

FUGRO WEST, INC.

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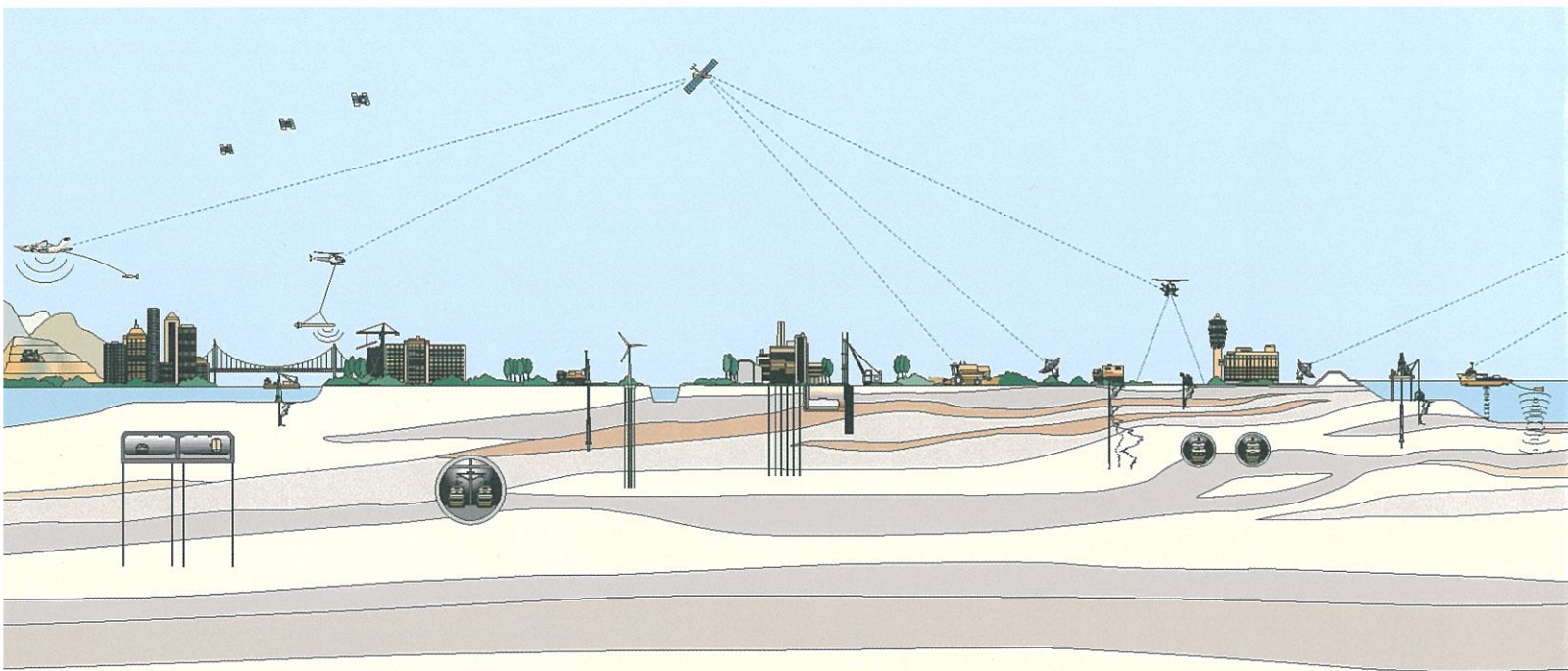
Alameda County  
Environmental Health



**SPRING 2010 GROUNDWATER  
MONITORING REPORT  
2250 TELEGRAPH AVENUE  
OAKLAND, CALIFORNIA**

Prepared for:  
**BUTTNER PROPERTIES**

May 2010  
Fugro Project No. 609.004



May 13, 2010  
Project No. 609.004

Buttner Properties  
600 West Grand Avenue  
Oakland, California 94612

Attention: Ms. Marianne Robison

Subject: Spring 2010 Groundwater Monitoring Report, 2250 Telegraph Avenue  
Oakland, California

Dear Ms. Robison:

Fugro West, Inc., (Fugro) is pleased to present this report, which records the results of the Spring 2010 Groundwater Monitoring Event for the 2250 Telegraph Avenue property (Site). Monitoring is currently conducted at the Site on a semi-annual basis. The groundwater monitoring program has been implemented in general accordance with Fugro's Work Plan for Additional Site Investigation, dated January 16, 2009. Based on discussions between Fugro and Alameda County Environmental Health Department (ACEH) in March 2010, ACEH authorized Fugro to forego routine semi-annual groundwater monitoring on Wells MW-2, MW-5, and MW-6 until further notice. During this monitoring event, Fugro sampled three wells located onsite (MW-1, MW-3, and MW-4). The Site location is shown on the Vicinity Map - Plate 1, and the Site Plan is presented on Plate 2.

## **BACKGROUND**

A review of soil and groundwater data collected during source removal activities, site characterization and monitoring well installation studies, and groundwater monitoring events conducted onsite since March 1994, indicates that the site is impacted by releases that occurred onsite and possibly those which have occurred from offsite sources. The plumes become commingled on site. Data further suggests that the characteristics of the plumes have not changed significantly during the last sixteen years. Previous risk assessment activities have also confirmed that no significant risks are posed to the ongoing commercial use of the property.

Fugro submitted a Work Plan to ACEH in January 2009 which summarized past studies conducted at the Site. This Work Plan also proposed a new scope of work that included additional soil, groundwater, and soil-vapor investigations, as well as groundwater monitoring. The scope of work also included a preliminary risk assessment, providing ACEH with information regarding preferential pathways and registered monitoring wells in the vicinity of the Site. The Work Plan was approved by ACEH in May 2009 and implemented at the Site during July 27 through July 31, and September 8, 2009.

The 2009 study confirmed that vadose zone soil impacts are localized to the former waste oil tank vicinity and extend below the existing building. The groundwater zone impacts due to onsite fuel and waste oil releases also appear to be limited as data does not suggest that significant migration has occurred downgradient (southeast and east of the Site). The presence of the impacted soil and groundwater does not appear to represent a significant risk of exposure via an inhalation route based on the 2009 soil-vapor data and given the current Site use. Fugro submitted the results of this study to ACEH in November 2009. As of the date of this report, ACEH is still evaluating the Site Investigation Completion Report.

### **GROUNDWATER MONITORING – SPRING 2010**

Fugro conducted this monitoring event on March 23 and 24, 2010. Prior to sampling, the presence of free product was checked and the depth to groundwater was measured in wells MW-1, MW-3, and MW-4. On March 23, 2010, each well was purged of approximately three casing volumes of water while monitoring for changes in pH, conductivity, and temperature. Due to slow recharge of the three wells, Fugro's field personnel returned to the Site on March 24, 2010 and sampled the wells with clean disposable bailers. Fugro's field personnel noticed hydrocarbon odors during purging and sampling of these three wells; however, no free product was observed. Samples were retained in glass containers pre-cleaned by the laboratory in accordance with Environmental Protection Agency (EPA) protocols. The containers were placed in an ice-filled cooler and kept chilled, pending delivery to the laboratory.

The samples for this event were submitted under chain-of-custody documentation to Curtis & Tompkins, Ltd., a laboratory certified by the State of California Department of Health Services for hazardous waste and water testing. A sample from each well was analyzed for the following constituents:

- Total volatile hydrocarbons as gasoline (TVHg) by EPA Methods 5030/8260;
- Total extractable petroleum hydrocarbons as diesel and motor oil (TEHd and TEHmo) by EPA Methods 8015m, using silica gel cleanup; and
- Lead scavengers (dichloroethane and dibromoethane); Five fuel oxygenates (MTBE, TBA, DIPE, ETBE, and TAME); and Benzene, toluene, ethylbenzene, and total xylenes (BTEX) by EPA Method 8260.

Well sampling forms and the laboratory analytical report (including chain-of-custody documentation) are presented in Appendices A and B, respectively. Groundwater elevation data are summarized in Table 1. Analytical test results are summarized in Table 2.

The historic groundwater flow directions for this Site are presented in the Rose Diagram on Plate 2. The gradient for this event was 0.01 feet/foot<sup>1</sup> directed towards the southeast. Based on the groundwater elevation data presented in Table 1, the groundwater gradient remains generally consistent with previous measurements. Groundwater was generally

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<sup>1</sup> Data based on current measurements in wells MW-1, MW-3, and MW-4. Wells MW-2, MW-5, and MW-6 were not included in this groundwater monitoring event.



encountered at higher elevations compared to the July 2009 monitoring event, which is expected given that this monitoring event was conducted during a wet winter season.

## **DISCUSSION OF RESULTS**

Analyses detected TVHg and TEHd during this event in groundwater samples obtained from wells MW-1, MW-3, and MW-4 at concentrations ranging from 82 micrograms per liter ( $\mu\text{g/L}$ ) to 510  $\mu\text{g/L}$ , and 53  $\mu\text{g/L}$  to 670  $\mu\text{g/L}$ , respectively. TEHmo was only detected in samples collected from Well MW-4 at a concentration of 980  $\mu\text{g/L}$ . Concentrations of the analytes detected during this sampling event are generally within the historic range of data for each well.

No concentrations of BTEX were detected in groundwater samples obtained from MW-1 and MW-4. Analysis detected benzene, toluene, ethylbenzene, and total xylenes in Well MW-3 at concentrations of 64  $\mu\text{g/L}$ , 2.5  $\mu\text{g/L}$ , 0.78  $\mu\text{g/L}$ , and 3.3  $\mu\text{g/L}$ , respectively. Concentrations of the analytes detected during this sampling event are generally within the historic range of data for this well.

No MTBE concentrations were detected in any of the samples tested during this event. Additionally, none of the lead scavengers or other fuel oxygenates were detected in any of the samples analyzed.

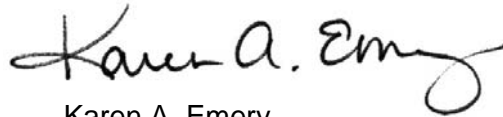
## **REPORTING REQUIREMENTS**

In accordance with reporting requirements, Fugro has uploaded a PDF copy of this Spring 2010 Groundwater Monitoring Report to the ACEH ftp website. We have also sent electronic copies of all attached tables in a Microsoft excel format to ACEH. Copies of required reports, tables, and site plans have also been uploaded to the Regional Water Quality Control Board's (RWQCB) GeoTracker database.


## CLOSING STATEMENT

The next scheduled monitoring event will be conducted during the Fall of 2010. If you have any questions, please call either of the undersigned at (510) 268-0461.

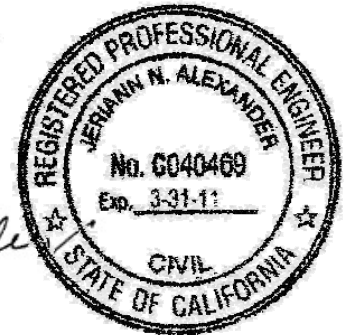
Sincerely,  
FUGRO WEST, INC.



Karen A. Emery  
Project Geologist



Jeriann N. Alexander, P.E., R.E.A.  
Project Manager  
Civil Engineer 40469 (exp. 3/31/11)  
REA 03130 (exp. 7/10)



KAE/JNA:afp

Attachments: Table 1 - Groundwater Elevation Data  
Table 2 – Summary of Chemical Concentrations – Groundwater Monitoring Wells

Plate 1 - Vicinity Map  
Plate 2 - Site Plan

Appendix A – Well Sampling Forms  
Appendix B – Analytical Report and Chain-of-Custody Form

Copies Submitted: (1) Addressee  
(PDF) Mr. Tim Robison, Ph.D.  
(PDF) Ms. Helen Robison  
(PDF) Alameda County Environmental Health FTP website  
(PDF) Regional Water Quality Control Board GeoTracker database

## **TABLES**



**Table 1**  
**Groundwater Elevation Data**  
**2250 Telegraph Avenue, Oakland, California**

Monitoring Well	Date	TOC Elevation (Feet MSL)	DTW (feet)	Elevation (Feet MSL)
MW-1	3/3/1994	20.55	10.39	10.16
	3/10/1994		10.54	10.01
	6/6/1994		11.36	9.19
	9/7/1994		11.92	8.63
	12/22/1994		10.83	9.72
	3/17/1995		9.73	10.82
	6/27/1995		10.51	10.04
	9/18/1995		11.12	9.43
	5/30/1996		10.49	10.06
	7/9/1997		11.79	8.76
	8/21/1998		11.00	9.55
	10/6/1998		11.84	8.71
	2/24/1999		9.74	10.81
	6/30/2000		11.28	9.27
	4/27/2001		10.56	9.99
	4/14/2005		10.12	10.43
	8/1/2005		10.56	9.99
	11/9/2005		12.53	8.02
	3/21/2006		9.71	10.84
	8/7/2006		11.40	9.15
	10/27/2006		11.39	9.16
	3/20/2007		10.94	9.61
	8/8/2007		11.21	9.34
	2/5/2008		9.52	11.03
	8/14/2008		11.00	9.55
	3/3/2009		9.69	10.86
	7/30/2009		11.10	9.45
9/8/2009	11.77	8.78		
	3/23/2010		10.15	10.40
MW-2	3/3/1994	20.03	10.37	9.66
	3/10/1994		10.53	9.50
	6/6/1994		11.15	8.88
	9/7/1994		11.72	8.31
	12/22/1994		11.27	8.76
	3/17/1995		9.85	10.18
	6/27/1995		10.70	9.33
	9/18/1995		11.67	8.36
	5/30/1996		11.56	8.47
	7/9/1997		11.52	8.51
	8/21/1998		11.91	8.12
	10/6/1998		11.57	8.46
	2/24/1999		9.91	10.12
	6/30/2000		11.16	8.87
	4/27/2001		11.32	8.71
	4/14/2005		11.00	9.03
	8/1/2005		11.67	8.36
	11/9/2005		11.54	8.49
	3/21/2006		11.02	9.01
	8/7/2006		11.84	8.19
	10/27/2006		11.92	8.11
	3/20/2007		12.52	7.51
	8/8/2007		12.82	7.21
	2/5/2008		10.39	9.64
	8/14/2008		9.10	10.93
	3/3/2009		12.31	7.72
	7/30/2009		11.41	8.62
	3/23/2010		Not Sampled	





**Table 1**  
**Groundwater Elevation Data**  
**2250 Telegraph Avenue, Oakland, California**

Monitoring Well	Date	TOC Elevation (Feet MSL)	DTW (feet)	Elevation (Feet MSL)
MW-3	3/3/1994	18.97	9.50	9.47
	3/10/1994		9.51	9.46
	6/6/1994		10.28	8.69
	9/7/1994		10.75	8.22
	12/22/1994		9.74	9.23
	3/17/1995		8.85	10.12
	6/27/1995		9.94	9.03
	9/18/1995		10.54	8.43
	5/30/1996		9.69	9.28
	7/9/1997		10.60	8.37
	8/21/1998		10.36	8.61
	10/6/1998		10.64	8.33
	2/24/1999		8.58	10.39
	6/30/2000		10.21	8.76
	4/27/2001		9.85	9.12
	4/14/2005		9.58	9.39
	8/1/2005		10.24	8.73
	11/9/2005		10.45	8.52
	3/21/2006		8.77	10.20
	8/7/2006		10.30	8.67
	10/27/2006		10.63	8.34
	3/20/2007		9.72	9.25
	8/8/2007		10.48	8.49
	2/5/2008		8.61	10.36
	8/14/2008		10.53	8.44
	3/2/2009		8.11	10.86
7/30/2009	10.41	8.56		
9/8/2009	10.60	8.37		
	3/23/2010		8.87	10.10
MW-4	3/3/1994	19.88	10.89	8.99
	3/10/1994		11.19	8.69
	6/6/1994		11.85	8.03
	9/7/1994		12.86	7.02
	12/22/1994		12.26	7.62
	3/17/1995		10.10	9.78
	6/27/1995		11.05	8.83
	9/18/1995		11.84	8.04
	5/30/1996		10.97	8.91
	7/9/1997		12.08	7.80
	8/21/1998		11.86	8.02
	10/6/1998		12.84	7.04
	2/24/1999		10.79	9.09
	6/30/2000		12.39	7.49
	4/27/2001		11.26	8.62
	4/14/2005		12.01	7.87
	8/1/2005		11.78	8.10
	11/9/2005		12.42	7.46
	3/21/2006		10.00	9.88
	8/7/2006		11.90	7.98
	10/27/2006		12.75	7.13
	3/20/2007		11.20	8.68
	8/8/2007		12.00	7.88
	2/5/2008		10.40	9.48
	8/14/2008		11.47	8.41
	3/2/2009		11.13	8.75
7/30/2009	11.81	8.07		
9/8/2009	12.11	7.77		
	3/23/2010		9.95	9.93





**Table 1**  
**Groundwater Elevation Data**  
**2250 Telegraph Avenue, Oakland, California**

Monitoring Well	Date	TOC Elevation (Feet MSL)	DTW (feet)	Elevation (Feet MSL)
MW-5	6/26/1997	16.02	8.44	7.58
	7/9/1997		8.48	7.54
	8/21/1998		8.32	7.70
	10/6/1998		8.51	7.51
	2/24/1999		6.86	9.16
	6/30/2000		7.63	8.39
	4/27/2001		7.60	8.42
	4/15/2005		7.20	8.82
	8/1/2005		8.16	7.86
	11/9/2005		7.92	8.10
	3/21/2006		6.58	9.44
	8/7/2006		8.27	7.75
	10/27/2006		8.48	7.54
	3/20/2007		7.67	8.35
	8/8/2007		8.43	7.59
	2/5/2008		6.76	9.26
	8/14/2008		8.31	7.71
	3/2/2009		6.20	9.82
	7/30/2009		8.13	7.89
	3/23/2010		Not Sampled	
MW-6	6/26/1997	18.36	10.89	7.47
	7/9/1997		10.98	7.38
	8/21/1998		11.00	7.36
	10/6/1998		10.79	7.57
	2/24/1999		9.32	9.04
	6/30/2000		10.37	7.99
	4/27/2001		10.10	8.26
	4/15/2005		9.55	8.81
	8/1/2005		10.54	7.82
	11/9/2005		NA	NA
	3/21/2006		9.11	9.25
	8/7/2006		10.59	7.77
	NA		NA	NA
	3/20/2007		10.10	8.26
	8/8/2007		10.85	7.51
	2/5/2008		9.27	9.09
	8/14/2008		10.71	7.65
	3/3/2009		8.60	9.76
			7/30/2009	
	3/23/2010		Not Sampled	
TOC = Top of Casing DTW = Depth to Water Elevation Reference: USGS benchmark W1197, 1969 with a reported elevation of +21.06 feet MSL datum.				



Table 2  
Summary of Chemical Concentrations - Groundwater Monitoring Wells  
2250 Telegraph Avenue, Oakland, California



Well	Date	Groundwater Elevation (Feet MSL)	Petroleum Hydrocarbons				Volatile Organics														
			TVH as Gasoline µg/L	TEH as Kerosene µg/L	TEH as Diesel µg/L	TEH as Motor Oil µg/L	Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Total Xylenes µg/L	MTBE -8020 µg/L	MTBE -8260 µg/L	TBA µg/L	DIPE µg/L	ETBE µg/L	TAME µg/L	1,1,1-TCA µg/L	1,2-DCA µg/L	1,2-DBA µg/L	PCE µg/L	Chlorobenzene µg/L
Soil Gas ESL*			NV	NV	NV	NE	540	380,000	170,000	160,000	24,000	24,000	NV	NE	NE	NE	130,000	200	150	120	13,000
Groundwater ESL**			210	210	210	210	46.0	130	43	100	1,800	1,800	18,000	NE	NE	NE	62	200	150	120	25
MW-3	3/3/94	9.47	85	<50	<50	<500	<0.5	0.77	<0.5	3.7	--	--	--	--	--	<0.5	<0.5	--	<0.5	<0.5	
	6/6/94	8.69	100	110+	<50	<500	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	2.5	0.8	--	2.1	<0.5	
	9/7/94	8.22	220	<50	<50	<500	11	1.8	2.6	3.5	--	--	--	--	--	<0.5	<0.5	--	0.6	<0.5	
	12/22/94	9.23	130	95+	<50	<500	3.8	0.5	0.6	1.2	--	--	--	--	--	<0.5	<0.5	--	<0.5	<0.5	
	3/17/95	10.12	1,500	270	<50	<500	83	6.0	10	15	--	--	--	--	--	<0.5	<0.5	--	<0.5	<0.5	
	6/27/95	9.03	2,500	<50	<50	<500	330	8.9	8.1	20	--	--	--	--	--	<0.5	<0.5	--	<0.5	<0.5	
	9/18/95	8.43	1,500	--	770+	--	400	11	2.2	3.3	--	--	--	--	--	<0.5	<0.5	--	<0.5	<0.5	
	8/21/98	8.61	2,300	--	600+	--	410	9.3	36	25	<10	--	--	--	--	--	--	--	--	--	
	2/24/99	10.39	55	--	110+	--	<0.5	<0.5	<0.5	<0.5	--	<2.0	--	--	--	--	--	--	--	--	
	6/30/00	10.83	110	--	83+	--	<0.5	<0.5	0.51	<0.5	<2.0	--	--	--	--	--	--	--	--	--	
	4/27/01	8.67	<50	--	690+	--	<0.5	<0.5	<0.5	<0.5	<2.0	--	--	--	--	--	--	--	--	--	
	4/14/05	9.12	<50	--	<50	<300	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--	
	8/1/05	9.39	410	--	150 <sup>HL</sup> <sub>Y</sub>	750	17	<0.5	0.87 <sup>c</sup>	1.4	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--
	11/9/05	8.73	1,100 <sup>Y</sup>	--	110 <sup>LY</sup>	<300	150	3.4	6.1	3.8	--	<0.5	13	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--
	3/21/06	10.20	100	--	61 <sup>Y</sup>	<300	<0.5	<0.5	<0.5	<0.5	--	<0.5	12	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--
	8/7/06	8.67	4,000 <sup>Y</sup>	--	280 <sup>LY</sup>	<300	630	9	31	12	--	<0.5	18	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--
	10/27/06	8.34	5,300	--	240 <sup>LY</sup>	<300	950	13	17	11	--	<10	<200	<10	<10	<10	--	<10	<10	--	--
	3/20/07	9.25	1,000 <sup>LY</sup>	--	180 <sup>LY</sup>	<300	100	1.5	2.1	3.3	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--
	8/8/07	8.49	2,100 <sup>LY</sup>	--	130 <sup>LY</sup>	<300	260	5.1	5.8	3.6	--	<2.0	<40	<2.0	<2.0	<2.0	--	<2.0	<2.0	--	--
	2/5/08	10.36	100	--	50 <sup>Y</sup>	<300	7.6	<0.5	<0.5	0.5	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--
8/14/08	8.44	1,400	--	200 <sup>Y</sup>	<300	510	8.2	22	7.2	--	<3.6	<71	<3.6	<3.6	<3.6	--	<3.6	<3.6	--	--	
3/2/09	10.86	170 <sup>Y</sup>	--	<50	<300	16	<0.5	<0.5	2.4	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--	
7/30/09	8.56	360	--	71 <sup>Y</sup>	<300	14	<0.5	1.2	<1.0	--	<0.5	13	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--	
9/8/09	8.37	1200 <sup>Y</sup>	--	--	--	280	2.4	9.2 <sup>c</sup>	3.08 <sup>c</sup>	--	<2.0	--	--	--	--	--	--	--	--	--	
	3/24/10	10.10	300	--	130 <sup>Y</sup>	<300	64	2.5	0.78	3.3	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--
MW-4	3/3/94	8.99	4,300	<50	240	<500	220	20	7.5	17	--	--	--	--	--	<0.5	5.9	--	<0.5	4.4	
	6/6/94	8.03	4,400	<50	800+	<500	140	<0.5	<0.5	<0.5	--	--	--	--	--	<0.5	<0.5	--	<0.5	<0.5	
	9/7/94	7.02	10,000	490+	280+	<500	84	<0.5	42	69	--	--	--	--	--	<0.5	4.4	--	0.5	4.3	
	12/22/94	7.62	2,400	450+	54+	<500	11	<0.5	7.1	11	--	--	--	--	--	<0.5	3.6	--	3.6	<0.5	
	3/17/95	9.78	2,200	380	160+	<500	<0.5	<0.5	7.9	10	--	--	--	--	--	<0.5	1.7	--	<0.5	4.5	
	6/27/95	8.83	3,100	<50	82	<500	<0.5	<0.5	13	19	--	--	--	--	--	<0.5	2.3	--	<0.5	4.8	
	9/18/95	8.04	3,000	--	1,231+	--	12	<0.7	6.9	8.3	--	--	--	--	--	<0.5	1.9	--	<0.5	4.0	
	8/21/98	8.02	1,700	--	600+	--	8.2	12	13	5.2	<2.0	--	--	--	--	--	--	--	--	--	
	2/24/99	9.09	2,700	--	2,100+	--	4.3	0.64	<0.5	0.54	--	<2.0	--	--	--	--	--	--	--	--	
	6/30/00	11.74	6,700	--	3,200+	--	3.1	1.7	11	16.7	--	--	--	--	--	--	--	--	--	--	
	4/27/01	8.62	1,900	--	710	--	<0.5	<0.5	<0.5	<0.5	14	--	--	--	--	--	--	--	--	--	
	4/14/05	7.87	2,900	--	2,200 <sup>HL</sup> <sub>Y</sub>	2,500	<0.5	<0.5	<0.5	5.1	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--
	8/1/05	8.10	2,000	--	2,100 <sup>HL</sup> <sub>Y</sub>	3400 <sup>L</sup>	<0.5	<0.5	<0.5	5.8 <sup>c</sup>	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--
	11/9/05	7.46	2,000 <sup>Y</sup>	--	1,900 <sup>HL</sup> <sub>Y</sub>	2,300 <sup>L</sup>	1.2	<0.5	<0.5	0.8	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--
	3/21/06	9.88	2,200	--	2,800 <sup>HL</sup> <sub>Y</sub>	4,000 <sup>L</sup>	1.2	<0.5	<0.5	0.7	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--
	8/7/06	7.98	2,500 <sup>Y</sup>	--	4,700 <sup>HL</sup> <sub>Y</sub>	7,200 <sup>L</sup>	0.6	<0.5	<0.5	<0.5	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--
	10/27/06	7.13	2,200 <sup>Y</sup>	--	2,500 <sup>HL</sup> <sub>Y</sub>	3,200 <sup>L</sup>	0.5	<0.5	<0.5	<0.5	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--
	3/20/07	8.68	2,700	--	2,900 <sup>HL</sup> <sub>Y</sub>	3,500 <sup>L</sup>	0.77	<0.5	<0.5	0.67	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--
	8/8/07	7.88	6,100 <sup>LY</sup>	--	9,200 <sup>HL</sup>	12,000 <sup>HL</sup>	0.7	<0.5	<0.5	0.5	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--
	2/5/08	9.48	2,100	--	2,100 <sup>Y</sup>	2,200	<0.5	<0.5	<0.5	<0.5	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--
8/14/08	8.41	1,900 <sup>Y</sup>	--	370 <sup>Y</sup>	<300	1.4	0.59	<0.5	0.85	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--	
3/2/09	8.75	1,300 <sup>Y</sup>	--	880 <sup>Y</sup>	850	<0.5	<0.5	<0.5	<1.0	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--	
7/30/09	8.07	1,400 <sup>Y</sup>	--	1,100 <sup>Y</sup>	1,300	<0.5	<0.5	<0.5	<1.0	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--	
9/8/09	7.77	580 <sup>Y</sup>	--	--	--	<0.5	<0.5	<0.5	7.5 <sup>c</sup>	--	2.4 <sup>c</sup>	--	--	--	--	--	--	--	--	--	
	3/24/10	9.93	510 <sup>Y</sup>	--	670	980	<0.5	<0.5	<0.5	<1.0	--	<0.5	<0.5	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--



Well	Date	Groundwater Elevation (Feet MSL)	Petroleum Hydrocarbons				Volatile Organics															
			TVH as Gasoline µg/L	TEH as Kerosene µg/L	TEH as Diesel µg/L	TEH as Motor Oil µg/L	Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Total Xylenes µg/L	MTBE -8020 µg/L	MTBE -8260 µg/L	TBA µg/L	DIPE µg/L	ETBE µg/L	TAME µg/L	1,1,1-TCA µg/L	1,2-DCA µg/L	1,2-DBA µg/L	PCE µg/L	Chlorobenzene µg/L	
Soil Gas ESL*			NV	NV	NV	NE	540	380,000	170,000	160,000	24,000	24,000	NV	NE	NE	NE	130,000	200	150	120	13,000	
Groundwater ESL**			210	210	210	210	46.0	130	43	100	1,800	1,800	18,000	NE	NE	NE	62	200	150	120	25	
MW-5	6/26/97	7.58	120	--	<50	--	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	<0.5	<0.5	--	1.6	<0.5	
	8/21/98	7.70	<50	--	<50	--	<0.5	<0.5	<0.5	<0.5	<2.0	--	--	--	--	--	--	--	--	--	--	
	2/24/99	9.16	<50	--	<50	--	<0.5	<0.5	<0.5	<0.5	--	<2.0	--	--	--	--	--	--	--	--	--	
	6/30/00	8.39	<50	--	<50	--	<0.5	<0.5	<0.5	<0.5	5.1	--	--	--	--	--	--	--	--	--	--	
	4/27/01	8.42	<50	--	<50	--	<0.5	<0.5	<0.5	<0.5	<2.0	--	--	--	--	--	--	--	--	--	--	
	4/14/05	8.82	<50	--	<50	<300	<0.5	<0.5	<0.5	<0.5	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--	
	8/1/05	7.86	<50	--	<50	<300	<0.5	<0.5	<0.5	<0.5	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--	
	11/9/05	8.10	<50	--	<50	<300	<0.5	<0.5	<0.5	<0.5	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--	
	3/21/06	9.44	<50	--	<50	<300	<0.5	<0.5	<0.5	<0.5	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--	
	8/7/06	7.75	<50	--	<50	<300	<0.5	<0.5	<0.5	<0.5	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--	
	10/27/06	7.54	<50	--	<50	<300	<0.5	<0.5	<0.5	<0.5	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--	
	3/20/07	8.35	<50	--	<50	<300	<0.5	<0.5	<0.5	<0.5	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--	
	8/8/07	7.59	<50	--	<50	<300	<0.5	<0.5	<0.5	<0.5	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--	
	2/5/08	9.26	<50	--	<50	<300	<0.5	<0.5	<0.5	<0.5	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--	
	8/14/08	7.71	<50	--	<50	<300	<0.5	<0.5	<0.5	<0.5	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--	
	3/2/09	9.82	<50	--	<50	<300	<0.5	<0.5	<0.5	<1.0	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--	
	7/30/09	7.89	<50	--	<50	<300	<0.5	<0.5	<0.5	<1.0	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--	
3/24/10	NOT SAMPLED																					
MW-6	6/26/97	7.47	1,500+	--	450+	--	<0.5	<0.5	11	<0.5	--	--	--	--	--	--	<0.5	<0.5	--	<0.5	1.7	
	8/21/98	7.36	1,400	--	540+	--	<0.5	3.6	5.6	0.4	5.7	3.2	--	--	--	--	--	--	--	--	--	
	2/24/99	9.04	1,600	--	600+	--	<0.5	<0.5	0.56	<0.5	--	2.3	--	--	--	--	--	--	--	--	--	
	6/30/00	8.04	1,900	--	360+	--	0.56	3.0	5.4	3.5	30	--	--	--	--	--	--	--	--	--	--	
	4/27/01	8.26	1,600	--	440	--	<0.5	<0.5	<0.5	<0.5	3.3	--	--	--	--	--	--	--	--	--	--	
	4/14/05	8.81	2,100	--	890 <sup>LY</sup>	<300	<0.5	<0.5	<0.5	5.9	--	0.7	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--	
	8/1/05	7.82	2,100	--	670 <sup>LY</sup>	<300	<0.5	<0.5	<0.5	<0.5	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--	
	11/9/05	NA	NA	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/21/06	9.25	1,900	--	850 <sup>LY</sup>	<300	<0.5	<0.5	<0.5	<0.5	--	0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--	
	8/7/06	7.77	2,200 <sup>Y</sup>	--	940 <sup>LY</sup>	<300	<0.5	<0.5	<0.5	<0.5	--	0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--	
	10/27/06	NA	NA	--	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
	3/20/07	8.26	2,000 <sup>Y</sup>	--	670L <sup>Y</sup>	<300	<0.5	<0.5	<0.5	<0.5	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--	
	8/8/07	7.51	2,100 <sup>HL<sup>Y</sup></sup>	--	680 <sup>LY</sup>	<300	<0.5	<0.5	<0.5	<0.5	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--	
	2/5/08	9.09	1,400	--	560 <sup>Y</sup>	<300	<0.5	<0.5	<0.5	<0.5	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--	
	8/14/08	7.65	1,100 <sup>Y</sup>	--	390 <sup>Y</sup>	<300	<0.5	<0.5	<0.5	<0.5	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--	
	3/3/09	9.76	990 <sup>Y</sup>	--	230 <sup>Y</sup>	<300	<0.5	<0.5	<0.5	<1.0	--	<0.5	<10	<0.5	<0.5	<0.5	--	<0.5	<0.5	--	--	
	7/30/2009	NO ACCESS																				
3/24/2010	NOT SAMPLED																					

Notes:

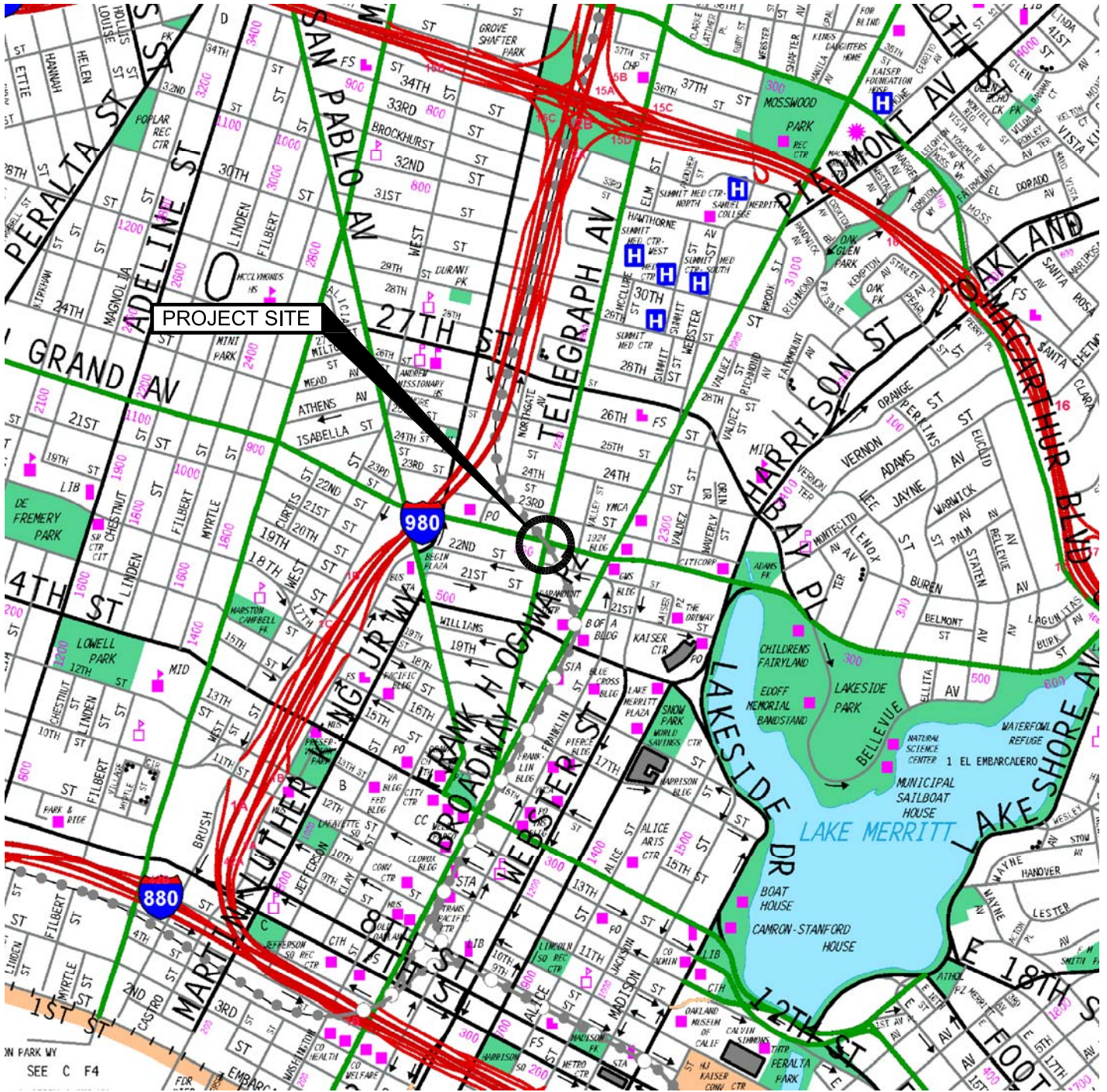
- TVH = Total Volatile Hydrocarbons
- TEH = Total Extractable Hydrocarbons
- DCA = Dichloroethane
- DBA = Dibromoethane
- TCA = Trichloroethane
- PCE = Tetrachloroethane
- MTBE = tert-Butyl methyl ether
- TBA = Tert butyl alcohol
- DIPE = Diisopropyl Ether
- ETBE = Ethyl tert butyl ether
- TAME = Methyl tert amyl ether
- = Chemical not tested for
- NR = Hydrocarbon range not reported by laboratory
- + = Uncategorized hydrocarbons quantified in ranges specified

- µg/L = micrograms per liter = parts per billion
- <1 = Chemical not present at a concentration greater than the laboratory detection limit shown or stated on test reports
- C = Presence Confirmed, but RPD between columns exceeds 40%
- Y = Sample exhibits chromatographic pattern which does not resemble standard
- H = Heavier hydrocarbon contributed to the quantitation
- L = Lighter hydrocarbon contributed to the quantitation
- ESLs = San Francisco Bay Regional Water Quality Control Board, Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater, Interim Final November 2007, Revised May 2008
- \* = Table E-1 Groundwater Screening Levels for Evaluation of Potential Vapor Intrusion Concerns
- \*\* = Table F-1a Groundwater Screening Levels (groundwater is a current potential drinking water resource)
- NA = Not Accessible During This Sampling Event
- NE = Not Evaluated
- NV = No Value

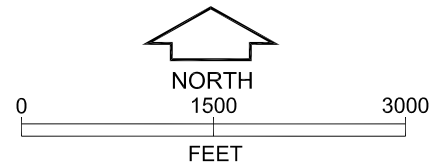
## PLATES



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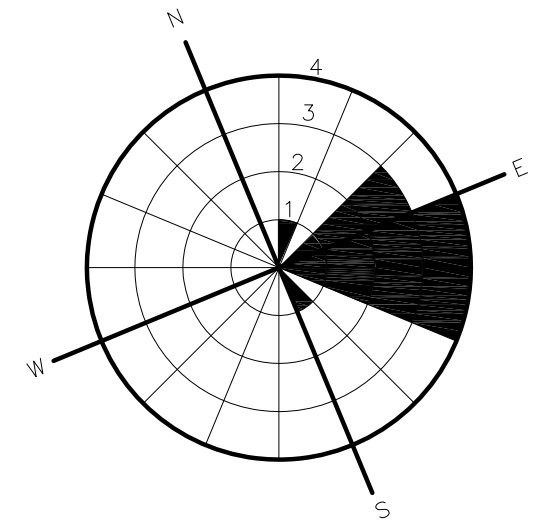
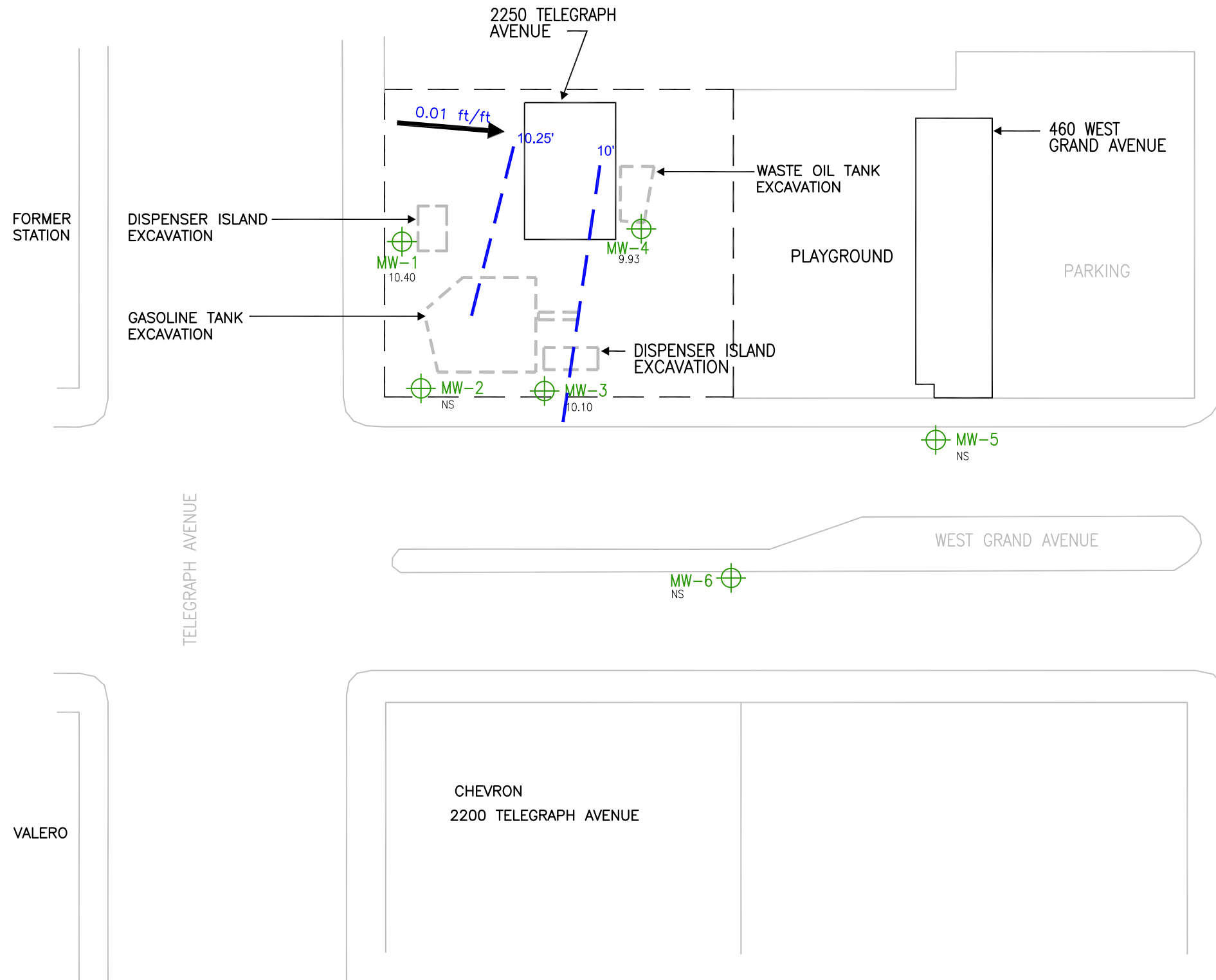


**SOURCE:** This Site Vicinity Map is based on The Thomas Guide Digital Edition 2003, Bay Area Metro, Alameda, Contra Costa, Marin, San Francisco, San Mateo, and Santa Clara Counties.



**VICINITY MAP**  
2250 Telegraph Avenue  
Oakland, California

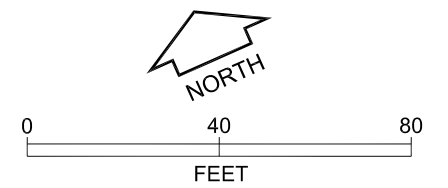
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ROSE DIAGRAM SHOWING  
GROUNDWATER FLOW DIRECTION  
(2004-2009)

EXPLANATION

- EXISTING STRUCTURE
- LIMITS OF EXCAVATIONS
- MONITORING WELL LOCATION
- 7.72 GROUNDWATER ELEVATION
- APPROXIMATE GROUNDWATER FLOW DIRECTION
- GROUNDWATER ELEVATION CONTOUR
- NS NOT SAMPLED



**SITE PLAN**  
2250 Telegraph Avenue  
Oakland, California



**APPENDIX A  
WELL SAMPLING FORMS**



ES-F50 WELL SAMPLING FORM

PROJECT NAME: Buttner  
 PROJECT NO.: 609004  
 SAMPLED BY: KE  
 DATE: 3-23-10  
 WEATHER: Sunny, Warm

WELL NO.: MW-1  
 WELL CASING DIAMETER: 2"  
 TOC ELEVATION: 2055

TOTAL DEPTH OF CASING (BTOC): 18.31 FEET  
 DEPTH TO GROUNDWATER (BTOC): 10.15 FEET  
 FEET OF WATER IN WELL: 8.16 FEET  
 CALCULATED PURGE VOLUME: 3.99 gallons  
 (feet of water \* casing dia<sup>2</sup> \* .0408 \* # of Volumes)  
 FREE PRODUCT: None  
 PURGE METHOD: Peristaltic  
 MEASUREMENT METHOD: ELECTRONIC SOUNDER or OTHER \_\_\_\_\_

FIELD MEASUREMENTS

GALLONS REMOVED	TIME	Temp	pH	CONDUCTIVITY (µMHOS/CM)	TDS (g/L)	ORP (mV)	DO (mg/l)	COMMENTS (odor, color, ...)
Downhole (Pre-Purge)	9:05	18.55	6.67	934	—	8.1	1.89	—
1.0	9:51	18.61	6.81	932	—	-16.1	2.54	clean pet odor
2.5	9:54	18.71	6.80	935	—	-25.3	2.16	clean slight pet odor
4.5	10:25	19.65	6.88	952	—	-31.0	3.33	" "

ACTUAL DEPTH TO GROUNDWATER BEFORE SAMPLING (BTOC): 10.29 TIME SAMPLED: 9:30

SAMPLING METHOD: Disposable Bailer  
 CONTAINERS / PRESERVATIVE: 7X HCl 40 ML  
X 2 / Amb (500ML) LITER  
 Poly OTHER

ANALYSES: (Note if any samples are field filtered)  
 TPHd, TPHmo (8015 w/ Silica gel)  
 TPHg, BTEX, MTBE (8015/8020)  
 VOCs (8260)  
 HVOCs (8260)  
 Title 22/CAM 17 Metals (6010/7000)  
 Pesticides (8080) fuel oxy  
 PCBs (8000) lead scand  
 Sulfate (300.0)  
 Nitrate (300.0)  
 Fe<sup>2+</sup> - Field Filtered

MISC FIELD OBSERVATION: Paused purging @ 9:53 to allow some recharge  
Resume @ 10:15 - purge dry  
Returned on 3/24/10 to sample

Equipment	Serial No.	Calibration
Conductivity	YSI	600
pH		
Turbidity		Equipco Calibration
Temperature		sheet

10.4



ES-F50 WELL SAMPLING FORM

PROJECT NAME: Butner  
PROJECT NO.: 609004  
SAMPLED BY: EC  
DATE: 3-23-10  
WEATHER: Sunny, warm

WELL NO.: MW-3  
WELL CASING DIAMETER: 2"  
TOC ELEVATION: 18.97

TOTAL DEPTH OF CASING (BTOC): 16.3 FEET  
DEPTH TO GROUNDWATER (BTOC): 8.87 FEET  
FEET OF WATER IN WELL: 7.43 FEET  
MEASUREMENT METHOD: ELECTRONIC SOUNDER or OTHER \_\_\_\_\_

CALCULATED PURGE VOLUME: 3.6 gallons  
(feet of water \* casing dia<sup>2</sup> \* .0408 \* # of Volumes)  
FREE PRODUCT: none  
PURGE METHOD: peristaltic

FIELD MEASUREMENTS

GALLONS REMOVED	TIME	Temp	pH	CONDUCTIVITY (µMHOS/CM)	TDS (g/L)	ORP (mV)	DO (mg/l)	COMMENTS (odor, color, ...)
Downhole (Pre-Purge)	8:55	19.05	6.25	775	-	156.5	1.57	
1.0	8:59	18.42	6.43	768	-	60.6	6.86	clear, slight odor
2.0	9:00	18.35	6.43	769	-	39.4	7.87	" "
3.5	9:01	18.48	6.46	783	-	14.8	2.37	" "

ACTUAL DEPTH TO GROUNDWATER BEFORE SAMPLING (BTOC): 9.0 TIME SAMPLED: 9:05

SAMPLING METHOD: Disposable Bailer

CONTAINERS / PRESERVATIVE: 76 HCl 2 / Amb (500ml)  
40 ML LITER  
Poly OTHER

ANALYSES: (Note if any samples are field filtered)  
 TPHd, TPHmo (8015 w/ Silica gel)  Pesticides (8080) fuel oxy  
 TPHg, BTEX, MTBE (8015/8020)  PCBs (8080) lead scan  
 VOCs (8260)  Sulfate (300.0)  
 HVOCs (8260)  Nitrate (300.0)  
 Title 22/CAM 17 Metals (6010/7000)  Fe<sup>2+</sup> - Field Filtered

MISC FIELD OBSERVATION: Purged dry @ 3.5 gal 3/23/10 9:02am  
Returned on 3/24/10 to sample

Equipment	Serial No.	Calibration
Conductivity	YSI-600	
pH		
Turbidity		Sempco
Temperature		cal sheets

10/10



ES-F50 WELL SAMPLING FORM

PROJECT NAME: Butner  
 PROJECT NO.: 6091004  
 SAMPLED BY: PZ  
 DATE: 3-23-10  
 WEATHER: sunny, warm

WELL NO.: MW-4  
 WELL CASING DIAMETER: 2"  
 TOC ELEVATION: 19.88

TOTAL DEPTH OF CASING (BTOC): 18.3 FEET  
 CALCULATED PURGE VOLUME: 4.08 gallons  
 (feet of water \* casing dia<sup>2</sup> \* .0408 \* # of Volumes)  
 DEPTH TO GROUNDWATER (BTOC): 9.95 FEET  
 FREE PRODUCT: None  
 FEET OF WATER IN WELL: 8.35 FEET  
 PURGE METHOD: Peristaltic

MEASUREMENT METHOD: ELECTRONIC SOUNDER or OTHER \_\_\_\_\_

FIELD MEASUREMENTS

GALLONS REMOVED	TIME	Temp	pH	CONDUCTIVITY (µMHOS/CM)	TDS (g/L)	ORP (mV)	DO (mg/l)	COMMENTS (odor, color, ...)
Downhole (Pre-Purge)	9:16	18.53	6.69	1451	-	-96.8	1.13	
1.0	9:20	18.53	6.82	1529	-	-82.3	2.31	clean, pet odor
2.75	9:21	18.56	6.83	1501	-	-89.5	1.87	" "
2.0	9:23	18.74	6.86	1577	-	-93.9	1.84	" "

ACTUAL DEPTH TO GROUNDWATER BEFORE SAMPLING (BTOC): 11.8 TIME SAMPLED: 8:40 3/24/10

SAMPLING METHOD: Disposable Bailer

CONTAINERS / PRESERVATIVE: 2X / HCl 2X / Amb (500ml)  
 40 ML LITER  
 Poly OTHER

ANALYSES: (Note if any samples are field filtered)  
 TPHd, TPHmo (8015 w/ Silica gel)  Pesticides (8080) Fuel oxidates  
 TPHg, BTEX, MTBE (8015/8020)  PCBs (8060) lead scavengers  
 VOCs (8260)  Sulfate (300.0)  
 HVOCs (8260)  Nitrate (300.0)  
 Title 22/CAM 17 Metals (6010/7000)  Fe<sup>2+</sup> - Field Filtered

MISC FIELD OBSERVATION: Returned on 3/24/10 to sample

Equipment	Serial No.	Calibration
Conductivity		<u>YSI 1000</u>
pH		<u>Equipro</u>
Turbidity		<u>Calibration Sheet</u>
Temperature		

7.9.21

**APPENDIX B**  
**ANALYTICAL REPORT AND CHAIN OF CUSTODY FORM**





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





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

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

**Laboratory Job Number 219023  
ANALYTICAL REPORT**

Fugro West Inc.  
1000 Broadway  
Oakland, CA 94607

Project : 609.004  
Location : 2250 Telgraph Av. Oakland  
Level : II

<u>Sample ID</u>	<u>Lab ID</u>
MW-1	219023-001
MW-3	219023-002
MW-4	219023-003

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:   
Project Manager

Date: 03/31/2010

NELAP # 01107CA



**CASE NARRATIVE**

Laboratory number: 219023  
Client: Fugro West Inc.  
Project: 609.004  
Location: 2250 Telgraph Av. Oakland  
Request Date: 03/24/10  
Samples Received: 03/24/10

This data package contains sample and QC results for three water samples, requested for the above referenced project on 03/24/10. 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



Curtis & Tompkins, Ltd.

Login # 219023 Date Received 3/24/10 Number of coolers 1  
Client FUGRO Project 2250 TELEGRAPH AVENUE

Date Opened 3/24/10 By (print) M. VILLALBA (sign) [Signature]  
Date Logged in [initials] By (print) [initials] (sign) [initials]

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

- Samples Received on ice & cold without a temperature blank
- 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 samples in the appropriate containers for indicated tests? YES NO

11. Are sample labels present, in good condition and complete? YES NO

12. Do the sample labels agree with custody papers? YES NO

13. Was sufficient amount of sample sent for tests requested? YES NO

14. Are the samples appropriately preserved? YES NO N/A

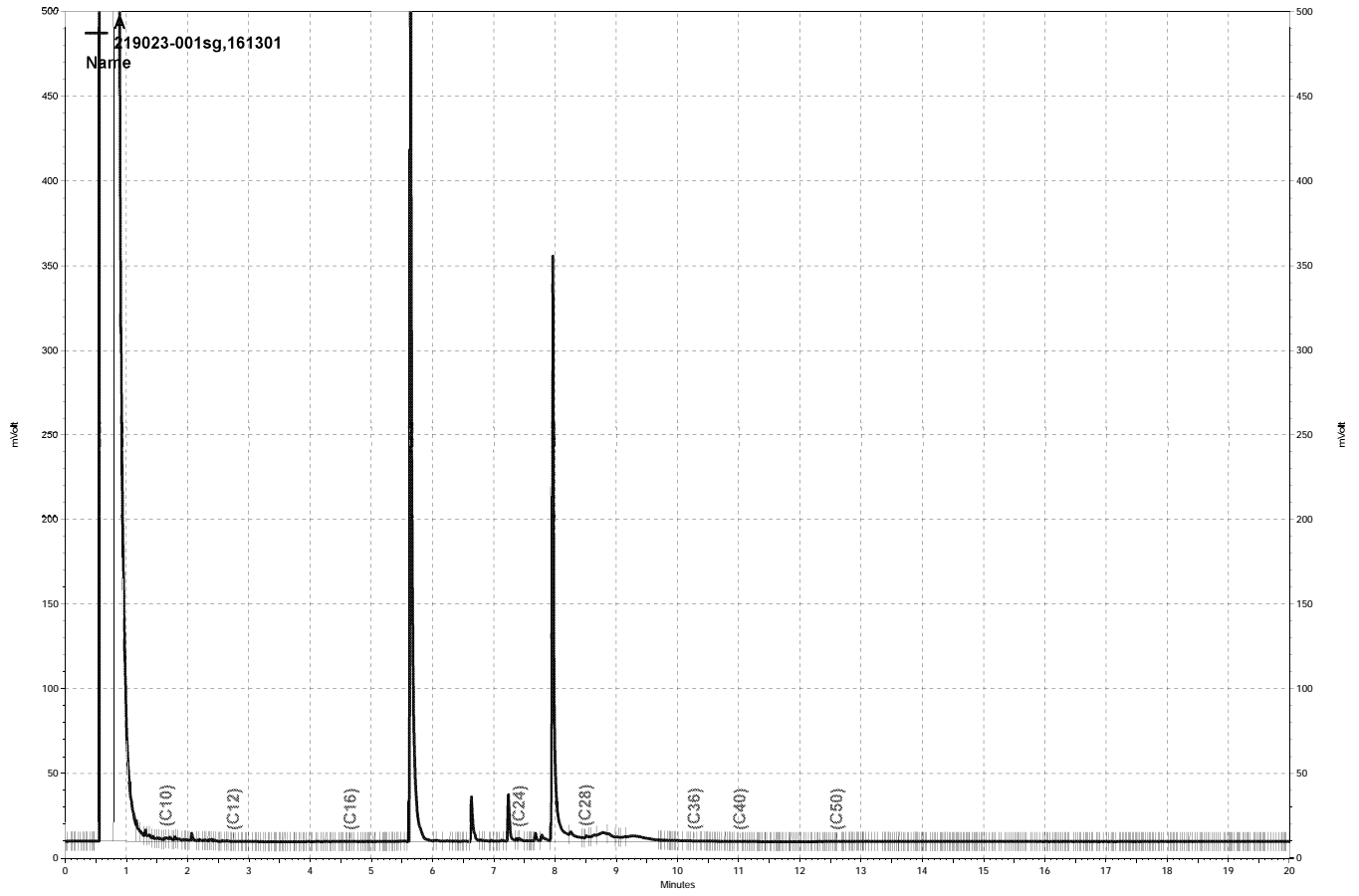
15. Are bubbles > 6mm absent in VOA samples? YES NO N/A

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

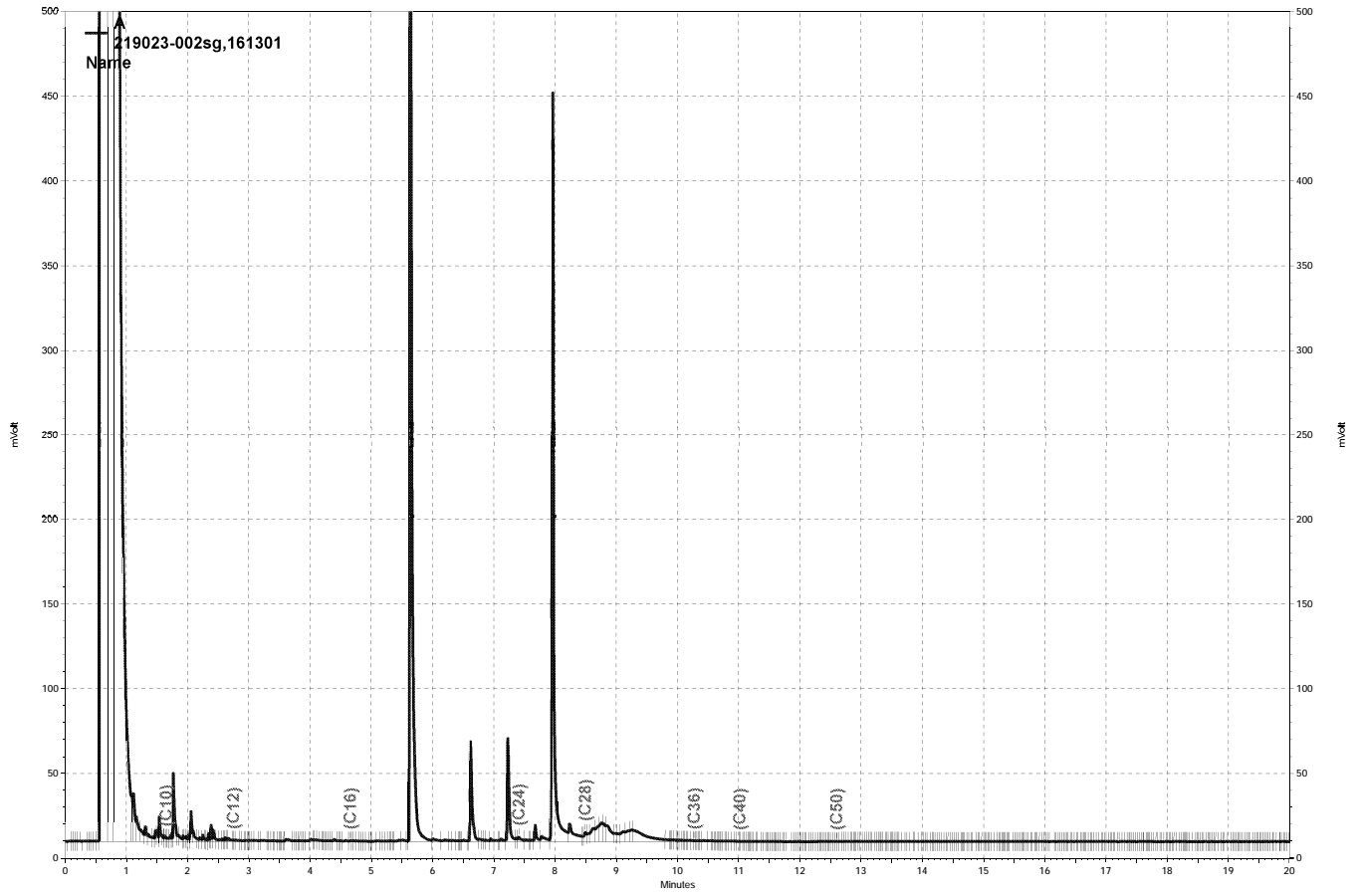
COMMENTS  
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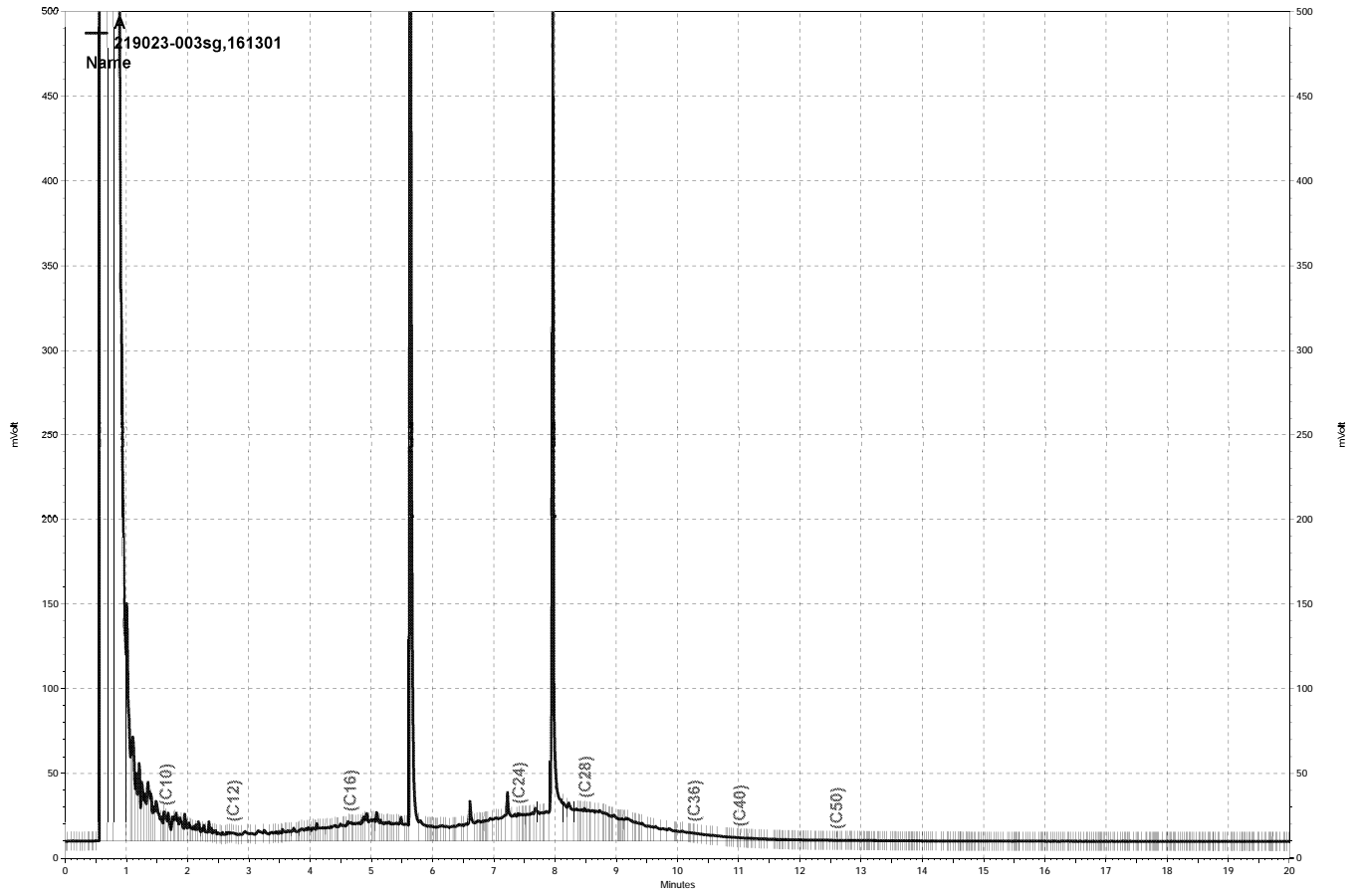


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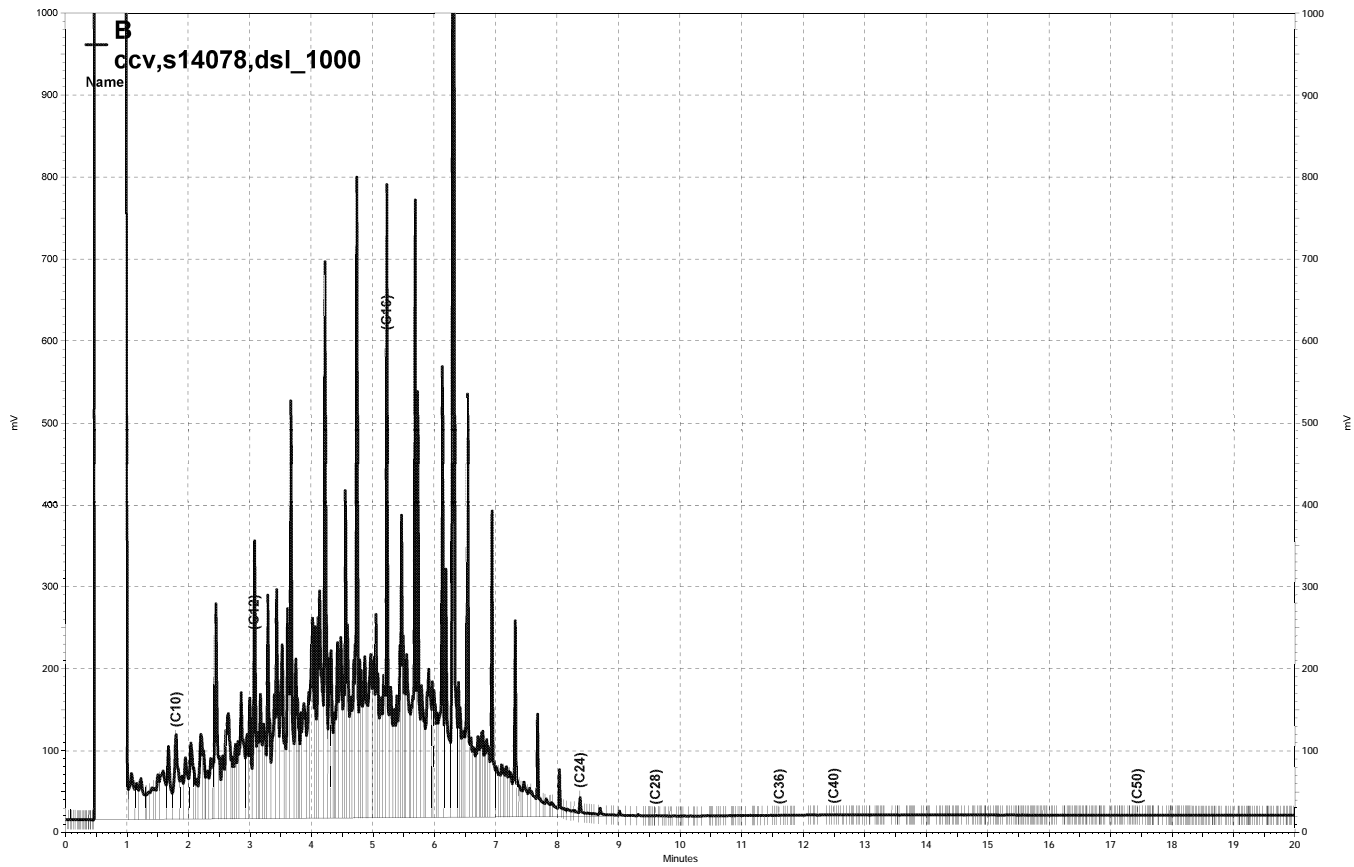


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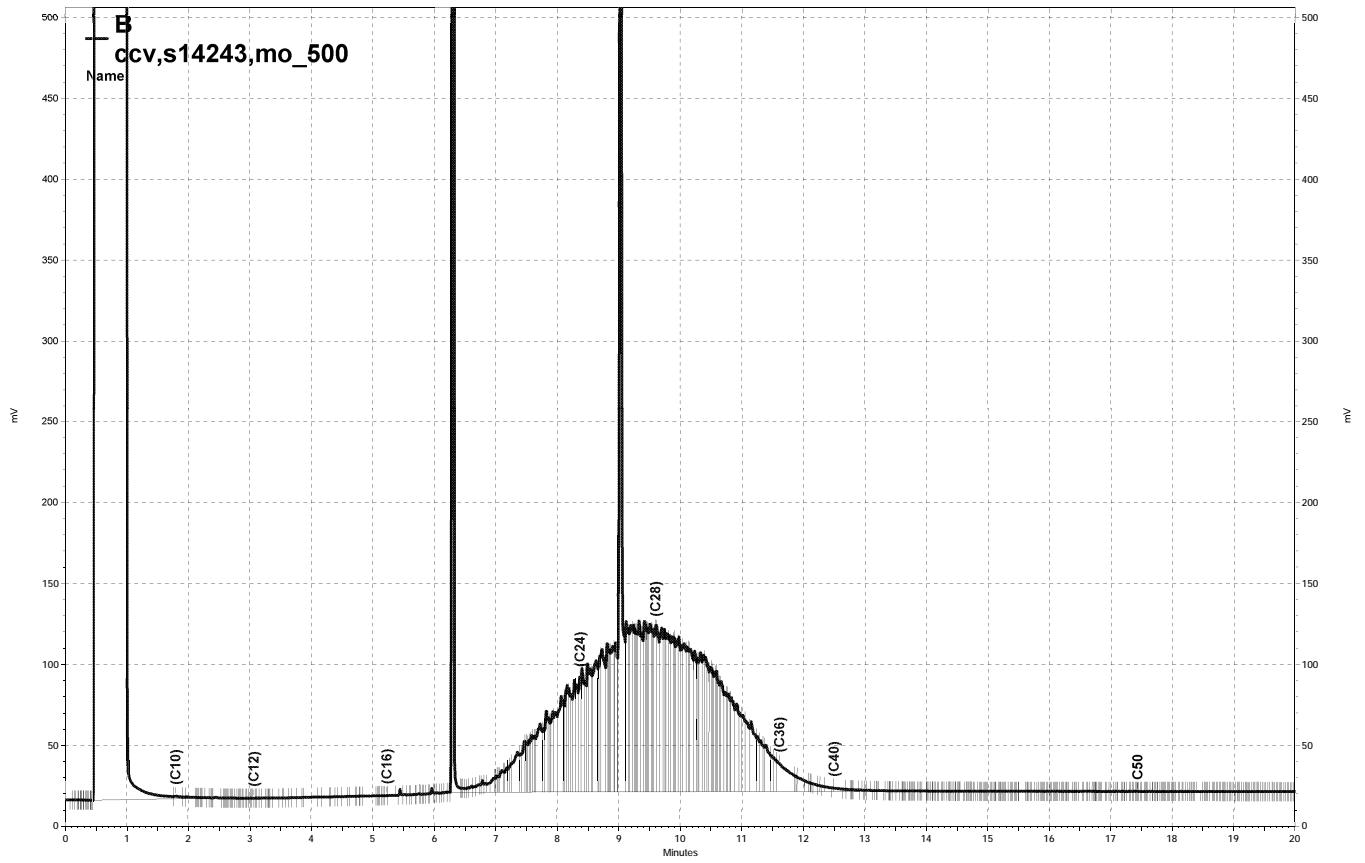




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Gasoline by GC/MS			
Lab #:	219023	Location:	2250 Telgraph Av. Oakland
Client:	Fugro West Inc.	Prep:	EPA 5030B
Project#:	609.004	Analysis:	EPA 8260B
Field ID:	MW-1	Batch#:	161375
Lab ID:	219023-001	Sampled:	03/24/10
Matrix:	Water	Received:	03/24/10
Units:	ug/L	Analyzed:	03/28/10
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	82 Y	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
1,2-Dichloroethane	ND	0.50
Benzene	ND	0.50
Toluene	ND	0.50
1,2-Dibromoethane	ND	0.50
Ethylbenzene	ND	0.50
m,p-Xylenes	ND	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	97	81-124
1,2-Dichloroethane-d4	95	73-140
Toluene-d8	103	88-113
Bromofluorobenzene	103	80-127

Y= Sample exhibits chromatographic pattern which does not resemble standard  
 ND= Not Detected  
 RL= Reporting Limit

Gasoline by GC/MS			
Lab #:	219023	Location:	2250 Telgraph Av. Oakland
Client:	Fugro West Inc.	Prep:	EPA 5030B
Project#:	609.004	Analysis:	EPA 8260B
Field ID:	MW-3	Batch#:	161375
Lab ID:	219023-002	Sampled:	03/24/10
Matrix:	Water	Received:	03/24/10
Units:	ug/L	Analyzed:	03/28/10
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	300	50
tert-Butyl Alcohol (TBA)	ND	10
Isopropyl Ether (DIPE)	ND	0.50
Ethyl tert-Butyl Ether (ETBE)	ND	0.50
Methyl tert-Amyl Ether (TAME)	ND	0.50
MTBE	ND	0.50
1,2-Dichloroethane	ND	0.50
Benzene	64	0.50
Toluene	2.5	0.50
1,2-Dibromoethane	ND	0.50
Ethylbenzene	0.78	0.50
m,p-Xylenes	3.3	0.50
o-Xylene	ND	0.50

Surrogate	%REC	Limits
Dibromofluoromethane	102	81-124
1,2-Dichloroethane-d4	102	73-140
Toluene-d8	103	88-113
Bromofluorobenzene	105	80-127

ND= Not Detected  
 RL= Reporting Limit

Gasoline by GC/MS			
Lab #:	219023	Location:	2250 Telgraph Av. Oakland
Client:	Fugro West Inc.	Prep:	EPA 5030B
Project#:	609.004	Analysis:	EPA 8260B
Field ID:	MW-4	Batch#:	161375
Lab ID:	219023-003	Sampled:	03/24/10
Matrix:	Water	Received:	03/24/10
Units:	ug/L	Analyzed:	03/28/10
Diln Fac:	1.000		

Analyte	Result	RL
Gasoline C7-C12	510 Y	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
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	99	81-124
1,2-Dichloroethane-d4	98	73-140
Toluene-d8	103	88-113
Bromofluorobenzene	102	80-127

Y= Sample exhibits chromatographic pattern which does not resemble standard  
 ND= Not Detected  
 RL= Reporting Limit

**Batch QC Report**

<b>Gasoline by GC/MS</b>			
Lab #:	219023	Location:	2250 Telgraph Av. Oakland
Client:	Fugro West Inc.	Prep:	EPA 5030B
Project#:	609.004	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC537932	Batch#:	161375
Matrix:	Water	Analyzed:	03/28/10
Units:	ug/L		

<b>Analyte</b>	<b>Result</b>	<b>RL</b>
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
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

<b>Surrogate</b>	<b>%REC</b>	<b>Limits</b>
Dibromofluoromethane	96	81-124
1,2-Dichloroethane-d4	99	73-140
Toluene-d8	102	88-113
Bromofluorobenzene	101	80-127

ND= Not Detected  
 RL= Reporting Limit

**Batch QC Report**

Gasoline by GC/MS			
Lab #:	219023	Location:	2250 Telgraph Av. Oakland
Client:	Fugro West Inc.	Prep:	EPA 5030B
Project#:	609.004	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	161375
Units:	ug/L	Analyzed:	03/28/10
Diln Fac:	1.000		

Type: BS Lab ID: QC537933

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	125.0	103.6	83	36-156
Isopropyl Ether (DIPE)	25.00	23.32	93	54-139
Ethyl tert-Butyl Ether (ETBE)	25.00	22.56	90	64-133
Methyl tert-Amyl Ether (TAME)	25.00	21.45	86	73-124
MTBE	25.00	20.58	82	61-123
1,2-Dichloroethane	25.00	21.55	86	66-141
Benzene	25.00	24.59	98	81-122
Toluene	25.00	26.11	104	82-122
1,2-Dibromoethane	25.00	24.13	97	81-122
Ethylbenzene	25.00	27.39	110	86-125
m,p-Xylenes	50.00	55.83	112	83-127
o-Xylene	25.00	26.12	104	81-122

Surrogate	%REC	Limits
Dibromofluoromethane	100	81-124
1,2-Dichloroethane-d4	98	73-140
Toluene-d8	100	88-113
Bromofluorobenzene	99	80-127

Type: BSD Lab ID: QC537934

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	125.0	100.8	81	36-156	3	23
Isopropyl Ether (DIPE)	25.00	23.24	93	54-139	0	11
Ethyl tert-Butyl Ether (ETBE)	25.00	22.82	91	64-133	1	11
Methyl tert-Amyl Ether (TAME)	25.00	20.95	84	73-124	2	11
MTBE	25.00	20.93	84	61-123	2	11
1,2-Dichloroethane	25.00	21.75	87	66-141	1	12
Benzene	25.00	25.07	100	81-122	2	12
Toluene	25.00	27.04	108	82-122	3	12
1,2-Dibromoethane	25.00	23.56	94	81-122	2	11
Ethylbenzene	25.00	27.29	109	86-125	0	12
m,p-Xylenes	50.00	55.36	111	83-127	1	13
o-Xylene	25.00	26.41	106	81-122	1	12

Surrogate	%REC	Limits
Dibromofluoromethane	101	81-124
1,2-Dichloroethane-d4	96	73-140
Toluene-d8	106	88-113
Bromofluorobenzene	102	80-127

RPD= Relative Percent Difference



## Batch QC Report

Gasoline by GC/MS			
Lab #:	219023	Location:	2250 Telgraph Av. Oakland
Client:	Fugro West Inc.	Prep:	EPA 5030B
Project#:	609.004	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	161375
Units:	ug/L	Analyzed:	03/28/10
Diln Fac:	1.000		

Type: BS Lab ID: QC537935

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	1,008	101	74-124

Surrogate	%REC	Limits
Dibromofluoromethane	100	81-124
1,2-Dichloroethane-d4	101	73-140
Toluene-d8	102	88-113
Bromofluorobenzene	103	80-127

Type: BSD Lab ID: QC537936

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	1,000	1,114	111	74-124	10	13

Surrogate	%REC	Limits
Dibromofluoromethane	96	81-124
1,2-Dichloroethane-d4	97	73-140
Toluene-d8	105	88-113
Bromofluorobenzene	100	80-127

RPD= Relative Percent Difference

