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JUL 31 2002

July 29, 2002

Mr. Barney Chan
Alameda County Department of Environmental Health
UST Local Oversight Program
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Re: **Second Quarter 2002 Monitoring Report**
Former ARCO Service Station (Bo Gin)
706 Harrison Street
Oakland, California
STID 3749
Cambria Project #230-0116



Dear Mr. Chan:

On behalf of Mr. Bo K. Gin, Cambria Environmental Technology, Inc. (Cambria) is submitting this second quarter 2002 groundwater monitoring report for the above-referenced site. Presented in the report are the second quarter 2002 activities and results and the anticipated third quarter 2002 activities.

If you have any questions or comments regarding this report, please call me at (510) 450-1983.

Sincerely,
Cambria Environmental Technology, Inc.

Ron Scheele, RG
Senior Geologist

Attachments: Second Quarter 2002 Monitoring Report

cc: Mr. Bo K. Gin, 288 11th Street, Oakland, California 94706

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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JUL 31 2002

SECOND QUARTER 2002 MONITORING REPORT

**Former ARCO Service Station (Bo Gin)
706 Harrison Street
Oakland, California
STID 3749
Cambria Project #230-0116**



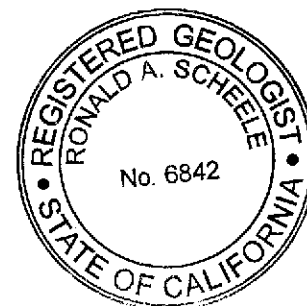
July 29, 2002

Prepared for:

Mr. Bo K. Gin
288 11th Street
Oakland, California 94706

Prepared by:

Cambria Environmental Technology, Inc.
6262 Hollis Street
Emeryville, California 94102



Matthew A. Meyers
Staff Geologist

Ron Scheele, RG
Senior Geologist

C A M B R I A

SECOND QUARTER 2002 MONITORING REPORT

Former ARCO Service Station (Bo Gin)
706 Harrison Street
Oakland, California
STID 3749
Cambria Project #230-0116

July 29, 2002



INTRODUCTION

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

SECOND QUARTER 2002 ACTIVITIES

Monitoring Activities

Field Activities: On May 10, 2002, Cambria conducted quarterly monitoring and sampling activities. Cambria gauged groundwater levels in monitoring wells MW-1 through MW-7 (see Figure 1). Groundwater samples were collected from wells MW-1, MW-2, and MW-4 according to the sampling schedule. Field Data Sheets are presented as Appendix A.

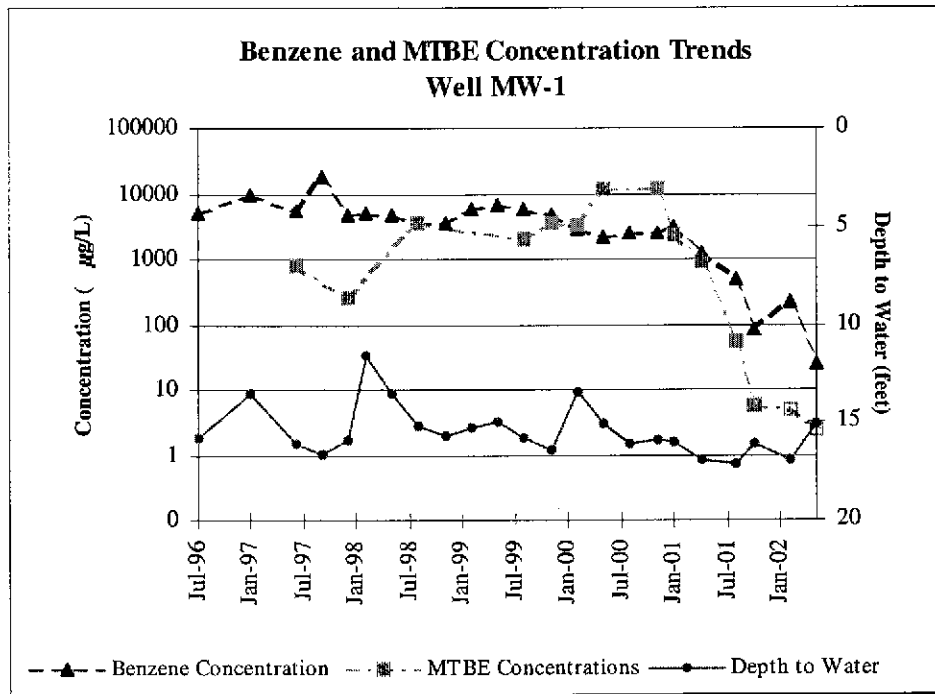
Sample Analyses: Groundwater samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg) by modified EPA Method 8015, and benzene, toluene, ethylbenzene, and xylenes (BTEX), and methyl tertiary butyl ether (MTBE) by EPA Method 8021B. Laboratory analytical results are included as Appendix B. Groundwater elevations are shown on Figure 1.

Monitoring Results

Groundwater Flow Direction: The groundwater flow direction on May 10, 2002 was split with groundwater flowing northerly along the northern portion of the site, and groundwater flowing southerly along the southern portion of the site. This split gradient has been apparent during the last five monitoring quarters. Based on depth-to-water measurements collected during Cambria's May 10, 2002 site visit, groundwater in the southern portion of the site flows toward the south-southwest at a rate of 0.006 ft/ft (Figure 1).



Hydrocarbon Distribution in Groundwater: Hydrocarbon concentrations were detected in all three of the wells analyzed this quarter. Hydrocarbon concentrations were less in wells MW-1 and MW-4 as compared to the previous quarter. However, hydrocarbon concentrations in MW-2 were higher than the previous quarter and showed a return to historical levels. The maximum TPHg and benzene concentrations were detected in well MW-2 at 97,000 and 4,500 micrograms per liter (µg/L), respectively. No MTBE was detected in any of the wells. Continued decreasing benzene and MTBE concentration trends are apparent in monitoring wells MW-1 and MW-4. See example graph of MW-1 below and Appendix C for graphs of each well. Please note that MTBE has been below laboratory detection limits in MW-1 the last two sampling events as indicated by the unshaded boxes.



Corrective Action Activities

Cambria operated the air sparging system throughout the second quarter to enhance the natural attenuation of the remaining hydrocarbons. Air was injected into air sparge wells SP-3, SP-4, and SP-5 at a rate of approximately 2 to 4 cfms and at pressures ranging from 5 to 10 psi.

ANTICIPATED THIRD QUARTER 2002 ACTIVITIES



Monitoring Activities

Cambria will gauge all wells, check the wells for SPH, and collect groundwater samples from scheduled wells that do not contain SPH. 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.

Corrective Action Activities

Cambria plans to continue operation of the air sparging system during the second quarter 2002 while remediation testing is performed at the upgradient service station site. Cambria will also perform a Tier I Risk Based Corrective Action evaluation and if necessary prepare a work plan for additional sampling of soil and soil vapor. A hydrocarbon mass estimate and hydrogeologic cross-sections will also be prepared and included with the Tier I RBCA evaluation.

APPENDICES

Figure 1 – Groundwater Elevation Contour Map

Table 1 – Groundwater Elevations and Analytical Data

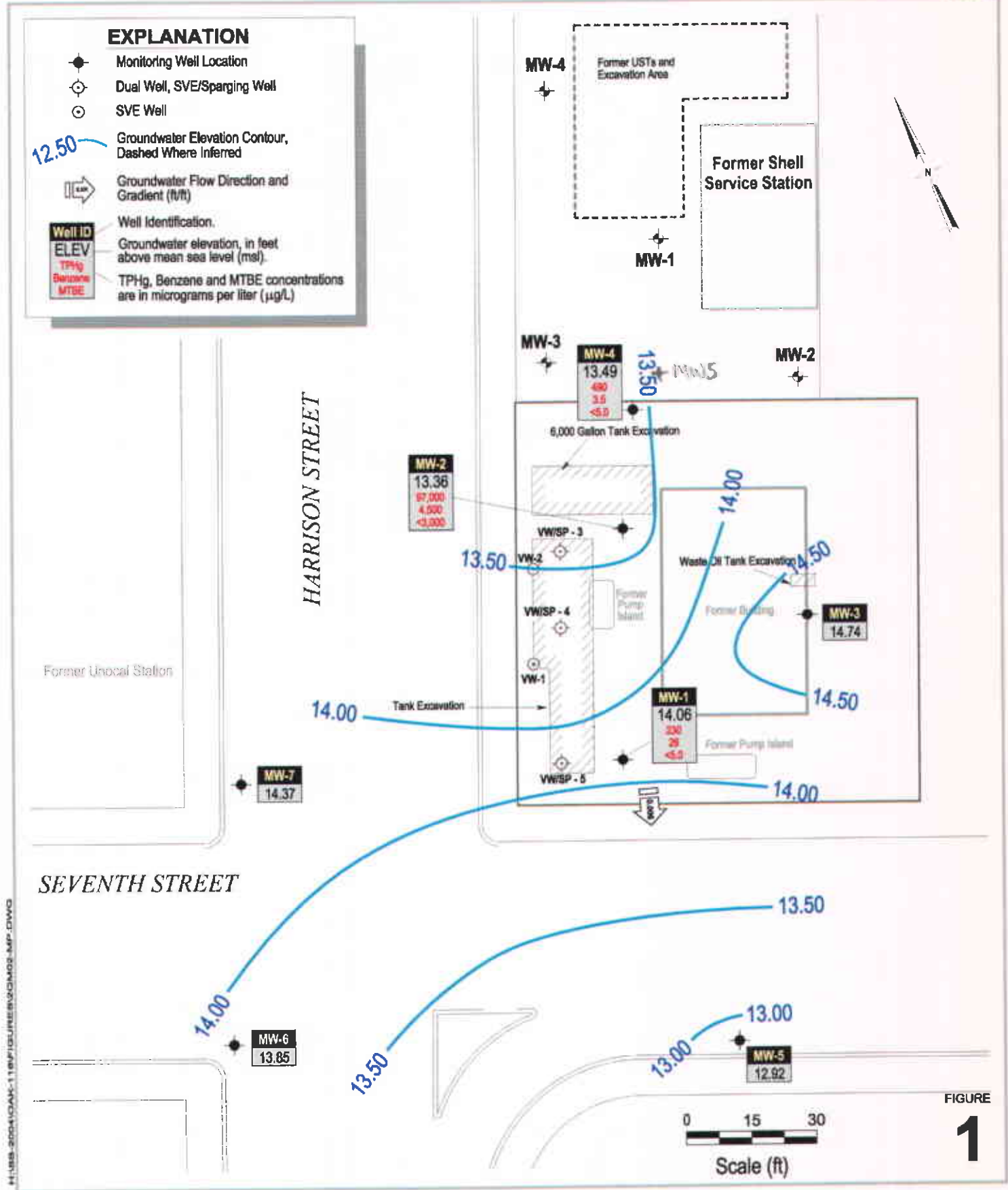
Appendix A – Groundwater Monitoring Field Data Sheets

Appendix B – Laboratory Analytical Report

Appendix C – Benzene and MtBE Concentration Graphs – MW-1, MW-2, and MW-4

EXPLANATION

- Monitoring Well Location
- Dual Well, SVE/Sparging Well
- SVE Well
- Groundwater Elevation Contour, Dashed Where Inferred
- Groundwater Flow Direction and Gradient (ft/ft)
- Well ID**
ELEV
TPHg
Benzene
MTBE
- Well Identification.
- Groundwater elevation, in feet above mean sea level (msl).
- TPHg, Benzene and MTBE concentrations are in micrograms per liter (µg/L).



FIGURE

1

Former Arco Station

706 Harrison Street
Oakland, California



C A M B R I A

Groundwater Elevation Contour Map

May 10, 2002

H:\88-2004\04\K-118\FIGURES\GCM02.MPJ.DWG

CAMBRIA

Table 1. Groundwater Elevations and Analytical Data - Former ARCO Station - 706 Harrison Street, Oakland, California

Well ID	TOC	Elevation	Depth to	Groundwater	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE (8020)	MTBE (8260)	Notes
Monitoring	Date Sampled	(ft)	Elevation	(ft-msl)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	
Frequency												
MW-1	8/13/93	17.40	11.75	20,000	8,500	640	280	440	-	-		
29.15	12/14/93	17.27	11.88	17,000	9,200	1,200	4,400	540	-	-		
Quarterly	4/15/94	17.00	12.15	9,500	3,600	530	160	280	-	-		
	12/29/94	16.40	12.75	-	-	-	-	-	-	-		
	7/19/96	15.83	13.32	17,000	5,200	1,100	330	530	-	-		sheen/odor
	1/27/97	13.58	15.57	30,000	9,800	1,300	790	880	400	-		b, sheen/odor
	6/18/97	16.11	13.04	19,000	5,600	1,400	510	770	1,200	800		a, b
	9/18/97	16.62	12.53	48,000	18,000	4,400	1,000	1,700	<640	-		b
	12/10/97	15.93	13.22	22,000	4,900	1,300	580	650	460	260		a, b, odor
	2/18/98	11.56	17.59	16,000	5,000	750	400	780	1,800	-		b
	5/12/98	13.53	15.62	19,000	4,600	810	450	770	5,500	-		b, c
	8/18/98	15.19	13.96	12,000	3,600	1,300	300	570	5,100	3,700		a, b
	11/24/98	15.67	13.48	13,000	3,600	890	330	380	6,100	-		b
	2/4/99	15.31	13.84	20,000	5,900	830	450	500	4,900	-		b
	5/18/99	14.95	14.20	23,000	7,000	1,600	520	830	6,100	-		b
	8/27/99	15.84	13.31	19,000	5,800	1,700	410	710	1,800	2,100		a, b
	11/18/99	16.39	12.76	20,000	4,900	630	410	580	4,900	3,600		b
	2/29/00	13.43	15.72	12,000	2,800	24	290	170	3,100	3,400		a
	5/25/00	15.08	14.07	12,000	2,200	120	330	260	9,100	12,000		a, b
	8/9/00	16.09	13.06	13,000	2,500	44	310	140	16,000	-		b
	11/9/00	15.90	13.25	11,000	2,500	140	380	150	11,000	12,000		b
	1/29/01	16.05	13.10	9,600	3,100	100	77	200	2,600	2,400		b
	4/16/01	16.90	12.25	3,300	1,200	4.4	2.7	28	900	940		b
	8/14/01	17.13	12.02	2,000	500	3.4	24	7.8	68	53		a
	10/22/01	16.11	13.04	220	83	0.63	2.8	<0.5	<10	5.7		a
	2/1/02	16.93	12.22	640	220	1.7	4.7	0.57	<10	-		a
	5/10/02	15.09	14.06	230	26	0.97	<0.5	<0.5	<5.0	-		a

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Table 1. Groundwater Elevations and Analytical Data - Former ARCO Station - 706 Harrison Street, Oakland, California

Well ID											
TOC											
Elevation											
Monitoring	Depth to	Groundwater	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE (8020)	MTBE (8260)	Notes	
Frequency	Date Sampled	Water	Elevation	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	
		(ft)	(ft-msl)								
MW-2	8/13/93	17.05	13.46	34,000	6,800	10,000	740	3,900	-	-	
30.51	12/14/93	18.28	12.23	16,000	3,200	4,200	500	1,700	-	-	
Quarterly	4/15/94	18.10	12.41	23,000	2,500	4,200	470	1,800	-	-	
	12/29/94	17.40	13.11	-	-	-	-	-	-	-	
	7/19/96	16.72	13.79	90,000	7,300	14,000	1,600	7,300	-	-	odor
	1/27/97	14.89	15.62	63,000	7,100	13,000	1,600	7,100	500	-	b, odor
	6/18/97	17.12	13.39	52,000	5,100	10,000	1,400	6,000	<200	-	b
	9/18/97	17.63	12.88	110,000	9,400	23,000	2,600	13,000	<890	-	b, shecn/odor
	12/10/97	16.98	13.53	39,000	2,600	5,300	940	3,900	780	320	b, odor
	2/18/98	12.61	17.90	85,000	9,000	19,000	2,300	11,000	2,400	-	b
	5/12/98	14.45	16.06	110,000	9,500	21,000	2,500	12,000	<1,200	-	b
	8/18/98	16.14	14.37	64,000	6,000	13,000	1,700	7,800	2,000	1,300	a, b
	11/24/98	16.70	13.81	78,000	5,300	14,000	2,300	11,000	<2,000	-	b, g
	2/4/99	18.39	12.12	66,000	5,800	16,000	2,600	12,000	3,000	-	b, g
	5/18/99	15.90	14.61	78,000	6,700	17,000	2,400	10,000	4,300	-	b
	8/27/99	16.79	13.72	91,000	7,400	17,000	2,300	11,000	1,200	1,000	a, b
	11/18/99	17.32	13.19	180,000	7,000	20,000	3,300	16,000	<6,000	1,700	b,g
	2/29/00	14.37	16.14	86,000	5,500	13,000	2,000	9,500	3,500	4,700	a
	5/25/00	16.01	14.50	110,000	6,300	14,000	2,400	10,000	7,500	6,500	a, b, g
	8/9/00	17.02	13.49	77,000	5,000	13,000	2,000	8,600	5,900	-	b
	11/9/00	17.00	13.51	70,000	4,800	12,000	1,900	8,000	9,400	8,300	b
	1/29/01	18.31	12.20	110,000	8,200	21,000	2,800	13,000	2,500	1,900	b,g
	4/16/01	18.59	11.92	97,000	7,400	15,000	2,500	12,000	<3,000	<50	b,g
	8/14/01	18.74	11.77	97,000	6,200	14,000	2,400	13,000	<250	<50	a,j
	10/22/01	18.27	12.24	71,000	5,900	15,000	2,400	12,000	<1,400	150	a
	2/1/02	18.05	12.46	1,400	11	88	44	210	<5.0	-	a
	5/10/02	17.15	13.36	97,000	4,500	15,000	2,500	12,000	<3,000	-	a,g

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Table 1. Groundwater Elevations and Analytical Data - Former ARCO Station - 706 Harrison Street, Oakland, California

Well ID											
TOC											
Elevation		Depth to	Groundwater								
Monitoring		Water	Elevation	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE (8020)	MTBE (8260)	Notes
Frequency	Date Sampled	(ft)	(ft-msl)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	
MW-3	8/13/93	17.05	12.72	<50	<0.50	<0.50	<0.50	<1.5	-	-	
29.77	12/14/93	17.70	12.07	<50	<0.50	<0.50	<0.50	<1.5	-	-	
Bi-annually	4/15/94	17.40	12.37	<50	<0.5	<0.5	<0.5	<0.5	-	-	
	12/29/94	16.80	12.97	-	-	-	-	-	-	-	
	7/19/96	16.28	13.49	<50	<0.5	<0.5	<0.5	<0.5	-	-	
	1/27/97	13.83	15.94	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	6/18/97	16.53	13.24	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	9/18/97	17.07	12.70	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	12/10/97	16.15	13.62	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	2/18/98	11.80	17.97	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	5/12/98	13.85	15.92	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	8/18/98	15.57	14.20	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	11/24/98	16.04	13.73	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	2/4/99	17.80	11.97	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	5/18/99	15.29	14.48	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	8/27/99	16.15	13.62	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	11/18/99	16.77	13.00	-	-	-	-	-	-	-	
	2/29/00	13.71	16.06	<50	2	<0.5	<0.5	<0.5	<5.0	-	
	5/25/00	15.46	14.31	-	-	-	-	-	-	-	
	8/9/00	16.46	13.31	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	11/9/00	16.25	13.52	-	-	-	-	-	-	-	
	1/29/01	16.52	13.25	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	4/16/01	16.95	12.82	-	-	-	-	-	-	-	
	8/14/01	17.11	12.66	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	10/22/01	16.50	13.27	-	-	-	-	-	-	-	
	2/1/02	16.90	12.87	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	5/10/02	15.03	14.74	-	-	-	-	-	-	-	

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TOC											
Elevation		Depth to	Groundwater								
Monitoring		Water	Elevation	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE (8020)	MTBE (8260)	
Frequency	Date Sampled	(ft)	(ft-msl)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	Notes
MW-4	12/16/94	18.10	13.08	2,500	32	6.5	4.5	17	-	-	
31.18	12/29/94	17.95	13.23	-	-	-	-	-	-	-	
Quarterly	7/19/96	17.38	13.80	3,300	520	39	67	60	-	-	
	1/27/97	15.25	15.93	4,500	860	55	100	91	1,100	-	b
	6/18/97	17.61	13.57	2,700	700	52	81	76	2,200	2,300	a, b
	9/18/97	18.01	13.17	3,900	760	38	56	64	<170	-	b
	12/10/97	17.45	13.73	12,000	1,800	120	210	210	2,900	2,600	a, b
	2/18/98	13.09	18.09	1,700	210	8	6.7	16	200	-	b
	5/12/98	14.78	16.40	2,100	300	15	36	34	920	-	b, c
	8/18/98	16.59	14.59	4,700	1,000	130	110	150	5,200	4,900	a, b
	11/24/98	17.18	14.00	3,000	810	44	76	94	4,800	-	b
	2/4/99	18.90	12.28	2,800	770	50	69	69	3,100	-	b
	5/18/99	16.30	14.88	4,000	780	57	7.7	79	4,800	-	b
	8/27/99	17.21	13.97	4,100	870	51	74	99	3,300	4,100	a, b
	11/18/99	17.77	13.41	3,000	760	43	67	65	5,100	5,400	b
	2/29/00	14.85	16.33	4,600	1,000	64	94	170	4,100	4,600	a
	5/25/00	16.45	14.73	2,600	540	39	59	41	3,500	5,300	b
	8/9/00	17.47	13.71	4,400	930	66	98	79	9,400	-	b
	11/9/00	17.45	13.73	4,200	630	34	54	44	7,800	9,400	b
	1/29/01	18.90	12.28	3,100	710	34	66	51	9,400	8,000	b
	4/16/01	19.17	12.01	160	1.2	1.3	<0.5	12	22	20	b
	8/14/01	19.20	11.98	1,700	190	11	35	13	300	250	b
	10/22/01	18.95	12.23	1,100	120	3.7	29	7.9	<25	16	a
	2/1/02	19.05	12.13	2,600	25	43	21	280	<5.0	-	a
	5/10/02	17.69	13.49	490	3.5	2.0	2.1	2.2	<5.0	-	a

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Table 1. Groundwater Elevations and Analytical Data - Former ARCO Station - 706 Harrison Street, Oakland, California

Well ID											
TOC											
Elevation		Depth to	Groundwater								
Monitoring		Water	Elevation	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE (8020)	MTBE (8260)	
Frequency	Date Sampled	(ft)	(ft-msl)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	Notes
MW-5	12/16/94	16.07	11.97	<50	1.1	<0.5	<0.5	2.4	-	-	
28.04	12/29/94	16.10	11.94	-	-	-	-	-	-	-	
Bi-annually	7/19/96	15.49	12.55	<50	<0.5	<0.5	<0.5	<0.5	-	-	
	1/27/97	13.60	14.44	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	6/18/97	15.55	12.49	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	9/18/97	16.16	11.88	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	12/10/97	15.41	12.63	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	2/18/98	10.93	17.11	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	5/12/98	13.25	14.79	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	8/18/98	14.75	13.29	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	11/24/98	15.15	12.89	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	2/4/99	14.61	13.43	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	5/18/99	14.15	13.89	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	8/27/99	15.43	12.61	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	11/18/99	15.97	12.07	-	-	-	-	-	-	-	
	2/29/00	13.16	14.88	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	5/25/00	14.72	13.32	-	-	-	-	-	-	-	
	8/9/00	15.68	12.36	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	11/9/00	15.39	12.65	-	-	-	-	-	-	-	
	1/29/01	15.97	12.07	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	4/16/01	16.24	11.80	-	-	-	-	-	-	-	
	8/14/01	17.39	10.65	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	10/22/01	15.90	12.14	-	-	-	-	-	-	-	
	2/1/02	16.55	11.49	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	5/10/02	15.12	12.92	-	-	-	-	-	-	-	

CAMBRIA

Table 1. Groundwater Elevations and Analytical Data - Former ARCO Station - 706 Harrison Street, Oakland, California

Well ID	TOC	Elevation	Depth to	Groundwater	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE (8020)	MTBE (8260)	Notes
Monitoring	Date Sampled	(ft)	Elevation	(ft-msl)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	
Frequency												
MW-6	12/16/94	17.74	11.36	-	-	-	-	-	-	-	-	
29.1	12/29/94	17.40	11.70	-	-	-	-	-	-	-	-	
Bi-annually	7/19/96	16.60	12.50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	
	1/27/97	14.88	14.22	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	6/18/97	16.73	12.37	51	22	<0.5	<0.5	<0.5	<0.5	<5.0	-	c
	9/18/97	17.24	11.86	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	12/10/97	16.56	12.54	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	2/18/98	12.93	16.17	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	5/12/98	14.35	14.75	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	8/18/98	15.94	13.16	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	11/24/98	16.46	12.64	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	2/4/99	18.25	10.85	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	5/18/99	15.73	13.37	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	8/27/99	15.64	13.46	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	11/18/99	17.04	12.06	-	-	-	-	-	-	-	-	
	2/29/00	14.55	14.55	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	5/25/00	15.86	13.24	-	-	-	-	-	-	-	-	
	8/9/00	16.80	12.30	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	11/9/00	16.60	12.50	-	-	-	-	-	-	-	-	
	1/29/01	17.00	12.10	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	4/16/01	17.15	11.95	-	-	-	-	-	-	-	-	
	8/14/01	17.30	11.80	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	10/22/01	17.13	11.97	-	-	-	-	-	-	-	-	
	2/1/02	16.57	12.53	70	37	<0.5	<0.5	<0.5	<0.5	<5.0	-	a
	5/10/02	15.25	13.85	-	-	-	-	-	-	-	-	

CAMBRIA

Table 1. Groundwater Elevations and Analytical Data - Former ARCO Station - 706 Harrison Street, Oakland, California

Well ID											
TOC											
Elevation		Depth to	Groundwater								
Monitoring		Water	Elevation	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE (8020)	MTBE (8260)	
Frequency	Date Sampled	(ft)	(ft-msl)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	Notes
MW-7	12/16/94	17.07	12.60	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
29.67	12/29/94	17.65	12.02	-	-	-	-	-	-	-	
Bi-annually	7/19/96	16.44	13.23	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	1/27/97	15.09	14.58	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	6/18/97	16.59	13.08	73	<0.5	0.55	<0.5	<0.5	<5.0	-	d
	9/18/97	17.06	12.61	94	<0.5	<0.5	<0.5	<0.5	<5.0	-	e, f
	12/10/97	16.58	13.09	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	2/18/98	12.60	17.07	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	5/12/98	14.81	14.86	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	8/18/98	15.67	14.00	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	11/24/98	16.30	13.37	200	<0.5	<0.5	<0.5	<0.5	<5.0	-	d
	2/4/99	15.99	13.68	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	5/18/99	15.42	14.25	200	<0.5	<0.5	<0.5	<0.5	<5.0	-	d
	8/27/99	16.35	13.32	140	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	11/18/99	16.81	12.86	--	--	--	--	--	--	-	
	2/29/00	14.16	15.51	100	<0.5	<0.5	<0.5	<0.5	<5.0	-	f
	5/25/00	15.54	14.13	--	--	--	--	--	--	-	
	8/9/00	16.56	13.11	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	11/9/00	16.45	13.22	-	-	-	-	-	-	-	
	1/29/01	16.92	12.75	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	4/16/01	17.03	12.64	-	-	-	-	-	-	-	
	8/14/01	17.27	12.40	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	10/22/01	16.95	12.72	-	-	-	-	-	-	-	
	2/1/02	16.14	13.53	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	5/10/02	15.30	14.37	-	-	-	-	-	-	-	
Trip Blank	11/9/00	-	-	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	

CAMBRIA

Table 1. Groundwater Elevations and Analytical Data - Former ARCO Station - 706 Harrison Street, Oakland, California

Well ID											
TOC		Depth to	Groundwater								
Elevation		Water	Elevation	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE (8020)	MTBE (8260)	
Monitoring		(ft)	(ft-msl)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	Notes
Frequency	Date Sampled										

Abbreviations and Analyses:

TPHg = Total petroleum hydrocarbons as gasoline by modified EPA Method 8015
 Benzene, ethylbenzene, toluene and xylenes by EPA Method 8020.
 MTBE = Methyl tertiary butyl ether by EPA Method 8020 and/or 8260.
 µg/L = Micrograms per liter
 TOC = Top of casing elevation with respect to mean sea level
 - = not sampled

Notes

a = Analytical laboratory notes that unmodified or weakly modified gasoline is significant.
 b = Analytical laboratory notes that heavier gasoline range compounds are significant.
 c = Analytical laboratory notes that lighter gasoline range compounds are significant.
 d = Analytical laboratory notes that isolated peaks are present.
 e = Analytical laboratory notes that heavier gasoline range compounds are significant.
 f = Analytical laboratory notes hydrocarbons with no recognizable patterns are present.
 g = Analytical laboratory notes lighter than water immiscible sheen is present.
 j = Sample diluted due to high organic content.
 Data prior to 12/16/94 provided by previous consultant.

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Date/Time of Submittal: 7/26/2002 3:39:40 PM

Facility Global ID: T0600100985

Facility Name: OAKLAND AUTO PARTS

Submittal Title: Bo Gin 2nd Qtr 2002, GW Sampling Results

Submittal Type: GW Monitoring Report

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CONTACT SITE ADMINISTRATOR.

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UPLOADING A GEO_WELL FILE

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

Submittal Title: Bo Gin, 2nd Qtr 2002, Depth to
GW

Submittal Date/Time: 7/26/2002 3:42:18 PM

Confirmation
Number: 1936787247

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A M B R I A



ATTACHMENT A

Groundwater Monitoring Field Data Sheets

WELL DEPTH MEASUREMENTS

Well ID	Time	Product Depth	Water Depth	Product Thickness	Well Depth	Comments
MW-1	11:40		15.09			
MW-2	11:35		17.15			
MW-3	11:25		15.03			
MW-4	11:30		17.69			
MW-5	10:00		15.12			
MW-6	11:05		15.25			
MW-7	11:10		15.30			

Project Name: Bo Gin

Project Number: 230-0116

Measured By: S. Hill

Date: 5-10-02

WELL SAMPLING FORM

Project Name: Bo Gin	Cambria Mgr: RAS	Well ID: MW-1
Project Number: 230-0116	Date: 05/01/02	Well Yield:
Site Address: 706 Harrison St. Oakland, Ca	Sampling Method: Disposable bailer	Well Diameter: 2" pvc
		Technician(s): SG
Initial Depth to Water: 15.09	Total Well Depth: 24.20	Water Column Height: 9.11
Volume/ft: 0.16	1 Casing Volume: 1.45	3 Casing Volumes: 4.37
Purging Device: disposable bailer	Did Well Dewater?: NO	Total Gallons Purged: 5
Start Purge Time: 13:10	Stop Purge Time: 13:24	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

Time	Casing Volume	Temp.	pH	Cond.	Comments
13:15	1.5	16.4	7.22	1370	
13:20	3	16.3	7.15	922	
13:25	5	16.1	7.19	975	

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW-1	05/01/02	13:30	4VOAs	HCL	TPHg BTEX MTBE	8260

WELL SAMPLING FORM

Project Name: Bo Gin	Cambria Mgr: RAS	Well ID: MW-2
Project Number: 230-0116	Date: 05/01/02	Well Yield:
Site Address: 706 Harrison St. Oakland, Ca	Sampling Method: Disposable bailer	Well Diameter: 2" pvc
		Technician(s): SG
Initial Depth to Water: 17.15	Total Well Depth: 26.50	Water Column Height: 8.35
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: 12:40	Stop Purge Time: 12:54	Total Time: 14 mins

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

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

Time	Casing Volume	Temp.	pH	Cond.	Comments
12:45	1.5	16.1	7.10	2959	
12:50	3	16.1	7.28	1310	
12:55	4	16.2	7.24	1070	

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW-2	05/01/02	13:00	4VOAs	HCL	TPHg BTEX MTBE	8260

WELL SAMPLING FORM

Project Name: Bo Gin	Cambria Mgr: RAS	Well ID: MW-4
Project Number: 230-0116	Date: 05/01/02	Well Yield:
Site Address: 706 Harrison St. Oakland, Ca	Sampling Method:	Well Diameter: 2" pvc
	Disposable bailer	Technician(s): SG
Initial Depth to Water: 17.69	Total Well Depth: 24.40	Water Column Height: 6.71
Volume/ft: 0.16	1 Casing Volume: 1.07	3 Casing Volumes: 3.21
Purging Device: disposable bailer	Did Well Dewater?: no	Total Gallons Purged: 3
Start Purge Time: 12:00	Stop Purge Time: 12:14	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

Time	Casing Volume	Temp.	pH	Cond.	Comments
12:05	1	16.4	7.09	1115	
12:10	2	16.3	7.21	1870	
12:15	3	16.3	7.28	1524	

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW-4	05/01/02	12:20	4VOAs	HCL	TPHg BTEX MTBE	8260

C A M B R I A



ATTACHMENT B

Laboratory Analytical Report

McC Campbell Analytical Inc.

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

Cambria Env. Technology 6262 Hollis St. Emeryville, CA 94608	Client Project ID: #230-0116-921; Bo Gin	Date Sampled: 05/01/02
		Date Received: 05/07/02
	Client Contact: Ron Scheele	Date Reported: 05/13/02
	Client P.O.:	Date Completed: 05/13/02

May 13, 2002

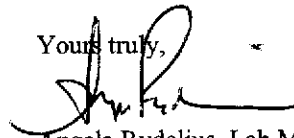
Dear Ron:

Enclosed are:

- 1). the results of 3 samples from your #230-0116-921; Bo Gin project,
- 2). a QC report for the above samples
- 3). a copy of the chain of custody, and
- 4). a bill for analytical services.

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

Yours truly,



Angela Rydelius, Lab Manager

Cambria Env. Technology
 6262 Hollis St.
 Emeryville, CA 94608

Client Project ID: #230-0116-921; Bo Gin
 Client Contact: Ron Scheele
 Client P.O.:

Date Sampled: 05/01/02
 Date Received: 05/07/02
 Date Extracted: 05/08/02-05/10/02
 Date Analyzed: 05/08/02-05/10/02

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

Extraction method: SW5030B

Analytical methods: SW8021B/8015Cm

Work Order: 0205082

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	MW-1	W	230,a	ND	26	0.97	ND	ND	1	---#
002A	MW-2	W	97,000,a,h	ND<3000	4500	15,000	2500	12,000	200	118
003A	MW-4	W	490,a	ND	3.5	2.0	2.1	2.2	1	---#

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	0.5	ug/L
	S	1.0	0.05	0.005	0.005	0.005	0.005	0.005	mg/Kg

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

DF = dilution factor.

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); 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) no recognizable pattern.

QC SUMMARY REPORT FOR SW8021B/8015Cm

BatchID: 1713

Matrix: W

WorkOrder: 0205082

EPA Method: SW8021B/8015Cm		Extraction: SW5030B		Ext. Date: 5/07/02		Spiked Sample ID: N/A				
Compound	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD Acceptance Criteria (%)		
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(gas)	N/A	60	N/A	N/A	N/A	107	111	4.1	80	120
MTBE	N/A	10	N/A	N/A	N/A	85.1	88.7	4.1	80	120
Benzene	N/A	10	N/A	N/A	N/A	91.1	97.6	6.9	80	120
Toluene	N/A	10	N/A	N/A	N/A	94.3	101	6.5	80	120
Ethylbenzene	N/A	10	N/A	N/A	N/A	94.5	102	7.2	80	120
Xylenes	N/A	30	N/A	N/A	N/A	94.3	103	9.1	80	120
%SS	N/A	10	N/A	N/A	N/A	102	103	1.0	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.

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

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

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

McC Campbell Analytical Inc.

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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0205082

Client:

Cambria Env. Technology
 6262 Hollis St.
 Emeryville, CA 94608

TEL: (510) 450-1983
 FAX: (510) 450-8295
 ProjectNo: #230-0116-921;
 PO:

07-May-02

Sample ID	ClientSampID	Matrix	Collection Date	Bottle	Requested Tests			
				8021B/8015				
0205082-001	MW-1	Water	5/1/02 1:30:00 PM		A			
0205082-002	MW-2	Water	5/1/02 1:00:00 PM		A			
0205082-003	MW-4	Water	5/1/02 12:20:00 PM		A			

Comments:

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

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

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

0205082

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: **Ron Scheele** Bill To: **Cambria Env.**

Company: Cambria Environmental Technology

6262 Hollis Street
Emeryville, CA 94608

Tele: (510) **450-1983**

Fax: (510) 450-8295

Project #: **230-0116-921**

Project Name: **Boilin**

Project Location: **706 Harrison St. Oakland, Ca**

Sampler Signature: *[Signature]*

Analysis Request

Other

Comments

SAMPLE ID	LOCATION	SAMPLING		# Containers	Type Containers	MATRIX					METHOD PRESERVED				Analysis Request	Other	Comments
		Date	Time			Water	Soil	Air	Sludge	Other	Ice	HCl	HNO ₃	Other			
MW-1		5-1-02	13:30	4	VOG	X					X	X					Report results in EDF format
MW-2		5-1-02	13:00	4	VOG	X					X	X					
MW-4		5-1-02	12:20	4	VOG	X					X	X					

BTEX & TPH as Gas (602/8020 + 8015) MITDE
 TPH as Diesel (8015)
 Total Petroleum Oil & Grease (5520) E&P(R&F)
 Total Petroleum Hydrocarbons (418.1)
 EPA 601 / 8010
 RTEX 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

Relinquished By: <i>[Signature]</i>	Date: 5-2-02	Time: 4:30	Received By: secure location
Relinquished By:	Date:	Time:	Received By: <i>[Signature]</i> 5/7/02
Relinquished By:	Date:	Time:	Received By:

Remarks:

IDEM®
 GOOD CONDITION
 HEAD SPACE ABSENT

PRESERVATION APPROPRIATE CONTAINERS

VOAG ORG METALS OTHER

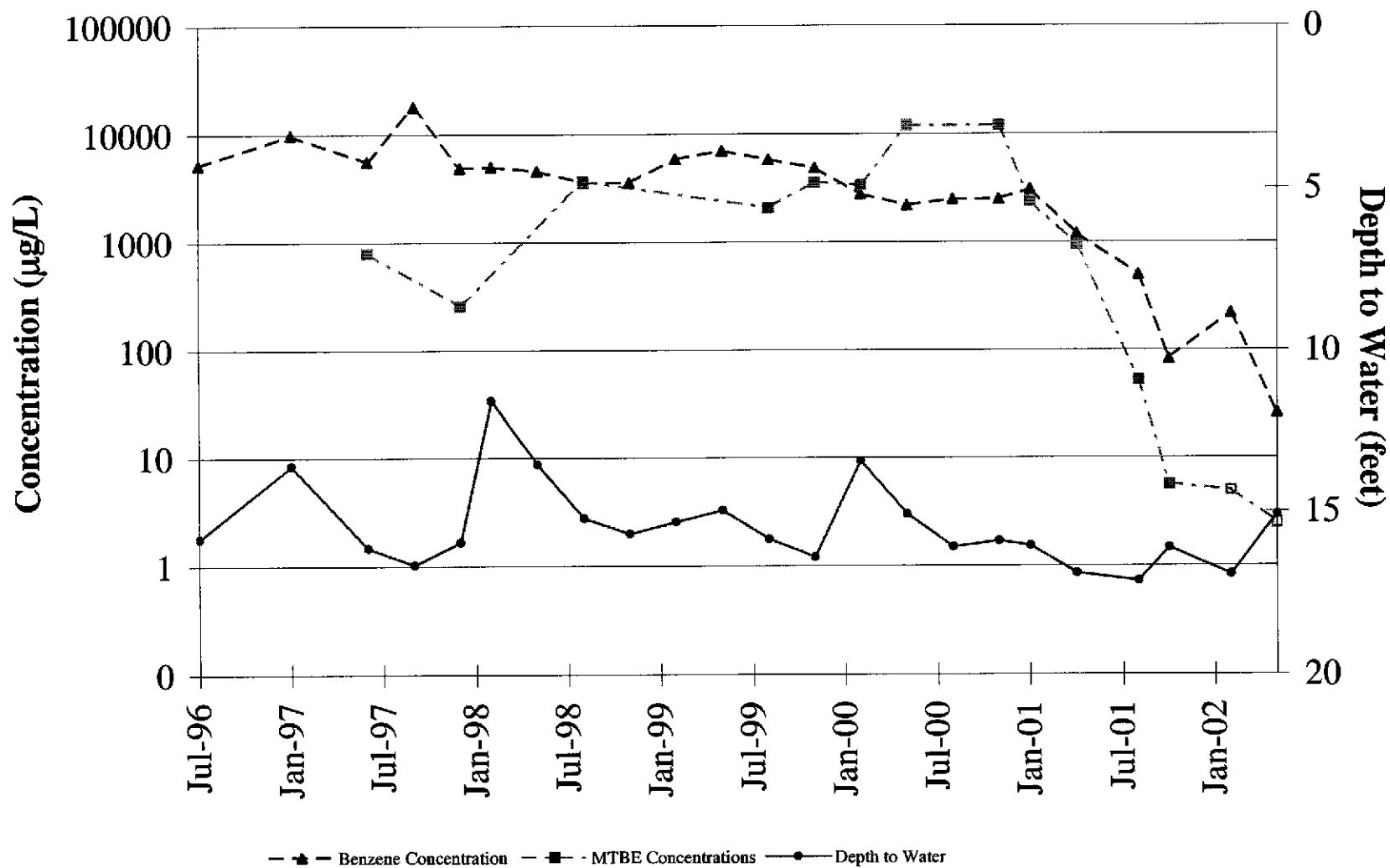
C A M B R I A



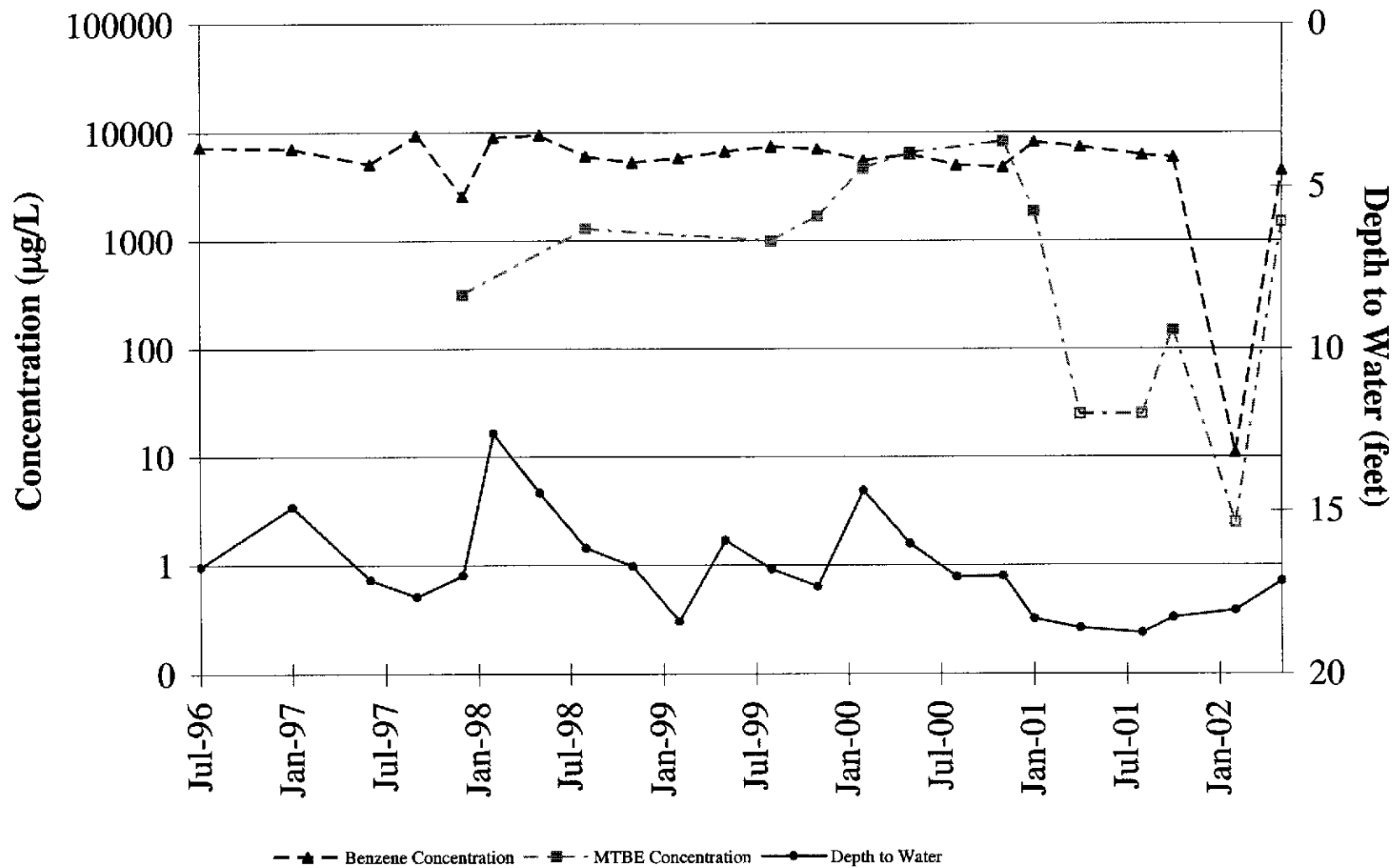
ATTACHMENT C

Benzene and MTBE Concentration Graphs

Benzene and MTBE Concentration Trends Well MW-1



Benzene and MTBE Concentration Trends Well MW-2



Benzene and MTBE Concentration Trends Well MW-4

