CAMBRIA

4070/129

Barry

December 12, 2001

DEC 18 2001

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

Re: **Third Quarter 2001 Monitoring Report**
Douglas Parking
1721 Webster Street
Oakland, California
Cambria Project No. 580-0197

Dear Mr. Douglas:

Cambria Environmental Technology, Inc. (Cambria) is pleased to provide this third quarter 2001 monitoring report for the above-referenced site. The report describes the third quarter 2001 activities and results as well as the anticipated fourth quarter 2001 activities.

If you have any questions or comments, please call me at (510) 420-3340.

Sincerely,
Cambria Environmental Technology, Inc.

Bella P. Bakrania
Project Engineer

Attachments: Third Quarter 2001 Monitoring Report

cc: Mr. Larry Seto, 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
Suite B
Oakland, CA 94608
Tel (510) 420-0700
Fax (510) 420-9170

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THIRD QUARTER 2001 MONITORING REPORT

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

December 12, 2001

Prepared for:

Mr. Lee Douglas
1721 Webster Street
Oakland, California 94612

Prepared by:

Cambria Environmental Technology, Inc.
1144 65th Street, Suite B
Oakland, California 94608

Bella P. Bakrania
Project Engineer

Bob Clark-Riddell, P.E.
Principal Engineer

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THIRD QUARTER 2001 MONITORING REPORT

Douglas Parking
1721 Webster Street
Oakland, California
Cambria Project No. 580-0197

December 13, 2001

INTRODUCTION

On behalf of Douglas Parking, Cambria Environmental Technology, Inc. (Cambria) is submitting this third quarter 2001 groundwater monitoring report for the above-referenced site. Presented below are the third quarter 2001 activities and the anticipated fourth quarter 2001 activities.

THIRD QUARTER 2001 ACTIVITIES

Monitoring Activities

Field Activities: On July 6, 2001, 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, MW-3, MW-4, and MW-5. Well MW-1 is not part of 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. MTBE concentrations were not detected by EPA Method 8020, so 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 July 6, 2001 site visit, groundwater beneath the site flows toward the north with an average gradient of 0.006 ft/ft (see Figure 1). Depth-to-water and groundwater elevation data are presented in Table 1.

Hydrocarbon Distribution in Groundwater: No SPH was detected in any site wells. The maximum detected TPHg concentration was 13,000 micrograms per liter (µg/l) in groundwater samples collected from well MW-3. The maximum benzene concentration detected was 500 µg/l in groundwater samples from well MW-2. Consistent with historical groundwater data, groundwater samples from well MW-5 contained no detectable hydrocarbons above laboratory reporting limits. No MTBE was detected in any analyzed groundwater sample. The analytical results are summarized on Table 1.

ANTICIPATED FOURTH QUARTER 2001 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

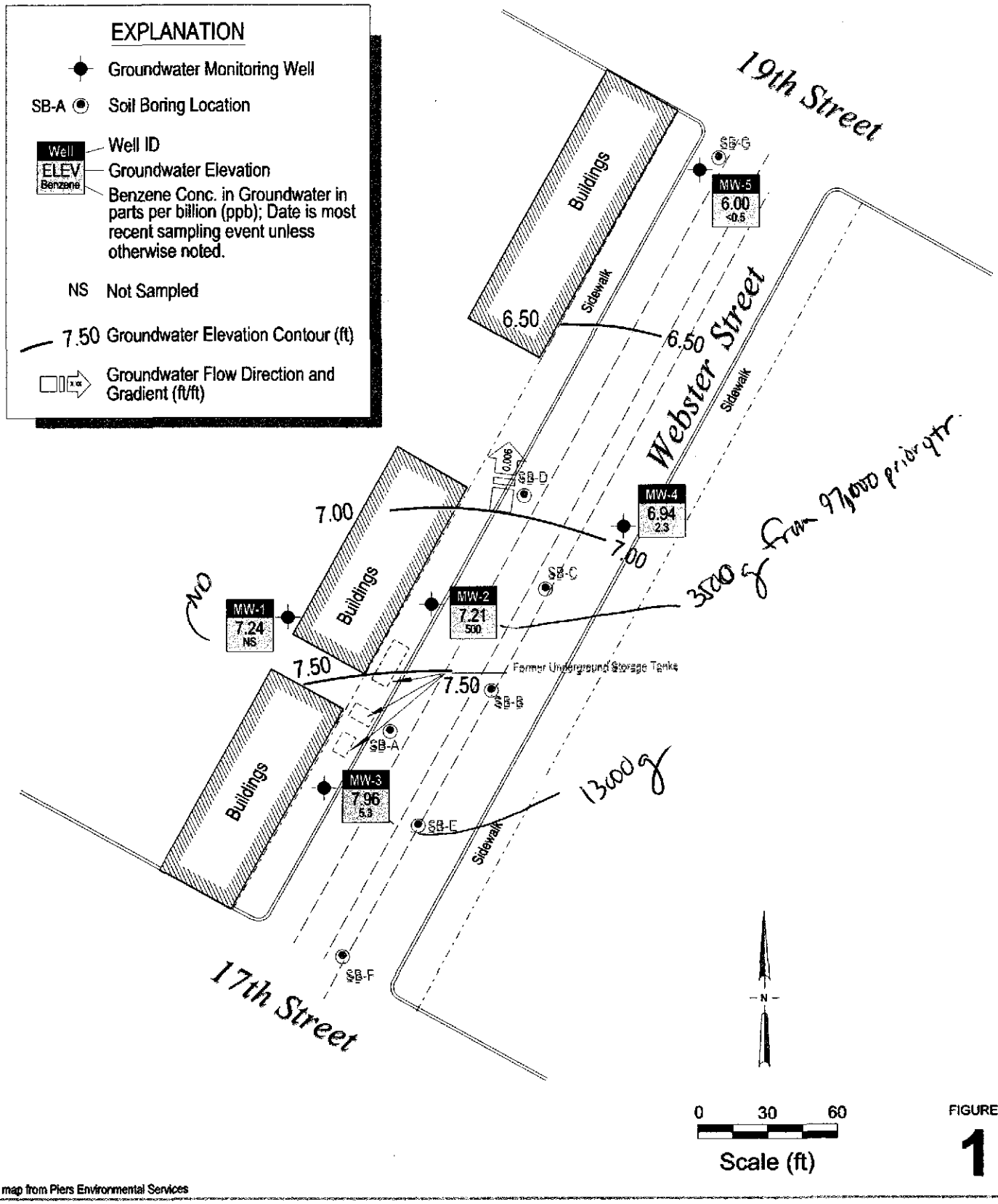
Cambria has begun preparing for feasibility testing of air sparging and soil vapor extraction at the site, as approved by the UST Cleanup Fund and the Alameda County Health Care Services Agency.

Investigation Activities

Cambria is preparing an investigation workplan to better characterize the site upgradient and crossgradient of the former underground storage tanks. This workplan was required by the August 15, 2001 letter from the Alameda County Health Care Services Agency.

Appendices

Figure 1 – Groundwater Elevation Contour Map
Table 1 – Groundwater Elevation and Analytical Data
Appendix A – Field Data Sheets
Appendix B – Laboratory Analytical Report



Base map from Piers Environmental Services

H:\SB-2004\DOUGLAS\1721 Webster\FIGURES\QM01-MP.DWG

Douglas Parking Facility
1721 Webster Street
Oakland, California

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Groundwater Elevation Contour Map
July 6, 2001

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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**	-	-	-	-	-	-	-	
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	-	-	
	2/28/1997	27.40	18.43	8.97	39,000	4,700	9,600	950	4,200	nd	-	
	9/16/1997	27.40	19.26	8.14	29,000	3,300	5,800	690	2,900	<620	-	

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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)			→		
	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	-	a
	7/6/2001	**27.40**	**20.19**	**7.21**	**3,500**	**500**	**150**	**11**	**420**	**<5.0**	-	**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	
	2/17/1999	29.56	20.53	9.03	-	-	-	-	-	-	>20	3, 5
	2/24/1999	29.56	22.53	7.03	-	-	-	-	-	-	>20	3, 5

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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) →							
	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	-	b,c
	7/6/2001	**29.56**	**21.60**	**7.96**	**13,000**	**5.3**	**1.6**	**11**	**58**	**<5.0**	**-**	**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	
	1/7/2000	25.29	17.78	7.51	18,000	<2	930	990	2,700	<30	0.98	
	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**	**-**	**a**

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-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**	-	

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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)			→		
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	-	

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 Novembet 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.
a = Unmodified or weakly modified gasoline is significant.
b = Heavier gasoline range compounds are significant (aged gasoline?).
c = No recognizable pattern.

APPENDIX A

Field Data Sheets

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WELL DEPTH MEASUREMENTS

Well ID	Time	Product Depth	Water Depth	Product Thickness	Well Depth	Comments
MW-1	7:30		22.57			
MW-2	7:55		20.19		25.70	
MW-3	7:50		21.60		26.65	
MW-4	7:45		18.35		29.20	
MW-5	7:40		15.97		24.30	

Project Name: Douglas Parking

Project Number: 580-0197-040

Measured By: S. Hall

Date: 7-6-01

F:\TEMPLATE\FORMS\FIELD\GW-DEPTH.WPD

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WELL SAMPLING FORM

Project Name: **Douglas Parking**	Cambria Mgr: **JR**	Well ID: **MW- 2**
Project Number: **580-0197**	Date: 7.6.01	Well Yield: ----------
Site Address: **1721 Webster Street Oakland, California**	Sampling Method: **Disposable bailer**	Well Diameter: **2" pvc**
		Technician(s): SG
Initial Depth to Water: 20.19	Total Well Depth: 25.70	Water Column Height: 5.51
Volume/ft: 0.16	1 Casing Volume: 0.88	3 Casing Volumes: 2.64
Purging Device: **disposable bailer**	Did Well Dewater?: no	Total Gallons Purged: 2.5
Start Purge Time: 10:20	Stop Purge Time: 10:34	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
10:25	1 1	12.9	7.25	720	
10:30	2 1.5	19.8	7.22	792	
10:35	3 2.5	19.4	7.31	721	

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW- 2	~~4/6/00~~ 7-6-01	10:40	**4 voa's**	**HCL**	**TPHg, BTEX, MTBE * Confirm MTBE hits**	**8020 8015 8260**

CAMBRIA

WELL SAMPLING FORM

Project Name: **Douglas Parking**	Cambria Mgr: **JR**	Well ID: MW- 3
Project Number: **580-0197**	Date: 7-6-01	Well Yield: ----------
Site Address: **1721 Webster Street Oakland, California**	Sampling Method: **Disposable bailer**	Well Diameter: 2" pvc
		Technician(s): SG
Initial Depth to Water: 21.60	Total Well Depth: 26.65	Water Column Height: 5.05
Volume/ft: 0.16	1 Casing Volume: 0.80	3 Casing Volumes: 2.40
Purging Device: **disposable bailer**	Did Well Dewater?: no	Total Gallons Purged: 2.5
Start Purge Time: 9:45	Stop Purge Time: 9:59	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
9:50	1 1	19.8	7.24	850	
9:55	2 1.5	19.5	7.51	874	
10:00	3 2.5	19.8	7.59	822	

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW- 3	~~4/6/00~~ 7-6-01	10:05	4 voa's	HCL	TPHg, BTEX, MTBE * Confirm MTBE hits	8020 8015 8260

CAMBRIA

WELL SAMPLING FORM

Project Name: **Douglas Parking**	Cambria Mgr: **JR**	Well ID: **MW-4**
Project Number: **580-0197**	Date: 7-6-01	Well Yield: ----------
Site Address: **1721 Webster Street Oakland, California**	Sampling Method: **Disposable bailer**	Well Diameter: **2" pvc**
		Technician(s): SG
Initial Depth to Water: 18.35	Total Well Depth: 29.20	Water Column Height: 10.85
Volume/ft: 0.16	1 Casing Volume: 1.73	3 Casing Volumes: 5.20
Purging Device: **disposable bailer**	Did Well Dewater?: no	Total Gallons Purged: 5
Start Purge Time: 9:00	Stop Purge Time: 9:19	Total Time: 19mins

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
9:10	1 1.5	19.8	7.20	760	
9:15	2 3	19.8	7.74	792	
9:20	3 5	19.8	7.59	755	

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW-4	~~7-6-00~~ 7-6-01	9:~~25~~	**4 voa's**	**HCL**	**TPHg, BTEX, MTBE * Confirm MTBE hits**	**8020 8015 8260**

CAMBRIA

WELL SAMPLING FORM

Project Name: **Douglas Parking**	Cambria Mgr: **JR**	Well ID: **MW-** 5
Project Number: **580-0197**	Date: 7-6-01	Well Yield: ----------
Site Address: **1721 Webster Street Oakland, California**	Sampling Method: **Disposable bailer**	Well Diameter: "2 **pvc**
		Technician(s): SG
Initial Depth to Water: 15.97	Total Well Depth: 24.30	Water Column Height: 8.33
Volume/ft: 0.16	1 Casing Volume: 1.33	3 Casing Volumes: 3.99
Purging Device: **disposable bailer**	Did Well Dewater?: no	Total Gallons Purged: 4
Start Purge Time: 8:20	Stop Purge Time: 8:34	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
8:25	1 1.5	20.1	7.15	618	
8:30	2 2.5	20.5	7.03	635	
8:35	3 4	20.1	7.09	651	

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW- 5	~~4/6/00~~ 7-6-01	8:40	**4 voa's**	**HCL**	**TPHg, BTEX, MTBE * Confirm MTBE hits**	**8020 8015 8260**

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 Environmental Technology 1144 65th Street, Suite C Oakland, CA 94608	Client Project ID: #580-0197; Douglas Parking	Date Sampled: 07/06/01
		Date Received: 07/09/01
	Client Contact: Bob Schultz	Date Extracted: 07/10-07/12/01
	Client P.O:	Date Analyzed: 07/10-07/12/01

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*, with Methyl tert-Butyl Ether* & BTEX*

EPA methods 5030, modified 8015, and 8020 or 602; California RWQCB (SF Bay Region) method GCFID(5030)

Lab ID	Client ID	Matrix	TPH(g)+	MTBE	Benzene	Toluene	Ethyl-benzene	Xylenes	% Recovery Surrogate
72011	MW-2	W	3500,a	ND	500	150	11	420	105
72012	MW-3	W	13,000,a	ND	5.3	1.6	11	58	---#
72013	MW-4	W	470,a	ND	2.3	1.6	0.81	43	107
72014	MW-5	W	ND	ND	ND	ND	ND	ND	104
72015	TB	W	ND	ND	ND	ND	ND	ND	102
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit		W	50 ug/L	5.0	0.5	0.5	0.5	0.5	
		S	1.0 mg/kg	0.05	0.005	0.005	0.005	0.005	

* water and vapor samples are reported in ug/L, wipe samples in ug/wipe, soil and sludge samples in mg/kg, and all TCLP and SPLP extracts in ug/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 (?); f) one to a few isolated peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~5 vol. % sediment; j) no recognizable pattern.

DHS Certification No. 1644

Edward Hamilton, Lab Director

McCAMPBELL ANALYTICAL INC.
110 2nd Ave. South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
http://www.mccampbell.com E-mail: main@mccampbell.com

QC REPORT

EPA 8015m + 8020

Date: 07/12/01 **Matrix:** Water

Compound	Concentration: ug/L				%Recovery		RPD
	Sample	MS	MSD	Amount Spiked	MS	MSD	
SampleID: 71201	Extraction: EPA 5030				Instrument: GC-3		
Surrogate1	ND	100.0	103.0	100.00	100	103	3.0
Xylenes	ND	26.6	26.2	30.00	89	87	1.5
Ethylbenzene	ND	8.8	8.7	10.00	88	87	1.1
Toluene	ND	9.2	9.1	10.00	92	91	1.1
Benzene	ND	9.2	9.3	10.00	92	93	1.1
MTBE	ND	10.1	9.6	10.00	101	96	5.1
TPH (gas)	ND	84.4	82.2	100.00	84	82	2.6
SampleID: 70501	Extraction: EPA 3510				Instrument: GC-6 A		
Surrogate1	ND	98.0	112.0	100.00	98	112	13.3
TPH (diesel)	ND	8650.0	8350.0	7500.00	115	111	3.5

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

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

RPD means Relative Percent Deviation

60704 ZC425

McCAMPBELL ANALYTICAL INC.

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

CHAIN OF CUSTODY RECORD

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

Report To: Cambria Env Bill To: Cambria Env
Company: Cambria Environmental Technology
1144 65th Street, Suite C
Oakland, CA 94608
Tele: (510) 420-0700 Fax: (510) 420-9170
Project #: 580-0197 Project Name: Douglas Parking
Project Location: 1721 Webster St. Oakland, Ca
Sampler Signature: [signature]

SAMPLE ID	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	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)	[illegible]	Other	Comments
MW-2		7-6-01	10:40	4	VOA	X					X	X			X																Confirm all MTBE hits by 8260
MW-3		7-6-01	10:05	4	VOA	X					X	X			X																X
MW-4		7-6-01	9:25	4	VOA	X					X	X			X																X
MW-5		7-6-01	8:40	4	VOA	X					X	X			X																X
TB		7-6-01		2	VOA	X					X	X			X																X

72011
72012
72013
72014
72015

Relinquished By:	Date:	Time:	Received By:
[signature]	7-6-01	14:00	secure place
[signature]	7-9-01	1215	[signature]
[signature]	07/09	1615	[signature]

Remarks:

ICE/t° ✓
GOOD CONDITION ✓
HEAD SPACE ABSENT ___
PRESERVATION APPROPRIATE ✓
CONTAINERS ✓

VOA	O&G	METALS	OTHER