



R0199

June 13, 2005

Mr. Don Hwang  
Alameda County Health Care Services Agency  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502

Alameda County  
JUN 17 2005  
Environmental Services Agency

Re: **Groundwater Monitoring Report - First Quarter 2005**  
Connell Automobile Dealership  
3093 Broadway  
Oakland, California  
ACHCSA Case No. 469

Dear Mr. Hwang:

On behalf of Mr. George Hill and Mr. Gordon Linden, Pangea Environmental Services, Inc. has prepared this *Groundwater Monitoring Report – First Quarter 2005* for the subject site. This report describes groundwater monitoring, sampling and other site activities.

I declare, under penalty of perjury, that the information contained in the attached report is true and correct to the best of my knowledge. If you have any questions or comments, please call me at (510) 435-8664.

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

Robert Clark-Riddell  
Principal Engineer

Attachments: *Groundwater Monitoring Report – First Quarter 2005*

cc: Mr. George Hill, 305 Sheridan Avenue, Piedmont, California 94611  
Mr. Gordon Linden, 150 La Salle Avenue, Piedmont, California 94611  
Mr. Paul Kibel, Fitzgerald, Abbott & Beardsley, LLP, 1221 Broadway, 21<sup>st</sup> Floor, Oakland, California 94612  
Mr. Leroy Griffin, Hazardous Materials Manager, Fire Department - OES, 1605 MLK Jr. Way, Oakland, California 94612

**PANGEA Environmental Services, Inc.**

436 14th Street, Suite 1123, Oakland, California 94612 Telephone 510.835.1801 Facsimile 510.893.2500 www.pangeaenv.com



**GROUNDWATER MONITORING REPORT - FIRST QUARTER 2005**

**Connell Automobile Dealership  
3093 Broadway  
Oakland, California  
ACHCSA Case No. 469**

**June 13, 2005**

*Prepared for:*

Mr. George Hill  
305 Sheridan Avenue  
Piedmont, California 94611

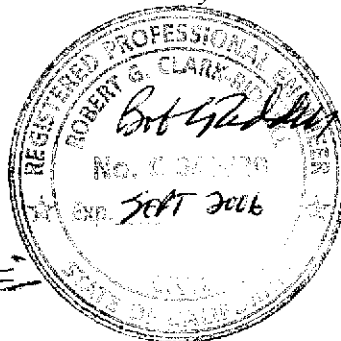
and

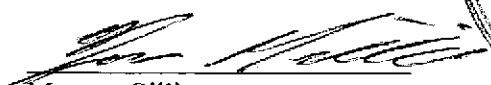
Mr. Gordon Linden  
150 La Salle Avenue  
Piedmont, California 94611

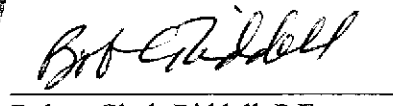
*Prepared by:*

Pangea Environmental Services, Inc.  
436 14th Street, Suite 1123  
Oakland, California 94612

*Written by:*



  
Morgan Gillies  
Project Manager

  
Robert Clark-Riddell, P.E.  
Principal Engineer

**PANGEA Environmental Services, Inc.**

## **INTRODUCTION**

As required by the Alameda County Health Care Services Agency (ACHCSA), Pangea Environmental Services, Inc. (Pangea) has prepared this *Groundwater Monitoring Report – First Quarter 2005* for the subject site. On behalf of Mr. George Hill and Mr. Gordon Linden, Pangea coordinated groundwater monitoring, sampling, and separate-phase hydrocarbon (SPH) bailing during this quarter at the subject site (Figure 1). The purpose of the monitoring and sampling is to evaluate groundwater flow direction concentrations of dissolved hydrocarbons in groundwater, and the presence of SPH. The purpose of the SPH bailing is to provide additional remediation of residual hydrocarbons. The groundwater monitoring well locations and select site features are shown on Figure 2. Historical and current analytical results and groundwater elevation data are summarized on Figure 2 and Table 1, 2 and 3. Table 4 summarizes SPH removal to date.

## **SITE DESCRIPTION AND BACKGROUND**

The site is located on the hillside of “Pill Hill.” The upper portion of the site is near the former USTs (the presumed source area), while the lower portion of the site is near the bottom of the hill. Three underground storage tanks (USTs) that previously contained gasoline, diesel, and waste oil were removed from the site in December 1989. Soil and groundwater assessment has been ongoing since 1990. Between October 1996 and March 1998, operation of a soil vapor extraction (SVE) remediation system removed approximately 1,421 pounds of hydrocarbons. Manual removal of separate phase hydrocarbons (SPH) from monitoring wells has been conducted at the site since 1991. Chemicals of concern at the site are petroleum hydrocarbons, halogenated volatile organic compounds (e.g., 1,2 dichloroethane) and semi-volatile organic compounds (e.g., naphthalene). The petroleum hydrocarbons of concern are total petroleum hydrocarbons as gasoline (TPHg), total petroleum hydrocarbons as diesel (TPHd), benzene, toluene, ethylbenzene, and xylenes (BTEX). Compounds quantified as total petroleum hydrocarbons as motor oil (TPHmo) may be the heavier fraction of TPHd. Methyl tertiary butyl ether (MTBE) is not a constituent of concern at this site.

## **GROUNDWATER MONITORING AND SAMPLING**

On February 18, 2005, Muskan Environmental Sampling (Muskan) of Yuba City, California, gauged depth-to-water groundwater levels and inspected for SPH in site monitoring wells in accordance with the well monitoring protocol in Appendix A. The well monitoring protocol involves quarterly gauging of source area groundwater monitoring wells (MW-1, MW-6, MW-14 and MW-15) and quarterly gauging and sampling of select downgradient and crossgradient groundwater monitoring wells (MW-4, MW-7, MW-8, MW-9 and MW-13). Source area wells are sampled during the first quarter of each year, if no SPH is present.

Prior to sampling, groundwater levels and SPH thickness were measured in the wells within 45 minutes to evaluate groundwater elevation and flow patterns at the site. To facilitate groundwater sampling, approximately three well-casing volumes of groundwater were purged prior to sampling. The sampling technician recorded groundwater pH, conductivity, and temperature, and evaluated reading stabilization. Groundwater samples were collected using clean, disposable bailers and were decanted into the appropriate containers supplied by the analytical laboratory. Samples were labeled, placed in protective plastic bags, stored on crushed, water-based ice at or below 4 degrees Celsius and transported under chain-of-custody to the laboratory. Field data sheets are presented as Appendix B.

## **MONITORING RESULTS**

Current and historical groundwater elevation data and analytical results are described below, and summarized on Figure 2 and Tables 1, 2 and 3. In accordance with the approved sampling protocol, groundwater samples were analyzed for TPHg by modified EPA Method 8015C; TPHd, and TPHmo by EPA Method 8015C with silica gel cleanup; and BTEX and MTBE by EPA Method 8021B. During the first quarter of each year, groundwater samples are also analyzed for halogenated volatile organic compounds (HVOCs) by EPA Method 8260B. Dissolved oxygen was also measured in all sampled wells (Table 1). Table 1 summarizes current and historical analytical results for purgeable hydrocarbons and volatile organic compounds. Table 2 summarizes extractable hydrocarbons (TPHd and TPHmo), and semi-volatile organic compounds (SVOCs). Table 3 presents historical LUFT metals concentrations in groundwater data. Laboratory analyses were performed by McCampbell Analytical of Pacheco, California. The laboratory analytical report and chain of custody are included in Appendix C.

### **Groundwater Flow Direction**

Based on depth-to-water measurements collected on February 18, 2005, groundwater beneath the upper portion of the site generally flows in the southeast direction toward the lower portion of the site. Groundwater at the lower portion of the site generally flows toward the northeast (Figure 1). The inferred flow direction is consistent with previous quarters. Depth to water and groundwater elevation data are presented in Table 1.

### **Hydrocarbon Distribution in Groundwater**

SPH were detected in wells MW-1, MW-6, MW-14 and MW-15, ranging from a 0.04 to 0.10 feet in thickness. Hydrocarbon concentrations were detected in three of the five sampled wells. The maximum TPHg, TPHd, and benzene concentrations were detected in well MW-4 at 97,000 micrograms per liter ( $\mu\text{g/L}$ ), 13,000  $\mu\text{g/L}$ , and 11,000  $\mu\text{g/L}$ , respectively. No hydrocarbons were detected in down/crossgradient well MW-7 or downgradient, offsite well MW-13. No MTBE was detected in the sampled wells.

### **HVOC Distribution in Groundwater**

HVOC analyses were performed on samples from wells MW-4, MW-7, MW-8, MW-9 and MW-13. The only detected compound was 1,2-dichloroethane (1,2-DCA), found in wells MW-8 and MW-9 at concentrations of 47  $\mu\text{g/L}$  and 220  $\mu\text{g/L}$ , respectively. These 1,2-DCA concentrations are lower results from prior grab groundwater sampling summarized on Table 1.

## **OTHER SITE ACTIVITIES**

### **SPH Removal this Quarter**

SPH removal activities were conducted on February 18, 2005. A total of 0.14 gallons of SPH was removed during this quarter from wells MW-1, MW-6, MW-14 and MW-15. SPH was removed from absorbent socks in MW-1 and MW-14, and from the skimmer in MW-6. Additionally, SPH was manually bailed from monitoring well MW-1, MW-6, MW-14 and MW-15. Approximately 155.24 gallons of SPH have been removed since SPH removal activities began in December 1991. Table 4 presents the SPH thickness measurements, amount of SPH removed from the wells, and cumulative volume of SPH removal.

### **Ongoing Monitoring and SPH Removal**

Pangea will continue quarterly groundwater monitoring and SPH bailing in accordance with the approved monitoring protocol. All program wells will be gauged for depth to water and SPH, and dissolved oxygen will be measured in program wells without SPH. All groundwater samples will be analyzed for TPHg/BTEX/MTBE by EPA Method 8015Cm/8021B and for TPHd/TPHmo by EPA Method 8015 with silica gel cleanup. During the first quarter of each year, groundwater samples will also be analyzed for HVOCs by EPA Method 8010. Pangea will summarize groundwater monitoring activities and results in a groundwater monitoring report.

### **ATTACHMENTS**

Figure 1 – Site Location Map

Figure 2 – Groundwater Elevation Contours and Hydrocarbon Concentration Map

Table 1 – Groundwater Elevation and Analytical Data: Volatile Hydrocarbons, HVOCs and DO

Table 2 – Groundwater Elevation and Analytical Data: Extractable Hydrocarbons and SVOCs

Table 3 – LUFT Metals in Groundwater

Table 4 – Separate-Phase Hydrocarbon Removal

Appendix A – Well Sampling Protocol

Appendix B – Field Data Sheets

Appendix C – Laboratory Analytical Report

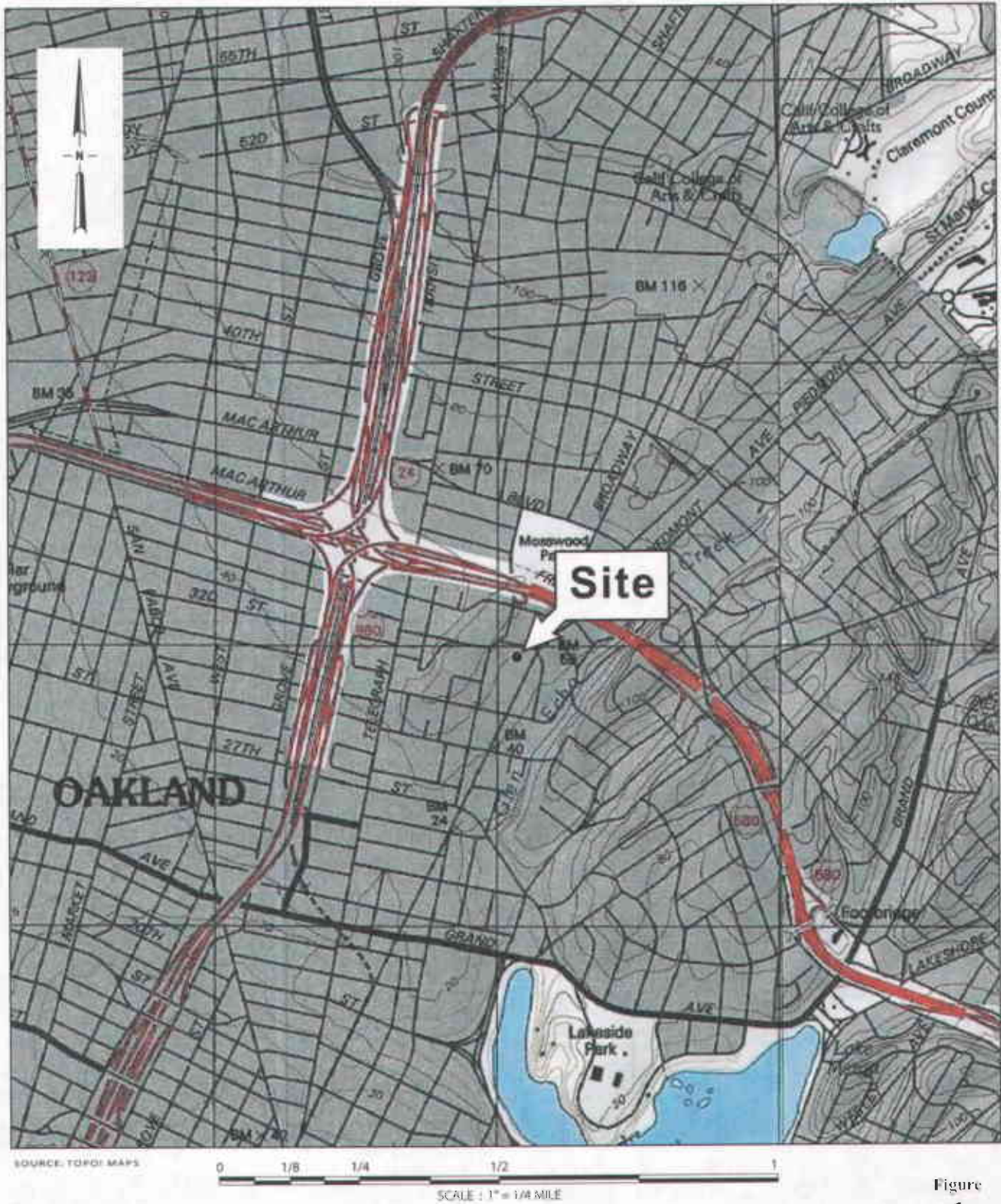
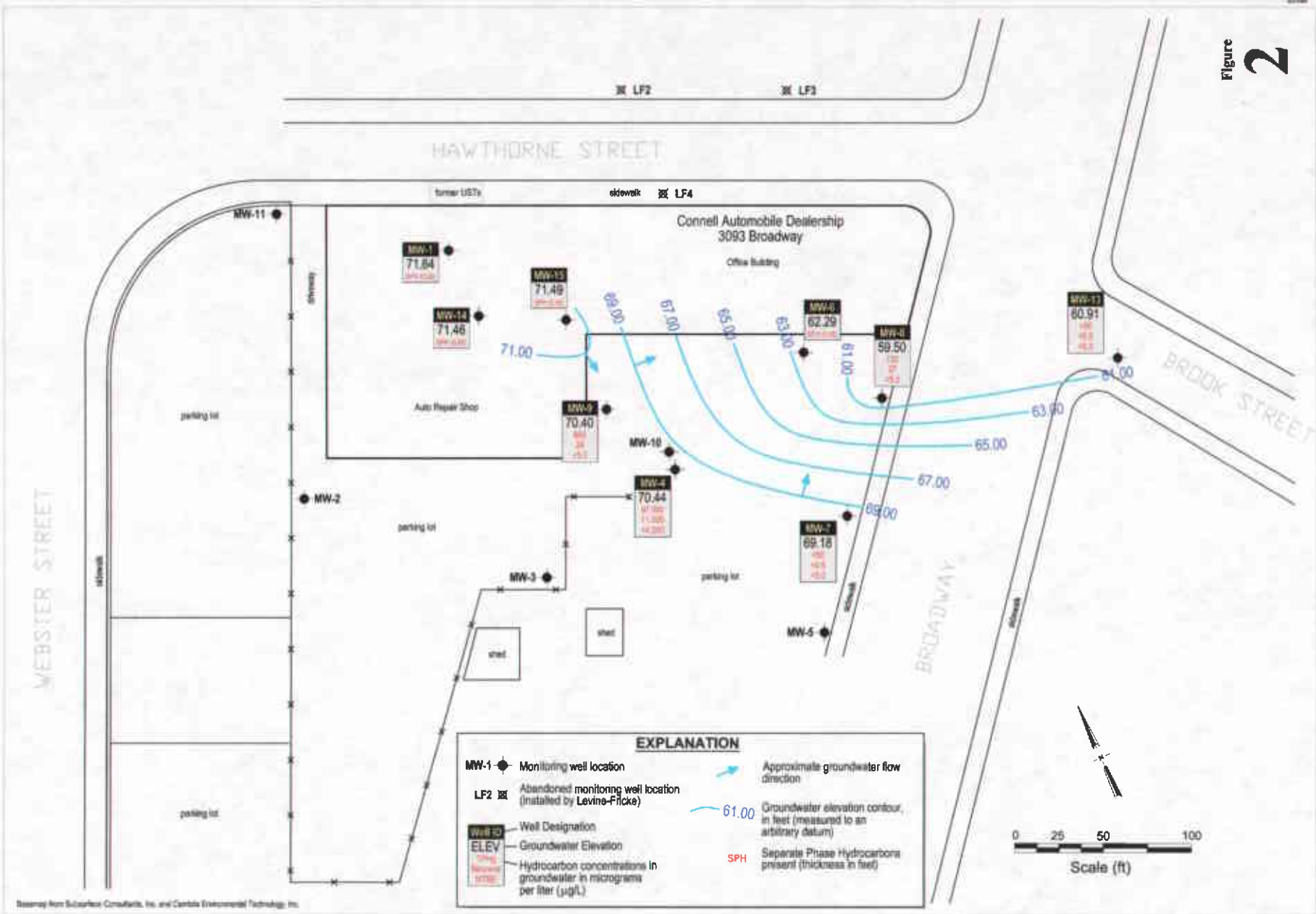


Figure  
**1**

Vicinity Map

Connell Automobile Dealership  
3093 Broadway  
Oakland, California

**Pangea**  
ENVIRONMENTAL SERVICES, INC.



Revised from Subsurface Consultants, Inc. and Corbett Environmental Technology, Inc.



# Pangea

**Table 1. Groundwater Elevation and Analytical Data: Volatile Hydrocarbons, HVOCs, and Dissolved Oxygen**

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID TOC Elev. (ft)	Sampling Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)	TVH/TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	1,2-DCA (µg/L)	Other HVOCs (µg/L)	DO (mg/L)
MW-1	10/5/1990	26.40	68.08	620,000	33,000	50,000	7,900	41,000	--	--	ND	--
94.48	3/1/1991	27.46	67.02	SPH	--	--	--	--	--	--	--	--
	10/12/1992	26.44	68.04	490,000	51,000	59,000	5,000	27,000	--	--	--	--
	11/24/1992	26.63	67.85	320,000	35,000	43,000	4,200	22,000	--	--	ND	--
	4/5/1993	23.77	70.71	270,000	50,000	58,000	4,600	25,000	--	--	ND	--
	7/21/1993	24.51	69.97	SPH	--	--	--	--	--	--	--	--
	11/9/1993	26.06	68.42	SPH	--	--	--	--	--	--	--	--
	8/30/1995	21.73	72.75	SPH	--	--	--	--	--	--	--	--
	12/4/1995	21.94	72.54	SPH	--	--	--	--	<200	--	--	--
	5/2/1996	20.65	73.83	340,000	57,000	73,000	7,200	38,000	--	--	--	--
	11/5/1996	24.29	70.19	270,000	43,000	56,000	4,500	34,000	--	--	--	--
	5/9/1997	22.79	71.69	240,000	36,000	45,000	3,300	17,900	--	--	--	--
	11/5/1997	25.06	69.42	240,000	42,000	48,000	3,600	18,800	<1,000	--	--	--
	2/9/1998	22.64	71.84	220,000	47,000	60,000	5,200	29,800	<1,000	--	ND	--
	5/1/1998	19.95	74.53	160,000	35,000	42,000	2,800	16,000	<1,000	--	ND	--
	11/3/1998	23.29	71.19	200,000	39,000	49,000	4,400	26,000	<500	--	ND	--
	3/24/1999	22.30	72.18	SPH	--	--	--	--	--	--	--	--
	7/1/1999	22.70	71.78	SPH	--	--	--	--	--	--	--	--
	9/21/1999	23.81	70.67	SPH	--	--	--	--	--	--	--	--
	2/9/2000	23.95	70.59	SPH	--	--	--	--	--	--	--	--
	5/31/2000	22.05	72.43	SPH	--	--	--	--	--	--	--	--
	8/8/2000	22.49	71.99	SPH	--	--	--	--	--	--	--	--
	11/14/2000	24.65	69.83	SPH	--	--	--	--	--	--	--	--
	3/1/2001	24.22	70.28	SPH	--	--	--	--	--	--	--	--
	5/7/2001	23.85	70.67	SPH (0.05)	--	--	--	--	--	--	--	--
	8/1/2001	23.91	70.64	SPH (0.09)	--	--	--	--	--	--	--	--
	11/5/2001	23.95	70.67	SPH (0.18)	--	--	--	--	--	--	--	--
	2/13/2002	23.15	71.39	SPH(0.07)	--	--	--	--	--	--	--	--
	5/2/2002	23.91	70.60	SPH (0.04)	--	--	--	--	--	--	--	--
	8/4/2002	24.02	70.48	SPH (0.03)	--	--	--	--	--	--	--	--
	11/26/2002	24.47	70.05	SPH (0.05)	--	--	--	--	--	--	--	--
	1/20/2003	22.37	72.14	SPH (0.04)	--	--	--	--	--	--	--	--
	5/28/2003	21.77	72.73	SPH (0.02)	--	--	--	--	--	--	--	--

# Pangea

**Table 1. Groundwater Elevation and Analytical Data: Volatile Hydrocarbons, HVOCs, and Dissolved Oxygen**

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID TOC Elev. (ft)	Sampling Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)	TVH/TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	1,2-DCA (µg/L)	Other HVOCs (µg/L)	DO (mg/L)
MW-1 <i>(continued)</i>	8/5/2003	23.07	71.44	SPH (0.04)	--	--	--	--	--	--	--	--
	11/10/2003	22.53	71.97	SPH (0.03)	--	--	--	--	--	--	--	--
	2/18/2004	22.61	71.91	SPH (0.05)	--	--	--	--	--	--	--	--
	5/27/2004	22.08	72.44	SPH (0.05)	--	--	--	--	--	--	--	--
	8/19/2004	24.35	70.43	SPH (0.38)	--	--	--	--	--	--	--	--
	12/27/2004	24.62	70.16	SPH (0.44)	--	--	--	--	--	--	--	--
	<b>2/18/2005</b>	<b>23.14</b>	<b>71.64</b>	<b>SPH (0.04)</b>	--	--	--	--	--	--	--	--
MW-2 94.85	3/1/1991	27.90	66.95	<50	<0.5	<0.5	<0.5	<0.5	--	--	ND	--
	11/24/1992	27.95	66.90	<50	<0.5	1.1	<0.5	1.5	--	--	ND	--
	4/5/1993	25.99	68.86	<50	<0.5	<0.5	<0.5	<0.5	--	--	ND	--
	7/21/1993	25.63	69.22	<50	<0.5	<0.5	<0.5	<0.5	--	--	ND	--
	11/10/1993	26.76	68.09	<50	<0.5	<0.5	<0.5	<0.5	--	--	ND	--
	8/30/1995	25.79	69.06	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--
	5/3/1996	23.32	71.53	<50	<0.5	<0.5	<0.5	<0.5	--	--	ND	--
	5/8/1997	24.62	70.23	<50	<0.5	0.7	<0.5	<0.5	--	--	--	--
4/29/1998	22.22	72.63	<50	<0.5	<0.5	<0.5	<0.5	<2	--	ND	--	
MW-3 90.08	3/1/1991	23.17	66.91	<50	<50	0.6	<0.5	<0.5	--	--	ND	--
	11/25/1992	23.01	67.07	50	<0.5	0.9	<0.5	2	--	--	ND	--
	4/5/1993	22.11	67.97	<50	<0.5	<0.5	<0.5	<0.5	--	--	ND	--
	7/21/1993	23.93	66.15	<50	<0.5	<0.5	<0.5	<0.5	--	--	ND	--
	11/10/1993	23.14	66.94	<50	<0.5	<0.5	<0.5	<0.5	--	--	ND	--
	8/30/1995	20.61	69.47	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--
	5/3/1996	18.43	71.65	<50	<0.5	<0.5	<0.5	<0.5	--	--	ND	--
	5/8/1997	19.77	70.31	<50	<0.5	0.7	<0.5	<0.5	--	--	--	--
4/29/1998	17.92	72.16	<50	<0.5	<0.5	<0.5	<0.5	<2	--	ND	--	
MW-4 88.84	3/1/1991	23.79	65.05	150,000	20,000	38,000	2,800	14,000	**	--	ND	--
	10/12/1992	22.48	66.36	230,000	15,000	32,000	2,500	14,000	--	--	--	--
	11/24/1992	22.60	66.24	210,000	14,000	31,000	2,500	14,000	--	--	ND	--
	4/2/1993	20.11	68.73	SPH	--	--	--	--	--	--	--	--
	7/21/1993	20.48	68.36	SPH	--	--	--	--	--	--	--	--
	11/9/1993	21.71	67.13	SPH	--	--	--	--	--	--	--	--
8/30/1995	19.90	68.94	SPH	--	--	--	--	--	--	--	--	

# Pangea

**Table 1. Groundwater Elevation and Analytical Data: Volatile Hydrocarbons, HVOCs, and Dissolved Oxygen**  
 Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID TOC Elev. (ft)	Sampling Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)	TVH/TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	1,2-DCA (µg/L)	Other HVOCs (µg/L)	DO (mg/L)
>>MW-4	12/1/1995	19.40	69.44	SPH	--	--	--	--	--	--	--	--
(continued)	5/2/1996	17.50	71.34	140,000	24,000	50,000	3,000	15,100	--	--	ND	--
88.84	11/4/1996	20.13	68.71	160,000	16,000	38,000	2,700	14,000	--	--	ND	--
	5/8/1997	18.63	70.21	170,000	16,000	37,000	2,400	15,900	--	--	--	--
	11/5/1997	20.19	68.65	190,000	15,000	31,000	2,200	14,600	<400	--	--	--
	2/9/1998	18.28	70.56	110,000	19,000	42,000	2,500	18,300	<500	--	--	--
	5/1/1998	16.11	72.73	130,000	15,000	31,000	2,000	13,400	<1,000	--	ND	--
	8/4/1998	17.54	71.30	130,000	16,000	34,000	2,400	15,700	<400	--	ND	--
	11/2/1998	19.21	69.63	140,000	16,000	32,000	2,300	15,500	<400	--	ND	--
	3/26/1999	17.51	71.33	110,000	15,000	30,000	1,600	15,000	450 <sup>4</sup>	--	<sup>5</sup>	--
	7/1/1999	18.80	70.04	110,000	13,000	23,000	1,600	12,000	<83	--	<sup>5</sup>	--
	9/21/1999	19.85	68.99	140,000	16,000	31,000	2,400	14,800	ND	--	<sup>5</sup>	3.27
	2/9/2000	19.76	69.08	140,000	16,000	28,000	2,100	14,000	<400	--	DCB: 5.9, MCB: 5.9	--
	5/31/2000	17.90	70.94	15,000	17,000	28,000	2,400	14,000	<0.5 <sup>6</sup>	--	ND	--
	8/8/2000	18.62	70.22	140,000	15,000	25,000	2,100	13,000	<300	--	ND	0.60
	11/14/2000	19.63	69.21	150,000	19,000	36,000	2,900	17,000	<200	--	ND	0.32
	3/1/2001	19.68	69.16	120,000	10,000	15,000	1,300	10,000	<2000	--	ND	0.13
	5/7/2001	18.60	70.24	210,000	12,000	19,000	1,900	12,000	<200	--	ND	0.23
	8/1/2001	18.73	70.11	160,000	13,000	21,000	2,200	13,000	<200	--	ND	--
	11/5/2001	18.97	69.87	220,000	15,000	26,000	3,100	16,000	<200	--	ND	--
	2/13/2002	18.59	70.25	180,000	6,100	11,000	1,400	13,000	<200	--	2-MNE: 620, NE: 1000	0.43
	5/2/2002	18.77	70.07	110,000	13,000	20,000	2,000	10,000	<1,200	--	ND	0.21
	8/4/2002	18.95	69.89	92,000	9,200	15,000	1,800	10,000	<2,000	--	ND	0.35
	11/26/2002	20.83	68.01	110,000	16,000	26,000	2,700	12,000	<1,000	--	ND	0.29
	1/20/2003	16.90	71.94	110,000	9,000	16,000	1,900	11,000	<1,200	--	ND	0.35
	5/28/2003	15.25	73.59	110,000	13,000	17,000	1,800	8,500	<1,000	--	ND	0.59
	8/5/2003	17.05	71.79	110,000	13,000	20,000	2,200	9,800	<1,000	--	<25	0.66
	11/10/2003	16.60	72.24	130,000	14,000	23,000	2,700	12,000	<2,700	--	--	0.74
	2/18/2004	16.59	72.25	110,000	11,000	17,000	1,600	9,900	<3,500	--	--	0.46
	5/27/2004	15.97	72.87	97,000	12,000	18,000	2,100	8,900	<3,000	--	--	0.59
	8/19/2004	18.11	70.73	92,000	9,500	15,000	1,900	8,600	<2,500	--	--	0.77
	12/27/2004	19.53	69.31	120,000	16,000	28,000	2,800	12,000	<1,000	--	--	0.2
	<b>2/18/2005</b>	<b>18.40</b>	<b>70.44</b>	<b>97,000</b>	<b>11,000</b>	<b>16,000</b>	<b>1,700</b>	<b>7,400</b>	<b>&lt;4,000</b>	<b>&lt;50</b>	<b>&lt;50</b>	<b>0.89</b>

# Pangea

**Table 1. Groundwater Elevation and Analytical Data: Volatile Hydrocarbons, HVOCs, and Dissolved Oxygen**  
Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID	Sampling Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)	TVH/TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	1,2-DCA (µg/L)	Other HVOCs (µg/L)	DO (mg/L)
MW-5	3/15/1991	26.31	58.53	<50	<0.5	<0.5	<0.5	<0.5	--	--	ND	--
84.84	11/10/1992	26.83	58.01	<50	<0.5	<0.5	<0.5	<0.5	--	--	ND	--
	4/2/1993	26.62	58.22	<50	<0.5	<0.5	<0.5	<0.5	--	--	ND	--
	7/21/1993	26.60	58.24	<50	<0.5	<0.5	<0.5	<0.5	--	--	ND	--
	11/9/1993	27.24	57.60	<50	<0.5	<0.5	<0.5	<0.5	--	--	ND	--
	8/30/1995	27.46	57.38	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--
	5/3/1996	26.02	58.82	<50	<0.5	<0.5	<0.5	<0.5	--	--	ND	--
	5/8/1997	26.76	58.08	<50	<0.5	0.5	<0.5	<0.5	--	--	--	--
	4/29/1998	26.55	58.29	<50	<0.5	0.5	<0.5	<0.5	<2	--	ND	--
MW-6	3/15/1991	25.82	59.80	80,000	12,000	13,000	1,100	5,400	--	--	DBCM: 160	--
85.62	10/12/1992	25.02	60.60	19,000	3,200	1,400	200	560	--	--	--	--
	12/1/1992	28.87	56.75	SPH	--	--	--	--	--	--	--	--
	4/2/1993	26.96	58.66	SPH	--	--	--	--	--	--	--	--
	7/21/1993	26.17	59.45	SPH	--	--	--	--	--	--	--	--
	11/9/1993	27.51	58.11	SPH	--	--	--	--	--	--	--	--
	8/30/1995	28.00	57.62	SPH	--	--	--	--	--	--	--	--
	12/1/1995	27.58	58.04	SPH	--	--	--	--	<8,000,000	--	--	--
86.94	5/3/1996	28.15	58.79	130,000	37,000	50,000	3,200	14,200	--	--	ND	--
	5/9/1997	26.54	60.40	1,700,000	14,000	27,000	4,000	28,200	--	--	--	--
	11/5/1997	26.16	60.78	160,000	13,000	19,000	1,900	14,300	<200	--	--	--
	5/1/1998	22.96	62.86	130,000	15,000	23,000	1,700	13,200	<500	--	ND	--
85.82	11/3/1998	24.35	61.47	110,000	17,000	21,000	1,800	10,700	<200	--	ND	--
	3/26/1999	23.82	62.00	SPH	--	--	--	--	--	--	--	--
	7/1/1999	24.45	61.37	SPH	--	--	--	--	--	--	--	--
	9/21/1999	24.58	61.24	SPH	--	--	--	--	--	--	--	--
	2/9/2000	24.93	61.24	SPH	--	--	--	--	--	--	--	--
	5/31/2000	23.47	62.41	SPH	--	--	--	--	--	--	--	--
	8/8/2000	23.85	61.97	SPH	--	--	--	--	--	--	--	--
	11/14/2000	24.61	61.21	SPH	--	--	--	--	--	--	--	--
	3/1/2001	23.97	61.85	SPH	--	--	--	--	--	--	--	--
	5/7/2001	23.17	62.71	SPH	--	--	--	--	--	--	--	--
	8/1/2001	obstruction in well		--	--	--	--	--	--	--	--	--
	11/5/2001	obstruction in well		--	--	--	--	--	--	--	--	--

# Pangea

**Table 1. Groundwater Elevation and Analytical Data: Volatile Hydrocarbons, HVOCs, and Dissolved Oxygen**  
Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID	Sampling Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)	TVH/TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	1,2-DCA (µg/L)	Other HVOCs (µg/L)	DO (mg/L)
>>MW-6	2/13/2002	obstruction in well		-	--	--	--	--	--	--	--	--
(continued)	5/2/2002	23.25	62.41	SPH (0.05)	--	--	--	--	--	--	--	--
	8/4/2002	23.55	62.29	SPH (0.03)	--	--	--	--	--	--	--	--
	11/26/2002	24.22	61.62	SPH (0.03)	--	--	--	--	--	--	--	--
	1/20/2003	22.49	63.36	SPH (0.04)	--	--	--	--	--	--	--	--
	5/28/2003	21.92	63.93	SPH (0.04)	--	--	--	--	--	--	--	--
	8/5/2003	23.98	61.87	SPH (0.04)	--	--	--	--	--	--	--	--
	11/10/2003	23.50	62.40	SPH (0.10)	--	--	--	--	--	--	--	--
	2/18/2004	22.21	63.64	SPH (0.04)	--	--	--	--	--	--	--	--
	5/27/2004	22.01	63.85	SPH (0.05)	--	--	--	--	--	--	--	--
	8/19/2004	24.16	61.68	SPH (0.03)	--	--	--	--	--	--	--	--
	12/27/2004	24.69	61.15	SPH (sheen)	--	--	--	--	--	--	--	--
	<b>2/18/2005</b>	<b>23.55</b>	<b>62.29</b>	<b>SPH (0.08)</b>	--	--	--	--	--	--	--	--
MW-7	3/15/1991	21.63	63.78	<50	<0.5	<0.5	<0.5	<0.5	--	--	ND	--
85.41	11/24/1992	21.52	63.89	<50	<0.5	<0.5	<0.5	<0.5	--	--	ND	--
	4/2/1993	20.08	65.33	<50	<0.5	<0.5	<0.5	<0.5	--	--	ND	--
	7/21/1993	19.59	65.82	<50	<0.5	<0.5	<0.5	<0.5	--	--	ND	--
	11/9/1993	20.65	64.76	<50	<0.5	1	<0.5	1.7	--	--	ND	--
	8/30/1995	18.78	66.63	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--
	12/1/1995	19.47	65.94	<50	<0.5	<0.5	<0.5	<0.5	--	--	ND	--
	5/2/1996	17.15	68.26	<50	<0.5	<0.5	<0.5	<0.5	--	--	ND	--
	8/8/1996	18.48	66.93	<50	<0.5	<0.5	<0.5	<0.5	<2	--	ND	--
	11/4/1996	18.69	66.72	<50	<1	<1	<1	<1	--	--	ND	--
	2/6/1997	17.44	67.97	<50	<0.5	<0.5	<0.5	<0.5	<2	--	ND	--
	5/8/1997	17.72	67.69	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--
	8/7/1997	18.49	66.92	<50	<0.5	<0.5	<0.5	<0.5	<2	--	ND	--
	11/5/1997	18.86	66.55	<50	<0.5	<0.5	<0.5	<0.5	<2	--	--	--
	2/9/1998	17.56	67.85	<50	<0.5	<0.5	<0.5	<0.5	<2	--	--	--
	4/29/1998	16.23	69.18	<50	<0.5	<0.5	<0.5	<0.5	<2	--	ND	--
	8/4/1998	17.24	68.17	<50	<0.5	<0.5	<0.5	<0.5	<2	--	ND	--
	11/2/1998	17.91	67.50	<50	<0.5	<0.5	<0.5	<0.5	<2	--	ND	--
	3/26/1999	16.42	68.99	<50	<0.5	<0.5	<0.5	<0.5	<2	--	ND	--
	7/1/1999	17.90	67.51	85	<0.5	1.1	0.55	2.5	<0.5	--	5	--
	9/21/1999	18.91	66.50	<50	0.7	1.8	<0.5	1.5	<5.0	--	ND	4.32

# Pangea

**Table 1. Groundwater Elevation and Analytical Data: Volatile Hydrocarbons, HVOCs, and Dissolved Oxygen**  
 Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID	Sampling Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)	TVH/TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	1,2-DCA (µg/L)	Other HVOCs (µg/L)	DO (mg/L)
>>MW-7	2/9/2000	16.74	68.67	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	<0.5	--
(continued)	5/31/2000	16.21	69.20	<50	3	6	1	9	<0.5	--	ND	--
	8/8/2000	16.92	68.49	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	ND	0.43
	11/14/2000	17.00	68.41	<50	<0.5	0.63	<0.5	<0.5	<5.0	--	ND	0.44
	3/1/2001	17.09	68.32	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	ND	--
	5/7/2001	17.19	68.22	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	ND	0.51
	8/1/2001	17.25	68.16	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	ND	--
	11/5/2001	17.35	68.06	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	ND	--
	2/13/2002	17.50	67.91	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	ND	0.80
	5/2/2002	17.30	68.11	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	ND	0.31
	8/4/2002	17.58	67.83	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	ND	0.37
	11/26/2002	18.35	67.06	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	ND	0.28
	1/20/2003	15.84	69.57	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	ND	0.61
	5/28/2003	15.19	70.22	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	ND	0.74
	8/5/2003	17.00	68.41	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	<0.5	0.61
	11/10/2003	16.54	68.87	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	0.65
	2/18/2004	16.47	68.94	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	0.74
	5/27/2004	15.93	69.48	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	0.65
	8/19/2004	18.05	67.36	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	0.71
	12/27/2004	17.35	68.06	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	2.0
	<b>2/18/2005</b>	<b>16.23</b>	<b>69.18</b>	<b>&lt;50</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;5.0</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>0.93</b>
MW-8	10/12/1992	27.70	57.80	70	20	1	1	3	--	--	--	--
85.50	11/25/1992	27.62	57.88	<50	<0.5	<0.5	<0.5	<0.5	--	--	ND	--
	4/8/1993	26.64	58.86	490	15	45	5.1	73	--	--	ND	--
	7/21/1993	26.60	58.90	180	2.5	3	<0.5	1.9	--	--	ND	--
	11/11/1993	27.18	58.32	310	23	<0.5	<0.5	<0.5	--	--	ND	--
	8/30/1995	26.35	59.15	660	360	6.8	13	2.8	--	--	--	--
	12/4/1995	26.72	58.78	250	46	0.9	4.9	<0.5	--	--	ND	--
	5/3/1996	25.47	60.03	69	110	<0.5	<0.5	1.5	--	--	ND	--
	8/8/1996	26.41	59.09	120	11	<0.5	<0.5	<0.5	<2	--	ND	--
	11/5/1996	26.77	58.73	110	20	<1	1	<1	--	--	ND	--
	2/6/1997	25.84	59.66	67	51	<0.5	0.56	<0.5	<2	--	ND	--
	5/9/1997	26.39	59.11	110	59	<0.5	<0.5	<0.5	--	--	--	--
	8/7/1997	26.72	58.78	<50	12	<0.5	<0.5	<0.5	<2	--	ND	--

# Pangea

**Table 1. Groundwater Elevation and Analytical Data: Volatile Hydrocarbons, HVOCs, and Dissolved Oxygen**  
Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID TOC Elev. (ft)	Sampling Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)	TVH/TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	1,2-DCA (µg/L)	Other HVOCs (µg/L)	DO (mg/L)
>>MW-8 (continued)	11/5/1997	26.82	58.68	<50	9.4	<0.5	<0.5	<0.5	<2	--	--	--
	2/9/1998	25.57	59.93	<50	6	<0.5	<0.5	<0.5	<2	--	--	--
	5/1/1998	25.64	59.86	430	490	7.1	27	26	<10	--	ND	--
	8/5/1998	25.96	59.54	140	19	<0.5	5.2	5.3	<2	--	ND	--
	11/3/1998	26.27	59.23	150	110	1.1	4.3	4.5	<2	--	ND	--
	3/31/1999	20.93	64.57	54	170	1.5	4.1	1.9	4.4	--	1,1 DCA: 0.7	--
	7/1/1999	26.59	58.91	140	58	0.9	3	2.3	<0.5	--	5	--
	9/21/1999	26.89	58.61	670	170	2.6	11	7.9	<5	--	ND	2.61
	2/9/2000	26.60	58.90	300	60	1.2	4.8	1.2	<5.0	--	<0.5	--
	8/8/2000	26.43	59.07	270	56	1.2	4.1	1.0	<5.0	--	ND	0.25
	11/14/2000	26.60	58.90	330	64	1.3	3.5	0.60	<5.0	--	ND	0.51
	3/1/2001	26.41	59.09	400	140	<0.5	<0.5	0.55	<5.0	--	ND	--
	5/7/2001	26.55	58.95	240	37	0.71	2.5	0.77	<5.0	--	ND	0.49
	8/1/2001	26.71	58.79	130	5.2	<0.5	<0.5	<0.5	<5.0	--	ND	--
	11/5/2001	26.67	58.83	140	3.3	<0.5	<0.5	<0.5	<5.0	--	ND	--
	2/13/2002	26.15	59.35	1,100	440	0.087	0.66	2.0	<5.0	--	ND	0.71
	5/2/2002	26.63	58.87	90	3.9	<0.5	<0.5	<0.5	<5.0	--	ND	0.37
	8/4/2002	26.80	58.70	120	2.4	0.77	<0.5	<0.5	<5.0	--	ND	0.44
	11/26/2002	27.50	58.00	85	3.7	<0.5	<0.5	<0.5	<5.0	--	ND	0.48
	1/20/2003	24.93	60.57	90	3.9	0.67	<0.5	<0.5	<5.0	--	ND	0.65
	5/28/2003	24.28	61.22	120	1.4	<0.5	<0.5	<0.5	<5.0	--	ND	0.71
	8/5/2003	26.51	58.99	150 <sup>f</sup>	<0.5	<0.5	<0.5	<0.5	<5.0	--	<1.0	0.67
	11/10/2003	26.04	59.46	50	0.84	<0.5	<0.5	<0.5	<5.0	--	--	0.70
2/18/2004	25.97	59.53	52	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	0.69	
5/27/2004	25.31	60.19	75	0.76	<0.5	<0.5	<0.5	<5.0	--	--	0.98	
8/19/2004	27.55	57.95	72	1.7	<0.5	<0.5	<0.5	<5.0	--	--	1.41	
12/27/2004	26.50	59.00	160	22	0.74	2.2	0.55	<5.0	--	--	0.2	
<b>2/18/2005</b>	<b>26.00</b>	<b>59.50</b>	<b>130</b>	<b>27</b>	<b>0.70</b>	<b>2.3</b>	<b>0.69</b>	<b>&lt;5.0</b>	<b>47</b>	<b>&lt;1.0</b>	<b>0.91</b>	
MW-9	11/24/1992	23.51	66.86	19,000	180	590	23	2,000	--	--	TCM: 15	--
90.37	4/5/1993	21.14	69.23	2,300	48	4	0.6	13	--	--	TCM: 2	--
	7/21/1993	21.54	68.83	2,300	170	8.1	15	<0.5	--	--	ND	--
	11/10/1993	27.53	62.84	4,400	69	7.3	21	9.7	--	--	ND	--
	8/30/1995	19.59	70.78	3,200	3,900	49	80	22.8	--	--	--	--
	12/4/1995	20.65	69.72	--	--	--	--	--	<2	--	--	--

# Pangea

**Table 1. Groundwater Elevation and Analytical Data: Volatile Hydrocarbons, HVOCs, and Dissolved Oxygen**  
Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID TOC Elev. (ft)	Sampling Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)	TVH/TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	1,2-DCA (µg/L)	Other HVOCs (µg/L)	DO (mg/L)
>>MW-9	5/2/1996	18.63	71.74	<1300	2,600	<13	200	<13	--	--	ND	--
(continued)	11/5/1996	20.69	69.68	1,800	280	<5	65	<5	--	--	ND	--
	5/9/1997	19.96	70.41	1,100	160	<0.5	42	<0.5	--	--	--	--
	8/8/1997	20.84	69.53	570 <sup>1,2</sup>	<0.5	<0.5	<0.5	0.78 <sup>3</sup>	<2	--	ND	--
	11/5/1997	21.55	68.82	490 <sup>1</sup>	<0.5	<0.5	6	<0.5	<2	--	--	--
	2/9/1998	20.21	70.16	270 <sup>1</sup>	48	17	5.8	<0.5	<2	--	--	--
	5/1/1998	19.27	71.10	550	70	<0.5	22	2.2	<2	--	ND	--
	8/5/1998	19.35	71.02	550 <sup>1</sup>	88	<0.5	13	1.9 <sup>3</sup>	<2	--	ND	--
	11/2/1998	20.43	69.94	580	<0.5	<0.5	7.5 <sup>3</sup>	1.6 <sup>3</sup>	<2	--	ND	--
	3/25/1999	18.46	71.91	1,100	160	<0.5	21	2.1 <sup>3</sup>	5.7 <sup>4</sup>	--	ND	--
	7/1/1999	19.95	70.42	540	100	7.4	26	16.9	<1.3	--	5	--
	9/21/1999	21.15	69.22	2,700	320	98	88	47	<20	--	ND	5.86
	2/9/2000	21.08	69.29	1,600	81	3.6	19	18	<5.0	--	<0.5	--
	5/31/2000	19.11	71.26	1,500	170	13	25	<1.0	<0.5	--	ND	--
	8/8/2000	19.86	70.51	1,300	140	2.1	19	<0.5	<5.0	--	ND	2.4
	11/14/2000	20.90	69.47	1,700	250	2.6	44	2.1	<5.0	--	ND	0.29
	3/1/2001	20.45	69.92	1,800	170	5.6	30	2.5	<20	--	ND	0.31
	5/7/2001	19.83	70.54	1,500	120	2.6	24	<0.5	<5.0	--	ND	0.18
	8/1/2001	20.02	70.35	2,600	280	4.8	50	<0.5	<5.0	--	ND	--
	11/5/2001	19.85	70.52	2,200	170	4.5	100	0.54	<5.0	--	ND	--
	2/13/2002	19.80	70.57	1,800	98	3	58	1.5	<5.0	--	ND	0.53
	5/2/2002	19.93	70.44	1,100	82	1.4	20	<0.5	<10	--	ND	0.28
	8/4/2002	20.20	70.17	1,200	130	2.5	50	0.58	<10	--	ND	0.51
	11/26/2002	20.37	70.00	1,200	150	3.3	48	<2.5	<25	--	ND	0.53
	1/20/2003	17.93	72.44	840	110	1.2	31	0.76	<5.0	--	ND	0.31
	5/28/2003	17.25	73.12	1,100	40	1.9	3.0	<0.5	<20	--	ND	0.60
	8/5/2003	19.03	71.34	1,100 <sup>A</sup>	62	0.99	25	<0.5	<5.0	--	<10	0.54
	11/10/2003	18.65	71.72	1,500	120	7.6	41	<1.0	<10	--	--	0.62
	2/18/2004	18.41	71.96	820	50	1.2	19	<0.5	<5.0	--	--	0.58
	5/27/2004	17.89	72.48	730	36	2.0	11	1.6	<5.0	--	--	0.90
	8/19/2004	20.14	70.23	1,200	95	2.5	24	<0.5	<25	--	--	0.98
	12/27/2004	21.65	68.72	720	25	14	2.0	3.5	<15	--	--	2.5
	<b>2/18/2005</b>	<b>19.97</b>	<b>70.40</b>	<b>.600</b>	<b>24</b>	<b>&lt;0.5</b>	<b>3.8</b>	<b>&lt;0.5</b>	<b>&lt;5.0</b>	<b>220</b>	<b>&lt;5.0</b>	<b>0.88</b>



# Pangea

**Table 1. Groundwater Elevation and Analytical Data: Volatile Hydrocarbons, HVOCs, and Dissolved Oxygen**  
Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID TOC Elev. (ft)	Sampling Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)	TVH/TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	1,2-DCA (µg/L)	Other HVOCs (µg/L)	DO (mg/L)
MW-10 88.60	10/12/1992	21.55	67.05	28,000	2,700	3,800	210	1,300	--	--	--	--
	11/24/1992	21.86	66.74	130,000	9,700	19,000	1,400	8,400	--	--	ND	--
	4/5/1993	19.14	69.46	63,000	6,300	14,000	1,100	7,500	--	--	ND	--
	7/21/1993	19.79	68.81	140,000	16,000	31,000	2,200	13,000	--	--	ND	--
	8/30/1995	17.99	70.61	92,000	13,000	24,000	1,800	9,100	--	--	--	--
	5/3/1996	17.04	71.56	81,000	17,000	29,000	2,100	8,500	--	--	ND	--
	5/9/1997	18.36	70.24	63,000	7,400	13,000	940	4,100	--	--	--	--
	5/1/1998	15.84	72.76	60,000	7,100	14,000	1,100	5,300	<250	--	ND	--
MW-11 102.06	11/24/1992	33.65	68.41	<50	<0.5	<0.5	<0.5	<0.5	--	--	ND	--
	12/8/92***	33.37	68.69	<50	<0.1	<0.1	<0.1	<0.1	--	--	--	--
	12/8/1992	33.37	68.69	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--
	4/5/1993	31.03	71.03	<50	<0.5	<0.5	<0.5	<0.5	--	--	ND	--
	7/21/1993	31.90	70.16	160	<0.5	1.8	<0.5	<0.5	--	--	ND	--
	11/9/1993	32.60	69.46	80	<0.5	<0.5	<0.5	<0.5	--	--	ND	--
	8/30/1995	28.92	73.14	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--
	5/3/1996	28.00	74.06	<50	<0.5	<0.5	<0.5	<0.5	--	--	ND	--
	5/8/1997	29.93	72.13	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--
4/29/1998	27.22	74.84	<50	<0.5	<0.5	<0.5	<0.5	<2	--	ND	--	
MW-13 84.06	11/24/1992	26.05	58.01	<50	<0.5	<0.5	<0.5	<0.5	--	--	ND	--
	12/8/92***	25.08	58.98	<50	<0.1	<0.1	<0.1	<0.1	--	--	--	--
	12/8/1992	25.08	58.98	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--
	4/5/1993	24.64	59.42	<50	<0.5	0.9	<0.5	<0.5	--	--	ND	--
	7/21/1993	24.29	59.77	<50	<0.5	<0.5	<0.5	<0.5	--	--	ND	--
	11/9/1993	24.23	59.83	<50	<0.5	<0.5	<0.5	<0.5	--	--	ND	--
	8/30/1995	23.30	60.76	<50	49	<0.5	<0.5	<0.5	--	--	--	--
	12/1/1995	23.80	60.26	<50	<0.5	<0.5	<0.5	<0.5	--	--	ND	--
	5/3/1996	23.19	60.87	<50	<0.5	<0.5	<0.5	<0.5	--	--	ND	--
	8/8/1996	23.44	60.62	<50	32	<0.5	<0.5	<0.5	<2	--	ND	--
	11/5/1996	24.04	60.02	<50	<1	<1	<1	<1	--	--	ND	--
	2/6/1997	23.24	60.82	<50	<0.5	<0.5	<0.5	<0.5	<2	--	ND	--
	5/8/1997	23.46	60.60	<50	81	<0.5	<0.5	<0.5	--	--	--	--
	8/8/1997	23.92	60.14	<50	<0.5	<0.5	<0.5	<0.5	<2	--	ND	--
11/5/1997	24.27	59.79	<50	<0.5	<0.5	<0.5	<0.5	<2	--	--	--	

# Pangea

**Table 1. Groundwater Elevation and Analytical Data: Volatile Hydrocarbons, HVOCs, and Dissolved Oxygen**

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID TOC Elev. (ft)	Sampling Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)	TVH/TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	1,2-DCA (µg/L)	Other HVOCs (µg/L)	DO (mg/L)
>>MW-13	2/9/1998	22.89	61.17	<50	<0.5	<0.5	<0.5	<0.5	<2	--	--	--
(continued)	4/29/1998	22.27	61.79	<50	24	<0.5	<0.5	<0.5	<2	--	ND	--
	8/4/1998	22.75	61.31	120	200	<1	<1	<1	<4	--	ND	--
	11/3/1998	23.90	60.16	59 <sup>1</sup>	33	<0.5	<0.5	<0.5	<2	--	ND	--
	3/31/1999	23.11	60.95	130	0.56	<0.5	<0.5	<0.5	<2	--	ND	--
	7/1/1999	23.40	60.66	160	370	19	1.2	3.5	<1	--	3	--
	9/21/1999	21.91	62.15	370	150	1.0	0.8	0.8	<5.0	--	ND	3.76
	2/9/2000	23.84	60.22	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	<0.5	--
	8/8/2000	23.31	60.75	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	ND	1.76
	11/14/2000	24.00	60.06	<50	<0.5	0.52	<0.5	<0.5	<5.0	--	ND	0.49
	3/1/2001	23.93	60.13	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	ND	--
	5/7/2001	23.93	60.13	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	ND	0.59
	8/1/2001	24.10	59.96	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	ND	--
	11/5/2001	24.02	60.04	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	ND	--
	2/13/2002	23.70	60.36	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	ND	0.55
	5/2/2002	23.97	60.09	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	ND	0.63
	8/4/2002	24.19	59.87	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	ND	0.31
	11/26/2002	24.78	59.28	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	ND	0.47
	1/20/2003	22.10	61.96	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	ND	0.53
	5/28/2003	21.72	62.34	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	ND	0.75
	8/5/2003	23.99	60.07	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	<0.5	0.59
	11/10/2003	23.47	60.59	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	0.70
	2/18/2004	22.58	61.48	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	0.52
	5/27/2004	21.95	62.11	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	0.84
	8/19/2004	24.29	59.77	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	0.98
	12/27/2004	23.70	60.36	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	5.5
	<b>2/18/2005</b>	<b>23.15</b>	<b>60.91</b>	<b>&lt;50</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;5.0</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>0.97</b>
MW-14	5/26/1998	21.67	72.99	41,000	7,100	11,000	720	3,900	<1000	--	ND	--
94.66	7/1/1999	22.95	71.71	SPH	--	--	--	--	--	--	--	--
	9/21/1999	24.26	70.40	SPH	--	--	--	--	--	--	--	--
	2/9/2000	24.13	70.53	92,000	12,000	17,000	1,300	8,700	<140	--	<0.5	--
	5/31/2000	22.09	72.57	SPH	--	--	--	--	--	--	--	--
	8/8/2000	22.88	71.78	SPH	--	--	--	--	--	--	--	--
	11/14/2000	23.90	70.76	SPH	--	--	--	--	--	--	--	--

# Pangea

**Table 1. Groundwater Elevation and Analytical Data: Volatile Hydrocarbons, HVOCs, and Dissolved Oxygen**

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID TOC Elev. (ft)	Sampling Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)	TVH/TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	1,2-DCA (µg/L)	Other HVOCs (µg/L)	DO (mg/L)
>>MW-14	3/1/2001	23.97	70.69	SPH	--	--	--	--	--	--	--	--
<i>(continued)</i>	5/7/2001	23.45	71.23	SPH (sheen)	--	--	--	--	--	--	--	--
	8/1/2001	23.57	71.12	SPH (0.06)	--	--	--	--	--	--	--	--
	11/5/2001	23.50	71.18	SPH (0.03)	--	--	--	--	--	--	--	--
	2/13/2002	22.99	71.70	SPH (0.04)	--	--	--	--	--	--	--	--
	5/2/2002	23.51	71.17	SPH (0.02)	--	--	--	--	--	--	--	--
	8/4/2002	23.61	71.06	SPH (0.01)	--	--	--	--	--	--	--	--
	1/20/2003	22.35	72.31	SPH (sheen)	--	--	--	--	--	--	--	--
	5/28/2003	21.95	72.74	SPH (0.04)	--	--	--	--	--	--	--	--
	8/5/2003	23.03	71.66	SPH (0.04)	--	--	--	--	--	--	--	--
	11/10/2003	22.70	72.02	SPH (0.07)	--	--	--	--	--	--	--	--
	2/18/2004	22.37	72.32	SPH (0.04)	--	--	--	--	--	--	--	--
	5/27/2004	21.78	72.92	SPH (0.05)	--	--	--	--	--	--	--	--
	8/19/2004	24.13	70.57	SPH (0.05)	--	--	--	--	--	--	--	--
	12/27/2004	24.19	70.51	SPH (sheen)	--	--	--	--	--	--	--	--
	<b>2/18/2005</b>	<b>23.24</b>	<b>71.46</b>	<b>SPH (0.05)</b>	--	--	--	--	--	--	--	--
MW-15	5/26/1998	21.87	72.89	130,000	30,000	38,000	2,500	12,600	<1000	--	ND	--
94.76	7/1/1999	22.25	72.51	SPH	--	--	--	--	--	--	--	--
	9/21/1999	24.12	70.64	SPH	--	--	--	--	--	--	--	--
	2/9/2000	24.42	70.34	180,000	32,000	37,000	2,800	14,000	<200	--	<0.5	--
	5/31/2000	22.40	72.36	SPH	--	--	--	--	--	--	--	--
	8/8/2000	23.17	71.59	SPH	--	--	--	--	--	--	--	--
	11/14/2000	24.15	70.61	SPH	--	--	--	--	--	--	--	--
	3/1/2001	23.99	70.77	SPH	--	--	--	--	--	--	--	--
	5/7/2001	23.50	71.26	SPH (sheen)	--	--	--	--	--	--	--	--
	8/1/2001	23.62	71.14	SPH (sheen)	--	--	--	--	--	--	--	--
	11/5/2001	23.65	71.11	SPH (sheen)	--	--	--	--	--	--	--	--
	2/13/2002	23.09	71.67	68,000	9,300	8,500	760	2,600	<200	--	ND	0.59
	5/2/2002	23.59	71.17	SPH (sheen)	--	--	--	--	--	--	--	--
	8/4/2002	23.65	71.11	SPH (sheen)	--	--	--	--	--	--	--	--
	11/26/2002	24.59	70.17	SPH (sheen)	--	--	--	--	--	--	--	--
	1/20/2003	22.08	72.68	48,000	9,900	10,000	1,000	3,600	<1,200	--	ND	0.24
	5/28/2003	21.68	73.08	SPH (sheen)	--	--	--	--	--	--	--	--
	8/5/2003	24.05	70.71	SPH (sheen)	--	--	--	--	--	--	--	--

# Pangea

**Table 1. Groundwater Elevation and Analytical Data: Volatile Hydrocarbons, HVOCs, and Dissolved Oxygen**  
Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID TOC Elev. (ft)	Sampling Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)	TVH/TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)	1,2-DCA (µg/L)	Other HVOCs (µg/L)	DO (mg/L)
>>MW-15	11/10/2003	23.68	71.08	SPH (sheen)	--	--	--	--	--	--	--	--
(continued)	2/18/2004	23.51	71.25	25,000	5,200	3,600	390	1,100	<1,000	--	--	0.63
	5/27/2004	22.98	71.78	SPH (sheen)	--	--	--	--	--	--	--	--
	8/19/2004	25.31	69.45	SPH (sheen)	--	--	--	--	--	--	--	0.42
	12/27/2004	24.46	70.30	SPH (sheen)	--	--	--	--	--	--	--	--
	<b>2/18/2005</b>	<b>23.27</b>	<b>71.49</b>	<b>SPH (0.10)</b>	--	--	--	--	--	--	--	--

## Grab Sampling Data

### Sample ID

CPT-1****	10/6/1992	--	--	490	20	60	10	60	--	1	--	--
CPT-3	10/6/1992	--	--	50	<0.4	<0.4	3	3	--	<4	--	--
CPT-4	10/6/1992	--	--	1,100	60	50	80	15	--	110	--	--
CPT-5	10/6/1992	--	--	600,000	2,300	53,000	8,000	43,000	--	730	--	--
CPT-7	10/6/1992	--	--	1,700,000	40,000	120,000	25,000	120,000	--	2,900	--	--
CPT-9	10/7/1992	--	--	2,100,000	49,000	140,000	28,000	145,000	--	620	--	--
CPT-10	10/7/1992	--	--	190,000	13,000	16,000	3,900	18,000	--	1,400	--	--
CPT-11	10/7/1992	--	--	2,000	200	50	30	70	--	11	--	--
CPT-12	10/7/1992	--	--	130,000	4,100	10,000	2,600	10,000	--	9	--	--
CPT-13(MW-10)	10/7/1992	--	--	28,000	2,700	3,800	210	1,300	--	150	--	--
CPT-17 (B-12)	10/6/1992	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	<1	ND	--
B (boring)	5/16/1998	--	--	140	37	0.64	6.6	1.7	<2	17	--	--
C (boring)	5/16/1998	--	--	<50	0.72	<0.5	<0.5	<0.5	<2	210	--	--
G (boring)	5/16/1998	--	--	590,000	15,000	25,000	2,100	10,800	<500	880	--	--

### Abbreviations and Notes:

TOC Elev. (ft) = Top of casing elevation, surveyed to an arbitrary datum (measured in feet)

µg/L = micrograms per liter = parts per billion = ppb

-- = Not measured or not analyzed

ND = Not detected above laboratory reporting limit; see laboratory reports for individual reporting limits.

# Pangea

**Table 1. Groundwater Elevation and Analytical Data: Volatile Hydrocarbons, HVOCs, and Dissolved Oxygen**

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID	Sampling	Depth to	Groundwater				Ethyl-					
<i>TOC Elev.</i>	Date	Groundwater	Elevation	TVH/TPHg	Benzene	Toluene	benzene	Xylenes	MTBE	1,2-DCA	Other HVOCs	DO
(ft)		(ft)	(ft)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(mg/L)

SPH = Separate-phase hydrocarbons encountered in well (value in parentheses is thickness in feet)

TVH = Total Volatile Hydrocarbons

TPHg = Total petroleum hydrocarbons as gasoline by modified EPA Method 8015; value in parentheses by EPA Method 8260

Benzene, toluene, ethylbenzene, and xylenes by EPA Method 8021B; value in parentheses by EPA Method 8260

MTBE = Methyl tertiary butyl ether by EPA Method 8021B; values in parentheses by EPA Method 8260

HVOCs = Halogenated volatile organic compounds by EPA Method 8010

1,2-DCA = 1,2 Dichloroethane by EPA Method 8010

DCB = 1, 3 Dichlorobenzene

DBCM = Dibromochloromethane

MCB = Chlorobenzene

NE = Naphthalene (results for MW-1 from 1995 through 1998 from SCI reporting of SVOC results)

TCM = Chloroform = trichloromethane

DO = Dissolved oxygen, measured in the field.

<n = Chemical not present at a concentration in excess of detection limit shown.

\* = Suspect laboratory contamination contributing to test result.

\*\* = Fuel fingerprint analysis indicates MTBE is not present in the free product sample collected from this well.

\*\*\* = Duplicate sample sent to a different chemical laboratory.

\*\*\*\* = CPT-2, 6, 8, 14, 15 and 16 were not sampled.

1 = Sample exhibits fuel pattern which does not resemble standard

2 = Lighter hydrocarbons than indicated standard

3 = Presence of this compound confirmed by second column, however, the confirmation concentration differed from the reported result by more than a factor of two.

4 = Detection may potentially be a false positive, to be checked during the next event.

5 = One or more of the following substances found: Acetone, 1,2-Dibromoethane, 1,3,5-Trimethylbenzene, 2-Chlorotoluene, 1,2,4-Trimethylbenzene, n-Butylbenzene, and Naphthalene.

See laboratory results for details.

6 = Confirmed by GC/MS.

# Pangea

**Table 2. Groundwater Elevation and Analytical Data: Extractable Hydrocarbons and SVOCs**  
Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID <i>TOC Elev.</i> <i>(ft)</i>	Sampling Date	Depth to water (ft)	Groundwater Elevation (ft)	TEH (µg/L)	TPHd (µg/L)	TPHmo (µg/L)	2-Methyl naphthalene (µg/L)	Naphthalene (µg/L)	Other SVOCs (µg/L)
MW-1	10/3/1990	26.40	68.08	<500	--	--	--	--	--
94.48	3/1/1991	27.46	67.02	SPH	--	--	--	--	--
	10/12/1992	26.44	68.04	--	--	--	--	--	--
	11/24/1992	26.63	67.85	4,600	--	--	--	--	--
	4/5/1993	23.77	70.71	25,000	--	--	--	--	--
	7/21/1993	24.51	69.97	SPH	--	--	--	--	--
	11/9/1993	26.06	68.42	SPH	--	--	--	--	--
	8/30/1995	21.73	72.75	SPH	--	--	630	1,200	1
	12/4/1995	21.94	72.54	SPH	--	--	--	--	--
	5/2/1996	20.65	73.83	32,000	--	--	250	640	ND
	11/5/1996	24.29	70.19	--	--	--	--	--	--
	5/9/1997	22.79	71.69	28,000	--	--	280	650	2
	11/5/1997	25.06	69.42	28,000	--	--	720	1,500	ND
	2/9/1998	22.64	71.84	27,000	--	--	160	570	3
	5/1/1998	19.95	74.53	29,000	--	--	--	--	--
	5/27/1998	--	--	--	--	--	120	630	4
	11/3/1998	23.29	71.19	37,000	--	--	500	1,100	ND?
	3/24/1999	22.30	72.18	SPH	--	--	--	--	--
	7/1/1999	22.70	71.78	SPH	--	--	--	--	--
	9/21/1999	23.81	70.67	SPH	--	--	--	--	--
	2/9/2000	23.95	70.59	--	SPH	--	--	--	--
	5/31/2000	22.05	72.43	--	SPH	--	--	--	--
	11/14/2000	24.65	69.83	--	SPH	--	--	--	--
	3/1/2001	24.22	70.28	--	SPH	--	--	--	--
	5/7/2001	23.85	70.67	--	SPH	--	--	--	--
	8/1/2001	23.91	70.64	--	SPH	--	--	--	--
	11/3/2001	23.95	70.67	--	SPH	--	--	--	--
	2/13/2002	23.15	71.39	--	SPH (0.07)	--	--	--	--
	5/2/2002	23.91	70.60	--	SPH (0.04)	--	--	--	--
	8/4/2002	24.02	70.48	--	SPH (0.03)	--	--	--	--
	11/26/2002	24.47	70.05	--	SPH (0.05)	--	--	--	--
	1/20/2003	22.37	72.14	--	SPH (0.04)	--	--	--	--
	5/28/2003	21.77	72.73	--	SPH (0.02)	--	--	--	--
	8/5/2003	23.07	71.44	--	SPH (0.04)	--	--	--	--
	11/10/2003	22.53	71.97	--	SPH (0.03)	--	--	--	--
	2/18/2004	22.61	71.91	--	SPH (0.05)	--	--	--	--

# Pangea

**Table 2. Groundwater Elevation and Analytical Data: Extractable Hydrocarbons and SVOCs**  
Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID TOC Elev. (ft)	Sampling Date	Depth to water (ft)	Groundwater Elevation (ft)	TEH (µg/L)	TPHd (µg/L)	TPHmo (µg/L)	2-Methyl naphthalene (µg/L)	Naphthalene (µg/L)	Other SVOCs (µg/L)
MW-1	5/27/2004	22.08	72.44	--	SPH (0.05)	--	--	--	--
(cont'd)	8/19/2004	24.35	70.43	--	SPH (0.38)	--	--	--	--
	12/27/2004	24.62	70.16	--	SPH (0.44)	--	--	--	--
	<b>2/18/2005</b>	<b>23.14</b>	<b>70.16</b>	--	<b>SPH (0.04)</b>	--	--	--	--
MW-2	3/1/1991	27.86	66.95	<50	--	--	--	--	--
94.81	11/24/1992	27.91	66.90	<50	--	--	--	--	--
	4/5/1993	25.95	68.86	870	--	--	--	--	--
	7/21/1993	25.59	69.22	<50	--	--	--	--	--
	11/10/1993	26.72	68.09	240	--	--	--	--	--
	8/30/1995	25.75	69.06	150	--	--	--	--	--
	5/3/1996	23.28	71.53	<50	--	--	--	--	--
	5/8/1997	24.58	70.23	<50	--	--	--	--	--
	4/29/1998	22.18	72.63	<47	--	--	--	--	--
MW-3	3/1/1991	23.17	66.91	<50	--	--	--	--	--
90.08	11/25/1992	23.01	67.07	160	--	--	--	--	--
	4/5/1993	22.11	67.97	<50	--	--	--	--	--
	7/21/1993	23.93	66.15	<50	--	--	--	--	--
	11/10/1993	23.14	66.94	<50	--	--	--	--	--
	8/30/1995	20.61	69.47	<50	--	--	--	--	--
	5/3/1996	18.43	71.65	<50	--	--	--	--	--
	5/8/1997	19.77	70.31	<50	--	--	--	--	--
	4/29/1998	17.92	72.16	<47	--	--	--	--	--
MW-4	3/1/1991	23.79	65.05	<500	--	--	--	--	--
88.84	10/12/1992	22.48	66.36	--	--	--	--	--	--
	11/24/1992	22.60	66.24	1,600	--	--	--	--	--
	4/2/1993	20.11	68.73	SPH	--	--	--	--	--
	7/21/1993	20.48	68.36	SPH	--	--	--	--	--
	11/9/1993	21.71	67.13	SPH	--	--	--	--	--
	8/30/1995	19.90	68.94	SPH	--	--	--	--	--
	12/1/1995	19.40	69.44	SPH	--	--	--	--	--
	5/2/1996	17.50	71.34	9,200	--	--	--	--	--
	11/4/1996	20.13	68.71	4,700	--	--	--	--	--
	5/8/1997	18.63	70.21	5,100	--	--	--	--	--

# Pangea

**Table 2. Groundwater Elevation and Analytical Data: Extractable Hydrocarbons and SVOCs**  
Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID TOC Elev. (ft)	Sampling Date	Depth to water (ft)	Groundwater Elevation (ft)	TEH (µg/L)	TPHd (µg/L)	TPHmo (µg/L)	2-Methyl naphthalene (µg/L)	Naphthalene (µg/L)	Other SVOCs (µg/L)
MW-4	11/5/1997	20.19	68.65	3,700	--	--	--	--	--
(cont'd)	2/9/1998	18.28	70.56	4,800	--	--	--	--	--
	5/1/1998	16.11	72.73	5,000	--	--	--	--	--
	8/4/1998	17.54	71.30	3,500	--	--	--	--	--
	11/2/1998	19.21	69.63	7,200	--	--	--	--	--
	3/26/1999	17.51	71.33	14,000	--	--	--	--	--
	7/1/1999	18.80	70.04	17,000	--	--	370	860	ND
	9/21/1999	19.85	68.99	14,000	--	--	360	820	ND
	2/9/2000	19.76	69.08	--	12,000	1,000	290	700	ND
	5/31/2000	17.90	70.94	--	14,000 **	<500	--	--	--
	11/14/2000	19.63	69.21	--	8,000	290	--	--	--
	3/1/2001	19.68	69.16	--	57,000	2,800	210	510	ND
	5/7/2001	18.60	70.24	--	56,000	3,600	--	--	--
	8/1/2001	18.73	70.11	--	42,000	6,700	--	--	--
	11/5/2001	18.97	69.87	--	49,000	14,000	--	--	--
	2/13/2002	18.59	70.25	--	140,000	11,000	620	1000	--
	5/2/2002	18.77	70.07	--	68,000	<25,000	--	--	--
	8/4/2002	18.95	69.89	--	58,000	<25,000	--	--	--
	11/26/2002	20.83	68.01	--	7,100	<250	--	--	--
	1/20/2003	16.90	71.94	--	29,000	<2500	--	--	--
	5/28/2003	15.25	73.59	--	12,000	300	--	--	--
	8/5/2003	17.05	71.79	--	6,600	<250	--	--	--
	11/10/2003	16.60	72.24	--	15,000	--	--	--	--
	2/18/2004	16.59	72.25	--	16,000	--	--	--	--
	5/27/2004	15.97	72.87	--	23,000	<2,500	--	--	--
	8/19/2004	18.11	70.73	--	19,000	--	--	--	--
	12/27/2004	19.53	69.31	--	8,700	<2,500	--	--	--
	<b>2/18/2005</b>	<b>18.40</b>	<b>70.44</b>	--	<b>13,000</b>	<b>&lt;250</b>	--	--	--



# Pangea

**Table 2. Groundwater Elevation and Analytical Data: Extractable Hydrocarbons and SVOCs**

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID <i>TOC Elev.</i> <i>(ft)</i>	Sampling Date	Depth to water <i>(ft)</i>	Groundwater Elevation <i>(ft)</i>	TEH <i>(µg/L)</i>	TPHd <i>(µg/L)</i>	TPHmo <i>(µg/L)</i>	2-Methyl naphthalene <i>(µg/L)</i>	Naphthalene <i>(µg/L)</i>	Other SVOCs <i>(µg/L)</i>
MW-5	3/15/1991	26.31	58.53	<50	--	--	--	--	--
84.84	11/10/1992	26.83	58.01	50	--	--	--	--	--
	4/2/1993	26.62	58.22	<50	--	--	--	--	--
	7/21/1993	26.60	58.24	190	--	--	--	--	--
	11/9/1993	27.24	57.60	170	--	--	--	--	--
	8/30/1995	27.46	57.38	180	--	--	--	--	--
	5/3/1996	26.02	58.82	<50	--	--	--	--	--
	5/8/1997	26.76	58.08	<50	--	--	--	--	--
	4/29/1998	26.55	58.29	<47	--	--	--	--	--
MW-6	3/15/1991	25.82	59.80	<50	--	--	--	--	--
85.62	10/12/1992	25.02	60.60	--	--	--	--	--	--
	12/1/1992	28.87	56.75	SPH	--	--	--	--	--
	4/2/1993	26.96	58.66	SPH	--	--	--	--	--
	7/21/1993	26.17	59.45	SPH	--	--	--	--	--
	11/9/1993	27.51	58.11	SPH	--	--	--	--	--
	8/30/1995	28.00	57.62	SPH	--	--	--	--	--
	12/1/1995	27.58	58.04	SPH	--	--	--	--	--
	5/3/1996	26.83	58.79	9,000	--	--	--	--	--
86.94	5/9/1997	26.54	60.40	53,000	--	--	--	--	--
	11/5/1997	26.16	60.78	65,000	--	--	--	--	--
85.82	5/1/1998	22.96	62.86	25,000	--	--	--	--	--
	11/3/1998	24.35	61.47	30,000	--	--	--	--	--
	3/26/1999	23.82	62.00	SPH	--	--	--	--	--
	7/1/1999	24.45	61.37	SPH	--	--	--	--	--
	9/21/1999	24.58	61.24	SPH	--	--	--	--	--
	2/9/2000	24.93	61.24	--	SPH	--	--	--	--
	5/31/2000	23.47	62.41	--	SPH	--	--	--	--
	11/14/2000	24.61	61.21	--	SPH	--	--	--	--
	3/1/2001	23.97	61.85	--	SPH	--	--	--	--
	5/7/2001	23.17	-23.11	--	SPH	--	--	--	--
	8/1/2001	obstruction in well		--	--	--	--	--	--
	11/5/2001	obstruction in well		--	--	--	--	--	--
	2/13/2002	obstruction in well		--	--	--	--	--	--
	5/2/2002	23.25	62.41	--	SPH (0.05)	--	--	--	--
	8/4/2002	23.55	62.29	--	SPH (0.03)	--	--	--	--

# Pangea

**Table 2. Groundwater Elevation and Analytical Data: Extractable Hydrocarbons and SVOCs**  
Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID TOC Elev. (ft)	Sampling Date	Depth to water (ft)	Groundwater Elevation (ft)	TEH (µg/L)	TPHd (µg/L)	TPHmo (µg/L)	2-Methyl naphthalene (µg/L)	Naphthalene (µg/L)	Other SVOCs (µg/L)
MW-6	11/26/2002	24.22	61.62	--	SPH (0.03)	--	--	--	--
(cont'd)	1/20/2003	22.49	63.36	--	SPH (0.04)	--	--	--	--
	5/28/2003	21.92	63.93	--	SPH (0.04)	--	--	--	--
	8/5/2003	23.98	61.87	--	SPH (0.04)	--	--	--	--
	11/10/2003	23.50	62.40	--	SPH (0.10)	--	--	--	--
	2/18/2004	22.21	63.64	--	SPH (0.04)	--	--	--	--
	5/27/2004	22.01	63.85	--	SPH (0.05)	--	--	--	--
	8/19/2004	24.16	61.68	--	SPH (0.03)	--	--	--	--
	12/27/2004	24.69	61.15	--	SPH (sheen)	--	--	--	--
	<b>2/18/2005</b>	<b>23.55</b>	<b>62.29</b>	--	<b>SPH (0.08)</b>	--	--	--	--
MW-7	3/15/1991	21.63	63.78	<50	--	--	--	--	--
85.41	11/24/1992	21.52	63.89	<50	--	--	--	--	--
	4/2/1993	20.08	65.33	<50	--	--	--	--	--
	7/21/1993	19.59	65.82	150	--	--	--	--	--
	11/9/1993	20.65	64.76	200	--	--	--	--	--
	8/30/1995	18.78	66.63	170	--	--	--	--	--
	12/1/1995	19.47	65.94	<50	--	--	--	--	--
	5/2/1996	17.15	68.26	<50	--	--	--	--	--
	8/8/1996	18.48	66.93	<50	--	--	--	--	--
	11/4/1996	18.69	66.72	<50	--	--	--	--	--
	2/6/1997	17.44	67.97	<50	--	--	--	--	--
	5/8/1997	17.72	67.69	<50	--	--	--	--	--
	8/7/1997	18.49	66.92	<50	--	--	--	--	--
	11/5/1997	18.86	66.55	<50	--	--	--	--	--
	2/9/1998	17.56	67.85	<50	--	--	--	--	--
	4/29/1998	16.23	69.18	<47	--	--	--	--	--
	8/4/1998	17.24	68.17	<50	--	--	--	--	--
	11/2/1998	17.91	67.50	<50	--	--	--	--	--
	3/26/1999	16.42	68.99	<50	--	--	--	--	--
	7/1/1999	17.90	67.51	<50	--	--	<10	<10	ND
	9/21/1999	18.91	66.50	<48	--	--	<9.5	<9.5	ND
	2/9/2000	16.74	68.67	--	<50	<250	<10	<10	ND
	5/31/2000	16.21	69.20	--	<50	<500	--	--	--
	11/14/2000	17.00	68.41	--	<50	<250	--	--	--
	3/1/2001	17.09	68.32	--	<50	<250	<10	<10	ND

# Pangea

**Table 2. Groundwater Elevation and Analytical Data: Extractable Hydrocarbons and SVOCs**  
Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID TOC Elev. (ft)	Sampling Date	Depth to water (ft)	Groundwater Elevation (ft)	TEH (µg/L)	TPHd (µg/L)	TPHmo (µg/L)	2-Methyl naphthalene (µg/L)	Naphthalene (µg/L)	Other SVOCs (µg/L)
MW-7	5/7/2001	17.19	68.22	--	<50	<250	--	--	--
(cont'd)	8/1/2001	17.25	68.16	--	<50	<250	--	--	--
	11/5/2001	17.35	68.06	--	<50	<250	--	--	--
	2/13/2002	17.50	67.91	--	<50	<250	--	--	--
	5/2/2002	17.30	68.11	--	<50	<250	--	--	--
	8/4/2002	17.58	67.83	--	<50	<250	--	--	--
	11/26/2002	18.35	67.06	--	<50	<250	--	--	--
	1/20/2003	15.84	69.57	--	83	<250	--	--	--
	5/28/2003	15.19	70.22	--	<50	<250	--	--	--
	8/5/2003	17.00	68.41	--	<50	<250	--	--	--
	11/10/2003	16.54	68.87	--	<50	--	--	--	--
	2/18/2004	16.47	68.94	--	<50	--	--	--	--
	5/27/2004	15.93	69.48	--	<50	<250	--	--	--
	8/19/2004	18.05	67.36	--	<50	--	--	--	--
	12/27/2004	17.35	68.06	--	<50	<250	--	--	--
	<b>2/18/2005</b>	<b>16.23</b>	<b>69.18</b>	--	<b>&lt;50</b>	<b>&lt;250</b>	--	--	--
MW-8	10/12/1992	27.70	57.80	--	--	--	--	--	--
85.50	11/23/1992	27.62	57.88	170	--	--	--	--	--
	4/8/1993	26.64	58.86	100	--	--	--	--	--
	7/21/1993	26.60	58.90	90	--	--	--	--	--
	11/11/1993	27.18	58.32	170	--	--	--	--	--
	8/30/1995	26.35	59.15	240	--	--	--	--	--
	12/4/1995	26.72	58.78	<50	--	--	--	--	--
	5/3/1996	25.47	60.03	94	--	--	--	--	--
	8/8/1996	26.41	59.09	250	--	--	--	--	--
	11/5/1996	26.77	58.73	<50	--	--	--	--	--
	2/6/1997	25.84	59.66	130	--	--	--	--	--
	5/9/1997	26.39	59.11	120	--	--	--	--	--
	8/7/1997	26.72	58.78	150	--	--	--	--	--
	11/5/1997	26.82	58.68	110	--	--	--	--	--
	2/9/1998	25.57	59.93	75	--	--	--	--	--
	5/1/1998	25.64	59.86	210	--	--	--	--	--
	8/5/1998	25.96	59.54	260	--	--	--	--	--
	11/3/1998	26.27	59.23	190	--	--	--	--	--
	3/31/1999	20.93	64.57	200	--	--	--	--	--

# Pangea

**Table 2. Groundwater Elevation and Analytical Data: Extractable Hydrocarbons and SVOCs**

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID TOC Elev. (ft)	Sampling Date	Depth to water (ft)	Groundwater Elevation (ft)	TEH (µg/L)	TPHd (µg/L)	TPHmo (µg/L)	2-Methyl naphthalene (µg/L)	Naphthalene (µg/L)	Other SVOCs (µg/L)
MW-8	7/1/1999	26.59	58.91	170	--	--	<9.6	<9.6	ND
(cont'd)	9/21/1999	26.89	58.61	420	--	--	<9.4	<9.4	ND
	2/9/2000	26.60	58.90	--	120	280	<10	<10	ND
	5/31/2000	26.16	59.34	--	160 **	<500	--	--	--
	11/14/2000	26.60	58.90	--	150	<250	--	--	--
	3/1/2001	26.41	59.09	--	54	<250	<10	<10	Phenol: 25
	5/7/2001	26.55	58.95	--	<50	<250	--	--	--
	8/1/2001	26.71	58.79	--	58	<250	--	--	--
	11/5/2001	26.67	58.83	--	84	<250	--	--	--
	2/13/2002	26.15	59.35	--	83	<250	--	--	--
	5/2/2002	26.63	58.87	--	<50	<250	--	--	--
	8/4/2002	26.80	58.70	--	260	<250	--	--	--
	11/26/2002	27.50	58.00	--	<50	<250	--	--	--
	1/20/2003	24.93	60.57	--	63	<250	--	--	--
	5/28/2003	24.28	61.22	--	<50	<250	--	--	--
	8/5/2003	26.51	58.99	--	2,700	380	--	--	--
	11/10/2003	26.04	59.46	--	<50	--	--	--	--
	2/18/2004	25.97	59.53	--	<50	--	--	--	--
	5/27/2004	25.31	60.19	--	<50	<250	--	--	--
	8/19/2004	27.55	57.95	--	<50	--	--	--	--
	12/27/2004	26.50	59.00	--	<50	<250	--	--	--
	2/18/2005	26.00	59.50	--	<50	<250	--	--	--
MW-9	11/24/1992	23.51	66.86	320	--	--	--	--	--
90.37	4/5/1993	21.14	69.23	920	--	--	--	--	--
	7/21/1993	21.54	68.83	450	--	--	--	--	--
	11/10/1993	27.53	62.84	450	--	--	--	--	--
	8/30/1995	19.59	70.78	680	--	--	--	--	--
	12/4/1995	20.65	69.72	--	--	--	--	--	--
	5/2/1996	18.63	71.74	710	--	--	--	--	--
	11/5/1996	20.69	69.68	420	--	--	--	--	--
	5/9/1997	19.96	70.41	490	--	--	--	--	--
	8/8/1997	20.84	69.53	480	--	--	--	--	--
	11/5/1997	21.55	68.82	370	--	--	--	--	--
	2/9/1998	20.21	70.16	410	--	--	--	--	--
	5/1/1998	19.27	71.10	450	--	--	--	--	--

# Pangea

**Table 2. Groundwater Elevation and Analytical Data: Extractable Hydrocarbons and SVOCs**

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID TOC Elev. (ft)	Sampling Date	Depth to water (ft)	Groundwater Elevation (ft)	TEH (µg/L)	TPHd (µg/L)	TPHmo (µg/L)	2-Methyl naphthalene (µg/L)	Naphthalene (µg/L)	Other SVOCs (µg/L)
MW-9	8/5/1998	19.35	71.02	630	--	--	--	--	--
(cont'd)	11/2/1998	20.43	69.94	500	--	--	--	--	--
	3/25/1999	18.46	71.91	630	--	--	--	--	--
	7/1/1999	19.95	70.42	570	--	--	<9.5	<9.5	ND
	9/21/1999	21.15	69.22	770	--	--	<9.4	<9.4	ND
	2/9/2000	21.08	69.29	--	320	<250	<10	<10	ND
	5/31/2000	19.11	71.26	--	390 **	<500	--	--	--
	11/14/2000	20.90	69.47	--	160	<250	--	--	--
	3/1/2001	20.45	69.92	--	220	<250	<10	<10	ND
	5/7/2001	19.83	-19.83	--	290	<250	--	--	--
	8/1/2001	20.02	70.35	--	460	<250	--	--	--
	11/5/2001	19.85	70.52	--	230	<250	--	--	--
	2/13/2002	19.80	70.57	--	210	<250	--	--	--
	5/2/2002	19.93	70.44	--	250	<250	--	--	--
	8/4/2002	20.20	70.17	--	300	<250	--	--	--
	11/26/2002	20.37	70.00	--	270	<250	--	--	--
	1/20/2003	17.93	72.44	--	350	<250	--	--	--
	5/28/2003	17.25	73.12	--	91	<250	--	--	--
	8/5/2003	19.03	71.34	--	210	<250	--	--	--
	11/10/2003	18.65	71.72	--	250	--	--	--	--
	2/18/2004	18.41	71.96	--	250	--	--	--	--
	5/27/2004	17.89	72.48	--	160	<250	--	--	--
	8/19/2004	20.14	70.23	--	160	--	--	--	--
	12/27/2004	21.65	68.72	--	91	<250	--	--	--
	<b>2/18/2005</b>	<b>19.97</b>	<b>70.40</b>	--	<b>120</b>	<b>&lt;250</b>	--	--	--
MW-10	10/12/1992	21.55	67.05	--	--	--	--	--	--
88.60	11/24/1992	21.86	66.74	1,300	--	--	--	--	--
	4/5/1993	19.14	69.46	5,000	--	--	--	--	--
	7/21/1993	19.79	68.81	20,000	--	--	--	--	--
	8/30/1995	17.99	70.61	5,900	--	--	--	--	--
	5/3/1996	17.04	71.56	5,600	--	--	--	--	--
	5/9/1997	18.36	70.24	2,500	--	--	--	--	--
	5/1/1998	15.84	72.76	2,000	--	--	--	--	--

# Pangea

**Table 2. Groundwater Elevation and Analytical Data: Extractable Hydrocarbons and SVOCs**  
Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID TOC Elev. (ft)	Sampling Date	Depth to water (ft)	Groundwater Elevation (ft)	TEH (µg/L)	TPHd (µg/L)	TPHmo (µg/L)	2-Methyl naphthalene (µg/L)	Naphthalene (µg/L)	Other SVOCs (µg/L)
MW-11 102.06	11/24/1992	33.65	68.41	220	--	--	--	--	--
	12/8/92*	33.37	68.69	140	--	--	--	--	--
	12/8/1992	33.37	68.69	120	--	--	--	--	--
	4/5/1993	31.03	71.03	<50	--	--	--	--	--
	7/21/1993	31.90	70.16	150	--	--	--	--	--
	11/9/1993	32.60	69.46	60	--	--	--	--	--
	8/30/1995	28.92	73.14	240	--	--	--	--	--
	5/3/1996	28.00	74.06	<50	--	--	--	--	--
	5/8/1997	29.93	72.13	<50	--	--	--	--	--
4/29/1998	27.22	74.84	<47	--	--	--	--	--	
MW-13 84.06	11/24/1992	26.05	58.01	3,600	--	--	--	--	--
	12/8/92*	25.08	58.98	210	--	--	--	--	--
	12/8/1992	25.08	58.98	100	--	--	--	--	--
	4/5/1993	24.64	59.42	<50	--	--	--	--	--
	7/21/1993	24.29	59.77	<50	--	--	--	--	--
	11/9/1993	24.23	59.83	160	--	--	--	--	--
	8/30/1995	23.30	60.76	<50	--	--	--	--	--
	12/1/1995	23.80	60.26	<50	--	--	--	--	--
	5/3/1996	23.19	60.87	<50	--	--	--	--	--
	8/8/1996	23.44	60.62	<50	--	--	--	--	--
	11/5/1996	24.04	60.02	<50	--	--	--	--	--
	2/6/1997	23.24	60.82	<50	--	--	--	--	--
	5/8/1997	23.46	60.60	<50	--	--	--	--	--
	8/8/1997	23.92	60.14	<50	--	--	--	--	--
	11/5/1997	24.27	59.79	<50	--	--	--	--	--
	2/9/1998	22.89	61.17	<50	--	--	--	--	--
	4/29/1998	22.27	61.79	<47	--	--	--	--	--
	8/4/1998	22.75	61.31	78	--	--	--	--	--
	11/3/1998	23.90	60.16	<50	--	--	--	--	--
	3/31/1999	23.11	60.95	<48	--	--	--	--	--
7/1/1999	23.40	60.66	100	--	--	<9.6	<9.6	ND	
9/21/1999	21.91	62.15	<48	--	--	<9.4	<9.4	ND	
2/9/2000	23.84	60.22	--	<50	<250	<10	<10	ND	
5/31/2000	22.97	61.09	--	<50	<500	--	--	--	
11/14/2000	24.00	60.06	--	65	<250	--	--	--	

# Pangea

**Table 2. Groundwater Elevation and Analytical Data: Extractable Hydrocarbons and SVOCs**

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID <i>TOC Elev.</i> <i>(ft)</i>	Sampling Date	Depth to water <i>(ft)</i>	Groundwater Elevation <i>(ft)</i>	TEH <i>(µg/L)</i>	TPHd <i>(µg/L)</i>	TPHmo <i>(µg/L)</i>	2-Methyl naphthalene <i>(µg/L)</i>	Naphthalene <i>(µg/L)</i>	Other SVOCs <i>(µg/L)</i>
MW-13	3/1/2001	23.93	60.13	--	<50	<250	<10	<10	ND
<i>(cont'd)</i>	5/7/2001	23.93	60.13	--	<50	<250	--	--	--
	8/1/2001	24.10	59.96	--	<50	<250	--	--	--
	11/5/2001	24.02	60.04	--	350	610	--	--	--
	2/13/2002	23.70	60.36	--	<50	<250	--	--	--
	5/2/2002	23.97	60.09	--	<50	<250	--	--	--
	8/4/2002	24.19	59.87	--	810	310	--	--	--
	11/26/2002	24.78	59.28	--	66	<250	--	--	--
	1/20/2003	22.10	61.96	--	<50	<250	--	--	--
	5/28/2003	17.25	62.34	--	<50	<250	--	--	--
	8/5/2003	23.99	60.07	--	<50	<250	--	--	--
	11/10/2003	23.47	60.59	--	<50	--	--	--	--
	2/18/2004	22.58	61.48	--	<50	--	--	--	--
	5/27/2004	21.95	62.11	--	<50	<250	--	--	--
	8/19/2004	24.29	59.77	--	<50	--	--	--	--
	12/27/2004	23.70	60.36	--	<50	<250	--	--	--
	<b>2/18/2005</b>	<b>23.15</b>	<b>60.91</b>	--	<b>&lt;50</b>	<b>&lt;250</b>	--	--	--
MW-14	5/26/1998	21.67	72.99	7,700	--	--	--	--	--
94.66	7/1/1999	22.95	71.71	SPH	--	--	--	--	--
	9/21/1999	24.26	70.40	SPH	--	--	--	--	--
	2/9/2000	24.13	70.53	--	14,000	1,500	290	600	ND
	5/31/2000	22.09	72.57	--	SPH	--	--	--	--
	11/14/2000	23.90	70.76	--	SPH	--	--	--	--
	3/1/2001	23.97	70.69	--	SPH	--	--	--	--
	5/7/2001	23.45	71.23	--	SPH	--	--	--	--
	8/1/2001	23.57	71.12	--	SPH	--	--	--	--
	11/5/2001	23.50	71.18	--	SPH	--	--	--	--
	2/13/2002	22.99	71.70	--	SPH (0.04)	--	--	--	--
	5/2/2002	23.51	71.17	--	SPH (0.02)	--	--	--	--
	8/4/2002	23.61	71.06	--	SPH (0.01)	--	--	--	--
	11/26/2002	24.35	70.31	--	SPH (sheen)	--	--	--	--
	1/20/2003	22.35	72.31	--	SPH (sheen)	--	--	--	--
	5/28/2003	21.95	72.74	--	SPH (0.04)	--	--	--	--
	8/5/2003	23.03	71.66	--	SPH (0.04)	--	--	--	--
	11/10/2003	22.70	72.02	--	SPH (0.07)	--	--	--	--

# Pangea

**Table 2. Groundwater Elevation and Analytical Data: Extractable Hydrocarbons and SVOCs**

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID <i>TOC Elev.</i> <i>(ft)</i>	Sampling Date	Depth to water <i>(ft)</i>	Groundwater Elevation <i>(ft)</i>	TEH <i>(µg/L)</i>	TPHd <i>(µg/L)</i>	TPHmo <i>(µg/L)</i>	2-Methyl naphthalene <i>(µg/L)</i>	Naphthalene <i>(µg/L)</i>	Other SVOCs <i>(µg/L)</i>
MW-14	2/18/2004	22.37	72.32	--	SPH (0.04)	--	--	--	--
<i>(cont'd)</i>	5/27/2004	21.78	72.92	--	SPH (0.05)	--	--	--	--
	8/19/2004	24.13	70.57	--	SPH (0.05)	--	--	--	--
	12/27/2004	24.19	70.51	--	SPH (sheen)	--	--	--	--
	<b>2/18/2005</b>	<b>23.24</b>	<b>71.46</b>	--	<b>SPH (0.05)</b>	--	--	--	--
MW-15	5/26/1998	21.87	72.89	1,700	--	--	--	--	--
94.76	7/1/1999	22.25	72.51	SPH	--	--	--	--	--
	9/21/1999	24.12	70.64	SPH	--	--	--	--	--
	2/9/2000	24.42	70.34	--	4,000	1,200	50	270	ND
	5/31/2000	22.40	72.36	--	SPH	--	--	--	--
	11/14/2000	24.15	70.61	--	SPH	--	--	--	--
	3/1/2001	23.99	70.77	--	SPH	--	--	--	--
	5/7/2001	23.50	71.26	--	SPH	--	--	--	--
	8/1/2001	23.62	71.14	--	SPH	--	--	--	--
	11/5/2001	23.65	71.11	--	SPH (sheen)	--	--	--	--
	2/13/2002	23.09	71.67	--	3,100	<250	17	68	5
	5/2/2002	23.59	71.17	--	SPH (sheen)	--	--	--	--
	8/4/2002	23.65	71.11	--	SPH (sheen)	--	--	--	--
	11/26/2002	24.59	70.17	--	SPH (sheen)	--	--	--	--
	1/20/2003	22.08	72.68	--	3,700	340	--	--	--
	5/28/2003	21.68	73.08	--	SPH (sheen)	--	--	--	--
	8/5/2003	24.05	70.71	--	SPH (sheen)	--	--	--	--
	11/10/2003	23.68	71.08	--	SPH (sheen)	--	--	--	--
	2/18/2004	23.51	71.25	--	1,100	--	--	--	--
	5/27/2004	22.98	71.78	--	SPH (sheen)	--	--	--	--
	8/19/2004	25.31	69.45	--	SPH (sheen)	--	--	--	--
	12/27/2004	24.46	70.30	--	SPH (sheen)	--	--	--	--
	<b>2/18/2005</b>	<b>23.27</b>	<b>71.49</b>	--	<b>SPH (0.10)</b>	--	--	--	--



# Pangea

**Table 2. Groundwater Elevation and Analytical Data: Extractable Hydrocarbons and SVOCs**

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID TOC Elev. (ft)	Sampling Date	Depth to water (ft)	Groundwater Elevation (ft)	TEH ( $\mu\text{g/L}$ )	TPHd ( $\mu\text{g/L}$ )	TPHmo ( $\mu\text{g/L}$ )	2-Methyl naphthalene ( $\mu\text{g/L}$ )	Naphthalene ( $\mu\text{g/L}$ )	Other SVOCs ( $\mu\text{g/L}$ )
------------------------------	------------------	---------------------------	----------------------------------	----------------------------	-----------------------------	------------------------------	--	------------------------------------	------------------------------------

**Grab Sampling Data**

B (boring)	5/16/1998	--	--	77**	--	--	--	--	--
C (boring)	5/16/1998	--	--	48**	--	--	--	--	--
G (boring)	5/16/1998	--	--	35,000**	--	--	--	--	--

**Abbreviations and Notes:**

TOC Elev. (ft) = Top of casing elevation, surveyed to an arbitrary datum

TEH = Total extractable hydrocarbons

TPHd = Total petroleum hydrocarbons as diesel

TPHmo = Total petroleum hydrocarbons as motor oil

SVOCs = Semi-volatile organic compounds

Other SVOC's = All other compounds analyzed by EPA Method 8270

$\mu\text{g/l}$  = micrograms per liter = parts per billion = ppb

ND = None detected above laboratory reporting limit, see laboratory report for individual reporting limits

1 = ND except for 1,700  $\mu\text{g/l}$  2,4 dichlorophenol, 240  $\mu\text{g/l}$  bis (2-ethyl hexyl) phthalate. Also 10  $\text{mg/l}$  oil and grease.

2 = ND except for 370  $\mu\text{g/l}$  benzoic acid and 93  $\mu\text{g/l}$  phenol. Also 20  $\text{mg/l}$  oil and grease.

3 = ND except for 700  $\mu\text{g/l}$  benzoic acid, 92  $\mu\text{g/l}$  phenol, and 52  $\mu\text{g/l}$  3,4 methyl phenol.

4 = ND except for 74  $\mu\text{g/l}$  benzoic acid and 68  $\mu\text{g/l}$  creosol.

5 = ND except for 480  $\mu\text{g/l}$  phenol, 110  $\mu\text{g/l}$  2,4 dimethylphenol, 210  $\mu\text{g/l}$  2-methylphenol, 200  $\mu\text{g/l}$  3,4-methylphenol, and 5.7  $\text{mg/l}$  oil and grease.

< n = Not detected above n  $\mu\text{g/l}$

-- = Not analyzed/not available

\* = Duplicate sample sent to a different chemical laboratory

\*\* = Does not match TPHd or TEH pattern

# Pangea

**Table 3. LUFT Metals in Groundwater**  
Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID	Sampling Date	Cadmium (µg/L)	Chromium (µg/L)	Lead (µg/L)	Nickel (µg/L)	Zinc (µg/L)
MW-4	7/1/1999	<5	<10	59	<20	<20
	9/21/1999	<5	<10	66	<20	33
	2/9/2000	<5	17	68	<50	<50
MW-7	7/1/1999	<5	<10	<3	<20	<20
	9/21/1999	<5	<10	<3	<20	<20
	2/9/2000	<5	14	8.6	59	<50
MW-8	7/1/1999	<5	<10	<3	<20	<20
	9/21/1999	<5	<10	<3	<20	<20
	2/9/2000	<5	<5	<5	<50	<50
MW-9	7/1/1999	<5	<10	<3	34	<20
	9/21/1999	<5	<10	<3	25	37
	2/9/2000	<5	82	29	160	130
	3/1/2001	<5	47	<5	72	<50
	5/7/2001	<5	49	<5	<50	<50
	8/1/2001	<5	<20	<5	<50	<50
	2/13/2002	<5	--	<5	<50	<50
	1/20/2003	<5	<20	<5	<50	<50
MW-13	7/1/1999	<5	<10	<3	<20	<20
	9/21/1999	<5	<10	<3	<20	<20
	2/9/2000	<5	12	15	<50	<50
MW-14	2/9/2000	<5	210	24	2,500	280
	2/9/2000	<5	140	1,800	220	150
	2/13/2002	<5	--	<5	<50	<50
MW-15	1/20/2003	<5	<20	36	<50	<50

**Abbreviations and Notes:**

LUFT metals analyzed by EPA Method 6010

ug/l = micrograms per liter

-- = Not analyzed/not available

# Pangea

**Table 4. Separate-Phase Hydrocarbon Removal**

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID	Date	Depth to	SPH	SPH	SPH	SPH	Cumulative SPH	Notes
TOC Elev.	Sampled	Groundwater	Thickness	Removed	Removed	Removed	Removed	
(ft)		(feet)	(feet)	(mL)	(gallons)	(lbs)	(gallons)	
MW-1	12/23/1991	26.86	1.15		2.00	12.20	2.00	1
94.48	12/26/1991	26.08	0.22		0.50	3.05	2.50	1
	1/13/1992	26.53	0.66		1.00	6.10	3.50	1
	2/28/1992	27.75	0.42		2.00	12.20	5.50	1
	11/9/1993	26.06	1.17		0.50	3.05	6.00	1
	11/3/1995	23.10	0.76		0.75	4.58	6.75	1
	11/30/1995	23.38	0.70		0.25	1.53	7.00	1
	1/3/1996	23.30	0.78		0.53	3.23	7.53	1
	2/2/1996	22.96	0.84		0.75	4.58	8.28	1
	3/1/1996	21.69	0.14		0.10	0.61	8.38	1
	4/4/1996	21.11	0.00		0.00	0.00	8.38	1
	5/2/1996	20.96	0.00		0.00	0.00	8.38	1
	6/5/1996	20.98	0.04		0.10	0.61	8.48	1
	7/9/1996	21.64	0.20		0.10	0.61	8.58	1
	8/8/1996	22.43	0.33		0.05	0.31	8.63	1
	9/10/1996	23.25	0.60		0.10	0.61	8.73	1
	10/1/1996	23.58	0.60		0.25	1.53	8.98	1
	11/4/1996	24.29	0.78		0.13	0.79	9.11	1
	12/2/1996	24.63	0.88		0.26	1.59	9.37	1
	1/3/1997	24.08	0.81		0.39	2.38	9.76	1
	2/6/1997	22.46	0.30		0.01	0.06	9.77	1
	3/5/1997	23.00	0.00		0.00	0.00	9.77	1
	4/1/1997	22.29	0.20		0.01	0.06	9.78	1
	5/8/1997	22.79	0.33		0.02	0.12	9.80	1
	6/6/1997	24.33	1.69		0.26	1.59	10.06	1
	7/8/1997	24.00	0.96		0.20	1.22	10.26	1
	8/7/1997	24.58	1.29		1.00	6.10	11.26	1
	9/10/1997	24.93	1.21		1.50	9.15	12.76	1
	10/1/1997	24.89	0.86		0.26	1.59	13.02	1
	11/4/1997	25.06	0.77		0.26	1.59	13.28	1
	12/4/1997	24.76	0.54		0.19	1.16	13.47	1
	1/8/1998	23.66	0.00		0.00	0.00	13.47	1
	2/5/1998	22.64	0.00		0.00	0.00	13.47	1
	3/6/1998	20.80	0.00		0.00	0.00	13.47	1
	4/2/1998	20.31	0.00		0.00	0.00	13.47	1
	4/29/1998	19.95	0.00		0.00	0.00	13.47	1
	6/3/1998	20.41	0.00		0.00	0.00	13.47	1
	7/9/1998	20.97	0.07		0.00	0.00	13.47	1
	8/4/1998	21.40	trace		0.00	0.00	13.47	1
	8/26/1998	21.85	0.10		0.00	0.00	13.47	1
	11/2/1998	22.92	0.39		0.00	0.00	13.47	1
	12/4/1998	23.29	0.29		0.01	0.06	13.48	1

# Pangea

**Table 4. Separate-Phase Hydrocarbon Removal**  
Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID TOC Elev. (ft)	Date Sampled	Depth to Groundwater (feet)	SPH Thickness (feet)	SPH Removed (mL)	SPH Removed (gallons)	SPH Removed (lbs)	Cumulative SPH Removed (gallons)	Notes
MW-1	1/5/1999	23.51	0.42		0.03	0.18	13.51	1
(cont'd)	2/8/1999	23.08	0.05		0.25	1.53	13.76	1
	3/24/1999	21.90	0.01		0.01	0.06	13.77	1
	4/30/1999	21.52	0.00		0.00	0.00	13.77	1
	7/1/1999	22.70	0.03		0.01	0.06	13.78	1
	9/21/1999	23.81	0.08		0.20	1.22	13.98	1
	10/20/1999	23.90	0.10		0.01	0.06	13.99	1
	12/13/1999	24.24	trace		0.00	0.00	13.99	1
	2/9/2000	23.95	0.07		0.05	0.31	14.04	1
	2/15/2000	--	0.00		0.00	0.00	14.04	2
	2/25/2000	23.69	0.00		0.06	0.38	14.10	2
	3/3/2000	23.27	0.00		0.05	0.31	14.15	2
	3/28/2000	22.39	0.00		0.13	0.76	14.28	2
	5/2/2000	22.29	0.00		0.05	0.29	14.32	2
	5/31/2000	22.05	0.00		0.00	0.00	14.32	2
	7/3/2000	22.10	trace		0.02	0.12	14.34	2
	8/4/2000	22.40	0.00		0.01	0.06	14.35	2
	10/6/2000	23.47	0.46		0.01	0.06	14.36	1
	11/3/2000	24.14	0.78		0.00	0.00	14.36	
	12/1/2000	25.40	0.83		1.75	10.68	16.11	1,2
	1/4/2001	25.13	0.09		0.25	1.53	16.36	2
	2/2/2001	25.12	0.03		0.13	0.76	16.49	2
	4/3/2001	23.19	0.24		0.10	0.61	16.59	
	5/4/2001	23.31	0.47		0.00	0.00	16.59	
	5/7/2001	23.85	0.05		0.03	0.16	16.62	2
	6/11/2001	23.77	0.67		0.00	0.00	16.62	2
	5/2/2002	23.41	0.46		0.01	0.04	16.62	
	6/14/2002	23.95	0.03		0.01	0.04	16.63	2
	8/4/2002	24.02	0.03		0.01	0.06	16.64	2
	9/24/2002	24.59	0.01		0.003	0.02	16.64	2
	10/16/2002	25.08	0.03		0.003	0.02	16.64	2
	11/6/2002	25.71	0.08		0.005	0.03	16.65	2
	11/26/2002	24.47	0.05		0.003	0.02	16.65	2
	12/9/2002	24.08	0.07		0.009	0.06	16.66	2
	1/17/2003	22.14	0.07		0.005	0.03	16.67	1,2
	1/27/2003	22.55	0.02		0.003	0.02	16.67	2
	3/5/2003	23.53	0.02		0.25	1.53	16.92	1,2
	4/11/2003	23.11	0.03		0.007	0.04	16.93	1,2
	5/13/2003	22.95	0.02		0.007	0.04	16.93	1,2
	5/28/2003	21.77	0.02		0.008	0.05	16.94	1,2
	6/13/2003	21.84	0.03		0.013	0.08	16.95	1,2
	7/24/2003	23.19	0.05		0.003	0.02	16.96	1,2

# Pangea

**Table 4. Separate-Phase Hydrocarbon Removal**  
Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID TOC Elev. (ft)	Date Sampled	Depth to Groundwater (feet)	SPH Thickness (feet)	SPH Removed (mL)	SPH Removed (gallons)	SPH Removed (lbs)	Cumulative SPH Removed (gallons)	Notes
MW-1	8/5/2003	23.07	0.04		0.013	0.08	16.97	1, 2
(cont'd)	9/12/2003	23.74	0.05		0.021	0.13	16.99	1, 2
	10/10/2003	23.90	0.06		0.026	0.16	17.02	1, 2
	11/10/2003	22.53	0.03		0.016	0.10	17.03	1, 2
	11/21/2003	23.12	0.02		0.026	0.16	17.06	1, 2
	12/4/2003	22.95	0.03		0.026	0.16	17.09	1, 2
	1/23/2004	22.40	0.04	70	0.018	0.11	17.10	1, 2
	2/6/2004	22.74	0.05	65	0.017	0.10	17.12	1, 2
	2/18/2004	22.61	0.05	70	0.018	0.11	17.14	1, 2
	3/28/2004	22.81	0.01	5	0.001	0.01	17.14	1, 2
	4/9/2004	22.61	0.00	0	0.000	0.00	17.14	1, 2
	5/27/2004	22.08	0.05	35	0.009	0.06	17.15	1, 2
	7/29/2004	24.52	0.92	2500	0.660	4.03	17.81	1, 2
	8/6/2004	23.98	0.25	1000	0.264	1.61	18.08	1, 2
	8/19/2004	24.35	0.38	1000	0.264	1.61	18.34	1, 2
	9/3/2004	24.47	0.29	1000	0.264	1.61	18.60	1, 2
	12/27/2004	24.18	0.44	450	0.119	0.73	18.72	1, 2
	2/18/2005	23.14	0.04	250	0.066	0.40	18.79	1, 2
MW-4	12/23/1991	22.63	0.98		2.50	15.25	2.50	1
88.84	12/26/1991	22.52	0.96		6.00	36.60	8.50	1
	1/10/1992	22.74	0.99		5.00	30.50	13.50	1
	2/28/1992	22.00	0.67		4.00	24.40	17.50	1
	3/11/1992	21.71	0.55		3.50	21.35	21.00	1
	3/13/1992	21.56	0.49		3.50	21.35	24.50	1
	3/17/1992	25.46	0.44		2.25	13.73	26.75	1
	3/18/1992	21.38	0.44		2.50	15.25	29.25	1
	3/19/1992	21.33	0.48		1.50	9.15	30.75	1
	3/23/1992	21.29	0.42		4.00	24.40	34.75	1
	3/24/1992	21.31	0.38		1.50	9.15	36.25	1
	3/25/1992	21.17	0.36		1.00	6.10	37.25	1
	3/26/1992	21.08	0.35		1.00	6.10	38.25	1
	3/27/1992	20.92	0.26		0.50	3.05	38.75	1
	3/31/1992	21.15	0.44		0.50	3.05	39.25	1
	4/1/1992	20.90	0.24		0.25	1.53	39.50	1
	4/2/1992	20.90	0.17		0.13	0.79	39.63	1
	4/6/1992	--	--		0.13	0.79	39.76	1
	4/10/1992	20.91	0.33		0.25	1.53	40.01	1
	4/13/1992	21.04	0.42		0.25	1.53	40.26	1
	4/20/1992	20.74	0.19		0.13	0.79	40.39	1
	5/4/1992	20.83	0.33		0.13	0.79	40.52	1
	5/18/1992	21.33	0.23		0.13	0.79	40.65	1
	5/26/1992	20.83	0.17		0.13	0.79	40.78	1
	6/1/1992	20.85	0.19		0.06	0.37	40.84	1
	6/29/1992	21.38	0.53		0.25	1.53	41.09	1

# Pangea

**Table 4. Separate-Phase Hydrocarbon Removal**

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID TOC Elev. (ft)	Date Sampled	Depth to Groundwater (feet)	SPH Thickness (feet)	SPH Removed (mL)	SPH Removed (gallons)	SPH Removed (lbs)	Cumulative SPH Removed (gallons)	Notes
MW-4	7/29/1992	21.69	0.56		1.11	6.77	42.20	1
(cont'd)	8/28/1992	21.35	0.63		1.68	10.25	43.88	1
	4/3/1993	20.11	0.51		0.13	0.79	44.01	1
	11/9/1993	20.48	0.52		0.03	0.18	44.04	1
	8/30/1995	21.71	0.63		1.75	10.68	45.79	1
	10/2/1995	19.90	2.20		0.50	3.05	46.29	1
	11/3/1995	18.76	0.57		0.25	1.53	46.54	1
	11/30/1995	19.17	0.65		0.25	1.53	46.79	1
	1/3/1996	19.45	0.44		0.05	0.31	46.84	1
	2/2/1996	19.50	0.32		0.10	0.61	46.94	1
	3/1/1996	19.31	0.20		0.20	1.22	47.14	1
	4/4/1996	17.53	0.18		0.20	1.22	47.34	1
	5/2/1996	17.50	0.25		0.20	1.22	47.54	1
	6/5/1996	17.67	0.39		0.15	0.92	47.69	1
	7/9/1996	18.29	0.50		0.16	0.98	47.85	1
	8/8/1996	18.84	0.00		0.00	0.00	47.85	1
	9/10/1996	19.31	0.34		0.05	0.31	47.90	1
	10/1/1996	19.51	0.29		0.05	0.31	47.95	1
	11/4/1996	20.13	0.35		0.02	0.12	47.97	1
	12/2/1996	20.23	0.33		0.02	0.12	47.99	1
	1/3/1997	19.33	0.10		0.02	0.12	48.01	1
	2/6/1997	18.13	0.01		0.01	0.06	48.02	1
	4/30/1999	17.28	trace		0.00	0.00	48.02	1
	2/9/2000	19.76	0.00		0.00	0.00	48.02	1
	2/15/2000	--	0.00		0.00	0.00	48.02	2
	2/25/2000	19.30	0.00		0.00	0.00	48.02	2
MW-6	12/23/1991	28.40	3.21		7.50	45.75	7.50	1
85.62	12/26/1991	27.25	1.67		2.00	12.20	9.50	1
	1/10/1992	27.23	0.90		1.00	6.10	10.50	1
	2/4/1992	27.71	2.04		2.00	12.20	12.50	1
	2/28/1992	27.92	3.00		3.00	18.30	15.50	1
	3/10/1992	27.16	2.06		2.75	16.78	18.25	1
	3/12/1992	25.96	0.52		2.00	12.20	20.25	1
	3/23/1992	26.34	1.09		1.00	6.10	21.25	1
	3/30/1992	25.73	0.35		0.50	3.05	21.75	1
	4/10/1992	25.29	0.05		0.25	1.53	22.00	1
	4/13/1992	25.52	0.21		0.13	0.79	22.13	1
	4/20/1992	25.38	0.10		0.13	0.79	22.26	1
	5/4/1992	25.40	--		0.13	0.79	22.39	1
	5/8/1992	25.50	0.17		0.06	0.37	22.45	1
	5/26/1992	25.46	0.13		0.13	0.79	22.58	1
	6/1/1992	25.46	0.09		0.06	0.37	22.64	1
	6/29/1992	25.59	0.14		0.19	1.16	22.83	1
	7/29/1992	26.90	1.71		0.60	3.66	23.43	1

# Pangea

**Table 4. Separate-Phase Hydrocarbon Removal**  
Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID	Date	Depth to	SPH	SPH	SPH	SPH	Cumulative SPH	Notes
TOC Elev.	Sampled	Groundwater	Thickness	Removed	Removed	Removed	Removed	
(ft)		(feet)	(feet)	(mL)	(gallons)	(lbs)	(gallons)	
MW-6	8/28/1992	25.09	2.62		2.40	14.64	25.83	1
(cont'd)	12/2/1992	--	--		0.00	0.00	25.83	1
	4/3/1993	26.96	2.86		1.75	10.68	27.58	1
	11/9/1993	27.51	3.06		0.83	5.06	28.41	1
	8/30/1995	28.00	7.96		4.50	27.45	32.91	1
	10/2/1995	28.24	6.14		4.00	24.40	36.91	1
	11/3/1995	28.39	6.13		3.00	18.30	39.91	1
	11/30/1995	26.91	3.44		2.50	15.25	42.41	1
	1/3/1996	27.58	4.41		2.50	15.25	44.91	1
	2/2/1995	27.58	4.37		5.00	30.50	49.91	1
	3/1/1996	27.96	5.15		4.00	24.40	53.91	1
	4/4/1996	27.96	5.41		5.00	30.50	58.91	1
	5/2/1996	26.83	4.66		4.50	27.45	63.41	1
	6/5/1996	27.15	5.17		4.00	24.40	67.41	1
	7/9/1996	27.08	4.86		4.50	27.45	71.91	1
	8/8/1996	26.71	4.05		4.00	24.40	75.91	1
	9/10/1996	26.83	3.82		3.50	21.35	79.41	1
	10/1/1996	26.96	3.77		4.00	24.40	83.41	1
	11/4/1996	--	NM		0.00	0.00	83.41	4
86.94	12/2/1996	--	NM		0.00	0.00	83.41	4
	1/3/1997	--	NM		0.00	0.00	83.41	4
	2/6/1997	25.08	0.20		0.00	0.00	83.41	4
	3/5/1997	24.20	0.00		0.00	0.00	83.41	4
	4/1/1997	24.04	0.00		0.00	0.00	83.41	4
	5/8/1997	26.54	1.88		0.40	2.44	83.81	1
	6/6/1997	25.33	0.21		0.03	0.18	83.44	1
85.82	7/8/1997	25.30	0.07		0.00	0.00	83.41	1
	8/7/1997	25.52	0.00		0.00	0.00	83.41	1
	9/10/1997	25.76	0.00		0.00	0.00	83.41	1
	10/1/1997	25.12	0.00		0.00	0.00	83.41	1
	11/4/1997	26.16	0.18		0.02	0.12	83.43	1
	12/4/1997	26.08	0.16		0.05	0.31	83.86	1
	1/8/1998	25.79	0.10		0.66	4.03	84.10	1
	2/5/1998	25.31	0.89		0.00	0.00	84.10	4
	3/6/1998	24.63	0.46		0.04	0.24	84.14	1
	4/2/1998	24.45	0.59		0.10	0.61	84.24	1
	4/29/1998	22.96	0.55		0.09	0.55	84.33	1
	6/3/1998	22.81	0.41		0.03	0.18	84.36	1
	7/9/1998	23.04	0.35		0.05	0.31	84.41	1
	8/4/1998	23.29	0.35		0.04	0.24	84.45	1
	8/26/1998	23.50	0.31		0.01	0.06	84.46	1
	11/2/1998	24.24	0.43		0.02	0.12	84.48	1
	12/4/1998	24.35	0.32		0.01	0.06	84.49	1
	1/5/1999	24.51	0.40		0.03	0.18	84.52	1

# Pangea

**Table 4. Separate-Phase Hydrocarbon Removal**  
Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID TOC Elev. (ft)	Date Sampled	Depth to Groundwater (feet)	SPH Thickness (feet)	SPH Removed (mL)	SPH Removed (gallons)	SPH Removed (lbs)	Cumulative SPH Removed (gallons)	Notes
MW-6	2/8/1999	24.00	0.03		0.13	0.76	84.65	1
(cont'd)	3/24/1999	23.82	0.19		0.03	0.18	84.68	1
	4/30/1999	23.60	1.13		0.10	0.61	84.78	1
	7/1/1999	24.45	0.42		0.06	0.38	84.84	1
	7/27/1999	25.35	0.24		0.06	0.38	84.90	1
	8/19/1999	24.87	0.24		0.06	0.37	84.96	1
	9/21/1999	24.58	0.10		0.20	1.22	85.16	1
	10/20/1999	25.05	0.17		0.20	1.22	85.36	1
	12/13/1999	25.08	0.10		0.06	0.37	85.42	1
	2/9/2000	24.93	0.44		0.25	1.53	85.67	1
	2/15/2000	—	0.00		0.07	0.43	85.74	3
	2/25/2000	24.23	0.00		0.01	0.06	85.75	3
	3/3/2000	24.00	0.00		0.00	0.01	85.75	3
	3/28/2000	23.54	0.00		0.05	0.31	85.80	3
	5/2/2000	23.52	0.06		0.03	0.15	85.83	3
	5/31/2000	23.39	0.08		0.00	0.00	85.83	3
	7/3/2000	23.61	trace		0.02	0.12	85.85	3
	8/4/2000	23.80	0.10		0.01	0.06	85.86	3
	10/6/2000	24.22	0.04		0.01	0.06	85.87	
	11/3/2000	24.30	0.09		0.00	0.00	85.87	
	12/1/2000	24.38	0.07		0.03	0.18	85.90	2, 3
	1/4/2001	24.65	0.17		0.00	0.00	85.90	5
	2/2/2001	24.72	0.22		0.25	1.53	86.15	3
	4/3/2001	23.90	0.06		0.05	0.31	86.20	
	5/4/2001	23.95	0.07		0.05	0.31	86.25	
	5/7/2001	—	—		0.08	0.48	86.33	
	6/11/2001	24.25	0.10		0.00	0.00	86.33	
	5/2/2002	23.25	0.01		0.00	0.02	86.33	2
	6/14/2002	23.17	0.07		0.01	0.04	86.34	1
	8/4/2002	23.55	0.03		0.01	0.06	86.35	1
	9/24/2002	23.98	0.02		0.007	0.04	86.35	1
	10/16/2002	24.20	0.09		0.005	0.03	86.36	1
	11/6/2002	25.78	0.07		0.005	0.03	86.36	1
	11/26/2002	24.22	0.03		0.009	0.06	86.37	1, 3
	12/9/2002	23.97	0.05		0.021	0.13	86.39	1, 3
	1/17/2003	21.30	0.06		0.013	0.08	86.41	1, 3
	1/27/2003	22.49	0.02		0.016	0.10	86.42	1, 3
	3/5/2003	24.35	0.06		0.013	0.08	86.44	1, 3
	4/11/2003	24.05	0.07		0.029	0.18	86.46	3
	5/13/2003	23.98	0.03		0.016	0.10	86.48	3
	5/28/2003	21.92	0.04		0.021	0.13	86.50	1, 3
	6/13/2003	21.98	0.06		0.020	0.12	86.52	1, 3



# Pangea

**Table 4. Separate-Phase Hydrocarbon Removal**  
Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID TOC Elev. (ft)	Date Sampled	Depth to Groundwater (feet)	SPH Thickness (feet)	SPH Removed (mL)	SPH Removed (gallons)	SPH Removed (lbs)	Cumulative SPH Removed (gallons)	Notes
MW-6	7/24/2003	24.11	0.07		0.040	0.24	86.56	1, 3
(cont'd)	8/5/2003	23.98	0.04		0.021	0.13	86.58	1, 3
	9/12/2003	24.53	0.06		0.026	0.16	86.61	1, 3
	10/10/2003	24.88	0.10		0.026	0.16	86.64	1, 3
	11/10/2003	23.50	0.10		0.032	0.19	86.67	1, 3
	11/21/2003	23.81	0.06		0.026	0.16	86.69	1, 3
	12/4/2003	23.61	0.08		0.029	0.18	86.72	1, 3
	1/23/2004	23.09	0.10	100	0.026	0.16	86.75	1, 3
	2/6/2004	22.39	0.05	80	0.021	0.13	86.77	1, 3
	2/18/2004	22.21	0.04	70	0.018	0.11	86.79	1, 3
	3/28/2004	23.91	0.06	50	0.013	0.08	86.80	1, 3
	4/9/2004	23.89	0.03	100	0.026	0.16	86.83	1, 3
	5/27/2004	22.01	0.05	140	0.037	0.23	86.87	1, 3
	5/27/2004	22.01	0.05	140	0.037	0.23	86.90	1, 3
	7/29/2004	24.35	0.00	0	0.000	0.00	86.90	1, 3
	8/6/2004	24.05	0.03	20	0.005	0.03	86.91	1, 3
	8/19/2004	24.16	0.03	10	0.003	0.02	86.91	1, 3
	9/3/2004	24.29	0.02	10	0.003	0.02	86.91	1, 3
	12/27/2004	24.69	sheen	80	0.021	0.13	86.93	3
	2/18/2005	23.55	0.08	130	0.034	0.21	86.96	1, 3
MW-9 90.37	8/8/1996	19.89	0.35		0.10	0.61	0.61	1
MW-14 94.66	12/4/1998	23.42	0.23		0.01	0.06	0.01	1
	1/5/1999	23.36	0.12		0.01	0.06	0.02	1
	2/8/1999	23.17	trace		0.01	0.06	0.03	1
	3/24/1999	22.08	trace		0.00	0.00	0.03	1
	4/30/1999	21.17	0.01		0.00	0.00	0.03	1
	7/1/1999	22.95	0.04		0.00	0.00	0.03	1
	9/21/1999	24.26	trace		0.00	0.00	0.03	1
	10/20/1999	24.10	0.00		0.00	0.00	0.03	1
	2/9/2000	24.13	0.00		0.00	0.00	0.03	1
	2/15/2000	--	0.00		0.00	0.00	0.03	1
	2/25/2000	--	0.00		0.00	0.00	0.03	2
	3/3/2000	23.27	0.00		0.05	0.31	0.08	2
	3/28/2000	22.40	0.00		0.13	0.76	0.21	2
	5/2/2000	22.22	0.00		0.04	0.24	0.25	2
	5/31/2000	22.09	0.00		0.00	0.00	0.25	2
	7/3/2000	22.35	trace		0.01	0.06	0.26	2
	8/4/2000	22.78	0.00		0.03	0.18	0.29	2
	10/6/2000	23.48	0.00		0.00	0.00	0.29	
	11/3/2000	23.60	0.00		0.00	0.00	0.29	
	12/1/2000	23.90	0.04		0.04	0.24	0.33	1, 2
	1/4/2001	24.10	0.00		0.00	0.00	0.33	

# Pangea

**Table 4. Separate-Phase Hydrocarbon Removal**  
Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID TOC Elev. (ft)	Date Sampled	Depth to Groundwater (feet)	SPH Thickness (feet)	SPH Removed (mL)	SPH Removed (gallons)	SPH Removed (lbs)	Cumulative SPH Removed (gallons)	Notes
MW-14	2/2/2001	24.27	0.00		0.10	0.61	0.43	2
(cont'd)	4/3/2001	23.06	0.00		0.05	0.31	0.48	
	5/4/2001	23.05	0.00		0.00	0.00	0.48	
	5/7/2001	23.45	0.02		0.01	0.05	0.48	2
	6/11/2001	23.40	0.00		0.00	0.00	0.48	
	5/2/2002	23.51	0.02		0.003	0.02	0.49	2
	6/14/2002	23.88	0.01		0.003	0.02	0.49	2
	8/4/2002	23.61	0.01		0.004	0.02	0.49	2
	9/24/2002	24.07	0.01		0.007	0.04	0.50	2
	10/16/2002	24.29	trace		0.007	0.04	0.51	2
	11/6/2002	25.85	0.00		0.00	0.00	0.51	2
	11/26/2002	24.35	trace		0.00	0.00	0.51	2
	12/9/2002	24.05	trace		0.00	0.00	0.51	2
	1/17/2003	22.09	0.00		0.00	0.00	0.51	2
	1/27/2003	22.60	0.00		0.00	0.00	0.51	2
	3/5/2003	23.63	0.00		0.13	0.79	0.64	1,2
	4/11/2003	23.63	0.02		0.003	0.02	0.64	1,2
	5/13/2003	23.11	0.03		0.003	0.02	0.64	1,2
	5/28/2003	21.95	0.04		0.007	0.04	0.65	1,2
	6/13/2003	22.05	0.03		0.004	0.02	0.65	1,2
	7/24/2003	23.10	0.02		0.003	0.02	0.65	1,2
	8/5/2003	23.03	0.04		0.011	0.06	0.66	1,2
	9/12/2003	23.81	0.06		0.013	0.08	0.68	1,2
	10/10/2003	24.03	0.05		0.021	0.13	0.70	1,2
	11/10/2003	22.70	0.07		0.013	0.08	0.71	1,2
	11/21/2003	22.85	0.05		0.013	0.08	0.73	1,2
	12/4/2003	22.69	0.02		0.008	0.05	0.73	1,2
	1/23/2004	22.05	0.04	40	0.011	0.06	0.74	1,2
	2/6/2004	22.49	0.04	50	0.013	0.08	0.76	1,2
	2/18/2004	22.37	0.04	50	0.013	0.08	0.77	1,2
	3/28/2004	22.79	0.00	5	0.001	0.01	0.77	1,2
	4/9/2004	22.81	0.00	0	0.000	0.00	0.77	1,2
	5/27/2004	21.78	0.05	40	0.011	0.06	0.78	1,2
	7/29/2004	23.80	0.02	10	0.003	0.02	0.78	1,2
	8/6/2004	23.99	0.02	100	0.026	0.16	0.81	1,2
	8/19/2004	24.13	0.05	100	0.026	0.16	0.84	1,2
	9/3/2004	24.22	0.02	50	0.013	0.08	0.85	1,2
	12/27/2004	24.19	sheen	5	0.001	0.01	0.85	2
	<b>2/18/2005</b>	<b>23.24</b>	<b>0.05</b>	<b>120</b>	<b>0.032</b>	<b>0.19</b>	<b>0.88</b>	<b>1,2</b>
MW-15	2/18/2005	23.27	0.10	20.00	0.01	0.03	0.01	1
<b>Total SPH Removed (gallons):</b>							<b>155.24</b>	

# Pangea

**Table 4. Separate-Phase Hydrocarbon Removal**

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID	Date	Depth to	SPH	SPH	SPH	SPH	Cumulative SPH	Notes
<i>TOC Elev.</i>	<i>Sampled</i>	<i>Groundwater</i>	<i>Thickness</i>	<i>Removed</i>	<i>Removed</i>	<i>Removed</i>	<i>Removed</i>	
<i>(ft)</i>		<i>(feet)</i>	<i>(feet)</i>	<i>(mL)</i>	<i>(gallons)</i>	<i>(lbs)</i>	<i>(gallons)</i>	

**Abbreviations and Notes:**

*TOC Elev. (ft)* = Top of casing elevation, surveyed to an arbitrary datum (measured in feet)

SPH = Separate-phase hydrocarbons

-- = Not measured or not applicable

NM = Not Measured. Product was being removed by vapor extraction at time of measurement.

1 = SPH removed by manual bailing

2 = SPH removed from well by absorbent sock

3 = SPH removed from well by passive skimmer

4 = Vapor extraction system operating in well

5 = No product removed; skimmer adjusted incorrectly.

**APPENDIX A**

Well Monitoring Protocol

## APPENDIX A

### Well Monitoring Protocol

Well Monitoring Protocol			
Well	Gauging Frequency	Sampling Frequency	Analytes
<b>Source Area Wells</b>			
MW-1	<b>Quarterly</b>	<b>Annually (1<sup>st</sup> Qtr)</b>	TPHd, TPHmo, TPHg, BTEX, MTBE, <i>HVOCs</i> , DO
MW-6			(SVOCs and LUFT Metals no longer required)
MW-14			
MW-15			
<b>Down-Gradient/Cross-Gradient Wells</b>			
MW-4	<b>Quarterly</b>	<b>Quarterly</b>	TPHd, TPHmo, TPHg, BTEX, MTBE, DO
MW-7			( <i>HVOCs</i> 1 <sup>st</sup> qtr only)
MW-8			
MW-9			(SVOCs and LUFT Metals no longer required)
MW-13			
<ol style="list-style-type: none"> <li>1. Per the May 3, 1999, ACHCSA letter to Messrs. Hill and Linden, monitoring wells MW-2, MW-3, MW-5, MW-10, and MW-11 were dropped from the monitoring program.</li> <li>2. For cost control purposes, frequency for <i>HVOC</i> sample analysis for the cross/downgradient wells was reduced from quarterly to annually.</li> <li>3. SVOCs and LUFT Metal analysis no longer required by ACHCSA for this site.</li> </ol>			


**APPENDIX B**

Field Data Sheets





## WELL SAMPLING FORM

<b>Date:</b>		2/18/2005				
<b>Client:</b>		Pangea Environmental Services, Inc				
<b>Site Address:</b>		3093 Broadway Oakland, Ca				
<b>Well ID:</b>		MW-4				
<b>Well Diameter:</b>		2"				
<b>Purging Device:</b>		Disposable Bailer				
<b>Sampling Method:</b>		Disposable Bailer				
<b>Total Well Depth:</b>		24.25	<b>Fe=</b> mg/L			
<b>Depth to Water:</b>		18.40	<b>ORP=</b> mV			
<b>Water Column Height:</b>		5.85	<b>DO=</b> 0.89 mg/L			
<b>Volume/ft:</b>		0.16				
<b>1 Casing Volume (gal):</b>		0.94	<b>COMMENTS:</b>			
<b>3 Casing Volumes (gal):</b>		2.81				
<b>TIME:</b>	<b>CASING VOLUME (gal)</b>	<b>TEMP (Celsius)</b>			<b>pH</b>	<b>COND. (microns)</b>
1:10	0.94	24.7			7.04	690
1:20	1.87	24.3	7.00	645		
1:30	2.81	24.5	7.02	676		
<b>Sample ID:</b>	<b>Date:</b>	<b>Time</b>	<b>Container Type</b>	<b>Preservative</b>	<b>Analytes</b>	<b>Method</b>
MW-4	2/18/2005	1:35	Voa, Amber	HCl	TPHd/mo TPHg, BTEX, MTBE, HVOC	8015, 8021, 8010
				<b>Signature:</b>		






## WELL SAMPLING FORM

<b>Date:</b>		2/18/2005				
<b>Client:</b>		Pangea Environmental Services, Inc				
<b>Site Address:</b>		3093 Broadway Oakland, Ca				
<b>Well ID:</b>		MW-7				
<b>Well Diameter:</b>		2"				
<b>Purging Device:</b>		Disposable Bailer				
<b>Sampling Method:</b>		Disposable Bailer				
<b>Total Well Depth:</b>		30.10	<b>Fe=</b> <b>mg/L</b>			
<b>Depth to Water:</b>		16.23	<b>ORP=</b> <b>mV</b>			
<b>Water Column Height:</b>		13.87	<b>DO=</b> 0.93 <b>mg/L</b>			
<b>Volume/ft:</b>		0.16				
<b>1 Casing Volume (gal):</b>		2.22	<b>COMMENTS:</b> Turbid			
<b>3 Casing Volumes (gal):</b>		6.66				
<b>TIME:</b>	<b>CASING VOLUME (gal)</b>	<b>TEMP (Celsius)</b>			<b>pH</b>	<b>COND. (microns)</b>
10:10	2.2	25.0			7.10	470
10:20	4.4	24.6	7.36	574		
10:30	6.7	24.3	7.31	603		
<b>Sample ID:</b>	<b>Date:</b>	<b>Time</b>	<b>Container Type</b>	<b>Preservative</b>	<b>Analytes</b>	<b>Method</b>
MW-7	2/18/2005	10:35	Voa, Amber	HCl	TPHd/mo ,TPHg, BTEX, MTBE, HVOC	8015, 8021, 8010
<b>Signature:</b>						



## WELL SAMPLING FORM

<b>Date:</b>		2/18/2005				
<b>Client:</b>		Pangea Environmental Services, Inc				
<b>Site Address:</b>		3093 Broadway Oakland, Ca				
<b>Well ID:</b>		MW-8				
<b>Well Diameter:</b>		6"				
<b>Purging Device:</b>		4" pvc bailer				
<b>Sampling Method:</b>		Disposable Bailer				
<b>Total Well Depth:</b>		39.35	<b>Fe=</b> mg/L			
<b>Depth to Water:</b>		26.00	<b>ORP=</b> mV			
<b>Water Column Height:</b>		13.35	<b>DO=</b> 0.91 mg/L			
<b>Volume/ft:</b>		1.65				
<b>1 Casing Volume (gal):</b>		22.03	<b>COMMENTS:</b>			
<b>3 Casing Volumes (gal):</b>		66.08				
<b>TIME:</b>	<b>CASING VOLUME (gal)</b>	<b>TEMP (Celsius)</b>			<b>pH</b>	<b>COND. (microns)</b>
11:00	22.0	25.8			7.26	981
11:20	44.1	25.9			7.40	871
11:40	66.1	25.6	7.53	899		
<b>Sample ID:</b>	<b>Date:</b>	<b>Time</b>	<b>Container Type</b>	<b>Preservative</b>	<b>Analytes</b>	<b>Method</b>
MW-8	2/18/2005	11:45	Voa, Amber	HCl	TPHd/mo ,TPHg, BTEX, MTBE, HVOC	8015, 8021, 8010
				<b>Signature:</b>		



## WELL SAMPLING FORM

<b>Date:</b>		2/18/2005				
<b>Client:</b>		Pangea Environmental Services, Inc				
<b>Site Address:</b>		3093 Broadway Oakland, Ca				
<b>Well ID:</b>		MW-9				
<b>Well Diameter:</b>		2"				
<b>Purging Device:</b>		Disposable Bailer				
<b>Sampling Method:</b>		Disposable Bailer				
<b>Total Well Depth:</b>		30.62	<b>Fe=</b> <b>mg/L</b>			
<b>Depth to Water:</b>		19.97	<b>ORP=</b> <b>mV</b>			
<b>Water Column Height:</b>		10.65	<b>DO=</b> <b>0.88 mg/L</b>			
<b>Volume/ft:</b>		0.16				
<b>1 Casing Volume (gal):</b>		1.70	<b>COMMENTS:</b>			
<b>3 Casing Volumes (gal):</b>		5.11				
<b>TIME:</b>	<b>CASING VOLUME (gal)</b>	<b>TEMP (Celsius)</b>			<b>pH</b>	<b>COND. (microns)</b>
12:30	1.70	24.6			6.98	893
12:40	3.41	24.6			7.04	841
12:50	5.11	24.5	7.02	865		
<b>Sample ID:</b>	<b>Date:</b>	<b>Time</b>	<b>Container Type</b>	<b>Preservative</b>	<b>Analytes</b>	<b>Method</b>
MW-9	2/18/2005	12:55	Voa, Amber	HCl	TPHd/mo .TPHg, BTEX, MTBE, HVOC	8015, 8021, 8010
				<b>Signature:</b>		



## WELL SAMPLING FORM

<b>Date:</b>		2/18/2005				
<b>Client:</b>		Pangea Environmental Services, Inc				
<b>Site Address:</b>		3093 Broadway Oakland, Ca				
<b>Well ID:</b>		MW-13				
<b>Well Diameter:</b>		2"				
<b>Purging Device:</b>		Disposable Bailer				
<b>Sampling Method:</b>		Disposable Bailer				
<b>Total Well Depth:</b>		39.50	<b>Fe=</b> mg/L			
<b>Depth to Water:</b>		23.15	<b>ORP=</b> mV			
<b>Water Column Height:</b>		16.35	<b>DO=</b> 0.97 mg/L			
<b>Volume/ft:</b>		0.16				
<b>1 Casing Volume (gal):</b>		2.62	<b>COMMENTS:</b> Turbid			
<b>3 Casing Volumes (gal):</b>		7.85				
<b>TIME:</b>	<b>CASING VOLUME (gal)</b>	<b>TEMP (Celsius)</b>			<b>pH</b>	<b>COND. (microns)</b>
9:30	2.6	23.7	7.01	774		
9:40	5.2	23.5	6.99	688		
9:50	7.8	23.4	7.03	671		
<b>Sample ID:</b>	<b>Date:</b>	<b>Time</b>	<b>Container Type</b>	<b>Preservative</b>	<b>Analytes</b>	<b>Method</b>
MW-13	2/18/2005	9:55	Voa, Amber	HCl	TPHd/mo, TPHg, BTEX, MTBE, HVOC	8015, 8021, 8010
				<b>Signature:</b>		

## **APPENDIX C**

### Laboratory Analytical Report

**McC Campbell Analytical, Inc.**

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560  
Telephone : 925-798-1620 Fax : 925-798-1622  
Website: www.mcccampbell.com E-mail: main@mcccampbell.com

Pangea Environmental Svcs., Inc. 64 Sonia Street Oakland, CA 94618	Client Project ID: Connell	Date Sampled: 02/18/05
		Date Received: 02/18/05
	Client Contact: Bob Clark-Riddell	Date Reported: 02/25/05
	Client P.O.:	Date Completed: 02/25/05

**WorkOrder: 0502310**

February 25, 2005

Dear Bob:

Enclosed are:

- 1). the results of 5 analyzed samples from your **Connell project**,
- 2). a QC report for the above samples
- 3). a copy of the chain of custody, and
- 4). a bill for analytical services.

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

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

Yours truly,

Angela Rydelius, Lab Manager



# McC Campbell Analytical, Inc.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560  
 Telephone : 925-798-1620 Fax : 925-798-1622  
 Website: www.mcccampbell.com E-mail: main@mcccampbell.com

Pangea Environmental Svcs., Inc.  64 Sonia Street  Oakland, CA 94618	Client Project ID: Connell	Date Sampled: 02/18/05
		Date Received: 02/18/05
	Client Contact: Bob Clark-Riddell	Date Extracted: 02/23/05-02/24/05
	Client P.O.:	Date Analyzed: 02/23/05-02/24/05

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

Extraction method: SW5030B

Analytical methods: SW8021B/8015Cm

Work Order: 0502310


Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	MW-4	W	97,000,a	ND<4000	11,000	16,000	1700	7400	100	90
002A	MW-7	W	ND	ND	ND	ND	ND	ND	1	110
003A	MW-8	W	130,a	ND	27	0.70	2.3	0.69	1	113
004A	MW-9	W	600,a	ND	24	ND	3.8	ND	1	96
005A	MW-13	W	ND	ND	ND	ND	ND	ND	1	111

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	5.0	0.5	0.5	0.5	0.5	1	µg/L
	S	NA	NA	NA	NA	NA	NA	1	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: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent / mineral spirit?); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) reporting limit raised due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern; n) TPH(g) range non-target isolated peaks subtracted out of the TPH(g) concentration at the client's request.

 Angela Rydelius, Lab Manager



# McC Campbell Analytical, Inc.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560  
 Telephone : 925-798-1620 Fax : 925-798-1622  
 Website: www.mcccampbell.com E-mail: main@mcccampbell.com

Pangea Environmental Svcs., Inc.  64 Sonia Street  Oakland, CA 94618	Client Project ID: Connell	Date Sampled: 02/18/05
		Date Received: 02/18/05
	Client Contact: Bob Clark-Riddell	Date Extracted: 02/18/05
	Client P.O.:	Date Analyzed: 02/20/05-02/24/05

### Diesel (C10-23) and Oil (C18+) Range Extractable Hydrocarbons with Silica Gel Clean-Up\*

Extraction method: SW3510C Analytical methods: SW8015C Work Order: 0502310


Lab ID	Client ID	Matrix	TPH(d)	TPH(mo)	DF	% SS
0502310-001B	MW-4	W	13,000,d	ND	1	114
0502310-002B	MW-7	W	ND	ND	1	115
0502310-003B	MW-8	W	ND	ND	1	116
0502310-004B	MW-9	W	120,d,f	ND	1	102
0502310-005B	MW-13	W	ND	ND	1	114

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	250	µg/L
	S	NA	NA	mg/Kg

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

#) cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract; &) low or no surrogate due to matrix interference.

+The following descriptions of the TPH chromatogram are cursory in nature and McC Campbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel? is significant; d) gasoline range compounds are significant; e) unknown medium boiling point pattern that does not appear to be derived from diesel (asphalt); f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; k) kerosene/kerosene range; l) bunker oil; m) fuel oil; n) stoddard solvent/mineral spirit.

 Angela Rydelius, Lab Manager





# McC Campbell Analytical, Inc.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560  
 Telephone : 925-798-1620 Fax : 925-798-1622  
 Website: www.mccampbell.com E-mail: main@mccampbell.com

Pangea Environmental Svcs., Inc.  64 Sonia Street  Oakland, CA 94618	Client Project ID: Connell	Date Sampled: 02/18/05
		Date Received: 02/18/05
	Client Contact: Bob Clark-Riddell	Date Extracted: 02/22/05-02/23/05
	Client P.O.:	Date Analyzed: 02/22/05-02/23/05

## Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0502310

Lab ID	0502310-001C	0502310-002C	0502310-003C	0502310-004C	Reporting Limit for DF = 1	
Client ID	MW-4	MW-7	MW-8	MW-9	S	W
Matrix	W	W	W	W		
DF	100	1	2	10		

Compound	Concentration				µg/kg	µg/L
Bromodichloromethane	ND<50	ND	ND<1.0	ND<5.0	NA	0.5
Bromoform	ND<50	ND	ND<1.0	ND<5.0	NA	0.5
Bromomethane	ND<50	ND	ND<1.0	ND<5.0	NA	0.5
Carbon Tetrachloride	ND<50	ND	ND<1.0	ND<5.0	NA	0.5
Chlorobenzene	ND<50	ND	ND<1.0	ND<5.0	NA	0.5
Chloroethane	ND<50	ND	ND<1.0	ND<5.0	NA	0.5
2-Chloroethyl Vinyl Ether	ND<100	ND	ND<2.0	ND<10	NA	1.0
Chloroform	ND<50	ND	ND<1.0	ND<5.0	NA	0.5
Chloromethane	ND<50	ND	ND<1.0	ND<5.0	NA	0.5
Dibromochloromethane	ND<50	ND	ND<1.0	ND<5.0	NA	0.5
1,2-Dichlorobenzene	ND<50	ND	ND<1.0	ND<5.0	NA	0.5
1,3-Dichlorobenzene	ND<50	ND	ND<1.0	ND<5.0	NA	0.5
1,4-Dichlorobenzene	ND<50	ND	ND<1.0	ND<5.0	NA	0.5
Dichlorodifluoromethane	ND<50	ND	ND<1.0	ND<5.0	NA	0.5
1,1-Dichloroethane	ND<50	ND	ND<1.0	ND<5.0	NA	0.5
1,2-Dichloroethane (1,2-DCA)	ND<50	ND	47	220	NA	0.5
1,1-Dichloroethene	ND<50	ND	ND<1.0	ND<5.0	NA	0.5
cis-1,2-Dichloroethene	ND<50	ND	ND<1.0	ND<5.0	NA	0.5
trans-1,2-Dichloroethene	ND<50	ND	ND<1.0	ND<5.0	NA	0.5
1,2-Dichloropropane	ND<50	ND	ND<1.0	ND<5.0	NA	0.5
cis-1,3-Dichloropropene	ND<50	ND	ND<1.0	ND<5.0	NA	0.5
trans-1,3-Dichloropropene	ND<50	ND	ND<1.0	ND<5.0	NA	0.5
Methylene chloride	ND<50	ND	ND<1.0	ND<5.0	NA	0.5
1,1,2,2-Tetrachloroethane	ND<50	ND	ND<1.0	ND<5.0	NA	0.5
Tetrachloroethene	ND<50	ND	ND<1.0	ND<5.0	NA	0.5
1,1,1-Trichloroethane	ND<50	ND	ND<1.0	ND<5.0	NA	0.5
1,1,2-Trichloroethane	ND<50	ND	ND<1.0	ND<5.0	NA	0.5
Trichloroethene	ND<50	ND	ND<1.0	ND<5.0	NA	0.5
Trichlorofluoromethane	ND<50	ND	ND<1.0	ND<5.0	NA	0.5
Vinyl Chloride	ND<50	ND	ND<1.0	ND<5.0	NA	0.5

### Surrogate Recoveries (%)

%SS1:	100	106	104	103
%SS2:	99	101	99	99
%SS3:	95	104	83	86
Comments	j			

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

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

# surrogate diluted out of range or surrogate coelutes with another peak.

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



# McC Campbell Analytical, Inc.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560  
 Telephone : 925-798-1620 Fax : 925-798-1622  
 Website: www.mccampbell.com E-mail: main@mccampbell.com

Pangea Environmental Svcs., Inc.  64 Sonia Street  Oakland, CA 94618	Client Project ID: Connell	Date Sampled: 02/18/05
		Date Received: 02/18/05
	Client Contact: Bob Clark-Riddell	Date Extracted: 02/22/05-02/23/05
	Client P.O.:	Date Analyzed: 02/22/05-02/23/05

## Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0502310

Lab ID	0502310-005C				Reporting Limit for DF = 1
Client ID	MW-13				
Matrix	W				
DF	1				

Compound	Concentration				µg/kg	µg/L
	Bromodichloromethane	ND				NA
Bromoform	ND				NA	0.5
Bromomethane	ND				NA	0.5
Carbon Tetrachloride	ND				NA	0.5
Chlorobenzene	ND				NA	0.5
Chloroethane	ND				NA	0.5
2-Chloroethyl Vinyl Ether	ND				NA	1.0
Chloroform	ND				NA	0.5
Chloromethane	ND				NA	0.5
Dibromochloromethane	ND				NA	0.5
1,2-Dichlorobenzene	ND				NA	0.5
1,3-Dichlorobenzene	ND				NA	0.5
1,4-Dichlorobenzene	ND				NA	0.5
Dichlorodifluoromethane	ND				NA	0.5
1,1-Dichloroethane	ND				NA	0.5
1,2-Dichloroethane (1,2-DCA)	ND				NA	0.5
1,1-Dichloroethene	ND				NA	0.5
cis-1,2-Dichloroethene	ND				NA	0.5
trans-1,2-Dichloroethene	ND				NA	0.5
1,2-Dichloropropane	ND				NA	0.5
cis-1,3-Dichloropropene	ND				NA	0.5
trans-1,3-Dichloropropene	ND				NA	0.5
Methylene chloride	ND				NA	0.5
1,1,2,2-Tetrachloroethane	ND				NA	0.5
Tetrachloroethene	ND				NA	0.5
1,1,1-Trichloroethane	ND				NA	0.5
1,1,2-Trichloroethane	ND				NA	0.5
Trichloroethene	ND				NA	0.5
Trichlorofluoromethane	ND				NA	0.5
Vinyl Chloride	ND				NA	0.5

### Surrogate Recoveries (%)

%SS1:	103			
%SS2:	100			
%SS3:	84			
Comments				

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

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

# surrogate diluted out of range or surrogate coelutes with another peak.

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



QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder: 0502310

EPA Method: SW8021B/8015Cm		Extraction: SW5030B		BatchID: 15102		Spiked Sample ID: 0502308-001A				
Analyte	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD
TPH(btex) <sup>£</sup>	ND	60	98	101	3.48	101	96.9	4.13	70 - 130	70 - 130
MTBE	ND	10	95.4	96.8	1.43	95.9	90.1	6.25	70 - 130	70 - 130
Benzenc	ND	10	103	104	0.348	101	96.6	4.78	70 - 130	70 - 130
Toluene	ND	10	97.7	99.8	2.08	97.3	91.5	6.23	70 - 130	70 - 130
Ethylbenzene	ND	10	105	107	2.16	103	98.2	4.98	70 - 130	70 - 130
Xylenes	ND	30	96	100	4.08	95.7	91	5.00	70 - 130	70 - 130
%SS:	113	10	110	105	4.32	107	106	0.541	70 - 130	70 - 130

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

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

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

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

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

# cluttered chromatogram; sample peak coelutes with surrogate peak.

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

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



### QC SUMMARY REPORT FOR SW8015C

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder: 0502310

EPA Method: SW8015C		Extraction: SW3510C			BatchID: 15100			Spiked Sample ID: N/A		
Analyte	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD
TPH(d)	N/A	7500	N/A	N/A	N/A	107	109	1.36	N/A	70 - 130
%SS:	N/A	2500	N/A	N/A	N/A	116	118	1.66	N/A	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										

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

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

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

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

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



### QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder: 0502310

EPA Method: SW8260B		Extraction: SW5030B			BatchID: 15104		Spiked Sample ID: 0502311-005B			
Analyte	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD
Chlorobenzene	ND	10	101	100	1.30	111	106	3.98	70 - 130	70 - 130
1,2-Dichloroethane (1,2-DCA)	ND	10	108	110	1.56	116	113	2.74	70 - 130	70 - 130
1,1-Dichloroethene	ND	10	102	100	1.26	109	107	2.73	70 - 130	70 - 130
Trichloroethene	ND	10	96	95.5	0.605	105	102	2.92	70 - 130	70 - 130
%SS1:	103	10	106	106	0	108	106	1.72	70 - 130	70 - 130
%SS2:	100	10	93	92	0.921	93	93	0	70 - 130	70 - 130
%SS3:	86	10	94	95	0.458	94	96	2.80	70 - 130	70 - 130

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

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

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

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

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

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

Laboratory extraction solvents such as methylene chloride and freon 113 may occasionally appear in the method blank at low levels.



# McCampbell Analytical, Inc.



110 Second Avenue South, #D7  
 Pacheco, CA 94553-5560  
 (925) 798-1620

# CHAIN-OF-CUSTODY RECORD

WorkOrder: 0502310

ClientID: PEO

<b>Report to:</b>		<b>Bill to:</b>	<b>Requested TAT:</b>
Bob Clark-Riddell	TEL: (510) 435-8664	Bob Clark-Riddell	<b>5 days</b>
Pangea Environmental Svcs., Inc.	FAX: (510) 654-4006	Pangea Environmental Svcs., Inc.	
64 Sonia Street	ProjectNo: Connell	64 Sonia Street	<i>Date Received:</i> 02/18/2005
Oakland, CA 94618	PO:	Oakland, CA 94618	<i>Date Printed:</i> 02/18/2005

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)														
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0502310-001	MW-4	Water	2/18/05	<input type="checkbox"/>	C	A	A	B											
0502310-002	MW-7	Water	2/18/05	<input type="checkbox"/>	C	A		B											
0502310-003	MW-8	Water	2/18/05	<input type="checkbox"/>	C	A		B											
0502310-004	MW-9	Water	2/18/05	<input type="checkbox"/>	C	A		B											
0502310-005	MW-13	Water	2/18/05	<input type="checkbox"/>	C	A		B											

**Test Legend:**

1	8010BMS_W	2	G-MBTX_W	3	PREF REPORT	4	TPH(DMO)WSG_W	5	
6		7		8		9		10	
11		12		13		14		15	

Prepared by: Melissa Valles

**Comments:**

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