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Alameda County

JUN 25 2003

Environmental Health

June 16, 2003

Mr. Don Hwang
Alameda County Department of Environmental Health
UST Local Oversight Program
1131 Harbor Bay Parkway, 2nd Floor
Alameda, California 94502

Re: **Groundwater Monitoring Report, Second Quarter 2003**
Hooshi's Auto Service
1499 MacArthur Boulevard
Oakland, California 94602
Cambria Project No. 129-0741

Dear Mr. Hwang:

On behalf of Ms. Naomi Gatzke, Cambria Environmental Technology, Inc. (Cambria) has prepared this *Groundwater Monitoring Report* for the above-referenced site. Presented in the report are the second quarter 2003 activities and the anticipated third quarter 2003 activities.

If you have any questions or comments regarding this report, please call me at (510) 420-3314.

Sincerely,
Cambria Environmental Technology, Inc.

Matthew A. Meyers
Senior Staff Geologist

Attachments: Groundwater Monitoring Report, Second Quarter 2003

cc: Ms. Naomi Gatzke, 1545 Scenic View Drive, San Leandro, California 94577

Cambria Environmental Technology, Inc.

5900 Hollis Street
Suite A
Emeryville, CA 94608
Tel (510) 420-0700
Fax (510) 420-9170

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GROUNDWATER MONITORING REPORT

SECOND QUARTER 2003

Hooshi's Auto Service
1499 MacArthur Boulevard
Oakland, California 94602
Cambria Project No. 129-0741

June 16, 2003

Prepared for:

Ms. Naomi Gatzke
1545 Scenic View Drive
San Leandro, California 94577

Prepared by:

Cambria Environmental Technology, Inc.
5900 Hollis Street, Suite A
Emeryville, California 94608

REGISTERED GEOLOGIST
RONALD A. SCHEELE
No. 6842
STATE OF CALIFORNIA

Matthew A. Meyers
Senior Staff Geologist

Ron Scheele, RG
Associate Geologist

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GROUNDWATER MONITORING REPORT

SECOND QUARTER 2003

Hooshi's Auto Service
1499 MacArthur Boulevard
Oakland, California 94602
Cambria Project No. 129-0741

June 16, 2003

INTRODUCTION

On behalf of Ms. Naomi Gatzke, Cambria Environmental Technology, Inc. (Cambria) has prepared this *Groundwater Monitoring Report* for the above-referenced site (see Figure 1). Presented in this report are the second quarter 2003 groundwater monitoring activities and the anticipated third quarter 2003 activities.

SECOND QUARTER 2003 ACTIVITIES

Monitoring Activities

Field Activities: On April 21, 2003, Cambria gauged water levels in groundwater monitoring wells MW-1 through MW-6. On April 21, 2003, groundwater samples were obtained from monitoring wells according to the sampling schedule. Field data sheets are presented as Appendix A. The laboratory analytical report is included as Appendix B. The well gauging data has been submitted to the Geotracker database. See Appendix D for the Electronic Delivery confirmations.

Sample Analyses: Groundwater samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg) by modified EPA Method 8015; and benzene, toluene, ethylbenzene, xylenes (BTEX), and methyl tertiary butyl ether (MTBE) by EPA Method 8021. The groundwater analytical results are summarized in Table 1. The groundwater analytical results have been submitted to the Geotracker database. See Appendix D for the Electronic Delivery confirmations.

Monitoring Results

Groundwater Flow Direction: Based on field measurements collected on April 21, 2003, groundwater beneath the site generally flows in a southwesterly direction (Figure 1). The groundwater gradient is relatively flat onsite and increases significantly towards the southwest corner of the site. Depth to water and groundwater elevation data are presented in Table 1.

Hydrocarbon Distribution in Groundwater: No hydrocarbons or MTBE were detected in monitoring wells MW-1 and MW-5. TPHg and benzene concentrations were detected in well MW-2 at 12,000 and 350 micrograms per liter (µg/L), respectively. Overall, hydrocarbon concentrations have either decreased or remained at similar levels as compared with previous quarters and continue to exhibit a decreasing trend.

ANTICIPATED THIRD QUARTER 2003 ACTIVITIES

Monitoring Activities

Cambria will gauge water levels in all wells and collect groundwater samples from wells MW-1, MW-2, and MW-5. As per phone discussions with Mr. Don Hwang of the Alameda County Department of Environmental Health (ACDEH), the well sampling schedule has been revised so that wells MW-1, MW-2, and MW-5 will be sampled on a quarterly basis and wells MW-3, MW-4, and MW-6 will be sampled on an annual basis (during the fourth quarter). Groundwater samples will be analyzed for TPHg by Modified EPA Method 8015 and BTEX and MTBE by EPA Method 8021. MTBE concentrations will be confirmed by EPA Method 8260. Cambria will prepare a groundwater monitoring report summarizing the monitoring activities and results.

Site Closure Activities

Based on the decreasing concentrations and the stable plume confirmation, Cambria will begin preparation of a Closure Request Report for this low risk groundwater site.

ATTACHMENTS

Figure 1 – Groundwater Elevation Contour and Hydrocarbon Concentration Map

Table 1 – Groundwater Elevation and Analytical Data

Appendix A – Groundwater Monitoring Field Data Sheets

Appendix B – Analytical Results for Groundwater Sampling

Appendix C – Benzene Concentration Graphs

Appendix D – Electronic Delivery Confirmations

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Hooshi's Auto Service

1499 MacAurthur Boulevard
Oakland, California

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Groundwater Elevation Contour and Hydrocarbon Concentration Map

April 21, 2003

FIGURE
1

NOTE All points surveyed to an arbitrary datum

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Table 1. Groundwater Elevation and Analytical Data - Hooshi's Auto Service, 1499 MacArthur Boulevard, Oakland, California

Well ID *TOC (ft*)*	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft**)	SPH Thickness (ft)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Notes
					← (µg/L) →						
MW-1	1/4/93	--	--	--	539	130	12	22	13	--	
181.00	4/22/93	--	--	--	1,130	75	8.0	38	11	--	
	12/27/94	--	--	--	770	22	6.6	14	21	--	
	6/27/96	14.11	166.89	--	3,300	260	34	59	170	80	
	12/10/96	13.71	167.29	--	1,500	84	11	22	32	34	
	5/8/98	13.85	167.15	--	3,200	300	12	62	36	<120	a
	8/17/98	14.11	166.89	--	1,700	160	18	32	27	39	a
	11/4/98	14.28	166.72	--	1,100	11	4.3	3.6	6.5	<50	a
	2/17/99	13.41	167.59	--	320	200	47	72	75	57	a
	5/27/99	14.16	166.84	--	2,500	81	12	29	41	<80	a
	8/19/99	14.18	166.82	--	780	19	<0.5	5.7	4.5	28	a
180.83	11/23/99	14.43	166.40	--	1,300	24	0.64	1.8	3.3	<100	a
	2/17/00	13.85	166.98	--	1,300	60	9.1	22	19	22 (16)	a,b
	5/9/00	14.01	166.82	--	2,700	55	13	19	25	34 (29)	a
	8/15/00	14.24	166.59	--	--	--	--	--	--	--	
	12/1/00	8.75	172.08	--	480	6.4	5.9	1.1	3.9	18 (21)	a
180.63	2/8/01	8.49	172.14	--	64	<0.5	<0.5	<0.5	<0.5	6.1 (5.6)	a,c
	4/9/01	8.71	171.92	--	--	--	--	--	--	--	
	4/24/01	7.90	172.73	--	77	<0.5	<0.5	<0.5	<0.5	5.6 (3.7)	c
	8/6/01	8.83	171.80	--	140	1.7	0.55	<0.5	0.63	5.8 (4.0)	a
	10/22/01	8.91	171.72	--	120	0.92	<0.5	<0.5	0.59	11(10)	a
	2/1/02	8.15	172.48	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	4/19/02	8.63	172.00	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	7/16/02	8.79	171.84	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	10/3/02	8.90	171.73	--	110	<0.5	<0.5	<0.5	<0.5	<5.0	f
	1/10/03	7.93	172.70	--	<50	<0.5	0.74	<0.5	<0.5	<5.0	
	4/21/03	**8.17**	**172.46**	--	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<5.0**	

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Table 1. Groundwater Elevation and Analytical Data - Hooshi's Auto Service, 1499 MacArthur Boulevard, Oakland, California

Well ID *TOC (ft*)*	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft**)	SPH Thickness (ft)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Notes
					← (µg/L) →						
MW-2	1/4/93	--	--	--	149,000	21,700	25,000	ND	7,760	--	
180.45	4/22/93	--	--	--	136,300	9,900	15,870	15,300	2,190	--	
	12/27/94	--	--	--	94,000	11,000	18,000	2,700	16,000	--	
	6/27/96	12.61	168.64	1.00	--	--	--	--	--	--	
	12/10/96	11.10	169.55	0.25	--	--	--	--	--	--	
	5/8/98	10.81	169.66	0.03	--	--	--	--	--	--	
	8/17/98	12.16	168.31	0.02	--	--	--	--	--	--	
	11/4/98	12.61	167.86	0.02	--	--	--	--	--	--	
	2/17/99	9.82	170.66	0.04	--	--	--	--	--	--	
	5/27/99	11.07	169.48	0.13	--	--	--	--	--	--	
	8/19/99	12.79	167.68	0.02	--	--	--	--	--	--	
180.24	11/23/99	12.14	168.20	0.12	--	--	--	--	--	--	
	2/17/00	10.01	170.37	0.18	--	--	--	--	--	--	
	5/9/00	10.88	169.38	0.03	--	--	--	--	--	--	
	8/15/00	12.28	167.97	0.01	--	--	--	--	--	--	
	12/1/00	8.03	172.21	--	260,000	1,100	5,000	1,900	17,000	<100	a
	2/8/01	7.86	172.38	--	2,900	1.7	14	5.0	140	<5.0	c,d
	4/9/01	7.95	172.29	--	--	--	--	--	--	--	
	4/24/01	6.90	173.34	--	56,000	360	980	1,000	4,700	<5.0	a,b
	8/6/01	8.15	172.09	--	54,000	680	1,900	1,500	7,800	<200 (<10)	a,h,j
	10/22/01	8.22	172.02	--	32,000	420	770	1,100	4,100	<250	a,h
	2/1/02	8.07	172.17	--	26,000	310	490	920	1,600	<1,000	a
	4/19/02	8.60	171.64	--	16,000	300	240	1,000	990	<100	a
	7/16/02	8.21	172.03	--	5,700	120	18	340	15	<50	a
	10/3/02	8.14	172.10	--	4,400	44	16	68	20	<25	a
	1/10/03	6.98	173.26	--	16,000	300	320	580	830	<100	a,h
	4/21/03	**7.25**	**172.99**	**--**	**12,000**	**350**	**260**	**610**	**380**	**<50**	**a**

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Table 1. Groundwater Elevation and Analytical Data - Hooshi's Auto Service, 1499 MacArthur Boulevard, Oakland, California

Well ID	Date	Depth to Groundwater	Groundwater Elevation	SPH Thickness	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Notes
TOC (ft)*		(ft)	(ft**)	(ft)	←			(µg/L)		→	
MW-3	1/4/93	--	--	--	1,610	772	14	11	ND	--	
179.94	4/22/93	--	--	--	3,040	980	34	19	16	--	
	12/27/94	--	--	--	2,600	180	9.0	7.2	13	--	
	6/27/96	13.20	166.74	--	2,000	22	2.9	11	7.4	56	
	12/10/96	13.13	166.81	--	970	<0.5	<0.5	<0.5	<0.5	24	
	5/8/98	13.03	166.91	--	780	3.7	2.1	1.1	2.4	<32	a
	8/17/98	13.22	166.72	--	870	2.8	<0.5	<0.5	3.7	<5.0	b,c
	11/4/98	13.31	166.63	--	770	1.6	4.4	2.0	6.9	<30	c
	2/17/99	12.89	167.05	--	650	6.2	3.4	1.5	2.6	<5.0	b,c
	5/27/99	12.32	167.62	--	570	1.5	1.2	0.72	1.1	<20	a
	8/19/99	13.19	166.75	--	830	<0.5	1.9	<0.5	1.3	<20	c,d
179.55	11/23/99	13.26	166.29	--	900	<0.5	1.8	0.56	1.4	<20	c,d
	2/17/00	12.78	166.77	--	250	<0.5	1.5	<0.5	0.62	<5.0	d
	5/9/00	12.92	166.63	--	690	<0.5	2.1	0.85	1.6	<5.0	a
	8/15/00	13.19	166.36	--	610	<0.5	2.3	0.75	1.2	<5.0	c,d
	12/1/00	7.50	172.05	--	120	<0.5	0.90	0.65	0.62	<5.0	c,d
	2/8/01	7.20	172.35	--	87	<0.5	<0.5	<0.5	<0.5	<5.0	c,d
	4/9/01	7.33	172.22	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	8/6/01	7.61	171.94	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	10/22/01	7.58	171.97	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	2/1/02	7.53	172.02	--	<50	<0.5	<0.5	<0.5	<0.5	8.5 (8.5)	
	4/19/02	7.95	171.60	--	<50	<0.5	<0.5	<0.5	<0.5	9.0 (11)	
	7/16/02	7.68	171.87	--	<50	<0.5	<0.5	<0.5	<0.5	20 (30)	
	10/3/02	7.78	171.77	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	1/10/03	6.91	172.64	--	<50	<0.5	<0.5	<0.5	<0.5	19 (16)	
sampled annually	**4/21/03**	**7.21**	**172.34**	**--**	--	--	--	--	--	--	

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Table 1. Groundwater Elevation and Analytical Data - Hooshi's Auto Service, 1499 MacArthur Boulevard, Oakland, California

Well ID *TOC (ft*)*	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft**)	SPH Thickness (ft)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Notes
					← (µg/L) →						
MW-4	6/27/96	17.03	163.51	--	720	2	0.5	2.5	23	3.2	
180.54	12/10/96	8.50	172.04	--	80	2.4	<0.5	<0.5	6.6	<2.0	
	5/8/98	11.46	169.08	--	<50	0.60	<0.5	<0.5	<0.5	<5.0	
	8/17/98	13.98	166.56	--	<50	<0.5	<0.5	<0.5	0.5	<5.0	
	11/4/98	14.36	166.18	--	96	9.7	8.1	4.8	18	<5.0	a
	2/17/99	8.39	172.15	--	<50	<0.5	<0.5	<0.5	0.5	<5.0	
	5/27/99	12.80	167.74	--	<50	<0.5	1.0	<0.5	2.9	<5.0	
	8/19/99	14.42	166.12	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
180.12	11/23/99	14.63	165.49	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	2/17/00	8.15	171.97	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	5/9/00	12.81	167.31	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	8/15/00	14.29	165.83	--	<50	2.1	<0.5	<0.5	<0.5	<5.0	
	12/1/00	12.80	167.32	--	81	6.0	8.4	1.0	5.6	<5.0	a
	2/8/01	12.57	167.55	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	4/9/01	12.50	167.62	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	8/6/01	14.00	166.12	--	59	1.5	<0.5	<0.5	<0.5	<5.0	a
	10/22/01	14.05	166.07	--	130	6.3	<0.5	0.88	<0.5	<5.0	a
	2/1/02	13.47	166.65	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	4/19/02	13.55	166.57	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	7/16/02	14.05	166.07	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	10/3/02	13.09	167.03	--	77	2.1	0.51	<0.5	<0.5	<5.0	a
	1/10/03	12.04	168.08	--	<50	<0.5	<0.5	<0.5	<0.5	20 (15)	a
sampled annually	**4/21/03**	**12.15**	**167.97**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	

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Table 1. Groundwater Elevation and Analytical Data - Hooshi's Auto Service, 1499 MacArthur Boulevard, Oakland, California

Well ID *TOC (ft*)*	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft**)	SPH Thickness (ft)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Notes
					← (µg/L) →						
MW-5	6/27/96	13.62	166.74	0.16	--	--	--	--	--	--	
180.23	12/10/96	13.26	167.77	1.00	--	--	--	--	--	--	
	5/8/98	13.15	167.11	0.04	--	--	--	--	--	--	
	8/17/98	13.36	166.89	0.02	--	--	--	--	--	--	
	11/4/98	13.52	166.73	0.02	--	--	--	--	--	--	
	2/17/99	13.02	167.23	0.02	--	--	--	--	--	--	
	5/27/99	13.80	166.71	0.35	--	--	--	--	--	--	
	8/19/99	13.45	166.86	0.10	--	--	--	--	--	--	
180.09	11/23/99	14.03	166.35	0.36	--	--	--	--	--	--	
	2/17/00	13.28	167.02	0.26	--	--	--	--	--	--	
	5/9/00	13.55	166.77	0.29	--	--	--	--	--	--	
	8/15/00	13.58	166.54	0.04	--	--	--	--	--	--	
	12/1/00	8.00	172.09	0.00	54,000	240	1,700	870	1,000	<300	c,d
180.04	2/8/01	7.88	172.16	0.00	33,000	63	420	120	4,500	<50	a,b
	4/9/01	7.97	172.07	0.00	--	--	--	--	--	--	
	4/24/01	7.00	173.04	0.00	3,200	<1.0	11	7	260	<5.0	c,d
	8/6/01	8.17	171.87	--	2,700	11	40	21	240	<5.0	a
	10/22/01	8.15	171.89	--	20,000	200	1,200	330	2,900	<100	a,h
	2/1/02	8.07	171.97	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	4/19/02	8.51	171.53	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	7/16/02	8.40	171.64	--	<50	<0.5	<0.5	<0.5	1.7	<5.0	
	10/3/02	8.18	171.86	--	15,000	94	830	460	2,200	<500	a
	1/10/03	6.95	173.09	--	290	<0.5	1.8	<0.5	17	<5.0	a
	4/21/03	**7.18**	**172.86**	**--**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<5.0**	

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Table 1. Groundwater Elevation and Analytical Data - Hooshi's Auto Service, 1499 MacArthur Boulevard, Oakland, California

Well ID *TOC (ft*)*	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft**)	SPH Thickness (ft)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Notes
					← (µg/L) →						
MW-6	6/27/96	18.55	161.48	--	ND	ND	ND	ND	ND	--	
180.03	12/10/99	11.79	168.24	--	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	
	5/8/98	11.62	168.41	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	8/17/98	12.66	167.37	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	11/4/98	13.56	166.47	--	68	3.8	3.7	2.8	11	<5.0	a
	2/17/99	12.91	167.12	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	5/27/99	13.03	167.00	--	<50	1.0	1.7	0.82	4.9	<5.0	
	8/19/99	13.10	166.93	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
179.63	11/23/99	13.58	166.05	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	2/17/00	10.72	168.91	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	5/9/00	11.71	167.92	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	8/15/00	12.49	167.14	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	12/1/00	8.64	170.99	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	2/8/01	8.20	171.43	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	4/9/01	8.53	171.10	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	8/6/01	8.69	170.94	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	10/22/01	8.75	170.88	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	2/1/02	8.31	171.32	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	4/19/02	8.62	171.01	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	7/16/02	8.84	170.79	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	10/3/02	8.71	170.92	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	1/10/03	6.99	172.64	--	<50	<0.5	<0.5	<0.5	<0.5	19 (16)	
sampled annually	**4/21/03**	**7.15**	**172.48**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	

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Table 1. Groundwater Elevation and Analytical Data - Hooshi's Auto Service, 1499 MacArthur Boulevard, Oakland, California

Well ID	Date	Depth to Groundwater	Groundwater Elevation	SPH Thickness	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Notes
TOC (ft)*		(ft)	(ft**)	(ft)	← (µg/L) →						
Trip Blank	5/8/98	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	11/4/98	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	5/27/99	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	11/23/99	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	12/1/00	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	

Abbreviations and Methods:

SPH = Separate phase hydrocarbons

TPHg = Total petroleum hydrocarbons as gasoline by modified EPA Method 8015

Benzene, toluene, ethylbenzene, and xylenes by EPA Method 8020

MTBE = Methyl tertiary butyl ether by EPA Method 8020
(concentration in parentheses confirmed by EPA Method 8260)

ft = measured in feet

µg/L = Micrograms per liter

TOC = Top of casing elevation

* = wells surveyed to an arbitrary datum

** = Calculated groundwater elevation corrected for SPH by the relation:

Groundwater Elevation = Well Elevation - Depth to Water + (0.8xSPH thickness (ft))

*** = Due to the air sparge system running during sampling, samples collected on 4/9/01 were anomalous. Well was resampled on 4/24/01 with the air sparge system off.

-- = not sampled.

Abbreviations and Methods (Cont'd):

MCLs = California primary maximum contaminant levels for drinking water (22 CCR 64444)

NE = MCLs not established

ND = Compound not detected, detection limit unknown

Notes:

a - The analytical laboratory noted that unmodified or weakly modified gasoline is significant.

b - The analytical laboratory noted that lighter than water immiscible sheen is present.

c - The analytical laboratory noted no recognizable pattern.

d - The analytical labatory noted heavier gasoline range compounds are significant (aged gasoline?)

f - The analytical laboratory noted one to a few isolated non-target peaks present

h - The analytical laboratory noted lighter than water immiscible sheen is present

j - The analytical laboratory noted sample diluted due to high organic content.

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APPENDIX A

Groundwater Monitoring Field Data Sheets

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Groundwater Monitoring Field Sheet

Well ID	Time	DTP	DTW	Product Thickness	Amount of Product Removed	Casing Diam.	Comment
MW-1	12:00		8.17				
MW-2	12:10		7.25				
MW-3	11:45		7.21				
MW-4	11:55		12.15				
MW-5	12:05		7.18				
MW-6	11:50		7.15				

Project Name: Hooshi's

Project Number/Task: 129-0741 /043

Measured By: S. Hill

Date: 4-21-03

F:\Field Services\Forms\gw monitoring.wpd

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WELL SAMPLING FORM

Project Name: Hooshi's	Cambria Mgr: MM	Well ID: MW-1
Project Number: 129-0741	Date: 4-21-03	Well Yield:
Site Address: 1499 MacArthur Blvd Oakland, Ca	Sampling Method: disposable bailer	Well Diameter: 2 ☐ pvc
		Technician(s): SG
Initial Depth to Water: 8.17	Total Well Depth: 19.90	Water Column Height: 11.73
Volume/ft: 0.16	1 Casing Volume: 1.87	3 Casing Volumes: 5.63
Purging Device: disposable bailer	Did Well Dewater?: no	Total Gallons Purged: 5
Start Purge Time: 12:30	Stop Purge Time: 12:44	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. (°C)	pH	Cond. (uS)	Comments
12:35	1.5	18.7	7.71	3999	
12:40	3	18.9	7.52	3999	
12:45	5	19.0	7.48	3999	

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

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW-1	4-21-03	12:50	3voa	HCl		

D:\TEMPLATE\FORMS\FIELD\WELLSAMP2.WPD
NSM 5/31/94

WELL SAMPLING FORM

oject Name: Hooshi's	Cambria Mgr: MM	Well ID: MW-2
Project Number: 129-0741	Date: 4-21-03	Well Yield:
Site Address: 1499 MacArthur Blvd Oakland, Ca	Sampling Method: disposable bailer	Well Diameter: 2 ☐ pvc
		Technician(s): SG
Initial Depth to Water: 7.25	Total Well Depth: 19.80	Water Column Height: 12.55
Volume/ft: 0.16	1 Casing Volume: 2.0	3 Casing Volumes: 6.0
Purging Device: disposable bailer	Did Well Dewater?: NO	Total Gallons Purged: 6
Start Purge Time: 1:40	Stop Purge Time: 1:54	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. (°C)	pH	Cond. (uS)	Comments
1:45	2	19.3	7.40	1629	
1:50	4	19.3	7.32	1688	
1:55	6	19.3	7.35	1650	

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

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW-2	4-21-03	2:00	3 VOA	HCl		

D:\TEMPLATE\FORMS\FIELD\WELLSAMP2.WPD
NSM 5/31/94

WELL SAMPLING FORM

Project Name: Hooshi's	Cambria Mgr: MM	Well ID: MW-5
Project Number: 129-0741	Date: 4-21-03	Well Yield:
Site Address: 1499 MacArthur Blvd Oakland, Ca	Sampling Method: disposable bailer	Well Diameter: 2 ☐ pvc
		Technician(s): SG
Initial Depth to Water: 7.18	Total Well Depth: 14.50	Water Column Height: 7.32
Volume/ft: 0.16	1 Casing Volume: 1.17	3 Casing Volumes: 3.51
Purging Device: disposable bailer	Did Well Dewater?: NO	Total Gallons Purged: 4
Start Purge Time: 1:05	Stop Purge Time: 1:19	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. (°C)	pH	Cond. (uS)	Comments
1:10	1.5	19.3	7.28	3599	
1:15	3	19.0	7.31	3170	
1:20	4	19.0	7.33	1820	

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

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW-5	4-21-03	1:25	3VOA	HCl		

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APPENDIX B

Analytical Results for Groundwater Sampling

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

Cambria Env. Technology 5900 Hollis St, Suite A Emeryville, CA 94608	Client Project ID: #129-0741-043; Hooshi's	Date Sampled: 04/21/03
		Date Received: 04/22/03
	Client Contact: Matt Meyers	Date Reported: 04/28/03
	Client P.O.:	Date Completed: 04/28/03

WorkOrder: 0304341

April 28, 2003

Dear Matt:

Enclosed are:

1). the results of 3 analyzed samples from your **#129-0741-043; Hooshi's project,**

2). a QC report for the above samples

3). a copy of the chain of custody, and

4). a bill for analytical services.

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

Yours truly,

Angela Rydelius, Lab Manager

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

Cambria Env. Technology	Client Project ID: #129-0741-043; Hooshi's	Date Sampled: 04/21/03
5900 Hollis St, Suite A		Date Received: 04/22/03
Emeryville, CA 94608	Client Contact: Matt Meyers	Date Extracted: 04/23/03-04/24/03
	Client P.O.:	Date Analyzed: 04/23/03-04/24/03

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

Extraction method: SW5030B Analytical methods: SW8021B/8015Cm Work Order: 0304341

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	MW-1	W	ND	ND	ND	ND	ND	ND	1	104
002A	MW-2	W	12,000,a	ND<50	350	260	610	380	10	--#
003A	MW-5	W	ND	ND	ND	ND	ND	ND	1	100
Reporting Limit for DF =1; ND means not detected at or above the reporting limit		W	50	5.0	0.5	0.5	0.5	0.5	1	µg/L
		S	NA	NA	NA	NA	NA	NA	1	mg/Kg

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

cluttered chromatogram; sample peak coelutes with surrogate peak.

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

DHS Certification No. 1644

Angela Rydelius, Lab Manager

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

QC SUMMARY REPORT FOR SW8021B/8015Cm

Matrix: W WorkOrder: 0304341

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

Compound	Sample	Spiked	MS*	MSD*	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(btex)£	ND	60	120	117	2.53	109	107	2.42	80	120
MTBE	ND	10	101	101	0	98.8	106	7.31	80	120
Benzene	ND	10	113	112	0.741	108	115	6.07	80	120
Toluene	ND	10	107	106	1.29	103	109	5.42	80	120
Ethylbenzene	ND	10	112	109	3.03	109	112	2.74	80	120
Xylenes	ND	30	107	103	3.17	107	110	3.08	80	120
%SS:	106	100	106	109	2.73	105	107	1.60	80	120

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

NONE

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

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

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

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

cluttered chromatogram; sample peak coelutes with surrogate peak.

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

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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0304341

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

TEL: (510) 450-1983
FAX: (510) 450-8295
ProjectNo: #129-0741-043; Hooshi's
PO:

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

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests						
					<>	V8021B/8015C					
0304341-001	MW-1	Water	04/21/2003 12:50:00	☐	A	A					
0304341-002	MW-2	Water	04/21/2003 2:00:00 PM	☐		A					
0304341-003	MW-5	Water	04/21/2003 1:25:00 PM	☐		A					

Prepared by: Elisa Venegas

Comments: Confirm all MTBE hits by 8260

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

CUE 030341

CHAIN OF CUSTODY RECORD

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

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

EDF Required? ☒ Yes ☐ No

Report To: Matt Meyers Bill To: Cambria Env. Tech.

Company: Cambria Environmental Technology Inc.
5900 Hollis Street
Emeryville, CA 94608 E-mail:
Tele: 510-420-3314 Fax: 510-420-9170
Project #: 129-0741-043 Project Name: Hooshi's
Project Location: 1499 MacArthur Blvd. Oakland, CA
Sampler Signature: L. Hill

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	MATRIX Soil	MATRIX Air	MATRIX Sludge	MATRIX Other	METHOD PRESERVED Ice	METHOD PRESERVED HCl	METHOD PRESERVED HNO_3	METHOD PRESERVED Other	Analysis Request: BTEX & TPH as Gas (602/8020 + 8015)/ MTBE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601 / 8010	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8080	EPA 608 / 8080 PCB's ONLY	EPA 624 / 8240 / 8260	EPA 625 / 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals	LUFT 5 Metals	Lead (7240/7421/239.2/6010)	RCI	Other	Comments
MW-1		4-21-03	12:50	3	voa	x					x	x			x																Confirm all MTBE hits by 8260
MW-2		4-21-03	2:00	3	voa	x					x	x			x																
MW-5		4-21-03	1::25	3	voa	x					x	x			x																

Relinquished By:	Date:	Time:	Received By:
L. Hill	4-22-03	6:30	secure location
	4/22/03	10:10	Tim Perez 298
Tim Perez 298	4/22/03	1310	

Remarks:

	VOAS	O&G	METALS	OTHER
PRESERVATION				
APPROPRIATE				
CONTAINERS				
PRESERVED IN LAB				

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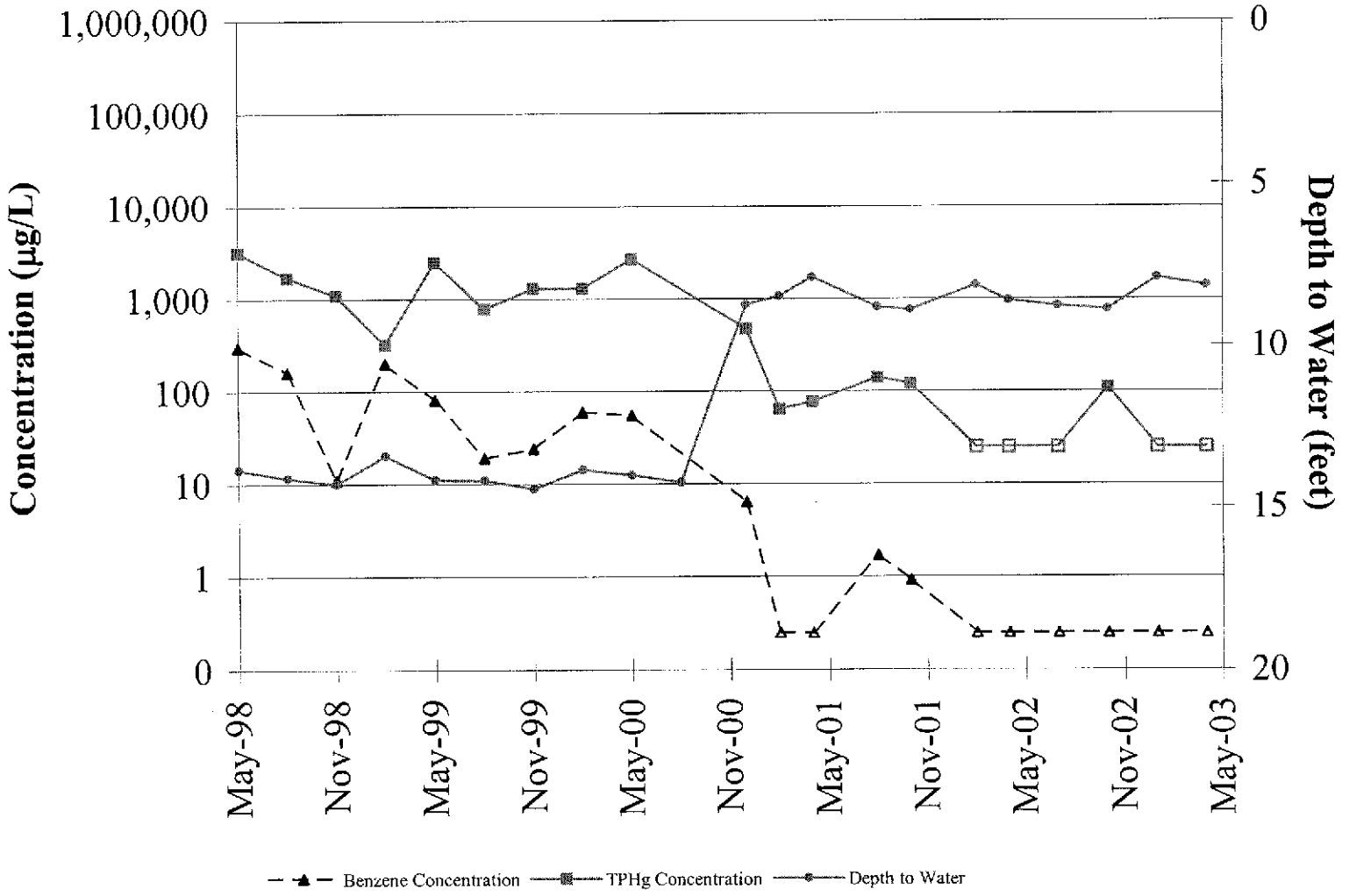
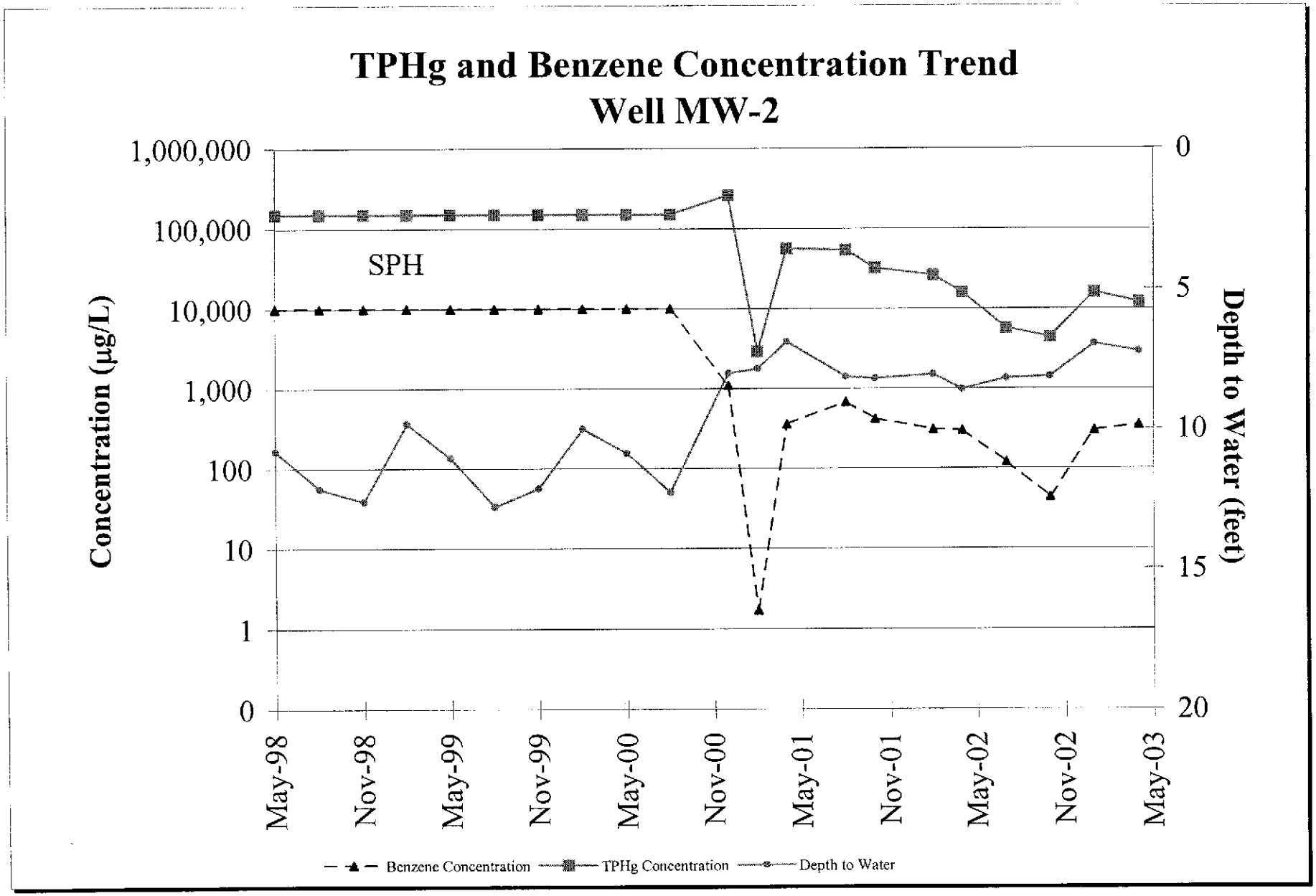
ATTACHMENT C

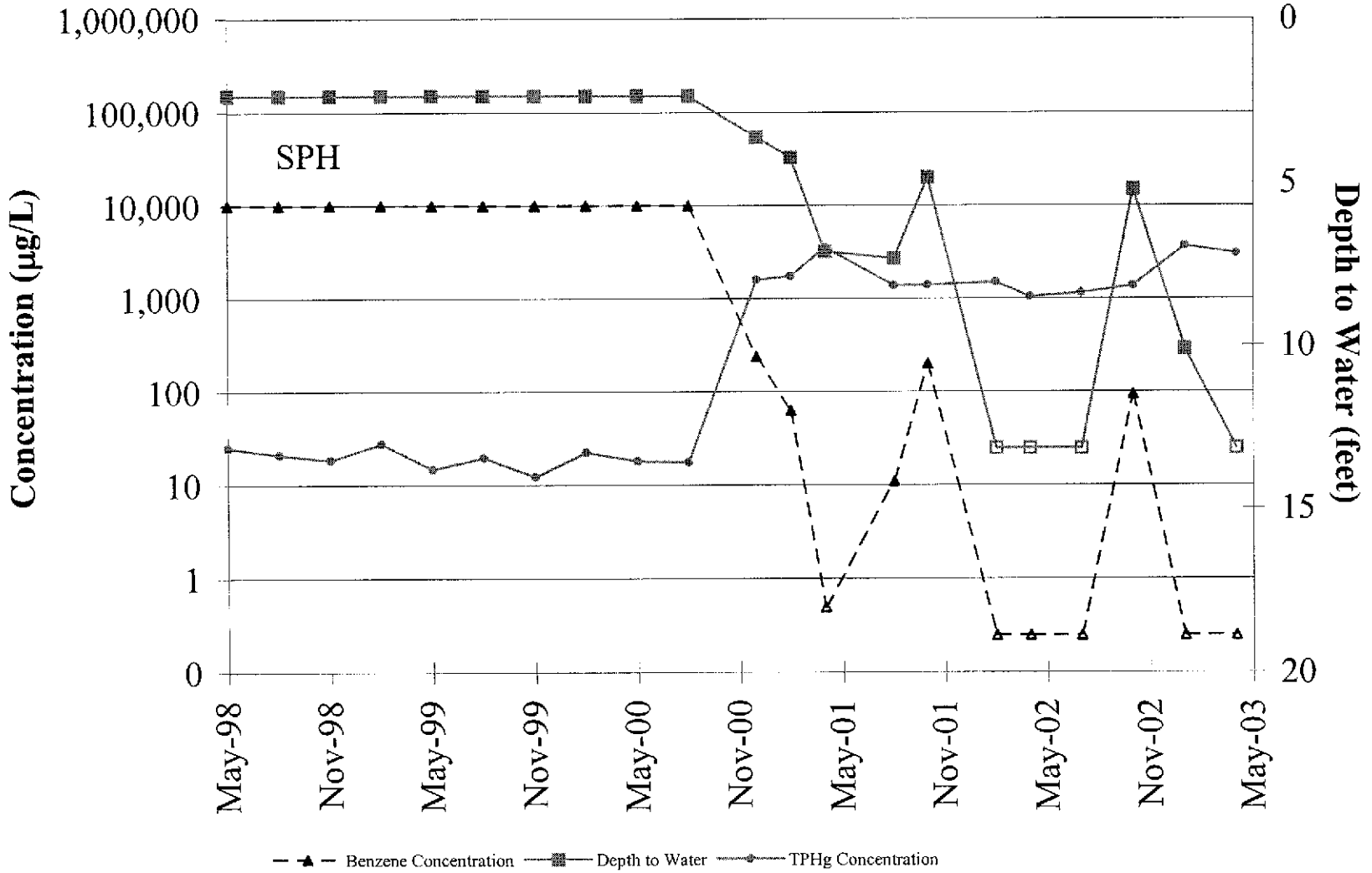
Benzene Concentration Graphs

TPHg and Benzene Concentration Trend
Well MW-1




TPHg and Benzene Concentration Trend
Well MW-2
Concentration (µg/L)
1,000,000
100,000
10,000
1,000
100
10
1
0
SPH
Depth to Water (feet)
0
5
10
15
20
May-98
Nov-98
May-99
Nov-99
May-00
Nov-00
May-01
Nov-01
May-02
Nov-02
May-03
Benzene Concentration
TPHg Concentration
Depth to Water

TPHg and Benzene Concentration Trend
Well MW-5



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APPENDIX D

Electronic Delivery Confirmations

AB2886 Electronic Delivery

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

UPLOADING A GEO_WELL FILE

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

Submittal Title:	**Hooshi's 2QM03 geo_well**
Submittal Date/Time:	**5/30/2003 2:55:01 PM**
Confirmation Number:	**6493366837**

Back to Main Menu

Logged in as CAMBRIA-EM (AUTH_RP)

CONTACT SITE ADMINISTRATOR.

AB2886 Electronic Delivery

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

Your EDF file has been succcessfully uploaded!

Confirmation Number: 9646294951
Date/Time of Submittal: 5/30/2003 2:57:19 PM
Facility Global ID: T0600100714
Facility Name: HOOSHI'S AUTO SERVICE
Submittal Title: 2QM03
Submittal Type: GW Monitoring Report

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