



April 21, 2009

VIA ALAMEDA COUNTY FTP SITE

Ms. Barbara Jakub
Alameda County Environmental Health
1131 Harbor Bay Parkway, 2nd Floor
Alameda, California 94502

RECEIVED
10:19 am, Apr 30, 2009
Alameda County
Environmental Health

Re: **Groundwater Monitoring and Remediation Summary Report – First Quarter 2009**
Douglas Parking Company
1721 Webster Street
Oakland, California
ACEH File No. 129

Dear Ms. Jakub:

On behalf of the Douglas Parking Company, Pangea Environmental Services, Inc. has prepared this *Groundwater Monitoring and Remediation Summary Report – First Quarter 2009* for the above-referenced site. The report describes groundwater monitoring and sampling, site remediation, and other site activities.

To help control project costs per Cleanup Fund request on October 23, 2008, Pangea proposed to reduce the groundwater monitoring frequency on select site wells in the *Groundwater Monitoring and Remediation Summary Report – Fourth Quarter 2008*. The proposed monitoring program is shown in Appendix A. Pangea respectfully requests that ACEH concur with this recommendation.

Pangea recently submitted an *Investigation and Remediation Workplan* dated March 5, 2009 which outlines proposed additional investigation, system expansion, and natural attenuation evaluation at the site.

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 and Remediation Summary Report – First Quarter 2009*

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



**GROUNDWATER MONITORING AND REMEDIATION SUMMARY REPORT
– FIRST QUARTER 2009**

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

April 21, 2009

Prepared for:

Mr. Lee Douglas
1721 Webster Street
Oakland, California 94612

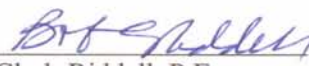
Prepared by:

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, and remediation system operation and sampling during this quarter at the subject site (Figure 1). Current groundwater analytical results and elevation data are shown on Figure 2. Current and historical groundwater data are summarized on Table 1. Site remediation data are summarized on Table 2.

SITE BACKGROUND

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

Several former underground storage tank (UST) sites are located close to the site, including Prentiss Properties to the northeast at 1750 Webster Street, a former gas station to the east at 1700 Webster, and a former Chevron service station which is located approximately 400 feet to the southwest on the corner of 17th 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. Site remediation via soil vapor extraction and air sparging began in October 2007.

GROUNDWATER MONITORING AND SAMPLING

On January 9, 2009, Pangea conducted groundwater monitoring and sampling at the site. Site monitoring wells were gauged for depth to water. Groundwater samples were collected from monitoring wells MW-1 through MW-7.

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 new polyethylene tubing with a check valve. During well purging field technicians measured 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 analytical 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 EPA Method 8015C; and benzene, toluene, ethylbenzene, xylenes (BTEX), and methyl tertiary butyl ether (MTBE) by EPA Method 8021B. Samples were analyzed by McCampbell Analytical, Inc. of Pittsburg, California, a State-certified laboratory. The laboratory analytical report is included as Appendix B. Dissolved oxygen concentrations in groundwater monitoring wells ranged from 0.53 mg/L (MW-5 and MW-7) to 0.80 mg/L (MW-1).

Groundwater Flow Direction

Based on depth-to-water measurements collected on January 9, 2009, groundwater beneath the site flowed northwards to north-northeastwards (Figure 2). The groundwater depth measurements and inferred flow direction this quarter are consistent with historical site conditions. Groundwater depths at the site have historically ranged from approximately 14 to 23 ft bgs, equivalent to a groundwater elevation range from 5 to 13 feet above msl over nine years of monitoring (Table 1).

Hydrocarbon and MTBE Distribution in Groundwater

TPHg, benzene and MTBE concentrations in groundwater at the site are shown on Figure 2. This quarter the maximum TPHg (22,000 µg/L) and benzene (340 µg/L) concentrations were detected in well MW-6. No hydrocarbons were detected in perimeter wells MW-5 or MW-7. Detected hydrocarbon concentrations in site wells this quarter were within historical ranges. In general, TPHg and BTEX concentrations in site monitoring wells exhibit a stable long-term or slightly decreasing trend.

TPHg and especially benzene concentrations appear to be decreasing in source area well MW-2 as the result of site remediation efforts. The TPHg concentration of 16,000 µg/L detected in well MW-2 this quarter is the lowest in that well since October 2004. Most importantly, benzene concentrations in well MW-2 remain significantly reduced from the elevated concentration of 3,000 µg/L in April 2008, with only 240 µg/L benzene detected this quarter. Prior concentration reductions and subsequent rebounding was presumably due to short-term hydrogen peroxide and ORC activities in well MW-2. Future monitoring will help evaluate if this is just a temporary decrease or a long term trend.

MTBE was not detected above reporting limits in any of the sampled wells this quarter. The only apparent historical MTBE detection at the site (48 µg/L in well MW-3 by EPA Method 8020) was interpreted to be a false positive, based on the results of confirmation testing using EPA Method 8260 on July 21, 2003. Since the tank was removed in 1992 and because of the lack of confirmed detectable historical MTBE, MTBE is not a compound of concern at this site.

REMEDIATION SYSTEM SUMMARY

Soil Vapor Extraction/Air Sparge System

The soil vapor extraction (SVE) remediation system consists of a blower that extracts soil vapor from well SVE-1. Extracted vapors are routed through a moisture separator then treated by two 2,000-lb canisters of granular activated carbon plumbed in series. The treated vapor is discharged to the atmosphere in accordance

with Bay Area Air Quality Management District (BAAQMD) requirements. The air sparging (AS) system consists of a compressor for injecting air into wells AS-1, AS-2 and/or AS-3. Injection into AS wells is controlled by timer-activated solenoid valves. Wells SVE-1 and AS-1 are constructed as vertical co-axial wells, with angled wells AS-2 and AS-3 located in the same vault. A cross section of the remediation wells is included as Figure 3. The remediation system layout is shown on Figure 4.

Operation and Performance

SVE system operation commenced on October 29, 2007, and AS system operation started on November 12, 2007. During initial SVE system operation, the system was monitored *daily* in accordance with air permit requirements of the *Authority to Construct* issued by the Bay Area Air Quality Management District (BAAQMD). On November 27, 2007, the BAAQMD approved Pangea's request to reduce the monitoring frequency from *daily* to *weekly* to help control costs. System operation and performance data through March 26, 2009 is summarized on Table 2.

As of March 26, 2009, the SVE/AS system has been in operation for a total of 9,675 hours (approximately 403.1 days). On August 8, 2008, air sparge wells AS-1 and AS-3 were disconnected from the air compressor and air sparging was conducted solely in well AS-2 to target hydrocarbons in nearby well MW-2. The SVE/AS system was shut down on January 20, 2009 to evaluate the effectiveness of the ongoing site remediation activities. At the request of the ACEH, the SVE/AS system was restarted on February 6, 2009. Based on laboratory analytical data, the TPHg removal rates observed during the first quarter 2009 (December 31, 2008 to March 26, 2009) ranged from 0.1 to 0.7 lbs/day. Benzene has not been detected above laboratory detection limits in analyzed vapor samples since October 6, 2008, so the benzene removal rate for the period was 0.00 lbs/day. As of March 26, 2009, laboratory analytical data indicates that the system has removed a total of approximately 3,070.3 lbs TPHg and 6.53 lbs benzene. The laboratory analytical reports for soil vapor samples collected during the first quarter 2009 are included in Appendix C.

OTHER SITE ACTIVITIES

Site Investigation, Remediation System Expansion and Bioparameter Evaluation

Despite over 12 months of SVE/AS system operation, groundwater conditions have not significantly improved, although the recent benzene reduction in well MW-2 may be due to enhanced sparging efforts in well AS-2. The limited system effectiveness may be due to insufficient well spacing/quantity or due to a possible offsite source. To improve system performance and further evaluate site conditions Pangea submitted an *Investigation and Remediation Workplan* dated March 5, 2009, which proposes additional investigation, remediation system expansion, and evaluation of groundwater geochemistry.

Groundwater Monitoring – Reduced Sampling Program

To help control project cost per Cleanup Fund request on October 23, 2008, Pangea proposed to reduce the groundwater monitoring frequency on select site wells in the *Groundwater Monitoring and Remediation Summary Report – Fourth Quarter 2008*. The reduced sampling program is shown in Appendix A. Pangea respectfully requests that ACEH concur with this recommendation.

Pangea will continue quarterly groundwater monitoring and sampling at the site in accordance with the proposed monitoring program shown in Appendix A. All monitoring wells will be gauged for depth to water and groundwater samples will be analyzed for TPHg, BTEX and MTBE by EPA Method 8015Cm/8021B.

ELECTRONIC REPORTING

This report will be submitted to Alameda County Environmental Health 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 Resource Control Board's Geotracker database. As requested, report hard copies will no longer be provided to local agencies.

ATTACHMENTS

Figure 1 – Vicinity Map

Figure 2 – Groundwater Elevations and Hydrocarbon Concentration Map

Figure 3 – Cross Section of Remediation Wells

Figure 4 – Remediation System Layout

Table 1 – Groundwater Elevation and Analytical Data

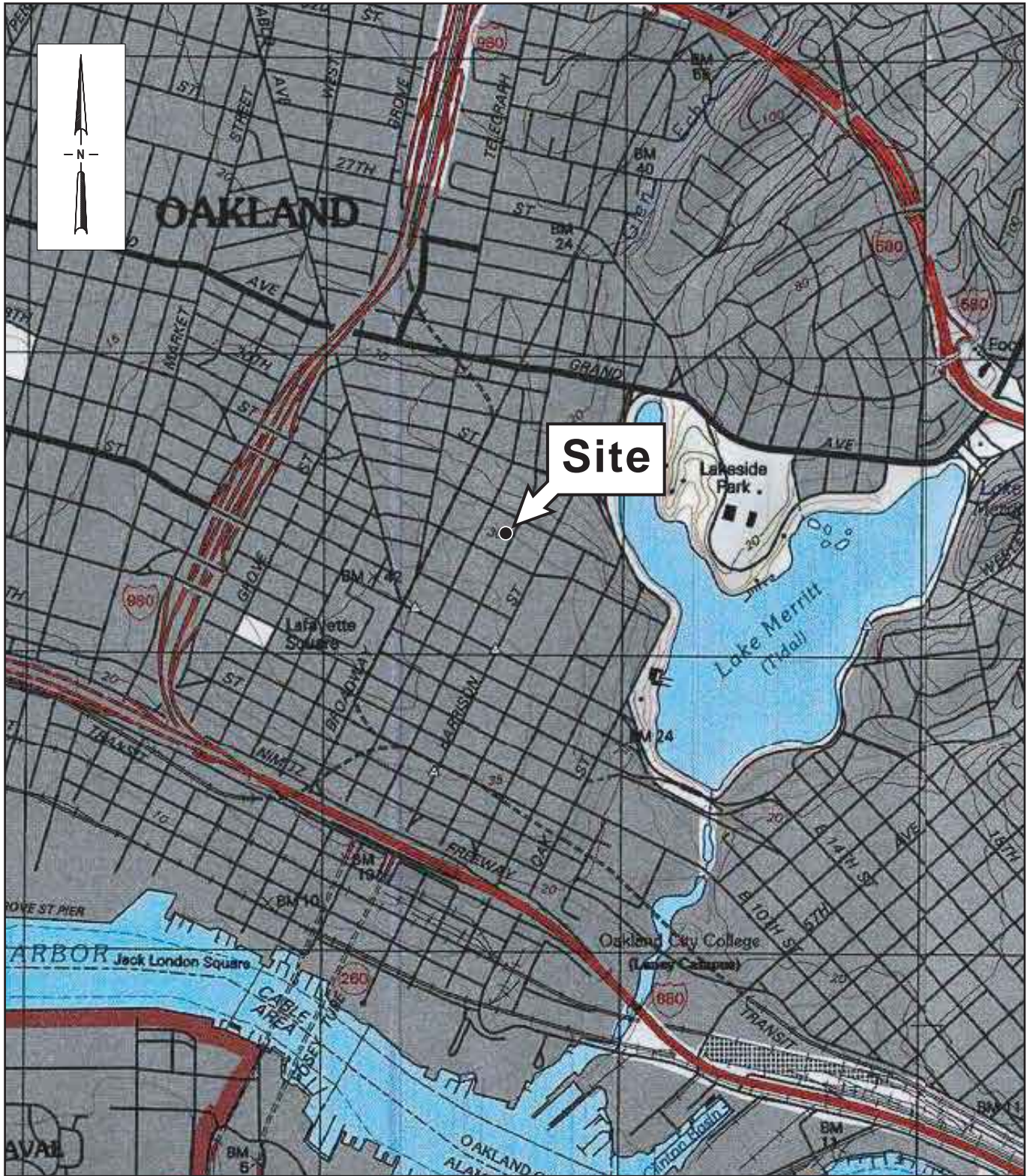
Table 2 – SVE System Performance Summary

Appendix A – Groundwater Monitoring Program

Appendix B – Groundwater Monitoring Field Data Sheets

Appendix C – Laboratory Analytical Reports

APPENDIX A



SOURCE: TOPOI MAPS



SCALE : 1" = 1/4 MILE

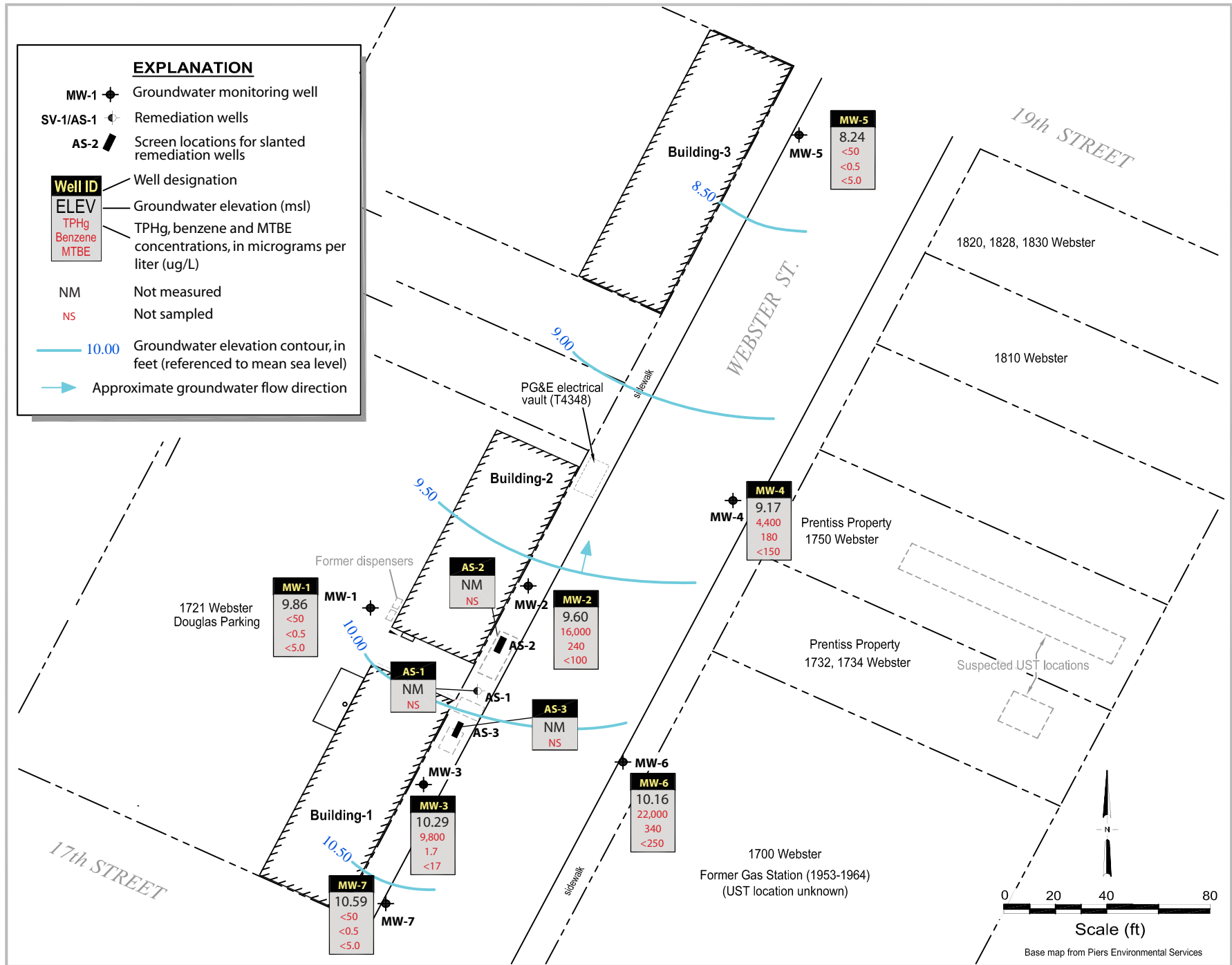
Figure

1

Douglas Parking Facility
 1721 Webster Street
 Oakland, California



Vicinity Map



Douglas Parking
 1721 Webster Street
 Oakland, California



Groundwater Elevations and Hydrocarbon Concentration Map

January 9, 2009

FIGURE

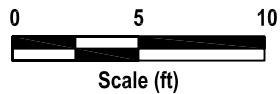
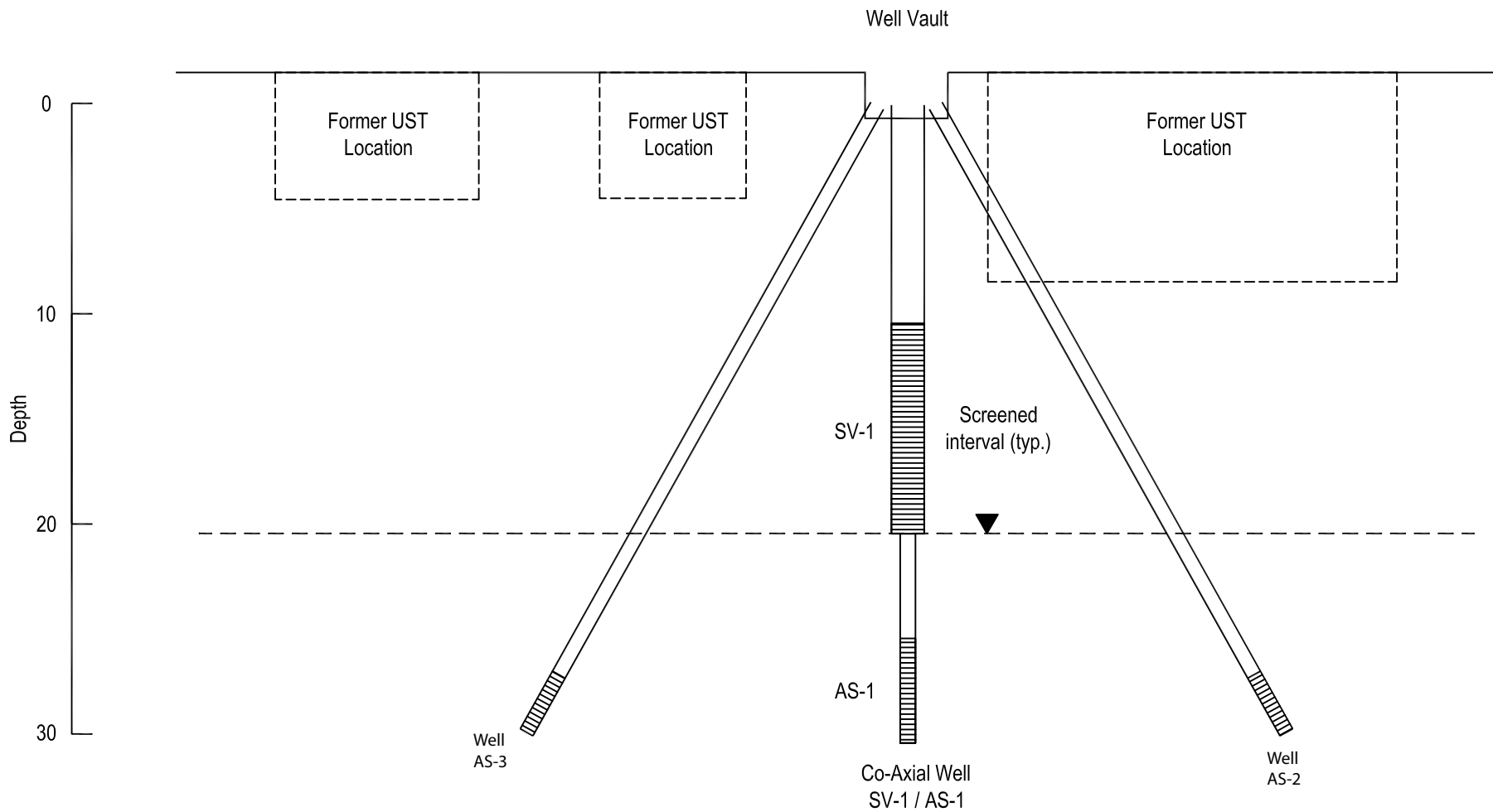



Figure
3

EXPLANATION	
MW-1	Groundwater monitoring well
SV-1, AS-1	Remediation Wells
	Former Underground Storage Tanks / Dispensers

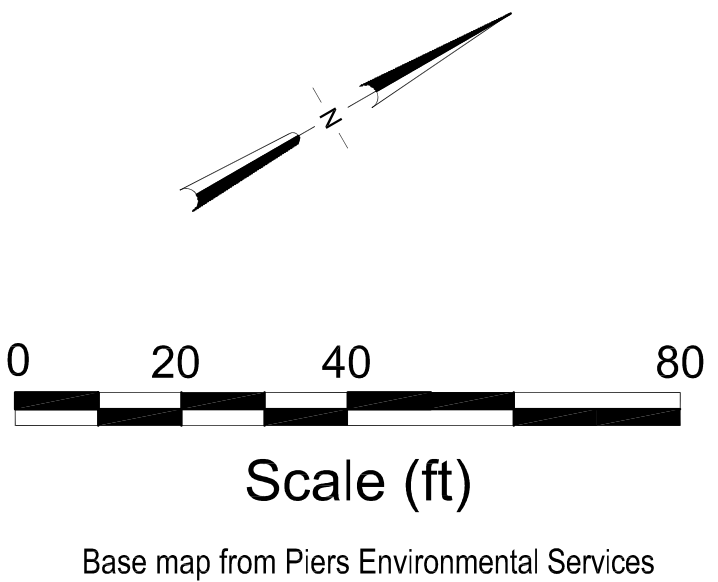
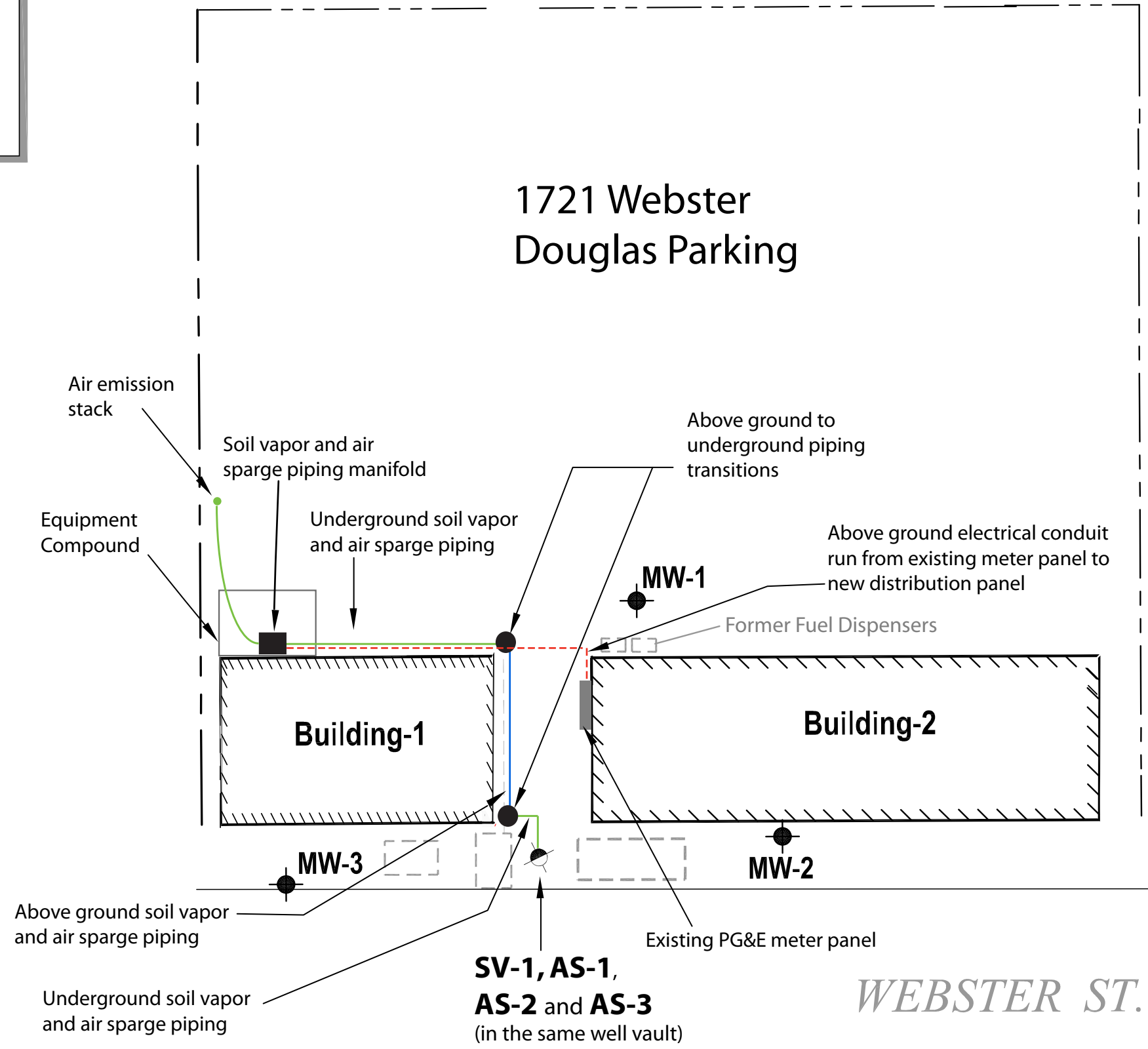


Figure 4

Douglas Parking
 1721 Webster Street
 Oakland, California



**Remediation System
 Layout**

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)	Groundwater Analytical Data (µg/L)					
				TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
MW-1	12/2/1994	19.42	9.83	ND	ND	ND	ND	ND	-
29.25	3/6/1995	20.69	9.04	ND	ND	ND	ND	ND	-
29.73	7/11/1995	20.65	9.16	ND	ND	ND	ND	ND	-
29.81	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	-	-	-	-	-	-
	8/11/1998	20.50	9.31	-	-	-	-	-	-
	2/8/1999	21.42	8.39	-	-	-	-	-	-
	2/24/1999	22.99	6.82	-	-	-	-	-	-
	3/3/1999	20.84	8.97	-	-	-	-	-	-
	3/10/1999	20.89	8.92	-	-	-	-	-	-
	3/17/1999	20.84	8.97	-	-	-	-	-	-
	5/4/1999	20.80	9.01	-	-	-	-	-	-
	7/20/1999	21.25	8.56	-	-	-	-	-	-
	10/5/1999	21.37	8.44	-	-	-	-	-	-
	1/7/2000	21.65	8.16	-	-	-	-	-	-
	4/6/2000	21.05	8.76	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	7/31/2000	21.13	8.68	-	-	-	-	-	-
	10/3/2000	21.69	8.12	-	-	-	-	-	-
	1/12/2001	22.00	7.81	-	-	-	-	-	-
	4/11/2001	22.16	7.65	-	-	-	-	-	-
	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	-	-	-	-	-	-
32.75	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	-	-	-	-	-	-
	7/6/2006	20.90	11.85	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	10/26/2006	21.80	10.95	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	1/19/2007	22.02	10.73	--	--	--	--	--	--
	4/17/2007	22.13	10.62	--	--	--	--	--	--
	7/6/2007	21.83	10.92	--	--	--	--	--	--
	10/15/2007	22.28	10.47	--	--	--	--	--	--
	1/17/2008	22.33	10.42	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	4/9/2008	22.11	10.64	--	--	--	--	--	--
	7/17/2008	22.50	10.25	--	--	--	--	--	--
	10/27/2008	22.75	10.00	--	--	--	--	--	--
	1/9/2009	22.89	9.86	<50	<0.5	<0.5	<0.5	<0.5	<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		
							(µg/L)		
MW-2	12/2/1994	19.50	7.60	61,300	3,000	3,900	160	4,500	-
27.10	3/6/1995	18.49	8.61	98,000	8,400	16,000	2,000	2,600	-
27.40	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
	8/11/1998	18.41	8.99	12,000	1,200	2,300	260	1,400	300
	2/8/1999	19.84	7.56	5,500	740	1,200	150	780	60
	2/17/1999	18.94	8.46	-	-	-	-	-	-
	2/24/1999	20.76	6.64	-	-	-	-	-	-
	3/3/1999	18.55	8.85	-	-	-	-	-	-
	3/10/1999	20.74	6.66	-	-	-	-	-	-
	3/17/1999	18.57	8.83	-	-	-	-	-	-
	5/4/1999	18.55	8.85	90,000	9,200	21,000	1,600	10,000	560
	7/20/1999	18.98	8.42	28,000	2,100	3,700	900	4,200	<860
	10/5/1999	19.10	8.30	11,000	870	180	30	1,400	<110
	1/7/2000	19.41	7.99	15,000	1,300	2,100	440	1,800	<14
	4/6/2000	18.80	8.60	17,000	1,800	3,100	500	2,200	<50
	7/31/2000	18.87	8.53	17,000	1,500	2,700	430	2,100	<200
	10/3/2000	19.45	7.95	27,000	2,500	4,000	660	2,900	<50
	1/12/2001	19.80	7.60	25,000	2,700	4,100	670	3,000	<200
	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
30.40	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
	7/6/2006	18.76	11.64	28,000	1,900	1,700	720	2,900	<500
	10/26/2006	19.60	10.80	43,000	2,800	2,500	1,700	7,600	<500
	1/19/2007	19.84	10.56	31,000	2,700	2,400	1,400	5,800	<150
	4/17/2007	19.90	10.50	37,000	3,200	2,900	1,600	6,400	<400
	7/6/2007	19.63	10.77	30,000	3,200	2,000	1,500	5,200	<250
	10/15/2007	20.11	10.29	20,000	1,200	990	650	2,300	<500
	1/17/2008	20.10	10.30	38,000	2,900	5,100	1,200	5,000	<210
	4/9/2008	20.12	10.28	51,000	3,000	6,400	1,700	6,500	<250
	7/17/2008	20.01	10.39	22,000	180	500	660	2,100	<250
	10/27/2008	20.61	9.79	26,000	570	2,100	670	3,400	<50
	1/9/2009	20.80	9.60	16,000	240	680	460	3,000	<100

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		
							(µg/L)		
MW-3	12/2/1994	22.15	7.35	394,000	1,200	ND	1,800	4,000	-
29.50	3/6/1995	20.09	9.16	21,000	400	150	24	62	-
29.25	7/11/1995	19.99	9.57	12,000	ND	10	16	99	-
29.56	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
	8/11/1998	19.95	9.61	2,700	<0.5	3.5	3.2	12	<10
	2/8/1999	20.58	8.98	6,100	<0.5	8.1	18	80	<140
	2/17/1999	20.53	9.03	-	-	-	-	-	-
	2/24/1999	22.53	7.03	-	-	-	-	-	-
	3/3/1999	20.28	9.28	-	-	-	-	-	-
	3/10/1999	22.45	7.11	-	-	-	-	-	-
	3/17/1999	20.26	9.30	-	-	-	-	-	-
	5/4/1999	20.24	9.32	11,000	<2	<2	9.8	140	<10
	7/20/1999	20.68	8.88	11,000	<0.5	3.1	13	88	<80
	10/5/1999	20.81	8.75	31,000	62	<0.5	21	170	<90
	1/7/2000	21.09	8.47	13,000	<0.5	<2	21	140	<80
	4/6/2000	20.48	9.08	5,300	1.5	1.4	9.8	60	<30
	7/31/2000	20.62	8.94	7,100	3.5	1.0	12	66	<5.0
	10/3/2000	21.13	8.43	8,000	<0.5	3.3	11	70	<40
	1/12/2001	21.45	8.11	11,000	4.3	6.7	11	73	<70
	4/11/2001	21.69	7.87	10,000	<0.5	<0.5	11	65	<10
	7/6/2001	21.60	7.96	13,000	5.3	1.6	11	58	<5.0
	10/25/2001	21.70	7.86	11,000	<0.5	3.0	15	70	<10
	3/4/2002	21.65	7.91	1,900	1.3	0.8	<0.5	15	<5.0
	4/18/2002	21.77	7.79	1,500	1.0	0.97	1.3	5.8	<5
	7/9/2002	22.03	7.53	13,000	6.8	5.7	13	59	<90
	10/4/2002	22.15	7.41	8,400	<10	<10	<10	42	<100
	1/12/2003	21.13	8.43	9,000	9.5	5.1	8.5	46	<90
	4/21/2003	20.63	8.93	10,000	<5.0	<5.0	8.5	32	<50
32.56	7/21/2003	20.68	11.88	9,600	<2.5	<2.5	7.4	39	48 (<1.0)
	10/2/2003	20.99	11.57	12,000	<5.0	<5.0	10	40	<90
	1/15/2004	20.74	11.82	13,000	37	41	78	930	<50
	4/5/2004	20.59	11.97	4,500	<1.7	<1.7	<1.7	12	<17
	8/9/2004	22.18	10.38	2,100	<1.0	3.7	<1.0	8.1	<10
	10/7/2004	22.79	9.77	2,400	6.5	26	7.5	89	<15
	2/7/2005	20.35	12.21	6,800	2.2	5.6	2.0	12	<30
	4/5/2005	19.95	12.61	6,100	2.3	2.6	1.3	8.3	<45 (<0.5)
	7/6/2005	19.93	12.63	4,500	<1.0	1.5	1.0	8.3	<10
	10/10/2005	20.45	12.11	3,800	0.73	<0.5	0.98	5.7	<15
	1/26/2006	20.05	12.51	5,100	<0.5	1.1	<0.5	6.6	<15
	4/10/2006	19.39	13.17	1,900	0.55	1.6	0.51	4.1	<10
	7/6/2006	20.25	12.31	5,600	<1.0	2.3	<1.0	6.4	<20
	10/26/2006	21.07	11.49	8,000	2.5	1.0	2.3	12	<35
	1/19/2007	21.38	11.18	77,000	19	40	9.5	130	<300
	4/17/2007	21.45	11.11	7,400	2.7	6.6	1.1	12	<40
	7/6/2007	21.29	11.27	7,100	2.4	5.6	0.85	10	<30
	10/15/2007	21.62	10.94	10,000	<5.0	<5.0	<5.0	14	<50
	1/17/2008	21.68	10.88	6,400	1.8	<0.5	1.0	8.4	23
	4/9/2008	21.42	11.14	4,700	1.7	2.2	<0.5	3.8	<18
	7/17/2008	22.10	10.46	7,700	2.9	3.1	1.4	11	<60
	10/27/2008	22.13	10.43	9,700	<1.7	1.8	2.3	11	<17
	1/9/2009	22.27	10.29	9,800	1.7	2.0	3.0	14	<17

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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)	Groundwater Analytical Data (µg/L)					
				TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
MW-4 25.29	5/10/1996	16.98	8.31	14,000	ND	1,200	720	3,100	-
	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
	9/17/1997	17.93	7.36	13,000	<2.5	820	750	2,900	<190
	2/5/1998	16.78	8.51	13,000	<1.0	690	690	2,900	<170
	8/11/1998	16.59	8.70	15,000	<5	360	520	1,900	280
	2/8/1999	17.10	8.19	9,800	<5	680	770	2,200	300
	2/24/1999	18.95	6.34	-	-	-	-	-	-
	3/3/1999	16.80	8.49	-	-	-	-	-	-
	3/10/1999	16.86	8.43	-	-	-	-	-	-
	3/17/1999	16.82	8.47	-	-	-	-	-	-
	5/4/1999	16.86	8.43	11,000	46	600	620	1,900	<100
	7/20/1999	17.30	7.99	13,000	<0.5	470	7.0	2,000	<150
	10/5/1999	17.43	7.86	18,000	4.4	720	800	2,100	<120
	1/7/2000	17.78	7.51	18,000	<2	930	990	2,700	<30
	4/6/2000	17.17	8.12	8,000	31	390	530	1,300	<10
	7/31/2000	17.21	8.08	6,200	13	170	460	850	<10
	10/3/2000	18.00	7.29	14,000	42	820	730	2,000	<50
	1/12/2001	18.20	7.09	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	4/11/2001	18.31	6.98	<50	<0.5	<0.5	<0.5	<0.5	<5.0
7/6/2001	18.35	6.94	470	2.3	1.6	0.81	43	<5.0	
10/25/2001	18.47	6.82	110	0.70	<0.5	<0.5	3.3	<5.0	
3/4/2002	18.43	6.86	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
4/18/2002	18.61	6.68	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
7/9/2002	19.50	5.79	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
10/4/2002	19.83	5.46	310	2.0	2.9	13	16	<0.5	
1/12/2003	19.07	6.22	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
4/21/2003	18.71	6.58	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
28.29	7/21/2003	18.81	9.48	<50	<0.5	<0.5	<0.5	<0.5	<5.0
10/2/2003	19.02	9.27	59	0.78	<0.5	1.1	0.91	<5.0	
1/15/2004	18.68	9.61	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
4/5/2004	17.41	10.88	6,200	29	250	450	730	<100	
8/9/2004	19.07	9.22	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
10/7/2004	19.65	8.64	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
2/7/2005	17.21	11.08	8,700	48	340	550	720	<100	
4/5/2005	16.78	11.51	6,900	27	290	520	660	<170 (<0.5)	
7/6/2005	16.98	11.31	5,600	<5.0	130	470	480	<50	
10/10/2005	17.59	10.70	6,300	23	78	530	430	<50	
1/26/2006	17.08	11.21	5,600	41	68	400	290	<120	
4/10/2006	16.27	12.02	2,900	39	32	200	140	<60	
7/6/2006	17.20	11.09	5,400	65	59	340	150	<120	
10/26/2006	18.06	10.23	7,200	72	46	460	200	<150	
1/19/2007	18.29	10.00	7,100	140	35	520	150	<200	
4/17/2007	18.30	9.99	4,900	90	32	290	89	<110	
7/6/2007	18.00	10.29	4,600	91	30	210	55	<90	
10/15/2007	18.52	9.77	8,600	200	62	480	110	<210	
1/17/2008	18.46	9.83	820	15	3.7	25	9.3	<10	
4/9/2008	18.23	10.06	3,600	55	20	160	64	<60	
7/17/2008	18.72	9.57	6,500	210	47	510	180	<180	
10/27/2008	19.07	9.22	7,700	200	28	450	87	<150	
	1/9/2009	19.12	9.17	4,400	180	34	180	93	<150

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Douglas Parking Company, 1721 Webster Street, Oakland, California

Boring / Well ID TOC	Date	Depth to Water (ft)	Groundwater Elevation (ft amsl)	Groundwater Analytical Data (µg/L)					
				TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
MW-5 21.97	5/10/1996	14.60	7.37	ND	ND	ND	ND	ND	-
	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
	9/17/1997	15.18	6.79	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0
	2/5/1998	13.64	8.33	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	8/11/1998	13.92	8.05	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	2/8/1999	14.19	7.78	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	2/24/1999	16.18	5.79	-	-	-	-	-	-
	3/3/1999	14.23	7.74	-	-	-	-	-	-
	3/10/1999	14.32	7.65	-	-	-	-	-	-
	3/17/1999	14.25	7.72	-	-	-	-	-	-
	5/4/1999	14.41	7.56	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	7/20/1999	14.44	7.53	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	10/5/1999	14.79	7.18	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	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
	7/31/2000	14.52	7.45	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	10/3/2000	15.37	6.60	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	1/12/2001	15.70	6.27	6,400	13	290	450	1,100	<40
	4/11/2001	15.78	6.19	<50	<0.5	<0.5	<0.5	<0.5	<5.0
7/6/2001	15.97	6.00	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
10/25/2001	16.05	5.92	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
3/4/2002	16.21	5.76	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
4/18/2002	16.59	5.38	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
7/9/2002	16.94	5.03	170	1.0	0.65	2.1	4.0	<15	
10/4/2002	17.14	4.83	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
1/12/2003	16.58	5.39	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
4/21/2003	15.90	6.07	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
7/21/2003	16.03	8.96	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
10/2/2003	16.33	8.66	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
1/15/2004	16.21	8.78	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
4/5/2004	15.01	9.98	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
8/9/2004	16.85	8.14	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
10/7/2004	17.48	7.51	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
2/7/2005	16.52	8.47	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
4/5/2005	14.45	10.54	<50	<0.5	<0.5	<0.5	<0.5	<5.0 (<0.5)	
7/6/2005	14.85	10.14	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
10/10/2005	15.44	9.55	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
1/26/2006	14.96	10.03	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
4/10/2006	14.01	10.98	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
7/6/2006	15.17	9.82	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
10/26/2006	15.94	9.05	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
1/19/2007	16.05	8.94	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
4/17/2007	15.99	9.00	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
7/6/2007	15.50	9.49	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
10/15/2007	16.27	8.72	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
1/17/2008	15.10	9.89	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
4/9/2008	15.96	9.03	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
7/17/2008	16.44	8.55	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
10/27/2008	16.78	8.21	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
1/9/2009	16.75	8.24	<50	<0.5	<0.5	<0.5	<0.5	<0.5	

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Douglas Parking Company, 1721 Webster Street, Oakland, California

Boring / Well ID TOC	Date	Depth to Water (ft)	Groundwater Elevation (ft amsl)	Groundwater Analytical Data (µg/L)					
				TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
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
	7/6/2006	18.80	12.19	17,000	150	1,000	290	1,000	<250
	10/26/2006	19.62	11.37	23,000	230	660	470	1,500	<500
	1/19/2007	19.92	11.07	18,000	190	620	350	1,100	<150
	4/17/2007	19.97	11.02	23,000	380	1,400	590	2,000	<450
	7/6/2007	19.81	11.18	28,000	600	3,000	900	2,700	<500
	10/15/2007	20.15	10.84	25,000	290	680	410	1,100	<250
	10/15/2007	20.15	10.84	25,000	290	680	410	1,100	<250
1/17/2007	20.22	10.77	16,000	200	130	130	460	<150	
4/9/2008	19.86	11.13	18,000	320	870	480	1,500	<250	
7/17/2008	20.36	10.63	18,000	320	510	420	1,200	<500	
10/27/2008	20.69	10.30	31,000	320	320	410	990	<350	
	1/9/2009	20.83	10.16	22,000	340	390	560	1,400	<250
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
	7/6/2006	20.47	12.64	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	10/26/2006	21.30	11.81	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	1/19/2007	21.62	11.49	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	4/17/2007		11.49	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	7/6/2007	21.59	11.52	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	10/15/2007	21.85	11.26	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	1/17/2007	21.90	11.21	<50	<0.5	<0.5	<0.5	<0.5	<5.0
4/9/2008	21.61	11.50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
7/17/2008	22.09	11.02	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
10/27/2008	22.39	10.72	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	1/9/2009	22.52	10.59	<50	<0.5	<0.5	<0.5	<0.5	<5.0
AS-1	7/6/2006	19.53	--	18,000	2,700	570	700	1,900	<500
	10/26/2006	20.33	--	15,000	1,900	340	360	1,400	<250
	1/19/2007	20.64	--	5,700	1,100	110	88	630	<50
	1/19/2007	20.64	--	5,700	1,100	110	88	630	<50
	4/17/2007	20.71	--	--	--	--	--	--	--
7/16/2007	--	--	--	--	--	--	--	--	

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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
AS-1(cont'd)	10/15/2007	--	--	--	--	--	--	--	--
	1/17/2008	--	--	--	--	--	--	--	--
	4/9/2008	--	--	--	--	--	--	--	--
AS-2	7/6/2006	22.26	--	2,100	6.1	<0.5	33	200	<20
	10/26/2006	23.25	--	280	1.1	<0.5	<0.5	6.0	<15
	1/19/2007	23.61	--	2,100	2.3	<0.5	96	310	<35
	4/17/2007	23.70	--	--	--	--	--	--	--
	7/16/2007	--	--	--	--	--	--	--	--
	10/15/2007	--	--	--	--	--	--	--	--
	1/17/2008	--	--	--	--	--	--	--	--
	4/9/2008	--	--	--	--	--	--	--	--
AS-3	7/6/2006	21.77	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	10/26/2006	22.66	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	1/19/2007	22.97	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	4/17/2007	23.06	--	--	--	--	--	--	--
	7/16/2007	--	--	--	--	--	--	--	--
	10/15/2007	--	--	--	--	--	--	--	--
	1/17/2008	--	--	--	--	--	--	--	--
	4/9/2008	--	--	--	--	--	--	--	--
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
	10/15/2007	--	--	--	--	--	--	--	--

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.

BTEX = 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.

<0.5 = Concentration not detected above specific laboratory reporting limit.

-- = Not analyzed, not sampled, or not applicable.

ND = Not detected.

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

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.

Table 2. SVE/AS System Performance Summary - 1721 Webster Street, Oakland, California													
Date	Sample ID	FIELD MEASUREMENTS				ANALYTICAL RESULTS		REMOVAL				Air Sparge Unit on? (yes/no)	Comments
		Hour Meter Reading (hours)	System Vapor Flow Rate (cfm)	Applied Vacuum ("H2O)	FID Reading (ppm)	TPHg Lab Data (ppmv)	Benzene Lab Data (ppmv)	SVE TPHg Removal Rate (lbs/day)	Cumulative SVE TPHg Removal (lbs)	SVE Benzene Removal Rate (lbs/day)	Cumulative SVE Benzene Removal (lbs)		
10/29/07	N/A	1.0	0	0	0	0	0	0	0	0	0	no	System start up
10/29/07	SYS-INF SYS-MID SYS-EFF	1.5	104	68	3,400 8 0	9,600 23 27	76 ND<0.077 0.15	320.3	6.7	2.30	0.05	no	
10/30/07	SYS-INF SYS-MID SYS-EFF	24.3	50	27	37,000 635 700	9,000 ND<7.0 60	74 ND<0.077 0.29	144.4	143.8	1.08	1.07	no	Readings upon arrival
10/30/07	SYS-INF SYS-MID SYS-EFF	25.2	45	27	3,200 620 530	1,500 ND<7.0 ND<7.0	11 ND<0.077 ND<0.077	21.7	144.6	0.14	1.08	no	Readings after dilution air introduced to reduce noise and limit hydrocarocarbon loading on carbon (prevent thermal
10/31/07	SYS-INF SYS-MID SYS-EFF	48.8	40	27	922* 0* 0*	880 ND<7.0 ND<7.0	8.6 ND<0.077 ND<0.077	11.3	155.7	0.10	1.17	no	Dilution airflow set at ~25% of total flow
11/01/07	SYS-INF SYS-MID SYS-EFF	78.8	39	27	1,475 14 9	--- --- ---	---	11.0	169.5	0.10	1.30	no	
11/02/07	SYS-INF SYS-MID SYS-EFF	100.2	40	27	736 19 10	--- --- ---	---	11.3	179.6	0.10	1.39	no	Shut system down at 100.5 hours for weekend
11/05/07	SYS-INF SYS-MID SYS-EFF	100.9	38	27	1,546 30 4	--- --- ---	---	10.7	179.9	0.10	1.39	no	Restart system at 100.5 hours on 11/5/07
11/06/07	SYS-INF SYS-MID SYS-EFF	126.7	38	27	213 0 0	--- --- ---	---	10.7	191.4	0.10	1.49	no	
11/07/07	SYS-INF SYS-MID SYS-EFF	154.7	45	27	170 0 0	--- --- ---	---	12.7	206.2	0.11	1.62	no	
11/08/07	SYS-INF SYS-MID SYS-EFF	178.2	47	27	160 0 0	--- --- ---	---	13.3	219.2	0.12	1.74	no	Lab analysis performed for methane; 2.4 ul/L detected in SYS EFF
11/09/07	SYS-INF SYS-MID SYS-EFF	200.3	45	31	163 0 0	--- --- ---	---	12.7	230.9	0.11	1.84	no	Shut system down at 200.3 hours for weekend
11/12/07	SYS-INF SYS-MID SYS-EFF	206.3	42	28	211 0 2	--- --- ---	---	11.9	233.9	0.11	1.87	yes	Restart system at 200.3 hours on 11/12/07; start air sparge system
11/13/07	SYS-INF SYS-MID SYS-EFF	225.6	46	28	2,937 0 4	--- --- ---	---	13.0	244.3	0.12	1.96	yes	

Table 2. SVE/AS System Performance Summary - 1721 Webster Street, Oakland, California													
Date	Sample ID	FIELD MEASUREMENTS				ANALYTICAL RESULTS		REMOVAL				Air Sparge Unit on? (yes/no)	Comments
		Hour Meter Reading (hours)	System Vapor Flow Rate (cfm)	Applied Vacuum ("H2O)	FID Reading (ppm)	TPHg Lab Data (ppmv)	Benzene Lab Data (ppmv)	SVE TPHg Removal Rate (lbs/day)	Cumulative SVE TPHg Removal (lbs)	SVE Benzene Removal Rate (lbs/day)	Cumulative SVE Benzene Removal (lbs)		
11/14/07	SYS-INF SYS-MID SYS-EFF	253.0	45	28	4,113 0 0	---	---	12.7	258.9	0.11	2.09	yes	
11/15/07	SYS-INF SYS-MID SYS-EFF	278.4	45	28	2,810 0 0	---	---	12.7	272.3	0.11	2.21	yes	
11/16/07	SYS-INF SYS-MID SYS-EFF	301.4	43	28	2,570 0 0	---	---	12.1	283.9	0.11	2.31	yes	
11/17/07	SYS-INF SYS-MID SYS-EFF	327.1	42	41	11 0 0	---	---	11.9	296.6	0.11	2.42	yes	
11/18/07	SYS-INF SYS-MID SYS-EFF	352.1	44	41	530 0 0	---	---	12.4	309.6	0.11	2.54	yes	
11/19/07	SYS-INF SYS-MID SYS-EFF	375.2	42	41	24 0 0	22 ---	<0.077 ---	0.3	309.9	0.00	2.54	yes	
11/20/07	SYS-INF SYS-MID SYS-EFF	398.8	49	68	660 0 0	---	---	0.3	310.2	0.00	2.54	yes	Increased system vacuum by closing off recirculation valve on blower.
11/26/07	SYS-INF SYS-MID SYS-EFF	426.3	49	68	1,800 0 0	---	---	0.3	310.6	0.00	2.54	yes	Received verbal approval from BAAQMD to decrease monitoring from daily to weekly.
12/03/07	SYS-INF SYS-MID SYS-EFF	593.5	48	61	1,300 0 0	---	---	0.3	313.0	0.00	2.54	yes	
12/14/07	SYS-INF SYS-MID SYS-EFF	853.0	52	54	280 0 0	280 <7.0 <7.0	0.17 <0.077 <0.077	4.7	363.5	0.003	2.57	yes	
12/21/07	SYS-INF SYS-MID SYS-EFF	1,021.5	58	54	0 0 0	170 <7.0 <7.0	0.14 <0.077 <0.077	3.2	385.7	0.00	2.58	yes	SVE shutdown after reading, restarted
12/27/07	SYS-INF SYS-MID SYS-EFF	1,163.5	40	54	NM NM NM	---	---	2.2	398.6	0.00	2.59	yes	SVE shutdown on arrival, restart and monitor
12/28/07	SYS-INF SYS-MID SYS-EFF	1,188.5	50	54	14 0 0	14 <7.0 <7.0	<0.077 <0.077 <0.077	0.2	398.8	0.00	2.59	yes	
01/03/08	SYS-INF SYS-MID SYS-EFF	1,329.5	51	54	50 0 0	50 15 <7.0	<0.077 <0.077 <0.077	0.8	403.6	0.00	2.59	yes	
01/10/08	SYS-INF SYS-MID SYS-EFF	1,430.2	50	54	0 0 0	16 13 <7.0	<0.077 <0.077 <0.077	0.3	404.7	0.00	2.59	no	AS system off while sampling

Table 2. SVE/AS System Performance Summary - 1721 Webster Street, Oakland, California													
Date	Sample ID	FIELD MEASUREMENTS				ANALYTICAL RESULTS		REMOVAL				Air Sparge Unit on? (yes/no)	Comments
		Hour Meter Reading (hours)	System Vapor Flow Rate (cfm)	Applied Vacuum ("H2O)	FID Reading (ppm)	TPHg Lab Data (ppmv)	Benzene Lab Data (ppmv)	SVE TPHg Removal Rate (lbs/day)	Cumulative SVE TPHg Removal (lbs)	SVE Benzene Removal Rate (lbs/day)	Cumulative SVE Benzene Removal (lbs)		
1/15/2008*	SYS-INF SYS-MID SYS-EFF	1,546.0	50	81	--	1,200 7.7 <7.0	2.1 <0.077 <0.077	19.2	497.6	0.03	2.74	yes	
1/23/2008*	SYS-INF SYS-MID SYS-EFF	1,694.5	50	95	--	1,300 11 <7.0	1.6 <0.077 <0.077	20.9	626.6	0.02	2.88	yes	
01/30/08	SYS-INF SYS-MID SYS-EFF	1,864.6	49	81	--	2,300 24 <7.0	2.6 <0.077 <0.077	36.2	882.9	0.04	3.15	yes	
02/06/08	SYS-INF SYS-MID SYS-EFF	2,027.5	50	81	--	1,700 43 <7.0	2.9 <0.077 <0.077	27.3	1,068.0	0.04	3.43	yes	
02/12/08	SYS-INF SYS-MID SYS-EFF	2,173.3	60	95	--	1,500 520 28	1.7 1.1 <0.077	28.9	1,243.4	0.03	3.61	yes	
02/21/08	SYS-INF SYS-MID SYS-EFF	2,394.1	65	95	--	---	---	31.3	1,531.2	0.03	3.91	yes	Samples not picked up by the laboratory courier before hold time expired.
02/29/08	SYS-INF SYS-MID SYS-EFF	2,580.5	27	95	--	1,100 890 <7.0	1.4 5.3 <0.077	9.5	1,605.2	0.01	3.99	yes	System shut down for future changeout of carbon in first vessel.
04/07/08	SYS-INF SYS-MID SYS-EFF	2,581.4	44	7.5	--	1,100 ---	1.4 ---	15.5	1,605.8	0.02	3.99	yes	Restart system after carbon changeout
04/10/08	SYS-INF SYS-MID SYS-EFF	2,650.3	26	7	--	1,200 <7.0 <7.0	3.6 <0.077 <0.077	10.0	1,634.5	0.03	4.07	yes	
04/17/08	SYS-INF SYS-MID SYS-EFF	2,826.1	28	8	962 3 3	---	---	10.8	1,713.5	0.03	4.29	yes	
04/23/08	SYS-INF SYS-MID SYS-EFF	2,969.4	26	7.5	--	1,100 <7.0 <7.0	1.5 <0.077 <0.077	9.2	1,768.2	0.01	4.36	yes	
04/30/08	SYS-INF SYS-MID SYS-EFF	3,136.8	23	7.5	--	780 <7.0 <7.0	1.4 <0.077 <0.077	5.8	1,808.4	0.01	4.42	yes	
05/07/08	SYS-INF SYS-MID SYS-EFF	3,304.6	28	8	378 0 0	---	---	7.0	1,857.4	0.01	4.50	yes	
05/14/08	SYS-INF SYS-MID SYS-EFF	3,472.2	26	8	523 6 0	---	---	6.5	1,902.8	0.01	4.57	yes	
05/23/08	SYS-INF SYS-MID SYS-EFF	3,690.2	28	7	264 0 0	---	---	7.0	1,966.5	0.01	4.68	yes	

Table 2. SVE/AS System Performance Summary - 1721 Webster Street, Oakland, California													
Date	Sample ID	FIELD MEASUREMENTS				ANALYTICAL RESULTS		REMOVAL				Air Sparge Unit on? (yes/no)	Comments
		Hour Meter Reading (hours)	System Vapor Flow Rate (cfm)	Applied Vacuum ("H2O)	FID Reading (ppm)	TPHg Lab Data (ppmv)	Benzene Lab Data (ppmv)	SVE TPHg Removal Rate (lbs/day)	Cumulative SVE TPHg Removal (lbs)	SVE Benzene Removal Rate (lbs/day)	Cumulative SVE Benzene Removal (lbs)		
05/30/08	SYS-INF SYS-MID SYS-EFF	3,859.2	36	7	317 1 0	---	---	9.0	2,029.9	0.01	4.78	yes	
06/05/08	SYS-INF SYS-MID SYS-EFF	3,999.6	38	7	350 0 0	---	---	9.5	2,085.5	0.02	4.87	yes	
06/13/08	SYS-INF SYS-MID SYS-EFF	4,193.1	38	7	--	700 <7.0 <7.0	1.6 <0.077 <0.077	8.5	2,154.3	0.02	5.01	yes	
06/19/08	SYS-INF SYS-MID SYS-EFF	4336.7	25	7	349 -- 0	---	---	5.6	2,187.9	0.01	5.08	yes	
06/27/08	SYS-INF SYS-MID SYS-EFF	4,529.7	25	7	335 0 0	---	---	5.6	2,233.1	0.01	5.18	yes	
07/10/08	SYS-INF SYS-MID SYS-EFF	4,839.0	56	8	256 40 0	---	---	12.6	2,395.2	0.03	5.51	yes	
07/18/08	SYS-INF SYS-MID SYS-EFF	5,032.0	33	8	330 174 0	---	---	7.4	2,454.8	0.02	5.64	yes	
7/24/2008**	SYS-INF SYS-MID SYS-EFF	5,178.0	33	8	360 187 0	---	---	7.4	2,499.8	0.02	5.73	yes	
8/1/2008**	SYS-INF SYS-MID SYS-EFF	5,368.0	33	8	248 193 0	---	---	7.4	2,558.5	0.02	5.85	yes	Lowered motor speed of blower to reduce noise within garage per client request.
8/8/2008**	SYS-INF SYS-MID SYS-EFF	5,536.7	17	4.5	146 153 0	---	---	3.8	2,585.3	0.01	5.91	yes	Stopped air sparging to wells AS-1 & AS-3. Sparging in well AS-2 full time.
8/18/2008**	SYS-INF SYS-MID SYS-EFF	5,774.1	17	4.5	365 170 0	840 140 <7.0	1.1 <0.077 <0.077	4.6	2,630.7	0.01	5.96	yes	
08/22/08	SYS-INF SYS-MID SYS-EFF	5,873.9	17	4	325 207 0	---	---	4.6	2,649.7	0.01	5.98	yes	
09/05/08	SYS-INF SYS-MID SYS-EFF	6,208.4	14	5	385 219 23	---	---	3.6	2,700.4	0.004	6.05	yes	System shutdown for carbon changeout
10/06/08	SYS-INF SYS-MID SYS-EFF	6,211.0	13	5	443 23 0	1,000 -- <7.0	1.8 -- <0.077	3.4	2,700.8	0.004	6.05	yes	System restarted; samples collected after system ran for approximately 1 hour
10/14/08	SYS-INF SYS-MID SYS-EFF	6,405.0	15	5	215 0 0	---	---	4.7	2,738.4	0.00	6.05	yes	

Table 2. SVE/AS System Performance Summary - 1721 Webster Street, Oakland, California													
Date	Sample ID	FIELD MEASUREMENTS				ANALYTICAL RESULTS		REMOVAL				Air Sparge Unit on? (yes/no)	Comments
		Hour Meter Reading (hours)	System Vapor Flow Rate (cfm)	Applied Vacuum ("H2O)	FID Reading (ppm)	TPHg Lab Data (ppmv)	Benzene Lab Data (ppmv)	SVE TPHg Removal Rate (lbs/day)	Cumulative SVE TPHg Removal (lbs)	SVE Benzene Removal Rate (lbs/day)	Cumulative SVE Benzene Removal (lbs)		
10/23/08	SYS-INF SYS-MID SYS-EFF	6,615.7	14	5	205 0 0	---	---	4.5	2,777.8	0.01	6.11	yes	
10/29/08	SYS-INF SYS-MID SYS-EFF	6,760.3	21	5	160 0 0	---	---	6.6	2,817.5	0.01	6.17	yes	
11/17/08	SYS-INF SYS-MID SYS-EFF	7,221.4	20	5	98 0 0	---	---	6.3	2,937.6	0.01	6.37	yes	
11/25/08	SYS-INF SYS-MID SYS-EFF	7,413.9	19	5	24 0 0	---	---	6.1	2,986.5	0.01	6.45	yes	
12/05/08	SYS-INF SYS-MID SYS-EFF	7,652.3	15	5	74 0 0	---	---	4.8	3,034.3	0.01	6.53	yes	Shutdown system to conduct maintenance on blower. Greased fittings and lowered motor speed at owner request
12/16/08	SYS-INF SYS-MID SYS-EFF	7,915.0	15	5	21 0 0	77 ---	<0.077 ---	0.4	3,038.4	0.00	6.53	yes	
12/23/08	SYS-INF SYS-MID SYS-EFF	8,079.4	20	5	22 0 0	---	---	0.5	3,041.7	0.00	6.53		
12/31/08	SYS-INF SYS-MID SYS-EFF	8,277.1	30	5	24 0 0	---	---	0.7	3,047.8	0.00	6.53		
01/06/09	SYS-INF SYS-MID SYS-EFF	8,416.9	27	5	28 0 0	---	---	0.7	3,051.6	0.00	6.53		Greased blower
01/20/09	SYS-INF SYS-MID SYS-EFF	8,756.6	27	5	NM ---	---	---	0.7	3,061.1	0.00	6.53		Shutdown system to evaluate effectiveness of remediation on
02/06/09	SYS-INF SYS-MID SYS-EFF	8,756.6	25	5	50 0 0	50 ---	<0.077 ---	0.4	3,061.1	0.00	6.53		Restart system
02/26/09	SYS-INF SYS-MID SYS-EFF	9,002.6	22	5	13 1 0	---	---	0.3	3,064.6	0.00	6.53		Restart system, off on arrival
03/06/09	SYS-INF SYS-MID SYS-EFF	9,197.4	23	5	5 0 0	---	---	0.4	3,067.6	0.00	6.53		
03/13/09	SYS-INF SYS-MID SYS-EFF	9,360.4	22	5	NM NM NM	20 <7.0 <7.0	<0.077 <0.077 <0.077	0.1	3,068.5	0.00	6.53		
03/18/09	SYS-INF SYS-MID SYS-EFF	9,480.4	21	5	5 0 0	---	---	0.1	3,069.2	0.00	6.53		
03/26/09	SYS-INF SYS-MID SYS-EFF	9,675.1	21	5	5 0 0	---	---	0.1	3,070.3	0.00	6.53		

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		Hour Meter Reading (hours)	System Vapor Flow Rate (cfm)	Applied Vacuum ("H2O)	FID Reading (ppm)	TPHg Lab Data (ppmv)	Benzene Lab Data (ppmv)	SVE TPHg Removal Rate (lbs/day)	Cumulative SVE TPHg Removal (lbs)	SVE Benzene Removal Rate (lbs/day)	Cumulative SVE Benzene Removal (lbs)		
<p>Notes:</p> <p>NM = not measured</p> <p>cfm = cubic feet per minute.</p> <p>ppmv = Parts per million by volume</p> <p>lbs = Pounds</p> <p>"H2O = Inches of water</p> <p>SVE/AS = Soil vapor extraction and air sparge</p> <p>FID = Flame Ionization Detector.</p> <p>Hydrocarbon Removal/Emission Rate = Rate based on Bay Area Air Quality Management District's Manual of Procedures for Soil Vapor Extraction dated July 17, 1991.</p> <p>Rate = vapor analytical concentration (ppmv) x system flowrate (scfm) x (1lb-mole/386 ft³) x molecular weight (86 lb/lb-mole for TPH-Gas hexane) x 1440 min/day x 1/1,000,000.</p> <p>* = Subtracted carbon tip readings of 28, 17, and 10, respectively, from influent, midpoint and effluent readings without carbon tip to account for methane.</p> <p>(-) = not sampled</p> <p>*Soil vapor flow rates were not measured on 1/15/08 and 1/23/08 due to equipment breakage. For hydrocarbon mass removal calculation purposes, the flow rate recorded during the 1/10/08 visit was used.</p> <p>**Vapor flow meter being serviced from 7-24-2008 through 8-18-2008. Flow rates assumed from previous data, field observations, and adjustments made to system.</p>													

APPENDIX A

Groundwater Monitoring Program

Table A - Groundwater Monitoring Program
Douglas Parking Company, 1721 Webster Street, Oakland, CA.

Well ID	Well Type	Screened Interval (ft bgs)	Well Location for Monitoring	Casing Diam. (in)	Gauge Frequency	Sample Frequency	TPHg/BTEX/MTBE	TAME/TBA/DIPE/ETBE/MTBE
Onsite Monitoring and Remediation Wells								
MW-1	Mon	17-30	Source Area	2	All	1st	1st	---
MW-2	Mon	19.5-29.5	Downgradient	2	All	All	All	---
MW-3	Mon	20-30	Upgradient	2	All	All	All	---
AS-1	Rem	27-30	Source Area	1	---	---	---	---
AS-2	Rem	27-30	Source Area	2	---	---	---	---
AS-3	Rem	27-30	Source Area	2	---	---	---	---
Offsite Monitoring Wells								
MW-4	Mon	15-30	Mid-Downgradient	2	All	All	All	---
MW-5	Mon	10-25	Downgradient	2	All	1st	1st	---
MW-6	Mon	15-30	Crossgradient	2	All	All	All	---
MW-7	Mon	15-30	Upgradient	2	All	1st	1st	---

Notes and Abbreviations:

1st = First Quarter (Typically January, A month)

All = All four quarters. Typically A months (January, April, July, October)

Mon = Groundwater Monitoring Only

Rem= Remediation Well Only


--- = None or not applicable

AS-1 = Air Sparging Well

APPENDIX B

Groundwater Monitoring Field Data Sheets

Well Gauging Data Sheet

Project.Task #:1135.001 218				Project Name: Douglas Parking			
Address: 1721 Webster Street, Oakland, CA						Date:1/09/09	
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"	5:50			22.89	26.65	TOC
MW-2	2"	3:26			20.80	25.95	TOC
MW-3	2"	3:20			22.27	26.90	TOC
MW-4	2"	3:17			19.12	29.42	TOC
MW-5	2"	3:08			16.75	24.50	TOC
MW-6	2"	3:30			20.83	25.79	TOC
MW-7 MW-7	2"	3:12			22.52	28.46	TOC

Comments:


MONITORING FIELD DATA SHEET

Well ID: MN-1

Project.Task #: 1135.001 218				Project Name: Douglas Parking				
Address: 1721 Webster Street, Oakland, CA								
Date: 1/09/09				Weather: <u>Clear</u>				
Well Diameter: <u>2''</u>				Volume/ft.	1" = 0.04	3" = 0.37	6" = 1.47	radius ² * 0.163
				2" = 0.16	4" = 0.65			
Total Depth (TD): <u>26.65</u>				Depth to Product:				
Depth to Water (DTW): <u>22.89</u>				Product Thickness:				
Water Column Height: <u>3.76</u>				1 Casing Volume: <u>0.60</u>		gallons		
Reference Point: TOC				<u>3</u> Casing Volumes: <u>1.80</u>		gallons		
Purging Device: <u>Disposable Bailer</u> , 3" PVC Bailer, Check Valve Tubing, 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>19.3</u>	<u>6.88</u>	<u>570</u>				<u>1.0</u>	
<u>5:57</u>	<u>19.9</u>	<u>6.82</u>	<u>554</u>				<u>1.5</u>	
<u>6:00</u>	<u>19.4</u>	<u>6.84</u>	<u>582</u>				<u>2.0</u>	

Comments: YSI 550A DO meter pre purge DO = 0.80 mg/l
 post purge DO = mg/l

very turbid, silty


Sample ID: <u>MN-1</u>	Sample Time: <u>6:05</u>
Laboratory: McCampbell Analytical, INC.	Sample Date: 1/09/09
Containers/Preservative: Voa/HCl	
Analyzed for: 8015, 8021, 8200	
Sampler Name: Sanjiv Gill	Signature: 

MONITORING FIELD DATA SHEET

Well ID: MW-2

Project.Task #: 1135.001 218		Project Name: Douglas Parking	
Address: 1721 Webster Street, Oakland, CA			
Date: 1/09/09		Weather: <u>Clear</u>	
Well Diameter: <u>2''</u>	Volume/ft.	1" = 0.04	3" = 0.37
		2" = 0.16	4" = 0.65
6" = 1.47		radius ² * 0.163	
Total Depth (TD): <u>25.95</u>		Depth to Product:	
Depth to Water (DTW): <u>20.80</u>		Product Thickness:	
Water Column Height: <u>5.15</u>		1 Casing Volume: <u>0.82</u> gallons	
Reference Point: TOC		<u>3</u> Casing Volumes: <u>2.46</u> gallons	
Purging Device: <u>Disposable Bailer</u> 3" PVC Bailer, Check Valve Tubing, Whal Pump			
Sampling Device: Disposable Bailer			
Time	Temp ©	pH	Cond (µs)
			NTU
			DO(mg/L)
			ORP (mV)
			Vol(gal)
			DTW
<u>5:15</u>	<u>19.4</u>	<u>6.75</u>	<u>490</u>
<u>5:17</u>	<u>19.7</u>	<u>6.79</u>	<u>486</u>
<u>5:20</u>	<u>19.8</u>	<u>6.82</u>	<u>479</u>

Comments: YSI 550A DO meter pre purge DO = 0.61 mg/l
 post purge DO = mg/l
very turbid, silty, odor

Sample ID: <u>MW-2</u>	Sample Time: <u>5:25</u>
Laboratory: McCampbell Analytical, INC.	Sample Date: 1/09/09
Containers/Preservative: Voa/HCl	
Analyzed for: 8015, 8021, 8250	
Sampler Name: Sanjiv Gill	Signature: 

MONITORING FIELD DATA SHEET

Well ID: MW-3

Project Task #: 1135.001 218		Project Name: Douglas Parking						
Address: 1721 Webster Street, Oakland, CA								
Date: 1/09/09		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 ² * 0.163			
Total Depth (TD): <u>26.90</u>		Depth to Product:						
Depth to Water (DTW): <u>22.27</u>		Product Thickness:						
Water Column Height: <u>4.63</u>		1 Casing Volume: <u>0.74</u>	gallons					
Reference Point: TOC		<u>3</u> Casing Volumes: <u>2.22</u>	gallons					
Purging Device: <u>Disposable Bailer</u> 3" PVC Bailer, Check Valve Tubing, Whal Pump								
Sampling Device: Disposable Bailer								
Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
<u>4:55</u>	<u>19.1</u>	<u>6.80</u>	<u>417</u>				<u>1</u>	
<u>4:57</u>	<u>18.8</u>	<u>6.84</u>	<u>398</u>				<u>1.5</u>	
<u>5:00</u>	<u>19.3</u>	<u>6.86</u>	<u>392</u>				<u>2.0</u>	

Comments: YSI 550A DO meter pre purge DO = 0.79 mg/l
post purge DO = mg/l


Sample ID: <u>MW-3</u>	Sample Time: <u>5:05</u>
Laboratory: McCampbell Analytical, INC.	Sample Date: 1/09/09
Containers/Preservative: Voa/HCl	
Analyzed for: 8015, 8021, 8260	
Sampler Name: Sanjiv Gill	Signature: 

MONITORING FIELD DATA SHEET

Well ID: MW-4

Project.Task #: 1135.001 218				Project Name: Douglas Parking				
Address: 1721 Webster Street, Oakland, CA								
Date: 1/09/09				Weather: <u>Clear</u>				
Well Diameter: <u>2"</u>				Volume/ft.	1" = 0.04	3" = 0.37	6" = 1.47	radius ² * 0.163
				2" = 0.16	4" = 0.65			
Total Depth (TD): <u>29.42</u>				Depth to Product:				
Depth to Water (DTW): <u>19.12</u>				Product Thickness:				
Water Column Height: <u>10.30</u>				1 Casing Volume: <u>1.64</u>		gallons		
Reference Point: TOC				<u>3</u> Casing Volumes: <u>4.92</u>		gallons		
Purging Device: <u>Disposable Bailer</u> , 3" PVC Bailer, Check Valve Tubing, Whal Pump								
Sampling Device: Disposable Bailer								
Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
<u>4:30</u>	<u>19.5</u>	<u>7.24</u>	<u>620</u>				<u>1.5</u>	
<u>4:35</u>	<u>19.9</u>	<u>7.24</u>	<u>635</u>				<u>3</u>	
<u>4:40</u>	<u>19.6</u>	<u>7.24</u>	<u>632</u>				<u>5</u>	

Comments: YSI 550A DO meter pre purge DO = 0.68mg/l
 post purge DO = mg/l
turbid, odors


Sample ID: <u>MW-4</u>	Sample Time: <u>4:45</u>
Laboratory: McCampbell Analytical, INC.	Sample Date: 1/09/09
Containers/Preservative: <u>Voac/HCl</u>	
Analyzed for: 8015, 8021, 8020	
Sampler Name: Sanjiv Gill	Signature: 

MONITORING FIELD DATA SHEET

Well ID: MW-5

Project.Task #: 1135.001 218		Project Name: Douglas Parking						
Address: 1721 Webster Street, Oakland, CA								
Date: 1/09/09		Weather: Clear						
Well Diameter: 2"	Volume/ft.							
	1" = 0.04 2" = 0.16	3" = 0.37 4" = 0.65	6" = 1.47 radius ² * 0.163					
Total Depth (TD): 24.50	Depth to Product:							
Depth to Water (DTW): 16.75	Product Thickness:							
Water Column Height: 7.75	1 Casing Volume: 1.24		gallons					
Reference Point: TOC	3 Casing Volumes: 3.72		gallons					
Purging Device: Disposable Bailer, 3" PVC Bailer, Check Valve Tubing, Whal Pump								
Sampling Device: Disposable Bailer								
Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
3:45	19.8	7.49	510				1.5	
3:47	19.7	7.46	517				3	
3:50	19.5	7.38	524				4	

Comments: YSI 550A DO meter pre purge DO = 0.53 mg/l
 post purge DO = mg/l
 turbid

Sample ID: MW-5	Sample Time: 3:55
Laboratory: McCampbell Analytical, INC.	Sample Date: 1/09/09
Containers/Preservative: Voa/HCl	
Analyzed for: 8015, 8021, 8260	
Sampler Name: Sanjiv Gill	Signature: 

MONITORING FIELD DATA SHEET

Well ID: MN-6

Project.Task #: 1135.001 218		Project Name: Douglas Parking	
Address: 1721 Webster Street, Oakland, CA			
Date: 1/09/09		Weather: <u>Clear</u>	
Well Diameter: <u>2"</u>	Volume/ft.	1" = 0.04	3" = 0.37
		2" = 0.16	4" = 0.65
6" = 1.47		radius ² * 0.163	
Total Depth (TD): <u>25.79</u>		Depth to Product:	
Depth to Water (DTW): <u>20.83</u>		Product Thickness:	
Water Column Height: <u>4.96</u>		1 Casing Volume: <u>0.79</u> gallons	
Reference Point: TOC		<u>3</u> Casing Volumes: <u>2.37</u> gallons	
Purging Device: <u>Disposable Bailer</u> , 3" PVC Bailer, Check Valve Tubing, Whal Pump			
Sampling Device: Disposable Bailer			
Time	Temp ©	pH	Cond (µs)
<u>5:35</u>	<u>19.2</u>	<u>6.73</u>	<u>732</u>
<u>5:37</u>	<u>19.5</u>	<u>6.81</u>	<u>711</u>
<u>5:40</u>	<u>19.5</u>	<u>6.79</u>	<u>715</u>
NTU	DO(mg/L)	ORP (mV)	Vol(gal)
			<u>1.0</u>
			<u>2.0</u>
			<u>2.5</u>
DTW			

Comments: YSI 550A DO meter pre purge DO = 0.58 mg/l
 post purge DO = _____ mg/l
very turbid, silty, odor


Sample ID: <u>MN-6</u>	Sample Time: <u>5:45</u>
Laboratory: McCampbell Analytical, INC.	Sample Date: 1/09/09
Containers/Preservative: Voa/HCl	
Analyzed for: 8015, 8021, 8020	
Sampler Name: Sanjiv Gill	Signature:

MONITORING FIELD DATA SHEET

Well ID: MW-7

Project.Task #: 1135.001 218		Project Name: Douglas Parking							
Address: 1721 Webster Street, Oakland, CA									
Date: 1/09/09		Weather: <u>Clear</u>							
Well Diameter: <u>2"</u>		Volume/ft. <table border="1" style="font-size: small; border-collapse: collapse;"> <tr> <td>1" = 0.04</td> <td>3" = 0.37</td> <td>6" = 1.47</td> </tr> <tr> <td>2" = 0.16</td> <td>4" = 0.65</td> <td>radius²* 0.163</td> </tr> </table>		1" = 0.04	3" = 0.37	6" = 1.47	2" = 0.16	4" = 0.65	radius ² * 0.163
1" = 0.04	3" = 0.37	6" = 1.47							
2" = 0.16	4" = 0.65	radius ² * 0.163							
Total Depth (TD): <u>28.46</u>		Depth to Product:							
Depth to Water (DTW): <u>22.52</u>		Product Thickness:							
Water Column Height: <u>5.94</u>		1 Casing Volume: <u>0.95</u> gallons							
Reference Point: TOC		<u>3</u> Casing Volumes: <u>2.85</u> gallons							
Purging Device: <u>Disposable Bailer</u> , 3" PVC Bailer, Check Valve Tubing, Whal Pump									
Sampling Device: Disposable Bailer									
Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW	
<u>4:05</u>	<u>19.6</u>	<u>7.12</u>	<u>381</u>				<u>1</u>		
<u>4:07</u>	<u>19.8</u>	<u>7.10</u>	<u>360</u>				<u>2</u>		
<u>4:10</u>	<u>19.9</u>	<u>7.06</u>	<u>370</u>				<u>3</u>		

Comments: YSI 550A DO meter pre purge DO = 0.53mg/l
 post purge DO = mg/l
very turbid, silty

Sample ID: <u>MW-7</u>	Sample Time: <u>4:15</u>
Laboratory: McCampbell Analytical, INC.	Sample Date: 1/09/09
Containers/Preservative: Voa/HCl	
Analyzed for: 8015, 8021, 8020	
Sampler Name: Sanjiv Gill	Signature: 

APPENDIX C

Laboratory Analytical Reports



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; Douglas Parking, Webster St. Oakland	Date Sampled: 01/09/09
	Client Contact: Erica Ray	Date Received: 01/09/09
	Client P.O.:	Date Reported: 01/15/09
		Date Completed: 01/14/09

WorkOrder: 0901131

January 15, 2009

Dear Erica:

Enclosed within are:

- 1) The results of the **7** analyzed samples from your project: **#1135.001; Douglas Parking, Webst**
- 2) A QC report for the above samples,
- 3) A copy of the chain of custody, and
- 4) An invoice 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 or concerns, please feel free to give me a call. Thank you for choosing

McC Campbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
Laboratory Manager
McC Campbell Analytical, Inc.

0901131

McCAMPBELL ANALYTICAL, INC.

110 2nd AVENUE SOUTH, #D7
PACHECO, CA 94553-5560

Website: www.mccampbell.com Email: main@mccampbell.com

Telephone: (925) 798-1620 Fax: (925) 798-1622

CHAIN OF CUSTODY RECORD

TURN AROUND TIME

EDF Yes

RUSH 24 HR 48 HR 72 HR 5 DAY

EDF Required? Coelt (Normal) No Write On (DW) No

Report To: Erica Ray Bill To: Pangea Environmental
Company: Pangea Environmental Services, Inc.
1710 Franklin Street, Suite 200
Oakland, CA 94612 E-Mail: eray@pangeaenv.com
Tele: 510-836-3702 Fax: (510) 836-3709
Project #: 1135001 Project Name: Douglas Parking
Project Location: 1721 Webster St., Oakland, CA
Sampler Signature: Muskan Environmental Sampling

Analysis Request Other Comments

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING		# Containers	Type Containers	MATRIX					METHOD PRESERVED		BTEX & TPH as Gas (602/8020 + 8015)/MTBE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601 / 8010 / 8021	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8081	EPA 608 / 8082 PCB's ONLY	EPA 8140 / 8141	EPA 8150 / 8151	EPA 524.2 / 624 / 8260	EPA 525 / 625 / 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals (6010 / 6020)	LUFT 5 Metals (6010 / 6020)	Lead (200.8 / 200.9 / 6010)	Filter Samples for Metals analysis: Yes / No						
		Date	Time			Water	Soil	Air	Sludge	Other	ICE	HCL																		HNO ₃	Other				
+1 MW-1		1-9-09	6:05	3	VOA	X					X	X	X																						
+ MW-2			5:25																																
+ MW-3			5:05																																
+ MW-4			4:46																																
+ MW-5			3:55																																
+1 MW-6			5:45																																
+5 MW-7			4:15																																

Relinquished By: [Signature] Date: 1-9-09 Time: 7:18
Received By: ENVIRO-TECH SERVICES Date: 1-9-09 Time: 7:18 AM
Relinquished By: Enviro-Tech Svc. Date: 1-9-09 Time: 9:05
Received By: [Signature]
Relinquished By: [Signature] Date: 1/9/09 Time: 9:20
Received By: [Signature]

ICE/PH 4.8
GOOD CONDITION ✓
HEAD SPACE ABSENT ✓
DECHLORINATED IN LAB ✓
APPROPRIATE CONTAINERS ✓
PRESERVED IN LAB ✓
PRESERVATION VOAS O&G METALS OTHER
pH-2

McC Campbell Analytical, Inc.



1534 Willow Pass Rd
 Pittsburg, CA 94565-1701
 (925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0901131

ClientCode: PEO

WriteOn
 EDF
 Excel
 Fax
 Email
 HardCopy
 ThirdParty
 J-flag

Report to:	Erica Ray	Email: eray@pangeaenv.com	Bill to:	Bob Clark-Riddell	Requested TAT: 5 days
	Pangea Environmental Svcs., Inc.	cc:		Pangea Environmental Svcs., Inc.	Date Received: 01/09/2009
	1710 Franklin Street, Ste. 200	PO:		1710 Franklin Street, Ste. 200	Date Printed: 01/09/2009
	Oakland, CA 94612	ProjectNo: #1135.001; Douglas Parking, Webster		Oakland, CA 94612	
	(510) 836-3702 FAX (510) 836-3709	St. Oakland			

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
0901131-001	MW-1	Water	1/9/2009 6:05	<input type="checkbox"/>	A	A											
0901131-002	MW-2	Water	1/9/2009 5:25	<input type="checkbox"/>	A												
0901131-003	MW-3	Water	1/9/2009 5:05	<input type="checkbox"/>	A												
0901131-004	MW-4	Water	1/9/2009 4:45	<input type="checkbox"/>	A												
0901131-005	MW-5	Water	1/9/2009 3:55	<input type="checkbox"/>	A												
0901131-006	MW-6	Water	1/9/2009 5:45	<input type="checkbox"/>	A												
0901131-007	MW-7	Water	1/9/2009 4:15	<input type="checkbox"/>	A												

Test Legend:

1	G-MBTEX_W	2	PREDF REPORT	3		4		5	
6		7		8		9		10	
11		12							

Prepared by: Maria Venegas

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
 Hazardous samples will be returned to client or disposed of at client expense.



Sample Receipt Checklist

Client Name: **Pangea Environmental Svcs., Inc.**

Date and Time Received: **01/09/09 8:33:15 AM**

Project Name: **#1135.001; Douglas Parking, Webster St. Oakland**

Checklist completed and reviewed by: **Maria Venegas**

WorkOrder N°: **0901131** Matrix Water

Carrier: EnviroTech

Chain of Custody (COC) Information

- Chain of custody present? Yes No
- Chain of custody signed when relinquished and received? Yes No
- Chain of custody agrees with sample labels? Yes No
- Sample IDs noted by Client on COC? Yes No
- Date and Time of collection noted by Client on COC? Yes No
- Sampler's name noted on COC? Yes No

Sample Receipt Information

- Custody seals intact on shipping container/cooler? Yes No NA
- Shipping container/cooler in good condition? Yes No
- Samples in proper containers/bottles? Yes No
- Sample containers intact? Yes No
- Sufficient sample volume for indicated test? Yes No

Sample Preservation and Hold Time (HT) Information

- All samples received within holding time? Yes No
- Container/Temp Blank temperature Cooler Temp: 4.8°C NA
- Water - VOA vials have zero headspace / no bubbles? Yes No No VOA vials submitted
- Sample labels checked for correct preservation? Yes No
- TTLC Metal - pH acceptable upon receipt (pH<2)? Yes No NA
- Samples Received on Ice? Yes No

(Ice Type: WET ICE)

* NOTE: If the "No" box is checked, see comments below.

Client contacted:

Date contacted:

Contacted by:

Comments:



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; Douglas Parking, Webster St. Oakland	Date Sampled: 01/09/09
	Client Contact: Erica Ray	Date Received: 01/09/09
	Client P.O.:	Date Extracted: 01/09/09-01/13/09
		Date Analyzed 01/09/09-01/13/09

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

Extraction method SW5030B

Analytical methods SW8021B/8015Bm

Work Order: 0901131

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	MW-1	W	ND,b1	ND	ND	ND	ND	ND	1	94
002A	MW-2	W	16,000,d1	ND<100	240	680	460	3000	20	94
003A	MW-3	W	9800,d1	ND<17	1.7	2.0	3.0	14	3.3	115
004A	MW-4	W	4400,d1	ND<150	180	34	180	93	5	103
005A	MW-5	W	ND	ND	ND	ND	ND	ND	1	95
006A	MW-6	W	22,000,d1,b6,b1	ND<250	340	390	560	1400	50	110
007A	MW-7	W	ND,b1	ND	ND	ND	ND	ND	1	94

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	5	0.5	0.5	0.5	0.5	µg/L
	S	1.0	0.05	0.005	0.005	0.005	0.005	mg/Kg

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/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:

b1) aqueous sample that contains greater than ~1 vol. % sediment
b6) lighter than water immiscible sheen/product is present
d1) weakly modified or unmodified gasoline is significant



QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 40728

WorkOrder 0901131

EPA Method SW8021B/8015Bm		Extraction SW5030B							Spiked Sample ID: 0901130-005B			
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	RPD	LCS/LCSD	RPD
TPH(btex) [£]	ND	60	102	105	3.23	105	101	3.80	70 - 130	20	70 - 130	20
MTBE	ND	10	94.5	92.9	1.66	86.4	101	16.0	70 - 130	20	70 - 130	20
Benzene	ND	10	89	81.3	9.01	82.9	96.8	15.4	70 - 130	20	70 - 130	20
Toluene	ND	10	91.1	87.7	3.88	86.6	99.3	13.7	70 - 130	20	70 - 130	20
Ethylbenzene	ND	10	82.2	91	10.1	86.5	99.2	13.7	70 - 130	20	70 - 130	20
Xylenes	ND	30	103	102	0.274	99	114	13.8	70 - 130	20	70 - 130	20
%SS:	94	10	99	103	4.14	100	101	0.362	70 - 130	20	70 - 130	20

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

BATCH 40728 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0901131-001A	01/09/09 6:05 AM	01/09/09	01/09/09 8:55 PM	0901131-002A	01/09/09 5:25 AM	01/12/09	01/12/09 11:39 PM
0901131-003A	01/09/09 5:05 AM	01/13/09	01/13/09 9:10 PM	0901131-004A	01/09/09 4:45 AM	01/12/09	01/12/09 9:31 PM
0901131-005A	01/09/09 3:55 AM	01/09/09	01/09/09 9:29 PM	0901131-006A	01/09/09 5:45 AM	01/09/09	01/09/09 7:53 PM
0901131-007A	01/09/09 4:15 AM	01/09/09	01/09/09 11:10 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.

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

cluttered chromatogram; sample peak coelutes with surrogate peak.

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

NR = matrix interference and/or 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, or inconsistency in sample containers.



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"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; 1721 Webster Street	Date Sampled: 02/06/09
	Client Contact: Bryce Taylor	Date Received: 02/06/09
	Client P.O.:	Date Reported: 02/11/09
		Date Completed: 02/10/09

WorkOrder: 0902176

February 12, 2009

Dear Bryce:

Enclosed within are:

- 1) The results of the **1** analyzed sample from your project: **#1135.001; 1721 Webster Street,**
- 2) A QC report for the above sample,
- 3) A copy of the chain of custody, and
- 4) An invoice 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 or concerns, please feel free to give me a call. Thank you for choosing

McC Campbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
Laboratory Manager
McC Campbell Analytical, Inc.

McC Campbell Analytical, Inc.



1534 Willow Pass Rd
 Pittsburg, CA 94565-1701
 (925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0902176

ClientCode: PEO

WriteOn EDF Excel Fax Email HardCopy ThirdParty J-flag

Report to:
 Bryce Taylor
 Pangea Environmental Svcs., Inc.
 1710 Franklin Street, Ste. 200
 Oakland, CA 94612
 (510) 836-3702 FAX (510) 836-3709

Email: btaylor@pangeaenv.com
cc:
PO:
ProjectNo: #1135.001; 1721 Webster Street

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

Requested TAT: 5 days
Date Received: 02/06/2009
Date Printed: 02/06/2009

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)													
					1	2	3	4	5	6	7	8	9	10	11	12		
0902176-001	INF	Air	2/6/2009 12:00	<input type="checkbox"/>	A	A												

Test Legend:

1	G-MBTEX AIR	2	PREDF REPORT	3		4		5	
6		7		8		9		10	
11		12							

The following SampID: 001A contains testgroup.

Prepared by: Samantha Arbuckle

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
 Hazardous samples will be returned to client or disposed of at client expense.



Sample Receipt Checklist

Client Name: **Pangea Environmental Svcs., Inc.**

Date and Time Received: **2/6/09 4:09:53 PM**

Project Name: **#1135.001; 1721 Webster Street**

Checklist completed and reviewed by: **Samantha Arbuckle**

WorkOrder N°: **0902176** Matrix Air

Carrier: Rob Pringle (MAI Courier)

Chain of Custody (COC) Information

- Chain of custody present? Yes No
- Chain of custody signed when relinquished and received? Yes No
- Chain of custody agrees with sample labels? Yes No
- Sample IDs noted by Client on COC? Yes No
- Date and Time of collection noted by Client on COC? Yes No
- Sampler's name noted on COC? Yes No

Sample Receipt Information

- Custody seals intact on shipping container/cooler? Yes No NA
- Shipping container/cooler in good condition? Yes No
- Samples in proper containers/bottles? Yes No
- Sample containers intact? Yes No
- Sufficient sample volume for indicated test? Yes No

Sample Preservation and Hold Time (HT) Information

- All samples received within holding time? Yes No
- Container/Temp Blank temperature Cooler Temp: NA
- Water - VOA vials have zero headspace / no bubbles? Yes No No VOA vials submitted
- Sample labels checked for correct preservation? Yes No
- TTLC Metal - pH acceptable upon receipt (pH<2)? Yes No NA
- Samples Received on Ice? Yes No

* NOTE: If the "No" box is checked, see comments below.

Client contacted:

Date contacted:

Contacted by:

Comments:



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Pangea Environmental Svcs., Inc.

 1710 Franklin Street, Ste. 200

 Oakland, CA 94612

Client Project ID: #1135.001; 1721
 Webster Street

 Client Contact: Bryce Taylor

 Client P.O.:

Date Sampled: 02/06/09
 Date Received: 02/06/09
 Date Extracted: 02/09/09
 Date Analyzed 02/09/09

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

Extraction method SW5030B

Analytical methods SW8021B/8015Bm

Work Order: 0902176

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	INF	A	180,d7	ND	ND	ND	ND	1.2	1	99

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	A	25	2.5	0.25	0.25	0.25	0.25	0.25	µg/L
	S	1.0	0.05	0.005	0.005	0.005	0.005	0.005	mg/Kg

* water and vapor samples 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 McCampbell Analytical is not responsible for their interpretation:

d7) strongly aged gasoline or diesel range compounds are significant in the TPH(g) chromatogram



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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; 1721 Webster Street	Date Sampled: 02/06/09
	Client Contact: Bryce Taylor	Date Received: 02/06/09
	Client P.O.:	Date Analyzed: 02/09/09
		Date Extracted: 02/09/09

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with MTBE and BTEX in ppmv*

Extraction method SW5030B

Analytical methods SW8021B/8015Bm

Work Order: 0902176

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	INF	A	50,d7	ND	ND	ND	ND	0.28	1	99

ppm (mg/L) to ppmv (ul/L) conversion for TPH(g) assumes the molecular weight of gasoline to be equal to that of hexane.

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	A	7.0	0.68	0.077	0.065	0.057	0.057	1	uL/L
	S	NA	NA	NA	NA	NA	NA	1	mg/Kg

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

d7) strongly aged gasoline or diesel range compounds are significant in the TPH(g) chromatogram



QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Air

QC Matrix: Water

BatchID: 41263

WorkOrder: 0902176

EPA Method SW8021B/8015Bm		Extraction SW5030B							Spiked Sample ID: 0902169-001A			
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	RPD	LCS/LCSD	RPD
TPH(btex) ^f	ND	60	86.2	84.7	1.82	93.1	89.9	3.48	70 - 130	20	70 - 130	20
MTBE	ND	10	84.1	89.1	5.76	94.3	88.4	6.54	70 - 130	20	70 - 130	20
Benzene	ND	10	81.4	85.2	4.64	88.8	83.5	6.15	70 - 130	20	70 - 130	20
Toluene	ND	10	83.3	87.7	5.09	90.6	86	5.20	70 - 130	20	70 - 130	20
Ethylbenzene	ND	10	82.8	87.8	5.89	91.5	86.5	5.58	70 - 130	20	70 - 130	20
Xylenes	ND	30	93	98.7	5.91	102	97	5.33	70 - 130	20	70 - 130	20
%SS:	94	10	102	102	0	101	101	0	70 - 130	20	70 - 130	20

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

BATCH 41263 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0902176-001A	02/06/09 12:00 PM	02/09/09	02/09/09 12:49 PM	0902176-001A	02/06/09 12:00 PM	02/09/09	02/09/09 12:49 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.

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

cluttered chromatogram; sample peak coelutes with surrogate peak.

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.



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Telephone: 877-252-9262 Fax: 925-252-9269

Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612	Client Project ID: Douglas	Date Sampled: 03/13/09
		Date Received: 03/13/09
	Client Contact: Brian Busch	Date Reported: 03/19/09
	Client P.O.:	Date Completed: 03/16/09

WorkOrder: 0903358

March 19, 2009

Dear Brian:

Enclosed within are:

- 1) The results of the **3** analyzed samples from your project: **Douglas**,
- 2) A QC report for the above samples,
- 3) A copy of the chain of custody, and
- 4) An invoice 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 or concerns, please feel free to give me a call. Thank you for choosing

McC Campbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
Laboratory Manager
McC Campbell Analytical, Inc.

McCAMPBELL ANALYTICAL, INC.

1534 WILLOW PASS ROAD
PITTSBURG, CA 94565-1701

* Website: www.mccampbell.com Email: 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? (Normal) No Write On (DW) No

Report To: Brian Busch Bill To: Pangea
Company: Pangea Environmental Technology, Inc.
1710 Franklin Street, Suite 200, Oakland, CA 94612
E-Mail: bbusch@pangeaenv.com
Tele: (925) 708-2775 Fax: (510) 836-3709
Project #: Project Name: DOUGLAS
Project Location: 1721 WEBSTER ST, OAKLAND CA.
Sampler Signature: *[Signature]*

Analysis Request Other Comments

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING		# Containers	Type Containers	MATRIX					METHOD PRESERVED								
		Date	Time			Water	Soil	Air	Sludge	Other	ICE	HCL	HNO ₃	Other					
INFLUENT		3-13-09	1115	1	bag			X											
MIDPOINT		↓	↓	1	↓			X											
EFFLUENT		↓	↓	1	↓			X											

- BTEX & TPH as Gas (602/8020 + 8015)/MTBE
- TPH as Diesel (8015)
- Total Petroleum Oil & Grease (5520 E&F/B&F)
- Total Petroleum Hydrocarbons (418.1)
- EPA 601 / 8010 / 8021
- BTEX ONLY (EPA 602 / 8020)
- EPA 608 / 8081
- EPA 608 / 8082 PCB's ONLY
- EPA 8140 / 8141
- EPA 8150 / 8151
- EPA 524.2 / 624 / 8260
- EPA 525 / 625 / 8270
- PAH's / PNA's by EPA 625 / 8270 / 8310
- CAM-17 Metals (6010 / 6020)
- LUFT 5 Metals (6010 / 6020)
- Lead (200.8 / 200.9 / 6010)

Filter Samples for Metals analysis: Yes / No

Relinquished By: *[Signature]* Date: 3-13-09 Time: 1144 Received By: *[Signature]*
Relinquished By: *[Signature]* Date: 3/13/09 Time: 1230 Received By: *[Signature]*
Relinquished By: _____ Date: _____ Time: _____ Received By: _____

ICE/T° *[Signature]*
GOOD CONDITION
HEAD SPACE ABSENT
DECHLORINATED IN LAB
APPROPRIATE CONTAINERS
PRESERVED IN LAB
VOAS O&G METALS OTHER
PRESERVATION pH<2

report results in ppmv

McC Campbell Analytical, Inc.



1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0903358

ClientCode: PEO

WriteOn
 EDF
 Excel
 Fax
 Email
 HardCopy
 ThirdParty
 J-flag

Report to:	Brian Busch	Email: bbusch@pangeaenv.com	Bill to:	Bob Clark-Riddell	Requested TAT: 5 days
	Pangea Environmental Svcs., Inc.	cc:		Pangea Environmental Svcs., Inc.	Date Received: 03/13/2009
	1710 Franklin Street, Ste. 200	PO:		1710 Franklin Street, Ste. 200	Date Printed: 03/13/2009
	Oakland, CA 94612	ProjectNo: Douglas		Oakland, CA 94612	
	(510) 836-3700 FAX (510) 836-3709				

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
0903358-001	Influent	Air	3/13/2009 11:15	<input type="checkbox"/>	A	A											
0903358-002	Midpoint	Air	3/13/2009 11:15	<input type="checkbox"/>	A												
0903358-003	Effluent	Air	3/13/2009 11:15	<input type="checkbox"/>	A												

Test Legend:

1	G-MBTEX AIR	2	PREDF REPORT	3		4		5	
6		7		8		9		10	
11		12							

The following SampIDs: 001A, 002A, 003A contain testgroup.

Prepared by: Maria Venegas

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
Hazardous samples will be returned to client or disposed of at client expense.



Sample Receipt Checklist

Client Name: **Pangea Environmental Svcs., Inc.**

Date and Time Received: **03/13/09 12:40:41 PM**

Project Name: **Douglas**

Checklist completed and reviewed by: **Maria Venegas**

WorkOrder N°: **0903358** Matrix Air

Carrier: Rob Pringle (MAI Courier)

Chain of Custody (COC) Information

- Chain of custody present? Yes No
- Chain of custody signed when relinquished and received? Yes No
- Chain of custody agrees with sample labels? Yes No
- Sample IDs noted by Client on COC? Yes No
- Date and Time of collection noted by Client on COC? Yes No
- Sampler's name noted on COC? Yes No

Sample Receipt Information

- Custody seals intact on shipping container/cooler? Yes No NA
- Shipping container/cooler in good condition? Yes No
- Samples in proper containers/bottles? Yes No
- Sample containers intact? Yes No
- Sufficient sample volume for indicated test? Yes No

Sample Preservation and Hold Time (HT) Information

- All samples received within holding time? Yes No
- Container/Temp Blank temperature Cooler Temp: NA
- Water - VOA vials have zero headspace / no bubbles? Yes No No VOA vials submitted
- Sample labels checked for correct preservation? Yes No
- TTLC Metal - pH acceptable upon receipt (pH<2)? Yes No NA
- Samples Received on Ice? Yes No

* NOTE: If the "No" box is checked, see comments below.

Client contacted:

Date contacted:

Contacted by:

Comments:



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Telephone: 877-252-9262 Fax: 925-252-9269

Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612	Client Project ID: Douglas	Date Sampled: 03/13/09
		Date Received: 03/13/09
	Client Contact: Brian Busch	Date Extracted: 03/13/09
	Client P.O.:	Date Analyzed 03/13/09

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

Extraction method SW5030B

Analytical methods SW8021B/8015Bm

Work Order: 0903358

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	Influent	A	73,d7	ND	ND	ND	ND	0.57	1	102
002A	Midpoint	A	ND	ND	ND	ND	ND	ND	1	98
003A	Effluent	A	ND	ND	ND	ND	ND	ND	1	94

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	A	25	2.5	0.25	0.25	0.25	0.25	0.25	µg/L
	S	1.0	0.05	0.005	0.005	0.005	0.005	0.005	mg/Kg

* water and vapor samples 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:

d7) strongly aged gasoline or diesel range compounds are significant in the TPH(g) chromatogram



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Telephone: 877-252-9262 Fax: 925-252-9269

Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612	Client Project ID: Douglas	Date Sampled: 03/13/09
		Date Received: 03/13/09
	Client Contact: Brian Busch	Date Extracted: 03/13/09
	Client P.O.:	Date Analyzed 03/13/09

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with MTBE and BTEX in ppmv*

Extraction method SW5030B

Analytical methods SW8021B/8015Bm

Work Order: 0903358

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	Influent	A	20,d7	ND	ND	ND	ND	0.13	1	102
002A	Midpoint	A	ND	ND	ND	ND	ND	ND	1	98
003A	Effluent	A	ND	ND	ND	ND	ND	ND	1	94

ppm (mg/L) to ppmv (ul/L) conversion for TPH(g) assumes the molecular weight of gasoline to be equal to that of hexane.

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	A	7.0	0.68	0.077	0.065	0.057	0.057	1	uL/L
	S	NA	NA	NA	NA	NA	NA	1	mg/Kg

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

d7) strongly aged gasoline or diesel range compounds are significant in the TPH(g) chromatogram



QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Air

QC Matrix: Water

BatchID: 42020

WorkOrder 0903358

EPA Method SW8021B/8015Bm		Extraction SW5030B							Spiked Sample ID: 0903347-001A			
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	RPD	LCS/LCSD	RPD
TPH(btex) [£]	ND	60	98.5	103	3.97	91	99.3	8.68	70 - 130	20	70 - 130	20
MTBE	ND	10	111	118	6.04	94.5	107	12.4	70 - 130	20	70 - 130	20
Benzene	ND	10	106	101	4.83	98.4	98.8	0.446	70 - 130	20	70 - 130	20
Toluene	ND	10	113	109	3.01	91.4	89	2.65	70 - 130	20	70 - 130	20
Ethylbenzene	ND	10	112	109	2.61	99.2	99	0.170	70 - 130	20	70 - 130	20
Xylenes	ND	30	123	121	1.64	97.7	98.3	0.566	70 - 130	20	70 - 130	20
%SS:	95	10	98	95	3.67	103	96	7.55	70 - 130	20	70 - 130	20

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

BATCH 42020 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0903358-001A	03/13/09 11:15 AM	03/13/09	03/13/09 5:55 PM	0903358-002A	03/13/09 11:15 AM	03/13/09	03/13/09 3:53 PM
0903358-003A	03/13/09 11:15 AM	03/13/09	03/13/09 4:24 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.

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

cluttered chromatogram; sample peak coelutes with surrogate peak.

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.