CAMBRIA

February 14, 2001

Mr. Barney Chan
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502

#515

. gw conc. still elevated / DPE system down.

Re: **Fourth Quarter 2000 Monitoring Report**
Former Exxon Service Station
3055 35th Avenue
Oakland, California
Cambria Project #130-0105

Dear Mr. Chan:

On behalf of Mr. Lynn Worthington of Golden Empire Properties, Cambria Environmental Technology, Inc., (Cambria) has prepared this fourth quarter 2000 groundwater monitoring report for the above referenced site. Presented in the report are the fourth quarter 2000 activities and results and the anticipated first quarter 2001 activities. This monitoring program complies with Alameda County Health Care Services Agency requirements regarding underground storage tank investigations.

Sincerely,

Cambria Environmental Technology, Inc.

Ron Scheele, RG
Senior Geologist

Attachments: Quarterly Groundwater Monitoring Report, Fourth Quarter 2000

cc: Mr. Lynn Worthington, Golden Empire Properties, Inc. 5942 MacArthur Boulevard, Suite B, Oakland, CA 94605

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

Cambria Environmental Technology, Inc.

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

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FOURTH QUARTER 2000 MONITORING REPORT

Former Exxon Service Station
3055 35th Avenue
Oakland, California
Cambria Project #130-0105

February 14, 2001

Prepared for:

Mr. Lynn Worthington
Golden Empire Properties, Inc.
5942 MacArthur Boulevard, Suite B
Oakland, CA 94605

Prepared by:

Cambria Environmental Technology, Inc.
1144 65th Street, Suite B
Oakland, California 94608

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

Jason Olson
Senior Staff Environmental Scientist

Ron Scheele, RG
Senior Geologist

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FOURTH QUARTER 2000 MONITORING REPORT

Former Exxon Service Station
3055 35th Avenue
Oakland, California
Cambria Project #130-0105

February 14, 2001

INTRODUCTION

On behalf of Mr. Lynn Worthington of Golden Empire Properties, Cambria Environmental Technology, Inc. (Cambria) has prepared this fourth quarter 2000 groundwater monitoring report for the above-referenced site (see Figure 1). Presented in the report are the fourth quarter 2000 activities and results and the anticipated first quarter 2001 activities. This monitoring program complies with Alameda County Health Care Services Agency requirements regarding underground storage tank investigations.

FOURTH QUARTER 2000 ACTIVITIES

Monitoring Activities

Field Activities: On December 5, 2000, Cambria conducted quarterly monitoring activities. Cambria gauged and inspected for separate-phase hydrocarbons (SPH) monitoring wells MW-1, MW-2, MW-3 and MW-4 (Figure 1). Groundwater samples were collected from all scheduled wells not containing SPH. Field data sheets are presented in Appendix A.

Sample Analyses: Groundwater samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg) and total petroleum hydrocarbons as diesel (TPHd) by modified EPA Method 8015, and benzene, toluene, ethylbenzene and xylenes (BTEX) and methyl tert-butyl ether (MTBE) by modified EPA Method 8020. The groundwater analytical results are summarized in Table 1. The Laboratory Analytical Report is included in Appendix B.

Monitoring Results

Groundwater Flow Direction: Based on depth-to-water measurements collected during Cambria's December 5, 2000 site visit, groundwater beneath the site flows to the northwest at a gradient of 0.008 ft/ft (Figure 1). Since 1994, the primary groundwater flow direction has been toward the northwest with a change towards the southwest usually occurring during the fourth quarter. Groundwater elevation data is presented in Table 1.

Hydrocarbon Distribution in Groundwater: Hydrocarbon concentrations detected this quarter are consistent with historic data, with the exception of well MW-2, which showed an increase in TPHd. No SPH were detected in any of the wells. TPHg and benzene concentrations detected this quarter ranged from 26,000 to 110,000 and 5,100 to 17,000 micrograms per liter (µg/L), respectively, with the maximum concentrations detected in well MW-3. TPHd concentrations ranged from 2,600 to 87,000 µg/L, with the maximum concentration detected in well MW-2. MTBE concentrations were below detection limits in all sampled wells. Analytical results are summarized in Table 1.

Corrective Action Activities

During the fourth quarter 2000, Cambria performed dual-phase vacuum extraction (DPE) activities at the site. The remediation system was off for repairs during the month of December 2000. Please refer to Cambria's *Remediation System Progress Report – Fourth Quarter 2000* for additional detals regarding system operation and performance.

ANTICIPATED FIRST QUARTER 2001 ACTIVITIES

Monitoring Activities

Cambria will gauge the site wells, check the wells for SPH, and collect groundwater samples from all wells not containing SPH. Following field activities, Cambria will tabulate the data, contour site groundwater elevations, and prepare a groundwater monitoring report.

Corrective Action Activities

Cambria plans to switch remediation equipment vendors due to ongoing equipment repairs and reliability issues. Cambria hopes to have the remediation equipment (catalytic oxidizer/blower) replaced and restarted before the beginning of the second quarter 2001.

ATTACHMENTS:

Figure 1- Groundwater Elevation Contours
Table 1 - Groundwater Elevation and Analytical Data
Appendix A - Field Data Sheets
Appendix B - Laboratory Analytical Report

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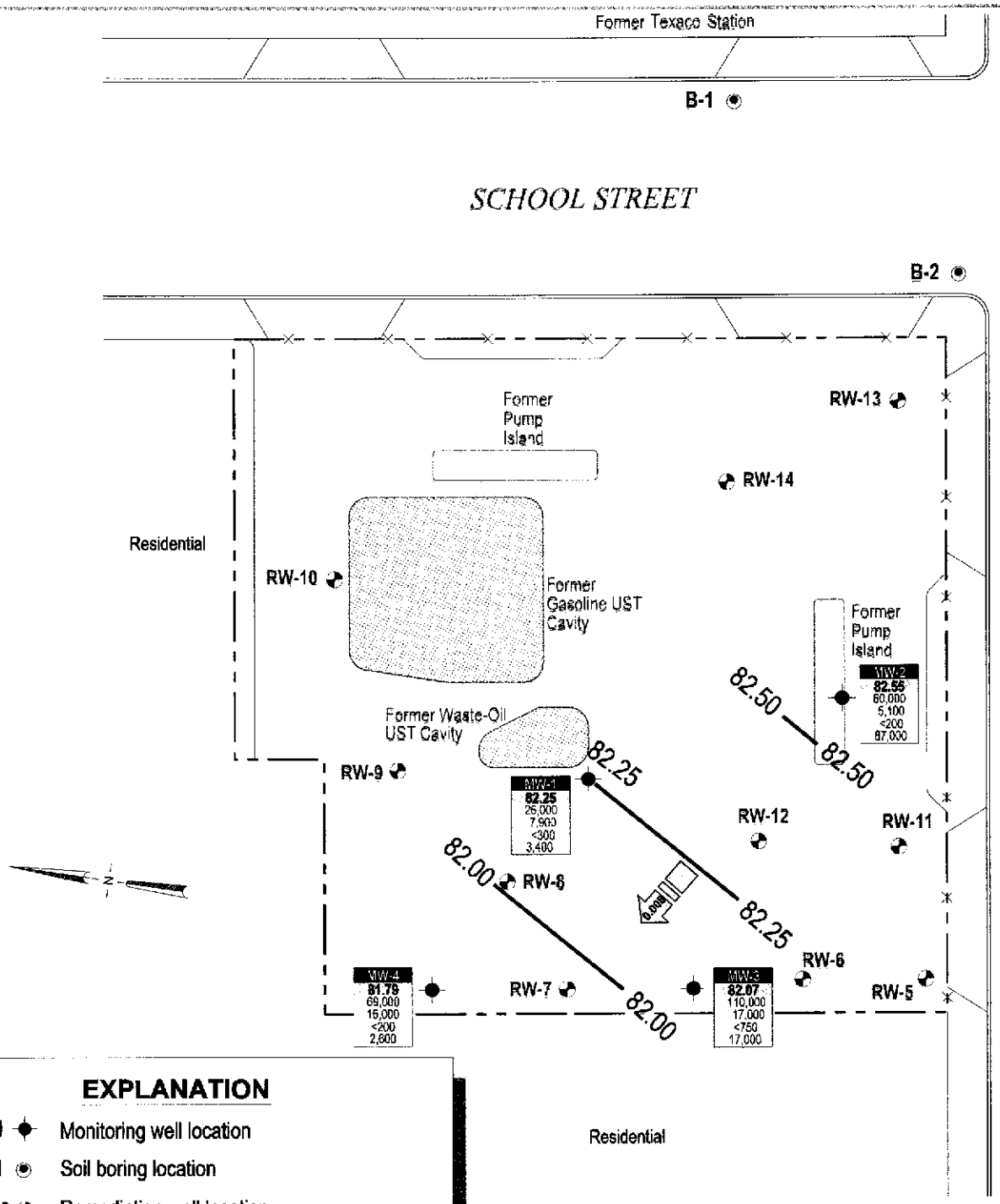

EXPLANATION

- MW-1 — Monitoring well location
- B-1 — Soil boring location
- RW-6 — Remediation well location
- XX.XX — Groundwater elevation contour, in feet above mean sea level (msl), dashed where inferred
- Groundwater flow direction and gradient
- Well designation
- Groundwater elevation (msl)
- Hydrocarbon concentrations in groundwater, in ug/l

Well ID
ELEV
TPHg
Benzene
MTBE
TPHd

FIGURE
1

H:\SB-2004\OAK-002\FIGURES\40M00-MF.DWG

Former Exxon Station
3055 35th Avenue
Oakland, California

CAMBRIA

Groundwater Elevation Contour Map
December 5, 2000

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Table 1. Groundwater Elevation and Analytical Data - Former Exxon Service Station, 3055 35th Avenue, Oakland, California

Well ID	Date	GW	SPH	GW	TPHg	TPHd	TPHmo	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	DO
(TOC)		Depth (ft)	(ft)	Elev. (ft)	<---------- Concentrations in parts per billion (µg/L) ---------->								(mg/L)
MW-1	05/25/94	16.79	Sheen	84.06	120,000	25,000	<50,000	22,000	17,000	2,800	16,000	---	---
100.85	07/19/94	20.77	---	80.08	---	---	---	---	---	---	---	---	---
	08/18/94	21.04	Sheen	79.81	925,000	---	---	16,500	6,200	1,000	9,400	---	---
	11/11/94	15.80	---	85.05	57,000	---	---	14,000	4,400	1,400	6,400	---	---
	02/27/95	15.53	---	85.32	45,000	---	---	2,900	2,500	760	4,100	---	---
	05/23/95	15.29	---	85.56	22,000	---	---	9,900	990	790	2,000	---	---
	08/22/95	20.90	---	79.95	23,000	---	---	6,900	340	1,200	1,900	---	---
	11/29/95	22.19	---	78.66	37,000	---	---	9,900	530	1,600	2,900	---	---
	02/21/96	11.69	---	89.16	33,000	4,300	---	10,000	480	1,000	1,800	3,300	---
	05/21/96	14.62	---	86.23	36,000	8,500	---	8,500	1,400	1,300	2,800	1,900	---
	08/22/96	22.30	---	78.55	41,000	6,200	---	8,600	1,300	1,500	2,900	<200	8.0
	11/27/96	17.24	Sheen	83.61	38,000	6,100	---	9,600	950	1,600	3,100	<400	5.6
	03/20/97	16.65	---	84.20	33,000	10,000	---	6,100	560	970	2,200	<400	8.5
	06/25/97	19.77	---	81.08	31,000	7,400[a]	---	7,400	440	890	1,800	<400	3.7
	09/17/97	20.12	---	80.73	32,000[d]	3,500[e]	---	9,100	550	1,000	2,000	<1,000	2.1
	12/22/97	12.95	---	87.90	26,000[d]	5,800[e]	---	7,900	370	920	1,500	<790	0.7
	03/18/98	12.34	Sheen	88.51	30,000[d]	4,200[e,f]	---	7,800	820	840	2,000	<1,100	1.3
	07/14/98	17.34	---	83.51	41,000[d]	8,900[e,f]	---	8,200	1,100	1,200	3,000	<200	1.8
	09/30/98	19.90	---	80.95	37,000	3,300	---	11,000	950	1,200	2,800	<20	2.0
	12/08/98	15.62	---	85.23	22,000	3,700	---	3,000	1,200	730	3,100	<900	---
	03/29/99	11.98	---	88.87	36,000[d]	6,800[e]	---	12,000	750	1,300	2,400	950	0.50
	06/29/99	20.77	---	80.08	28,000[d]	3,500[e]	---	7,300	420	810	1,700	<1,300	0.10
	09/28/99	19.68	---	81.17	13,000[d]	3,600[e,f]	---	3,200	130	320	1,100	<210	0.55
	12/10/99	17.02	---	83.83	25,000[d]	2,900[e,f]	---	5,400	130	620	1,400	<1,000	1.03
	03/23/00	12.76	---	88.09	21,000[d]	3,300[f]	---	4,700	140	470	1,100	<350	---
	09/07/00	19.45	---	81.40	40,000[d,g]	12,000[e,g]	---	3,700	1,400	910	4,900	<50	0.17
	12/05/00	**18.60**	**---**	**82.25**	**26,000[a]**	**3,400[e]**	**---**	**7,900**	**150**	**580**	**810**	**<300**	**0.35**

Table 1. Groundwater Elevation and Analytical Data - Former Exxon Service Station, 3055 35th Avenue, Oakland, California

Well ID	Date	GW	SPH	GW	TPHg	TPHd	TPHmo	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	DO
(TOC)		Depth (ft)	(ft)	Elev. (ft)	<---------- Concentrations in parts per billion (µg/L) ---------->								(mg/L)
MW-2	05/25/94	15.65	---	84.35	61,000	6,900	<5,000	9,900	7,400	960	4,600	---	---
100.00	07/19/94	19.81	---	80.19	---	---	---	---	---	---	---	---	---
	08/18/94	20.37	---	79.63	88,000	---	---	10,750	10,500	1,850	9,600	---	---
	11/11/94	15.52	---	84.48	54,000	---	---	5,900	6,700	1,300	7,500	---	---
	02/27/95	14.46	Sheen	85.54	44,000	---	---	5,100	5,300	930	6,400	---	---
	05/23/95	14.17	---	85.83	33,000	---	---	8,200	5,600	900	6,600	---	---
	08/22/95	19.80	---	80.20	38,000	---	---	6,400	5,000	1,100	5,600	---	---
	11/29/95	21.05	---	78.95	46,000	---	---	7,100	5,300	1,300	6,000	---	---
	02/21/96	10.53	---	89.47	59,000	---	---	8,000	6,000	1,800	8,900	4,500	---
	05/21/96	13.47	---	86.53	51,000	3,400	---	8,200	5,200	1,300	6,600	2,400	---
	08/22/96	19.12	---	80.88	37,000	5,700	---	5,100	3,500	960	4,500	<200	3.0
	11/27/96	16.61	Sheen	83.39	54,000	10,000	---	9,800	7,000	1,800	7,900	<2,000	3.1
	03/20/97	15.39	---	84.61	27,000	6,100	---	3,700	2,300	580	2,800	<400	8.1
	06/25/97	18.62	---	81.38	42,000	7,800[b]	---	7,400	3,800	1,200	5,700	<200	0.9
	09/17/97	19.05	Sheen	80.95	41,000[d]	8,900[e]	---	5,200	3,400	1,300	5,900	<700	1.2
	12/22/97	14.09	---	85.91	47,000[d]	6,100[e]	---	8,500	4,600	1,800	8,400	<1,200	1.2
	03/18/98	10.83	Sheen	89.17	58,000[d]	7,000[e,f]	---	9,300	6,100	1,800	8,200	<1,100	1.1
	07/14/98	16.07	---	83.93	42,000[d]	5,300[e,f]	---	6,000	3,000	1,000	4,800	<200	1.5
	09/30/98	18.71	---	81.29	22,000	2,400	---	3,600	1,300	720	3,200	<30	1.8
	12/08/98	14.80	---	85.20	32,000	3,100	---	9,200	680	1,100	2,300	<2,000	---
	03/29/99	11.81	---	88.19	28,000[d]	7,500[e,f]	---	4,400	1,600	950	4,100	410	1.86
	06/29/99	19.54	---	80.46	28,000[d]	3,300[e]	---	3,500	1,100	690	3,100	<1,000	0.41
	09/28/99	18.61	---	81.39	15,000[d]	3,400[e,f]	---	1,200	540	230	2,300	<36	1.18
	12/10/99	16.53	---	83.47	17,000[d]	2,500[e,f]	---	1,300	780	420	2,700	<40	0.17
	03/23/00	13.56	---	86.44	25,000[d]	3,100[i]	---	1,900	1,100	660	3,700	<500	---
	09/07/00	18.25	---	81.75	62,000[d,g]	32,000[e,g]	---	5,300	2,300	1,500	8,400	<100	0.39
	12/05/00	**17.45**	**---**	**82.55**	**60,000[d,g]**	**87,000[e,f,g]**	**---**	**5,100**	**2,200**	**1,600**	**9,000**	**<200**	**0.31**

Table 1. Groundwater Elevation and Analytical Data - Former Exxon Service Station, 3055 35th Avenue, Oakland, California

Well ID	Date	GW	SPH	GW	TPHg	TPHd	TPHmo	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	DO
(TOC)		Depth (ft)	(ft)	Elev. (ft)	<---------- Concentrations in parts per billion (µg/L) ---------->								(mg/L)
MW-3	05/25/94	13.93	Sheen	82.94	56,000	14,000	<50,000	14,000	14,000	1,300	11,000	---	---
96.87	07/19/94	17.04	---	79.83	---	---	---	---	---	---	---	---	---
	08/18/94	17.75	---	79.12	116,000	---	---	28,300	26,000	2,400	15,000	---	---
	11/11/94	17.80	---	79.07	89,000	---	---	1,600	1,900	1,900	14,000	---	---
	02/27/95	11.86	Sheen	85.01	250,000	---	---	22,000	26,000	7,800	21,000	---	---
	05/23/95	11.60	Sheen	85.27	310,000	---	---	18,000	17,000	4,500	2,800	---	---
	08/22/95	17.10	---	79.77	74,000	---	---	14,000	13,000	1,900	11,000	---	---
	11/29/95	16.34	---	80.53	220,000	---	---	25,000	25,000	3,500	19,000	---	---
	02/21/96	7.92	---	88.95	60,000	---	---	10,000	7,800	1,500	8,800	3,400	---
	05/21/96	10.86	Sheen	86.01	69,000	13,000	---	17,000	9,400	1,700	9,400	2,600	---
	08/22/96	16.50	---	80.37	94,000	16,000	---	17,000	15,000	2,100	12,000	330	2.0
	11/27/96	13.47	Sheen	83.40	82,000	24,000	---	14,000	13,000	2,400	13,000	<1,000	2.4
	03/20/97	12.86	---	84.01	56,000	11,000	---	9,900	6,900	1,300	8,000	3,500	9.0
	06/25/97	15.98	---	80.89	49,000	7,700[b]	---	9,700	7,100	1,300	7,000	220	5.8
	09/17/97	16.34	Sheen	80.53	78,000[d]	15,000[e]	---	11,000	9,900	1,800	10,000	<1,200	0.7
	12/22/97	10.71	Sheen	86.16	49,000[d]	14,000[e]	---	7,300	5,300	1,400	7,500	<1,100	3.1
	03/18/98	8.41	Sheen	88.46	120,000[d]	20,000[e,f]	---	21,000	19,000	2,600	15,000	<1,600	1.6
	07/14/98	13.51	---	83.36	94,000[d,g]	65,000[e,f,g]	---	18,000	14,000	1,900	11,000	<1,400	1.8
	09/30/98	16.14	---	80.73	91,000	9,800	---	17,000	13,000	2,100	12,000	<1300	2.0
	12/08/98	11.20	---	85.67	51,000	4,200	---	8,000	6,800	1,400	7,500	<1,100	---
	03/29/99	7.95	---	88.92	39,000[d]	4,600[e]	---	8,900	4,400	940	4,500	810	0.56
	06/29/99	16.98	---	79.89	71,000[d]	6,900[e]	---	12,000	7,300	1,400	8,400	<1,700	0.19
	09/28/99	15.99	---	80.88	60,000[d]	7,800[e]	---	9,400	9,200	1,000	9,900	200	0.53
	12/10/99	13.31	---	83.56	53,000[d]	5,300[e,f]	---	8,000	6,400	1,100	8,100	<200	0.48
	03/23/00	8.98	---	87.89	77,000[d,g]	11,000[g,j]	---	10,000	9,400	1,600	11,000	<430	---
	09/07/00	15.61	---	81.26	100,000[d,g]	19,000[e,f,g]	---	17,000	12,000	1,600	11,000	<500	---
	12/05/00	**14.80**	**---**	**82.07**	**110,000[d,g]**	**17,000[e,g]**	**---**	**17,000**	**11,000**	**1,900**	**12,000**	**<750**	**0.37**

Table 1. Groundwater Elevation and Analytical Data - Former Exxon Service Station, 3055 35th Avenue, Oakland, California

Well ID (TOC)	Date	GW Depth (ft)	SPH (ft)	GW Elev. (ft)	TPHg	TPHd	TPHmo	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	DO (mg/L)
					<---------- Concentrations in parts per billion (µg/L) ---------->								
MW-4	03/20/97	13.75	---	83.59	47,000	3,100	---	11,000	4,500	1,100	5,200	3,400	8.4
97.34	06/25/97	16.15	---	81.19	61,000	5,800[b]	---	16,000	6,100	1,500	5,900	780[c]	1.4
	09/17/97	17.10	---	80.24	60,000[d]	4,400[e]	---	17,000	4,900	1,500	5,700	<1,500	1.5
	12/22/97	9.21	---	88.13	43,000[d]	3,100[e]	---	13,000	3,900	1,100	4,200	<960	3.7
	03/18/98	9.54	---	87.80	58,000[d]	5,500[e,f]	---	14,000	4,700	1,400	5,700	<1,200	0.8
	07/14/98	14.15	---	83.19	73,000[d]	2,900[e,f]	---	22,000	7,000	1,800	7,300	<200	1.0
	09/30/98	16.84	---	80.50	39,000	2,100	---	12,000	2,700	1,000	3,400	510	1.1
	12/08/98	13.45	---	83.89	27,000	1,600	---	8,900	1,600	730	2,300	<1,500	---
	03/29/99	9.10	---	88.24	48,000[d]	2,400[e,f,h]	---	15,000	3,000	1,300	5,000	1,300	1.32
	06/29/99*	---	---	---	---	---	---	---	---	---	---	---	---
	09/28/99	16.58	---	80.76	24,000[d]	3,200[e,f]	---	7,500	1,200	190	2,200	210	14.29[#]
	12/10/99	13.99	---	83.35	47,000[d]	3,100[e,f]	---	12,000	1,800	1,000	4,400	<100	0.62
	03/23/00	10.22	---	87.12	40,000[d]	3,100[e,f]	---	11,000	1,600	910	3,100	690	---
	09/07/00	16.40	---	80.94	43,000[d]	5,900[e]	---	10,000	1,100	1,100	3,400	<450	1.04
	12/05/00	**15.55**	**---**	**81.79**	**69,000[d,g]**	**2,600[e,g]**	**---**	**16,000**	**1,300**	**1,300**	**3,400**	**<200**	**0.35**
Trip Blank	07/14/98	---	---	---	<50	<50	---	<0.5	<0.5	<0.5	<0.5	<5.0	---
	09/30/98	---	---	---	<50	<50	---	<0.5	<0.5	<0.5	<0.5	<5.0	---
	12/08/98	---	---	---	<50	---	---	<0.5	<0.5	<0.5	<0.5	<5.0	---
	03/29/99	---	---	---	<50	---	---	<0.5	<0.5	<0.5	<0.5	<5.0	---
	06/29/99	---	---	---	<50	---	---	<0.5	<0.5	<0.5	<0.5	<5.0	---
	03/23/00	---	---	---	<50	---	---	<0.5	<0.5	<0.5	<0.5	<5.0	---
	09/07/00	---	---	---	<50	---	---	<0.5	1.1	<0.5	1.1	<5.0	---

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Table 1. Groundwater Elevation and Analytical Data - Former Exxon Service Station, 3055 35th Avenue, Oakland, California

Well ID	Date	GW	SPH	GW	TPHg	TPHd	TPHmo	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	DO
(TOC)		Depth (ft)	(ft)	Elev. (ft)	<---------- Concentrations in parts per billion (µg/L) ---------->								(mg/L)

Abbreviations:

TOC = Top of casing elevation relative to an aribitrary datum

GW = Groundwater

SPH = Separate-phase hydrocarbons

--- = not observed/not analyzed

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

TPHd = Total petroleum hydrocarbons as diesel by modified EPA Method 8015

TPHmo = Total petroleum hydrocarbons as motor oil by modified EPA Method 8015

Benzene, Ethylbenzene, Toluene, and Xylenes by EPA Method 8020

MTBE = Methyl Tertiary-Butyl Ether by EPA Method 8020

DO = Dissolved oxygen

µg/L = Micrograms per liter, equivalent to parts per billion in water

mg/L = Milligrams per liter, equivalent to parts per million in water

* = Well inaccessible during site visit

Notes:

a = Result has an atypical pattern for diesel analysis

b = Result appears to be a lighter hydrocarbon than diesel

c = There is a >40% difference between primary and confirmation analysis

d = Unmodified or weakly modified gasoline is significant

e = Gasoline range compounds are significant

f = Diesel range compounds are significant; no recognizable pattern

g = lighter than water immiscible sheen is present

h = one to a few isolated peaks present

i = medium boiling point pattern does not match diesel (stoddard solvent)

j = aged diesel? is significant

TOC Elevation of Well MW-4 surveyed relative to an arbitrary site datum by David Hop, Licensed Surveyor on April 19, 1997

= abnormally high reading due to added hydrogen peroxide

APPENDIX A

Field Data Sheets

CAMBR

WELL DEPTH MEASUREMENTS

Well ID	Time	Product Depth	Water Depth	Product Thickness	Well Depth	Comments
MW-1	12:51		18.60		27.13	4"
MW-2	12:49		17.45		27.45	4"
MW-3	12:47		~~14.80~~ 14.80		25.00	2"
MW-4	12:45		15.55		30.10	2"

Project Name: Worthington

Project Number: 130-0105

Measured By: J Gall

Date: 12-05-00

F:\TEMPLATE\FORMS\FIELD\GW-DEPTH.WPD

CAMBRIA

WELL SAMPLING FORM

Project Name: Worthington	Cambria Mgr: RDS	Well ID: MW- 1
Project Number: 130-0105	Date: 12-05-00	Well Yield: -----
Site Address: 3055 35th St Oakland, Ca	Sampling Method: Disposable bailer	Well Diameter: 4" pvc
		Technician(s): SS
Initial Depth to Water: 18.60	Total Well Depth: 27.13	Water Column Height: 8.53
Volume/ft: 0.65	1 Casing Volume: 5.54	3 Casing Volumes: 16.63
Purging Device: 4" pvc bailer	Did Well Dewater?: NO	Total Gallons Purged: 16
Start Purge Time: 14:20	Stop Purge Time: 14:26	Total Time: 6mins

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

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

Time	Casing Volume	Temp. C	pH	Cond. uS	Comments
14:22	1 6	18.1	7.73	1351	
14:24	2 12	18.7	7.13	1319	
14:27	3 16	18.7	7.25	1349	Stions odor
					DO = 0.38
					DO = 0.35 mg/L

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW- MW-1	12-05-00	14:32	4 VOA	HCl	TPHs BTEX MTBE	8015/8020
MW-			Liter		TPHd	

CAMBRIA

WELL SAMPLING FORM

Project Name: Worthington	Cambria Mgr: KAS	Well ID: MW- 2
Project Number: 130-0105	Date: 12-05-00	Well Yield: -----
Site Address: 3055 35th St Oakland, Ca	Sampling Method: Disposable bailer	Well Diameter: 2" pvc
		Technician(s): SG
Initial Depth to Water: 17.45	Total Well Depth: 27.45	Water Column Height: 10
Volume/ft: 0.65	1 Casing Volume: 6.50	3 Casing Volumes: 19.50
Purging Device: 4" PVC bailer	Did Well Dewater?: NO	Total Gallons Purged: 20
Start Purge Time: 13:55	Stop Purge Time: 14:02	Total Time: 7 mins

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

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

Time	Casing Volume	Temp. C	pH	Cond. uS	Comments
13:57	1 7	18.1	7.19	1301	
13:59	2 14	19.7	7.83	1891	SPH & slobbonols
14:03	3 20	19.5	7.97	1865	sample was taken
					strong odor
					DO = 0.31 mg/L

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW- 2	12-05-00	14:08	4 VOA	HCl	TPHg, BTEX & MTBE	8015/8020
MW-			1 Liter		TPHd	

CAMBRIA

WELL SAMPLING FORM

Project Name: Worthington	Cambria Mgr: RAS	Well ID: MW-3
Project Number: 130-0105	Date: 12-05-00	Well Yield: -----
Site Address: 3055 35th St Oakland Ca	Sampling Method: Disposable bailer	Well Diameter: 2" pvc
		Technician(s): SG
Initial Depth to Water: 14.80	Total Well Depth: 25.00	Water Column Height: 10.20
Volume/ft: 0.16	1 Casing Volume: 1.63	3 Casing Volumes: 4.89
Purging Device: disposable bailer	Did Well Dewater?: no	Total Gallons Purged: 5
Start Purge Time: 13:30	Stop Purge Time: 13:35	Total Time: 5 mins

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

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

Time	Casing Volume		Temp. C	pH	Cond. uS	Comments
13:32	1	2	18.5 ~~6.98~~	6.98	1301	
13:34	2	4	19.1 ~~7.05~~	7.05	1501	
13:36	3	5	19.7 ~~7.09~~	7.09	1535	
						DO= 0.37 mg/L

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW-3	12-05-00	13:41	4 VOA	HCl	TPHg BTEX MTBE	8015/8020
MW-			1 Liter		TPHd	

CAMBRIA

WELL SAMPLING FORM

Project Name: Worthington	Cambria Mgr: RAS	Well ID: MW- 4
Project Number: 130-0105	Date: 12-05-00	Well Yield: -----
Site Address: 3055 35th St Oakland, Ca	Sampling Method: Disposable bailer	Well Diameter: 2" pvc
		Technician(s): SG
Initial Depth to Water: 15.55	Total Well Depth: 30.10	Water Column Height: 14.55
Volume/ft: 0.16	1 Casing Volume: 2.32	3 Casing Volumes: 6.98
Purging Device: disposable bailer	Did Well Dewater?: NO	Total Gallons Purged: 7
Start Purge Time: 13:05	Stop Purge Time: 13:11	Total Time: 6mins

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

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

Time	Casing Volume	Temp. C	pH	Cond. uS	Comments
13:07	1 2.5	17.1	7.13	1632	
13:09	2 5	17.9	7.51	973	
13:12	3 7	17.9	7.54	912	
					DO= 0.35 mg/L

Sample ID	Date	Time	Container Type	Preservative	Analytes	Analytic Method
MW- 4	12-05-00	13:17	4 VOA	HCl	TPHs, BTEX, MTBE	8015/8020
MW-			1 Liter	✱	TPHd	

APPENDIX B

Laboratory Analytical Report

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

Cambria Environmental Technology 1144 65th Street, Suite C Oakland, CA 94608	Client Project ID: #130-0105; Worthington	Date Sampled: 12/05/00
		Date Received: 12/07/00
	Client Contact: Ron Scheele	Date Extracted: 12/07/00
	Client P.O:	Date Analyzed: 12/07/00

12/14/00

Dear Ron:

Enclosed are:

1). the results of **4** samples from your **#130-0105; Worthington** 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,

Edward Hamilton, Lab Director

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

Cambria Environmental Technology	Client Project ID: #130-0105; Worthington	Date Sampled: 12/05/00
1144 65th Street, Suite C		Date Received: 12/07/00
Oakland, CA 94608	Client Contact: Ron Scheele	Date Extracted: 12/07-12/08/00
	Client P.O:	Date Analyzed: 12/07-12/08/00

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

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

Lab ID	Client ID	Matrix	TPH(g)+	MTBE	Benzene	Toluene	Ethyl-benzene	Xylenes	% Recovery Surrogate
55292	MW-1	W	26,000,a	ND<300	7900	150	580	810	102
55293	MW-2	W	60,000,a,h	ND<200	5100	2200	1600	9000	104
55294	MW-3	W	110,000,a,h	ND<750	17,000	11,000	1900	12,000	107
55295	MW-4	W	69,000,a,h	ND<200	16,000	1300	1300	3400	103
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit		W	50 ug/L	5.0	0.5	0.5	0.5	0.5	
		S	1.0 mg/kg	0.05	0.005	0.005	0.005	0.005	

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

cluttered chromatogram; sample peak coelutes with surrogate peak

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

DHS Certification No. 1644

Edward Hamilton, Lab Director

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Telephone : 925-798-1620 Fax : 925-798-1622
http://www.mccampbell.com E-mail: main@mccampbell.com

Cambria Environmental Technology	Client Project ID: #130-0105; Worthington	Date Sampled: 12/05/00
1144 65th Street, Suite C		Date Received: 12/07/00
Oakland, CA 94608	Client Contact: Ron Scheele	Date Extracted: 12/07/00
	Client P.O:	Date Analyzed: 12/07-12/14/00

Diesel Range (C10-C23) Extractable Hydrocarbons as Diesel *

EPA methods modified 8015, and 3550 or 3510; California RWQCB (SF Bay Region) method GCFID(3550) or GCFID(3510)

Lab ID	Client ID	Matrix	TPH(d)+	% Recovery Surrogate
55292	MW-1	W	3400,d	110
55293	MW-2	W	87,000,d,b,h	108
55294	MW-3	W	17,000,d,h	98
55295	MW-4	W	2600,d,h	102
Reporting Limit unless otherwise stated; ND means not detected above the reporting limit		W	50 ug/L	
		S	1.0 mg/kg	

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

cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

+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 diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel? is significant); d) gasoline range compounds are significant; e) medium boiling point pattern that does not match diesel (?); f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~5 vol. % sediment.

DHS Certification No. 1644

Edward Hamilton, Lab Director

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QC REPORT

Date: 12/07/00 Matrix: Water

Extraction: TTLC

Compound	Concentration: ug/L				%Recovery		RPD
	Sample	MS	MSD	Amount Spiked	MS	MSD	
SampleID: 112900					Instrument: GC-7		
Surrogate1	0.000	93.0	89.0	100.00	93	89	4.4
Xylenes	0.000	28.3	29.1	30.00	94	97	2.8
Ethyl Benzene	0.000	9.0	9.2	10.00	90	92	2.2
Toluene	0.000	9.1	9.2	10.00	91	92	1.1
Benzene	0.000	8.6	9.0	10.00	86	90	4.5
MTBE	0.000	9.4	9.4	10.00	94	94	0.0
GAS	0.000	93.2	92.9	100.00	93	93	0.4
SampleID: 112900					Instrument: GC-2 B		
Surrogate1	0.000	103.0	102.0	100.00	103	102	1.0
TPH (diesel)	0.000	8175.0	7125.0	7500.00	109	95	13.7

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

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

RPD means Relative Percent Deviation

23475 ZC 2660

McCAMPBELL ANALYTICAL INC.

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

CHAIN OF CUSTODY RECORD

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

Report To: Ron Scheele Bill To: Cambria Env. Tech

Company: Cambria Environmental Technology

6262 Hollis Street

Emeryville, CA 94608

Tele: (510) 450-1983 Fax: (510) 450-8295

Project #: 130-0105 Project Name: Worthington

Project Location: 3055 35th St Oakland, Ca

Sampler Signature:

SAMPLE ID	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	MATRIX Soil	MATRIX Air	MATRIX Sludge	MATRIX Other	METHOD PRESERVED Ice	METHOD PRESERVED HCl	METHOD PRESERVED HNO_3	METHOD PRESERVED Other	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
MW-1		12-05-00	14:32	5	VOA Amber	X					X	X			X	X														55292 (+)	
MW-2		12-05-00	14:08	5	VOA Amber	X					X	X			X	X														55293 (+)	
MW-3		12-05-00	13:41	5	VOA Amber	X					X	X			X	X														55294 (+)	
MW-4		12-05-00	13:17	5	VOA Amber	X					X	X			X	X														55295 †	

Relinquished By:	Date:	Time:	Received By:
	12.7	11.45	David Moro
David Moro	12.7	1.20	Laura Rodriguez

Remarks:

	VOAS	O&G	METALS	OTHER
ICE/t°	✓			
CONDITION	✓			
HEADSPACE ABSENT				
PRESERVATION				
APPROPRIATE				
CONTAINERS	✓			