

C A M B R I A

ENVIRONMENTAL
PROTECTION

00 OCT 24 PM 3:34

October 18, 2000

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

Re: **Third Quarter 2000 Monitoring Report**

Former Arco Service Station
706 Harrison Street
Oakland, California
STID 3749
Cambria Project #230-0116-117



Dear Mr. Seto:

On behalf of Mr. Bo K. Gin, Cambria Environmental Technology, Inc. (Cambria) is submitting this third quarter 2000 groundwater monitoring report for the above-referenced site. Presented below are the third quarter 2000 activities, the hydrocarbon distribution in groundwater, and the anticipated fourth quarter 2000 activities.

THIRD QUARTER 2000 ACTIVITIES

Quarterly Groundwater Sampling: On August 9, 2000, Cambria gauged, inspected for separate phase hydrocarbons (SPH), and sampled all site groundwater monitoring wells. The groundwater samples were sent to a California State certified analytical laboratory for analysis of total petroleum hydrocarbons as gasoline (TPHg); benzene, toluene, ethylbenzene, and xylenes (BTEX); and methyl tertiary butyl ether (MTBE). Table 1 summarizes groundwater elevation data and analytical results for the subject site. Figure 1 presents the groundwater elevation contours with benzene and MTBE concentrations for the site. The groundwater sampling laboratory analytical results are included as Attachment A, and water sampling field sheets are included as Attachment B.

Oakland, CA
San Ramon, CA
Sonoma, CA
Portland, OR

Remediation System: The air sparging system continued to inject air into wells VW/SP-3, VW/SP-4, and VW/SP-5 to increase dissolved oxygen concentrations and enhance aerobic biodegradation.

**Cambria
Environmental
Technology, Inc.**

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

HYDROCARBON DISTRIBUTION IN GROUNDWATER

No measurable liquid-phase hydrocarbons (LPH) were detected in any of the site wells. In general, hydrocarbon concentrations remained consistent with historic data, except for MTBE, which increased in onsite wells MW-1 and MW-4. The maximum TPHg and benzene concentrations 77,000 and 5,000 parts per billion (ppb), respectively, were detected in source area well MW-2. The maximum MTBE concentration of 16,000 ppb in monitoring well MW-1.

ANTICIPATED FOURTH QUARTER 2000 ACTIVITIES



Quarterly Groundwater Sampling: As required by the Alameda County Department of Environmental Health (ACDEH), Cambria will gauge each monitoring well, measure the thickness of any detected SPH, and collect groundwater samples from selected wells. Cambria will tabulate the data and prepare a quarterly monitoring report.


Remediation System: Cambria will prepare a third quarter system operation report. As part of this report, Cambria will request agency approval to discontinue active remediation at the site and remove the remediation equipment.

CLOSING

If you have any questions related to this report, please call Ron Scheele at (510) 450-1983.

Sincerely,
Cambria Environmental Technology, Inc.


Jason Olson
Staff Environmental Scientist


Ron Scheele, RG
Senior Geologist



Attachments: Figure 1 - Groundwater Elevation and Hydrocarbon Concentration Map
Table 1 - Groundwater Analytical Data
Attachment A - Laboratory Analytical Report
Attachment B - Field Data Sheets

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

EXPLANATION

- Monitoring Well Location
- Dual Well, SVE/Sparging Well
- SVE Well

13.25
Groundwater Elevation Contour, Dashed Where Inferred

* Anomalous groundwater elevation; not used in contouring.

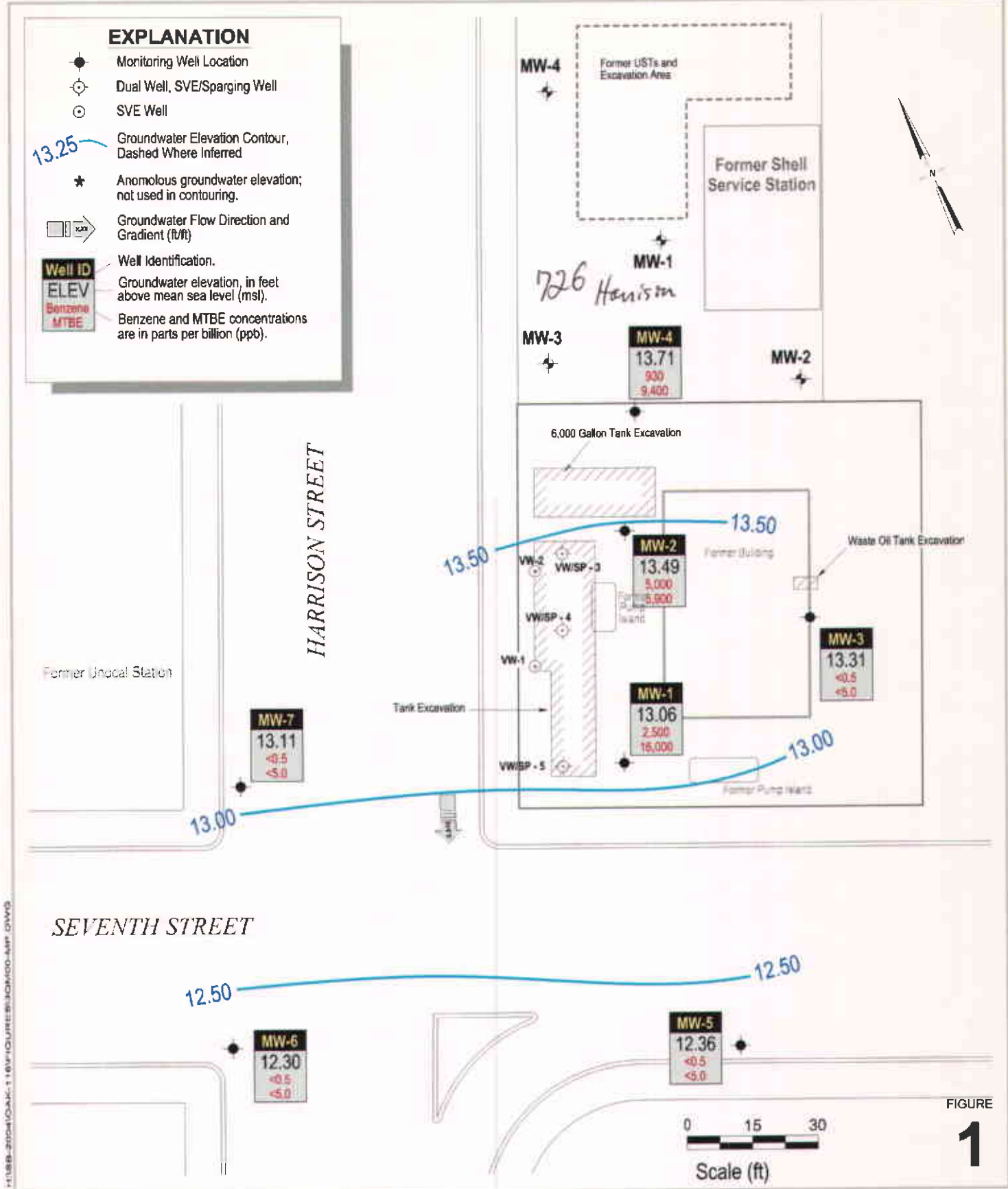
Groundwater Flow Direction and Gradient (ft/ft)

Well ID
ELEV
Benzene
MTBE

Well Identification.

Groundwater elevation, in feet above mean sea level (msl).

Benzene and MTBE concentrations are in parts per billion (ppb).



FIGURE

1

Former Arco Station

706 Harrison Street
Oakland, California



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Groundwater Elevation Contour Map

August 9, 2000

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Table 1. Groundwater Analytical Data - Former Arco Station - 706 Harrison Street, Oakland, California

Well ID TOC monitoring frequency	Date Sampled	Depth to Water (ft)	Groundwater Elevation (ft)	Concentrations in parts per billion (µg/L)						MTBE*	Notes
				TPHg	Benzene	Toluene	Ethylbenzene	Xylenes			
MW-1	8/13/93	17.40	11.75	20,000	8,500	640	280	440	-		
29.15	12/14/93	17.27	11.88	17,000	9,200	1,200	4,400	540	-		
Quarterly	4/15/94	17.00	12.15	9,500	3,600	530	160	280	-		
	12/29/94	16.40	12.75	-	-	-	-	-	-		
	7/19/96	15.83	13.32	17,000	5,200	1,100	330	530	-	sheen/odor	
	1/27/97	13.58	15.57	30,000	9,800	1,300	790	880	400	b, sheen/odor	
	6/18/97	16.11	13.04	19,000	5,600	1,400	510	770	1,200 (800)	a, b	
	9/18/97	16.62	12.53	48,000	18,000	4,400	1,000	1,700	<640	b	
	12/10/97	15.93	13.22	22,000	4,900	1,300	580	650	460 (260)	a, b, odor	
	2/18/98	11.56	17.59	16,000	5,000	750	400	780	1,800	b	
	5/12/98	13.53	15.62	19,000	4,600	810	450	770	5,500	b, c	
	8/18/98	15.19	13.96	12,000	3,600	1,300	300	570	5,100(3,700)	a, b	
	11/24/98	15.67	13.48	13,000	3,600	890	330	380	6,100	b	
	2/4/99	15.31	13.84	20,000	5,900	830	450	500	4,900	b	
	5/18/99	14.95	14.20	23,000	7,000	1,600	520	830	6,100	b	
	8/27/99	15.84	13.31	19,000	5,800	1,700	410	710	1,800 (2,100)	a, b	
	11/18/99	16.39	12.76	20,000	4,900	630	410	580	4,900 (3,600)	b	
	2/29/00	13.43	15.72	12,000	2,800	24	290	170	3,100 (3,400)	a	
	5/25/00	15.08	14.07	12,000	2,200	120	330	260	9,100 (12,000)	a, b	
	8/9/00	16.09	13.06	13,000	2,500	44	310	140	16,000	b	
MW-2	8/13/93	17.05	13.46	34,000	6,800	10,000	740	3,900	-		
30.51	12/14/93	18.28	12.23	16,000	3,200	4,200	500	1,700	-		
Quarterly	4/15/94	18.10	12.41	23,000	2,500	4,200	470	1,800	-		
	12/29/94	17.40	13.11	-	-	-	-	-	-		
	7/19/96	16.72	13.79	90,000	7,300	14,000	1,600	7,300	-	odor	

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Table 1. Groundwater Analytical Data - Former Arco Station - 706 Harrison Street, Oakland, California

Well ID TOC monitoring frequency	Date Sampled	Depth to Water (ft)	Groundwater Elevation (ft)	Concentrations in parts per billion (µg/L)						Notes
				TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE ^a	
	1/27/97	14.89	15.62	63,000	7,100	13,000	1,600	7,100	500	b, odor
	6/18/97	17.12	13.39	52,000	5,100	10,000	1,400	6,000	<200	b
	9/18/97	17.63	12.88	110,000	9,400	23,000	2,600	13,000	<890	b, sheen/odor
	12/10/97	16.98	13.53	39,000	2,600	5,300	940	3,900	780 (320)	b, odor
	2/18/98	12.61	17.90	85,000	9,000	19,000	2,300	11,000	2,400	b
	5/12/98	14.45	16.06	110,000	9,500	21,000	2,500	12,000	<1,200	b
	8/18/98	16.14	14.37	64,000	6,000	13,000	1,700	7,800	2,000(1,300)	a, b
	11/24/98	16.70	13.81	78,000	5,300	14,000	2,300	11,000	<2,000	b, g
	2/4/99	18.39	12.12	66,000	5,800	16,000	2,600	12,000	3,000	b, g
	5/18/99	15.90	14.61	78,000	6,700	17,000	2,400	10,000	4,300	b
	8/27/99	16.79	13.72	91,000	7,400	17,000	2,300	11,000	1,200 (1,000)	a, b
	11/18/99	17.32	13.19	180,000	7,000	20,000	3,300	16,000	<6,000 (1,700)	b,g
	2/29/00	14.37	16.14	86,000	5,500	13,000	2,000	9,500	3,500 (4,700)	a
	5/25/00	16.01	14.50	110,000	6,300	14,000	2,400	10,000	7,500 (6,500)	a, b, g
	8/9/00	17.02	13.49	77,000	5,000	13,000	2,000	8,600	5,900	b
MW-3	8/13/93	17.05	12.72	<50	<0.50	<0.50	<0.50	<1.5	-	
29.77	12/14/93	17.70	12.07	<50	<0.50	<0.50	<0.50	<1.5	-	
Biannually	4/15/94	17.40	12.37	<50	<0.5	<0.5	<0.5	<0.5	-	
	12/29/94	16.80	12.97	-	-	-	-	-	-	
	7/19/96	16.28	13.49	<50	<0.5	<0.5	<0.5	<0.5	-	
	1/27/97	13.83	15.94	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	6/18/97	16.53	13.24	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	9/18/97	17.07	12.70	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	12/10/97	16.15	13.62	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	2/18/98	11.80	17.97	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	5/12/98	13.85	15.92	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	8/18/98	15.57	14.20	<50	<0.5	<0.5	<0.5	<0.5	<5.0	

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Table 1. Groundwater Analytical Data - Former Arco Station - 706 Harrison Street, Oakland, California

Well ID <i>TOC</i> monitoring frequency	Date Sampled	Depth to Water (ft)	Groundwater Elevation (ft)	Concentrations in parts per billion (µg/L)						MTBE ^a	Notes
				TPHg	Benzene	Toluene	Ethylbenzene	Xylenes			
	11/24/98	16.04	13.73	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	
	2/4/99	17.80	11.97	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	
	5/18/99	15.29	14.48	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	
	8/27/99	16.15	13.62	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	
	11/18/99	16.77	13.00	--	--	--	--	--	--	--	
	2/29/00	13.71	16.06	<50	2.0	<0.5	<0.5	<0.5	<0.5	<5.0	
	5/25/00	15.46	14.31	--	--	--	--	--	--	--	
	8/9/00	16.46	13.31	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	
MW-4	12/16/94	18.10	13.08	2,500	32	6.5	4.5	17	-		
31.18	12.29/94	17.95	13.23	-	-	-	-	-	-		
Quarterly	7/19/96	17.38	13.80	3,300	520	39	67	60	-		
	1/27/97	15.25	15.93	4,500	860	55	100	91	1,100		b
	6/18/97	17.61	13.57	2,700	700	52	81	76	2,200 (2,300)		a, b
	9/18/97	18.01	13.17	3,900	760	38	56	64	<170		b
	12/10/97	17.45	13.73	12,000	1,800	120	210	210	2,900 (2,600)		a, b
	2/18/98	13.09	18.09	1,700	210	8.0	6.7	16	200		b
	5/12/98	14.78	16.40	2,100	300	15	36	34	920		b, c
	8/18/98	16.59	14.59	4,700	1,000	130	110	150	5,200(4,900)		a, b
	11/24/98	17.18	14.00	3,000	810	44	76	94	4,800		b
	2/4/99	18.90	12.28	2,800	770	50	69	69	3,100		b
	5/18/99	16.30	14.88	4,000	780	57	7.7	79	4,800		b
	8/27/99	17.21	13.97	4,100	870	51	74	99	3,300 (4,100)		a, b
	11/18/99	17.77	13.41	3,000	760	43	67	65	5,100 (5,400)		b
	2/29/00	14.85	16.33	4,600	1,000	64	94	170	4,100 (4,600)		a
	5/25/00	16.45	14.73	2,600	540	39	59	41	3,500 (5,300)		a, b
	8/9/00	17.47	13.71	4,400	930	66	98	79	9,400		b

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Table 1. Groundwater Analytical Data - Former Arco Station - 706 Harrison Street, Oakland, California

Well ID TOC monitoring frequency	Date Sampled	Depth to Water (ft)	Groundwater Elevation (ft)	Concentrations in parts per billion (µg/L)						MTBE ^a	Notes
				TPHg	Benzene	Toluene	Ethylbenzene	Xylenes			
MW-5	12/16/94	16.07	11.97	<50	1.1	<0.5	<0.5	2.4	-		
28.04	12/29/94	16.10	11.94	-	-	-	-	-	-		
Biannually	7/19/96	15.49	12.55	<50	<0.5	<0.5	<0.5	<0.5	-		
	1/27/97	13.60	14.44	<50	<0.5	<0.5	<0.5	<0.5	<5.0		
	6/18/97	15.55	12.49	<50	<0.5	<0.5	<0.5	<0.5	<5.0		
	9/18/97	16.16	11.88	<50	<0.5	<0.5	<0.5	<0.5	<5.0		
	12/10/97	15.41	12.63	<50	<0.5	<0.5	<0.5	<0.5	<5.0		
	2/18/98	10.93	17.11	<50	<0.5	<0.5	<0.5	<0.5	<5.0		
	5/12/98	13.25	14.79	<50	<0.5	<0.5	<0.5	<0.5	<5.0		
	8/18/98	14.75	13.29	<50	<0.5	<0.5	<0.5	<0.5	<5.0		
	11/24/98	15.15	12.89	<50	<0.5	<0.5	<0.5	<0.5	<5.0		
	2/4/99	14.61	13.43	<50	<0.5	<0.5	<0.5	<0.5	<5.0		
	5/18/99	14.15	13.89	<50	<0.5	<0.5	<0.5	<0.5	<5.0		
	8/27/99	15.43	12.61	<50	<0.5	<0.5	<0.5	<0.5	<5.0		
	11/18/99	15.97	12.07	--	--	--	--	--	--		
	2/29/00	13.16	14.88	<50	<0.5	<0.5	<0.5	<0.5	<5.0		
5/25/00	14.72	13.32	--	--	--	--	--	--	--		
8/9/00	15.68	12.36	<50	<0.5	<0.5	<0.5	<0.5	<5.0			
MW-6	12/16/94	17.74	11.36	-	-	-	-	-	-		
29.10	12/29/94	17.40	11.70	-	-	-	-	-	-		
Biannually	7/19/96	16.60	12.50	<50	<0.5	<0.5	<0.5	<0.5	-		
	1/27/97	14.88	14.22	<50	<0.5	<0.5	<0.5	<0.5	<5.0		
	6/18/97	16.73	12.37	51	22	<0.5	<0.5	<0.5	<5.0	c	
	9/18/97	17.24	11.86	<50	<0.5	<0.5	<0.5	<0.5	<5.0		
	12/10/97	16.56	12.54	<50	<0.5	<0.5	<0.5	<0.5	<5.0		
	2/18/98	12.93	16.17	<50	<0.5	<0.5	<0.5	<0.5	<5.0		
5/12/98	14.35	14.75	<50	<0.5	<0.5	<0.5	<0.5	<5.0			

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Table 1. Groundwater Analytical Data - Former Arco Station - 706 Harrison Street, Oakland, California

Well ID TOC monitoring frequency	Date Sampled	Depth to Water (ft)	Groundwater Elevation (ft)	Concentrations in parts per billion (µg/L)						Notes
				TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE ^a	
	8/18/98	15.94	13.16	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	11/24/98	16.46	12.64	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	2/4/99	18.25	10.85	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	5/18/99	15.73	13.37	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	8/27/99	15.64	13.46	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	11/18/99	17.04	12.06	-	-	-	-	-	-	
	2/29/00	14.55	14.55	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	5/25/00	15.86	13.24	--	--	--	--	--	--	
	8/9/00	16.80	12.30	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
MW-7	12/16/94	17.07	12.60	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
29.67	12/29/94	17.65	12.02	-	-	-	-	-	-	
Biannually	7/19/96	16.44	13.23	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	1/27/97	15.09	14.58	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	6/18/97	16.59	13.08	73	<0.5	0.55	<0.5	<0.5	<5.0	d
	9/18/97	17.06	12.61	94	<0.5	<0.5	<0.5	<0.5	<5.0	e, f
	12/10/97	16.58	13.09	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	2/18/98	12.60	17.07	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	5/12/98	14.81	14.86	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	8/18/98	15.67	14.00	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	11/24/98	16.30	13.37	200	<0.5	<0.5	<0.5	<0.5	<5.0	d
	2/4/99	15.99	13.68	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
	5/18/99	15.42	14.25	200	<0.5	<0.5	<0.5	<0.5	<5.0	d
	8/27/99	16.35	13.32	140	<0.5	<0.5	<0.5	<0.5	<5.0	
	11/18/99	16.81	12.86	--	--	--	--	--	--	
	2/29/00	14.16	15.51	100	<0.5	<0.5	<0.5	<0.5	<5.0	f
	5/25/00	15.54	14.13	--	--	--	--	--	--	
	8/9/00	16.56	13.11	<50	<0.5	<0.5	<0.5	<0.5	<5.0	

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Table 1. Groundwater Analytical Data - Former Arco Station - 706 Harrison Street, Oakland, California

Well ID TOC monitoring frequency	Date Sampled	Depth to Water (ft)	Groundwater Elevation (ft)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE ^a	Notes
<-----Concentrations in parts per billion (µg/L)----->										

Abbreviations and Analyses:

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

Notes:

a = Result in parentheses indicates MTBE by EPA Method 8260.
 b = Analytical laboratory notes that unmodified or weakly modified gasoline is significant.
 c = Analytical laboratory notes that lighter gasoline range compounds are significant.
 d = Analytical laboratory notes that isolated peaks are present.
 e = Analytical laboratory notes that heavier gasoline range compounds are significant.
 f = Analytical laboratory notes hydrocarbons with no recognizable patterns are present.
 g = Analytical laboratory notes lighter than water immiscible sheen is present.
 Data prior to 12/16/94 provided by previous consultant.

ATTACHMENT A

Laboratory Analytical Report



QC REPORT

Date: 08/11/00-08/12/00 Matrix: Water

Extraction: N/A

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

SampleID: 40793

Instrument: GC-3

Surrogate1	0.000	95.0	95.0	100.00	95	95	0.0
Xylenes	0.000	273.0	276.0	300.00	91	92	1.1
Ethyl Benzene	0.000	92.0	93.0	100.00	92	93	1.1
Toluene	0.000	93.0	94.0	100.00	93	94	1.1
Benzene	0.000	96.0	95.0	100.00	96	95	1.0
MTBE	0.000	110.0	112.0	100.00	110	112	1.8
GAS	0.000	824.1	830.0	1000.00	82	83	0.7

SampleID: 81100

Instrument: MB-1

Oil & Grease	0.000	19.6	19.4	20.00	98	97	1.0
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SampleID: 81400

Instrument: GC-2 A

Surrogate1	0.000	106.0	101.0	100.00	106	101	4.8
TPH (diesel)	0.000	350.0	335.0	300.00	117	112	4.4

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

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

RPD means Relative Percent Deviation

ATTACHMENT B

Field Data Sheets

WELL DEPTH MEASUREMENTS

RDER

5
7
4
6
1
2
3

Well ID	Time	Product Depth	Water Depth	Product Thickness	Well Depth	Comments
MW-1	9:30		16.09'		25.82'	
MW-2	9:40		17.02'		25.55'	
MW-3	9:25		16.46'		27.77'	
MW-4	9:35		17.47'		29.12'	
MW-5	9:00		15.68'		28.13'	TRAFFIC Control
MW-6	9:10		16.80'		26.10'	↓ ↓ ↓
MW-7	9:20		16.56'		29.80'	

Project Name: _____

Project Number: _____

Measured By: _____

Date: 8/9/06

WELL SAMPLING FORM

Project Name: Bo Gin	Cambria Mgr: RAS	Well ID: MW-1
Project Number: 230-0116	Date: 8/8/00 8/9	Well Yield:
Site Address: 706 Harrison Street Oakland, California	Sampling Method: Disposable bailer	Well Diameter: 2 " pvc
		Technician(s): AS /JO
Initial Depth to Water: 16.09'	Total Well Depth: 25.82'	Water Column Height: 9.73
Volume/ft: .16	1 Casing Volume: 1.55	3 Casing Volumes: 4.65
Purging Device: Dis bailer	Did Well Dewater?:	Total Gallons Purged: ± 5 gal
Start Purge Time: 10:05	Stop Purge Time: 10:15	Total Time: 10 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. µS	Comments
10:08	2 gal	20.6	6.9	244	
10:11	3	20.7	6.3	292	
10:14	4	20.5	6.3	302	

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW-1	8/9	10:20	4 voa's	HCL	TPHg, BTEX, MTBE	8020 8015

WELL SAMPLING FORM

Project Name: Bo Gin	Cambria Mgr: RAS	Well ID: MW-2
Project Number: 230-0116	Date: 8/8/00 8/9	Well Yield:
Site Address: 706 Harrison Street Oakland, California	Sampling Method: Disposable bailer	Well Diameter: 2 " pvc
		Technician(s): BJO
Initial Depth to Water: 17.02'	Total Well Depth: 25.55	Water Column Height: 8.53
Volume/ft: .16	1 Casing Volume: 1.40	3 Casing Volumes: 4.20
Purging Device: D.S. bailer	Did Well Dewater?:	Total Gallons Purged: ~4.5
Start Purge Time: 10:30	Stop Purge Time: 10:40	Total Time: 10 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. µS	Comments
10:33	2 gal	21.4	6.4	231	
10:36	3	21.3	6.3	248	
10:39	4	21.5	6.4	212	

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW-2	8/9	10:50	4 voa's	HCL	TPHg, BTEX, MTBE	8020 8015

WELL SAMPLING FORM

Project Name: Bo Gin	Cambria Mgr: RAS	Well ID: MW-3
Project Number: 230-0116	Date: 8/8/00 8/9	Well Yield:
Site Address: 706 Harrison Street Oakland, California	Sampling Method:	Well Diameter: 2 " pvc
	Disposable bailer	Technician(s): JO
Initial Depth to Water: 16.46'	Total Well Depth: 27.71'	Water Column Height: 11.25
Volume/ft: 1.16	1 Casing Volume: 1.80 gal	3 Casing Volumes: 5.40 gal
Purging Device: Dis bailer	Did Well Dewater?:	Total Gallons Purged: 5.5
Start Purge Time: 11:00	Stop Purge Time: 11:10	Total Time: 10 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. µS	Comments
11:03	3 gal	20.5	6.6	216	
11:06	4	20.5	6.5	219	
11:09	5	20.5	6.6	242	

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW-3	8/9	11:20	4 voa's	HCL	TPHg, BTEX, MTBE	8020 8015

WELL SAMPLING FORM

Project Name: Bo Gin	Cambria Mgr: RAS	Well ID: MW-4
Project Number: 230-0116	Date: 8/8/00 8/9	Well Yield:
Site Address: 706 Harrison Street Oakland, California	Sampling Method: Disposable bailer	Well Diameter: 2 " pvc
		Technician(s): CB/JO
Initial Depth to Water: 17.47	Total Well Depth: 29.12'	Water Column Height: 11.65'
Volume/ft: .16	1 Casing Volume: 1.90 gal	3 Casing Volumes: 5.70 gal
Purging Device: Dis bailer	Did Well Dewater?:	Total Gallons Purged: ≈ 6 gal
Start Purge Time: 11:30	Stop Purge Time: 11:40	Total Time: 10 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. µS	Comments
11:33	3 gal	21	6.5	204	
11:36	4 gal	20.8	6.5	228	
11:39	5	20.3	6.5	212	

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW-4	8/9	11:50	4 voa's	HCL	TPHg, BTEX, MTBE	8020 8015

WELL SAMPLING FORM

Project Name: Bo Gin	Cambria Mgr: RAS	Well ID: MW-5
Project Number: 230-0116	Date: 8/8/00 8/9	Well Yield:
Site Address: 706 Harrison Street Oakland, California	Sampling Method: Disposable bailer	Well Diameter: 2 " pvc
		Technician(s): BJO
Initial Depth to Water: 15.68	Total Well Depth: 28.13	Water Column Height: 12.45
Volume/ft: .16	1 Casing Volume: 2.00 gal	3 Casing Volumes: 6.00 gal
Purging Device: Dis bailer	Did Well Dewater?:	Total Gallons Purged: 6 gal
Start Purge Time: 12:10	Stop Purge Time: 12:20	Total Time: 10 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. µS	Comments
12:13	4 gal	21.3	6.5	201	TRAFFIC Control
12:16	5	21.0	6.6	199	
12:19	6	20.9	6.5	212	

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW-5	8/9	12:35	4 voa's	HCL	TPHg, BTEX, MTBE	8020 8015

WELL SAMPLING FORM

Project Name: Bo Gin	Cambria Mgr: RAS	Well ID: MW-6
Project Number: 230-0116	Date: 8/3/00 8/9	Well Yield:
Site Address: 706 Harrison Street Oakland, California	Sampling Method:	Well Diameter: 2 " pvc
	Disposable bailer	Technician(s): CS /JO
Initial Depth to Water: 16.80'	Total Well Depth: 26.10'	Water Column Height: 9.30'
Volume/ft: .16	1 Casing Volume: 1.50 gal	3 Casing Volumes: 4.50 gal
Purging Device: Dis bailer	Did Well Dewater?:	Total Gallons Purged: 4.5 gal
Start Purge Time: 12:50	Stop Purge Time: 1:00	Total Time: 10 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. µS	Comments
12:53	2 gal	21.5	6.7	171	
12:56	3	21.3	6.8	174	
12:59	4	21.3	6.8	196	

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW-6	8/9	1:15	4 voa's	HCL	TPHg, BTEX, MTBE	8020 8015

WELL SAMPLING FORM

Project Name: Bo Gin	Cambria Mgr: RAS	Well ID: MW-7
Project Number: 230-0116	Date: 8/8/00 8/9/00	Well Yield:
Site Address: 706 Harrison Street Oakland, California	Sampling Method:	Well Diameter: 2 " pvc
	Disposable bailer	Technician(s): CB/JO
Initial Depth to Water: 16.56'	Total Well Depth: 28.80'	Water Column Height: 12.24'
Volume/ft: .16	1 Casing Volume: 1.95 gal	3 Casing Volumes: 6.85 gal
Purging Device: Dis bailer	Did Well Dewater?:	Total Gallons Purged: 27 gal
Start Purge Time: 1:30	Stop Purge Time: 1:40	Total Time: 10 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. µS	Comments
1:33	4 gal	22.4	6.7	184	
1:36	5	27.0	6.6	168	
1:40	6	21.9	6.6	192	

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW-7	8/9	2:00	4 voa's	HCL	TPHg, BTEX, MTBE	8020 8015