



FOUNDED 1930

DOUGLAS PARKING LLC

PARKING, MANAGEMENT & LEASING
1721 WEBSTER STREET
OAKLAND, CALIFORNIA 94612-3411

ENVIRONMENTAL
PROTECTION

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www.douglasparking.com

CS
STRP 4070

November 16, 1999

ACDEH
UST Oversight Program
1131 Harbor Bay Parkway, 2nd Flr.
Alameda, CA. 94502

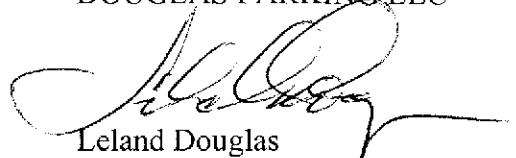
Attn: Jennifer Eberle

Dear Ms. Eberle,

Enclosed please find copy of fourth quarter 1999 Monitoring Report for location at 1721 Webster St., Oakland.

Sincerely,

DOUGLAS PARKING LLC



Leland Douglas

LD/kk
Encl.

C A M B R I A

November 9, 1999

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

Re: Fourth Quarter 1999 Monitoring Report

Douglas Parking
1721 Webster Street
Oakland, California
Cambria Project# 580-0197



Dear Mr. Douglas:

This report summarizes the fourth quarter 1999 groundwater monitoring results for the above-referenced site. Described below are the fourth quarter 1999 activities, the hydrocarbon distribution in groundwater, and the anticipated future activities.

FOURTH QUARTER AND LATE THIRD QUARTER 1999 ACTIVITIES

Groundwater Sampling: On October 5, 1999, Cambria collected and analyzed groundwater samples from wells MW-2, MW-3, MW-4 and MW-5 for total petroleum hydrocarbons as gasoline (TPHg), benzene, toluene, ethylbenzene, xylenes (BTEX), methyl tert-butyl ether (MTBE), and dissolved oxygen (DO) concentrations. Cambria also gauged all site wells and inspected the wells for separate-phase hydrocarbons (SPH). No SPH were detected. The groundwater elevation and analytical data are summarized in Table 1. The laboratory analytical report for groundwater is included as Attachment A. Well sampling forms are included as Attachment B.

Well Maintenance: On October 29, 1999, Cambria replaced a broken well vault for MW-4. MW-4 is located in a traffic lane. The new vault (Christy G5) is traffic-rated and meets the required roadway specifications.

Remedial Action: Cambria submitted a *Remedial Evaluation and Revised Remedial Workplan* to the Alameda County Department of Environmental Health (ACDEH) on August 13, 1999. The Remedial Workplan was approved by Mr. Larry Seto of ACDEH on September 16, 1999.

Oakland, CA
Sonoma, CA
Portland, OR
Seattle, WA

Cambria
Environmental
Technology, Inc.

1144 65th Street
Suite B
Oakland, CA 94608
Tel (510) 420-0700
Fax (510) 420-9170

Mr. Lee Douglas
November 9, 1999

HYDROCARBON DISTRIBUTION IN GROUNDWATER

Groundwater elevation data indicate that groundwater flows towards the north-northeast with a gradient of 0.005 ft/ft (Figure 1). Consistent with historical site data, hydrocarbons were detected in wells MW-2, MW-3 and MW-4. Hydrocarbon concentrations in MW-3 increased significantly this quarter. Benzene was detected in MW-3 for the first time since March 1995. Since MW-3 is an upgradient well, there exists a possibility that hydrocarbons are migrating toward the subject site from an offsite source. Therefore, Cambria will continue to evaluate this possibility through future site monitoring events. The planned remedial action should improve groundwater quality near wells MW-2 and MW-3. The extent of hydrocarbons in groundwater is defined to below method reporting limits in the northern, crossgradient direction by well MW-1 and in the downgradient direction by well MW-5.

ANTICIPATED FUTURE ACTIVITIES

Groundwater Sampling: As requested by the ACDEH, Cambria will perform groundwater monitoring on a quarterly basis. During each monitoring event, Cambria will gauge all site wells; inspect for SPH; and collect and analyze groundwater samples from wells MW-2, MW-3, MW-4 and MW-5 for TPHg, BTEX, MTBE, and DO. If MTBE is detected in wells MW-2 or MW-4, concentrations will be confirmed by re-analysis using EPA Method 8260. Cambria will summarize the quarterly monitoring activities in a written report.

Remedial Action: Cambria will commence implementation of the August 13, 1999 *Revised Remedial Workplan* upon receiving cost pre-approval from the UST Cleanup Fund. The remedial action will first involve installation and testing of vapor extraction and air sparging wells between wells MW-2 and MW-3.

C A M B R I A

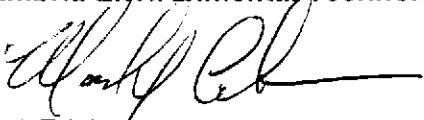
Mr. Lee Douglas
November 9, 1999

CLOSING

Cambria appreciates the opportunity to provide environmental services to Douglas Parking. Please call if you have any questions or comments.

Sincerely,

Cambria Environmental Technology, Inc.



Mark Erickson
Staff Engineer



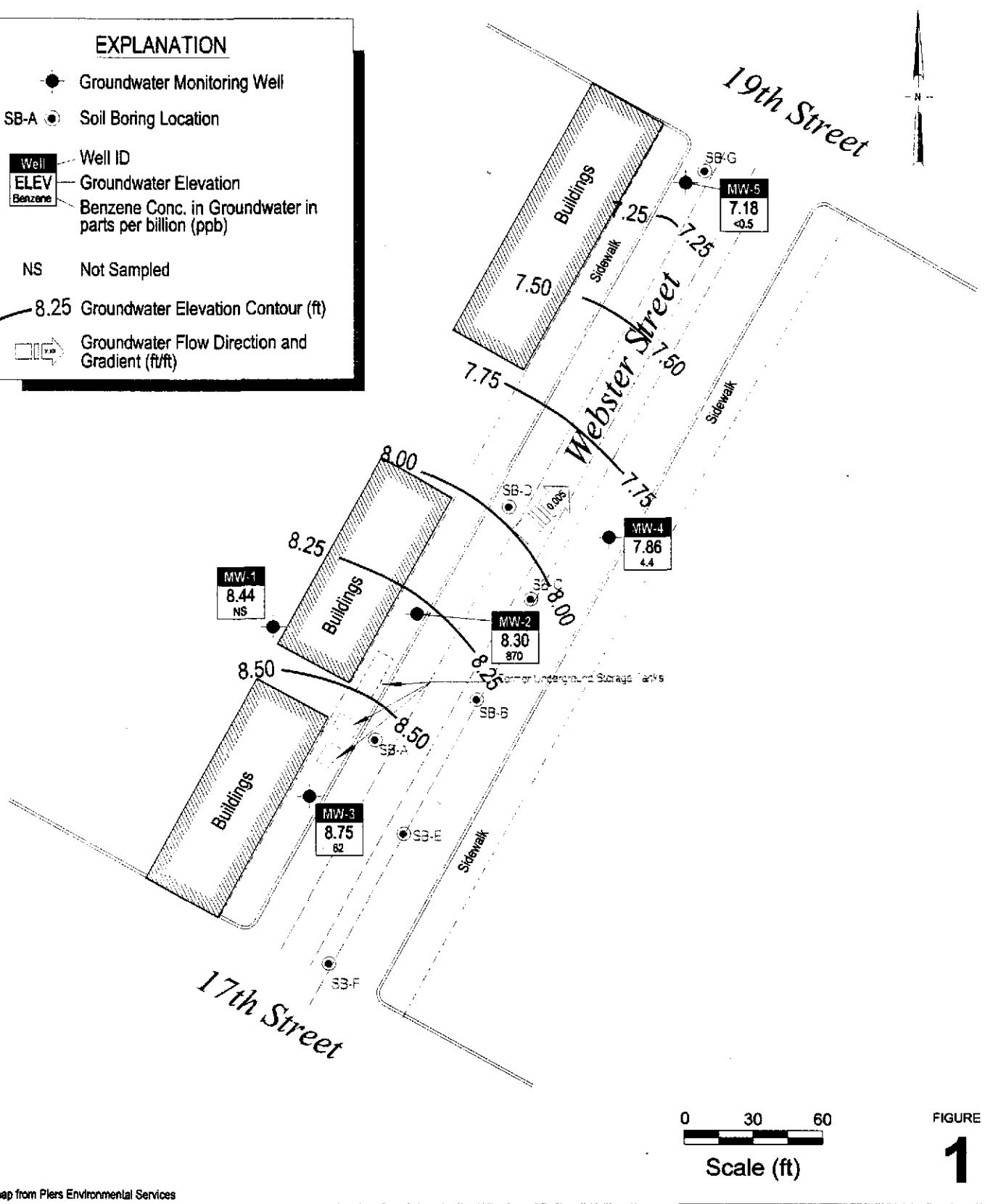
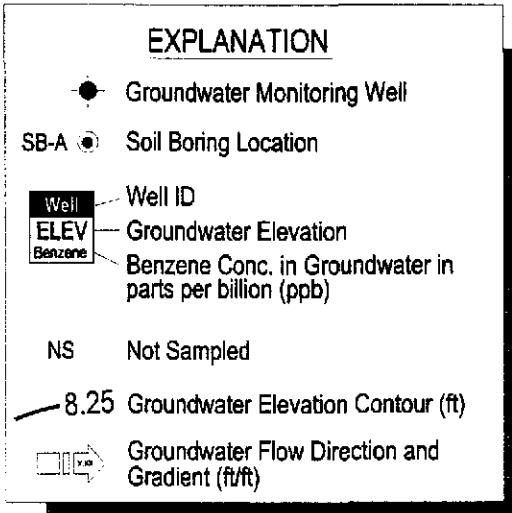
Bob Clark-Riddell
Bob Clark-Riddell, PE
Principal Engineer



Attachments: A - Laboratory Analytical Report
B - Well Sampling Forms

cc: Larry Seto, Alameda County Department of Environmental Health, 1131 Harbor Bay Parkway, 2nd Floor, Alameda, CA 94502

H:\SB-2004\DOUGLAS\1721 Webster\QMS\QM-4-99.WPD



Douglas Parking Facility

1721 Webster Street
Oakland, California



Groundwater Elevation Contour Map

October 5, 1999

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)				>	
MW-1	12/02/94	29.25	19.42	9.83	nd	nd	nd	nd	nd	-	-	1
	03/06/95	29.73	20.69	9.04	nd	nd	nd	nd	nd	-	-	1
	07/11/95	29.81	20.65	9.16	nd	nd	nd	nd	nd	-	-	
	05/10/96	29.81	20.80	9.01	nd	nd	nd	nd	nd	-	-	
	10/02/96	29.81	21.35	8.46	-	-	-	-	-	-	-	2
	02/28/97	29.81	20.57	9.24	-	-	-	-	-	-	-	2
	09/16/97	29.81	21.50	8.31	-	-	-	-	-	-	-	2
	02/05/98	29.81	20.91	8.90	-	-	-	-	-	-	1.9	2
	08/11/98	29.81	20.50	9.31	-	-	-	-	-	-	0.06	2
	02/08/99	29.81	21.42	8.39	-	-	-	-	-	-	6.0	2, 3
	02/24/99	29.81	22.99	6.82	-	-	-	-	-	-	2.0	2, 3
	03/03/99	29.81	20.84	8.97	-	-	-	-	-	-	3.8	2, 3
	03/10/99	29.81	20.89	8.92	-	-	-	-	-	-	3.4	2, 3
	03/17/99	29.81	20.84	8.97	-	-	-	-	-	-	2.8	2, 3
MW-2	05/04/99	29.81	20.80	9.01	-	-	-	-	-	-	3.5	2
	07/20/99	29.81	21.25	8.56	-	-	-	-	-	-	3.1	2
	10/05/99	29.81	21.37	8.44	-	-	-	-	-	-	5.4	2
	12/02/94	27.10	19.50	7.60	61,300	3,000	3,900	160	4,500	-	-	1
	03/06/95	27.10	18.49	8.61	98,000	8,400	16,000	2,000	2,600	-	-	1
	07/11/95	27.40	18.45	8.95	38,000	3,100	7,500	940	3,700	-	-	
	05/10/96	27.40	18.56	8.84	63,000	7,400	16,000	1,500	6,000	-	-	
	10/02/96	27.40	19.15	8.25	21,000	2,200	3,400	430	1,600	-	-	
	02/28/97	27.40	18.43	8.97	39,000	4,700	9,600	950	4,200	nd	-	
	09/16/97	27.40	19.26	8.14	29,000	3,300	5,800	690	2,900	<620	-	
	02/05/98	27.40	18.66	8.74	10,000	1,000	2,000	170	860	<330	7.9	
	08/11/98	27.40	18.41	8.99	12,000	1,200	2,300	260	1,400	300	5.4	
	02/08/99	27.40	19.84	7.56	5,500	740	1,200	150	780	60	3.7	3
	02/17/99	27.40	18.94	8.46	-	-	-	-	-	-	>20	3
	02/24/99	27.40	20.76	6.64	-	-	-	-	-	-	>20	3
	03/03/99	27.40	18.55	8.85	-	-	-	-	-	-	>20	3
	03/10/99	27.40	20.74	6.66	-	-	-	-	-	-	>20	3
	03/17/99	27.40	18.57	8.83	-	-	-	-	-	-	>20	3
	05/04/99	27.40	18.55	8.85	90,000	9,200	21,000	1,600	10,000	560	3.2	
	07/20/99	27.40	18.98	8.42	28,000	2,100	3,700	900	4,200	<860	0.6	
	10/05/99	27.40	19.10	8.30	11,000	870	180	30	1,400	<110	0.6	

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)----->						
MW-3	12/02/94	29.50	22.15	7.35	394,000	1,200	nd	1,800	4,000	-	-	1
	03/06/95	29.25	20.09	9.16	21,000	400	150	24	62	-	-	1
	07/11/95	29.56	19.99	9.57	12,000	nd	10	16	99	-	-	
	05/10/96	29.56	20.24	9.32	8,600	nd	7.6	16	84	-	-	
	10/02/96	29.56	20.90	8.66	11,000	nd	7.4	19	92	-	-	
	02/28/97	29.56	20.12	9.44	6,000	nd	4.4	17	88	50	-	
	09/16/97	29.56	20.97	8.59	6,500	<0.5	1	1	7	<5.0	-	
	02/05/98	29.56	20.39	9.17	5,400	<0.5	6.3	15	86	<63	1.9	
	08/11/98	29.56	19.95	9.61	2,700	<0.5	3.5	3.2	12	<10	0.05	
	02/08/99	29.56	20.58	8.98	6,100	<0.5	8.1	18	80	<140	2.2	3
	02/17/99	29.56	20.53	9.03	-	-	-	-	-	-	>20	3
	02/24/99	29.56	22.53	7.03	-	-	-	-	-	-	>20	3
	03/03/99	29.56	20.28	9.28	-	-	-	-	-	-	>20	3
	03/10/99	29.56	22.45	7.11	-	-	-	-	-	-	>20	3
	03/17/99	29.56	20.26	9.30	-	-	-	-	-	-	>20	3
	05/04/99	29.56	20.24	9.32	11,000	<2	<2	9.8	140	<10	3.1	
	07/20/99	29.56	20.68	8.88	11,000	<0.5	3.1	13	88	<80	0.8	
	10/05/99	29.56	20.81	8.75	31,000	62	<0.5	21	170	<90	0.7	
MW-4	05/10/96	25.29	16.98	8.31	14,000	nd	1,200	720	3,100	-	-	
	10/02/96	25.29	17.65	7.64	12,000	nd	650	580	2,200	-	-	
	02/28/97	25.29	16.80	8.49	13,000	nd	1,100	750	2,700	110	-	
	09/17/97	25.29	17.93	7.36	13,000	<2.5	820	750	2,900	<190	-	
	02/05/98	25.29	16.78	8.51	13,000	<1.0	690	690	2,900	<170	2.1	
	08/11/98	25.29	16.59	8.70	15,000	<5	360	520	1,900	280	2.8	
	02/08/99	25.29	17.10	8.19	9,800	<5	680	770	2,200	300	1.8	3
	02/24/99	25.29	18.95	6.34	-	-	-	-	-	-	2.2	3
	03/03/99	25.29	16.80	8.49	-	-	-	-	-	-	4.6	3
	03/10/99	25.29	16.86	8.43	-	-	-	-	-	-	3.7	3
	03/17/99	25.29	16.82	8.47	-	-	-	-	-	-	4.3	3
	05/04/99	25.29	16.86	8.43	11,000	46	600	620	1,900	<100	4.1	
	07/20/99	25.29	17.30	7.99	13,000	<0.5	470	7.0	2,000	<150	0.4	
	10/05/99	25.29	17.43	7.86	18,000	4.4	720	800	2,100	<120	0.7	

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)----->						
MW-5	05/10/96	21.97	14.60	7.37	nd	nd	nd	nd	nd	-	-	
	10/02/96	21.97	15.25	6.72	nd	nd	nd	nd	nd	-	-	
	02/28/97	21.97	14.31	7.66	nd	nd	nd	nd	nd	nd	-	
	09/17/97	21.97	15.18	6.79	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	02/05/98	21.97	13.64	8.33	<50	<0.5	<0.5	<0.5	<0.5	<5.0	2.8	
	08/11/98	21.97	13.92	8.05	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.05	
	02/08/99	21.97	14.19	7.78	<50	<0.5	<0.5	<0.5	<0.5	<5.0	3.0	3
	02/24/99	21.97	16.18	5.79	-	-	-	-	-	-	4.9	3
	03/03/99	21.97	14.23	7.74	-	-	-	-	-	-	3.4	3
	03/10/99	21.97	14.32	7.65	-	-	-	-	-	-	3.6	3
	03/17/99	21.97	14.25	7.72	-	-	-	-	-	-	3.9	3
	05/04/99	21.97	14.41	7.56	<50	<0.5	<0.5	<0.5	<0.5	<5.0	3.2	
	07/20/99	21.97	14.44	7.53	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.0	
	10/05/99	21.97	14.79	7.18	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.5	

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, as described in November 11, 1998 Remedial Workplan.

ATTACHMENT A

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 65 th Street, Suite C Oakland, CA 94608	Client Project ID: #580-0197; Douglas Parking	Date Sampled: 10/05/99
		Date Received: 10/06/99
	Client Contact: Jacquelyn Jones	Date Extracted: 10/07-10/13/99
	Client P.O:	Date Analyzed: 10/07-10/13/99

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	Ethylbenzene	Xylenes	% Recovery Surrogate
22884	MW-2	W	11,000,a	ND<110	870	180	30	1400	91
22885	MW-3	W	31,000,a	ND<90	62	ND	21	170	106
22886	MW-4	W	18,000,b,j	ND<120	4.4	720	800	2100	98
22887	MW-5	W	ND	ND	ND	ND	ND	ND	95
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.

McCAMPBELL ANALYTICAL INC.

110 2nd Avenue South, #D7, Pacheco, CA 94553
Tele: 925-798-1620 Fax: 925-798-1622

QC REPORT FOR HYDROCARBON ANALYSES

Date: 10/07/99

Matrix: WATER

Analyte	Concentration (ug/L)			Amount Spiked	% Recovery		RPD
	Sample (#22100)	MS	MSD		MS	MSD	
TPH (gas)	0.0	91.1	96.4	100.0	91.1	96.4	5.7
Benzene	0.0	9.0	8.3	10.0	90.0	83.0	8.1
Toluene	0.0	9.5	9.3	10.0	95.0	93.0	2.1
Ethyl Benzene	0.0	9.6	9.2	10.0	96.0	92.0	4.3
Xylenes	0.0	29.7	28.8	30.0	99.0	96.0	3.1
TPH(diesel)	0.0	7842	7817	7500	105	104	0.3
TRPH (oil & grease)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

% Rec. = (MS - Sample) / amount spiked x 100

RPD = ((MS - MSD) / (MS + MSD))x 2 x 100

17039-2-Cle.doc

McCAMPBELL ANALYTICAL INC.

110 2nd AVENUE SOUTH, #D7
PACHECO, CA 94553

Telephone: (925) 798-1620

Fax: (925) 798-1622

Report To: Jacquelyn Jones

Bill To: CAMBRIA

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: 1724 WEBSTER ST. OAKLAND, CA

Sampler Signature: *Jacquelyn Jones*

CHAIN OF CUSTODY RECORD

TURN AROUND TIME
RUSH 24 HOUR 48 HOUR 5 DAY

SAMPLE ID	LOCATION	SAMPLING		# Containers	Type Containers	MATRIX			METHOD PRESERVED		BTX & TPH as Gas (602/6020 + 8015) MTBE TPH as Diesel (8015)	Total Petroleum Oil & Grease (5520 E&F/B&F) Total Petroleum Hydrocarbons (418.1)	EPA 601 / 8010 BTX 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 LIJFT 5 Metals Lead (7240/7421/7392/6010) RCI	Other	Comments	
		Date	Time			Water	Soil	Air	Sludge	Other						
mw-2		10/8/97	2:55	4	Veg X		X			XX		X				22884
mw-3			3:26	1	/ X					XX		X				22885
mw-4			3:20	1	/ X					XX		X				22886
mw-5			3:05	4	/ X					XX		X				22887
Relinquished By:	<i>Mark Cole</i>	Date: 10/8/97	Time: 3:18	Received By:	<i>Bill Butto</i>											
Relinquished By:	<i>Bill Butto</i>	Date: 10/8/97	Time: 3:45	Received By:	<i>Wanda Vomar</i>											
Relinquished By:		Date:	Time:	Received By:												
Remarks:												VOAS	O&G	METALS	OTHER	
ICE/ <input checked="" type="checkbox"/>												PRESERVATION	<input checked="" type="checkbox"/>			
GOOD CONDITION <input checked="" type="checkbox"/>												APPROPRIATE	<input checked="" type="checkbox"/>			
HEAD SPACE ABSENT <input checked="" type="checkbox"/>												CONTAINERS <input checked="" type="checkbox"/>				

ATTACHMENT B

Well Sampling Forms

WELL DEPTH MEASUREMENTS

Well ID	Time	Product Depth	Water Depth	Product Thickness	Well Depth	Comments
MW1	1:22	-	21.37	-	24.63	$\delta w = 5.44 \text{ mg/L}$
MW5	1:28	-	14.79	-	24.63	
MW3	1:34	-	20.81	-	28.05	
MW4	1:38	-	17.43	-	29.88	
MW2	1:40	-	19.10	-	27.08	

Project Name: Douglas

Project Number: 580-0197

Measured By: JJ ME

Date: 10/5/99

CAMBRIA

WELL SAMPLING FORM

Project Name: Douglas Parking	Cambria Mgr: RWS	Well ID: MW 1
Project Number: 580-0197	Date: 10/15/99	Well Yield: —
Site Address: 1721 Webster Street Oakland, California	Sampling Method:	Well Diameter: " pvc
	Disposable bailer	Technician(s): JJ/me
Initial Depth to Water: 21.37	Total Well Depth: 24.63	Water Column Height: 3.26
Volume/ft: 0.16 gals/ft	1 Casing Volume: 0.82	3 Casing Volumes: 1.56 gals
Purging Device: disposable bailer	Did Well Dewater?:	Total Gallons Purged:
Start Purge Time:	Stop Purge Time:	Total Time:

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: 5.44 mg/L

Time	Casing Volume	Temp. °C	pH	Cond. µS	Comments

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
			4 vials	HCL	TPHg, BTEX, MTBE	8020 8015

CAMBRIA

WELL SAMPLING FORM

Project Name: Douglas Parking	Cambria Mgr: RWS	Well ID: HW 2
Project Number: 580-0197	Date: 10/5/99	Well Yield: —
Site Address: 1721 Webster Street Oakland, California	Sampling Method: Disposable bailer	Well Diameter: 2 " pvc
Initial Depth to Water: 19.10	Total Well Depth: 27.08	Water Column Height: 7.98
Volume/ft: 0.16	1 Casing Volume: 1.28 gal	3 Casing Volumes: ~3.8 gal
Purging Device: disposable bailer	Did Well Dewater? PURGE	Total Gallons Purged: WELL
Start Purge Time:	Stop Purge Time:	Total Time:

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: 0.58 mg/L

Time	Casing Volume	Temp. °C	pH	Cond. μS	Comments
No	Dug well !!				

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW2	10/5/99	255	4 voa's	HCL	TPHg, BTEX, MTBE	8020 8015

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WELL SAMPLING FORM

Project Name: Douglas Parking	Cambria Mgr: RWS	Well ID: MW3
Project Number: 580-0197	Date: 10/5/99	Well Yield: —
Site Address: 1721 Webster Street Oakland, California	Sampling Method:	Well Diameter: 2 " pvc
	Disposable bailer	Technician(s): DK / ME
Initial Depth to Water: 20.81	Total Well Depth: 28.05	Water Column Height: 7.24
Volume/ft: 0.16	1 Casing Volume: 1.16 gal	3 Casing Volumes: ~3.5 gal
Purging Device: disposable bailer	Did Well Dewater?:	Total Gallons Purged:
Start Purge Time:	Stop Purge Time:	Total Time:

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

Well Diam.	Volume/ft (gallons)
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2"	0.16
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4"	0.65
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6"	1.47
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Pre-purge DO: 0.68 mg/L

Time	Casing Volume #	Temp. °C	pH	Cond. µS	Comments
2:49	1	20.0	7.3	246	
2:52	2	20.2	7.3	159	
2:58	3	20.5	7.0	388	

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW-3	10/6/99	3:26	4 voa's	HCL	TPHg, BTEX, MTBE	8020 8015

WELL SAMPLING FORM

Project Name: Douglas Parking	Cambria Mgr: RWS	Well ID: MW4
Project Number: 580-0197	Date: 10/5/99	Well Yield: —
Site Address: 1721 Webster Street Oakland, California	Sampling Method:	Well Diameter: 2 " pvc
	Disposable bailer	Technician(s): JJ/MC
Initial Depth to Water: 17.43	Total Well Depth: 29.88	Water Column Height: 12.45
Volume/ft: 0.16	1 Casing Volume: 1.99 gal	3 Casing Volumes: ~6 gal
Purging Device: disposable bailer	Did Well Dewater?: no	Total Gallons Purged: 6 gal
Start Purge Time: 210	Stop Purge Time: 219	Total Time: 9 min

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

Well Diam.

2"

Volume/ft (gallons)

0.16

4"

0.65

6"

1.47

Pre-purge DO: 0.71 mg/L

Time	Casing Volume	Temp. °C	pH	Cond. µS	Comments
210	1	21.1	6.8	579	
215	2	20.7	6.7	497	
219	3	20.6	6.7	450	

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW4	10/5/99	3:20	4 voa's	HCL	TPHg, BTEX, MTBE	8020 8015

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WELL SAMPLING FORM

Project Name: Douglas Parking	Cambria Mgr: RWS	Well ID: MW 5
Project Number: 580-0197	Date: 10/15/99	Well Yield: —
Site Address: 1721 Webster Street Oakland, California	Sampling Method:	Well Diameter: 2 " pvc
	Disposable bailer	Technician(s): SS / ME
Initial Depth to Water: 14.79	Total Well Depth: 24.63	Water Column Height: 9.84
Volume/ft: 0.16	1 Casing Volume: 1.57 gal	3 Casing Volumes: 4.72
Purging Device: disposable bailer	Did Well Dewater?:	Total Gallons Purged:
Start Purge Time:	Stop Purge Time:	Total Time:

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: 1.52 mg/L

Time	Casing Volume #	Temp. °C	pH	Cond. µS	Comments
10:15	1	14.8	7.8	461	
10:16	2	17.8	7.4	386	
10:22	3	20.0	7.1	300	

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW5 10/15/99		3:05	4 vials	HCL	TPHg, BTEX, MTBE	8020 8015