

498

MARK BORSUK
Attorney at Law
1626 Vallejo Street
San Francisco, CA 94123-5116
(415) 922-4740
FAX 922-1485
Internet: mborsuk@ix.netcom.com

April 30, 2000

Mr. Thomas Peacock
Supervising HMS, LOP
ACHCSA
1131 Harbor Bay Parkway
Alameda, CA 94501
(510) 567-6700 / FAX 337-9335
tpeacock@co.alameda.ca.us

SUBJECT: IQ'00 Monitoring Report
1432 Harrison Street, Oakland, CA 94612
SITE ID 498

Dear Mr. Peacock:

Attached is the IQ'00 groundwater monitoring data for the above site.
If you have a question, please contact me.

Sincerely yours,



Mark Borsuk

April 17, 2000

Mr. Mark Borsuk, Esq.
1626 Vallejo St.
San Francisco, CA
94123-5116

Re: **First Quarter 2000 Monitoring Report**
1432 Harrison Street
Oakland, California
Cambria Project #540-0188-028



Dear Mr. Borsuk:

As you requested, Cambria Environmental Technology, Inc. (Cambria) is submitting this first quarter groundwater monitoring report for the above-referenced site. Presented below are the first quarter 2000 activities and results, the current hydrocarbon distribution in groundwater, and the anticipated second quarter 2000 activities.

FIRST QUARTER 2000 ACTIVITIES AND RESULTS

Groundwater Sampling: On March 21, 2000, Cambria gauged all site monitoring wells and collected groundwater samples from monitoring wells MW-1, MW-2, MW-4, MW-5, and MW-6. Groundwater samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg) by modified EPA Method 8015, and benzene, toluene, ethylbenzene and xylenes (BTEX) by EPA Method 8020. Wells containing MTBE were further analyzed using EPA Method 8260. Analytical results are included as Attachment A. Groundwater elevations are shown on Figure 1.

Hydrocarbon Distribution in Groundwater: Consistent with historical data, groundwater analytical results for wells MW-1 and MW-2 suggest that hydrocarbon concentrations are highest in groundwater in the immediate vicinity of the former underground storage tanks. TPHg concentrations in wells MW-1 and MW-2 were 210,000 micrograms per liter ($\mu\text{g/L}$) and 98,000 $\mu\text{g/L}$, respectively. TPHg and benzene concentrations in well MW-4 increased this quarter to 45,000 $\mu\text{g/L}$ and 16,000 $\mu\text{g/L}$, respectively. Site analytical data indicates that the extent of the hydrocarbon plume is well defined to the east and south of the site by perimeter wells MW-3 and MW-6, respectively. North of the site, however, hydrocarbons have been detected intermittently in monitoring well MW-4.

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

Remediation System: Cambria finalized the system design package and will submit the package to at least three general contractors.

ANTICIPATED SECOND QUARTER 2000 ACTIVITIES


Groundwater Sampling: Cambria will gauge all site wells and collect groundwater samples from wells MW-1, MW-2, MW-4, MW-5, and MW-6. Groundwater samples will be analyzed for TPHg by Modified EPA Method 8015 and BTEX and MTBE by EPA Method 8020. Any samples containing MTBE will be confirmed by EPA Method 8260. Cambria will prepare a groundwater monitoring report summarizing the monitoring activities and results.

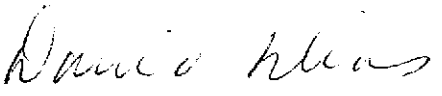
Remediation System: Cambria will select a general contractor and submit a cost estimate package to the UST Cleanup Fund for pre-approval.

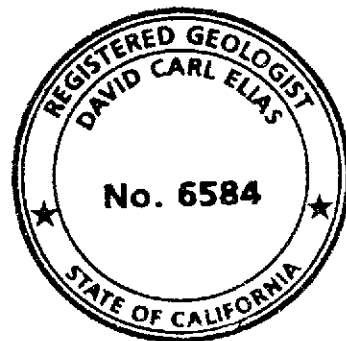
CLOSING

If you have any questions or comments related to this report, please call me at (510) 420-3328 or call David Elias at (510) 420-3307.

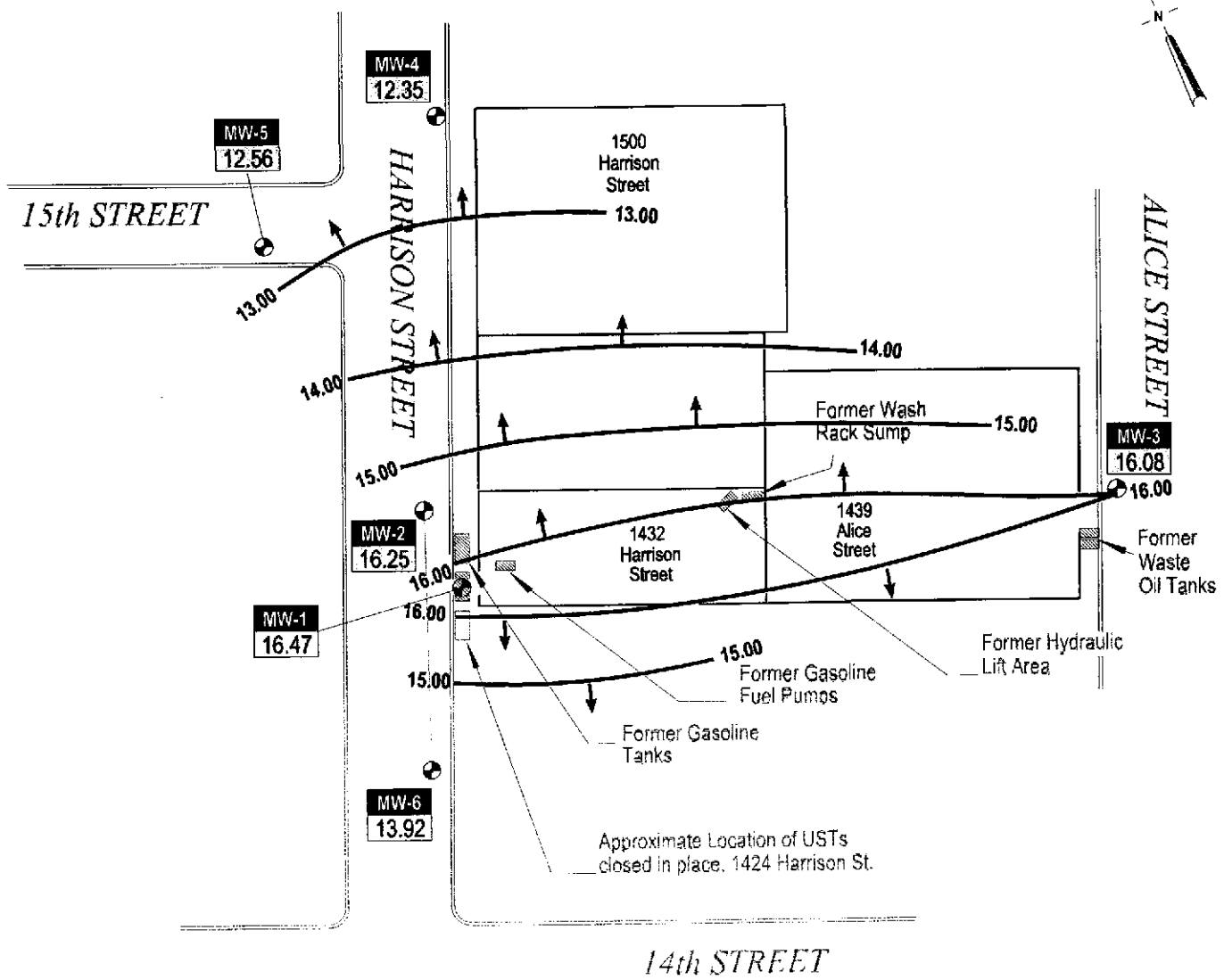
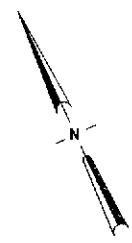
Sincerely,
Cambria Environmental Technology, Inc.


Mark Erickson
Staff Engineer


David Elias, R.G.
Senior Geologist



- Figure: 1 - Groundwater Elevation Contours
- Attachment: A - Laboratory Analytical Results
- B - Field Data Sheets



EXPLANATION

- Groundwater Monitoring Well
- Groundwater Elevation Contour, Feet Above msl, Dashed Where Inferred
- Groundwater Flow Direction
- Well Designation
- Groundwater Elevation, Feet Above Mean Sea Level (msl)



FIGURE 1

1432 Harrison Street

Oakland, California



C A M B R I A

Groundwater Elevation Contours

March 21, 2000

H:\S-B-2004\OAK-186\FIGURES\1\GM00-MP.DWG

CAMBRIA

Table 1. Groundwater Elevation and Analytic Data - 1432 Harrison St., Oakland, CA.

Well/Boring ID	Date	Top of Casing Elevation (ft)	Depth to Groundwater (ft)	Groundwater Elevation (ft)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Notes
					<------(Concentrations in µg/l)----->						
<i>Current Investigation Grab Sample Results:</i>											
CB-1-W	07/22/99	--	--	--	110,000	1,300	16,000	2,700	12,000	<3000*	a,b,c
CB-2-W	07/22/99	--	--	--	4,700	21	13	170	76	<50*	a,c
<i>Historical Grab Sample Results:</i>											
SB-A	07/06/95	--	~20	--	330	16	3.6	1.3	4.9	--	i,j
SB-B	07/07/95	--	~20	--	450	55	3.1	5.1	5.0	--	a
SB-C	07/06/95	--	~20	--	44,000	6,600	5,900	980	4,400	--	a
SB-D	07/06/95	--	~20	--	70,000	7,400	10,000	1,600	7,200	--	a
SB-E	07/06/95	--	~20	--	25,000	1,000	3,000	610	2,700	--	a
SB-G	07/07/95	--	~20	--	84,000	9,400	16,000	2,200	9,900	--	a,b
SB-I	07/07/95	--	~20	--	24,000	6,100	1,400	680	1,600	--	a
SB-J	07/07/95	--	~20	--	960	110	66	8.7	71	--	a
SB-K	07/07/95	--	~20	--	72,000	9,600	9,600	1,800	7,000	--	a
<i>Monitoring Well Sample Results:</i>											
MW-1	08/01/94	--	--	--	170,000	35,000	51,000	2,400	13,000	--	--
	12/21/94	34.95	19.53	15.42	180,000	41,000	64,000	3,100	100,000	--	--
	03/13/95	34.95	18.66	16.29	150,000	31,000	45,000	2,500	17,000	--	--
	06/27/95	34.95	18.20	16.75	71,000	17,000	18,000	1,600	7,700	--	--
	07/07/95	34.95	18.35	16.60	71,000	17,000	18,000	1,600	7,700	--	--
	09/28/95	34.95	18.20	16.75	110,000	27,000	34,000	1,700	14,000	--	--
	12/20/95	34.95	19.96	14.99	120,000	33,000	43,000	2,300	15,000	--	--
	03/26/96	34.95	19.27	15.68	140,000	29,000	36,000	1,900	13,000	<200*	d
	06/20/96	34.95	18.64	16.31	110,000	30,000	38,000	2,200	13,000	<200*	--
	09/26/96	34.95	19.35	15.60	170,000	28,000	40,000	2,200	15,000	ND**	--
	10/28/96	34.95	19.58	15.37	--	--	--	--	--	--	--
	12/12/96	34.95	19.68	15.27	110,000	36,000	47,000	2,500	16,000	ND*	--
	03/31/97	34.95	18.80	16.15	160,000	24,000	39,000	1,900	13,000	ND*	--
	06/27/97	34.95	19.26	15.69	130,000	25,000	36,000	2,000	14,000	ND*	--
	09/09/97	34.95	19.70	15.25	99,000	22,000	27,000	1,600	13,000	270*	--
	12/18/97	34.95	19.25	15.70	160,000	30,000	44,000	2,200	15,000	ND***	--
	03/12/98	34.95	17.52	17.43	190,000	20,000	49,000	2,500	18,000	ND***	--

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Well/Boring ID	Date	Top of Casing Elevation (ft)	Depth to Groundwater (ft)	Groundwater Elevation (ft)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Notes
					------(Concentrations in µg/l)-----						
	06/22/98	34.95	18.63	16.32	90,000	19,000	40,000	2,100	16,000	--	--
	09/18/98	34.95	18.60	16.35	190,000	29,000	48,000	2,400	17,000	--	--
	12/23/98	34.95	19.18	15.77	140,000	24,000	44,000	2,000	8,200	--	--
	03/29/99	34.95	18.52	16.43	181,000	22,200	40,100	1,844	12,200	--	--
	06/23/99	34.95	18.60	16.35	80,000	20,000	33,000	1,600	11,000	--	--
	09/24/99	34.95	19.05	15.90	117,000	15,100	20,700	1,550	11,800	--	--
	12/23/99	34.95	19.95	15.00	186,000	25,900	39,000	1,990	12,400	--	--
	03/21/00	34.95	18.48	16.47	210,000	35,000	42,000	2,200	13,000	<3,000	a
MW-2	08/01/94	--	--	--	130,000	28,000	35,000	3,000	12,000	--	--
	12/21/94	35.18	19.91	15.27	200	140,000	200,000	3,500	22,000	--	--
	03/13/95	35.18	19.15	16.03	500	9,200	23,000	7,000	36,000	--	--
	06/27/95	35.18	18.74	16.44	120,000	23,000	30,000	2,700	13,000	--	--
	07/07/95	35.18	18.80	16.38	120,000	23,000	30,000	2,700	13,000	--	--
	09/28/95	35.18	19.30	15.88	110,000	23,000	29,000	2,500	11,000	--	--
	12/20/95	35.18	20.24	14.94	83,000	980	1,800	2,200	10,000	--	--
	03/26/96	35.18	19.69	15.49	150,000	23,000	32,000	2,800	12,000	<200*	d
	06/20/96	35.18	19.20	15.98	94,000	15,000	23,000	2,400	12,000	<200*	--
	09/26/96	35.18	19.80	15.38	150,000	20,000	29,000	2,800	12,000	ND**	--
	10/28/96	35.18	20.18	15.00	--	--	--	--	--	--	--
	12/12/96	35.18	20.17	15.01	58,000	3,100	11,000	1,700	8,100	220*	--
	03/31/97	35.18	19.67	15.51	38,000	6,000	7,900	690	3,300	ND*	--
	06/27/97	35.18	19.68	15.50	62,000	13,000	16,000	1,300	6,000	ND*	--
	09/09/97	35.18	20.20	14.98	81,000	16,000	18,000	1,800	8,600	ND***	--
	12/18/97	35.18	19.80	15.38	110,000	18,000	26,000	2,200	9,500	ND***	--
	03/12/98	35.18	18.07	17.11	120,000	16,000	26,000	2,200	9,400	ND***	--
	06/22/98	35.18	18.29	16.89	38,000	9,800	9,500	1,500	6,000	--	--
	09/18/98	35.18	19.09	16.09	68,000	12,000	16,000	1,400	5,900	--	--
	12/23/98	35.18	19.67	15.51	180,000	16,000	22,000	2,200	8,300	--	--
	03/29/99	35.18	18.97	16.21	16,600	1,380	1,920	373	1,840	--	--
	06/23/99	35.18	18.25	16.93	41,000	10,000	9,400	1,100	5,000	--	--

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Table 1. Groundwater Elevation and Analytic Data - 1432 Harrison St., Oakland, CA.

Well/Boring ID	Date	Top of Casing Elevation (ft)	Depth to Groundwater (ft)	Groundwater Elevation (ft)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Notes
					------(Concentrations in µg/l)----->						
	09/24/99	35.18	19.60	15.58	40,600	4,880	3,490	1,090	4,560	--	--
	12/23/99	35.18	20.21	14.97	61,900	6,710	9,320	1,150	5,360	--	--
	03/21/00	35.18	18.93	16.25	98,000	14,000	21,000	1,600	6,900	<1600	a
MW-3	08/01/94	--	--	--	<50	<0.5	<0.5	<0.5	<2.0	--	--
	12/21/94	33.97	18.82	15.15	<50	<0.5	<0.5	<0.5	<0.5	--	e
	03/13/95	33.97	17.86	16.11	<50	<0.5	<0.5	<0.5	<0.5	--	f,g
	07/07/95	33.97	18.25	15.72	--	--	--	--	--	--	h
	09/28/95	33.97	18.00	15.97	--	--	--	--	--	--	--
	12/20/95	33.97	18.74	15.23	--	--	--	--	--	--	--
	03/26/96	33.97	18.25	15.72	--	--	--	--	--	--	--
	06/20/96	33.97	18.35	15.62	--	--	--	--	--	--	--
	09/26/96	33.97	19.12	14.85	--	--	--	--	--	--	--
	10/28/96	33.97	19.11	14.86	--	--	--	--	--	--	--
	12/12/96	33.97	18.61	15.36	--	--	--	--	--	--	--
	03/31/97	33.97	18.35	15.62	--	--	--	--	--	--	--
	06/27/97	33.97	18.81	15.16	--	--	--	--	--	--	--
	09/09/97	33.97	19.18	14.79	--	--	--	--	--	--	--
	12/18/97	33.97	18.64	15.33	--	--	--	--	--	--	--
	03/12/98	33.97	17.56	16.41	--	--	--	--	--	--	--
	06/22/98	33.97	18.64	15.33	--	--	--	--	--	--	--
	09/18/98	33.97	18.33	15.64	--	--	--	--	--	--	--
	12/23/98	33.97	18.60	15.37	--	--	--	--	--	--	--
	03/29/99	33.97	17.85	16.12	--	--	--	--	--	--	--
	06/23/99	33.97	18.67	15.30	--	--	--	--	--	--	--
	09/24/99	33.97	18.64	15.33	--	--	--	--	--	--	--
	12/23/99	33.97	19.32	14.65	--	--	--	--	--	--	--
	03/21/00	33.97	17.89	16.08	--	--	--	--	--	--	--
MW-4	10/28/96	30.77	19.32	11.45	10,000	3,900	420	400	360	<200*	--
	12/12/96	30.77	19.42	11.35	11,000	4,200	410	420	260	32*	--
	03/31/97	30.77	18.67	12.10	ND	ND	ND	ND	ND	ND*	--
	06/27/97	30.77	19.08	11.69	160	49	1.2	ND	5.9	ND*	--

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Table 1. Groundwater Elevation and Analytic Data - 1432 Harrison St., Oakland, CA.

Well/Boring ID	Date	Top of Casing Elevation (ft)	Depth to Groundwater (ft)	Groundwater Elevation (ft)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Notes
					------(Concentrations in µg/l)----->						
	09/09/97	30.77	19.33	11.44	7,400	5,000	410	230	470	33*	--
	12/18/97	30.77	19.17	11.60	710	170	8.0	ND	39	ND***	--
	03/12/98	30.77	17.68	13.09	1,300	410	21	ND	57	ND***	--
	06/22/98	30.77	17.63	13.14	ND	ND	ND	ND	ND	--	--
	09/18/98	30.77	18.58	12.19	ND	42	1.6	ND	4.8	--	--
	12/23/98	30.77	19.01	11.76	1,900	1,000	76	50	120	--	--
	03/29/99	30.77	18.35	12.42	ND	ND	ND	ND	ND	--	--
	06/23/99	30.77	17.58	13.19	ND	ND	ND	ND	ND	--	--
	09/24/99	30.77	19.05	11.72	9,150	3,270	131	34	537	--	--
	12/23/99	30.77	19.41	11.36	12,200	5,360	275	424	592	--	--
	3/21/00	30.77	18.42	12.35	45,000	16,000	1,100	1,400	1,900	1400 (<35)	a,l
MW-5	10/28/96	31.61	19.88	11.73	90	4.0	0.6	<0.50	<0.50	16*	--
	12/12/96	31.61	20.09	11.52	230	5.6	0.9	ND	0.9	3.6*	--
	03/31/97	31.61	19.24	12.37	90	3.1	ND	ND	ND	ND*	--
	06/27/97	31.61	19.16	12.45	ND	ND	ND	ND	ND	ND*	--
	09/09/97	31.61	19.93	11.68	ND	ND	ND	ND	ND	ND*	--
	12/18/97	31.61	19.77	11.84	ND	ND	ND	ND	ND	ND***	--
	03/12/98	31.61	19.77	11.84	79	2.3	ND	0.8	ND	ND*	--
	06/22/98	31.61	18.08	13.53	ND	ND	ND	ND	ND	--	--
	09/18/98	31.61	19.12	12.49	ND	ND	ND	ND	ND	--	--
	12/23/98	31.61	19.60	12.01	ND	0.8	0.9	ND	ND	--	--
	03/29/99	31.61	18.88	12.73	ND	ND	ND	ND	ND	--	--
	06/23/99	31.61	18.05	13.56	ND	ND	ND	ND	ND	--	--
	09/24/99	31.61	19.61	12.00	ND	ND	ND	ND	ND	--	--
	12/23/99	31.61	20.01	11.60	ND	ND	ND	ND	ND	--	--
	3/21/00	31.61	19.05	12.56	140	<0.5	<0.5	<0.5	<0.5	<5.0	k
MW-6	10/28/96	32.89	20.02	12.87	<50	<0.50	<0.50	<0.50	<0.50	<2.0*	--
	12/12/96	32.89	20.18	12.71	ND	ND	ND	ND	ND	ND*	--
	03/31/97	32.89	19.81	13.08	--	--	--	--	--	--	--
	06/27/97	32.89	19.76	13.13	--	--	--	--	--	--	--

CAMBRIA

Table 1. Groundwater Elevation and Analytic Data - 1432 Harrison St., Oakland, CA.

Well/Boring ID	Date	Top of Casing Elevation (ft)	Depth to Groundwater (ft)	Groundwater Elevation (ft)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Notes
					<------(Concentrations in µg/l)----->						
	09/09/97	32.89	20.06	12.83	ND	ND	ND	ND	ND	ND*	--
	12/18/97	32.89	19.90	12.99	ND	ND	ND	ND	ND	--	--
	03/12/98	32.89	18.00	14.89	ND	ND	ND	ND	ND	ND*	--
	06/22/98	32.89	18.43	14.46	ND	ND	ND	ND	ND	--	--
	09/18/98	32.89	19.10	13.79	ND	ND	ND	ND	ND	--	--
	12/23/98	32.89	19.61	13.28	ND	ND	ND	ND	ND	--	--
	03/29/99	32.89	18.92	13.97	ND	ND	ND	ND	ND	--	--
	06/23/99	32.89	18.41	14.48	ND	ND	ND	ND	ND	--	--
	09/24/99	32.89	19.61	13.28	ND	ND	ND	ND	ND	--	--
	12/23/99	32.89	20.30	12.59	ND	ND	ND	ND	ND	--	--
	03/21/00	32.89	18.97	13.92	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
Trip Blank	03/21/00	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--

Abbreviations

TPHg = Total petroleum hydrocarbons as gasoline by EPA method Modified 8015.
 Benzene, toluene, ethylbenzene, xylenes by EPA method 8020.
 -- = Not Sampled/Not Analyzed
 <n = Not detected in sample above n µg/l.
 ND = Not detected at minimum quantitation limit. See laboratory reports.
 µg/l = micrograms per liter
 MTBE = Methyl tert-butyl ether
 * = MTBE by EPA Method 8020
 ** = MTBE by EPA Method 8240
 *** = MTBE by EPA Method 8260
 VOCs = volatile organic compounds

Notes

a = Unmodified or weakly modified gasoline is significant.
 b = Lighter than water immiscible sheen is present.
 c = Liquid sample that contains greater than ~5 vol. % sediment.
 d = MTBE result confirmed by secondary column or GC/MS analysis.
 e = Sample analyzed for purgeable hydrocarbons by EPA method 8010,
 no purgeable halocarbons were detected.
 f = Sample analyzed for VOCs by EPA method 8240, no non-BTEX compounds were detected.
 g = Sample analyzed for Total Petroleum Hydrocarbons as motor oil (TPHmo) by
 EPA method Modified 8015, no TPHmo was detected.
 h = Analytic sampling discontinued. Approved by Alameda County Department of
 Environmental Health.
 i = Lighter than gasoline range compounds are significant.
 j = Gasoline range compounds having broad chromatographic peaks are significant.
 k = No recognizable pattern.
 l = Sample diluted due to high organic content.

C A M B R I A



Attachment A

Laboratory Analytical Results



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: #180-0214; Borsuk	Date Sampled: 03/21/00
		Date Received: 03/22/00
	Client Contact: Mark Erickson	Date Extracted: 03/23-03/25/00
	Client P.O:	Date Analyzed: 03/23-03/25/00

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
33662	MW-1	W	210,000,a	ND<3000	35,000	42,000	2200	13,000	102
33663	MW-2	W	98,000,a	ND<1600	14,000	21,000	1600	6900	102
33664	MW-4	W	45,000,a	1400	16,000	1100	1400	1900	104
33665	MW-5	W	140,j	ND	ND	ND	ND	ND	107
33666	MW-6	W	ND	ND	ND	ND	ND	ND	107
33667	TB	W	ND	ND	ND	ND	ND	ND	106
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 94553-5560
 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: #180-0214; Borsuk	Date Sampled: 03/21/00
		Date Received: 03/22/00
	Client Contact: Mark Erickson	Date Extracted: 03/28/00
	Client P.O:	Date Analyzed: 03/28/00

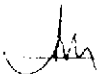
Methyl tert-Butyl Ether *

EPA method 8260 modified

Lab ID	Client ID	Matrix	MTBE ^a	% Recovery Surrogate
33664	MW-4	W	ND<35j	102
Reporting Limit unless otherwise stated, ND means not detected above the reporting limit	W		1.0 ug/L	
	S		5.0 ug/kg	

* water samples are reported in ug/L, soil and sludge samples in ug/kg, wipe samples in ug/wipe and all TCLP / STLC / SPLP extracts in ug/L.
 h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than -5 vol. % sediment; j) sample diluted due to high organic content.

DHS Certification No. 1644

 Edward Hamilton, Lab Director



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QC REPORT

Date: 03/23/00 Matrix: Water

Extraction: N/A

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

SampleID: 32300

Instrument: GC-7

Surrogate1	0.000	97.0	99.0	100.00	97	99	2.0
Xylenes	0.000	281.0	291.0	300.00	94	97	3.5
Ethyl Benzene	0.000	90.0	93.0	100.00	90	93	3.3
Toluene	0.000	91.0	95.0	100.00	91	95	4.3
Benzene	0.000	89.0	95.0	100.00	89	95	6.5
MTBE	0.000	105.0	107.0	100.00	105	107	1.9
GAS	0.000	1024.6	1022.0	1000.00	102	102	0.3

SampleID: 32400

Instrument: GC-11 A

Surrogate1	0.000	105.0	103.0	100.00	105	103	1.9
TPH (diesel)	0.000	311.0	268.0	300.00	104	89	14.9

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

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

RPD means Relative Percent Difference



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QC REPORT

VOCs (EPA 8240/8260)

Date: 03/27/00-03/28/00 Matrix: Water

Extraction: N/A

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

SampleID: 4400

Instrument: GC-10

Surrogate	0.000	107.0	105.0	100.00	107	105	1.9
tert-Amyl Methyl Ether	0.000	91.0	91.0	100.00	91	91	0.0
Methyl tert-Butyl Ether	0.000	81.0	80.0	100.00	81	80	1.2
Ethyl tert-Butyl Ether	0.000	107.0	106.0	100.00	107	106	0.9
Di-isopropyl Ether	0.000	105.0	103.0	100.00	105	103	1.9
Surrogate	0.000	107.0	106.0	100.00	107	106	0.9
Toluene	0.000	102.0	104.0	100.00	102	104	1.9
Benzene	0.000	102.0	102.0	100.00	102	102	0.0
Chlorobenzene	0.000	96.0	98.0	100.00	96	98	2.1
Trichloroethane	0.000	88.0	92.0	100.00	88	92	4.4
1,1-Dichloroethene	0.000	101.0	104.0	100.00	101	104	2.9

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

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

RPD means Relative Percent Deviation

194287031.doc

McCAMPBELL ANALYTICAL INC.											CHAIN OF CUSTODY RECORD												
110 2 ND AVENUE SOUTH, #D7 PACHECO, CA 94553 Telephone: (925) 798-1620 Fax: (925) 798-1622											TURN AROUND TIME <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input checked="" type="checkbox"/> RUSH 24 HOUR 48 HOUR 5 DAY												
Report To: <u>MARK ERICKSON</u> Bill To: <u>CAMBRIA ENV. TECH</u>											Analysis Request											Other	Comments
Company: Cambria Environmental Technology 1144 65 TH Street, Suite C Oakland, CA 94608											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) <u>ACTY CONCENTR</u> 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												
Tele: (510) 420-0700 Fax: (510) 420-9170																							
Project #: <u>180-0214</u> Project Name: <u>BORSUK</u>																							
Project Location: <u>1432 HARRISON ST. OAKLAND</u>																							
Sampler Signature: <u>[Signature]</u>																							
SAMPLE ID	LOCATION	SAMPLING		# Containers	Type Containers	MATRIX					METHOD PRESERVED												
		Date	Time			Water	Soil	Air	Sludge	Other	Ice	HCl	HNO ₃	Other									
MW-1		3/2/00	2:10	4	VOA	X						X	X							33662			
MW-2			2:25	4	VOA															33663			
MW-4			2:50	4	VOA															33664			
MW-5			3:00	4	VOA															33665			
MW-6			2:35	4	VOA															33666			
TB				1+	VOA															33667			
ICE ✓ PRESERVATION APPROPRIATE ✓ CONTAINERS ✓																							
Relinquished By: <u>[Signature]</u> Date: <u>3/2/00</u> Time: <u>1100</u>											Remarks: * TRIP BLANK INCLUDED CONFIRM MTBE BY 8260 TB, MW												
Relinquished By: <u>[Signature]</u> Date: <u>3/2/00</u> Time: <u>1240</u>																							
Relinquished By: _____ Date: _____ Time: _____																							

C A M B R I A



Attachment B

Field Data Sheets

WELL DEPTH MEASUREMENTS

Well ID	Time	Product Depth	Water Depth	Product Thickness	Well Depth	Comments
MW-1	10:35		18.48'		34.95'	HIGH CONC. WELL
MW-2	10:43		18.93'		35.12'	HIGH CONC. WELL
MW-3	10:10		17.89'		33.97'	NO SAMPLES TAKEN
MW-4	10:39		18.42'		30.77'	WATER IN WELL W/OUT. REMOVE.
MW-5	10:40		19.05'		31.61'	NO DETECT WELL
MW-6	10:16		18.97'		32.89'	WATER IN WELL W/OUT. REMOVE.

Project Name: BORSUK

Project Number: 100-0214

Measured By: ME.

Date: 3/21/00

WELL SAMPLING FORM

Project Name: Borsuk	Cambria Mgr: DCE	Well ID: MW- /
Project Number: 180-0214	Date: 3/21/00	Well Yield: -----
Site Address: 1432 Harrison St Oakland, CA.	Sampling Method:	Well Diameter: 4" pvc
	Disposable bailer	Technician(s): ME
Initial Depth to Water: 18.48'	Total Well Depth: 34.95'	Water Column Height: 16.47'
Volume/ft: 0.65	1 Casing Volume: 10.76 gal	3 Casing Volumes: 32.19 gal
Purging Device: disposable bailer	Did Well Dewater?: YES	Total Gallons Purged: 86 gal
Start Purge Time: 11:23	Stop Purge Time: 11:29	Total Time: 6 min

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
11:25	1	20.4	8.1	587	ODDROUS
	2				
	3				

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW- /	3/21/00	2:10	4 voa's	HCL	TPHg, BTEX, MTBE* Confirm MTBE	8020 8015 8260

WELL SAMPLING FORM

Project Name: Borsuk	Cambria Mgr: DCE	Well ID: MW- 2
Project Number: 180-0214	Date: 3/21/00	Well Yield: -----
Site Address: 1432 Harrison St Oakland, CA.	Sampling Method:	Well Diameter: 2" pvc
	Disposable bailer	Technician(s): ME
Initial Depth to Water: 18.93'	Total Well Depth: 35.18'	Water Column Height: 16.25'
Volume/ft: 0.16 gal/ft	1 Casing Volume: 2.16 gal	3 Casing Volumes: 7.8 gal
Purging Device: disposable bailer	Did Well Dewater?: NO	Total Gallons Purged: 8 gal
Start Purge Time: 11:39	Stop Purge Time: 11:46	Total Time: 7 min

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
11:40	1	20.8	7.8	587	ODOROUS
11:42	2	20.7	7.4	593	
11:44	3	21.2	7.1	595	
11:45	3	21.3	7.0	587	

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW- 2	3/21/00	2:25	4 voa's	HCL	TPHg, BTEX, MTBE* Confirm MTBE	8020 8015 8260

WELL SAMPLING FORM

Project Name: Borsuk	Cambria Mgr: DCE	Well ID: MW- 3
Project Number: 180-0214	Date: 3/21/00	Well Yield: -----
Site Address: 1432 Harrison St Oakland, CA.	Sampling Method:	Well Diameter: 2 " pvc
	Disposable bailer	Technician(s): ME
Initial Depth to Water: 17.89'	Total Well Depth: 33.97'	Water Column Height: 16.08'
Volume/ft: 0.16	1 Casing Volume: 2.69 gal	3 Casing Volumes: 7.79 gal
Purging Device: disposable bailer	Did Well Dewater?: NO	Total Gallons Purged: 8 gal
Start Purge Time: 1:33	Stop Purge Time: 1:51	Total Time: 18 min

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
1:37	1	19.1	8.1	333	
1:44	2	18.7	8.0	151	
1:50	3	18.2	7.8	148	

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW- 3	3/21/00		4 voa's	HCL	TPHg, BTEX, MTBE* Confirm MTBE	8020 8015 8260
NO SAMPLES NO						
NO DETECTION WELL						

WELL SAMPLING FORM

Project Name: Borsuk	Cambria Mgr: DCE	Well ID: MW- 4
Project Number: 180-0214	Date: 3/21/00	Well Yield: -----
Site Address: 1432 Harrison St Oakland, CA.	Sampling Method:	Well Diameter: 2 " pvc
	Disposable bailer	Technician(s): ME
Initial Depth to Water: 18.42'	Total Well Depth: 30.77'	Water Column Height: 12.35'
Volume/ft: 0.16'	1 Casing Volume: 1.98 gal	3 Casing Volumes: 5.93 gal
Purging Device: disposable bailer	Did Well Dewater?: NO	Total Gallons Purged: 6 gal
Start Purge Time: 1:03	Stop Purge Time: 1:16	Total Time: 13 min

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
1:05	1	20.1	7.5	541	GREENISH-GRAY
1:09	2	19.8	7.3	546	PURGE WATER
1:15	3	19.6	7.2	592	

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW- 4	3/21/00	2:50	4 voa's	HCL	TPHg, BTEX, MTBE* Confirm MTBE	8020 8015 8260

WELL SAMPLING FORM

Project Name: Borsuk	Cambria Mgr: DCE	Well ID: MW- 5
Project Number: 180-0214	Date: 3/21/00	Well Yield: -----
Site Address: 1432 Harrison St Oakland, CA.	Sampling Method:	Well Diameter: 2 " pvc
	Disposable bailer	Technician(s): ME
Initial Depth to Water: 19.05'	Total Well Depth: 31.61'	Water Column Height: 12.56'
Volume/ft: 0.16	1 Casing Volume: 2.0 gal	3 Casing Volumes: 6 gal
Purging Device: disposable bailer	Did Well Dewater?: NO	Total Gallons Purged: 6.256 gal
Start Purge Time: 12:03	Stop Purge Time: 12:19	Total Time: 16 min

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
12:05	1	18.8	7.5	573	
12:12	2	18.3	7.5	578	
12:18	3	18.2	7.5	552	

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW- 5	3/21/00	3:00	4 voa's	HCL	TPHg, BTEX, MTBE* Confirm MTBE	8020 8015 8260

WELL SAMPLING FORM

Project Name: Borsuk	Cambria Mgr: DCE	Well ID: MW- 6
Project Number: 180-0214	Date: 3/21/00	Well Yield: -----
Site Address: 1432 Harrison St Oakland, CA.	Sampling Method:	Well Diameter: 2" pvc
	Disposable bailer	Technician(s): ME
Initial Depth to Water: 18.97'	Total Well Depth: 32.89'	Water Column Height: 13.92'
Volume/ft: 0.16'	1 Casing Volume: 2.22 gal	3 Casing Volumes: 6.68 gal
Purging Device: disposable bailer	Did Well Dewater?: NO.	Total Gallons Purged: 7 gal
Start Purge Time: 12:30	Stop Purge Time: 12:48	Total Time: 18 min

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
12:35	1	19.3	7.8	817	
12:40	2	19.6	7.6	683	
12:46	3	19.5	7.5	532	

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW- 6	3/21/00	2:35	4 voa's	HCL	TPHg, BTEX, MTBE* Confirm MTBE	8020 8015 8260