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December 5, 2006

***VIA ALAMEDA COUNTY FTP SITE***

Mr. Don Hwang  
Alameda County Environmental Health  
1131 Harbor Bay Parkway, 2<sup>nd</sup> Floor  
Alameda, California 94502

Re: **Groundwater Monitoring Report – Third Quarter 2006**  
Douglas Parking Company  
1721 Webster Street  
Oakland, California  
ACEH File No. 4070

Dear Mr. Hwang:

On behalf of the Douglas Parking Company, Pangea Environmental Services, Inc., has prepared this *Groundwater Monitoring Report – Third Quarter 2006* for the above-referenced site. The report describes groundwater monitoring, sampling, and other site activities.

If you have any questions, please call me at (510) 435-8664.

Sincerely,  
**Pangea Environmental Services, Inc.**

Bob Clark-Riddell, P.E.  
Principal Engineer

Attachment: *Groundwater Monitoring Report – Third Quarter 2006*

cc: Mr. Lee Douglas, Douglas Parking Company, 1721 Webster Street, Oakland, California 94612 (2 copies)  
SWRCB Geotracker Database (electronic copy)

**PANGEA Environmental Services, Inc.**



## GROUNDWATER MONITORING REPORT – THIRD QUARTER 2006

**Douglas Parking Company  
1721 Webster Street  
Oakland, California  
File No. 4070**

**December 5, 2006**

*Prepared for:*

Mr. Lee Douglas  
1721 Webster Street  
Oakland, California 94612


*Prepared by:*

Pangea Environmental Services, Inc.  
1710 Franklin Street, Suite 200  
Oakland, California 94612

*Written by:*



  
Morgan Gillies  
Project Manager

  
Bob Clark-Riddell, P.E.  
Principal Engineer

**PANGEA Environmental Services, Inc.**

## INTRODUCTION

On behalf of the Douglas Parking Company, Pangea Environmental Services, Inc. (Pangea), performed groundwater monitoring and sampling during this quarter at the subject site (Figure 1). The purpose of the monitoring and sampling is to evaluate dissolved contaminant concentrations and the site groundwater flow direction. Current groundwater analytical results and elevation data are shown on Figure 2. Current and historical data are summarized on Table 1.

## SITE BACKGROUND

The site is located at 1721 Webster Street between 17th and 19th Streets in downtown Oakland, California (Figure 1). The site is located approximately five miles east of the San Francisco Bay and one half-mile west of Lake Merritt. The site is currently being utilized as a parking garage. The site is relatively flat with an elevation of approximately 30 feet (ft) above mean sea level, and is covered with concrete and asphalt.

There are several nearby former UST sites including Prentiss Properties northeast of the site located at 1750 Webster Street, a former gas station east of the site at 1700 Webster, and a former Chevron service station located approximately 400 feet southwest of the site, on the corner of 17<sup>th</sup> Street and Harrison Street.

On August 3 and 6, 1992, Parker Environmental Services removed one 1,000-gallon and two 500-gallon gasoline underground storage tanks (USTs) from the site. Up to 1,500 milligrams per kilogram (mg/kg) total petroleum hydrocarbons as gasoline (TPHg) and up to 12 mg/kg benzene were detected in the soil samples collected from the UST excavation.

Several investigations have been completed at the site. On July 8 and September 8, 1994, Gen Tech/Piers Environmental, Inc. (Gen Tech) of San Jose, California drilled six exploratory borings and installed three groundwater monitoring wells (MW-1 through MW-3). In February and May 1996, Cambria Environmental Technology (Cambria) of Emeryville, California advanced seven geoprobe soil borings and installed two groundwater monitoring wells (MW-4 and MW-5). On June 27, 2003 Cambria installed two additional offsite monitoring wells (MW-6 and MW-7).

Limited site remediation has been conducted at the site. In January 1998, Cambria installed ORC socks in well MW-2 to enhance the natural attenuation of dissolved-phase hydrocarbons. Dissolved oxygen (DO) concentrations *temporarily* increased in well MW-2 following the ORC sock installation. In February and March 1999, a total of 120 gallons of 7.5% hydrogen peroxide solution was added into monitoring wells MW-2 and MW-3 to oxidize hydrocarbons and also increase DO levels to enhance biodegradation of

dissolved-phase hydrocarbons. The hydrogen peroxide *temporarily* increased groundwater DO levels, but hydrocarbon concentrations remained at elevated levels. On March 4, 2003, Cambria installed a co-axial air sparging/soil vapor extraction well (SV-1/AS-1) and two angled air sparging wells (AS-2 and AS-3) to approximately 30 ft bgs (Figure 3). The wells were installed to facilitate feasibility testing and future site remediation.

Since 1994 the depth to groundwater at the site has ranged from approximately 18 ft to 21 ft bgs (Table 1). The groundwater elevations have ranged from approximately 10 and 12 ft above mean sea level, based on the well casing elevation resurveyed in July 2003. Groundwater flows consistently towards the northeast based on nine years of monitoring data.

## **GROUNDWATER MONITORING AND SAMPLING**

On July 6, 2006, Pangea conducted groundwater monitoring and sampling at the site. Site monitoring wells were gauged for depth to water and total well depth. Groundwater samples were obtained from monitoring wells MW-1 through MW-7 and from air sparge (AS) remediation wells AS-1 through AS-3. Sampling of AS wells was conducted to provide additional assessment of the lateral and vertical contaminant extent in the source area before remediation commences, and to assist with evaluation of future remediation efforts.

Before well purging, the dissolved oxygen (DO) concentration was measured in each well. DO was measured by lowering a downwell sensor to the approximate middle of the water column, and allowing the reading to stabilize during gentle height adjustment. Prior to sample collection approximately three casing volumes of water were purged using disposable bailers, an electric submersible pump, or a peristaltic pump. During well purging field technicians measured the pH, temperature and conductivity. A groundwater sample was collected from each well with a disposable bailer and decanted into the appropriate containers supplied by the analytic laboratory. Groundwater samples were labeled, placed in protective plastic bags, and stored on crushed ice at or below 4° C. All samples were transported under chain-of-custody to the State-certified analytical laboratory. Purge water was stored onsite in DOT-approved 55-gallon drums. Field data sheets are presented as Appendix A.

## **MONITORING RESULTS**

Groundwater elevation and analytical data are described below and summarized on Table 1 and Figure 2. Groundwater samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg) by modified United States Environmental Protection Agency (EPA) Method SW8015C, and benzene, toluene, ethylbenzene, and xylenes (BTEX) and methyl tertiary-butyl ether (MTBE) by EPA Method SW8021B by McCampbell

Analytical, Inc. of Pittsburg, California, a California-certified laboratory. Groundwater samples were also analyzed for several oxygenates and lead scavengers ethylene dibromide and 1,2-dichloroethane (1,2-DCA) by EPA Method 8260B. The laboratory analytical report is included as Appendix B.

### **Groundwater Flow Direction**

Based on depth-to-water measurements collected on July 6, 2006, groundwater beneath the site flowed toward the northeast with a gradient of approximately 0.007 feet per foot (Figure 2). The groundwater flow conditions observed during the third quarter 2006 are consistent with historical site conditions.

### **Hydrocarbon and MTBE Distribution in Groundwater**

Most monitoring wells continued to exhibit an overall stable or decreasing trend for TPHg and BTEX concentrations, although benzene concentrations are slightly increasing in downgradient well MW-4. Consistent with historical trends, groundwater analytical results indicate that gasoline-range hydrocarbons concentrations are greatest in well MW-2, located approximately 20 feet downgradient of the former USTs (Table 1). The chemical concentrations detected this quarter in source area well MW-2 were 28,000 µg/L TPHg and 1,900 µg/L benzene. Lower concentrations were detected in nearby wells MW-3, MW-4 and MW-6. No hydrocarbons were detected in perimeter wells MW-1, MW-5 and MW-7.

Hydrocarbon concentrations were also elevated in source area remediation well AS-1, located in the center of the former USTs and screened from approximately 27 to 30 ft below grade surface (bgs). The detected benzene concentration of 2,700 µg/L in well AS-1 is greater than the maximum benzene concentration (1,900 µg/L, MW-2) detected in site groundwater wells. (Nearby well MW-2 is screened from approximately 19.5 to 29.5 bgs). Significantly lower concentrations were detected in AS-2, and no hydrocarbons were detected in AS-3. Dissolved oxygen concentrations in groundwater monitoring wells ranged from 0.21 mg/L (MW-5) to 0.88 mg/L (MW-1). Dissolved oxygen concentrations in the AS wells ranged from 0.38 mg/L (AS-2) to 0.55 mg/L (AS-3).

### **Distribution of Oxygenates and Lead Scavengers in Groundwater**

EPA Method 8260 analytical are summarized on Table 2 and included in Appendix B. No analytes were detected above method reporting limits, except for 1,2-DCA in wells MW-2 and AS-1 at relatively low concentrations of 6.8 µg/L and 22 µg/L, respectively. MTBE was not detected above reporting limits in any of the wells monitored this quarter and is not a compound of concern at this site.

## **OTHER SITE ACTIVITIES**

### **Groundwater Monitoring**

Pangea will continue quarterly groundwater monitoring and sampling at the site in accordance with the approved sampling frequency. Well MW-1 will be monitored annually during the first quarter of each year. Due to the lack of detected oxygenates and relatively low concentrations of 1,2-DCA, Pangea will discontinue sample analysis for oxygenates and lead scavengers. All wells will be gauged for depth to water. All groundwater samples will be analyzed for TPHg and BTEX by EPA Method 8015Cm/8021B.

### **Interim Remedial Action**

Pangea is currently obtaining permits required to install and operate the soil vapor extraction and air sparge system. Pangea anticipates system startup during the beginning of the second quarter of 2007.

## **ELECTRONIC REPORTING**

This report will be submitted to the ACEH via upload to the County's ftp site. Applicable data, maps, and reports for groundwater monitoring and other activities will be uploaded to the State Water Control Board's Geotracker database. As requested, report hard copies will no longer be provided to the local agencies.

## **ATTACHMENTS**

Figure 1 – Site Vicinity Map

Figure 2 – Groundwater Elevation Contour and Hydrocarbon Concentration Map

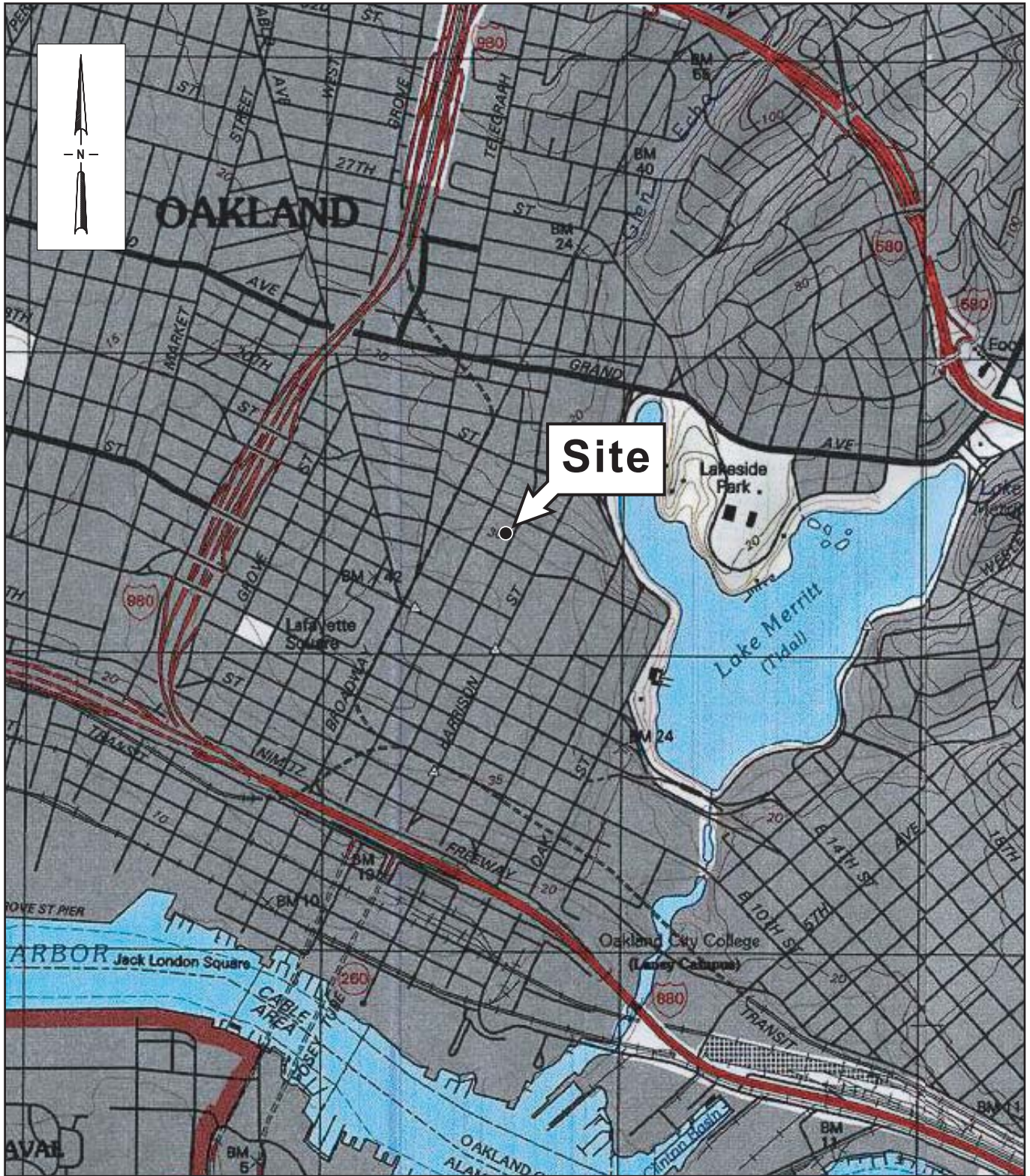
Figure 3 – Cross Section of Remediation Wells

Table 1 – Groundwater Elevation and Analytical Data

Table 2 – Dissolved-Phase Concentrations of Fuel Oxygenates and Lead Scavengers

Appendix A – Groundwater Monitoring Field Data Sheets

Appendix B – Laboratory Analytical Report



SOURCE: TOPOI MAPS



SCALE : 1" = 1/4 MILE

Figure




1

Vicinity Map

**Douglas Parking Facility**  
 1721 Webster Street  
 Oakland, California





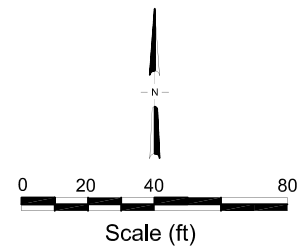
**EXPLANATION**

- MW-1  Monitoring well locations
- SV-1/AS-1  Remediation well locations; SV-1, AS-1, AS-2, and AS-3 in same well vault
-  Wells AS-2 and AS-3 installed at angle, screened at approximately 27-30 feet bgs
- |         |
|---------|
| Well ID |
| ELEV    |
| TPHg    |
| Benzene |
| MTBE    |

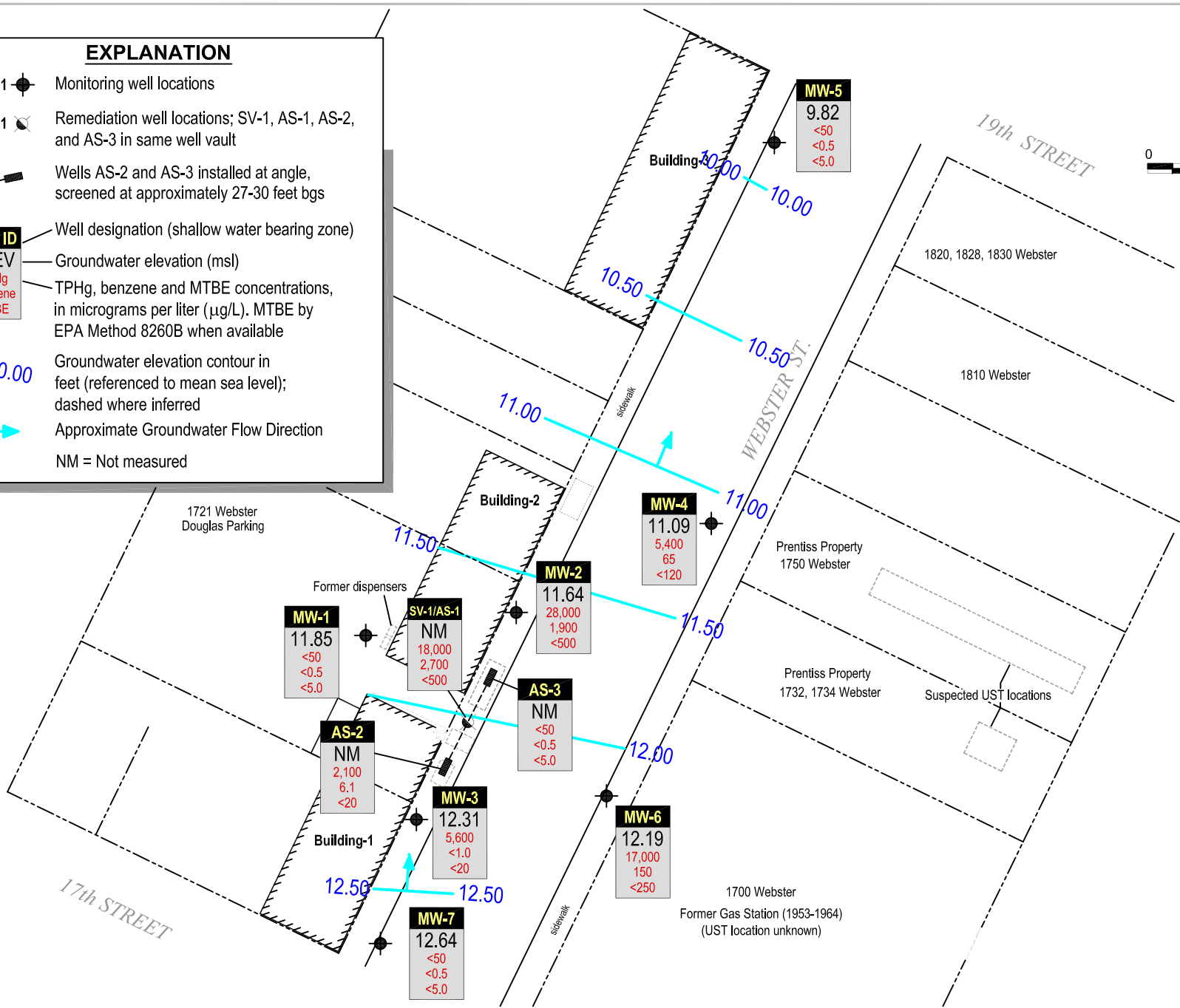
 Well designation (shallow water bearing zone)
- |         |
|---------|
| ELEV    |
| TPHg    |
| Benzene |
| MTBE    |

 Groundwater elevation (msl)
- |         |
|---------|
| TPHg    |
| Benzene |
| MTBE    |

 TPHg, benzene and MTBE concentrations, in micrograms per liter (µg/L). MTBE by EPA Method 8260B when available
-  10.00 Groundwater elevation contour in feet (referenced to mean sea level); dashed where inferred
-  Approximate Groundwater Flow Direction
- NM = Not measured



Base map from Piers Environmental Services and Cambria Environmental Technology, Inc.



**Figure 2**

**Douglas Parking**  
1721 Webster Street  
Oakland, California



**Groundwater Elevation and Hydrocarbon Concentration Map**  
July 6, 2006

9006281.001



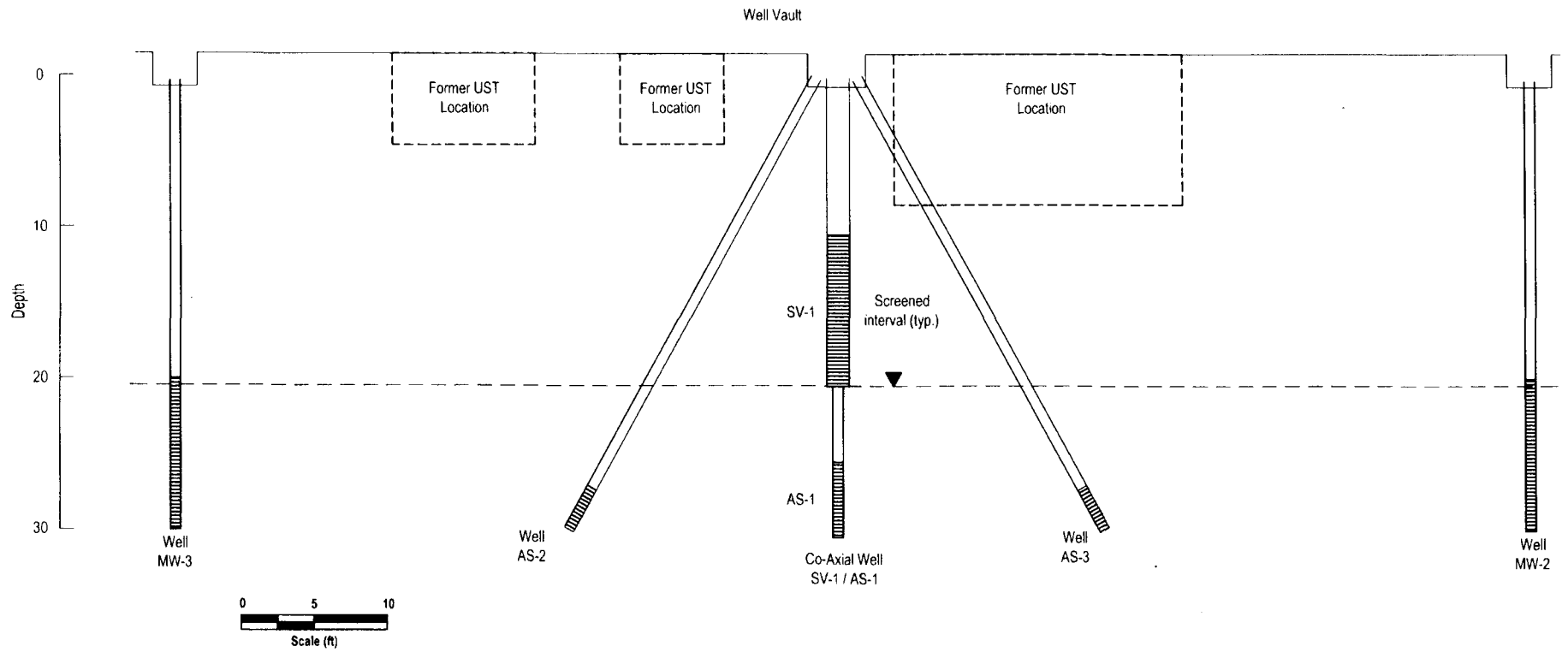


Figure  
3

Douglas Parking  
1721 Webster Street  
Oakland, California



Cross Section of Remediation Wells  
SV-1/AS-1, AS-2, and AS-3

# Pangea

**Table 1 - Groundwater Elevation and Analytical Data- Douglas Parking Company, 1721 Webster Street, Oakland, California**

Boring Well ID <i>TOC</i>	Date	Depth to Water (ft)	Groundwater Elevation (ft amsl)	←----- (µg/L) -----→						Dissolved Oxygen mg/L
				TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	
MW-1	12/2/1994	19.42	9.83	ND	ND	ND	ND	ND	--	--
<i>29.25</i>	3/6/1995	20.69	9.04	ND	ND	ND	ND	ND	--	--
<i>29.73</i>	7/11/1995	20.65	9.16	ND	ND	ND	ND	ND	--	--
<i>29.81</i>	5/10/1996	20.80	9.01	ND	ND	ND	ND	ND	--	--
	10/2/1996	21.35	8.46	--	--	--	--	--	--	--
	2/28/1997	20.57	9.24	--	--	--	--	--	--	--
	9/16/1997	21.50	8.31	--	--	--	--	--	--	--
	2/5/1998	20.91	8.90	--	--	--	--	--	--	1.90
	8/11/1998	20.50	9.31	--	--	--	--	--	--	0.06
	2/8/1999	21.42	8.39	--	--	--	--	--	--	6.00
	2/24/1999	22.99	6.82	--	--	--	--	--	--	2.00
	3/3/1999	20.84	8.97	--	--	--	--	--	--	3.80
	3/10/1999	20.89	8.92	--	--	--	--	--	--	3.40
	3/17/1999	20.84	8.97	--	--	--	--	--	--	2.80
	5/4/1999	20.80	9.01	--	--	--	--	--	--	3.50
	7/20/1999	21.25	8.56	--	--	--	--	--	--	3.07
	10/5/1999	21.37	8.44	--	--	--	--	--	--	5.40
	1/7/2000	21.65	8.16	--	--	--	--	--	--	2.10
	4/6/2000	21.05	8.76	<50	<0.5	<0.5	<0.5	<0.5	<5.0	3.90
	7/31/2000	21.13	8.68	--	--	--	--	--	--	1.80
	10/3/2000	21.69	8.12	--	--	--	--	--	--	1.42
	1/12/2001	22.00	7.81	--	--	--	--	--	--	0.68
	4/11/2001	22.16	7.65	--	--	--	--	--	--	0.51
	7/6/2001	22.57	7.24	--	--	--	--	--	--	--
	10/25/2001	22.71	7.10	--	--	--	--	--	--	--
	3/4/2002	22.53	7.28	--	--	--	--	--	--	--
	4/18/2002	22.81	7.00	--	--	--	--	--	--	--
	7/9/2002	22.95	6.86	--	--	--	--	--	--	--
	10/4/2002	23.13	6.68	--	--	--	--	--	--	--
	1/12/2003	22.05	7.76	--	--	--	--	--	--	--
	4/21/2003	21.17	8.64	--	--	--	--	--	--	--
<i>32.75</i>	7/21/2003	21.39	11.36	--	--	--	--	--	--	--
	10/2/2003	21.64	11.11	--	--	--	--	--	--	--
	1/15/2004	21.10	11.65	--	--	--	--	--	--	--
	4/5/2004	21.20	11.55	--	--	--	--	--	--	--
	8/9/2004	22.97	9.78	--	--	--	--	--	--	--
	10/7/2004	23.55	9.20	--	--	--	--	--	--	--
	2/7/2005	20.90	11.85	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
	4/5/2005	20.60	12.15	--	--	--	--	--	--	--
	7/6/2005	20.66	12.09	--	--	--	--	--	--	--
	10/10/2005	21.16	11.59	--	--	--	--	--	--	--
	1/26/2006	20.73	12.02	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
	4/10/2006	20.05	12.70	--	--	--	--	--	--	--
	<b>7/6/2006</b>	<b>20.90</b>	<b>11.85</b>	<b>&lt;50</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;5.0</b>	<b>0.88</b>
MW-2	12/2/1994	19.50	7.60	61,300	3,000	3,900	160	4,500	-	--
<i>27.10</i>	3/6/1995	18.49	8.61	98,000	8,400	16,000	2,000	2,600	-	--
<i>27.40</i>	7/11/1995	18.45	8.95	38,000	3,100	7,500	940	3,700	-	--
	5/10/1996	18.56	8.84	63,000	7,400	16,000	1,500	6,000	-	--
	10/2/1996	19.15	8.25	21,000	2,200	3,400	430	1,600	-	--
	2/28/1997	18.43	8.97	39,000	4,700	9,600	950	4,200	ND	--
	9/16/1997	19.26	8.14	29,000	3,300	5,800	690	2,900	<620	--
	2/5/1998	18.66	8.74	10,000	1,000	2,000	170	860	<330	7.90
	8/11/1998	18.41	8.99	12,000	1,200	2,300	260	1,400	300	5.40
	2/8/1999	19.84	7.56	5,500	740	1,200	150	780	60	3.70

# Pangea

Table 1 - Groundwater Elevation and Analytical Data- Douglas Parking Company, 1721 Webster Street, Oakland, California

Boring Well ID	Date	Depth to Water (ft)	Groundwater Elevation (ft amsl)	Groundwater Concentrations (µg/L)						Dissolved Oxygen (mg/L)
				TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	
MW-2	2/17/1999	18.94	8.46	--	--	--	--	--	--	>20
<i>(cont'd)</i>	2/24/1999	20.76	6.64	--	--	--	--	--	--	>20
	3/3/1999	18.55	8.85	--	--	--	--	--	--	>20
	3/10/1999	20.74	6.66	--	--	--	--	--	--	>20
	3/17/1999	18.57	8.83	--	--	--	--	--	--	>20
	5/4/1999	18.55	8.85	90,000	9,200	21,000	1,600	10,000	560	3.20
	7/20/1999	18.98	8.42	28,000	2,100	3,700	900	4,200	<860	0.64
	10/5/1999	19.10	8.30	11,000	870	180	30	1,400	<110	0.58
	1/7/2000	19.41	7.99	15,000	1,300	2,100	440	1,800	<14	0.94
	4/6/2000	18.80	8.60	17,000	1,800	3,100	500	2,200	<50	0.64
	7/31/2000	18.87	8.53	17,000	1,500	2,700	430	2,100	<200	0.50
	10/3/2000	19.45	7.95	27,000	2,500	4,000	660	2,900	<50	0.16
	1/12/2001	19.80	7.60	25,000	2,700	4,100	670	3,000	<200	0.35
	4/11/2001	20.03	7.37	97,000	9,500	21,000	2,200	7,900	<200	--
	7/6/2001	20.19	7.21	3,500	500	150	11	420	<5.0	--
	10/25/2001	20.35	7.05	3,800	620	230	70	400	<50	--
	3/4/2002	20.37	7.03	46,000	7,300	12,000	870	3,200	<500	--
	4/18/2002	20.15	7.25	68,000	5,100	8,900	1,100	4,000	<1,000	--
	7/9/2002	21.09	6.31	1,000	200	8.9	0.67	82	<10	--
	10/4/2002	21.28	6.12	270	100	3.4	0.53	10	<5.0	--
	1/12/2003	20.59	6.81	67,000	7,600	13,000	1,400	5,600	<500	--
	4/21/2003	19.98	7.42	78,000	7,700	12,000	1,900	6,900	<500	--
<i>30.40</i>	7/21/2003	20.08	10.32	1,800	360	16	<5.0	190	<50	--
	10/2/2003	20.41	9.99	4,000	790	110	60	350	<50	--
	1/15/2004	19.93	10.47	8,100	6.1	23	44	530	<50	--
	4/5/2004	18.99	11.41	14,000	1,600	2,100	550	2,500	<500	--
	8/9/2004	19.79	10.61	1,200	210	16	14	100	<20	--
	10/7/2004	20.26	10.14	1,100	2.3	9.8	2.9	36	<5.0	--
	2/7/2005	18.80	11.60	45,000	4,400	4,800	1,400	5,800	<200	--
	4/5/2005	18.40	12.00	34,000	3,700	3,600	1,200	5,300	<500 (<5.0)	--
	7/6/2005	18.48	11.92	24,000	1,600	1,700	570	2,800	<500	--
	10/10/2005	19.00	11.40	25,000	1,700	2,100	710	3,200	<500	--
	1/26/2006	18.58	11.82	60,000	4,600	7,200	1,600	6,900	<1,000	--
	4/10/2006	17.84	12.56	56,000	4,900	7,500	1,200	7,400	<500	--
	<b>7/6/2006</b>	<b>18.76</b>	<b>11.64</b>	<b>28,000</b>	<b>1,900</b>	<b>1,700</b>	<b>720</b>	<b>2,900</b>	<b>&lt;500</b>	<b>0.25</b>
MW-3	12/2/1994	22.15	7.35	394,000	1,200	ND	1,800	4,000	-	--
<i>29.50</i>	3/6/1995	20.09	9.16	21,000	400	150	24	62	-	--
<i>29.25</i>	7/11/1995	19.99	9.57	12,000	ND	10	16	99	-	--
<i>29.56</i>	5/10/1996	20.24	9.32	8,600	ND	7.6	16	84	-	--
	10/2/1996	20.90	8.66	11,000	ND	7.4	19	92	-	--
	2/28/1997	20.12	9.44	6,000	ND	4.4	17	88	50	--
	9/16/1997	20.97	8.59	6,500	<0.5	0.69	1.2	6.7	<5.0	--
	2/5/1998	20.39	9.17	5,400	<0.5	6.3	15	86	<63	1.90
	8/11/1998	19.95	9.61	2,700	<0.5	3.5	3.2	12	<10	0.05
	2/8/1999	20.58	8.98	6,100	<0.5	8.1	18	80	<140	2.20
	2/17/1999	20.53	9.03	--	--	--	--	--	--	>20
	2/24/1999	22.53	7.03	--	--	--	--	--	--	>20
	3/3/1999	20.28	9.28	--	--	--	--	--	--	>20
	3/10/1999	22.45	7.11	--	--	--	--	--	--	>20
	3/17/1999	20.26	9.30	--	--	--	--	--	--	>20
	5/4/1999	20.24	9.32	11,000	<2	<2	9.8	140	<10	3.10
	7/20/1999	20.68	8.88	11,000	<0.5	3.1	13	88	<80	0.75
	10/5/1999	20.81	8.75	31,000	62	<0.5	21	170	<90	0.68
	1/7/2000	21.09	8.47	13,000	<0.5	<2	21	140	<80	1.96

# Pangea

**Table 1 - Groundwater Elevation and Analytical Data- Douglas Parking Company, 1721 Webster Street, Oakland, California**

Boring Well ID	Date	Depth to Water (ft)	Groundwater Elevation (ft amsl)	TPHg	Benzene	Toluene	Ethylbenzene			Xylenes	MTBE	Dissolved Oxygen mg/L
							(µg/L)					
MW-3	4/6/2000	20.48	9.08	5,300	1.5	1.4	9.8	60	<30	<5.0	4.15	
<i>(cont'd)</i>	7/31/2000	20.62	8.94	7,100	3.5	1.0	12	66	<5.0	<5.0	0.35	
	10/3/2000	21.13	8.43	8,000	<0.5	3.3	11	70	<40	<40	3.66	
	1/12/2001	21.45	8.11	11,000	4.3	6.7	11	73	<70	<70	0.35	
	4/11/2001	21.69	7.87	10,000	<0.5	<0.5	11	65	<10	<10	--	
	7/6/2001	21.60	7.96	13,000	5.3	1.6	11	58	<5.0	<5.0	--	
	10/25/2001	21.70	7.86	11,000	<0.5	3.0	15	70	<10	<10	--	
	3/4/2002	21.65	7.91	1,900	1.3	0.8	<0.5	15	<5.0	<5.0	--	
	4/18/2002	21.77	7.79	1,500	1.0	0.97	1.3	5.8	<5	<5	--	
	7/9/2002	22.03	7.53	13,000	6.8	5.7	13	59	<90	<90	--	
	10/4/2002	22.15	7.41	8,400	<10	<10	<10	42	<100	<100	--	
	1/12/2003	21.13	8.43	9,000	9.5	5.1	8.5	46	<90	<90	--	
	4/21/2003	20.63	8.93	10,000	<5.0	<5.0	8.5	32	<50	<50	--	
32.56	7/21/2003	20.68	11.88	9,600	<2.5	<2.5	7.4	39	48 (<1.0)	<1.0	--	
	10/2/2003	20.99	11.57	12,000	<5.0	<5.0	10	40	<90	<90	--	
	1/15/2004	20.74	11.82	13,000	37	41	78	930	<50	<50	--	
	4/5/2004	20.59	11.97	4,500	<1.7	<1.7	<1.7	12	<17	<17	--	
	8/9/2004	22.18	10.38	2,100	<1.0	3.7	<1.0	8.1	<10	<10	--	
	10/7/2004	22.79	9.77	2,400	6.5	26	7.5	89	<15	<15	--	
	2/7/2005	20.35	12.21	6,800	2.2	5.6	2.0	12	<30	<30	--	
	4/5/2005	19.95	12.61	6,100	2.3	2.6	1.3	8.3	<45 (<0.5)	<0.5	--	
	7/6/2005	19.93	12.63	4,500	<1.0	1.5	1.0	8.3	<10	<10	--	
	10/10/2005	20.45	12.11	3,800	0.73	<0.5	0.98	5.7	<15	<15	--	
	1/26/2006	20.05	12.51	5,100	<0.5	1.1	<0.5	6.6	<15	<15	--	
	4/10/2006	19.39	13.17	1,900	0.55	1.6	0.51	4.1	<10	<10	--	
	<b>7/6/2006</b>	<b>20.25</b>	<b>12.31</b>	<b>5,600</b>	<b>&lt;1.0</b>	<b>2.3</b>	<b>&lt;1.0</b>	<b>6.4</b>	<b>&lt;20</b>	<b>&lt;20</b>	<b>0.73</b>	
MW-4	5/10/1996	16.98	8.31	14,000	ND	1,200	720	3,100	-	-	--	
25.29	10/2/1996	17.65	7.64	12,000	ND	650	580	2,200	-	-	--	
	2/28/1997	16.80	8.49	13,000	ND	1,100	750	2,700	110	110	--	
	9/17/1997	17.93	7.36	13,000	<2.5	820	750	2,900	<190	<190	--	
	2/5/1998	16.78	8.51	13,000	<1.0	690	690	2,900	<170	<170	2.10	
	8/11/1998	16.59	8.70	15,000	<5	360	520	1,900	280	280	2.80	
	2/8/1999	17.10	8.19	9,800	<5	680	770	2,200	300	300	1.80	
	2/24/1999	18.95	6.34	-	-	-	-	-	-	-	2.20	
	3/3/1999	16.80	8.49	-	-	-	-	-	-	-	4.60	
	3/10/1999	16.86	8.43	-	-	-	-	-	-	-	3.70	
	3/17/1999	16.82	8.47	-	-	-	-	-	-	-	4.30	
	5/4/1999	16.86	8.43	11,000	46	600	620	1,900	<100	<100	4.10	
	7/20/1999	17.30	7.99	13,000	<0.5	470	7.0	2,000	<150	<150	0.38	
	10/5/1999	17.43	7.86	18,000	4.4	720	800	2,100	<120	<120	0.71	
	1/7/2000	17.78	7.51	18,000	<2	930	990	2,700	<30	<30	0.98	
	4/6/2000	17.17	8.12	8,000	31	390	530	1,300	<10	<10	1.33	
	7/31/2000	17.21	8.08	6,200	13	170	460	850	<10	<10	0.50	
	10/3/2000	18.00	7.29	14,000	42	820	730	2,000	<50	<50	0.54	
	1/12/2001	18.20	7.09	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	0.39	
	4/11/2001	18.31	6.98	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	--	
	7/6/2001	18.35	6.94	470	2.3	1.6	0.81	43	<5.0	<5.0	--	
	10/25/2001	18.47	6.82	110	0.70	<0.5	<0.5	3.3	<5.0	<5.0	--	
	3/4/2002	18.43	6.86	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	--	
	4/18/2002	18.61	6.68	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	--	
	7/9/2002	19.50	5.79	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	--	
	10/4/2002	19.83	5.46	310	2.0	2.9	13	16	<0.5	<0.5	--	
	1/12/2003	19.07	6.22	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	--	
	4/21/2003	18.71	6.58	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	--	
28.29	7/21/2003	18.81	9.48	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	--	

# Pangea

**Table 1 - Groundwater Elevation and Analytical Data- Douglas Parking Company, 1721 Webster Street, Oakland, California**

Boring Well ID TOC	Date	Depth to Water (ft)	Groundwater Elevation (ft amsl)	TPHg	Benzene	Toluene	Ethylbenzene			Xylenes	MTBE	Dissolved Oxygen mg/L
							(µg/L)					
MW-4	10/2/2003	19.02	9.27	59	0.78	<0.5	1.1	0.91	<5.0	<5.0	--	
(cont'd)	1/15/2004	18.68	9.61	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	--	
	4/5/2004	17.41	10.88	6,200	29	250	450	730	<100	<5.0	--	
	8/9/2004	19.07	9.22	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	--	
	10/7/2004	19.65	8.64	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	--	
	2/7/2005	17.21	11.08	8,700	48	340	550	720	<100	<5.0	--	
	4/5/2005	16.78	11.51	6,900	27	290	520	660	<170 (<0.5)	<5.0	--	
	7/6/2005	16.98	11.31	5,600	<5.0	130	470	480	<50	<5.0	--	
	10/10/2005	17.59	10.70	6,300	23	78	530	430	<50	<5.0	--	
	1/26/2006	17.08	11.21	5,600	41	68	400	290	<120	<5.0	--	
	4/10/2006	16.27	12.02	2,900	39	32	200	140	<60	<5.0	--	
	<b>7/6/2006</b>	<b>17.20</b>	<b>11.09</b>	<b>5,400</b>	<b>65</b>	<b>59</b>	<b>340</b>	<b>150</b>	<b>&lt;120</b>	<b>&lt;5.0</b>	<b>0.60</b>	
	MW-5	5/10/1996	14.60	7.37	ND	ND	ND	ND	ND	-	-	--
	21.97	10/2/1996	15.25	6.72	ND	ND	ND	ND	ND	-	-	--
2/28/1997		14.31	7.66	ND	ND	ND	ND	ND	ND	ND	--	
9/17/1997		15.18	6.79	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	--	
2/5/1998		13.64	8.33	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	2.80	
8/11/1998		13.92	8.05	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	0.05	
2/8/1999		14.19	7.78	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	3.00	
2/24/1999		16.18	5.79	-	-	-	-	-	-	-	4.90	
3/3/1999		14.23	7.74	-	-	-	-	-	-	-	3.40	
3/10/1999		14.32	7.65	-	-	-	-	-	-	-	3.60	
3/17/1999		14.25	7.72	-	-	-	-	-	-	-	3.90	
5/4/1999		14.41	7.56	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	3.20	
7/20/1999		14.44	7.53	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	0.99	
10/5/1999		14.79	7.18	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	1.52	
1/7/2000*		15.23	6.74	-	-	-	-	-	-	-	--	
4/6/2000		14.74	7.23	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	1.67	
7/31/2000		14.52	7.45	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	2.55	
10/3/2000		15.37	6.60	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	1.51	
1/12/2001		15.70	6.27	6,400	13	290	450	1,100	<40	<5.0	0.71	
4/11/2001		15.78	6.19	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	--	
7/6/2001		15.97	6.00	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	--	
10/25/2001		16.05	5.92	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	--	
3/4/2002		16.21	5.76	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	--	
4/18/2002		16.59	5.38	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	--	
7/9/2002		16.94	5.03	170	1.0	0.65	2.1	4.0	<15	<5.0	--	
10/4/2002	17.14	4.83	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	--		
1/12/2003	16.58	5.39	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	--		
4/21/2003	15.90	6.07	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	--		
24.99	7/21/2003	16.03	8.96	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	--	
	10/2/2003	16.33	8.66	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	--	
	1/15/2004	16.21	8.78	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	--	
	4/5/2004	15.01	9.98	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	--	
	8/9/2004	16.85	8.14	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	--	
	10/7/2004	17.48	7.51	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	--	
	2/7/2005	16.52	8.47	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	--	
	4/5/2005	14.45	10.54	<50	<0.5	<0.5	<0.5	<0.5	<5.0 (<0.5)	<5.0	--	
	7/6/2005	14.85	10.14	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	--	
	10/10/2005	15.44	9.55	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	--	
	1/26/2006	14.96	10.03	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	--	
	4/10/2006	14.01	10.98	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<5.0	--	
<b>7/6/2006</b>	<b>15.17</b>	<b>9.82</b>	<b>&lt;50</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;5.0</b>	<b>0.21</b>		

# Pangea

**Table 1 - Groundwater Elevation and Analytical Data- Douglas Parking Company, 1721 Webster Street, Oakland, California**

Boring Well ID TOC	Date	Depth to Water (ft)	Groundwater Elevation (ft amsl)	TPHg	Benzene	Toluene	Ethylbenzene			Xylenes	MTBE	Dissolved Oxygen mg/L
							(µg/L)					
MW-6 30.99	6/30/2003	19.60	11.39	68,000	950	6,000	2,400	10,000	<1,000	--		
	7/21/2003	19.67	11.32	120,000	170	1,400	1,100	10,000	<1,000	--		
	10/2/2003	19.97	11.02	16,000	7.6	200	38	1,800	<100	--		
	1/15/2004	19.55	11.44	14,000	48	51	94	1,100	<50	--		
	4/5/2004	19.17	11.82	24,000	180	900	430	1,800	<500	--		
	8/9/2004	20.98	10.01	5,300	6.4	25	5.3	69	<17 (<0.5)	--		
	10/7/2004	21.52	9.47	5,600	11	58	18	210	<50 (<0.5)	--		
	2/7/2005	19.00	11.99	31,000	120	620	310	1,200	<500	--		
	4/5/2005	18.60	12.39	21,000	170	1,100	350	1,300	<500 (<5.0)	--		
	7/6/2005	18.56	12.43	26,000	130	920	320	1,200	<500	--		
	10/10/2005	19.99	11.00	19,000	140	840	250	980	<500	--		
	1/26/2006	18.70	12.29	10,000	140	1,100	270	1,200	<170	--		
	4/10/2006	18.04	12.95	13,000	140	1,000	280	1,000	<250	--		
	<b>7/6/2006</b>	<b>18.80</b>	<b>12.19</b>	<b>17,000</b>	<b>150</b>	<b>1,000</b>	<b>290</b>	<b>1,000</b>	<b>&lt;250</b>	<b>0.23</b>		
MW-7 33.11	6/30/2003	21.40	11.71	170	<0.5	2.1	2.0	8.7	<5.0	--		
	7/21/2003	21.44	11.67	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--		
	10/2/2003	21.73	11.38	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--		
	1/15/2004	21.57	11.54	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--		
	4/5/2004	20.84	12.27	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--		
	8/9/2004	22.68	10.43	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--		
	10/7/2004	23.27	9.84	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--		
	2/7/2005	20.60	12.51	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--		
	4/5/2005	20.22	12.89	<50	<0.5	0.75	<0.5	<0.5	<5.0 (<0.5)	--		
	7/6/2005	20.25	12.86	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--		
	10/10/2005	20.70	12.41	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--		
	1/26/2006	20.32	12.79	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--		
	4/10/2006	19.62	13.49	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--		
<b>7/6/2006</b>	<b>20.47</b>	<b>12.64</b>	<b>&lt;50</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;5.0</b>	<b>0.59</b>			
AS-1	<b>7/6/2006</b>	<b>19.53</b>	--	<b>18,000</b>	<b>2,700</b>	<b>570</b>	<b>700</b>	<b>1,900</b>	<b>&lt;500</b>	<b>0.51</b>		
AS-2	<b>7/6/2006</b>	<b>22.26</b>	--	<b>2,100</b>	<b>6.1</b>	<b>&lt;0.5</b>	<b>33</b>	<b>200</b>	<b>&lt;20</b>	<b>0.38</b>		
AS-3	<b>7/6/2006</b>	<b>21.77</b>	--	<b>&lt;50</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;5.0</b>	<b>0.55</b>		
Trip Blank	01/12/01	-	-	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--		
	4/11/2001	-	-	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--		
	7/6/2001	-	-	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--		
	3/4/2002	-	-	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--		
	10/2/2003	-	-	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--		

**Notes and Abbreviations:**

TOC = Top of casing elevations in feet above mean sea level

ft amsl = Measured in feet above mean sea level

µg/L = Micrograms per liter

TPHg = Total petroleum hydrocarbons as gasoline by modified EPA Method 8015C

Benzene, toluene, ethylbenzene, and xylenes by EPA Method 8021B

MTBE = Methyl tertiary butyl ether by EPA Method 8021B, and by EPA Method 8260 in parenthesis

<n = Concentration not detected above laboratory reporting limit of n

ND = Not detected

-- = Not available, not analyzed, or does not apply

Data prior to 7/11/95 is from Gen Tech and Piers Environmental Quarterly Groundwater Monitoring Reports dated December 2, 1994 and March 6, 1995, respectively.

Sampling is no longer required in well MW-1 per September 17, 1996, ACDEH letter to Douglas Parking.

On July 31, 2003, Virgil Chavez Land Surveying of Vallejo, California surveyed monitoring wells using a benchmark in the top of the curb near the SW return of the NW corner of 34th and Broadway.

# Pangea

**Table 2 - Dissolved-Phase Concentrations of Fuel Oxygenates and Lead Scavengers.**  
Douglas Parking Company, 1721 Webster Street, Oakland, California

Well ID	Date	TAME (µg/L)	TBA (µg/L)	EDB (µg/L)	1,2-DCA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	MTBE (µg/L)	Ethanol (µg/L)
MW-1	7/6/2006	<0.5	<5.0	<0.5	<0.5	<0.5	<0.5	<0.5	--
MW-2	4/5/2005	<5.0	<5.0	<5.0	11	<5.0	<5.0	<5.0	<500
	7/6/2006	<5.0	<5.0	<5.0	6.8	<5.0	<5.0	<5.0	--
MW-3	4/5/2005	<0.5	<5.0	<0.5	<0.5	<0.5	<0.5	<0.5	<50
	7/6/2006	<0.5	<5.0	<0.5	<0.5	<0.5	<0.5	<0.5	<50
MW-4	4/5/2005	<0.5	<5.0	<0.5	<0.5	<0.5	<0.5	<0.5	<50
	7/6/2006	<0.5	<5.0	<0.5	<0.5	<0.5	<0.5	<0.5	<50
MW-5	4/5/2005	<0.5	<5.0	<0.5	<0.5	<0.5	<0.5	<0.5	<50
	7/6/2006	<0.5	<5.0	<0.5	<0.5	<0.5	<0.5	<0.5	<50
MW-6	4/5/2005	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<500
	7/6/2006	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	--
MW-7	4/5/2005	<0.5	<5.0	<0.5	<0.5	<0.5	<0.5	<0.5	<50
	7/6/2006	<5.0	<5.0	<5.0	<0.5	<5.0	<5.0	<5.0	--
AS-1	7/6/2006	<5.0	<5.0	<5.0	22	<5.0	<5.0	<5.0	--
AS-2	7/6/2006	<5.0	<5.0	<5.0	<0.5	<5.0	<5.0	<5.0	--
AS-3	7/6/2006	<5.0	<5.0	<5.0	<0.5	<5.0	<5.0	<5.0	--

**Notes and Abbreviations:**

µg/L = Micrograms per liter

<n = Not detected in sample above n µg/L

TAME = Tertiary-amyl methyl ether

TBA = Tertiary-Butyl alcohol

EDB = Ethylene dibromide

1,2-DCA = 1,2-Dichloroethane

DIPE = Diisopropyl ether

ETBE = Ethyl tertiary-butyl ether

MTBE = Methyl tertiary butyl ether


-- = Not available, not analyzed, or does not apply

## **APPENDIX A**

Groundwater Monitoring Field Data Sheets



**Well Gauging Data Sheet**

Project Task #: 1135.001 208				Project Name: Douglas Parking			
Address: 1721 Webster Street Oakland, CA						Date: 7/6/06	
Name: Sanjiv Gill				Signature: 			
Well ID	Well Size (in.)	Time	Depth to Immiscible Liquid (ft)	Thickness of Immiscible Liquid (ft)	Depth to Water (ft)	Total Depth (ft)	Measuring Point
MW-1	2"	7:00			20.90	26.65	TOC
MW-2		2:30			18.76	25.95	TOC
MW-3		2:25			20.25	26.90	TOC
MW-4		2:20			17.20	29.42	TOC
MW-5		2:00			15.17	24.50	TOC
MW-6		2:27			18.80	25.79	TOC
MW-7		1:55			20.47	28.46	TOC
AS-1	1"	2:15			19.53	30.18	TOC
AS-2	2"	2:10			22.26	33.02	TOC
AS-3	2"	2:05			21.77	33.85	TOC

Comments:

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## MONITORING FIELD DATA SHEET

Well ID: *MW-1*

Project Task #: 1135.001 208		Project Name: Douglas Parking	
Address: 1721 Webster Street Oakland, CA			
Date: <i>7-6-06</i>		Weather: <i>Clear</i>	
Well Diameter: <i>2''</i>		Volume/ft. $1'' = 0.04$ $3'' = 0.37$ $6'' = 1.47$ $2'' = 0.16$ $4'' = 0.65$ radius <sup>2</sup> * 0.163	
Total Depth (TD): <i>26.65</i>		Depth to Product:	
Depth to Water (DTW): <i>20.90</i>		Product Thickness:	
Water Column Height: <i>5.75</i>		1 Casing Volume: <i>0.92</i> gallons	
Reference Point: TOC		3 Casing Volumes: <i>2.76</i> gallons	

Purging Device: Disposable Bailer, 3" PVC Bailer, Whal Pump

Sampling Device: Disposable Bailer

Time	Temp (°C)	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
<i>7:12</i>	<i>18.4</i>	<i>7.29</i>	<i>620</i>				<i>1</i>	
<i>7:14</i>	<i>18.1</i>	<i>7.14</i>	<i>648</i>				<i>2</i>	
<i>7:16</i>	<i>17.9</i>	<i>7.10</i>	<i>633</i>				<i>3</i>	

Comments: Oakton DO meter *pre purge DO = 0.88 mg/l*  
*post purge DO = mg/l*  
*turbid*

Sample ID: <i>MW-1</i>	Sample Time: <i>7:20</i>
Laboratory: McCampbell Analytical, INC.	Sample Date: <i>7-6-06</i>
Containers/Preservative: <i>Voal/HCl</i>	
Analyzed for: <i>8015, 8021, 8260</i>	
Sampler Name: Sanjiv Gill	Signature: <i>[Signature]</i>



## MONITORING FIELD DATA SHEET

Well ID: MW-3

Project Task #: 1135.001 208		Project Name: Douglas Parking	
Address: 1721 Webster Street Oakland, CA			
Date: <u>7-6-06</u>		Weather: <u>Clear</u>	
Well Diameter: <u>2"</u>		Volume/ft. $1" = 0.04$ $3" = 0.37$ $6" = 1.47$ $2" = 0.16$ $4" = 0.65$ radius <sup>2</sup> = 0.163	
Total Depth (TD): <u>26.90</u>		Depth to Product:	
Depth to Water (DTW): <u>20.25</u>		Product Thickness:	
Water Column Height: <u>6.65</u>		1 Casing Volume: <u>1.06</u> gallons	
Reference Point: TOC		3 Casing Volumes: <u>3.19</u> gallons	

Purging Device: Disposable Bailer, 3" PVC Bailer, Whal Pump

Sampling Device: Disposable Bailer

Time	Temp @	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
<u>5:55</u>	<u>18.6</u>	<u>7.10</u>	<u>622</u>				<u>1</u>	
<u>6:00</u>	<u>18.4</u>	<u>6.84</u>	<u>590</u>				<u>2</u>	
<u>6:05</u>	<u>18.2</u>	<u>6.90</u>	<u>578</u>				<u>3</u>	

Comments: Oakton DO meter pre purge DO = 0.73 mg/l  
post purge DO =          mg/l  
turbid, odor

Sample ID: <u>MW-3</u>	Sample Time: <u>6:10</u>
Laboratory: <u>McCampbell Analytical, INC.</u>	Sample Date: <u>        </u>
Containers/Preservative: <u>Voac/HCl</u>	
Analyzed for: <u>8015, 8021, 8260</u>	
Sampler Name: <u>Sanjiv Gill</u>	Signature: <u>[Signature]</u>

**MONITORING FIELD DATA SHEET**

Well ID: *MW-4*

Project Task #: 1135.001 208		Project Name: Douglas Parking	
Address: 1721 Webster Street Oakland, CA			
Date: <i>7-6-06</i>		Weather: <i>Clear</i>	
Well Diameter: <i>2"</i>		Volume/ft. <i>1" = 0.04</i> <i>3" = 0.37</i> <i>6" = 1.47</i> <i>2" = 0.16</i> <i>4" = 0.65</i> <i>radius = 0.163</i>	
Total Depth (TD): <i>29.42</i>		Depth to Product:	
Depth to Water (DTW): <i>17.20</i>		Product Thickness:	
Water Column Height: <i>12.22</i>		1 Casing Volume: <i>1.95</i> gallons	
Reference Point: TOC		3 Casing Volumes: <i>5.86</i> gallons	

Purging Device: Disposable Bailer, 3" PVC Bailer, What Pump

Sampling Device: Disposable Bailer

Time	Temp (°C)	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
<i>4:05</i>	<i>18.2</i>	<i>6.70</i>	<i>489</i>				<i>2</i>	
<i>4:10</i>	<i>17.6</i>	<i>6.73</i>	<i>477</i>				<i>4</i>	
<i>4:15</i>	<i>17.9</i>	<i>6.85</i>	<i>492</i>				<i>6</i>	

Comments: Oakton DO meter pre purge DO = *0.60* mg/l  
 post purge DO =  mg/l  
*turbid, odor*

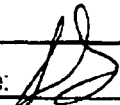
Sample ID: <i>MW-4</i>	Sample Time: <i>4:20</i>
Laboratory: McCampbell Analytical, INC.	Sample Date: <i>7-6-06</i>
Containers/Preservative: <i>Voal/HCl</i>	
Analyzed for: <i>8015, 8021, 8260</i>	
Sampler Name: Sanjiv Gill	Signature: <i>[Signature]</i>

## MONITORING FIELD DATA SHEET

Well ID: MW-5

Project Task #: 1135.001 208		Project Name: Douglas Parking						
Address: 1721 Webster Street Oakland, CA								
Date: 7-6-06		Weather: Clear						
Well Diameter: 2"		Volume/ft. 1" = 0.04 3" = 0.37 6" = 1.47 2" = 0.16 4" = 0.65 radius = 0.163						
Total Depth (TD): 24.50		Depth to Product:						
Depth to Water (DTW): 15.17		Product Thickness:						
Water Column Height: 9.33		1 Casing Volume: 1.49 gallons						
Reference Point: TOC		3 Casing Volumes: 4.47 gallons						
Purging Device: Disposable Bailer, 3" PVC Bailer, Whal Pump								
Sampling Device: Disposable Bailer								
Time	Temp @	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
2:50	18.4	6.91	849				1.5	
2:53	17.1	7.14	630				3	
2:55	17.2	7.10	623				4.5	

Comments: Oakton DO meter pre purge DO = 0.21 mg/l  
 post purge DO = mg/l  
 tubid


Sample ID: MW-5	Sample Time: 3:00
Laboratory: McCampbell Analytical, INC.	Sample Date: 7-6-06
Containers/Preservative: Vol/HCl	
Analyzed for: 8015, 8021, 8260	
Sampler Name: Sanjiv Gill	Signature: 

**MONITORING FIELD DATA SHEET**

Well ID: MW-6

Project Task #: 1135.001 208		Project Name: Douglas Parking						
Address: 1721 Webster Street Oakland, CA								
Date: <u>7-6-06</u>		Weather: <u>Clear</u>						
Well Diameter: <u>2"</u>		Volume/ft. $1" = 0.04$ $3" = 0.37$ $6" = 1.47$ $2" = 0.16$ $4" = 0.65$ radius <sup>2</sup> = 0.163						
Total Depth (TD): <u>25.79</u>		Depth to Product:						
Depth to Water (DTW): <u>18.80</u>		Product Thickness:						
Water Column Height: <u>6.99</u>		1 Casing Volume: <u>1.11</u> gallons						
Reference Point: TOC		<u>3</u> Casing Volumes: <u>3.33</u> gallons						
Purging Device: <u>Disposable Bailer</u> , 3" PVC Bailer, Whal Pump								
Sampling Device: <u>Disposable Bailer</u>								
Time	Temp @	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
<u>6:40</u>	<u>16.7</u>	<u>6.58</u>	<u>529</u>				<u>1</u>	
<u>6:43</u>	<u>17.3</u>	<u>6.71</u>	<u>540</u>				<u>2</u>	
<u>6:45</u>	<u>17.4</u>	<u>6.77</u>	<u>536</u>				<u>3</u>	

Comments: Oakton DO meter pre purge DO = 0.93 mg/l  
post purge DO =    mg/l  
turbid

Sample ID: <u>MW-6</u>	Sample Time: <u>6:50</u>
Laboratory: <u>McCampbell Analytical, INC.</u>	Sample Date: <u>7-6-06</u>
Containers/Preservative: <u>Voal/HCl</u>	
Analyzed for: <u>8015, 8021</u>	
Sampler Name: <u>Sanjiv Gill</u>	Signature: 

**MONITORING FIELD DATA SHEET**

Well ID: MW-7

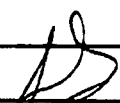
Project Task #: 1135.001 208		Project Name: Douglas Parking	
Address: 1721 Webster Street Oakland, CA			
Date: <u>7-6-06</u>		Weather: <u>Clear</u>	
Well Diameter: <u>2"</u>		Volume/ft. <u>1" = 0.04</u> <u>3" = 0.37</u> <u>6" = 1.47</u> <u>2" = 0.16</u> <u>4" = 0.65</u> radius <sup>2</sup> = 0.163	
Total Depth (TD): <u>28.46</u>		Depth to Product:	
Depth to Water (DTW): <u>20.47</u>		Product Thickness:	
Water Column Height: <u>7.99</u>		1 Casing Volume: <u>1.27</u> gallons	
Reference Point: TOC		3 Casing Volumes: <u>3.83</u> gallons	

Purging Device: Disposable Bailer, 3" PVC Bailer, What Pump

Sampling Device: Disposable Bailer

Time	Temp @	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
<u>3:30</u>	<u>17.2</u>	<u>7.20</u>	<u>692</u>				<u>1.5</u>	
<u>3:33</u>	<u>17.5</u>	<u>7.12</u>	<u>570</u>				<u>3</u>	
<u>3:35</u>	<u>17.5</u>	<u>7.15</u>	<u>589</u>				<u>4</u>	

Comments: Oakton DO meter      pre purge DO = 0.59 mg/l  
post purge DO =      mg/l  
very turbid

Sample ID: <u>MW-7</u>	Sample Time: <u>3:40</u>
Laboratory: <u>McCampbell Analytical, INC.</u>	Sample Date: <u>7-6-06</u>
Containers/Preservative: <u>Voac/HCl</u>	
Analyzed for: <u>8015, 8021, 8260</u>	
Sampler Name: <u>Sanjiv Gill</u>	Signature: 





## MONITORING FIELD DATA SHEET

Well ID: AS-2

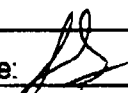
Project Task #: 1135.001 208	Project Name: Douglas Parking
Address: 1721 Webster Street Oakland, CA	
Date: <u>7-6-06</u>	Weather: <u>Clear</u>
Well Diameter: <u>2"</u>	Volume/ft. $1" = 0.04$ $3" = 0.37$ $6" = 1.47$ $2" = 0.16$ $4" = 0.65$ radius <sup>2</sup> = 0.163
Total Depth (TD): <u>33.02</u>	Depth to Product:
Depth to Water (DTW): <u>22.26</u>	Product Thickness:
Water Column Height: <u>10.76</u>	1 Casing Volume: <u>1.72</u> gallons
Reference Point: TOC	<u>3</u> Casing Volumes: <u>5.16</u> gallons

Purging Device: Disposable Bailer, 3" PVC Bailer, What Pump

Sampling Device: Disposable Bailer

Time	Temp (°C)	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
<u>5:00</u>	<u>16.9</u>	<u>7.22</u>	<u>590</u>				<u>1.5</u>	
<u>5:05</u>	<u>16.9</u>	<u>6.95</u>	<u>527</u>				<u>3</u>	
<u>5:10</u>	<u>16.9</u>	<u>7.02</u>	<u>514</u>				<u>5</u>	

Comments: Oakton DO meter pre purge DO = 0.38 mg/l  
post purge DO =          mg/l  
turbid

Sample ID: <u>AS-2</u>	Sample Time: <u>5:15</u>
Laboratory: McCampbell Analytical, INC.	Sample Date: <u>7-6-06</u>
Containers/Preservative: <u>Voal/HCl</u>	
Analyzed for: <u>8015, 8021, 8260</u>	
Sampler Name: Sanjiv Gill	Signature: 



## **APPENDIX B**

Laboratory Analytical Report

**McC Campbell Analytical, Inc.**

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701  
Web: www.mccampbell.com E-mail: main@mccampbell.com  
Telephone: 877-252-9262 Fax: 925-252-9269

Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612	Client Project ID: #1135.001 208; Douglas Parking	Date Sampled: 07/06/06
		Date Received: 07/11/06
	Client Contact: Bob Clark-Riddell	Date Reported: 07/17/06
	Client P.O.:	Date Completed: 07/17/06

**WorkOrder: 0607116**

July 17, 2006

Dear Bob:

Enclosed are:

- 1). the results of **10** analyzed samples from your **#1135.001 208; Douglas Parking project**,
- 2). a QC report for the above samples
- 3). a copy of the chain of custody, and
- 4). a bill for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions please contact me. McC Campbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Best regards,

Angela Rydelius, Lab Manager



# McC Campbell Analytical, Inc.

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701  
Web: www.mccampbell.com E-mail: main@mccampbell.com  
Telephone: 877-252-9262 Fax: 925-252-9269

Pangea Environmental Svcs., Inc.  
1710 Franklin Street, Ste. 200  
Oakland, CA 94612

Client Project ID: #1135.001 208; Douglas  
Parking

Date Sampled: 07/06/06

Date Received: 07/11/06

Client Contact: Bob Clark-Riddell

Date Extracted: 07/13/06-07/15/06

Client P.O.:

Date Analyzed: 07/13/06-07/15/06

## Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE\*

Extraction method: SW5030B

Analytical methods: SW8021B/8015Cm

Work Order: 0607116

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	MW-1	W	ND,i	ND	ND	ND	ND	ND	1	99
002A	MW-2	W	28,000,a	ND<500	1900	1700	720	2900	100	91
003A	MW-3	W	5600,b,m	ND<20	ND<1.0	2.3	ND<1.0	6.4	2	103
004A	MW-4	W	5400,a	ND<120	65	59	340	150	2	96
005A	MW-5	W	ND	ND	ND	ND	ND	ND	1	100
006A	MW-6	W	17,000,a,i	ND<250	150	1000	290	1000	50	101
007A	MW-7	W	ND,i	ND	ND	ND	ND	ND	1	98
008A	AS-1	W	18,000,a	ND<500	2700	570	700	1900	100	102
009A	AS-2	W	2100,a	ND<20	6.1	ND	33	200	1	109
010A	AS-3	W	ND,i	ND	ND	ND	ND	ND	1	104

Reporting Limit for DF = 1;

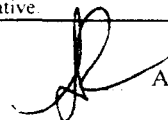
ND means not detected at or  
above the reporting limit

W	50	5.0	0.5	0.5	0.5	0.5	0.5	1	µg/L
S	NA	NA	NA	NA	NA	NA	NA	1	mg/Kg

\* water and vapor samples and all TCLP & SPLP extracts are reported in µg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg L.

# cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McC Campbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent / mineral spirit?); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) reporting limit raised due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern; n) TPH(g) range non-target isolated peaks subtracted out of the TPH(g) concentration at the client's request; p) see attached narrative.

  
Angela Rydelius, Lab Manager



# McC Campbell Analytical, Inc.

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701  
Web: www.mcccampbell.com E-mail: main@mcccampbell.com  
Telephone: 877-252-9262 Fax: 925-252-9269

Pangea Environmental Svcs., Inc.  1710 Franklin Street, Ste. 200  Oakland, CA 94612	Client Project ID: #1135.001 208; Douglas Parking	Date Sampled: 07/06/06
	Client Contact: Bob Clark-Riddell	Date Received: 07/11/06
	Client P.O.:	Date Extracted: 07/12/06-07/13/06
		Date Analyzed: 07/12/06-07/13/06

### Oxygenated Volatile Organics + EDB and 1,2-DCA by P&T and GC/MS\*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0607116

Lab ID	0607116-001B	0607116-002B	0607116-003B	0607116-004B	Reporting Limit for DF =1	
Client ID	MW-1	MW-2	MW-3	MW-4		
Matrix	W	W	W	W		
DF	1	10	1	1		

Compound	Concentration				ug/kg	µg/L
tert-Amyl methyl ether (TAME)	ND	ND<5.0	ND	ND	NA	0.5
t-Butyl alcohol (TBA)	ND	ND<50	ND	ND	NA	5.0
1,2-Dibromoethane (EDB)	ND	ND<5.0	ND	ND	NA	0.5
1,2-Dichloroethane (1,2-DCA)	ND	6.8	ND	ND	NA	0.5
Diisopropyl ether (DIPE)	ND	ND<5.0	ND	ND	NA	0.5
Ethyl tert-butyl ether (ETBE)	ND	ND<5.0	ND	ND	NA	0.5
Methyl-t-butyl ether (MTBE)	ND	ND<5.0	ND	ND	NA	0.5

### Surrogate Recoveries (%)

%SS1:	98	97	99	98
-------	----	----	----	----

Comments: i

\* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

# surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) sample diluted due to high organic content matrix interference; k) reporting limit near, but not identical to our standard reporting limit due to variable Encore sample weight, m) reporting limit raised due to insufficient sample amount; n) results are reported on a dry weight basis; p) see attached narrative.



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"When Quality Counts"

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Web: www.mccampbell.com E-mail: main@mccampbell.com  
Telephone: 877-252-9262 Fax: 925-252-9269

Pangea Environmental Svcs., Inc.  1710 Franklin Street, Ste. 200  Oakland, CA 94612	Client Project ID: #1135.001 208; Douglas Parking	Date Sampled: 07/06/06
	Client Contact: Bob Clark-Riddell	Date Received: 07/11/06
	Client P.O.:	Date Extracted: 07/12/06-07/13/06
		Date Analyzed: 07/12/06-07/13/06

### Oxygenated Volatile Organics + EDB and 1,2-DCA by P&T and GC/MS\*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0607116

Lab ID	0607116-005B	0607116-006B	0607116-007B	0607116-008B	Reporting Limit for DF = 1	
Client ID	MW-5	MW-6	MW-7	AS-1		
Matrix	W	W	W	W		
DF	1	10	1	10		

Compound	Concentration				ug/kg	ug/L
tert-Amyl methyl ether (TAME)	ND	ND<5.0	ND	ND<5.0	NA	0.5
t-Butyl alcohol (TBA)	ND	ND<50	ND	ND<50	NA	5.0
1,2-Dibromoethane (EDB)	ND	ND<5.0	ND	ND<5.0	NA	0.5
1,2-Dichloroethane (1,2-DCA)	ND	ND<5.0	ND	22	NA	0.5
Diisopropyl ether (DIPE)	ND	ND<5.0	ND	ND<5.0	NA	0.5
Ethyl tert-butyl ether (ETBE)	ND	ND<5.0	ND	ND<5.0	NA	0.5
Methyl-t-butyl ether (MTBE)	ND	ND<5.0	ND	ND<5.0	NA	0.5

### Surrogate Recoveries (%)

%SS1:	96	97	112	93	
-------	----	----	-----	----	--

Comments: j, i

\* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

# surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) sample diluted due to high organic content-matrix interference; k) reporting limit near, but not identical to our standard reporting limit due to variable Encore sample weight; m) reporting limit raised due to insufficient sample amount; n) results are reported on a dry weight basis; p) see attached narrative.





# McC Campbell Analytical, Inc.

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701  
Web: www.mcccampbell.com E-mail: main@mcccampbell.com  
Telephone: 877-252-9262 Fax: 925-252-9269

Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612	Client Project ID: #1135.001 208; Douglas Parking	Date Sampled: 07/06/06
	Client Contact: Bob Clark-Riddell	Date Received: 07/11/06
	Client P.O.:	Date Extracted: 07/12/06-07/13/06
		Date Analyzed: 07/12/06-07/13/06

### Oxygenated Volatile Organics + EDB and 1,2-DCA by P&T and GC/MS\*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0607116

Lab ID	0607116-009B	0607116-010B	Reporting Limit for DF =1	
Client ID	AS-2	AS-3		
Matrix	W	W		
DF	1	1		

Compound	Concentration		ug/kg	µg/L
tert-Amyl methyl ether (TAME)	ND	ND	NA	0.5
t-Butyl alcohol (TBA)	ND	ND	NA	5.0
1,2-Dibromoethane (EDB)	ND	ND	NA	0.5
1,2-Dichloroethane (1,2-DCA)	ND	ND	NA	0.5
Diisopropyl ether (DIPE)	ND	ND	NA	0.5
Ethyl tert-butyl ether (ETBE)	ND	ND	NA	0.5
Methyl-t-butyl ether (MTBE)	ND	ND	NA	0.5

### Surrogate Recoveries (%)

%SS1	100	115	
Comments	i		

\* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit, N/A means analyte not applicable to this analysis.

# surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

h) lighter than water immiscible sheen product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) sample diluted due to high organic content matrix interference; k) reporting limit near, but not identical to our standard reporting limit due to variable Encore sample weight; m) reporting limit raised due to insufficient sample amount; n) results are reported on a dry weight basis; p) see attached narrative.



QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder: 0607116

Table with columns: EPA Method: SW8021B/8015Cm, Extraction: SW5030B, BatchID: 22580, Spiked Sample ID: 0607086-020A. Rows include analytes like TPH(btex), MTBE, Benzene, Toluene, Ethylbenzene, Xylenes, and %SS with various recovery and RPD values.

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

BATCH 22580 SUMMARY

Summary table with columns: Sample ID, Date Sampled, Date Extracted, Date Analyzed. Lists three samples with their respective dates and times.

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

# cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not applicable or not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Handwritten signature and text: QA/QC Officer



**QC SUMMARY REPORT FOR SW8021B/8015Cm**

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder: 0607116

EPA Method: SW8021B/8015Cm		Extraction: SW5030B			BatchID: 22602			Spiked Sample ID: 0607116-007a		
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD
TPH(btex) <sup>£</sup>	ND	60	103	109	5.62	107	102	5.05	70 - 130	70 - 130
MTBE	ND	10	104	99.9	3.77	99.7	100	0.664	70 - 130	70 - 130
Benzene	ND	10	92.2	92.1	0.133	95.3	89.4	6.44	70 - 130	70 - 130
Toluene	ND	10	85.6	87.9	2.64	88.3	83.8	5.25	70 - 130	70 - 130
Ethylbenzene	ND	10	94.2	95.3	1.17	97.4	92	5.65	70 - 130	70 - 130
Xylenes	ND	30	92.3	96.3	4.24	93	92.7	0.359	70 - 130	70 - 130
%SS:	98	10	91	89	1.41	89	86	3.15	70 - 130	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

**BATCH 22602 SUMMARY**

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0607116-006A	7/06/06 6:50 AM	7/14/06	7/14/06 4:09 AM	0607116-007A	7/06/06 3:40 AM	7/14/06	7/14/06 9:17 AM
0607116-008A	7/06/06 4:50 AM	7/14/06	7/14/06 7:18 AM	0607116-009A	7/06/06 5:15 AM	7/14/06	7/14/06 9:47 AM
0607116-010A	7/06/06 5:45 AM	7/15/06	7/15/06 7:09 AM				

MS = Matrix Spike, MSD = Matrix Spike Duplicate, LCS = Laboratory Control Sample, LCSD = Laboratory Control Sample Duplicate, RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked); RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).


MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

# cluttered chromatogram: sample peak coelutes with surrogate peak.

N/A = not applicable or not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

 QA/QC Officer



**QC SUMMARY REPORT FOR SW8260B**

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder: 0607116

EPA Method: SW8260B		Extraction: SW5030B				BatchID: 22581			Spiked Sample ID: 0607100-001A	
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD
tert-Amyl methyl ether (TAME)	ND	10	105	105	0	108	106	2.09	70 - 130	70 - 130
t-Butyl alcohol (TBA)	ND	50	86.3	90.6	4.91	89.2	93.8	5.00	70 - 130	70 - 130
1,2-Dibromoethane (EDB)	ND	10	81	83	2.50	87.7	86.2	1.71	70 - 130	70 - 130
1,2-Dichloroethane (1,2-DCA)	ND	10	127	129	0.866	125	125	0	70 - 130	70 - 130
Diisopropyl ether (DIPE)	ND	10	115	117	2.08	119	120	0.331	70 - 130	70 - 130
Ethyl tert-butyl ether (ETBE)	ND	10	105	107	1.04	108	109	1.00	70 - 130	70 - 130
Methyl-t-butyl ether (MTBE)	ND	10	118	122	3.46	122	119	2.07	70 - 130	70 - 130
%SS1:	95	10	84	82	2.18	84	86	1.81	70 - 130	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

BATCH 22581 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0607116-001B	7/06/06 7:20 AM	7/12/06	7/12/06 3:30 AM				

MS = Matrix Spike, MSD = Matrix Spike Duplicate, LCS = Laboratory Control Sample, LCSD = Laboratory Control Sample Duplicate, RPD = Relative Percent Deviation.

% Recovery = 100 \* (MS-Sample) / (Amount Spiked), RPD = 100 \* (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons. a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

QA/QC Officer



**QC SUMMARY REPORT FOR SW8260B**

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder: 0607116

EPA Method: SW8260B		Extraction: SW5030B				BatchID: 22603			Spiked Sample ID: 0607116-005B	
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD
tert-Amyl methyl ether (TAME)	ND	10	115	114	0.891	96.8	101	4.17	70 - 130	70 - 130
t-Butyl alcohol (TBA)	ND	50	86.7	91.4	5.32	97.6	106	8.62	70 - 130	70 - 130
1,2-Dibromoethane (EDB)	ND	10	106	108	2.07	102	97.5	4.91	70 - 130	70 - 130
1,2-Dichloroethane (1,2-DCA)	ND	10	124	129	4.07	112	113	1.15	70 - 130	70 - 130
Diisopropyl ether (DIPE)	ND	10	127	120	5.62	93.7	97.3	3.81	70 - 130	70 - 130
Ethyl tert-butyl ether (ETBE)	ND	10	123	122	0.840	96.2	103	6.41	70 - 130	70 - 130
Methyl-t-butyl ether (MTBE)	ND	10	125	121	3.40	104	103	1.20	70 - 130	70 - 130
%SS1:	96	10	101	100	0.424	98	99	1.68	70 - 130	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:  
NONE

**BATCH 22603 SUMMARY**

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0607116-002B	7/06/06 6:30 AM	7/12/06	7/12/06 4:15 AM	0607116-003B	7/06/06 6:10 AM	7/12/06	7/12/06 5:00 AM
0607116-004B	7/06/06 4:20 AM	7/12/06	7/12/06 5:44 AM	0607116-005B	7/06/06 3:00 AM	7/12/06	7/12/06 6:28 AM
0607116-006B	7/06/06 6:50 AM	7/12/06	7/12/06 7:13 AM	0607116-007B	7/06/06 3:40 AM	7/13/06	7/13/06 7:21 PM
0607116-008B	7/06/06 4:50 AM	7/13/06	7/13/06 8:05 PM	0607116-009B	7/06/06 5:15 AM	7/13/06	7/13/06 10:33 PM
0607116-010B	7/06/06 5:45 AM	7/13/06	7/13/06 11:19 PM				

MS = Matrix Spike, MSD = Matrix Spike Duplicate, LCS = Laboratory Control Sample, LCSD = Laboratory Control Sample Duplicate, RPD = Relative Percent Deviation.

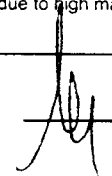
% Recovery =  $100 * (MS - Sample) / (Amount Spiked)$ ,  $RPD = 100 * (MS - MSD) / ((MS + MSD) / 2)$ .

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

 QA/QC Officer



110 Second Avenue South, #107  
 Pacheco, CA 94553-5560  
 (925) 798-1620

WorkOrder: 0607116

ClientID: PEO

EDF: YES

Report to:

Bob Clark-Riddell  
 Pangea Environmental Svcs., Inc.  
 1710 Franklin Street, Ste. 200  
 Oakland, CA 94612

TEL: (510) 836-3700  
 FAX: (510) 836-3709  
 ProjectNo: #1135.001 208; Douglas Parking  
 PO:

Bill to:

Bob Clark-Riddell  
 Pangea Environmental Svcs., Inc.  
 1710 Franklin Street, Ste. 200  
 Oakland, CA 94612

Requested TAT:

5 days

Date Received: 07/11/2006

Date Printed: 07/11/2006

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
0607116-001	MW-1	Water	7/6/06 7:20:00 AM	<input type="checkbox"/>	B	A	A										
0607116-002	MW-2	Water	7/6/06 6:30:00 AM	<input type="checkbox"/>	B	A											
0607116-003	MW-3	Water	7/6/06 6:10:00 AM	<input type="checkbox"/>	B	A											
0607116-004	MW-4	Water	7/6/06 4:20:00 AM	<input type="checkbox"/>	B	A											
0607116-005	MW-5	Water	7/6/06 3:00:00 AM	<input type="checkbox"/>	B	A											
0607116-006	MW-6	Water	7/6/06 6:50:00 AM	<input type="checkbox"/>	B	A											
0607116-007	MW-7	Water	7/6/06 3:40:00 AM	<input type="checkbox"/>	B	A											
0607116-008	AS-1	Water	7/6/06 4:50:00 AM	<input type="checkbox"/>	B	A											
0607116-009	AS-2	Water	7/6/06 5:15:00 AM	<input type="checkbox"/>	B	A											
0607116-010	AS-3	Water	7/6/06 5:45:00 AM	<input type="checkbox"/>	B	A											

Test Legend:

1	5-OXYS+PBSCV_W	2	G-MBTEX_W	3	PREF REPORT	4		5	
6		7		8		9		10	
11		12							

Prepared by: Maria Venegas

Comments:

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

060716

**McCAMPBELL ANALYTICAL, INC.**

110 2<sup>nd</sup> AVENUE SOUTH, #D7  
PACHECO, CA 94563-5560

Website: [www.mccampbell.com](http://www.mccampbell.com) Email: [main@mccampbell.com](mailto:main@mccampbell.com)  
Telephone: (925) 798-1620 Fax: (925) 798-1622

**CHAIN OF CUSTODY RECORD**

**TURN AROUND TIME**       
RUSH 24 HR 48 HR 72 HR 5 DAY  
EDF Required?  Yes  No

Report To: Bob Clark-Riddell Bill To: Pangea Environmental  
Company: Pangea Environmental Services Inc.  
1710 Franklin Street Suite 200  
Oakland, CA 94612 E-Mail: [bcr@pangeaenv.com](mailto:bcr@pangeaenv.com)  
Tele: 510-836-3702 Fax: 510-836-3709  
Project #: 1135001 208 Project Name: Douglas Parkings  
Project Location: 1721 Webster St. Oakland, CA  
Sampler Signature: Muskan Environmental Sampling

Analysis Request										Other	Comments	
MTBE / BTEX & TPH as Gas (602 / 8021 + 8015)												Filter Samples for Metals analysis: Yes / No
MTBE / BTEX ONLY (EPA 602 / 8021)												
TPH as Diesel (8015)												
Total Petroleum OH & Grease (1664 / 5528 E/R&F)												
Total Petroleum Hydrocarbons (418.1)												
EPA 502.2 / 601 / 8010 / 8021 (E/VOCs)												
EPA 505 / 608 / 8081 (CI Pesticides)												
EPA 608 / 8082, PCP's ONLY; Aroclors / Coagulants												
EPA 507 / 8141 (NP Pesticides)												
EPA 515 / 8151 (Acidic CI Herbicides)												
EPA 5242 / 624 / 8269 (VOCs)												
Fuel Additives (MTBE, ETBE, TAME, DIFE, TBA, 1,2 - DCA, 1,2 - EDB, ethanol) by 8269B												
IFMibe is detected by 8021 confirm by 8269B												
50XYS & Lead Scavs												

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING		# Containers	Type Containers	MATRIX					METHOD PRESERVED						
		Date	Time			Water	Soil	Air	Sludge	Other	ICE	HCL	HNO <sub>3</sub>	Other			
+5 MW-1		7:06	7:20	3	Voa	X						X	X				
+ MW-2			6:30														
+ MW-3			6:10														
+ MW-4			4:20														
+ MW-5			3:00														
+2 MW-6			6:50														
+1 MW-7			3:40														
+ AS-1			4:50														
+ AS-2			5:15														
+20 AS-3		X	5:45	X	X	X				X	X	X					

Relinquished By: *[Signature]* Date: 7/11/06 Time: 9:20 AM  
Received By: *[Signature]*  
Relinquished By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_  
Received By: \_\_\_\_\_

GOOD CONDITION   
HEAD SPACE ABSENT   
DECHLORINATED IN LAB   
PRESERVATION  VOAS  O&G  METALS  OTHER