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Alameda County  
MAY 09 2006  
Environmental Health

2006 MAY -5 AM 8:41

*Transmitted Via UPS Next Day Air*

May 2, 2006

Mr. Amir K. Gholami, REHS  
Hazardous Materials Specialist  
Alameda County Health Care Services  
Department of Environmental Health  
1131 Harbor Bay Parkway  
Alameda, California 94502-6577

Re: Groundwater Monitoring & Sampling Report  
UPS – Oakland Hub  
8400 Pardee Drive, Oakland, California  
State ID # 583


Dear Mr. Gholami:

On behalf of United Parcel Service (UPS), Blasland, Bouck & Lee, Inc. (BBL) is transmitting herewith the First Semi-Annual 2006 Monitoring & Sampling Report for the above-referenced facility. This report describes groundwater monitoring efforts performed at the site on March 27, 2006. The groundwater monitoring events were conducted in accordance with the Work Plan approval letter, dated August 8, 1997, from the Alameda County Health Care Services Agency. Monthly Free Product Gauging and Recovery Data for 2006 are also included.

UPS is considering replacing the existing diesel underground storage tanks (USTs) at the latter part of 2006. If this occurs, it is UPS's plan to remediate residual petroleum hydrocarbons at this time via selective over-excavation of impacted soils and/or stained pea gravel, and possible impacted tank pit water. If you have any questions regarding this report, please do not hesitate to contact Mr. Hugh Devery at (770) 428-9009 extension 11.

Sincerely,

BLASLAND, BOUCK & LEE, INC.

  
Hugh B. Devery, P.G.  
Senior Geologist

cc: Linda Lyons, UPS, w/ attachments  
File

# REPORT

## *Year 2006 First Semi-Annual Monitoring & Sampling Report*

*UPS – Oakland Hub  
8400 Pardee Drive  
Oakland, California*

*State ID # 583*

**United Parcel Service  
55 Glenlake Parkway, NE  
Atlanta, Georgia 30328**

**April 2006**

*Year 2006 First Semi-Annual  
Monitoring & Sampling Report*

*UPS – Oakland Hub  
8400 Pardee Drive  
Oakland, California*

*State ID # 583*

**United Parcel Service  
55 Glenlake Parkway, NE  
Atlanta, Georgia 30328**

**April 2006**

**BBL<sup>®</sup>**  
BLASLAND, BOUCK & LEE, INC.  
engineers, scientists, economists

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Appendix B Well Gauging Data

Appendix C Laboratory Analytical Results

# ***Groundwater Monitoring & Sampling***

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## **1.1. Introduction**

United Parcel Service (UPS) retained Blasland, Bouck & Lee, Inc. (BBL) to perform semi-annual quality groundwater monitoring at the UPS-Oakland Hub located at 8400 Pardee Drive, Oakland, California (Figures 1 and 2). This report describes results of groundwater monitoring performed on March 27, 2006. Groundwater monitoring was conducted in accordance with the Alameda County Health Care Services (ACHCS)-approved work plan (BBL, August 1997). Monthly free product gauging and recovery are also included as Table 1.

Groundwater samples were collected from groundwater monitoring wells MW-1, MW-2, MW-3 and OW-1 on March 27, 2006. The field activities were conducted in accordance with the groundwater monitoring procedures described in Appendix A. Water levels were measured prior to purging the wells. Purge water was monitored to document stabilization of pH, temperature, and conductivity parameters (Appendix B). Disposal of purged water is described in Section 1.4.

## **1.2. Water Levels**

Depths to water in the four monitoring wells were measured on March 27, 2006. Static fluid levels in the wells were measured to an accuracy of 0.01-foot (ft) using an electronic interface probe that is capable of detecting water and phase-separated hydrocarbons (PSH). PSH was detected in well MW-2 at the apparent thickness of 0.01-ft. Groundwater elevations in monitoring wells MW-1 and MW-3 in March 2006 were approximately 1.0 to 1.25-ft higher than water levels measured during the last sampling event of November 2005. The groundwater elevation in monitoring well MW-2 was approximately 1.5-ft lower than the water level measured during the November 2005 sampling event. A generalized groundwater contour map prepared using the March 2006 groundwater elevation data is shown on Figure 3. Groundwater flow is to the southwest, which is consistent with historical groundwater flow direction.

## **1.3. Water Quality**

Groundwater samples were collected from monitoring wells MW-1, MW-2, MW-3 and OW-1 on March 27, 2006. The thin layer amount of PSH was bailed off prior to sampling monitoring well MW-2 (0.01-ft). The groundwater samples were analyzed for total petroleum hydrocarbons as diesel (TPH-d) by US Environmental Protection Agency (USEPA) Method 8015M and for TPH-gasoline (TPH-g), benzene, toluene, ethylbenzene, total xylenes, and methyl tert-butyl ether (BTEX/MTBE) by USEPA Method 8260B. Analyses were conducted by STL in Pleasanton, California, certified for environmental analyses by the California Department of Health Services (certificate number 2496). Summaries of the groundwater analytical data are presented in Table 2 and on Figure 4. The laboratory analytical results and chain-of-custody documentation are attached as Appendix C.

Benzene was not detected above the primary drinking water maximum contaminant levels (MCL) of Title 22 of the California Code of Regulations in the groundwater sample collected from any wells. MTBE concentrations were detected in MW-1 at the low concentration of 0.62 micrograms per liter ( $\mu\text{g/L}$ ). MTBE was not detected above MCL in any of the groundwater samples. No additional BTEX analytes were detected above detection limits or MCL in any of the remaining groundwater samples collected during the March 2006 monitoring event. TPH-g was detected in monitoring wells MW-1, MW-2 and MW-3; MW-1 contained a concentration of 0.42 milligrams per liter ( $\text{mg/L}$ ), MW-2 contained a concentration of 0.71  $\text{mg/L}$  and MW-3 contained a concentration of 0.43  $\text{mg/L}$ . TPH-d concentrations were detected in wells MW-1, MW-2, MW-3 and OW-1; MW-1 contained a concentration of 11.0  $\text{mg/L}$ , MW-2 contained a concentration of 8.9  $\text{mg/L}$ , MW-3 contained a concentration of 13.0  $\text{mg/L}$  and OW-1 contained a concentration of 58.0  $\text{mg/L}$ . There is currently no established MCL for TPH-g or TPH-d.

#### 1.4. Purge Water Handling

The water generated from groundwater sampling activities was contained in two 55-gallon drums and stored at the UPS Hub pending proper disposal offsite.

#### 1.5. Summary

1. PSH was detected in monitoring wells MW-2 with an apparent thickness of 0.01-ft.
2. Groundwater samples were collected on March 27, 2006 and sampled for BTEX, MTBE, TPH-g and TPH-d.
3. Groundwater elevations in March 2006 for MW-1 and MW-3 were approximately 1.0 to 1.25-ft feet higher on average, while MW-2 was approximately 1.5-ft lower than water levels measured during the last sampling event of November 2005. Groundwater flow is to the southwest, consistent with historical direction.
4. BTEX was not detected above laboratory detection limits or their primary drinking water MCLs.
5. MTBE was detected in MW-1 at the low concentration of 0.62 µg/L. MTBE was not detected above detection limits in any of the other groundwater samples, and is below its MCL.
6. TPH-g and TPH-d were both detected at low concentrations in site wells; however, a MCL for TPH-g or TPH-d does not exist.

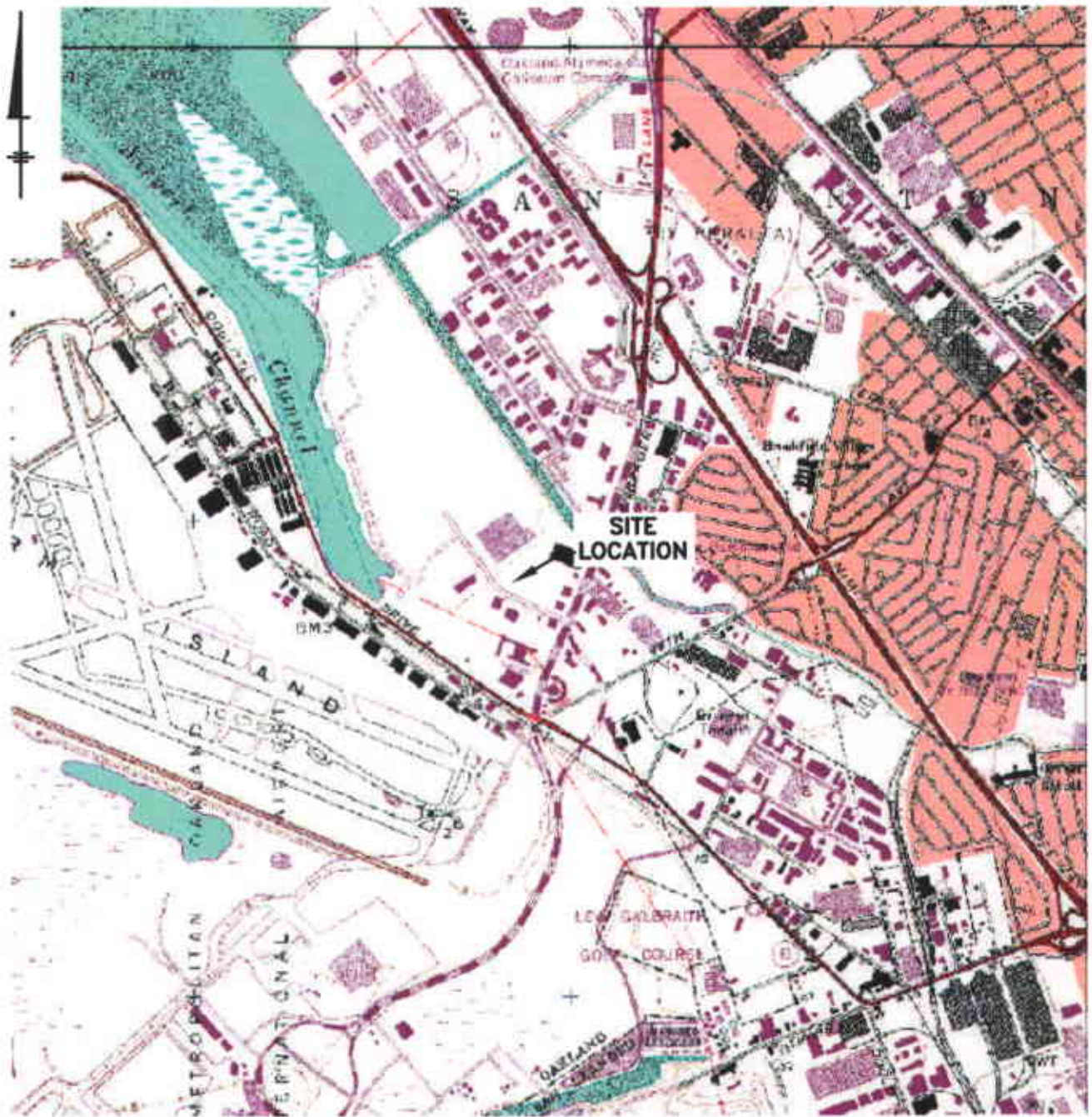
#### References:

Blasland, Bouck & Lee, Inc., 1997. Work Plan for UPS Distribution Center, 8400 Pardee Drive, Oakland, California.

***FIGURES***

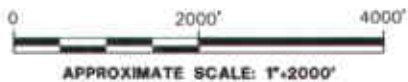
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**UPS-Oakland Center**



**NOTES:**

1. Base Map Source: USGS 7.5 Min. Topo. Quad., San Leandra, Calif.,(1993)
2. Property Location is Approximate Only.



UPS--OAKLAND FACILITY  
 8400 PARDEE DRIVE, OAKLAND, CALIFORNIA  
**GROUNDWATER MONITORING REPORT**

**TOPOGRAPHIC MAP OF SITE  
 LOCATION AND VICINITY**

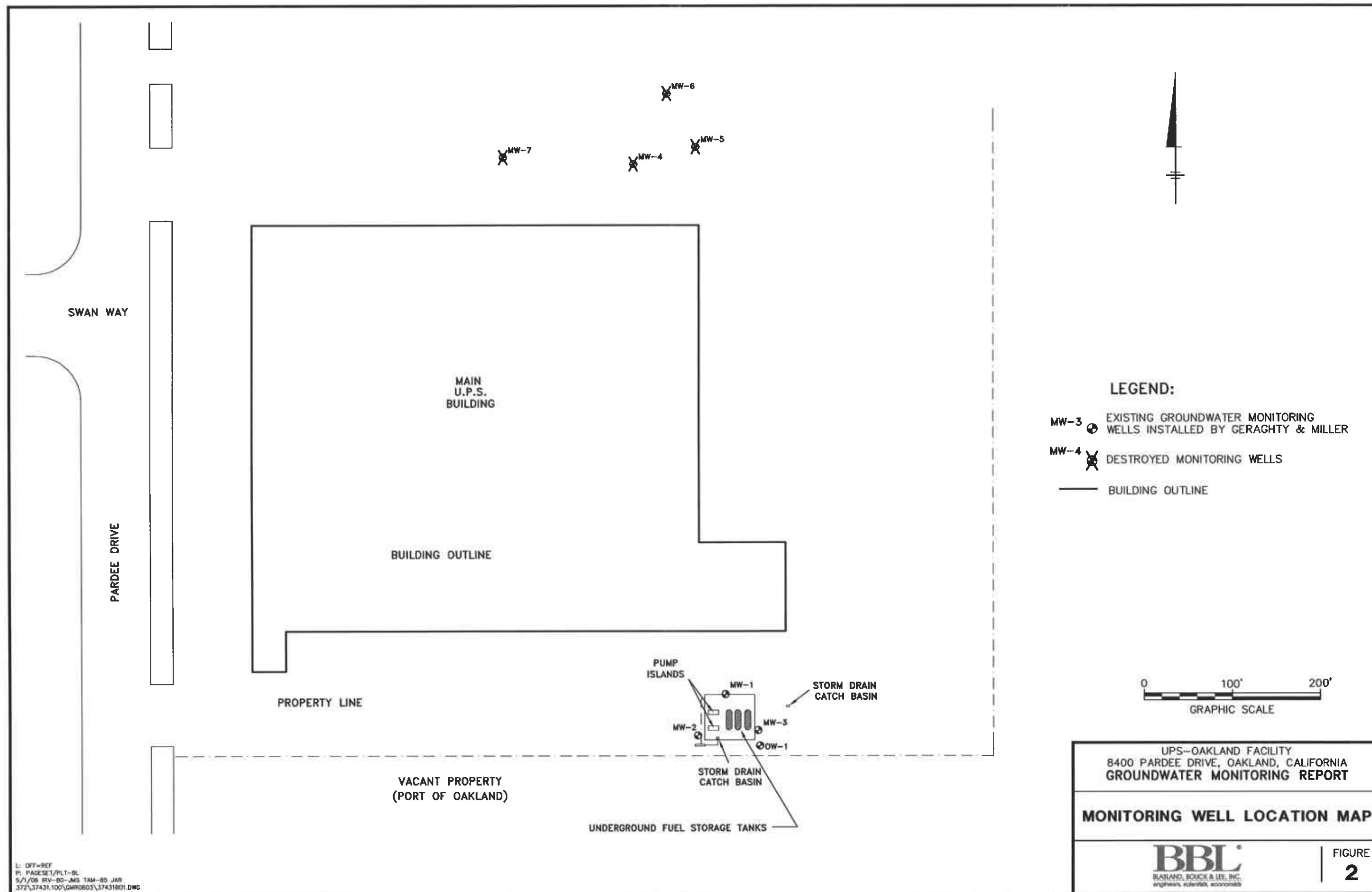


FIGURE

**1**

X: WEST-OAK.BMP  
 L: (LAYER)  
 P: PAGESET/PLT-AP1  
 S:/1/00 IRV-85 JMS TAM-85 JAH  
 374\37431.100\DMR0605\1743M01.DWG





**LEGEND:**

- MW-3 EXISTING GROUNDWATER MONITORING WELLS INSTALLED BY GERAGHTY & MILLER
- MW-4 DESTROYED MONITORING WELLS
- BUILDING OUTLINE

UPS-OAKLAND FACILITY  
 8400 PARDEE DRIVE, OAKLAND, CALIFORNIA  
 GROUNDWATER MONITORING REPORT

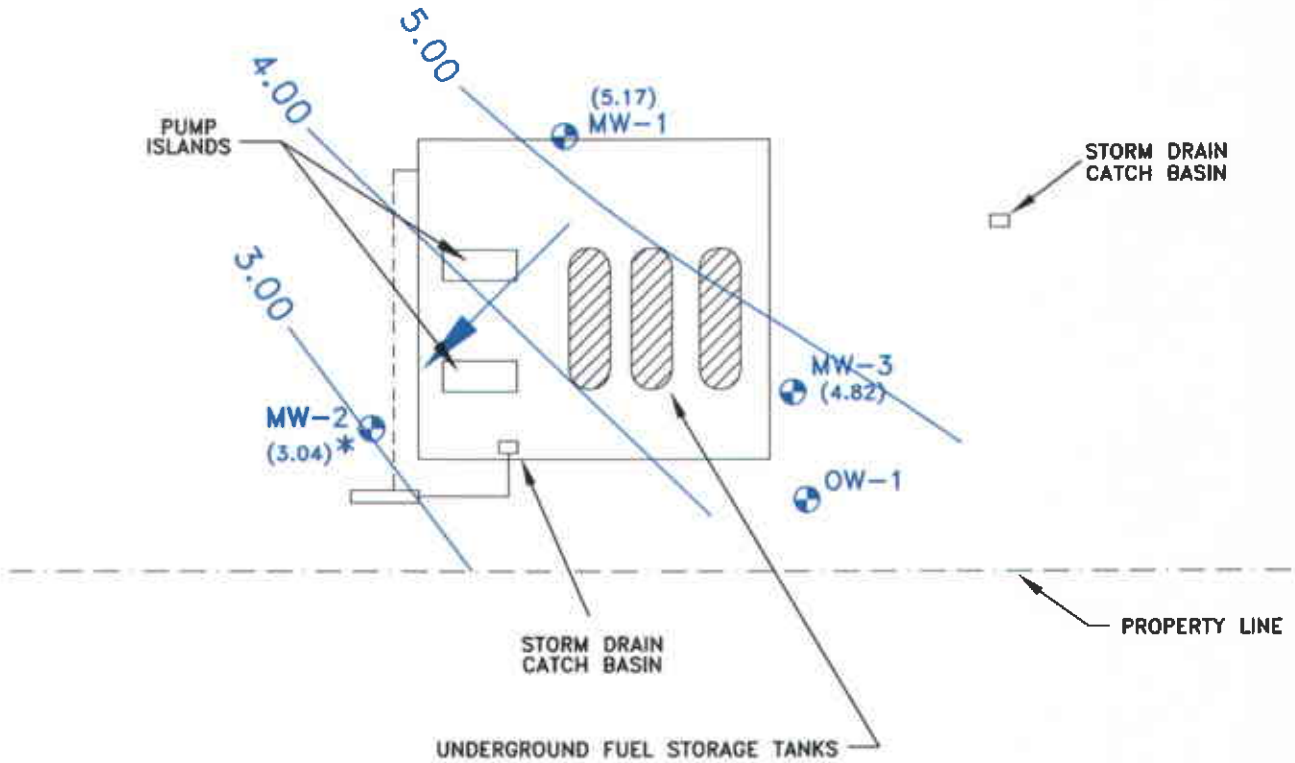
**MONITORING WELL LOCATION MAP**



FIGURE  
**2**

L: DFT-REF  
 P: PAGESET/PLT-BL  
 S/1/06 IRV-B0-JMS TAM-B5 JAR  
 372\37431.100\GMR0603\37431B01.DWG

UPS BUILDING



**LEGEND:**

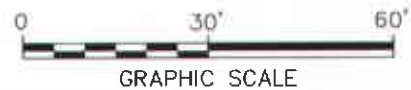
MW-1 GROUNDWATER MONITORING WELL

(3.75) GROUNDWATER TABLE ELEVATION (FEET ABOVE MSL)

4.00 GROUNDWATER ELEVATION CONTOUR

\* GROUNDWATER ELEVATION NOT CORRECTED FOR 0.01 FOOT OF PRODUCT PRESENT IN WELL

GROUNDWATER FLOW DIRECTION



**NOTE:**

1. OW-1 WAS NOT USED TO GENERATE CONTOURS. NO SURVEY DATA.

UPS-OAKLAND FACILITY  
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**GROUNDWATER MONITORING REPORT**

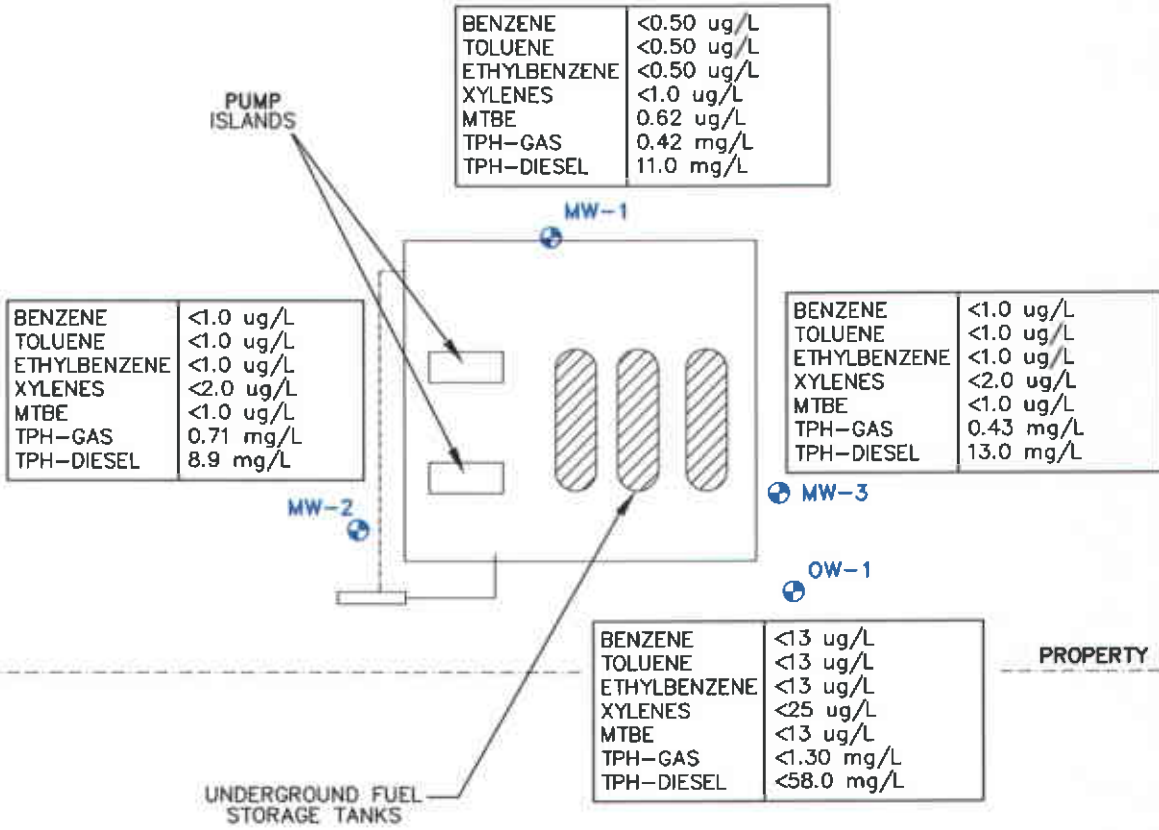
**GROUNDWATER CONTOUR MAP**  
**MARCH 27, 2006**



FIGURE

**3**

UPS BUILDING

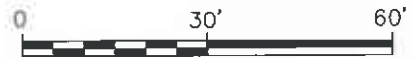


**LEGEND:**

MW-1 EXISTING GROUNDWATER MONITORING WELLS INSTALLED BY GERAGHTY & MILLER

ug/L MICROGRAMS PER LITER

mg/L MILLIGRAMS PER LITER



GRAPHIC SCALE

UPS-OAKLAND FACILITY  
8400 PARDEE DRIVE, OAKLAND, CALIFORNIA  
**GROUNDWATER MONITORING REPORT**

**GROUNDWATER QUALITY MAP**  
**MARCH 27, 2006**



FIGURE

**4**

X: (XREF)  
L: (LAYER)  
P: PAGESET/PLT-AP1  
5/1/06 11V-80 JMS TAM-85 JAR  
374\37431.100\GMR0603\37431C01.DWG

**TABLES**

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**UPS-Oakland Center**

**TABLE 1  
HISTORICAL GROUNDWATER ELEVATION SUMMARY**

**UPS-OAKLAND HUB  
8400 PARDEE DRIVE  
OAKLAND, CALIFORNIA  
STATE ID # 583**

Monitoring Well	Reference Elevation	Date Sampled	Depth to Groundwater (ft)	Groundwater Elevation (ft)	Change in Measurement (ft)	Product Thickness (ft)
MW-1	7.43	8/28/1990	3.80	3.63	—	0.00
		9/20/1990	3.99	3.44	-0.19	0.00
		6/19/1991	3.47	3.96	0.52	NM
		7/23/1991	3.70	3.73	-0.23	NM
		8/26/1991	3.92	3.51	-0.22	NM
		11/18/1991	4.21	3.22	-0.29	NM
		2/3/1992	3.99	3.44	0.22	NM
		6/29/1992	3.38	4.05	0.61	NM
		6/23/1993	2.72	4.71	0.66	NM
		10/11/1993	3.87	3.56	-1.15	NM
		1/4/1994	3.34	4.09	0.53	NM
		5/10/1994	2.14	5.29	1.20	NM
		2/1/1995	1.84	5.59	0.30	NM
		8/2/1995	3.10	4.33	-1.26	NM
		10/16/1995	3.75	3.68	-0.65	NM
		12/28/1995	3.56	3.87	0.19	NM
		6/4/1997	3.16	4.27	0.40	0.00
		9/30/1999	3.75	3.68	N/A	0.00
		10/11/2000	3.88	3.55	-0.13	0.00
		9/3/2002	3.73	3.70	0.15	0.00
		10/22/2002	5.11	2.32	-1.38	0.05
		12/23/2002	3.51	3.92	1.60	0.00
		3/28/2003	3.52	3.91	-0.01	0.00
		6/20/2003	3.50	3.93	0.02	0.00
		7/14/2003	3.65	3.78	-0.15	0.00
		8/25/2003	3.87	3.56	-0.22	0.00
		9/9/2003	4.02	3.41	-0.15	0.00
		9/25/2003	4.10	3.33	-0.08	0.00
		10/28/2003	4.29	3.14	-0.19	0.00
		11/18/2003	4.32	3.11	-0.03	0.00
		12/2/2003	4.34	3.09	-0.02	0.00
		1/27/2004	3.88	3.55	0.46	0.00
		2/24/2004	2.75	4.68	1.13	0.00
		3/29/2004	3.45	3.98	-0.70	0.00
		4/19/2004	3.55	3.88	-0.10	0.00
		5/20/2004	3.69	3.74	-0.14	0.00
		6/22/2004	3.81	3.62	-0.12	0.00
		7/27/2004	3.99	3.44	-0.18	0.00
		8/24/2004	4.14	3.29	-0.15	0.00
		9/29/2004	4.32	3.11	-0.18	0.00
10/25/2004	3.89	3.54	0.43	0.00		
12/15/2004	3.18	4.25	0.71	0.00		
1/24/2005	2.69	4.74	0.49	0.00		
2/23/2005	2.48	4.95	0.21	0.00		
3/23/2005	2.21	5.22	0.27	0.00		
4/29/2005	2.57	4.86	-0.36	0.00		
5/27/2005	2.68	4.75	-0.11	0.00		
6/29/2005	2.97	4.46	-0.29	0.00		
7/20/2005	3.13	4.30	-0.16	0.00		
8/24/2005	3.48	3.95	-0.35	0.00		
9/27/2005	3.69	3.74	-0.21	0.00		
10/19/2005	3.87	3.56	-0.18	0.00		
11/29/2005	3.79	3.64	0.08	0.00		
12/29/2005	3.08	4.35	0.71	0.00		
1/31/2006	2.91	4.52	0.17	0.00		
2/28/2006	2.84	4.59	0.07	0.00		
3/27/2006	2.26	5.17	0.58	0.00		

Notes:

1. Reference elevation surveyed relative to mean sea level by Geraghty and Miller (Geraghty and Miller, Inc., 1990)
2. Depth to groundwater measured from notch/mark on north edge of well casing
3. Sources: Geraghty and Miller, 1996; BBL
4. NM = Not measured; NC = Not calculated; N/A= Not Available

**TABLE 1  
HISTORICAL GROUNDWATER ELEVATION SUMMARY**

**UPS-OAKLAND HUB  
8400 PARDEE DRIVE  
OAKLAND, CALIFORNIA  
STATE ID # 583**

Monitoring Well	Reference Elevation	Date Sampled	Depth to Groundwater (ft)	Groundwater Elevation (ft)	Change in Measurement (ft)	Product Thickness (ft)	
MW-2	7.15	8/28/1990	4.98	2.17	--	0.00	
		9/20/1990	4.94	2.21	0.04	N/A	
		6/19/1991	4.66	2.49	0.28	N/A	
		7/23/1991	4.81	2.34	-0.15	N/A	
		8/26/1991	4.89	2.26	-0.08	N/A	
		11/18/1991	4.93	2.22	-0.04	N/A	
		2/3/1992	4.44	2.71	0.49	N/A	
		6/29/1992	4.80	2.35	-0.36	N/A	
		6/23/1993	4.38	2.77	0.42	N/A	
		10/11/1993	5.20	1.95	-0.82	N/A	
		1/4/1994	4.56	2.59	0.64	N/A	
		5/10/1994	4.20	2.95	0.36	N/A	
		2/1/1995	4.00	3.15	0.2	N/A	
		8/2/1995	4.71	2.44	-0.71	N/A	
		10/16/1995	5.02	2.13	-0.31	N/A	
		12/28/1995	4.56	2.59	0.46	N/A	
		6/12/1996	NM	--	--	--	0.25
		6/4/1997	6.02	1.13	N/A	N/A	Small globules
		9/30/1999	4.95	2.20	1.07	0.00	0.00
		10/11/2000	4.97	2.18	-0.02	0.08	0.08
		9/3/2002	5.02	2.13	-0.05	0.07	0.07
		9/27/2002	4.89	2.26	0.13	0.09	0.09
		12/23/2002	4.25	2.90	0.64	0.04	0.04
		2/12/2003	4.26	2.89	-0.01	0.01	0.01
		3/28/2003	4.35	2.80	-0.09	0.01	0.01
		6/20/2003	4.55	2.60	-0.20	0.01	0.01
		7/14/2003	4.56	2.59	-0.01	0.00	0.00
		8/25/2003	4.79	2.36	-0.23	0.01	0.01
		9/9/2003	4.90	2.25	-0.11	0.01	0.01
		9/25/2003	4.97	2.18	-0.07	0.01	0.01
		10/28/2003	4.98	2.17	-0.01	0.04	0.04
		11/18/2003	4.83	2.32	0.15	0.00	0.00
		12/3/2003	4.87	2.28	-0.04	0.00	0.00
		1/27/2004	7.39	-0.24	-2.52	0.00	0.00
		2/24/2004	4.56	2.59	2.83	0.01	0.01
		3/29/2004	4.24	2.91	0.32	0.01	0.01
		4/19/2004	4.50	2.65	-0.26	0.01	0.01
		5/20/2004	4.53	2.62	-0.03	0.00	0.00
		6/23/2004	4.65	2.50	-0.12	0.00	0.00
		7/27/2004	4.80	2.35	-0.15	0.00	0.00
		8/24/2004	5.93	1.22	-1.13	0.00	0.00
		9/29/2004	5.00	2.15	0.93	0.02	0.02
		10/25/2004	4.68	2.47	0.32	0.00	0.00
		12/15/2004	4.34	2.81	0.34	0.02	0.02
		1/24/2005	4.15	3.00	0.19	0.00	0.00
2/23/2005	4.95	2.20	-0.80	0.03	0.03		
3/23/2005	4.96	2.19	-0.01	0.02	0.02		
4/29/2005	4.23	2.92	0.73	0.10	0.10		
5/27/2005	4.20	2.95	0.03	0.02	0.02		
6/29/2005	4.29	2.86	-0.09	0.00	0.00		
7/20/2005	4.48	2.67	-0.19	0.04	0.04		
8/24/2005	4.71	2.44	-0.23	0.00	0.00		
9/27/2005	4.98	2.17	-0.27	0.03	0.03		
10/19/2005	5.08	2.07	-0.1	0.00	0.00		
11/29/2005	4.68	2.47	0.40	0.01	0.01		
12/29/2005	4.19	2.96	0.49	0.01	0.01		
1/31/2006	4.05	3.10	0.14	0.00	0.00		
2/28/2006	4.16	2.99	-0.11	0.00	0.00		
3/27/2006	4.11	3.04	0.05	0.01	0.01		

Notes:

1. Reference elevation surveyed relative to mean sea level by Geraghty and Miller (Geraghty and Miller, Inc., 1990)
2. Depth to groundwater measured from notch/mark on north edge of well casing
3. Sources: Geraghty and Miller, 1996; BBL
4. NM = Not measured; NC = Not calculated; N/A = Not Available

**TABLE 1**  
**HISTORICAL GROUNDWATER ELEVATION SUMMARY**

**UPS-OAKLAND HUB**  
**8400 PARDEE DRIVE**  
**OAKLAND, CALIFORNIA**  
**STATE ID # 583**

Monitoring Well	Reference Elevation	Date Sampled	Depth to Groundwater (ft)	Groundwater Elevation (ft)	Change in Measurement (ft)	Product Thickness (ft)	
MW-3	7.42	8/28/1990	3.88	3.54	—	0.00	
		9/20/1990	3.99	3.43	-0.11	0.00	
		6/19/1991	3.49	3.93	0.50	0.00	
		7/23/1991	3.71	3.71	-0.22	0.00	
		8/26/1991	3.94	3.48	-0.23	0.00	
		11/18/1991	4.23	3.19	-0.29	0.00	
		2/3/1992	4.01	3.41	0.22	0.00	
		6/29/1992	3.40	4.02	0.61	0.00	
		6/23/1993	2.75	4.67	0.65	0.00	
		10/11/1993	3.84	3.58	-1.09	0.00	
		1/4/1994	3.40	4.02	0.44	0.00	
		5/10/1994	2.25	5.17	1.15	0.00	
		2/1/1995	2.43	4.99	-0.18	0.00	
		8/2/1995	3.20	4.22	-0.77	0.00	
		10/16/1995	3.72	3.70	-0.52	0.00	
		12/28/1995	3.56	3.86	0.16	0.00	
		6/4/1997	3.20	4.22	0.36	0.00	
		6/3/1998	NM	--	--	--	0.00
		9/30/1999	3.72	3.70	-0.52	0.00	
		10/11/2000	3.88	3.54	-0.16	0.00	
		9/3/2002	3.75	3.67	0.13	0.00	
		12/23/2003	3.50	3.92	0.25	0.00	
		3/28/2003	3.56	3.86	-0.06	0.00	
		6/20/2003	3.52	3.90	0.04	0.00	
		7/14/2003	3.65	3.77	-0.13	0.00	
		8/25/2003	3.99	3.43	-0.34	0.00	
		9/9/2003	3.99	3.43	0.00	0.00	
		9/25/2003	4.06	3.36	-0.07	0.00	
		10/28/2003	4.15	3.27	-0.09	0.00	
		11/18/2003	4.28	3.14	-0.13	0.00	
		12/2/2003	4.31	3.11	-0.03	0.00	
		1/27/2004	3.85	3.57	0.46	0.00	
		2/24/2004	3.70	3.72	0.15	0.00	
		3/29/2004	3.47	3.95	0.23	0.00	
		4/19/2004	3.55	3.87	-0.08	0.00	
		5/20/2004	3.65	3.77	-0.10	0.00	
		6/22/2004	3.83	3.59	-0.18	0.00	
		7/27/2004	3.98	3.44	-0.15	0.00	
		8/24/2004	4.14	3.28	-0.16	0.00	
		9/29/2004	4.30	3.12	-0.16	0.00	
10/25/2004	3.85	3.57	0.45	0.00			
12/15/2004	3.16	4.26	0.69	0.00			
1/24/2005	2.65	4.77	0.51	0.00			
2/23/2005	2.50	4.92	0.15	0.00			
3/23/2005	2.48	4.94	0.02	0.00			
4/29/2005	2.59	4.83	-0.11	0.00			
5/27/2005	2.75	4.67	-0.16	0.00			
6/29/2005	3.05	4.37	-0.30	0.00			
7/20/2005	3.10	4.32	-0.05	0.00			
8/24/2005	3.45	3.97	-0.35	0.00			
9/27/2005	3.71	3.71	-0.26	0.00			
10/19/2005	3.73	3.69	-0.02	0.00			
11/29/2005	3.75	3.67	-0.02	0.00			
12/29/2005	3.08	4.34	0.67	0.00			
1/31/2006	2.99	4.43	0.09	0.00			
2/28/2006	2.95	4.47	-0.04	0.00			
3/27/2006	2.60	4.82	-0.35	0.00			

Notes:

1. Reference elevation surveyed relative to mean sea level by Geraghty and Miller (Geraghty and Miller, Inc., 1990)
2. Depth to groundwater measured from notch/mark on north edge of well casing
3. Sources: Geraghty and Miller, 1990; BBL
4. NM = Not measured; NC = Not calculated; N/A = Not Available

**TABLE 1  
HISTORICAL GROUNDWATER ELEVATION SUMMARY**

**UPS-OAKLAND HUB  
8400 PARDEE DRIVE  
OAKLAND, CALIFORNIA  
STATE ID # 583**

Monitoring Well	Reference Elevation	Date Sampled	Depth to Groundwater (ft)	Groundwater Elevation (ft)	Change in Measurement (ft)	Product Thickness (ft)
OW-1	N/A	6/4/1997	7.22	NC	—	0.01
		9/30/1999	8.35	NC	1.13	0.01
		10/11/2000	6.90	NC	-1.45	0.09
		10/22/2002	7.34	NC	0.44	0.01
		9/27/2002	7.02	NC	-0.32	0.14
		12/23/2002	5.17	NC	-1.85	0.03
		1/16/2003	4.97	NC	-0.20	0.01
		2/12/2003	5.23	NC	0.26	0.01
		3/28/2003	5.16	NC	-0.07	0.01
		6/20/2003	4.93	NC	-0.23	0.01
		7/14/2003	5.33	NC	0.40	0.00
		8/28/2003	5.85	NC	0.52	0.00
		9/9/2003	6.33	NC	0.48	0.00
		9/25/2003	6.52	NC	0.19	0.01
		10/28/2003	7.26	NC	0.74	0.03
		11/18/2003	7.29	NC	0.03	0.00
		12/2/2003	7.23	NC	-0.06	0.03
		1/27/2004	7.96	NC	0.73	0.01
		2/24/2004	6.26	NC	-1.7	0.02
		3/29/2004	6.08	NC	-0.18	0.02
		4/19/2004	6.29	NC	0.21	0.03
		5/20/2004	6.16	NC	-0.13	0.00
		6/22/2004	6.37	NC	0.21	0.00
		7/27/2004	5.67	NC	-0.7	0.04
		8/24/2004	6.81	NC	1.14	0.00
		9/29/2004	7.08	NC	0.27	0.04
		10/25/2004	6.74	NC	-0.34	0.04
		12/15/2004	5.33	NC	-1.41	0.01
		1/24/2005	3.98	NC	-1.35	0.00
		2/23/2005	3.44	NC	-0.54	0.01
		3/23/2005	3.34	NC	-0.1	0.02
		4/29/2005	6.89	NC	3.55	0.13
		5/27/2005	7.18	NC	0.29	0.11
		6/29/2005	7.12	NC	-0.06	0.10
		7/20/2005	7.20	NC	0.08	0.10
		8/24/2005	7.15	NC	-0.05	0.06
		9/27/2005	7.43	NC	0.28	0.12
		10/19/2005	7.48	NC	0.05	0.11
		11/29/2005	7.00	NC	-0.48	0.04
		12/29/2005	5.22	NC	-1.78	0.00
1/31/2006	5.64	NC	0.42	0.00		
2/28/2006	6.53	NC	0.89	0.01		
3/27/2006	5.80	NC	0.73	0.01		

Notes:

1. Reference elevation surveyed relative to mean sea level by Geraghty and Miller (Geraghty and Miller, Inc., 1990)
2. Depth to groundwater measured from notch/mark on north edge of well casing
3. Sources: Geraghty and Miller, 1996; BBL
4. NM = Not measured; NC = Not calculated; N/A = Not Available



TABLE 2

## HISTORICAL GROUNDWATER MONITORING RESULTS SUMMARY

UPS-OAKLAND HUB  
8400 PARDEE DRIVE  
OAKLAND, CALIFORNIA  
STATE ID # 583

Monitoring Well	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	TPH as gasoline (mg/L)	TPH as diesel (mg/L)	D.O. (mg/L)
MW-1	8/28/1990	3	1.4	4	2.4	NA	NA	21	NA
	6/19/1991	1.7	0.7	0.5	0.9	NA	NA	7.1	NA
	7/23/1991	1.6	1.1	0.5	1.5	NA	0.22	8.7	NA
	8/26/1991	180	120	31	160	NA	NA	2.8	NA
	11/18/1991	1.1	0.4	0.5	<0.3	NA	NA	6.6	NA
	2/3/1992	0.9	<0.3	0.8	0.7	NA	NA	2.2	NA
	6/29/1992	0.8	0.4	0.4	0.9	NA	NA	2.1	NA
	6/23/1993	0.66	<0.5	0.5	<0.5	NA	NA	3.2	NA
	10/11/1993	1.3	<0.5	<0.5	<0.5	NA	NA	9.6	NA
	1/4/1994	2.1	0.65	1.3	2.1	NA	NA	12	NA
	5/10/1994	0.54	0.53	<0.5	1.1	NA	NA	6.4	NA
	2/1/1995	<1.0	<1.0	1	<1.0	NA	0.51	10	NA
	8/2/1995	<0.5	<0.5	<0.5	<0.5	NA	0.51	8.7	NA
	10/16/1995	2.8	<0.5	<0.5	<0.5	NA	0.83	15	NA
	12/28/1995	2.1	<0.5	<0.5	<0.5	NA	0.56	15	NA
	6/4/1997	NA	NA	NA	NA	NA	NA	28	0.76
	9/30/1999	<0.5	0.6	<0.5	1.8	<3	1.6	28	9.9
	10/11/2000	<0.5	<0.5	<0.5	<1.0	<5	0.26	21	0.39
	9/3/2002	<0.5	<0.5	<0.5	0.5	<0.5	1.2	38	NA
	3/28/2003	<5	<5	<5	<10	<5.0	0.25	35	NM
9/9/2003	<0.5	<0.5	<0.5	<1.0	0.6	0.44	11	NM	
4/19/2004	3.2	<2.5	<2.5	<5.0	<2.5	0.280	24.00 ndp	NM	
9/29/2004	<1.0	<1.0	<1.0	<2.0	2.1	1.40 g	150 ndp	NM	
3/23/2005	<1.0	<1.0	<1.0	<2.0	<1.0	0.55 Q1	15 Q2	NM	
11/29/2005	<0.50	<0.50	<0.50	<1.0	0.94	0.31	7.80	NM	
3/27/2006	<0.50	<0.50	<0.50	<1.0	0.62	0.42	11.0	NM	
MCL	--	1	150	300	1,750	13	--	--	--

**Notes:**

(µg/L) = are micrograms per liter and mg/L are milligrams per liter.

NA = Not Analyzed; NS = Not Sampled; NM = Not Measured

TPH = Total petroleum hydrocarbons; MTBE = Methyl tertiary butyl ether.

Title 22 of the California Code of Regulations, California Maximum Contaminant Levels (MCLs) for drinking water.

D.O. = Dissolved Oxygen measured in the field.

Results collected between the dates of 8/28/90 and 12/28/95 are based on prior reporting by Geraghty & Miller, Inc. (1996).

Bold values indicate analytical detections above MCL.

The 9/96, 10/96 BBL reports revealed concentrations reported as TPH as diesel did not resemble the diesel chromatogram standard, containing > C-26.

J - Estimated value between MDL and PQL.

ndp - Hydrocarbon reported does not match the pattern of laboratory Diesel standard.

Q2 = Quantity of unknown hydrocarbon(s) in sample based on diesel.

Q1 = Quantity of unknown hydrocarbon(s) in sample based on gasoline.

TABLE 2

## HISTORICAL GROUNDWATER MONITORING RESULTS SUMMARY

UPS-OAKLAND HUB  
8400 PARDEE DRIVE  
OAKLAND, CALIFORNIA  
STATE ID # 583

Monitoring Well	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	TPH as gasoline (mg/L)	TPH as diesel (mg/L)	D.O. (mg/L)
MW-2	8/28/1990	0.6	0.4	0.6	0.7	NA	NA	3.5	NA
	6/19/1991	0.5	<0.3	<0.3	<0.3	NA	NA	<0.50	NA
	7/23/1991	0.7	<0.3	<0.3	<0.3	NA	<0.50	0.66	NA
	8/26/1991	0.7	<0.3	<0.3	<0.3	NA	NA	<0.50	NA
	11/18/1991	0.8	<0.3	<0.3	<0.3	NA	NA	3.2	NA
	2/3/1992	0.7	<0.3	<0.3	0.5	NA	NA	0.4	NA
	6/29/1992	0.6	<0.3	<0.3	<0.3	NA	NA	0.25	NA
	6/23/1993	0.55	<0.5	<0.5	<0.5	NA	NA	11	NA
	10/11/1993	1.2	<0.5	<0.5	1.3	NA	NA	1.4	NA
	1/4/1994	0.72	<0.5	<0.5	1.1	NA	NA	3.7	NA
	5/10/1994	0.74	<0.5	<0.5	0.7	NA	NA	2.3	NA
	2/1/1995	2.1	<1.0	<1.0	<1.0	NA	<100	2.1	NA
	8/2/1995	<0.5	<0.5	<0.5	<0.5	NA	0.21	3.6	NA
	10/16/1995	0.73	<0.5	<0.5	<0.5	NA	0.13	1.4	NA
	12/28/1995	<0.5	<0.5	<0.5	<0.5	NA	0.21	2.8	NA
	6/12/1996	NS	NS	NS	NS	NS	NS	--	NS
	6/4/1997	NA	NA	NA	NA	NA	NA	3.3	0.52
	9/30/1999	<0.5	<0.5	<0.5	<1.0	<3.0	0.22	6.3	9.5
	10/11/2000	<0.5	<0.5	<0.5	<1.0	<5.0	0.17	4.4	0.43
	9/27/2002	0.71	<2.5	<2.5	<2.5	<2.5	17	67	NM
3/28/2003	<25	<25	<25	<50	<25	1.6	10	NM	
9/25/2003	0.52	<0.50	<0.50	<1.0	<0.50	0.15	12	NM	
3/29/2004	0.51	<0.50	<0.50	<1.0	<0.50	0.084 g	7.80 ndp	NM	
9/29/2004	<0.50	<0.50	<0.50	<1.0	<0.50	0.63 g	10 ndp	NM	
1/24/2005	<0.50	<0.50	<0.50	<1.0	<0.50	2.3 Q1	15 Q2	NM	
11/29/2005	<1.0	<1.0	<1.0	<2.0	<1.0	1.90	22.0	NM	
3/27/2006	<1.0	<1.0	<1.0	<2.0	<1.0	0.71	8.9	NM	
MCL	--	1	150	300	1,750	13	--	--	--

**Notes:**

(µg/L) = are micrograms per liter and mg/L are milligrams per liter.

NA = Not Analyzed; NS = Not Sampled; NM = Not Measured

TPH = Total petroleum hydrocarbons; MTBE = Methyl tertiary butyl ether.

Title 22 of the California Code of Regulations, California Maximum Contaminant Levels (MCLs) for drinking water.

D.O. = Dissolved Oxygen measured in the field.

Results collected between the dates of 8/28/90 and 12/28/95 are based on prior reporting by Geraghty & Miller, Inc. (1996).

Bold values indicate analytical detections above MCL.

The 9/96, 10/96 BBL reports revealed concentrations reported as TPH as diesel did not resemble the diesel chromatogram standard, containing > C-26.

J - Estimated value between MDL and PQL.

g - Hydrocarbon reported in the gasoline range does not match laboratory gasoline standard.

ndp - Hydrocarbon reported does not match the pattern of laboratory Diesel standard.

Q2 = Quantity of unknown hydrocarbon(s) in sample based on diesel.

Q1 = Quantity of unknown hydrocarbon(s) in sample based on gasoline.

TABLE 2

## HISTORICAL GROUNDWATER MONITORING RESULTS SUMMARY

UPS-OAKLAND HUB  
8400 PARDEE DRIVE  
OAKLAND, CALIFORNIA  
STATE ID # 583

Monitoring Well	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	TPH as gasoline (mg/L)	TPH as diesel (mg/L)	D.O. (mg/L)
MW-3	8/28/1990	0.5	0.8	4.3	2.3	NA	NA	18	NA
	6/19/1991	0.4	0.4	1.7	1.4	NA	NA	1.3	NA
	7/23/1991	0.3	<0.3	1.5	0.5	NA	0.33	6.8	NA
	8/26/1991	13	13	5.8	26	NA	NA	<0.05	NA
	11/18/1991	0.6	<0.3	<0.3	<0.3	NA	NA	2.5	NA
	2/3/1992	0.4	<0.3	1.3	0.6	NA	NA	1.1	NA
	6/29/1992	<0.3	<0.3	1.3	0.3	NA	NA	3.2	NA
	6/23/1993	<0.5	<0.5	<0.5	<0.5	NA	NA	8.1	NA
	10/11/1993	1	<0.5	1.5	2.4	NA	NA	7.1	NA
	1/4/1994	<0.5	<0.5	1.6	<0.5	NA	NA	7.4	NA
	5/10/1994	<0.5	<0.5	<0.5	<0.5	NA	NA	5.7	NA
	2/1/1995	<1.0	<1.0	2.7	4.1	NA	0.81	10	NA
	8/2/1995	<0.5	<0.5	<0.5	<0.5	NA	1.2	6.5	NA
	10/16/1995	<0.5	<0.5	<0.5	<0.5	NA	0.93	9.8	NA
	12/28/1995	<0.5	<0.5	<0.5	<0.5	NA	0.69	11	NA
	6/4/1997	NA	NA	NA	NA	NA	NA	34	0.84
	9/30/1999	<0.5	0.6	0.7	1.2	<3.0	1.3	8.7	8.6
	10/11/2000	<0.5	<0.5	<0.5	<1.0	<5.0	0.43	20	0.51
	9/3/2002	<0.5	<0.5	<0.5	<0.5	<0.5	2.3	14	NA
	3/28/2003	<25	<25	<25	<50	<25	2.5	19	NM
9/9/2003	<0.5	<0.5	<0.5	<1.0	<0.5	0.7	73	NM	
4/19/2004	<0.50	<0.50	<0.50	<1.0	<0.50	0.099	14 ndp	NM	
9/29/2004	<2.5	<2.5	<2.5	<5.0	<2.5	0.39 g	10 ndp	NM	
1/24/2005	<2.5	<2.5	<2.5	<5.0	<2.5	.33 Q1	14 Q2	NM	
11/29/2005	<1.0	<1.0	<1.0	<2.0	<1.0	1.20	8.30	NM	
3/27/2006	<1.0	<1.0	<1.0	<2.0	<1.0	0.43	13.0	NM	
MCL	--	1	150	300	1,750	13	--	--	--

**Notes:**

(µg/L) = are micrograms per liter and mg/L are milligrams per liter.

NA = Not Analyzed; NS = Not Sampled; NM = Not Measured

TPH = Total petroleum hydrocarbons; MTBE = Methyl tertiary butyl ether.

Title 22 of the California Code of Regulations, California Maximum Contaminant Levels (MCLs) for drinking water.

D.O. = Dissolved Oxygen measured in the field.

Results collected between the dates of 8/28/90 and 12/28/95 are based on prior reporting by Geraghty & Miller, Inc. (1996).

Bold values indicate analytical detections above MCL.

The 9/96, 10/96 BBL reports revealed concentrations reported as TPH as diesel did not resemble the diesel chromatogram standard, containing > C-26.

J - Estimated value between MDL and PQL.

ndp - Hydrocarbon reported does not match the pattern of laboratory Diesel standard.

Q2 = Quantity of unknown hydrocarbon(s) in sample based on diesel.

Q1 = Quantity of unknown hydrocarbon(s) in sample based on gasoline.

TABLE 2

## HISTORICAL GROUNDWATER MONITORING RESULTS SUMMARY

UPS-OAKLAND HUB  
8400 PARDEE DRIVE  
OAKLAND, CALIFORNIA  
STATE ID # 583

Monitoring Well	Date	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	TPH as gasoline (mg/L)	TPH as diesel (mg/L)	D.O. (mg/L)
OW-1	6/23/1993	< 0.5	< 0.5	< 0.5	31.0	NA	NA	3,400	NA
	6/4/1997	NS	NS	NS	NS	NS	NS	NS	NS
	9/30/1999	< 2.0	< 2.0	< 2.0	4.2	< 12.0	8.3	2,800	9.7
	9/30/1999	< 1.0	< 1.0	1.9	8.9	< 6.0	2.9	340	--
	10/11/2000	< 0.5	< 0.5	< 0.5	< 1.0	< 5.0	2.1	58	0.74
	9/27/2002	0.6J	< 2.5	< 2.5	< 2.5	< 2.5	17	23	NA
	3/28/2003	< 50	< 50	< 50	< 100	< 50	0.82	81	NM
	9/25/2003	< 50	530	500	6,200	< 50	0.22	91	NM
	3/29/2004	< 0.50	< 0.50	< 0.50	< 1.0	< 0.50	0.51	280 ndp	NM
	9/29/2004	< 2.5	< 2.5	< 2.5	< 5.0	< 2.5	2.80 g	440 ndp	NM
	1/24/2005	< 0.50	< 0.50	< 0.50	< 1.0	< 0.50	.22 Q1	16 Q2	NM
	11/29/2005	< 0.50	< 0.50	< 0.50	< 1.0	< 0.50	0.65	30.0	NM
	3/27/2006	< 13	< 13	< 13	< 25	< 13	< 1.30	58.0	NM
MCL	--	1	150	300	1,750	13	--	--	--

**Notes:**

(µg/L) = are micrograms per liter and mg/L are milligrams per liter.

NA = Not Analyzed; NS = Not Sampled; NM = Not Measured

TPH = Total petroleum hydrocarbons; MTBE = Methyl tertiary butyl ether.

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Results collected between the dates of 8/28/90 and 12/28/95 are based on prior reporting by Geraghty & Miller, Inc. (1996).

Bold values indicate analytical detections above MCL.

The 9/96, 10/96 BBL reports revealed concentrations reported as TPH as diesel did not resemble the diesel chromatogram standard, containing > C-26.

J - Estimated value between MDL and PQL.

ndp - Hydrocarbon reported does not match the pattern of laboratory Diesel standard.

Q2 = Quantity of unknown hydrocarbon(s) in sample based on diesel.

Q1 = Quantity of unknown hydrocarbon(s) in sample based on gasoline.

**APPENDIX A**

---

**Standard Field Procedures for  
Groundwater Monitoring  
UPS-Oakland Center**

## **STANDARD FIELD PROCEDURES FOR GROUNDWATER MONITORING AND WELL SAMPLING**

Standard field procedures for groundwater sampling at UPS are as follows during the monitoring events.

### **Groundwater Sampling Procedure**

Prior to the collection of groundwater samples at the subject property, each well is sounded to determine depth to water and total well depth using an electronic Interface Probe. From this data, the wetted casing volume is calculated for each monitoring well. The electric sounder is cleaned in a solution of Liquinox (or equivalent) and water, and triple-rinsed with de-ionized water before and after measuring each well.

The wells are purged a minimum of three wetted casing volumes prior to sampling utilizing a new disposable bailer or an electric submersible pump. Purged water from the casing and gravel/sand pack is contained in labeled, sealed, DOT-approved 55-gallon drums. This purge water is stored on-site in a designated hazardous waste storage area until proper disposal can be determined based on groundwater sampling laboratory results.

Dedicated latex or nitrile surgical gloves and string are used when sampling each well. A new disposable bailer is used to sample each well to avoid the potential for cross-contamination. Upon collection, the groundwater samples are transferred from the sampling bailer to clean, laboratory-provided, sample containers. The sample containers are filled, labeled and sealed with teflon-lined screw lids and septa. The sample containers are double-bagged in self-locking plastic bags to prevent cross-contamination, placed on ice to prevent possible volatilization, and transported to a California state certified laboratory. Transportation of the samples follows industry standard chain-of-custody protocol. In addition, a duplicate sample is collected from one of the monitoring wells. The duplicate sample and the laboratory-supplied trip blank are also transported in the iced cooler with the other collected groundwater samples.

### **Decontamination Procedures**

The non-disposable field drilling and sampling equipment is cleaned prior and after use. Field equipment is cleaned with a solution of Liquinox (or equivalent) and water. Prior to each use all field equipment is subsequently, triple rinsed with the final being de-ionized water. The purge water and decontamination water is collected in 55-gallon DOT approved drums and temporarily stored on-site pending laboratory analysis.

# APPENDIX B

---

## Well Gauging Data UPS-Oakland Center

## SPH or Purge Water Drum Log

Client: BB#L  
 Site Address: UPS - Oakland, CA

STATUS OF DRUM(S) UPON ARRIVAL						
Date	3/27/06					
Number of drum(s) empty:						
Number of drum(s) 1/4 full:	1					
Number of drum(s) 1/2 full:						
Number of drum(s) 3/4 full:						
Number of drum(s) full:						
Total drum(s) on site:						
Are the drum(s) properly labeled?	Y					
Drum ID & Contents:	SW + H <sub>2</sub> O					
If any drum(s) are partially or totally filled, what is the first use date:	2/29/06					

- If you add any SPH to an empty or partially filled drum, drum must have at least 20 gals. of Purge water or DI Water.
- If drum contains SPH, the drum MUST be steel AND labeled with the appropriate label.
- All BTS drums MUST be labeled appropriately.

STATUS OF DRUM(S) UPON DEPARTURE						
Date	3/27/06					
Number of drums empty:						
Number of drum(s) 1/4 full:						
Number of drum(s) 1/2 full:	1					
Number of drum(s) 3/4 full:						
Number of drum(s) full:	1					
Total drum(s) on site:	2					
Are the drum(s) properly labeled?	Yes					
Drum ID & Contents:	SPH + H <sub>2</sub> O					

**LOCATION OF DRUM(S)**

Describe location of drum(s): SEE MAP

FINAL STATUS						
Number of new drum(s) left on site this event:	1					
Date of inspection:	3/27/06					
Drum(s) labelled properly:	Y					
Logged by BTS Field Tech:	DW					
Office reviewed by:	N					



WELLHEAD INSPECTION CHECKLIST

Date 3-27-06 Client BB+L  
Site Address 8400 Pardee Drive Oakland  
Job Number 060327-DW-4 Technician DW

Well ID	Well Inspected - No Corrective Action Required	Water Bailed From Wellbox	Wellbox Components Cleaned	Cap Replaced	Debris Removed From Wellbox	Lock Replaced	Other Action Taken (explain below)	Well Not Inspected (explain below)
MW-1	X							
MW-2	X							
MW-3	X							
ow-1		Rim loose						

NOTES: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

WELL GAUGING DATA

Project # 060327-DW-4 Date 3-27-06 Client BB+L

Site 8400 Pardee Drive Oakland

Well ID	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC
MW-1	4					2.26	14.03	↓
MW-2	4		4.10	.01		4.11	14.40	
MW-3	4					2.60	14.47	
DW-1	5	Sheen				5.80	18.40	

## WELL MONITORING DATA SHEET

Project #: <b>060327-DW-4</b>	Client: <b>BB&amp;L</b>
Sampler: <b>DW</b>	Date: <b>3-27-06</b>
Well I.D.: <b>MW-1</b>	Well Diameter: 2 3 <b>(4)</b> 6 8 _____
Total Well Depth (TD): <b>14.03</b>	Depth to Water (DTW): <b>2.26</b>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <b>(PVD)</b> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]:	

Purge Method:  Bailer  Waterra  Sampling Method:  Bailer  
                    Disposable Bailer  Peristaltic  Disposable Bailer  
                    Positive Air Displacement  Extraction Pump  Extraction Port  
                    Electric Submersible  Other \_\_\_\_\_  Dedicated Tubing

$\underline{7.7} \text{ (Gals.)} \times \underline{3} = \underline{23.1} \text{ Gals.}$		<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> </thead> <tbody> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius<sup>2</sup> * 0.163</td> </tr> </tbody> </table>		Well Diameter	Multiplier	Well Diameter	Multiplier	1"	0.04	4"	0.65	2"	0.16	6"	1.47	3"	0.37	Other	radius <sup>2</sup> * 0.163
Well Diameter	Multiplier	Well Diameter	Multiplier																
1"	0.04	4"	0.65																
2"	0.16	6"	1.47																
3"	0.37	Other	radius <sup>2</sup> * 0.163																
1 Case Volume	Specified Volumes	Calculated Volume																	

Time	Temp (°F or °C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
1350	62.4	6.5	1910	41	7.7	
1352	63.0	6.5	1906	30	15.4	
1354	62.8	6.6	1811	22	23.1	

Did well dewater? Yes  Gallons actually evacuated: **22**

Sampling Date: **3-27-06** Sampling Time: **1359** Depth to Water:

Sample I.D.: **MW-1** Laboratory: Kiff CalScience Other **STL**

Analyzed for: **(TPH-G)** **(BTEX)** **(MTBE)** **(TPH-D)** Oxygenates (5) Other:

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other:

D.O. (if req'd): Pre-purge: \_\_\_\_\_ mg/L Post-purge: \_\_\_\_\_ mg/L

O.R.P. (if req'd): Pre-purge: \_\_\_\_\_ mV Post-purge: \_\_\_\_\_ mV

## WELL MONITORING DATA SHEET

Project #: <u>060327-DW-4</u>	Client: <u>BB+L</u>
Sampler: <u>DW</u>	Date: <u>3-27-06</u>
Well I.D.: <u>MW-2</u>	Well Diameter: 2 3 <u>4</u> 6 8 _____
Total Well Depth (TD): <u>14.40</u>	Depth to Water (DTW): <u>4.11</u>
Depth to Free Product: <u>4.10</u>	Thickness of Free Product (feet): <u>.01</u>
Referenced to: <u>PVO</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <u>6.16</u>	

Purge Method: Bailer <input checked="" type="checkbox"/> Disposable Bailer ( <u>3"</u> ) Positive Air Displacement Electric Submersible	Waterra Peristaltic Extraction Pump Other _____	Sampling Method: Bailer <input checked="" type="checkbox"/> Disposable Bailer Extraction Port Dedicated Tubing Other: _____
--	--	---

$\frac{6.7}{1} \text{ (Gals.)} \times \frac{3}{\text{Specified Volumes}} = \frac{20.1}{\text{Calculated Volume}} \text{ Gals.}$	<table border="1" style="width: 100%; border-collapse: collapse; font-size: small;"> <thead> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> </thead> <tbody> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius<sup>2</sup> * 0.163</td> </tr> </tbody> </table>	Well Diameter	Multiplier	Well Diameter	Multiplier	1"	0.04	4"	0.65	2"	0.16	6"	1.47	3"	0.37	Other	radius <sup>2</sup> * 0.163
Well Diameter	Multiplier	Well Diameter	Multiplier														
1"	0.04	4"	0.65														
2"	0.16	6"	1.47														
3"	0.37	Other	radius <sup>2</sup> * 0.163														

Time	Temp (°F or °C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
1410					6.7	No parameters due to heavy sheen well dewatered @ 8:36
1455						No parameters due to heavy sheen

Did well dewater? <input checked="" type="checkbox"/> Yes No	Gallons actually evacuated: <u>8</u>
Sampling Date: <u>3-27-06</u> Sampling Time: <u>1455</u> Depth to Water: _____	
Sample I.D.: <u>MW-2</u> Laboratory: Kiff CalScience Other <u>STL</u>	
Analyzed for: <u>TPH-G</u> <u>BTEX</u> <u>MTBE</u> <u>TPH-D</u> Oxygenates (5) Other: _____	
EB I.D. (if applicable): _____ @ _____ Time Duplicate I.D. (if applicable): _____	
Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other: _____	
D.O. (if req'd): Pre-purge: _____ mg/L Post-purge: _____ mg/L	
O.R.P. (if req'd): Pre-purge: _____ mV Post-purge: _____ mV	

# WELL MONITORING DATA SHEET

Project #: 060327-DW-4	Client: BB+L
Sampler: DW	Date: 3-27-06
Well I.D.: MW-3	Well Diameter: 2 3 ④ 6 8
Total Well Depth (TD): 14.47	Depth to Water (DTW): 2.60
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVD Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: 4.97	

Purge Method:  Bailer  Disposable Bailer  Positive Air Displacement  Electric Submersible  
 Waterra  Peristaltic  Extraction Pump  Other \_\_\_\_\_  
 Sampling Method:  Bailer  Disposable Bailer  Extraction Port  Dedicated Tubing  
 Other: \_\_\_\_\_

$7.7$ (Gals.) X $3$ = $22.1$ Gals.	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Well Diameter</th> <th>Multiplier</th> <th>Well Diameter</th> <th>Multiplier</th> </tr> </thead> <tbody> <tr> <td>1"</td> <td>0.04</td> <td>4"</td> <td>0.65</td> </tr> <tr> <td>2"</td> <td>0.16</td> <td>6"</td> <td>1.47</td> </tr> <tr> <td>3"</td> <td>0.37</td> <td>Other</td> <td>radius<sup>2</sup> * 0.163</td> </tr> </tbody> </table>	Well Diameter	Multiplier	Well Diameter	Multiplier	1"	0.04	4"	0.65	2"	0.16	6"	1.47	3"	0.37	Other	radius <sup>2</sup> * 0.163
Well Diameter	Multiplier	Well Diameter	Multiplier														
1"	0.04	4"	0.65														
2"	0.16	6"	1.47														
3"	0.37	Other	radius <sup>2</sup> * 0.163														
Case Volume	Specified Volumes	Calculated Volume															

Time	Temp (°F or °C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
1341	64.9	6.2	1961	29	7.7	
						well dewatered @ 8 gal. DTW = 12.60
1442	63.8	6.2	1889	21	-	

Did well dewater?  Yes  No      Gallons actually evacuated: 8

Sampling Date: 3-27-06      Sampling Time: 1942      Depth to Water: 2.62

Sample I.D.: MW-3      Laboratory: Kiff CalScience Other STL

Analyzed for:  TPH-G  BTEX  MTBE  TPH-D      Oxygenates (5)      Other:

EB I.D. (if applicable): \_\_\_\_\_ @ \_\_\_\_\_ Time      Duplicate I.D. (if applicable): \_\_\_\_\_

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

## WELL MONITORING DATA SHEET

Project #: <u>060327-DW-4</u>	Client: <u>BB+L</u>
Sampler: <u>DW</u>	Date: <u>3-27-06</u>
Well I.D.: <u>0W-1</u>	Well Diameter: 2 3 4 6 8 <u>5</u>
Total Well Depth (TD): <u>18.40</u>	Depth to Water (DTW): <u>5.80</u>
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVD</u> Grade	D.O. Meter (if req'd): YSI HACH
DTW with 80% Recharge [(Height of Water Column x 0.20) + DTW]: <u>8.32</u>	

Purge Method: Bailer <input checked="" type="checkbox"/> Disposable Bailer ( <u>3"</u> ) Positive Air Displacement Electric Submersible	Waterra Peristaltic Extraction Pump Other: _____	Sampling Method: Bailer <input checked="" type="checkbox"/> Disposable Bailer Extraction Port Dedicated Tubing Other: _____
--	---	---

<u>12.7</u> (Gals.) X	<u>3</u>	= <u>38.1</u> Gals.
Case Volume	Specified Volumes	Calculated Volume

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	4"	0.65
2"	0.16	6"	1.47
3"	0.37	Other	radius <sup>2</sup> * 0.163

Time	Temp (°F or °C)	pH	Cond. (mS or µS)	Turbidity (NTUs)	Gals. Removed	Observations
<u>1425</u>	<u>No parameters taken due to heavy sheen 12.7</u>					
<u>1435</u>	<u>well dewatered @ 23 gal</u>					
<u>1510</u>	<u>No parameters taken due to heavy sheen</u>					

Did well dewater?  Yes No Gallons actually evacuated: 23

Sampling Date: 3-27-06 Sampling Time: 1510 Depth to Water: 9.72

Sample I.D.: 0W-1 Laboratory: Kiff CalScience Other STL

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other:

EB I.D. (if applicable): @ Time Duplicate I.D. (if applicable):

Analyzed for: TPH-G BTEX MTBE TPH-D Oxygenates (5) Other:

D.O. (if req'd):	Pre-purge:	mg/L	Post-purge:	mg/L
O.R.P. (if req'd):	Pre-purge:	mV	Post-purge:	mV

***APPENDIX C***

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**Laboratory Analytical Results  
UPS-Oakland Center**



STL

**ANALYTICAL REPORT**

Job Number: 720-2856-1

Job Description: UPS-Oakland

For:  
Blasland, Bouck & Lee, Inc. (BBL)  
975 Cobb Place Blvd NW  
Suite 311  
Kennesaw, GA 30144-4817

Attention: Mr. Hugh B. Devery

---

Dimple Sharma  
Project Manager I  
dsharma@stl-inc.com  
04/07/2006  
Revision: 1

cc: Ms. Lisa Taylor

Project Manager: Dimple Sharma

**Severn Trent Laboratories, Inc.**  
STL San Francisco 1220 Quarry Lane, Pleasanton, CA 94566  
Tel (925) 484-1919 Fax (925) 484-1096 www.stl-inc.com



## METHOD SUMMARY

Client: Blasland, Bouck & Lee, Inc. (BBL)

Job Number: 720-2856-1

Description	Lab Location	Method	Preparation Method
<b>Matrix: Water</b>			
Volatile Organic Compounds by GC/MS	STL-SF	SW846 8260B	
Purge-and-Trap	STL-SF		SW846 5030B
Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)	STL-SF	SW846 8015B	
Organic Compounds in Water by Microextraction	STL-SF		SW846 3511

### LAB REFERENCES:

STL-SF = STL-San Francisco

### METHOD REFERENCES:

SW846 - "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

## SAMPLE SUMMARY

Client: Blasland, Bouck & Lee, Inc. (BBL)

Job Number: 720-2856-1

<u>Lab Sample ID</u>	<u>Client Sample ID</u>	<u>Client Matrix</u>	<u>Date/Time Sampled</u>	<u>Date/Time Received</u>
720-2856-1	MW-1	Water	03/27/2006 1359	03/28/2006 1600
720-2856-2	MW-2	Water	03/27/2006 1455	03/28/2006 1600
720-2856-3	MW-3	Water	03/27/2006 1442	03/28/2006 1600
720-2856-4	OW-1	Water	03/27/2006 1510	03/28/2006 1600

# Analytical Data

Client: Blasland, Bouck & Lee, Inc. (BBL)

Job Number: 720-2856-1

Client Sample ID: MW-1

Lab Sample ID: 720-2856-1

Date Sampled: 03/27/2006 1359

Client Matrix: Water

Date Received: 03/28/2006 1600

## 8260B Volatile Organic Compounds by GC/MS

Method: 8260B

Analysis Batch: 720-7155

Instrument ID: Varian 3900A

Preparation: 5030B

Lab File ID: c:\satumws\data\200603\03

Dilution: 1.0

Initial Weight/Volume: 10 mL

Date Analyzed: 03/29/2006 1326

Final Weight/Volume: 10 mL

Date Prepared: 03/29/2006 1326

Analyte	Result (ug/L)	Qualifier	RL
Benzene	ND		0.50
Ethylbenzene	ND		0.50
Toluene	ND		0.50
MTBE	0.62		0.50
Xylenes, Total	ND		1.0
Gasoline Range Organics (GRO)-C5-C12	420		50
Surrogate	%Rec		Acceptance Limits
Toluene-d8	98		77 - 121
1,2-Dichloroethane-d4	122		73 - 130

# Analytical Data

Client: Blasland, Bouck & Lee, Inc. (BBL)

Job Number: 720-2856-1

Client Sample ID: MW-2

Lab Sample ID: 720-2856-2

Date Sampled: 03/27/2006 1455

Client Matrix: Water

Date Received: 03/28/2006 1600

## 8260B Volatile Organic Compounds by GC/MS

Method: 8260B

Analysis Batch: 720-7155

Instrument ID: Varian 3900A

Preparation: 5030B

Lab File ID: c:\satumws\data\200603\03

Dilution: 2.0

Initial Weight/Volume: 10 mL

Date Analyzed: 03/29/2006 1348

Final Weight/Volume: 10 mL

Date Prepared: 03/29/2006 1348

Analyte	Result (ug/L)	Qualifier	RL
Benzene	ND		1.0
Ethylbenzene	ND		1.0
Toluene	ND		1.0
MTBE	ND		1.0
Xylenes, Total	ND		2.0
Gasoline Range Organics (GRO)-C5-C12	710		100
Surrogate	%Rec		Acceptance Limits
Toluene-d8	99		77 - 121
1,2-Dichloroethane-d4	127		73 - 130

**Analytical Data**

Client: Blasland, Bouck & Lee, Inc. (BBL)

Job Number: 720-2856-1

Client Sample ID: MW-3

Lab Sample ID: 720-2856-3

Date Sampled: 03/27/2006 1442

Client Matrix: Water

Date Received: 03/28/2006 1600

**8260B Volatile Organic Compounds by GC/MS**

Method: 8260B

Analysis Batch: 720-7155

Instrument ID: Varian 3900A

Preparation: 5030B

Lab File ID: c:\saturday\data\200603\03

Dilution: 2.0

Initial Weight/Volume: 10 mL

Date Analyzed: 03/29/2006 1410

Final Weight/Volume: 10 mL

Date Prepared: 03/29/2006 1410

Analyte	Result (ug/L)	Qualifier	RL
Benzene	ND		1.0
Ethylbenzene	ND		1.0
Toluene	ND		1.0
MTBE	ND		1.0
Xylenes, Total	ND		2.0
Gasoline Range Organics (GRO)-C5-C12	430		100
Surrogate	%Rec		Acceptance Limits
Toluene-d8	103		77 - 121
1,2-Dichloroethane-d4	127		73 - 130

# Analytical Data

Client: Blasland, Bouck & Lee, Inc. (BBL)

Job Number: 720-2856-1

Client Sample ID: OW-1

Lab Sample ID: 720-2856-4

Date Sampled: 03/27/2006 1510

Client Matrix: Water

Date Received: 03/28/2006 1600

## 8260B Volatile Organic Compounds by GC/MS

Method: 8260B

Analysis Batch: 720-7155

Instrument ID: Varian 3900A

Preparation: 5030B

Lab File ID: c:\satumws\data\200603\03

Dilution: 25

Initial Weight/Volume: 10 mL

Date Analyzed: 03/29/2006 1433

Final Weight/Volume: 10 mL

Date Prepared: 03/29/2006 1433

Analyte	Result (ug/L)	Qualifier	RL
Benzene	ND		13
Ethylbenzene	ND		13
Toluene	ND		13
MTBE	ND		13
Xylenes, Total	ND		25
Surrogate	%Rec		Acceptance Limits
Toluene-d8	103		77 - 121
1,2-Dichloroethane-d4	123		73 - 130

Method: 8260B

Analysis Batch: 720-7191

Instrument ID: Varian 3900A

Preparation: 5030B

Lab File ID: c:\satumws\data\200603\03

Dilution: 25

Initial Weight/Volume: 10 mL

Date Analyzed: 03/30/2006 1631

Final Weight/Volume: 10 mL

Date Prepared: 03/30/2006 1631

Analyte	Result (ug/L)	Qualifier	RL
Gasoline Range Organics (GRO)-C5-C12	ND		1300

# Analytical Data

Client: Blasland, Bouck & Lee, Inc. (BBL)

Job Number: 720-2856-1

Client Sample ID: MW-1

Lab Sample ID: 720-2856-1

Date Sampled: 03/27/2006 1359

Client Matrix: Water

Date Received: 03/28/2006 1600

## 8015B Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Method: 8015B

Analysis Batch: 720-7346

Instrument ID: Varian DRO4

Preparation: 3511

Prep Batch: 720-7186

Lab File ID: N/A

Dilution: 10

Initial Weight/Volume: 35.00 mL

Date Analyzed: 04/05/2006 1105

Final Weight/Volume: 2 mL

Date Prepared: 03/31/2006 1300

Injection Volume:

Column ID: PRIMARY

Analyte	Result (ug/L)	Qualifier	RL
Diesel Range Organics [C10-C28]	11000		500
Surrogate	%Rec		Acceptance Limits
o-Terphenyl	0	D	60 - 130

**Analytical Data**

Client: Blasland, Bouck & Lee, Inc. (BBL)

Job Number: 720-2856-1

Client Sample ID: MW-2

Lab Sample ID: 720-2856-2

Date Sampled: 03/27/2006 1455

Client Matrix: Water

Date Received: 03/28/2006 1600

---

**8015B Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)**

Method: 8015B

Analysis Batch: 720-7346

Instrument ID: Varian DRO4

Preparation: 3511

Prep Batch: 720-7186

Lab File ID: N/A

Dilution: 10

Initial Weight/Volume: 35.00 mL

Date Analyzed: 04/05/2006 1132

Final Weight/Volume: 2 mL

Date Prepared: 03/31/2006 1300

Injection Volume:

Column ID: PRIMARY

Analyte	Result (ug/L)	Qualifier	RL
Diesel Range Organics [C10-C28]	8900		500
Surrogate	%Rec		Acceptance Limits
o-Terphenyl	0	D	60 - 130



**Analytical Data**

Client: Blasland, Bouck & Lee, Inc. (BBL)

Job Number: 720-2856-1

Client Sample ID: MW-3

Lab Sample ID: 720-2856-3

Date Sampled: 03/27/2006 1442

Client Matrix: Water

Date Received: 03/28/2006 1600

---

**8015B Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)**

Method:	8015B	Analysis Batch: 720-7346	Instrument ID: Varian DRO4
Preparation:	3511	Prep Batch: 720-7186	Lab File ID: N/A
Dilution:	10		Initial Weight/Volume: 35.00 mL
Date Analyzed:	04/05/2006 1159		Final Weight/Volume: 2 mL
Date Prepared:	03/31/2006 1300		Injection Volume:
			Column ID: PRIMARY

Analyte	Result (ug/L)	Qualifier	RL
Diesel Range Organics [C10-C28]	13000		500
Surrogate	%Rec		Acceptance Limits
o-Terphenyl	0	D	60 - 130

Analytical Data

Client: Blasland, Bouck & Lee, Inc. (BBL)

Job Number: 720-2856-1

Client Sample ID: OW-1

Lab Sample ID: 720-2856-4

Date Sampled: 03/27/2006 1510

Client Matrix: Water

Date Received: 03/28/2006 1600

8015B Nonhalogenated Organics using GC/FID -Modified (Diesel Range Organics)

Method: 8015B

Analysis Batch: 720-7346

Instrument ID: Varian DRO4

Preparation: 3511

Prep Batch: 720-7186

Lab File ID: N/A

Dilution: 100

Initial Weight/Volume: 35.00 mL

Date Analyzed: 04/05/2006 1227

Final Weight/Volume: 2 mL

Date Prepared: 03/31/2006 1300

Injection Volume:

Column ID: PRIMARY

Analyte	Result (ug/L)	Qualifier	RL
Diesel Range Organics [C10-C28]	58000		5000
Surrogate	%Rec		Acceptance Limits
o-Terphenyl	0	D	60 - 130

## DATA REPORTING QUALIFIERS

Client: Blasland, Bouck & Lee, Inc. (BBL)

Job Number: 720-2856-1

<u>Lab Section</u>	<u>Qualifier</u>	<u>Description</u>
GC Semi VOA	D	Surrogate or matrix spike recoveries were not obtained because the extract was diluted for analysis; also compounds analyzed at a dilution will be flagged with a D.

## Quality Control Results

Client: Blasland, Bouck & Lee, Inc. (BBL)

Job Number: 720-2856-1

### QC Association Summary

Lab Sample ID	Client Sample ID	Client Matrix	Method	Prep Batch
<b>GC/MS VOA</b>				
<b>Analysis Batch:720-7155</b>				
LCS 720-7155/20	Lab Control Spike	Water	8260B	
LCSD 720-7155/19	Lab Control Spike Duplicate	Water	8260B	
MB 720-7155/21	Method Blank	Water	8260B	
720-2837-A-1 MS	Matrix Spike	Water	8260B	
720-2837-A-1 MSD	Matrix Spike Duplicate	Water	8260B	
720-2856-1	MW-1	Water	8260B	
720-2856-2	MW-2	Water	8260B	
720-2856-3	MW-3	Water	8260B	
720-2856-4	OW-1	Water	8260B	
<b>Analysis Batch:720-7191</b>				
LCS 720-7191/11	Lab Control Spike	Water	8260B	
LCSD 720-7191/10	Lab Control Spike Duplicate	Water	8260B	
MB 720-7191/12	Method Blank	Water	8260B	
720-2856-4	OW-1	Water	8260B	
720-2872-A-1 MS	Matrix Spike	Water	8260B	
720-2872-A-1 MSD	Matrix Spike Duplicate	Water	8260B	
<b>GC Semi VOA</b>				
<b>Prep Batch: 720-7186</b>				
LCS 720-7186/2-A	Lab Control Spike	Water	3511	
LCSD 720-7186/3-A	Lab Control Spike Duplicate	Water	3511	
MB 720-7186/1-A	Method Blank	Water	3511	
720-2856-1	MW-1	Water	3511	
720-2856-2	MW-2	Water	3511	
720-2856-3	MW-3	Water	3511	
720-2856-4	OW-1	Water	3511	
<b>Analysis Batch:720-7346</b>				
LCS 720-7186/2-A	Lab Control Spike	Water	8015B	720-7186
LCSD 720-7186/3-A	Lab Control Spike Duplicate	Water	8015B	720-7186
MB 720-7186/1-A	Method Blank	Water	8015B	720-7186
720-2856-1	MW-1	Water	8015B	720-7186
720-2856-2	MW-2	Water	8015B	720-7186
720-2856-3	MW-3	Water	8015B	720-7186
720-2856-4	OW-1	Water	8015B	720-7186

STL San Francisco

# Quality Control Results

Client: Blasland, Bouck & Lee, Inc. (BBL)

Job Number: 720-2856-1

Method Blank - Batch: 720-7155

Method: 8260B  
Preparation: 5030B

Lab Sample ID: MB 720-7155/21  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 03/29/2006 1034  
Date Prepared: 03/29/2006 1034

Analysis Batch: 720-7155  
Prep Batch: N/A  
Units: ug/L

Instrument ID: Varian 3900A  
Lab File ID: c:\satumrws\data\200603\03  
Initial Weight/Volume: 10 mL  
Final Weight/Volume: 10 mL

Analyte	Result	Qual	RL
Benzene	ND		0.50
Ethylbenzene	ND		0.50
Toluene	ND		0.50
MTBE	ND		0.50
Xylenes, Total	ND		1.0
Gasoline Range Organics (GRO)-C5-C12	ND		50

Surrogate	% Rec	Acceptance Limits
Toluene-d8	98	77 - 121
1,2-Dichloroethane-d4	120	73 - 130

Calculations are performed before rounding to avoid round-off errors in calculated results.

## Quality Control Results

Client: Blasland, Bouck & Lee, Inc. (BBL)

Job Number: 720-2856-1

**Laboratory Control/  
Laboratory Control Duplicate Recovery Report - Batch: 720-7155**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 720-7155/20  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 03/29/2006 0950  
Date Prepared: 03/29/2006 0950

Analysis Batch: 720-7155  
Prep Batch: N/A  
Units: ug/L

Instrument ID: Varian 3900A  
Lab File ID: c:\saturnws\data\200603\032  
Initial Weight/Volume: 10 mL  
Final Weight/Volume: 10 mL

LCSD Lab Sample ID: LCSD 720-7155/19  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 03/29/2006 1012  
Date Prepared: 03/29/2006 1012

Analysis Batch: 720-7155  
Prep Batch: N/A  
Units: ug/L

Instrument ID: Varian 3900A  
Lab File ID: c:\saturnws\data\200603\032  
Initial Weight/Volume: 10 mL  
Final Weight/Volume: 10 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Benzene	96	92	69 - 129	4	25		
Toluene	96	91	70 - 130	5	25		
MTBE	93	91	65 - 165	2	25		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
Toluene-d8	101		99		77 - 121		
1,2-Dichloroethane-d4	116		114		73 - 130		

Calculations are performed before rounding to avoid round-off errors in calculated results.

**Quality Control Results**

Client: Blasland, Bouck & Lee, Inc. (BBL)

Job Number: 720-2856-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 720-7155**

**Method: 8260B  
Preparation: 5030B**

MS Lab Sample ID: 720-2837-A-1 MS  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 03/29/2006 1135  
Date Prepared: 03/29/2006 1135

Analysis Batch: 720-7155  
Prep Batch: N/A

Instrument ID: Varian 3900A  
Lab File ID: c:\satumws\data\200603\03  
Initial Weight/Volume: 10 mL  
Final Weight/Volume: 10 mL

MSD Lab Sample ID: 720-2837-A-1 MSD  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 03/29/2006 1157  
Date Prepared: 03/29/2006 1157

Analysis Batch: 720-7155  
Prep Batch: N/A

Instrument ID: Varian 3900A  
Lab File ID: c:\satumws\data\200603\03  
Initial Weight/Volume: 10 mL  
Final Weight/Volume: 10 mL

Analyte	% Rec		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Benzene	94	96	69 - 129	2	20		
Toluene	91	94	70 - 130	3	20		
MTBE	88	94	65 - 165	6	20		
Surrogate	MS % Rec		MSD % Rec		Acceptance Limits		
Toluene-d8	100		101		77 - 121		
1,2-Dichloroethane-d4	115		117		73 - 130		

Calculations are performed before rounding to avoid round-off errors in calculated results.

## Quality Control Results

Client: Blasland, Bouck & Lee, Inc. (BBL)

Job Number: 720-2856-1

Method Blank - Batch: 720-7191

Method: 8260B  
Preparation: 5030B

Lab Sample ID: MB 720-7191/12  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 03/30/2006 1026  
Date Prepared: 03/30/2006 1026

Analysis Batch: 720-7191  
Prep Batch: N/A  
Units: ug/L

Instrument ID: Varian 3900A  
Lab File ID: c:\saturnws\data\200603\01  
Initial Weight/Volume: 10 mL  
Final Weight/Volume: 10 mL

Analyte	Result	Qual	RL
Benzene	ND		0.50
Ethylbenzene	ND		0.50
Toluene	ND		0.50
MTBE	ND		0.50
Xylenes, Total	ND		1.0
Gasoline Range Organics (GRO)-C5-C12	ND		50

Surrogate	% Rec	Acceptance Limits
Toluene-d8	98	77 - 121
1,2-Dichloroethane-d4	115	73 - 130

Calculations are performed before rounding to avoid round-off errors in calculated results.



## Quality Control Results

Client: Blasland, Bouck & Lee, Inc. (BBL)

Job Number: 720-2856-1

**Laboratory Control/  
Laboratory Control Duplicate Recovery Report - Batch: 720-7191**

**Method: 8260B  
Preparation: 5030B**

LCS Lab Sample ID: LCS 720-7191/11  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 03/30/2006 0941  
Date Prepared: 03/30/2006 0941

Analysis Batch: 720-7191  
Prep Batch: N/A  
Units: ug/L

Instrument ID: Varian 3900A  
Lab File ID: c:\saturaws\data\200603\030  
Initial Weight/Volume: 10 mL  
Final Weight/Volume: 10 mL

LCSD Lab Sample ID: LCSD 720-7191/10  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 03/30/2006 1004  
Date Prepared: 03/30/2006 1004

Analysis Batch: 720-7191  
Prep Batch: N/A  
Units: ug/L

Instrument ID: Varian 3900A  
Lab File ID: c:\saturaws\data\200603\030  
Initial Weight/Volume: 10 mL  
Final Weight/Volume: 10 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Benzene	87	96	69 - 129	10	25		
Toluene	89	96	70 - 130	7	25		
MTBE	82	98	65 - 165	17	25		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
Toluene-d8	103		100		77 - 121		
1,2-Dichloroethane-d4	114		122		73 - 130		

Calculations are performed before rounding to avoid round-off errors in calculated results.

## Quality Control Results

Client: Blasland, Bouck & Lee, Inc. (BBL)

Job Number: 720-2856-1

**Matrix Spike/  
Matrix Spike Duplicate Recovery Report - Batch: 720-7191**

**Method: 8260B  
Preparation: 5030B**

MS Lab Sample ID: 720-2872-A-1 MS  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 03/30/2006 1120  
Date Prepared: 03/30/2006 1120

Analysis Batch: 720-7191  
Prep Batch: N/A

Instrument ID: Varian 3900A  
Lab File ID: c:\saturmws\data\200603\03  
Initial Weight/Volume: 10 mL  
Final Weight/Volume: 10 mL

MSD Lab Sample ID: 720-2872-A-1 MSD  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 03/30/2006 1142  
Date Prepared: 03/30/2006 1142

Analysis Batch: 720-7191  
Prep Batch: N/A

Instrument ID: Varian 3900A  
Lab File ID: c:\saturmws\data\200603\03  
Initial Weight/Volume: 10 mL  
Final Weight/Volume: 10 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Benzene	88	97	69 - 129	10	20		
Toluene	87	98	70 - 130	12	20		
MTBE	84	93	65 - 165	11	20		
Surrogate	MS % Rec		MSD % Rec	Acceptance Limits			
Toluene-d8	101		102	77 - 121			
1,2-Dichloroethane-d4	111		115	73 - 130			

Calculations are performed before rounding to avoid round-off errors in calculated results.

**Quality Control Results**

Client: Blasland, Bouck & Lee, Inc. (BBL)

Job Number: 720-2856-1

**Method Blank - Batch: 720-7186**

**Method: 8015B  
Preparation: 3511**

Lab Sample ID: MB 720-7186/1-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 04/05/2006 1105  
Date Prepared: 03/31/2006 1300

Analysis Batch: 720-7346  
Prep Batch: 720-7186  
Units: ug/L

Instrument ID: Varian DRO4  
Lab File ID: N/A  
Initial Weight/Volume: 35.00 mL  
Final Weight/Volume: 2 mL  
Injection Volume:  
Column ID: PRIMARY

Analyte	Result	Qual	RL
Diesel Range Organics [C10-C28]	ND		50
Surrogate	% Rec	Acceptance Limits	
o-Terphenyl	105	60 - 130	

**Laboratory Control/  
Laboratory Control Duplicate Recovery Report - Batch: 720-7186**

**Method: 8015B  
Preparation: 3511**

LCS Lab Sample ID: LCS 720-7186/2-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 04/04/2006 1855  
Date Prepared: 03/31/2006 1300

Analysis Batch: 720-7346  
Prep Batch: 720-7186  
Units: ug/L

Instrument ID: Varian DRO4  
Lab File ID: N/A  
Initial Weight/Volume: 35.00 mL  
Final Weight/Volume: 2 mL  
Injection Volume:  
Column ID: PRIMARY

LCSD Lab Sample ID: LCSD 720-7186/3-A  
Client Matrix: Water  
Dilution: 1.0  
Date Analyzed: 04/04/2006 1922  
Date Prepared: 03/31/2006 1300

Analysis Batch: 720-7346  
Prep Batch: 720-7186  
Units: ug/L

Instrument ID: Varian DRO4  
Lab File ID: N/A  
Initial Weight/Volume: 35.00 mL  
Final Weight/Volume: 2 mL  
Injection Volume:  
Column ID: PRIMARY

Analyte	% Rec.		Limit	RPD	RPD Limit	LCS Qual	LCSD Qual
	LCS	LCSD					
Diesel Range Organics [C10-C28]	95	88	50 - 150	8	25		
Surrogate	LCS % Rec		LCSD % Rec		Acceptance Limits		
o-Terphenyl	120	112			60 - 130		

Calculations are performed before rounding to avoid round-off errors in calculated results.

720-2856

**BLAINE**  
 TECH SERVICES, INC.  
 1680 ROGERS AVENUE  
 SAN JOSE, CALIFORNIA 95112-1105  
 FAX (408) 573-7771  
 PHONE (408) 573-0555

CONDUCT ANALYSIS TO DETECT

LAB STL 40140 DHS #  
 ALL ANALYSES MUST MEET SPECIFICATIONS AND DETECTION LIMITS SET BY CALIFORNIA DHS AND  
 EPA  RWQCB REGION  
 LIA  
 OTHER

CHAIN OF CUSTODY  
 BTS # 060327-DW-4  
 CLIENT Blasland, Bouck, & Lee, Inc.  
 SITE UPS  
8400 Pardee Drive  
Oakland, CA

SPECIAL INSTRUCTIONS  
 Invoice and Report to : Blasland, Bouck, & Lee, Inc.  
 Attn: Hugh Devery  
 707-428-9009

SAMPLE I.D.	DATE	TIME	MATRIX		TOTAL	CONTAINERS
			S=SOIL W=H <sub>2</sub> O			

SAMPLE I.D.	DATE	TIME	S=SOIL W=H <sub>2</sub> O	TOTAL	CONTAINERS
MW-1	3-27	1359	W	6	3 HCL 200ml 200ml 200ml
MW-2	↓	1455	↓	↓	↓
MW-3	↓	1442	↓	↓	↓
DW-1	↓	1510	↓	↓	↓

C = COMPOSITE ALL CONTAINERS		TPH-Gro, BTEX, MTBE (8260)	TPH-D (8015)															
X	X																	
X	X																	
X	X																	
X	X																	

Low Detection levels requested

ADD'L INFORMATION	STATUS	CONDITION	LAB SAMPLE #

SAMPLING COMPLETED	DATE	TIME	SAMPLING PERFORMED BY	RESULTS NEEDED	NO LATER THAN
	3-27-06	1510	Dave Walter	As contracted	
RELEASED BY	DATE	TIME	RECEIVED BY	DATE	TIME
David C. Halt	3-27-06	1055	(Sample Custodian)	3-27-06	1655
RELEASED BY	DATE	TIME	RECEIVED BY	DATE	TIME
SAMPLE CUSTODIAN	3/28/06	1255		3/28/06	1255
RELEASED BY	DATE	TIME	RECEIVED BY	DATE	TIME
	3/28/06	16:00		3/28/06	16:00
SHIPPED VIA	DATE SENT	TIME SENT	COOLER #		

## LOGIN SAMPLE RECEIPT CHECK LIST

Client: Blasland, Bouck & Lee, Inc. (BBL)

Job Number: 720-2856-1

Login Number: 2856

Question	T/F/NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	NA	
The cooler's custody seal, if present, is intact.	NA	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	