

C A M B R I A

RO-129

September 6, 2002

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

Alameda County
OCT 28 2002
Environmental Health

Re: **Second Quarter 2002 Monitoring Report**
Douglas Parking
1721 Webster Street 94612
Oakland, California
Cambria Project No. 580-0197



Dear Mr. Douglas:

Cambria Environmental Technology, Inc. (Cambria) is pleased to provide this second quarter 2002 monitoring report for the above-referenced site. The report describes the second quarter 2002 activities and results as well as the anticipated third quarter 2002 activities.

If you have any questions or comments, please call me at (510) 450-1982.

Sincerely,
Cambria Environmental Technology, Inc.

Mary C. Holland-Ford
Project Geologist

Attachments: Second Quarter 2002 Monitoring Report

cc: Mr. Barney M. Chan, Alameda County Department of Environmental Health, 1131 Harbor Bay Parkway,
2nd Floor, Alameda, CA 94502

Mr. Hari Patel, Technical Review Unit, UST Cleanup Fund, 1001 I Street, Sacramento, CA 94244

Oakland, CA
San Ramon, CA
Sonoma, CA

**Cambria
Environmental
Technology, Inc.**

1144 65th Street
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Oakland, CA 94608
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SECOND QUARTER 2002 MONITORING REPORT

Douglas Parking
1721 Webster Street
Oakland, California
Cambria Project No. 580-0917

September 6, 2002



Prepared for:

Mr. Lee Douglas
1721 Webster Street
Oakland, California 94612

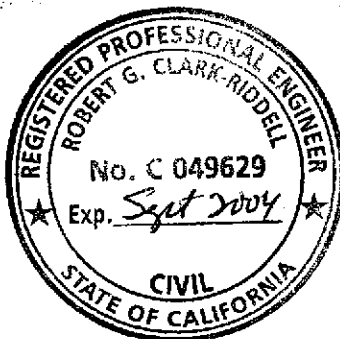
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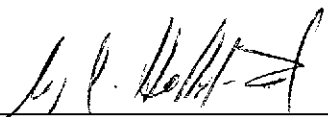
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Mary C. Holland-Ford
Project Geologist


Robert Clark-Riddell, P.E.
Principal Engineer

C A M B R I A

SECOND QUARTER 2002 MONITORING REPORT

Douglas Parking
1721 Webster Street
Oakland, California
Cambria Project No. 580-0917

September 6, 2002

INTRODUCTION



On behalf of Douglas Parking, Cambria Environmental Technology, Inc. (Cambria) is submitting this second quarter 2002 groundwater monitoring report for the above-referenced site. Presented below are the second quarter 2002 activities and the anticipated third quarter 2002 activities.

SECOND QUARTER 2002 ACTIVITIES

Monitoring Activities

Field Activities: On April 18, 2002, Cambria gauged depth-to-water and inspected for separate-phase hydrocarbons (SPH) in site wells MW-1 through MW-5. Groundwater samples were collected from monitoring wells MW-2 through MW-5. Well MW-1 is not included in the sampling schedule. Field data sheets are presented as Appendix A.

Sample Analyses: The samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg) by modified EPA Method 8015, and benzene, toluene, ethylbenzene and xylene (BTEX) and methyl tert-butyl ether (MTBE) by EPA Method 8020 by McCampbell Analytical, Inc. of Pacheco, California. As MTBE concentrations were not detected by EPA Method 8020, confirmation analysis by EPA Method 8260 was not performed. The laboratory analytical report is included as Appendix B.

Monitoring Results

Groundwater Flow Direction: Based on depth-to-water data collected during Cambria's April 18, 2002 site visit, groundwater beneath the site flows toward the northeast with an average gradient of 0.009, which is consistent with historical data. Water level and analytical results for this monitoring event are summarized in Figure 1 and on Table 1.



Hydrocarbon Distribution in Groundwater: No SPH was detected in any site wells. The maximum detected TPHg concentration was 68,000 micrograms per liter ($\mu\text{g/l}$) in groundwater samples collected from source area well MW-2. The maximum benzene concentration detected was 5,100 $\mu\text{g/l}$ in groundwater samples from source area well MW-2. Benzene results are shown in Figure 1. Consistent with historical groundwater data, groundwater samples from downgradient well MW-5 contained no detectable hydrocarbons above laboratory reporting limits. Downgradient and crossgradient well MW-4 also contained no detectable hydrocarbons above laboratory reporting limits. No MTBE was detected above laboratory reporting limits in any analyzed groundwater sample. The analytical results are summarized on Table 1.

ANTICIPATED THIRD QUARTER 2002 ACTIVITIES

Monitoring Activities

Cambria will gauge the site wells, inspect the wells for SPH, and collect groundwater samples from all wells not containing SPH. If MTBE is detected in any groundwater sample, concentrations will be confirmed using EPA Method 8260. Following field activities, Cambria will tabulate the data, contour site groundwater elevations, and prepare a groundwater monitoring report.

Corrective Action Activities

On April 29, 2002, the Alameda County Health Care Services Agency (ACHCSA) requested additional information about the planned feasibility testing. Cambria will conduct feasibility testing upon further approval from the ACHCSA. The proposed feasibility testing was approved by the California UST Cleanup Fund (Fund). The testing will evaluate the feasibility and effectiveness of air sparging and soil vapor extraction at the subject site.

APPENDICES

Figure 1 – Groundwater Elevation Contour and Benzene Concentration Map

Table 1 – Groundwater Elevation and Analytical Data

Appendix A – Field Data Sheets

Appendix B – Laboratory Analytical Report



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FIGURE

EXPLANATION

- ◆ Groundwater Monitoring Well
- SB-A ● Soil Boring Location
- Well ID
- ELEV Groundwater Elevation
- Benzene Benzene Conc. in Groundwater in parts per billion (ppb); Date is most recent sampling event unless otherwise noted.
- NS Not Sampled
- 7.00 Groundwater Elevation Contour (ft)
- Groundwater Flow Direction and Gradient (ft/ft)

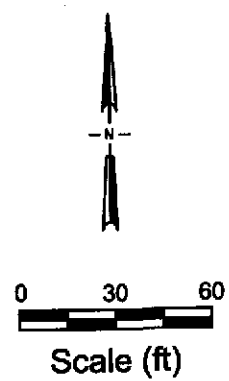
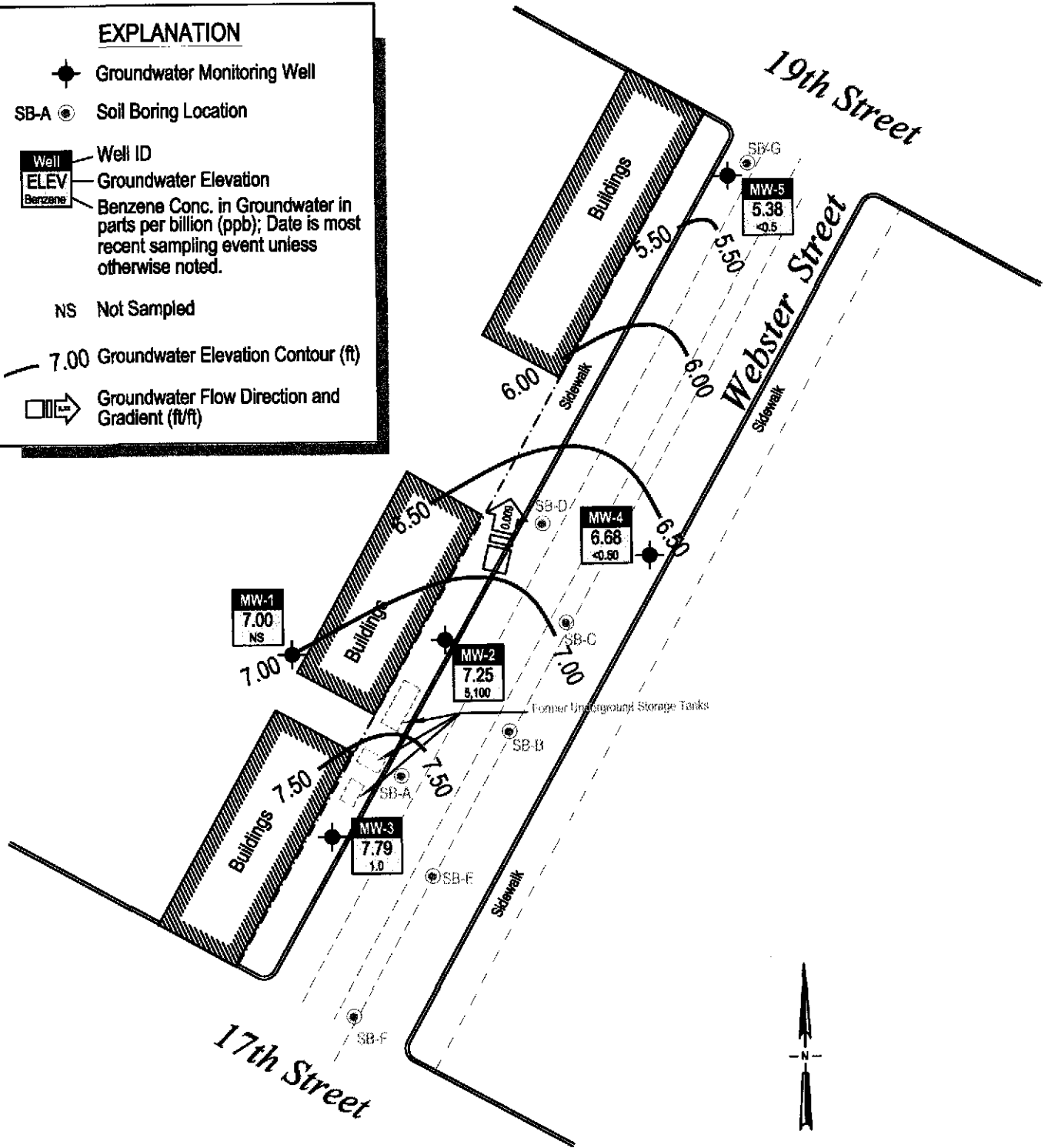


FIGURE
1

H:\SB-3004\DOUGLAS\1721 Webster\FIGURES\0802-MP-DWG

Base map from Piers Environmental Services

Douglas Parking Facility
1721 Webster Street
Oakland, California



Groundwater Elevation Contours
Benzene Concentrations
April 18, 2002

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TABLE

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

Well ID	Date	TOC Elevation (ft-msl)	Depth to Water (ft)	Groundwater Elevation (ft)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	DO (mg/L)	Notes
					← (Concentrations in µg/l) →							
MW-1	12/2/1994	29.25	19.42	9.83	nd	nd	nd	nd	nd	-	-	1
	3/6/1995	29.73	20.69	9.04	nd	nd	nd	nd	nd	-	-	1
	7/11/1995	29.81	20.65	9.16	nd	nd	nd	nd	nd	-	-	
	5/10/1996	29.81	20.80	9.01	nd	nd	nd	nd	nd	-	-	
	10/2/1996	29.81	21.35	8.46	-	-	-	-	-	-	-	2
	2/28/1997	29.81	20.57	9.24	-	-	-	-	-	-	-	2
	9/16/1997	29.81	21.50	8.31	-	-	-	-	-	-	-	2
	2/5/1998	29.81	20.91	8.90	-	-	-	-	-	-	1.90	2
	8/11/1998	29.81	20.50	9.31	-	-	-	-	-	-	0.06	2
	2/8/1999	29.81	21.42	8.39	-	-	-	-	-	-	6.00	2, 3
	2/24/1999	29.81	22.99	6.82	-	-	-	-	-	-	2.00	2, 3
	3/3/1999	29.81	20.84	8.97	-	-	-	-	-	-	3.80	2, 3
	3/10/1999	29.81	20.89	8.92	-	-	-	-	-	-	3.40	2, 3
	3/17/1999	29.81	20.84	8.97	-	-	-	-	-	-	2.80	2, 3
	5/4/1999	29.81	20.80	9.01	-	-	-	-	-	-	3.50	2
	7/20/1999	29.81	21.25	8.56	-	-	-	-	-	-	3.07	2
	10/5/1999	29.81	21.37	8.44	-	-	-	-	-	-	5.40	2
	1/7/2000	29.81	21.65	8.16	-	-	-	-	-	-	2.10	2
	4/6/2000	29.81	21.05	8.76	<50	<0.5	<0.5	<0.5	<0.5	<5.0	3.90	4
	7/31/2000	29.81	21.13	8.68	-	-	-	-	-	-	1.80	2
10/3/2000	29.81	21.69	8.12	-	-	-	-	-	-	1.42	2	
1/12/2001	29.81	22.00	7.81	-	-	-	-	-	-	0.68		
4/11/2001	29.81	22.16	7.65	-	-	-	-	-	-	0.51		
7/6/2001	29.81	22.57	7.24	-	-	-	-	-	-	-		
10/25/2001	29.81	22.71	7.10	-	-	-	-	-	-	-		
3/4/2002	29.81	22.53	7.28	-	-	-	-	-	-	-		
4/18/2002	29.81	22.81	7.00	-	-	-	-	-	-	-		
MW-2	12/2/1994	27.10	19.50	7.60	61,300	3,000	3,900	160	4,500	-	-	1
	3/6/1995	27.10	18.49	8.61	98,000	8,400	16,000	2,000	2,600	-	-	1
	7/11/1995	27.40	18.45	8.95	38,000	3,100	7,500	940	3,700	-	-	
	5/10/1996	27.40	18.56	8.84	63,000	7,400	16,000	1,500	6,000	-	-	
	10/2/1996	27.40	19.15	8.25	21,000	2,200	3,400	430	1,600	-	-	

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

Well ID	Date	TOC Elevation (ft-msl)	Depth to Water (ft)	Groundwater Elevation (ft)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	DO (mg/L)	Notes
					← (Concentrations in µg/l) →							
MW-2	2/28/1997	27.40	18.43	8.97	39,000	4,700	9,600	950	4,200	nd	-	
(cont'd)	9/16/1997	27.40	19.26	8.14	29,000	3,300	5,800	690	2,900	<620	-	
	2/5/1998	27.40	18.66	8.74	10,000	1,000	2,000	170	860	<330	7.90	
	8/11/1998	27.40	18.41	8.99	12,000	1,200	2,300	260	1,400	300	5.40	
	2/8/1999	27.40	19.84	7.56	5,500	740	1,200	150	780	60	3.70	
	2/17/1999	27.40	18.94	8.46	-	-	-	-	-	-	>20	3, 5
	2/24/1999	27.40	20.76	6.64	-	-	-	-	-	-	>20	3, 5
	3/3/1999	27.40	18.55	8.85	-	-	-	-	-	-	>20	3, 5
	3/10/1999	27.40	20.74	6.66	-	-	-	-	-	-	>20	3, 5
	3/17/1999	27.40	18.57	8.83	-	-	-	-	-	-	>20	3, 5
	5/4/1999	27.40	18.55	8.85	90,000	9,200	21,000	1,600	10,000	560	3.20	
	7/20/1999	27.40	18.98	8.42	28,000	2,100	3,700	900	4,200	<860	0.64	
	10/5/1999	27.40	19.10	8.30	11,000	870	180	30	1,400	<110	0.58	
	1/7/2000	27.40	19.41	7.99	15,000	1,300	2,100	440	1,800	<14	0.94	
	4/6/2000	27.40	18.80	8.60	17,000	1,800	3,100	500	2,200	<50	0.64	
	7/31/2000	27.40	18.87	8.53	17,000	1,500	2,700	430	2,100	<200	0.50	
	10/3/2000	27.40	19.45	7.95	27,000	2,500	4,000	660	2,900	<50	0.16	
	1/12/2001	27.40	19.80	7.60	25,000	2,700	4,100	670	3,000	<200	0.35	
	4/11/2001	27.40	20.03	7.37	97,000	9,500	21,000	2,200	7,900	<200	-	
	7/6/2001	27.40	20.19	7.21	3,500	500	150	11	420	<5.0	-	
	10/25/2001	27.40	20.35	7.05	3,800	620	230	70	400	<50	-	
3/4/2002	27.40	20.37	7.03	46,000	7,300	12,000	870	3,200	<500	-		
4/18/2002	27.40	20.15	7.25	68,000	5,100	8,900	1,100	4,000	<1,000	-		a
MW-3	12/2/1994	29.50	22.15	7.35	394,000	1,200	nd	1,800	4,000	-	-	1
	3/6/1995	29.25	20.09	9.16	21,000	400	150	24	62	-	-	1
	7/11/1995	29.56	19.99	9.57	12,000	nd	10	16	99	-	-	
	5/10/1996	29.56	20.24	9.32	8,600	nd	7.6	16	84	-	-	
	10/2/1996	29.56	20.90	8.66	11,000	nd	7.4	19	92	-	-	
	2/28/1997	29.56	20.12	9.44	6,000	nd	4.4	17	88	50	-	
	9/16/1997	29.56	20.97	8.59	6,500	<0.5	1	1	7	<5.0	-	
	2/5/1998	29.56	20.39	9.17	5,400	<0.5	6.3	15	86	<63	1.90	
	8/11/1998	29.56	19.95	9.61	2,700	<0.5	3.5	3.2	12	<10	0.05	
	2/8/1999	29.56	20.58	8.98	6,100	<0.5	8.1	18	80	<140	2.20	

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

Well ID	Date	TOC Elevation (ft-msl)	Depth to Water (ft)	Groundwater Elevation (ft)	(Concentrations in µg/l)						DO (mg/L)	Notes
					TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE		
MW-3	2/17/1999	29.56	20.53	9.03	-	-	-	-	-	-	>20	3, 5
(cont'd)	2/24/1999	29.56	22.53	7.03	-	-	-	-	-	-	>20	3, 5
	3/3/1999	29.56	20.28	9.28	-	-	-	-	-	-	>20	3, 5
	3/10/1999	29.56	22.45	7.11	-	-	-	-	-	-	>20	3, 5
	3/17/1999	29.56	20.26	9.30	-	-	-	-	-	-	>20	3, 5
	5/4/1999	29.56	20.24	9.32	11,000	<2	<2	9.8	140	<10	3.10	
	7/20/1999	29.56	20.68	8.88	11,000	<0.5	3.1	13	88	<80	0.75	
	10/5/1999	29.56	20.81	8.75	31,000	62	<0.5	21	170	<90	0.68	
	1/7/2000	29.56	21.09	8.47	13,000	<0.5	<2	21	140	<80	1.96	
	4/6/2000	29.56	20.48	9.08	5,300	1.5	1.4	9.8	60	<30	4.15	
	7/31/2000	29.56	20.62	8.94	7,100	3.5	1.0	12	66	<5.0	0.35	
	10/3/2000	29.56	21.13	8.43	8,000	<0.5	3.3	11	70	<40	3.66	
	1/12/2001	29.56	21.45	8.11	11,000	4.3	6.7	11	73	<70	0.35	
	4/11/2001	29.56	21.69	7.87	10,000	<0.5	<0.5	11	65	<10	-	
	7/6/2001	29.56	21.60	7.96	13,000	5.3	1.6	11	58	<5.0	-	
	10/25/2001	29.56	21.70	7.86	11,000	<0.5	3.0	15	70	<10	-	
	3/4/2002	29.56	21.65	7.91	1,900	1.3	0.8	<0.5	15	<5.0	-	
	4/18/2002	29.56	21.77	7.79	1,500	1.0	0.97	1.3	5.8	<5	-	a
MW-4	5/10/1996	25.29	16.98	8.31	14,000	nd	1,200	720	3,100	-	-	
	10/2/1996	25.29	17.65	7.64	12,000	nd	650	580	2,200	-	-	
	2/28/1997	25.29	16.80	8.49	13,000	nd	1,100	750	2,700	110	-	
	9/17/1997	25.29	17.93	7.36	13,000	<2.5	820	750	2,900	<190	-	
	2/5/1998	25.29	16.78	8.51	13,000	<1.0	690	690	2,900	<170	2.10	
	8/11/1998	25.29	16.59	8.70	15,000	<5	360	520	1,900	280	2.80	
	2/8/1999	25.29	17.10	8.19	9,800	<5	680	770	2,200	300	1.80	3
	2/24/1999	25.29	18.95	6.34	-	-	-	-	-	-	2.20	3
	3/3/1999	25.29	16.80	8.49	-	-	-	-	-	-	4.60	3
	3/10/1999	25.29	16.86	8.43	-	-	-	-	-	-	3.70	3
	3/17/1999	25.29	16.82	8.47	-	-	-	-	-	-	4.30	3
	5/4/1999	25.29	16.86	8.43	11,000	46	600	620	1,900	<100	4.10	
	7/20/1999	25.29	17.30	7.99	13,000	<0.5	470	7.0	2,000	<150	0.38	
	10/5/1999	25.29	17.43	7.86	18,000	4.4	720	800	2,100	<120	0.71	

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

Well ID	Date	TOC Elevation (ft-msl)	Depth to Water (ft)	Groundwater Elevation (ft)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	DO (mg/L)	Notes
					← (Concentrations in µg/l) →							
MW-4	1/7/2000	25.29	17.78	7.51	18,000	<2	930	990	2,700	<30	0.98	
<i>(cont'd)</i>	4/6/2000	25.29	17.17	8.12	8,000	31	390	530	1,300	<10	1.33	
	7/31/2000	25.29	17.21	8.08	6,200	13	170	460	850	<10	0.50	
	10/3/2000	25.29	18.00	7.29	14,000	42	820	730	2,000	<50	0.54	
	1/12/2001	25.29	18.20	7.09	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.39	
	4/11/2001	25.29	18.31	6.98	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	7/6/2001	25.29	18.35	6.94	470	2.3	1.6	0.81	43	<5.0	-	
	10/25/2001	25.29	18.47	6.82	110	0.70	<0.5	<0.5	3.3	<5.0	-	
	3/4/2002	25.29	18.43	6.86	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	4/18/2002	25.29	18.61	6.68	<50	<0.5	<0.5	<0.5	<0.5	<5	-	
MW-5	5/10/1996	21.97	14.60	7.37	nd	nd	nd	nd	nd	-	-	
	10/2/1996	21.97	15.25	6.72	nd	nd	nd	nd	nd	-	-	
	2/28/1997	21.97	14.31	7.66	nd	nd	nd	nd	nd	nd	-	
	9/17/1997	21.97	15.18	6.79	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	2/5/1998	21.97	13.64	8.33	<50	<0.5	<0.5	<0.5	<0.5	<5.0	2.80	
	8/11/1998	21.97	13.92	8.05	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.05	
	2/8/1999	21.97	14.19	7.78	<50	<0.5	<0.5	<0.5	<0.5	<5.0	3.00	
	2/24/1999	21.97	16.18	5.79	-	-	-	-	-	-	4.90	3
	3/3/1999	21.97	14.23	7.74	-	-	-	-	-	-	3.40	3
	3/10/1999	21.97	14.32	7.65	-	-	-	-	-	-	3.60	3
	3/17/1999	21.97	14.25	7.72	-	-	-	-	-	-	3.90	3
	5/4/1999	21.97	14.41	7.56	<50	<0.5	<0.5	<0.5	<0.5	<5.0	3.20	
	7/20/1999	21.97	14.44	7.53	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.99	
	10/5/1999	21.97	14.79	7.18	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.52	
	1/7/2000	21.97	15.23	6.74	-	-	-	-	-	-	-	Well inaccessible
	4/6/2000	21.97	14.74	7.23	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.67	
	7/31/2000	21.97	14.52	7.45	<50	<0.5	<0.5	<0.5	<0.5	<5.0	2.55	
	10/3/2000	21.97	15.37	6.60	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.51	
	1/12/2001	21.97	15.70	6.27	6,400	13	290	450	1,100	<40	0.71	
	4/11/2001	21.97	15.78	6.19	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	7/6/2001	21.97	15.97	6.00	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	10/25/2001	21.97	16.05	5.92	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	3/4/2002	21.97	16.21	5.76	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	4/18/2002	21.97	16.59	5.38	<50	<0.5	<0.5	<0.5	<0.5	<5	-	

CAMBRIA

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

Well ID	Date	TOC Elevation (ft-msl)	Depth to Water (ft)	Groundwater Elevation (ft)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	DO (mg/L)	Notes
					←————— (Concentrations in µg/l) —————→							
Trip Blank	01/12/01	-	-	-	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	4/11/2001	-	-	-	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	7/6/2001	-	-	-	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	3/4/2002	-	-	-	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	

Notes and Abbreviations:

Benzene, Toluene, Ethylbenzene, and Xylenes by EPA Method 8020.

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

MTBE = methyl tertiary butyl ether by EPA Method 8020.

µg/L = micrograms per liter

mg/L = milligrams per liter

ft-msl = feet above mean sea level

TOC = top of casing

nd = not detected

DO = dissolved oxygen

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

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

3 = DO monitoring event (no hydrocarbon analyses), as described in November 11, 1998 Remedial Workplan.

4 = Sampled well once to confirm well is still not impacted.

5 = Hydrogen peroxide injection occurring per our Remedial Workplan, dated November 11, 1998.

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APPENDIX A

Field Data Sheets

WELL SAMPLING FORM

Project Name: Douglas Parking	Cambria Mgr: JR	Well ID: MW- 2
Project Number: 580-0197	Date: 4-18-02	Well Yield: -----
Site Address: 1721 Webster Street Oakland, California	Sampling Method: Disposable bailer	Well Diameter: 2" pvc
		Technician(s): SA
Initial Depth to Water: 20.15	Total Well Depth: 25.70	Water Column Height: 5.55
Volume/ft: 0.16	1 Casing Volume: .88	3 Casing Volumes: 2.66
Purging Device: disposable bailer	Did Well Dewater?: no	Total Gallons Purged: 3
Start Purge Time: 4:40	Stop Purge Time: 4:54	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

Pre-purge DO: _____ mg/L

Time	Casing Volume	Temp. °C	pH	Cond. µS	Comments
4:45	1 1	16.9	7.29	1901	
4:50	2 2	16.4	7.11	1620	
4:55	3 3	16.4	7.15	1684	

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW- 2	4/16/00 4-18-02	5:00	4 voa's	HCL	TPHg, BTEX, MTBE * Confirm MTBE hits	8020 8015 8260

WELL SAMPLING FORM

Project Name: Douglas Parking	Cambria Mgr: JR	Well ID: MW- 3
Project Number: 580-0197	Date: 4-18-02	Well Yield: -----
Site Address: 1721 Webster Street Oakland, California	Sampling Method:	Well Diameter: " pvc 2
	Disposable bailer	Technician(s): SG
Initial Depth to Water: 21.77	Total Well Depth: 26.65	Water Column Height: 4.88
Volume/ft: 0.16	1 Casing Volume: 0.78	3 Casing Volumes: 2.34
Purging Device: disposable bailer	Did Well Dewater?: no	Total Gallons Purged: 2
Start Purge Time: 5:10	Stop Purge Time: 5:24	Total Time: 14 min

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

Pre-purge DO: _____ mg/L

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

Time	Casing Volume	Temp. °C	pH	Cond. µS	Comments
5:15	1 1	16.7	7.19	1090	
5:20	2 1.5	16.7	7.15	1087	
5:25	3 2	16.7	7.14	1089	

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW- 3	4/6/00 4-18-02	5:30	4 voa's	HCL	TPHg, BTEX, MTBE * Confirm MTBE hits	8020 8015 8260

WELL SAMPLING FORM

Project Name: Douglas Parking	Cambria Mgr: JR	Well ID: MW- 4
Project Number: 580-0197	Date: 4-18-02	Well Yield: -----
Site Address: 1721 Webster Street Oakland, California	Sampling Method:	Well Diameter: " pvc 2
	Disposable bailer	Technician(s): SG
Initial Depth to Water: 18.61	Total Well Depth: 29.20	Water Column Height: 10.59
Volume/ft: 0.16	1 Casing Volume: 1.69	3 Casing Volumes: 5.08
Purging Device: disposable bailer	Did Well Dewater?: no	Total Gallons Purged: 5
Start Purge Time: 4:10	Stop Purge Time: 4:24	Total Time: 14 min

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

Pre-purge DO: _____ mg/L

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

Time	Casing Volume	Temp. °C	pH	Cond. µS	Comments
4:15	1 1.5	16.4	7.29	1319	
4:20	2 3	16.5	7.11	1380	
4:25	3 5	16.6	7.15	1410	

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW- 4	4/6/00 4-18-02	4:30	4 voa's	HCL	TPHg, BTEX, MTBE * Confirm MTBE hits	8020 8015 8260

WELL SAMPLING FORM

Project Name: Douglas Parking	Cambria Mgr: JR	Well ID: MW-5
Project Number: 580-0197	Date: 4-18-02	Well Yield: -----
Site Address: 1721 Webster Street Oakland, California	Sampling Method: Disposable bailer	Well Diameter: 2" pvc
		Technician(s): SA
Initial Depth to Water: 16.59	Total Well Depth: 24.30	Water Column Height: 7.71
Volume/ft: 0.16	1 Casing Volume: 1.23	3 Casing Volumes: 3.69
Purging Device: disposable bailer	Did Well Dewater?: NO	Total Gallons Purged: 4
Start Purge Time: 3:40	Stop Purge Time: 3:54	Total Time: 14 min.

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

Pre-purge DO: _____ mg/L

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

Time	Casing Volume	Temp. °C	pH	Cond. µS	Comments
3:45	1 1.5	16.7	7.20	720	
3:50	2 3	16.5	7.18	1109	
3:55	3 4	16.5	7.21	1170	

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW-5	4/6/00 4-18-02	4:00	4 voa's	HCL	TPHg, BTEX, MTBE * Confirm MTBE hits	8020 8015 8260

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APPENDIX B

Laboratory Analytical Report



McC Campbell Analytical Inc.

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

Cambria Env. Technology 1144 65th Street, Suite C Oakland, CA 94608	Client Project ID: #580-0197; Douglas Parking	Date Sampled: 04/18/02
		Date Received: 04/24/02
	Client Contact: Ian Young	Date Reported: 04/30/02
	Client P.O.:	Date Completed: 04/30/02

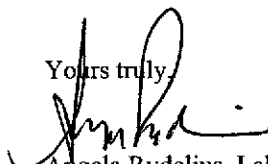
April 30, 2002

Dear Ian:

Enclosed are:

- 1). the results of 4 samples from your **#580-0197; Douglas Parking project**,
- 2). a QC report for the above samples
- 3). a copy of the chain of custody, and
- 4). a bill for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions please contact me. McC Campbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Yours truly,

Angela Rydelius, Lab Manager

QC SUMMARY REPORT FOR SW8021B/8015Cm

BatchID: 1473

Matrix: W

WorkOrder: 0204389

EPA Method: SW8021B/8015Cm		Extraction: SW5030B		Ext. Date: 4/24/02		Spiked Sample ID: 0204389-003A				
Compound	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(gas)	ND	60	115	108	5.72	110	101	8.3	70	130
MTBE	ND	10	86.4	86.5	0.0648	91.6	81.2	12	70	130
Benzene	ND	10	94.1	88.4	6.21	95.1	86.1	9.9	70	130
Toluene	ND	10	99.4	93.2	6.53	100	90.3	10	70	130
Ethylbenzene	ND	10	102	96.2	6.15	104	93.4	10	70	130
Xylenes	ND	30	103	94.7	8.75	103	93.7	9.8	70	130
%SS	101	10	102	103	0.607	100	100	0.054	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.

N/A = not enough sample to perform matrix spike, or analyte concentration in sample exceeds spike amount.

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

* MS and / or MSD spike recoveries may not be near 100% or their RPDs near 0% if: a) the sample is inhomogeneous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

McC Campbell Analytical Inc.

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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0204389

Client:

Cambria Env. Technology
 1144 65th Street, Suite C
 Oakland, CA 94608

TEL: (510) 420-0700
 FAX: (510) 420-9170
 ProjectNo: #580-0197; Doug
 PO:

24-Apr-02

Sample ID	ClientSampID	Matrix	Collection Date	Bottle	Requested Tests			
				8021B/8015				
0204389-001	MW-2	Water	4/18/02 5:00:00 PM		A			
0204389-002	MW-3	Water	4/18/02 5:30:00 PM		A			
0204389-003	MW-4	Water	4/18/02 4:30:00 PM		A			
0204389-004	MW-5	Water	4/18/02 4:00:00 PM		A			

Comments:

	Date/Time		Date/Time
Relinquished by: _____	_____	Received by: _____	_____
Relinquished by: _____	_____	Received by: _____	_____
Relinquished by: _____	_____	Received by: _____	_____

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.

Bottle Type: L-Liter V-Voa S-Soil Jar O-Orbo T-Tedlar B-Brass P-Plastic OT-Other

