CAMBRIA

July 3, 2003

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

Re: **Groundwater Monitoring Report – Second Quarter 2003**
Douglas Parking Company
1721 Webster Street
Oakland, California
File No. 4070
Cambria Project No. 580-0197

Dear Mr. Chan:

On behalf of Mr. Lee Douglas of Douglas Parking Company, Cambria Environmental Technology, Inc. (Cambria) has prepared this *Groundwater Monitoring Report - Second Quarter 2003* for the above-referenced site. The report describes the second quarter 2003 activities and results as well as the anticipated third quarter 2003 activities.

If you have any questions or comments, please call me at (510) 420-3307.

Sincerely,
Cambria Environmental Technology, Inc.

Mary C. Holland-Ford, R.G.
Project Geologist

Attachment: Groundwater Monitoring Report – Second Quarter 2003

cc: Mr. Lee Douglas, Douglas Parking Company, 1721 Webster Street, Oakland, California 94612 (2 copies)

Cambria Environmental Technology, Inc.

5900 Hollis Street
Suite A
Emeryville, CA 94608
Tel (510) 420-0700
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GROUNDWATER MONITORING REPORT – SECOND QUARTER 2003

Douglas Parking Company
1721 Webster Street
Oakland, California
File No. 4070
Cambria Project No. 580-0917

July 3, 2003

Prepared for:

Mr. Lee Douglas
1721 Webster Street
Oakland, California 94612

Prepared by:

Cambria Environmental Technology, Inc.
5900 Hollis Street, Suite A
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GROUNDWATER MONITORING REPORT – SECOND QUARTER 2003

Douglas Parking Company
1721 Webster Street
Oakland, California
File No. 4070
Cambria Project No. 580-0917

July 3, 2003

INTRODUCTION

On behalf of Douglas Parking Company, Cambria Environmental Technology, Inc. (Cambria) is submitting this *Groundwater Monitoring Report - Second Quarter 2003* for the above-referenced site. Presented below are the second quarter 2003 activities and results, and the anticipated third quarter 2003 activities.

SECOND QUARTER 2003 ACTIVITIES AND RESULTS

Monitoring Activities

Field Activities: On April 21, 2003, Cambria gauged depth-to-water and inspected all groundwater monitoring wells for separate-phase hydrocarbons (SPH). Groundwater samples were collected from monitoring wells MW-2 through MW-5. Well MW-1 was not included in the quarterly sampling schedule. Field data sheets are presented as Appendix A. The well gauging data has been submitted to the Geotracker database. See Appendix C for the Geotracker electronic delivery confirmations.

Sample Analyses: Groundwater samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg) by modified EPA Method 8015, and benzene, toluene, ethylbenzene, and xylenes (BTEX) and methyl tertiary butyl ether (MTBE) by EPA Method 8021B by McCampbell Analytical, Inc. of Pacheco, California. The laboratory analytical report is included in Appendix B. The analytical data has been submitted to the Geotracker database. See Appendix C for the Geotracker electronic delivery confirmations.

Monitoring Results

Groundwater Flow Direction: Based on depth-to-water measurements collected on April 21, 2003, groundwater beneath the site flows toward the northeast with a gradient of 0.022 ft/ft (Figure 1). The gradient is consistent with historical data. Depth to water and groundwater elevation data are presented in Table 1.

Hydrocarbon Distribution in Groundwater: Hydrocarbons were detected in two of the four wells sampled this quarter. Maximum TPHg and benzene concentrations were detected in well MW-2 at 78,000 micrograms per liter (µg/L) and 7,700 µg/L, respectively. No hydrocarbons were detected in groundwater samples from downgradient wells MW-4 and MW-5. No MTBE was detected in any of the wells. The analytical results are summarized in Figure 1 and Table 1.

ANTICIPATED THIRD QUARTER 2003 ACTIVITIES

Monitoring Activities

Cambria will gauge the site wells, inspect the wells for SPH, and collect groundwater samples from all wells not containing SPH. Groundwater samples will be analyzed for TPHg by EPA Method 8015 and BTEX and MTBE by EPA Method 8021B. If MTBE is detected by EPA Method 8021B, the MTBE concentration will be confirmed by EPA Method 8260. Following field activities, Cambria will tabulate the data, contour groundwater elevations, and prepare a quarterly groundwater monitoring report.

Offsite Plume Delineation

Cambria's *Subsurface Investigation Workplan* proposed the installation of two offsite groundwater monitoring wells to further delineate the hydrocarbon plume. Approval by the Alameda County Health Care Services Agency (ACHCSA) has been received and well installation activities are scheduled for the end of June 2003.

Corrective Action Activities

ACHCSA requested additional information about Cambria's proposed feasibility testing. Testing was proposed to evaluate the remedial effectiveness of using air sparge and soil vapor extraction to cleanup the site. Cambria will respond to the agency's request prior to conducting the feasibility testing in the third quarter.

ATTACHMENTS

Figure 1 – Groundwater Elevation Contour and Hydrocarbon Concentration Map

Table 1 – Groundwater Elevation and Analytical Data

Appendix A – Groundwater Monitoring Field Data Sheets
Appendix B – Laboratory Analytical Report
Appendix C – Geotracker Electronic Delivery Confirmations

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FIGURE

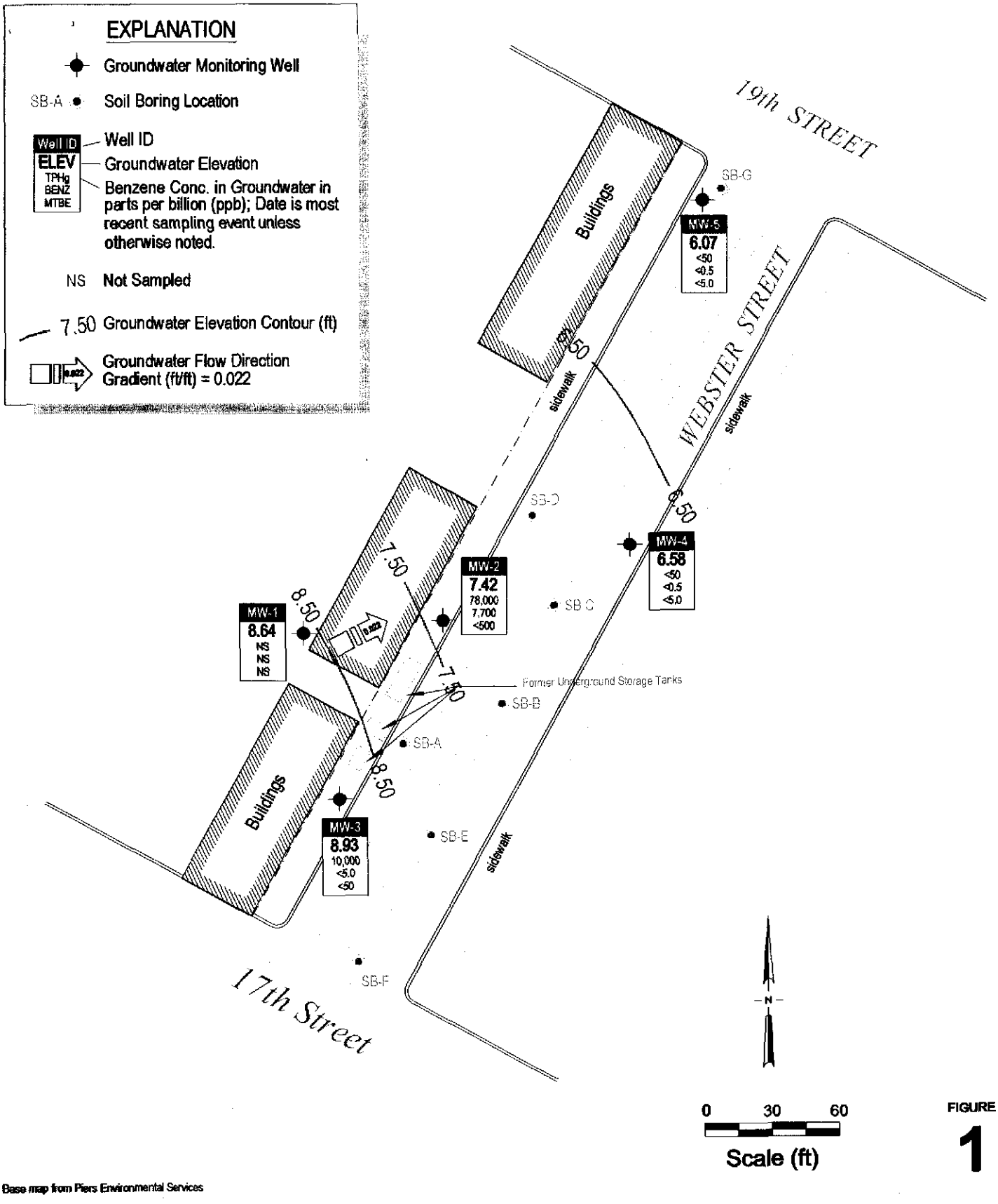

FIGURE
1

Base map from Piers Environmental Services

H:\SB-2004\DOUGLAS\1721 Webster\FIGURES\02M03-MP.DWG

Douglas Parking Facility

1721 Webster Street
Oakland, California

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Groundwater Elevation Contours and Hydrocarbon Concentration Map

April 21, 2003

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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 (TOC)	Date	Depth to Water (ft)	Groundwater Elevation (ft)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	DO (mg/L)
				← (Concentrations in µg/l) →						
MW-1	12/2/1994	19.42	9.83	nd	nd	nd	nd	nd	-	-
29.25	3/6/1995	20.69	9.04	nd	nd	nd	nd	nd	-	-
29.73	7/11/1995	20.65	9.16	nd	nd	nd	nd	nd	-	-
29.81	5/10/1996	20.80	9.01	nd	nd	nd	nd	nd	-	-
	10/2/1996	21.35	8.46	-	-	-	-	-	-	-
	2/28/1997	20.57	9.24	-	-	-	-	-	-	-
	9/16/1997	21.50	8.31	-	-	-	-	-	-	-
	2/5/1998	20.91	8.90	-	-	-	-	-	-	1.90
	8/11/1998	20.50	9.31	-	-	-	-	-	-	0.06
	2/8/1999	21.42	8.39	-	-	-	-	-	-	6.00
	2/24/1999	22.99	6.82	-	-	-	-	-	-	2.00
	3/3/1999	20.84	8.97	-	-	-	-	-	-	3.80
	3/10/1999	20.89	8.92	-	-	-	-	-	-	3.40
	3/17/1999	20.84	8.97	-	-	-	-	-	-	2.80
	5/4/1999	20.80	9.01	-	-	-	-	-	-	3.50
	7/20/1999	21.25	8.56	-	-	-	-	-	-	3.07
	10/5/1999	21.37	8.44	-	-	-	-	-	-	5.40
	1/7/2000	21.65	8.16	-	-	-	-	-	-	2.10
	4/6/2000	21.05	8.76	<50	<0.5	<0.5	<0.5	<0.5	<5.0	3.90
	7/31/2000	21.13	8.68	-	-	-	-	-	-	1.80
	10/3/2000	21.69	8.12	-	-	-	-	-	-	1.42
	1/12/2001	22.00	7.81	-	-	-	-	-	-	0.68
	4/11/2001	22.16	7.65	-	-	-	-	-	-	0.51
	7/6/2001	22.57	7.24	-	-	-	-	-	-	-
	10/25/2001	22.71	7.10	-	-	-	-	-	-	-
	3/4/2002	22.53	7.28	-	-	-	-	-	-	-
	4/18/2002	22.81	7.00	-	-	-	-	-	-	-
	7/9/2002	22.95	6.86	-	-	-	-	-	-	-
	10/4/2002	23.13	6.68	-	-	-	-	-	-	-
	1/12/2003	22.05	7.76	-	-	-	-	-	-	-
	4/21/2003	**21.17**	**8.64**	-	-	-	-	-	-	-
MW-2	12/2/1994	19.50	7.60	61,300	3,000	3,900	160	4,500	-	-
27.10	3/6/1995	18.49	8.61	98,000	8,400	16,000	2,000	2,600	-	-
27.40	7/11/1995	18.45	8.95	38,000	3,100	7,500	940	3,700	-	-
	5/10/1996	18.56	8.84	63,000	7,400	16,000	1,500	6,000	-	-
	10/2/1996	19.15	8.25	21,000	2,200	3,400	430	1,600	-	-
	2/28/1997	18.43	8.97	39,000	4,700	9,600	950	4,200	nd	-
	9/16/1997	19.26	8.14	29,000	3,300	5,800	690	2,900	<620	-
	2/5/1998	18.66	8.74	10,000	1,000	2,000	170	860	<330	7.90
	8/11/1998	18.41	8.99	12,000	1,200	2,300	260	1,400	300	5.40
	2/8/1999	19.84	7.56	5,500	740	1,200	150	780	60	3.70
	2/17/1999	18.94	8.46	-	-	-	-	-	-	>20
	2/24/1999	20.76	6.64	-	-	-	-	-	-	>20
	3/3/1999	18.55	8.85	-	-	-	-	-	-	>20
	3/10/1999	20.74	6.66	-	-	-	-	-	-	>20
	3/17/1999	18.57	8.83	-	-	-	-	-	-	>20
	5/4/1999	18.55	8.85	90,000	9,200	21,000	1,600	10,000	560	3.20
	7/20/1999	18.98	8.42	28,000	2,100	3,700	900	4,200	<860	0.64
	10/5/1999	19.10	8.30	11,000	870	180	30	1,400	<110	0.58
	1/7/2000	19.41	7.99	15,000	1,300	2,100	440	1,800	<14	0.94
	4/6/2000	18.80	8.60	17,000	1,800	3,100	500	2,200	<50	0.64
	7/31/2000	18.87	8.53	17,000	1,500	2,700	430	2,100	<200	0.50
	10/3/2000	19.45	7.95	27,000	2,500	4,000	660	2,900	<50	0.16
	1/12/2001	19.80	7.60	25,000	2,700	4,100	670	3,000	<200	0.35
	4/11/2001	20.03	7.37	97,000	9,500	21,000	2,200	7,900	<200	-
	7/6/2001	20.19	7.21	3,500	500	150	11	420	<5.0	-
	10/25/2001	20.35	7.05	3,800	620	230	70	400	<50	-

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

Well ID	Date	Depth to	Groundwater	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	DO
(TOC)		Water (ft)	Elevation (ft)	←		(Concentrations in µg/l)			→	(mg/L)
MW-2	3/4/2002	20.37	7.03	46,000	7,300	12,000	870	3,200	<500	-
(cont'd)	4/18/2002	20.15	7.25	68,000	5,100	8,900	1,100	4,000	<1,000	-
	7/9/2002	21.09	6.31	1,000	200	8.9	0.67	82	<10	-
	10/4/2002	21.28	6.12	270	100	3.4	0.53	10	<5.0	-
	1/12/2003	20.59	6.81	67,000	7,600	13,000	1,400	5,600	<500	-
	4/21/2003	**19.98**	**7.42**	**78,000**	**7,700**	**12,000**	**1,900**	**6,900**	**<500**	-
MW-3	12/2/1994	22.15	7.35	394,000	1,200	nd	1,800	4,000	-	-
29.50	3/6/1995	20.09	9.16	21,000	400	150	24	62	-	-
29.25	7/11/1995	19.99	9.57	12,000	nd	10	16	99	-	-
29.56	5/10/1996	20.24	9.32	8,600	nd	7.6	16	84	-	-
	10/2/1996	20.90	8.66	11,000	nd	7.4	19	92	-	-
	2/28/1997	20.12	9.44	6,000	nd	4.4	17	88	50	-
	9/16/1997	20.97	8.59	6,500	<0.5	1	1	7	<5.0	-
	2/5/1998	20.39	9.17	5,400	<0.5	6.3	15	86	<63	1.90
	8/11/1998	19.95	9.61	2,700	<0.5	3.5	3.2	12	<10	0.05
	2/8/1999	20.58	8.98	6,100	<0.5	8.1	18	80	<140	2.20
	2/17/1999	20.53	9.03	-	-	-	-	-	-	>20
	2/24/1999	22.53	7.03	-	-	-	-	-	-	>20
	3/3/1999	20.28	9.28	-	-	-	-	-	-	>20
	3/10/1999	22.45	7.11	-	-	-	-	-	-	>20
	3/17/1999	20.26	9.30	-	-	-	-	-	-	>20
	5/4/1999	20.24	9.32	11,000	<2	<2	9.8	140	<10	3.10
	7/20/1999	20.68	8.88	11,000	<0.5	3.1	13	88	<80	0.75
	10/5/1999	20.81	8.75	31,000	62	<0.5	21	170	<90	0.68
	1/7/2000	21.09	8.47	13,000	<0.5	<2	21	140	<80	1.96
	4/6/2000	20.48	9.08	5,300	1.5	1.4	9.8	60	<30	4.15
	7/31/2000	20.62	8.94	7,100	3.5	1.0	12	66	<5.0	0.35
	10/3/2000	21.13	8.43	8,000	<0.5	3.3	11	70	<40	3.66
	1/12/2001	21.45	8.11	11,000	4.3	6.7	11	73	<70	0.35
	4/11/2001	21.69	7.87	10,000	<0.5	<0.5	11	65	<10	-
	7/6/2001	21.60	7.96	13,000	5.3	1.6	11	58	<5.0	-
	10/25/2001	21.70	7.86	11,000	<0.5	3.0	15	70	<10	-
	3/4/2002	21.65	7.91	1,900	1.3	0.8	<0.5	15	<5.0	-
	4/18/2002	21.77	7.79	1,500	1.0	0.97	1.3	5.8	<5	-
	7/9/2002	22.03	7.53	13,000	6.8	5.7	13	59	<90	-
	10/4/2002	22.15	7.41	8,400	<10	<10	<10	42	<100	-
	1/12/2003	21.13	8.43	9,000	9.5	5.1	8.5	46	<90	-
	4/21/2003	**20.63**	**8.93**	**10,000**	**<5.0**	**<5.0**	**8.5**	**32**	**<50**	-
MW-4	5/10/1996	16.98	8.31	14,000	nd	1,200	720	3,100	-	-
25.29	10/2/1996	17.65	7.64	12,000	nd	650	580	2,200	-	-
	2/28/1997	16.80	8.49	13,000	nd	1,100	750	2,700	110	-
	9/17/1997	17.93	7.36	13,000	<2.5	820	750	2,900	<190	-
	2/5/1998	16.78	8.51	13,000	<1.0	690	690	2,900	<170	2.10
	8/11/1998	16.59	8.70	15,000	<5	360	520	1,900	280	2.80
	2/8/1999	17.10	8.19	9,800	<5	680	770	2,200	300	1.80
	2/24/1999	18.95	6.34	-	-	-	-	-	-	2.20
	3/3/1999	16.80	8.49	-	-	-	-	-	-	4.60
	3/10/1999	16.86	8.43	-	-	-	-	-	-	3.70
	3/17/1999	16.82	8.47	-	-	-	-	-	-	4.30
	5/4/1999	16.86	8.43	11,000	46	600	620	1,900	<100	4.10
	7/20/1999	17.30	7.99	13,000	<0.5	470	7.0	2,000	<150	0.38
	10/5/1999	17.43	7.86	18,000	4.4	720	800	2,100	<120	0.71
	1/7/2000	17.78	7.51	18,000	<2	930	990	2,700	<30	0.98
	4/6/2000	17.17	8.12	8,000	31	390	530	1,300	<10	1.33
	7/31/2000	17.21	8.08	6,200	13	170	460	850	<10	0.50
	10/3/2000	18.00	7.29	14,000	42	820	730	2,000	<50	0.54
	1/12/2001	18.20	7.09	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.39

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

Well ID (TOC)	Date	Depth to Water (ft)	Groundwater Elevation (ft)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	DO (mg/L)
				← (Concentrations in µg/l) →						
MW-4	4/11/2001	18.31	6.98	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-
(cont'd)	7/6/2001	18.35	6.94	470	2.3	1.6	0.81	43	<5.0	-
	10/25/2001	18.47	6.82	110	0.70	<0.5	<0.5	3.3	<5.0	-
	3/4/2002	18.43	6.86	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-
	4/18/2002	18.61	6.68	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-
	7/9/2002	19.50	5.79	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-
	10/4/2002	19.83	5.46	310	2.0	2.9	13	16	<0.5	-
	1/12/2003	19.07	6.22	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-
	4/21/2003	**18.71**	**6.58**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<5.0**	-
MW-5	5/10/1996	14.60	7.37	nd	nd	nd	nd	nd	-	-
21.97	10/2/1996	15.25	6.72	nd	nd	nd	nd	nd	-	-
	2/28/1997	14.31	7.66	nd	nd	nd	nd	nd	nd	-
	9/17/1997	15.18	6.79	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	-
	2/5/1998	13.64	8.33	<50	<0.5	<0.5	<0.5	<0.5	<5.0	2.80
	8/11/1998	13.92	8.05	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.05
	2/8/1999	14.19	7.78	<50	<0.5	<0.5	<0.5	<0.5	<5.0	3.00
	2/24/1999	16.18	5.79	-	-	-	-	-	-	4.90
	3/3/1999	14.23	7.74	-	-	-	-	-	-	3.40
	3/10/1999	14.32	7.65	-	-	-	-	-	-	3.60
	3/17/1999	14.25	7.72	-	-	-	-	-	-	3.90
	5/4/1999	14.41	7.56	<50	<0.5	<0.5	<0.5	<0.5	<5.0	3.20
	7/20/1999	14.44	7.53	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.99
	10/5/1999	14.79	7.18	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.52
	1/7/2000*	15.23	6.74	-	-	-	-	-	-	-
	4/6/2000	14.74	7.23	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.67
	7/31/2000	14.52	7.45	<50	<0.5	<0.5	<0.5	<0.5	<5.0	2.55
	10/3/2000	15.37	6.60	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.51
	1/12/2001	15.70	6.27	6,400	13	290	450	1,100	<40	0.71
	4/11/2001	15.78	6.19	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-
	7/6/2001	15.97	6.00	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-
	10/25/2001	16.05	5.92	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-
	3/4/2002	16.21	5.76	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-
	4/18/2002	16.59	5.38	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-
	7/9/2002	16.94	5.03	170	1.0	0.65	2.1	4.0	<15	-
	10/4/2002	17.14	4.83	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-
	1/12/2003	16.58	5.39	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-
	4/21/2003	**15.90**	**6.07**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<5.0**	-
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 80208260
DO = dissolved oxygen
<n = Below detection limit of n µg/L
* = Well inaccessible
µg/L = micrograms per liter
mg/L = milligrams per liter
ft-msl = feet above mean sea level
TOC = top of casing elevations in feet above mean sea level
nd = not detected

Data prior to 7/11/95 from Gen Tech and Piers Environmental Quarterly Groundwater Monitoring Reports dated December 2, 1994 and March 6, 1995, respectively.
Sampling no longer required in well MW-1 per September 17, 1996, ACDEH letter to Douglas Parking.
DO monitoring (no hydrocarbon analyses), as described in November 11, 1998 Remedial Workplan.

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APPENDIX A

Groundwater Monitoring Field Data Sheets

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Groundwater Monitoring Field Sheet

Well ID	Time	DTP	DTW	Product Thickness	Amount of Product Removed	Casing Diam.	Comment
MW-1	2:40		21.17				
MW-2	2:45		19.98				
MW-3	2:50		20.63				
MW-4	2:35		18.71				
MW-5	2:30		15.90				

Project Name: Douglas Parking

Project Number/Task: 580-0197 / 061

Measured By: L. Hill

Date: 4-21-03

CAMBRIA

WELL SAMPLING FORM

Project Name: Douglas Parking	Cambria Mgr: MHF	Well ID: MW-2
Project Number: 580-0197	Date: 4-21-03	Well Yield:
Site Address: 1721 Webster St Oakland, Ca	Sampling Method: disposable bailer	Well Diameter: 2 ▯ pvc Technician(s): SG
Initial Depth to Water: 19.98	Total Well Depth: 25.70	Water Column Height: 5.72
Volume/ft: 0.16	1 Casing Volume: 0.91	3 Casing Volumes: 2.73
Purging Device: disposabable bailer	Did Well Dewater?: no	Total Gallons Purged: 3
Start Purge Time: 4:10	Stop Purge Time: 4:24	Total Time: 14mins

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
4:15	1	19.4	7.20	3999	
4:20	2	18.9	7.28	3999	
4:25	3	18.9	7.29	3999	

Fe = **mg/L** **ORP =** **mV** **DO =** **mg/L**

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW-2	4-21-03	4:30	3voa	HCl		

CAMBRIA

WELL SAMPLING FORM

Project Name: Douglas Parking	Cambria Mgr: MHF	Well ID: MW-3
Project Number: 580-0197	Date: 4-21-03	Well Yield:
Site Address: 721 Webster St Oakland, Ca	Sampling Method: disposable bailer	Well Diameter: 2 ☐ pvc
		Technician(s): SG
Initial Depth to Water: 20.63	Total Well Depth: 26.65	Water Column Height: 6.02
Volume/ft: 0.16	1 Casing Volume: 0.96	3 Casing Volumes: 2.88
Purging Device: disposable bailer	Did Well Dewater?: NO	Total Gallons Purged: 3
Start Purge Time: 4:45	Stop Purge Time: 4:49	Total Time: 14mins

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
4:50	1	18.9	7.45	1750	
4:55	2	19.3	7.20	1922	
5:00	3	19.2	7.23	1985	

Fe = **mg/L** **ORP =** **mV** **DO =** **mg/L**

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW-3	4-21-03	5:05	3voa	HCl		

CAMBRIA

WELL SAMPLING FORM

Project Name: Douglas Parking	Cambria Mgr: MHF	Well ID: MW-4
Project Number: 580-0197	Date: 4-21-03	Well Yield:
Site Address: 721 Webster St Oakland, Ca	Sampling Method: disposable bailer	Well Diameter: 2 ☐ pvc Technician(s): SG
Initial Depth to Water: 18.71	Total Well Depth: 29.20	Water Column Height: 10.49
Volume/ft: 0.16	1 Casing Volume: 1.67	3 Casing Volumes: 5.01
Purging Device: disposable bailer	Did Well Dewater?: no	Total Gallons Purged: 5
Start Purge Time: 3:35	Stop Purge Time: 3:49	Total Time: 14mins

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
3:40	1.5	19.3	7.20	3999	
3:45	3	19.5	7.22	3999	
3:50	5	19.3	7.25	3999	

Fe = **mg/L** **ORP =** **mV** **DO =** **mg/L**

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW-4	4-21-03	3:55	3voa	HCl		

CAMBRIA

WELL SAMPLING FORM

Project Name: Douglas Parking	Cambria Mgr: MHF	Well ID: MW-5
Project Number: 580-0197	Date: 4-21-03	Well Yield:
Site Address: 721 Webster St Oakland, Ca	Sampling Method: disposable bailer	Well Diameter: 2 ☐ pvc Technician(s): SG
Initial Depth to Water: 15.90	Total Well Depth: 24.30	Water Column Height: 8.40
Volume/ft: 0.16	1 Casing Volume: 1.34	3 Casing Volumes: 4.03
Purging Device: disposable bailer	Did Well Dewater?: no	Total Gallons Purged: 4
Start Purge Time: 3:00	Stop Purge Time: 3:14	Total Time: 14mins

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
3:05	1.5	19.0	7.10	1710	
3:10	3	19.0	7.13	1950	
3:15	4	19.0	7.15	1829	

Fe = **mg/L** **ORP =** **mV** **DO =** **mg/L**

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW-5	4-21-03	3:20	3voa	HCl		

FILE COPY

CHAIN OF CUSTODY RECORD

McCAMPBELL ANALYTICAL INC.
110 2nd AVENUE SOUTH, #D7
PACHECO, CA 94553-5560
Telephone: (925) 798-1620 Fax: (925) 798-1622

TURN AROUND TIME: ☐ RUSH ☐ 24 HOUR ☐ 48 HOUR ☒ 5 DAY

EDF Required? ☒ Yes ☐ No

Report To: Mary Holland-Ford Bill To: Cambria Env. Tech.

Company: Cambria Environmental Technology Inc.
5900 Hollis Street
Emeryville, CA 94608 E-mail:
Tele: 510-420-3307 Fax: 510-420-9170
Project #: 580-0197-061 Project Name: Douglas Parking
Project Location: 1721 Webster St. Oakland, CA
Sampler Signature: S. Hill

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	MATRIX Soil	MATRIX Air	MATRIX Sludge	MATRIX Other	METHOD PRESERVED Ice	METHOD PRESERVED HCl	METHOD PRESERVED HNO_3	METHOD PRESERVED Other	Analysis Request: BTEX & TPH as Gas (602/8020 + 8015)/ MTBE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601 / 8010	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8080	EPA 608 / 8080 PCB's ONLY	EPA 624 / 8240 / 8260	EPA 625 / 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals	LUFT 5 Metals	Lead (7240/7421/239.2/6010)	RCI	Other	Comments
MW-2		4-21-03	4:30	3	voa	x					x	x			x																Confirm all MTBE hits by 8260
MW-3		4-21-03	5:05	3	voa	x					x	x			x																
MW-4		4-21-03	3:55	3	voa	x					x	x			x																
MW-5		4-21-03	3:20	3	voa	x					x	x			x																

Other | Comments

Relinquished By:	Date:	Time:	Received By:
S. Hill	4-22-03	6:30	secure location
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:

Remarks:

CAMBRIA

APPENDIX B

Laboratory Analytical Report

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

Cambria Env. Technology 5900 Hollis St, Suite A Emeryville, CA 94608	Client Project ID: #580-0197-061; Douglas Parking	Date Sampled: 04/21/03
		Date Received: 04/22/03
	Client Contact: Mary Holland-Ford	Date Reported: 04/28/03
	Client P.O.:	Date Completed: 04/28/03

WorkOrder: 0304340

April 28, 2003

Dear Mary:

Enclosed are:

1). the results of 4 analyzed samples from your **#580-0197-061; 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. McCampbell 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

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

Cambria Env. Technology	Client Project ID: #580-0197-061; Douglas Parking	Date Sampled: 04/21/03
5900 Hollis St, Suite A		Date Received: 04/22/03
Emeryville, CA 94608	Client Contact: Mary Holland-Ford	Date Extracted: 04/23/03
	Client P.O.:	Date Analyzed: 04/23/03

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

Extraction method: SW5030B Analytical methods: SW8021B/8015Cm Work Order: 0304340

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	MW-2	W	78,000,a	ND<500	7700	12,000	1900	6900	100	105
002A	MW-3	W	10,000,a	ND<50	ND<5.0	ND<5.0	8.5	32	10	---#
003A	MW-4	W	ND	ND	ND	ND	ND	ND	1	104
004A	MW-5	W	ND	ND	ND	ND	ND	ND	1	106
Reporting Limit for DF =1; ND means not detected at or above the reporting limit		W	50	5.0	0.5	0.5	0.5	0.5	1	µg/L
		S	NA	NA	NA	NA	NA	NA	1	mg/Kg

*water and vapor samples are reported in µg/L, soil and sludge samples in mg/kg, wipe samples in µg/wipe, and TCLP extracts in µg/L.

cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent / mineral spirit?); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) reporting limit raised due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern.

DHS Certification No. 1644

Angela Rydelius, Lab Manager

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

QC SUMMARY REPORT FOR SW8021B/8015Cm

Matrix: W WorkOrder: 0304340

EPA Method: SW8021B/8015Cm Extraction: SW5030B BatchID: 6640 Spiked Sample ID: 0304323-004A

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(btex)£	ND	60	106	104	1.65	108	108	0	80	120
MTBE	7.901	10	83.4	90.2	4.10	98.6	94.8	3.90	80	120
Benzene	ND	10	101	105	3.85	99.4	99.5	0.128	80	120
Toluene	ND	10	93.5	96.5	3.17	92.8	92.3	0.614	80	120
Ethylbenzene	ND	10	103	105	2.38	102	102	0	80	120
Xylenes	ND	30	96.7	100	3.39	96.7	96.7	0	80	120
%SS:	102	100	103	105	1.87	99.3	99.1	0.192	80	120

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

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

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

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

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

cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or

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

QC SUMMARY REPORT FOR SW8021B/8015Cm

Matrix: W WorkOrder: 0304340

EPA Method: SW8021B/8015Cm Extraction: SW5030B BatchID: 6663 Spiked Sample ID: 0304340-004A

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(btex)£	ND	60	120	117	2.53	109	107	2.42	80	120
MTBE	ND	10	101	101	0	98.8	106	7.31	80	120
Benzene	ND	10	113	112	0.741	108	115	6.07	80	120
Toluene	ND	10	107	106	1.29	103	109	5.42	80	120
Ethylbenzene	ND	10	112	109	3.03	109	112	2.74	80	120
Xylenes	ND	30	107	103	3.17	107	110	3.08	80	120
%SS:	106	100	106	109	2.73	105	107	1.60	80	120

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

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

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

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

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

cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or

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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0304340

Client:
Cambria Env. Technology
5900 Hollis St, Suite A
Emeryville, CA 94608

TEL: (510) 450-1983
FAX: (510) 450-8295
ProjectNo: #580-0197-061; Douglas Parking
PO:

Date Received: **04/22/2003**
Date Printed: **04/22/2003**

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests						
					<>	M8021B/8015C					
0304340-001	MW-2	Water	04/21/2003 4:30:00 PM	☐	A	A					
0304340-002	MW-3	Water	04/21/2003 5:05:00 PM	☐		A					
0304340-003	MW-4	Water	04/21/2003 3:55:00 PM	☐		A					
0304340-004	MW-5	Water	04/21/2003 3:20:00 PM	☐		A					

Prepared by: Elisa Venegas

Comments: Confirm all MTBE hits by 8260

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.

CAMBRIA

APPENDIX C

Geotracker Electronic Delivery Confirmations

AB2886 Electronic Delivery

Main Menu | View/Add Facilities | Upload EDD | Check EDD

UPLOADING A GEO_WELL FILE

Processing is complete. No errors were found! Your file has been successfully submitted!

Submittal Title:	**Douglas 2QM03 geo_well**
Submittal Date/Time:	**6/16/2003 10:54:15 AM**
Confirmation Number:	**1198094010**

Back to Main Menu

Logged in as CAMBRIA-EM (AUTH_RP) CONTACT SITE ADMINISTRATOR.

AB2886 Electronic Delivery

Main Menu | View/Add Facilities | Upload EDD | Check EDD

Your EDF file has been succcessfully uploaded!

Confirmation Number: 1484272301
Date/Time of Submittal: 6/16/2003 10:56:21 AM
Facility Global ID: T0600100140
Facility Name: DOUGLAS PARKING COMPANY
Submittal Title: Douglas 2QM03
Submittal Type: GW Monitoring Report

Logged in as CAMBRIA-EM (AUTH_RP) CONTACT SITE ADMINISTRATOR