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Alameda County

AUG 13 2004

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1626 Vallejo Street
San Francisco, CA 94123-5116

August 11, 2004

Mr. Don Hwang
Hazardous Materials Specialist
ACHCSA
1131 Harbor Bay Parkway
Alameda, CA 94501
(510) 567-6700 / FAX 337-9335

SUBJECT: IIQ04 Monitoring/SVE System Progress Report
1432 Harrison Street, Oakland, CA 94612
SITE ID 498

Dear Mr. Hwang:

Attached is the IIQ04 Groundwater Monitoring/SVE Systems Progress Report for the above site. If you have a question, please contact me.

Sincerely yours,

Mark Borsuk

CAMBRIA

July 30, 2004

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

Re: **Groundwater Monitoring and System Progress Report**
Second Quarter 2004
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 2004*. Presented in the report are the second quarter 2004 activities and results, and the anticipated third quarter 2004 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) 420-3327.

Sincerely,
Cambria Environmental Technology, Inc.

Ron Scheele, R.G.
Senior Geologist

Attachments: Groundwater Monitoring and System Progress Report - Second Quarter 2004
(2 copies)

Cambria Environmental Technology, Inc.

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

CAMBRIA

GROUNDWATER MONITORING AND SYSTEM PROGRESS REPORT

SECOND QUARTER 2004

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

July 30, 2004

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
Staff Scientist

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

Ron Scheele, R.G.
Senior Geologist

CAMBRIA

GROUNDWATER MONITORING AND SYSTEM PROGRESS REPORT

SECOND QUARTER 2004

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

July 30, 2004

INTRODUCTION

On behalf of Mr. Mark Borsuk, Cambria Environmental Technology, Inc. (Cambria) has prepared this Groundwater Monitoring and System Progress Report – Second Quarter 2004 for the above-referenced site (see Figure 1). Presented in this report are the second quarter 2004 groundwater monitoring and remediation activities, and the anticipated third quarter 2004 activities.

SECOND QUARTER 2004 ACTIVITIES AND RESULTS

Monitoring Activities

Field Activities: On June 16, 2004, Cambria conducted quarterly monitoring activities. Cambria 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-1, MW-2, MW-4, and MW-5. Groundwater monitoring field data sheets are presented as Appendix A. The groundwater monitoring data has been submitted to the GeoTracker database. See Appendix D 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 MTBE by EPA Method 8021B by McCampbell Analytical, Inc. of Pacheco, California. The laboratory analytical report is included as Appendix B. Hydrocarbon concentrations are shown on Figure 1 and Table 1. The analytical data was submitted to the GeoTracker database. See Appendix D for the GeoTracker electronic delivery confirmation.

Monitoring Results

Groundwater Flow Direction: Based on depth-to-water measurements collected during Cambria's June 16, 2004 site visit, groundwater beneath the site generally flows toward the north-northeast at a gradient of 0.036 feet/foot. The overall gradient is consistent with previous quarters, including the

groundwater mounding around well MW-1, which is induced by soil vapor extraction (SVE) operations. Depth to water and groundwater elevation data is presented in Figure 1 and Table 1.

Hydrocarbon Distribution in Groundwater: No SPH was detected in well MW-1 this quarter as a result of aggressive SVE and passive air sparge (AS) operations on the well. In-well air sparging was initiated in this well on February 6, 2004. A ¼-inch diameter copper sparge tube was lowered into the well casing approximately 3 feet below the groundwater level and sealed at the wellhead. Because of the existing vacuum on the well casing from the SVE system, ambient air is passively drawn from outside the well through the sparge tube and into the water column. This modification facilitates volatilization of SPH and removal by SVE operations.

Hydrocarbon concentrations were detected in all four sampled wells. TPHg concentrations ranged from 250 micrograms per liter (µg/L) to 9,100 µg/L with the highest concentration detected in well MW-2. Benzene concentrations ranged from 23 µg/L to 1,600 µg/L, with the highest concentration detected in well MW-2. MTBE was not detected above laboratory detection limits in any of the wells. Hydrocarbon concentrations in wells MW-1 and MW-4 are significantly lower than previous quarters, especially the concentrations in well MW-1, which are at historical low levels. Hydrocarbon concentrations in well MW-2 increased slightly as compared to the previous quarter. Concentrations for all wells continue to exhibit a stable or decreasing trend.

Corrective Action Activities

System Design: The SVE/AS remediation system consists of a trailer mounted, all-electric catalytic oxidizer with heat exchanger, a positive-displacement blower belt-driven by a 10-horsepower electric motor, an oil-less AS blower directly driven by a 5-horsepower electric motor, and an auto dialer connected to a phone line to provide remote notification of system status. Four coaxial remediation wells (VES-1/AS-1, VES-2/AS-2, VES-3/AS-3, VES-4/AS-4) and one former monitoring well (MW-1) are individually connected to a central manifold in the remediation system enclosure. See Figure 2 for the location of remediation enclosure and wells.

System Modification: Based on the low hydrocarbon vapor removal rates (approximately 2-3 lbs/day) and high electricity usage, Cambria proposed to modify the vapor abatement portion of the remediation system. Cambria received approval from Mr. Don Hwang with the Alameda County Environmental Health Agency to replace the catalytic oxidizer with vapor-phase carbon. The remediation system was modified in June and now consists of a positive-displacement blower package, and two 2,000-pound vapor-phase carbon vessels arranged in series. The AS portion of the system remains unchanged. The modified remediation system was re-started and tested to comply with the Bay Area Air Quality Management District's (BAAQMD's) permit conditions. Cambria monitored influent, mid, and effluent vapor concentrations with a flame-ionization detector (FID) on a daily basis from July 6 through July 8, 2004. In a BAAQMD letter dated July 9, 2004, Cambria was granted permission to monitor system effluent concentrations on a monthly basis.

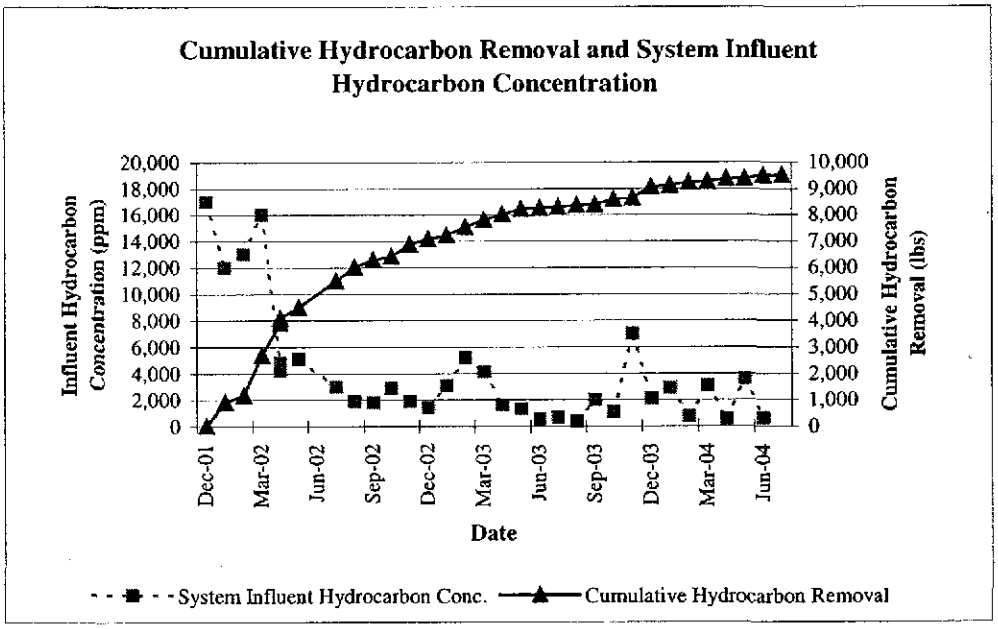
SVE/AS System Operation and Maintenance Activities: During the second quarter, Cambria performed system operation and maintenance (O&M) on the SVE/AS system approximately three times per month. Individual well flow, vacuum, and hydrocarbon concentration measurements were collected from all SVE wells and from the catalytic oxidizer/blower (see Tables 2 and 3). Flow and pressure measurements from the AS wells were also collected. During site visits, system operation parameters were recorded in specialized field forms for future system optimization and agency inspection. As per the BAAQMD permit, a catalytic oxidizer operating temperature greater than 600 degrees Fahrenheit was maintained, and system operation parameters were continuously measured using a chart recorder.

System influent and effluent vapor samples were collected and submitted for laboratory analysis on April 12, May 6, and June 10, 2004. Due to a laboratory error, influent and effluent vapor was re-sampled on May 17, 2004. Laboratory results indicate that the catalytic oxidizer was achieving proper destruction efficiency and was operating within BAAQMD air permit requirements. Table 2 summarizes SVE system operations and analytical results. The analytical laboratory reports from system vapor sampling are included as Appendix C.

SVE System Performance: The SVE system operated throughout the second quarter except for an automatic shutdown on April 18, 2004 due to a malfunctioning air pressure switch and system modifications in June. To evaluate vacuum versus flowrate relationships, a vacuum step-test was performed on April 27, 2004. Based on test data, the optimum extraction vacuum was 70-75 inches of water column. To maximize extraction flowrates, all extraction wells remained open for the duration of the quarter. System monitoring events were performed throughout the quarter to record

hydrocarbon concentrations in individual wells for future system optimization.

From April 2 through June 23, 2004, the SVE system operated for a total of 1,743 hours, a run-time of approximately 90 percent. Influent vapor concentrations ranged from 520 to 3,600 parts per million by volume (ppmv) and vapor flow rates ranged from 3.9 to 12.3 standard cubic feet per minute (see Table 2). Hydrocarbon removal rates ranged from approximately 0.7 to 4.5 pounds per day. The fluctuation in hydrocarbon removal rates is primarily due to continued performance optimization activities. As of July 6, 2004, approximately 9,521 pounds of hydrocarbons have been extracted and destroyed by soil vapor extraction activities (see graph below and Table 2).



AS System Performance: AS activities were periodically evaluated and optimized during the quarter. Air sparging parameters were adjusted to increase hydrocarbon concentrations while minimizing the potential for soil fracturing and offsite vapor migration. The AS system was set to cycle each AS well between 15 and 30 minutes, and to operate only between the hours of 7 am to 6 pm to reduce system noise during the evening and early morning hours. AS injection flow rates and intervals were adjusted during optimization events. Air pressures ranged from 5 to 11 pounds per square inch (psi) and injection flow rates ranged from 2.3 to 4.5 cubic feet per minute (cfm). To evaluate AS system performance, an AS injection test was performed on April 27, 2004. Hydrocarbon concentrations and extraction flowrate readings were monitored while air was injected into individual AS wells. The

results of the test indicated that AS system effectiveness was minimal, therefore, AS operations were temporarily discontinued on April 27, 2004.

ANTICIPATED THIRD QUARTER 2004 ACTIVITIES

Monitoring Activities

Cambria will gauge all monitoring wells; check wells for SPH; and collect groundwater samples from wells not containing SPH. As per the sampling schedule, 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 and System Progress Report - Third Quarter 2004.*

Corrective Action Activities

Cambria will continue to perform operation and maintenance visits of the SVE/AS system approximately two to three times per month during the third quarter of 2004. Optimization activities will include system vacuum adjustments to maximize subsurface air flow and extraction flow rates. During site visits, system parameters will be recorded in specialized field forms and will incorporate BAAQMD's required monitoring data. The BAAQMD does not require vapor sampling under the permit conditions governing activated vapor-phase carbon treatment, however, a system influent vapor sample will be collected on a monthly basis to calculate cumulative hydrocarbon mass removal. Passive in-well air sparging will continue in well MW-1 and will be continually monitored and optimized during system O&M events. Cambria will evaluate the performance of the remediation system and include the results with the *Groundwater Monitoring and System Progress Report - Third Quarter 2004.*

APPENDICES

Figure 1 - Groundwater Elevation and Hydrocarbon Concentration Map
Figure 2 - Soil Vapor Extraction/Air Sparge System Site Plan

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 – Analytical Results for Groundwater Sampling
Appendix C – Analytical Results for SVE System Operation
Appendix D – GeoTracker Electronic Delivery Confirmations

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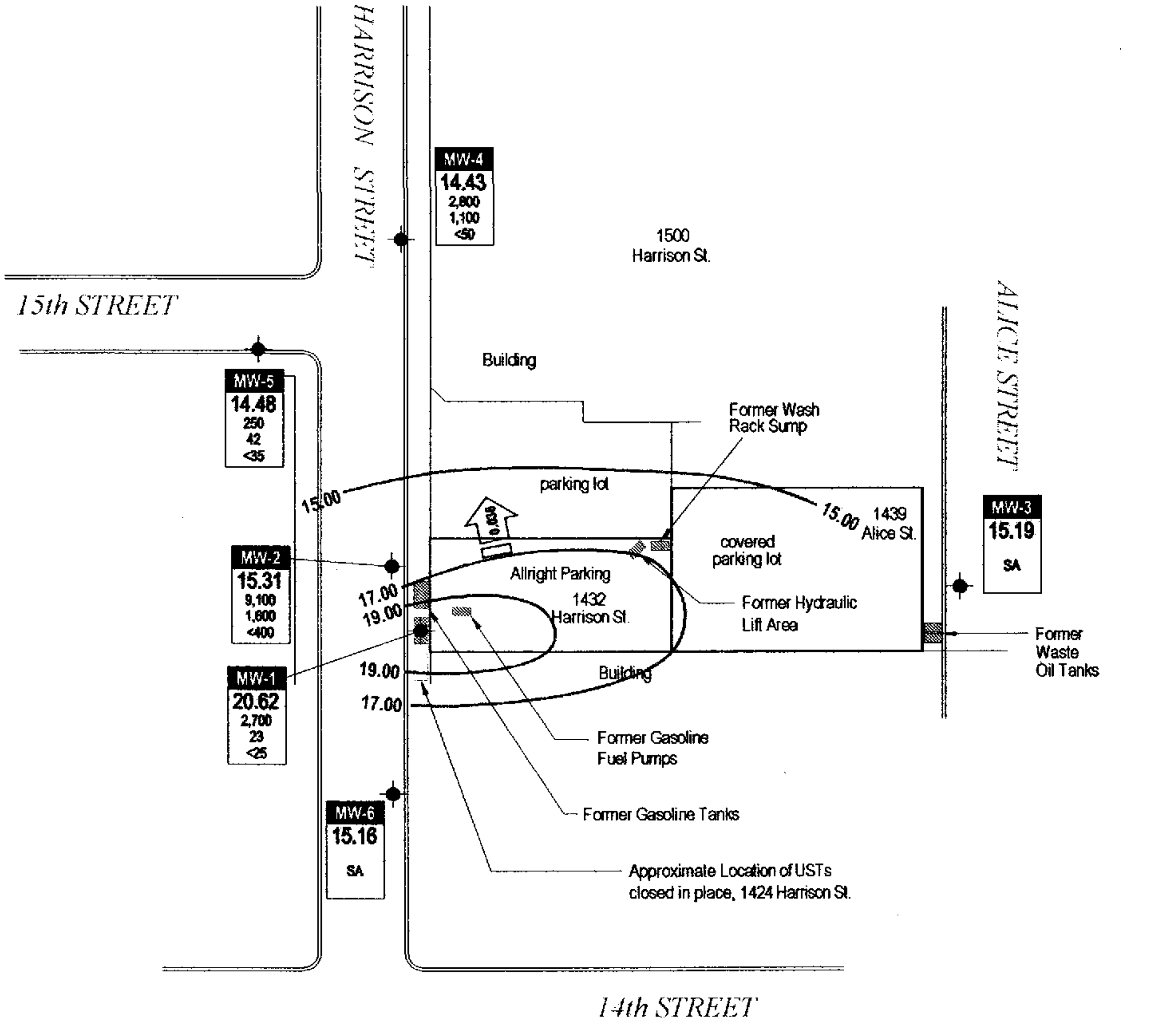


EXPLANATION

Symbol	Description
●	Groundwater monitoring well
17.00 ——	Groundwater elevation contour, in feet above mean sea level (msl)
⇨ 0.036	Groundwater flow direction and gradient
Well ID	Well designation
ELEV	Groundwater elevation, in feet above mean sea level (msl)
TPHg / Benzene / MTBE	Hydrocarbons and MTBE in groundwater, in micrograms per liter (µg/L)
SA	Sampled Annually

N

Scale (ft): 0 — 50 — 100

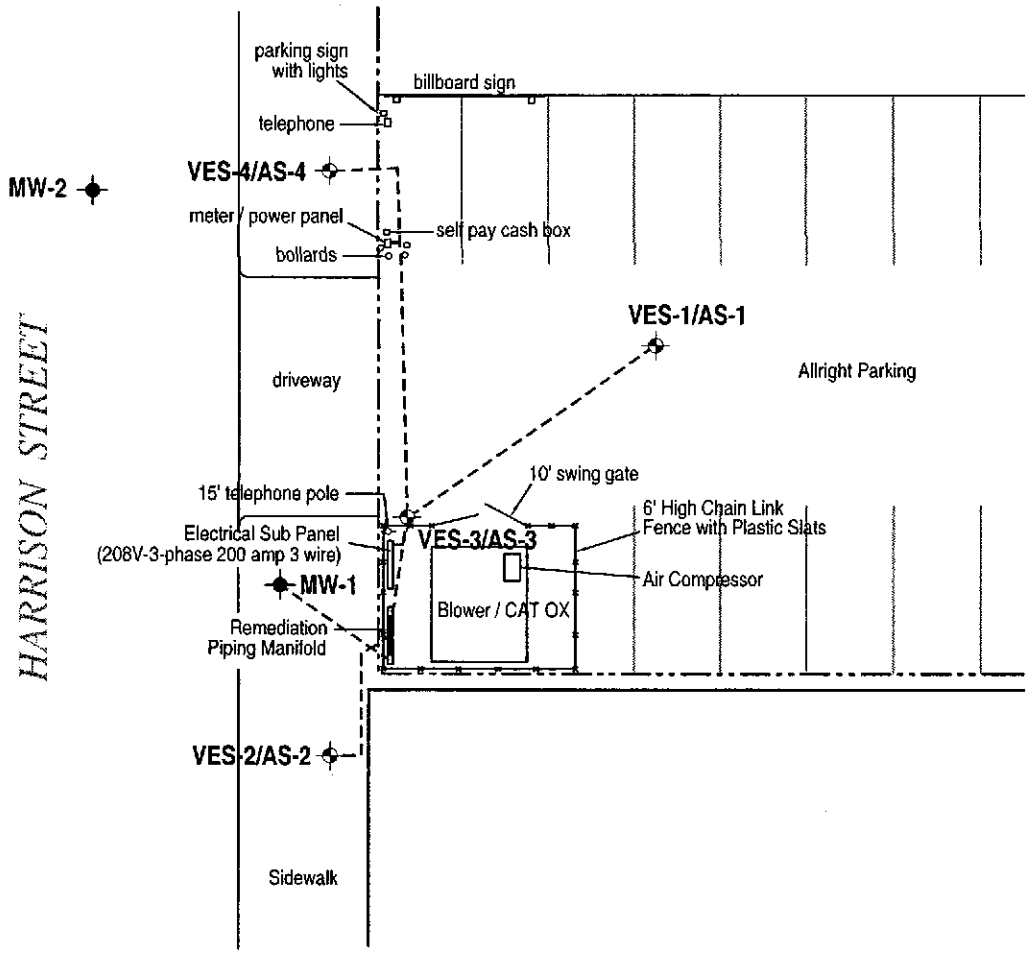
FIGURE **1**

Note: Groundwater mounding exists at well MW-1 due to soil vapor extraction on the well.

Allright Parking
1432 Harrison Street
Oakland, California

CAMBRIA

Groundwater Elevation and Hydrocarbon Concentration Map
June 16, 2004



EXPLANATION

VES-1/AS-1 — Vapor Extraction / Air Sparging Coaxial Well Location

MW-1 — Monitoring Well Location

---------- Underground Remediation Piping

Note: Monitoring well MW-1 is being utilized for vapor extraction

N

0 10 20

Scale (ft)

FIGURE

2

H:\SB-2004\ROSINKF\FIGURES\SYSTEM.DWG

Allright Parking

1432 Harrison Street

Oakland, California

CAMBRIA

Soil Vapor Extraction/ Air Sparge System Site Plan

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Table 1. Groundwater Elevations and Analytical Data - Borsuk Site, 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	a
	7/3/2000	18.95	--	16.00	200,000	33,000	46,000	2,200	15,000	<200*	a
	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[x]	--	--	--	--	--	--	--
	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[x]	--	--	--	--	--	--	--
	7/23/2003	19.42	0.07	15.59[x]	--	--	--	--	--	--	--
*35.37**	12/22/2003	17.09	0.01	18.29[x]	--	--	--	--	--	--	--
	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**

Table 1. Groundwater Elevations and Analytical Data - Borsuk Site, 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	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
	3/6/2001	19.57	--	15.61	32,000	3,400	3,400	580	2,500	<200	a
	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	<5.0*	a
	6/10/2002	22.83	--	12.35	7,800	2,000	1,100	76	570	<100*	a
35.21	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**

Table 1. Groundwater Elevations and Analytical Data - Borsuk Site, 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-3	8/1/1994	--	--	--	<50	<0.5	<0.5	<0.5	<2.0	--	--
33.97	12/21/1994	18.82	--	15.15	<50	<0.5	<0.5	<0.5	<0.5	--	e
(annual sampling)	3/13/1995	17.86	--	16.11	<50	<0.5	<0.5	<0.5	<0.5	--	f,g
	7/7/1995	18.25	--	15.72	--	--	--	--	--	--	h
	9/28/1995	18.00	--	15.97	--	--	--	--	--	--	--
	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*	--
34.01	9/3/2002	21.17	--	12.84	--	--	--	--	--	--	--
	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	--	--	--	--	--	--	--

Table 1. Groundwater Elevations and Analytical Data - Borsuk Site, 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	10/28/1996	19.32	--	14.43	10,000	3,900	420	400	360	<200*	n
33.75	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	--	--
	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,l
	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,l
	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**

Table 1. Groundwater Elevations and Analytical Data - Borsuk Site, 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-5	10/28/1996	19.88	--	14.75	90	4.0	0.6	<0.50	<0.50	16*	n
34.63	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	k
	7/3/2000	19.40	--	15.23	85	8.1	3.1	1.6	7.8	<5.0*	a
	9/7/2000	19.62	--	15.01	<50	<0.5	<0.5	<0.5	<0.5	<5.0*	--
	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	a
	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*	--
	9/3/2002	21.50	--	13.13	60	1.9	<0.5	<0.5	0.77	<5.0	a
	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	--
	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	a
	6/16/2004	20.15	--	14.48	250	42	<0.5	0.88	<0.5	<35	a

Table 1. Groundwater Elevations and Analytical Data - Borsuk Site, 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-6	10/28/1996	20.02	--	15.87	<50	<0.50	<0.50	<0.50	<0.50	<2.0*	n
35.89	12/12/1996	20.18	--	15.71	ND	ND	ND	ND	ND	ND*	--
(annual sampling)	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	--	--
	6/23/1999	18.41	--	17.48	ND	ND	ND	ND	ND	--	--
	9/24/1999	19.61	--	16.28	ND	ND	ND	ND	ND	--	--
	12/23/1999	20.30	--	15.59	ND	ND	ND	ND	ND	--	--
	3/21/2000	18.97	--	16.92	<50	<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	<5.0*	a
	9/7/2000	19.95	--	15.94	<50	<0.5	<0.5	<0.5	<0.5	<5.0*	--
	12/5/2000	20.50	--	15.39	<50	<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	<5.0	--
	6/8/2001	20.92	--	14.97	<50	<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	<5.0	--
	10/25/2001	21.59	--	14.30	<50	<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	<5.0*	--
	6/10/2002	21.97	--	13.92	<50	<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	<5.0	--
	1/23/2003	20.47	--	15.42	<50	<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	<5.0	--
	6/16/2004	**20.73**	--	**15.16**	--	--	--	--	--	--	--
Trip Blank	3/21/2000	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
	9/7/2000	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--

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Table 1. Groundwater Elevations and Analytical Data - Borsuk Site, 1432 Harrison Street, Oakland, California

Well ID	Date	Depth to Groundwater	SPH Thickness	Groundwater Elevation	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Notes
TOC (feet)		(feet)	(feet)	(feet)	←		(µg/L)			→	

Abbreviations

TOC = Top of Casing Elevation

SPH = Separate-Phase Hydrocarbons

TPHg = Total petroleum hydrocarbons as gasoline by EPA method Modified 8015

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

MTBE = Methyl tert-butyl ether * = MTBE by EPA Method 8020

** = MTBE by EPA Method 8240

*** = MTBE by EPA Method 8260

µg/L = micrograms per liter, equivalent to parts per billion

-- = Not Sampled, Not Analyzed, or Not Applicable

<n = Not detected in sample above n µg/L

ND = Not detected above laboratory detection limit

x = Groundwater elevation adjusted for SPH by the relation:

Groundwater Elevation = Well Elevation - Depth to Water + (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.

Notes

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.

g = Sample analyzed for Total Petroleum Hydrocarbons as motor oil (TPHmo) by

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. EPA method Modified 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 ~2 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: Borsuk Site, 1432 Harrison Street, Oakland, California

Date	Hour Meter Readings (hrs)	System Uptime (%)	System Vacuum (H2O)	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. [1] (ppmv) TPHg	Effluent HC Conc. [1] (ppmv) TPHg	Effluent HC Conc. [1] (ppmv) Benz	HC Removal Rate [2] (lbs/day) TPHg	Emission Rate [2] (lbs/day) TPHg	Emission Rate [2] (lbs/day) Benz	TPHg Destruction Efficiency [3] (%)	Gasoline Cumulative Removal [4] (lbs)
12/20/2001	13.0	--		--	17,000	825	170	920	<10	<0.15	50.18	<0.545	<0.007	--[3]	0
1/7/2002	443.8	100%		--	12,000	1017	105	1,400	<10	<0.15	47.16	<0.337	<0.005	--[3]	901
2/4/2002	576.2	20%		--	13,000	916	150	1,100	<10	<0.15	52.94	<0.481	<0.007	--[3]	1161
3/5/2002	1268.2	99%		--	16,000	1020	135	1,000	<10	<0.15	43.31	<0.433	<0.006	--[3]	2687
4/2/2002	1939.9	100%		--	4,800	715	114	390	<10	<0.15	14.26	<0.366	<0.005	--[3]	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	--[3]	6027
9/10/2002	5700.9	100%	80	10.5	1,800	609	*	*	<10	<0.15	6.08	<0.034	<0.000	--[3]	6282
10/2/2002	6229.7	100%	81	14.0	2,900	801	*	*	<10	<0.15	13.04	<0.045	<0.001	--[3]	6416
11/6/2002	7073.8	100%	82	12.1	1,900	848	*	*	<10	<0.15	7.40	<0.039	<0.001	--[3]	6875
12/5/2002	7771.5	100%	90	8.4	1,400	840	*	*	<10	<0.15	3.78	<0.027	<0.000	--[3]	7090

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

Date	Hour Meter Readings (hrs)	System Uptime (%)	System Vacuum ("H2O)	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. [1] (ppmv) TPHg	Effluent HC Conc. [1] (ppmv) TPHg	Effluent HC Conc. [1] (ppmv) Benz	HC Removal Rate [2] (lbs/day) TPHg	Emission Rate [2] (lbs/day) TPHg	Emission Rate [2] (lbs/day) Benz	TPHg Destruction Efficiency [3] (%)	Gasoline Cumulative Removal [4] (lbs)
1/8/2003	8580.5	99%	91	9.5	3,100	813	*	*	<10	<0.15	9.42	<0.030	<0.000	--[3]	7217
2/12/2003	9424.0	100%	93	7.6	5,200	801	*	*	<10	<0.15	12.61	<0.024	<0.000	--[3]	7548
3/4/2003	9902.8	100%	90	5.5	4,100	798	*	*	<10	<0.15	7.27	<0.018	<0.000	--[3]	7800
4/3/2003	10623.3	100%	115	9.5	1,600	802	*	*	<10	<0.15	4.86	<0.030	<0.000	--[3]	8018
5/15/2003	11629.8	100%	119	6.7	1,300	840	*	*	<10	<0.15	2.80	<0.022	<0.000	--[3]	8222
6/2/2003	12061.5	100%	116	4.4	526	805	*	*	<10	<0.15	0.75	<0.014	<0.000	--[3]	8272
7/2/2003	12779.5	100%	120	9.0	680	836	*	*	<10	<0.15	1.95	<0.029	<0.000	--[3]	8295
8/7/2003	13643.9	100%	117	7.6	370	749	*	*	<10	<0.15	0.90	<0.024	<0.000	--[3]	8365
9/3/2003	14288.9	100%	116	9.7	2,000	737	*	*	<10	<0.15	6.19	<0.031	<0.000	--[3]	8389
10/7/2003	15109.8	100%	119	4.5	1,100	752	*	*	<10	<0.15	1.57	<0.014	<0.000	--[3]	8601
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	--[3]	8652
12/2/2003	16378.9	99%	96	3.0	2,100	717	*	*	<10	<0.15	2.01	<0.010	<0.000	--[3]	9068
1/7/2004	17180.9	93%	98	3.2	2,900	905	*	*	<10	<0.15	2.97	<0.010	<0.000	--[3]	9135

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

Date	Hour Meter Readings (hrs)	System Uptime (%)	System Vacuum (H2O)	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. [1] (ppmv) TPHg	Effluent HC Conc. [1] (ppmv) TPHg	Effluent HC Conc. [1] (ppmv) Benz	HC Removal Rate [2] (lbs/day) TPHg	Emission Rate [2] (lbs/day) TPHg	Emission Rate [2] (lbs/day) Benz	TPHg Destruction Efficiency [3] (%)	Gasoline Cumulative Removal [4] (lbs)
2/11/2004	18021.0	100%	62	4.2	760	853	*	*	<10	<0.15	1.01	<0.013	<0.000	--[3]	9239
3/24/2004	18861.7	83%	82	5.2	3,100	796	*	*	<10	<0.15	5.16	<0.017	<0.000	--[3]	9275
4/12/2004	19315.8	100%	79	3.9	520	839	*	*	<10	<0.15	0.65	<0.012	<0.000	--[3]	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	--[3]	9495
7/6/2004	20823.5	50%	70	12.3	--	--	*	*	--	--	--	--	--	--	9521

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 (ug/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.

scfm = standard cubic feet per minute

[1] TPHg and benzene concentrations based on Horiba gas analyzer measurements and/or lab results by Modified EPA Methods 8015 and 8020.

Laboratory analytic results for TPHg and benzene are converted from ug/l to ppmv using conversion rates of 0.28 for TPHg and 0.308 for benzene.

[2] The hydrocarbon removal/emission rate is based on the Bay Area Air Quality Management's District's (BAAQMD) Procedures for Soil Vapor Extraction where

Rate = concentration (ppmv) x flow rate (cfm) x 1 lb-mole/386x10^{6}ft^3 x molecular weight (86 lb/lb-mole for TPHg, 78 lb/lb-mole for benzene) x 1440 min/day.

[3] As per BAAQMD Permit, destruction efficiency requirements are waived if system TPHg effluent concentration is <10.

[4] 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 Concentrations are now measured from the well manifold because there is no longer any dilution air affecting the calculation of the hydrocarbon removal rate.

Table 3. SVE System Parameters - Borsuk Site, 1432 Harrison Street, Oakland, California

Well ID	Date	Well Vacuum (inches of H_2O)	Flow Rate (cfm)	Hydrocarbon Vapor Concentration (ppmv)	Status (open/closed)
MW-1	11/11/03	105	1.0	26,000	open
	11/17/03	85	0.7	3,530	open
	12/2/03	94	1.0	5,700	open
	12/10/03	93	1.6	11,000	open
	12/23/03	95	0.8	10,000	open
	1/7/04	98	0.9	5,050	open
	1/23/04	82	0.59	13,100	open
	1/30/04	81	*	--	open
	2/11/04	62	2.6	160	open
	3/3/04	47	1.0	1,200	open
	3/3/04	150	4.8	589	open
	3/10/04	146	3.0	233	open
	3/24/04	74	0.9-2.5	3,950	open
	4/2/04	81	3.2	225	open
	4/12/04	78	2.18	415	open
	4/27/04	75	5.2	2,010	open
	5/6/04	70	4.0	160	open
	5/17/04	70	--	120	open
	5/27/04	70	1.8	75	open
	6/10/04	80	3.2	180	open
	6/16/04	84	3.8	63	open
	7/6/04	70	6.0	410	open
	7/7/04	72	6.5	360	open
	7/8/04	74	5.0	300	open
VES-1	12/13/01	–	--	36,000	open
	12/20/01	25	6.5	43,000	open
	12/27/01	48	12.4	41,000	open
	1/7/02	100	20.5	>10,000	open
	2/8/02	140	27	>10,000	open
	3/5/02	34	6.3	>10,000	open
	4/2/02	83	13.5	10,070	open
	4/15/02	101	28.2	10,070	open
	5/22/02	80	22.5	9,980	open
	5/27/02	81	4.5	27,000	open
	6/5/02	77	22.1	11,110	open
	6/21/02	81	*	7,810	open
	7/2/02	82	25	10,400	open
	7/26/02	81	22.5	5,210	open
	8/5/02	80	5.5	6,020	open
	9/10/02	80	5.2	9,180	open
	10/2/02	80	10.5	11,070	open
	11/6/02	82	9.0	4,850	open
	12/5/02	90	8.5	4,000	open
	1/8/03	92	5.1	2,340	open
	1/24/03	95	4.0	2,350	open
	3/4/03	90	3.6	1,750	open
	3/17/03	93	7.5	1,360	open
	4/3/03	115	4.0	720	open
	4/14/03	116	--	1,180	open
	5/7/03	117	3.5	660	open

Table 3. SVE System Parameters - Borsuk Site, 1432 Harrison Street, Oakland, California

Well ID	Date	Well Vacuum (inches of H_2O)	Flow Rate (cfm)	Hydrocarbon Vapor Concentration (ppmv)	Status (open/closed)
-->VES-1	5/15/03	119	6.0	1,950	open
	5/27/03	117	4.1	1,600	open
	6/13/03	118	3.9	1,525	open
	6/23/03	118	--	--	open
	7/2/03	119	25*	1,270	open
	7/11/03	118	3.5*	--	open
	8/7/03	117	*	50	open
	8/15/03	117	1.4*	105	closed
	8/26/03	120	4.0	200	open
	9/3/03	116	2.9*	190	open
	10/2/03	116	7.0	70	closed
	10/7/03	114	21	2	closed
	10/15/03	118	23*	1,650	open
	10/21/03	117	21	1,090	open
	11/17/03	85	0.7	2,050	open
	12/2/03	94	0.67	1,550	open
	12/10/03	92	0.63	5,700	open
	12/23/03	95	0.8	7,000	open
	1/7/04	98	0.5	3,750	open
	1/23/04	82	0.57	12,500	open
	1/30/04	81	0.5	--	open
	2/11/04	62	0.25	5,520	open
	3/3/04	47	0.31	1,515	open
	3/3/04	150	5.9	5,130	open
	3/10/04	146	0.7	1,867	open
	3/24/04	74	1.0	4,150	open
	4/2/04	81	0.9	135	open
	4/12/04	78	2.5-25*	80	open
	4/27/04	75	1.8	55	open
	5/6/04	70	3	2,150	open
	5/17/04	70	--	1,485	open
	5/27/04	70	0.9	1,030	open
	6/10/04	80	*	1,025	open
	6/16/04	84	1.4	460	open
	7/6/04	70	*	*	open
	7/7/04	72	*	*	open
	7/8/04	74	*	*	open
VES-2	12/13/01	--	--	40,000	open
	12/20/01	25	6.0	42,500	open
	12/27/01	48	12.1	35,000	open
	1/7/02	100	21.5	>10,000	open
	2/8/02	140	25.1	>10,000	open
	3/5/02	34	7.6	>10,000	open
	4/2/02	83	13.2	--	open
	4/15/02	102	24.1	1,347	open
	5/22/02	81	26.1	1,888	open
	5/27/02	81	9.5	4,710	open
	6/5/02	79	20.7	2,090	open
	6/21/02	82	47	1,820	open
	7/2/02	81	28.9	5,210	open

Table 3. SVE System Parameters - Borsuk Site, 1432 Harrison Street, Oakland, California

Well ID	Date	Well Vacuum (inches of H_2O)	Flow Rate (cfm)	Hydrocarbon Vapor Concentration (ppmv)	Status (open/closed)
-->VES-2	7/26/02	81	13.1	1,515	open
	8/5/02	80	10.5	1,925	open
	9/10/02	80	8.9	1,850	open
	10/2/02	80	8.5	3,370	open
	11/6/02	82	9.0	2,180	open
	12/5/02	90	--	1,870	open
	1/8/03	92	--	6,210	open
	1/24/03	95	4.0	9,630	open
	3/4/03	90	2.5	5,790	open
	3/17/03	93	--	2,020	open
	4/3/03	115	--	3,230	open
	4/14/03	116	--	2,980	open
	5/7/03	117	9.0	700	open
	5/15/03	119	8.0	475	open
	5/27/03	117	5.3	515	open
	6/13/03	118	4.1	525	open
	6/23/03	118	--	--	open
	7/2/03	119	9*	365	open
	7/11/03	118	5*	--	open
	8/7/03	117	15.2*	250	open
	8/15/03	117	8.5*	365	open
	8/26/03	121	4.2	245	open
	9/3/03	116	*	1,295	open
	10/2/03	120	4.0	410	open
	10/7/03	118	17	1,120	open
	10/15/03	119	21	1,550	open
	10/21/03	119	21	1,675	open
	11/17/03	85	1.9	1,115	open
	12/2/03	94	2.0*	460	open
	12/10/03	92	2.0	1,740	open
	12/23/03	95	1.5	1,510	open
	1/7/04	98	1.6	600	open
	1/23/04	82	1.6	90	open
	1/30/04	81	*	--	open
	2/11/04	62	2.1*	130	open
	3/3/04	47	0.87	3,460	open
	3/3/04	150	6.8	883	open
	3/10/04	146	*	3,930	open
	3/24/04	74	1.9	6,800	open
	4/2/04	81	1.0	3,350	open
	4/12/04	78	1.5	1,150	open
	4/27/04	75	2	1,170	open
	5/6/04	70	3.8	190	open
	5/17/04	70	--	65	open
	5/27/04	70	33*	30	open
	6/10/04	80	*	35	open
	6/16/04	84	2.7	20	open
	7/6/04	70	1.5	110	open
	7/7/04	72	1.3	250	open
	7/8/04	74	1.1	220	open

Table 3. SVE System Parameters - Borsuk Site, 1432 Harrison Street, Oakland, California

Well ID	Date	Well Vacuum (inches of H_2O)	Flow Rate (cfm)	Hydrocarbon Vapor Concentration (ppmv)	Status (open/closed)
VES-3	12/13/01	--	--	38,000	open
	12/20/01	25	7.0	41,500	open
	12/27/01	48	12	61,000	open
	1/7/02	100	22.5	>10,000	open
	2/8/02	140	26.5	>10,000	open
	3/5/02	47	7.5	>10,000	open
	4/2/02	84	11.1	--	open
	4/15/02	102	24.8	4,260	open
	5/22/02	85	16.5	7,090	open
	5/27/02	81	6.7	7,010	open
	6/5/02	85	14.7	5,290	open
	6/21/02	80	25.5	3,450	open
	7/2/02	82	32.2	4,820	open
	7/26/02	81	9.3	3,400	open
	8/5/02	80	4.5	3,380	open
	9/10/02	80	7.1	3,150	open
	10/2/02	80	4.0	2,140	open
	11/6/02	82	5.5	1,215	open
	12/5/02	90	4.5	1,015	open
	1/8/03	92	5.5	3,840	open
	1/24/03	95	3.0	6,040	open
	3/4/03	90	3.5	3,430	open
	3/17/03	93	1.3	1,980	open
	4/3/03	115	3.5	1,900	open
	4/14/03	116	--	1,950	open
	5/7/03	117	1.5	1,320	open
	5/15/03	119	2.6	1,530	open
	5/27/03	117	1.6	1,250	open
	6/13/03	118	1.5	1,000	open
	6/23/03	118	--	--	open
	7/2/03	119	14*	850	open
	7/11/03	118	1.9	--	open
	8/7/03	117	2.5	375	open
	8/15/03	117	2.7	380	open
	8/26/03	123	2.4	5	closed
	9/3/03	116	3.9*	3,430	open
	10/2/03	121	30*	25	closed
	10/7/03	117	19	225	closed
	10/15/03	118	23	30	closed
	10/21/03	118	21	70	closed
	11/17/03	86	2.0	1,425	open
	12/2/03	94	1.3	280	close
	12/10/03	92	2.2	100	open
	12/23/03	95	2.0	50	open
	1/7/04	98	0.6	4,810	open
	1/23/04	82	0.25	3,620	open
	1/30/04	81	0.7	--	open
	2/11/04	62	0.3	1,280	open
	3/3/04	47	0.39	3,320	open
	3/3/04	150	5.6	1,990	open
	3/10/04	146	3.7	285	open

Table 3. SVE System Parameters - Borsuk Site, 1432 Harrison Street, Oakland, California

Well ID	Date	Well Vacuum (inches of H_2O)	Flow Rate (cfm)	Hydrocarbon Vapor Concentration (ppmv)	Status (open/closed)
-->VES-3	3/24/04	74	19.7**	40	open
	4/2/04	81	0.5	1,240	open
	4/12/04	78	1.85	440	open
	4/27/04	75	0.9	425	open
	5/6/04	70	2.1	252	open
	5/17/04	70	--	410	open
	5/27/04	70	1.6	220	open
	6/10/04	80	1.9	2	open
	6/16/04	84	2.1	15	open
	7/6/04	70	1.4	20	open
	7/7/04	72	1.2	25	open
	7/8/04	74	1.0	50	open
VES-4	12/13/01	--	--	35,000	open
	12/20/01	25	4.9	46,500	open
	12/27/01	48	12.2	53,000	open
	1/7/02	100	23	>10,000	open
	2/8/02	140	28.1	>10,000	open
	3/5/02	47	9.3	>10,000	open
	4/2/02	84	11.5	--	open
	4/15/02	102	22.5	5,350	open
	5/22/02	80	21.7	570	open
	5/27/02	81	6.3	10,460	open
	6/5/02	80	18	4,490	open
	6/21/02	81	41.5	2,580	open
	7/2/02	81	38	9,690	open
	7/26/02	81	2.3	2,230	open
	8/5/02	80	4.4	6,160	open
	9/10/02	80	5.5	2,410	open
	10/2/02	80	3.5	1,777	open
	11/6/02	82	4.5	920	open
	12/5/02	90	7.0	420	open
	1/8/03	92	4.0	1,805	open
	1/24/03	95	5.0	2,720	open
	3/4/03	90	4.0	1,390	open
	3/17/03	93	1.0	1,300	open
	4/3/03	115	2.3	1,090	open
	4/14/03	116	--	1,050	open
	5/7/03	117	1.8	610	open
	5/15/03	119	2.7	2,100	open
	5/27/03	117	2.0	1,850	open
	6/13/03	118	2.0	1,800	open
	6/23/03	118	--	--	open
	7/2/03	119	17*	1,550	open
	7/11/03	118	2.2	--	open
	8/7/03	117	2.6	1,550	open
	8/15/03	117	2.8	630	open
	8/26/03	122	3.7	465	open
	9/3/03	--	--	25	closed
	10/2/03	117	7.5	2,550	open
	10/7/03	116	17	15	close

Table 3. SVE System Parameters - Borsuk Site, 1432 Harrison Street, Oakland, California

Well ID	Date	Well Vacuum (inches of H_2O)	Flow Rate (cfm)	Hydrocarbon Vapor Concentration (ppmv)	*Status* (open/closed)
-->VES-4	10/15/03	117	30	75	closed
	10/21/03	117	28	50	closed
	11/17/03	86	3.0	70	closed
	12/10/03	92	3.0	2,850	open
	12/23/03	95	0.5	2,300	open
	1/7/04	98	1.0	46,000	open
	1/23/04	82	0.65	12,000	open
	1/30/04	81	*	--	open
	2/11/04	62	0.45	4,770	open
	3/3/04	47	0.93	7,010	open
	3/3/04	150	2.2	4,270	open
	3/10/04	146	1.6	65	open
	3/24/04	74	0.7	3,500	open
	4/2/04	81	0.9	120	open
	4/12/04	78	5.5	170	open
	4/27/04	75	2.1	60	open
	5/6/04	70	2.8	1,740	open
	5/17/04	70	--	1,120	open
	5/27/04	70	1.1	2,560	open
	6/10/04	80	*	4,300	open
	6/16/04	84	1.0	1,840	open
	7/6/04	70	1.3	3,150	open
	7/7/04	72	1.0	4,880	open
	7/8/04	74	1.2	3,550	open

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.

CAMBRIA

APPENDIX A

Groundwater Monitoring Field Data Sheets

CAMBR..

Groundwater Monitoring Field Sheet

Well ID	Time	DTP	DTW	Depth to Bottom	Product Thickness	Amount of Product Removed	Casing Diam.	Comments
MW-1	9:05		14.75					
MW-2	5:50		19.90					
MW-3	5:30		18.82					
MW-4	5:40		19.32					
MW-5	5:45		20.15					
MW-6	5:35		20.73					

Project Name: Borsuk

Project Number/Task: 540-0188 / 058

Technician: J. Hall

Date: 6-16-04

\\1OAKDC\IR\IR GROUP INFO\FORMS (OFFICE AND FIELD)\FIELD\GW MONITORING.WPD

CAMBRIA

WELL SAMPLING FORM

Project Name: Borsuk	Cambria Mgr: GH	Well ID: MW-1
Project Number: 540-0138	Date: 6-16-04	Well Yield:
Site Address: 1432 Harrison St. Oakland, Ca	Sampling Method: disposable bailer	Well Diameter: 4" pvc Technician(s): SG
Initial Depth to Water: 14.75	Total Well Depth: ~~21.60~~ 21.60	Water Column Height: 6.85
Volume/ft: 0.65	1 Casing Volume: 4.45	3 Casing Volumes: 13.35
Purging Device: 4" pvc bailer	Did Well Dewater?: ~~Yes~~ No	Total Gallons Purged: 3
Start Purge Time: 9:10	Stop Purge Time: 9:15	Total Time: 5mins

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	~~4~~ 3 gallons	well dewatered			foam 4.63
~~9:20~~	8				
9:25	13				

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

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW-1	6-16-04	9:30	3 VOA	HCl	TPHg BTEX MTBE	8015/8020 8260

\TEMPLATE\FORMS\FIELD\WELLSAMP2.WPD
5M 5/31/94

CAMBRIA

WELL SAMPLING FORM

Project Name: Borsuk	Cambria Mgr: GH	Well ID: MW-2
Project Number: 540-0188	Date: 6-16-04	Well Yield:
Site Address: 1432 Harrison St. Oakland, Ca	Sampling Method: disposable bailer	Well Diameter: 2 0 pvc
		Technician(s): SG
Initial Depth to Water: 19.90	Total Well Depth: 25.40	Water Column Height: 5.50
Volume/ft: 0.16	1 Casing Volume: 0.88	3 Casing Volumes: 2.64
Purging Device: disposable baile.	Did Well Dewater?: no	Total Gallons Purged: 2.5
Start Purge Time: 7:45	Stop Purge Time: 8:09	Total Time: 24 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
7:55	1	19.3	7.12	628	
8:05	1.5	19.5	7.04	691	
8:10	2.5	19.5	7.02	635	

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

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW-2	6-16-04	8:15	3 VOA	HCl	TPHg BTEX MTBE	8015/8020 8260

CAMBRIA

WELL SAMPLING FORM

Project Name: Borsuk	Cambria Mgr: GH	Well ID: MW-4
Project Number: 540-0188	Date: 6-16-04	Well Yield:
Site Address: 1432 Harrison St. Oakland, Ca	Sampling Method: disposable bailer	Well Diameter: 2 ☐ pvc
		Technician(s): SG
Initial Depth to Water: 19.32	Total Well Depth: 24.50	Water Column Height: 5.18
Volume/ft: 0.16	1 Casing Volume: 0.82	3 Casing Volumes: 2.46
Purging Device: disposable bailer	Did Well Dewater?: no	Total Gallons Purged: 2.5
Start Purge Time: 6:50	Stop Purge Time: 7:19	Total Time: 29 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
7:00	1	19.7	6.99	1021	
7:10	1.5	19.7	7.02	851	
7:20	2.5	19.5	7.04	720	

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

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW-4	6-15-04	7:25	3 VOA	HCl	TPHg BTEX MTBE	8015/8020 8260

CAMBRIA

WELL SAMPLING FORM

Project Name: Borsuk	Cambria Mgr: GH	Well ID: MW-5
Project Number: 540-0188	Date: 6-16-04	Well Yield:
Site Address: 1432 Harrison St. Oakland, Ca	Sampling Method: disposable bailer	Well Diameter: 2 ☐ pvc
		Technician(s): SH
Initial Depth to Water: 20.15	Total Well Depth: 28.34	Water Column Height: 8.19
Volume/ft: 0.16	1 Casing Volume: 1.31	3 Casing Volumes: 3.93
Purging Device: disposable bailer	Did Well Dewater?: no	Total Gallons Purged: 4
Start Purge Time: 6:00	Stop Purge Time: 6:29	Total Time: 29 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
6:10	1.5	19.8	6.98	603	
6:20	3	19.6	703	695	
6:30	4	19.5	7.01	711	

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

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW-5	6-16-04	6:35	3 VOA	HCl	TPHg BTEX MTBE	8015/8020 8260

CAMBRIA

APPENDIX B

Analytical Results for Groundwater Sampling

McCampbell Analytical, Inc.

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

Cambria Env. Technology	Client Project ID: #540-0188; Borsuk	Date Sampled: 06/16/04
5900 Hollis St, Suite A		Date Received: 06/17/04
Emeryville, CA 94608	Client Contact: Gretchen Hellmann	Date Reported: 06/22/04
	Client P.O.:	Date Completed: 06/22/04

WorkOrder: 0406301

June 22, 2004

Dear Gretchen:

Enclosed are:

1). the results of **4** 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 E-mail: main@mccampbell.com

Cambria Env. Technology	Client Project ID: #540-0188; Borsuk	Date Sampled: 06/16/04
5900 Hollis St, Suite A		Date Received: 06/17/04
Emeryville, CA 94608	Client Contact: Gretchen Hellmann	Date Extracted: 06/20/04-06/22/04
	Client P.O.:	Date Analyzed: 06/20/04-06/22/04

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

Extraction method: SW5030B Analytical methods: SW8021B/8015Cm Work Order: 0406301

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	MW-1	W	2700,a	ND<25	23	160	13	520	5	111
002A	MW-2	W	9100,a	ND<400	1600	1200	220	830	50	112
003A	MW-4	W	2800,a	ND<50	1100	24	17	100	10	106
004A	MW-5	W	250,a	ND<35	42	ND	0.88	ND	1	111

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 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.

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

QC SUMMARY REPORT FOR SW8021B/8015Cm

Matrix: W WorkOrder: 0406301

EPA Method: SW8021B/8015Cm Extraction: SW5030B BatchID: 12014 Spiked Sample ID: 0406306-002A

	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	98.4	97.2	1.24	98.1	98.2	0.161	70	130
MTBE	ND	10	109	106	2.71	106	111	4.34	70	130
Benzene	ND	10	117	115	2.32	107	111	3.29	70	130
Toluene	ND	10	111	108	2.44	106	108	2.25	70	130
Ethylbenzene	ND	10	115	112	2.85	108	109	1.44	70	130
Xylenes	ND	30	100	96.3	3.74	95.7	96	0.348	70	130
%SS:	96.1	10	107	109	1.76	103	106	3.17	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 applicable or not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

DHS Certification No. 1644

QA/QC Officer

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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0406301 **ClientID: CETE**

Report to:
Gretchen Hellmann
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: 6/17/04
Date Printed: 6/17/04

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)														
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0406301-001	MW-1	Water	6/16/04	☐	A	A													
0406301-002	MW-2	Water	6/16/04 8:15:00 AM	☐	A														
0406301-003	MW-4	Water	6/16/04 7:25:00 AM	☐	A														
0406301-004	MW-5	Water	6/16/04 6:35:00 AM	☐	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: 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.

0406301

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: Gretchen Hellmann Bill To: Cambria Env. Tech

Company: Cambria Environmental Technology Inc.

5900 Hollis Street STE-A

Emeryville, CA 94608 E-mail:

Tele: 510-420-3305 Fax: 510-420-9170

Project #: 5410-0188 Project Name: Bossuk

Project Location: 1432 Harrison St. Oakland CA

Sampler Signature: L. 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
MW-1		6/6/04		3	VOA	X					X	X		
MW-2			8:15			X					X	X		
MW-4			7:25			X					X	X		
MW-5			6:35			X					X	X		

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	Comments
X																Confirm all MTBE by 8260 if greater than detection limits
X																X
X																X
X																X

Relinquished By:	Date:	Time:	Received By:
L. Hall	6-17-04	8:30	Secure location
	6/17/04	11:20	
	6/17	1pm	Mel Valle

Remarks:

ICE/t° ✓
GOOD CONDITION ✓ APPROPRIATE CONTAINERS ✓
HEAD SPACE ABSENT ✓ PRESERVED IN LAB
DECHLORINATED IN LAB

PRESERVATION	VOAS	O&G	METALS	OTHER
	✓			

CAMBRIA

APPENDIX C

Analytical Results for SVE System Operation

McCampbell Analytical, Inc.

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

Cambria Env. Technology 5900 Hollis St, Suite A Emeryville, CA 94608	Client Project ID: #540-0188-61; BORSUK	Date Sampled: 04/12/04
		Date Received: 04/13/04
	Client Contact: Gretchen Hellmann	Date Reported: 04/19/04
	Client P.O.:	Date Completed: 04/19/04

WorkOrder: 0404160

April 19, 2004

Dear Gretchen:

Enclosed are:

1). the results of **2** analyzed samples from your **#540-0188-61; 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 E-mail: main@mccampbell.com

Cambria Env. Technology	Client Project ID: #540-0188-61; BORSUK	Date Sampled: 04/12/04
5900 Hollis St, Suite A		Date Received: 04/13/04
Emeryville, CA 94608	Client Contact: Gretchen Hellmann	Date Extracted: 04/14/04
	Client P.O.:	Date Analyzed: 04/14/04

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

Extraction method: SW5030B Analytical methods: SW8021B/8015Cm Work Order: 0404160

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	INF	A	520,a	ND<5.0	1.7	1.6	ND	2.9	1	96.1
002A	EFF	A	ND	ND	ND	ND	ND	ND	1	108

ppm (mg/L) to ppmv (ul/L) conversion for TPH(g) assumes the molecular weight of gasoline to be equal to that of hexane.

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	A	10	1.5	0.15	0.15	0.15	0.15	1	uL/L
	S	NA	NA	NA	NA	NA	NA	1	mg/Kg

* water and vapor samples and all TCLP & SPLP extracts are reported in µg/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 ~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
Website: www.mccampbell.com E-mail: main@mccampbell.com

QC SUMMARY REPORT FOR SW8021B/8015Cm

Matrix: A WorkOrder: 0404160

EPA Method: SW8021B/8015Cm Extraction: SW5030B BatchID: 11093 Spiked Sample ID: N/A

	Sample	Spiked	MS*	MSD*	MS-MSD*	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	uL/L	uL/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(btex)£	N/A	60	N/A	N/A	N/A	98.5	100	1.98	70	130
MTBE	N/A	10	N/A	N/A	N/A	95.5	96.3	0.851	70	130
Benzene	N/A	10	N/A	N/A	N/A	114	111	2.73	70	130
Toluene	N/A	10	N/A	N/A	N/A	110	107	2.90	70	130
Ethylbenzene	N/A	10	N/A	N/A	N/A	111	112	0.849	70	130
Xylenes	N/A	30	N/A	N/A	N/A	100	100	0	70	130
%SS:	N/A	10	N/A	N/A	N/A	106	103	2.87	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.

DHS Certification No. 1644

QA/QC Officer

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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0404160

Report to:
Gretchen Hellmann
Cambria Env. Technology
5900 Hollis St, Suite A
Emeryville, CA 94608
TEL: (510) 420-0700
FAX: (510) 420-9170
ProjectNo: #540-0188-61; BORSUK
PO:

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

Requested TAT: 5 days
Date Received: 4/13/04
Date Printed: 4/13/04

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below) 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0404160-001	INF	Air	4/12/04 1:30:00 PM	☐	A														
0404160-002	EFF	Air	4/12/04 1:30:00 PM	☐	A														

Test Legend:

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

Prepared by: Melissa Valles

Comments:

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

COXE

0404160

CHAIN OF CUSTODY RECORD

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

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

EDF Required? ☐ Yes ☒ No

Report To: Gretchen Hellmann Bill To: SAME

Company: Cambria Environmental Technology, Inc.
5900 Hollis Street Suite A
Emeryville, CA 94608 E-mail: ghellmann@cambria-env.com

Tele: 510 420-3305 Fax: 510 420-9170

Project #: 540-0188-61 Project Name: BORSUK

Project Location: 1432 Harrison Street, Oakland, California

Sampler Signature:

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	MATRIX Soil	MATRIX Air	MATRIX Sludge	MATRIX Other	METHOD PRESERVED Ice	METHOD PRESERVED HCl	METHOD PRESERVED HNO_3	METHOD PRESERVED Other	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	Comments
INF	System	4/12/04	1:30	1	Tb			X							X																
EFF	System	4/12/04	1:30	1	Tb			X							X																

Relinquished By: T. Fulmer Date: 4/12/04 Time: 5:00 Received By: Secure Location

Relinquished By: Date: 4/14/04 Time: 2:25 Received By:

Relinquished By: Date: 4/13 Time: 5pm Received By: Mal Valli

Remarks: Report in ppm(v); Reporting Limit is 10 ppm(v).

Use 20 mL injection volume.

Please email results.

ICE/T ____
GOOD CONDITION ✓
HEAD SPACE ABSENT ____
DICHLORINATED IN LAB ____
APPROPRIATE CONTAINERS ✓
PRESERVED IN LAB ____

PRESERVATION | VOAS | O&G | METALS | OTHER

McCampbell Analytical, Inc.

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

Cambria Env. Technology	Client Project ID: #540-0188-61; BORSUK	Date Sampled: 05/17/04
5900 Hollis St, Suite A		Date Received: 05/18/04
Emeryville, CA 94608	Client Contact: Gretchen Hellmann	Date Reported: 05/21/04
	Client P.O.:	Date Completed: 05/21/04

WorkOrder: 0405287

May 21, 2004

Dear Gretchen:

Enclosed are:

1). the results of **2** analyzed samples from your **#540-0188-61; 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 E-mail: main@mccampbell.com

Cambria Env. Technology	Client Project ID: #540-0188-61; BORSUK	Date Sampled: 05/17/04
5900 Hollis St, Suite A		Date Received: 05/18/04
Emeryville, CA 94608	Client Contact: Gretchen Hellmann	Date Extracted: 05/19/04
	Client P.O.:	Date Analyzed: 05/19/04

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

Extraction method: SW5030B Analytical methods: SW8021B/8015Cm Work Order: 0405287

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	INF	A	3600,a	ND<30	14	10	ND<1.0	22	4	107
002A	EFF	A	ND	ND	ND	ND	ND	ND	1	94.3

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	A	25	2.5	0.25	0.25	0.25	0.25	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 µg/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.

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

QC SUMMARY REPORT FOR SW8021B/8015Cm

Matrix: A WorkOrder: 0405287

EPA Method: SW8021B/8015Cm Extraction: SW5030B BatchID: 11582 Spiked Sample ID: N/A

	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)£	N/A	60	N/A	N/A	N/A	101	104	3.06	70	130
MTBE	N/A	10	N/A	N/A	N/A	101	104	3.09	70	130
Benzene	N/A	10	N/A	N/A	N/A	101	107	6.48	70	130
Toluene	N/A	10	N/A	N/A	N/A	85.3	90.4	5.80	70	130
Ethylbenzene	N/A	10	N/A	N/A	N/A	107	113	5.44	70	130
Xylenes	N/A	30	N/A	N/A	N/A	96	100	4.08	70	130
%SS:	N/A	10	N/A	N/A	N/A	93.1	96.4	3.52	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.

DHS Certification No. 1644

QA/QC Officer

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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0405287 **ClientID: CETE**

Report to:
Gretchen Hellmann
Cambria Env. Technology
5900 Hollis St, Suite A
Emeryville, CA 94608
TEL: (510) 420-0700
FAX: (510) 420-9170
ProjectNo: #540-0188-61; BORSUK
PO:

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

Requested TAT: 5 days
Date Received: 5/18/2004
Date Printed: 5/18/2004

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)														
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0405287-001	INF	Air	05/17/2004	☐	A														
0405287-002	EFF	Air	05/17/2004	☐	A														

Test Legend:

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

Prepared by: Elisa 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.

CETE np' 0405287

CHAIN OF CUSTODY RECORD

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

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

EDF Required? ☐ Yes ☒ No

Report To:	Gretchen Hellmann	Bill To:	SAME
Company:	Cambria Environmental Technology, Inc.		
	5900 Hollis Street Suite A		
	Emeryville, CA 94608	E-mail:	ghellmann@cambria-env.com
Tele:	510 420-3305	Fax:	510 420-9170
Project #:	540-0188-61	Project Name:	BORSUK
Project Location:	1432 Harrison Street, Oakland, California		
Sampler Signature:			

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	MATRIX Soil	MATRIX Air	MATRIX Sludge	MATRIX Other	METHOD PRESERVED Ice	METHOD PRESERVED HCl	METHOD PRESERVED HNO_3	METHOD PRESERVED Other	BTEX & TPH as Gas (602/8020 + 8015)/ MTBE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601 / 8010	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8080	EPA 608 / 8080 PCB's ONLY	EPA 624 / 8240 / 8260	EPA 625 / 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals	LUFT 5 Metals	Lead (7240/7421/239.2/6010)	RCI	Other	Comments
INF	System	5/17/04	6:30p	1	Tb			X							X																
EFF	System	5/17/04	6:30p	1	Tb			X							X																

ICE/t _____
GOOD CONDITION _____
HEAD SPACE ABSENT _____
DECHLORINATED IN LAB _____
PRESERVATION _____

APPROPRIATE CONTAINERS _____
PRESERVED IN LAB _____

VOAS	O&G	METALS	OTHER

Relinquished By:	Date:	Time:	Received By:
	5/17/04	7pm	SF CURED LOCKER
Relinquished By:	Date:	Time:	Received By:
	5/18/04	1:20	
Relinquished By:	Date:	Time:	Received By:
	5/18	5:14	

Remarks: Report in ppm(v); Reporting Limit is 10 ppm(v).

Use 20 mL injection volume.

Please email results.

McCampbell Analytical, Inc.

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

Cambria Env. Technology	Client Project ID: #540-0188-61; Borsuk	Date Sampled: 06/10/04
5900 Hollis St, Suite A		Date Received: 06/11/04
Emeryville, CA 94608	Client Contact: Gretchen Hellmann	Date Reported: 06/17/04
	Client P.O.:	Date Completed: 06/17/04

WorkOrder: 0406202

June 17, 2004

Dear Gretchen:

Enclosed are:

1). the results of **2** analyzed samples from your **#540-0188-61; 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 E-mail: main@mccampbell.com

Cambria Env. Technology	Client Project ID: #540-0188-61; Borsuk	Date Sampled: 06/10/04
5900 Hollis St, Suite A		Date Received: 06/11/04
Emeryville, CA 94608	Client Contact: Gretchen Hellmann	Date Extracted: 06/11/04-06/14/04
	Client P.O.:	Date Analyzed: 06/11/04-06/14/04

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

Extraction method: SW5030B Analytical methods: SW8021B/8015Cm Work Order: 0406202

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	INF	A	620,a	ND<4.0	2.3	2.6	ND<1.0	4.4	4	105
002A	EFF	A	ND	ND	ND	ND	ND	ND	1	105

ppm (mg/L) to ppmv (ul/L) conversion for TPH(g) assumes the molecular weight of gasoline to be equal to that of hexane.

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	A	10	1.5	0.15	0.15	0.15	0.15	1	uL/L
	S	NA	NA	NA	NA	NA	NA	1	mg/Kg

* water and vapor samples and all TCLP & SPLP extracts are reported in µg/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.

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

QC SUMMARY REPORT FOR SW8021B/8015Cm

Matrix: A WorkOrder: 0406202

EPA Method: SW8021B/8015Cm Extraction: SW5030B BatchID: 11926 Spiked Sample ID: N/A

	Sample	Spiked	MS*	MSD*	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	uL/L	uL/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	Low	High
TPH(btex)£	N/A	60	N/A	N/A	N/A	93.5	98.1	4.82	70	130
MTBE	N/A	10	N/A	N/A	N/A	96.5	108	11.0	70	130
Benzene	N/A	10	N/A	N/A	N/A	104	113	8.11	70	130
Toluene	N/A	10	N/A	N/A	N/A	98.6	107	8.20	70	130
Ethylbenzene	N/A	10	N/A	N/A	N/A	102	111	8.92	70	130
Xylenes	N/A	30	N/A	N/A	N/A	90.3	96.7	6.77	70	130
%SS:	N/A	10	N/A	N/A	N/A	107	107	0	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.

DHS Certification No. 1644

QA/QC Officer

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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0406202 **ClientID: CETE**

Report to:
Gretchen Hellmann
Cambria Env. Technology
5900 Hollis St, Suite A
Emeryville, CA 94608

TEL: (510) 420-0700
FAX: (510) 420-9170
ProjectNo: #540-0188-61; Borsuk
PO:

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

Requested TAT: 5 days
Date Received: 6/11/04
Date Printed: 6/11/04

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)														
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0406202-001	INF	Air	6/10/04 10:30:00	☐	A														
0406202-002	EFF	Air	6/10/04 10:00:00	☐	A														

Test Legend:

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

Prepared by: Michelle Lopez

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.

McCampbell Analytical, Inc.

WORK ORDER Summary

11-Jun-04

Work Order: 0406202

Client ID: CETE

Project: #540-0188-61; Borsuk

QC Level:

Comments:

Sample ID	Client Sample ID	Collection Date	Date Received	Date Due	Matrix	Test Code	Hold	MS	SEL	BatchID	SubOut
0406202-001A	INF	6/10/04 10:30:00 AM	6/11/04	6/18/04	Air	G-MBTEX_PPMV	☐	☐	☐		
				6/18/04		PRGAS_W	☐	☐	☐	11926	
0406202-002A	EFF	6/10/04 10:00:00 AM		6/18/04		G-MBTEX_PPMV	☐	☐	☐		
				6/18/04		PRGAS_W	☐	☐	☐		

0406202

CHAIN OF CUSTODY RECORD

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

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

EDF Required? ☐ Yes ☒ No

Report To:	Gretchen Hellmann	Bill To:	SAME
Company:	Cambria Environmental Technology, Inc.		
	5900 Hollis Street Suite A		
	Emeryville, CA 94608	E-mail:	ghellmann@cambria-env.com
Tele:	510 420-3305	Fax:	510 420-9170
Project #:	540-0188-61	Project Name:	BORSUK
Project Location:	1432 Harrison Street, Oakland, California		
Sampler Signature:			

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	MATRIX Soil	MATRIX Air	MATRIX Sludge	MATRIX Other	METHOD PRESERVED Ice	METHOD PRESERVED HCl	METHOD PRESERVED HNO_3	METHOD PRESERVED Other	BTEX & TPH as Gas (602/8020 + 8015) MTBE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601 / 8010	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8080	EPA 608 / 8080 PCB's ONLY	EPA 624 / 8240 / 8260	EPA 625 / 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals	LUFT 5 Metals	Lead (7240/7421/239.2/6010)	RCI	Other	Comments
INF	System	6/10/04	1030	1	Tb			X							X																
EFF	System	6/10/04		1	Tb			X							X																

ICE? NO
GOOD CONDITION ✓
HEAD SPACE ABSENT
DECHLORINATED IN LAB
APPROPRIATE CONTAINERS ✓
PRESERVED IN LAB
PRESERVATION: VOAS | O&G | METALS | OTHER

Relinquished By:		Date: 6/10/04	Time: 6pm	Received By:
Relinquished By:		Date: 6/11/4	Time: 11:00	Received By:
Relinquished By:		Date: 6/11/04	Time: 1:00	Received By: J. Lopez

Remarks: Report in ppm(v); Reporting Limit is 10 ppm(v).

Use 20 mL injection volume.

Please email results.

CAMBRIA

APPENDIX D

GeoTracker Electronic Delivery Confirmations

Electronic Submittal Information

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

Your EDF file has been succcessfully uploaded!

Confirmation Number: 5911896109
Date/Time of Submittal: 7/21/2004 1:09:23 PM
Facility Global ID: T0600100682
Facility Name: A BACHARACH TR & B BORSUK
Submittal Title: 2nd Qtr 2004, GW Analytical Report
Submittal Type: GW Monitoring Report

Click here to view the detections report for this upload.

A BACHARACH TR & B BORSUK
1432 HARRISON ST
OAKLAND, CA 94612

Regional Board - Case #: 01-0739
SAN FRANCISCO BAY RWQCB (REGION 2) - **(BG)**
Local Agency (lead agency) - Case #: 498
ALAMEDA COUNTY LOP - **(UNK)**

CONF #	TITLE	QUARTER
5911896109	2nd Qtr 2004, GW Analytical Report	Q2 2004

SUBMITTED BY	SUBMIT DATE	STATUS
Matt Meyers	7/21/2004	PENDING REVIEW

SAMPLE DETECTIONS REPORT

# FIELD POINTS SAMPLED	4
# FIELD POINTS WITH DETECTIONS	4
# FIELD POINTS WITH WATER SAMPLE DETECTIONS ABOVE MCL	4
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

SAMPLE	COLLECTED	DETECTIONS > REPDL
QCTB SAMPLES	N	0
QCEB SAMPLES	N	0
QCAB SAMPLES	N	0

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

Electronic Submittal Information

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:	**2nd Qtr 2004 GW Depth Data for 1432 Harrison Street, Oakland**
Submittal Date/Time:	**7/21/2004 1:10:43 PM**
Confirmation Number:	**2726017594**

Back to Main Menu

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