

C A M B R I A

February 13, 2002

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

Re: **Third Quarter 2001 Monitoring Report**
Connell Automobile Dealership
3093 Broadway
Oakland, California
StID #469

MAR 01 2002



Dear Mr. Seery:

On behalf of Messrs. George Hill and Gordon Linden, and as required by the Alameda County Health Care Services Agency (ACHCSA), Cambria Environmental Technology, Inc. (Cambria) has prepared this quarterly monitoring report for the above-referenced site. This report satisfies the quarterly reporting requirements prescribed by Title 23 of the California Code of Regulations Article 3 Section 2652(d). The site background, third quarter 2001 activities and results, and anticipated fourth quarter 2001 activities are presented below.

SITE BACKGROUND

Three underground storage tanks (USTs) which previously contained gasoline, diesel, and waste oil were removed from the subject site in December 1989. Soil and groundwater investigation has been ongoing since 1990. Between October 1996 and March 1998, operation of a soil vapor extraction (SVE) remediation system removed approximately 1,421 lbs of hydrocarbons. Manual removal of separate phase hydrocarbons (SPH) from site monitoring wells has been conducted periodically since 1991.

THIRD QUARTER 2001 ACTIVITIES AND RESULTS

Groundwater Monitoring: Cambria monitored site groundwater following the sampling protocol described in Cambria's May 8, 2000 *Workplan Addendum* (Attachment A). On August 1, 2001 Cambria gauged monitoring wells MW-1, MW-4, MW-7, MW-8, MW-9, MW-13, MW-14, and MW-15, and inspected the wells for SPH. An obstruction in well MW-6 prevented both gauging and sampling during this event. Groundwater samples were collected from wells MW-4, MW-7, MW-8, MW-9, and MW-13. The samples were analyzed by a California Department of Health Services (DHS) certified analytical laboratory for total petroleum hydrocarbons as gasoline (TPHg), benzene, toluene, ethylbenzene, xylenes (BTEX), methyl tertiary butyl ether (MTBE), TPH as diesel (TPHd), TPH as motor oil (TPHmo), and EPA List 8010 halogenated volatile

Oakland, CA
San Ramon, CA
Sonoma, CA

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organic compounds (HVOCs). Samples from well MW-9 were additionally sampled for LUFT metals. The groundwater elevations, groundwater flow direction, and gradient are shown on Figure 1. The groundwater elevation, petroleum hydrocarbon, and HVOC data are presented in Tables 1 and 2. Dissolved metals data is presented in Table 3, and SPH thicknesses and quantities removed are presented in Table 4. The analytical laboratory report is included as Attachment B. Field data sheets are included as Attachment C.

Groundwater Flow Direction: Based on the August 1, 2001 depth-to-water measurements, groundwater flowed northeastward with a gradient of approximately 0.055 ft/ft during the third quarter of 2001 (Figure 1). The groundwater flow direction is consistent with the historical local groundwater flow direction.

Contaminant Distribution in Groundwater: In general, monitoring results were consistent with past results for this site. SPH were detected in wells MW-1, MW-14, and MW-15. The primary contaminants of concern (COCs) in site groundwater are benzene, 1,2 dichloroethane (1,2-DCA), naphthalene, lead and nickel; these COCs are typically associated with releases from USTs containing gasoline, diesel, and/or motor oil. During this quarter the maximum benzene concentration detected in groundwater was 13,000 micrograms per liter (ug/l) in MW-4, the maximum 1,2-DCA concentration was 450 ug/l in MW-9, the maximum TPHd concentration was 42,000 ug/l in MW-4, and the maximum TPHmo concentration was 6,700 ug/l, also in MW-4 (Tables 1 and 2). The contaminant plumes are adequately defined crossgradient (south) and downgradient (east) of the former UST complex location by wells MW-7 and MW-13, respectively.

Separate-Phase Hydrocarbon Removal: During the site visit on August 1, 2001, Cambria inspected the passive SPH recovery device in well MW-6. An obstruction in well MW-6 prevented both the measurement and recovery of any SPH from this well during the August 1 event. Cambria did not recover any SPH from the site monitoring wells during third quarter of 2001. As of August 1, 2001, a total of approximately 924.95 lbs of SPH had been recovered since liquid-phase hydrocarbon removal began in December 1991. Table 4 presents the SPH thickness measurements, the amount of SPH removed from the wells during each site visit, and the cumulative mass of SPH removed from each well.

ANTICIPATED FOURTH QUARTER 2001 ACTIVITIES

Groundwater Monitoring and Reporting: As required by the ACHCSA, Cambria will gauge site wells MW-1, MW-4, MW-6, MW-7, MW-8, MW-9, MW-13, MW-14, and MW-15 on a quarterly basis, collecting groundwater samples from MW-4, MW-7, MW-8, MW-9, and MW-13. During fourth quarter 2001, Cambria will analyze groundwater samples for TPHd, TPHmo, TPHg, BTEX, MTBE, EPA List 8010 HVOCs, semi-volatile organic compounds (SVOCs), lead, cadmium, chromium, zinc, and nickel (LUFT metals). Cambria will prepare a quarterly monitoring report that will include tabulated groundwater elevation and analytical data and a potentiometric surface map.

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Separate-Phase Hydrocarbon Removal: Cambria will conduct monthly SPH recovery events. Proper functioning of the recovery devices in MW-1, MW-6, and MW-14 will be verified. Cambria will attempt to clear the obstruction in well MW-6. Collected SPH will be transferred to labeled, DOT-approved steel drums pending disposal or recycling.

Feasibility Testing and Corrective Action Plan (CAP) Preparation: The *Feasibility Test Report* dated March 16, 2001 concluded that remediation would be feasible at the site and that the dissolved plume may not be stable. Although CAP preparation has been approved by the ACHCSA and the Fund, Cambria has requested that the ACHCSA confirm that CAP preparation is appropriate. Cambria has also requested an opportunity to meet with the ACHCSA to discuss required elements of a CAP for moving this site towards closure by the ACHCSA and the Regional Water Quality Control Board.

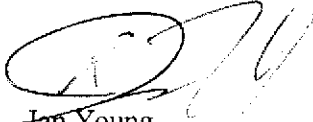


February 13, 2002


CLOSING

We trust that this report meets your requirements. If you have any questions or comments concerning this report, please call Bob Clark-Riddell at (510) 420-3303.

Sincerely,
Cambria Environmental Technology, Inc.



Ian Young
Senior Staff Geologist



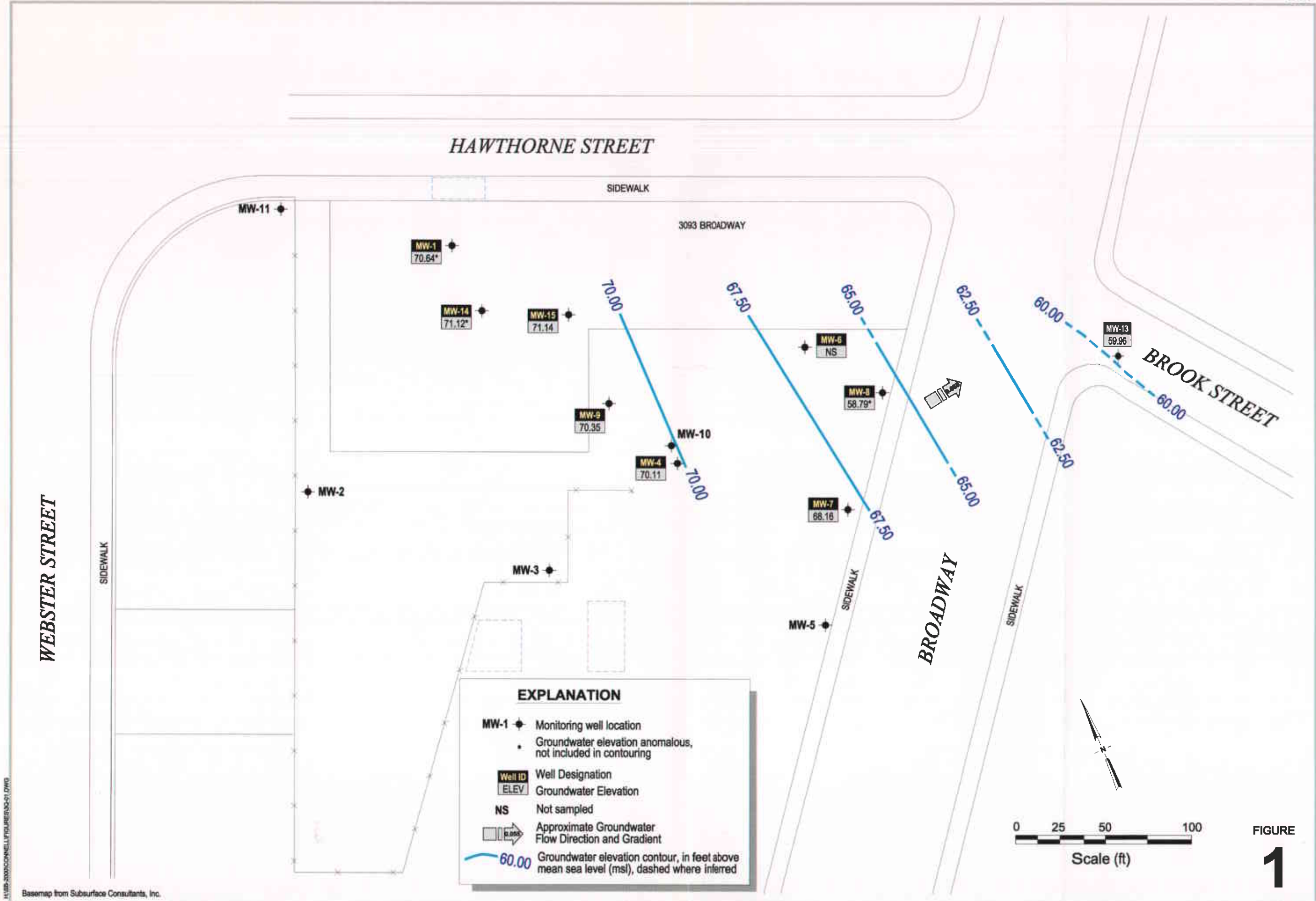
Bob Clark-Riddell, P.E.
Principal Engineer



- Figures: 1 - Groundwater Elevation Contour Map
- Tables: 1 - Groundwater Elevation and Analytical Data: Volatile Hydrocarbons and HVOCs
2 - Groundwater Elevation and Analytical Data: Extractable Hydrocarbons and SVOCs
3 - LUFT Metals in Groundwater
4 - Liquid Phase Hydrocarbon Removal
- Attachments: A - Well Sampling Protocol
B - Analytical Laboratory Report
C - Field Data Sheets
- cc: Mr. George Hill, 305 Sheridan Avenue, Piedmont, CA 94611
Mr. Gordon Linden, 150 La Salle Avenue, Piedmont, CA 94611
Mr. Paul Kibel, Fitzgerald, Abbott & Beardsley, LLP, 1221 Broadway, 21st Floor, Oakland, CA 94612
Mr. Leroy Griffin, Hazardous Materials Manager, Fire Department - OES, 1605 MLK Jr. Way, Oakland, CA 94612

H:\95-300\CONNELL\FIGURE\0201.DWG

Basemap from Subsurface Consultants, Inc.



WEBSTER STREET

HAWTHORNE STREET

3093 BROADWAY

BROOK STREET

BROADWAY



Groundwater Elevation Contours

August 1, 2001

Connell Automobile Dealership

3093 Broadway
Oakland, California

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Table 1. Groundwater Elevation and Analytical Data: Volatile Hydrocarbons and HVOCs

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID TOC Elev. (ft)	Sampling Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)	TVH ←	TPHg	Benzene	Toluene	Ethyl- benzene μg/l	Xylenes	MTBE	1,2-DCA	Other HVOCs →
MW-1	10/5/90	26.40	68.08	620,000	--	33,000	50,000	7,900	41,000	--	2,900	ND
94.48	3/1/91	27.46	67.02	SPH	--	--	--	--	--	**	--	--
	10/12/92	26.44	68.04	490,000	--	51,000	59,000	5,000	27,000	--	1,300	--
	11/24/92	26.63	67.85	320,000	--	35,000	43,000	4,200	22,000	--	1,600	ND
	4/5/93	23.77	70.71	270,000	--	50,000	58,000	4,600	25,000	--	1,800	ND
	7/21/93	24.51	69.97	SPH	--	--	--	--	--	--	--	--
	11/9/93	26.06	68.42	SPH	--	--	--	--	--	--	--	--
	8/30/95	21.73	72.75	SPH	--	--	--	--	--	--	--	--
	12/4/95	21.94	72.54	SPH	--	--	--	--	--	<200	--	--
	5/2/96	20.65	73.83	340,000	--	57,000	73,000	7,200	38,000	--	1,200	--
	11/5/96	24.29	70.19	270,000	--	43,000	56,000	4,500	34,000	--	--	--
	5/9/97	22.79	71.69	240,000	--	36,000	45,000	3,300	17,900	--	930	--
	11/5/97	25.06	69.42	240,000	--	42,000	48,000	3,600	18,800	<1,000	1,200	--
	2/9/98	22.64	71.84	220,000	--	47,000	60,000	5,200	29,800	<1,000	1,500	ND
	5/1/98	19.95	74.53	160,000	--	35,000	42,000	2,800	16,000	<1,000	1,100	ND
	11/3/98	23.29	71.19	200,000	--	39,000	49,000	4,400	26,000	<500	1,200	ND
	3/24/99	22.30	72.18	SPH	--	--	--	--	--	--	--	--
	7/1/99	22.70	71.78	SPH	--	--	--	--	--	--	--	--
	9/21/99	23.81	70.67	SPH	--	--	--	--	--	--	--	--
	2/9/00	23.95	70.59	SPH	--	--	--	--	--	--	--	--
	5/31/00	22.05	72.43	--	SPH	--	--	--	--	--	--	--
	8/8/00	22.49	71.99	--	SPH	--	--	--	--	--	--	--
	11/14/00	24.65	69.83	--	SPH	--	--	--	--	--	--	--
	3/1/01	24.22	70.28	--	SPH	--	--	--	--	--	--	--
	5/7/01	23.85	70.67	--	SPH (0.05)	--	--	--	--	--	--	--
	8/1/01	23.91	70.64	--	SPH (0.09)	--	--	--	--	--	--	--
MW-2	3/1/91	27.86	66.95	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	ND
94.81	11/24/92	27.91	66.90	<50	--	<0.5	1.1	<0.5	1.5	--	<1.0	ND
	4/5/93	25.95	68.86	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	ND
	7/21/93	25.59	69.22	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	ND
	11/10/93	26.72	68.09	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	ND

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Table 1. Groundwater Elevation and Analytical Data: Volatile Hydrocarbons and HVOCs

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID TOC Elev. (ft)	Sampling Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)	TVH ←	TPHg	Benzenc	Toluene	Ethyl- benzene μg/l	Xylenes	MTBE	1,2-DCA	Other HVOCs →
MW-2	8/30/95	25.75	69.06	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	--
94.81	5/3/96	23.28	71.53	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	ND
(cont'd)	5/8/97	24.58	70.23	<50	--	<0.5	0.7	<0.5	<0.5	--	<1.0	--
	4/29/98	22.18	72.63	<50	--	<0.5	<0.5	<0.5	<0.5	<2	<1.0	ND
MW-3	3/1/91	23.17	66.91	<50	--	<50	0.6	<0.5	<0.5	--	<1.0	ND
90.08	11/25/92	23.01	67.07	50	--	<0.5	0.9	<0.5	2	--	<1.0	ND
	4/5/93	22.11	67.97	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	ND
	7/21/93	23.93	66.15	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	ND
	11/10/93	23.14	66.94	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	ND
	8/30/95	20.61	69.47	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	--
	5/3/96	18.43	71.65	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	ND
	5/8/97	19.77	70.31	<50	--	<0.5	0.7	<0.5	<0.5	--	<1.0	--
	4/29/98	17.92	72.16	<50	--	<0.5	<0.5	<0.5	<0.5	<2	<1.0	ND
MW-4	3/1/91	23.79	65.05	150,000	--	20,000	38,000	2,800	14,000	**	610	ND
88.84	10/12/92	22.48	66.36	230,000	--	15,000	32,000	2,500	14,000	--	430	--
	11/24/92	22.60	66.24	210,000	--	14,000	31,000	2,500	14,000	--	500	ND
	4/2/93	20.11	68.73	SPH	--	--	--	--	--	--	--	--
	7/21/93	20.48	68.36	SPH	--	--	--	--	--	--	--	--
	11/9/93	21.71	67.13	SPH	--	--	--	--	--	--	--	--
	8/30/95	19.90	68.94	SPH	--	--	--	--	--	--	--	--
	12/1/95	19.40	69.44	SPH	--	--	--	--	--	--	--	--
	5/2/96	17.50	71.34	140,000	--	24,000	50,000	3,000	15,100	--	420	ND
	11/4/96	20.13	68.71	160,000	--	16,000	38,000	2,700	14,000	--	380	ND
	5/8/97	18.63	70.21	170,000	--	16,000	37,000	2,400	15,900	--	290	--
	11/5/97	20.19	68.65	190,000	--	15,000	31,000	2,200	14,600	<400	290	--
	2/9/98	18.28	70.56	110,000	--	19,000	42,000	2,500	18,300	<500	300	--
	5/1/98	16.11	72.73	130,000	--	15,000	31,000	2,000	13,400	<1,000	260	ND
	8/4/98	17.54	71.30	130,000	--	16,000	34,000	2,400	15,700	<400	240	ND

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Table 1. Groundwater Elevation and Analytical Data: Volatile Hydrocarbons and HVOCs

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID TOC Elev. (ft)	Sampling Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)	←-----µg/l-----→								
				TVH	TPHg	Benzene	Toluene	Ethyl- benzene	Xylenes	MTBE	1,2-DCA	Other HVOCs
MW-4	11/2/98	19.21	69.63	140,000	--	16,000	32,000	2,300	15,500	<400	230	ND
88.84	3/26/99	17.51	71.33	110,000	--	15,000	30,000	1,600	15,000	450 ⁴	210	⁵
(cont'd)	7/1/99	18.80	70.04	110,000	--	13,000	23,000	1,600	12,000	<83	170	⁵
	9/21/99	19.85	68.99	140,000	--	16,000	31,000	2,400	14,800	ND	<1000	⁵
	2/9/00	19.76	69.08	--	140,000	16,000	28,000	2,100	14,000	<400	100	DCB: 5.9, MCB: 5.9
	5/31/00	17.90	70.94	--	15,000	17,000	28,000	2,400	14,000	<0.5 ⁶	<0.5	ND
	8/8/00	18.62	70.22	--	140,000	15,000	25,000	2,100	13,000	<300	110	ND
	11/14/00	19.63	69.21	--	150,000	19,000	36,000	2,900	17,000	<200	120	ND
	3/1/01	19.68	69.16	--	120,000	10,000	15,000	1,300	10,000	<2000	110	ND
	5/7/01	18.60	70.24	--	210,000	12,000	19,000	1,900	12,000	<200	100	ND
	8/1/01	18.73	70.11	--	160,000	13,000	21,000	2,200	13,000	<200	84	ND
MW-5	3/15/91	26.31	58.53	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	ND
84.84	11/10/92	26.83	58.01	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	ND
	4/2/93	26.62	58.22	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	ND
	7/21/93	26.60	58.24	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	ND
	11/9/93	27.24	57.60	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	ND
	8/30/95	27.46	57.38	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	--
	5/3/96	26.02	58.82	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	ND
	5/8/97	26.76	58.08	<50	--	<0.5	0.5	<0.5	<0.5	--	<1.0	--
	4/29/98	26.55	58.29	<50	--	<0.5	0.5	<0.5	<0.5	<2	<1.0	ND
MW-6	3/15/91	25.82	59.80	80,000	--	12,000	13,000	1,100	5,400	--	1,400	DBC: 160
85.62	10/12/92	25.02	60.60	19,000	--	3,200	1,400	200	560	--	840	--
	12/1/92	28.87	56.75	SPH	--	--	--	--	--	--	--	--
	4/2/93	26.96	58.66	SPH	--	--	--	--	--	--	--	--
	7/21/93	26.17	59.45	SPH	--	--	--	--	--	--	--	--
	11/9/93	27.51	58.11	SPH	--	--	--	--	--	--	--	--
	8/30/95	28.00	57.62	SPH	--	--	--	--	--	--	--	--
	12/1/95	27.58	58.04	SPH	--	--	--	--	--	<8,000,000	71	--
86.94	5/3/96	28.15	58.79	130,000	--	37,000	50,000	3,200	14,200	--	2,400	ND
	5/9/97	26.54	60.40	1,700,000	--	14,000	27,000	4,000	28,200	--	1,200	--
	11/5/97	26.16	60.78	160,000	--	13,000	19,000	1,900	14,300	<200	790	--

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Table 1. Groundwater Elevation and Analytical Data: Volatile Hydrocarbons and HVOCs

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID TOC Elev. (ft)	Sampling Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)	TVH ←	TPHg	Benzene	Toluene	Ethyl- benzene μg/l	Xylenes	MTBE	1,2-DCA	Other HVOCs →
85.82	5/1/98	22.96	62.86	130,000	--	15,000	23,000	1,700	13,200	<500	1,100	ND
	11/3/98	24.35	61.47	110,000	--	17,000	21,000	1,800	10,700	<200	990	ND
MW-6	3/26/99	23.82	62.00	SPH	--	--	--	--	--	--	--	--
(cont'd)	7/1/99	24.45	61.37	SPH	--	--	--	--	--	--	--	--
	9/21/99	24.58	61.24	SPH	--	--	--	--	--	--	--	--
	2/9/00	24.93	61.24	SPH	--	--	--	--	--	--	--	--
	5/31/00	23.47	62.41	--	SPH	--	--	--	--	--	--	--
	8/8/00	23.85	61.97	--	SPH	--	--	--	--	--	--	--
	11/14/00	24.61	61.21	--	SPH	--	--	--	--	--	--	--
	3/1/01	23.97	61.85	--	SPH	--	--	--	--	--	--	--
	5/7/01	23.17	62.71	--	SPH (0.07)	--	--	--	--	--	--	--
	8/1/01		obstruction in well		--	--	--	--	--	--	--	--
MW-7	3/15/91	21.63	63.78	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	ND
85.41	11/24/92	21.52	63.89	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	ND
	4/2/93	20.08	65.33	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	ND
	7/21/93	19.59	65.82	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	ND
	11/9/93	20.65	64.76	<50	--	<0.5	1	<0.5	1.7	--	<1.0	ND
	8/30/95	18.78	66.63	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	--
	12/1/95	19.47	65.94	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	ND
	5/2/96	17.15	68.26	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	ND
	8/8/96	18.48	66.93	<50	--	<0.5	<0.5	<0.5	<0.5	<2	<1.0	ND
	11/4/96	18.69	66.72	<50	--	<1	<1	<1	<1	--	<1.0	ND
	2/6/97	17.44	67.97	<50	--	<0.5	<0.5	<0.5	<0.5	<2	<1.0	ND
	5/8/97	17.72	67.69	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	--
	8/7/97	18.49	66.92	<50	--	<0.5	<0.5	<0.5	<0.5	<2	<1.0	ND
	11/5/97	18.86	66.55	<50	--	<0.5	<0.5	<0.5	<0.5	<2	1	--
	2/9/98	17.56	67.85	<50	--	<0.5	<0.5	<0.5	<0.5	<2	<1.0	--
	4/29/98	16.23	69.18	<50	--	<0.5	<0.5	<0.5	<0.5	<2	<1.0	ND
	8/4/98	17.24	68.17	<50	--	<0.5	<0.5	<0.5	<0.5	<2	1.1	ND
	11/2/98	17.91	67.50	<50	--	<0.5	<0.5	<0.5	<0.5	<2	1.2	ND
3/26/99	16.42	68.99	<50	--	<0.5	<0.5	<0.5	<0.5	<2	ND	ND	
7/1/99	17.90	67.51	85	--	<0.5	1.1	0.55	2.5	<0.5	1.0	5	

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Table 1. Groundwater Elevation and Analytical Data: Volatile Hydrocarbons and HVOCs

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID TOC Elev. (ft)	Sampling Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)	TVH ←	TPHg	Benzene	Toluene	Ethyl- benzene μg/l	Xylenes	MTBE	1,2-DCA	Other HVOCs →
MW-7	9/21/99	18.91	66.50	<50	--	0.7	1.8	<0.5	1.5	<5.0	<5.0	ND
85.41	2/9/00	16.74	68.67	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<0.5
(cont'd)	5/31/00	16.21	69.20	--	<50	3	6	1	9	<0.5	<0.5	ND
	8/8/00	16.92	68.49	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.52	ND
	11/14/00	17.00	68.41	--	<50	<0.5	0.63	<0.5	<0.5	<5.0	<0.5	ND
	3/1/01	17.09	68.32	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	ND
	5/7/01	17.19	68.22	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	ND
	8/1/01	17.25	68.16	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	ND
MW-8	10/12/92	27.70	57.80	70	--	20	1	1	3	--	210	--
85.50	11/25/92	27.62	57.88	<50	--	<0.5	<0.5	<0.5	<0.5	--	200	ND
	4/8/93	26.64	58.86	490	--	15	45	5.1	73	--	210	ND
	7/21/93	26.60	58.90	180	--	2.5	3	<0.5	1.9	--	350	ND
	11/11/93	27.18	58.32	310	--	23	<0.5	<0.5	<0.5	--	240	ND
	8/30/95	26.35	59.15	660	--	360	6.8	13	2.8	--	130	--
	12/4/95	26.72	58.78	250	--	46	0.9	4.9	<0.5	--	94	ND
	5/3/96	25.47	60.03	69	--	110	<0.5	<0.5	1.5	--	100	ND
	8/8/96	26.41	59.09	120	--	11	<0.5	<0.5	<0.5	<2	93	ND
	11/5/96	26.77	58.73	110	--	20	<1	1	<1	--	98	ND
	2/6/97	25.84	59.66	67 ^{1,2}	--	51	<0.5	0.56	<0.5	<2	81	ND
	5/9/97	26.39	59.11	110 ^{1,2}	--	59	<0.5	<0.5	<0.5	--	76	--
	8/7/97	26.72	58.78	<50	--	12 ³	<0.5	<0.5	<0.5	<2	79	ND
	11/5/97	26.82	58.68	<50	--	9.4	<0.5	<0.5	<0.5	<2	84	--
	2/9/98	25.57	59.93	<50	--	6	<0.5	<0.5	<0.5	<2	85	--
	5/1/98	25.64	59.86	430	--	490	7.1	27	26	<10	85	ND
	8/5/98	25.96	59.54	140	--	19	<0.5	5.2	5.3	<2	69	ND
	11/3/98	26.27	59.23	150	--	110	1.1	4.3	4.5	<2	67	ND
	3/31/99	20.93	64.57	54	--	170	1.5	4.1	1.9	4.4 ⁴	5.9	1,1 DCA: 0.7
	7/1/99	26.59	58.91	140	--	58	0.9	3	2.3	<0.5	55	⁵
	9/21/99	26.89	58.61	670	--	170	2.6	11	7.9	<5	41	ND
	2/9/00	26.60	58.90	--	300	60	1.2	4.8	1.2	<5.0	40	<0.5

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Table 1. Groundwater Elevation and Analytical Data: Volatile Hydrocarbons and HVOCs

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID TOC Elev. (ft)	Sampling Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)	←-----µg/l-----→								
				TVH	TPHg	Benzene	Toluene	Ethyl- benzene	Xylenes	MTBE	1,2-DCA	Other HVOCs
MW-8	8/8/00	26.43	59.07	--	270	56	1.2	4.1	1.0	<5.0	39	ND
85.50	11/14/00	26.60	58.90	--	330	64	1.3	3.5	0.60	< 5.0	47	ND
(cont'd)	3/1/01	26.41	59.09	--	400	140	<0.5	<0.5	0.55	<5.0	16	ND
	5/7/01	26.55	58.95	--	240	37	0.71	2.5	0.77	<5.0	48	ND
	8/1/01	26.71	58.79	--	130	5.2	<0.5	<0.5	<0.5	<5.0	39	ND
MW-9	11/24/92	23.51	66.86	19,000	--	180	590	23	2000	--	340	TCM: 15
90.37	4/5/93	21.14	69.23	2,300	--	48	4	0.6	13	--	600	TCM: 2
	7/21/93	21.54	68.83	2,300	--	170	8.1	15	<0.5	--	1100	ND
	11/10/93	27.53	62.84	4,400	--	69	7.3	21	9.7	--	900	ND
	8/30/95	19.59	70.78	3,200	--	3,900	49	80	22.8	--	960	--
	12/4/95	20.65	69.72	--	--	--	--	--	--	<2	--	--
	5/2/96	18.63	71.74	<1300	--	2,600	<13	200	<13	--	550	ND
	11/5/96	20.69	69.68	1,800	--	280	<5	65	<5	--	770	ND
	5/9/97	19.96	70.41	1,100	--	160	<0.5	42	<0.5	--	690	--
	8/8/97	20.84	69.53	570 ^{1,2}	--	<0.5	<0.5	<0.5	0.78 ³	<2	680	ND
	11/5/97	21.55	68.82	490 ¹	--	<0.5	<0.5	6	<0.5	<2	500	--
	2/9/98	20.21	70.16	270 ¹	--	48	17	5.8	<0.5	<2	520	--
	5/1/98	19.27	71.10	550	--	70	<0.5	22	2.2	<2	390	ND
	8/5/98	19.35	71.02	550 ¹	--	88	<0.5	13	1.9 ³	<2	420	ND
	11/2/98	20.43	69.94	580	--	<0.5	<0.5	7.5 ³	1.6 ³	<2	430	ND
	3/25/99	18.46	71.91	1,100	--	160	<0.5	21	2.1 ³	5.7 ⁴	550	ND
	7/1/99	19.95	70.42	540	--	100	7.4	26	16.9	<1.3	400	⁵
	9/21/99	21.15	69.22	2,700	--	320	98	88	47	<20	540	ND
	2/9/00	21.08	69.29	--	1,600	81	3.6	19	18	<5.0	360	<0.5
	5/31/00	19.11	71.26	--	1,500	170	13	25	<1.0	<0.5	300	ND
	8/8/00	19.86	70.51	--	1,300	140	2.1	19	<0.5	<5.0	330	ND
	11/14/00	20.90	69.47	--	1,700	250	2.6	44	2.1	< 5.0	610	ND
	3/1/01	20.45	69.92	--	1,800	170	5.6	30	2.5	<20	620	ND
	5/7/01	19.83	70.54	--	1,500	120	2.6	24	<0.5	<5.0	400	ND
	8/1/01	20.02	70.35	--	2,600	280	4.8	50	<0.5	<5.0	450	ND

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Table 1. Groundwater Elevation and Analytical Data: Volatile Hydrocarbons and HVOCs

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID TOC Elev. (ft)	Sampling Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)	TVH ←	TPHg	Benzene	Toluene	Ethyl- benzenc μg/l	Xylenes	MTBE	1,2-DCA	Other HVOCs →
MW-10	10/12/92	21.55	67.05	28,000	--	2,700	3,800	210	1,300	--	150	--
88.60	11/24/92	21.86	66.74	130,000	--	9,700	19,000	1,400	8,400	--	370	ND
	4/5/93	19.14	69.46	63,000	--	6,300	14,000	1,100	7,500	--	70	ND
	7/21/93	19.79	68.81	140,000	--	16,000	31,000	2,200	13,000	--	700	ND
	8/30/95	17.99	70.61	92,000	--	13,000	24,000	1,800	9,100	--	300	--
	5/3/96	17.04	71.56	81,000	--	17,000	29,000	2,100	8,500	--	320	ND
	5/9/97	18.36	70.24	63,000	--	7,400	13,000	940	4,100	--	150	--
	5/1/98	15.84	72.76	60,000	--	7,100	14,000	1100	5,300	<250	120	ND
MW-11	11/24/92	33.65	68.41	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	ND
102.06	12/8/92***	33.37	68.69	<50	--	<0.1	<0.1	<0.1	<0.1	--	--	--
	12/8/92	33.37	68.69	<50	--	<0.5	<0.5	<0.5	<0.5	--	--	--
	4/5/93	31.03	71.03	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	ND
	7/21/93	31.90	70.16	160	--	<0.5	1.8	<0.5	<0.5	--	<1.0	ND
	11/9/93	32.60	69.46	80	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	ND
	8/30/95	28.92	73.14	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	--
	5/3/96	28.00	74.06	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	ND
	5/8/97	29.93	72.13	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	--
	4/29/98	27.22	74.84	<50	--	<0.5	<0.5	<0.5	<0.5	<2	<1.0	ND
MW-13	11/24/92	26.05	58.01	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	ND
84.06	12/8/92***	25.08	58.98	<50	--	<0.1	<0.1	<0.1	<0.1	--	--	--
	12/8/92	25.08	58.98	<50	--	<0.5	<0.5	<0.5	<0.5	--	--	--
	4/5/93	24.64	59.42	<50	--	<0.5	0.9	<0.5	<0.5	--	<1.0	ND
	7/21/93	24.29	59.77	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	ND
	11/9/93	24.23	59.83	<50	--	<0.5	<0.5	<0.5	<0.5	--	<1.0	ND
	8/30/95	23.30	60.76	<50	--	49	<0.5	<0.5	<0.5	--	3.6	--
	12/1/95	23.80	60.26	<50	--	<0.5	<0.5	<0.5	<0.5	--	4.1	ND
	5/3/96	23.19	60.87	<50	--	<0.5	<0.5	<0.5	<0.5	--	4	ND
	8/8/96	23.44	60.62	<50	--	32	<0.5	<0.5	<0.5	<2	6.4	ND
	11/5/96	24.04	60.02	<50	--	<1	<1	<1	<1	--	5.7	ND
	2/6/97	23.24	60.82	<50	--	<0.5	<0.5	<0.5	<0.5	<2	3.5	ND

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Table 1. Groundwater Elevation and Analytical Data: Volatile Hydrocarbons and HVOCs

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID TOC Elev. (ft)	Sampling Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)	←-----µg/l-----→								
				TVH	TPHg	Benzene	Toluene	Ethyl- benzene	Xylenes	MTBE	1,2-DCA	Other HVOCs
MW-13	5/8/97	23.46	60.60	<50	--	81	<0.5	<0.5	<0.5	--	5.5	--
84.06	8/8/97	23.92	60.14	<50	--	<0.5	<0.5	<0.5	<0.5	<2	6.8	ND
(cont'd)	11/5/97	24.27	59.79	<50	--	<0.5	<0.5	<0.5	<0.5	<2	5.5	--
	2/9/98	22.89	61.17	<50	--	<0.5	<0.5	<0.5	<0.5	<2	2.9	--
	4/29/98	22.27	61.79	<50	--	24	<0.5	<0.5	<0.5	<2	5.7	ND
	8/4/98	22.75	61.31	120	--	200	<1	<1	<1	<4	6.2	ND
	11/3/98	23.90	60.16	59 ¹	--	33	<0.5	<0.5	<0.5	<2	6.1	ND
	3/31/99	23.11	60.95	130	--	0.56	<0.5	<0.5	<0.5	<2	1.4	ND
	7/1/99	23.40	60.66	160	--	370	19	1.2	3.5	<1	4.2	⁵
	9/21/99	21.91	62.15	370	--	150	1.0	0.8	0.8	<5.0	<5.0	ND
	2/9/00	23.84	60.22	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	2.1	<0.5
	8/8/00	23.31	60.75	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	3.6	ND
	11/14/00	24.00	60.06	--	<50	<0.5	0.52	<0.5	<0.5	<5.0	3.3	ND
	3/1/01	23.93	60.13	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	ND
	5/7/01	23.93	60.13	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.3	ND
	8/1/01	24.10	59.96	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	ND
MW-14	5/26/98	21.67	72.99	41,000	--	7,100	11,000	720	3,900	<1000	440	ND
94.66	7/1/99	22.95	71.71	SPH	--	--	--	--	--	--	--	--
	9/21/99	24.26	70.40	SPH	--	--	--	--	--	--	--	--
	2/9/00	24.13	70.53	--	92,000	12,000	17,000	1,300	8,700	<140	450	<0.5
	5/31/00	22.09	72.57	--	SPH	--	--	--	--	--	--	--
	8/8/00	22.88	71.78	--	SPH	--	--	--	--	--	--	--
	11/14/00	23.90	70.76	--	SPH	--	--	--	--	--	--	--
	3/1/01	23.97	70.69	--	SPH	--	--	--	--	--	--	--
	5/7/01	23.45	71.23	--	SPH (sheen)	--	--	--	--	--	--	--
	8/1/01	23.57	71.12	--	SPH (0.06)	--	--	--	--	--	--	--

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Table 1. Groundwater Elevation and Analytical Data: Volatile Hydrocarbons and HVOCs

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID	Sampling Date	Depth to Groundwater (ft)	Groundwater Elevation (ft)	TVH	TPHg	Benzene	Toluene	Ethyl-benzene μg/l	Xylenes	MTBE	1,2-DCA	Other HVOCs
MW-15	5/26/98	21.87	72.89	130,000	--	30,000	38,000	2,500	12,600	<1000	1,200	ND
94.76	7/1/99	22.25	72.51	SPH	--	--	--	--	--	--	--	--
	9/21/99	24.12	70.64	SPH	--	--	--	--	--	--	--	--
	2/9/00	24.42	70.34	--	180,000	32,000	37,000	2,800	14,000	<200	1,100	<0.5
	5/31/00	22.40	72.36	--	SPH	--	--	--	--	--	--	--
	8/8/00	23.17	71.59	--	SPH	--	--	--	--	--	--	--
	11/14/00	24.15	70.61	--	SPH	--	--	--	--	--	--	--
	3/1/01	23.99	70.77	--	SPH	--	--	--	--	--	--	--
	5/7/01	23.50	71.26	--	SPH (sheen)	--	--	--	--	--	--	--
	8/1/01	23.62	71.14	--	SPH (sheen)	--	--	--	--	--	--	--
Trip Blank	8/1/01	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--

Abbreviations and Notes:

TOC Elev. (ft) = Top of casing elevation in feet above mean sea level

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

TVH = Total Volatile Hydrocarbons

TPHg = Total petroleum hydrocarbons as gasoline

MTBE = Methyl tert-butyl ether

1,2-DCA = 1,2 Dichloroethane

HVOCs = Halogenated volatile organic compounds by EPA Method 8010

DCB = 1, 3 Dichlorobenzene

MCB = Chlorobenzene

DBCM = Dibromochloromethane

TCM = Chloroform = trichloromethane

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

-- = Sample not analyzed

SPH = Free product encountered in well

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

MW-1 was initially referred to as Sample 5.

* = 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.

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.

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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 ←	TPHd	TPHmo	TPHho	2-Methyl naphthalene µg/l	Naphthalene	Other SVOCs →
MW-1	10/5/1990	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	ND
	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	ND
	11/5/1997	25.06	69.42	28,000	--	--	--	720	1,500	ND
	2/9/1998	22.64	71.84	27,000	--	--	--	160	570	ND
	5/1/1998	19.95	74.53	29,000	--	--	--	--	--	--
	5/27/1998	--	--	--	--	--	--	120	630	ND
	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	--	--	--	--	--
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	--	--	--	--	--	--

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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 ←	TPHd	TPHmo	TPHho	2-Methyl naphthalene <i>µg/l</i>	Naphthalene	Other SVOCs →
MW-2	5/3/1996	23.28	71.53	<50	--	--	--	--	--	--
<i>94.81</i>	5/8/1997	24.58	70.23	<50	--	--	--	--	--	--
<i>(cont'd)</i>	4/29/1998	22.18	72.63	<47	--	--	--	--	--	--
MW-3	3/1/1991	23.17	66.91	<50	--	--	--	--	--	--
<i>90.08</i>	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	--	--	--	--	--	--
<i>88.84</i>	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	--	--	--	--	--	--
	11/5/1997	20.19	68.65	3,700	--	--	--	--	--	--
	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	--	--	--	--	--	--

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

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID	Sampling Date	Depth to water (ft)	Groundwater Elevation (ft)	TEH	TPHd	TPHmo	TPHho	2-Methyl naphthalene $\mu\text{g/l}$	Naphthalene	Other SVOCs
MW-4	7/1/1999	18.80	70.04	17,000	--	--	--	370	860	ND
88.84	9/21/1999	19.85	68.99	14,000	--	--	--	360	820	ND
(cont'd)	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	--	--	--	--
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	--	--	--	--	--	--

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

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID	Sampling Date	Depth to water (ft)	Groundwater Elevation (ft)	TEH	TPHd	TPHmo	TPHho	2-Methyl naphthalene µg/l	Naphthalene	Other SVOCs
MW-6	7/1/1999	24.45	61.37	SPH	--	--	--	--	--	--
85.82	9/21/1999	24.58	61.24	SPH	--	--	--	--	--	--
(cont'd)	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	62.71	--	SPH	--	--	--	--	--
	8/1/2001	--	--	--	--	--	--	--	--	--
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

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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	TPHd	TPHmo	TPHho	2-Methyl		
								naphthalene	Naphthalene	Other SVOCs
								μg/l		
MW-7	2/9/2000	16.74	68.67	--	<50	<250	--	<10	<10	ND
85.41	5/31/2000	16.21	69.20	--	<50	<500	--	--	--	--
<i>(cont'd)</i>	11/14/2000	17.00	68.41	--	<50	<250	--	--	--	--
	3/1/2001	17.09	68.32	--	<50	<250	--	<10	<10	ND
	5/7/2001	17.19	68.22	--	<50	<250	--	--	--	--
	8/1/2001	17.25	68.16	--	<50	<250	--	--	--	--
MW-8	10/12/1992	27.70	57.80	--	--	--	--	--	--	--
85.50	11/25/1992	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	--	--	--	--	--	--
	7/1/1999	26.59	58.91	170	--	--	--	<9.6	<9.6	ND
	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	--	--	--	--	

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

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID	Sampling Date	Depth to water (ft)	Groundwater Elevation (ft)	TEH	TPHd	TPHmo	TPHho	2-Methyl naphthalene $\mu\text{g/l}$	Naphthalene	Other SVOCs
MW-9 90.37	11/24/1992	23.51	66.86	320	--	--	--	--	--	--
	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	--	--	--	--	--	--
	8/5/1998	19.35	71.02	630	--	--	--	--	--	--
	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	--	--	--	--	
MW-10 88.60	10/12/1992	21.55	67.05	--	--	--	--	--	--	--
	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	--	--	--	--	--	--

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

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID <i>TOC Elev. (ft)</i>	Sampling Date	Depth to water (ft)	Groundwater Elevation (ft)	TEH	TPHd	TPHmo	TPHho	2-Methyl		
								naphthalene μg/l	Naphthalene	Other SVOCs
MW-11 <i>102.06</i>	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 <i>84.06</i>	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	

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

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID	Sampling Date	Depth to water (ft)	Groundwater Elevation (ft)	TEH	TPHd	TPHmo	TPHho	2-Methyl naphthalene $\mu\text{g/l}$	Naphthalene	Other SVOCs
MW-13	2/9/2000	23.84	60.22	--	<50	<250	--	<10	<10	ND
84.06	5/31/2000	22.97	61.09	--	<50	<500	--	--	--	--
(cont'd)	11/14/2000	24.00	60.06	--	65	<250	--	--	--	--
	3/1/2001	23.93	60.13	--	<50	<250	--	<10	<10	ND
	5/7/2001	23.93	60.13	--	<50	<250	--	--	--	--
	8/1/2001	24.10	59.96	--	<50	<250	--	--	--	--
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	--	--	--	--	--
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	--	--	--	--	--

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

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID	Sampling Date	Depth to water (ft)	Groundwater Elevation (ft)	TEH	TPHd	TPHmo	TPHho	2-Methyl naphthalene (µg/l)	Naphthalene	Other SVOCs
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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

TPHho = Total petroleum hydrocarbons as hydraulic oil

SVOCs = Semi-volatile organic compounds

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

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

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

< n = Not detected above n ug/l

-- = Not analyzed/not available

* = Duplicate sample sent to a different chemical laboratory

** = Does not match diesel pattern

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

Well ID	Sampling Date	Cadmium	Chromium	Lead	Nickel	Zinc
		<-----ug/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
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
MW-15	2/9/2000	<5	140	1,800	220	150

Abbreviations and Notes:

LUFT metals analyzed by EPA Method 6010

ug/l = micrograms per liter

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Table 4. Liquid-Phase Hydrocarbon Removal

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID <i>TOC Elev.</i> <i>(ft)</i>	Sampling Date	Depth to Water (ft)	LPH Thickness (ft)	Hydrocarbons Removed (gallons)	Hydrocarbons Removed (lbs)	Cumulative Hydrocarbons Removed (lbs)	Notes
MW-1	12/23/1991	26.86	1.15	2.00	12.20	12.20	1
94.48	12/26/1991	26.08	0.22	0.50	3.05	15.25	1
	1/13/1992	26.53	0.66	1.00	6.10	21.35	1
	2/28/1992	27.75	0.42	2.00	12.20	33.55	1
	11/9/1993	26.06	1.17	0.50	3.05	36.60	1
	11/3/1995	23.10	0.76	0.75	4.58	41.18	1
	11/30/1995	23.38	0.70	0.25	1.53	42.70	1
	1/3/1996	23.30	0.78	0.53	3.23	45.93	1
	2/2/1996	22.96	0.84	0.75	4.58	50.51	1
	3/1/1996	21.69	0.14	0.10	0.61	51.12	1
	4/4/1996	21.11	0.00	0.00	0.00	51.12	1
	5/2/1996	20.96	0.00	0.00	0.00	51.12	1
	6/5/1996	20.98	0.04	0.10	0.61	51.73	1
	7/9/1996	21.64	0.20	0.10	0.61	52.34	1
	8/8/1996	22.43	0.33	0.05	0.31	52.64	1
	9/10/1996	23.25	0.60	0.10	0.61	53.25	1
	10/1/1996	23.58	0.60	0.25	1.53	54.78	1
	11/4/1996	24.29	0.78	0.13	0.79	55.57	1
	12/2/1996	24.63	0.88	0.26	1.59	57.16	1
	1/3/1997	24.08	0.81	0.39	2.38	59.54	1
	2/6/1997	22.46	0.30	0.01	0.06	59.60	1
	3/5/1997	23.00	0.00	0.00	0.00	59.60	1
	4/1/1997	22.29	0.20	0.01	0.06	59.66	1
	5/8/1997	22.79	0.33	0.02	0.12	59.78	1
	6/6/1997	24.33	1.69	0.26	1.59	61.37	1
	7/8/1997	24.00	0.96	0.20	1.22	62.59	1
	8/7/1997	24.58	1.29	1.00	6.10	68.69	1
	9/10/1997	24.93	1.21	1.50	9.15	77.84	1
	10/1/1997	24.89	0.86	0.26	1.59	79.42	1
	11/4/1997	25.06	0.77	0.26	1.59	81.01	1
	12/4/1997	24.76	0.54	0.19	1.16	82.17	1
	1/8/1998	23.66	0.00	0.00	0.00	82.17	1
	2/5/1998	22.64	0.00	0.00	0.00	82.17	1
	3/6/1998	20.80	0.00	0.00	0.00	82.17	1
	4/2/1998	20.31	0.00	0.00	0.00	82.17	1
	4/29/1998	19.95	0.00	0.00	0.00	82.17	1
	6/3/1998	20.41	0.00	0.00	0.00	82.17	1
	7/9/1998	20.97	0.07	0.00	0.00	82.17	1
	8/4/1998	21.40	trace	trace	0.00	82.17	1

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Table 4. Liquid-Phase Hydrocarbon Removal

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID	Sampling TOC Elev. (ft)	Depth to Water (ft)	LPH Thickness (ft)	Hydrocarbons Removed (gallons)	Hydrocarbons Removed (lbs)	Cumulative Hydrocarbons Removed (lbs)	Notes
MW-1	8/26/1998	21.85	0.10	trace	0.00	82.17	1
(cont'd)	11/2/1998	22.92	0.39	trace	0.00	82.17	1
	12/4/1998	23.29	0.29	0.01	0.06	82.23	1
	1/5/1999	23.51	0.42	0.03	0.18	82.41	1
	2/8/1999	23.08	0.05	0.25	1.53	83.94	1
	3/24/1999	21.90	0.01	0.01	0.06	84.00	1
	4/30/1999	21.52	0.00	0.00	0.00	84.00	1
	7/1/1999	22.70	0.03	0.01	0.06	84.06	1
	9/21/1999	23.81	0.08	0.20	1.22	85.28	1
	10/20/1999	23.90	0.10	0.01	0.06	85.34	1
	12/13/1999	24.24	trace	0.00	0.00	85.34	1
	2/9/2000	23.95	0.07	0.05	0.31	85.64	1
	2/15/2000	--	0.00	0.00	0.00	85.64	2
	2/25/2000	23.69	0.00	0.06	0.38	86.03	2
	3/3/2000	23.27	0.00	0.05	0.31	86.33	2
	3/28/2000	22.39	0.00	0.13	0.79	87.13	2
	5/2/2000	22.29	0.00	0.05	0.29	87.42	2
	5/31/2000	22.05	0.00	0.00	0.00	87.42	2
	7/3/2000	22.10	trace	0.02	0.12	87.54	2
	8/4/2000	22.40	0.00	0.01	0.06	87.60	2
	10/6/2000	23.47	0.46	0.01	0.06	87.66	1
11/3/2000	24.14	0.78	0.00	0.00	87.66		
12/1/2000	25.40	0.83	1.75	10.50	98.16	1,2	
1/4/2001	25.13	0.09	0.25	1.53	99.69	2	
2/2/2001	25.12	0.03	0.13	0.79	100.48	2	
4/3/2001	23.19	0.24	0.10	0.61	101.09		
5/4/2001	23.31	0.47	0.00	0.00	101.09		
6/11/2001	23.77	0.67	0.00	0.00	101.09		
MW-4	12/23/1991	22.63	0.98	2.50	15.25	15.25	1
88.84	12/26/1991	22.52	0.96	6.00	36.60	51.85	1
	1/10/1992	22.74	0.99	5.00	30.50	82.35	1
	2/28/1992	22.00	0.67	4.00	24.40	106.75	1
	3/11/1992	21.71	0.55	3.50	21.35	128.10	1
	3/13/1992	21.56	0.49	3.50	21.35	149.45	1
	3/17/1992	25.46	0.44	2.25	13.73	163.18	1
	3/18/1992	21.38	0.44	2.50	15.25	178.43	1
	3/19/1992	21.33	0.48	1.50	9.15	187.58	1
	3/23/1992	21.29	0.42	4.00	24.40	211.98	1
	3/24/1992	21.31	0.38	1.50	9.15	221.13	1

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Table 4. Liquid-Phase Hydrocarbon Removal

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID	Sampling TOC Elev. (ft)	Depth to Water (ft)	LPH Thickness (ft)	Hydrocarbons Removed (gallons)	Hydrocarbons Removed (lbs)	Cumulative Hydrocarbons Removed (lbs)	Notes
MW-4	3/25/1992	21.17	0.36	1.00	6.10	227.23	1
(cont'd)	3/26/1992	21.08	0.35	1.00	6.10	233.33	1
	3/27/1992	20.92	0.26	0.50	3.05	236.38	1
	3/31/1992	21.15	0.44	0.50	3.05	239.43	1
	4/1/1992	20.90	0.24	0.25	1.53	240.95	1
	4/2/1992	20.90	0.17	0.13	0.79	241.74	1
	4/6/1992	--	--	0.13	0.79	242.54	1
	4/10/1992	20.91	0.33	0.25	1.53	244.06	1
	4/13/1992	21.04	0.42	0.25	1.53	245.59	1
	4/20/1992	20.74	0.19	0.13	0.79	246.38	1
	5/4/1992	20.83	0.33	0.13	0.79	247.17	1
	5/18/1992	21.33	0.23	0.13	0.79	247.97	1
	5/26/1992	20.83	0.17	0.13	0.79	248.76	1
	6/1/1992	20.85	0.19	0.06	0.37	249.12	1
	6/29/1992	21.38	0.53	0.25	1.53	250.65	1
	7/29/1992	21.69	0.56	1.11	6.77	257.42	1
	8/28/1992	21.35	0.63	1.68	10.25	267.67	1
	4/3/1993	20.11	0.51	0.13	0.79	268.46	1
	11/9/1993	20.48	0.52	0.03	0.18	268.64	1
	8/30/1995	21.71	0.63	1.75	10.68	279.32	1
	10/2/1995	19.90	2.20	0.50	3.05	282.37	1
	11/3/1995	18.76	0.57	0.25	1.53	283.89	1
	11/30/1995	19.17	0.65	0.25	1.53	285.42	1
	1/3/1996	19.45	0.44	0.05	0.31	285.72	1
	2/2/1996	19.50	0.32	0.10	0.61	286.33	1
	3/1/1996	19.31	0.20	0.20	1.22	287.55	1
	4/4/1996	17.53	0.18	0.20	1.22	288.77	1
	5/2/1996	17.50	0.25	0.20	1.22	289.99	1
	6/5/1996	17.67	0.39	0.15	0.92	290.91	1
	7/9/1996	18.29	0.50	0.16	0.98	291.89	1
	8/8/1996	18.84	0.00	0.00	0.00	291.89	1
	9/10/1996	19.31	0.34	0.05	0.31	292.19	1
	10/1/1996	19.51	0.29	0.05	0.31	292.50	1
	11/4/1996	20.13	0.35	0.02	0.12	292.62	1
	12/2/1996	20.23	0.33	0.02	0.12	292.74	1
	1/3/1997	19.33	0.10	0.02	0.12	292.86	1
	2/6/1997	18.13	0.01	0.01	0.06	292.92	1
	4/30/1999	17.28	trace	0.00	0.00	292.92	1

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Table 4. Liquid-Phase Hydrocarbon Removal

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID	Sampling TOC Elev. (ft)	Depth to Water (ft)	LPH Thickness (ft)	Hydrocarbons Removed (gallons)	Hydrocarbons Removed (lbs)	Cumulative Hydrocarbons Removed (lbs)	Notes
MW-4	2/9/2000	19.76	0.00	0.00	0.00	292.92	1
(cont'd)	2/15/2000	--	0.00	0.00	0.00	292.92	2
	2/25/2000	19.30	0.00	0.00	0.00	292.92	2
MW-6	12/23/1991	28.40	3.21	7.50	45.75	45.75	1
85.62	12/26/1991	27.25	1.67	2.00	12.20	57.95	1
	1/10/1992	27.23	0.90	1.00	6.10	64.05	1
	2/4/1992	27.71	2.04	2.00	12.20	76.25	1
	2/28/1992	27.92	3.00	3.00	18.30	94.55	1
	3/10/1992	27.16	2.06	2.75	16.78	111.33	1
	3/12/1992	25.96	0.52	2.00	12.20	123.53	1
	3/23/1992	26.34	1.09	1.00	6.10	129.63	1
	3/30/1992	25.73	0.35	0.50	3.05	132.68	1
	4/10/1992	25.29	0.05	0.25	1.53	134.20	1
	4/13/1992	25.52	0.21	0.13	0.79	134.99	1
	4/20/1992	25.38	0.10	0.13	0.79	135.79	1
	5/4/1992	25.40	--	0.13	0.79	136.58	1
	5/8/1992	25.50	0.17	0.06	0.37	136.95	1
	5/26/1992	25.46	0.13	0.13	0.79	137.74	1
	6/1/1992	25.46	0.09	0.06	0.37	138.10	1
	6/29/1992	25.59	0.14	0.19	1.16	139.26	1
	7/29/1992	26.90	1.71	0.60	3.66	142.92	1
	8/28/1992	25.09	2.62	2.40	14.64	157.56	1
	12/2/1992	--	--	0.00	0.00	157.56	1
	4/3/1993	26.96	2.86	1.75	10.68	168.24	1
	11/9/1993	27.51	3.06	0.83	5.06	173.30	1
	8/30/1995	28.00	7.96	4.50	27.45	200.75	1
	10/2/1995	28.24	6.14	4.00	24.40	225.15	1
	11/3/1995	28.39	6.13	3.00	18.30	243.45	1
	11/30/1995	26.91	3.44	2.50	15.25	258.70	1
	1/3/1996	27.58	4.41	2.50	15.25	273.95	1
	2/2/1996	27.58	4.37	5.00	30.50	304.45	1
	3/1/1996	27.96	5.15	4.00	24.40	328.85	1
	4/4/1996	27.96	5.41	5.00	30.50	359.35	1
	5/2/1996	26.83	4.66	4.50	27.45	386.80	1
	6/5/1996	27.15	5.17	4.00	24.40	411.20	1
	7/9/1996	27.08	4.86	4.50	27.45	438.65	1
	8/8/1996	26.71	4.05	4.00	24.40	463.05	1
	9/10/1996	26.83	3.82	3.50	21.35	484.40	1

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Table 4. Liquid-Phase Hydrocarbon Removal

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID	Sampling TOC Elev. (ft)	Depth to Water (ft)	LPH Thickness (ft)	Hydrocarbons Removed (gallons)	Hydrocarbons Removed (lbs)	Cumulative Hydrocarbons Removed (lbs)	Notes
MW-6	10/1/1996	26.96	3.77	4.00	24.40	508.80	1
(cont'd)	11/4/1996	--	--	NM	NM	NM	4
86.94	12/2/1996	--	--	NM	NM	NM	4
	1/3/1997	--	--	NM	NM	NM	4
	2/6/1997	25.08	0.20	NM	NM	NM	4
	3/5/1997	24.20	0.00	NM	NM	NM	4
	4/1/1997	24.04	0.00	NM	NM	NM	4
85.82	5/8/1997	26.54	1.88	0.40	2.44	511.24	1
	6/6/1997	25.33	0.21	0.03	0.18	511.42	1
	7/8/1997	25.30	0.07	0.00	0.00	511.42	1
	8/7/1997	25.52	0.00	0.00	0.00	511.42	1
	9/10/1997	25.76	0.00	0.00	0.00	511.42	1
	10/1/1997	25.12	0.00	0.00	0.00	511.42	1
	11/4/1997	26.16	0.18	0.02	0.12	511.55	1
	12/4/1997	26.08	0.16	0.05	0.31	511.85	1
	1/8/1998	25.79	0.10	0.66	4.03	515.88	1
	2/5/1998	25.31	0.89	NM	NM	NM	4
	3/6/1998	24.63	0.46	0.04	0.24	516.12	1
	4/2/1998	24.45	0.59	0.10	0.61	516.73	1
	4/29/1998	22.96	0.55	0.09	0.55	517.28	1
	6/3/1998	22.81	0.41	0.03	0.18	517.46	1
	7/9/1998	23.04	0.35	0.05	0.31	517.77	1
	8/4/1998	23.29	0.35	0.04	0.24	518.01	1
	8/26/1998	23.50	0.31	0.01	0.06	518.07	1
	11/2/1998	24.24	0.43	0.02	0.12	518.20	1
	12/4/1998	24.35	0.32	0.01	0.06	518.26	1
	1/5/1999	24.51	0.40	0.03	0.18	518.44	1
	2/8/1999	24.00	0.03	0.13	0.76	519.20	1
	3/24/1999	23.82	0.19	0.03	0.18	519.38	1
	4/30/1999	23.60	1.13	0.10	0.61	519.99	1
	7/1/1999	24.45	0.42	0.06	0.38	520.38	1
	7/27/1999	25.35	0.24	0.06	0.38	520.76	1
	8/19/1999	24.87	0.24	0.06	0.37	521.12	1
	9/21/1999	24.58	0.10	0.20	1.22	522.34	1
	10/20/1999	25.05	0.17	0.20	1.22	523.56	1
	12/13/1999	25.08	0.10	0.06	0.37	523.93	1
	2/9/2000	24.93	0.44	0.25	1.53	525.45	1
	2/15/2000	--	0.00	0.07	0.43	525.88	3
	2/25/2000	24.23	0.00	0.01	0.06	525.94	3
	3/3/2000	24.00	0.00	0.00	0.01	525.95	3

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Table 4. Liquid-Phase Hydrocarbon Removal

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID <i>TOC Elev.</i> <i>(ft)</i>	Sampling Date	Depth to Water (ft)	LPH Thickness (ft)	Hydrocarbons Removed (gallons)	Hydrocarbons Removed (lbs)	Cumulative Hydrocarbons Removed (lbs)	Notes
MW-6	3/28/2000	23.54	0.00	0.05	0.31	526.26	3
<i>(cont'd)</i>	5/2/2000	23.52	0.06	0.03	0.15	526.41	3
85.82	5/31/2000	23.39	0.08	0.00	0.00	526.41	3
	7/3/2000	23.61	trace	0.02	0.12	526.53	3
	8/4/2000	23.80	0.10	0.01	0.06	526.59	3
	10/6/2000	24.22	0.04	0.01	0.06	526.65	
	11/3/2000	24.30	0.09	0.00	0.00	526.65	
	12/1/2000	24.38	0.07	0.03	0.18	526.83	2, 3
	1/4/2001	24.65	0.17	0.00	0.00	526.83	5
	2/2/2001	24.72	0.22	0.25	1.53	528.36	3
	4/3/2001	23.90	0.06	0.05	0.31	528.67	
	5/4/2001	23.95	0.07	0.05	0.31	528.97	
	6/11/2001	24.25	0.10	0.00	0.00	528.97	
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	0.06	1
	1/5/1999	23.36	0.12	0.01	0.06	0.12	1
	2/8/1999	23.17	trace	0.01	0.06	0.18	1
	3/24/1999	22.08	trace	trace	0.00	0.18	1
	4/30/1999	21.17	0.01	trace	0.00	0.18	1
	7/1/1999	22.95	0.04	trace	0.00	0.18	1
	9/21/1999	24.26	trace	trace	0.00	0.18	1
	10/20/1999	24.10	0.00	0.00	0.00	0.18	1
	2/9/2000	24.13	0.00	0.00	0.00	0.18	1
	2/15/2000	--	0.00	0.00	0.00	0.18	1
	2/25/2000	--	0.00	0.00	0.00	0.18	2
	3/3/2000	23.27	0.00	0.05	0.31	0.49	2
	3/28/2000	22.40	0.00	0.13	0.76	1.25	2
	5/2/2000	22.22	0.00	0.04	0.24	1.49	2
	5/31/2000	22.09	0.00	0.00	0.00	1.49	2
	7/3/2000	22.35	trace	0.01	0.06	1.55	2
	8/4/2000	22.78	0.00	0.03	0.18	1.73	2
	10/6/2000	23.48	0.00	0.00	0.00	1.73	
	11/3/2000	23.60	0.00	0.00	0.00	1.73	
	12/1/2000	23.90	0.04	0.04	0.24	1.97	1, 2

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Table 4. Liquid-Phase Hydrocarbon Removal

Connell Automobile Dealership, 3093 Broadway, Oakland, California

Well ID	Sampling	Depth to	LPH	Hydrocarbons	Hydrocarbons	Cumulative	Notes
<i>TOC Elev.</i>	Date	Water	Thickness	Removed	Removed	Hydrocarbons	
<i>(ft)</i>		<i>(ft)</i>	<i>(ft)</i>	<i>(gallons)</i>	<i>(lbs)</i>	<i>Removed (lbs)</i>	
MW-14	1/4/2001	24.10	0.00	0.00	0.00	1.97	
<i>(cont'd)</i>	2/2/2001	24.27	0.00	0.10	0.61	2.58	2
94.66	4/3/2001	23.06	0.00	0.05	0.31	2.89	
	5/4/2001	23.05	0.00	0.00	0.00	2.89	
	6/11/2001	23.40	0.00	0.00	0.00	2.89	
MW-15	9/20/1999	24.12	trace	trace	0.00	0.00	1
94.76	10/20/1999	24.40	0.00	0.00	0.00	0.00	1
	12/13/1999	24.61	0.00	0.00	0.00	0.00	1

Abbreviations and Notes:

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

-- = Not measured or not applicable

NM = product was being removed by vapor extraction at time of measurement.

1 = LPH removed by manual bailing

2 = LPH removed from well by absorbent sock

3 = LPH removed from well by passive skimmer

4 = vapor extraction system operating in well

5 = No product removed; skimmer adjusted incorrectly and filled with water.

Liquid-phase hydrocarbons (LPH) converted from volume to weight using the relation 1 gallon LPH= 6.1 pounds.

ATTACHMENT A

Well Sampling Protocol

ATTACHMENT A

Well Sampling Protocol - May 8, 2000 Workplan Addendum

Well Sampling Protocol - May 8, 2000 Workplan Addendum				
Well	Sampling Frequency	Analytes	Additions from Prior Protocol	Reductions/Removals from Prior Protocol
Source Area Wells				
MW-1				
MW-6	Annually (1st Qtr)			
MW-14				
MW-15	<i>(Gauge Quarterly)</i>	TPHd, TPHmo, TPHg, BTEX, MTBE, HVOCs, SVOCs, LUFT Metals, DO	DO	Reduced Well Sampling Frequency
Down-Gradient/Cross-Gradient Wells				
MW-4				
MW-7	Quarterly			
MW-13	<i>(Annually for SVOCs - 1st Qtr)</i>			
MW-8				
MW-9	Quarterly	TPHd, TPHmo, TPHg, BTEX, MTBE, HVOCs, DO (SVOCs, LUFT Metals - 1st qtr only)	DO	Annual LUFT Metals, Annual SVOC
	<i>(Annually for SVOCs and LUFT Metals - 1st Qtr)</i>			
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.				

ATTACHMENT B

Analytical Laboratory Report



McCAMPBELL ANALYTICAL INC.

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<http://www.mccampbell.com> E-mail: main@mccampbell.com

Cambria Environmental Technology 1144 65 th Street, Suite C Oakland, CA 94608	Client Project ID: #425-1580; Connell	Date Sampled: 08/01-08/02/01
	Client Contact: Bob Schultz	Date Received: 08/03/01
	Client P.O.:	Date Extracted: 08/03-08/06/01
		Date Analyzed: 08/03-08/06/01

Volatile Halocarbons

EPA method 601 or 8010

Lab ID	74192	74193	74194	74195
Client ID	MW-4	MW-7	MW-8	MW-9
Matrix	W	W	W	W
Compound	Concentration*			
Bromodichloromethane	ND<5.0	ND	ND	ND<5.0
Bromoform ^(b)	ND<5.0	ND	ND	ND<5.0
Bromomethane	ND<5.0	ND	ND	ND<5.0
Carbon Tetrachloride ^(c)	ND<5.0	ND	ND	ND<5.0
Chlorobenzene	ND<5.0	ND	ND	ND<5.0
Chloroethane	ND<5.0	ND	ND	ND<5.0
2-Chloroethyl Vinyl Ether ^(d)	ND<5.0	ND	ND	ND<5.0
Chloroform ^(e)	ND<5.0	ND	ND	ND<5.0
Chloromethane	ND<5.0	ND	ND	ND<5.0
Dibromochloromethane	ND<5.0	ND	ND	ND<5.0
1,2-Dichlorobenzene	ND<5.0	ND	ND	ND<5.0
1,3-Dichlorobenzene	ND<5.0	ND	ND	ND<5.0
1,4-Dichlorobenzene	ND<5.0	ND	ND	ND<5.0
Dichlorodifluoromethane	ND<5.0	ND	ND	ND<5.0
1,1-Dichloroethane	ND<5.0	ND	ND	ND<5.0
1,2-Dichloroethane	84	ND	39	450
1,1-Dichloroethene	ND<5.0	ND	ND	ND<5.0
cis 1,2-Dichloroethene	ND<5.0	ND	ND	ND<5.0
trans 1,2-Dichloroethene	ND<5.0	ND	ND	ND<5.0
1,2-Dichloropropane	ND<5.0	ND	ND	ND<5.0
cis 1,3-Dichloropropene	ND<5.0	ND	ND	ND<5.0
trans 1,3-Dichloropropene	ND<5.0	ND	ND	ND<5.0
Methylene Chloride ^(f)	ND<15	ND<1.0	ND<1.0	ND<15
1,1,2,2-Tetrachloroethane	ND<5.0	ND	ND	ND<5.0
Tetrachloroethene	ND<5.0	ND	ND	ND<5.0
1,1,1-Trichloroethane	ND<5.0	ND	ND	ND<5.0
1,1,2-Trichloroethane	ND<5.0	ND	ND	ND<5.0
Trichloroethene	ND<5.0	ND	ND	ND<5.0
Trichlorofluoromethane	ND<5.0	ND	ND	ND<5.0
Vinyl Chloride ^(g)	ND<5.0	ND	ND	ND<5.0
% Recovery Surrogate	89	105	103	106
Comments	h			

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil and sludge samples in ug/kg, wipe samples in ug/wipe
 Reporting limit unless otherwise stated: water/TCLP/SPLP extracts, ND<0.5ug/L; soils and sludges, ND<5ug/kg; wipes, ND<0.2ug/wipe
 ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis

(b) tribromomethane; (c) tetrachloromethane; (d) (2-chloroethoxy) ethene; (e) trichloromethane; (f) dichloromethane; (g) chloroethene; (h) a lighter than water immiscible sheen is present; (i) liquid sample that contains greater than ~5 vol. % sediment; (j) sample diluted due to high organic content.



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	Client P.O:	Date Extracted: 08/03-08/06/01
		Date Analyzed: 08/03-08/06/01

Volatile Halocarbons

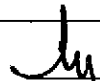
EPA method 601 or 8010

Lab ID	74196		
Client ID	MW-13		
Matrix	W		
Compound	Concentration		
Bromodichloromethane	ND		
Bromoform ^(b)	ND		
Bromomethane	ND		
Carbon Tetrachloride ^(c)	ND		
Chlorobenzene	ND		
Chloroethane	ND		
2-Chloroethyl Vinyl Ether ^(d)	ND		
Chloroform ^(e)	ND		
Chloromethane	ND		
Dibromochloromethane	ND		
1,2-Dichlorobenzene	ND		
1,3-Dichlorobenzene	ND		
1,4-Dichlorobenzene	ND		
Dichlorodifluoromethane	ND		
1,1-Dichloroethane	ND		
1,2-Dichloroethane	ND		
1,1-Dichloroethene	ND		
cis 1,2-Dichloroethene	ND		
trans 1,2-Dichloroethene	ND		
1,2-Dichloropropane	ND		
cis 1,3-Dichloropropene	ND		
trans 1,3-Dichloropropene	ND		
Methylene Chloride ^(f)	ND<1.0		
1,1,2,2-Tetrachloroethane	ND		
Tetrachloroethene	ND		
1,1,1-Trichloroethane	ND		
1,1,2-Trichloroethane	ND		
Trichloroethene	ND		
Trichlorofluoromethane	ND		
Vinyl Chloride ^(g)	ND		
% Recovery Surrogate	101		
Comments			

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil and sludge samples in ug/kg, wipe samples in ug/wipe
 Reporting limit unless otherwise stated: water/TCLP/SPLP extracts, ND<0.5ug/L; soils and sludges, ND<5ug/kg; wipes, ND<0.2ug/wipe
 ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis

(b) tribromomethane; (c) tetrachloromethane; (d) (2-chloroethoxy) ethene; (e) trichloromethane; (f) dichloromethane; (g) chloroethene; (h) a lighter than water immiscible sheen is present; (i) liquid sample that contains greater than ~5 vol. % sediment; (j) sample diluted due to high organic content.

DHS Certification No. 1644

 Edward Hamilton, Lab Director



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	Client Contact: Bob Schultz	Date Received: 08/03/01
	Client P.O:	Date Analyzed: 08/03-08/06/01
		Date Extracted: 08/03/01

LUFT Metals*

EPA analytical methods 6010/200.7, 239.2*

Lab ID	Client ID	Matrix	Extraction ^o	Cadmium	Chromium	Lead	Nickel	Zinc	% Recovery Surrogate
74195	MW-9	W	Dissolved	ND	ND	ND	ND	ND	N/A
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit	S	TTLIC	0.5 mg/kg	0.5	3.0	2.0	1.0		
	W	Dissolved	0.005 mg/L	0.02	0.005	0.05	0.05		
	---	STLC, TCLP	0.01 mg/L	0.05	0.2	0.05	0.05		

* water samples are reported in mg/L, soil and sludge samples in mg/kg, wipes in ug/wipe and all TCLP / STLC / SPLP extracts in mg/L
 * Lead is analysed using EPA method 6010 (ICP)for soils, STLC & TCLP extracts and method 239.2 (AA Furnace) for water samples
^o EPA extraction methods 1311(TCLP), 3010/3020(water, TTLIC), 3040(organic matrices, TTLIC), 3050(solids, TTLIC); STLC - CA Title 22
 @ DISTLC extractions are performed using STLC methodology except that deionized water is substituted for citric acid buffer as the extraction fluid. DISTLC results are not applicable to STLC regulatory limits.
 * surrogate diluted out of range; N/A means surrogate not applicable to this analysis
 * reporting limit raised due to matrix interference
 i) liquid sample that contains greater than ~2 vol. % sediment; this sediment is extracted with the liquid, in accordance with EPA methodologies and can significantly effect reported metal concentrations.



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QC REPORT

EPA 8015m + 8020

Date: 08/07/01

Matrix: Water

Compound	Concentration: ug/L			%Recovery		RPD	
	Sample	MS	MSD	Amount Spiked	MS		MSD
<u>SampleID:</u> 80301							
<u>Extraction:</u> EPA 5030			<u>Instrument:</u> GC-7				
Surrogate1	ND	88.0	89.0	100.00	88	89	1.1
Xylenes	ND	27.3	27.8	30.00	91	93	1.8
Ethylbenzene	ND	8.4	8.6	10.00	84	86	2.4
Toluene	ND	8.6	8.8	10.00	86	88	2.3
Benzene	ND	8.3	8.5	10.00	83	85	2.4
MTBE	ND	9.2	9.8	10.00	92	98	6.3
TPH (gas)	ND	96.2	94.3	100.00	96	94	2.0
<u>SampleID:</u> 80101							
<u>Extraction:</u> EPA 3510			<u>Instrument:</u> GC-6 A				
Surrogate1	ND	89.0	89.0	100.00	89	89	0.0
TPH (diesel)	ND	8075.0	8250.0	7500.00	108	110	2.1

$$\% \text{ Recovery} = \frac{(MS - \text{Sample})}{\text{Amount Spiked}} \cdot 100$$

$$RPD = \frac{(MS - MSD)}{(MS + MSD)} \cdot 2100$$

RPD means Relative Percent Deviation



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QC REPORT

EPA 8015m + 8020

Date: 08/03/01-0804/01

Matrix: Water

Compound	Concentration: ug/L				%Recovery		RPD
	Sample	MS	MSD	Amount Spiked	MS	MSD	

SampleID: 80201

Extraction: EPA 5030

Instrument: GC-3

Surrogate1	ND	99.0	101.0	100.00	99	101	2.0
Xylenes	ND	25.9	26.1	30.00	86	87	0.8
Ethylbenzene	ND	8.5	8.7	10.00	85	87	2.3
Toluene	ND	9.0	9.2	10.00	90	92	2.2
Benzene	ND	9.2	9.3	10.00	92	93	1.1
MTBE	ND	10.9	10.7	10.00	109	107	1.9
TPH (gas)	ND	81.2	80.1	100.00	81	80	1.3

SampleID: 80101

Extraction: EPA 3510

Instrument: GC-6 A

Surrogate1	ND	87.0	86.0	100.00	87	86	1.2
TPH (diesel)	ND	8650.0	8575.0	7500.00	115	114	0.9

$$\% \text{ Recovery} = \frac{(MS - \text{Sample})}{\text{Amount Spiked}} \cdot 100$$

$$RPD = \frac{(MS - MSD)}{(MS + MSD)} \cdot 2 \cdot 100$$



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QC REPORT

EPA 8010/8020/EDB

Date: 08/06/01-08/07/01

Extraction: N/A

Matrix: Water

Compound	Concentration: ug/L			%Recovery		RPD
	Sample	MS	MSD	Amount Spiked	MS	

SampleID: 80301

Instrument: GC-1

Surrogate1	ND	96.0	98.0	100.00	96	98	2.1
Chlorobenzene	ND	10.3	10.3	10.00	103	103	0.0
Trichloroethane	ND	9.8	10.0	10.00	98	100	2.0
1,1-DCE	ND	10.6	10.4	10.00	106	104	1.9

$$\% \text{ Recovery} = \frac{(MS - Sample)}{AmountSpiked} \cdot 100$$

$$RPD = \frac{(MS - MSD)}{(MS + MSD)} \cdot 2 \cdot 100$$

RPD means Relative Percent Deviation



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QC REPORT

LUFT

Date: 08/06/01-08/07/01

Extraction: Dissolved

Matrix: Water

Compound	Concentration: mg/L			%Recovery		RPD
	Sample	MS	MSD	Amount Spiked	MS	

SampleID: 80701

Instrument: P-1 | AA

Copper	ND	5.2	5.1	5.00	104	102	2.5
Zinc	ND	5.5	5.5	5.00	111	109	1.7
Lead	ND	5.4	5.2	5.00	107	103	3.7
Nickel	ND	5.1	5.1	5.00	102	101	0.5
Chromium	ND	5.3	5.2	5.00	105	104	0.9
Cadmium	ND	5.2	5.2	5.00	103	103	0.1

$$\% \text{ Recovery} = \frac{(MS - \text{Sample})}{\text{Amount Spiked}} \cdot 100$$

$$RPD = \frac{(MS - MSD)}{(MS + MSD)} \cdot 2 \cdot 100$$

RPD means Relative Percent Deviation

WELL DEPTH MEASUREMENTS

Well ID	Time	Top of Screen	DTB	DTP	DTW	DOP	Casing Dia	Comments
MW-1	7:55			23.82	23.91			
MW-4	7:15		24.06		18.73			
MW-6	8:05	obstruction at			22.80			
MW-7	7:10		30.00		17.25			
MW-8	7:25		39.40		26.71			
MW-9	7:20		30.50		20.02			
MW-13	7:00		39.45		24.10			
MW-14	7:45			23.51	23.57			
MW-15	7:35			Screen	23.62			not measured!

Project Name: Connell

Project Number: 425-1580

Measured By: S. Hall

Date: 8-1-01

CAMBRIA

WELL SAMPLING FORM

Project Name: <u>Connell</u>	Cambria Mgr: <u>BS</u>	Well ID: <u>MW-4</u>
Project Number: <u>425-1580</u>	Date: <u>8-1-01</u>	Well Yield: <u>----</u>
Site Address: <u>3093 Broadway Oakland, Ca</u>	Sampling Method: <u>Disposable bailer</u>	Well Diameter: <u>2" pvc</u>
Initial Depth to Water: <u>18.73</u>	Total Well Depth: <u>24.06</u>	Technician(s): <u>SA</u>
Volume/ft: <u>0.16</u>	1 Casing Volume: <u>0.85</u>	Water Column Height: <u>5.33</u>
Purging Device: <u>disposable bailer</u>	Did Well Dewater?: <u>no</u>	3 Casing Volumes: <u>2.55</u>
Start Purge Time: <u>13:40</u>	Stop Purge Time: <u>13:49</u>	Total Gallons Purged: <u>2.50</u>
		Total Time: <u>9mins</u>

1 Casing Volume = Water column height x Volume/ft.

Well Diam.

Volume/ft (gallons)

2"

0.16

4"

0.65

6"

1.47

Time	Casing Volume	Temp. C	pH	Cond. uS	Comments
13:44	1	19.1	7.51	537	odor
13:47	2	18.3	7.55	724	
13:50	3	18.7	7.59	731	DO = 0.37mg/l

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW-4	8-2-01	13:55	VOA/6 Amber/1 poly/1	HCl	TPH, BTE, XMTSE, MUCIS, TOM, TPH, MO, Pb, Cd, Cr, Zn, Ni	
MW-						

CAMBRIA

WELL SAMPLING FORM

Project Name: <u>Connell</u>	Cambria Mgr: <u>BS</u>	Well ID: <u>MW- 7</u>
Project Number: <u>425-1580</u>	Date: <u>8-1-01</u>	Well Yield: <u>----</u>
Site Address: <u>3093 Broadway Oakland, Ca</u>	Sampling Method:	Well Diameter: <u>2" pvc</u>
	<u>Disposable bailer</u>	Technician(s): <u>SG</u>
Initial Depth to Water: <u>17.25</u>	Total Well Depth: <u>30.00</u>	Water Column Height: <u>12.75</u>
Volume/ft: <u>0.16</u>	1 Casing Volume: <u>2.04</u>	3 Casing Volumes: <u>6.12</u>
Purging Device: <u>Disposable bailer</u>	Did Well Dewater?: <u>NO</u>	Total Gallons Purged: <u>6</u>
Start Purge Time: <u>14:45</u>	Stop Purge Time: <u>14:54</u>	Total Time: <u>9mins</u>

1 Casing Volume = Water column height x Volume/ft.

Well Diam.

Volume/ft (gallons)

2"	0.16
4"	0.65
6"	1.47

Time	Casing Volume	Temp. C	pH	Cond. uS	Comments
<u>14:50</u>	<u>2</u>	<u>19.5</u>	<u>7.69</u>	<u>520</u>	
<u>14:52</u>	<u>4</u>	<u>19.9</u>	<u>7.81</u>	<u>557</u>	
<u>14:55</u>	<u>6</u>	<u>20.1</u>	<u>7.33</u>	<u>522</u>	<u>DD= 0.62mg/l</u>

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
<u>MW- 7</u>	<u>8-2-01</u>	<u>15:00</u>	<u>VOA/6 Amber/1 poly/1</u>	<u>HCl</u>	<u>TPH, BTEX, MTBE, HVOCS, TPH, TPH-MO, Pb, Cd, Cr, Zn, Ni</u>	
<u>MW-</u>						

CAMBRIA

WELL SAMPLING FORM

Project Name: Connell	Cambria Mgr: BS	Well ID: MW-8
Project Number: 425-1580	Date: 8-1-01	Well Yield: ----
Site Address: 3093 Broadway Oakland, Ca	Sampling Method: Disposable bailer	Well Diameter: 2 1/2" pvc
Initial Depth to Water: 26.7'	Total Well Depth: 39.40	Technician(s): SG
Volume/ft: 1.47	1 Casing Volume: 18.65	Water Column Height: 12.69
Purging Device: Whale pump	Did Well Dewater?: no	3 Casing Volumes: 55.96
Start Purge Time: 9:00	Stop Purge Time: 9:59	Total Gallons Purged: 56
		Total Time: 59mins

1 Casing Volume = Water column height x Volume/ft.

Well Diam.	Volume/ft (gallons)
2"	0.16
4"	0.63
6"	1.47

Time	Casing Volume	Temp. C	pH	Cond. uS	Comments
9:20	18	18.5	7.14	721	
9:40	36	18.9	7.35	753	
10:00	56	19.3	7.32	759	
					NO = 0.53 mg/L

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW-	8-1-01	10:05	VOA/6 Amber/1 poly/1	HCl	TPHs BTE X MTSE MUDCS TMDA, TPH MO Pb Cd Cr Zn Ni	
MW-						

CAMBRIA

WELL SAMPLING FORM

Project Name: Connell	Cambria Mgr: BS	Well ID: MW-9
Project Number: 425-1580	Date: 8-1-01	Well Yield: ----
Site Address: 3093 Broadway Oakland, Ca	Sampling Method: Disposable bailer	Well Diameter: 2" pvc
Initial Depth to Water: 20.02	Total Well Depth: 30.50	Technician(s): SG
Volume/ft.: 0.16	1 Casing Volume: 1.67	Water Column Height: 10.48
Purging Device: Disposable bailer	Did Well Dewater?: no	3 Casing Volumes: 5.03
Start Purge Time: 14:10	Stop Purge Time: 14:19	Total Gallons Purged: 5
		Total Time: 9mins

1 Casing Volume = Water column height x Volume/ft.

Well Diam.	Volume/ft. (gallons)
2"	0.16
4"	0.63
6"	1.47

Time	Casing Volume	Temp. C	pH	Cond. uS	Comments
14:12	1	19.4	7.81	983	
14:14	2	19.3	7.50	917	
14:20	3	19.1	7.38	850	00 = 0.24 mg/L

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW-9	8-2-01	14:25	VOA/6 Amber/1 poly/1	HCl	TPP6, BT6, XMT6 MVOC's TAMD, TPH, MO, Pb, Cd, Cr, Zn, Ni	
MW-						

CAMBRIA

WELL SAMPLING FORM

Project Name: Connell	Cambria Mgr: BS	Well ID: MW-13
Project Number: 425-1580	Date: 8-1-01	Well Yield: ----
Site Address: 3093 Broadway Oakland, Ca	Sampling Method: Disposable bailer	Well Diameter: 2" pvc
Initial Depth to Water: 24.10	Total Well Depth: 39.45	Technician(s): SG
Volume/ft: 0.16	1 Casing Volume: 2.45	Water Column Height: 15.35
Purging Device: disposable bailer	Did Well Dewater?: no	3 Casing Volumes: 7.36
Start Purge Time: 13:00	Stop Purge Time: 13:14	Total Gallons Purged: 7
		Total Time: 14 mins

1 Casing Volume = Water column height x Volume/ft.

Well Diam.	Volume/ft (gallons)
2"	0.16
4"	0.65
6"	1.47

Time	Casing Volume	Temp. C	pH	Cond. uS	Comments
13:05	1	19.4	7.55	720	
13:10	2	18.7	7.73	951	
13:15	3	18.8	7.65	970	
					DO=0.51mg/L

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW-13	8-2-01	13:20	VOA/6 Amber/1 poly/1	HCl	TPHs BTE XMTSE MDOCs TPH TPH MO PbCd Cr Zn Ni	
MW-						