

*Transmitted Via UPS Next Day Air*

May 22, 2003

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 September 2002  
UPS - Oakland Hub  
8400 Pardee Drive  
Oakland, California  
State ID # 583  
BBL Project #: 36768.03

Dear Mr. Gholami:

On behalf of United Parcel Service (UPS), Blasland, Bouck & Lee, Inc. (BBL) is transmitting herewith the Second Semi-Annual 2002 Monitoring & Sampling Report for the above-referenced facility. This report describes groundwater monitoring efforts performed at the site in September 2002. 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. If you have any questions regarding this report, please do not hesitate to contact me at (770) 428-9009 extension 11.

Sincerely,

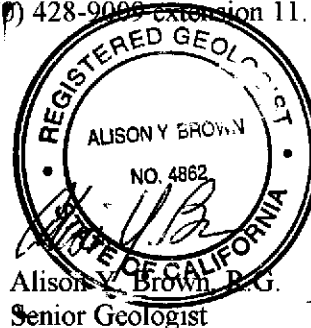
BLASLAND, BOUCK & LEE, INC.



Hugh B. Devery  
Senior Geologist

HBD/rbl

cc: Linda Lyons, UPS w/ attachments  
File



# REPORT

## *Year 2002 Second 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**

**May 2003**

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

*Year 2002 Second Semi-Annual  
Monitoring & Sampling Report*

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**May 2003**

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# 1 Groundwater Monitoring & Sampling

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## 1.1. Introduction

United Parcel Service (UPS) retained Blasland, Bouck & Lee, Inc. (BBL) to perform groundwater monitoring at the UPS-Oakland Center located at 8400 Pardee Drive, Oakland, California ( **Figures 1** and **2**). This report describes results of groundwater monitoring performed in September 2002. Groundwater monitoring was conducted in accordance with the Alameda County Health Care Agency-approved work plan (BBL, August 1997).

Groundwater samples were collected from the four groundwater monitoring wells (MW-1 through MW-3 and OW-1). Monitoring was conducted on September 3 and September 27, 2002 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 September 3, 2002. Static fluid levels in the wells were measured to an accuracy of 0.01-ft using an electronic interface probe that is capable of detecting water and phase-separated hydrocarbon (PSH). Depth to water and depth to free product, if present, were recorded. Measured depths ranged from 3.73 feet below top of casing (btoc) in MW-1 to 6.93 feet btoc in OW-1 (**Table 1**). Free product was detected in MW-2 and OW-1 at an apparent thickness of 0.08 and 0.10 feet, respectively. Water elevations in the four measured monitoring wells in September 3, 2002 were approximately 0.05 feet higher on average than water levels measured in October 2000. Generalized groundwater contour maps, prepared using the September 2002 and October 2000 groundwater elevation data, are shown on **Figures 3** and **4**. Groundwater flow is to the southwest, which agrees with historical direction.

## 1.3. Water Quality

Groundwater samples from MW-1 and MW-3 were collected on September 3, 2002. No samples were collected from MW-2 and OW-1 at that time due to free product being detected in the wells. Personnel returned to the site on September 27, 2002 and bailed off the detected free product from MW-2 and OW-1 and then sampled each well. Both sets of samples were analyzed for total petroleum hydrocarbons as diesel (TPH-d) by EPA Method 8015M and for TPH-g (gasoline), benzene, toluene, ethylbenzene, total xylenes, and methyl tert-butyl ether (BTEX/MTBE) by EPA Method 8260B. Analyses were conducted by SPL in Houston, Texas, certified for environmental analyses by the California Department of Health Services (certificate number: 1903). Summaries of the groundwater analytical data are presented in **Table 2** and on **Figure 5**. The laboratory analytical results and chain-of-custody documentation are attached as **Appendix C**.

BTEX analytes were detected in three of the wells sampled during the September 2002 monitoring event. The groundwater sample collected from MW-1 contained xylenes at a concentration of 0.5 micrograms per liter ( $\mu\text{g/L}$ ). The groundwater samples collected from monitoring wells MW-2 and OW-1 contained benzene at estimated concentrations of 0.7  $\mu\text{g/L}$  and 0.6  $\mu\text{g/L}$ , respectively. Detected BTEX concentrations were not above the Maximum Contaminant Levels (MCL) for any of the constituents detected. TPH-g was detected in monitoring wells MW-1, MW-2, MW-3 and OW-1; MW-1 with a concentration of 1.2 milligrams per liter (mg/L), MW-2 with a concentration of 17 mg/L, MW-3 with a concentration of 2.3 mg/L and OW-1 with a concentration of 17 mg/L. TPH-d was detected in wells MW-1, MW-2, MW-3 and OW-1; MW-1 with a

concentration of 38 mg/L, MW-2 with a concentration of 67 mg/L, MW-3 with a concentration of 14 mg/L and OW-1 with a concentration of 23 mg/L. There is currently no established MCL for TPH-g or TPH-d.

MTBE was not detected above the laboratory detection limit in the groundwater samples collected during the September 2002 sampling event.

#### 1.4. Purge Water Handling

The water generated from groundwater sampling activities was contained in 55-gallon drums and stored at the UPS center. Upon completion of the 4<sup>th</sup> Quarter 2003 groundwater sampling, proper disposal of investigation derived waste (IDW) will be arranged.

#### 1.5. Summary

1. Groundwater samples were collected on September 3 and September 27, 2002 and sampled for BTEX, MTBE, TPH-g and TPH-d.
2. Measured depths to water ranged from 3.73 feet btoc in MW-1 to 6.93 feet btoc in OW-1. Water elevations in the four measured monitoring wells in September 3, 2002 were approximately 0.05 feet higher on average than water levels measured in October 2000. Groundwater flow direction was to the southwest, which is consistent with historical data.
3. BTEX analytes were detected in three of the four monitoring wells. Detected concentrations in the samples collected were not above the California Maximum Containment Levels for any of the constituents detected. Well MW-1 contained xylenes at a concentration of 0.5 µg/L. Wells MW-2 and OW-1 contained estimated benzene concentrations of 0.7 µg/L and 0.6 µg/L, respectively.
4. TPH-g was detected in monitoring wells MW-1, MW-2, MW-3 and OW-1; MW-1 with a concentration of 1.2 mg/L, MW-2 with a concentration of 17 mg/L, MW-3 with a concentration of 2.3 mg/L and OW-1 with a concentration of 17 mg/L. TPH-d was detected in wells MW-1, MW-2, MW-3 and OW-1; MW-1 with a concentration of 38 mg/L, MW-2 with a concentration of 67 mg/L, MW-3 with a concentration of 14 mg/L and OW-1 with a concentration of 23 mg/L. There is currently no established MCLs for TPH-g or TPH-d.
5. MTBE was not detected above the laboratory detection limit in the wells sampled in September 2002.

#### References:

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

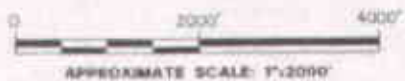
# FIGURES

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**NOTES:**

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



UNITED PARCEL SERVICE, INC.  
 8400 PARDEE DRIVE  
 OAKLAND, CALIFORNIA

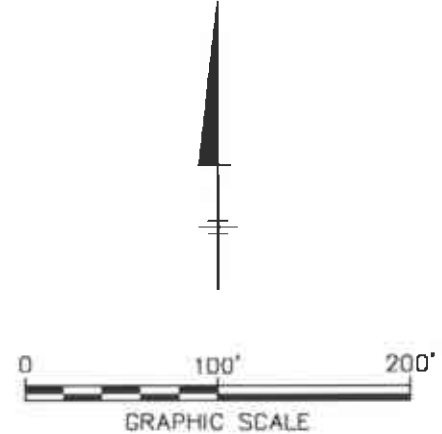
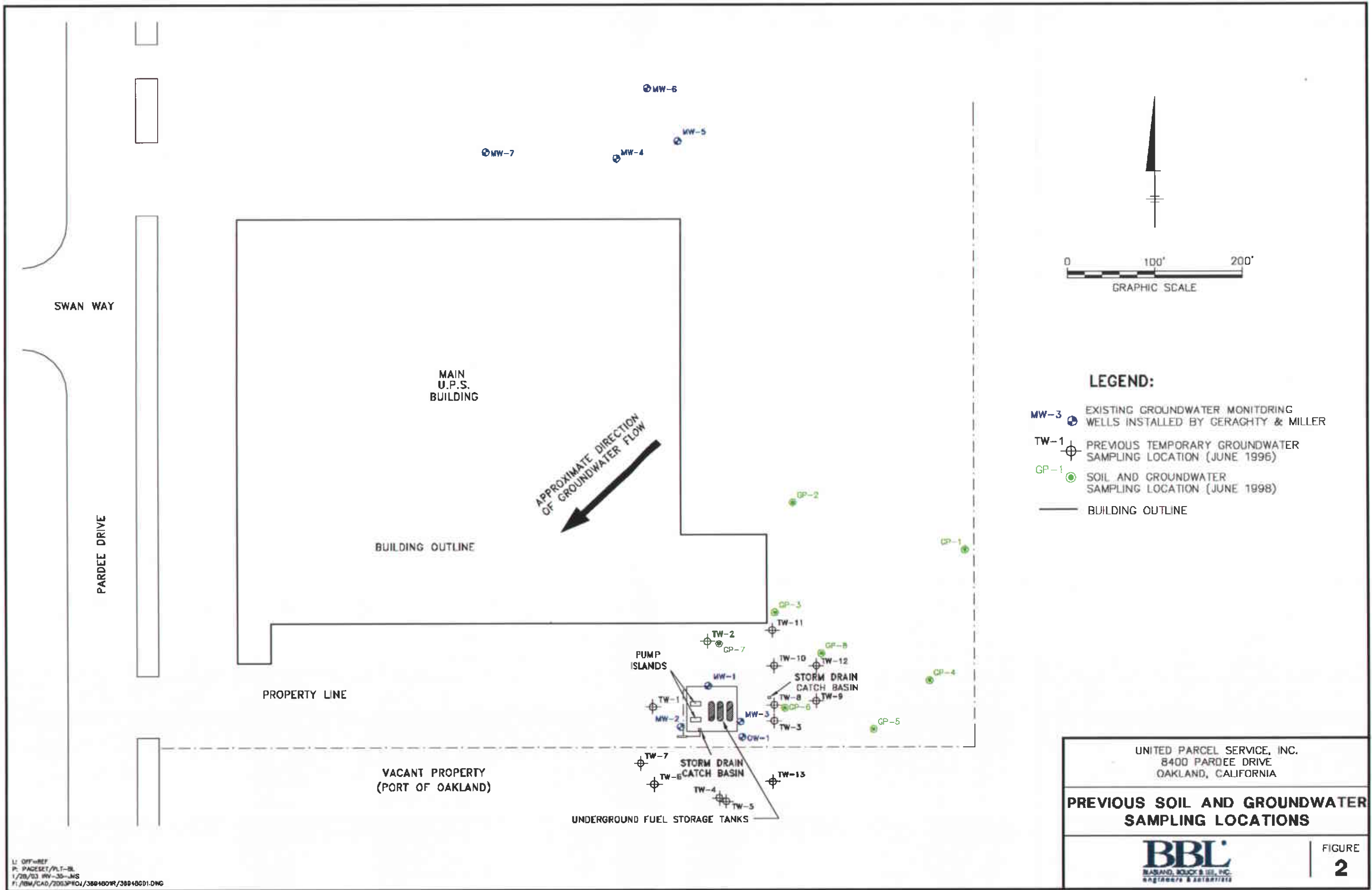
**TOPOGRAPHIC MAP OF  
 SITE LOCATION AND VICINITY**



FIGURE  
**1**

U. 1971-807  
 P. 170-102/14P  
 V. 1/24, 1/25, 2/24-25-80  
 F. 1/24, 1/25, 2/24, 2/25, 2/26, 2/27, 2/28, 2/29, 3/1, 3/2, 3/3, 3/4, 3/5, 3/6, 3/7, 3/8, 3/9, 3/10, 3/11, 3/12, 3/13, 3/14, 3/15, 3/16, 3/17, 3/18, 3/19, 3/20, 3/21, 3/22, 3/23, 3/24, 3/25, 3/26, 3/27, 3/28, 3/29, 3/30, 3/31, 4/1, 4/2, 4/3, 4/4, 4/5, 4/6, 4/7, 4/8, 4/9, 4/10, 4/11, 4/12, 4/13, 4/14, 4/15, 4/16, 4/17, 4/18, 4/19, 4/20, 4/21, 4/22, 4/23, 4/24, 4/25, 4/26, 4/27, 4/28, 4/29, 4/30, 5/1, 5/2, 5/3, 5/4, 5/5, 5/6, 5/7, 5/8, 5/9, 5/10, 5/11, 5/12, 5/13, 5/14, 5/15, 5/16, 5/17, 5/18, 5/19, 5/20, 5/21, 5/22, 5/23, 5/24, 5/25, 5/26, 5/27, 5/28, 5/29, 5/30, 5/31, 6/1, 6/2, 6/3, 6/4, 6/5, 6/6, 6/7, 6/8, 6/9, 6/10, 6/11, 6/12, 6/13, 6/14, 6/15, 6/16, 6/17, 6/18, 6/19, 6/20, 6/21, 6/22, 6/23, 6/24, 6/25, 6/26, 6/27, 6/28, 6/29, 6/30, 7/1, 7/2, 7/3, 7/4, 7/5, 7/6, 7/7, 7/8, 7/9, 7/10, 7/11, 7/12, 7/13, 7/14, 7/15, 7/16, 7/17, 7/18, 7/19, 7/20, 7/21, 7/22, 7/23, 7/24, 7/25, 7/26, 7/27, 7/28, 7/29, 7/30, 7/31, 8/1, 8/2, 8/3, 8/4, 8/5, 8/6, 8/7, 8/8, 8/9, 8/10, 8/11, 8/12, 8/13, 8/14, 8/15, 8/16, 8/17, 8/18, 8/19, 8/20, 8/21, 8/22, 8/23, 8/24, 8/25, 8/26, 8/27, 8/28, 8/29, 8/30, 8/31, 9/1, 9/2, 9/3, 9/4, 9/5, 9/6, 9/7, 9/8, 9/9, 9/10, 9/11, 9/12, 9/13, 9/14, 9/15, 9/16, 9/17, 9/18, 9/19, 9/20, 9/21, 9/22, 9/23, 9/24, 9/25, 9/26, 9/27, 9/28, 9/29, 9/30, 10/1, 10/2, 10/3, 10/4, 10/5, 10/6, 10/7, 10/8, 10/9, 10/10, 10/11, 10/12, 10/13, 10/14, 10/15, 10/16, 10/17, 10/18, 10/19, 10/20, 10/21, 10/22, 10/23, 10/24, 10/25, 10/26, 10/27, 10/28, 10/29, 10/30, 10/31, 11/1, 11/2, 11/3, 11/4, 11/5, 11/6, 11/7, 11/8, 11/9, 11/10, 11/11, 11/12, 11/13, 11/14, 11/15, 11/16, 11/17, 11/18, 11/19, 11/20, 11/21, 11/22, 11/23, 11/24, 11/25, 11/26, 11/27, 11/28, 11/29, 11/30, 12/1, 12/2, 12/3, 12/4, 12/5, 12/6, 12/7, 12/8, 12/9, 12/10, 12/11, 12/12, 12/13, 12/14, 12/15, 12/16, 12/17, 12/18, 12/19, 12/20, 12/21, 12/22, 12/23, 12/24, 12/25, 12/26, 12/27, 12/28, 12/29, 12/30, 12/31



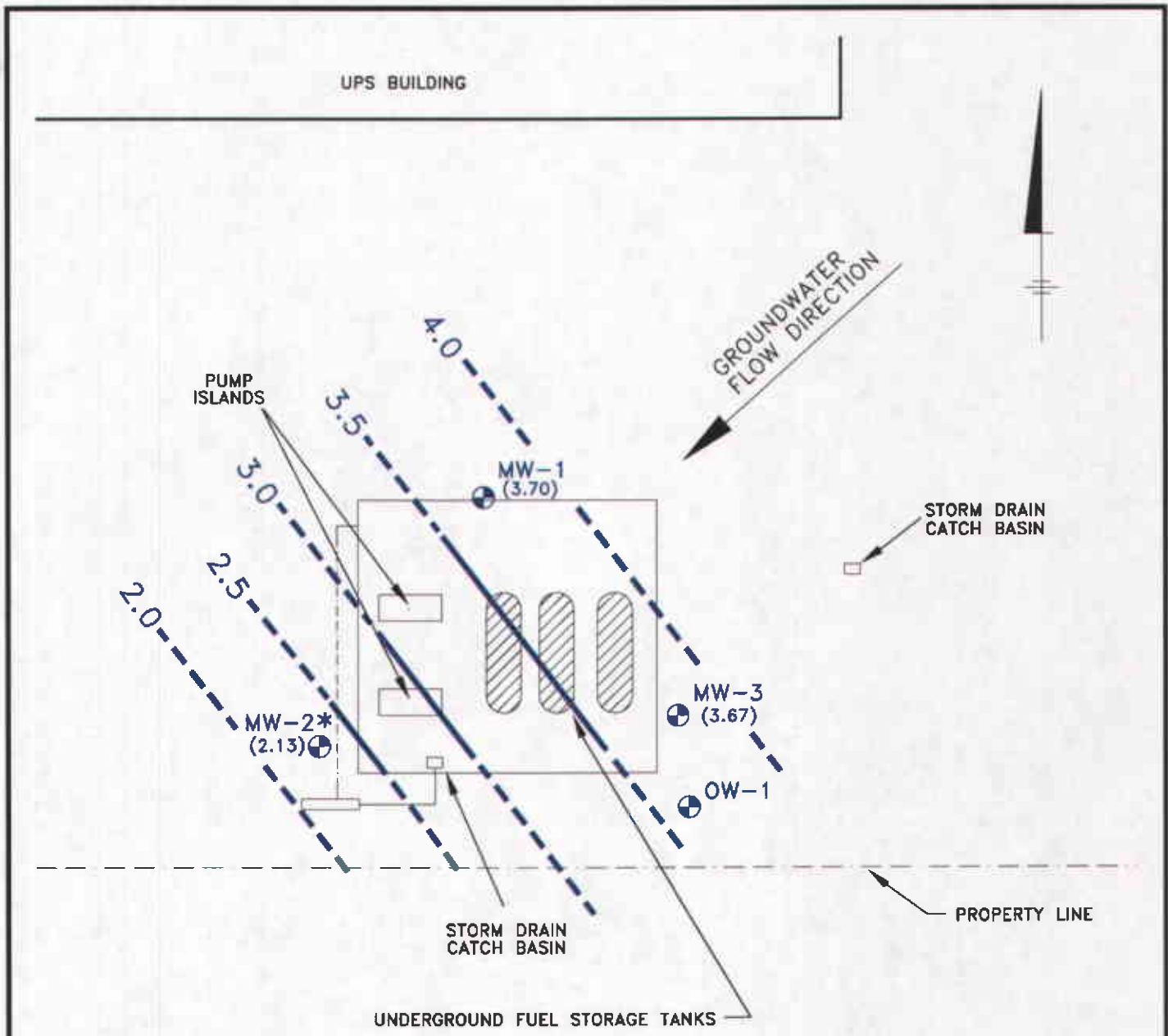


**LEGEND:**

- MW-3 EXISTING GROUNDWATER MONITORING WELLS INSTALLED BY GERAGHTY & MILLER
- TW-1 PREVIOUS TEMPORARY GROUNDWATER SAMPLING LOCATION (JUNE 1996)
- GP-1 SOIL AND GROUNDWATER SAMPLING LOCATION (JUNE 1998)
- BUILDING OUTLINE

UNITED PARCEL SERVICE, INC. 8400 PARDEE DRIVE OAKLAND, CALIFORNIA	
<b>PREVIOUS SOIL AND GROUNDWATER SAMPLING LOCATIONS</b>	
	FIGURE <b>2</b>

L1: OFF-REF  
P: PACESET/PLT-BL  
1/28/03 MW-30-JMS  
F1: BWM/CAD/2003P101/3894801R/3894801.DWG



**LEGEND:**

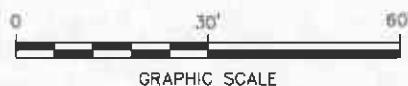
MW-1 (3.68) EXISTING GROUNDWATER MONITORING WELLS INSTALLED BY GERAGHTY & MILLER (GROUNDWATER TABLE ELEVATION IN FEET ABOVE MSL)

— 2.0 — GROUNDWATER ELEVATION CONTOUR

\* GROUNDWATER ELEVATION NOT CORRECTED FOR <0.1 FEET OF PRODUCT PRESENT IN WELL

**NOTES:**

1. OW-1 WAS NOT USED TO GENERATE CONTOURS.
2. MEASURED 9/3/02.



UNITED PARCEL SERVICE, INC.  
8400 PARDEE DRIVE  
OAKLAND, CALIFORNIA

**GROUNDWATER CONTOUR MAP  
SEPTEMBER 2002**



FIGURE  
**3**

UPS BUILDING



GROUNDWATER FLOW DIRECTION

PUMP ISLANDS

STORM DRAIN CATCH BASIN

MW-1 (3.55)

MW-3 (3.54)

OW-1

MW-2\* (2.19)

STORM DRAIN CATCH BASIN

PROPERTY LINE

UNDERGROUND FUEL STORAGE TANKS

LEGEND:

MW-1 (3.55) EXISTING GROUNDWATER MONITORING WELLS INSTALLED BY GERAGHTY & MILLER (GROUNDWATER TABLE ELEVATION IN FEET ABOVE MSL)

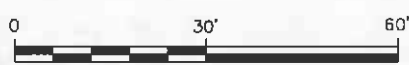
—3.0— GROUNDWATER ELEVATION CONTOUR

\* GROUNDWATER ELEVATION NOT CORRECTED FOR <0.1 FEET OF PRODUCT PRESENT IN WELL

- NOTES:
1. OW-1 WAS NOT USED TO GENERATE CONTOURS.
  2. MEASURED 10/11/00

UNITED PARCEL SERVICE, INC.  
8400 PARDEE DRIVE  
OAKLAND, CALIFORNIA

GROUNDWATER CONTOUR MAP  
OCTOBER 2000



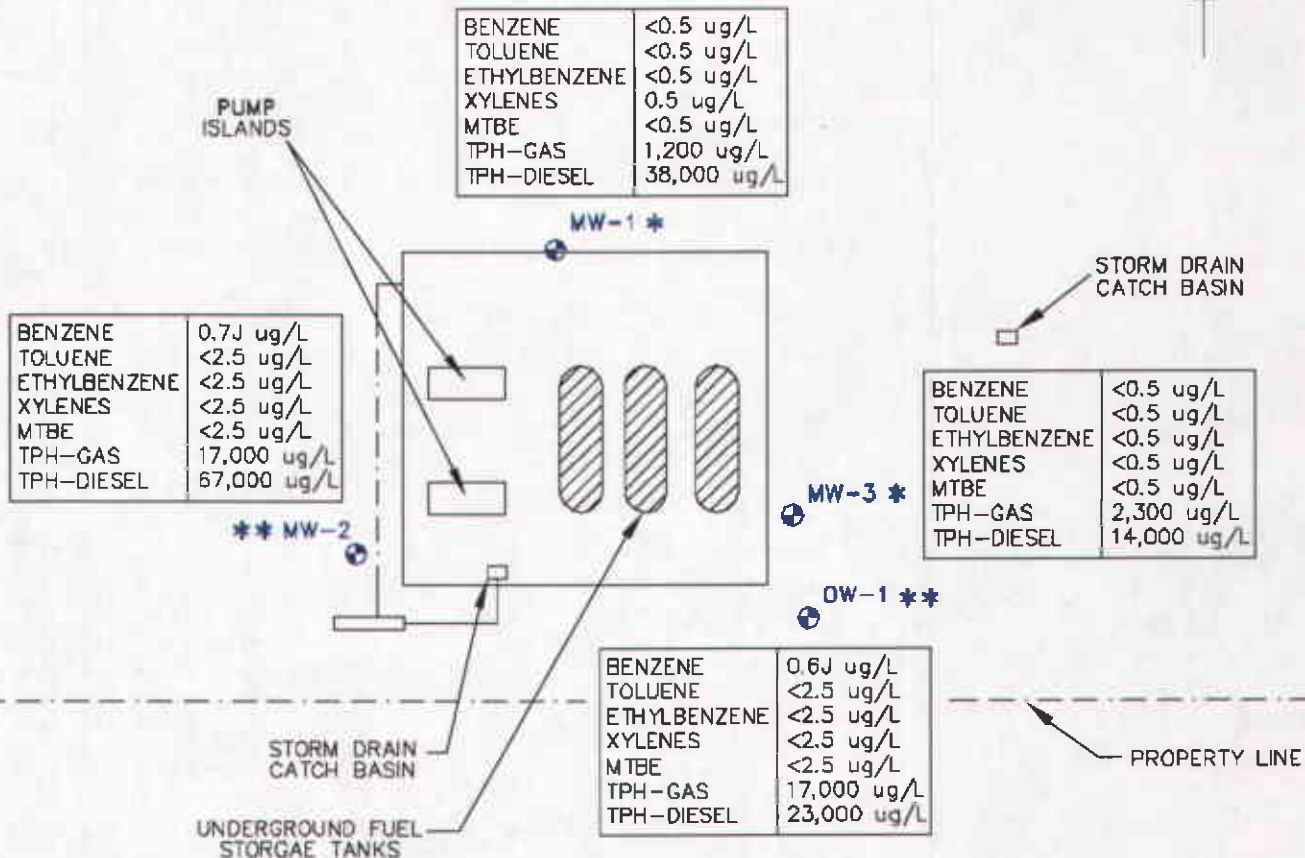
GRAPHIC SCALE



FIGURE  
4

L: OFF-REF  
P: PAGESET/PLT-AP  
S: 21/03 IRV-80-JMS  
F: /IRM/CAD/2003PROJ/3884001.DWG

UPS BUILDING



**LEGEND:**

- MW-1 EXISTING GROUNDWATER MONITORING WELLS INSTALLED BY GERAGHTY & MILLER
- \* SAMPLED 9/3/2002
- \*\* SAMPLED 9/27/2002
- J LABORATORY ESTIMATED VALUE BETWEEN MDL AND PQL



UNITED PARCEL SERVICE, INC.  
8400 PARDEE DRIVE  
OAKLAND, CALIFORNIA

**GROUNDWATER QUALITY MAP  
SEPTEMBER 2002**



FIGURE  
**5**

# TABLES

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**TABLE 1**

**HISTORICAL GROUNDWATER ELEVATION SUMMARY**

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

<b>Monitoring Well</b>	<b>Reference Elevation</b>	<b>Date Sampled</b>	<b>Depth to Groundwater (ft)</b>	<b>Groundwater Elevation (ft)</b>	<b>Change in Measurement (mg/L)</b>	<b>Product Thickness</b>
MW-1	7.43	8/28/1990	3.80	3.63	--	Sheen
		9/20/1990	3.99	3.44	-0.19	N/A
		6/19/1991	3.47	3.96	0.52	N/A
		7/23/1991	3.70	3.73	-0.23	N/A
		8/26/1991	3.92	3.51	-0.22	N/A
		11/18/1991	4.21	3.22	-0.29	N/A
		2/3/1992	3.99	3.44	0.22	N/A
		6/29/1992	3.38	4.05	0.61	N/A
		6/23/1993	2.72	4.71	0.66	N/A
		10/11/1993	3.87	3.56	-1.15	N/A
		1/4/1994	3.34	4.09	0.53	N/A
		5/10/1994	2.14	5.29	1.20	N/A
		2/1/1995	1.84	5.59	0.30	N/A
		8/2/1995	3.10	4.33	-1.26	N/A
		10/16/1995	3.75	3.68	-0.65	N/A
		12/28/1995	3.56	3.87	0.19	N/A
		6/4/1997	3.16	4.27	0.40	None Present
		6/3/1998	NM	N/A	M/A	Sheen
		9/30/1999	3.75	3.68	-0.59	Light Sheen
		10/11/2000	3.88	3.55	-0.13	Light Sheen
9/3/2002	3.73	3.70	0.15	Light Sheen		

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. NA = Not analyzed; 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 (mg/L)	Product Thickness	
MW-2	7.15	8/28/1990	4.98	2.17	—	Sheen	
		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	0.20	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	N/A	N/A	N/A	0.25-foot
		6/4/1997	6.02	1.13	-1.46	N/A	Small globules
		9/30/1999	4.95	2.20	1.07	N/A	Light sheen
		10/11/2000	4.97	2.18	-0.02	N/A	0.08-foot
9/3/2002	5.02	2.13	-0.05	N/A	0.08-foot		

## 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. NA = Not analyzed; NM = Not measured; NC = Not calculated; N/A= Not Available
5. Groundwater elevations are not corrected for the presence of product.

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 (mg/L)	Product Thickness
MW-3	7.42	8/28/1990	3.88	3.54	--	Sheen
		9/20/1990	3.99	3.43	-0.11	N/A
		6/19/1991	3.49	3.93	0.50	N/A
		7/23/1991	3.71	3.71	-0.22	N/A
		8/26/1991	3.94	3.48	-0.23	N/A
		11/18/1991	4.23	3.19	-0.29	N/A
		2/3/1992	4.01	3.41	0.22	N/A
		6/29/1992	3.40	4.02	0.61	N/A
		6/23/1993	2.75	4.67	0.65	N/A
		10/11/1993	3.84	3.58	-1.09	N/A
		1/4/1994	3.40	4.02	0.44	N/A
		5/10/1994	2.25	5.17	1.15	N/A
		2/1/1995	2.43	4.99	-0.18	N/A
		8/2/1995	3.20	4.22	-0.77	N/A
		10/16/1995	3.72	3.70	-0.52	N/A
		12/28/1995	3.56	3.86	0.16	N/A
		6/4/1997	3.20	4.22	0.36	None Present
		6/3/1998	NM	N/A	N/A	Sheen
		9/30/1999	3.72	3.70	-0.54	Light sheen
		10/11/2000	3.88	3.54	-0.16	Light Sheen
9/3/2002	3.75	3.67	0.13	N/A		
OW-1	N/A	6/4/1997	7.22	NC	NC	Trace
		9/30/1999	8.35	NC	-1.13	0.01-foot
		10/11/2000	6.90	NC	1.45	0.09-foot
		9/3/2002	6.93	NC	-0.03	0.10-foot

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. NA = Not analyzed; 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)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	TPH as gasoline (µg/L)	TPH as diesel (µg/L)	D.O. (mg/L)
MW-1	8/28/1990	<b>3</b>	<b>1.4</b>	<b>4</b>	<b>2.4</b>	NA	NA	<b>21,000</b>	NA
	6/19/1991	<b>1.7</b>	<b>0.7</b>	<b>0.5</b>	<b>0.9</b>	NA	NA	<b>7,100</b>	NA
	7/23/1991	<b>1.6</b>	<b>1.1</b>	<b>0.5</b>	<b>1.5</b>	NA	<b>220</b>	<b>8,700</b>	NA
	8/26/1991	<b>180</b>	<b>120</b>	<b>31</b>	<b>160</b>	NA	NA	<b>2,800</b>	NA
	11/18/1991	<b>1.1</b>	<b>0.4</b>	<b>0.5</b>	< 0.3	NA	NA	<b>6,600</b>	NA
	2/3/1992	<b>0.9</b>	< 0.3	<b>0.8</b>	<b>0.7</b>	NA	NA	<b>2,200</b>	NA
	6/29/1992	<b>0.8</b>	<b>0.4</b>	<b>0.4</b>	<b>0.9</b>	NA	NA	<b>2,100</b>	NA
	6/23/1993	<b>0.66</b>	< 0.5	<b>0.5</b>	< 0.5	NA	NA	<b>3,200</b>	NA
	10/11/1993	<b>1.3</b>	< 0.5	< 0.5	< 0.5	NA	NA	<b>9,600</b>	NA
	1/4/1994	<b>2.1</b>	<b>0.65</b>	<b>1.3</b>	<b>2.1</b>	NA	NA	<b>12,000</b>	NA
	5/10/1994	<b>0.54</b>	<b>0.53</b>	< 0.5	<b>1.1</b>	NA	NA	<b>6,400</b>	NA
	2/1/1995	< 1.0	< 1.0	<b>1</b>	< 1.0	NA	<b>510</b>	<b>10,000</b>	NA
	8/2/1995	< 0.5	< 0.5	< 0.5	< 0.5	NA	<b>510</b>	<b>8,700</b>	NA
	10/16/1995	<b>2.8</b>	< 0.5	< 0.5	< 0.5	NA	<b>830</b>	<b>15,000</b>	NA
	12/28/1995	<b>2.1</b>	< 0.5	< 0.5	< 0.5	NA	<b>560</b>	<b>15,000</b>	NA
	6/4/1997	NA	NA	NA	NA	NA	NA	<b>28,000</b>	<b>0.76</b>
	9/30/1999	< 0.5	<b>0.6</b>	< 0.5	<b>1.8</b>	< 3	<b>1,600</b>	<b>28,000</b>	<b>9.9</b>
	10/11/2000	< 0.5	< 0.5	< 0.5	< 1.0	< 5	<b>260</b>	<b>21,000</b>	<b>0.39</b>
9/3/2002	< 0.5	< 0.5	< 0.5	<b>0.5</b>	< 0.5	<b>1,200</b>	<b>38,000</b>	NA	
MCL	--	1	150	700	1750	13	N/A	N/A	--

Notes:

- Units are micrograms per liter (µg/L) unless otherwise indicated.
- NA = Not Analyzed; NS = Not Sampled; ND = Not Detected
- TPH = Total petroleum hydrocarbons; MTBE = Methyl tertiary butyl ether.
- Title 22 of the California Code of Regulations, California Maximum Containment 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.
- The 9/96, 10/96 BBL reports revealed concentrations reported as TPH as diesel did not resemble the diesel chromatogram standard, containing > C-26.
- The 6/4/97 sample revealed the following PAHs by EPA 8100: acenaphthylene 10 ug/L; fluorine 17 ug/L; phenanthrene 10 ug/L.
- J - Estimated value between MDL and PQL.

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)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	TPH as gasoline (µg/L)	TPH as diesel (µg/L)	D.O. (mg/L)
MW-2	8/28/1990	<b>0.6</b>	<b>0.4</b>	<b>0.6</b>	<b>0.7</b>	NA	NA	<b>3,500</b>	NA
	6/19/1991	<b>0.5</b>	< 0.3	< 0.3	< 0.3	NA	NA	< 50.0	NA
	7/23/1991	<b>0.7</b>	< 0.3	< 0.3	< 0.3	NA	< 50	<b>660</b>	NA
	8/26/1991	<b>0.7</b>	< 0.3	< 0.3	< 0.3	NA	NA	< 50.0	NA
	11/18/1991	<b>0.8</b>	< 0.3	< 0.3	< 0.3	NA	NA	<b>3,200</b>	NA
	2/3/1992	<b>0.7</b>	< 0.3	< 0.3	<b>0.5</b>	NA	NA	<b>400</b>	NA
	6/29/1992	<b>0.6</b>	< 0.3	< 0.3	< 0.3	NA	NA	<b>250</b>	NA
	6/23/1993	<b>0.55</b>	< 0.5	< 0.5	< 0.5	NA	NA	<b>11,000</b>	NA
	10/11/1993	<b>1.2</b>	< 0.5	< 0.5	<b>1.3</b>	NA	NA	<b>1,400</b>	NA
	1/4/1994	<b>0.72</b>	< 0.5	< 0.5	<b>1.1</b>	NA	NA	<b>3,700</b>	NA
	5/10/1994	<b>0.74</b>	< 0.5	< 0.5	<b>0.7</b>	NA	NA	<b>2,300</b>	NA
	2/1/1995	<b>2.1</b>	< 1.0	< 1.0	< 1.0	NA	< 100	<b>2,100</b>	NA
	8/2/1995	< 0.5	< 0.5	< 0.5	< 0.5	NA	<b>210</b>	<b>3,600</b>	NA
	10/16/1995	<b>0.73</b>	< 0.5	< 0.5	< 0.5	NA	<b>130</b>	<b>1,400</b>	NA
	12/28/1995	< 0.5	< 0.5	< 0.5	< 0.5	NA	<b>210</b>	<b>2,800</b>	NA
	6/12/1996	NS	NS	NS	NS	NS	NS	NS	NS
	6/4/1997	NA	NA	NA	NA	NA	NA	<b>3,300</b>	<b>0.52</b>
	9/30/1999	< 0.5	< 0.5	< 0.5	< 1.0	< 3.0	<b>220</b>	<b>6,300</b>	<b>9.5</b>
10/11/2000	< 0.5	< 0.5	< 0.5	< 1.0	< 5.0	<b>170</b>	<b>4,400</b>	<b>0.43</b>	
9/27/2002	<b>0.7J</b>	< 2.5	< 2.5	< 2.5	< 2.5	<b>17,000</b>	<b>67,000</b>	NA	
MCL	--	1	150	700	1750	13	N/A	N/A	--

**Notes:**

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- TPH = Total petroleum hydrocarbons; MTBE = Methyl tertiary butyl ether.
- Title 22 of the California Code of Regulations, California Maximum Containment 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.
- The 9/96, 10/96 BBL reports revealed concentrations reported as TPH as diesel did not resemble the diesel chromatogram standard, containing > C-26.
- The 6/4/97 sample revealed the following PAHs by EPA 8100: acenaphthylene 10 ug/L; fluorine 17 ug/L; phenanthrene 10 ug/L.
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TABLE 2

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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 (µg/L)	TPH as diesel (µg/L)	D.O. (mg/L)
MW-3	8/28/1990	<b>0.5</b>	<b>0.8</b>	<b>4.3</b>	<b>2.3</b>	NA	NA	<b>18,000</b>	NA
	6/19/1991	<b>0.4</b>	<b>0.4</b>	<b>1.7</b>	<b>1.4</b>	NA	NA	<b>1,300</b>	NA
	7/23/1991	<b>0.3</b>	< 0.3	<b>1.5</b>	<b>0.5</b>	NA	<b>330</b>	<b>6,800</b>	NA
	8/26/1991	<b>13</b>	<b>13</b>	<b>5.8</b>	<b>26</b>	NA	NA	< 50.0	NA
	11/18/1991	<b>0.6</b>	< 0.3	< 0.3	< 0.3	NA	NA	<b>2,500</b>	NA
	2/3/1992	<b>0.4</b>	< 0.3	<b>1.3</b>	<b>0.6</b>	NA	NA	<b>1,100</b>	NA
	6/29/1992	< 0.3	< 0.3	<b>1.3</b>	<b>0.3</b>	NA	NA	<b>3,200</b>	NA
	6/23/1993	< 0.5	< 0.5	< 0.5	< 0.5	NA	NA	<b>8,100</b>	NA
	10/11/1993	<b>1</b>	< 0.5	<b>1.5</b>	<b>2.4</b>	NA	NA	<b>7,100</b>	NA
	1/4/1994	< 0.5	< 0.5	<b>1.6</b>	< 0.5	NA	NA	<b>7,400</b>	NA
	5/10/1994	< 0.5	< 0.5	< 0.5	< 0.5	NA	NA	<b>5,700</b>	NA
	2/1/1995	< 1.0	< 1.0	<b>2.7</b>	<b>4.1</b>	NA	NA	<b>10,000</b>	NA
	8/2/1995	< 0.5	< 0.5	< 0.5	< 0.5	NA	<b>1,200</b>	<b>6,500</b>	NA
	10/16/1995	< 0.5	< 0.5	< 0.5	< 0.5	NA	<b>930</b>	<b>9,800</b>	NA
	12/28/1995	< 0.5	< 0.5	< 0.5	< 0.5	NA	<b>690</b>	<b>11,000</b>	NA
	6/4/1997	NA	NA	NA	NA	NA	NA	<b>34,000</b>	<b>0.84</b>
	9/30/1999	< 0.5	<b>0.6</b>	<b>0.7</b>	<b>1.2</b>	< 3.0	<b>1,300</b>	<b>8,700</b>	<b>8.6</b>
10/11/2000	< 0.5	< 0.5	< 0.5	< 1.0	< 5.0	<b>430</b>	<b>20,000</b>	<b>0.51</b>	
9/3/2002	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	<b>2,300</b>	<b>14,000</b>	NA	
OW-1	6/23/1993	< 0.5	< 0.5	< 0.5	<b>31.0</b>	NA	NA	<b>3,400,000</b>	NA
	6/4/1997	NS	NS	NS	NS	NS	NS	NS	NS
	9/30/1999	< 2.0	< 2.0	< 2.0	<b>4.2</b>	< 12.0	<b>8,300</b>	<b>2,800,000</b>	9.7
	9/30/1999	< 1.0	< 1.0	<b>1.9</b>	<b>8.9</b>	< 6.0	<b>2,900</b>	<b>340,000</b>	-
	10/11/2000	< 0.5	< 0.5	< 0.5	< 1.0	< 5.0	<b>2,100</b>	<b>58,000</b>	0.74
9/27/2002	<b>0.6J</b>	< 2.5	< 2.5	< 2.5	< 2.5	<b>17,000</b>	<b>23,000</b>	NA	
MCL	--	1	150	700	1750	13	N/A	N/A	--

Notes:

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- The 6/4/97 sample revealed the following PAHs by EPA 8100: acenaphthylene 10 µg/L; fluorine 17 µg/L; phenanthrene 10 µg/L.
- J - Estimated value between MDL and PQL.

*Appendix A*

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**Standard Field Procedures**

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

Standard field procedures for groundwater sampling for UPS are as follows during the quarterly 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 a Heron 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 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 teflon bailer. Purged water from the casing and gravel 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 surgical gloves and string are used when sampling each well. A new disposable teflon bailer is used to sample each well to avoid the potential for cross-contamination. Upon collection, the groundwater samples are transferred from the Teflon 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. Field equipment decontamination quality assurance is validated by obtaining an equipment field blank sample if applicable. The field blank and a laboratory-supplied trip blank are also transported in the iced cooler with the collected groundwater samples. The Purge water and decontamination water is collected in 55-gallon DOT approved drums and temporarily stored on-site pending laboratory analysis.

*Appendix B*

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**Boring Logs & Well Gauging Data**

WELL GAUGING DATA

Project # 020927-DA-1 Date 9/27/02 Client Blastand, Bouck+Lee

Site UPS @ 8400 Pardee Dr. Oakland, CA

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-2	4	FP	4.80	0.09		4.89	14.37	TOC
OW-1	5	FP	6.88	0.14		7.02	18.32	↓

## WELL MONITORING DATA SHEET

Project #: 020927-DA-1	Client: Blasland, Bouck, and Lee
Sampler: David A.	Start Date: 9/27/02
Well I.D.: OW-1	Well Diameter: 2 3 <b>4</b> 6 8
Total Well Depth: 18.32	Depth to Water: 7.02
Before:                      After:	Before:                      After:
Depth to Free Product: 6.88	Thickness of Free Product (feet): 0.14
Referenced to: <del>PHO</del> Grade	D.O. Meter (if req'd): YSI HACH

Purge Method:

Bailer  
 Disposable Bailer  
 Middleburg  
 Electric Submersible

Waterra  
 Peristaltic  
 Extraction Pump  
 Other \_\_\_\_\_

Sampling Method: Bailer

Disposable Bailer  
 Extraction Port  
 Dedicated Tubing

Other: \_\_\_\_\_

11.5 (Gals.) X 3 = 34.5

Gals.

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

Time	Temp. (F or °C)	pH	Conductivity (mS or µS)	Turbidity (NTU)	Gals. Removed	Observations
1242	68.1	6.2	4550	7200	11.5	odor, sheen, orange tint
1242	well dewatered @ 11.5 g DTW = 16.43					
Prior to purging well was hand bailed for ~ 1 hr. SPA thickness reduced to 0.00' before purging						
1430	67.2	6.4	2974	7200		DTW = 15.50

Did well dewater?  Yes    No    Gallons actually evacuated: 11.5

Sampling Time: 1435    Sampling Date: 9/27/02

Sample I.D.: OW-1    Laboratory: STL

Analyzed for:  TPH-G     BTEX     MTBE     TPH-D    Other:

Equipment Blank I.D.:    Duplicate I.D.:

Analyzed for: TPH-G    BTEX    MTBE    TPH-D    Other:

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



### WELL MONITORING DATA SHEET

Project #: 020927-DA-1	Client: Blasland, Bouck, and Lee
Sampler: David A.	Start Date: 9/27/02
Well I.D.: MW-2	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth: 14.37	Depth to Water: 4.89
Before: After:	Before: After:
Depth to Free Product: 4.80	Thickness of Free Product (feet): 0.89
Referenced to: <u>AVC</u> Grade	D.O. Meter (if req'd): YSI HACH

Purge Method:

- Bailer
- Disposable Bailer
- Middleburg
- Electric Submersible
- Waterra
- Peristaltic
- Extraction Pump
- Other \_\_\_\_\_

Sampling Method:

- Bailer
- Disposable Bailer
- Extraction Port
- Dedicated Tubing
- Other: \_\_\_\_\_

Grab Sample

(Gals.) X 3 = \_\_\_\_\_  
Gals.

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

Time	Temp. (For °C)	pH	Conductivity (mS or <u>µS</u> )	Turbidity (NTU)	Gals. Removed	Observations
<del>1335</del> 1340	72.9	6.0	5209	7200 <del>5209</del>	0	Hand bailed SPH to a thickness of 0.00 for 15 min orange tint, strong odor, heavy sludge

Did well dewater? Yes  No  Gallons actually evacuated: 0

Sampling Time: 1345 Sampling Date: 9/27/02

Sample I.D.: MW-2 Laboratory: STL

Analyzed for:  TPH-G  BTEX  MTBE  TPH-D Other: \_\_\_\_\_

Equipment Blank I.D.: \_\_\_\_\_ @ \_\_\_\_\_ Time Duplicate I.D.: \_\_\_\_\_

Analyzed for: TPH-G BTEX MTBE TPH-D Other: \_\_\_\_\_

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

## WELLHEAD INSPECTION CHECKLIST AND REPAIR ORDER

Client Blasland, Bouck and Lee Inspection Date 9/3/02

Site Address 8400 Pardee dr, Oakland, CA Inspected By DA

1. Lid on box?	6. Casing secure?	12. Water standing in wellbox?	15. Well cap functional?
2. Lid broken?	7. Casing cut level?	12a. Standing above the top of casing?	16. Can cap be pulled loose?
3. Lid bolts missing?	8. Debris in wellbox?	12b. Standing below the top of casing?	17. Can cap seal out water?
4. Lid bolts stripped?	9. Wellbox is too far above grade?	12c. Water even with the top of casing?	18. Padlock present?
5. Lid seal intact?	10. Wellbox is too far below grade?	13. Well cap present?	19. Padlock functional?
	11. Wellbox is crushed/damaged?	14. Well cap found secure?	

Check box if no deficiencies were found. Note below deficiencies you were able to correct.

Well I.D.	Deficiency	Corrective Action Taken
Mw-1	} Non BTS lock	New 2357
Mw-3		
Mw-2	No Lock	New 2357

Note below all deficiencies that could not be corrected and still need to be corrected.

Well I.D.	Persisting Deficiency	BTS Office assigns or defers Correction to:	Date assigned	Date corrected
Mw-1	} no key to lock			
Mw-3				
Ow-1	NO cap; 5" well on e" wellbox lid needs to be pried open	BTS ABLE TO REPLACE WELLBOX & AUTOMATIC		
Note:	Ups contact indicated he would prefer well lids with "monitoring well"	Call For Quote.		

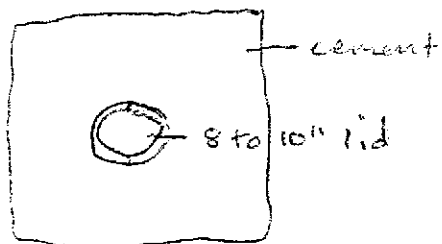
written on them rather than "water"

9/3/02

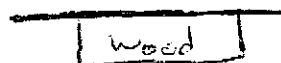
SITE: BB4L @ UPS OAKLAND, CA

OW-1

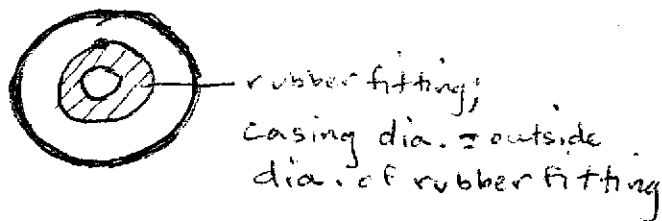
Top view



side view; lid



well box; top view





## WELL MONITORING DATA SHEET

Project #: <u>020903-PA-2</u>	Client: <u>Biasland, Bouck and Lee</u>
Sampler: <u>David A.</u>	Start Date: <u>9/3/02</u>
Well I.D.: <u>MW-1</u>	Well Diameter: 2 3 <u>4</u> 6 8
Total Well Depth: <u>14.00</u>	Depth to Water: <u>3.73</u>
Before: _____ After: _____	Before: _____ After: _____
Depth to Free Product: _____	Thickness of Free Product (feet): _____
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd): YSI HACH

Purge Method:	Sampling Method: <u>Bailer</u>
<input type="checkbox"/> Bailer <input type="checkbox"/> Disposable Bailer <input type="checkbox"/> Middleburg <input checked="" type="checkbox"/> Electric Submersible	<input type="checkbox"/> Waterra <input type="checkbox"/> Peristaltic <input type="checkbox"/> Extraction Pump <input type="checkbox"/> Other _____
	<input checked="" type="checkbox"/> Disposable Bailer <input type="checkbox"/> Extraction Port <input type="checkbox"/> Dedicated Tubing Other: _____

6.7 (Gals.) X 3 = 20.1  
 Gals.

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

Time	Temp. ( <u>F</u> or °C)	pH	Conductivity (mS or <u>µS</u> )	Turbidity (NTU)	Gals. Removed	Observations
<u>1204</u>	<u>78.8</u>	<u>6.7</u>	<u>1694</u>	<u>7200</u>	<u>7</u>	<u>grey, cloudy, slight odor</u>
<u>1205</u>	<u>77.9</u>	<u>6.7</u>	<u>1672</u>	<u>42</u>	<u>14</u>	<u>clearing</u>
<u>1207</u>	<u>77.9</u>	<u>6.7</u>	<u>1667</u>	<u>20</u>	<u>21</u>	<u>"</u>

Did well dewater? Yes   No      Gallons actually evacuated: 21

Sampling Time: 1210 seen in  
vein      Sampling Date: 9/3/02

Sample I.D.: MW-1      Laboratory: SPL

Analyzed for: ~~TPH-G~~ ~~BTEX~~ ~~MTBE~~ ~~TPH-D~~ Other: \_\_\_\_\_

Equipment Blank I.D.: \_\_\_\_\_ @ \_\_\_\_\_ Time      Duplicate I.D.: \_\_\_\_\_

Analyzed for: TPH-G BTEX MTBE TPH-D Other: \_\_\_\_\_

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

## WELL MONITORING DATA SHEET

Project #: 020903-DA-2	Client: Blasland, Bouck and Lee
Sampler: David A.	Start Date: 9/3/02
Well I.D.: MW-3	Well Diameter: 2 3 ④ 6 8
Total Well Depth: 14.43	Depth to Water: 3.75
Before:                      After:	Before:                      After:
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd):                      YSI                      HACH

Purge Method:                      Sampling Method:                      Bailer

Bailer	Waterra	<input checked="" type="checkbox"/> Disposable Bailer
Disposable Bailer	Peristaltic	Extraction Port
Middleburg	Extraction Pump	Dedicated Tubing
<input checked="" type="checkbox"/> Electric Submersible	Other _____	Other: _____

7.0 (Gals.) X 3 = 21.0  
Gals.

Well Diameter	Multiplier	Well Diameter	Multiplier
1"	0.04	④ 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	Conductivity (mS or <u>µS</u> )	Turbidity (NTU)	Gals. Removed	Observations
1235	77.5	6.8	1563	7200	7	tan, cloudy, slight odor
1236	78.5	6.7	1480	<del>7200</del> 150	14	"
1240	78.1	6.7	1506	74	21	"

Did well dewater?    Yes     No                      Gallons actually evacuated: 21

Sampling Time: 1245                      Sampling Date: 9/3/02

Sample I.D.: MW-3                      Laboratory: SPL

Analyzed for: TPH-G BTEX MTBE TPH-D    Other:

Equipment Blank I.D.:                      @                      Time                      Duplicate I.D.:

Analyzed for: TPH-G    BTEX    MTBE    TPH-D    Other:

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

## WELL GAUGING DATA

Project # 030116-DA-1    Date 1/16/03    Client BBTL

Site UPS @ 8400 Pardee Dr. Oakland, CA

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
MN-2	4		4.26	0.02		4.28	14.37	TOC
OW-1	5		4.97	0.01		4.98	18.32	↓

## WELL MONITORING DATA SHEET

Project #: <u>030116-DA-1</u>	Client: <u>BB+L</u>
Sampler: <u>David A.</u>	Start Date: <u>1/16/03</u>
Well I.D.: <u>MW-2</u>	Well Diameter: 2 3 <u>4</u> 6 8 <u>    </u>
Total Well Depth: <u>14.37</u>	Depth to Water: <u>4.25</u>
Before:                      After:	Before:                      After:
Depth to Free Product: <u>4.26</u>	Thickness of Free Product (feet): <u>0.02</u>
Referenced to: <u>PTC</u> Grade	D.O. Meter (if req'd):                      YSI                      HACH

Purge Method:

- Bailer
- Disposable Bailer
- Middleburg
- Electric Submersible
- Waterra
- Peristaltic
- Extraction Pump
- Other \_\_\_\_\_

Sampling Method:

- Bailer
- Disposable Bailer
- Extraction Port
- Dedicated Tubing

Other: \_\_\_\_\_

(Gals.) X SPH bail = \_\_\_\_\_  
Gals.

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

Time	Temp. (°F or °C)	pH	Conductivity (mS or µS)	Turbidity (NTU)	Gals. Removed	Observations
	<u>Bailed</u>	<u>49 ml</u>	<u>of SPH</u>	<u>to a thickness of</u>	<u>0.00 + 0.25 g.</u>	
	<u>H<sub>2</sub>O.</u>					

Did well dewater?    Yes     No

Gallons actually evacuated: 0.25

Sampling Time: \_\_\_\_\_                      Sampling Date: \_\_\_\_\_

Sample I.D.: \_\_\_\_\_                      Laboratory: \_\_\_\_\_

Analyzed for: TPH-G    BTEX    MTBE    TPH-D    Other: \_\_\_\_\_

Equipment Blank I.D.: \_\_\_\_\_ @ \_\_\_\_\_ Time                      Duplicate I.D.: \_\_\_\_\_

Analyzed for: TPH-G    BTEX    MTBE    TPH-D    Other: \_\_\_\_\_

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



## WELL MONITORING DATA SHEET

Project #: 030116-DA-1	Client: BB+L
Sampler: David A.	Start Date: 1/16/03
Well I.D.: OW-1	Well Diameter: 2 3 4 6 8 <u>5</u>
Total Well Depth: 18.32	Depth to Water: 4.98
Before:                      After:	Before:                      After:
Depth to Free Product: 4.97	Thickness of Free Product (feet): 0.01
Referenced to: <u>PVC</u> Grade	D.O. Meter (if req'd):                      YSI                      HACH

Purge Method:

- Bailer
- Disposable Bailer
- Middleburg
- Electric Submersible
- Waterra
- Peristaltic
- Extraction Pump
- Other \_\_\_\_\_

Sampling Method:

- Bailer
- Disposable Bailer
- Extraction Port
- Dedicated Tubing
- Other: \_\_\_\_\_

(Gals.) X SPH bail = \_\_\_\_\_  
Gals.

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	Conductivity (mS or µS)	Turbidity (NTU)	Gals. Removed	Observations
						Removed 40 ml SPH + 0.25 g. H <sub>2</sub> O. Bailed SPH to a thickness of 0.00'

Did well dewater? Yes  No  Gallons actually evacuated: 0.25

Sampling Time: \_\_\_\_\_ Sampling Date: \_\_\_\_\_

Sample I.D.: \_\_\_\_\_ Laboratory: \_\_\_\_\_

Analyzed for: TPH-G BTEX MTBE TPH-D Other: \_\_\_\_\_

Equipment Blank I.D.: \_\_\_\_\_ @ \_\_\_\_\_ Time Duplicate I.D.: \_\_\_\_\_

Analyzed for: TPH-G BTEX MTBE TPH-D Other: \_\_\_\_\_

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

*Appendix C*

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**Analytical Laboratory Results**



HOUSTON LABORATORY  
8880 INTERCHANGE DRIVE  
HOUSTON, TX 77054  
(713) 660-0901

**United Parcel Services**

**Certificate of Analysis Number:**

**02090919**

<b><u>Report To:</u></b>  BBL Hugh Devery 975 Cobb Place Blvd. Suite 311  Kennesaw GA 30144- ph: (770) 428-9009      fax:	<b><u>Project Name:</u></b> UPS - Oakland, CA #020927-DA-1 <b><u>Site:</u></b> Oakland, CA <b><u>Site Address:</u></b>  <b><u>PO Number:</u></b> <b><u>State:</u></b> California <b><u>State Cert. No.:</u></b> 01142CA <b><u>Date Reported:</u></b> 10/4/2002
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This Report Contains A Total Of 10 Pages

Excluding This Page

And

Chain Of Custody

10/4/2002

Date



HOUSTON LABORATORY  
8880 INTERCHANGE DRIVE  
HOUSTON, TX 77054  
(713) 660-0901

Case Narrative for:  
**United Parcel Services**

Certificate of Analysis Number:  
**02090919**

<b>Report To:</b>  BBL Hugh Devery 975 Cobb Place Blvd. Suite 311  Kennesaw GA 30144- ph: (770) 428-9009      fax:	<b>Project Name:</b> UPS - Oakland, CA #020927-DA-1 <b>Site:</b> Oakland, CA <b>Site Address:</b>  <b>PO Number:</b> <b>State:</b> California <b>State Cert. No.:</b> 01142CA <b>Date Reported:</b> 10/4/2002
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Matrix spike (MS) and matrix spike duplicate (MSD) samples are chosen and tested at random from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. Since the MS and MSD are chosen at random from an analytical batch, the sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The Laboratory Control Sample (LCS) and the Method Blank (MB) are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

Any other exceptions associated with this report will be footnoted in the analytical result page(s) or the quality control summary page(s).

Please do not hesitate to contact us if you have any questions or comments pertaining to this data report. Please reference the above Certificate of Analysis Number.

This report shall not be reproduced except in full, without the written approval of the laboratory. The reported results are only representative of the samples submitted for testing.

SPL, Inc. is pleased to be of service to you. We anticipate working with you in fulfilling all your current and future analytical needs.

  
Bernadette Fini  
Customer Service Manager

10/4/2002

Date



HOUSTON LABORATORY  
 8880 INTERCHANGE DRIVE  
 HOUSTON, TX 77054  
 (713) 660-0901

**United Parcel Services**

**Certificate of Analysis Number:**

**02090919**

**Report To:** BBL  
 Hugh Devery  
 975 Cobb Place Blvd. Suite 311  
  
 Kennesaw  
 GA  
 30144-  
 ph: (770) 428-9009 fax:

**Project Name:** UPS - Oakland, CA #020927-DA-1  
**Site:** Oakland, CA  
**Site Address:**

**PO Number:**  
**State:** California  
**State Cert. No.:** 01142CA  
**Date Reported:** 10/4/2002

**Fax To:**

Client Sample ID	Lab Sample ID	Matrix	Date Collected	Date Received	COC ID	HOLD
MW-2	02090919-01	Water	9/27/2002 1:45:00 PM	9/28/2002 10:00:00 AM		<input type="checkbox"/>
OW-1	02090919-02	Water	9/27/2002 2:35:00 PM	9/28/2002 10:00:00 AM		<input type="checkbox"/>

*Bernadette Fini*  
 Bernadette Fini  
 Customer Service Manager

10/4/2002  
 Date

Joel Grice  
 Laboratory Director  
  
 Ted Yen  
 Quality Assurance Officer



HOUSTON LABORATORY  
 8880 INTERCHANGE DRIVE  
 HOUSTON, TX 77054  
 (713) 660-0901

Client Sample ID MW-2 Collected: 09/27/2002 13:45 SPL Sample ID: 02090919-01

Site: Oakland, CA

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
<b>DIESEL RANGE ORGANICS</b>			<b>MCL</b>	<b>CA DRO</b>	<b>Units: mg/L</b>		
Diesel Range Organics	67	1	20		10/01/02 2:31	AR	1339538
Surr: n-Pentacosane	D	% 20-150	20	*	10/01/02 2:31	AR	1339538

Prep Method	Prep Date	Prep Initials
SW3510C	09/28/2002 7:28	KL

<b>VOLATILE ORGANICS BY MODIFIED 8260B</b>			<b>MCL</b>	<b>SW8260BMOD</b>	<b>Units: ug/L</b>		
Benzene	0.7 J	2.5	5		10/02/02 13:48	DO	1340910
Ethylbenzene	ND	2.5	5		10/02/02 13:48	DO	1340910
Gasoline Range Organics	17000	250	5		10/02/02 13:48	DO	1340910
Methyl tert-butyl ether	ND	2.5	5		10/02/02 13:48	DO	1340910
Toluene	ND	2.5	5		10/02/02 13:48	DO	1340910
m&p-Xylene	ND	2.5	5		10/02/02 13:48	DO	1340910
o-Xylene	ND	2.5	5		10/02/02 13:48	DO	1340910
Total Xylene	ND	2.5	5		10/02/02 13:48	DO	1340910
Surr: Toluene d-8	95.0	% 70-130	5		10/02/02 13:48	DO	1340910

**Qualifiers:** ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)  
 B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution  
 \* - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference  
 J - Estimated Value between MDL and PQL



HOUSTON LABORATORY  
 8880 INTERCHANGE DRIVE  
 HOUSTON, TX 77054  
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Client Sample ID OW-1 Collected: 09/27/2002 14:35 SPL Sample ID: 02090919-02

Site: Oakland, CA

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
<b>DIESEL RANGE ORGANICS</b>			<b>MCL</b>	<b>CA_DRO</b>	<b>Units: mg/L</b>		
Diesel Range Organics	23	0.5	10		10/01/02 3:10	AR	1339539
Surr: n-Pentacosane	58.2	% 20-150	10		10/01/02 3:10	AR	1339539

Prep Method	Prep Date	Prep Initials
SW3510C	09/28/2002 7:28	KL

<b>VOLATILE ORGANICS BY MODIFIED 8260B</b>			<b>MCL</b>	<b>SW8260BMOD</b>	<b>Units: ug/L</b>		
Benzene	0.6 J	2.5	5		10/02/02 13:20	DO	1340909
Ethylbenzene	ND	2.5	5		10/02/02 13:20	DO	1340909
Gasoline Range Organics	17000	250	5		10/02/02 13:20	DO	1340909
Methyl tert-butyl ether	ND	2.5	5		10/02/02 13:20	DO	1340909
Toluene	ND	2.5	5		10/02/02 13:20	DO	1340909
m&p-Xylene	ND	2.5	5		10/02/02 13:20	DO	1340909
o-Xylene	ND	2.5	5		10/02/02 13:20	DO	1340909
Total Xylene	ND	2.5	5		10/02/02 13:20	DO	1340909
Surr: Toluene d-8	99.5	% 70-130	5		10/02/02 13:20	DO	1340909

**Qualifiers:** ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)  
 B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution  
 \* - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference  
 J - Estimated Value between MDL and PQL

*Quality Control Documentation*





Quality Control Report

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

United Parcel Services
UPS - Oakland, CA #020927-DA-1

Analysis: Diesel Range Organics
Method: CA\_DRO

WorkOrder: 02090919
Lab Batch ID: 22755

Method Blank

Samples in Analytical Batch:

RunID: HP\_V\_021001B-1339534 Units: mg/L
Analysis Date: 09/30/2002 18:04 Analyst: AR
Preparation Date: 09/28/2002 7:28 Prep By: KL Method SW3510C

Lab Sample ID Client Sample ID
02090919-01B MW-2
02090919-02B OW-1

Table with 3 columns: Analyte, Result, Rep Limit. Rows: Diesel Range Organics (ND, 0.050), Surr: n-Pentacosane (80.0, 20-150)

Laboratory Control Sample (LCS)

RunID: HP\_V\_021001B-1339533 Units: mg/L
Analysis Date: 09/30/2002 17:25 Analyst: AR
Preparation Date: 09/28/2002 7:28 Prep By: KL Method SW3510C

Table with 6 columns: Analyte, Spike Added, Result, Percent Recovery, Lower Limit, Upper Limit. Row: Diesel Range Organics (2.5, 1.2, 47, 21, 175)

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 02090874-02
RunID: HP\_V\_021001B-1339536 Units: mg/L
Analysis Date: 09/30/2002 20:39 Analyst: AR
Preparation Date: 09/28/2002 7:28 Prep By: KL Method SW3510C

Table with 11 columns: Analyte, Sample Result, MS Spike Added, MS Result, MS % Recovery, MSD Spike Added, MSD Result, MSD % Recovery, RPD, RPD Limit, Low Limit, High Limit. Row: Diesel Range Organics (ND, 5, 6.53, 113, 5, 7.83, 139, 20.6\*, 20, 21, 175)

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL \* - Recovery Outside Advisable QC Limits

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



Quality Control Report

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

United Parcel Services
UPS - Oakland, CA #020927-DA-1

Analysis: Volatile Organics by Modified 8260B
Method: SW8260BMOD

WorkOrder: 02090919
Lab Batch ID: R69012

Method Blank

Samples in Analytical Batch:

RunID: MSDVOA2\_020924B-13409 Units: ug/L
Analysis Date: 10/02/2002 12:52 Analyst: DO

Lab Sample ID Client Sample ID
02090919-01A MW-2
02090919-02A OW-1

Table with 3 columns: Analyte, Result, Rep Limit. Rows include Benzene, Ethylbenzene, Gasoline Range Organics, Methyl tert-butyl ether, Toluene, m&p-Xylene, o-Xylene, Total Xylene, and Surr: Toluene d-8.

Laboratory Control Sample (LCS)

RunID: MSDVOA2\_020924B-13409 Units: ug/L
Analysis Date: 10/02/2002 11:32 Analyst: DO

Table with 6 columns: Analyte, Spike Added, Result, Percent Recovery, Lower Limit, Upper Limit. Rows include Benzene, Ethylbenzene, Gasoline Range Organics, Methyl tert-butyl ether, Toluene, m&p-Xylene, o-Xylene, and Total Xylene.

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 02090324-01
RunID: MSDVOA2\_020924B-13409 Units: ug/L
Analysis Date: 10/02/2002 15:47 Analyst: DO

Table with 12 columns: Analyte, Sample Result, MS Spike Added, MS Result, MS % Recovery, MSD Spike Added, MSD Result, MSD % Recovery, RPD, RPD Limit, Low Limit, High Limit.

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL \* - Recovery Outside Advisable QC Limits

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



Quality Control Report

HOUSTON LABORATORY  
8880 INTERCHANGE DRIVE  
HOUSTON, TX 77054  
(713) 660-0901

United Parcel Services  
UPS - Oakland, CA #020927-DA-1

Analysis: Volatile Organics by Modified 8260B  
Method: SW8260BMOD

WorkOrder: 02090919  
Lab Batch ID: R69012

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 02090324-01  
RunID: MSDVOA2\_020924B-13409 Units: ug/L  
Analysis Date: 10/02/2002 15:47 Analyst: DO

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Benzene	ND	100	101	101	100	104	104	3.10	20	70	130
Ethylbenzene	ND	100	101	101	100	104	104	3.19	20	70	130
Gasoline Range Organics	ND	1400	1620	115	1400	1670	118	2.53	20	70	130
Methyl tert-butyl ether	ND	200	198	98.8	200	207	103	4.59	20	70	130
Toluene	ND	100	101	101	100	105	105	3.10	20	70	130
m&p-Xylene	ND	200	202	101	200	209	104	3.52	20	70	130
o-Xylene	ND	100	100	100	100	103	100	3.3	20	70	130
Total Xylene	ND	300	302	101	300	312	104	3.26	20	70	130

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference  
 B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution  
 J - Estimated value between MDL and PQL \* - Recovery Outside Advisable QC Limits

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

*Sample Receipt Checklist  
And  
Chain of Custody*



HOUSTON LABORATORY  
8880 INTERCHANGE DRIVE  
HOUSTON, TX 77054  
(713) 660-0901

Sample Receipt Checklist

Workorder:	02090919	Received By:	RE
Date and Time Received:	9/28/2002 10:00:00 AM	Carrier name:	FedEx
Temperature:	3	Chilled by:	Water Ice

1. Shipping container/cooler in good condition? Yes  No  Not Present
2. Custody seals intact on shipping container/cooler? Yes  No  Not Present
3. Custody seals intact on sample bottles? Yes  No  Not Present
4. Chain of custody present? Yes  No
5. Chain of custody signed when relinquished and received? Yes  No
6. Chain of custody agrees with sample labels? Yes  No
7. Samples in proper container/bottle? Yes  No
8. Sample containers intact? Yes  No
9. Sufficient sample volume for indicated test? Yes  No
10. All samples received within holding time? Yes  No
11. Container/Temp Blank temperature in compliance? Yes  No
12. Water - VOA vials have zero headspace? Yes  No  Not Applicable
13. Water - pH acceptable upon receipt? Yes  No  Not Applicable

SPL Representative:

Contact Date & Time:

Client Name Contacted:

Non Conformance Issues:

Client Instructions:





HOUSTON LABORATORY  
8880 INTERCHANGE DRIVE  
HOUSTON, TX 77054  
(713) 660-0901

**United Parcel Services**

**Certificate of Analysis Number:**  
**02090122**

<b>Report To:</b>  BBL Hugh Devery 975 Cobb Place Blvd. Suite 311  Kennesaw GA 30144- ph: (770) 428-9009      fax:	<b>Project Name:</b> UPS -BBL BTS#020903-DA-1 <b>Site:</b> Oakland, CA <b>Site Address:</b>  <b>PO Number:</b> <b>State:</b> California <b>State Cert. No.:</b> 01142CA <b>Date Reported:</b> 9/13/2002
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This Report Contains A Total Of 10 Pages

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9/13/2002

Date



HOUSTON LABORATORY  
8880 INTERCHANGE DRIVE  
HOUSTON, TX 77054  
(713) 660-0901

Case Narrative for:  
**United Parcel Services**

Certificate of Analysis Number:  
**02090122**

<b>Report To:</b>  BBL Hugh Devery 975 Cobb Place Blvd. Suite 311  Kennesaw GA 30144- ph: (770) 428-9009      fax:	<b>Project Name:</b> UPS -BBL BTS#020903-DA-1 <b>Site:</b> Oakland, CA <b>Site Address:</b>  <b>PO Number:</b> <b>State:</b> California <b>State Cert. No.:</b> 01142CA <b>Date Reported:</b> 9/13/2002
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Matrix spike (MS) and matrix spike duplicate (MSD) samples are chosen and tested at random from an analytical batch of "like" matrix to check for possible matrix effect. The MS and MSD will provide site specific matrix data only for those samples which are spiked by the laboratory. Since the MS and MSD are chosen at random from an analytical batch, the sample chosen for spike purposes may or may not have been a sample submitted in this sample delivery group. The validity of the analytical procedures for which data is reported in this analytical report is determined by the Laboratory Control Sample (LCS) and the Method Blank (MB). The Laboratory Control Sample (LCS) and the Method Blank (MB) are processed with the samples and the MS/MSD to ensure method criteria are achieved throughout the entire analytical process.

Your sample ID \* MW-1 \* (SPL ID: 02090122-01) was randomly selected for use in SPL's quality control program for the Volatile Organics analysis by SW846 Method 8260B. The MS and MSD recoveries were outside of the advisable quality control limits for Gasoline Range Organics (Batch ID: R67708) due to matrix interference. A Laboratory Control Sample (LCS) was analyzed as a quality control check for the analytical batch and all recoveries were within acceptable limits.

Any other exceptions associated with this report will be footnoted in the analytical result page(s) or the quality control summary page(s).

Please do not hesitate to contact us if you have any questions or comments pertaining to this data report. Please reference the above Certificate of Analysis Number.

This report shall not be reproduced except in full, without the written approval of the laboratory. The reported results are only representative of the samples submitted for testing.

SPL, Inc. is pleased to be of service to you. We anticipate working with you in fulfilling all your current and future analytical needs.

  
Joni Blankfield  
Project Manager

9/17/2002

Date





HOUSTON LABORATORY  
 8880 INTERCHANGE DRIVE  
 HOUSTON, TX 77054  
 (713) 660-0901

**United Parcel Services**

Certificate of Analysis Number:

**02090122**

**Report To:** BBL  
 Hugh Devery  
 975 Cobb Place Blvd. Suite 311  
  
 Kennesaw  
 GA  
 30144-  
 ph: (770) 428-9009 fax:

**Project Name:** UPS -BBL BTS#020903-DA-1  
**Site:** Oakland, CA  
**Site Address:**  
  
**PO Number:**  
**State:** California  
**State Cert. No.:** 01142CA  
**Date Reported:** 9/13/2002

**Fax To:**

Client Sample ID	Lab Sample ID	Matrix	Date Collected	Date Received	COC ID	HOLD
MW-1	02090122-01	Water	9/3/2002 12:10:00 PM	9/5/2002 10:00:00 AM		<input type="checkbox"/>
MW-3	02090122-02	Water	9/3/2002 12:45:00 PM	9/5/2002 10:00:00 AM		<input type="checkbox"/>
TB 8/27/02	02090122-03	Water	9/3/2002 10:25:00 AM	9/5/2002 10:00:00 AM		<input checked="" type="checkbox"/>

*Jon Blankfield*  
 Jon Blankfield  
 Project Manager

9/13/2002

Date

Joel Grice  
 Laboratory Director  
  
 Ted Yen  
 Quality Assurance Officer



HOUSTON LABORATORY  
 8880 INTERCHANGE DRIVE  
 HOUSTON, TX 77054  
 (713) 660-0901

Client Sample ID MW-1 Collected: 09/03/2002 12:10 SPL Sample ID: 02090122-01

Site: Oakland, CA

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
<b>DIESEL RANGE ORGANICS</b>			<b>MCL</b>	<b>CA_DRO</b>	<b>Units: mg/L</b>		
Diesel Range Organics	38	0.5	10		09/09/02 15:23	AR	1310849
Surr: n-Pentacosane	104	% 20-150	10		09/09/02 15:23	AR	1310849

Prep Method	Prep Date	Prep Initials
SW3510C	09/06/2002 11:58	J_L

<b>VOLATILE ORGANICS BY MODIFIED 8260B</b>			<b>MCL</b>	<b>SW8260BMOD</b>	<b>Units: ug/L</b>		
Benzene	ND	0.5	1		09/11/02 21:05	DO	1314026
Ethylbenzene	ND	0.5	1		09/11/02 21:05	DO	1314026
Gasoline Range Organics	1200	50	1		09/11/02 21:05	DO	1314026
Methyl tert-butyl ether	ND	0.5	1		09/11/02 21:05	DO	1314026
Toluene	ND	0.5	1		09/11/02 21:05	DO	1314026
m&p-Xylene	ND	0.5	1		09/11/02 21:05	DO	1314026
o-Xylene	0.5	0.5	1		09/11/02 21:05	DO	1314026
Total Xylene	0.5	0.5	1		09/11/02 21:05	DO	1314026
Surr: Toluene d-8	89.7	% 70-130	1		09/11/02 21:05	DO	1314026

**Qualifiers:** ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)  
 B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution  
 \* - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference  
 J - Estimated Value between MDL and PQL



HOUSTON LABORATORY  
 8880 INTERCHANGE DRIVE  
 HOUSTON, TX 77054  
 (713) 660-0901

Client Sample ID MW-3

Collected: 09/03/2002 12:45

SPL Sample ID: 02090122-02

Site: Oakland, CA

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
<b>DIESEL RANGE ORGANICS</b>			<b>MCL</b>	<b>CA_DRO</b>	<b>Units: mg/L</b>		
Diesel Range Organics	14	0.25	5		09/09/02 16:02	AR	1310850
Surr: n-Pentacosane	56.6 %	20-150	5		09/09/02 16:02	AR	1310850

Prep Method	Prep Date	Prep Initials
SW3510C	09/06/2002 11:58	J_L

<b>VOLATILE ORGANICS BY MODIFIED 8260B</b>			<b>MCL</b>	<b>SW8260BMOD</b>	<b>Units: ug/L</b>		
Benzene	ND	0.5	1		09/11/02 21:34	DO	1314027
Ethylbenzene	ND	0.5	1		09/11/02 21:34	DO	1314027
Gasoline Range Organics	2300	50	1		09/11/02 21:34	DO	1314027
Methyl teri-butyl ether	ND	0.5	1		09/11/02 21:34	DO	1314027
Toluene	ND	0.5	1		09/11/02 21:34	DO	1314027
m&p-Xylene	ND	0.5	1		09/11/02 21:34	DO	1314027
o-Xylene	ND	0.5	1		09/11/02 21:34	DO	1314027
Total Xylene	ND	0.5	1		09/11/02 21:34	DO	1314027
Surr: Toluene d-8	91.6 %	70-130	1		09/11/02 21:34	DO	1314027

**Qualifiers:** ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)  
 B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution  
 \* - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference  
 J - Estimated Value between MDL and PQL

*Quality Control Documentation*



Quality Control Report

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

United Parcel Services
UPS -BBL BTS#020903-DA-1

Analysis: Diesel Range Organics
Method: CA\_DRO

WorkOrder: 02090122
Lab Batch ID: 22363

Method Blank

Samples in Analytical Batch:

RunID: HP\_V\_020906A-1310826 Units: mg/L
Analysis Date: 09/06/2002 19:29 Analyst: AR
Preparation Date: 09/06/2002 11:58 Prep By: J\_L Method SW3510C
Lab Sample ID: 02090122-01B Client Sample ID: MW-1
02090122-02B Client Sample ID: MW-3

Table with 3 columns: Analyte, Result, Rep Limit. Rows: Diesel Range Organics (ND, 0.050), Surr: n-Pentacosane (102.4, 20-150)

Laboratory Control Sample (LCS)

RunID: HP\_V\_020906A-1310824 Units: mg/L
Analysis Date: 09/06/2002 18:51 Analyst: AR
Preparation Date: 09/06/2002 11:58 Prep By: J\_L Method SW3510C

Table with 6 columns: Analyte, Spike Added, Result, Percent Recovery, Lower Limit, Upper Limit. Row: Diesel Range Organics (2.5, 2.5, 100, 21, 175)

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 02090082-04
RunID: HP\_V\_020906A-1310833 Units: mg/L
Analysis Date: 09/07/2002 0:02 Analyst: AR
Preparation Date: 09/06/2002 11:58 Prep By: J\_L Method SW3510C

Table with 12 columns: Analyte, Sample Result, MS Spike Added, MS Result, MS % Recovery, MSD Spike Added, MSD Result, MSD % Recovery, RPD, RPD Limit, Low Limit, High Limit. Row: Diesel Range Organics (ND, 2.5, 3.3, 120, 2.5, 2.8, 100, 17, 20, 21, 175)

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL \* - Recovery Outside Advisable QC Limits

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



Quality Control Report

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TX 77054
(713) 660-0901

United Parcel Services
UPS -BBL BTS#020903-DA-1

Analysis: Volatile Organics by Modified 8260B
Method: SW8260BMOD

WorkOrder: 02090122
Lab Batch ID: R67708

Method Blank

Samples in Analytical Batch:

RunID: MSDVOA2\_020911A-13140 Units: ug/L
Analysis Date: 09/11/2002 20:36 Analyst: DO

Lab Sample ID Client Sample ID
02090122-01A MW-1
02090122-02A MW-3

Table with 3 columns: Analyte, Result, Rep Limit. Rows include Benzene, Ethylbenzene, Gasoline Range Organics, Methyl tert-butyl ether, Toluene, m&p-Xylene, o-Xylene, Total Xylene, and Surr: Toluene d-8.

Laboratory Control Sample (LCS)

RunID: MSDVOA2\_020911A-13140 Units: ug/L
Analysis Date: 09/11/2002 18:42 Analyst: DO

Table with 6 columns: Analyte, Spike Added, Result, Percent Recovery, Lower Limit, Upper Limit. Rows include Benzene, Ethylbenzene, Gasoline Range Organics, Methyl tert-butyl ether, Toluene, m&p-Xylene, o-Xylene, and Total Xylene.

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 02090122-01
RunID: MSDVOA2\_020911A-13140 Units: ug/L
Analysis Date: 09/11/2002 19:10 Analyst: DO

Table with 11 columns: Analyte, Sample Result, MS Spike Added, MS Result, MS % Recovery, MSD Spike Added, MSD Result, MSD % Recovery, RPD, RPD Limit, Low Limit, High Limit.

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference
B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution
J - Estimated value between MDL and PQL \* - Recovery Outside Advisable QC Limits

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.



Quality Control Report

HOUSTON LABORATORY  
8880 INTERCHANGE DRIVE  
HOUSTON, TX 77054  
(713) 660-0901

United Parcel Services

UPS -BBL BTS#020903-DA-1

Analysis: Volatile Organics by Modified 8260B  
Method: SW8260BMOD

WorkOrder: 02090122  
Lab Batch ID: R67708

Matrix Spike (MS) / Matrix Spike Duplicate (MSD)

Sample Spiked: 02090122-01  
RunID: MSDVOA2\_020911A-13140 Units: ug/L  
Analysis Date: 09/11/2002 19:10 Analyst: DO

Analyte	Sample Result	MS Spike Added	MS Result	MS % Recovery	MSD Spike Added	MSD Result	MSD % Recovery	RPD	RPD Limit	Low Limit	High Limit
Benzene	ND	100	98.5	98.3	100	92.5	92.3	6.30	20	70	130
Ethylbenzene	ND	100	88.5	88.1	100	87.5	87.1	1.12	20	70	130
Gasoline Range Organics	1210	1400	3130	137 *	1400	3140	138 *	0.952	20	70	130
Methyl tert-butyl ether	ND	200	200	100	200	179	89.6	11.0	20	70	130
Toluene	ND	100	97.5	97.2	100	92.2	92.0	5.56	20	70	130
m&p-Xylene	ND	200	188	93.7	200	180	89.9	4.05	20	70	130
o-Xylene	0.540	100	91.4	90.9	100	88.3	87.7	3.54	20	70	130
Total Xylene	0.5000	300	279.4	92.97	300	268.3	89.27	4.061	20	70	130

Qualifiers: ND/U - Not Detected at the Reporting Limit MI - Matrix Interference  
 B - Analyte detected in the associated Method Blank D - Recovery Unreportable due to Dilution  
 J - Estimated value between MDL and PQL \* - Recovery Outside Advisable QC Limits

The percent recoveries for QC samples are correct as reported. Due to significant figures and rounding, the reported RPD may differ from the displayed RPD values but is correct as reported.

*Sample Receipt Checklist  
And  
Chain of Custody*





HOUSTON LABORATORY  
8880 INTERCHANGE DRIVE  
HOUSTON, TX 77054  
(713) 660-0901

Sample Receipt Checklist

Workorder:	02090122	Received By:	DS
Date and Time Received:	9/5/2002 10:00:00 AM	Carrier name:	UPS
Temperature:	2	Chilled by:	Water Ice

1. Shipping container/cooler in good condition? Yes  No  Not Present
2. Custody seals intact on shipping container/cooler? Yes  No  Not Present
3. Custody seals intact on sample bottles? Yes  No  Not Present
4. Chain of custody present? Yes  No
5. Chain of custody signed when relinquished and received? Yes  No
6. Chain of custody agrees with sample labels? Yes  No
7. Samples in proper container/bottle? Yes  No
8. Sample containers intact? Yes  No
9. Sufficient sample volume for indicated test? Yes  No
10. All samples received within holding time? Yes  No
11. Container/Temp Blank temperature in compliance? Yes  No
12. Water - VOA vials have zero headspace? Yes  No  Not Applicable
13. Water - pH acceptable upon receipt? Yes  No  Not Applicable

SPL Representative:

Contact Date & Time:

Client Name Contacted:

Non Conformance Issues:

Client Instructions:

02090122

# 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 \_\_\_\_\_ SPL \_\_\_\_\_ DHS # \_\_\_\_\_

ALL ANALYSES MUST MEET SPECIFICATIONS AND DETECTION LIMITS SET BY CALIFORNIA DHS AND

EPA  RWQCB REGION \_\_\_\_\_  
 LIA  
 OTHER

CHAIN OF CUSTODY **BTS # 020903-DA-1**

CLIENT **Blasland, Bouck, & Lee, Inc.**

SITE **UPS**

**8400 Pardee Drive**

**Oakland, CA**

C = COMPOSITE ALL CONTAINERS

SAMPLE I.D.	DATE	TIME	MATRIX		TOTAL	C	TPH-GAS (8015)	BTEX & MTBE (8260)	TPH-D (8015)	TAMS	TBA	ADD'L INFORMATION	STATUS	CONDITION	LAB SAMPLE #
			S= SOIL	W=H <sub>2</sub> O											
MW-1	9/3/02	1210	w		8		X	X	X						
<del>MW-2</del>															
MW-3	9/3/02	1245					X	X	X						
<del>MW-4</del>															
<del>OTB</del>	9/3/02	1025	w		2		X	X				"ON HOLD" "TB"			

SPECIAL INSTRUCTIONS

Invoice and Report to : Blasland, Bouck, & Lee, Inc.  
Attn: Paul Bluestein or Hugh Devery

Fax copy of COC to  
Blaine Tech

SAMPLING COMPLETED DATE 9/3/02 TIME 1210 SAMPLING PERFORMED BY **David Allbut** RESULTS NEEDED NO LATER THAN As contracted

RELEASED BY **David Allbut** DATE 9/4/02 TIME RECEIVED BY \_\_\_\_\_ DATE TIME

RELEASED BY \_\_\_\_\_ DATE TIME RECEIVED BY \_\_\_\_\_ DATE TIME

RELEASED BY \_\_\_\_\_ DATE TIME RECEIVED BY **Danna Stealy** DATE 9/5/02 TIME 1000

SHIPPED VIA **UPS** DATE SENT 9/4/02 TIME SENT COOLER #

UPS 12LE41022210018303 20



HOUSTON LABORATORY  
 8880 INTERCHANGE DRIVE  
 HOUSTON, TX 77054  
 (713) 660-0901

**United Parcel Services**

**Certificate of Analysis Number:**  
02090122

**Report To:** BBL  
 Hugh Devery  
 975 Cobb Place Blvd. Suite 311  
  
 Kennesaw  
 GA  
 30144-  
 ph: (770) 428-9009 fax:

**Project Name:** UPS -BBL BTS#020903-DA-1  
**Site:** Oakland, CA  
**Site Address:**  
  
**PO Number:**  
**State:** California  
**State Cert. No.:** 01142CA  
**Date Reported:** 9/13/02

**Fax To:**

Client Sample ID	Lab Sample ID	Matrix	Date Collected	Date Received	COC ID	HOLD
MW-1	02090122-01	Water	9/3/02 12:10:00 PM	9/5/02 10:00:00 AM		<input type="checkbox"/>
MW-3	02090122-02	Water	9/3/02 12:45:00 PM	9/5/02 10:00:00 AM		<input type="checkbox"/>
TB 8/27/02	02090122-03	Water	9/3/02 10:25:00 AM	9/5/02 10:00:00 AM		<input checked="" type="checkbox"/>

9/13/02

Joni Blankfield  
 Project Manager

Date

Joel Grice  
 Laboratory Director  
  
 Ted Yen  
 Quality Assurance Officer



HOUSTON LABORATORY  
 8880 INTERCHANGE DRIVE  
 HOUSTON, TX 77054  
 (713) 660-0901

Client Sample ID MW-1 Collected: 09/03/2002 12:10 SPL Sample ID: 02090122-01

Site: Oakland, CA

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
<b>DIESEL RANGE ORGANICS</b>			<b>MCL</b>	<b>CA_DRO</b>	<b>Units: mg/L</b>		
Diesel Range Organics	38	0.5	10		09/09/02 15:23	AR	1310849
Surr. n-Pentacosane	104 %	20-150	10		09/09/02 15:23	AR	1310849

Prep Method	Prep Date	Prep Initials
SW3510C	09/06/2002 11:58	J_L

<b>VOLATILE ORGANICS BY MODIFIED 8260B</b>			<b>MCL</b>	<b>SW8260BMOD</b>	<b>Units: ug/L</b>		
Benzene	ND	0.5	1		09/11/02 21:05	DO	1314026
Ethylbenzene	ND	0.5	1		09/11/02 21:05	DO	1314026
Gasoline Range Organics	1200	50	1		09/11/02 21:05	DO	1314026
Methyl tert-butyl ether	ND	0.5	1		09/11/02 21:05	DO	1314026
Toluene	ND	0.5	1		09/11/02 21:05	DO	1314026
m&p-Xylene	ND	0.5	1		09/11/02 21:05	DO	1314026
o-Xylene	0.5	0.5	1		09/11/02 21:05	DO	1314026
Total Xylene	0.5	0.5	1		09/11/02 21:05	DO	1314026
Surr. Toluene d-8	89.7 %	70-130	1		09/11/02 21:05	DO	1314026

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)  
 B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution  
 \* - Surrogate Recovery Outside Advisable QC Limits MI - Matrix Interference  
 J - Estimated Value between MDL and PQL



HOUSTON LABORATORY  
 8880 INTERCHANGE DRIVE  
 HOUSTON, TX 77054  
 (713) 660-0901

Client Sample ID MW-3 Collected: 09/03/2002 12:45 SPL Sample ID: 02090122-02

Site: Oakland, CA

Analyses/Method	Result	Rep.Limit	Dil. Factor	QUAL	Date Analyzed	Analyst	Seq. #
<b>DIESEL RANGE ORGANICS</b>			<b>MCL</b>	<b>CA_DRO</b>	<b>Units: mg/L</b>		
Diesel Range Organics	14	0.25		5	09/09/02 16:02	AR	1310850
Surr: n-Pentacosane	56.6	% 20-150		5	09/09/02 16:02	AR	1310850

Prep Method	Prep Date	Prep Initials
SW3510C	09/06/2002 11:58	J.L

<b>VOLATILE ORGANICS BY MODIFIED 8260B</b>			<b>MCL</b>	<b>SW8260BMOD</b>	<b>Units: ug/L</b>		
Benzene	ND	0.5		1	09/11/02 21:34	DO	1314027
Ethylbenzene	ND	0.5		1	09/11/02 21:34	DO	1314027
Gasoline Range Organics	2300	50		1	09/11/02 21:34	DO	1314027
Methyl tert-butyl ether	ND	0.5		1	09/11/02 21:34	DO	1314027
Toluene	ND	0.5		1	09/11/02 21:34	DO	1314027
m&p-Xylene	ND	0.5		1	09/11/02 21:34	DO	1314027
o-Xylene	ND	0.5		1	09/11/02 21:34	DO	1314027
Total Xylene	ND	0.5		1	09/11/02 21:34	DO	1314027
Surr: Toluene d-8	91.6	% 70-130		1	09/11/02 21:34	DO	1314027

Qualifiers: ND/U - Not Detected at the Reporting Limit >MCL - Result Over Maximum Contamination Limit(MCL)  
 B - Analyte detected in the associated Method Blank D - Surrogate Recovery Unreportable due to Dilution  
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