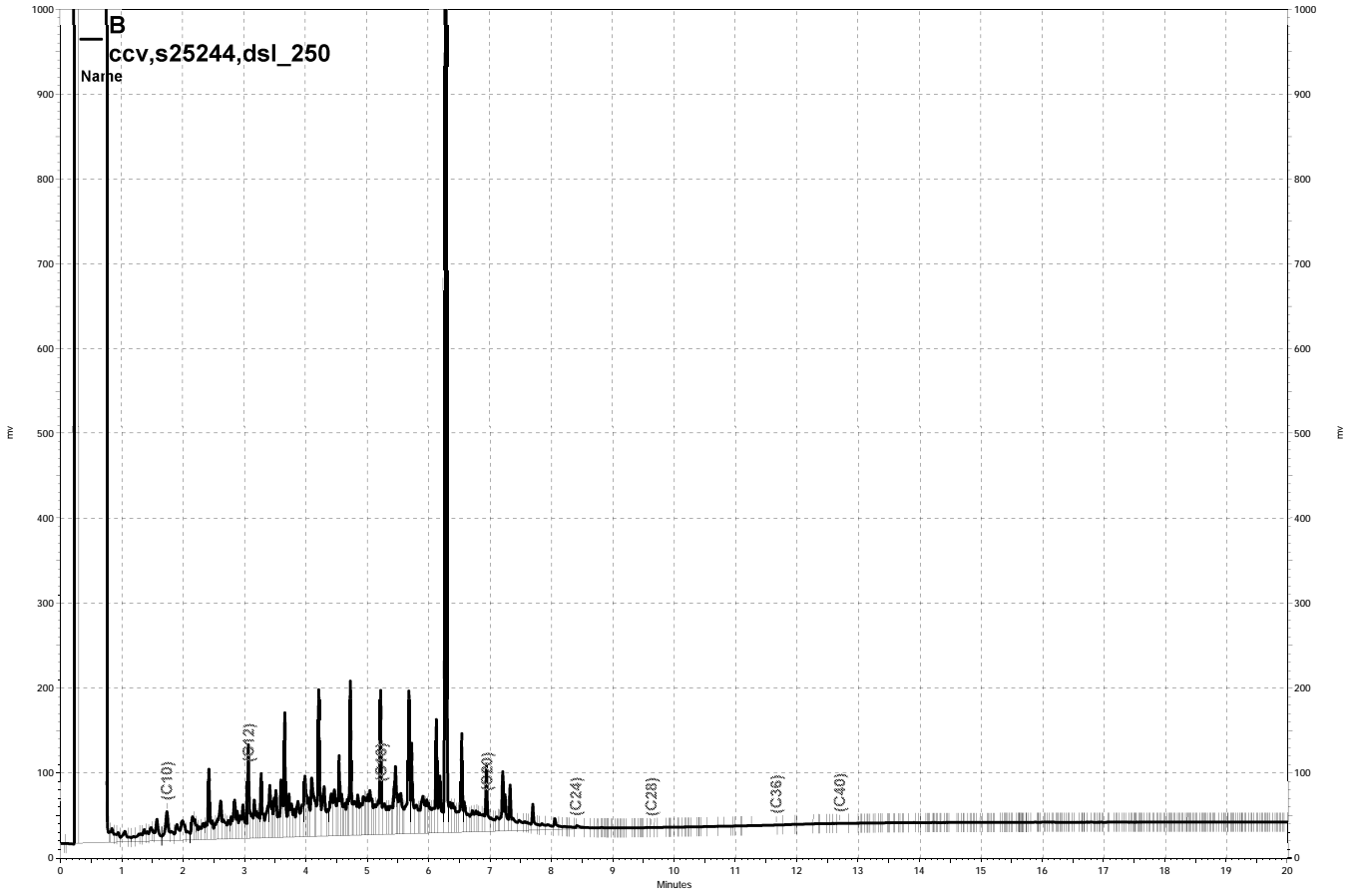
— \\Lims\gdrive\ezchrom\Projects\GC15B\Data\246a012, B



— \\Lims\gdrive\ezchrom\Projects\GC15B\Data\246a013, B



— \\Lims\gdrive\ezchrom\Projects\GC17A\Data\247a006, A



— \\Lims\gdrive\ezchrom\Projects\GC15B\Data\246a004, B

Purgeable Organics by GC/MS

Lab #: 260328	Location: 2844 Mountain Blvd., Oakland
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 5081	Analysis: EPA 8260B
Field ID: RS-3	Batch#: 214933
Lab ID: 260328-001	Sampled: 08/27/14
Matrix: Water	Received: 08/28/14
Units: ug/L	Analyzed: 08/29/14
Diln Fac: 1.000	

Analyte	Result	RL
Gasoline C7-C12	ND	50
tert-Butyl Alcohol (TBA)	ND	10
Isopropyl Ether (DIPE)	ND	0.50
Ethyl tert-Butyl Ether (ETBE)	ND	0.50
Methyl tert-Amyl Ether (TAME)	1.2	0.50
MTBE	27	0.50
Benzene	ND	0.50
Toluene	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	88	77-136
1,2-Dichloroethane-d4	100	75-139
Toluene-d8	97	80-120
Bromofluorobenzene	92	80-120

ND= Not Detected
 RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #: 260328	Location: 2844 Mountain Blvd., Oakland
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 5081	Analysis: EPA 8260B
Field ID: RS-4	Batch#: 214999
Lab ID: 260328-002	Sampled: 08/27/14
Matrix: Water	Received: 08/28/14
Units: ug/L	Analyzed: 09/02/14
Diln Fac: 40.00	

Analyte	Result	RL
Gasoline C7-C12	2,500	2,000
tert-Butyl Alcohol (TBA)	28,000	400
Isopropyl Ether (DIPE)	ND	20
Ethyl tert-Butyl Ether (ETBE)	ND	20
Methyl tert-Amyl Ether (TAME)	150	20
MTBE	2,100	20
Benzene	ND	20
Toluene	ND	20
Ethylbenzene	40	20
m,p-Xylenes	ND	20
o-Xylene	ND	20

Surrogate	%REC	Limits
Dibromofluoromethane	89	77-136
1,2-Dichloroethane-d4	98	75-139
Toluene-d8	98	80-120
Bromofluorobenzene	91	80-120

ND= Not Detected
 RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #: 260328	Location: 2844 Mountain Blvd., Oakland
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 5081	Analysis: EPA 8260B
Field ID: MW-1	Batch#: 214999
Lab ID: 260328-003	Sampled: 08/27/14
Matrix: Water	Received: 08/28/14
Units: ug/L	Analyzed: 09/02/14
Diln Fac: 125.0	

Analyte	Result	RL
Gasoline C7-C12	8,100	6,300
tert-Butyl Alcohol (TBA)	23,000	1,300
Isopropyl Ether (DIPE)	ND	63
Ethyl tert-Butyl Ether (ETBE)	ND	63
Methyl tert-Amyl Ether (TAME)	1,500	63
MTBE	8,400	63
Benzene	640	63
Toluene	ND	63
Ethylbenzene	610	63
m,p-Xylenes	720	63
o-Xylene	ND	63

Surrogate	%REC	Limits
Dibromofluoromethane	88	77-136
1,2-Dichloroethane-d4	98	75-139
Toluene-d8	97	80-120
Bromofluorobenzene	91	80-120

ND= Not Detected
 RL= Reporting Limit

Purgeable Organics by GC/MS

Lab #: 260328	Location: 2844 Mountain Blvd., Oakland
Client: SOMA Environmental Engineering Inc.	Prep: EPA 5030B
Project#: 5081	Analysis: EPA 8260B
Field ID: MW-2	Units: ug/L
Lab ID: 260328-004	Sampled: 08/27/14
Matrix: Water	Received: 08/28/14

Analyte	Result	RL	Diln Fac	Batch#	Analyzed
Gasoline C7-C12	3,400	830	16.67	215039	09/03/14
tert-Butyl Alcohol (TBA)	25,000	2,000	200.0	214933	08/29/14
Isopropyl Ether (DIPE)	ND	8.3	16.67	215039	09/03/14
Ethyl tert-Butyl Ether (ETBE)	ND	8.3	16.67	215039	09/03/14
Methyl tert-Amyl Ether (TAME)	310	8.3	16.67	215039	09/03/14
MTBE	2,300	100	200.0	214933	08/29/14
Benzene	100	8.3	16.67	215039	09/03/14
Toluene	ND	8.3	16.67	215039	09/03/14
Ethylbenzene	120	8.3	16.67	215039	09/03/14
m,p-Xylenes	76	8.3	16.67	215039	09/03/14
o-Xylene	12	8.3	16.67	215039	09/03/14

Surrogate	%REC	Limits	Diln Fac	Batch#	Analyzed
Dibromofluoromethane	90	77-136	16.67	215039	09/03/14
1,2-Dichloroethane-d4	104	75-139	16.67	215039	09/03/14
Toluene-d8	93	80-120	16.67	215039	09/03/14
Bromofluorobenzene	92	80-120	16.67	215039	09/03/14

ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	260328	Location:	2844 Mountain Blvd., Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5081	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	214933
Units:	ug/L	Analyzed:	08/29/14
Diln Fac:	1.000		

Type: BS Lab ID: QC755665

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	125.0	99.12	79	37-151
Isopropyl Ether (DIPE)	25.00	24.74	99	56-124
Ethyl tert-Butyl Ether (ETBE)	25.00	22.63	91	61-122
Methyl tert-Amyl Ether (TAME)	25.00	24.67	99	65-120
MTBE	25.00	21.48	86	64-121
Benzene	25.00	27.72	111	80-124
Toluene	25.00	27.22	109	80-122
Ethylbenzene	25.00	27.72	111	80-124
m,p-Xylenes	50.00	55.71	111	80-122
o-Xylene	25.00	28.96	116	77-120

Surrogate	%REC	Limits
Dibromofluoromethane	89	77-136
1,2-Dichloroethane-d4	96	75-139
Toluene-d8	98	80-120
Bromofluorobenzene	93	80-120

Type: BSD Lab ID: QC755666

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	125.0	97.22	78	37-151	2	30
Isopropyl Ether (DIPE)	25.00	22.27	89	56-124	10	20
Ethyl tert-Butyl Ether (ETBE)	25.00	21.09	84	61-122	7	22
Methyl tert-Amyl Ether (TAME)	25.00	22.87	91	65-120	8	22
MTBE	25.00	19.88	80	64-121	8	20
Benzene	25.00	24.42	98	80-124	13	20
Toluene	25.00	23.73	95	80-122	14	20
Ethylbenzene	25.00	24.28	97	80-124	13	20
m,p-Xylenes	50.00	48.74	97	80-122	13	20
o-Xylene	25.00	25.17	101	77-120	14	20

Surrogate	%REC	Limits
Dibromofluoromethane	90	77-136
1,2-Dichloroethane-d4	97	75-139
Toluene-d8	99	80-120
Bromofluorobenzene	90	80-120

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	260328	Location:	2844 Mountain Blvd., Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5081	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	214933
Units:	ug/L	Analyzed:	08/29/14
Diln Fac:	1.000		

Type: BS Lab ID: QC755667

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	1,001	100	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	87	77-136
1,2-Dichloroethane-d4	98	75-139
Toluene-d8	98	80-120
Bromofluorobenzene	93	80-120

Type: BSD Lab ID: QC755668

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	1,000	965.7	97	80-120	4	20

Surrogate	%REC	Limits
Dibromofluoromethane	86	77-136
1,2-Dichloroethane-d4	100	75-139
Toluene-d8	97	80-120
Bromofluorobenzene	90	80-120

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	260328	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:	QC755669	Batch#:	214933
Matrix:	Water	Analyzed:	08/29/14
Units:	ug/L		

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

Surrogate	%REC	Limits
Dibromofluoromethane	90	77-136
1,2-Dichloroethane-d4	104	75-139
Toluene-d8	98	80-120
Bromofluorobenzene	93	80-120

ND= Not Detected

RL= Reporting Limit

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	260328	Location:	2844 Mountain Blvd., Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5081	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	214999
Units:	ug/L	Analyzed:	09/02/14
Diln Fac:	1.000		

Type: BS Lab ID: QC755940

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	62.50	64.68	103	37-151
Isopropyl Ether (DIPE)	12.50	12.11	97	56-124
Ethyl tert-Butyl Ether (ETBE)	12.50	11.41	91	61-122
Methyl tert-Amyl Ether (TAME)	12.50	12.64	101	65-120
MTBE	12.50	11.00	88	64-121
Benzene	12.50	14.04	112	80-124
Toluene	12.50	13.97	112	80-122
Ethylbenzene	12.50	13.60	109	80-124
m,p-Xylenes	25.00	28.18	113	80-122
o-Xylene	12.50	14.29	114	77-120

Surrogate	%REC	Limits
Dibromofluoromethane	87	77-136
1,2-Dichloroethane-d4	101	75-139
Toluene-d8	96	80-120
Bromofluorobenzene	92	80-120

Type: BSD Lab ID: QC755941

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	62.50	62.35	100	37-151	4	30
Isopropyl Ether (DIPE)	12.50	12.07	97	56-124	0	20
Ethyl tert-Butyl Ether (ETBE)	12.50	11.36	91	61-122	0	22
Methyl tert-Amyl Ether (TAME)	12.50	13.20	106	65-120	4	22
MTBE	12.50	10.88	87	64-121	1	20
Benzene	12.50	14.09	113	80-124	0	20
Toluene	12.50	13.89	111	80-122	1	20
Ethylbenzene	12.50	13.59	109	80-124	0	20
m,p-Xylenes	25.00	27.92	112	80-122	1	20
o-Xylene	12.50	14.00	112	77-120	2	20

Surrogate	%REC	Limits
Dibromofluoromethane	88	77-136
1,2-Dichloroethane-d4	102	75-139
Toluene-d8	99	80-120
Bromofluorobenzene	93	80-120

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	260328	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:	QC755942	Batch#:	214999
Matrix:	Water	Analyzed:	09/02/14
Units:	ug/L		

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

Surrogate	%REC	Limits
Dibromofluoromethane	90	77-136
1,2-Dichloroethane-d4	104	75-139
Toluene-d8	97	80-120
Bromofluorobenzene	93	80-120

ND= Not Detected

RL= Reporting Limit

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	260328	Location:	2844 Mountain Blvd., Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5081	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	214999
Units:	ug/L	Analyzed:	09/02/14
Diln Fac:	1.000		

Type: BS Lab ID: QC755950

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	967.9	97	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	89	77-136
1,2-Dichloroethane-d4	102	75-139
Toluene-d8	97	80-120
Bromofluorobenzene	94	80-120

Type: BSD Lab ID: QC755951

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	1,000	930.0	93	80-120	4	20

Surrogate	%REC	Limits
Dibromofluoromethane	89	77-136
1,2-Dichloroethane-d4	101	75-139
Toluene-d8	99	80-120
Bromofluorobenzene	95	80-120

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	260328	Location:	2844 Mountain Blvd., Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5081	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	215039
Units:	ug/L	Analyzed:	09/03/14
Diln Fac:	1.000		

Type: BS Lab ID: QC756101

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	62.50	56.44	90	37-151
Isopropyl Ether (DIPE)	12.50	12.11	97	56-124
Ethyl tert-Butyl Ether (ETBE)	12.50	11.26	90	61-122
Methyl tert-Amyl Ether (TAME)	12.50	12.68	101	65-120
MTBE	12.50	10.56	84	64-121
Benzene	12.50	14.24	114	80-124
Toluene	12.50	13.79	110	80-122
Ethylbenzene	12.50	13.94	112	80-124
m,p-Xylenes	25.00	28.57	114	80-122
o-Xylene	12.50	14.63	117	77-120

Surrogate	%REC	Limits
Dibromofluoromethane	89	77-136
1,2-Dichloroethane-d4	100	75-139
Toluene-d8	99	80-120
Bromofluorobenzene	90	80-120

Type: BSD Lab ID: QC756102

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	62.50	56.92	91	37-151	1	30
Isopropyl Ether (DIPE)	12.50	11.68	93	56-124	4	20
Ethyl tert-Butyl Ether (ETBE)	12.50	10.86	87	61-122	4	22
Methyl tert-Amyl Ether (TAME)	12.50	12.32	99	65-120	3	22
MTBE	12.50	10.52	84	64-121	0	20
Benzene	12.50	13.39	107	80-124	6	20
Toluene	12.50	12.99	104	80-122	6	20
Ethylbenzene	12.50	12.90	103	80-124	8	20
m,p-Xylenes	25.00	26.99	108	80-122	6	20
o-Xylene	12.50	13.51	108	77-120	8	20

Surrogate	%REC	Limits
Dibromofluoromethane	88	77-136
1,2-Dichloroethane-d4	101	75-139
Toluene-d8	99	80-120
Bromofluorobenzene	92	80-120

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	260328	Location:	2844 Mountain Blvd., Oakland
Client:	SOMA Environmental Engineering Inc.	Prep:	EPA 5030B
Project#:	5081	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	215039
Units:	ug/L	Analyzed:	09/03/14
Diln Fac:	1.000		

Type: BS Lab ID: QC756103

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	1,147	115	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	90	77-136
1,2-Dichloroethane-d4	106	75-139
Toluene-d8	98	80-120
Bromofluorobenzene	92	80-120

Type: BSD Lab ID: QC756104

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	1,000	976.1	98	80-120	16	20

Surrogate	%REC	Limits
Dibromofluoromethane	90	77-136
1,2-Dichloroethane-d4	102	75-139
Toluene-d8	97	80-120
Bromofluorobenzene	94	80-120

RPD= Relative Percent Difference

Batch QC Report

Purgeable Organics by GC/MS			
Lab #:	260328	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:	QC756105	Batch#:	215039
Matrix:	Water	Analyzed:	09/03/14
Units:	ug/L		

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

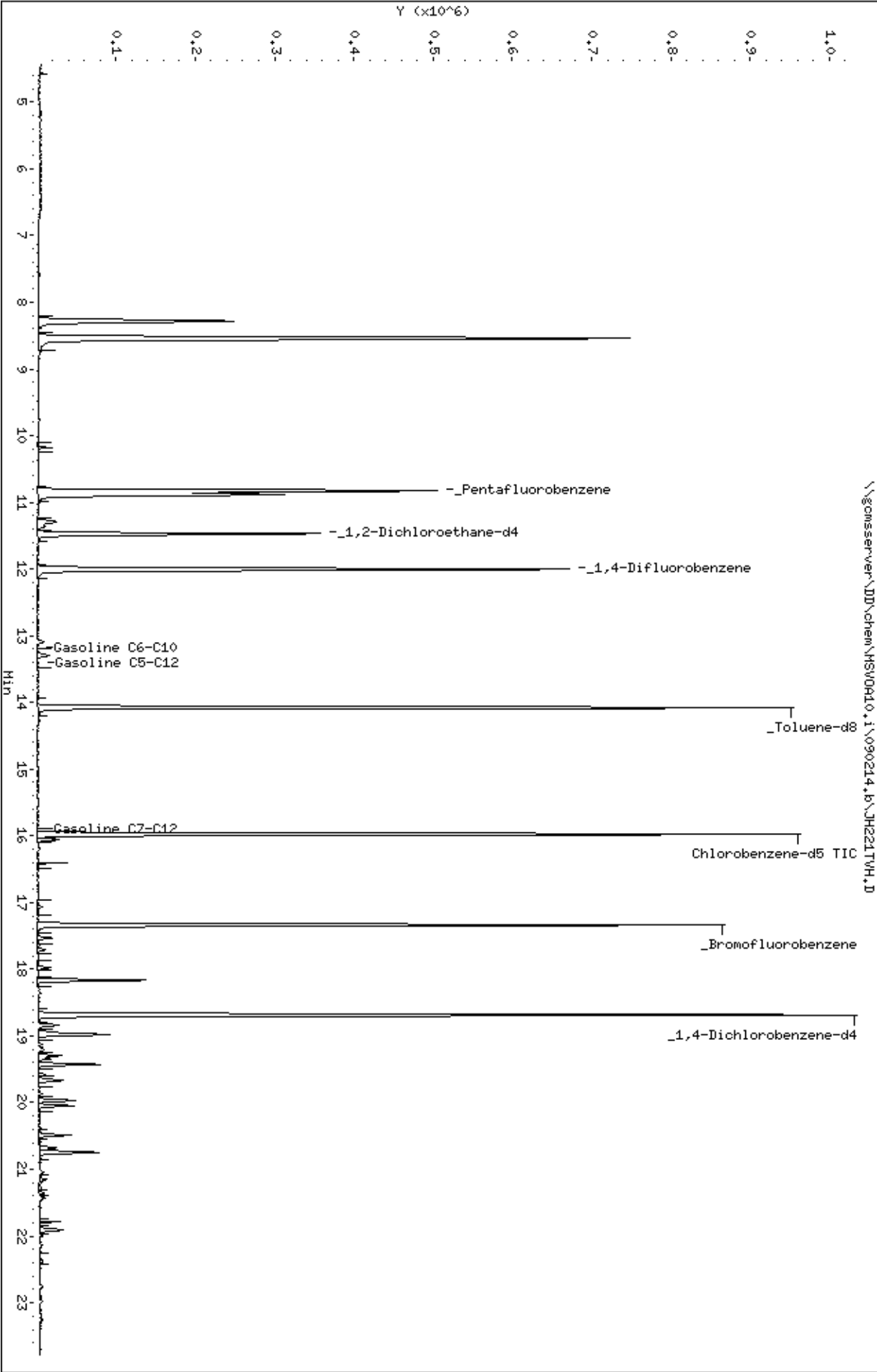
Surrogate	%REC	Limits
Dibromofluoromethane	93	77-136
1,2-Dichloroethane-d4	106	75-139
Toluene-d8	100	80-120
Bromofluorobenzene	93	80-120

ND= Not Detected

RL= Reporting Limit

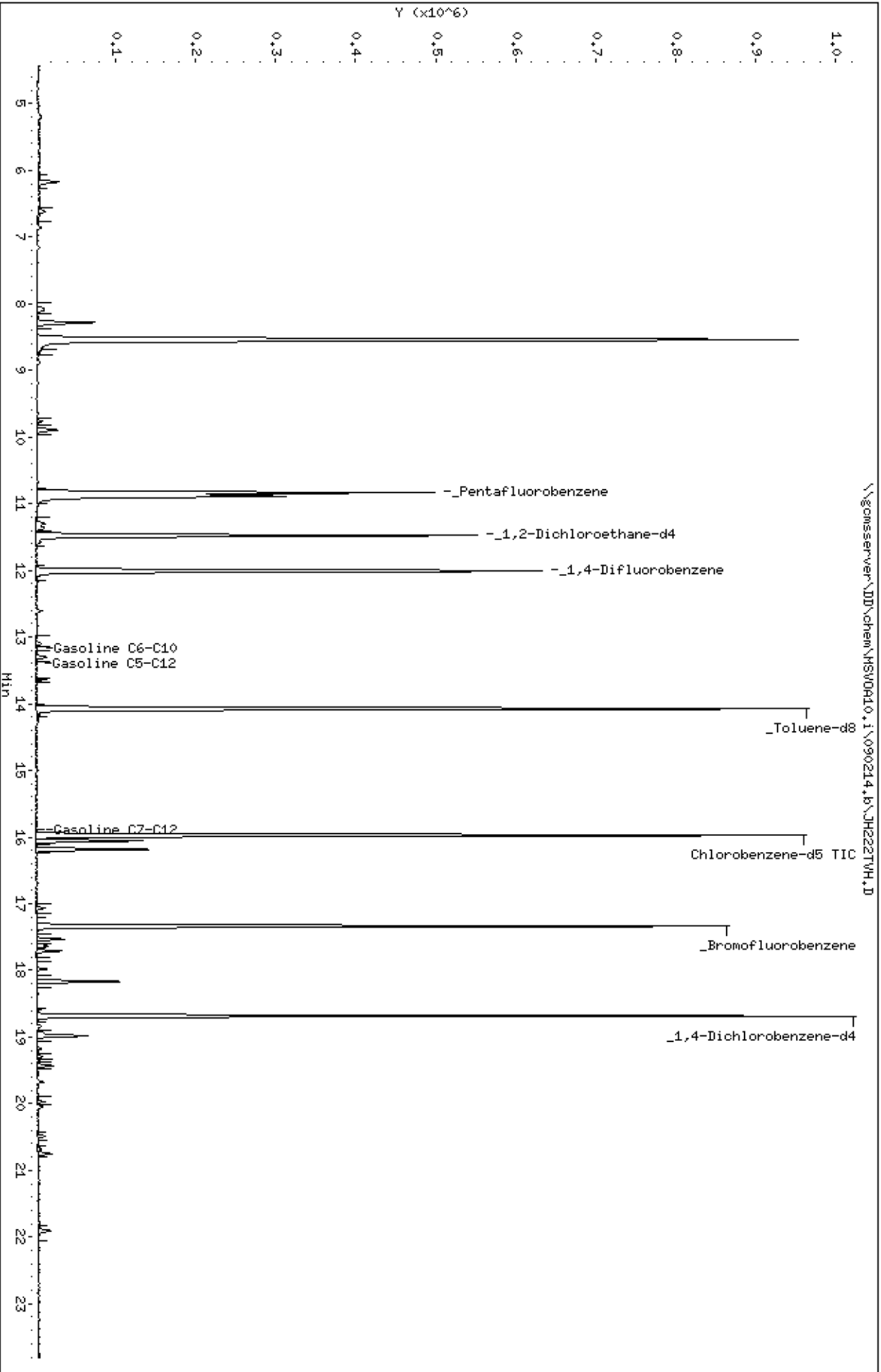
Data File: \\gcmserver\DD\chem\HSV0R10.i\090214.b\JH221TVH.D
Date: 02-SEP-2014 20:58
Client ID: DYNA P&T
Sample Info: S,260328-002
Column phase:

Instrument: HSV0R10.i
Operator: WDA
Column diameter: 2.00



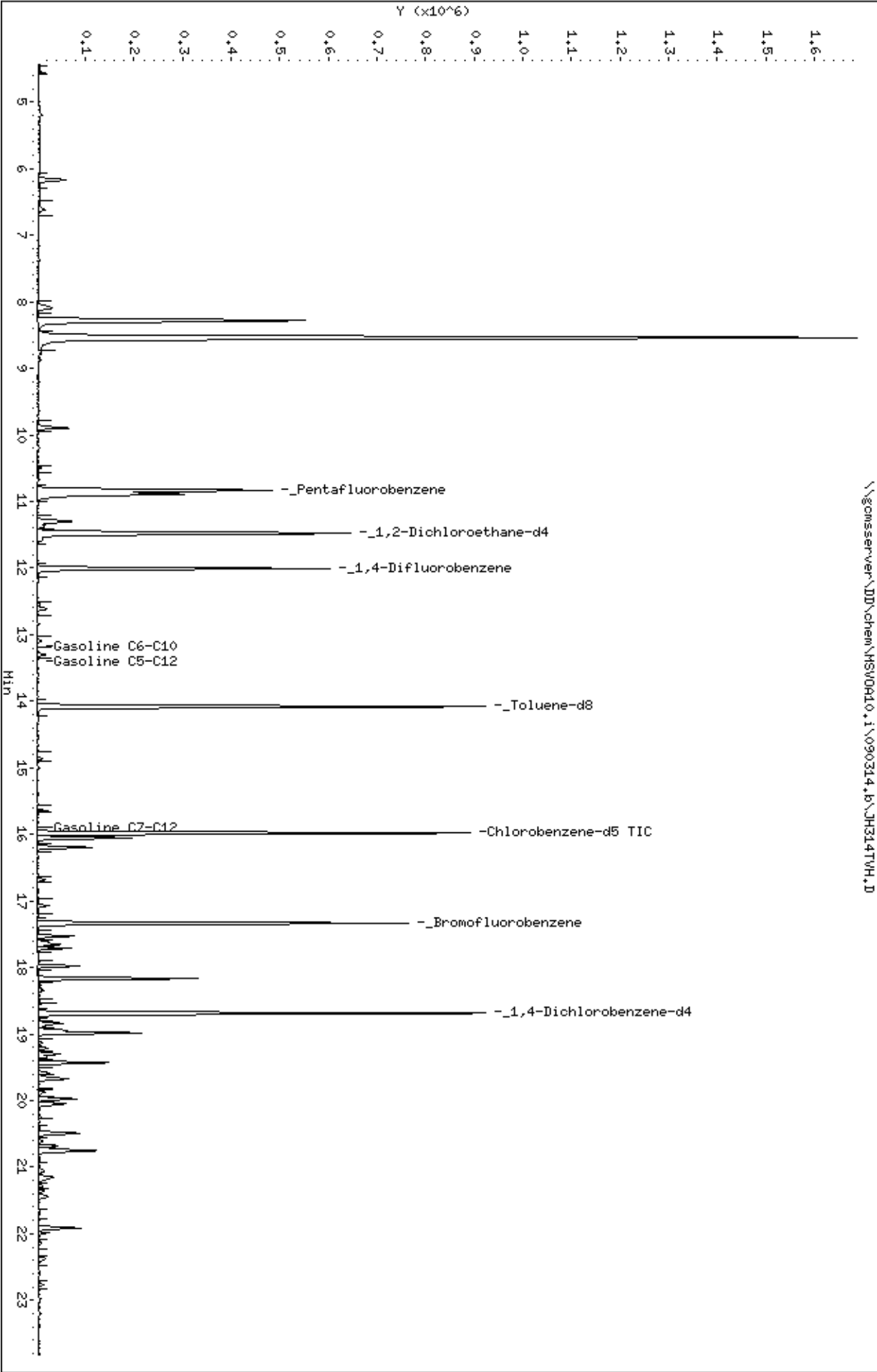
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Date : 02-SEP-2014 21:31
Client ID: DYNA P&T
Sample Info: S,260328-003
Column phase:

Instrument: HSV0R10.i
Operator: WDA
Column diameter: 2.00



Data File: \\gcmserver\DD\chem\HSV0R10.i\090314.b\JH314TVH.D
Date: 03-SEP-2014 17:20
Client ID: DYNA P&T
Sample Info: S,260328-004
Column phase:

Instrument: HSV0R10.i
Operator: WDA
Column diameter: 2.00



Data File: \\gcmserver\DD\chem\HSV0R10.i\082914.b\JHT09TVH.D

Date: 29-JUN-2014 12:12

Client ID: DYNA P&T

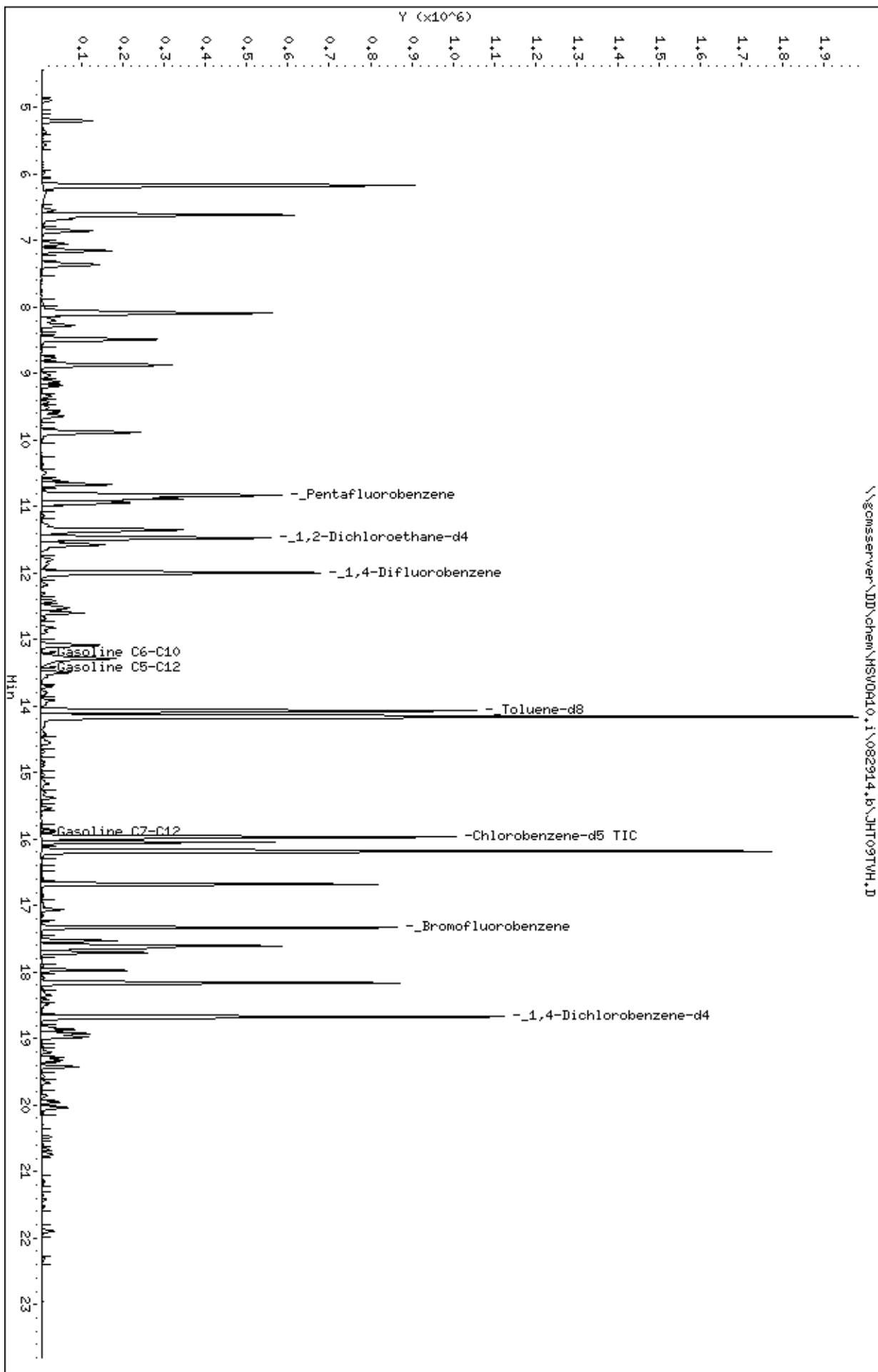
Sample Info: cov/bs,0C755667

Column phase:

Instrument: HSV0R10.i

Operator: WDA

Column diameter: 2.00



Appendix D

Non-Hazardous Waste Manifest

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 1
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	
	INSTRAT INC		A. State Transporter's ID	
7. Transporter 2 Company Name		8. US EPA ID Number		B. Transporter 1 Phone
				C. State Transporter's ID
9. Designated Facility Name and Site Address		10. US EPA ID Number		D. Transporter 2 Phone
INSTRAT, INC. 1100 G AIRPORT RD. PO BOX 100, CA 94621				E. State Facility's ID
				F. Facility's Phone
				(707) 374-0204
11. WASTE DESCRIPTION		12. Containers No.	Type	13. Total Quantity
a.				14. Unit Wt./Vol.
NON-HAZ MONITORING WELL WATER		2	DRM	110 GAL
b.				
c.				
d.				
G. Additional Descriptions for Materials Listed Above			H. Handling Codes for Wastes Listed Above	
BROWN, FINE, NO ODOR				
15. Special Handling Instructions and Additional Information				
<p>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.</p>				
Printed/Typed Name		Signature		Date
				Month Day Year
17. Transporter 1 Acknowledgement of Receipt of Materials		Signature		Date
Printed/Typed Name		Signature		Month Day Year
JASON HOBIE		Jason Hobie		9/19/14
18. Transporter 2 Acknowledgement of Receipt of Materials		Signature		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		Date
MICHAEL WHITEHEAD		Michael Whitehead		9/12/14

NON-HAZARDOUS WASTE

GENERATOR

TRANSPORTER

FACILITY

