CAMBRIA

July 23, 1999

Ms. Juliet Shin
Alameda County Department of
Environmental Health
UST Local Oversight Program
1131 Harbor Bay Parkway, 2nd Floor
Alameda, CA 94502

Re: **Second Quarter 1999 Monitoring Report**
Hooshi's Auto Service
1499 MacArthur Blvd.
Oakland, California 94602

Dear Ms. Shin:

On behalf of Ms. Naomi English, Cambria Environmental Technology, Inc. (Cambria) has prepared this report presenting the second quarter 1999 groundwater monitoring results for the site referenced above. Presented below are the second quarter 1999 activities, the current groundwater flow direction, the current hydrocarbon distribution in groundwater, and the anticipated third quarter 1999 activities.

SECOND QUARTER 1999 ACTIVITIES

Quarterly Groundwater Sampling: On May 27, 1999 Cambria gauged and sampled all onsite and offsite groundwater monitoring wells. The thickness of separate-phase hydrocarbons (SPH), when detected, was measured. The samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg), benzene, toluene, ethylbenzene, and xylenes (BTEX), and methyl tert-butyl ether (MTBE).

Remediation System: Cambria negotiated a contract with a replacement contractor and is in the process of scheduling system installation.

Oakland, CA
Sonoma, CA
Portland, OR
Seattle, WA

Cambria Environmental Technology, Inc.

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

GROUNDWATER FLOW DIRECTION

Based on the May 27, 1999 depth-to-water measurements, groundwater mounded near the vicinity of the former underground storage tanks, similar to mounding that occurred during the second quarter of 1998 (Figure 1). Apart from the mound, flow across the site appears to be predominantly toward the northeast. Table 1 summarizes the groundwater elevation data.

HYDROCARBON DISTRIBUTION IN GROUNDWATER

SPHs were measured in wells MW-2 and MW-5. A maximum benzene concentration of 81 parts per billion (ppb) and a maximum TPHg concentration of 2,500 ppb were detected in well MW-1. MTBE was not detected in any of the wells sampled. Table 1 summarizes the groundwater analytical results. The laboratory reports are included as Attachment A. The water sampling field sheets are included as Attachment B.

ANTICIPATED THIRD QUARTER 1999 ACTIVITIES

Quarterly Groundwater Sampling: As requested by the Alameda County Department of Environmental Health, Cambria will gauge and collect water samples from each groundwater monitoring well, and measure the thickness of any detected SPH. Samples will be analyzed for TPHg, BTEX, and MTBE. Cambria will tabulate the data, contour groundwater elevations, and prepare a quarterly monitoring report.

Remediation System: Cambria will begin to install the SVE system during the third quarter of 1999. A SVE start up report and periodic remedial update reports will be presented in separate reports.

CLOSING

Cambria appreciates the opportunity to provide environmental services to Ms. Naomi English. Please call myself or David Elias at (510) 420-0700 if you have any questions or comments.

Sincerely,
Cambria Environmental Technology, Inc.

Jacquelyn Jones
Staff Geologist

David C. Elias, R.G.
Senior Geologist

REGISTERED GEOLOGIST
DAVID CARL ELIAS
No. 6584
STATE OF CALIFORNIA

H:\SB-2004\Oak1 - Hooshi's\QM\2Q99.wpd

Attachments: A - Analytical Results for Groundwater Sampling
B - Water Sampling Field Notes

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

H:\SB-2004\OAK-HOOSHI\FIGURES\2QM99-MP.DWG

Hooshi's Auto Service

1499 MacArthur Boulevard
Oakland, California

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Groundwater Elevation Contour Map

May 27, 1999

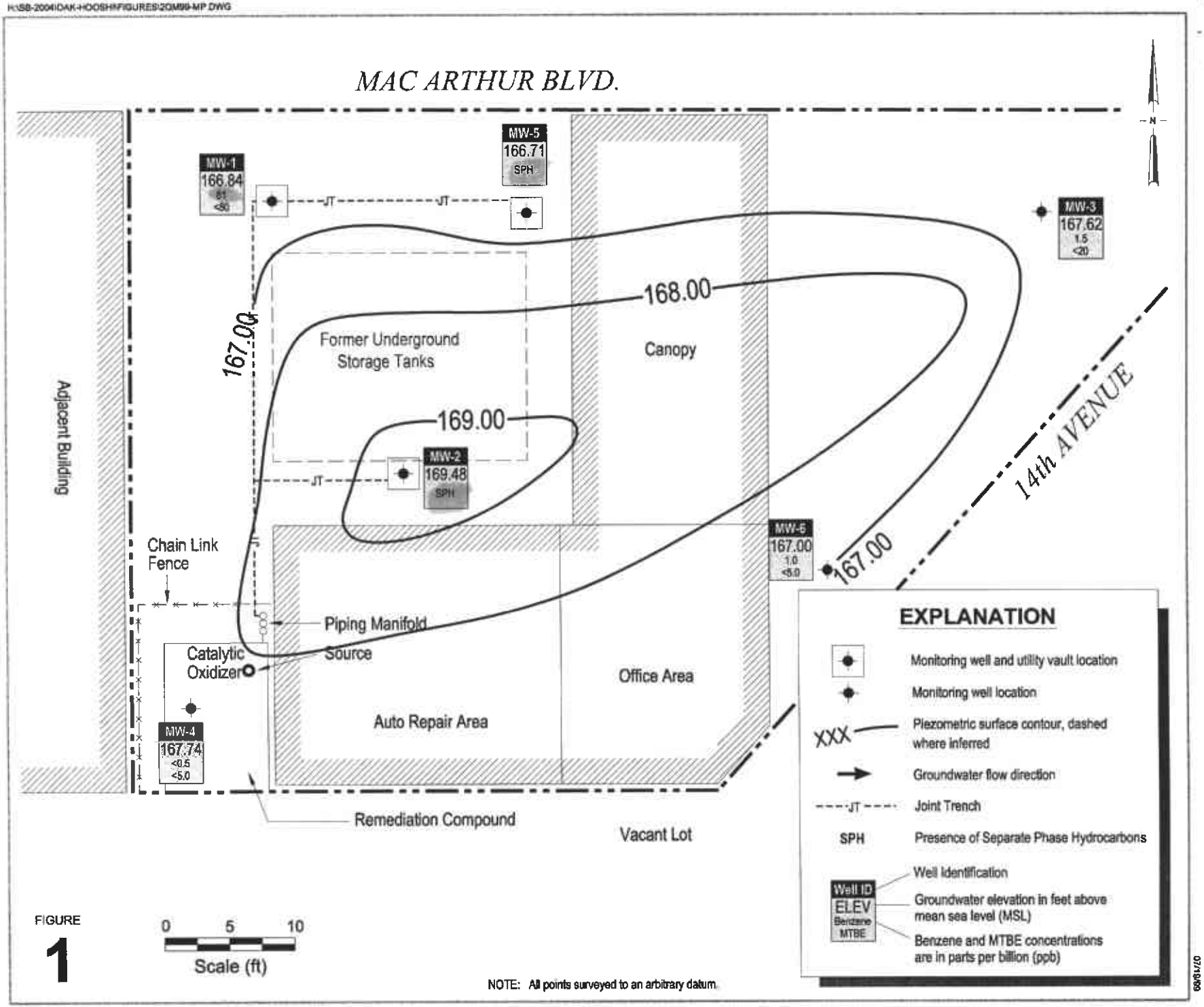

FIGURE
1

NOTE: All points surveyed to an arbitrary datum.

07/19/99

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Table 1. Ground Water Elevations and Analytical Data - Hooshi's Auto Service, 1499 MacArthur Boulevard, Oakland, Calfornia

Well ID *TOC (ft*)*	Date	Depth to Ground Water (ft)	Ground Water Elevation (ft**)	Separate Phase Hydrocarbons (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
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**	**--**	**--**	**--**	**--**	**--**	**--**	
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,j
	11/4/98	13.31	166.63	--	770	1.6	4.4	2.0	6.9	<30	j

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Table 1. Ground Water Elevations and Analytical Data - Hooshi's Auto Service, 1499 MacArthur Boulevard, Oakland, Calfornia

Well ID *TOC (ft*)*	Date	Depth to Ground Water (ft)	Ground Water Elevation (ft**)	Separate Phase Hydrocarbons (ft)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Notes
					← (µg/L) →						
	2/17/99	12.89	167.05	--	650	6.2	3.4	1.5	2.6	<5.0	b,j
	5/27/99	**12.32**	**167.62**	**--**	**570**	**1.5**	**1.2**	**0.72**	**1.1**	**<20**	**a**
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**	
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**	**--**	**--**	**--**	**--**	**--**	**--**	
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**	

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Table 1. Ground Water Elevations and Analytical Data - Hooshi's Auto Service, 1499 MacArthur Boulevard, Oakland, California

Well ID *TOC (ft*)*	Date	Depth to Ground Water (ft)	Ground Water Elevation (ft**)	Separate Phase Hydrocarbons (ft)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Notes
					← (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**	
MCLs	--	--	--	--	NE	1	150	700	1,750	NE	

Abbreviations and Methods:

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

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

MTBE = Methyl tert-butyl ether by EPA Method 8020

µg/L = Micrograms per liter

TOC = Top of casing elevation

SPH = Separate Phase Hydrocarbons

* = elevations surveyed to an arbitrary datum

** = Calculated ground water elevation corrected for SPH by the relation: Ground Water Elevation = Well Elevation - Depth to Water +(0.8xSPH thickness (ft))

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.

j - The analytical laboratory noted no recognizable pattern.

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ATTACHMENT A

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	Client Project ID: #129-0741-015	Date Sampled: 05/27/99
1144 65th Street, Suite C		Date Received: 05/28/99
Oakland, CA 94608	Client Contact: Jacquelyn Jones	Date Extracted: 05/29-06/02/99
	Client P.O:	Date Analyzed: 05/28-06/02/99

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*, with Methyl tert-Butyl Ether* & BTEX*

EPA methods 5030, modified 8015, and 8020 or 602; California RWQCB (SF Bay Region) method GCFID(5030)

Lab ID	Client ID	Matrix	TPH(g)+	MTBE	Benzene	Toluene	Ethylben-zene	Xylenes	% Recovery Surrogate
12271	MW1	W	2500,a	ND<80	81	12	29	41	119#
12272	MW3	W	570,a	ND<20	1.5	1.2	0.72	1.1	119#
12273	MW4	W	ND	ND	ND	1.0	ND	2.9	105
12274	MW6	W	ND	ND	1.0	1.7	0.82	4.9	105
12275	TB2	W	ND	ND	ND	ND	ND	ND	104
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit		W	50 ug/L	5.0	0.5	0.5	0.5	0.5	
		S	1.0 mg/kg	0.05	0.005	0.005	0.005	0.005	

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

cluttered chromatogram; sample peak coelutes with surrogate peak

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (?); f) one to a few isolated peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~5 vol. % sediment; j) no recognizable pattern.

DHS Certification No. 1644

Edward Hamilton, Lab Director

McCAMPBELL ANALYTICAL INC.
110 2nd Avenue South, #D7, Pacheco, CA 94553
Tele: 925-798-1620 Fax: 925-798-1622

QC REPORT FOR HYDROCARBON ANALYSES

Date: 05/28/99-05/29/99 Matrix: WATER

Analyte	Concentration (ug/L) Sample (#12050)	MS	MSD	Amount Spiked	% Recovery MS	MSD	RPD
TPH (gas)	0.0	106.2	103.5	100.0	106.2	103.5	2.6
Benzene	0.0	9.4	9.2	10.0	94.0	92.0	2.2
Toluene	0.0	9.8	9.5	10.0	98.0	95.0	3.1
Ethyl Benzene	0.0	9.9	9.7	10.0	99.0	97.0	2.0
Xylenes	0.0	29.8	29.1	30.0	99.3	97.0	2.4
TPH(diesel)	0.0	8954	8664	7500	119	116	3.3
TRPH (oil & grease)	N/A	N/A	N/A	N/A	N/A	N/A	N/A

% Rec. = (MS - Sample) / amount spiked x 100

RPD = (MS - MSD) / (MS + MSD) x 2 x 100

15364 EC 23

McCAMPBELL ANALYTICAL INC.

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

CHAIN OF CUSTODY RECORD

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

Report To: Jacquelyn Jones Bill To: Cambria

Company: Cambria Environmental Technology
1144 65th Street, Suite C
Oakland, CA 94608

Tele: (510) 420-0700 Fax: (510) 420-9170

Project #: 129-0741-015 Project Name: Hoosier's

Project Location: 1499 MacArthur Blvd., Oakland

Sampler Signature: Jacquelyn Jones

SAMPLE ID	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	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	Other	Other	Other	Comments
+ MW1		5/27/99	525	4	VOA	✓					✓	✓			✓																		12271
+ MW3			545																														12272
+ MW4			570																														12273
+ MW6			540																														12274
✓ TB2				1																													12275

Relinquished By:	Date:	Time:	Received By:
	5/28/99		Jaime Cadillo 2041
Relinquished By: 2041	Date: 5/28/99	Time: 12:30	Received By: Dina A. Butler
Relinquished By:	Date:	Time:	Received By:

Remarks:

ICE ✓
GOOD CONDITION ✓
HEAD SPACE ABSENT ✓
PRESERVATION APPROPRIATE ✓
CONTAINERS ✓

VOAS ✓ | O&G | METALS | OTHER

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ATTACHMENT B

Water Sampling Field Notes

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WELL SAMPLING FORM

Project Name: **Hooshi's**	Cambria Mgr: **DCE**	Well ID: MW1
Project Number: **129-0741**	Date: 5/27/99	Well Yield: —
Site Address: **1499 MacArthur Boulevard Oakland, California**	Sampling Method: **Disposable bailer**	Well Diameter: **2 " pvc**
		Technician(s): JS/DWS
Initial Depth to Water: 14.16	Total Well Depth: 20.05	Water Column Height: 5.86
Volume/ft: 0.16	1 Casing Volume: 0.94	3 Casing Volumes: 2.81
Purging Device: **disposable bailer**	Did Well Dewater?: no	Total Gallons Purged: 4 gals
Start Purge Time: 17:04	Stop Purge Time: 17:08	Total Time: 4 min

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

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

Time	Casing Volume	Temp.	pH	Cond.	Comments
17:05	1	17.2	7.2	554 µS	
17:06	2	17.1	7.1	824 µS	
17:07	3	17.4	7.0	964 µS	
17:08	4	17.4	6.9	743 µS	

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW1	5/27/99	525	**4 voa's**	**HCL**	**TPHg, BTEX, MTBE**	**8020 8015**

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WELL SAMPLING FORM

Project Name: **Hooshi's**	Cambria Mgr: **DCE**	Well ID: MW3
Project Number: **129-0741**	Date: 5/27/99	Well Yield: —
Site Address: **1499 MacArthur Boulevard Oakland, California**	Sampling Method: **Disposable bailer**	Well Diameter: **2 " pvc**
		Technician(s): SS / RWS
Initial Depth to Water: 12.32	Total Well Depth: 21.00	Water Column Height: 8.68
Volume/ft: 0.16	1 Casing Volume: 1.39	3 Casing Volumes: 4.17
Purging Device: **disposable bailer**	Did Well Dewater?: no	Total Gallons Purged: 6gals
Start Purge Time: 5:31	Stop Purge Time: 5:37	Total Time: 6 min.

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

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

Time	Casing Volume	Temp.	pH	Cond.	Comments
5:32	1	16.9	7.5	666	
5:33	2	17.1	6.7	725	
5:35	3	17.3	6.6	627	
5:37	4	17.0	6.7	616	

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW3	5/27/99	545	**4 voa's**	**HCL**	**TPHg, BTEX, MTBE**	**8020 8015**

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WELL SAMPLING FORM

Project Name: **Hooshi's**	Cambria Mgr: **DCE**	Well ID: MW4
Project Number: **129-0741**	Date: 5/27/99	Well Yield: —
Site Address: **1499 MacArthur Boulevard Oakland, California**	Sampling Method: **Disposable bailer**	Well Diameter: **2 " pvc**
		Technician(s): JS / PWS
Initial Depth to Water: 12.80	Total Well Depth: 19.98	Water Column Height: 7.18
Volume/ft: 0.16	1 Casing Volume: 1.15	3 Casing Volumes: 3.45
Purging Device: **disposable bailer**	Did Well Dewater?: NO	Total Gallons Purged: 4.5 gal
Start Purge Time: 457	Stop Purge Time: 502	Total Time: 5 min

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

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

Time	Casing Volume	Temp. °C	pH	Cond. uS	Comments
456	1	16.5	8.1	776	
459	2	16.2	7.9	744	
500	2	15.9	7.6	752	
500	3	16.0	7.6	764	
501	3	15.8	7.5	776	

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW4	5/27	510	**4 voa's**	**HCL**	**TPHg, BTEX, MTBE**	**8020 8015**

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WELL SAMPLING FORM

Project Name: **Hooshi's**	Cambria Mgr: **DCE**	Well ID: MW6
Project Number: **129-0741**	Date: 5/27/99	Well Yield: —
Site Address: **1499 MacArthur Boulevard Oakland, California**	Sampling Method: **Disposable bailer**	Well Diameter: **2 " pvc**
		Technician(s): AJ/RWS
Initial Depth to Water: 13.03	Total Well Depth: 22.20	Water Column Height: 9.17
Volume/ft: 0.16	1 Casing Volume: 1.47	3 Casing Volumes: 4.40
Purging Device: **disposable bailer**	Did Well Dewater?: no	Total Gallons Purged: 4.5
Start Purge Time: 13:24	Stop Purge Time: 17:28	Total Time: 4 min.

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

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

Time	Casing Volume	Temp.	pH	Cond.	Comments
17:25	1	17.1	7.0	1225	
17:26	2	17.3	6.9	1223	
17:27	3	17.4	6.7	1225	

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW-6	5/27	540	**4 voa's**	**HCL**	**TPHg, BTEX, MTBE**	**8020 8015**

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

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WELL DEPTH MEASUREMENTS

Well ID	Time	Product Depth	Water Depth	Product Thickness	Well Depth	Comments
MW4	4:39	—	12.80	—	19.98	
MW6	4:41	—	13.03	—	22.20	
MW3	4:42	—	12.32	—	21.00	
MW1	4:43	—	14.16	—	20.05	
MW2	4:48	10.94	11.07	0.13	—	
MW5	4:45	13.45	13.80	~~0.45~~ 0.35	—	

Measured By: JF / Schultz

Date: 5/27/99