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Alameda County  
Environmental Health  
AUG 03 2005

July 31, 2005

Mr. Don Hwang  
Hazardous Materials Specialist  
ACHCSA  
1311 Harbor Bay Parkway  
Alameda, CA 94501  
(510) 567-6700 / FAX 337-9335

SUBJECT: IIQ05 Groundwater Monitoring and System Progress Report  
1432 Harrison St., Oakland, CA 94612  
Site ID: 498

Dear Mr. Hwang:

Attached is the IIQ05 Groundwater Monitoring/System Progress Report for the above site. If you have a question, please call me.

Sincerely yours,



Mark Borsuk

# C A M B R I A

July 29, 2005

Mr. Mark Borsuk  
1626 Vallejo St.  
San Francisco, CA 94123-5116

Alameda County  
AUG 03 2005  
Environmental Health

Re: **Groundwater Monitoring and System Progress Report  
Second Quarter 2005**  
Allright Parking  
1432 Harrison Street  
Oakland, California  
Cambria Project #540-0188



Dear Mr. Borsuk:

As requested, Cambria Environmental Technology, Inc. (Cambria) has prepared this *Groundwater Monitoring and System Progress Report – Second Quarter 2005*. Presented in the report are the second quarter 2005 activities and results, and the anticipated third quarter 2005 activities. Attached are two additional copies for submittal to Mr. Don Hwang with the Alameda County Health Care Service Agency (ACHCSA) and for your file.

If you have any questions or comments regarding this report, please call me at (510) 420-3361.

Sincerely,  
**Cambria Environmental Technology, Inc.**

Subbarao Nagulapathy  
Project Engineer

Attachments: *Groundwater Monitoring and System Progress Report - Second Quarter 2005*  
(2 copies)

**Cambria  
Environmental  
Technology, Inc.**

5900 Hollis Street  
Suite A  
Emeryville, CA 94608  
Tel (510) 420-0700  
Fax (510) 420-9170

# C A M B R I A

## GROUNDWATER MONITORING AND SYSTEM PROGRESS REPORT

SECOND QUARTER 2005

Allright Parking  
1432 Harrison Street  
Oakland, California  
Cambria Project #540-0188



July 29, 2005

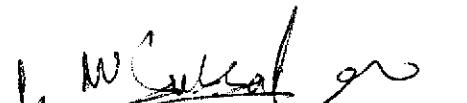
*Prepared for:*

Mr. Mark Borsuk  
1626 Vallejo Street  
San Francisco, California 94123-5116

*Prepared by:*

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

*Written by:*

  
Rowan Fennell  
Senior Staff Scientist



  
Ron Scheele, P.G.  
Senior Geologist

# C A M B R I A

## GROUNDWATER MONITORING AND SYSTEM PROGRESS REPORT

### SECOND QUARTER 2005

Allright Parking  
1432 Harrison Street  
Oakland, California  
Cambria Project #540-0188

July 29, 2005

### INTRODUCTION



On behalf of Mr. Mark Borsuk, Cambria Environmental Technology, Inc. (Cambria) has prepared this *Groundwater Monitoring and System Progress Report – Second Quarter 2005* for the above-referenced site (see Figure 1). Presented in this report are the second quarter 2005 groundwater monitoring and remediation activities, and the anticipated third quarter 2005 activities.

### SECOND QUARTER 2005 ACTIVITIES AND RESULTS

#### Monitoring Activities

**Field Activities:** On June 9, 2005, Cambria coordinated with Muskan Environmental Sampling (MES) to conduct quarterly monitoring activities. MES gauged and inspected for separate-phase hydrocarbons (SPH) in all monitoring wells. SPH was not detected in any of the wells and groundwater samples were collected from wells MW-2, MW-4, and MW-5. A sample from well MW-1 was not collected due to the well de-watering during purging activities, and a very slow recharge rate. Wells MW-3 and MW-6 are sampled on an annual basis. Groundwater monitoring field data sheets are presented as Appendix A. The groundwater monitoring data has been submitted to the GeoTracker database. See Appendix B for the GeoTracker electronic delivery confirmation.

**Sample Analyses:** Groundwater samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg) by modified EPA Method 8015, and benzene, toluene, ethylbenzene, and xylenes (BTEX) and methyl tert-butyl ether (MTBE) by EPA Method 8021B. All analyses were performed by McCampbell Analytical, Inc. of Pacheco, California. The laboratory analytical report is included as Appendix C. Hydrocarbon concentrations are shown on Figure 1 and Table 1. The analytical data was submitted to the GeoTracker database. See Appendix B for the GeoTracker electronic delivery confirmation.

## Monitoring Results

**Groundwater Flow Direction:** Based on depth-to-water measurements collected during the June 9, 2005 site visit, groundwater beneath the site flows toward the northeast at a gradient of 0.005 feet/foot. The overall gradient is consistent with previous three quarters. Depth to water and groundwater elevation data is presented in Figure 1 and Table 1.



**Hydrocarbon Distribution in Groundwater:** Hydrocarbon concentrations were detected in all three sampled wells this quarter. TPHg concentrations ranged from 240 micrograms per liter ( $\mu\text{g}/\text{L}$ ) to 20,000  $\mu\text{g}/\text{L}$  with the highest concentration detected in well MW-4. Benzene concentrations ranged from 22  $\mu\text{g}/\text{L}$  to 6,100  $\mu\text{g}/\text{L}$ , with the highest concentration detected in well MW-4. MTBE was not detected above laboratory reporting limits in any of the wells. Concentrations in all wells continued to exhibit a stable or decreasing trend in TPHg and BTEX concentrations over the past year. Please refer to Figure 1 and Table 1 for dissolved hydrocarbon concentrations, and Appendix A for benzene concentration and depth to water versus time trend graphs for wells MW-1 through MW-6. Please note that the unshaded symbols on the graphs represent results below laboratory detection limits.

## Corrective Action Activities

**System Shutdown and Removal:** Due to low influent vapor concentrations and hydrocarbon mass removal rates, Cambria requested and received approval from the Alameda County Health Care Services Agency (ACHCSA) to shutdown the soil vapor extraction/air sparge (SVE/AS) remediation system operations. On April 30, 2005, remediation activities ceased and the SVE/AS system was removed from the site on June 2, 2005.

**SVE/AS System Operation and Maintenance Activities:** During the second quarter, Cambria performed system operation and maintenance (O&M) on the SVE/AS system twice during April 2005. Individual well flow, vacuum, and hydrocarbon concentration measurements were collected from all SVE wells and from the system influent sample location (see Tables 2 and 3). During site visits, system operation parameters were recorded in specialized field forms for permit compliance.

**Total SVE System Performance:** The SVE system was operational for an average of 92% from December 20, 2001 till system shutdown on April 30, 2005. During operation of the SVE system, approximately 9,939 pounds of hydrocarbons have been extracted and destroyed by soil vapor extraction activities (see Table 2).

**AS System Performance:** Air sparging operations were shutdown with system operations on April 30, 2005. During operation, ambient air was injected into air sparge wells (AS-1 through AS-4) at flowrates of 2 standard cubic feet per minute and at pressures ranging from 2 to 11 pounds per square inch. SVE flowrates and hydrocarbon concentrations were monitored to evaluate effectiveness of air sparge activities.

## **ANTICIPATED THIRD QUARTER 2005 ACTIVITIES**



### **Monitoring Activities**

Cambria will coordinate with MES to perform quarterly monitoring activities. MES will gauge all monitoring wells; check wells for SPH; and collect groundwater samples from wells not containing SPH. As per the sampling schedule, only wells MW-1, MW-2, MW-4, and MW-5 will be sampled during the third quarter event. Groundwater samples will be analyzed for TPHg by modified EPA Method 8015, and BTEX and MTBE by EPA Method 8021B. If MTBE is detected above laboratory detection limits in any sample, confirmation analysis by EPA Method 8260 will be performed. Groundwater monitoring and sampling results will be submitted to the State's GeoTracker database. Cambria will summarize groundwater monitoring activities and results in the *Groundwater Monitoring Report - Third Quarter 2005*.

### **Corrective Action Activities**

Cambria initiated a risk-based corrective action (RBCA) analysis to evaluate the site as a low-risk case closure candidate. The RBCA analysis was proposed in Cambria's *Groundwater monitoring and System Progress Report – First Quarter 2005* dated April 13, 2005 and a letter dated June 29, 2005 notifying the start of RBCA analysis to the ACHCSA.

Allright Parking  
1432 Harrison Street  
Oakland, California  
July 29, 2005

**ATTACHMENTS**

Figure 1 - Groundwater Elevation and Hydrocarbon Concentration Map

Table 1 - Groundwater Elevations and Analytical Data

Table 2 - SVE System Performance and Soil Vapor Analytical Results

Table 3 - SVE System Parameters

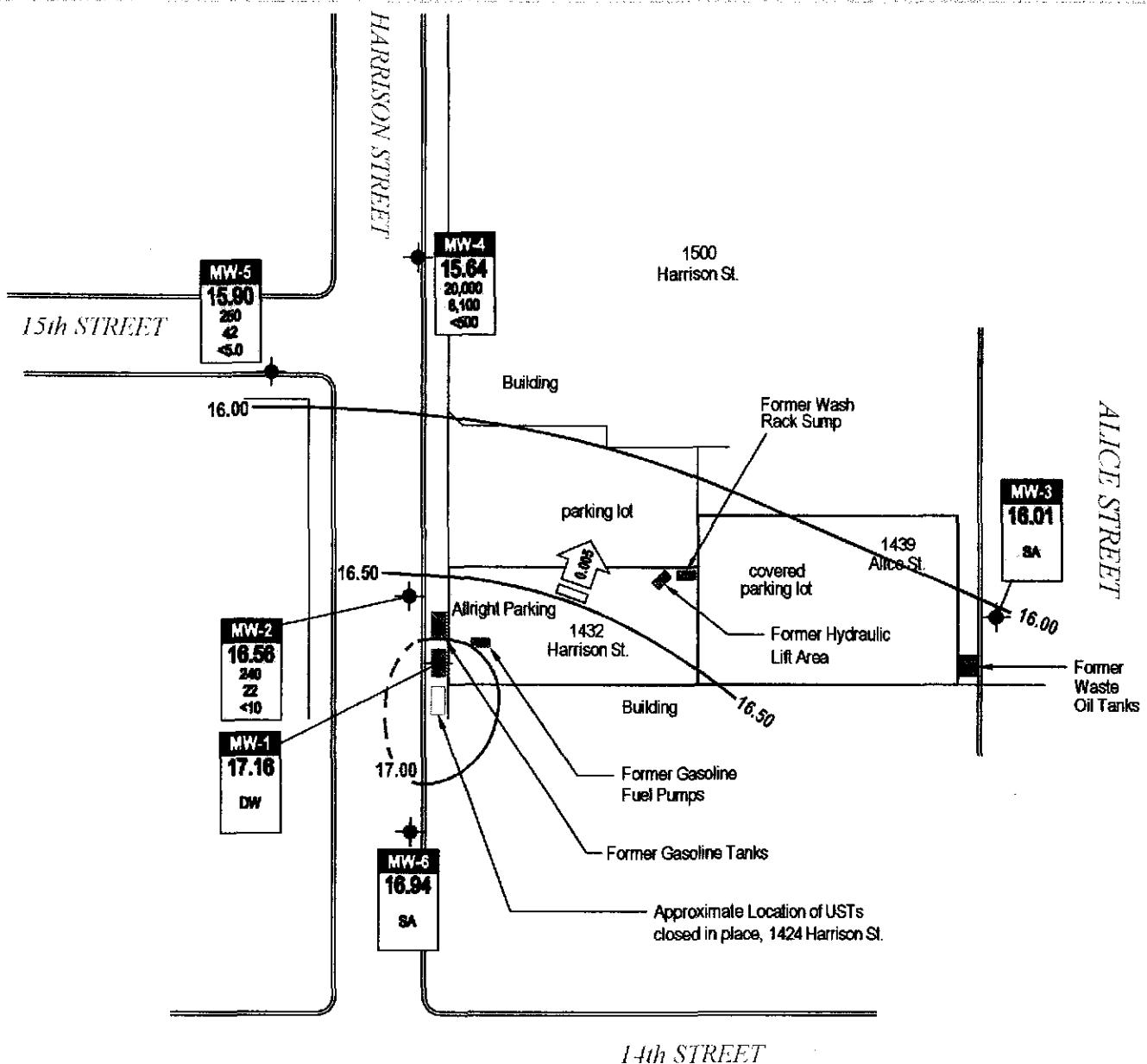
Appendix A – Groundwater Monitoring Field Data Sheets

Appendix B – GeoTracker Electronic Delivery Confirmations

Appendix C – Analytical Results for Groundwater Sampling

Appendix D – Benzene Concentration and Depth to Water versus Time Trend Graphs

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### EXPLANATION

◆	Groundwater monitoring well
16.00 —	Groundwater elevation contour, in feet above mean sea level (dashed where inferred)
0.005 →	Groundwater flow direction and gradient
Well ID ELEV TPHg Benzene MTBE	Well designation Groundwater elevation, in feet above mean sea level Hydrocarbons and MTBE in groundwater, in micrograms per liter
DW	Well dewatered during purging activities, no sample collected
SA	Sampled Annually

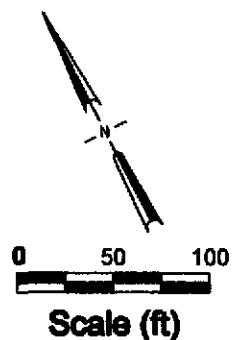


FIGURE  
1

### Allright Parking

1432 Harrison Street  
Oakland, California

C  
A  
M  
B  
R  
I  
A

### Groundwater Elevation and Hydrocarbon Concentration Map

June 9, 2005

# CAMBRIA

**Table 1. Groundwater Elevations and Analytical Data** - Allright Parking, 1432 Harrison Street, Oakland, California

Well ID TOC (feet)	Date	Depth to Groundwater (feet)	SPH Thickness (feet)	Groundwater Elevation (feet)	TPHg ↔	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Notes →
						(μg/L)					
MW-1	8/1/1994	--	--	--	170,000	35,000	51,000	2,400	13,000	--	--
34.95	12/21/1994	19.53	--	15.42	180,000	41,000	64,000	3,100	100,000	--	--
	3/13/1995	18.66	--	16.29	150,000	31,000	45,000	2,500	17,000	--	--
	6/27/1995	18.20	--	16.75	71,000	17,000	18,000	1,600	7,700	--	--
	7/7/1995	18.35	--	16.60	71,000	17,000	18,000	1,600	7,700	--	--
	9/28/1995	18.20	--	16.75	110,000	27,000	34,000	1,700	14,000	--	--
	12/20/1995	19.96	--	14.99	120,000	33,000	43,000	2,300	15,000	--	--
	3/26/1996	19.27	--	15.68	140,000	29,000	36,000	1,900	13,000	<200*	d
	6/20/1996	18.64	--	16.31	110,000	30,000	38,000	2,200	13,000	<200*	--
	9/26/1996	19.35	--	15.60	170,000	28,000	40,000	2,200	15,000	ND**	--
	10/28/1996	19.58	--	15.37	--	--	--	--	--	--	--
	12/12/1996	19.68	--	15.27	110,000	36,000	47,000	2,500	16,000	ND*	--
	3/31/1997	18.80	--	16.15	160,000	24,000	39,000	1,900	13,000	ND*	--
	6/27/1997	19.26	--	15.69	130,000	25,000	36,000	2,000	14,000	ND*	--
	9/9/1997	19.70	--	15.25	99,000	22,000	27,000	1,600	13,000	270*	--
	12/18/1997	19.25	--	15.70	160,000	30,000	44,000	2,200	15,000	ND***	--
	3/12/1998	17.52	--	17.43	190,000	20,000	49,000	2,500	18,000	ND***	--
	6/22/1998	18.63	--	16.32	90,000	19,000	40,000	2,100	16,000	--	--
	9/18/1998	18.60	--	16.35	190,000	29,000	48,000	2,400	17,000	--	--
	12/23/1998	19.18	--	15.77	140,000	24,000	44,000	2,000	8,200	--	--
	3/29/1999	18.52	--	16.43	181,000	22,200	40,100	1,844	12,200	--	--
	6/23/1999	18.60	--	16.35	80,000	20,000	33,000	1,600	11,000	--	--
	9/24/1999	19.05	--	15.90	117,000	15,100	20,700	1,550	11,800	--	--
	12/23/1999	19.95	--	15.00	186,000	25,900	39,000	1,990	12,400	--	--
	3/21/2000	18.48	--	16.47	210,000	35,000	42,000	2,200	13,000	<3,000	e
	7/3/2000	18.95	--	16.00	200,000	33,000	46,000	2,200	15,000	<200*	e
	9/7/2000	19.45	Sheen	15.50	--	--	--	--	--	--	--
	12/5/2000	19.90	--	15.05	220,000	42,000	57,000	2,700	17,000	<200	a
	3/6/2001	18.20	--	16.75	180,000	27,000	39,000	2,000	13,000	<1200 (<20)	a,l
	6/8/2001	20.14	--	14.81	170,000	28,000	40,000	1,900	13,000	<200	a
	8/27/2001	21.19	--	13.76	130,000	24,000	33,000	1,600	11,000	<350	a
	10/25/2001	21.74	--	13.21	160,000	22,000	28,000	1,500	10,000	<350	a
	3/1/2002	21.39	0.41	13.84 <sup>a</sup>	--	--	--	--	--	--	--
	6/10/2002	22.30	--	12.65	210,000	30,000	51,000	3,100	22,000	<1,000*	a
34.96	9/3/2002	21.40	--	13.56	2,500,000	31,000	170,000	29,000	170,000	2,500,000	a
	12/22/2002	20.50	--	14.46	89,000	2,600	9,300	530	28,000	<1,700	a,m
	1/23/2003	18.57	--	16.39	130,000	600	1,600	<100	41,000	<50***	a,b,l
	6/12/2003	19.10	0.07	15.91 <sup>b</sup>	--	--	--	--	--	--	--
	7/23/2003	19.42	0.07	15.59 <sup>a</sup>	--	--	--	--	--	--	--
35.37#	12/22/2003	17.09	0.01	18.29 <sup>a</sup>	--	--	--	--	--	--	--
	3/10/2004	13.82	--	21.55	22,000	190	250	<10	5,100	<100	a,c
	6/16/2004	14.75	--	20.62	2,700	23	160	13	520	<25	a
	9/27/2004	18.02	--	17.35	27,000	580	2,000	56	6,800	<10***	a,m
	12/22/2004	11.25	--	24.12	250	3.5	18	<0.5	47	<0.5***	a,m
	3/3/2005	14.42	--	20.95	320	5.2	13	3.2	46	<5.0	a
34.96##	6/9/2005	17.80	--	17.16	--	--	--	--	--	--	+
MW-2	8/1/1994	--	--	--	130,000	28,000	35,000	3,000	12,000	--	--
35.18	12/21/1994	19.91	--	15.27	200	140,000	200,000	3,500	22,000	--	--
	3/13/1995	19.15	--	16.03	500	9,200	23,000	7,000	36,000	--	--
	6/27/1995	18.74	--	16.44	120,000	23,000	30,000	2,700	13,000	--	--
	7/7/1995	18.80	--	16.38	120,000	23,000	30,000	2,700	13,000	--	--
	9/28/1995	19.30	--	15.88	110,000	23,000	29,000	2,500	11,000	--	--
	12/20/1995	20.24	--	14.94	83,000	980	1,800	2,200	10,000	--	--
	3/26/1996	19.69	--	15.49	150,000	23,000	32,000	2,800	12,000	<200*	d
	6/20/1996	19.20	--	15.98	94,000	15,000	23,000	2,400	12,000	<200*	--
	9/26/1996	19.80	--	15.38	150,000	20,000	29,000	2,800	12,000	ND**	--
	10/28/1996	20.18	--	15.00	--	--	--	--	--	--	--
	12/12/1996	20.17	--	15.01	58,000	3,100	11,000	1,700	8,100	220*	--
	3/31/1997	19.67	--	15.51	38,000	6,000	7,900	690	3,300	ND*	--
	6/27/1997	19.68	--	15.50	62,000	13,000	16,000	1,300	6,000	ND*	--
	9/9/1997	20.20	--	14.98	81,000	16,000	18,000	1,800	8,600	ND***	--
	12/18/1997	19.80	--	15.38	110,000	18,000	26,000	2,200	9,500	ND***	--
	3/12/1998	18.07	--	17.11	120,000	16,000	26,000	2,200	9,400	ND***	--
	6/22/1998	18.29	--	16.89	38,000	9,800	9,500	1,500	6,000	--	--
	9/18/1998	19.09	--	16.09	68,000	12,000	16,000	1,400	5,900	--	--
	12/23/1998	19.67	--	15.51	180,000	16,000	22,000	2,200	8,300	--	--
	3/29/1999	18.97	--	16.21	16,600	1,380	1,920	373	1,840	--	--
	6/23/1999	18.25	--	16.93	41,000	10,000	9,400	1,100	5,000	--	--
	9/24/1999	19.60	--	15.58	40,600	4,880	3,490	1,090	4,560	--	--
	12/23/1999	20.21	--	14.97	61,900	6,710	9,320	1,150	5,360	--	--
	3/21/2000	18.93	--	16.25	98,000	14,000	21,000	1,600	6,900	<1600	a
	7/3/2000	19.38	--	15.80	140,000	18,000	33,000	2,600	11,000	<200*	a
	9/7/2000	19.83	--	15.35	110,000	17,000	21,000	2,200	9,700	<100***	a,l
	12/5/2000	20.30	--	14.88	130,000	19,000	28,000	2,500	11,000	<200	a

# CAMBRIA

**Table 1. Groundwater Elevations and Analytical Data - Allright Parking, 1432 Harrison Street, Oakland, California**

Well ID TOC (feet)	Date	Depth to Groundwater (feet)	SPH Thickness (feet)	Groundwater Elevation (feet)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Notes
						(µg/L)					
MW-2	3/6/2001	19.57	--	15.61	32,000	3,400	3,400	580	2,500	<200	a
<i>Continued</i>	6/8/2001	20.59	--	14.59	72,000	9,400	9,200	1,300	5,800	<200	a
	8/27/2001	21.79	--	13.39	110,000	17,000	28,000	2,600	11,000	<950	a
	10/25/2001	22.05	--	13.13	110,000	15,000	18,000	2,000	8,700	<350	a
	3/1/2002	21.80	--	13.38	3,100	370	180	62	330	<50*	a
	6/10/2002	22.83	--	12.35	7,800	2,000	1,100	76	570	<100*	a
<i>35.21</i>	9/3/2002	22.03	--	13.18	21,000	2,400	2,900	320	1,400	<500	a
	12/22/2002	22.70	--	12.51	630	48	56	19	82	<5.0	a
	1/23/2003	20.49	--	14.72	1,100	27	32	19	150	<25	a
	6/12/2003	21.03	--	14.18	10,000	2,100	1,600	150	660	<250	a
	7/23/2003	21.40	--	13.81	28,000	4,800	4,800	380	1,700	<500	a
	12/22/2003	19.33	--	15.88	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
	3/10/2004	19.33	--	15.88	3,100	460	290	38	240	<50	a
	6/16/2004	19.90	--	15.31	9,100	1,600	1,200	220	830	<400	a
	9/27/2004	22.08	--	13.13	14,000	2,800	490	340	1,600	<350	a
	12/22/2004	21.74	--	13.47	1,100	300	28	22	71	<15	a
	3/3/2005	19.60	--	15.61	340	12	4.4	9.1	28	<10	a
	6/9/2005	18.65	--	16.56	240	22	2.7	6.4	27	<10	a
MW-3	8/1/1994	--	--	--	<50	<0.5	<0.5	<0.5	<2.0	--	--
<i>33.97</i>	12/21/1994	18.82	--	15.15	<50	<0.5	<0.5	<0.5	<0.5	--	--
<i>(annual sampling)</i>	3/13/1995	17.86	--	16.11	<50	<0.5	<0.5	<0.5	<0.5	--	e
	7/7/1995	18.25	--	15.72	--	--	--	--	--	--	f,g
	9/28/1995	18.00	--	15.97	--	--	--	--	--	--	h
	12/20/1995	18.74	--	15.23	--	--	--	--	--	--	--
	3/26/1996	18.25	--	15.72	--	--	--	--	--	--	--
	6/20/1996	18.35	--	15.62	--	--	--	--	--	--	--
	9/26/1996	19.12	--	14.85	--	--	--	--	--	--	--
	10/28/1996	19.11	--	14.86	--	--	--	--	--	--	--
	12/12/1996	18.61	--	15.36	--	--	--	--	--	--	--
	3/31/1997	18.35	--	15.62	--	--	--	--	--	--	--
	6/27/1997	18.81	--	15.16	--	--	--	--	--	--	--
	9/9/1997	19.18	--	14.79	--	--	--	--	--	--	--
	12/18/1997	18.64	--	15.33	--	--	--	--	--	--	--
	3/12/1998	17.56	--	16.41	--	--	--	--	--	--	--
	6/22/1998	18.64	--	15.33	--	--	--	--	--	--	--
	9/18/1998	18.33	--	15.64	--	--	--	--	--	--	--
	12/23/1998	18.60	--	15.37	--	--	--	--	--	--	--
	3/29/1999	17.85	--	16.12	--	--	--	--	--	--	--
	6/23/1999	18.67	--	15.30	--	--	--	--	--	--	--
	9/24/1999	18.64	--	15.33	--	--	--	--	--	--	--
	12/23/1999	19.32	--	14.65	--	--	--	--	--	--	--
	3/21/2000	17.89	--	16.08	--	--	--	--	--	--	--
	7/3/2000	18.40	--	15.57	--	--	--	--	--	--	--
	9/7/2000	18.75	--	15.22	--	--	--	--	--	--	--
	12/5/2000	19.03	--	14.94	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
	3/6/2001	18.12	--	15.85	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
	6/8/2001	20.02	--	13.95	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
	8/27/2001	21.09	--	12.88	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
	10/25/2001	21.29	--	12.68	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
	3/1/2002	21.14	--	12.83	<50	<0.5	<0.5	<0.5	<0.5	<5.0*	--
	6/10/2002	21.99	--	11.98	<50	<0.5	<0.5	<0.5	<0.5	<5.0*	--
	9/3/2002	21.17	--	12.84	--	--	--	--	--	--	--
<i>34.01</i>	12/22/2002	21.94	--	12.07	--	--	--	--	--	--	--
	1/23/2003	20.08	--	13.93	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
	6/12/2003	20.95	--	13.06	--	--	--	--	--	--	--
	7/23/2003	21.28	--	12.73	--	--	--	--	--	--	--
	12/22/2003	19.05	--	14.96	--	--	--	--	--	--	--
	3/10/2004	18.22	--	15.79	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
	6/16/2004	18.82	--	15.19	--	--	--	--	--	--	--
	9/27/2004	21.03	--	12.98	--	--	--	--	--	--	--
	12/22/2004	20.69	--	13.32	--	--	--	--	--	--	--
	3/5/2005	17.94	--	16.07	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
	6/9/2005	18.00	--	16.01	--	--	--	--	--	--	--
MW-4	10/28/1996	19.32	--	14.43	10,000	3,900	420	400	360	<200*	a
<i>33.75</i>	12/12/1996	19.42	--	14.33	11,000	4,200	410	420	260	32*	--
	3/31/1997	18.67	--	15.08	ND	ND	ND	ND	ND	ND*	--
	6/27/1997	19.08	--	14.67	160	49	1.2	ND	5.9	ND*	--
	9/9/1997	19.33	--	14.42	7,400	5,000	410	230	470	33*	--
	12/18/1997	19.17	--	14.58	710	170	8.0	ND	39	ND**	--
	3/12/1998	17.68	--	16.07	1,300	410	21	ND	57	ND***	--
	6/22/1998	17.63	--	16.12	ND	ND	ND	ND	ND	--	--
	9/18/1998	18.58	--	15.17	ND	42	1.6	ND	4.8	--	--
	12/23/1998	19.01	--	14.74	1,900	1,000	76	50	120	--	--

# CAMBRIA

**Table 1. Groundwater Elevations and Analytical Data - Allright Parking, 1432 Harrison Street, Oakland, California**

Well ID TOC (feet)	Date	Depth to Groundwater (feet)	SPH Thickness (feet)	Groundwater Elevation (feet)	TPHg ↔	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Notes →
						(μg/L)					
MW-4 <i>Continued</i>	3/29/1999	18.35	--	15.40	ND	ND	ND	ND	ND	--	--
	6/23/1999	17.58	--	16.17	ND	ND	ND	ND	ND	--	--
	9/24/1999	19.05	--	14.70	9,150	3,270	131	34	537	--	--
	12/23/1999	19.41	--	14.34	12,200	5,360	275	424	592	--	--
	3/21/2000	18.42	--	15.33	45,000	16,000	1,100	1,400	1,900	1400* (<35)***	a,f
	7/3/2000	18.82	--	14.93	33,000	10,000	720	840	1,800	<200*	a
	9/7/2000	19.21	--	14.54	26,000	8,800	800	740	1,500	<50***	a,c,l
	12/5/2000	19.60	--	14.15	41,000	11,000	840	930	1,900	<200	a
	3/6/2001	18.24	--	15.51	1,100	400	5.7	<0.5	20	<5.0	a
	6/8/2001	20.91	--	12.84	92	19	<0.5	<0.5	1	<5.0	a
	8/27/2001	21.63	--	12.12	49,000	17,000	1700	1,700	3,200	<260	a
	10/25/2001	21.70	--	12.05	57,000	16,000	1,500	1,600	2,600	<300	a
	3/1/2002	21.53	--	12.22	400	140	2.3	<0.5	12	<5.0*	a
	6/10/2002	22.23	--	11.52	<50	2.5	<0.5	<0.5	<0.5	<5.0*	--
	9/3/2002	21.85	--	11.90	31,000	9,700	300	650	1,100	<1,000	a
	12/22/2002	22.39	--	11.36	35,000	13,000	310	1,100	1,800	<1,500	a
	1/23/2003	20.61	--	13.14	51,000	18,000	430	1,500	2,200	<5.0***	a,f
	6/12/2003	21.20	--	12.55	80	12	<0.5	<0.5	1.0	<10	a
	7/23/2003	21.51	--	12.24	20,000	7,600	100	65	660	<250	a
	12/22/2003	19.60	--	14.15	26,000	9,500	200	380	1,100	<150	a
	3/10/2004	18.81	--	14.94	14,000	4,800	150	320	530	<400	a
	6/16/2004	19.32	--	14.43	2,800	1,100	24	17	100	<50	a
	9/27/2004	21.45	--	12.30	45,000	16,000	260	1,700	2,000	<25***	a
	12/22/2004	21.15	--	12.60	29,000	10,000	160	890	1,200	<5.0***	a,j
	3/3/2005	18.60	--	15.15	18,000	6,400	98	500	610	<600	a
	6/9/2005	18.11	--	15.64	20,000	6,100	110	460	580	<500	a
MW-5 34.63	10/28/1996	19.88	--	14.75	90	4.0	0.6	<0.50	<0.50	16*	b
	12/12/1996	20.09	--	14.54	230	5.6	0.9	ND	0.9	3.6*	
	3/31/1997	19.24	--	15.39	90	3.1	ND	ND	ND	ND*	--
	6/27/1997	19.16	--	15.47	ND	ND	ND	ND	ND	ND*	--
	9/9/1997	19.93	--	14.70	ND	ND	ND	ND	ND	ND*	--
	12/18/1997	19.77	--	14.86	ND	ND	ND	ND	ND	ND***	--
	3/12/1998	19.77	--	14.86	79	2.3	ND	0.8	ND	ND*	--
	6/22/1998	18.08	--	16.55	ND	ND	ND	ND	ND	--	--
	9/18/1998	19.12	--	15.51	ND	ND	ND	ND	ND	--	--
	12/23/1998	19.60	--	15.03	ND	0.8	0.9	ND	ND	--	--
	3/29/1999	18.88	--	15.75	ND	ND	ND	ND	ND	--	--
	6/23/1999	18.05	--	16.58	ND	ND	ND	ND	ND	--	--
	9/24/1999	19.61	--	15.02	ND	ND	ND	ND	ND	--	--
	12/23/1999	20.01	--	14.62	ND	ND	ND	ND	ND	--	--
	3/21/2000	19.05	--	15.58	140	<0.5	<0.5	<0.5	<0.5	<5.0	--
	7/3/2000	19.40	--	15.23	85	8.1	3.1	1.6	7.8	<5.0*	k
	9/7/2000	19.62	--	15.01	<50	<0.5	<0.5	<0.5	<0.5	<5.0*	a
	12/5/2000	20.25	--	14.38	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
	3/6/2001	19.07	--	15.56	91	5.5	<0.5	<0.5	<0.5	<5.0	--
	6/8/2001	20.77	--	13.86	290	22.0	0.8	<0.5	<0.5	<5.0	--
	8/27/2001	21.33	--	13.30	660	24.0	2.2	1.3	4.0	<25	a
	10/25/2001	21.62	--	13.01	55	3.5	<0.5	<0.5	<0.5	<5.0	a
	3/1/2002	21.49	--	13.14	200	1.9	0.69	<0.5	<0.5	<5.0*	a
	6/10/2002	22.15	--	12.48	<50	<0.5	<0.5	<0.5	<0.5	<5.0*	a
	9/3/2002	21.50	--	13.13	60	1.9	<0.5	<0.5	0.77	<5.0	--
	12/22/2002	22.19	--	12.44	82	0.57	<0.5	0.68	<0.5	<5.0	a
	1/23/2003	20.27	--	14.36	<50	2.1	<0.5	<0.5	<0.5	<5.0	a
	6/12/2003	21.10	--	13.53	<50	0.88	<0.5	<0.5	<0.5	<5.0	--
	7/23/2003	21.47	--	13.16	<50	4.0	<0.5	<0.5	<0.5	<5.0	--
	12/22/2003	19.57	--	15.06	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
	3/10/2004	19.61	--	15.02	990	200	2.9	4.0	20	<70	--
	6/16/2004	20.15	--	14.48	250	42	<0.5	0.88	<0.5	<35	a
	9/27/2004	22.14	--	12.49	1,600	140	4.8	45	18	<110	a
	12/22/2004	21.81	--	12.82	<50	5.3	<0.5	<0.5	0.66	<5.0	--
	3/3/2005	19.35	--	15.28	2,000	330	4.4	63	39	<150	a
	6/9/2005	18.73	--	15.90	250	42	1.4	14	3.2	<5.0	a
MW-6 35.89 (annual sampling)	10/28/1996	20.02	--	15.87	<50	<0.50	<0.50	<0.50	<0.50	<2.0*	n
	12/12/1996	20.18	--	15.71	ND	ND	ND	ND	ND	ND*	
	3/31/1997	19.81	--	16.08	--	--	--	--	--	--	--
	6/27/1997	19.76	--	16.13	--	--	--	--	--	--	--
	9/9/1997	20.06	--	15.83	ND	ND	ND	ND	ND	ND*	--
	12/18/1997	19.90	--	15.99	ND	ND	ND	ND	ND	--	--
	3/12/1998	18.00	--	17.89	ND	ND	ND	ND	ND	ND*	--
	6/22/1998	18.43	--	17.46	ND	ND	ND	ND	ND	--	--
	9/18/1998	19.10	--	16.79	ND	ND	ND	ND	ND	--	--
	12/23/1998	19.61	--	16.28	ND	ND	ND	ND	ND	--	--
	3/29/1999	18.92	--	16.97	ND	ND	ND	ND	ND	--	--

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**Table 1. Groundwater Elevations and Analytical Data - Allright Parking, 1432 Harrison Street, Oakland, California**

Well ID TOC (feet)	Date	Depth to Groundwater (feet)	SPH Thickness (feet)	Groundwater Elevation (feet)	TPHg	Benzene		Toluene ( $\mu\text{g/L}$ )	Ethylbenzene	Xylenes	MTBE	Notes
						←	→					
MW-6	6/23/1999	18.41	--	17.48	ND	ND	ND	ND	<0.5	<0.5	<5.0	--
<i>Continued</i>	9/24/1999	19.61	--	16.28	ND	ND	ND	ND	<0.5	<0.5	<5.0*	--
	12/23/1999	20.30	--	15.59	ND	ND	ND	ND	<0.5	<0.5	<5.0	--
	3/21/2000	18.97	--	16.92	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	--
	7/3/2000	19.46	--	16.43	59	5.1	2.3	1.1	5.3	5.3	<5.0*	--
	9/7/2000	19.95	--	15.94	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0*	a
	12/5/2000	20.50	--	15.39	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	--
	3/6/2001	19.54	--	16.35	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	--
	6/8/2001	20.92	--	14.97	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<5.1	--
	8/27/2001	21.37	--	14.52	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	--
	10/25/2001	21.59	--	14.30	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	--
	3/1/2002	21.33	--	14.56	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0*	--
	6/10/2002	21.97	--	13.92	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0*	--
	9/3/2002	21.55	--	14.34	--	--	--	--	--	--	--	--
	12/22/2002	22.25	--	13.64	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	--
	1/23/2003	20.47	--	15.42	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	--
	6/12/2003	21.09	--	14.80	--	--	--	--	--	--	--	--
	7/23/2003	21.42	--	14.47	--	--	--	--	--	--	--	--
	12/22/2003	19.49	--	16.40	--	--	--	--	--	--	--	--
	3/10/2004	20.20	--	15.69	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	--
	6/16/2004	20.73	--	15.16	--	--	--	--	--	--	--	--
	9/27/2004	22.88	--	13.01	--	--	--	--	--	--	--	--
	12/22/2004	22.53	--	13.36	--	--	--	--	--	--	--	--
	3/3/2005	19.87	--	16.02	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	--
	6/9/2005	18.95	--	16.94	--	--	--	--	--	--	--	--
Trip Blank	3/21/2000	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	--
	9/7/2000	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	--

**Abbreviations, Methods, & Notes**

TOC = Top of casing elevation

SPH = Separate-phase hydrocarbons

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

Benzene, toluene, ethylbenzene, and xylenes by EPA Method 8021B

MTBE = Methyl tert-butyl ether \* = MTBE by EPA Method 8021B

\*\* = MTBE by EPA Method 8240

\*\*\* = MTBE by EPA Method 8260

$\mu\text{g/L}$  = micrograms per liter, equivalent to parts per billion

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

<ND = Not detected in sample above n  $\mu\text{g/L}$ .

ND = Not detected above laboratory detection limit

x = Groundwater elevation adjusted for SPH by the relation:

Groundwater Elevation = TOC Elevation - Depth to Groundwater + (0.7 x SPH thickness)

# = The wellhead elevation was raised by 0.41 feet when well MW-1 was connected to the SVE system on October 31, 2003.

## = The wellhead elevation was lowered by 0.41 feet when well MW-1 was disconnected from the SVE system on April 30, 2005.

+ = Well de-watered during purging, no measurable water to sample.

a = Unmodified or weakly modified gasoline is significant.

b = Lighter than water immiscible sheen is present.

c = Liquid sample that contains greater than ~2 vol. % sediment.

d = MTBE result confirmed by secondary column or GC/MS analysis.

e = Sample analyzed for purgeable hydrocarbons by EPA Method 8010, no purgeable hydrocarbons were detected.

f = Sample analyzed for VOCs by EPA Method 8240, no non-BTEX compounds were detected.

g = Sample analyzed for Total Petroleum Hydrocarbons as motor oil (TPHmo) by Modified EPA Method 8015, no TPHmo was detected.

h = Analytic sampling discontinued. Approved by Alameda County Department of Environmental Health.

i = Lighter than gasoline range compounds are significant.

j = Gasoline range compounds having broad chromatographic peaks are significant.

k = No recognizable pattern.

l = Sample diluted due to high organic content.

m = Liquid sample that contains greater than ~1 vol. % sediment.

n = TOC well elevation was increased by 3 ft based on a benchmark discrepancy discovered during a well survey performed on September 11, 2002

Table 2. SVE System - Performance and Soil Vapor Analytical Results: Allright Parking, 1432 Harrison Street, Oakland, California

Date	Hour Meter Readings (hours)	System Uptime (%)	System Vacuum (H <sub>2</sub> O)	Total Well Flow Rate (prior to dilution) (scfm)	Total Well HC Conc. (ppmv) TPHg	System Inlet Temp. (degrees F)	System Flow Rate (after dilution) (cfm)	System Influent HC Conc. <sup>1</sup> (ppmv) TPHg	Effluent HC Conc. <sup>1</sup> (ppmv) TPHg Benz		HC Removal Rate <sup>2</sup> (pounds/day) TPHg	Emission Rate <sup>2</sup> (pounds/day) TPHg Benz		TPHg Destruction Efficiency <sup>3</sup> (%)	Gasoline Cumulative Removal <sup>4</sup> (pounds)
									TPHg	Benz		TPHg	Benz		
12/20/2001	13.0	--		--	17,000	825	170	920	<10	<0.15	50.18	<0.545	<0.007	-- <sup>3</sup>	0
1/7/2002	443.8	100%		--	12,000	1017	105	1,400	<10	<0.15	47.16	<0.337	<0.005	-- <sup>3</sup>	901
2/4/2002	576.2	20%		--	13,000	916	150	1,100	<10	<0.15	52.94	<0.481	<0.007	-- <sup>3</sup>	1161
3/5/2002	1268.2	99%		--	16,000	1020	135	1,000	<10	<0.15	43.31	<0.433	<0.006	-- <sup>3</sup>	2687
4/2/2002	1939.9	100%		--	4,800	715	114	390	<10	<0.15	14.26	<0.366	<0.005	-- <sup>3</sup>	3899
4/15/2002	2253.2	100%	136	18.3	4,200	709	*	*	28	<0.15	24.67	0.16	<0.001	99.3	4086
5/6/2002	2655.2	80%	77	10.1	5,100	735	*	*	14	<0.15	16.58	0.05	<0.000	99.7	4499
6/5/2002	3373.2	100%	80	15.1	3,800	652	*	*	14	<0.15	18.41	0.07	<0.001	99.6	4995
7/2/2002	4024.9	101%	80	16.3	3,000	672	*	*	<15	0.16	15.70	<0.078	<0.001	99.5	5495
8/5/2002	4838.8	100%	80	11.6	1,900	667	*	*	<10	<0.15	7.10	<0.037	<0.001	-- <sup>3</sup>	6027
9/10/2002	5700.9	100%	80	10.5	1,800	609	*	*	<10	<0.15	6.08	<0.034	<0.000	-- <sup>3</sup>	6282
10/2/2002	6229.7	100%	81	14.0	2,900	801	*	*	<10	<0.15	13.04	<0.045	<0.001	-- <sup>3</sup>	6416

Table 2. SVE System - Performance and Soil Vapor Analytical Results: Allright Parking, 1432 Harrison Street, Oakland, California

Date	Hour Meter Readings (hours)	System Uptime (%)	System Vacuum (H <sub>2</sub> O)	Total Well Flow Rate (prior to dilution)	Total Well HC Conc. (ppmv)	System Inlet Temp. (degrees F)	System Flow Rate (after dilution) (cfm)	System Influent HC Conc. <sup>1</sup> (ppmv)	Effluent HC Conc. <sup>1</sup> (ppmv)		HC Removal Rate <sup>2</sup> (pounds/day)	Emission Rate <sup>2</sup> (pounds/day)		TPHg Destruction Efficiency <sup>3</sup> (%)	Gasoline Cumulative Removal <sup>4</sup> (pounds)
				(scfm)	(TPHg)				TPHg	Benz		TPHg	Benz		
11/6/2002	7073.8	100%	82	12.1	1,900	848	*	*	<10	<0.15	7.40	<0.039	<0.001	-- <sup>3</sup>	6875
12/5/2002	7771.5	100%	90	8.4	1,400	840	*	*	<10	<0.15	3.78	<0.027	<0.000	-- <sup>3</sup>	7090
1/8/2003	8580.5	99%	91	9.5	3,100	813	*	*	<10	<0.15	9.42	<0.030	<0.000	-- <sup>3</sup>	7217
2/12/2003	9424.0	100%	93	7.6	5,200	801	*	*	<10	<0.15	12.61	<0.024	<0.000	-- <sup>3</sup>	7548
3/4/2003	9902.8	100%	90	5.5	4,100	798	*	*	<10	<0.15	7.27	<0.018	<0.000	-- <sup>3</sup>	7800
4/3/2003	10623.3	100%	115	9.5	1,600	802	*	*	<10	<0.15	4.86	<0.030	<0.000	-- <sup>3</sup>	8018
5/15/2003	11629.8	100%	119	6.7	1,300	840	*	*	<10	<0.15	2.80	<0.022	<0.000	-- <sup>3</sup>	8222
6/2/2003	12061.5	100%	116	4.4	526	805	*	*	<10	<0.15	0.75	<0.014	<0.000	-- <sup>3</sup>	8272
7/2/2003	12779.5	100%	120	9.0	680	836	*	*	<10	<0.15	1.95	<0.029	<0.000	-- <sup>3</sup>	8295
8/7/2003	13643.9	100%	117	7.6	370	749	*	*	<10	<0.15	0.90	<0.024	<0.000	-- <sup>3</sup>	8365
9/3/2003	14288.9	100%	116	9.7	2,000	737	*	*	<10	<0.15	6.19	<0.031	<0.000	-- <sup>3</sup>	8389
10/7/2003	15109.8	100%	119	4.5	1,100	752	*	*	<10	<0.15	1.57	<0.014	<0.000	-- <sup>3</sup>	8601

**Table 2. SVE System - Performance and Soil Vapor Analytical Results: Allright Parking, 1432 Harrison Street, Oakland, California**

Date	Hour Meter Readings (hours)	System Uptime (%)	System Vacuum (H <sub>2</sub> O)	Total Well Flow Rate (prior to dilution) (scfm)	Total Well HC Conc. (ppmv)	System Inlet Temp. (degrees F)	System Flow Rate (after dilution) (cfm)	System Influent HC Conc. <sup>1</sup> (ppmv)	Effluent HC Conc. <sup>1</sup> (ppmv)		HC Removal Rate <sup>2</sup> (pounds/day)	Emission Rate <sup>2</sup> (pounds/day)		TPHg Destruction Efficiency <sup>3</sup> (%)	Gasoline Cumulative Removal <sup>4</sup> (pounds)
									TPHg	Benz		TPHg	Benz		
11/11/2003	15881.9	92%	90	9.0	7,000	765	38	3,700	7.3	0.18	20.11	0.021	0.000	-- <sup>3</sup>	8652
12/2/2003	16378.9	99%	96	3.0	2,100	717	*	*	<10	<0.15	2.01	<0.010	<0.000	-- <sup>3</sup>	9068
1/7/2004	17180.9	93%	98	3.2	2,900	905	*	*	<10	<0.15	2.97	<0.010	<0.000	-- <sup>3</sup>	9135
2/11/2004	18021.0	100%	62	4.2	760	853	*	*	<10	<0.15	1.01	<0.013	<0.000	-- <sup>3</sup>	9239
3/24/2004	18861.7	83%	82	5.2	3,100	796	*	*	<10	<0.15	5.16	<0.017	<0.000	-- <sup>3</sup>	9275
4/12/2004	19315.8	100%	79	3.9	520	839	*	*	<10	<0.15	0.65	<0.012	<0.000	-- <sup>3</sup>	9372
5/17/2004	19945.0	75%	70	3.9	3,600	755	*	*	<25	<0.25	4.49	<0.031	<0.000	99.3	9389
6/10/2004	20512.8	99%	80	10.0	620	792	*	*	<10	<0.15	2.00	<0.032	<0.000	-- <sup>3</sup>	9495
7/6/2004	20823.5	50%	70	12.3	990	--	*	*	0**	--	3.92	<0.000	--	-- <sup>3</sup>	9521
8/12/2004	21702.2	99%	62	7.4	780	--	*	*	0**	--	1.86	<0.000	--	-- <sup>3</sup>	9665
9/16/2004	22024.9	38%	39	9.2	1,300	--	*	*	0**	--	3.85	<0.000	--	-- <sup>3</sup>	9690
10/11/2004	22622.5	100%	50	9.8	890	--	*	*	0**	--	2.80	<0.000	--	-- <sup>3</sup>	9785

Table 2. SVE System - Performance and Soil Vapor Analytical Results: Allright Parking, 1432 Harrison Street, Oakland, California

Date	Hour Meter Readings (hours)	System Uptime (%)	System Vacuum ( $H_2O$ )	Total Well Flow Rate (prior to dilution) (scfm)	Total Well HC Conc. (ppmv)	System Inlet Temp. (degrees F)	System Flow Rate (after dilution) (cfm)	System Influent HC Conc. <sup>1</sup> (ppmv)	Effluent HC Conc. <sup>1</sup> (ppmv)		HC Removal Rate <sup>2</sup> (pounds/day)	Emission Rate <sup>2</sup> (pounds/day)		TPHg Destruction Efficiency <sup>3</sup> (%)	Gasoline Cumulative Removal <sup>4</sup> (pounds)
									TPHg	Benz		TPHg	Benz		
11/4/2004	23185.2	98%	38	4.9	220	—	*	*	0**	—	0.35	<0.000	—	— <sup>3</sup>	9851
12/6/2004	23853.9	87%	45	5.2	610	—	*	*	0**	—	1.03	<0.000	—	— <sup>3</sup>	9861
1/10/2005	24693.0	100%	65	3.9	660	—	*	*	0**	—	0.84	<0.000	—	— <sup>3</sup>	9897
2/2/2005	25071.5	69%	70	3.9	360	—	*	*	0**	—	0.45	<0.000	—	— <sup>3</sup>	9910
3/7/2005	25769.8	100% <sup>a</sup>	71	4.0	270	—	*	*	0**	—	0.35	<0.000	—	— <sup>3</sup>	9923
4/4/2005	26442.1	100%	77	3.4	225	—	*	*	0**	—	0.25	<0.000	—	— <sup>3</sup>	9933
4/30/2005	27058.0	99%	70	2.9	40	—	*	*	0**	—	0.04	<0.000	—	— <sup>3</sup>	9939

**Notes and Abbreviations:**

TPHg = Total petroleum hydrocarbons as gasoline

Benz = Benzene

HC Conc. = Hydrocarbon vapor concentrations measured as TPHg and/or benzene

ppmv = Parts per million by volume. Analytical lab results converted from micrograms per liter (mg/l) to ppmv assumes the molecular weight of gasoline to be equal to that of hexane. at 1 atmosphere of pressure and 20 degrees Celsius.

cfm = cubic feet per minute

scfm = standard cubic feet per minute

<sup>1</sup> TPHg and benzene concentrations based on Horiba gas analyzer measurements and/or lab results by Modified EPA Methods 8015 and 8020.Laboratory analytical results for TPHg and benzene are converted from  $\mu g/l$  to ppmv using conversion rates of 0.28 for TPHg and 0.308 for benzene.<sup>2</sup> The hydrocarbon removal/emission rate is based on the Bay Area Air Quality Management's District's (BAAQMD) Procedures for Soil Vapor Extraction whereRate = concentration (ppmv)  $\times$  flow rate (cfm)  $\times$  1 lb-mole/ $386 \times 10^6 ft^3$   $\times$  molecular weight (86 lb/lb-mole for TPHg, 78 lb/lb-mole for benzene)  $\times$  1440 min/day.<sup>3</sup> As per BAAQMD Permit, destruction efficiency requirements are waived if system TPHg effluent concentration is <10.<sup>4</sup> Gasoline Cumulative Removal = The previous removal rates multiplied by the interval days of operation plus the previous total removal amount.

The total TPHg removal is based on analytic results and/or field measurements.

\* = Flow Rate and Hydrocarbon Concentration are now measured from the well manifold because there is no longer any dilution air affecting the calculation of the hydrocarbon removal rate.

\*\* = As per the Bay Area Air Quality Management District's letter dated July 9, 2004 effluent analysis is no longer required. Effluent hydrocarbon concentrations are measured using a Horiba gas analyzer in the field.

-- = Not available, not measured, or not applicable.

a = Hour meter reading does not reflect actual run-time due to instrument malfunction.

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Table 3. SVE System Parameters - Allright Parking, 1432 Harrison Street, Oakland, California

Well ID	Date	Well Vacuum (inches of H <sub>2</sub> O)	Hydrocarbon Vapor Concentration		Status (open/closed)
			Flow Rate (cfm)	(ppmv)	
MW-1	11/11/2003	105	1.0	26,000	open
	11/17/2003	85	0.7	3,530	open
	12/2/2003	94	1.0	5,700	open
	12/10/2003	93	1.6	11,000	open
	12/23/2003	95	0.8	10,000	open
	1/7/2004	98	0.9	5,050	open
	1/23/2004	82	0.59	13,100	open
	1/30/2004	81	*	--	open
	2/11/2004	62	2.6	160	open
	3/3/2004	47	1.0	1,200	open
	3/3/2004	150	4.8	589	open
	3/10/2004	146	3.0	233	open
	3/24/2004	74	0.9-2.5	3,950	open
	4/2/2004	81	3.2	225	open
	4/12/2004	78	2.18	415	open
	4/27/2004	75	5.2	2,010	open
	5/6/2004	70	4.0	160	open
	5/17/2004	70	--	120	open
	5/27/2004	70	1.8	75	open
	6/10/2004	80	3.2	180	open
	6/16/2004	84	3.8	63	open
	7/6/2004	70	6.0	410	open
	7/7/2004	72	6.5	360	open
	7/8/2004	74	5.0	300	open
	7/28/2004	34	6.5	115	open
	8/12/2004	21	3.0	270	open
	8/17/2004	40	6.0	535	open
	8/25/2004	40	4.4	360	open
	9/16/2004	22	5.3	1,425	open
	9/27/2004	--	4.5	570	open
	10/11/2004	26	3.9	500	open
	11/1/2004	48	4.6	200	open
	11/4/2004	38	--	160	open
	12/6/2004	42	2.8	215	open
	12/22/2004	50	4.6	30	open
	12/22/2004	70	5.9	62	open
	12/22/2004	90	6.6	93	open
	12/30/2004	--	--	--	open
	1/10/2005	51	3.0	--	open
	1/21/2005	74	4.8	750	open
	1/27/2005	70	2.7	550	open
	2/2/2005	71	2.5	560	open
	2/11/2005	70	3.1	93	open
	2/24/2005	71	3.1	250	open
	3/7/2005	70	2.9	280	open
	3/24/2005	72	2.8	150	open
	4/4/2005	77	2.4	280	open
	4/30/2005	70	2.1	88	System shutdown

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Table 3. SVE System Parameters - Allright Parking, 1432 Harrison Street, Oakland, California

Well ID	Date	Well Vacuum (inches of H <sub>2</sub> O)	Hydrocarbon Vapor Concentration		Status (open/closed)
			Flow Rate (cfm)	(ppmv)	
VES-1	12/13/2001	--	--	36,000	open
	12/20/2001	25	6.5	43,000	open
	12/27/2001	48	12.4	41,000	open
	1/7/2002	100	20.5	>10,000	open
	2/8/2002	140	27	>10,000	open
	3/5/2002	34	6.3	>10,000	open
	4/2/2002	83	13.5	10,070	open
	4/15/2002	101	28.2	10,070	open
	5/22/2002	80	22.5	9,980	open
	5/27/2002	81	4.5	27,000	open
	6/5/2002	77	22.1	11,110	open
	6/21/2002	81	*	7,810	open
	7/2/2002	82	25	10,400	open
	7/26/2002	81	22.5	5,210	open
	8/5/2002	80	5.5	6,020	open
	9/10/2002	80	5.2	9,180	open
	10/2/2002	80	10.5	11,070	open
	11/6/2002	82	9.0	4,850	open
	12/5/2002	90	8.5	4,000	open
	1/8/2003	92	5.1	2,340	open
	1/8/2003	92	5.1	2,340	open
	1/24/2003	95	4.0	2,350	open
	3/4/2003	90	3.6	1,750	open
	3/17/2003	93	7.5	1,360	open
	4/3/2003	115	4.0	720	open
	4/14/2003	116	--	1,180	open
	5/7/2003	117	3.5	660	open
	5/15/2003	119	6.0	1,950	open
	5/27/2003	117	4.1	1,600	open
	6/13/2003	118	3.9	1,525	open
	6/23/2003	118	--	--	open
	7/2/2003	119	25	1,270	
	7/2/2003	119	25*	1,270	open
	7/11/2003	118	3.5*	--	open
	8/7/2003	117	*	50	open
	8/15/2003	117	1.4*	105	closed
	8/26/2003	120	4.0	200	open
	9/3/2003	116	2.9*	190	open
	10/2/2003	116	7.0	70	closed
	10/7/2003	114	21	2	closed
	10/15/2003	118	23*	1,650	open
	10/21/2003	117	21	1,090	open
	11/17/2003	85	0.7	2,050	open
	12/2/2003	94	0.67	1,550	open
	12/10/2003	92	0.63	5,700	open
	12/23/2003	95	0.8	7,000	open
	1/7/2004	98	0.5	3,750	open
	1/23/2004	82	0.57	12,500	open
	1/30/2004	81	0.5	--	open
	2/11/2004	62	0.25	5,520	open
	3/3/2004	47	0.31	1,515	open
	3/3/2004	150	5.9	5,130	open

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Table 3. SVE System Parameters - Allright Parking, 1432 Harrison Street, Oakland, California

Well ID	Date	Well Vacuum (inches of H <sub>2</sub> O)	Flow Rate (cfm)	Hydrocarbon Vapor Concentration		Status (open/closed)
				(ppmv)		
->VES-1	3/10/2004	146	0.7	1,867		open
	3/24/2004	74	1.0	4,150		open
	4/2/2004	81	0.9	135		open
	4/12/2004	78	2.5-25*	80		open
	4/27/2004	75	1.8	55		open
	5/6/2004	70	3	2,150		open
	5/17/2004	70	--	1,485		open
	5/27/2004	70	0.9	1,030		open
	6/10/2004	80	*	1,025		open
	6/16/2004	84	1.4	460		open
	7/6/2004	70	*	*		open
	7/7/2004	72	*	*		open
	7/8/2004	74	*	*		open
	7/28/2004	67	*	*		open
	8/12/2004	62	1.5	655		open
	8/17/2004	63	1.25	520		open
	8/25/2004	62	1.0	470		open
	9/16/2004	39	1.3	805		open
	9/27/2004	--	1.7	510		open
	10/11/2004	34	0.9	400		open
	11/1/2004	58	0.5	165		open
	11/4/2004	38	--	150		open
	12/6/2004	42	1.0	130		open
	12/22/2004	51	0.4	315		open
	12/22/2004	72	0.4	650		open
	12/22/2004	89	0.5	1,115		open
	12/30/2004	--	--	--		open
	1/10/2005	51	0.0	--		open
	1/21/2005	74	0.2	2,720		open
	1/27/2005	70	0.8	700		open
	2/2/2005	71	0.5	708		open
	2/11/2005	70	0.4	225		open
	2/24/2005	71	0.7	260		open
	3/7/2005	70	0.7	290		open
	3/24/2005	72	0.4	120		open
	4/4/2005	77	0.2	250		open
	4/30/2005	70	0.2	84		System shutdown
VES-2	12/13/2001	--	--	40,000		open
	12/20/2001	25	6.0	42,500		open
	12/27/2001	48	12.1	35,000		open
	1/7/2002	100	21.5	>10,000		open
	2/8/2002	140	25.1	>10,000		open
	3/5/2002	34	7.6	>10,000		open
	4/2/2002	83	13.2	--		open
	4/15/2002	102	24.1	1,347		open
	5/22/2002	81	26.1	1,888		open
	5/27/2002	81	9.5	4,710		open
	6/5/2002	79	20.7	2,090		open
	6/21/2002	82	47	1,820		open
	7/2/2002	81	28.9	5,210		open
	7/26/2002	81	13.1	1,515		open

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**Table 3. SVE System Parameters - Allright Parking, 1432 Harrison Street, Oakland, California**

Well ID	Date	Well Vacuum (inches of H <sub>2</sub> O)	Hydrocarbon Vapor Concentration		Status (open/closed)
			Flow Rate (cfm)	(ppmv)	
-->VES-2	8/5/2002	80	10.5	1,925	open
	9/10/2002	80	8.9	1,850	open
	10/2/2002	80	8.5	3,370	open
	11/6/2002	82	9.0	2,180	open
	12/5/2002	90	--	1,870	open
	1/8/2003	92	--	6,210	open
	1/8/2003	92	--	6,210	open
	1/24/2003	95	4.0	9,630	open
	3/4/2003	90	2.5	5,790	open
	3/17/2003	93	--	2,020	open
	4/3/2003	115	--	3,230	open
	4/14/2003	116	--	2,980	open
	5/7/2003	117	9.0	700	open
	5/15/2003	119	8.0	475	open
	5/27/2003	117	5.3	515	open
	6/13/2003	118	4.1	525	open
	7/2/2003	119	9	365	open
	6/23/2003	118	--	--	open
	7/2/2003	119	9*	365	open
	7/11/2003	118	5*	--	open
	8/7/2003	117	15.2*	250	open
	8/15/2003	117	8.5*	365	open
	8/26/2003	121	4.2	245	open
	9/3/2003	116	*	1,295	open
	10/2/2003	120	4.0	410	open
	10/7/2003	118	17	1,120	open
	10/15/2003	119	21	1,550	open
	10/21/2003	119	21	1,675	open
	11/17/2003	85	1.9	1,115	open
	12/2/2003	94	2.0*	460	open
	12/10/2003	92	2.0	1,740	open
	12/23/2003	95	1.5	1,510	open
	1/7/2004	98	1.6	600	open
	1/23/2004	82	1.6	90	open
	1/30/2004	81	*	--	open
	2/11/2004	62	2.1*	130	open
	3/3/2004	47	0.87	3,460	open
	3/3/2004	150	6.8	883	open
	3/10/2004	146	*	3,930	open
	3/24/2004	74	1.9	6,800	open
	4/2/2004	81	1.0	3,350	open
	4/12/2004	78	1.5	1,150	open
	4/27/2004	75	2	1,170	open
	5/6/2004	70	3.8	190	open
	5/17/2004	70	--	65	open
	5/27/2004	70	33*	30	open
	6/10/2004	80	*	35	open
	6/16/2004	84	2.7	20	open
	7/6/2004	70	1.5	110	open
	7/7/2004	72	1.3	250	open
	7/8/2004	74	1.1	220	open
	7/28/2004	67	1.4	10	open

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**Table 3. SVE System Parameters - Allright Parking, 1432 Harrison Street, Oakland, California**

Well ID	Date	Well Vacuum (inches of H <sub>2</sub> O)	Hydrocarbon Vapor Concentration		Status (open/closed)
			Flow Rate (cfm)	(ppmv)	
-->VES-2	8/12/2004	62	1.9	50	open
	8/17/2004	63	2.6	40	open
	8/25/2004	62	1.8	20	open
	9/16/2004	39	2.1	820	open
	9/27/2004	--	1.5	240	open
	10/11/2004	34	1.3	310	open
	11/1/2004	58	1.9	170	open
	11/4/2004	38	--	410	open
	12/6/2004	42	1.4	380	open
	12/22/2004	50	1.6	75	open
	12/22/2004	70	2.0	310	open
	12/22/2004	90	2.5	670	open
	12/30/2004	--	--	--	open
	1/10/2005	51	0.7	--	open
	1/21/2005	74	1.7	115	open
	1/27/2005	70	1.5	360	open
	2/2/2005	71	1.1	305	open
	2/11/2005	70	2.2	420	open
	2/24/2005	71	1.2	410	open
	3/7/2005	70	1.1	400	open
	3/24/2005	72	0.9	295	open
	4/4/2005	77	1.3	205	open
	4/30/2005	70	1.9	7	System shutdown
VES-3	12/13/2001	--	--	38,000	open
	12/20/2001	25	7.0	41,500	open
	12/27/2001	48	12	61,000	open
	1/7/2002	100	22.5	>10,000	open
	2/8/2002	140	26.5	>10,000	open
	3/5/2002	47	7.5	>10,000	open
	4/2/2002	84	11.1	--	open
	4/15/2002	102	24.8	4,260	open
	5/22/2002	85	16.5	7,090	open
	5/27/2002	81	6.7	7,010	open
	6/5/2002	85	14.7	5,290	open
	6/21/2002	80	25.5	3,450	open
	7/2/2002	82	32.2	4,820	open
	7/26/2002	81	9.3	3,400	open
	8/5/2002	80	4.5	3,380	open
	9/10/2002	80	7.1	3,150	open
	10/2/2002	80	4.0	2,140	open
	11/6/2002	82	5.5	1,215	open
	12/5/2002	90	4.5	1,015	open
	1/8/2003	92	5.5	3,840	open
	1/8/2003	92	5.5	3,840	open
	1/24/2003	95	3.0	6,040	open
	3/4/2003	90	3.5	3,430	open
	3/17/2003	93	1.3	1,980	open
	4/3/2003	115	3.5	1,900	open
	4/14/2003	116	--	1,950	open
	5/7/2003	117	1.5	1,320	open
	5/15/2003	119	2.6	1,530	open

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Table 3. SVE System Parameters - Allright Parking, 1432 Harrison Street, Oakland, California

Well ID	Date	Well Vacuum (inches of H <sub>2</sub> O)	Hydrocarbon Vapor Concentration		Status (open/closed)
			Flow Rate (cfm)	(ppmv)	
-->VES-3	5/27/2003	117	1.6	1,250	open
	6/13/2003	118	1.5	1,000	open
	6/23/2003	118	--	--	open
	7/2/2003	119	14*	850	open
	7/11/2003	118	1.9	--	open
	8/7/2003	117	2.5	375	open
	8/15/2003	117	2.7	380	open
	8/26/2003	123	2.4	5	closed
	9/3/2003	116	3.9*	3,430	open
	10/2/2003	121	30*	25	closed
	10/7/2003	117	19	225	closed
	10/15/2003	118	23	30	closed
	10/21/2003	118	21	70	closed
	11/17/2003	86	2.0	1,425	open
	12/2/2003	94	1.3	280	close
	12/10/2003	92	2.2	100	open
	12/23/2003	95	2.0	50	open
	1/7/2004	98	0.6	4,810	open
	1/23/2004	82	0.25	3,620	open
	1/30/2004	81	0.7	--	open
	2/11/2004	62	0.3	1,280	open
	3/3/2004	47	0.39	3,320	open
	3/3/2004	150	5.6	1,990	open
	3/10/2004	146	3.7	285	open
	3/24/2004	74	19.7**	40	open
	4/2/2004	81	0.5	1,240	open
	4/12/2004	78	1.85	440	open
	4/27/2004	75	0.9	425	open
	5/6/2004	70	2.1	252	open
	5/17/2004	70	--	410	open
	5/27/2004	70	1.6	220	open
	6/10/2004	80	1.9	2	open
	6/16/2004	84	2.1	15	open
	7/6/2004	70	1.4	20	open
	7/7/2004	72	1.2	25	open
	7/8/2004	74	1.0	50	open
	7/28/2004	67	1.2	120	open
	8/12/2004	62	1.0	175	open
	8/17/2004	63	1.3	105	open
	8/25/2004	62	1.9	92	open
	9/16/2004	39	1.7	375	open
	9/27/2004	--	1.5	410	open
	10/11/2004	34	0.9	390	open
	11/1/2004	58	0.9	150	open
	11/4/2004	38	--	315	open
	12/6/2004	42	1.7	550	open
	12/22/2004	49	0.5	250	open
	12/22/2004	70	0.6	415	open
	12/22/2004	90	0.8	777	open
	12/30/2004	--	--	--	open
	1/10/2005	51	0.4	--	open
	1/21/2005	74	0.4	582	open

# CAMBRIA

Table 3. SVE System Parameters - Allbright Parking, 1432 Harrison Street, Oakland, California

Well ID	Date	Well Vacuum (inches of H <sub>2</sub> O)	Hydrocarbon Vapor Concentration		Status (open/closed)
			Flow Rate (cfm)	(ppmv)	
-->VES-3	1/27/2005	70	0.5	440	open
	2/2/2005	71	0.5	510	open
	2/11/2005	70	0.5	260	open
	2/24/2005	71	0.3	300	open
	3/7/2005	70	0.4	290	open
	3/24/2005	72	0.3	210	open
	4/4/2005	77	0.7	180	open
	4/30/2005	70	0.6	24	System Shutdown
VES-4	12/13/2001	—	—	35,000	open
	12/20/2001	25	4.9	46,500	open
	12/27/2001	48	12.2	53,000	open
	1/7/2002	100	23	>10,000	open
	2/8/2002	140	28.1	>10,000	open
	3/5/2002	47	9.3	>10,000	open
	4/2/2002	84	11.5	--	open
	4/15/2002	102	22.5	5,350	open
	5/22/2002	80	21.7	570	open
	5/27/2002	81	6.3	10,460	open
	6/5/2002	80	18	4,490	open
	6/21/2002	81	41.5	2,580	open
	7/2/2002	81	38	9,690	open
	7/26/2002	81	2.3	2,230	open
	8/5/2002	80	4.4	6,160	open
	9/10/2002	80	5.5	2,410	open
	10/2/2002	80	3.5	1,777	open
	11/6/2002	82	4.5	920	open
	12/5/2002	90	7.0	420	open
	1/8/2003	92	4.0	1,805	open
	1/8/2003	92	4.0	1,805	open
	1/24/2003	95	5.0	2,720	open
	3/4/2003	90	4.0	1,390	open
	3/17/2003	93	1.0	1,300	open
	4/3/2003	115	2.3	1,090	open
	4/14/2003	116	--	1,050	open
	5/7/2003	117	1.8	610	open
	5/15/2003	119	2.7	2,100	open
	5/27/2003	117	2.0	1,850	open
	6/13/2003	118	2.0	1,800	open
	6/23/2003	118	--	--	open
	7/2/2003	119	17*	1,550	open
	7/11/2003	118	2.2	--	open
	8/7/2003	117	2.6	1,550	open
	8/15/2003	117	2.8	630	open
	8/26/2003	122	3.7	465	open
	9/3/2003	—	--	25	closed
	10/2/2003	117	7.5	2,550	open
	10/7/2003	116	17	15	close
	10/15/2003	117	30	75	closed
	10/21/2003	117	28	50	closed
	11/17/2003	86	3.0	70	closed
	12/10/2003	92	3.0	2,850	open

# CAMBRIA

Table 3. SVE System Parameters - Allright Parking, 1432 Harrison Street, Oakland, California

Well ID	Date	Well Vacuum (inches of H <sub>2</sub> O)	Hydrocarbon Vapor Concentration		Status (open/closed)
			Flow Rate (cfm)	(ppmv)	
-->VES-4	12/23/2003	95	0.5	2,300	open
	1/7/2004	98	1.0	46,000	open
	1/23/2004	82	0.65	12,000	open
	1/30/2004	81	*	—	open
	2/11/2004	62	0.45	4,770	open
	3/3/2004	47	0.93	7,010	open
	3/3/2004	150	2.2	4,270	open
	3/10/2004	146	1.6	65	open
	3/24/2004	74	0.7	3,500	open
	4/2/2004	81	0.9	120	open
	4/12/2004	78	5.5	170	open
	4/27/2004	75	2.1	60	open
	5/6/2004	70	2.8	1,740	open
	5/17/2004	70	—	1,120	open
	5/27/2004	70	1.1	2,560	open
	6/10/2004	80	*	4,300	open
	6/16/2004	84	1.0	1,840	open
	7/6/2004	70	1.3	3,150	open
	7/7/2004	72	1.0	4,880	open
	7/8/2004	74	1.2	3,550	open
	7/28/2004	67	1.1	1,615	open
	8/12/2004	62	2.2	3,160	open
	8/17/2004	63	1.1	55	open
	8/25/2004	62	1.6	1,310	open
	9/16/2004	39	1.7	2,630	open
	9/27/2004	—	1.6	1,920	open
	10/11/2004	34	1.2	2,220	open
	11/1/2004	58	0.6	870	open
	11/4/2004	38	—	750	open
	12/6/2004	42	0.9	1,250	open
	12/22/2004	49	0.6	50	open
	12/22/2004	70	0.3	185	open
	12/22/2004	89	0.6	310	open
	12/30/2004	—	—	—	open
	1/10/2005	51	0.2	—	open
	1/21/2005	74	0.9	518	open
	1/27/2005	70	0.3	530	open
	2/2/2005	71	0.3	435	open
	2/11/2005	70	0.5	107	open
	2/24/2005	71	0.4	220	open
	3/7/2005	70	0.5	200	open
	3/24/2005	72	1.4	110	open
	4/4/2005	77	0.5	215	open
	4/30/2005	70	0.4	79	System Shutdown

Notes:

Hydrocarbon concentrations are measured using a Horiba MEXA-554 gas analyzer. Concentration readings above 10,000 ppmv are above the instrument calibration and are not reliable.

— = Data not available or not collected

\* = Unable to get reading due to the presence of water

\*\* = Well seal cracked, allowing ambient air to short-circuit vapor extraction. Well seal replaced.

## **APPENDIX A**

Groundwater Monitoring Field Data Sheets



**MUSKAN  
ENVIRONMENTAL  
SAMPLING**

## **WELL GAUGING SHEET**



MUSKAN  
ENVIRONMENTAL  
SAMPLING

## **WELL SAMPLING FORM**

Date:	6/9/2005					
Client:	Cambria Environmental Technology Inc.					
Site Address:	1432 Harrison Street Oakland, CA					
Well ID:	MW-1					
Well Diameter:	4"					
Purging Device:	4" PVC Bailer					
Sampling Method:	Disposable Bailer					
Total Well Depth:	21.13		Fe=	mg/L		
Depth to Water:	17.80		ORP=	mV		
Water Column Height:	3.33		DO=	mg/L		
Gallons/ft:	0.65					
1 Casing Volume (gal):	2.16		COMMENTS: Purge water consisted of thick silt and clay. Well dewatered after bailing 2 and half gallons of thick clay and silt mixture. Waited until 8:00 for well to recharge, but no measurable amount of water came into the well.			
3 Casing Volumes (gal):	6.49					
TIME:	CASING VOLUME (gal)	TEMP (Celsius)	pH	COND. ( $\mu$ S)		
5:30	2.5					
Sample ID:	Date:	Time	Container Type	Preservative	Analytes	Method



**MUSKAN  
ENVIRONMENTAL  
SAMPLING**

## **WELL SAMPLING FORM**

Date:	6/9/2005						
Client:	Cambria Environmental Technology Inc.						
Site Address:	1432 Harrison Street Oakland, CA						
Well ID:	MW-2						
Well Diameter:	2"						
Purging Device:	Disposable Bailer						
Sampling Method:	Disposable Bailer						
Total Well Depth:	25.64	Fe=	mg/L				
Depth to Water:	18.65	ORP=	mV				
Water Column Height:	6.99	DO=	mg/L				
Gallons/ft:	0.16						
1 Casing Volume (gal):	1.12	COMMENTS: Turbid					
3 Casing Volumes (gal):	3.36						
TIME:	CASING VOLUME (gal)	TEMP (Celsius)	pH	COND. ( $\mu$ S)			
4:45	1.1	24.9	7.04	429			
4:50	2.2	24.7	7.01	461			
4:55	3.4	24.6	6.99	450			
Sample ID:	Date:	Time	Container Type	Preservative	Analytes	Method	
MW-2	6/9/2005	5:00	Voa	HCl, ICE	TPHg, BTEX, MTBE	8015, 8020, and cofirm MTBE by 8260	



## WELL SAMPLING FORM

Date:	6/9/2005					
Client:	Cambria Environmental Technology Inc.					
Site Address:	1432 Harrison Street Oakland, CA					
Well ID:	MW-4					
Well Diameter:	2"					
Purging Device:	Disposable Bailer					
Sampling Method:	Disposable Bailer					
Total Well Depth:	24.76		Fe=	mg/L		
Depth to Water:	18.11		ORP=	mV		
Water Column Height:	6.65		DO=	mg/L		
Gallons/ft:	0.16					
1 Casing Volume (gal):	1.06		COMMENTS: Turbid			
3 Casing Volumes (gal):	3.19					
TIME:	CASING VOLUME (gal)	TEMP (Celsius)	pH	COND. (µS)		
4:00	1.1	24.7	6.97	640		
4:05	2.1	24.8	7.02	683		
4:10	3.2	24.8	7.00	658		
Sample ID:	Date:	Time	Container Type	Preservative	Analytes	Method
MW-4	6/9/2005	4:15	Voa	HCl, ICE	TPHg, BTEX, MTBE	8015, 8020, and cofirm MTBE by 8260
					Signature:	



## WELL SAMPLING FORM

Date:	6/9/2005					
Client:	Cambria Environmental Technology Inc.					
Site Address:	1432 Harrison Street Oakland, CA					
Well ID:	MW-5					
Well Diameter:	2"					
Purging Device:	Disposable Bailer					
Sampling Method:	Disposable Bailer					
Total Well Depth:	28.41		Fe=	mg/L		
Depth to Water:	18.73		ORP=	mV		
Water Column Height:	9.68		DO=	mg/L		
Gallons/ft:	0.16					
1 Casing Volume (gal):	1.55		COMMENTS: Turbid			
3 Casing Volumes (gal):	4.65					
TIME:	CASING VOLUME (gal)	TEMP (Celsius)	pH	COND. (µS)		
3:15	1.5	23.9	6.95	522		
3:20	3.1	24.3	6.99	547		
3:25	4.6	24.4	6.98	570		
Sample ID:	Date:	Time	Container Type	Preservative	Analytes	Method
MW-5	6/9/2005	3:30	Voa	HCl, ICE	TPHg, BTEX, MTBE	8015, 8020, and cofirm MTBE by 8260
					Signature:	

## **APPENDIX B**

Geotracker Electronic Delivery Confirmations

# Electronic Submittal Information

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## UPLOADING A GEO\_WELL FILE

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

**Submittal Title:** 2nd Qtr 2005 GW Depth Data,  
Borsuk  
**Submittal Date/Time:** 7/15/2005 10:22:01 AM  
**Confirmation Number:** 5307844400

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# Electronic Submittal Information

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Your EDF file has been successfully uploaded!

**Confirmation Number:** 6106137931

**Date/Time of Submittal:** 7/15/2005 10:26:54 AM

**Facility Global ID:** T0600100682

**Facility Name:** A BACHARACH TR & B BORSUK

**Submittal Title:** 2nd Qtr 2005 GW Analytical Data

**Submittal Type:** GW Monitoring Report

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

<b>A BACHARACH TR &amp; B BORSUK</b> 1432 HARRISON ST OAKLAND, CA 94612	<b>Regional Board - Case #:</b> <u>01-0739</u> SAN FRANCISCO BAY RWQCB (REGION 2) - (BG)
	<b>Local Agency (lead agency) - Case #:</b> <u>498</u> ALAMEDA COUNTY LOP - (AG)

<b>CONF #</b>	<b>TITLE</b>	<b>QUARTER</b>
6106137931	2nd Qtr 2005 GW Analytical Data	Q2 2005
<b>SUBMITTED BY</b>	<b>SUBMIT DATE</b>	<b>STATUS</b>
Matt Meyers	7/15/2005	PENDING REVIEW

## **SAMPLE DETECTIONS REPORT**

# FIELD POINTS SAMPLED	3
# FIELD POINTS WITH DETECTIONS	3
# FIELD POINTS WITH WATER SAMPLE DETECTIONS ABOVE MCL	3
SAMPLE MATRIX TYPES	WATER

## **METHOD QA/QC REPORT**

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

## **QA/QC FOR 8021/8260 SERIES SAMPLES**

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

## **WATER SAMPLES FOR 8021/8260 SERIES**

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

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

**SOIL SAMPLES FOR 8021/8260 SERIES**

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

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

SURROGATE SPIKES % RECOVERY BETWEEN 70-125% n/a

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

**FIELD QC SAMPLES**

<u>SAMPLE</u>	<u>COLLECTED</u>	<u>DETECTIONS &gt; REPDL</u>
QCTB SAMPLES	N	0
QCEB SAMPLES	N	0
QCAB SAMPLES	N	0

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## Electronic Submittal Information

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### UPLOADING A GEO\_REPORT FILE

**YOUR DOCUMENT UPLOAD WAS SUCCESSFUL!**

**Facility Name:** A BACHARACH TR & B BORSUK  
**Global ID:** T0600100682  
**Title:** Groundwater Monitoring and System Progress Report - Second Quarter 2005  
**Document Type:** Monitoring Report - Quarterly  
**Submittal Type:** GEO\_REPORT  
**Submittal Date/Time:** 7/29/2005 12:58:08 PM  
**Confirmation Number:** 7503186881

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## **APPENDIX C**

Analytical Results for Groundwater Sampling



**McCampbell Analytical, Inc.**

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

Cambria Env. Technology  5900 Hollis St, Suite A  Emeryville, CA 94608	Client Project ID: #540-0188; Borsuk	Date Sampled: 06/09/05
		Date Received: 06/10/05
	Client Contact: Subbarao Nagulapathy	Date Reported: 06/17/05
	Client P.O.:	Date Completed: 06/17/05

**WorkOrder: 0506210**

June 17, 2005

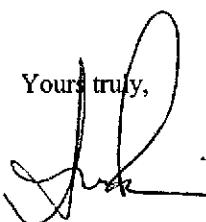
Dear Subbarao:

Enclosed are:

- 1). the results of 3 analyzed samples from your #540-0188; Borsuk project,
- 2). a QC report for the above samples
- 3). a copy of the chain of custody, and
- 4). a bill for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions please contact me. McCampbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Yours truly,  


Angela Rydelius, Lab Manager



## **McCampbell Analytical, Inc.**

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

Cambria Env. Technology 5900 Hollis St, Suite A Emeryville, CA 94608	Client Project ID: #540-0188; Borsuk	Date Sampled: 06/09/05
		Date Received: 06/10/05
	Client Contact: Subbarao Nagulapathy	Date Extracted: 06/14/05-06/16/05
	Client P.O.:	Date Analyzed: 06/14/05-06/16/05

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

Extraction method: SW5030B

Analytical methods: SW8021B/8015Cm

Work Order: 0506210

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

# cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent / mineral spirit?); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) reporting limit raised due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern; n) TPH(g) range non-target isolated peaks subtracted out of the TPH(g) concentration at the client's request.



McCampbell Analytical, Inc.

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

## QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder: 0506210

EPA Method: SW8021B/8015Cm		Extraction: SW5030B			BatchID: 16614		Spiked Sample ID: 0506218-002A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD
TPH(btex) <sup>E</sup>	ND	60	98.7	96.5	2.21	101	96.8	3.95	70 - 130	70 - 130
MTBE	ND	10	104	99.9	4.21	106	109	3.30	70 - 130	70 - 130
Benzene	ND	10	102	100	2.16	105	108	2.41	70 - 130	70 - 130
Toluene	ND	10	103	102	0.878	106	108	2.31	70 - 130	70 - 130
Ethylbenzene	ND	10	104	102	2.42	107	109	1.07	70 - 130	70 - 130
Xylenes	ND	30	107	100	6.45	110	103	6.25	70 - 130	70 - 130
%SS:	99	10	96	95	0.562	97	97	0	70 - 130	70 - 130

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

## BATCH 16614 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0506210-001A	6/09/05 5:00 PM	6/14/05	6/14/05 11:23 PM	0506210-002A	6/09/05 4:15 PM	6/15/05	6/15/05 5:37 PM
0506210-003A	6/09/05 3:30 PM	6/16/05	6/16/05 8:42 AM				

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

<sup>E</sup> TPH(btex) = sum of BTEX areas from the FID.

# cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not applicable or not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

cete -0506210

## McCAMPBELL ANALYTICAL, INC.

110 2<sup>nd</sup> AVENUE SOUTH, #D7  
PACHECO, CA 94553-5560Website: [www.mccampbell.com](http://www.mccampbell.com) Email: [main@mccampbell.com](mailto:main@mccampbell.com)  
Telephone: (925) 798-1620 Fax: (925) 798-1622

## CHAIN OF CUSTODY RECORD

TURN AROUND TIME       
RUSH 24 HR 48 HR 72 HR 5 DAEDF Required?  Yes No

Report To: *Ram Subbarao Nagulaparty* Bill To: Cambria Environmental Tech.  
 Company: Cambria Environmental Tech.  
 5900 Hollis St. Ste. A *s Nagulaparty*  
 Oakland, CA 94608 E-Mail: [mnagulaparty@cambria-env.com](mailto:mnagulaparty@cambria-env.com)  
 Tele: 510-420-3361 Fax: (510) 420-9170  
 Project #: 540-0188 Project Name: Borsut  
 Project Location: 1432 Harrison St., Oakland, CA  
 Sampler Signature: Muskan Environmental Sampling

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING		# Containers	Type Containers	MATRIX		METHOD PRESERVED	Analysis Request		Other	Comment
		Date	Time			Water	Soil		Air	Sludge	Other	
MN-2		6-9-05	5:00	3	VOC	X				X	X	
MN-4			4:15	1								
MN-5			3:30	1						X		
TB				1						X		Hold
Relinquished By:		Date: 6/10	Time: 12:10	Received By: <i>Julie Wall</i>								
Relinquished By:		Date:	Time:	Received By:								
Relinquished By:		Date:	Time:	Received By:								

ICE/<sup>o</sup>  
GOOD CONDITION  
HEAD SPACE ABSENT  
DECHLORINATED IN LAB  
APPROPRIATE CONTAINERS  
PRESERVED IN LAB

COMMENTS:

VOAS	O&G	METALS	OTHER
		pH<2	

**McCAMPBELL ANALYTICAL, INC.**

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

**CHAIN-OF-CUSTODY RECORD**

Page 1 of 1

WorkOrder: 0506210

ClientID: CETE

## Report to:

Subbarao Nagulapati  
 Cambria Env. Technology  
 5900 Hollis St, Suite A  
 Emeryville, CA 94608

TEL: (510) 420-0700  
 FAX: (510) 420-9170  
 ProjectNo: #540-0188; Borsuk  
 PO:

## Bill to:

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

Requested TAT: 5 days

Date Received: 06/10/2005

Date Printed: 06/10/2005

Sample ID	ClientSamplID	Matrix	Collection Date	Hold	Requested Tests (See legend below)														
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0506210-001	MW-2	Water	6/9/05 5:00:00 PM	<input type="checkbox"/>	A	A													
0506210-002	MW-4	Water	6/9/05 4:15:00 PM	<input type="checkbox"/>	A														
0506210-003	MW-5	Water	6/9/05 3:30:00 PM	<input type="checkbox"/>	A														

## Test Legend:

1	G-MBTEX_W	2	PREDF REPORT	3		4		5	
6		7		8		9		10	
11		12		13		14		15	

Prepared by: Rosa Venegas

## Comments:

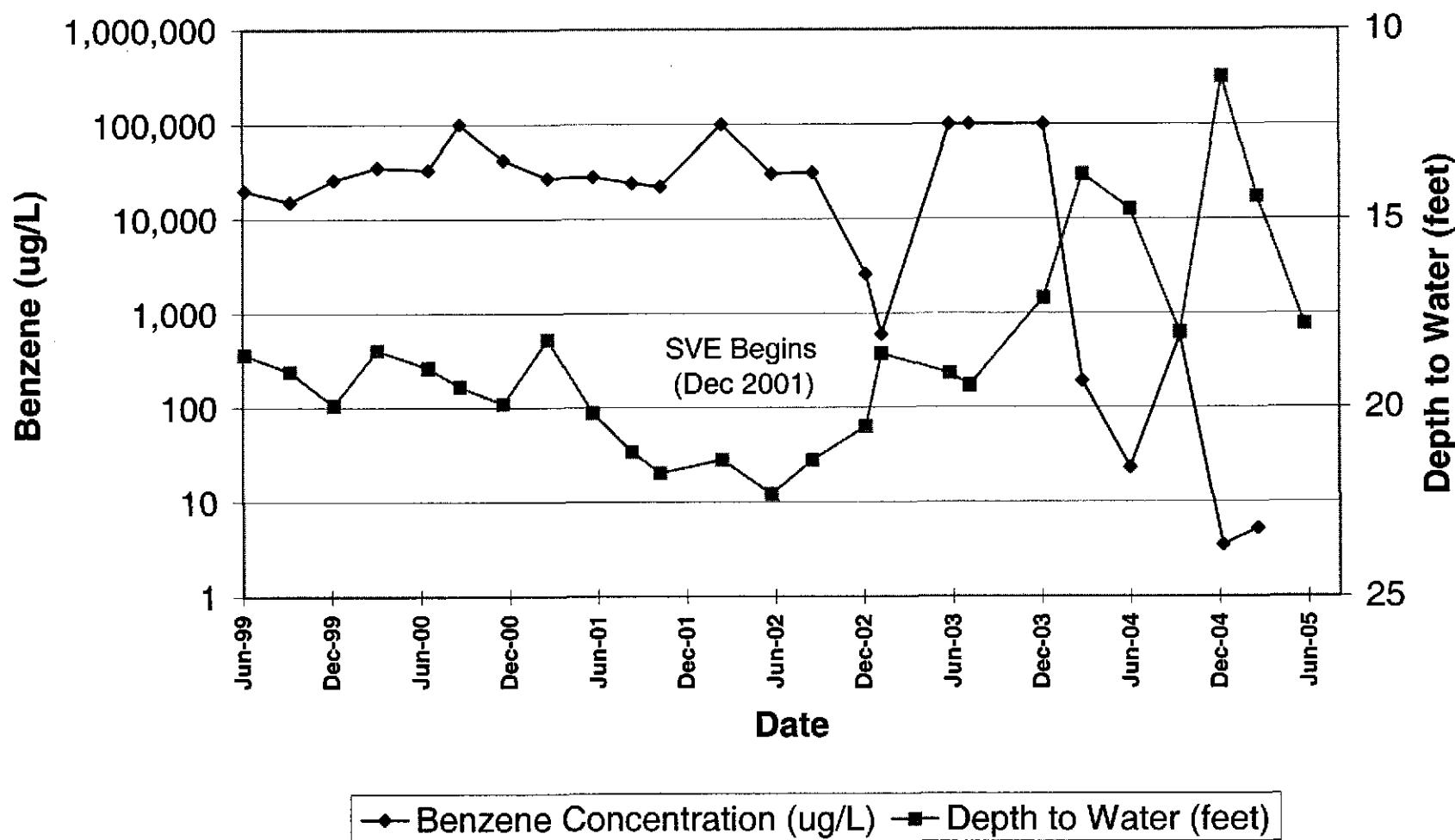
NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

## **APPENDIX D**

Benzene Concentration and Depth to Water versus Time Trend Graphs

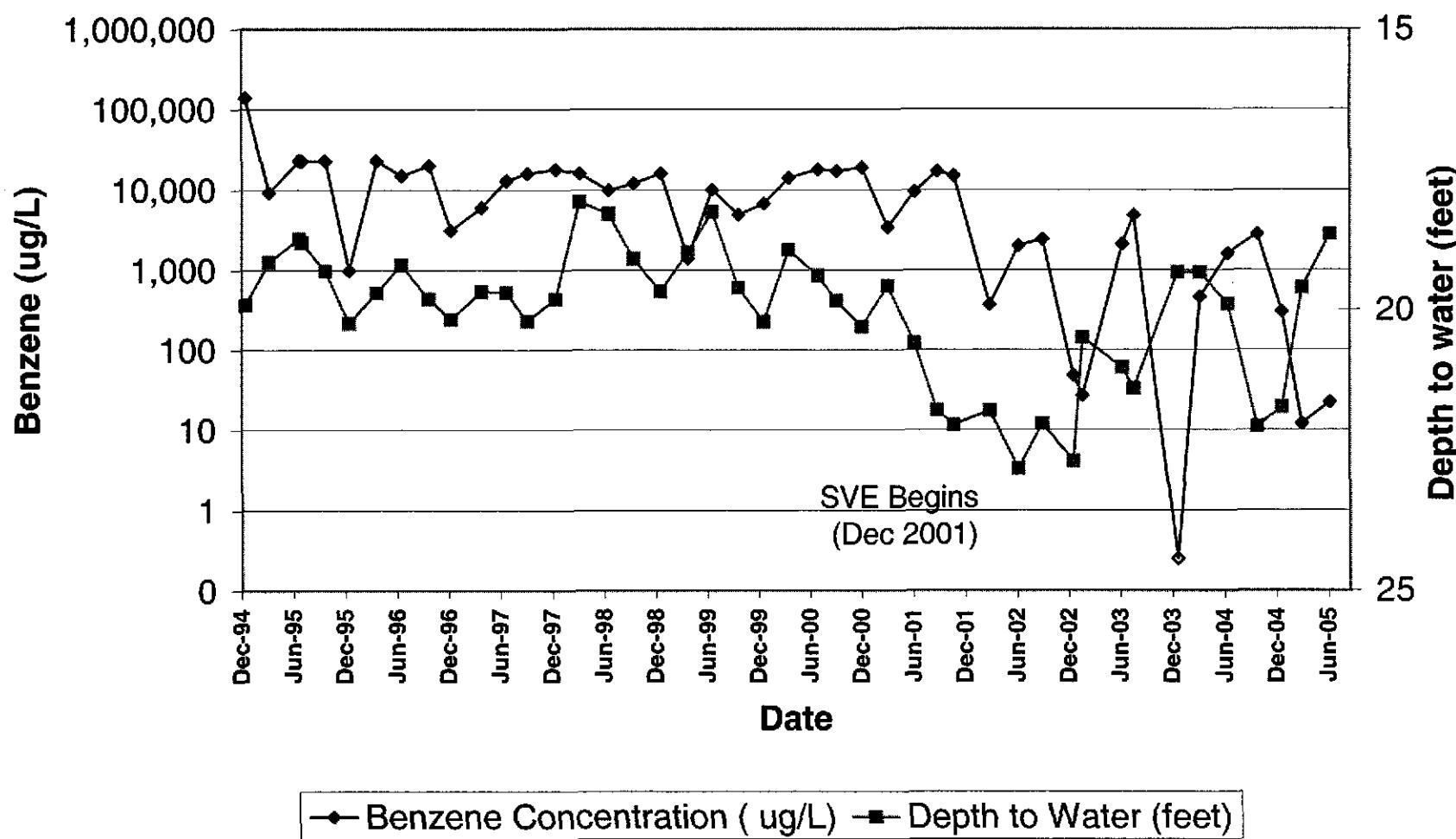
## MW-1: Benzene Concentration and Depth to Water vs. Time

Allright Parking, 1432 Harrison Street, Oakland, California



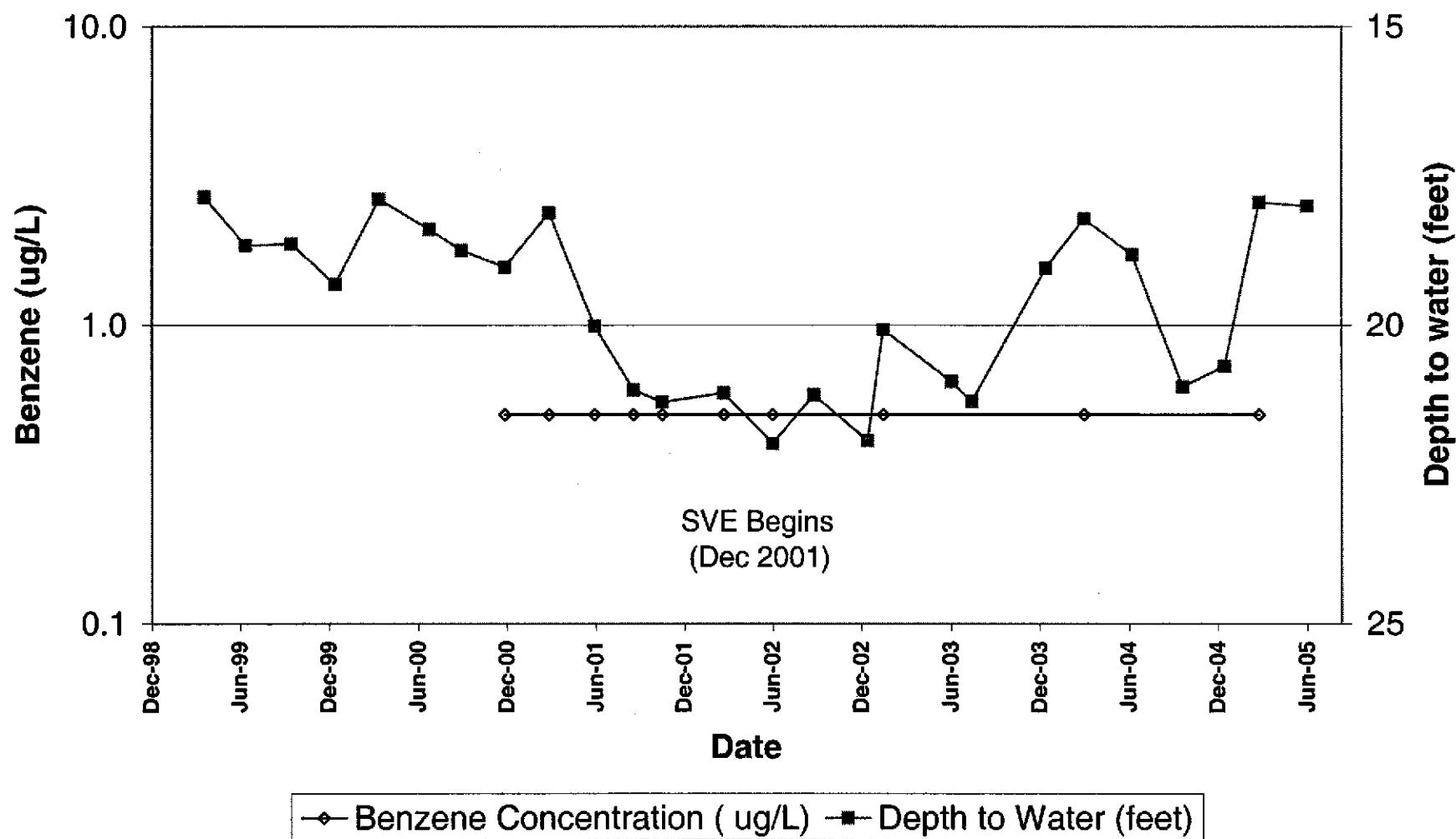
## MW-2: Benzene Concentration and Depth to Water vs. Time

Allright Parking, 1432 Harrison Street, Oakland, California



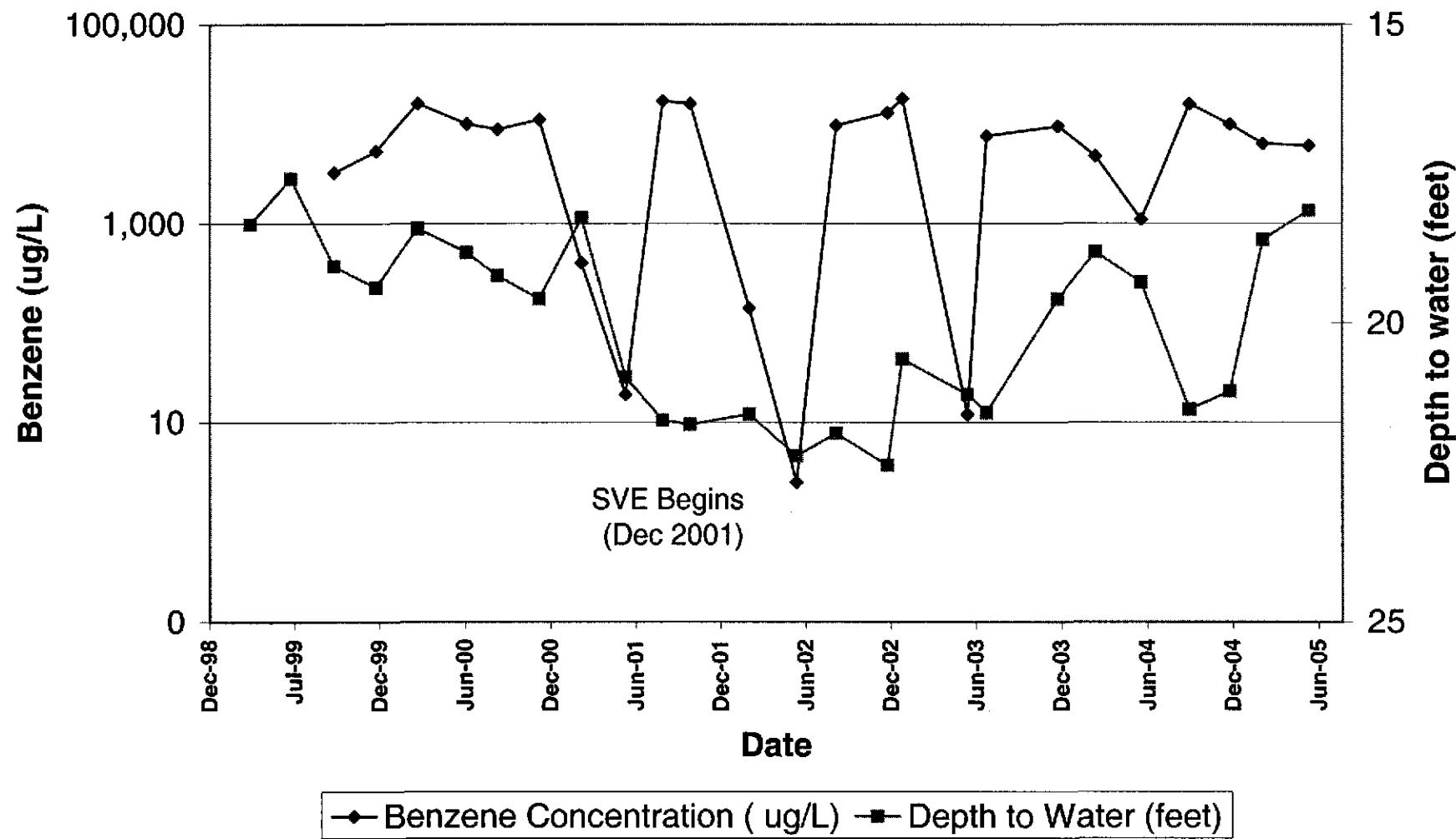
## MW-3:Benzene Concentration and Depth to Water vs. Time

Allright Parking, 1432 Harrison Street, Oakland, California



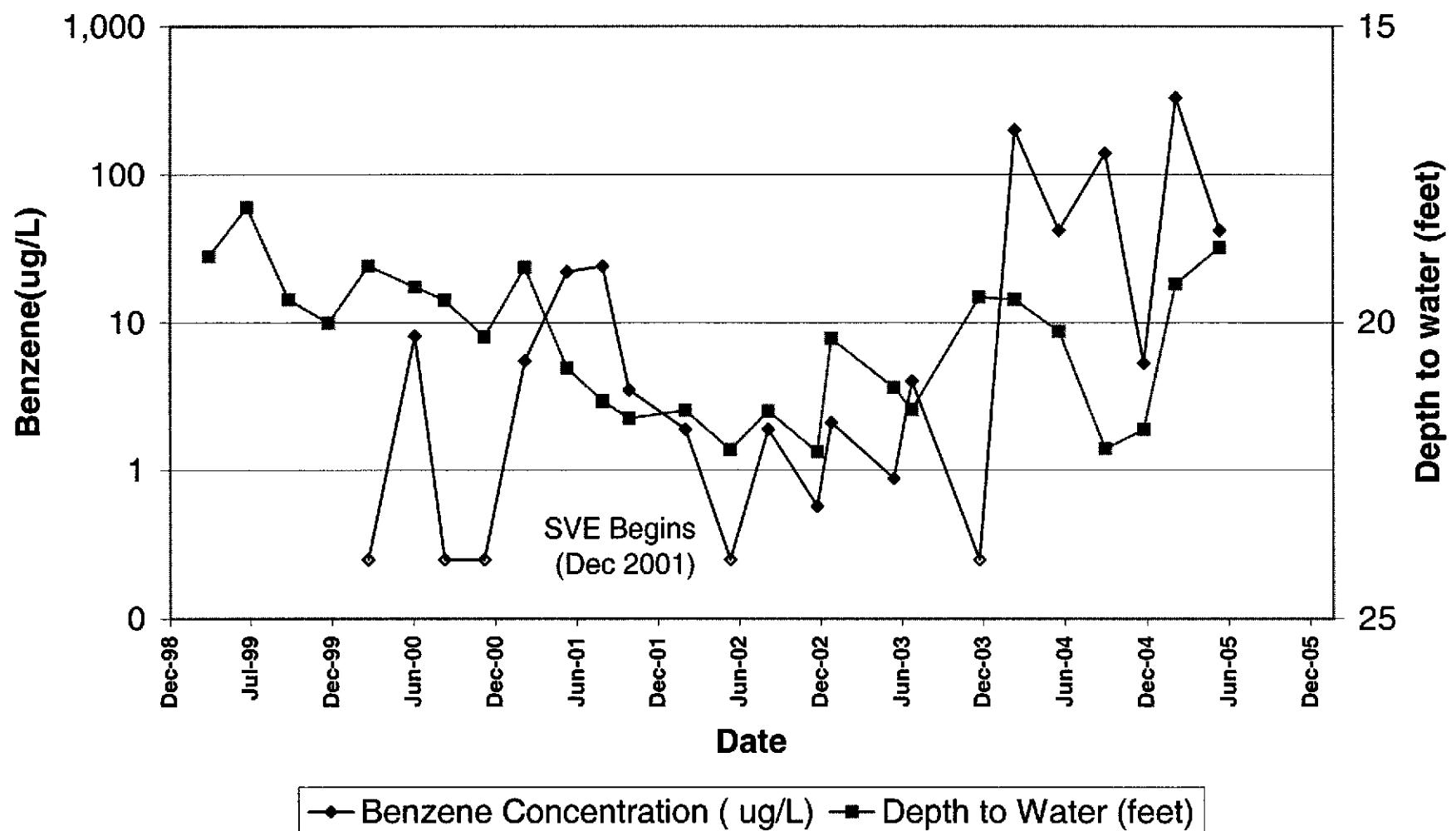
## MW-4: Benzene Concentration and Depth to Water vs. Time

Allright Parking, 1432 Harrison Street, Oakland, California



## MW-5: Benzene Concentration and Depth to Water vs. Time

Allright Parking, 1432 Harrison Street, Oakland, California



## MW-6: Benzene Concentration and Depth to Water vs. Time

Allright Parking, 1432 Harrison Street, Oakland, California

