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October 10, 2005

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 - Third Quarter 2005**

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



Alameda County
Environmental Health
OCT 13 2005

Dear Mr. Hwang:

On behalf of Ms. Naomi Gatzke, Cambria Environmental Technology, Inc. (Cambria) has prepared this *Groundwater Monitoring Report – Third Quarter 2005* for the referenced site. Presented in the report is a summary of the third quarter 2005 activities and results, closure request status, and a description of the anticipated fourth quarter 2005 activities.

As requested by Mr. Dennis Parfitt of the State Water Resources Control Board, Department of Water Quality, the wells were tested for bioattenuation parameters. The results are presented in this report.

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
Project Geologist

Attachments: *Groundwater Monitoring Report - Third Quarter 2005*

cc: Ms. Naomi Gatzke, 1545 Scenicview Drive, San Leandro, California
Mr. Dennis Parfitt, State Water Resources Control Board, Division of Water Quality, P.O. Box 2231, Sacramento, California

**Cambria
Environmental
Technology, Inc.**

5900 Hollis Street
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GROUNDWATER MONITORING REPORT - THIRD QUARTER 2005

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

October 10, 2005



Prepared for:

Ms. Naomi Gatzke
1545 Scenicview Drive
San Leandro, California 94577

Alameda County
OCT 13 2005

Environmental Health

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GROUNDWATER MONITORING REPORT - THIRD QUARTER 2005

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

October 10, 2005

INTRODUCTION

On behalf of Ms. Naomi Gatzke, Cambria Environmental Technology, Inc. (Cambria) has prepared this *Groundwater Monitoring Report – Third Quarter 2005* for the referenced site (Figure 1). Presented in this report is a summary of the third quarter 2005 groundwater monitoring activities and results, closure request status, and a description of the anticipated fourth quarter 2005 activities.

In addition to the information presented in this report, four appendices present supporting information and data. Appendix A contains groundwater monitoring field data sheets for this monitoring event. Appendix B contains the analytical laboratory report for the samples collected and submitted by Muskan Environmental Sampling (MES). Appendix C contains graphs of hydrocarbon concentrations versus time. Appendix D contains GeoTracker electronic delivery confirmation documentation.

THIRD QUARTER 2005 ACTIVITIES

Monitoring Activities

Field Activities: On July 28, 2005, MES gauged water levels and sampled groundwater in monitoring wells MW-1 through MW-6 in accordance with the sampling schedule. Field data sheets are presented as Appendix A. The well gauging data has been submitted to the GeoTracker database (Appendix D). MES followed Cambria's monitoring procedures and protocol, which consisted of the following. Prior to purging, groundwater levels were gauged in the wells to evaluate groundwater elevation and flow patterns at the site. In addition, dissolved oxygen (DO) and ferrous iron concentrations were measured with an Oakton 100[®] meter and Hach[®] reagent test kit, respectively. To facilitate groundwater sampling, MES purged three well-casing volumes prior to sampling. MES recorded groundwater pH, conductivity, and temperature, and evaluated reading stabilization. Groundwater samples were collected using clean, disposable bailers and were decanted into the appropriate containers supplied by the analytical laboratory. Samples were labeled, placed in protective foam sleeves, stored on crushed, water-based ice at or below 4 degrees Celsius and transported under chain-of-custody to the laboratory.

Sample Analyses: Groundwater samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg) by modified United States Environmental Protection Agency (EPA) Method SW8015C; and benzene, toluene, ethylbenzene, total xylenes (BTEX), and methyl tertiary-butyl ether (MTBE) by EPA Method SW8021B. In addition, groundwater samples were also analyzed for inorganic anions nitrate as nitrogen (N), nitrite as N and sulfate by analytical method E300.1. Samples were also analyzed for total alkalinity as calcium carbonate (CaCO_3), carbonate as CaCO_3 , bicarbonate as CaCO_3 and hydroxide as CaCO_3 by Standard Method 2320B. The groundwater analytical results are summarized in Tables 1 and 2. The laboratory analytical report is included as Appendix B. The groundwater analytical results have been submitted to the GeoTracker database (Appendix D).



Monitoring Results

Groundwater Flow Direction and Gradient: Based on field measurements collected on July 28, 2005 groundwater beneath the site generally flows towards the southwest (Figure 1). The groundwater gradient is relatively flat onsite and increases to 0.179 feet/foot towards the southwest corner of the site. Depth to water and groundwater elevation data are presented in Table 1.

Hydrocarbon Distribution in Groundwater: Hydrocarbons were detected in two of the three sampled wells. The highest concentration of TPHg was detected in well MW-2 at 35,000 micrograms per liter ($\mu\text{g/L}$). The highest concentrations of BTEX were also detected in well MW-2 at 690 $\mu\text{g/L}$, 1,200 $\mu\text{g/L}$, 1,200 $\mu\text{g/L}$, and 5,200 $\mu\text{g/L}$, respectively. No hydrocarbons were detected in well MW-1. No MTBE was in any of the sampled monitoring wells. Compared to the previous quarter, hydrocarbon concentrations decreased in well MW-1, increased slightly in well MW-2, and increased by one order of magnitude in well MW-5. The concentrations in MW-5 are the highest detected for TPHg since 2001 and BTEX since 2003. Since the hydrocarbon plume is delineated, future monitoring events will evaluate these normal concentration fluctuations. Overall hydrocarbon concentrations at the site continue to display a decreasing trend (Appendix C).

Bioattenuation Parameters in Groundwater

During a telephone conversation between Mr. Dennis Parfitt of the State Water Resources Control Board, Department of Water Quality and Matt Meyers of Cambria, Mr. Parfitt requested testing of bioattenuation parameters during this monitoring event. Monitoring wells MW-1 through MW-6 were sampled for inorganic anions and total and speciated alkalinity as CaCO_3 . The bioattenuation parameter results are presented in Table 2.

Dissolved Oxygen: During aerobic biodegradation, DO concentrations are reduced as aerobic respiration occurs. DO is the most thermodynamically favored electron acceptor used in aerobic biodegradation of petroleum hydrocarbons. Active aerobic biodegradation of BTEX compounds requires at least 1 mg/L DO in groundwater. DO concentrations can be as high as 8 to 13 mg/L in oxygen-saturated groundwater that is free of hydrocarbons. Inverse relationships between DO and hydrocarbon concentrations indicate the occurrence of aerobic degradation, provided that at least 1 to 2 mg/L of DO is present in groundwater. At the site, DO concentrations ranged from 3.57 milligrams per liter (mg/L) to 5.79 mg/L. These DO concentrations are sufficient for aerobic biodegradation to occur. However, an inverse relationship between DO and hydrocarbon concentrations does not exist at this site. Therefore, it appears that aerobic degradation of hydrocarbons is not occurring at this site.



Nitrate and Nitrite: After DO has been depleted in groundwater, nitrate may be used as an electron receptor for anaerobic biodegradation. In this denitrification process, nitrate is reduced to nitrite. If nitrate concentrations vary inversely with hydrocarbon concentrations and if nitrates are depleted in the core of the plume, anaerobic biodegradation of fuel hydrocarbons is probably occurring. At this site, nitrate values ranged between <0.1 mg/L and 0.77 mg/L and no nitrite was detected. Therefore, it appears that nitrate has been depleted at the site by biodegradation.

Sulfate: After DO and nitrate have been depleted in groundwater, sulfate may be used as an electron receptor for anaerobic biodegradation. If sulfate concentrations vary inversely with hydrocarbon concentrations, anaerobic biodegradation of fuel hydrocarbons is probably occurring. At the site, sulfate concentrations ranged from 5.6 mg/l to 47 mg/L. The sulfate concentration in source area well MW-2 varies inversely with the detected hydrocarbon concentration in well MW-2. This suggests that anaerobic biodegradation is occurring at the core of the hydrocarbon plume.

Ferrous Iron: In some cases ferric iron is used as an electron acceptor during anaerobic biodegradation of petroleum hydrocarbons. In this process, ferric iron is reduced to ferrous iron, which may be soluble in water. Ferrous iron concentrations should increase in source areas of elevated hydrocarbon concentrations if anaerobic biodegradation is occurring. At the site, ferrous iron concentrations ranged from 0.2 mg/l to 3.4 mg/L. Elevated ferrous iron concentrations were detected in wells MW-1 and MW-2, which are adjacent to the hydrocarbon source area, the former UST cavity. This suggests that anaerobic biodegradation is occurring at the core of the hydrocarbon plume.

Alkalinity: The total alkalinity of groundwater indicates groundwater's ability to neutralize acid. High alkalinity (high pH) conditions occur when groundwater contains elevated hydroxides, carbonates, and bicarbonates of elements such as calcium, magnesium, sodium, potassium, or ammonia. Since these species are created by the respiration of microorganisms, high alkalinity is an indicator of biological activity. However, these species may also result from the dissolution of rock

(especially carbonate rock) and the transfer of carbon dioxide from the atmosphere. Alkalinity also buffers groundwater pH against acid generation by both aerobic and anaerobic biodegradation processes. Higher alkalinity in the source area compared to the clean areas suggests that biodegradation is occurring. At the site, concentrations of total alkalinity as CaCO₃ directly correspond with concentrations of bicarbonate as CaCO₃, since no concentrations of carbonate as CaCO₃ or hydroxide as CaCO₃ were detected. Concentration of total alkalinity as CaCO₃ ranged from 164 mg/L to 550 mg/L. The distribution of concentrations of total alkalinity as CaCO₃ does not show a strong correlation to hydrocarbons concentrations; therefore, this data is inconclusive for supporting the occurrence of biodegradation.



Summary: In summary, it is evident that anaerobic hydrocarbon biodegradation is occurring. There is sufficient DO to support aerobic biodegradation at the site; however, DO concentrations do not inversely correlate with elevated hydrocarbon concentrations. The hydrocarbon plume is probably being degraded primarily by anaerobic biodegradation as indicated in the nitrate, sulfate and ferrous iron evaluation. As the concentrations at the core of the plume decrease, anaerobic biodegradation may give way to the more accelerated aerobic biodegradation process.

Waste Disposal

On August 8, 2005, 55 gallons of purged groundwater from previous monitoring events was transported for disposal by Evergreen Environmental Services to Evergreen Oil, Inc. in Newark, California. See Appendix E for a copy of the Non-Hazardous Waste Manifest.

CLOSURE REQUEST STATUS

Based on the decreasing source area hydrocarbon concentrations and the delineated hydrocarbon plume, Cambria prepared *Closure Request* dated July 21, 2004 and *Clarifications Regarding Closure Request* dated October 6, 2004 for this low risk groundwater site. During phone discussions between Mr. Don Hwang of ACDEH and Matt Meyers of Cambria, Mr. Hwang recommended continuing quarterly monitoring. As a result, Cambria will continue monitoring activities according to the approved monitoring schedule through 2005 pending the ACDEH's review of the above mentioned documents. A *Petition for Closure* dated May 6, 2005 was submitted to the State Water Resources Control Board (SWRCB) as per their *Site Closure Petition Process - Underground Storage Tank Program Fact Sheet*.

ANTICIPATED FOURTH QUARTER 2005 ACTIVITIES**Monitoring Activities**

Cambria will gauge water levels and collect groundwater samples from wells MW-1 through MW-6. Wells MW-1, MW-2, and MW-5 are sampled on a quarterly basis and wells MW-3, MW-4, and MW-6 are sampled on an annual basis during the fourth quarter. Groundwater samples will be analyzed for TPHg by modified EPA Method SW8015C and BTEX and MTBE by EPA Method SW8021B. Detected MTBE concentrations will be confirmed by EPA Method SW8260B. Cambria will prepare a groundwater monitoring report summarizing the monitoring activities and results.

**Site Closure Activities**

Cambria requests a meeting with the ACDEH as soon as possible, to facilitate regulatory closure for the site.

ATTACHMENTS

Figure 1 – Groundwater Elevation Contour and Hydrocarbon Concentration Map

Table 1 – Groundwater Elevation and Analytical Data

Table 2 – Groundwater Elevation and Bioattenuation Analytical Data

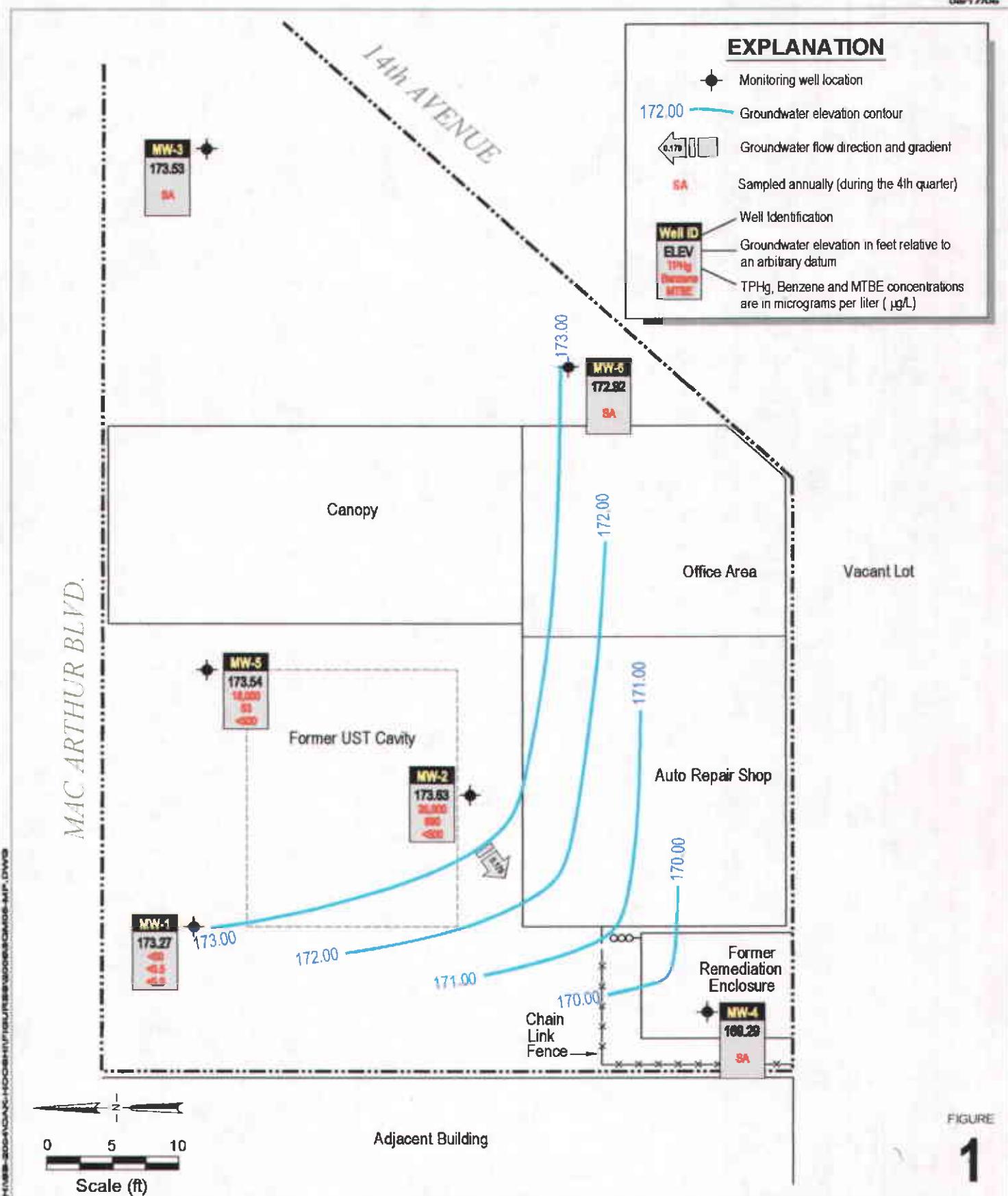
Appendix A – Groundwater Monitoring Field Data Sheets

Appendix B – Analytical Results for Groundwater Sampling

Appendix C – TPHg and Benzene Concentration Graphs

Appendix D – Electronic Delivery Confirmation

Appendix E – Non-Hazardous Waste Manifest



Hooshi's Auto Service
1499 MacAurthur Boulevard
Oakland, California



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Groundwater Elevation Contour and Hydrocarbon Concentration Map

July 28, 2005

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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	SPH	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Notes
		Groundwater	Elevation	Thickness							
		(ft)	(ft**)	(ft)	<	>					
MW-1	1/4/1993	--	--	--	539	130	12	22	13	--	
181.00	4/22/1993	--	--	--	1,130	75	8.0	38	11	--	
	12/27/1994	--	--	--	770	22	6.6	14	21	--	
	6/27/1996	14.11	166.89	--	3,300	260	34	59	170	80	
	12/10/1996	13.71	167.29	--	1,500	84	11	22	32	34	
	5/8/1998	13.85	167.15	--	3,200	300	12	62	36	<120	a
	8/17/1998	14.11	166.89	--	1,700	160	18	32	27	39	a
	11/4/1998	14.28	166.72	--	1,100	11	4.3	3.6	6.5	<50	a
	2/17/1999	13.41	167.59	--	320	200	47	72	75	57	a
	5/27/1999	14.16	166.84	--	2,500	81	12	29	41	<80	a
	8/19/1999	14.18	166.82	--	780	19	<0.5	5.7	4.5	28	a
180.83	11/23/1999	14.43	166.40	--	1,300	24	0.64	1.8	3.3	<100	a
	2/17/2000	13.85	166.98	--	1,300	60	9.1	22	19	22 (16)	a,b
	5/9/2000	14.01	166.82	--	2,700	55	13	19	25	34 (29)	a
	8/15/2000	14.24	166.59	--	--	--	--	--	--	--	
	12/1/2000	8.75	172.08	--	480	6.4	5.9	1.1	3.9	18 (21)	a
180.63	2/8/2001	8.49	172.14	--	64	<0.5	<0.5	<0.5	<0.5	6.1 (5.6)	a,c
	4/9/2001	8.71	171.92	--	--	--	--	--	--	--	
	4/24/2001	7.90	172.73	--	77	<0.5	<0.5	<0.5	<0.5	5.6 (3.7)	c
	8/6/2001	8.83	171.80	--	140	1.7	0.55	<0.5	0.63	5.8 (4.0)	a
	10/22/2001	8.91	171.72	--	120	0.92	<0.5	<0.5	0.59	11(10)	a
	2/1/2002	8.15	172.48	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	4/19/2002	8.63	172.00	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	7/16/2002	8.79	171.84	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	10/3/2002	8.90	171.73	--	110	<0.5	<0.5	<0.5	<0.5	<5.0	f
	1/10/2003	7.93	172.70	--	<50	<0.5	0.74	<0.5	<0.5	<5.0	
	4/21/2003	8.17	172.46	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	7/9/2003	8.92	171.71	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	10/7/2003	9.13	171.50	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	1/22/2004	8.20	172.43	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	4/2/2004	7.09	173.54	--	110	0.52	<0.5	<0.5	<0.5	<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 TOC (ft*)	Date	Depth to	Groundwater	SPH	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Notes
		Groundwater (ft)	Elevation (ft**) (ft)	Thickness (ft)							
<i>MW-1 cont'd</i>	12/29/2004	6.15	174.48	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	1/27/2005	7.15	173.48	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	4/6/2005	6.84	173.79	--	140	<0.5	0.55	<0.5	0.70	<5.0	c
	7/28/2005	7.36	173.27	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
<i>MW-2</i> <i>J80.45</i>	1/4/1993	--	--	--	149,000	21,700	25,000	ND	7,760	--	
	4/22/1993	--	--	--	136,300	9,900	15,870	15,300	2,190	--	
	12/27/1994	--	--	--	94,000	11,000	18,000	2,700	16,000	--	
	6/27/1996	12.61	168.64	1.00	--	--	--	--	--	--	
	12/10/1996	11.10	169.55	0.25	--	--	--	--	--	--	
	5/8/1998	10.81	169.66	0.03	--	--	--	--	--	--	
	8/17/1998	12.16	168.31	0.02	--	--	--	--	--	--	
	11/4/1998	12.61	167.86	0.02	--	--	--	--	--	--	
	2/17/1999	9.82	170.66	0.04	--	--	--	--	--	--	
	5/27/1999	11.07	169.48	0.13	--	--	--	--	--	--	
	8/19/1999	12.79	167.68	0.02	--	--	--	--	--	--	
	11/23/1999	12.14	168.20	0.12	--	--	--	--	--	--	
	2/17/2000	10.01	170.37	0.18	--	--	--	--	--	--	
<i>J80.24</i>	5/9/2000	10.88	169.38	0.03	--	--	--	--	--	--	
	8/15/2000	12.28	167.97	0.01	--	--	--	--	--	--	
	12/1/2000	8.03	172.21	--	260,000	1,100	5,000	1,900	17,000	<100	a
	2/8/2001	7.86	172.38	--	2,900	1.7	14	5.0	140	<5.0	c,d
	4/9/2001	7.95	172.29	--	--	--	--	--	--	--	
	4/24/2001	6.90	173.34	--	56,000	360	980	1,000	4,700	<5.0	a,b
	8/6/2001	8.15	172.09	--	54,000	680	1,900	1,500	7,800	<200 (<10)	a,b,j
	10/22/2001	8.22	172.02	--	32,000	420	770	1,100	4,100	<250	a,b
	2/1/2002	8.07	172.17	--	26,000	310	490	920	1,600	<1,000	a
	4/19/2002	8.60	171.64	--	16,000	300	240	1,000	990	<100	a
	7/16/2002	8.21	172.03	--	5,700	120	18	340	15	<50	a
	10/3/2002	8.14	172.10	--	4,400	44	16	68	20	<25	a
	1/10/2003	6.98	173.26	--	16,000	300	320	580	830	<100	a,b

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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	SPH	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Notes
		Groundwater (ft)	Elevation (ft**)	Thickness (ft)			(μg/L)	→			
<i>MW-2 cont'd</i>	4/21/2003	7.25	172.99	--	12,000	350	260	610	380	<50	a
	7/9/2003	7.99	172.25	--	3,300	51	7.4	47	2.8	<17	a
	10/7/2003	8.21	172.03	--	2,400	93	11	34	22	<50	a
	1/22/2004	7.24	173.00	--	5,900	240	130	350	200	<50	a
	4/2/2004	6.29	173.95	--	37,000	840	1,500	1,300	5,900	<500	a
	12/29/2004	5.37	174.87	--	9,300	240	230	330	880	<50	a
	1/27/2005	6.38	173.86	--	37,000	1,200	1,400	1,300	5,200	<250	a
	4/6/2005	5.88	174.36	--	21,000	400	340	780	1,700	<100	a
	7/28/2005	6.61	173.63	--	35,000	690	1,200	1,200	5,200	<500	a
MW-3	1/4/1993	--	--	--	1,610	772	14	11	ND	--	
<i>I79.94</i>	4/22/1993	--	--	--	3,040	980	34	19	16	--	
	12/27/1994	--	--	--	2,600	180	9.0	7.2	13	--	
	6/27/1996	13.20	166.74	--	2,000	22	2.9	11	7.4	56	
	12/10/1996	13.13	166.81	--	970	<0.5	<0.5	<0.5	<0.5	24	
	5/8/1998	13.03	166.91	--	780	3.7	2.1	1.1	2.4	<32	a
	8/17/1998	13.22	166.72	--	870	2.8	<0.5	<0.5	3.7	<5.0	b,c
	11/4/1998	13.31	166.63	--	770	1.6	4.4	2.0	6.9	<30	c
	2/17/1999	12.89	167.05	--	650	6.2	3.4	1.5	2.6	<5.0	b,c
	5/27/1999	12.32	167.62	--	570	1.5	1.2	0.72	1.1	<20	a
	8/19/1999	13.19	166.75	--	830	<0.5	1.9	<0.5	1.3	<20	c,d
<i>I79.55</i>	11/23/1999	13.26	166.29	--	900	<0.5	1.8	0.56	1.4	<20	c,d
	2/17/2000	12.78	166.77	--	250	<0.5	1.5	<0.5	0.62	<5.0	d
	5/9/2000	12.92	166.63	--	690	<0.5	2.1	0.85	1.6	<5.0	a
	8/15/2000	13.19	166.36	--	610	<0.5	2.3	0.75	1.2	<5.0	c,d
	12/1/2000	7.50	172.05	--	120	<0.5	0.90	0.65	0.62	<5.0	c,d
	2/8/2001	7.20	172.35	--	87	<0.5	<0.5	<0.5	<0.5	<5.0	c,d
	4/9/2001	7.33	172.22	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	8/6/2001	7.61	171.94	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	10/22/2001	7.58	171.97	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	2/1/2002	7.53	172.02	--	<50	<0.5	<0.5	<0.5	<0.5	8.5 (8.5)	

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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	SPH	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Notes
		Groundwater (ft)	Elevation (ft**)	Thickness (ft)							
<i>MW-3 cont'd</i>	4/19/2002	7.95	171.60	--	<50	<0.5	<0.5	<0.5	<0.5	9.0 (11)	
	7/16/2002	7.68	171.87	--	<50	<0.5	<0.5	<0.5	<0.5	20 (30)	
	10/3/2002	7.78	171.77	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	1/10/2003	6.91	172.64	--	<50	<0.5	<0.5	<0.5	<0.5	19 (16)	
<i>sampled annually</i>	4/21/2003	7.21	172.34	--	--	--	--	--	--	--	
	7/9/2003	8.05	171.50	--	--	--	--	--	--	--	
	10/7/2003	8.19	171.36	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	1/22/2004	7.13	172.42	--	--	--	--	--	--	--	
	4/2/2004	5.73	173.82	--	--	--	--	--	--	--	
	12/29/2004	4.88	174.67	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	1/27/2005	5.80	173.75	--	--	--	--	--	--	--	
	4/6/2005	5.49	174.06	--	--	--	--	--	--	--	
	7/28/2005	6.02	173.53	--	--	--	--	--	--	--	
<i>MW-4</i>	6/27/1996	17.03	163.51	--	720	2	0.5	2.5	23	3.2	
<i>I80.54</i>	12/10/1996	8.50	172.04	--	80	2.4	<0.5	<0.5	6.6	<2.0	
	5/8/1998	11.46	169.08	--	<50	0.60	<0.5	<0.5	<0.5	<5.0	
	8/17/1998	13.98	166.56	--	<50	<0.5	<0.5	<0.5	0.5	<5.0	
	11/4/1998	14.36	166.18	--	96	9.7	8.1	4.8	18	<5.0	a
	2/17/1999	8.39	172.15	--	<50	<0.5	<0.5	<0.5	0.5	<5.0	
	5/27/1999	12.80	167.74	--	<50	<0.5	1.0	<0.5	2.9	<5.0	
	8/19/1999	14.42	166.12	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	11/23/1999	14.63	165.49	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
<i>I80.12</i>	2/17/2000	8.15	171.97	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	5/9/2000	12.81	167.31	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	8/15/2000	14.29	165.83	--	<50	2.1	<0.5	<0.5	<0.5	<5.0	
	12/1/2000	12.80	167.32	--	81	6.0	8.4	1.0	5.6	<5.0	a
	2/8/2001	12.57	167.55	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	4/9/2001	12.50	167.62	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	8/6/2001	14.00	166.12	--	59	1.5	<0.5	<0.5	<0.5	<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 TOC (ft*)	Date	Depth to	Groundwater	SPH	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Notes
		Groundwater (ft)	Elevation (ft**)	Thickness (ft)							
MW-4 cont'd	10/22/2001	14.05	166.07	--	130	6.3	<0.5	0.88	<0.5	<5.0	a
	2/1/2002	13.47	166.65	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	4/19/2002	13.55	166.57	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	7/16/2002	14.05	166.07	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	10/3/2002	13.09	167.03	--	77	2.1	0.51	<0.5	<0.5	<5.0	a
	1/10/2003	12.04	168.08	--	<50	<0.5	<0.5	<0.5	<0.5	20 (15)	a
sampled annually	4/21/2003	12.15	167.97	--	--	--	--	--	--	--	
	7/9/2003	12.90	167.22	--	--	--	--	--	--	--	
	10/7/2003	13.15	166.97	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	1/22/2004	12.09	168.03	--	--	--	--	--	--	--	
	4/2/2004	8.97	171.15	--	--	--	--	--	--	--	
	12/29/2004	7.85	172.27	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	1/27/2005	8.28	171.84	--	--	--	--	--	--	--	
	4/6/2005	8.07	172.05	--	--	--	--	--	--	--	
	7/28/2005	10.83	169.29	--	--	--	--	--	--	--	
MW-5	6/27/1996	13.62	166.74	0.16	--	--	--	--	--	--	
I80.23	12/10/1996	13.26	167.77	1.00	--	--	--	--	--	--	
	5/8/1998	13.15	167.11	0.04	--	--	--	--	--	--	
	8/17/1998	13.36	166.89	0.02	--	--	--	--	--	--	
	11/4/1998	13.52	166.73	0.02	--	--	--	--	--	--	
	2/17/1999	13.02	167.23	0.02	--	--	--	--	--	--	
	5/27/1999	13.80	166.71	0.35	--	--	--	--	--	--	
	8/19/1999	13.45	166.86	0.10	--	--	--	--	--	--	
I80.09	11/23/1999	14.03	166.35	0.36	--	--	--	--	--	--	
	2/17/2000	13.28	167.02	0.26	--	--	--	--	--	--	
	5/9/2000	13.55	166.77	0.29	--	--	--	--	--	--	
	8/15/2000	13.58	166.54	0.04	--	--	--	--	--	--	
	12/1/2000	8.00	172.09	0.00	54,000	240	1,700	870	1,000	<300	c,d
I80.04	2/8/2001	7.88	172.16	0.00	33,000	63	420	120	4,500	<50	a,b

CAMBRIA

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

Well ID TOC (ft*)	Date	Depth to Groundwater	Groundwater Elevation	SPH Thickness	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Notes
		(ft)	(ft**) (μg/L)	(ft)			←	→			
<i>MW-5 cont'd</i>	4/9/2001	7.97	172.07	0.00	--	--	--	--	--	--	
	4/24/2001	7.00	173.04	0.00	3,200	<1.0	11	7	260	<5.0	c,d
	8/6/2001	8.17	171.87	--	2,700	11	40	21	240	<5.0	a
	10/22/2001	8.15	171.89	--	20,000	200	1,200	330	2,900	<100	a,b
	2/1/2002	8.07	171.97	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	4/19/2002	8.51	171.53	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	7/16/2002	8.40	171.64	--	<50	<0.5	<0.5	<0.5	1.7	<5.0	
	10/3/2002	8.18	171.86	--	15,000	94	830	460	2,200	<500	a
	1/10/2003	6.95	173.09	--	290	<0.5	1.8	<0.5	17	<5.0	a
	4/21/2003	7.18	172.86	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	7/9/2003	7.95	172.09	--	<50	<0.5	<0.5	<0.5	2.7	<5.0	
	10/7/2003	8.22	171.82	--	9,800	120	340	180	2,000	<50	a
	1/22/2004	7.18	172.86	--	250	<0.5	0.82	<0.5	29	<5.0	d
	4/2/2004	6.23	173.81	--	4,300	6.3	18	59	750	<25	a
	12/29/2004	5.27	174.77	--	72	<0.5	0.78	<0.5	6.5	<5.0	d
	1/27/2005	6.25	173.79	--	3,300	<5.0	22	18	320	<50	a
	4/6/2005	5.90	174.14	--	3,100	1.3	6.9	7.2	100	<10	c,d
	7/28/2005	6.50	173.54	--	18,000	53	230	130	2,100	<500	a
<i>MW-6</i>	6/27/1996	18.55	161.48	--	ND	ND	ND	ND	ND	--	
<i>I80.03</i>	12/10/1999	11.79	168.24	--	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	
	5/8/1998	11.62	168.41	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	8/17/1998	12.66	167.37	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	11/4/1998	13.56	166.47	--	68	3.8	3.7	2.8	11	<5.0	a
	2/17/1999	12.91	167.12	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	5/27/1999	13.03	167.00	--	<50	1.0	1.7	0.82	4.9	<5.0	
	8/19/1999	13.10	166.93	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
<i>I79.63</i>	11/23/1999	13.58	166.05	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	2/17/2000	10.72	168.91	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	5/9/2000	11.71	167.92	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	8/15/2000	12.49	167.14	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	12/1/2000	8.64	170.99	--	<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	SPH	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Notes
		Groundwater (ft)	Elevation (ft**)	Thickness (ft)							
MW-6 cont'd	2/8/2001	8.20	171.43	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	4/9/2001	8.53	171.10	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	8/6/2001	8.69	170.94	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	10/22/2001	8.75	170.88	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	2/1/2002	8.31	171.32	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	4/19/2002	8.62	171.01	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	7/16/2002	8.84	170.79	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	10/3/2002	8.71	170.92	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	1/10/2003	6.99	172.64	--	<50	<0.5	<0.5	<0.5	<0.5	19 (16)	
sampled annually	4/21/2003	7.15	172.48	--	--	--	--	--	--	--	
	7/9/2003	7.98	171.65	--	--	--	--	--	--	--	
	10/7/2003	8.28	171.35	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	1/22/2004	7.15	172.48	--	--	--	--	--	--	--	
	4/2/2004	6.56	173.07	--	--	--	--	--	--	--	
	12/29/2004	5.63	174.00	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	1/27/2005	6.66	172.97	--	--	--	--	--	--	--	
	4/6/2005	6.25	173.38	--	--	--	--	--	--	--	
	7/28/2005	6.71	172.92	--	--	--	--	--	--	--	
	Trip Blank	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	5/8/1998	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	11/4/1998	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	5/27/1999	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	11/23/1999	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	12/1/2000	--	--	--	<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
----------------------	------	---------------------------------	------------------------------------	--------------------------	------	---------	---------	--------------	---------	------	-------

Abbreviations and Methods:

TOC = Top of casing elevation

ft = Measured in feet

SPH = Separate phase hydrocarbons

TPHg = Total petroleum hydrocarbons as gasoline by modified EPA Method SW8015C

Benzene, toluene, ethylbenzene, and xylenes by EPA Method SW8021B

MTBE = Methyl tertiary butyl ether by EPA Method SW8021B

(concentration in parentheses confirmed by EPA Method SW8260B)

µg/L = Micrograms per liter

-- = Not sampled, not analyzed, or not applicable

<n = Concentration less than laboratory reporting limit of n.

ND = Compound not detected, detection limit unknown

* = 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.

Notes:

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

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

c - The analytical laboratory noted no recognizable pattern.

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

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

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

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Table 2. Groundwater Elevation and Bioattenuation 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)	Nitrate as N ←	Nitrite as N	Sulfate	Total Alkalinity as CaCO ₃ mg/L	Carbonate as CaCO ₃	Bicarbonate as CaCO ₃	Hydroxide as CaCO ₃	Ferrous Iron	Dissolved Oxygen
MW-1 180.63	7/28/2005	7.36	173.27	--	<0.1	<0.1	47	322	<1	322	<1	3.4	5.79
MW-2 180.24	7/28/2005	6.61	173.63	--	<0.1	<0.1	5.6	448	<1	448	<1	2.4	5.41
MW-3 179.55	7/28/2005	6.02	173.53	--	<0.1	<0.1	43	239	<1	239	<1	0.2	4.76
MW-4 180.12	7/28/2005	10.83	169.29	--	0.77	<0.1	47	412	<1	412	<1	0.4	4.73
MW-5 180.04	7/28/2005	6.50	173.54	--	0.20	<0.1	40	164	<1	164	<1	0.2	5.03
MW-6 179.63	7/28/2005	6.71	172.92	--	0.28	<0.1	42	550	<1	550	<1	0.2	3.57

Abbreviations and Methods:

TOC = Top of casing elevation

ft = Measured in feet

SPH = Separate phase hydrocarbons

N = Nitrogen

CaCO₃ = Calcium carbonate

mg/L = Milligrams per liter

-- = Not applicable

* = 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))

Ferrous iron measured in the field with Hach® reagent test kit

Dissolved oxygen measured in the field with Oakton 100® meter

APPENDIX A

Groundwater Monitoring Field Data Sheets



MUSKAN
ENVIRONMENTAL
SAMPLING

WELL GAUGING SHEET

Client: Cambria Environmental Technology Inc.						
Site Address: 1499 MacArthur Boulevard Oakland, CA						
Date: 7/28/2005			Signature: 			
Well ID	Time	Depth to SPH	Depth to Water	SPH Thickness	Depth to Bottom	Comments
MW-1	9:50		7.36		20.01	
MW-2	10:00		6.61		19.87	
MW-3	9:45		6.02		19.20	
MW-4	9:35		10.83		19.84	
MW-5	9:55		6.50		14.61	
MW-6	9:40		6.71		20.11	



MUSKAN
ENVIRONMENTAL
SAMPLING

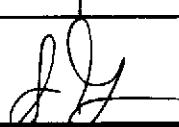
WELL SAMPLING FORM



MUSKAN
ENVIRONMENTAL
SAMPLING

WELL SAMPLING FORM

WELL SAMPLING FORM

Date:	7/28/2005					
Client:	Cambria Environmental Technology Inc.					
Site Address:	1499 MacArthur Boulevard Oakland, CA					
Well ID:	MW-3					
Well Diameter:	2"					
Purging Device:	Disposable Bailer					
Sampling Method:	Disposable Bailer					
Total Well Depth:	19.20		Fe=	0.2 mg/L		
Depth to Water:	6.02		ORP=	mV		
Water Column Height:	13.18		DO=	4.76 mg/L		
Gallons/ft:	0.16					
1 Casing Volume (gal):	2.11		COMMENTS: Turbid			
3 Casing Volumes (gal):	6.33					
TIME:	CASING VOLUME (gal)	TEMP (Celsius)	pH	COND. (µS)		
11:30	2.1	24.4	7.16	456		
11:35	4.2	24.8	7.13	453		
11:40	6.3	24.3	7.11	458		
Sample ID:	Date:	Time	Container Type	Preservative	Analytes	Method
MW-3	7/28/2005	11:45	Poly	ICE	bioattenuation parameters	SM2320B, 300.1
						Signature: 



WELL SAMPLING FORM

Date:	7/28/2005					
Client:	Cambria Environmental Technology Inc.					
Site Address:	1499 MacArthur Boulevard Oakland, CA					
Well ID:	MW-4					
Well Diameter:	2"					
Purging Device:	Disposable Bailer					
Sampling Method:	Disposable Bailer					
Total Well Depth:	19.84		Fe=	0.4 mg/L		
Depth to Water:	10.83		ORP=	mV		
Water Column Height:	9.01		DO=	4.73 mg/L		
Gallons/ft:	0.16					
1 Casing Volume (gal):	1.44		COMMENTS: Turbid			
3 Casing Volumes (gal):	4.32					
TIME:	CASING VOLUME (gal)	TEMP (Celsius)	pH	COND. (µS)		
10:30	1.4	24.1	6.98	614		
10:35	2.9	23.9	7.07	601		
10:40	4.3	23.7	7.05	622		
Sample ID:	Date:	Time	Container Type	Preservative	Analytes	Method
MW-4	7/28/2005	10:45	Poly	ICE	bioattenuation parameters	SM2320B, 300.1
						Signature: 



WELL SAMPLING FORM

Date:	7/28/2005						
Client:	Cambria Environmental Technology Inc.						
Site Address:	1499 MacArthur Boulevard Oakland, CA						
Well ID:	MW-6						
Well Diameter:	2"						
Purging Device:	Disposable Bailer						
Sampling Method:	Disposable Bailer						
Total Well Depth:	20.11		Fe=	0.2 mg/L			
Depth to Water:	6.71		ORP=	mV			
Water Column Height:	13.40		DO=	3.57 mg/L			
Gallons/ft:	0.16						
1 Casing Volume (gal):	2.14		COMMENTS: Turbid				
3 Casing Volumes (gal):	6.43						
TIME:	CASING VOLUME (gal)	TEMP (Celsius)	pH	COND. (µS)			
11:00	2.1	24.4	6.94	859			
11:05	4.3	24.5	6.98	890			
11:10	6.4	23.7	6.93	896			
Sample ID:	Date:	Time	Container Type	Preservative	Analytes	Method	
MW-6	7/28/2005	11:15	Poly	ICE	bioattenuation parameters	SM2320B, 300.1	
					Signature: <i>FG</i>		

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
Website: www.mccampbell.com E-mail: main@mccampbell.com

Cambria Env. Technology 5900 Hollis St, Suite A Emeryville, CA 94608	Client Project ID: #129-0741; Hooshi's	Date Sampled: 07/28/05
		Date Received: 07/29/05
	Client Contact: Matt Meyers	Date Reported: 08/04/05
	Client P.O.:	Date Completed: 08/04/05

WorkOrder: 0507495

August 04, 2005

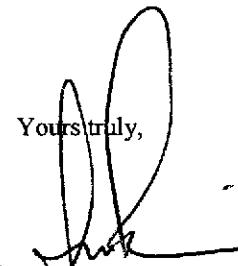
Dear Matt:

Enclosed are:

- 1). the results of 6 analyzed 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,


Angela Rydelius, Lab Manager



McCampbell Analytical, Inc.

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

Cambria Env. Technology 5900 Hollis St, Suite A Emeryville, CA 94608	Client Project ID: #129-0741; Hooshi's	Date Sampled: 07/28/05
		Date Received: 07/29/05
	Client Contact: Matt Meyers	Date Extracted: 07/31/05-08/01/05
	Client P.O.:	Date Analyzed: 07/31/05-08/01/05

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

Extraction method: SW5030B

Analytical methods: SW8021B/8015Cm

Work Order: 0507495

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/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 ~1 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; n) TPH(g) range non-target isolated peaks subtracted out of the TPH(g) concentration at the client's request.



McCampbell Analytical, Inc.

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

Cambria Env. Technology 5900 Hollis St, Suite A Emeryville, CA 94608	Client Project ID: #129-0741; Hooshi's	Date Sampled: 07/28/05
		Date Received: 07/29/05
	Client Contact: Matt Meyers	Date Extracted: 07/29/05
	Client P.O.:	Date Analyzed: 07/29/05

Inorganic Anions by IC*

Extraction method: E300

Analytical methods: E300.1

Work Order: 0507495

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	0.1	0.1	0.1	mg/L
	S	NA	NA	NA	mg/Kg

* water samples are reported in mg/L, soil/sludge/solid samples in mg/kg, wipe samples in mg/wipe, product/oil/non-aqueous liquid samples in mg/L.

surrogate diluted out of range or surrogate coelutes with another peak; N/A means surrogate not applicable to this analysis.

b) a lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) sample diluted/raised due to high inorganic content/matrix interference; k) sample arrived with head space.



McCampbell Analytical, Inc.

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

Cambria Env. Technology 5900 Hollis St, Suite A Emeryville, CA 94608	Client Project ID: #129-0741; Hooshi's	Date Sampled: 07/28/05
		Date Received: 07/29/05
	Client Contact: Matt Meyers	Date Extracted: 07/29/05
	Client P.O.:	Date Analyzed: 07/29/05

Total & Speciated Alkalinity as Calcium Carbonate*

Extraction method: SM2320B

Analytical methods: SM2320B

Work Order: 0507495

Reporting Limit for DF =1;
ND means not detected at or
above the reporting limit

W

1

1

1

mg CaCO₃/L

me/Kg

*water samples are reported in mg calcium carbonate/L. Hydroxide, Carbonate & Bicarbonate alkalinity measure @ end-point of pH = 8.3 & 4.5 per SM2320B

b) lighter than water immiscible sheen/product is present: i) liquid sample that contains greater than ~1 vol. % sediment



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QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder: 0507495

EPA Method: SW8021B/8015Cm		Extraction: SW5030B		BatchID: 17381			Spiked Sample ID: 0507496-004A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD
TPH(btex) ^E	ND	60	102	99.2	3.19	106	102	3.52	70 - 130	70 - 130
MTBE	ND	10	85.1	88.2	3.57	96.7	90.2	6.99	70 - 130	70 - 130
Benzene	ND	10	93.2	92.7	0.499	97.7	89	9.29	70 - 130	70 - 130
Toluene	ND	10	91.2	91.2	0	95.2	87.6	8.35	70 - 130	70 - 130
Ethylbenzene	ND	10	105	104	1.05	108	102	5.64	70 - 130	70 - 130
Xylenes	ND	30	103	100	3.28	107	100	6.45	70 - 130	70 - 130
%SS:	109	10	103	102	0.362	100	98	2.43	70 - 130	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 17381 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0507495-001C	7/28/05 12:15 PM	8/01/05	8/01/05 9:40 PM	0507495-002C	7/28/05 1:20 PM	7/31/05	7/31/05 12:05 AM
0507495-005C	7/28/05 12:45 PM	7/31/05	7/31/05 12:36 AM				

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

% Recovery = $100 * (\text{MS-Sample}) / (\text{Amount Spiked})$; RPD = $100 * (\text{MS} - \text{MSD}) / ((\text{MS} + \text{MSD}) / 2)$.

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

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

cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not applicable or 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 analyte content.

DHS Certification No. 1644

 QA/QC Officer



QC SUMMARY REPORT FOR E300.1

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder: 0507495

EPA Method: E300.1		Extraction: E300.1		BatchID: 17368			Spiked Sample ID: N/A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	mg/L	mg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD
Nitrate as N	N/A	1	N/A	N/A	N/A	95.4	94.3	1.18	N/A	85 - 115
Sulfate	N/A	1	N/A	N/A	N/A	101	98.1	2.43	N/A	85 - 115
%SS:	N/A	0.10	N/A	N/A	N/A	94	94	0	N/A	90 - 115

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 17368 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0507495-001b	7/28/05 12:15 PM	7/29/05	7/29/05 5:32 PM	0507495-001b	7/28/05 12:15 PM	7/29/05	7/29/05 9:07 PM
0507495-002b	7/28/05 1:20 PM	7/29/05	7/29/05 6:03 AM	0507495-003b	7/28/05 11:45 AM	7/29/05	7/29/05 6:33 PM
0507495-003b	7/28/05 11:45 AM	7/29/05	7/29/05 10:08 PM	0507495-004b	7/28/05 10:45 AM	7/29/05	7/29/05 7:04 PM
0507495-004b	7/28/05 10:45 AM	7/29/05	7/29/05 10:39 PM	0507495-005b	7/28/05 12:45 PM	7/29/05	7/29/05 7:35 PM
0507495-005b	7/28/05 12:45 PM	7/29/05	7/29/05 11:10 PM	0507495-006b	7/28/05 11:15 AM	7/29/05	7/29/05 11:41 AM
0507495-006b	7/28/05 11:15 AM	7/29/05	7/29/05 8:05 PM				

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

% Recovery = $100 * (\text{MS-Sample}) / (\text{Amount Spiked})$; RPD = $100 * (\text{MS} - \text{MSD}) / ((\text{MS} + \text{MSD}) / 2)$.

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not applicable to this method.

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 analyte content.



McCampbell Analytical, Inc.

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

QC SUMMARY REPORT FOR WET CHEMISTRY TESTS

Test Method: Alkalinity

Matrix: W

WorkOrder: 0507495

Method Name: SM2320B		Units: mg CaCO ₃ /L			BatchID: 17206	
SampleID	Sample	DF	Dup / Ser. Dil.	DF	% RPD	Acceptance Criteria (%)
0507495-001a	322	1	308	1	4.44	<20
0507495-002a	448	1	451	1	0.667	<20
0507495-003a	239	1	238	1	0.419	<20
0507495-004a	412	1	414	1	0.484	<20
0507495-005a	164	1	165	1	0.608	<20
0507495-006a	550	1	560	1	1.8	<20

BATCH 17206 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0507495-001a	7/28/05 12:15 PM	7/29/05	7/29/05 8:21 PM	0507495-002a	7/28/05 1:20 PM	7/29/05	7/29/05 8:31 PM
0507495-003a	7/28/05 11:45 AM	7/29/05	7/29/05 8:43 PM	0507495-004a	7/28/05 10:45 AM	7/29/05	7/29/05 8:52 PM
0507495-005a	7/28/05 12:45 PM	7/29/05	7/29/05 9:03 PM	0507495-006a	7/28/05 11:15 AM	7/29/05	7/29/05 9:13 PM

Dup = Duplicate; Ser. Dil. = Serial Dilution; MS = Matrix Spike; RD = Relative Difference; RPD = Relative Percent Deviation.

RD = Absolute Value (Sample - Duplicate); RPD = 100 * (Sample - Duplicate) / (Sample + Duplicate) * 2.

DHS Certification No. 1644

 QA/QC Officer

Cete

0567495

McCAMPBELL ANALYTICAL, INC.

110 2nd AVENUE SOUTH, #D7
PACHECO, CA 94553-3560Website: Email: main@mccampbell.com
Telephone: (925) 798-1620 Fax: (925) 798-1622

CHAIN OF CUSTODY RECORD

TURN AROUND TIME

 RUSH 24 HR 48 HR 72 HR 5 DAY

EDF Required? Yes

Report To: Matt Meyers

Bill To: Cambria Environmental Technology

Company: Cambria Environmental Technology

5900 Hollis St, Ste A

Emeryville, CA 94608

E-Mail: mmeyers@cambria-env.com

Tele: 510-420-3314

Fax: (510) 420-9170

Project #: 129-0741

Project Name: Hooshi's

Project Location: 1499 MacArthur Blvd Oakland, CA

Sampler Signature: Muskan Environmental Sampling

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING		# Containers	MATRIX		METHOD PRESERVED	Analysis Request							Other	Comments	
		Date	Time		Type	Containers		Water	Soil	Air	Sludge	Other	ICE	HCL	HNO ₃		
MW-1		7/28/05	12:15	3 2	Voa Poly	X						X	X			MTBE / BTEX & TPH as Gas (602 / 8021 + 8015)	
MW-2		7/28/05	1:20	3 2	Voa Poly	X					X	X				MTBE / BTEX ONLY (EPA 602 / 8021)	
MW-3		7/28/05	11:45	2	Poly	X					X	X				TPH as Diesel / Motor Oil (8015)	
MW-4		7/28/05	10:45	2	Poly	X					X	X				Total Petroleum Oil & Grease (1664 / 5520 EPA/EP)	
MW-5		7/28/05	12:45	3 2	Voa Poly	X					X	X				Total Petroleum Hydrocarbons (416.1)	
MW-6		7/28/05	11:15	2	Poly	X					X	X				EPA 502.2 / 601 / 8010 / 8021 (HVOCs)	
TB		7/28/05		1	Voa	X					X	X				EPA 505 / 608 / 8081 (CI Pesticides)	
																EPA 608 / 8082 PCB's ONLY; Arsenicals / Congeners	
																EPA 507 / 8141 (NP Pesticides)	
																EPA 515 / 8151 (Aromatic Cl Herbicides)	
																EPA 524.2 / 624 / 8269 (VOCs)	
																Fuel Additives (MTBE, ETBE, TAME, DiPE, TBA, 1,2 - DCA, 1,2 - EDDE, ethanol) by 8266B	
																TPHg by 8015 M	
																VOC ₃ and fuel additives by 8260	
																TPHg / BTEX & MTBE by 8015 / 8020	
																Total Alkalinity as CaCO ₃ / Carbonate Alkalinity/ Bicarbonate Alkalinity as Calcium Carbonate/ Hydroxide Alkalinity as Calcium Carbonate by SM2320B	
																Nitrate as Nitrogen/Sulfate test by 300.1	
																Confirm all MTBE tests by 8266B	

ICP
GOOD CONDITION
HEAD SPACE ABSENT
DECHLORINATED IN LAB
PRESERVED IN LAB
PRESERVATION
VOAS OAG METALS OTHER

McC Campbell Analytical, Inc.

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

CHAIN-OF-CUSTODY RECORD

Page 1 of 1

WorkOrder: 0507495

ClientID: CETE

EDF: NO

Report to:

Matt Meyers
Cambria Env. Technology
5900 Hollis St, Suite A
Emeryville, CA 94608

TEL: (510) 420-0700
FAX: (510) 420-9170
ProjectNo: #129-0741; Hooshi's
PO:

Bill to:

Accounts Payable
Cambria Env. Technology
5900 Hollis St, Ste. A
Emeryville, CA 94608

Requested TAT: 5 days

Date Received: 07/29/2005

Date Printed: 07/29/2005

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)														
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0507495-001	MW-1	Water	7/28/05 12:15:00	<input type="checkbox"/>	B	A	C												
0507495-002	MW-2	Water	7/28/05 1:20:00 PM	<input type="checkbox"/>	B	A	C												
0507495-003	MW-3	Water	7/28/05 11:45:00	<input type="checkbox"/>	B	A													
0507495-004	MW-4	Water	7/28/05 10:45:00	<input type="checkbox"/>	B	A													
0507495-005	MW-5	Water	7/28/05 12:45:00	<input type="checkbox"/>	B	A	C												
0507495-006	MW-6	Water	7/28/05 11:15:00	<input type="checkbox"/>	B	A													

Test Legend:

1	300_1_W	2	Alka(spe)_W	3	G-MBTEX_W	4		5	
6		7		8		9		10	
11		12		13		14		15	

Prepared by: Melissa Valles

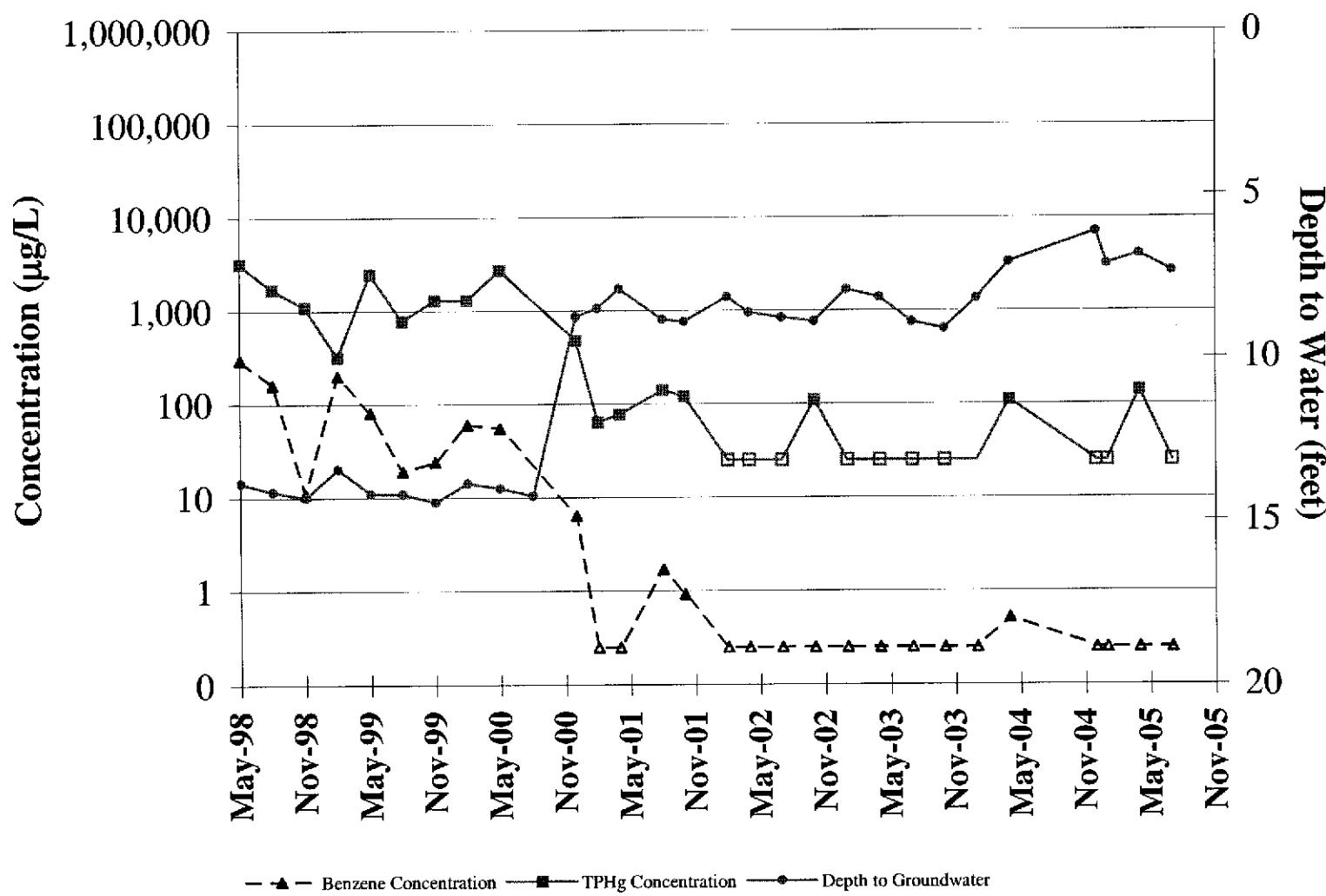
Comments:

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.

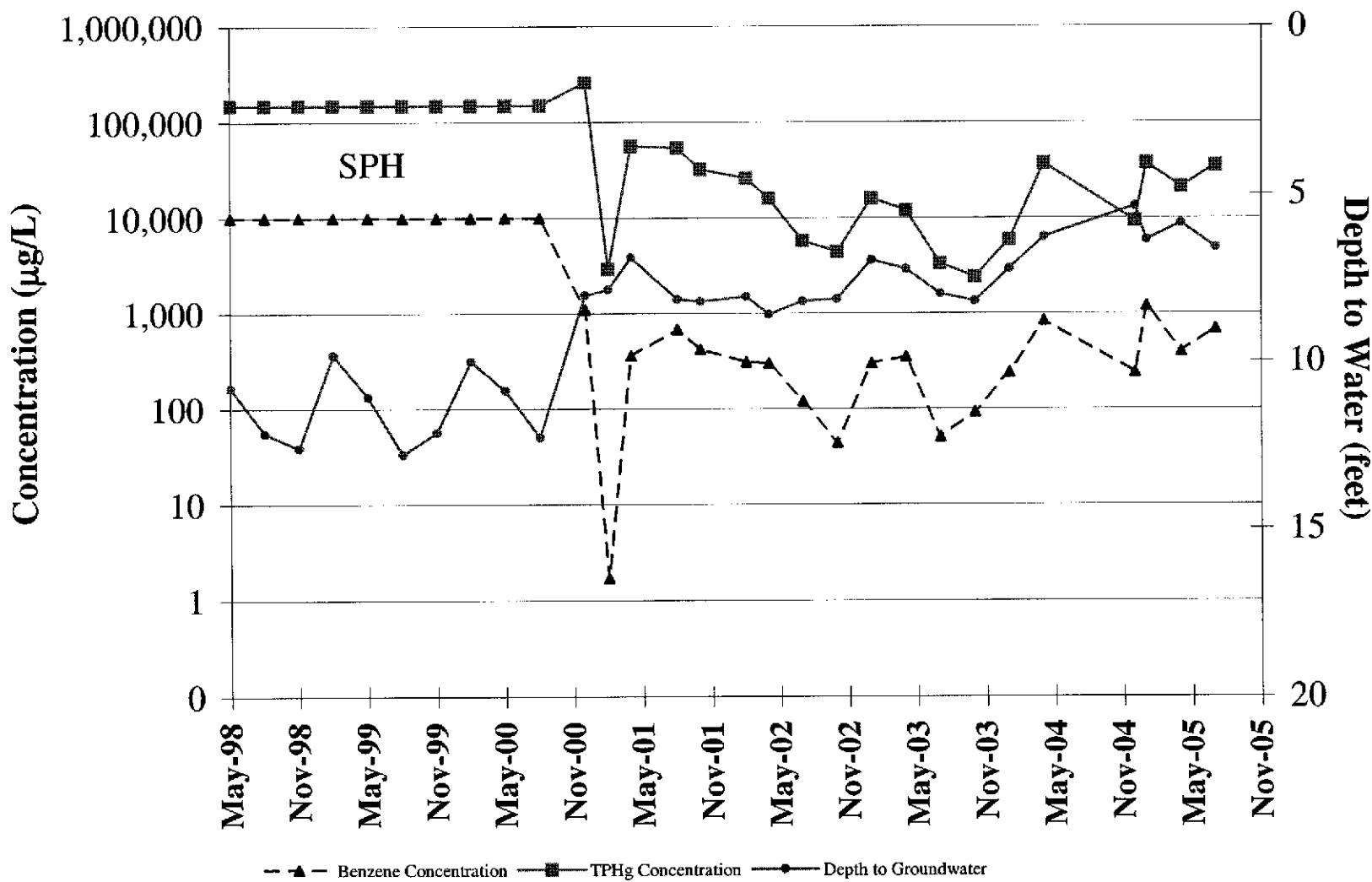
APPENDIX C

TPHg and Benzene Concentration Graphs

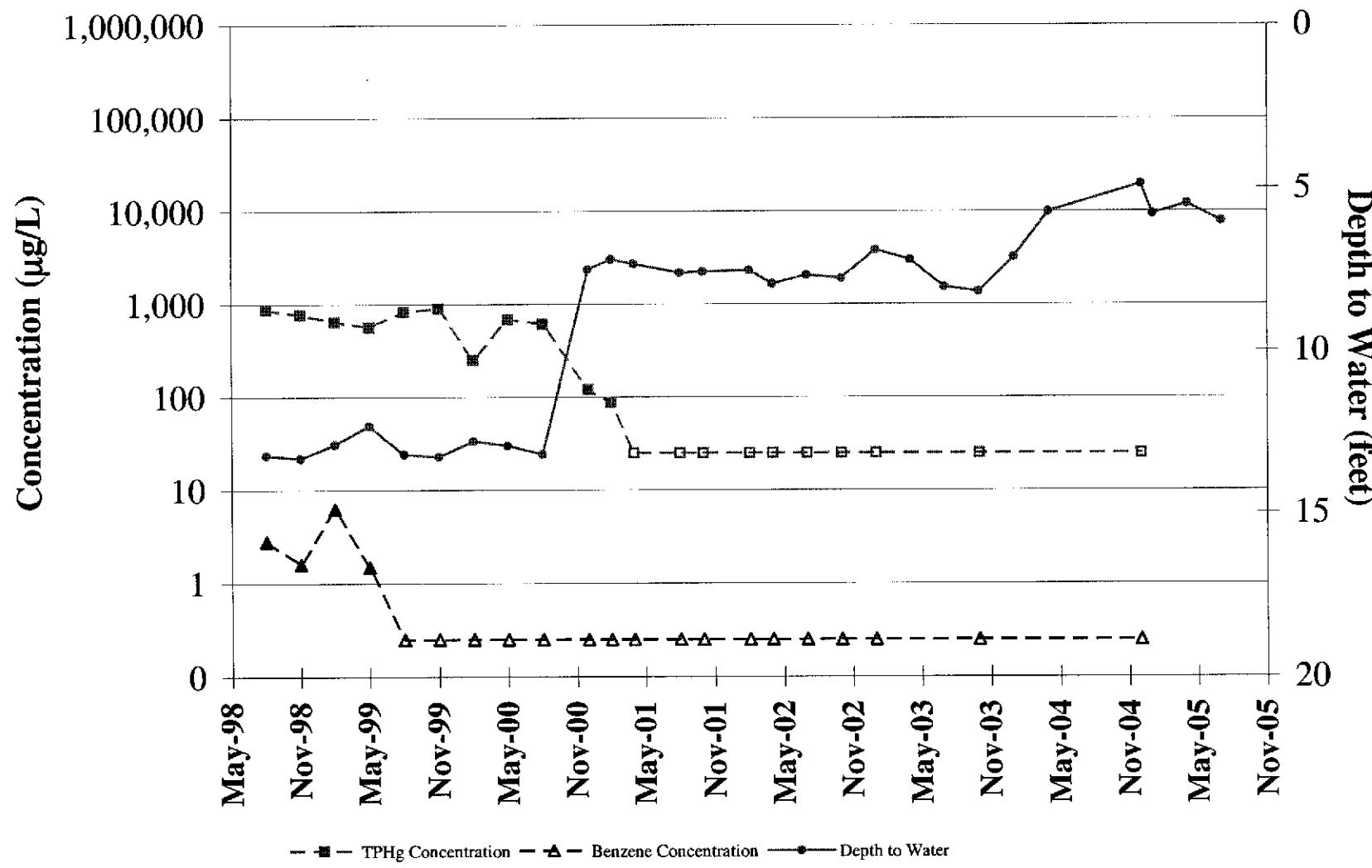
TPHg and Benzene Concentration Trend Well MW-1



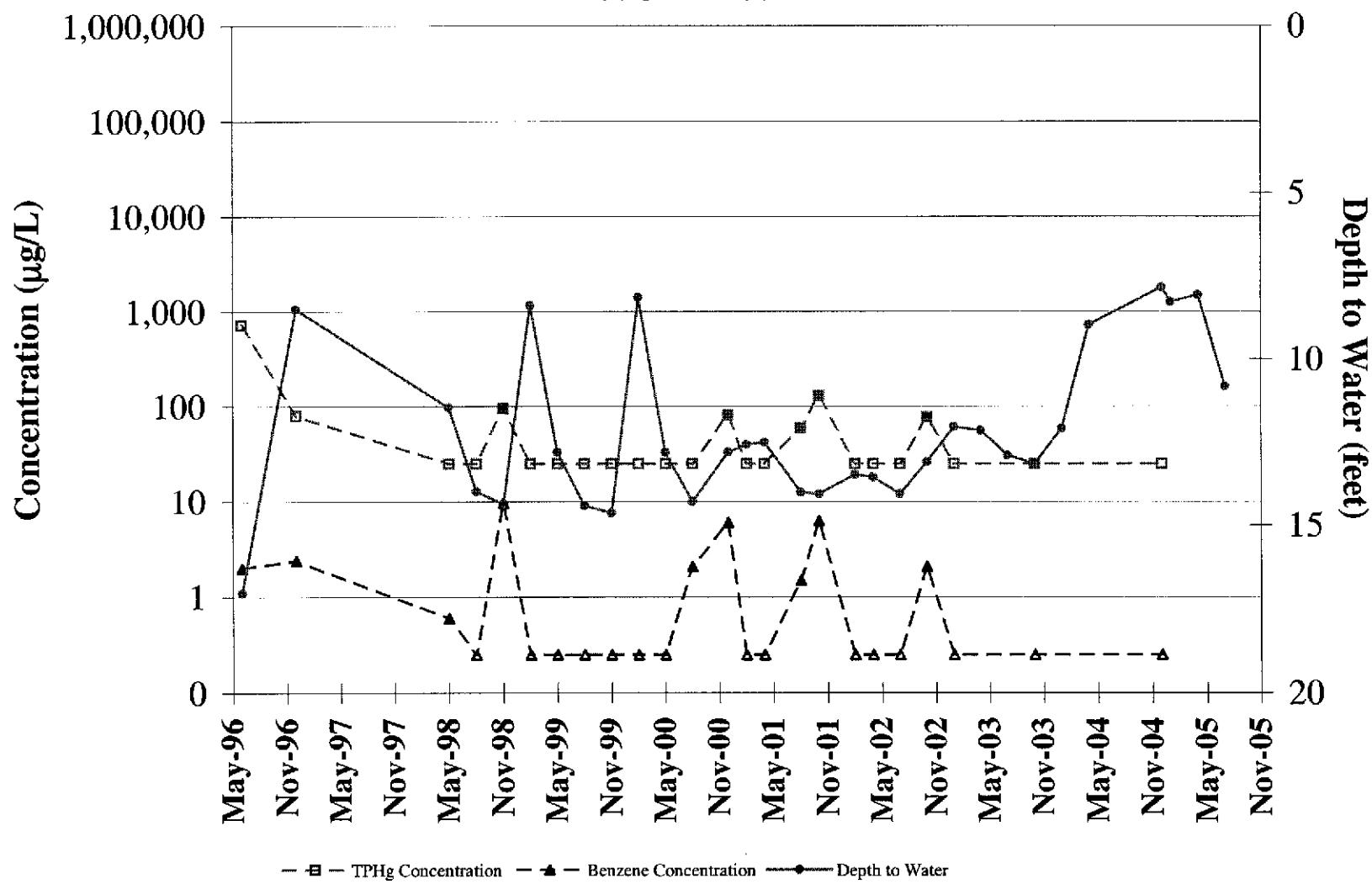
TPHg and Benzene Concentration Trend Well MW-2



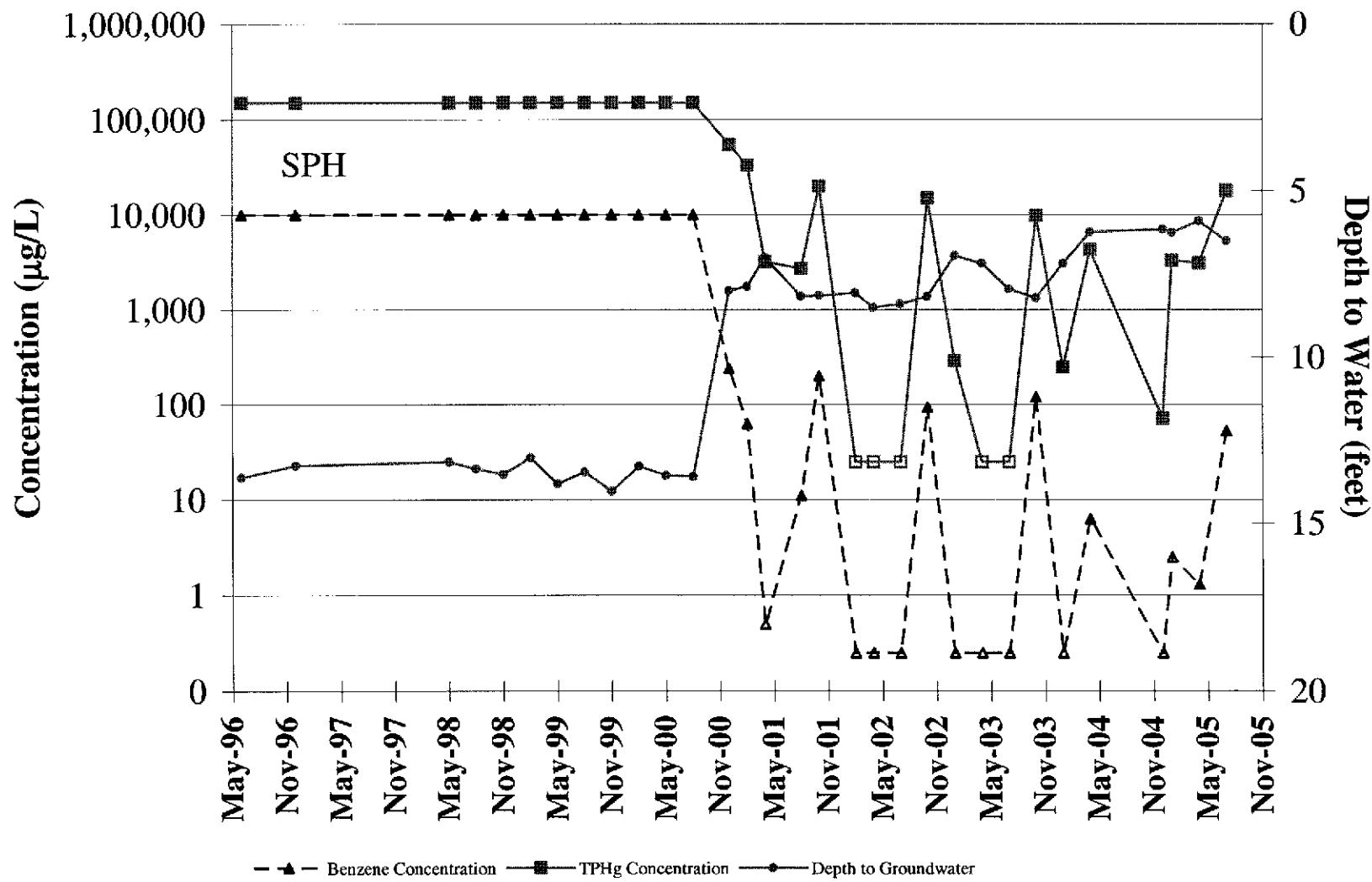
TPHg and Benzene Concentration Trend Well MW-3



TPHg and Benzene Concentration Trend Well MW-4



TPHg and Benzene Concentration Trend Well MW-5



APPENDIX D

Electronic Delivery Confirmations

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Your file has been successfully submitted!

Submittal Title: 3rd Qtr 2005 GW Depth Data, 1499 MacArthur Blvd,
Oakland

Submittal Date/Time: 8/17/2005 8:57:11 AM

**Confirmation
Number:** 7772587418

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Confirmation Number: 5964249610

Date/Time of Submittal: 8/17/2005 8:58:37 AM

Facility Global ID: T0600100714

Facility Name: HOOSHI'S AUTO SERVICE

Submittal Title: 3rd Qtr 2005 GW Analytical Data

Submittal Type: GW Monitoring Report

Click [here](#) to view the detections report for this upload.

HOOSHI'S AUTO SERVICE 1499 MACARTHUR BLVD OAKLAND, CA 94602	Regional Board - Case #: <u>01-0777</u> SAN FRANCISCO BAY RWQCB (REGION 2) - (BG) Local Agency (lead agency) - Case #: <u>3597</u> ALAMEDA COUNTY LOP
CONF # 5964249610	TITLE 3rd Qtr 2005 GW Analytical Data
SUBMITTED BY Matt Meyers	QUARTER Q3 2005
	SUBMIT DATE 8/17/2005
	STATUS PENDING REVIEW

SAMPLE DETECTIONS REPORT

# FIELD POINTS SAMPLED	6
# FIELD POINTS WITH DETECTIONS	6
# FIELD POINTS WITH WATER SAMPLE DETECTIONS ABOVE MCL	6
SAMPLE MATRIX TYPES	WATER

METHOD QA/QC REPORT

METHODS USED	A2320B,E300.1,SW8021F
TESTED FOR REQUIRED ANALYTES?	N
MISSING PARAMETERS NOT TESTED:	
- SW8021F REQUIRES ETBE TO BE TESTED	
- SW8021F REQUIRES TAME TO BE TESTED	
- SW8021F REQUIRES DIPE TO BE TESTED	
- SW8021F REQUIRES TBA TO BE TESTED	
- SW8021F REQUIRES DCA12 TO BE TESTED	
- SW8021F REQUIRES EDB TO BE TESTED	
LAB NOTE DATA QUALIFIERS	N

QA/QC FOR 8021/8260 SERIES SAMPLES

TECHNICAL HOLDING TIME VIOLATIONS	0
METHOD HOLDING TIME VIOLATIONS	0
LAB BLANK DETECTIONS ABOVE REPORTING DETECTION LIMIT	0
LAB BLANK DETECTIONS	0
DO ALL BATCHES WITH THE 8021/8260 SERIES INCLUDE THE FOLLOWING?	
- LAB METHOD BLANK	Y
- MATRIX SPIKE	Y
- MATRIX SPIKE DUPLICATE	Y
- BLANK SPIKE	Y
- SURROGATE SPIKE - NON-STANDARD SURROGATE USED	Y

WATER SAMPLES FOR 8021/8260 SERIES

MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) % RECOVERY BETWEEN 65-135%	Y
MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30%	Y
SURROGATE SPIKES % RECOVERY BETWEEN 85-115%	Y

BLANK SPIKE / BLANK SPIKE DUPLICATES % RECOVERY BETWEEN 70-130%

Y

SOIL SAMPLES FOR 8021/8260 SERIES

MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) % RECOVERY BETWEEN 65-135%

n/a

MATRIX SPIKE / MATRIX SPIKE DUPLICATE(S) RPD LESS THAN 30%

n/a

SURROGATE SPIKES % RECOVERY BETWEEN 70-125%

n/a

BLANK SPIKE / BLANK SPIKE DUPLICATES % RECOVERY BETWEEN 70-130%

n/a

FIELD QC SAMPLES

<u>SAMPLE</u>	<u>COLLECTED</u>	<u>DETECTIONS > REPDL</u>
QCTB SAMPLES	N	0
QCAB SAMPLES	N	0
QCAB SAMPLES	N	0

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UPLOADING A GEO_REPORT FILE

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Facility Name: HOOSHI'S AUTO SERVICE
Global ID: T0600100714
Title: Groundwater Monitoring Report - Third Quarter 2005
Document Type: Monitoring Report - Quarterly
Submittal Type: GEO_REPORT
Submittal Date/Time: 10/10/2005 10:06:33 AM
Confirmation Number: 7546857535

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APPENDIX E

Non-Hazardous Waste Manifest

NON-HAZARDOUS WASTE MANIFEST

EES19

NON-HAZARDOUS WASTE MANIFEST		1. Generator's US EPA ID No. EXEMPT	Manifest Document No. NH 3339	2. Page 1 of 1
3. Generator's Name and Mailing Address CARBON ENVIRONMENTAL TECH INC 5900 HOLLIS ST, SUITE A, ENGLEWOOD, CO 80210				
4. Generator's Phone (510-420-0700)				
5. Transporter 1 Company Name EVERGREEN ENVIRONMENTAL SERVICES		6. US EPA ID Number CAD982413262	A. State Transporter's ID	
7. Transporter 2 Company Name		8. US EPA ID Number	B. State Transporter 1 Phone 510 795-4400	
9. Designated Facility Name and Site Address EVERGREEN OIL, INC. 6880 Smith Avenue Newark, CA 94560		10. US EPA ID Number CAD980887418	C. State Transporter 2 ID	
			D. Transporter 2 Phone	
			E. State Facility's ID	
			F. Facility's Phone 510 795-4400	
11. WASTE DESCRIPTION		12. Containers	T3. Total Quantity	14. Unit Wt/Vol
a.	Non-Hazardous waste, liquid	No. 100 Type 55	55	G
b.				
c.				
d.				
G. Additional Descriptions for Materials Listed Above 100 GALLON TANKS		H. Handling Codes for Wastes Listed Above		
15. Special Handling Instructions and Additional Information Profile # _____ Do not ingest Wear protective clothing In case of emergency call: CHEMREC 800-424-9300 DOT ERG 171		129-0741-057 SITE LOCATION: 1499 MACARTHUR BLVD OAKLAND CA Invoice # 278086 Sales Order:		
16. GENERATOR'S CERTIFICATION: I hereby certify that the contents of this shipment are fully and accurately described and are in all respects in proper condition for transport. The materials described on this manifest are not subject to federal hazardous waste regulations.		Date: _____ Month Day Year 8 18 05		
Printed/Typed Name J. SPEIR		Signature _____ Month Day Year 8 18 05		
TRANSPORTER Printed/Typed Name Malcolm Smith		Signature _____ Month Day Year 8 18 05		
FACILITY Printed/Typed Name Koshi Chassell		Signature _____ Month Day Year 8 18 05		
19. Discrepancy Indication Space				
20. Facility Owner or Operator: Certification of receipt of the waste materials covered by this manifest, except as noted in Item 19.		Date _____ Month Day Year		
Printed/Typed Name		Signature _____		