

C A M B R I A

January 31, 2002

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

FEB 11 2002

Re: **Groundwater Monitoring and System Progress Report
Fourth Quarter 2001**
Hooshi's Auto Service
1499 MacArthur Blvd.
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 and remediation system progress report for the above-referenced site. Presented in the report are the fourth quarter 2001 activities and the anticipated first 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

Ron Scheele, RG
Senior Geologist

Attachments: Groundwater Monitoring and System Progress Report, Fourth Quarter 2001

Oakland, CA
San Ramon, CA
Sonoma, CA

cc: Ms. Naomi Gatzke, 1545 Scenic View Dr., San Leandro, CA 94577

**Cambria
Environmental
Technology, Inc.**

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

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GROUNDWATER MONITORING AND SYSTEM PROGRESS REPORT

FOURTH QUARTER 2001

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

FEB 11 2002



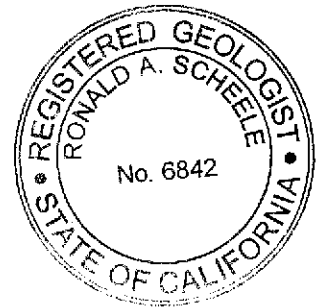
January 31, 2002

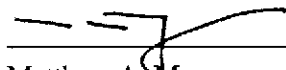
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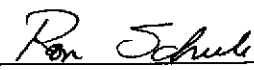
Ms. Naomi Gatzke
1545 Scenic View Drive
San Leandro, California 94577

Prepared by:

Cambria Environmental Technology, Inc.
6262 Hollis Street
Emeryville, California 94608




Matthew A. Meyers
Staff Geologist


Ron Scheele, RG
Senior Geologist

GROUNDWATER MONITORING AND SYSTEM PROGRESS REPORT

FOURTH QUARTER 2001

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

January 31, 2002

INTRODUCTION

On behalf of Ms. Naomi Gatzke, Cambria Environmental Technology, Inc. (Cambria) has prepared this Groundwater Monitoring and System Progress Report for the above-referenced site (see Figure 1). Presented in the report are the fourth quarter 2001 groundwater monitoring and corrective action activities and the anticipated first quarter 2002 activities.

FOURTH QUARTER 2001 ACTIVITIES

Monitoring Activities

Field Activities: On October 22, 2001, Cambria gauged water levels and inspected for separate phase hydrocarbons (SPH) in groundwater monitoring wells MW-1 through MW-6. On October 22, groundwater samples were obtained from monitoring wells that did not contain SPH. 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, benzene, toluene, ethylbenzene, and xylenes (BTEX), and methyl tertiary butyl ether (MTBE) by EPA Method 8020. When MTBE was detected by EPA Method 8020, the result was confirmed by EPA Method 8260. The groundwater analytical results are summarized in Table 1. The laboratory analytical report is included as Appendix B.

Monitoring Results

Groundwater Flow Direction: Based on field measurements collected on October 22, 2001, groundwater beneath the site flows towards the southwest at a gradient of 0.248 ft/ft (Figure 1). This is consistent with the historic groundwater flow direction and gradient. Depth to water and groundwater elevation data are presented in Table 1.

Hydrocarbon Distribution in Groundwater: No SPH were detected in any of the wells. TPHg concentrations ranged from 120 to 32,000 micrograms per liter ($\mu\text{g/L}$), with the maximum TPHg concentration detected in well MW-2. The maximum concentration of benzene was detected in well MW-2, at 420 $\mu\text{g/L}$. MTBE was detected only in well MW-1 at 10 $\mu\text{g/L}$ (as confirmed by EPA 8260). Table 1 summarizes the groundwater analytical results.

Corrective Action Activities

SVE System Status: The SVE system was removed from the site in the second quarter 2001. Additional site remediation may be performed in the future pending agency approval of an Interim Remedial Action Plan.

ANTICIPATED FIRST QUARTER 2002 ACTIVITIES

Monitoring Activities

Cambria will gauge the site wells, check the wells for SPH, and collect groundwater samples from all wells not containing 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 revise the remediation system after preparation and agency approval of an Interim Remedial Action Plan.

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

Hooshi's Auto Service
 1499 MacArthur Boulevard
 Oakland, California

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**Groundwater Elevation Contour
 and Hydrocarbon Concentration Map**
 October 22, 2001

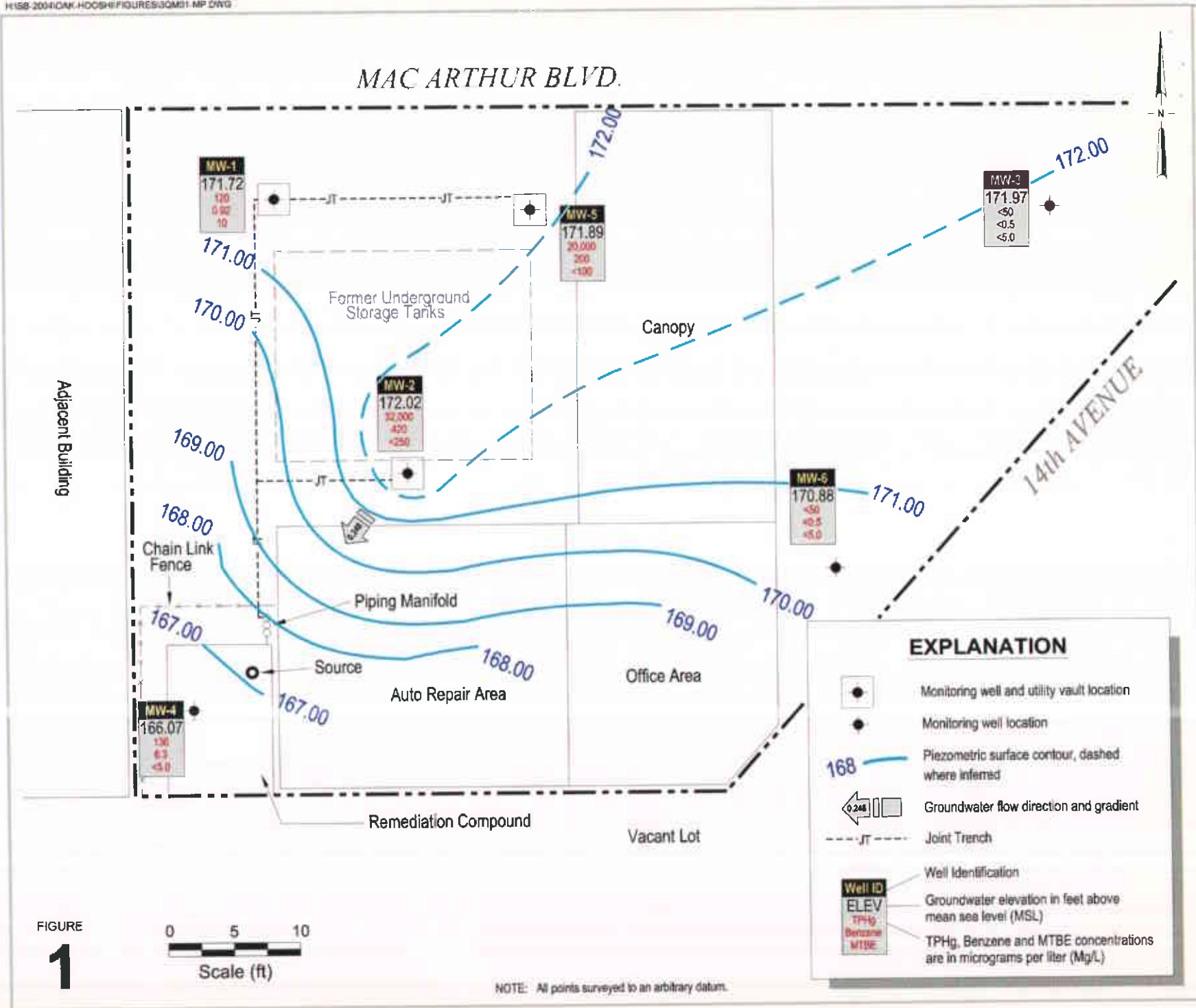


FIGURE
1



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 <i>TOC (ft*)</i>	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft**)	Separate Phase Hydrocarbons (ft)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Notes
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
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	--	--	--	--	--	--	
	12/10/99	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	--	--	--	--	--	--	

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

Well ID <i>TOC (ft*)</i>	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft**)	Separate Phase Hydrocarbons (ft)	<i>(µg/L)</i>						Notes
					TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	
	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
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	

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

Well ID <i>TOC (ft*)</i>	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft**)	Separate Phase Hydrocarbons (ft)	TPHg ←	Benzene	Toluene	Ethylbenzene →			MTBE	Notes
								(µg/L)	Xylenes			
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		
180.12	8/19/99	14.42	166.12	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0		
	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
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	--	--	--	--	--	--		
180.09	8/19/99	13.45	166.86	0.10	--	--	--	--	--	--		
	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	--	--	--	--	--	--		
180.04	12/1/00	8.00	172.09	0.00	54,000	240	1,700	870	1,000	<300		c,d
	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

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

Well ID <i>TOC (ft*)</i>	Date	Depth to Groundwater (ft)	Groundwater Elevation (ft**)	Separate Phase Hydrocarbons (ft)	TPHg ←	Benzene	Toluene	→ (µg/L)			MTBE	Notes
								Ethylbenzene	Xylenes			
	10/22/01	8.15	171.89	--	20,000	200	1,200	330	2,900	<100	a,h	
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		
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		

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APPENDIX A

Groundwater Monitoring Field Data Sheets

APPENDIX A

Groundwater Monitoring Field Data Sheets

WELL DEPTH MEASUREMENTS

Well ID	Time	Product Depth	Water Depth	Product Thickness	Well Depth	Comments
MW-1	8:55		8.91		19.90	
MW-2	8:40		8.22		19.80	
MW-3	8:45		7.58		19.78	
MW-4	8:50		14.05		19.72	
MW-5	9:00		8.15		14.50	
MW-6	8:35		8.75		20.00	

Project Name: Heoshi's
 Measured By: S. Hall

Project Number: 129-0741
 Date: 10-22-01

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WELL SAMPLING FORM

Project Name: Hooshi's	Cambria Mgr: RAS	Well ID: MW-1
Project Number: 129-0741	Date: 10-22-01	Well Yield: ---
Site Address: 1499 MacArthur Blvd Oakland, Ca	Sampling Method: Disposable bailer	Well Diameter: 2" pvc
Initial Depth to Water: 8.91	Total Well Depth: 19.90	Technician(s): SG
Volume/ft: 0.16	1 Casing Volume: 1.75	Water Column Height: 10.99
Purging Device: Disposable bailer	Did Well Dewater?: no	3 Casing Volumes: 5.27
Start Purge Time: 11:05	Stop Purge Time: 11:19	Total Gallons Purged: 5
		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
11:10	1.5	17.5	7.50	870	
11:15	3	18.9	7.33	921	
11:20	5	18.7	7.29	954	

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW-1	10-22-01	11:25	VOA	HCl	TPH, BTEX, MTBE	8020/8015

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WELL SAMPLING FORM

Project Name: Hoooshi's	Cambria Mgr: RAS	Well ID: MW-2
Project Number: 129-0741	Date: -10-22-01	Well Yield: ---
Site Address: 1499 MacArthur Blvd Oakland, Ca	Sampling Method: Disposable bailer	Well Diameter: 2" pvc
Initial Depth to Water: 8.22	Total Well Depth: 19.80	Technician(s): SG
Volume/ft: 0.16	1 Casing Volume: 1.85	Water Column Height: 11.58
Purging Device: disposable bailer	Did Well Dewater?: no	3 Casing Volumes: 5.55
Start Purge Time: 11:35	Stop Purge Time: 11:49	Total Gallons Purged: 5.5
		Total Time: 14 mins

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

Well Diam.	Volume/ft (gallons)
2"	0.16
4"	0.55
6"	1.47

Time	Casing Volume	Temp. C	pH	Cond. uS	Comments
11:40	1.5	19.1	7.30	850	sheen
11:45	3	18.7	7.22	874	
11:50	5.5	18.9	7.28	892	

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW-2	10-22-01	11:55	VOA	HCl	TPH ₅ BTEX MTBE	8020/8015

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WELL SAMPLING FORM

Project Name: Hoooshi's	Cambria Mgr: RAS	Well ID: MW-3
Project Number: 129-0741	Date: -10-22-01	Well Yield: ---
Site Address: 1499 MacArthur Blvd Oakland, Ca	Sampling Method: Disposable bailer	Well Diameter: 2" pvc
Initial Depth to Water: 7.58	Total Well Depth: 19.78	Technician(s): SG
Volume/ft: 0.16	1 Casing Volume: 1.95	Water Column Height: 12.20
Purging Device: disposable bailer	Did Well Dewater?: no	3 Casing Volumes: 5.85
Start Purge Time: 9:20	Stop Purge Time: 9:34	Total Gallons Purged: 6
		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
9:25	2	19.1	7.25	927	
9:30	4	19.7	7.31	955	
9:35	6	19.5	7.39	1027	

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW-3	10-22-01	9:40	VOA	HCl	TPH ₃ BTEX MTBE	8020/8015
MW-						

CAMBRIA

WELL SAMPLING FORM

Project Name: Hooshi's	Cambria Mgr: RAS	Well ID: MW-4
Project Number: 129-0741	Date: -10-22-01	Well Yield: ---
Site Address: 1499 MacArthur Blvd Oakland, Ca	Sampling Method: Disposable bailer	Well Diameter: 2" pvc
Initial Depth to Water: 14.05	Total Well Depth: 19.72	Technician(s): SG
Volume/ft: 0.16	1 Casing Volume: 0.90	Water Column Height: 5.67
Purging Device: disposable bailer	Did Well Dewater?: no	3 Casing Volumes: 2.70
Start Purge Time: 10:30	Stop Purge Time: 10:44	Total Gallons Purged: 3
		Total Time: 14 mins

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

Well Diam.

Volume/ft (gallons)

2"	0.16
4"	0.63
6"	1.47

Time	Casing Volume	Temp. C	pH	Cond. uS	Comments
10:35	1	19.1	7.33	1027	
10:40	2	19.2	7.29	870	
10:45	3	19.5	7.35	954	

Sample ID	Date	Time	Container Type	Preservative	Analysis	Analytic Method
MW-4	10-22-01	10:50	VOA	HCl	TPH, BTEX, MTBE	8020/8015

CAMBRIA

WELL SAMPLING FORM

Project Name: Hooshi's	Cambria Mgr: RAS	Well ID: MW-5
Project Number: 129-0741	Date: -10-22-01	Well Yield: ---
Site Address: 1499 MacArthur Blvd Oakland, Ca	Sampling Method: Disposable bailer	Well Diameter: 2" pvc
Initial Depth to Water: 8.15	Total Well Depth: 14.50	Technician(s): SG
Volume/ft: 0.16	1 Casing Volume: 1.01	Water Column Height: 6.35
Purging Device: disposable bailer	Did Well Dewater?: no	3 Casing Volumes: 3.03
Start Purge Time: 12:10	Stop Purge Time: 12:24	Total Gallons Purged: 3
		Total Time: 14 mins

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

Well Diam.	Volume/ft (gallons)
2"	0.16
4"	0.63
6"	1.47

Time	Casing Volume	Temp. C	pH	Cond. μ S	Comments
12:15	1	19.4	7.15	871	
12:20	2	19.1	7.20	820	
12:25	3	19.1	7.22	895	

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW-5	10-22-01	12:30	VOA	HCl	TPH, BTEX, MTBE	8020/8015
MW-						

CAMBRIA

WELL SAMPLING FORM

Project Name: Hooshi's	Cambria Mgr: RAS	Well ID: MW-6
Project Number: 129-0741	Date: -10-22-01	Well Yield: ---
Site Address: 1499 MacArthur Blvd Oakland, Ca	Sampling Method: Disposable bailer	Well Diameter: 2" pvc
Initial Depth to Water: 8.75	Total Well Depth: 20.00	Technician(s): SG
Volume/ft: 0.16	1 Casing Volume: 1.80	Water Column Height: 11.25
Purging Device: disposable bailer	Did Well Dewater?: no	3 Casing Volumes: 5.40
Start Purge Time: 9:55	Stop Purge Time: 10:09	Total Gallons Purged: 5
		Total Time: 14mins

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
10:00	1.5	19.1	7.30	1291	
10:05	3	19.1	7.37	1155	
10:10	5	19.3	7.41	1184	

Sample ID	Date	Time	Container Type	Preservative	Analysis	Analysis Method
MW-6	10-22-01	10:15	VOA	HCl	TPH, BTEX, MTBE	8020/8015
MW-						

C A M B R I A



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 Environmental Technology 6262 Hollis Street Emeryville, CA 94608	Client Project ID: #129-0741; Hooshi's	Date Sampled: 10/22/01
		Date Received: 10/25/01
	Client Contact: Ron Scheele	Date Extracted: 10/25/01
	Client P.O:	Date Analyzed: 10/25/01

11/01/01

Dear Ron:

Enclosed are:

- 1). the results of 6 samples from your #129-0741; 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,

Edward Hamilton, Lab Director



McCAMPBELL ANALYTICAL INC.

110 2nd Ave. South, #D7, Pacheco, CA 94553-5560

Telephone : 925-798-1620 Fax : 925-798-1622

<http://www.mccampbell.com> E-mail: main@mccampbell.com

QC REPORT

EPA 8015m + 8020

Date: 10/26/01

Extraction: EPA 5030

Matrix: Water

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

SampleID: 102601

Instrument: GC-3

Surrogate1	ND	105.0	101.0	100.00	105	101	3.9
Xylenes	ND	34.5	33.2	30.00	115	111	3.8
Ethylbenzene	ND	11.5	10.9	10.00	115	109	5.4
Toluene	ND	11.2	10.5	10.00	112	105	6.5
Benzene	ND	10.4	10.1	10.00	104	101	2.9
MTBE	ND	9.6	9.6	10.00	96	96	0.0
TPH (gas)	ND	84.8	84.1	100.00	85	84	0.8

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

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

RPD means Relative Percent Deviation



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QC REPORT

VOCs (EPA 8240/8260)

Date: 10/31/01-11/01/01

Extraction: EPA 5030

Matrix: Water

Compound	Concentration: ug/L			%Recovery		RPD	
	Sample	MS	MSD	Amount Spiked	MS		MSD
SampleID: 102901				Instrument: GC-10			
Surrogate	ND	98.0	99.0	100.00	98	99	1.0
Methyl tert-Butyl Ether	ND	9.3	8.7	10.00	93	87	6.7

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

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

RPD means Relative Percent Deviation

28444

ZC501

McCAMPBELL ANALYTICAL INC.

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

Telephone: (925) 798-1620

Fax: (925) 798-1622

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 #: 1A9-0741

Project Name: Hooshi's

Project Location: 1499 MacArthur Blvd. Oakland, Ca

Sampler Signature: S. Hall

CHAIN OF CUSTODY RECORD
TURN AROUND TIME

RUSH 24 HOUR 48 HOUR 5 DAY

Analysis Request

Other

Comments

BTEX & TPH as Gas (602/8020) 8015/MTDE

TPH as Diesel (8015)

Total Petroleum Oil & Grease (5520 E&F/RA&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)

JCI

confirm all MTDE hits by 8/26/01

SAMPLE ID	LOCATION	SAMPLING		# Containers	Type Containers	MATRIX					METHOD PRESERVED								
		Date	Time			Water	Soil	Air	Sludge	Other	Ice	HCl	HNO ₃	Other					
MW-1		10-22-01	11:25	4	Voa	X					X								
MW-2		10-22-01	11:55	4	Voa	X					X								
MW-3		10-22-01	9:40	4	Voa	X					X								
MW-4		10-22-01	10:50	4	Voa	X					X	X							
MW-5		10-22-01	12:30	4	Voa	X					X	X							
MW-6		10-22-01	10:15	4	Voa	X					X	X							

81954
81955
81956
81957
81958
81959

ICE/GOOD CONDITION HEAD SPACE ABSENT ✓
PRESERVATION APPROPRIATE CONTAINERS ✓
VOAST/DC/METALS/OTHER ✓

Relinquished By: S. Hall Date: 10/25/01 Time: 11:00am Received By: Sabrina Lopez #244

Relinquished By: Sabrina Lopez Date: 10/25/01 Time: 3:50pm Received By: Maria Vazquez

Remarks: Report results in EDF format