CAMBRIA

THIRD QUARTER 2003 MONITORING REPORT

Former ARCO Service Station
706 Harrison Street
Oakland, California
Fuel Leak Site RO484
Cambria Project No. 230-0116

December 1, 2003

Prepared for:

Mr. Bo K. Gin
342 Lester Avenue
Oakland, California 94606

Prepared by:

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

Written by:

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

Matthew A. Meyers
Senior Staff Geologist

Ron Scheele, R.G.
Senior Geologist

RO484

CAMBRIA

December 1, 2003

Mr. Barney Chan
Alameda County Department of Environmental Health
UST Local Oversight Program
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Re: **Third Quarter 2003 Monitoring Report**
Former ARCO Service Station
706 Harrison Street
Oakland, California
Fuel Leak Site RO484
Cambria Project No. 230-0116

Alameda County
DEC 05 2003
Environmental Health

Dear Mr. Chan:

On behalf of Mr. Bo K. Gin, Cambria Environmental Technology, Inc. (Cambria) is submitting this *Third Quarter 2003 Monitoring Report* for the above-referenced site. Presented in the report are the third quarter 2003 activities and results and the anticipated fourth quarter 2003 activities.

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

Sincerely,
Cambria Environmental Technology, Inc.

Matthew A. Meyers
Senior Staff Geologist

Attachments: Third Quarter 2003 Monitoring Report

cc: Mr. Bo K. Gin, 342 Lester Avenue, Oakland, California 94606

Cambria Environmental Technology, Inc.

5900 Hollis Street
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Tel (510) 420-0700
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THIRD QUARTER 2003 MONITORING REPORT

Former ARCO Service Station
706 Harrison Street
Oakland, California
Fuel Leak Site RO484
Cambria Project No. 230-0116

December 1, 2003

INTRODUCTION

On behalf of Mr. Bo K. Gin, Cambria Environmental Technology, Inc. (Cambria) is submitting this *Third Quarter 2003 Monitoring Report* for the above-referenced site. Presented below are the third quarter 2003 activities and results and the anticipated fourth quarter 2003 activities.

THIRD QUARTER 2003 ACTIVITIES

Monitoring Activities

Field Activities: On July 18, 2003, Cambria conducted quarterly monitoring and sampling activities. Cambria gauged groundwater levels in monitoring wells MW-1 through MW-7 (see Figure 1). Groundwater samples were collected from wells MW-1 through MW-7 as per the well sampling schedule. Field activities were performed jointly with Aqua Science Engineers, Inc. (Aqua Science), of Danville, California, who monitored and sampled wells owned by the adjacent, former Shell service station (Shell). Field Data Sheets are presented as Appendix A. The well gauging data has been submitted to the Geotracker database. See Appendix D for the electronic delivery confirmation.

Sample Analyses: Groundwater samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg) by modified EPA Method 8015C; benzene, toluene, ethylbenzene, and xylenes (BTEX), and methyl tertiary butyl ether (MTBE) by EPA Method 8021B. Groundwater samples collected from wells MW-2 and MW-4 were analyzed for MTBE by EPA Method 8260. The laboratory analytical report is included as Appendix B. Groundwater analytical results are shown on Table 1 and summarized on Figure 1. The groundwater sampling results have been submitted to the Geotracker database. See Appendix D for the electronic delivery confirmation.

Monitoring Results

Groundwater Gradient: Based on depth-to-water measurements collected during the July 18, 2003 joint monitoring event, groundwater generally flows towards the southwest with a groundwater depression around MW-2 (Figure 1). Due to a recent well survey (see below), this is the first time a groundwater elevation contour map has incorporated groundwater elevation data from the neighboring former Shell station. The flow direction and gradient is generally consistent with previous quarters and confirms that the site is directly down gradient from the former Shell station.

Hydrocarbon Distribution in Groundwater: Hydrocarbon concentrations were detected in only one of the seven wells sampled this quarter. TPHg and benzene concentrations were detected in well MW-2 at 57,000 and 2,100 micrograms per liter (µg/L), respectively. MTBE was detected only in well MW-4 at 0.74 µg/L. Hydrocarbon concentrations in well MW-2 have decreased slightly as compared to the previous quarter. The MTBE concentration in well MW-4 has also decreased as compared with the previous quarter but remains directly down gradient from wells with increasing levels of MTBE, up to 39,000 µg/L in Shell well MW-1 (see Figure 1 and Appendix E). No MTBE was ever stored or used at the former ARCO service station prior to the USTs being removed in 1991.

Well Survey

On October 27, 2003, Virgil Chavez Land Surveying of Vallejo, California surveyed the latitude, longitude, and elevation of the monitoring well casings and well boxes relative to City of Oakland benchmark 25A. The adjacent Shell wells are also surveyed to the same benchmark. Table 1 has been updated with the survey results and Figure 1 incorporates the Shell groundwater elevation data. The monitoring well survey report is included as Appendix F. The vertical and horizontal survey results have been submitted to the Geotracker database. See Appendix D for the electronic delivery confirmations.

ANTICIPATED FOURTH QUARTER 2003 ACTIVITIES

Monitoring Activities

Cambria will gauge water levels and collect groundwater samples from wells MW-1, MW-2, and MW-4. Wells MW-1, MW-2, and MW-4 are sampled on a quarterly basis and wells MW-3, MW-5, MW-6, and MW-7 are sampled on a semi-annual basis during the first and third quarters. Groundwater samples will be analyzed for TPHg by Modified EPA Method 8015C, and BTEX and MTBE by EPA Method 8021B. Samples from MW-2 and MW-4 will also be analyzed for MTBE by EPA Method 8260. Cambria will prepare a groundwater monitoring report summarizing the monitoring activities and results.

Corrective Action Activities

Due to the recent changes to risk based screening levels and new agency guidance for soil gas investigations, submittal of a work plan to further characterize the site prior to requesting site closure was postponed. A work plan will now be prepared that will follow the latest Soil Gas Investigation Advisory prepared by the DTSC and the RWQCB-LAR. The work plan will propose the collection of soil gas samples from several locations and the results will be compared to the recent environmental screening levels (ESLs) provided by the RWQCB-SBR. The work plan will also include hydrogeologic cross-sections, a hydrocarbon mass estimate, and a subsurface utility survey.

ATTACHMENTS

Figure 1 – Groundwater Elevation Contour and Hydrocarbon Concentration Map

Table 1 – Groundwater Elevations and Analytical Data

Appendix A – Groundwater Monitoring Field Data Sheets
Appendix B – Laboratory Analytical Report
Appendix C – Benzene and MTBE Concentration Graphs
Appendix D – Electronic Delivery Confirmations
Appendix E – Former Shell Station Groundwater Data and Analytical Results
Appendix F – Monitoring Well Survey Report

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FIGURE

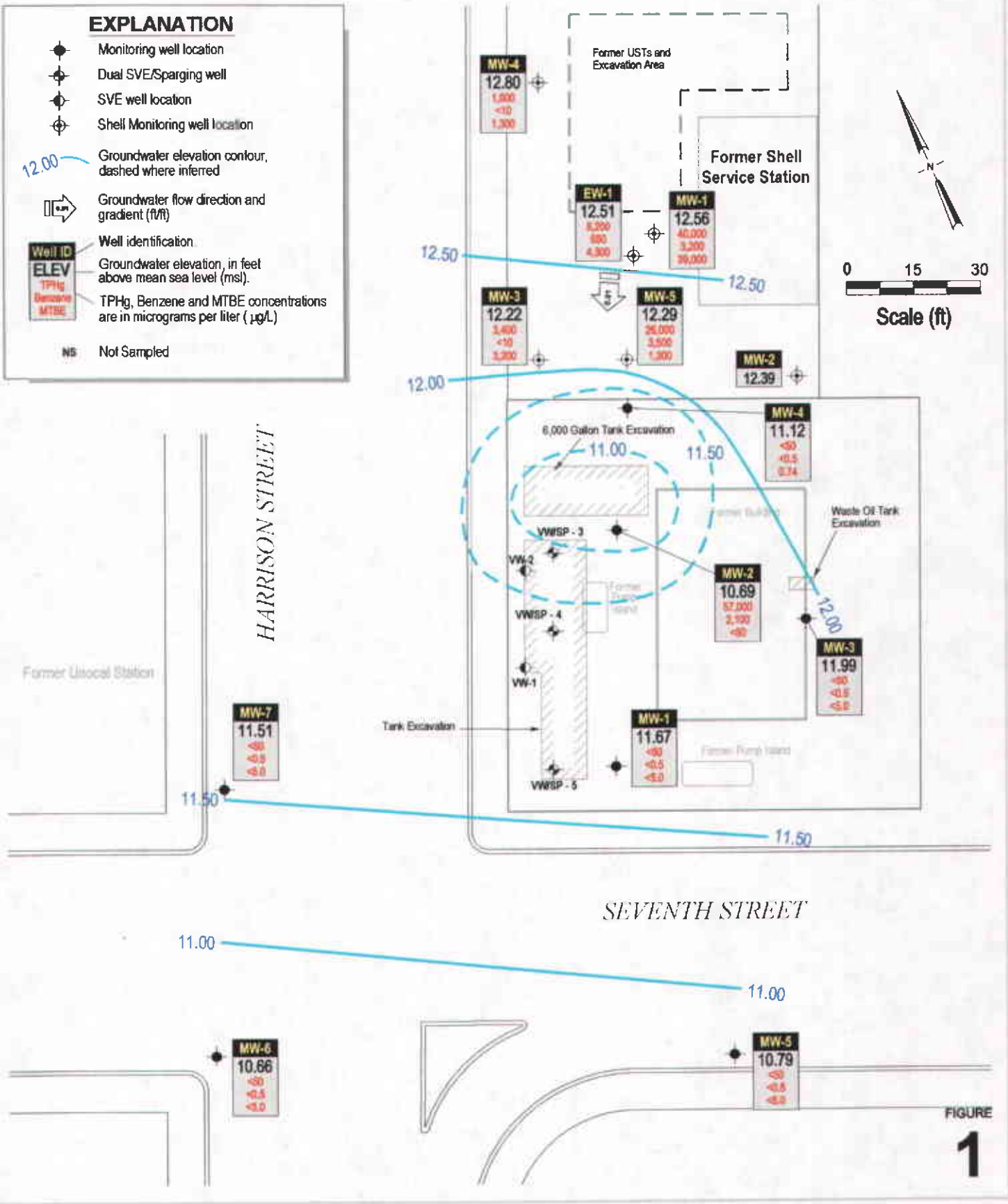

FIGURE
1

Former Arco Station
706 Harrison Street
Oakland, California

CAMBRIA

Groundwater Elevation Contour and Hydrocarbon Concentration Map
July 18, 2003

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TABLE

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Table 1. Groundwater Elevations and Analytical Data: Former ARCO Station - 706 Harrison Street, Oakland, California

Well ID *TOC* Sampling Frequency	Date Sampled	Depth to Water (ft)	Groundwater Elevation (ft-msl)	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (8020) (µg/L)	MTBE (8260) (µg/L)	Notes
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
	11/9/00	15.90	13.25	11,000	2,500	140	380	150	11,000	12,000	b
	1/29/01	16.05	13.10	9,600	3,100	100	77	200	2,600	2,400	b
	4/16/01	16.90	12.25	3,300	1,200	4.4	2.7	28	900	940	b
	8/14/01	17.13	12.02	2,000	500	3.4	24	7.8	68	53	a
	10/22/01	16.11	13.04	220	83	0.63	2.8	<0.5	<10	5.7	a
	2/1/02	16.93	12.22	640	220	1.7	4.7	0.57	<10	-	a
	5/10/02	15.09	14.06	230	26	0.97	<0.5	<0.5	<5.0	-	a
	7/8/02	15.20	13.95	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	
	10/2/02	15.70	13.45	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	1/23/03	15.09	14.06	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	4/29/03	13.02	16.13	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
26.17	**7/18/03**	**14.50**	**11.67**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<5.0**	-	

Table 1. Groundwater Elevations and Analytical Data: Former ARCO Station - 706 Harrison Street, Oakland, California

Well ID *TOC* Sampling Frequency	Date Sampled	Depth to Water (ft)	Groundwater Elevation (ft-msl)	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (8020) (µg/L)	MTBE (8260) (µg/L)	Notes
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
	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
	11/9/00	17.00	13.51	70,000	4,800	12,000	1,900	8,000	9,400	8,300	b
	1/29/01	18.31	12.20	110,000	8,200	21,000	2,800	13,000	2,500	1,900	b,g
	4/16/01	18.59	11.92	97,000	7,400	15,000	2,500	12,000	<3,000	<50	b,g
	8/14/01	18.74	11.77	97,000	6,200	14,000	2,400	13,000	<250	<50	a,j
	10/22/01	18.27	12.24	71,000	5,900	15,000	2,400	12,000	<1,400	150	a
	2/1/02	18.05	12.46	1,400	11	88	44	210	<5.0	-	a
	5/10/02	17.15	13.36	97,000	4,500	15,000	2,500	12,000	<3,000	-	a,g
	7/8/02	15.30	15.21	42,000	2,100	6,500	2,200	8,800	<1,000	65	a
	10/2/02	15.89	14.62	70,000	1,700	5,700	1,900	8,300	<1,700	-	a
	1/23/03	17.51	13.00	40,000	1,900	7,800	1,200	5,600	<1,000	-	a
	4/29/03	15.31	15.20	82,000	2,500	11,000	2,200	9,400	<2,000	-	a
27.53	**7/18/03**	**16.84**	**10.69**	**57,000**	**2,100**	**8,700**	**2,200**	**10,000**	-	**<50**	**a, j**

Table 1. Groundwater Elevations and Analytical Data: Former ARCO Station - 706 Harrison Street, Oakland, California

Well ID *TOC* Sampling Frequency	Date Sampled	Depth to Water (ft)	Groundwater Elevation (ft-msl)	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (8020) (µg/L)	MTBE (8260) (µg/L)	Notes
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	-	-	
Semi-annually	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	-	
	11/24/98	16.04	13.73	<50	<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	<5.0	-	
	5/18/99	15.29	14.48	<50	<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	<5.0	-	
	11/18/99	16.77	13.00	-	-	-	-	-	-	-	
	2/29/00	13.71	16.06	<50	2	<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	<5.0	-	
	11/9/00	16.25	13.52	-	-	-	-	-	-	-	
	1/29/01	16.52	13.25	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	4/16/01	16.95	12.82	-	-	-	-	-	-	-	
	8/14/01	17.11	12.66	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	10/22/01	16.50	13.27	-	-	-	-	-	-	-	
	2/1/02	16.90	12.87	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	5/10/02	15.03	14.74	-	-	-	-	-	-	-	
	7/8/02	14.45	15.32	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	10/2/02	15.03	14.74	-	-	-	-	-	-	-	
	1/23/03	15.48	14.29	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	4/29/03	12.49	17.28	-	-	-	-	-	-	-	
26.79	**7/18/03**	**14.80**	**11.99**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<5.0**	-	

Table 1. Groundwater Elevations and Analytical Data: Former ARCO Station - 706 Harrison Street, Oakland, California

Well ID *TOC* Sampling Frequency	Date Sampled	Depth to Water (ft)	Groundwater Elevation (ft-msl)	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (8020) (µg/L)	MTBE (8260) (µg/L)	Notes
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	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	b
	8/9/00	17.47	13.71	4,400	930	66	98	79	9,400	-	b
	11/9/00	17.45	13.73	4,200	630	34	54	44	7,800	9,400	b
	1/29/01	18.90	12.28	3,100	710	34	66	51	9,400	8,000	b
	4/16/01	19.17	12.01	160	1.2	1.3	<0.5	12	22	20	b
	8/14/01	19.20	11.98	1,700	190	11	35	13	300	250	b
	10/22/01	18.95	12.23	1,100	120	3.7	29	7.9	<25	16	a
	2/1/02	19.05	12.13	2,600	25	43	21	280	<5.0	-	a
	5/10/02	17.69	13.49	490	3.5	2.0	2.1	2.2	<5.0	-	a
	7/8/02	15.75	15.43	170	0.51	0.62	1.6	1.2	<5.0	2.0	m
	10/2/02	16.30	14.88	240	1.7	2.0	2.2	0.88	<5.0	-	a
	1/23/03	17.74	13.44	<50	0.52	4.1	<0.5	1.9	<5.0	-	
	4/29/03	15.47	15.71	1,300	75	4.8	21	7.3	130	120	a
28.20	**7/18/03**	**17.08**	**11.12**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	-	**0.74**	

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Well ID *TOC* Sampling Frequency	Date Sampled	Depth to Water (ft)	Groundwater Elevation (ft-msl)	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (8020) (µg/L)	MTBE (8260) (µg/L)	Notes
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	-	-	-	-	-	-	-	
Semi-annually	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	-	
	11/9/00	15.39	12.65	-	-	-	-	-	-	-	
	1/29/01	15.97	12.07	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	4/16/01	16.24	11.80	-	-	-	-	-	-	-	
	8/14/01	17.39	10.65	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	10/22/01	15.90	12.14	-	-	-	-	-	-	-	
	2/1/02	16.55	11.49	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	5/10/02	15.12	12.92	-	-	-	-	-	-	-	
	7/8/02	15.92	12.12	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	10/2/02	16.42	11.62	-	-	-	-	-	-	-	
	1/23/03	14.90	13.14	<50	20	<0.5	<0.5	<0.5	<5.0	-	
	4/29/03	12.05	15.99	-	-	-	-	-	-	-	
25.07	**7/18/03**	**14.28**	**10.79**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<5.0**	-	

Table 1. Groundwater Elevations and Analytical Data: Former ARCO Station - 706 Harrison Street, Oakland, California

Well ID *TOC* Sampling Frequency	Date Sampled	Depth to Water (ft)	Groundwater Elevation (ft-msl)	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (8020) (µg/L)	MTBE (8260) (µg/L)	Notes
MW-6	12/16/94	17.74	11.36	-	-	-	-	-	-	-	
29.10	12/29/94	17.40	11.70	-	-	-	-	-	-	-	
Semi-annually	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	-	
	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	-	
	11/9/00	16.60	12.50	-	-	-	-	-	-	-	
	1/29/01	17.00	12.10	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	4/16/01	17.15	11.95	-	-	-	-	-	-	-	
	8/14/01	17.30	11.80	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	10/22/01	17.13	11.97	-	-	-	-	-	-	-	
	2/1/02	16.57	12.53	70	37	<0.5	<0.5	<0.5	<5.0	-	a
	5/10/02	15.25	13.85	-	-	-	-	-	-	-	
	7/8/02	15.79	13.31	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	10/2/02	16.38	12.72	-	-	-	-	-	-	-	
	1/23/03	16.03	13.07	<50	21	<0.5	<0.5	<0.5	<5.0	-	
	4/29/03	14.19	14.91	-	-	-	-	-	-	-	
26.13	**7/18/03**	**15.47**	**10.66**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<5.0**	-	

Table 1. Groundwater Elevations and Analytical Data: Former ARCO Station - 706 Harrison Street, Oakland, California

Well ID *TOC* Sampling Frequency	Date Sampled	Depth to Water (ft)	Groundwater Elevation (ft-msl)	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (8020) (µg/L)	MTBE (8260) (µg/L)	Notes
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	-	-	-	-	-	-	-	
Semi-annually	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	-	
	11/9/00	16.45	13.22	-	-	-	-	-	-	-	
	1/29/01	16.92	12.75	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	4/16/01	17.03	12.64	-	-	-	-	-	-	-	
	8/14/01	17.27	12.40	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	10/22/01	16.95	12.72	-	-	-	-	-	-	-	
	2/1/02	16.14	13.53	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	5/10/02	15.30	14.37	-	-	-	-	-	-	-	
	7/8/02	15.73	13.94	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
	10/2/02	16.24	13.43	-	-	-	-	-	-	-	
	1/23/03	15.70	13.97	<50	23	<0.5	<0.5	<0.5	<5.0	-	
	4/29/03	12.68	16.99	-	-	-	-	-	-	-	
26.70	**7/18/03**	**15.19**	**11.51**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<5.0**	-	

Table 1. Groundwater Elevations and Analytical Data: Former ARCO Station - 706 Harrison Street, Oakland, California

Well ID *TOC* Sampling Frequency	Date Sampled	Depth to Water (ft)	Groundwater Elevation (ft-msl)	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (8020) (µg/L)	MTBE (8260) (µg/L)	Notes
VW-3	3/6/03	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	i
--	3/25/03	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	i
VW-4	3/6/03	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
--	3/25/03	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	
Trip Blank	11/9/00	-	-	<50	<0.5	<0.5	<0.5	<0.5	<5.0	-	

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 tertiary 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
Data prior to 12/16/94 provided by previous consultant.
ft-msl = measured in feet relative to mean sea level
ft = measured in feet
Wells were re-surveyed on October 27, 2003 to City of Oakland benchmark 25A.

Notes

a = Analytical laboratory notes that unmodified or weakly modified gasoline is significant.
b = Analytical laboratory notes that heavier gasoline range compounds are 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.
j = Sample diluted due to high organic content.
i = Sample contains greater than ~2 vol. % sediment.

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APPENDIX A

Groundwater Monitoring Field Data Sheets

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Groundwater Monitoring Field Sheet

Well ID	Time	DTP	DTW	Product Thickness	Amount of Product Removed	Casing Diam.	Comment
MW-1	6:20		14.50				
MW-2	6:25		16.84				
MW-3	6:10		14.80				
MW-4	6:30		17.08				
MW-5	5:55		14.28				
MW-6	5:45		15.47				
MW-7	6:05		15.19				

Project Name: Bo Gin

Project Number/Task: 230-0116/136

Measured By: S. Hill

Date: 7-18-03

CAMBRIA

WELL SAMPLING FORM

Project Name: BoGin	Cambria Mgr: MM	Well ID: MW-1
Project Number: 230-0116	Date: 7-18-03	Well Yield:
Site Address: 706 Harrison St. Oakland, CA	Sampling Method: disposable bailers	Well Diameter: 2 ☐ pvc
		Technician(s): SG
Initial Depth to Water: 14.50	Total Well Depth: 24.20	Water Column Height: 9.7
Volume/ft: 0.16	1 Casing Volume: ~~24.20~~ 1.55	3 Casing Volumes: 4.65
Purging Device: disposable bailer	Did Well Dewater?: no	Total Gallons Purged: 4
Start Purge Time: 9:45	Stop Purge Time: 9:59	Total Time: 14 mins

Casing Volume = Water column height x Volume/ ft.

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

Time	Casing Volume	Temp. (°C)	pH	Cond. (uS)	Comments
9:50	1.5	19.1	7.20	740	
9:55	3	19.3	7.35	890	
10:00	4	19.3	7.42	947	

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

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW-1	7-18-03	10:05	3 voa	HCl		

CAMBRIA

WELL SAMPLING FORM

Project Name: BoGin	Cambria Mgr: MM	Well ID: MW-2
Project Number: 230-0116	Date: 7-18-03	Well Yield:
Site Address: 706 Harrison St. Oakland, CA	Sampling Method: disposable bailer	Well Diameter: 2 ☐ pvc Technician(s): SG
Initial Depth to Water: 16.84	Total Well Depth: 25.50	Water Column Height: 8.66
Volume/ft: 0.16	1 Casing Volume: 1.38	3 Casing Volumes: 4.15
Purging Device: disposable bailer	Did Well Dewater?: no	Total Gallons Purged: 4
Start Purge Time: 10:20	Stop Purge Time: 10:34	Total Time: 14mins

Casing Volume = Water column height x Volume/ ft.

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

Time	Casing Volume	Temp. (°C)	pH	Cond. (uS)	Comments
10:25	1.5	19.0	7.05	622	
10:30	3	18.7	7.13	840	
10:35	4	18.9	7.15	893	

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

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW-2	7-18-03	10:40	3 VOA	HCl		

CAMBRIA

WELL SAMPLING FORM

Project Name: BoGin	Cambria Mgr: MM	Well ID: MW-3
Project Number: 230-0116	Date: 7-18-03	Well Yield:
Site Address: 706 Harrison St. Oakland, CA	Sampling Method: disposable bailer	Well Diameter: 2 ☐ pvc
		Technician(s): SG
Initial Depth to Water: 14.80	Total Well Depth: 27.55	Water Column Height: 12.75
Volume/ft: 0.16	1 Casing Volume: 2.04	3 Casing Volumes: 6.12
Purging Device: disposable bailer	Did Well Dewater?: no	Total Gallons Purged: 6
Start Purge Time: 9:10	Stop Purge Time: 9:24	Total Time: 14mins

Casing Volume = Water column height x Volume/ ft.

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

Time	Casing Volume	Temp. (°C)	pH	Cond. (uS)	Comments
9:15	2	18.9	7.14	892	
9:20	4	19.1	7.21	759	
9:25	6	19.1	7.25	780	

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

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW-3	7-18-03	9:30	3 VOA	HCl		

CAMBRIA

WELL SAMPLING FORM

Project Name: BoGin	Cambria Mgr: MM	Well ID: MW-4
Project Number: 230-0116	Date: 7-18-03	Well Yield:
Site Address: 706 Harrison St. Oakland, CA	Sampling Method: disposable bailer	Well Diameter: 2 ☐ pvc Technician(s): SCo
Initial Depth to Water: 17.08	Total Well Depth: 25.40	Water Column Height: 8.32
Volume/ft: 0.16	1 Casing Volume: 1.33	3 Casing Volumes: 3.99
Purging Device: disposable bailer	Did Well Dewater?: no	Total Gallons Purged: 4
Start Purge Time: 4:30 pm	Stop Purge Time: 4:44	Total Time: 14mins

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
4:35 pm	1.5	19.6	7.10	1290	
4:40 pm	3	19.4	7.17	861	
4:45 pm	4	19.2	7.13	892	

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

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW-4	7-18-03	4:50 pm	3 VOA	HCl		

CAMBRIA

WELL SAMPLING FORM

Project Name: BoGin	Cambria Mgr: MM	Well ID: MW-5
Project Number: 230-0116	Date: 7-18-03	Well Yield:
Site Address: 706 Harrison St. Oakland, CA	Sampling Method: disposable bailer	Well Diameter: 2 ☐ pvc
		Technician(s): SG
Initial Depth to Water: 14.28	Total Well Depth: 27.80	Water Column Height: 13.52
Volume/ft: 0.16	1 Casing Volume: 2.16	3 Casing Volumes: 6.48
Purging Device: disposable bailer	Did Well Dewater?: no	Total Gallons Purged: 6.5
Start Purge Time: 8:30	Stop Purge Time: 8:44	Total Time: 14 mins

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
8:35	2.5	19.1	7.01	1419	
8:40	4.5	19.3	7.13	1072	
8:45	6.5	19.1	7.15	950	

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

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW-5	7-18-03	8:50	3 VOA	HCl		

CAMBRIA

WELL SAMPLING FORM

Project Name: BoGin	Cambria Mgr: MM	Well ID: MW-6
Project Number: 230-011b	Date: 7-18-03	Well Yield:
Site Address: 706 Harrison St. Oakland, CA	Sampling Method: disposable bailer	Well Diameter: 2 ☐ pvc Technician(s): SG
Initial Depth to Water: 15.47	Total Well Depth: 25.85	Water Column Height: 10.38
Volume/ft: 0.16	1 Casing Volume: 1.66	3 Casing Volumes: 4.98
Purging Device: disposable bailer	Did Well Dewater?: no	Total Gallons Purged: 5
Start Purge Time: 7:50	Stop Purge Time: 8:04	Total Time: 14mins

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
7:55	1.5	18.9	7.25	513	
8:00	3.0	19.1	7.13	580	
8:05	5.0	19.2	7.18	650	

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

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW-6	7-18-03	8:10	3 VOA	HCl		

CAMBRIA

WELL SAMPLING FORM

Project Name: BoGin	Cambria Mgr: MM	Well ID: MW-7
Project Number: 230-0116	Date: 7-18-03	Well Yield:
Site Address: 706 Harrison St. Oakland, CA	Sampling Method: disposable bailer	Well Diameter: 2 ☐ pvc
		Technician(s): SG
Initial Depth to Water: 15.19	Total Well Depth: 27.50	Water Column Height: 12.31
Volume/ft: 0.16	1 Casing Volume: 1.96	3 Casing Volumes: 5.90
Purging Device: disposable bailer	Did Well Dewater?: no	Total Gallons Purged: 6
Start Purge Time: 7:00	Stop Purge Time: 7:14	Total Time: 14 mins

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
7:05	2	19.0	7.09	641	
7:10	4	18.9	7.13	795	
7:15	6	19.1	7.18	832	

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

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW-7	7-18-03	7:20	3 VOA	HCl		

McCAMPBELL ANALYTICAL INC.

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

FILE COPY

CHAIN OF CUSTODY RECORD

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

EDF Required? ☒ Yes ☐ No

Report To: Matt Meyers Bill To: Cambria Env Tech

Company: Cambria Environmental Technology Inc.

5900 Hollis Street STE-A

Emeryville, CA 94608 E-mail:

Tele: 510-420-3314 Fax: 510-420-9170

Project #: 230-0116/136 Project Name: BoGin

Project Location: 706 Harrison St. Oakland, CA

Sampler Signature: J. Hall

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX: Water	Soil	Air	Sludge	Other	METHOD PRESERVED: Ice	HCl	HNO_3	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: TPH, BTEX 8015/8020 MTBE by 8260	Other: confirm MTBE by 8260	Comments
MW-1		7-18-03	10:05	3	VOAs	X					X	X			X																	X
MW-2		7-18-03	10:40	3	VOAs	X					X	X																			X		
MW-3		7-18-03	9:30	3	VOAs	X					X	X			X																X	X	
MW-4		7-18-03	4:30pm	3	VOAs	X					X	X																			X		
MW-5		7-18-03	8:50	3	VOAs	X					X	X			X																X	X	
MW-6		7-18-03	8:10	3	VOAs	X					X	X			X																	X	X
MW-7		7-18-03	7:20	3	VOAs	X					X	X			X																	X	X
																															X	

Relinquished By:	Date:	Time:	Received By:
J. Hall	7-22-03	4:30	secure location

Remarks:

CAMBRIA

APPENDIX B

Laboratory Analytical Report

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

Cambria Env. Technology	Client Project ID: #230-0166/136; BoGin	Date Sampled: 07/18/03
5900 Hollis St, Suite A		Date Received: 07/22/03
Emeryville, CA 94608	Client Contact: Matt Meyers"	Date Reported: 07/29/03
	Client P.O.:	Date Completed: 07/29/03

WorkOrder: 0307381

July 29, 2003

Dear Matt:

Enclosed are:

1). the results of **7** analyzed samples from your **#230-0166/136; BoGin project,**

2). a QC report for the above samples

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

4). a bill for analytical services.

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

Yours truly,

Angela Rydelius, Lab Manager

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

Cambria Env. Technology	Client Project ID: #230-0166/136; BoGin	Date Sampled: 07/18/03
5900 Hollis St, Suite A		Date Received: 07/22/03
Emeryville, CA 94608	Client Contact: Matt Meyers"	Date Extracted: 07/23/03-07/25/03
	Client P.O.:	Date Analyzed: 07/23/03-07/25/03

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

Extraction method: SW5030B Analytical methods: SW8021B/8015Cm Work Order: 030738I

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	MW-1	W	ND	ND	ND	ND	ND	ND	1	102
002A	MW-2	W	57,000,a	---	2100	8700	2200	10,000	200	100
003A	MW-3	W	ND	ND	ND	ND	ND	ND	1	102
004A	MW-4	W	ND	---	ND	ND	ND	ND	1	101
005A	MW-5	W	ND	ND	ND	ND	ND	ND	1	102
006A	MW-6	W	ND	ND	ND	ND	ND	ND	1	104
007A	MW-7	W	ND	ND	ND	ND	ND	ND	1	104
Reporting Limit for DF =1; ND means not detected at or above the reporting limit		W	50	5.0	0.5	0.5	0.5	0.5	1	µg/L
		S	NA	NA	NA	NA	NA	NA	1	mg/Kg

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in µg/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 ~2 vol. % sediment; j) reporting limit raised due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern.

DHS Certification No. 1644

Angela Rydelius, Lab Manager

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

Cambria Env. Technology	Client Project ID: #230-0166/136; BoGin	Date Sampled: 07/18/03
5900 Hollis St, Suite A		Date Received: 07/22/03
Emeryville, CA 94608	Client Contact: Matt Meyers"	Date Extracted: 07/23/03
	Client P.O.:	Date Analyzed: 07/23/03

Methyl tert-Butyl Ether*

Extraction method: SW5030B Analytical methods: SW8260B Work Order: 0307381

Lab ID	Client ID	Matrix	Methyl-t-butyl ether (MTBE)	DF	% SS
002B	MW-2	W	ND<50,j	100	104
004B	MW-4	W	0.74	1	98.7

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	0.5	µg/L
	S	NA	NA

* water and vapor samples and all TCLP & SPLP extracts are reported in µg/L, soil/sludge/solid samples in µg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or surrogate coelutes with another peak.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

DHS Certification No. 1644

Angela Rydelius, Lab Manager

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

QC SUMMARY REPORT FOR SW8021B/8015Cm

Matrix: W WorkOrder: 0307381

EPA Method: SW8021B/8015Cm Extraction: SW5030B BatchID: 7925 Spiked Sample ID: 0307381-007A

	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(btex)£	ND	60	100	100	0	99.2	98.7	0.420	70	130
MTBE	ND	10	96.1	94.7	1.48	102	101	1.27	70	130
Benzene	ND	10	94.8	94.3	0.579	96.9	97.8	0.916	70	130
Toluene	ND	10	94.9	95.5	0.610	100	100	0	70	130
Ethylbenzene	ND	10	98.1	98	0.114	105	106	0.443	70	130
Xylenes	ND	30	100	100	0	107	110	3.08	70	130
%SS:	104	100	99.6	100	0.537	98.8	99.2	0.419	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

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

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

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

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

cluttered chromatogram; sample peak coelutes with surrogate peak.

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

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

QC SUMMARY REPORT FOR SW8260B

Matrix: W WorkOrder: 0307381

EPA Method: SW8260B	Extraction: SW5030B	BatchID: 7916	Spiked Sample ID: 0307382-008C

	Sample	Spiked	MS*	MSD*	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
Methyl-t-butyl ether (MTBE)	ND	10	103	104	0.254	114	92.2	21.2	70	130
%SS1:	103	100	100	99.8	0.224	98.8	95.7	3.22	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

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

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

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

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

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

0307381

McCAMPBELL ANALYTICAL INC.

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

CHAIN OF CUSTODY RECORD

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

EDF Required? ☒ Yes ☐ No

Report To: Matt Meyers Bill To: Cambria Env Tech

Company: Cambria Environmental Technology Inc.

5900 Hollis Street STE-A

Emeryville, CA 94608 E-mail: mmeyers@cambria-env.com

Tele: 510-420-3314 Fax: 510-420-9170

Project #: 230-0116/136 Project Name: BoGin

Project Location: 706 Harrison St. Oakland, CA

Sampler Signature: J. Hall

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX: Water	Soil	Air	Sludge	Other	METHOD PRESERVED: Ice	HCl	HNO_3	Other	Analysis Request: BTEX & TPH as Gas (602/8020 + 8015) MTBE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601 / 8010	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8080	EPA 608 / 8080 PCB's ONLY	EPA 624 / 8240 / 8260	EPA 625 / 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals	LUFT 5 Metals	Lead (7240/7421/239.2/6010)	RCI	Other: TPH, BTEX 8015/8020 MTBE by 8260	confirm MTBE by 8260	Comments
MW-1		7-18-03	10:05	3	VOAs	X					X	X			X															X		X	
MW-2		7-18-03	10:40	3	VOAs	X					X	X																		X		X	
MW-3		7-18-03	9:30	3	VOAs	X					X	X			X															X	X			
MW-4		7-18-03	4:50pm	3	VOAs	X					X	X																		X	X			
MW-5		7-18-03	8:50	3	VOAs	X					X	X			X															X	X			
MW-6		7-18-03	8:10	3	VOAs	X					X	X			X																	X		
MW-7		7-18-03	7:20	3	VOAs	X					X	X			X																	X		

Relinquished By:	Date:	Time:	Received By:
J. Hall	7-22-03	4:30	secure location
	7/22/03	1115	285
	7/22/03	1525	

Remarks:

GOOD CONDITION	✓	PRESERVATION APPROPRIATE	✓	VOAs ✓ / O&G / METALS / OTHER
HEAD SPACE ABSENT		CONTAINERS	✓	
CHLORINATED IN LAB		PRESERVED IN LAB		

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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0307381

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

TEL: (510) 420-0700
FAX: (510) 420-3394
ProjectNo: #230-0166/136; BoGin
PO:

Date Received: 7/22/03
Date Printed: 7/22/03

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests						
					<>	M8021B/8015C	SW8260B				
0307381-001	MW-1	Water	7/18/03 10:05:00 AM	☐	A	A					
0307381-002	MW-2	Water	7/18/03 10:40:00 AM	☐		A	B				
0307381-003	MW-3	Water	7/18/03 9:30:00 AM	☐		A					
0307381-004	MW-4	Water	7/18/03 4:30:00 AM	☐		A	B				
0307381-005	MW-5	Water	7/18/03 8:50:00 AM	☐		A					
0307381-006	MW-6	Water	7/18/03 8:10:00 AM	☐		A					
0307381-007	MW-7	Water	7/18/03 7:20:00 AM	☐		A					

Prepared by: Melissa Valles

Comments:

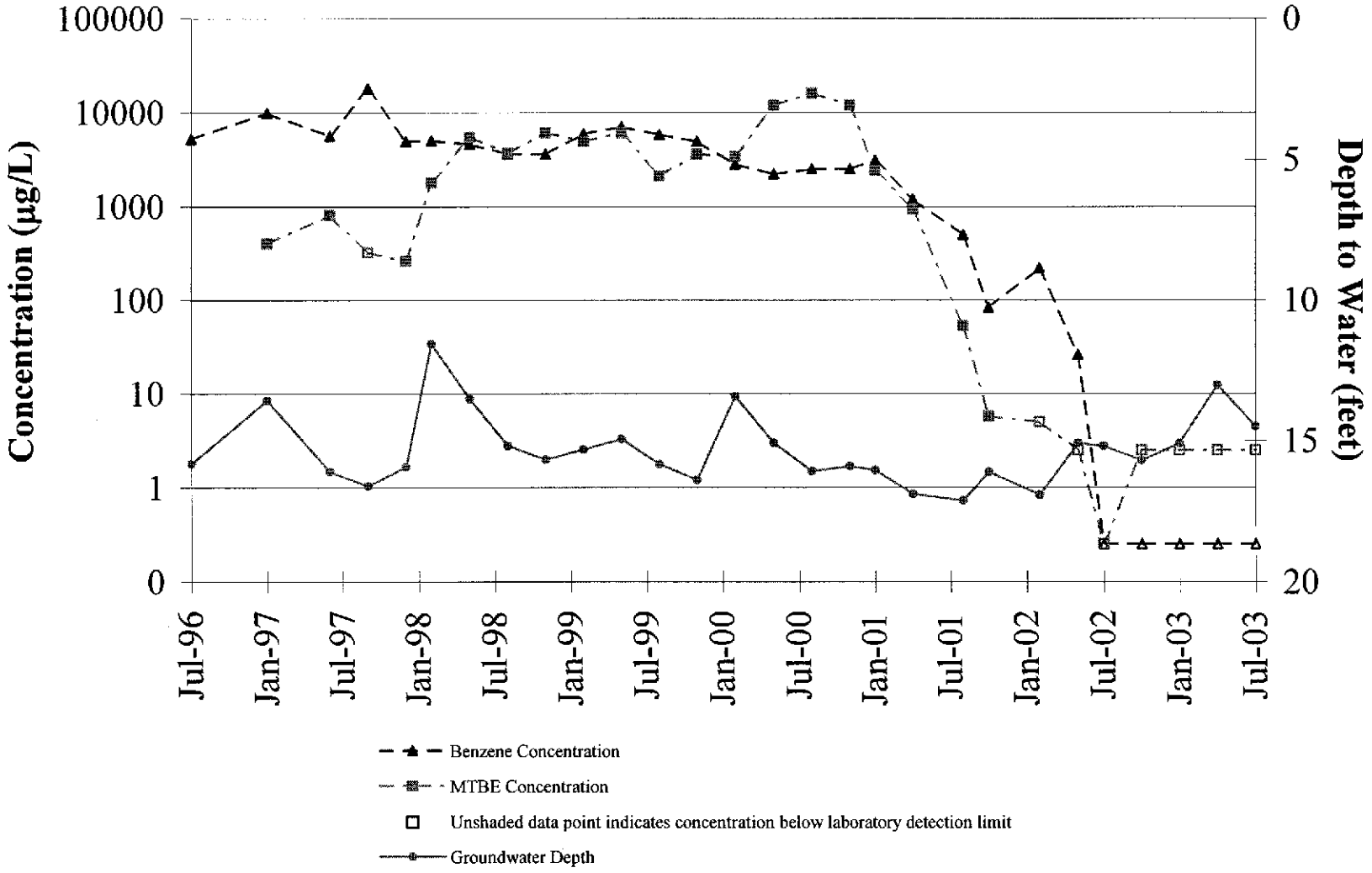
NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

CAMBRIA

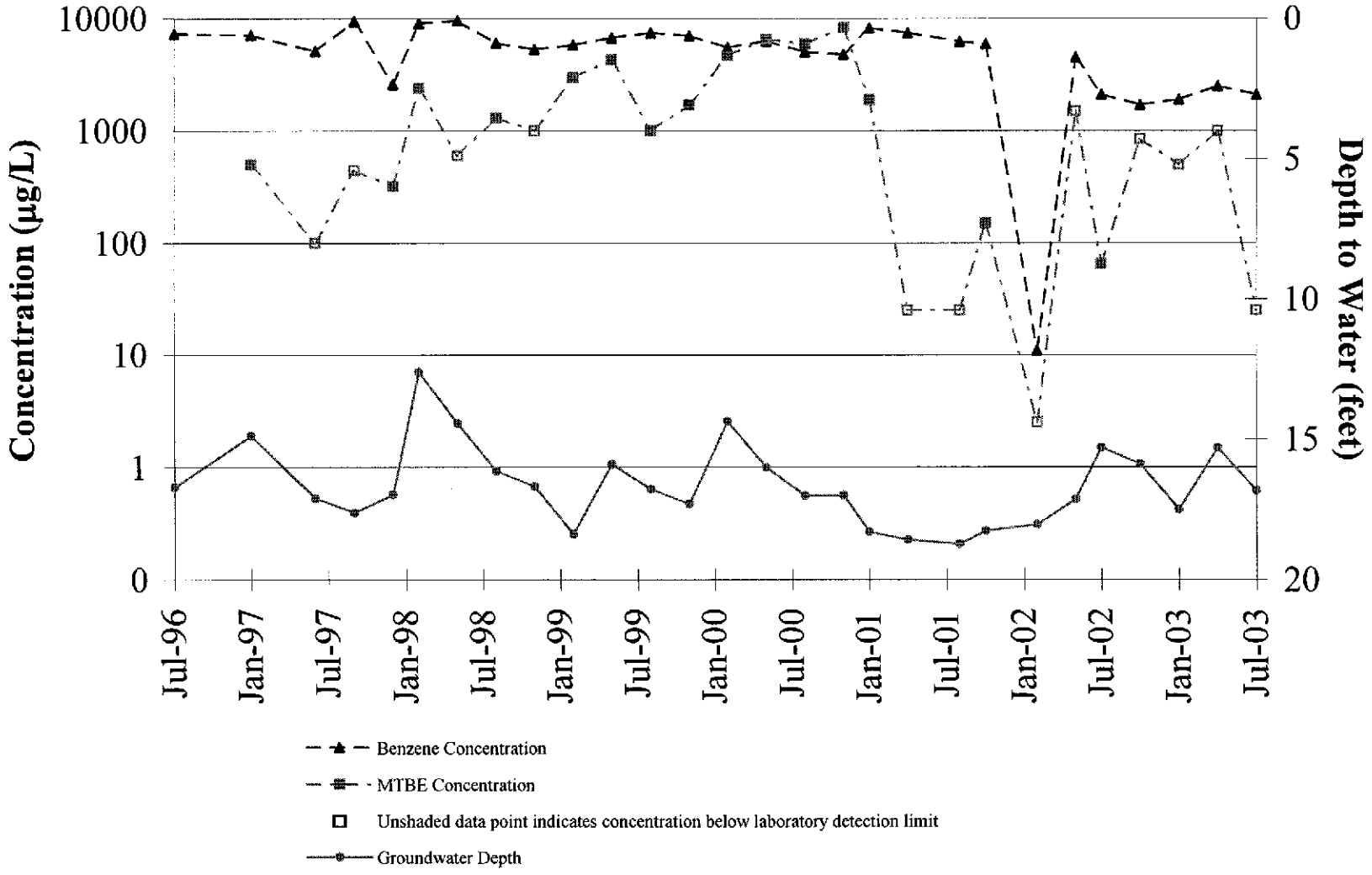
APPENDIX C

Benzene and MTBE Concentration Graphs

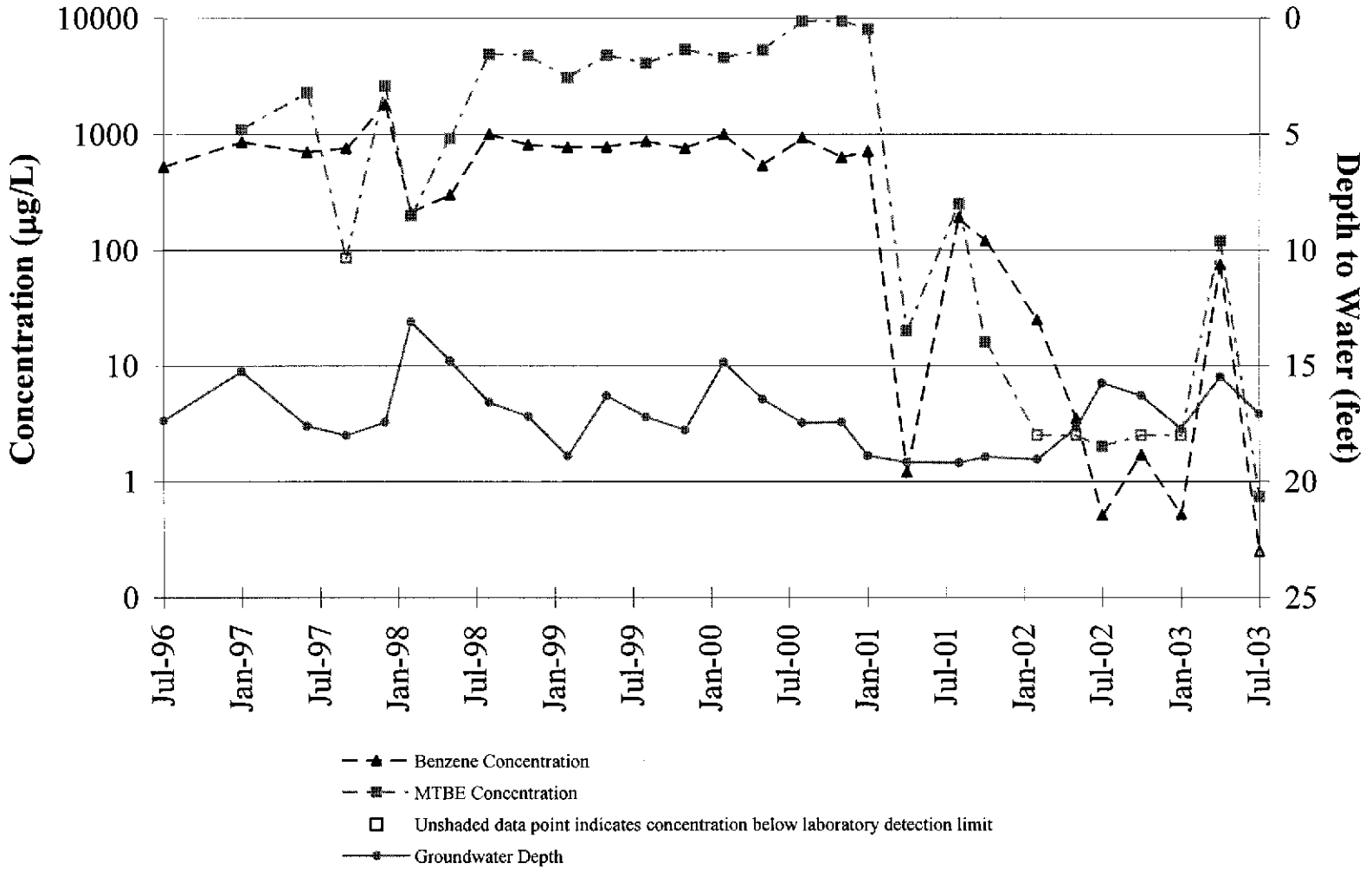
Benzene and MTBE Concentration Trends
Well MW-1



Benzene and MTBE Concentration Trends
Well MW-2



Benzene and MTBE Concentration Trends
Well MW-4



CAMBRIA

APPENDIX D

Electronic Delivery Confirmations

AB2886 Electronic Delivery

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

UPLOADING A GEO_Z FILE

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

Submittal Title:	**Vertical Well Survey Results, 706 Harrison Street, Oakland**
Submittal Date/Time:	**11/10/2003 5:38:50 PM**
Confirmation Number:	**5263996720**

Back to Main Menu

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

AB2886 Electronic Delivery

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

UPLOADING A GEO_XY FILE

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

Submittal Title:	**Horizontal Well Survey Results, 706 Harrison Street, Oakland**
Submittal Date/Time:	**11/10/2003 5:37:11 PM**
Confirmation Number:	**7379394352**

Back to Main Menu

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

AB2886 Electronic Delivery

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

UPLOADING A GEO_WELL FILE

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

Submittal Title:	**3rd Qtr 2003 Groundwater Depths, 706 Harrison Street, Oakland**
Submittal Date/Time:	**11/10/2003 5:08:17 PM**
Confirmation Number:	**4936996281**

Back to Main Menu

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

AB2886 Electronic Delivery

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

Your EDF file has been succcessfully uploaded!

Confirmation Number: 7227929472
Date/Time of Submittal: 11/10/2003 5:11:31 PM
Facility Global ID: T0600100985
Facility Name: OAKLAND AUTO PARTS
Submittal Title: 3rd Qtr 2003 Groundwater Monitoring Analytical Data
Submittal Type: GW Monitoring Report

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

CAMBRIA

APPENDIX E

Former Shell Station Groundwater Data and Analytical Results

TABLE ONE
Groundwater Elevation Data
Chan's Former Shell Station

Well ID	Date of Measurement	Top of Casing Elevation (relative to Project Datum)	Depth to Water (feet)	Groundwater Elevation (project data)
MW-1	12/15/1998	31.95	17.32	14.63
	3/4/1999		15.52	16.43
	6/17/1999		16.9	15.05
	8/27/1999		17.39	14.56
	12/9/1999		18.03	13.92
	3/7/2000		15.11	16.84
	6/7/2000		16.66	15.29
	10/11/2000		18.08	13.87
	1/18/2001		17.96	13.99
	4/5/2001		16.35	15.60
	7/17/2001		16.94	15.01
	10/5/2001	28.98	17.35	11.63
	1/18/2002		15.40	13.58
	4/11/2002		15.76	13.22
	7/8/2002		16.17	12.81
	10/9/2002		16.72	12.26
	1/29/2003		16.26	12.72
	4/11/2003		16.56	12.42
	7/18/2003		**16.42**	**12.56**
MW-2	12/15/1998	32.40	18.03	14.37
	3/4/1999		16.11	16.29
	6/17/1999		17.72	14.68
	8/27/1999	Inaccessible		
	12/9/1999	Inaccessible		
	3/7/2000	Inaccessible		
	6/7/2000		17.67	14.73
	10/11/2000		18.91	13.49
	1/18/2001		18.66	13.74
	4/5/2001		16.97	15.43
	7/17/2001		17.54	14.86
	10/5/2001	29.44	17.98	11.46
	1/18/2002		15.87	13.57
	4/11/2002		16.36	13.08
	7/8/2002		16.72	12.72
	10/9/2002		17.33	12.11
	1/29/2003		16.82	12.62
	4/11/2003		17.15	12.29
	7/18/2003		**17.05**	**12.39**
MW-3	12/15/1998	31.61	17.26	14.35
	3/4/1999		15.47	16.14
	6/17/1999		16.92	14.69
	8/27/1999		17.40	14.21
	12/9/1999		18.01	13.60
	3/7/2000		16.15	15.46
	6/7/2000		16.85	14.76
	10/11/2000		18.07	13.54
	1/18/2001		17.89	13.72
	4/5/2001		16.21	15.40
	7/17/2001		16.90	14.71
	10/5/2001	28.64	17.32	11.32
	1/18/2002		15.35	13.29
	4/11/2002		15.82	12.82
	7/8/2002		16.15	12.49
	10/9/2002		16.67	11.97
	1/29/2003		16.19	12.45
	4/11/2003		16.49	12.15
	7/18/2003		**16.42**	**12.22**

TABLE ONE
Groundwater Elevation Data
Chan's Former Shell Station

Well ID	Date of Measurement	Top of Casing Elevation (relative to Project Datum)	Depth to Water (feet)	Groundwater Elevation (project data)
MW-4	12/15/1998	32.53	17.59	14.94
	3/4/1999		15.88	16.65
	6/17/1999		17.14	15.39
	8/27/1999		17.65	14.88
	12/9/1999		18.28	14.25
	3/7/2000		15.41	17.12
	6/7/2000		17.09	15.44
	10/11/2000		18.33	14.20
	1/18/2001		18.23	14.30
	4/5/2001		16.69	15.84
	7/17/2001		17.32	15.21
	10/5/2001	29.58	17.71	11.87
	1/18/2002		15.85	13.73
	4/11/2002		16.14	13.44
	7/8/2002		16.56	13.02
	10/9/2002		17.09	12.49
	1/29/2003		16.65	12.93
	4/11/2003		16.93	12.65
	7/18/2003		**16.78**	**12.80**
MW-5	8/29/2001	29.06	17.42	11.64
	1/18/2002		15.68	13.38
	4/11/2002		16.17	12.89
	7/8/2002		16.51	12.55
	10/9/2002		17.10	11.96
	1/29/2003		16.58	12.48
	4/11/2003		16.87	12.19
	7/18/2003		**16.77**	**12.29**
EW-1	1/18/2002	28.89	15.35	13.54
	4/11/2002		15.73	13.16
	7/8/2002		16.13	12.76
	10/9/2002		16.70	12.19
	1/29/2003		16.20	12.69
	4/11/2003		16.52	12.37
	7/18/2003		**16.38**	**12.51**

TABLE THREE

Certified Analytical Results for GROUNDWATER Samples
Former Chan's Shell Station
726 Harrison St., Oakland, CA
All results are in parts per billion (ppb)

Well ID & Dates Sampled	TPH-G	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE
MW-1						
7/3/1997	18,000	2,700	350	450	900	7,400
12/5/1998	18,000	1,500	270	260	560	14,000
3/4/1999	44,000	2,800	400	440	960	43,000
6/17/1999	33,000	2,200	250	460	660	25,000
8/27/1999	6,000	1,000	97	190	230	14,000/ 16,000*
12/9/1999	15,000	1,500	160	220	420	17,000
3/7/2000	9,300	1,500	210	66	530	12,000
6/7/2000	26,000**	1,700	< 250	360	580	30,000
10/11/2000	13,000**	1,600	< 100	140	160	19,000
1/18/2001	14,000**	450	< 100	110	230	9,600
4/5/2001	38,000	2,200	180	290	590	35,000
7/17/2001	35,000**	1,800	< 100	300	170	35,000
10/5/2001	17,000	1,500	210	420	790	27,000
1/18/2002	18,000	1,500	120	160	220	22,000
4/11/2002	41,000	2,700	210	340	380	30,000
7/8/2002	36,000	2,800	140	360	300	31,000
10/9/2002	30,000	1,700	310	< 100	< 100	19,000
1/29/2003	26,000	2,400	< 100	310	520	20,000
4/11/2003	22,000	1,700	< 100	270	580	16,000
7/18/2003	40,000	3,200	290	480	830	39,000
10/9/2003	**54,000****	**3,300**	**< 130**	**350**	**310**	**49,000**
MW-2						
12/5/1998	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5
3/4/1999		Inaccessible due to car parked over well				
6/17/1999	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5
8/27/1999		Inaccessible due to car parked over well				
12/9/1999		Inaccessible due to car parked over well				
3/7/2000		Inaccessible due to car parked over well				
6/7/2000	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
10/11/2000	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
1/18/2001	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
4/5/2001	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
7/17/2001			No Longer Sampled			
MW-3						
12/5/1998	6,500***	< 50	50	60	50	3,900
3/4/1999	2,800	< 25	< 25	< 25	< 25	1,600
6/17/1999	1,000	< 10	< 10	< 10	< 10	1,400
8/27/1999	230	< 0.5	0.51	0.5	1	1,500/ 1,600*
12/9/1999	870**	< 0.5	< 0.5	< 0.5	< 0.5	2,100
3/7/2000	150**	4	< 0.5	< 0.5	< 0.5	830
6/7/2000	140**	< 0.5	< 0.5	< 0.5	< 0.5	1,100
10/11/2000	620**	< 5.0	< 5.0	< 5.0	< 5.0	1,500
1/18/2001	1,200**	< 5.0	< 5.0	< 5.0	< 5.0	1,000
4/5/2001	1,700**	< 5.0	< 5.0	< 5.0	< 5.0	1,900
7/17/2001	1,400**	< 10	< 10	< 10	< 10	1,700
10/5/2001	< 1,000	< 10	< 10	< 10	< 10	1,700
1/18/2002	1,600	26	20	16	54	2,100
4/11/2002	2,600	21	16	< 10	21	2,300
7/8/2002	2,800	< 10	< 10	< 10	< 10	3,800
10/9/2002	6,000	< 50	< 50	< 50	< 50	4,900
1/29/2003	1,800	< 10	< 10	< 10	< 10	2,300
4/11/2003	2,900	< 25	< 25	< 25	< 25	3,100
7/18/2003	3,400	< 10	< 10	< 10	< 10	3,200
10/9/2003	**2,300**	< 10	< 10	< 10	< 10	**2,700**

TABLE THREE

Certified Analytical Results for GROUNDWATER Samples
Former Chan's Shell Station
726 Harrison St., Oakland, CA
All results are in parts per billion (ppb)

Well ID & Dates Sampled	TPH-G	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE
MW-4						
12/5/1998	880	3	< 0.5	< 0.5	< 0.5	950
3/4/1999	3,800	< 25	< 25	< 25	< 25	3,700
6/17/1999	2,700	< 25	< 25	< 25	< 25	2,700
8/27/1999	440	4.7	1.1	0.58	1.3	1,600/ 1,700*
12/9/1999	1,100**	< 2.5	< 2.5	< 2.5	< 2.5	1,700
3/7/2000	< 250	< 2.5	< 2.5	< 2.5	< 2.5	1,700
6/7/2000	530**	8.8	< 2.5	< 2.5	< 2.5	440
10/11/2000	700**	3.9	< 2.5	< 2.5	< 2.5	680
1/18/2001	2,000**	< 2.5	< 2.5	< 2.5	< 2.5	780
4/5/2001	810**	< 2.5	< 2.5	< 2.5	< 2.5	620
7/17/2001	880**	< 2.5	< 2.5	< 2.5	< 2.5	570
10/5/2001	550**	< 2.5	< 2.5	< 2.5	< 2.5	710
1/18/2002	960**	< 5.0	< 5.0	< 5.0	< 5.0	1,300
4/11/2002	1,100**	< 5.0	< 5.0	< 5.0	< 5.0	550
7/8/2002	1,200**	< 5.0	< 5.0	< 5.0	< 5.0	890
10/9/2002	1,300**	< 5.0	< 5.0	< 5.0	< 5.0	880
1/29/2003	530**	< 1.0	< 1.0	< 1.0	< 1.0	190
4/11/2003	690**	< 2.5	< 2.5	< 2.5	< 2.5	310
7/18/2003	1,600**	< 10	< 10	< 10	< 10	1,300
10/9/2003	**1500*****	**< 10**	**< 10**	**< 10**	**< 10**	**1,400**
MW-5						
8/29/2001	14,000	1,300	470	230	800	14,000
1/18/2002	24,000	3,200	1,300	390	1,500	5,700
4/11/2002	23,000	2,700	980	38	950	4,300
7/8/2002	19,000	3,300	25	360	1,100	2,100
10/9/2002	24,000	2,800	990	360	820	2,400
1/29/2003	17,000	2,100	1,400	380	1,400	< 250
4/11/2003	26,000	2,900	2,200	590	2,200	630
7/18/2003	26,000	3,500	1,700	480	1,300	1,300
10/9/2003	**27,000**	**3,800**	**1,900**	**510**	**1,700**	**1,200**
EW-1						
1/18/2002	11,000	1,000	< 100	220	350	6,700
4/11/2002	17,000	1,000	< 100	120	140	9,700
7/8/2002	21,000	1,300	< 100	< 100	200	12,000
10/9/2002	12,000	900	< 25	< 25	200	9,200
1/29/2003	12,000	860	73	130	500	4,500
4/11/2003	8,700	890	< 25	< 25	82	5,400
7/18/2003	**5,700****	**500**	**28**	**53**	**35**	**3,600**
ESL	400	46	130	290	13	1,800

Notes:

* EPA Method 8020/EPA Method 8260 (MTBE confirmation)

** Hydrocarbon reported in the gasoline range does not match the laboratory gasoline stan

*** Sample contains a discrete peak in addition to gasoline

ESL = Environmental screening levels presented in the "Screening For Environmental Concerns
at Sites With Contaminated Soil and Groundwater (July 2003)" document prepared

Most current data is in **Bold**

Non-detectable concentrations noted by the less than sign (<) followed by the laboratory method reporting limit.

SEVERN TRENT STL

Submission #: 2003-07-0647

Gas/BTEX Compounds by 8015M/8021

Aqua Science Engineers, Inc.
Attn.: Robert Kitay

208 West El Pintado Road
Danville, CA 94526
Phone: (925) 820-9391 Fax: (925) 837-4853

Project: Chans

Received: 07/21/2003 16:53
Site: Oakland

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
MW-1	07/18/2003 11:20	Water	1
MW-3	07/18/2003 14:50	Water	2
MW-4	07/18/2003 15:35	Water	3
MW-5	07/18/2003 10:15	Water	4
EW-1	07/18/2003 15:00	Water	5

SEVERN TRENT STL

Submission #: 2003-07-0647

Gas/BTEX Compounds by 8015M/8021

Aqua Science Engineers, Inc.
Attn.: Robert Kitay

208 West El Pintado Road
Danville, CA 94526
Phone: (925) 820-9391 Fax: (925) 837-4853

Project: Chans

Received: 07/21/2003 16:53
Site: Oakland

Prep(s):	5030 5030	Test(s):	8015M 8021B
Sample ID:	MW-1	Lab ID:	2003-07-0647 - 1
Sampled:	07/18/2003 11:20	Extracted:	7/23/2003 14:37
Matrix:	Water	QC Batch#:	2003/07/23-01.05

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	40000	13000	ug/L	250.00	07/23/2003 14:37	g
Benzene	3200	130	ug/L	250.00	07/23/2003 14:37	
Toluene	290	130	ug/L	250.00	07/23/2003 14:37	
Ethyl benzene	480	130	ug/L	250.00	07/23/2003 14:37	
Xylene(s)	830	130	ug/L	250.00	07/23/2003 14:37	
MTBE	39000	1300	ug/L	250.00	07/23/2003 14:37	
Surrogates(s)						
Trifluorotoluene	95.1	58-124	%	250.00	07/23/2003 14:37	
4-Bromofluorobenzene-FID	98.5	50-150	%	250.00	07/23/2003 14:37	

SEVERN TRENT STL

Submission #: 2003-07-0647

Gas/BTEX Compounds by 8015M/8021

Aqua Science Engineers, Inc.
Attn.: Robert Kitay

208 West El Pintado Road
Danville, CA 94526
Phone: (925) 820-9391 Fax: (925) 837-4853

Project: Chans

Received: 07/21/2003 16:53
Site: Oakland

Prep(s):	5030 5030	Test(s):	8015M 8021B
Sample ID:	MW-3	Lab ID:	2003-07-0647 - 2
Sampled:	07/18/2003 14:50	Extracted:	7/23/2003 11:51
Matrix:	Water	QC Batch#:	2003/07/23-01.01

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	3400	1000	ug/L	20.00	07/23/2003 11:51	dp
Benzene	ND	10	ug/L	20.00	07/23/2003 11:51	
Toluene	ND	10	ug/L	20.00	07/23/2003 11:51	
Ethyl benzene	ND	10	ug/L	20.00	07/23/2003 11:51	
Xylene(s)	ND	10	ug/L	20.00	07/23/2003 11:51	
MTBE	3200	100	ug/L	20.00	07/23/2003 11:51	
Surrogates(s)						
Trifluorotoluene	94.6	58-124	%	1.00	07/23/2003 11:51	
4-Bromofluorobenzene-FID	104.6	50-150	%	1.00	07/23/2003 11:51	

SEVERN TRENT STL

Submission #: 2003-07-0647

Gas/BTEX Compounds by 8015M/8021

Aqua Science Engineers, Inc.
Attn.: Robert Kitay

208 West El Pintado Road
Danville, CA 94526
Phone: (925) 820-9391 Fax: (925) 837-4853

Project: Chans

Received: 07/21/2003 16:53
Site: Oakland

Prep(s):	5030 5030	Test(s):	8015M 8021B
Sample ID:	MW-4	Lab ID:	2003-07-0647 - 3
Sampled:	07/18/2003 15:35	Extracted:	7/23/2003 12:22
Matrix:	Water	QC Batch#:	2003/07/23-01.01

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	1600	1000	ug/L	20.00	07/23/2003 12:22	dp
Benzene	ND	10	ug/L	20.00	07/23/2003 12:22	
Toluene	ND	10	ug/L	20.00	07/23/2003 12:22	
Ethyl benzene	ND	10	ug/L	20.00	07/23/2003 12:22	
Xylene(s)	ND	10	ug/L	20.00	07/23/2003 12:22	
MTBE	1300	100	ug/L	20.00	07/23/2003 12:22	
Surrogates(s)						
Trifluorotoluene	95.7	58-124	%	20.00	07/23/2003 12:22	
4-Bromofluorobenzene-FID	107.3	50-150	%	20.00	07/23/2003 12:22	

SEVERN TRENT STL

Submission #: 2003-07-0647

Gas/BTEX Compounds by 8015M/8021

Aqua Science Engineers, Inc.
Attn.: Robert Kitay

208 West El Pintado Road
Danville, CA 94526
Phone: (925) 820-9391 Fax: (925) 837-4853

Project: Chans

Received: 07/21/2003 16:53
Site: Oakland

Prep(s):	5030 5030	Test(s):	8015M 8021B
Sample ID:	MW-5	Lab ID:	2003-07-0647 - 4
Sampled:	07/18/2003 10:15	Extracted:	7/23/2003 12:53
Matrix:	Water	QC Batch#:	2003/07/23-01.01

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	26000	5000	ug/L	100.00	07/23/2003 12:53	
Benzene	3500	50	ug/L	100.00	07/23/2003 12:53	
Toluene	1700	50	ug/L	100.00	07/23/2003 12:53	
Ethyl benzene	480	50	ug/L	100.00	07/23/2003 12:53	
Xylene(s)	1300	50	ug/L	100.00	07/23/2003 12:53	
MTBE	1300	500	ug/L	100.00	07/23/2003 12:53	
Surrogates(s)						
Trifluorotoluene	93.3	58-124	%	100.00	07/23/2003 12:53	
4-Bromofluorobenzene-FID	100.2	50-150	%	100.00	07/23/2003 12:53	

SEVERN TRENT STL

Submission #: 2003-07-0647

Gas/BTEX Compounds by 8015M/8021

Aqua Science Engineers, Inc.
Attn.: Robert Kitay

208 West El Pintado Road
Danville, CA 94526
Phone: (925) 820-9391 Fax: (925) 837-4853

Project: Chans

Received: 07/21/2003 16:53
Site: Oakland

Prep(s):	5030 5030	Test(s):	8015M 8021B
Sample ID:	EW-1	Lab ID:	2003-07-0647 - 5
Sampled:	07/18/2003 15:00	Extracted:	7/23/2003 13:24
Matrix:	Water	QC Batch#:	2003/07/23-01.01

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	8200	2500	ug/L	50.00	07/23/2003 13:24	g
Benzene	650	25	ug/L	50.00	07/23/2003 13:24	
Toluene	77	25	ug/L	50.00	07/23/2003 13:24	
Ethyl benzene	99	25	ug/L	50.00	07/23/2003 13:24	
Xylene(s)	140	25	ug/L	50.00	07/23/2003 13:24	
MTBE	4300	250	ug/L	50.00	07/23/2003 13:24	
Surrogates(s)						
Trifluorotoluene	90.6	58-124	%	50.00	07/23/2003 13:24	
4-Bromofluorobenzene-FID	99.8	50-150	%	50.00	07/23/2003 13:24	

SEVERN TRENT STL

Submission #: 2003-07-0647

Gas/BTEX Compounds by 8015M/8021

Aqua Science Engineers, Inc.
Attn.: Robert Kitay

208 West El Pintado Road
Danville, CA 94526
Phone: (925) 820-9391 Fax: (925) 837-4853

Project: Chans

Received: 07/21/2003 16:53
Site: Oakland

Batch QC Report

Prep(s): 5030 Test(s): 8015M
Method Blank **Water** **QC Batch # 2003/07/23-01.01**
MB: 2003/07/23-01.01-003 Date Extracted: 07/23/2003 08:26

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	07/23/2003 08:26	
Benzene	ND	0.5	ug/L	07/23/2003 08:26	
Toluene	ND	0.5	ug/L	07/23/2003 08:26	
Ethyl benzene	ND	0.5	ug/L	07/23/2003 08:26	
Xylene(s)	ND	0.5	ug/L	07/23/2003 08:26	
MTBE	ND	5.0	ug/L	07/23/2003 08:26	
Surrogates(s)					
Trifluorotoluene	83.0	58-124	%	07/23/2003 08:26	
4-Bromofluorobenzene-FID	94.1	50-150	%	07/23/2003 08:26	

SEVERN TRENT STL

Submission #: 2003-07-0647

Gas/BTEX Compounds by 8015M/8021

Aqua Science Engineers, Inc.
Attn.: Robert Kitay

208 West El Pintado Road
Danville, CA 94526
Phone: (925) 820-9391 Fax: (925) 837-4853

Project: Chans

Received: 07/21/2003 16:53
Site: Oakland

Batch QC Report

Prep(s): 5030 Test(s): 8015M
Method Blank **Water** **QC Batch # 2003/07/23-01.05**
MB: 2003/07/23-01.05-008 Date Extracted: 07/23/2003 10:35

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	07/23/2003 10:35	
Benzene	ND	0.5	ug/L	07/23/2003 10:35	
Toluene	ND	0.5	ug/L	07/23/2003 10:35	
Ethyl benzene	ND	0.5	ug/L	07/23/2003 10:35	
Xylene(s)	ND	0.5	ug/L	07/23/2003 10:35	
MTBE	ND	5.0	ug/L	07/23/2003 10:35	
Surrogates(s)					
Trifluorotoluene	97.0	58-124	%	07/23/2003 10:35	
4-Bromofluorobenzene-FID	101.0	50-150	%	07/23/2003 10:35	

SEVERN TRENT STL

Submission #: 2003-07-0647

Gas/BTEX Compounds by 8015M/8021

Aqua Science Engineers, Inc.
Attn.: Robert Kitay

208 West El Pintado Road
Danville, CA 94526
Phone: (925) 820-9391 Fax: (925) 837-4853

Project: Chans

Received: 07/21/2003 16:53
Site: Oakland

Batch QC Report

Prep(s): 5030 Test(s): 8021B

Laboratory Control Spike **Water** **QC Batch # 2003/07/23-01.01**

LCS 2003/07/23-01.01-004 Extracted: 07/23/2003 Analyzed: 07/23/2003 08:57
LCSD 2003/07/23-01.01-008 Extracted: 07/23/2003 Analyzed: 07/23/2003 11:20

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Benzene	83.1	89.2	100.0	83.1	89.2	7.1	77-123	20		
Toluene	83.1	88.3	100.0	83.1	88.3	6.1	78-122	20		
Ethyl benzene	80.7	86.6	100.0	80.7	86.6	7.1	70-130	20		
Xylene(s)	240	254	300	80.0	84.7	5.7	75-125	20		
Surrogates(s)										
Trifluorotoluene	450	494	500	90.0	98.8		58-124			

SEVERN TRENT STL

Submission #: 2003-07-0647

Gas/BTEX Compounds by 8015M/8021

Aqua Science Engineers, Inc.
Attn.: Robert Kitay

208 West El Pintado Road
Danville, CA 94526
Phone: (925) 820-9391 Fax: (925) 837-4853

Project: Chans

Received: 07/21/2003 16:53
Site: Oakland

Batch QC Report

Prep(s): 5030 Test(s): 8015M

Laboratory Control Spike **Water** **QC Batch # 2003/07/23-01.01**

LCS 2003/07/23-01.01-006 Extracted: 07/23/2003 Analyzed: 07/23/2003 09:59
LCSD 2003/07/23-01.01-007 Extracted: 07/23/2003 Analyzed: 07/23/2003 10:29

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Gasoline	510	498	500	102.0	99.6	2.4	75-125	20		
Surrogates(s)										
4-Bromofluorobenzene-FID	525	515	500	105.0	103.0		50-150			

SEVERN TRENT STL

Submission #: 2003-07-0647

Gas/BTEX Compounds by 8015M/8021

Aqua Science Engineers, Inc.
Attn.: Robert Kitay

208 West El Pintado Road
Danville, CA 94526
Phone: (925) 820-9391 Fax: (925) 837-4853

Project: Chans

Received: 07/21/2003 16:53
Site: Oakland

Batch QC Report

Prep(s): 5030 Test(s): 8021B

Laboratory Control Spike **Water** **QC Batch # 2003/07/23-01.05**

LCS 2003/07/23-01.05-003 Extracted: 07/23/2003 Analyzed: 07/23/2003 08:26
LCSD 2003/07/23-01.05-004 Extracted: 07/23/2003 Analyzed: 07/23/2003 08:59

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Benzene	92.0	95.3	100.0	92.0	95.3	3.5	77-123	20		
Toluene	90.1	92.6	100.0	90.1	92.6	2.7	78-122	20		
Ethyl benzene	92.0	93.5	100.0	92.0	93.5	1.6	70-130	20		
Xylene(s)	274	281	300	91.3	93.7	2.6	75-125	20		
Surrogates(s)										
Trifluorotoluene	486	487	500	97.2	97.4		58-124			

SEVERN TRENT STL

Submission #: 2003-07-0647

Gas/BTEX Compounds by 8015M/8021

Aqua Science Engineers, Inc.
Attn.: Robert Kitay

208 West El Pintado Road
Danville, CA 94526
Phone: (925) 820-9391 Fax: (925) 837-4853

Project: Chans

Received: 07/21/2003 16:53
Site: Oakland

Batch QC Report

Prep(s): 5030 Test(s): 8015M

Laboratory Control Spike **Water** **QC Batch # 2003/07/23-01.05**

LCS 2003/07/23-01.05-005 Extracted: 07/23/2003 Analyzed: 07/23/2003 09:31
LCSD 2003/07/23-01.05-006 Extracted: 07/23/2003 Analyzed: 07/23/2003 10:03

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD	%	Rec.	RPD	LCS	LCSD
Gasoline	505	497	500	101.0	99.4	1.6	75-125	20		
Surrogates(s)										
4-Bromofluorobenzene-FID	546	546	500	109.2	109.2		50-150			

SEVERN TRENT STL

Submission #: 2003-07-0647

Gas/BTEX Compounds by 8015M/8021

Aqua Science Engineers, Inc.
Attn.: Robert Kitay

208 West El Pintado Road
Danville, CA 94526
Phone: (925) 820-9391 Fax: (925) 837-4853

Project: Chans

Received: 07/21/2003 16:53

Site: Oakland

Legend and Notes

Result Flag

dp

Sample contains discrete peak in addition to gasoline.

g

Hydrocarbon reported in the gasoline range does not match our gasoline standard.

CAMBRIA

APPENDIX F

Monitoring Well Survey Report

Virgil Chavez Land Surveying
312 Georgia Street, Suite 225
Vallejo, California 94590-5907
(707) 553-2476 • Fax (707) 553-8698

October 29, 2003
Project No.: 2305-11

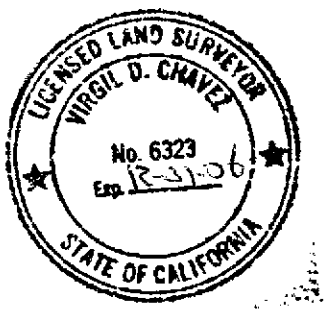
Matt Meyers
Cambria Environmental
5900 Hollis Street, Suite A
Emeryville, CA 94608

Subject: Monitoring Well Survey
Former Arco Station
706 Harrison Street
Oakland, CA

Dear Matt:

This is to confirm that we have proceeded at your request to survey the ground water monitoring wells located at the above referenced location. The survey was completed on October 27, 2003. The benchmark for this survey was a City of Oakland benchmark 25A, a brass pin in monument box in the sidewalk at the northeast corner of the intersection of 7th Street and Harrison. The latitude, longitude and coordinates are for top of casings and are based on the California State Coordinate System, Zone III (NAD83).
Benchmark Elevation = 25.812 feet City of Oakland Datum.

Latitude	Longitude	Northing	Easting	Elev.	Desc.
				26.64	RIM MW-1
37.7981483	-122.2703243	2117923.56	6050194.98	26.17	TOC MW-1
				28.19	RIM MW-2
37.7982925	-122.2702325	2117975.56	6050222.50	27.53	TOC MW-2
				27.33	RIM MW-3
37.7981772	-122.2701301	2117933.04	6050251.28	26.79	TOC MW-3
				28.79	RIM MW-4
37.7983489	-122.2701801	2117995.83	6050238.01	28.20	TOC MW-4
				25.35	RIM MW-5
37.7978901	-122.2703115	2117829.52	6050196.89	25.07	TOC MW-5
				26.34	RIM MW-6
37.7980565	-122.2707242	2117892.35	6050078.83	26.13	TOC MW-6
				26.84	RIM MW-7
37.7982843	-122.2705756	2117974.46	6050123.33	26.70	TOC MW-7



Sincerely,

Virgil D. Chavez, PLS 6323