

Mr. Lee Douglas
Douglas Parking Company
1721 Webster Street
Oakland, California 94612

Ms. Barbara Jakub
Alameda County Environmental Health
Department of Environmental Health
1131 Harbor Bay Parkway, 2nd Floor
Alameda, CA 94502-6577

RECEIVED

11:21 am, Oct 16, 2012

Alameda County
Environmental Health

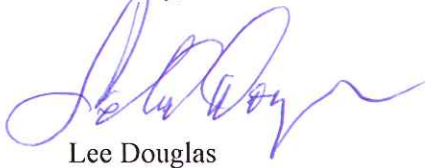
Re: Douglas Parking Company
1721 Webster Street
Oakland, California
ACEH File No. 129

Dear Ms. Jakub:

I, Mr. Lee Douglas, have retained Pangea Environmental Services, Inc. (Pangea) as the environmental consultant for the project referenced above. Pangea is submitting the attached report on my behalf.

I declare, under penalty of perjury, that the information and/or recommendations contained in the attached report are true and correct to the best of my knowledge.

Sincerely,



Lee Douglas



October 1, 2012

VIA ALAMEDA COUNTY FTP SITE

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

Re: **Groundwater Monitoring and Remediation Report – Second Half 2012**
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 Report – Second Half 2012* for the above referenced site. The report describes groundwater monitoring and sampling, site remediation, and other site activities.

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

Sincerely,
Pangea Environmental Services, Inc.

A handwritten signature in blue ink, appearing to read "Bob Clark-Riddell".

Bob Clark-Riddell, P.E.
Principal Engineer

Attachment: *Groundwater Monitoring and Remediation Report – Second Half 2012*

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

PANGEA Environmental Services, Inc.

1710 Franklin Street, Suite 200, Oakland, CA 94612 Telephone 510.836.3700 Facsimile 510.836.3709 www.pangeaenv.com



**GROUNDWATER MONITORING AND REMEDIATION REPORT
SECOND HALF 2012**

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

October 1, 2012

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 Douglas Parking Company, Pangea Environmental Services, Inc. (Pangea), performed groundwater monitoring and sampling during this half year 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 four miles east of San Francisco Bay and one quarter of 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 August 8, 2000, *Conduit Study and File Review Report* was submitted by Cambria Environmental Technology. The report provided significant information about offsite hydrocarbon impact and offsite sources, and concluded that there were no identified conduits for contaminant migration in groundwater. On June 27, 2003 Cambria installed two additional offsite monitoring wells (MW-6 and MW-7) to facilitate additional plume delineation.

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. To improve system performance and further evaluate site conditions, Pangea submitted an *Investigation and Remediation Workplan* dated March 5, 2009, which proposed additional investigation, remediation system expansion, and evaluation of groundwater geochemistry.

On November 19, 2010, ACEH issued a letter requesting a cross section, additional information regarding a potential offsite source and a preferential pathway survey. In December 2010, Pangea informed the ACEH that significant information about the offsite hydrocarbon impact was presented in the August 8, 2000 *Conduit Study and File Review Report* prepared by Cambria. In December 2010, the UST Cleanup Fund prepared a 5 Year Review that recommended a site conceptual model (SCM), risk assessment, and sensitive receptor survey to help facilitate selection of an enhanced remediation technique. In March 2011, Pangea provided information requested by the ACEH and proposed remediation and assessment tasks to help facilitate regulatory case closure. In a letter dated June 17, 2011, ACEH requested a site conceptual model with a preferential pathway evaluation. The UST Cleanup Fund 5-Year Review of March 12, 2012 also requested an SCM prior to any system modification. Pangea submitted a *Sensitive Receptor Survey, Conduit Study and Site Conceptual Model* dated March 26, 2012.

GROUNDWATER MONITORING AND SAMPLING

On July 25, 2012, Pangea conducted groundwater monitoring and sampling at the site. All site monitoring wells were gauged for depth to water. Following the sampling protocol presented in Appendix A, groundwater samples were collected from select site monitoring wells.

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 B.

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 and 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 C.

Groundwater Flow Direction

Based on depth-to-water measurements collected on July 25, 2012, groundwater beneath the site flowed *north-northeastwards* (Figure 2). The groundwater depth measurements and inferred flow direction during this event are consistent with historical site conditions. Groundwater depths at the site have historically ranged from approximately 14 to 23 ft below ground surface (bgs), equivalent to a groundwater elevation range from 5 to 13 feet above msl (Table 1).

Hydrocarbon and MTBE Distribution in Groundwater

TPHg, benzene and MTBE concentrations detected in site groundwater during this monitoring event are shown on Figure 2. During this event the maximum TPHg and benzene concentrations detected were 5,400 (well MW-3) $\mu\text{g/L}$ and 31 $\mu\text{g/L}$ (offsite well MW-6), respectively. Benzene was not detected above reporting levels in well MW-2, which is a historic low for this key source area well. Additionally, the TPHg concentration detected in well MW-2 (440 $\mu\text{g/L}$) was the lowest since October 2002.

To evaluate site remediation effectiveness, TPHg and benzene concentration trends in key source area wells MW-2 and MW-3 are graphed on Figure 3. Most importantly, benzene concentrations have dramatically decreased in source area well MW-2 since the commencement of SVE/AS in October 2007. However, TPHg concentrations remain elevated in well MW-3.

MTBE was not detected above reporting limits in any of the sampled wells this monitoring event. The only apparent historical MTBE detection at the site (48 $\mu\text{g/L}$ 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 4. The remediation system layout is shown on Figure 5.

Operation and Performance

The SVE system operated from October 2007 to October 2010 with periodic cycling for rebound testing. By November 23, 2010, the SVE system operated for a total of about 19,396 hours (approximately 808 days) and the system removed a total of approximately 3,212 lbs TPHg and 6.9 lbs benzene. The AS system operated from November 2007 to April 2010, when the AS compressor broke down. Starting in August 2008, air sparge wells AS-1 and AS-3 were disconnected to focus air sparging on well AS-2 to target hydrocarbons in nearby key monitoring well MW-2. In prior reports Pangea proposed cost effective techniques to enhance site remediation. System operation and performance data is summarized on Table 2.

OTHER SITE ACTIVITIES

Semi-Annual Groundwater Monitoring

Pangea will conduct semi-annual groundwater monitoring and sampling at the site in accordance with the approved monitoring program shown in Appendix A. All monitoring wells will be gauged for depth to water. Groundwater samples from program wells will be analyzed for TPHg, BTEX and MTBE by EPA Method 8015Cm/8021B.

Soil Gas Sampling

In our *Sensitive Receptor Survey, Conduit Study and Site Conceptual Model* dated March 26, 2012, Pangea recommended soil gas and/or subslab gas sampling to evaluate the potential for vapor intrusion into indoor air for the onsite and adjacent retail buildings. Pangea recommends sampling of these probe locations during the dry season and wet season to evaluate subsurface vapor conditions at different times, and help evaluate this case for regulatory case closure.

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 – TPHg and Benzene Concentration Trends in Groundwater

Figure 4 – Cross Section of Remediation Wells

Figure 5 – Remediation System Layout

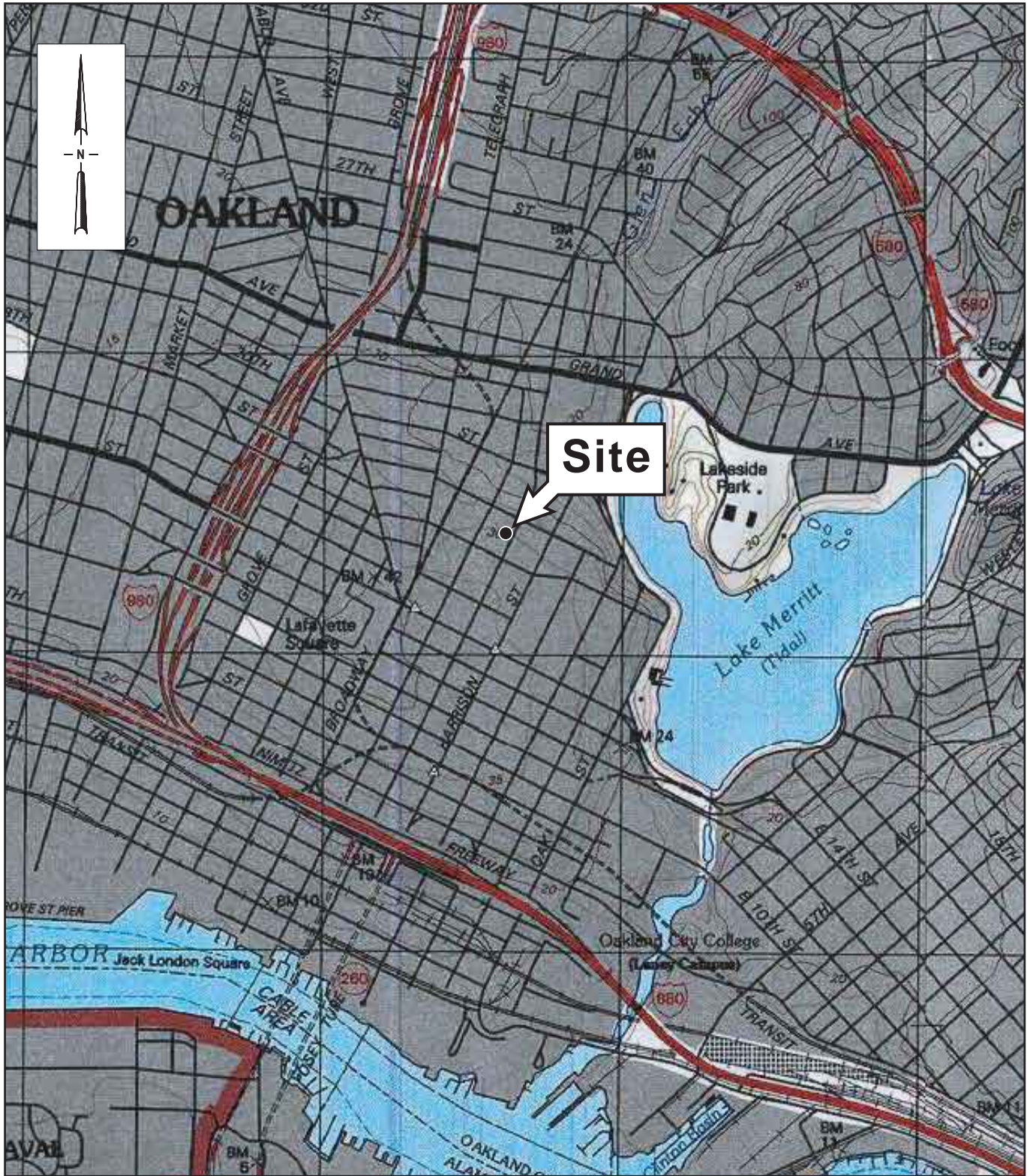
Table 1 – Groundwater Elevation and Analytical Data

Table 2 – SVE System Performance Summary

Appendix A – Groundwater Monitoring Program

Appendix B – Groundwater Monitoring Field Data Sheets

Appendix C – Laboratory Analytical Report



SOURCE: TOPOI MAPS



SCALE : 1" = 1/4 MILE

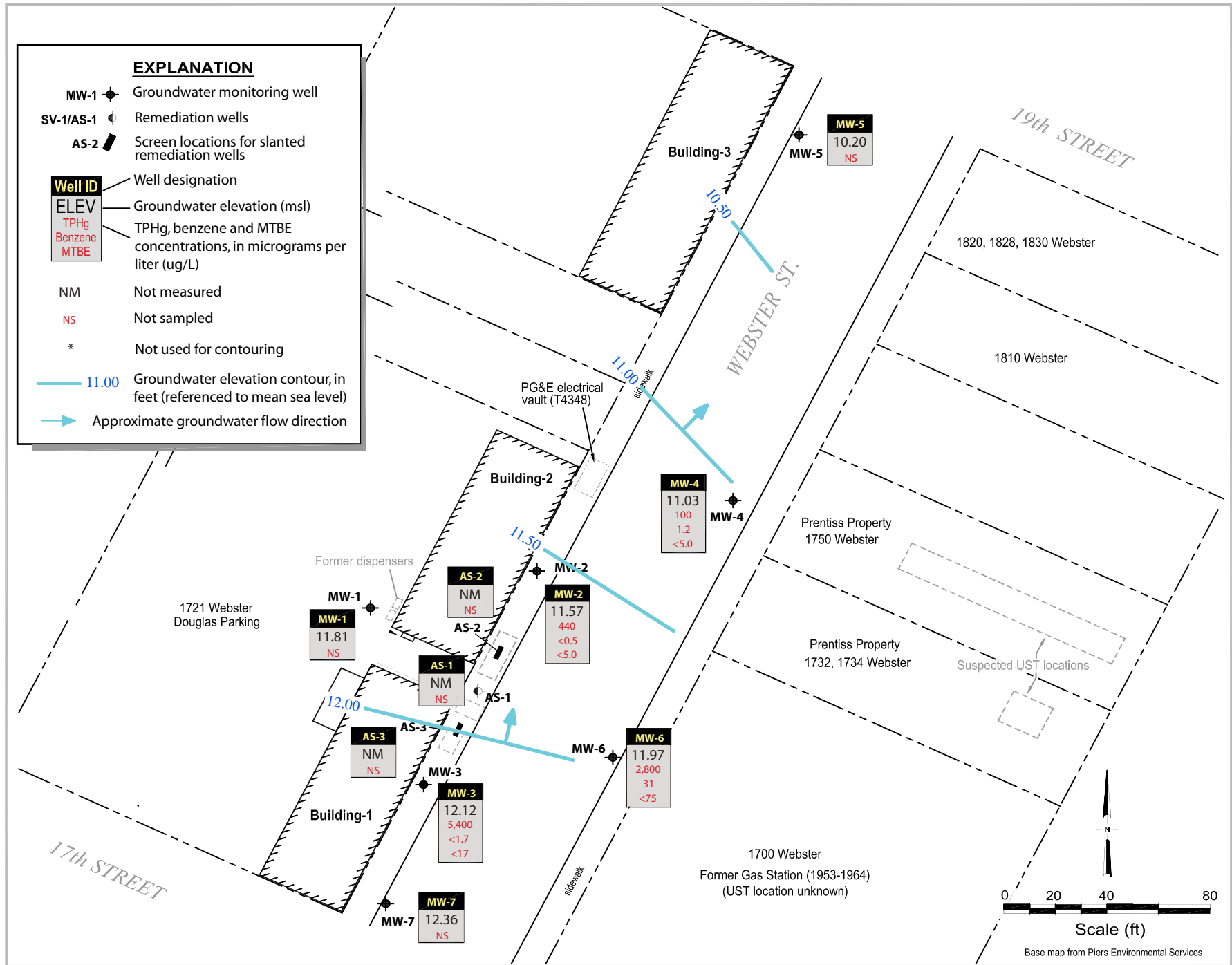
Figure

1

Douglas Parking Facility
 1721 Webster Street
 Oakland, California



Vicinity Map



Douglas Parking
 1721 Webster Street
 Oakland, California



**Groundwater Elevations and
 Hydrocarbon Concentration Map**

July 25, 2012

FIGURE

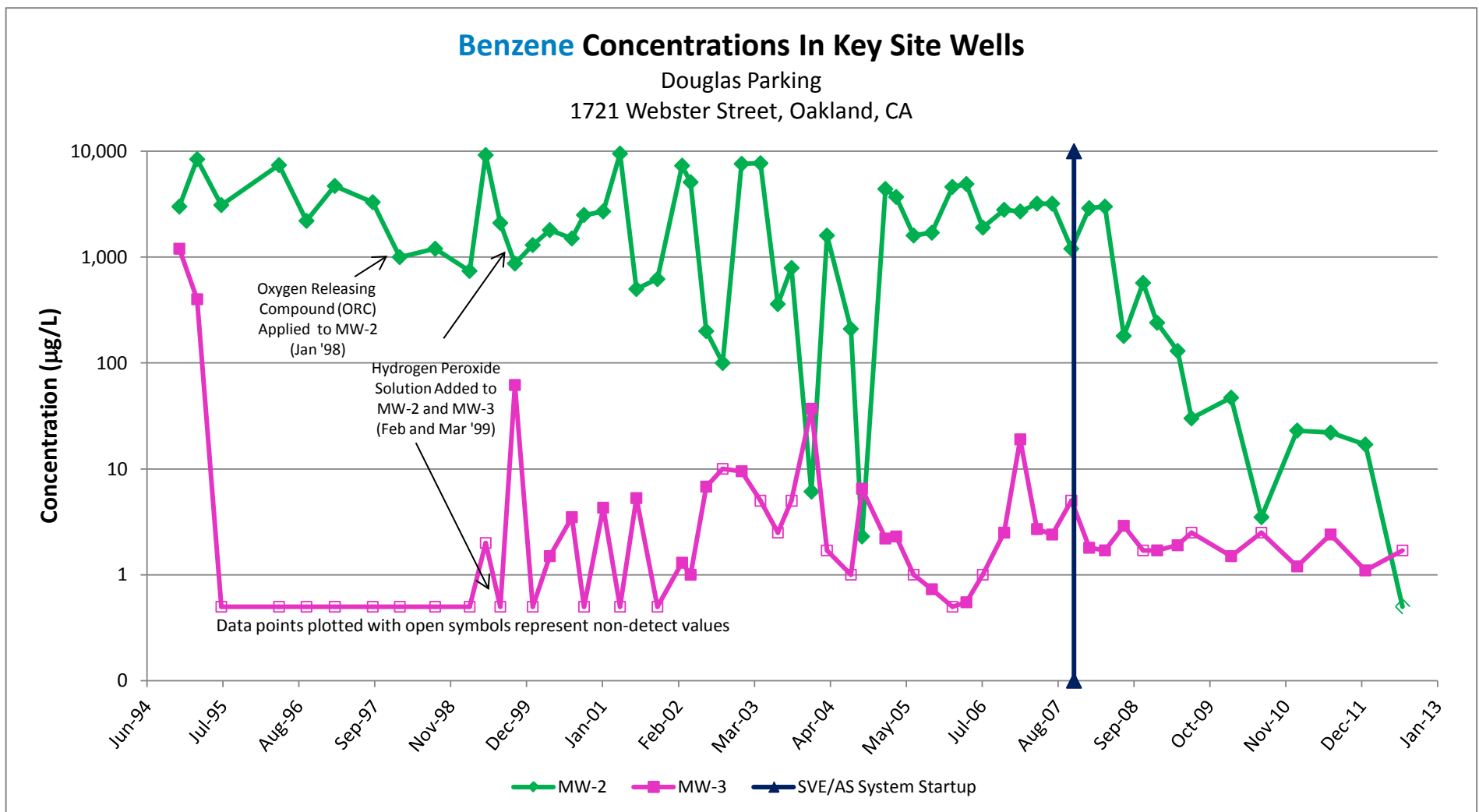
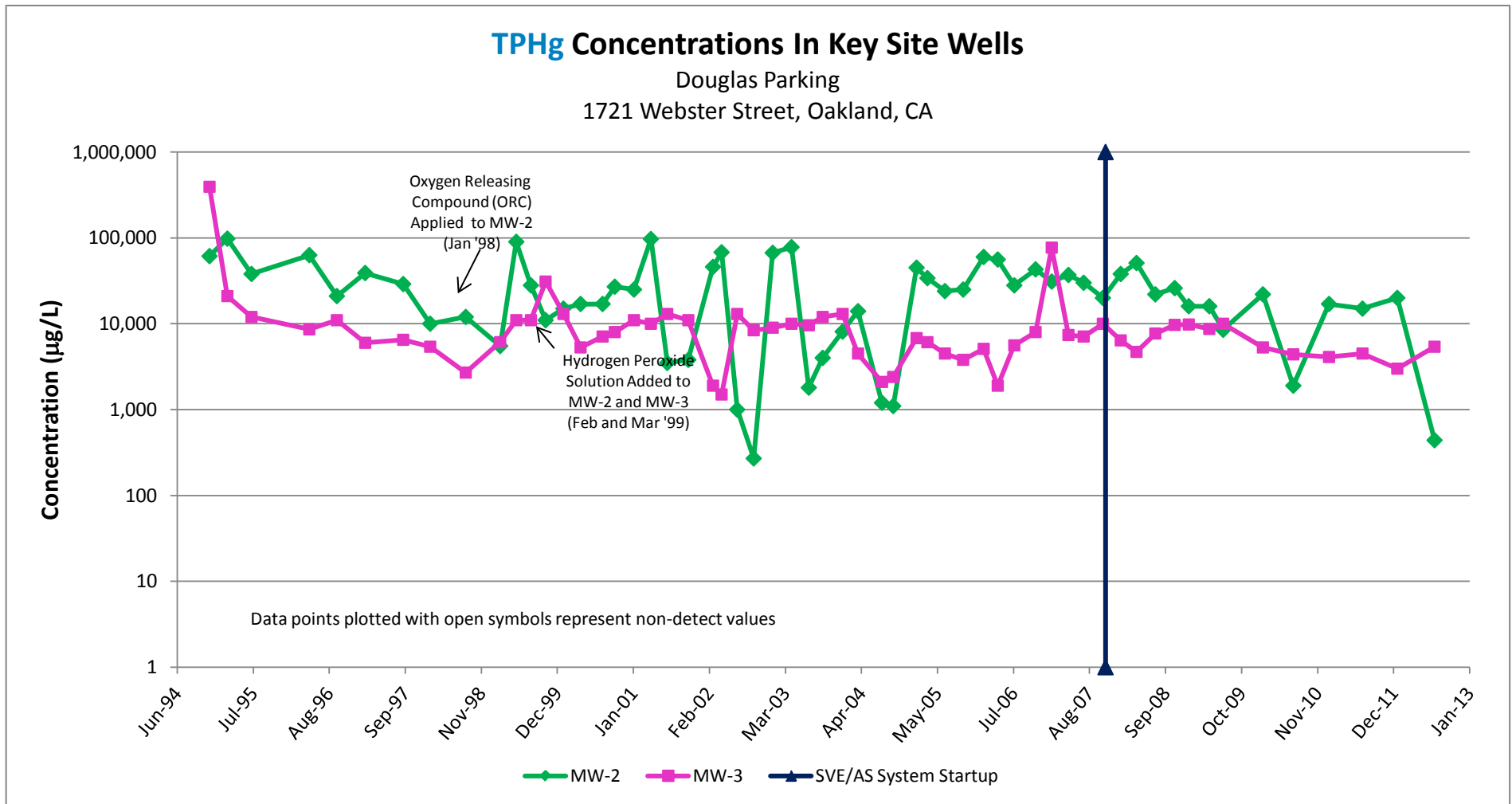


Figure 3 - TPHg and Benzene Concentration Trends in Groundwater

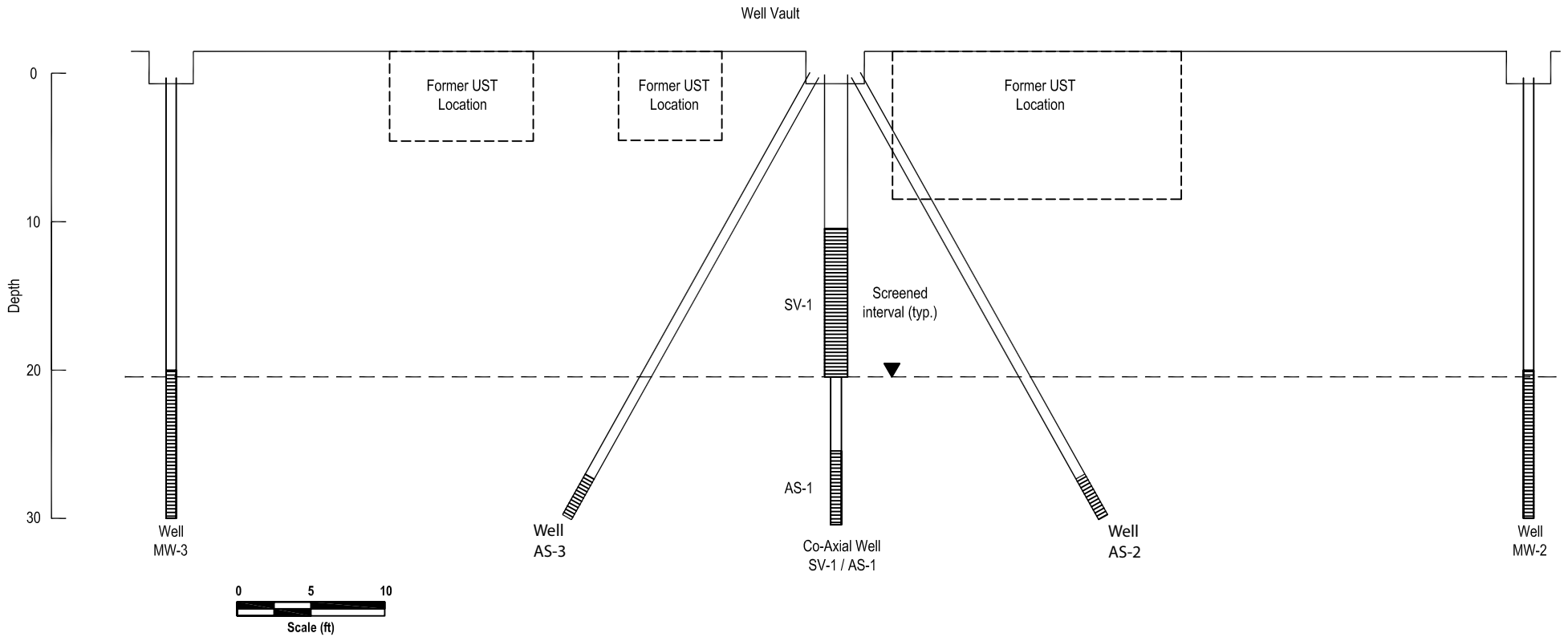
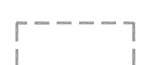
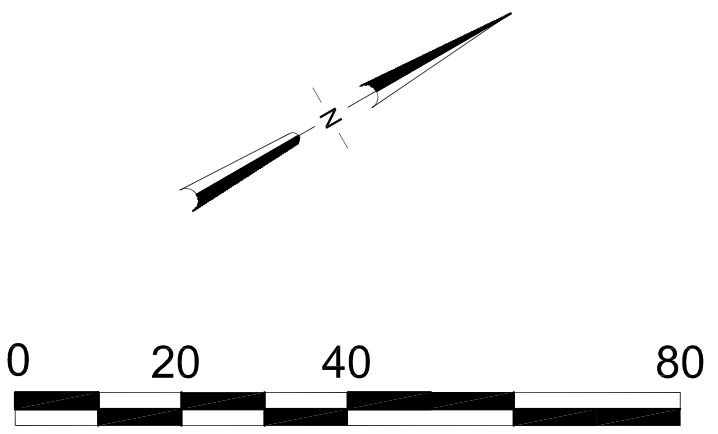
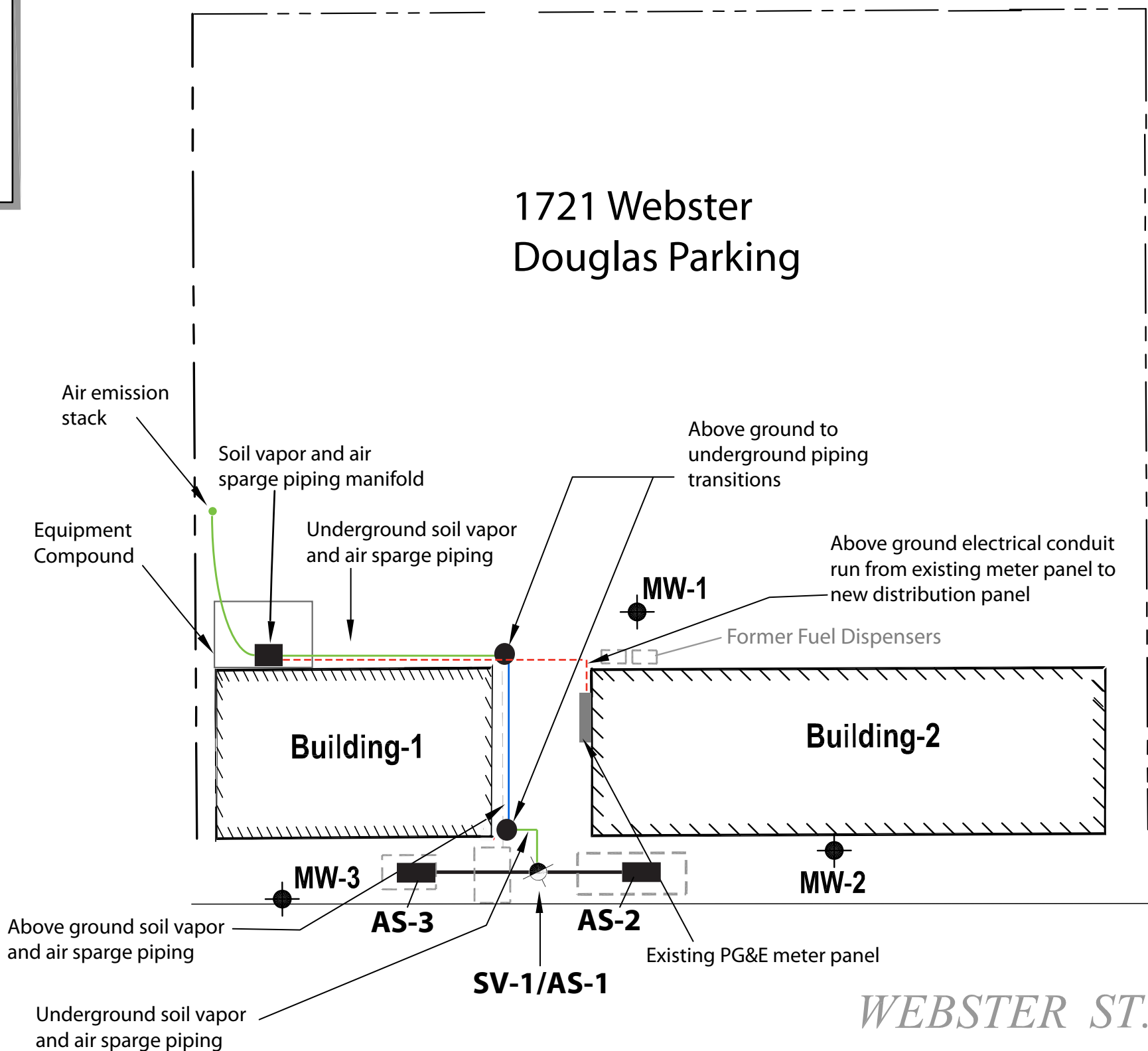


Figure
4

EXPLANATION	
MW-1	Groundwater monitoring well
SV-1, AS-1	Remediation well
	Former Underground Storage Tanks/Dispensers
AS-2	Screen locations for slanted remediation wells



Base map from Piers Environmental Services

Figure 5

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 <i>TOC</i>	Date	Depth to Water (ft)	Groundwater Elevation (ft amsl)	TPHg	Benzene	Toluene	Ethylbenzene (µg/L)	Xylenes	MTBE	
Monitoring Wells										
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	
	4/27/2009	22.40	10.35	--	--	--	--	--	--	
	7/9/2009	22.55	10.20	--	--	--	--	--	--	
	2/3/2010	22.08	10.67	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	7/13/2010	21.20	11.55	---	---	---	---	---	---	
	1/17/2011			Well Inaccessible						
	7/12/2011	20.72	12.03	--	--	--	--	--	--	
	1/11/2012	21.33	11.42	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	7/25/2012	20.94	11.81	--	--	--	--	--	--	

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)	← (µg/L) →					
				TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
MW-2 27.10 27.40	12/2/1994	19.50	7.60	61,300	3,000	3,900	160	4,500	-
	3/6/1995	18.49	8.61	98,000	8,400	16,000	2,000	2,600	-
	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	
4/27/2009	20.17	10.23	16,000	130	660	570	3,600	<500	
7/9/2009	20.36	10.04	8,500	30	110	250	1,400	<100	
2/3/2010	19.84	10.56	22,000	47	140	500	3,000	<100	
7/13/2010	19.08	11.32	1,900	3.5	5.8	38	110	<5.0	
1/17/2011	19.02	11.38	17,000	23	100	330	2,200	<100	
7/12/2011	18.52	11.88	15,000	22	30	190	740	<50	
1/12/2011	19.18	11.22	20,000	17	47	250	2,100	<84	
7/25/2012	18.83	11.57	440	<0.5	2.2	1.0	39	<5.0	

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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 (µg/L)	Xylenes	MTBE →
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
	4/27/2009	21.74	10.82	8,700	1.9	3.3	<1.7	11	<50
	7/9/2009	21.92	10.64	10,000	<2.5	4.1	2.6	11	<60
	2/3/2010	21.55	11.01	5,300	1.5	2.3	<0.5	2.7	<25
	7/13/2010	21.31	11.25	4,400	<2.5	9.0	<2.5	4.6	<25
	1/17/2011	20.75	11.81	4,100	1.2	1.8	<0.5	2.7	<20
	7/12/2011	20.14	12.42	4,500	2.4	2.8	<0.5	5.0	<25
	1/11/2012	20.80	11.76	3,000	1.1	1.6	<0.5	1.9	<15
	7/25/2012	20.44	12.12	5,400	<1.7	<1.7	<1.7	4.1	<17

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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)	TPHg ←	Benzene	Toluene	Ethylbenzene			MTBE →
							(µg/L)	Xylenes		
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	
	4/27/2009	18.52	9.77	2,500	110	24	190	69	<150	
	7/9/2009	18.78	9.51	5,600	150	34	270	83	<250	
2/3/2010	18.24	10.05	2,900	38	20	69	54	<50		
7/13/2010	17.59	10.70	1,100	20	7.6	43	26	<60		
1/17/2011	17.42	10.87	2,900	16	43	60	99	<15		
7/12/2011	17.01	11.28	<50	<0.5	0.56	0.52	0.93	<5.0		
1/11/2012	17.68	10.61	4,100	52	52	49	130	<90		
7/25/2012	17.26	11.03	100	1.2	<0.5	<0.5	<0.5	<5.0		

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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)	TPHg ←	Benzene	Toluene	Ethylbenzene Xylenes			MTBE →
							(µg/L)			
MW-5 21.97	5/10/1996	14.60	7.37	ND	ND	ND	ND	ND	ND	-
	10/2/1996	15.25	6.72	ND	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	<0.5	<5.0
	2/5/1998	13.64	8.33	<50	<0.5	<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	<0.5	<5.0
	2/8/1999	14.19	7.78	<50	<0.5	<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	<0.5	<5.0
	7/20/1999	14.44	7.53	<50	<0.5	<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	<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	<0.5	<5.0
	7/31/2000	14.52	7.45	<50	<0.5	<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	<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	<0.5	<5.0
7/6/2001	15.97	6.00	<50	<0.5	<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	<0.5	<5.0	
3/4/2002	16.21	5.76	<50	<0.5	<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	<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	<0.5	<5.0	
1/12/2003	16.58	5.39	<50	<0.5	<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	<0.5	<5.0	
7/21/2003	16.03	8.96	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	
24.99	10/2/2003	16.33	8.66	<50	<0.5	<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	<0.5	<5.0
	4/5/2004	15.01	9.98	<50	<0.5	<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	<0.5	<5.0
	10/7/2004	17.48	7.51	<50	<0.5	<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	<0.5	<5.0
	4/5/2005	14.45	10.54	<50	<0.5	<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	<0.5	<5.0
	10/10/2005	15.44	9.55	<50	<0.5	<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	<0.5	<5.0
	4/10/2006	14.01	10.98	<50	<0.5	<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	<0.5	<5.0
	10/26/2006	15.94	9.05	<50	<0.5	<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	<0.5	<5.0
	4/17/2007	15.99	9.00	<50	<0.5	<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	<0.5	<5.0
	10/15/2007	16.27	8.72	<50	<0.5	<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	<0.5	<5.0
	4/9/2008	15.96	9.03	<50	<0.5	<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	<0.5	<5.0
10/27/2008	16.78	8.21	<50	<0.5	<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	<5.0	
4/27/2009	16.21	8.78	--	--	--	--	--	--	--	
7/9/2009	16.48	8.51	--	--	--	--	--	--	--	
2/3/2010	15.77	9.22	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	
7/13/2010	15.34	9.65	---	---	---	---	---	---	---	
1/17/2011	14.93	10.06	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	
7/12/2011	14.81	10.18	--	--	--	--	--	--	--	
1/11/2012	15.44	9.55	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	
7/25/2012	14.79	10.20	--	--	--	--	--	--	--	

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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)	← (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
	4/27/2009	20.27	10.72	13,000	110	97	380	1,100	<350
	7/9/2009	20.43	10.56	18,000	250	520	470	1,300	<450
2/3/2010	20.14	10.85	6,200	82	180	190	550	<150	
7/13/2010	19.29	11.70	12,000	260	420	480	1,600	<450	
1/17/2011	19.31	11.68	4,900	70	52	210	500	<50	
7/12/2011	18.73	12.26	1,400	20	8.5	64	130	<30	
1/11/2012	19.39	11.60	6,000	100	38	310	700	<210	
7/25/2012	19.02	11.97	2,800	31	13	140	240	<75	
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
	4/27/2009	21.98	11.13	--	--	--	--	--	--
	7/9/2009	22.18	10.93	--	--	--	--	--	--
	2/3/2010	21.87	11.24	<50	<0.5	<0.5	<0.5	<0.5	<5.0
7/13/2010	21.01	12.10	---	---	---	---	---	---	
1/17/2011	21.07	12.04	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
7/12/2011	20.72	12.39	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
1/11/2012	21.13	11.98	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
7/25/2012	20.75	12.36	--	--	--	--	--	--	

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) →		
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	--	--	--	--	--	--	--	--
	10/15/2007	--	--	--	--	--	--	--	--
	1/17/2008	--	--	--	--	--	--	--	--
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	--	--	--	--	--	--	--	--
Grab Groundwater									
SB-A	2/22/1996	--	--	16,000	38	16	180	620	--
SB-B	2/22/1996	--	--	20,000	100	29	320	590	--
SB-C	2/22/1996	--	--	1,200	130	100	68	230	--
SB-D	2/22/1996	--	--	7,400	550	110	160	89	--
SB-E	2/23/1996	--	--	16,000	31	160	390	1,400	--
SB-F	2/23/1996	--	--	<50	<0.5	1.4	<0.5	2.3	--
SB-G	2/23/1996	--	--	5,200	1.3	<0.5	0.7	<0.5	--
EB-1GWS	7/8/1994	--	--	62,000	<0.5	26	850.0	8,900	--
EB-2GWS	7/8/1994	--	--	160,000	5,300	20,000	2,100	17,000	--
EB-3GWS	7/8/1994	--	--	87,000	1,400	21,000	1,700	19,000	--
EB-4GWS	7/8/1994	--	--	350,000	290	1,300	3,200	31,000	--
EB-5GWS	7/8/1994	--	--	120,000	2,100.0	13,000	1,300.0	16,000	--
EB-6GWS	7/8/1994	--	--	230,000	10,000	34,000	2,300	16,000	--

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	

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)		
01/10/08	SYS-INF SYS-MID SYS-EFF	1,430.2	50	54	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
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	

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)		
05/14/08	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		
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	
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		

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)		
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 ---	1.8 ---	3.4	2,700.8	0.004	6.05	yes	System restarted; samples collected after system ran for approximately 1
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	
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
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	yes	
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	yes	
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	yes	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	yes	Shutdown system to evaluate effectiveness of remediation on groundwater.
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	yes	Restart system

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)				
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	yes	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	yes		
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	yes	
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	yes		
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	yes		
04/03/09	SYS-INF SYS-MID SYS-EFF	9,868.7	21	5	4 0 0	--- --- ---	---	---	0.1	3,071.4	0.00	6.53	yes		
04/10/09	SYS-INF SYS-MID SYS-EFF	10,035.7	22	5	1 0 0	--- --- ---	---	---	0.1	3,072.4	0.00	6.53	yes		
04/17/09	SYS-INF SYS-MID SYS-EFF	10,203.7	21	5	4 0 0	--- --- ---	---	---	0.1	3,073.3	0.00	6.53	yes		
04/24/09	SYS-INF SYS-MID SYS-EFF	10,366.7	19	5	4 0 0	--- --- ---	---	---	0.1	3,074.2	0.00	6.53	yes	Shut AS/SVE off for upcoming QM	
05/01/09	SYS-INF SYS-MID SYS-EFF	10,366.7	20	5	3 0 0	--- --- ---	---	---	0.1	3,074.2	0.00	6.53	yes	Restart SVE/AS	
05/08/09	SYS-INF SYS-MID SYS-EFF	10,543.3	21	5	15 0 0	--- --- ---	---	---	0.1	3,075.1	0.00	6.53	yes		
05/15/09	SYS-INF SYS-MID SYS-EFF	10,711.8	20	5	32 0 0	--- --- ---	---	---	0.1	3,076.0	0.00	6.53	yes		
05/22/09	SYS-INF SYS-MID SYS-EFF	10,879.5	0	0	NM NM NM	--- --- ---	---	---	0.0	3,076.0	0.00	6.53	no	AS compressor down; shut SVE off	
09/18/09	SYS-INF SYS-MID SYS-EFF	10,879.5	22	5	41 0 0	--- --- ---	---	---	0.1	3,076.0	0.00	6.53	yes	Restart AS and SVE after repairing AS comp	
10/30/09	SYS-INF SYS-MID SYS-EFF	11,889.8	20	5	35 0 0	--- --- ---	---	---	0.1	3,081.5	0.00	6.53	no	SVE on, AS comp has blown fuse	
11/30/09	SYS-INF SYS-MID SYS-EFF	12,631.8	20	5	31 0 0	--- --- ---	---	---	0.1	3,085.4	0.00	6.53	yes	Replace fuse, restart AS	

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)		
12/16/09	SYS-INF SYS-MID SYS-EFF	13,017.6	22	5	22 0 0	---	---	0.1	3,087.7	0.00	6.53	yes	
01/18/10	SYS-INF SYS-MID SYS-EFF	13,808.6	24	5	27 0 0	---	---	0.2	3,092.8	0.00	6.53	yes	
02/03/10	SYS-INF SYS-MID SYS-EFF	14,193.0	12	4	34 0 0	72 <7.0 <7.0	0.25 <0.077 <0.077	0.3	3,097.2	0.00	6.53	yes	Serviced SVE blower, collected lab samples
04/07/10	SYS-INF SYS-MID SYS-EFF	15,701.1	12	5	45 0 0	---	---	0.3	3,114.6	0.00	6.58	no	AS off, compressor non-op
05/07/10	SYS-INF SYS-MID SYS-EFF	16,425.2	27	0	43 0 0	---	---	0.6	3,133.4	0.00	6.64	no	AS off, compressor non-op
06/07/10	SYS-INF SYS-MID SYS-EFF	17,168.0	27	0	46 0 0	84 <7.0 <7.0	0.29 <0.077 <0.077	0.7	3,155.5	0.00	6.71	no	AS off, compressor non-op
07/15/10	SYS-INF SYS-MID SYS-EFF	18,075.8	23	0	4 2 0	---	---	0.6	3,179.1	0.00	6.79	no	AS off, compressor non-op
08/18/10	SYS-INF SYS-MID SYS-EFF	18,434.1	30	0	26 2 0	---	---	0.8	3,191.3	0.00	6.82	no	Restart system, off on arrival
09/22/10	SYS-INF SYS-MID SYS-EFF	19,173.6	25	0	17 2 0	66 <7.0 <7.0	0.21 <0.077 <0.077	0.5	3,208.0	0.00	6.87	no	Restart system, off on arrival
10/22/10	SYS-INF SYS-MID SYS-EFF	19,345.1	25	0	14 1 0	---	---	0.5	3,211.8	0.00	6.88	no	Restart system, off on arrival
11/23/10	SYS-INF SYS-MID SYS-EFF	19,395.5	0	0	NM NM NM	---	---	0.0	3,211.8	0.00	6.88	no	Off on arrival, system shutdown October 26, 2010 for rainy season.

Notes:

NM = not measured
 cfm = cubic feet per minute.
 ppmv = Parts per million by volume
 lbs = Pounds
 "H2O = Inches of water
 SVE/AS = Soil vapor extraction and air sparge
 FID = Flame Ionization Detector.
 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.
 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.
 * = Subtracted carbon tip readings of 28, 17, and 10, respectively, from influent, midpoint and effluent readings without carbon tip to account for methane.
 (--) = not sampled
 *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.
 **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.

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	1st, 3rd	1st	1st	---
MW-2	Mon	19.5-29.5	Downgradient	2	1st, 3rd	1st, 3rd	1st, 3rd	---
MW-3	Mon	20-30	Upgradient	2	1st, 3rd	1st, 3rd	1st, 3rd	---
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	1st, 3rd	1st, 3rd	1st, 3rd	---
MW-5	Mon	10-25	Downgradient	2	1st, 3rd	1st	1st	---
MW-6	Mon	15-30	Crossgradient	2	1st, 3rd	1st, 3rd	1st, 3rd	---
MW-7	Mon	15-30	Upgradient	2	1st, 3rd	1st	1st	---

Notes and Abbreviations:

1st = Sampled during the 1st quarter, typically January

1st, 3rd = Sampled during the 1st and 3rd quarters, typically January and July

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 #:1135.001 232				Project Name: Douglas Parking - 1721 Webster				
1721 Webster Street, Oakland, CA						Date: 7/25/12		
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	07:02			20.94	26.65	TOC	
MW-2	2	04:06			18.83	25.95		
MW-3	2	03:44			20.44	26.90		
MW-4	2	03:52			17.26	29.42		
MW-5	2	03:35			14.79	24.50		
MW-6	2	04:00			19.02	25.79		
MW-7	2	03:40			20.75	28.46		X


Comments:

MONITORING FIELD DATA SHEET

Well ID: MW-3

Project.Task #: 1135.001 232				Project Name: Douglas Parking 1721 Webster				
Address: 1721 Webster Street, Oaklane, CA								
Date: 7/25/12				Weather: <u>Clear</u>				
Well Diameter: <u>2" 20</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>20.44</u>				Product Thickness:				
Water Column Height: <u>6.46</u>				1 Casing Volume: <u>1.03</u>		gallons		
Reference Point: TOC				3 Casing Volumes: <u>3.09</u>		gallons		
Purging Device: <u>Disposable Bailer</u> 3" PVC Bailer, Parastaltic Pump, Whal Pump								
Sampling Device: Disposable Bailer								
Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
04:40	17.9	6.75	499				1	
04:45	17.6	6.77	506				2	
04:50	17.8	6.78	498				3	

Comments: YSI 550A DO meter pre purge DO = 0.77 mg/l
 ; post purge DO = _____ mg/l

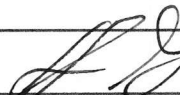
Sample ID: <u>MW-3</u>		Sample Time: <u>04:55</u>	
Laboratory: McCampbell Analytical, INC.		Sample Date: <u>7/25/12</u>	
Containers/Preservative: VOA/HCl			
Analyzed for: TPHg, BTEX, MTBE			
Sampler Name: Sanjiv Gill		Signature: 	

MONITORING FIELD DATA SHEET

Well ID: MW-4

Project.Task #: 1135.001 232				Project Name: Douglas Parking 1721 Webster				
Address: 1721 Webster Street, Oaklane, CA								
Date: 7/23 7/25/12				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>17.26</u>				Product Thickness:				
Water Column Height: <u>12.16</u>				1 Casing Volume: <u>1.94</u>		gallons		
Reference Point: TOC				<u>3</u> Casing Volumes: <u>5.82</u>		gallons		
Purging Device: <u>Disposable Bailer</u> , 3" PVC Bailer, Parastaltic Pump, Whal Pump								
Sampling Device: Disposable Bailer								
Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
<u>05:15</u>	<u>17.9</u>	<u>7.29</u>	<u>648</u>				<u>2</u>	
<u>05:20</u>	<u>17.9</u>	<u>7.35</u>	<u>631</u>				<u>4</u>	
<u>05:25</u>	<u>17.6</u>	<u>7.30</u>	<u>635</u>				<u>6</u>	

Comments: YSI 550A DO meter pre purge DO = 0.51 mg/l
 ; post purge DO = mg/l

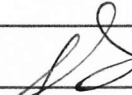
Sample ID: <u>MW-4</u>		Sample Time: <u>05:30</u>	
Laboratory: McCampbell Analytical, INC.		Sample Date: <u>7/25/12</u>	
Containers/Preservative: VOA/HCl			
Analyzed for: TPHg, BTEX, MTBE			
Sampler Name: Sanjiv Gill		Signature: 	

MONITORING FIELD DATA SHEET

Well ID: MW-6

Project.Task #: 1135.001 232				Project Name: Douglas Parking 1721 Webster				
Address: 1721 Webster Street, Oaklane, CA								
Date: 7/25/12				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>25.79</u>				Depth to Product:				
Depth to Water (DTW): <u>19.02</u>				Product Thickness:				
Water Column Height: <u>6.77</u>				1 Casing Volume: <u>1.08</u>		gallons		
Reference Point: TOC				3 Casing Volumes: <u>3.24</u>		gallons		
Purging Device: <u>Disposable Bailer</u> , 3" PVC Bailer, Parastaltic Pump, Whal Pump								
Sampling Device: Disposable Bailer								
Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
<u>05:45</u>	<u>17.0</u>	<u>7.21</u>	<u>679</u>				<u>1</u>	
<u>05:50</u>	<u>17.4</u>	<u>7.24</u>	<u>711</u>				<u>2</u>	
<u>05:55</u>	<u>17.6</u>	<u>7.24</u>	<u>708</u>				<u>3</u>	

Comments: YSI 550A DO meter pre purge DO = 0.65 mg/l
 ; post purge DO = mg/l

Sample ID: <u>MW-6</u>	Sample Time: <u>06:00</u>
Laboratory: McCampbell Analytical, INC.	Sample Date: <u>7/25/12</u>
Containers/Preservative: VOA/HCl	
Analyzed for: TPHg, BTEX, MTBE	
Sampler Name: Sanjiv Gill	Signature: 

APPENDIX C

Laboratory Analytical Reports



Analytical Report

Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612	Client Project ID: #1135.001.232; Douglas Parking-1721 Webster	Date Sampled: 07/25/12
		Date Received: 07/27/12
	Client Contact: Tina De La Fuente	Date Reported: 08/03/12
	Client P.O.:	Date Completed: 08/02/12

WorkOrder: 1207718

August 03, 2012

Dear Tina:

Enclosed within are:

- 1) The results of the **4** analyzed samples from your project: **#1135.001.232; Douglas Parking-1721 Webster,**
- 2) QC data for the above samples, and
- 3) A copy of the chain of custody.

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.

The analytical results relate only to the items tested.



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

WorkOrder: 1207718

ClientCode: PEO

WaterTrax
 WriteOn
 EDF
 Excel
 EQUIS
 Email
 HardCopy
 ThirdParty
 J-flag

Report to:		Bill to:	Requested TAT:
Tina De La Fuente	Email: tdelafuente@pangeaenv.com	Bob Clark-Riddell	5 days
Pangea Environmental Svcs., Inc.	cc:	Pangea Environmental Svcs., Inc.	
1710 Franklin Street, Ste. 200	PO:	1710 Franklin Street, Ste. 200	<i>Date Received:</i> 07/27/2012
Oakland, CA 94612	ProjectNo: #1135.001.232; Douglas Parking-1721	Oakland, CA 94612	<i>Date Printed:</i> 07/27/2012
(510) 836-3700 FAX: (510) 836-3709	Webster		

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	
1207718-001	MW-2	Water	7/25/2012 6:35	<input type="checkbox"/>	A	A											
1207718-002	MW-3	Water	7/25/2012 4:55	<input type="checkbox"/>	A												
1207718-003	MW-4	Water	7/25/2012 5:30	<input type="checkbox"/>	A												
1207718-004	MW-6	Water	7/25/2012 6:00	<input type="checkbox"/>	A												

Test Legend:

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

Prepared by: Zoraida Cortez

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: **7/27/2012 7:02:50 PM**
 Project Name: **#1135.001.232; Douglas Parking-1721 Webster** Login Reviewed by: **Zoraida Cortez**
 WorkOrder N°: **1207718** Matrix: Water Carrier: 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: 4.4°C NA
 Water - VOA vials have zero headspace / no bubbles? Yes No No VOA vials submitted
 Sample labels checked for correct preservation? Yes No
 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.

 Comments:



QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 69544

WorkOrder: 1207718

EPA Method: SW8021B/8015Bm		Extraction: SW5030B					Spiked Sample ID: 1207755-001A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS	
TPH(btex) £	ND	60	92.5	92.5	0	77.4	70 - 130	20	70 - 130	
MTBE	ND	10	97.8	90.4	7.88	95	70 - 130	20	70 - 130	
Benzene	ND	10	101	92.3	9.04	92.4	70 - 130	20	70 - 130	
Toluene	0.61	10	97	88.3	8.85	94.8	70 - 130	20	70 - 130	
Ethylbenzene	ND	10	102	96.2	5.97	96.7	70 - 130	20	70 - 130	
Xylenes	ND	30	105	99.6	5.42	98.6	70 - 130	20	70 - 130	
%SS:	86	10	99	93	6.61	94	70 - 130	20	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 69544 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1207718-001A	07/25/12 6:35 AM	08/01/12	08/01/12 3:38 AM	1207718-002A	07/25/12 4:55 AM	08/01/12	08/01/12 4:57 PM
1207718-003A	07/25/12 5:30 AM	08/01/12	08/01/12 6:08 AM	1207718-004A	07/25/12 6:00 AM	08/01/12	08/01/12 3:52 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.