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January 12, 2007

**FILE COPY**

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

Re: **Groundwater Monitoring Report**  
**Fourth Quarter 2006**

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



Dear Mr. Plunkett:

On behalf of Golden Empire Properties, Inc., Cambria Environmental Technology, Inc. (Cambria) has prepared this *Groundwater Monitoring Report – Fourth Quarter 2006*. Presented in the report are the fourth quarter 2006 activities and the anticipated first quarter 2007 activities.

If you have any questions or comments regarding this report, please call me at (510) 420-3307.

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

*Mark Jonas*  
Mark Jonas, P.G.  
Senior Project Geologist

Attachments: *Groundwater Monitoring Report - Fourth Quarter 2006*

cc: Golden Empire Properties, Inc. 5942 MacArthur Boulevard, Suite B, Oakland, California 94605  
Mr. Jeffrey Lawson, SVLG, 25 Metro Drive, Suite 600, San Jose, California 95110

**Cambria  
Environmental  
Technology, Inc.**

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Suite A  
Emeryville, CA 94608  
Tel (510) 420-0700  
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## GROUNDWATER MONITORING REPORT - FOURTH QUARTER 2006

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

**January 12, 2007**

*Prepared for:*

Golden Empire Properties, Inc.  
5942 MacArthur Boulevard, Suite B  
Oakland, California 94605



*Prepared by:*

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

*Written by:*

C. McClelland

Christina McClelland  
Staff Geologist

Cambria Environmental Technology, Inc. (Cambria) prepared this document for use by our client and appropriate regulatory agencies. It is based partially on information available to Cambria from outside sources and/or in the public domain, and partially on information supplied by Cambria and its subcontractors. Cambria makes no warranty or guarantee, expressed or implied, included or intended in this document, with respect to the accuracy of information obtained from these outside sources or the public domain, or any conclusions or recommendations based on information that was not independently verified by Cambria. This document represents the best professional judgment of Cambria. None of the work performed hereunder constitutes or shall be represented as a legal opinion of any kind or nature.

I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge.

Mark Jonas  
Mark Jonas, P.G.  
Senior Project Geologist



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**GROUNDWATER MONITORING REPORT - FOURTH QUARTER 2006**

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

**January 12, 2007**

**INTRODUCTION**

On behalf of Golden Empire Properties, Inc., Cambria Environmental Technology, Inc. (Cambria) has prepared this *Groundwater Monitoring Report – Fourth Quarter 2006* for the referenced site (see Figure 1). Presented in the report are the fourth quarter 2006 groundwater monitoring and corrective action activities and the anticipated first quarter 2007 activities.

Figure 1 presents recent monitoring groundwater elevations and selected hydrochemical data. Table 1 provides recent and historic groundwater level measurements and elevations, and hydrochemical data. Appendix A contains field data sheets for this monitoring event. Appendix B presents the recent laboratory analytical report. Appendix C includes time-series plots with benzene and total petroleum hydrocarbons as gasoline (TPHg) concentrations, and groundwater elevations.

**FOURTH QUARTER 2006 ACTIVITIES**

**Monitoring Activities**

**Field Activities:** On December 6, 2006, Cambria subcontracted Muskan Environmental Sampling (MES) to perform quarterly monitoring activities. MES gauged and inspected for separate-phase hydrocarbons (SPH) in all monitoring wells (Figure 1). Groundwater samples were collected from wells MW-1 through MW-4, RW-5, and RW-9. Groundwater monitoring field data sheets are presented in Appendix A. The monitoring data was submitted to the GeoTracker database.

Prior to groundwater sampling, groundwater levels were measured in all monitoring wells. Each monitoring well was then purged before sampling. MES purged at least three well-casing volumes of groundwater from each monitoring well. Field measurements of pH, conductivity, and temperature of purged groundwater were measured after the extraction of each successive casing volume. Well purging continued until consecutive pH, specific conductance, and temperature measurements appeared to stabilize. Field measurements, purge volumes, and sample collection data were recorded on field sampling data forms, presented in Appendix A.

Groundwater samples were collected using new disposable bailers, decanted into appropriate sampling containers supplied by the analytical laboratory. Samples were labeled, placed in protective foam sleeves, stored on crushed, water-based ice at or below 4 degrees Celsius and transported under a chain-of-custody (COC) to the laboratory. The COC used for this monitoring event is provided in Appendix B.

**Sample Analyses:** Groundwater samples were analyzed for TPHg and total petroleum hydrocarbons as diesel (TPHd) with silica gel clean-up by modified EPA Method SW8015C; and for benzene, toluene, ethylbenzene and xylenes (BTEX) and methyl tertiary butyl ether (MTBE) by EPA Method SW8021B. Groundwater samples were also collected for field measurement of dissolved oxygen (DO) from each of the sampled wells. DO was recorded on field data sheets provided in Appendix A. The laboratory analytical report is presented as Appendix B. The analytical data has been submitted to the GeoTracker database.



### **Monitoring Results**

**Groundwater Flow Direction:** Based on depth to water measurements collected during MES's December 6, 2006 site visit, groundwater beneath the site flows towards the west-southwest with a gradient of 0.008 ft/ft (Figure 1). The groundwater gradient is generally consistent with historical static groundwater conditions. Groundwater monitoring data is presented in Table 1.

**Hydrocarbon Distribution in Groundwater:** Hydrocarbon concentrations were detected in all six sampled wells. TPHg concentrations ranged from 4,500 micrograms per liter ( $\mu\text{g/L}$ ) to 44,000  $\mu\text{g/L}$ , with the highest concentration detected in well MW-3. Benzene concentrations ranged from 440  $\mu\text{g/L}$  to 4,500  $\mu\text{g/L}$ , with the highest concentration detected in well MW-3. TPHd concentrations ranged from 660  $\mu\text{g/L}$  to 31,000  $\mu\text{g/L}$ , with the highest concentration detected in well MW-2. No MTBE was detected above laboratory detection limits. Hydrocarbon concentrations are generally consistent with previous monitoring events (see Appendix C for individual well concentration trend graphs). Analytical results are summarized in Table 1 and shown on Figure 1.

### **Corrective Action Activities**

No corrective action activities took place during the fourth quarter 2006. An ozone sparge pilot remediation system is currently in the design and preparation phase.

## **ANTICIPATED FIRST QUARTER 2007 ACTIVITIES**

### **Monitoring Activities**

During the first quarter 2007, Cambria will coordinate with MES to gauge the site wells, check the wells for SPH, and collect groundwater samples from monitoring wells MW-1 through MW-4, RW-5, and RW-9. All sampled wells will be field measured for DO. Groundwater samples will be analyzed

# C A M B R I A

Groundwater Monitoring Report – Fourth Quarter 2006  
Former Exxon Service Station, Oakland, California  
January 12, 2007

for TPHg and TPHd with silica gel clean-up by Modified EPA Method SW8015C; and for BTEX and MTBE by EPA Method SW8021B. Cambria will summarize groundwater monitoring activities and results in the *Groundwater Monitoring Report – First Quarter 2007*.

## **Corrective Action Activities**

On February 22, 2005, Cambria submitted a *Remediation Work Plan* to the Alameda County Health Care Services Agency (ACEH). A revised work plan was submitted to ACEH on January 30, 2006 titled *Revised Remediation Work Plan*, as requested by Mr. Amir Gholami. Comments were received from ACEH in a May 16, 2006 letter. Cambria responded in a June 6, 2006 *Response to Agency Letter – Technical Comments*. In an October 5, 2006 e-mail, ACEH approved remediation stating that “ACEH concurs with the proposed remedial alternative...” In the first quarter 2007 we should begin on-site implementation of the selected remedial alternative, in-situ chemical oxidation using ozone.



## **ATTACHMENTS**

Figure 1 – Groundwater Elevation and Hydrocarbon Concentration Map – December 6, 2006

Table 1 – Groundwater Elevations and Analytical Data

Appendix A – Groundwater Monitoring Field Data Sheets

Appendix B – Analytical Results for Groundwater Sampling

Appendix C – TPHg and Benzene Concentration Trend Graphs

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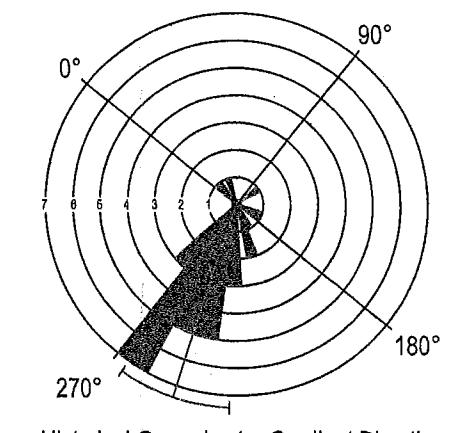
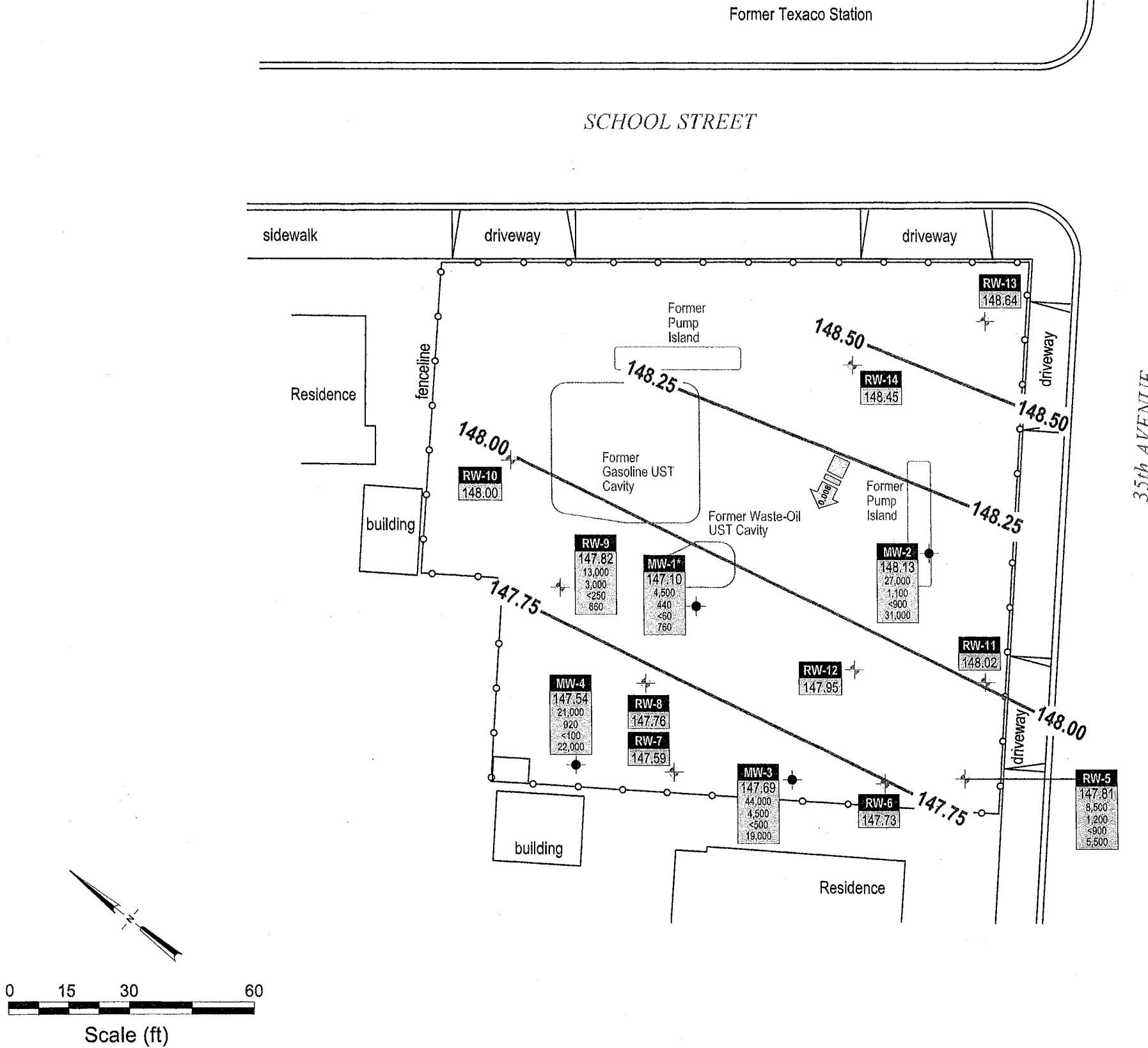
## Groundwater Elevation and Hydrocarbon Concentration Map

December 6, 2006



**Former Exxon Station**

305 35th Avenue  
Oakland, California



**1**

FIGURE

# CAMBRIA

**Table 1. Groundwater Elevations 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 ----->	Concentrations in micrograms per liter ( $\mu\text{g/L}$ )					DO (mg/L)	TPE System Status
								Benzene	Toluene	Ethylbenzene	Xylenes	MTBE		
MW-1	5/25/1994	16.79	Sheen	84.06	120,000	25,000	<50,000	22,000	17,000	2,800	16,000	---	---	
100.85	7/19/1994	20.77	---	80.08	---	---	---	---	---	---	---	---	---	
	8/18/1994	21.04	Sheen	79.81	925,000	---	---	16,500	6,200	1,000	9,400	---	---	
	11/11/1994	15.80	---	85.05	57,000	---	---	14,000	4,400	1,400	6,400	---	---	
	2/27/1995	15.53	---	85.32	45,000	---	---	2,900	2,500	760	4,100	---	---	
	5/23/1995	15.29	---	85.56	22,000	---	---	9,900	990	790	2,000	---	---	
	8/22/1995	20.90	---	79.95	23,000	---	---	6,900	340	1,200	1,900	---	---	
	11/29/1995	22.19	---	78.66	37,000	---	---	9,900	530	1,600	2,900	---	---	
	2/21/1996	11.69	---	89.16	33,000	4,300	---	10,000	480	1,000	1,800	3,300	---	
	5/21/1996	14.62	---	86.23	36,000	8,500	---	8,500	1,400	1,300	2,800	1,900	---	
	8/22/1996	22.30	---	78.55	41,000	6,200	---	8,600	1,300	1,500	2,900	<200	8.0	
	11/27/1996	17.24	Sheen	83.61	38,000	6,100	---	9,600	950	1,600	3,100	<400	5.6	
	3/20/1997	16.65	---	84.20	33,000	10,000	---	6,100	560	970	2,200	<400	8.5	
	6/25/1997	19.77	---	81.08	31,000	7,400 <sup>a</sup>	---	7,400	440	890	1,800	<400	3.7	
	9/17/1997	20.12	---	80.73	32,000 <sup>d</sup>	3,500 <sup>e</sup>	---	9,100	550	1,000	2,000	<1,000	2.1	
	12/22/1997	12.95	---	87.90	26,000 <sup>d</sup>	5,800 <sup>e</sup>	---	7,900	370	920	1,500	<790	0.7	
	3/18/1998	12.34	Sheen	88.51	30,000 <sup>d</sup>	4,200 <sup>e,f</sup>	---	7,800	820	840	2,000	<1,100	1.3	
	7/14/1998	17.34	---	83.51	41,000 <sup>d</sup>	8,900 <sup>e,f</sup>	---	8,200	1,100	1,200	3,000	<200	1.8	
	9/30/1998	19.90	---	80.95	37,000	3,300	---	11,000	950	1,200	2,800	<20	2.0	
	12/8/1998	15.62	---	85.23	22,000	3,700	---	3,000	1,200	730	3,100	<900	---	
	3/29/1999	11.98	---	88.87	36,000 <sup>d</sup>	6,800 <sup>e</sup>	---	12,000	750	1,300	2,400	950	0.50	
	6/29/1999	20.77	---	80.08	28,000 <sup>d</sup>	3,500 <sup>e</sup>	---	7,300	420	810	1,700	<1,300	0.10	
	9/28/1999	19.68	---	81.17	13,000 <sup>d</sup>	3,600 <sup>e,f</sup>	---	3,200	130	320	1,100	<210	0.55	
	12/10/1999	17.02	---	83.83	25,000 <sup>d</sup>	2,900 <sup>e,f</sup>	---	5,400	130	620	1,400	<1,000	1.03	
	3/23/2000	12.76	---	88.09	21,000 <sup>d</sup>	3,300 <sup>f</sup>	---	4,700	140	470	1,100	<350	---	
	9/7/2000	19.45	---	81.40	40,000 <sup>d,g</sup>	12,000 <sup>e,g</sup>	---	3,700	1,400	910	4,900	<50	0.17	
	12/5/2000	18.60	---	82.25	26,000 <sup>a</sup>	3,400 <sup>e</sup>	---	7,900	150	580	810	<300	0.35	
	3/7/2001	16.19	---	84.66	13,000	2,400	---	2,700	43	69	300	<100	0.49	
	6/6/2001	18.47	---	82.38	19,000	4,000	---	4,500	130	270	430	<400	0.39	
	8/30/2001	21.70	---	79.15	8,800 <sup>a</sup>	1,400 <sup>d</sup>	---	2,100	45	91	240	<130	0.27	
	12/7/2001	26.55	---	74.30	8,700 <sup>d</sup>	1,900 <sup>e,f</sup>	---	1,300	160	38	730	<20	0.59	
	3/11/2002	17.13	---	83.72	9,400 <sup>d</sup>	1,400 <sup>e</sup>	---	2,100	200	74	470	<20	0.39	
	6/10/2002	24.10	---	76.75	4,200 <sup>d</sup>	900 <sup>e,k</sup>	---	830	170	110	460	<100	---	

# CAMBRIA

**Table 1. Groundwater Elevations 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 Concentrations in micrograms per liter (µg/L)----->	TPHmo	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	DO (mg/L)	TPE System Status
								---	---	---	---	---		
<i>MW-1</i> <i>Continued</i>	9/26/2002	20.30	---	80.55	7,000 <sup>d</sup>	1,300 <sup>e,f,k</sup>	---	1,300	190	200	760	<100	0.70	Operating
	11/21/2002	21.55	---	79.30	83,000 <sup>d,g</sup>	200,000 <sup>e,g</sup>	---	7,100	1,700	3,000	13,000	<1,000	0.49	Operating
	1/13/2003	14.80	---	86.05	20,000 <sup>d</sup>	5,300 <sup>e,f</sup>	---	2,300	480	300	2,100	<500	0.33	Not operating
	4/25/2003	20.90	---	79.95	4,200 <sup>d</sup>	320 <sup>e</sup>	---	580	81	59	470	<50	---	Operating
	5/30/2003	16.65	---	84.20	---	---	---	---	---	---	---	---	---	Not operating
	9/3/2003	24.16	---	76.69	14,000 <sup>d</sup>	36,000 <sup>e,f</sup>	---	300	50	33	480	<50	---	Operating
	12/2/2003	24.12	---	76.73	7,100 <sup>d,g</sup>	9,300 <sup>e,f,g</sup>	---	1,400	230	160	820	<100	---	Operating
<i>167.02</i> <i>(Monument Well box)</i>	3/18/2004	17.70	---	83.15	3,600 <sup>d</sup>	1,100 <sup>e,f</sup>	---	650	59	38	370	<90	---	Operating
	6/16/2004	19.20	---	147.82	8,100 <sup>d</sup>	2,300 <sup>e,f</sup>	---	1,500	69	22	1,000	<100	---	Not operating
	9/27/2004	23.07	---	143.95	7,800 <sup>d</sup>	1,700 <sup>e</sup>	---	1,800	110	120	670	<180	0.28	Not operating
	12/27/2004	17.04	---	149.98	10,000 <sup>d</sup>	1,400 <sup>e</sup>	---	2,400	170	170	1,500	<120	0.41	Not operating
	3/7/2005	10.73	---	156.29	8,700 <sup>d</sup>	1,300 <sup>e,f,k</sup>	---	1,200	99	140	770	<500	0.91	Not operating
	6/21/2005	14.60	---	152.42	6,500 <sup>d</sup>	930 <sup>e,k</sup>	---	820	26	57	110	<250	---	Not operating
	9/21/2005	19.64	---	147.38	2,900 <sup>d</sup>	860 <sup>e,f,f</sup>	---	430	19	46	150	<50	1.14	Not operating
	12/14/2005	17.63	---	149.39	6,200 <sup>d</sup>	4,000 <sup>e,f,k</sup>	---	570	32	72	420	<110	1.08	Not operating
	3/22/2006	10.52	---	156.50	8,300 <sup>d</sup>	1,100 <sup>e,f,k</sup>	---	1,700	100	190	660	<150	0.84	Not operating
	6/30/2006	16.33	Sheen	150.69	2,100 <sup>d,l</sup>	1,500 <sup>m,k,l</sup>	---	320	6.1	<1.0	77	<90	0.66	Not operating
	9/5/2006	19.96	---	147.06	5,500 <sup>d,g</sup>	1,500 <sup>e,f,k,g</sup>	---	1,000	45	81	310	<120	0.38	Not operating
	12/6/2006	19.92	---	147.10	4,500 <sup>d,g</sup>	760 <sup>e,g</sup>	---	440	13	42	190	<60	0.55	Not operating
<i>MW-2</i> <i>100.00</i>	5/25/1994	15.65	---	84.35	61,000	6,900	<5,000	9,900	7,400	960	4,600	---	---	---
	7/19/1994	19.81	---	80.19	---	---	---	---	---	---	---	---	---	---
	8/18/1994	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	---	---	---
	2/27/1995	14.46	Sheen	85.54	44,000	---	---	5,100	5,300	930	6,400	---	---	---
	5/23/1995	14.17	---	85.83	33,000	---	---	6,400	5,000	1,100	5,600	---	---	---
	8/22/1995	19.80	---	80.20	38,000	---	---	7,100	5,300	1,300	6,000	---	---	---
	11/29/95	21.05	---	78.95	46,000	---	---	8,000	6,000	1,800	8,900	4,500	---	---
	2/21/1996	10.53	---	89.47	59,000	---	---	8,200	5,200	1,300	6,600	2,400	---	---
	5/21/1996	13.47	---	86.53	51,000	3,400	---	8,200	3,500	960	4,500	<200	3.0	---
	8/22/1996	19.12	---	80.88	37,000	5,700	---	5,100	3,500	4,500	4,500	---	---	---

# CAMBRIA

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

Well ID TOC	Date	GW	SPH	GW	TPHg	TPHd	TPHmo	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	DO	TPE System
		Depth (ft)	(ft)	Elev. (ft)	<	Concentrations in micrograms per liter ( $\mu\text{g/L}$ )							>	(mg/L)
MW-2	11/27/1996	16.61	Sheen	83.39	54,000	10,000	---	9,800	7,000	1,800	7,900	<2,000	3.1	
<i>Continued</i>	3/20/1997	15.39	---	84.61	27,000	6,100	---	3,700	2,300	580	2,800	<400	8.1	
	6/25/1997	18.62	---	81.38	42,000	7,800 <sup>b</sup>	---	7,400	3,800	1,200	5,700	<200	0.9	
	9/17/1997	19.05	Sheen	80.95	41,000 <sup>d</sup>	8,900 <sup>e</sup>	---	5,200	3,400	1,300	5,900	<700	1.2	
	12/22/1997	14.09	---	85.91	47,000 <sup>d</sup>	6,100 <sup>e</sup>	---	8,500	4,600	1,800	8,400	<1,200	1.2	
	3/18/1998	10.83	Sheen	89.17	58,000 <sup>d</sup>	7,000 <sup>e,f</sup>	---	9,300	6,100	1,800	8,200	<1,100	1.1	
	7/14/1998	16.07	---	83.93	42,000 <sup>d</sup>	5,300 <sup>e,f</sup>	---	6,000	3,000	1,000	4,800	<200	1.5	
	9/30/1998	18.71	---	81.29	22,000	2,400	---	3,600	1,300	720	3,200	<30	1.8	
	12/8/1998	14.80	---	85.20	32,000	3,100	---	9,200	680	1,100	2,300	<2,000	---	
	3/29/1999	11.81	---	88.19	28,000 <sup>d</sup>	7,500 <sup>e,f</sup>	---	4,400	1,600	950	4,100	410	1.86	
	6/29/1999	19.54	---	80.46	28,000 <sup>d</sup>	3,300 <sup>e</sup>	---	3,500	1,100	690	3,100	<1,000	0.41	
	9/28/1999	18.61	---	81.39	15,000 <sup>d</sup>	3,400 <sup>e,f</sup>	---	1,200	540	230	2,300	<36	1.18	
	12/10/1999	16.53	---	83.47	17,000 <sup>d</sup>	2,500 <sup>e,f</sup>	---	1,300	780	420	2,700	<40	0.17	
	3/23/2000	13.56	---	86.44	25,000 <sup>d</sup>	3,100 <sup>i</sup>	---	1,900	1,100	660	3,700	<500	---	
	9/7/2000	18.25	---	81.75	62,000 <sup>d,g</sup>	32,000 <sup>e,g</sup>	---	5,300	2,300	1,500	8,400	<100	0.39	
	12/5/2000	17.45	---	82.55	60,000 <sup>d,g</sup>	87,000 <sup>e,f,g</sup>	---	5,100	2,200	1,600	9,000	<200	0.31	Not operating
	3/7/2001	15.68	---	84.32	34,000	3,900	---	1,200	770	620	4,300	<200	0.44	Not operating
	6/6/2001	17.51	---	82.49	110,000	48,000	---	14,000	9,000	1,900	12,000	<950	0.24	Not operating
	8/30/2001	21.00	---	79.00	43,000 <sup>a,h</sup>	15,000 <sup>d,h</sup>	---	3,100	720	980	5,500	<200	---	Operating
	12/7/2001	24.45	---	75.55	4,100 <sup>d</sup>	750 <sup>e,f</sup>	---	510	88	8.2	580	<20	0.47	Operating
	3/11/2002	16.95	---	83.05	4,700 <sup>d</sup>	590 <sup>e</sup>	---	1,200	150	30	310	<50	0.24	Operating
	6/10/2002	18.59	---	81.41	14,000 <sup>d</sup>	2,000 <sup>e</sup>	---	2,600	710	150	2,000	<800	---	Operating
	9/26/2002	20.39	---	79.61	4,800 <sup>d</sup>	660 <sup>e</sup>	---	770	200	140	740	<50	0.29	Operating
	11/21/2002	18.75	---	81.25	210,000 <sup>d,g</sup>	350,000 <sup>e,g</sup>	---	14,000	23,000	4,400	28,000	<1,700	0.43	Operating
	1/13/2003	13.60	---	86.40	32,000 <sup>d,g</sup>	14,000 <sup>e,f,g,k</sup>	---	4,500	1,600	920	3,600	<1000	0.39	Not operating
	4/25/2003	19.05	---	80.95	3,800 <sup>d</sup>	310 <sup>e</sup>	---	460	78	72	410	310	---	Operating
	5/30/2003	15.23	---	84.77	---	---	---	---	---	---	---	---	---	Not operating
	9/3/2003	23.57	---	76.43	2,900 <sup>d</sup>	2,300 <sup>e</sup>	---	240	57	68	380	770	---	Operating
	12/2/2003	23.17	---	76.83	2,400 <sup>d,g</sup>	3,300 <sup>e,f,g</sup>	---	91	20	14	250	890	---	Operating
	3/18/2004	15.78	---	84.22	4,200 <sup>d</sup>	870 <sup>e,f</sup>	---	730	89	<5.0	480	2,300	---	Not operating
<i>166.14</i> <i>(Monument</i> <i>Well box)</i>	6/16/2004	18.15	---	147.99	15,000 <sup>d</sup>	9,800 <sup>e,f</sup>	---	800	210	290	1,800	2,000	0.79	Operating
	9/27/2004	27.55**	---	138.59	770 <sup>d</sup>	1,000 <sup>c,f,k</sup>	---	20	7.9	10	140	1,600	0.94	Not operating
	12/27/2004	16.81	---	149.33	17,000 <sup>d</sup>	3,800 <sup>e,f</sup>	---	1,300	370	540	3,800	620	0.94	

# CAMBRIA

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

Well ID TOC	Date	GW	SPH	GW	TPHg	TPHd	TPHmo	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	DO	TPE System
		Depth (ft)	(ft)	Elev. (ft)	<	Concentrations in micrograms per liter ( $\mu\text{g/L}$ )								(mg/L)
<i>MW-2</i> <i>Continued</i>	3/7/2005	9.31	Sheen	156.83	20,000 <sup>d,g</sup>	8,300 <sup>e,f,k,g</sup>	--	1,400	330	430	2,600	1,100	0.88	Not operating
	6/21/2005	13.42	--	152.72	36,000 <sup>d,g</sup>	15,000 <sup>e,f,g</sup>	--	1,700	310	460	3,100	1,200	--	Not operating
	9/21/2005	18.50	--	147.64	4,600 <sup>d</sup>	1,100 <sup>e,f</sup>	--	370	62	110	740	1,100	0.86	Not operating
	12/14/2005	16.40	--	149.74	29,000 <sup>d,g</sup>	49,000 <sup>e,f,k,g</sup>	--	1,700	260	600	3,700	1,000	0.99	Not operating
	3/22/2006	9.15	--	156.99	21,000 <sup>d,g</sup>	23,000 <sup>e,f,k,g</sup>	--	2,300	200	550	2,800	1,200	0.91	Not operating
	6/30/2006	16.78	Sheen	149.36	18,000 <sup>d,g</sup>	55,000 <sup>e,f,k,g</sup>	--	1,100	71	270	1,400	1,200	0.84	Not operating
	9/5/2006	18.96	--	147.18	15,000 <sup>d,g</sup>	19,000 <sup>e,f,k,g</sup>	--	680	70	260	1,400	<1,000	0.79	Not operating
	12/6/2006	18.01	Sheen	148.13	27,000 <sup>d,g</sup>	31,000 <sup>e,f,k,g</sup>	--	1,100	51	420	1,600	<900	0.48	Not operating
<i>MW-3</i> <i>96.87</i>	5/25/1994	13.93	Sheen	82.94	56,000	14,000	<50,000	14,000	14,000	1,300	11,000	--	--	--
	7/19/1994	17.04	--	79.83	--	--	--	--	--	--	--	--	--	--
	8/18/1994	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	--	--	--
	2/27/1995	11.86	Sheen	85.01	250,000	--	--	22,000	26,000	7,800	21,000	--	--	--
	5/23/1995	11.60	Sheen	85.27	310,000	--	--	18,000	17,000	4,500	2,800	--	--	--
	8/22/1995	17.10	--	79.77	74,000	--	--	14,000	13,000	1,900	11,000	--	--	--
	11/29/1995	16.34	--	80.53	220,000	--	--	25,000	25,000	3,500	19,000	--	--	--
	2/21/1996	7.92	--	88.95	60,000	--	--	10,000	7,800	1,500	8,800	3,400	--	--
	5/21/1996	10.86	Sheen	86.01	69,000	13,000	--	17,000	9,400	1,700	9,400	2,600	--	--
	8/22/1996	16.50	--	80.37	94,000	16,000	--	17,000	15,000	2,100	12,000	330	2.0	--
	11/27/1996	13.47	Sheen	83.40	82,000	24,000	--	14,000	13,000	2,400	13,000	<1,000	2.4	--
	3/20/1997	12.86	--	84.01	56,000	11,000	--	9,900	6,900	1,300	8,000	3,500	9.0	--
	6/25/1997	15.98	--	80.89	49,000	7,700 <sup>b</sup>	--	9,700	7,100	1,300	7,000	220	5.8	--
	9/17/1997	16.34	Sheen	80.53	78,000 <sup>d</sup>	15,000 <sup>e</sup>	--	11,000	9,900	1,800	10,000	<1,200	0.7	--
	12/22/1997	10.71	Sheen	86.16	49,000 <sup>d</sup>	14,000 <sup>e</sup>	--	7,300	5,300	1,400	7,500	<1,100	3.1	--
	3/18/1998	8.41	Sheen	88.46	120,000 <sup>d</sup>	20,000 <sup>e,f</sup>	--	21,000	19,000	2,600	15,000	<1,600	1.6	--
	7/14/1998	13.51	--	83.36	94,000 <sup>d,g</sup>	65,000 <sup>e,f,g</sup>	--	18,000	14,000	1,900	11,000	<1,400	1.8	--
	9/30/1998	16.14	--	80.73	91,000	9,800	--	17,000	13,000	2,100	12,000	<1300	2.0	--
	12/8/1998	11.20	--	85.67	51,000	4,200	--	8,000	6,800	1,400	7,500	<1,100	--	--
	3/29/1999	7.95	--	88.92	39,000 <sup>d</sup>	4,600 <sup>e</sup>	--	8,900	4,400	940	4,500	810	0.56	--
	6/29/1999	16.98	--	79.89	71,000 <sup>d</sup>	6,900 <sup>e</sup>	--	12,000	7,300	1,400	8,400	<1,700	0.19	--
	9/28/1999	15.99	--	80.88	60,000 <sup>d</sup>	7,800 <sup>e</sup>	--	9,400	9,200	1,000	9,900	200	0.53	--
	12/10/1999	13.31	--	83.56	53,000 <sup>d</sup>	5,300 <sup>e,f</sup>	--	8,000	6,400	1,100	8,100	<200	0.48	--

# CAMBRIA

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

Well ID TOC	Date	GW	SPH	GW	TPHg	TPHd	TPHmo	Benzene	Toluene	Ethybenzene	Xylenes	MTBE	DO	TPE System Status
		Depth (ft)	(ft)	Elev. (ft)	<	Concentrations in micrograms per liter ( $\mu\text{g/L}$ )							>	(mg/L)
MW-3	3/23/2000	8.98	---	87.89	77,000 <sup>d,g</sup>	11,000 <sup>e,j</sup>	---	10,000	9,400	1,600	11,000	<430	---	
<i>Continued</i>	9/7/2000	15.61	---	81.26	100,000 <sup>d,g</sup>	19,000 <sup>e,f,g</sup>	---	17,000	12,000	1,600	11,000	<500	---	
	12/5/2000	14.80	---	82.07	110,000 <sup>d,g</sup>	17,000 <sup>e,g</sup>	---	17,000	11,000	1,900	12,000	<750	0.37	Not operating
	3/7/2001	14.27	---	82.60	60,000	13,000	---	7,000	4,600	900	7,100	<350	0.49	Not operating
	6/6/2001	14.88	---	81.99	43,000	12,000	---	3,000	1,000	770	5,200	<400	1.71	Not operating
	8/30/2001	12.43	---	84.44	95,000 <sup>a,b</sup>	190,000 <sup>d,h</sup>	---	6,900	10,000	2,700	15,000	<250	0.24	Operating
	12/7/2001	24.65	---	72.22	25,000 <sup>d</sup>	3,900 <sup>e,f</sup>	---	2,500	1,700	64	2,200	<200	0.19	Operating
	3/11/2002	14.69	---	82.18	30,000 <sup>d</sup>	2,800 <sup>f,e,k</sup>	---	5,000	2,400	190	1,800	<1,300	0.30	Operating
	6/10/2002	22.94	---	73.93	9,000 <sup>d</sup>	990 <sup>c,k</sup>	---	1,800	1,300	96	1,000	<300	---	Operating
	9/26/2002	18.85	---	78.02	50,000 <sup>d,g</sup>	130,000 <sup>e,g</sup>	---	3,900	5,400	820	6,600	<500	0.19	Operating
	11/21/2002	17.85	0.05	79.06	37,000 <sup>d,g</sup>	120,000 <sup>e,g</sup>	---	4,000	660	1,200	5,100	<1,700	0.28	Operating
	1/13/2003	11.43	---	85.44	21,000 <sup>d,g</sup>	6,300 <sup>c,f,g,k</sup>	---	2,400	2,300	390	3,000	<500	0.31	Not operating
	4/25/2003	18.30	---	78.57	12,000 <sup>d</sup>	1,200 <sup>c</sup>	---	1,800	850	150	1,200	<500	---	Operating
	5/30/2003	13.30	---	83.57	---	---	---	---	---	---	---	---	---	Not operating
162.94	9/3/2003	21.65	---	75.22	8,100 <sup>d</sup>	3,300 <sup>c</sup>	---	220	170	66	560	<50	---	Operating
	12/2/2003	17.70	---	79.17	30,000 <sup>d,g</sup>	8,400 <sup>e,f,g</sup>	---	2,900	2,100	530	3,600	<500	---	Operating
	3/18/2004	16.49	---	80.38	15,000 <sup>d</sup>	2,300 <sup>e,f</sup>	---	2,600	990	260	1,700	<300	---	Operating
	6/16/2004	15.40	---	147.54	23,000 <sup>d</sup>	8,800 <sup>e,f</sup>	---	2,100	1,300	360	2,800	<1,000	---	Operating
	9/27/2004	23.65	---	139.29	5,200 <sup>d</sup>	1,700 <sup>e,f</sup>	---	430	220	100	680	250	0.55	Operating
	12/27/2004	14.58	---	148.36	32,000 <sup>d,g</sup>	24,000 <sup>c,f,g,k</sup>	---	4,400	2,800	650	4,800	<250	0.71	Not operating
	3/7/2005	6.91	Sheen	156.03	50,000 <sup>d,g</sup>	14,000 <sup>e,f,g</sup>	---	6,100	2,100	1,300	7,400	<500	0.62	Not operating
	6/21/2005	10.79	---	152.15	44,000 <sup>d,g</sup>	12,000 <sup>c,g</sup>	---	4,900	870	1,100	6,500	<1,200	---	Not operating
	9/21/2005	15.73	---	147.21	41,000 <sup>d,g</sup>	16,000 <sup>c,f,k,g</sup>	---	3,700	480	930	5,700	<500	0.90	Not operating
	12/14/2005	13.65	---	149.29	53,000 <sup>d,g</sup>	19,000 <sup>c,f,k,g</sup>	---	4,700	350	1,100	7,400	<1,000	0.95	Not operating
	3/22/2006	8.10	---	154.84	45,000 <sup>d,g</sup>	15,000 <sup>c,f,k,g</sup>	---	4,300	390	1,100	5,300	<1,000	0.88	Not operating
	6/30/2006	14.10	Sheen	148.84	44,000 <sup>d,g</sup>	15,000 <sup>c,f,k,g</sup>	---	4,000	160	550	4,000	<450	0.81	Not operating
	9/5/2006	16.25	Sheen	146.69	56,000 <sup>d,g</sup>	16,000 <sup>c,f,k,g</sup>	---	5,400	300	1,200	6,200	<500	0.55	Not operating
	12/6/2006	15.25	Sheen	147.69	44,000 <sup>d,g</sup>	19,000 <sup>e,f,k,g</sup>	---	4,500	110	930	3,600	<500	0.70	Not operating
MW-4	3/20/1997	13.75	---	83.59	47,000	3,100	---	11,000	4,500	1,100	5,200	3,400	8.4	
97.34	6/25/1997	16.15	---	81.19	61,000	5,800 <sup>b</sup>	---	16,000	6,100	1,500	5,900	780 <sup>c</sup>	1.4	
	9/17/1997	17.10	---	80.24	60,000 <sup>d</sup>	4,400 <sup>e</sup>	---	17,000	4,900	1,500	5,700	<1,500	1.5	
	12/22/1997	9.21	---	88.13	43,000 <sup>d</sup>	3,100 <sup>e</sup>	---	13,000	3,900	1,100	4,200	<960	3.7	

# CAMBRIA

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

Well ID TOC	Date	GW	SPH	GW	TPHg	TPHd	TPHmo	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	DO	TPE System Status
		Depth (ft)	(ft)	Elev. (ft)	<	Concentrations in micrograms per liter ( $\mu\text{g/L}$ )								>
MW-4	3/18/1998	9.54	---	87.80	58,000 <sup>d</sup>	5,500 <sup>e,f</sup>	---	14,000	4,700	1,400	5,700	<1,200	0.8	
<i>Continued</i>	7/14/1998	14.15	---	83.19	73,000 <sup>d</sup>	2,900 <sup>e,f</sup>	---	22,000	7,000	1,800	7,300	<200	1.0	
	9/30/1998	16.84	---	80.50	39,000	2,100	---	12,000	2,700	1,000	3,400	510	1.1	
	12/8/1998	13.45	---	83.89	27,000	1,600	---	8,900	1,600	730	2,300	<1,500	---	
	3/29/1999	9.10	---	88.24	48,000 <sup>d</sup>	2,400 <sup>e,f,h</sup>	---	15,000	3,000	1,300	5,000	1,300	1.32	
	06/29/99*	---	---	---	---	---	---	---	---	---	---	---	---	
	9/28/1999	16.58	---	80.76	24,000 <sup>d</sup>	3,200 <sup>e,f</sup>	---	7,500	1,200	190	2,200	210	14.29 <sup>#</sup>	
	12/10/1999	13.99	---	83.35	47,000 <sup>d</sup>	3,100 <sup>e,f</sup>	---	12,000	1,800	1,000	4,400	<100	0.62	
	3/23/2000	10.22	---	87.12	40,000 <sup>d</sup>	3,100 <sup>e,f</sup>	---	11,000	1,600	910	3,100	690	---	
	9/7/2000	16.40	---	80.94	43,000 <sup>d</sup>	5,900 <sup>e</sup>	---	10,000	1,100	1,100	3,400	<450	1.04	
	12/5/2000	15.55	---	81.79	69,000 <sup>d,g</sup>	2,600 <sup>e,g</sup>	---	16,000	1,300	1,300	3,400	<200	0.35	
	3/20/2001	14.03	---	83.31	46,000	---	---	13,000	1,000	900	2,800	<350	0.39	
	6/6/2001	15.49	---	81.85	75,000	5,400	---	22,000	1,800	1,900	6,400	<1,200	2.22	
	8/30/2001	18.00	---	79.34	43,000 <sup>a</sup>	3,200 <sup>d</sup>	---	6,400	630	510	2,600	<200	0.32	Operating
	12/7/2001	23.45	---	73.89	32,000 <sup>d,g</sup>	11,000 <sup>e,f,g</sup>	---	4,500	740	310	2,300	<200	0.21	Operating
	3/11/2002	14.95	---	82.39	15,000 <sup>d</sup>	1,600 <sup>e,f,k</sup>	---	3,700	500	92	790	<500	0.30	Operating
	6/10/2002	22.30	---	75.04	9,400 <sup>d</sup>	3,400 <sup>e</sup>	---	1,400	50	<5.0	690	<200	---	Operating
	9/26/2002	17.93	---	79.41	21,000 <sup>d</sup>	800 <sup>e</sup>	---	3,300	1,300	450	2,900	<500	0.24	Operating
	11/21/2002	17.55	---	79.79	5,700 <sup>d</sup>	2,400 <sup>e,k</sup>	---	1,400	290	63	640	550	---	Operating
	1/13/2003	11.75	---	85.59	35,000 <sup>d,g</sup>	15,000 <sup>e,f,g,k</sup>	---	5,100	1,500	510	4,500	<800	0.28	
	4/25/2003	19.37	---	77.97	6,600 <sup>d</sup>	2,200 <sup>e,f</sup>	---	960	130	100	560	<170	---	
	5/30/2003	13.56	---	83.78	---	---	---	---	---	---	---	---	---	
	9/3/2003	21.65	---	75.69	29,000 <sup>d</sup>	27,000 <sup>e,f</sup>	---	2,200	380	280	2,300	65	---	Operating
	12/2/2003	19.17	---	78.17	13,000 <sup>d</sup>	5,800 <sup>e,f</sup>	---	1,300	180	120	1,900	<250	---	Operating
	3/18/2004	14.92	---	82.42	5,300 <sup>d</sup>	1,500 <sup>e</sup>	---	1,300	55	37	440	<180	---	Operating
	6/16/2004	16.02	---	147.47	9,100 <sup>d</sup>	3,400 <sup>e,f</sup>	---	940	96	120	800	<50	---	
	9/27/2004	19.93	---	143.56	1,300 <sup>d</sup>	980 <sup>e,f,k</sup>	---	140	10	11	81	<50	0.68	Not operating
	12/27/2004	14.79	---	148.70	10,000 <sup>d,g</sup>	5,300 <sup>e,f,g,k</sup>	---	1,000	99	34	1,600	<50	0.74	Not operating
	3/7/2005	7.81	Sheen	155.68	15,000 <sup>d,g</sup>	9,300 <sup>e,f,g</sup>	---	1,100	140	88	1,900	<100	0.65	Not operating
	6/21/2005	11.82	---	151.67	30,000 <sup>d,g</sup>	12,000 <sup>e,g</sup>	---	3,300	270	250	2,800	<500	---	Not operating
	9/21/2005	16.55	---	146.94	12,000 <sup>d,g</sup>	15,000 <sup>e,f,k,g</sup>	---	540	100	54	1,800	<50	0.89	Not operating
	12/14/2005	14.43	---	149.06	5,200 <sup>d,g</sup>	9,800 <sup>e,f,k,g</sup>	---	710	41	91	540	<50	0.91	Not operating
	3/22/2006	7.52	---	155.97	17,000 <sup>d,g</sup>	9,300 <sup>e,f,k,g</sup>	---	2,000	230	150	1,900	<50	0.80	Not operating

# CAMBRIA

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

Well ID TOC	Date	GW	SPH	GW	TPHg	TPHd	TPHmo	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	DO	TPE System Status
		Depth (ft)	(ft)	Elev. (ft)	<	Concentrations in micrograms per liter ( $\mu\text{g/L}$ )						>	(mg/L)	
<i>MW-4</i> <i>Continued</i>	6/30/2006	15.00	Sheen	148.49	18,000 <sup>d,g</sup>	19,000 <sup>e,f,g</sup>	---	1,400	50	60	1,300	<100	0.85	Not operating
	9/5/2006	16.96	Sheen	146.53	30,000 <sup>d,g</sup>	9,400 <sup>e,f,k,g</sup>	---	1,400	180	110	4,300	<500	0.75	Not operating
	12/6/2006	15.95	Sheen	147.54	21,000 <sup>d,g</sup>	22,000 <sup>e,f,g</sup>	---	920	56	73	1,500	<100	0.71	Not operating
<i>RW-5</i> <i>162.34</i>	1/13/2003	10.20	---	---	14,000	3,000	---	2,100	750	300	1,800	950	0.17	
	3/18/2003	14.48	---	---	12,000	--	---	2,000	380	190	1,500	830	---	
	6/16/2004	14.73	---	147.61	--	--	---	--	--	--	--	--	--	Not operating
	9/27/2004	25.55	---	136.79	--	--	---	--	--	--	--	--	--	Operating
	12/27/2004	10.45	---	151.89	--	--	---	--	--	--	--	--	--	Not operating
	3/7/2005	4.42	Sheen	157.92	7,000 <sup>d</sup>	6,100 <sup>e,f,k</sup>	---	720	63	97	670	<400	0.93	Not operating
	6/21/2005	10.02	---	152.32	11,000 <sup>d</sup>	490 <sup>e</sup>	---	1,200	67	68	690	<500	---	Not operating
	9/21/2005	15.07	---	147.27	2,000 <sup>d,g</sup>	2,500 <sup>e,f,k,g</sup>	---	390	16	24	170	1,300	0.99	Not operating
	12/14/2005	12.95	---	149.39	8,900 <sup>d,g</sup>	6,200 <sup>e,f,k,g</sup>	---	1,500	92	180	750	2,300	1.03	Not operating
	3/22/2006	2.55	---	159.79	7,400 <sup>d</sup>	2,700 <sup>e,f,k</sup>	---	59	76	20	120	<50	1.10	Not operating
	6/30/2006	13.32	Sheen	149.02	3,100 <sup>d</sup>	3,100 <sup>e,f,k</sup>	---	590	15	27	88	410	0.89	Not operating
	9/5/2006	15.55	Sheen	146.79	5,300 <sup>d,g</sup>	3,200 <sup>e,f,k,g</sup>	---	1,000	31	61	230	370	0.81	Not operating
	12/6/2006	14.53	Sheen	147.81	8,500 <sup>d,g</sup>	5,500 <sup>e,f,g</sup>	---	1,200	24	91	250	<900	0.79	Not operating
<i>RW-6</i> <i>162.36</i>	3/11/2002	-	---	---	14,000	3,100	---	970	520	170	2,200	<130	---	
	1/13/2003	10.35	---	---	15,000	2,900	---	2,200	1,200	130	2,200	440	0.24	
	3/18/2004	11.47	---	---	8,500	--	---	1,300	260	71	990	1,300	--	
	6/16/2004	14.80	---	147.56	--	--	---	--	--	--	--	--	--	Not operating
	9/27/2004	18.46	---	143.90	--	--	---	--	--	--	--	--	--	Not operating
	12/27/2004	9.82	---	152.54	--	--	---	--	--	--	--	--	--	Not operating
	3/7/2005	6.05	---	156.31	--	--	---	--	--	--	--	--	--	Not operating
	6/21/2005	10.13	---	152.23	--	--	---	--	--	--	--	--	--	Not operating
	9/21/2005	15.13	---	147.23	--	--	---	--	--	--	--	--	--	Not operating
	12/14/2005	13.02	---	149.34	--	--	---	--	--	--	--	--	--	Not operating
	3/22/2006	5.85	---	156.51	--	--	---	--	--	--	--	--	--	Not operating
	6/30/2006	13.44	---	148.92	--	--	---	--	--	--	--	--	--	Not operating
	9/5/2006	15.63	---	146.73	--	--	---	--	--	--	--	--	--	Not operating
	12/6/2006	14.63	---	147.73	--	--	---	--	--	--	--	--	--	Not operating

# CAMBRIA

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

Well ID TOC	Date	GW	SPH	GW	TPHg	TPHd	TPHmo	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	DO	TPE System Status
		Depth (ft)	(ft)	Elev. (ft)	<-----	Concentrations in micrograms per liter ( $\mu\text{g/L}$ ) ----->						(mg/L)		
RW-7 162.72	3/11/2002	--	--	--	<50	<50	--	<0.5	<0.5	<0.5	<0.5	<5.0	--	
	1/13/2003	10.95	--	--	<50	67	--	<0.5	<0.5	<0.5	<0.5	<5.0	0.22	
	3/18/2004	15.33	--	--	250	--	--	66	4.8	3.2	10	<15	--	
	6/16/2004	15.22	--	147.50	--	--	--	--	--	--	--	--	--	Not operating
	9/27/2004	18.98	--	143.74	--	--	--	--	--	--	--	--	--	Not operating
	12/27/2004	9.85	--	152.87	--	--	--	--	--	--	--	--	--	Not operating
	3/7/2005	5.82	--	156.90	--	--	--	--	--	--	--	--	--	Not operating
	6/21/2005	10.85	--	151.87	--	--	--	--	--	--	--	--	--	Not operating
	9/21/2005	15.70	--	147.02	--	--	--	--	--	--	--	--	--	Not operating
	12/14/2005	13.58	--	149.14	--	--	--	--	--	--	--	--	--	Not operating
	3/22/2006	5.75	--	156.97	--	--	--	--	--	--	--	--	--	Not operating
	6/30/2006	14.05	--	148.67	--	--	--	--	--	--	--	--	--	Not operating
RW-8 164.13	9/5/2006	16.12	--	146.60	--	--	--	--	--	--	--	--	--	Not operating
	12/6/2006	15.13	--	147.59	--	--	--	--	--	--	--	--	--	Not operating
	3/11/2002	--	--	--	1,300	80	--	620	11	15	14	<60	--	
	1/13/2003	12.80	--	--	390	56	--	150	11	4.1	4.1	13	0.31	
	3/18/2004	15.34	--	--	760	--	--	310	9.9	11	16	<25	--	
	6/16/2004	16.41	--	147.72	--	--	--	--	--	--	--	--	--	Not operating
	9/27/2004	19.74	--	144.39	--	--	--	--	--	--	--	--	--	Not operating
	12/27/2004	12.32	--	151.81	--	--	--	--	--	--	--	--	--	Not operating
	3/7/2005	8.10	--	156.03	--	--	--	--	--	--	--	--	--	Not operating
	6/21/2005	12.15	--	151.98	--	--	--	--	--	--	--	--	--	Not operating
	9/21/2005	16.90	--	147.23	--	--	--	--	--	--	--	--	--	Not operating
	12/14/2005	14.80	--	149.33	--	--	--	--	--	--	--	--	--	Not operating
RW-9 163.86	3/22/2006	7.88	--	156.25	--	--	--	--	--	--	--	--	--	Not operating
	6/30/2006	15.31	--	148.82	--	--	--	--	--	--	--	--	--	Not operating
	9/5/2006	17.38	--	146.75	--	--	--	--	--	--	--	--	--	Not operating
	12/6/2006	16.37	--	147.76	--	--	--	--	--	--	--	--	--	Not operating
	3/11/2002	--	--	--	12,000	880	--	3,400	230	78	1,300	<240	--	
RW-9 163.86	1/13/2003	11.85	--	--	23,000	2,000	--	7,700	610	310	310	<500	0.39	
	3/18/2004	13.69	--	--	2,300	--	--	770	32	15	200	<50	--	

# CAMBRIA

**Table 1. Groundwater Elevations 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 Concentrations in micrograms per liter (µg/L)----->	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	DO (mg/L)	TPE System Status
								---	---	---	---	---		
<i>RW-9</i> <i>Continued</i>	6/16/2004	16.03	---	147.83	---	---	---	---	---	---	---	---	---	Not operating
	9/27/2004	19.83	---	144.03	---	---	---	---	---	---	---	---	---	Not operating
	12/27/2004	24.88	---	138.98	---	---	---	---	---	---	---	---	---	Not operating
	3/7/2005	7.87	---	155.99	9,000 <sup>d</sup>	510 <sup>e</sup>	---	2,600	69	200	550	<500	0.91	Not operating
	6/21/2005	11.90	---	151.96	9,400 <sup>d</sup>	630 <sup>e</sup>	---	2,400	69	210	470	<350	---	Not operating
	9/21/2005	16.62	---	147.24	8,300 <sup>d,g</sup>	820 <sup>e,f,g</sup>	---	2,500	36	190	310	<170	1.04	Not operating
	12/14/2005	14.52	---	149.34	6,300 <sup>d</sup>	1,100 <sup>e,f</sup>	---	1,900	29	150	260	<50	0.98	Not operating
	3/22/2006	7.63	---	156.23	7,600 <sup>d</sup>	680 <sup>e</sup>	---	2,900	59	190	310	<200	0.95	Not operating
	6/30/2006	15.04	---	148.82	14,000 <sup>d</sup>	1,400 <sup>e</sup>	---	3,100	53	130	260	<300	0.73	Not operating
	9/5/2006	17.02	---	146.84	14,000 <sup>d</sup>	1,100 <sup>e</sup>	---	3,900	39	200	230	<330	0.69	Not operating
	12/6/2006	16.04	---	147.82	13,000 <sup>d,g</sup>	660 <sup>e,g</sup>	---	3,000	29	180	260	<250	0.74	Not operating
<i>RW-10</i> <i>I63.02</i>	3/11/2002	---	---	12,000	740	---	3,900	150	110	1,100	<270	---	---	---
	1/13/2003	10.75	---	---	4,300	330	---	1,500	43	98	98	<100	0.41	---
	3/18/2004	13.13	---	---	5,800	---	---	2,400	11	<10	110	<300	---	Not operating
	6/16/2004	15.03	---	147.99	---	---	---	---	---	---	---	---	---	Not operating
	9/27/2004	18.35	---	144.67	---	---	---	---	---	---	---	---	---	Not operating
	12/27/2004	19.39	---	143.63	---	---	---	---	---	---	---	---	---	Not operating
	3/7/2005	6.40	---	156.62	---	---	---	---	---	---	---	---	---	Not operating
	6/21/2005	10.95	---	152.07	---	---	---	---	---	---	---	---	---	Not operating
	9/21/2005	15.51	---	147.51	---	---	---	---	---	---	---	---	---	Not operating
	12/14/2005	13.37	---	149.65	---	---	---	---	---	---	---	---	---	Not operating
	3/22/2006	6.53	---	156.49	---	---	---	---	---	---	---	---	---	Not operating
	6/30/2006	14.13	---	148.89	---	---	---	---	---	---	---	---	---	Not operating
	9/5/2006	15.98	---	147.04	---	---	---	---	---	---	---	---	---	Not operating
	12/6/2006	15.02	---	148.00	---	---	---	---	---	---	---	---	---	Not operating
<i>RW-11</i> <i>I62.57</i>	3/11/2002	---	---	260	<50	---	34	5.3	8.1	48	<5.0	---	---	---
	1/13/2003	9.80	---	---	5,300	2,700	---	490	110	120	120	180	0.24	---
	3/18/2004	12.45	---	---	9,300	---	---	980	120	180	770	2,000	---	Not operating
	6/16/2004	14.75	---	147.82	---	---	---	---	---	---	---	---	---	Not operating
	9/27/2004	18.44	---	144.13	---	---	---	---	---	---	---	---	---	Not operating
	12/27/2004	10.07	---	152.50	---	---	---	---	---	---	---	---	---	Not operating

# CAMBRIA

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

Well ID <i>TOC</i>	Date	GW	SPH	GW	TPHg	TPHd	TPHmo	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	DO	TPE System Status
		Depth (ft)	(ft)	Elev. (ft)	<-----	Concentrations in micrograms per liter ( $\mu\text{g/L}$ ) ----->								(mg/L)
<i>RW-11</i>	3/7/2005	5.95	--	156.62	--	--	--	--	--	--	--	--	--	Not operating
	6/21/2005	9.96	--	152.61	--	--	--	--	--	--	--	--	--	Not operating
	9/21/2005	15.09	--	147.48	--	--	--	--	--	--	--	--	--	Not operating
	12/14/2005	12.96	--	149.61	--	--	--	--	--	--	--	--	--	Not operating
	3/22/2006	5.70	--	156.87	--	--	--	--	--	--	--	--	--	Not operating
	6/30/2006	13.36	--	149.21	--	--	--	--	--	--	--	--	--	Not operating
	9/5/2006	15.56	--	147.01	--	--	--	--	--	--	--	--	--	Not operating
<i>Continued</i>	12/6/2006	14.55	--	148.02	--	--	--	--	--	--	--	--	--	Not operating
	RW-12	3/11/2002	--	--	13,000	900	--	4,500	130	130	270	<5.0	--	
	<i>163.06</i>	1/13/2003	10.90	--	4,100	1,800	--	1,000	130	99	99	<100	0.21	
		3/18/2004	13.63	--	17,000	--	--	2,700	960	230	1,500	1,400	--	
		6/16/2004	15.30	--	147.76	--	--	--	--	--	--	--	--	Not operating
		9/27/2004	19.09	--	143.97	--	--	--	--	--	--	--	--	Not operating
		12/27/2004	10.85	--	152.21	--	--	--	--	--	--	--	--	Not operating
		3/7/2005	6.59	--	156.47	--	--	--	--	--	--	--	--	Not operating
		6/21/2005	10.58	--	152.48	--	--	--	--	--	--	--	--	Not operating
		9/21/2005	15.63	--	147.43	--	--	--	--	--	--	--	--	Not operating
		12/14/2005	13.43	--	149.63	--	--	--	--	--	--	--	--	Not operating
		3/22/2006	6.35	--	156.71	--	--	--	--	--	--	--	--	Not operating
		6/30/2006	13.95	--	149.11	--	--	--	--	--	--	--	--	Not operating
		9/5/2006	16.11	--	146.95	--	--	--	--	--	--	--	--	Not operating
		12/6/2006	15.11	--	147.95	--	--	--	--	--	--	--	--	Not operating
<i>RW-13</i>	3/11/2002	--	--	--	830	79	--	190	13	13	34	<5.0	--	
	<i>164.34</i>	1/13/2003	11.20	--	210	92	--	54	2.0	2.7	2.7	<5.0	0.35	
		3/18/2004	13.45	--	150	--	--	47	1.0	2.1	1.5	<5.0	--	
		6/16/2004	15.83	--	148.51	--	--	--	--	--	--	--	--	Not operating
		9/27/2004	19.55	--	144.79	--	--	--	--	--	--	--	--	Not operating
		12/27/2004	18.12	--	146.22	--	--	--	--	--	--	--	--	Not operating
		3/7/2005	6.90	--	157.44	--	--	--	--	--	--	--	--	Not operating
		6/21/2005	11.05	--	153.29	--	--	--	--	--	--	--	--	Not operating
		9/21/2005	16.20	--	148.14	--	--	--	--	--	--	--	--	Not operating

# CAMBRIA

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

Well ID <i>TOC</i>	Date	GW	SPH	GW	TPHg	TPHd	TPHmo	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	DO	TPE System Status
		Depth (ft)	(ft)	Elev. (ft)	<-----	Concentrations in micrograms per liter ( $\mu\text{g/L}$ ) ----->						(mg/L)		
RW-13	12/14/2005	14.11	---	150.23	---	---	---	---	---	---	---	---	---	Not operating
<i>Continued</i>	3/22/2006	6.65	---	157.69	---	---	---	---	---	---	---	---	---	Not operating
	6/30/2006	14.44	---	149.90	---	---	---	---	---	---	---	---	---	Not operating
	9/5/2006	16.62	---	147.72	---	---	---	---	---	---	---	---	---	Not operating
	12/6/2006	15.70	---	148.64	---	---	---	---	---	---	---	---	---	Not operating
RW-14	3/11/2002	---	---	270	82	---	44	0.99	<0.5	4.2	<5.0	---	---	
<i>163.76</i>	1/13/2003	11.00	---	3700	6800	---	230	77	91	91	<50	0.38		
	3/18/2004	12.81	---	220	---	---	42	1.4	0.99	5.2	<5.0	---		
	6/16/2004	15.41	---	148.35	---	---	---	---	---	---	---	---	---	Not operating
	9/27/2004	19.20	---	144.56	---	---	---	---	---	---	---	---	---	Not operating
	12/27/2004	12.62	---	151.14	---	---	---	---	---	---	---	---	---	Not operating
	3/7/2005	6.61	---	157.15	---	---	---	---	---	---	---	---	---	Not operating
	6/21/2005	10.80	---	152.96	---	---	---	---	---	---	---	---	---	Not operating
	9/21/2005	15.82	---	147.94	---	---	---	---	---	---	---	---	---	Not operating
	12/14/2005	13.73	---	150.03	---	---	---	---	---	---	---	---	---	Not operating
	3/22/2006	6.43	---	157.33	---	---	---	---	---	---	---	---	---	Not operating
	6/30/2006	14.10	---	149.66	---	---	---	---	---	---	---	---	---	Not operating
	9/5/2006	16.21	---	147.55	---	---	---	---	---	---	---	---	---	Not operating
	12/6/2006	15.31	---	148.45	---	---	---	---	---	---	---	---	---	Not operating
Trip Blank	7/14/1998	---	---	<50	<50	---	<0.5	<0.5	<0.5	<0.5	<5.0	---	---	
	9/30/1998	---	---	<50	<50	---	<0.5	<0.5	<0.5	<0.5	<5.0	---	---	
	12/8/1998	---	---	<50	---	---	<0.5	<0.5	<0.5	<0.5	<5.0	---	---	
	3/29/1999	---	---	<50	---	---	<0.5	<0.5	<0.5	<0.5	<5.0	---	---	
	6/29/1999	---	---	<50	---	---	<0.5	<0.5	<0.5	<0.5	<5.0	---	---	
	3/23/2000	---	---	<50	---	---	<0.5	<0.5	<0.5	<0.5	<5.0	---	---	
	9/7/2000	---	---	<50	---	---	<0.5	1.1	<0.5	1.1	<5.0	---	---	

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**Table 1. Groundwater Elevations 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 Concentrations in micrograms per liter ( $\mu\text{g/L}$ ) ----->	TPHmo	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	DO (mg/L)	TPE System Status
----------------	------	------------------	-------------	------------------	----------------	---	-------	---------	---------	--------------	---------	------	--------------	----------------------

**Methods and Abbreviations:**

TOC = Top of casing elevation measured in feet relative to surveyor's datum.

All site wells were re-surveyed by Virgil Chavez Land Surveying on June 2, 2004 to the CA State Coordinate System, Zone III (NAD83). Benchmark elevation = 177.397 feet (NGVD 29)

GW Depth = Groundwater depth measured in feet below TOC.

GW Elev. = Groundwater elevation measured in feet above mean sea level.

ft = Measured in feet

SPH = Separate-phase hydrocarbons depth measured from TOC.

TPHg = Total petroleum hydrocarbons as gasoline by modified EPA Method SW8015C

TPHd = Total petroleum hydrocarbons as diesel by modified EPA Method SW8015C

TPHmo = Total petroleum hydrocarbons as motor oil by modified EPA Method SW8015C

Benzene, Toluene, Ethylbenzene, and Xylenes by EPA Method SW8021B

MTBE = Methyl tertiary-butyl ether by EPA Method SW8021B

DO = Dissolved oxygen

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

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

TPE = Two-phase extraction

Sheen = A sheen was observed on the water's surface.

\* = Well inaccessible during site visit

\*\* = No water in well due to system operating in well, value reflects total well depth.

# = abnormally high reading due to added hydrogen peroxide

--- = Not observed/not analyzed

**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/product 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

k = Oil range compounds are significant

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

m = Stoddard solvent/mineral spirit

**APPENDIX A**

Groundwater Monitoring Field Data Sheets



MUSKAN  
ENVIRONMENTAL  
SAMPLING

## WELL GAUGING SHEET

**Client:** Cambria Environmental Technology Inc.

**Site**

**Address:** 3055 35th Avenue, Oakland, CA

**Date:** 12/6/2006

**Signature:**

Well ID	Time	Depth to SPH	Depth to Water	SPH Thickness	Depth to Bottom	Comments
MW-1	5:45		19.92		27.35	Sheen MW-2, MW-3, MW-4, RW-5
MW-2	5:40		18.01		27.60	
MW-3	6:20		15.25		25.10	
MW-4	6:10		15.95		30.29	
RW-5	6:30		14.53		25.65	
RW-6	6:25		14.63		25.35	
RW-7	6:15		15.13		29.19	
RW-8	5:55		16.37		29.00	
RW-9	5:50		16.04		25.20	
RW-10	5:35		15.02		24.95	
RW-11	6:05		14.55		24.95	



# MUSKAN ENVIRONMENTAL SAMPLING

## **WELL GAUGING SHEET**



MUSKAN  
ENVIRONMENTAL  
SAMPLING

## **WELL SAMPLING FORM**



MUSKAN  
ENVIRONMENTAL  
SAMPLING

## **WELL SAMPLING FORM**

Date:	12/6/2006					
Client:	Cambria Environmental Technology Inc.					
Site Address:	3055 35th Avenue, Oakland, CA					
Well ID:	MW-2					
Well Diameter:	4"					
Purging Device:	3" PVC Bailer					
Sampling Method:	Disposable Bailer					
Total Well Depth:	27.60					
Depth to Water:	18.01					
Water Column Height:	9.59					
Gallons/ft:	0.65					
1 Casing Volume (gal):	6.23					
3 Casing Volumes (gal):	18.70					
TIME:	CASING VOLUME (gal)	TEMP (Celsius)	pH	COND. ( $\mu\text{S}$ )		
12:15	6.2	18.9	7.10	690	<b>COMMENTS:</b> heavy sheen, turbid	
12:30	12.5	18.1	7.16	698		
12:50	18.7	18.4	7.21	705		
Sample ID:	Sample Date:	Sample Time:	Container Type	Preservative	Analytes	Method
MW-2	12/6/2006	1:00	40 ml VOA, 1 L amber	HCl, ICE	TPHg, TPHd, BTEX, MTBE	8015 with silica gel clean up, 8021



MUSKAN  
ENVIRONMENTAL  
SAMPLING

## **WELL SAMPLING FORM**

Date:	12/6/2006					
Client:	Cambria Environmental Technology Inc.					
Site Address:	3055 35th Avenue, Oakland, CA					
Well ID:	MW-3					
Well Diameter:	2"					
Purging Device:	Disposable Bailer					
Sampling Method:	Disposable Bailer					
Total Well Depth:	25.10		Fe=	mg/L		
Depth to Water:	15.25		ORP=	mV		
Water Column Height:	9.85		DO=	0.70 mg/L		
Gallons/ft:	0.16					
1 Casing Volume (gal):	1.58		<b>COMMENTS:</b> sheen, turbid			
3 Casing Volumes (gal):	4.73					
TIME:	CASING VOLUME (gal)	TEMP (Celsius)	pH	COND. (µS)		
11:00	1.6	17.5	7.20	645		
11:25	3.2	18.1	7.17	633		
11:45	4.7	18.2	7.16	618		
Sample ID:	Sample Date:	Sample Time:	Container Type	Preservative	Analytes	Method
MW-3	12/6/2006	12:00	40 ml VOA, 1 L amber	HCl, ICE	TPHg, TPHd, BTEX, MTBE	8015 with silica gel clean up, 8021



MUSKAN  
ENVIRONMENTAL  
SAMPLING

## **WELL SAMPLING FORM**

Date:	12/6/2006						
Client:	Cambria Environmental Technology Inc.						
Site Address:	3055 35th Avenue, Oakland, CA						
Well ID:	MW-4						
Well Diameter:	2"						
Purging Device:	Disposable Bailer						
Sampling Method:	Disposable Bailer						
Total Well Depth:	30.29						
Depth to Water:	15.95						
Water Column Height:	14.34						
Gallons/ft:	0.16						
1 Casing Volume (gal):	2.29						
3 Casing Volumes (gal):	6.88						
TIME:	CASING VOLUME (gal)	TEMP (Celsius)	pH	COND. (µS)			
10:35	2.3	18.9	7.12	529	<b>COMMENTS:</b> sheen, turbid		
10:40	4.6	18.1	7.17	541			
10:45	6.9	18.3	7.17	568			
Sample ID:	Sample Date:		Sample Time:	Container Type	Preservative	Analytes	Method
MW-4	12/6/2006		10:50	40 ml VOA, 1 L amber	HCl, ICE	TPHg, TPHd, BTEX, MTBE	8015 with silica gel clean up, 8021



MUSKAN  
ENVIRONMENTAL  
SAMPLING

## **WELL SAMPLING FORM**

Date:	12/6/2006						
Client:	Cambria Environmental Technology Inc.						
Site Address:	3055 35th Avenue, Oakland, CA						
Well ID:	RW-5						
Well Diameter:	4"						
Purging Device:	3" PVC Bailer						
Sampling Method:	Disposable Bailer						
Total Well Depth:	25.65		Fe=	mg/L			
Depth to Water:	14.53		ORP=	mV			
Water Column Height:	11.12		DO=	0.79 mg/L			
Gallons/ft:	0.65						
1 Casing Volume (gal):	7.23		<b>COMMENTS:</b> heavy sheen, turbid				
3 Casing Volumes (gal):	21.68						
TIME:	CASING VOLUME (gal)	TEMP (Celsius)				pH	COND. (µS)
9:10	7.2	17.4				7.12	610
9:30	14.5	17.7				7.16	589
9:55	21.7	17.9				7.20	584
Sample ID:	Sample Date:	Sample Time:	Container Type	Preservative	Analytes	Method	
RW-5	12/6/2006	10:15	40 ml VOA, 1 L amber	HCl, ICE	TPHg, TPHd, BTEX, MTBE	8015 with silica gel clean up, 8021	



MUSKAN  
ENVIRONMENTAL  
SAMPLING

## **WELL SAMPLING FORM**

Date:	12/6/2006						
Client:	Cambria Environmental Technology Inc.						
Site Address:	3055 35th Avenue, Oakland, CA						
Well ID:	RW-9						
Well Diameter:	4"						
Purging Device:	3" PVC Bailer						
Sampling Method:	Disposable Bailer						
Total Well Depth:	25.20		Fe=	mg/L			
Depth to Water:	16.04		ORP=	mV			
Water Column Height:	9.16		DO=	0.74 mg/L			
Gallons/ft:	0.65		COMMENTS:				
1 Casing Volume (gal):	5.95						
3 Casing Volumes (gal):	17.86						
TIME:	CASING VOLUME (gal)	TEMP (Celsius)				pH	COND. (µS)
7:00	6.0	17.9				7.20	825
7:15	11.9	18.2	7.19	792			
7:30	17.9	17.6	7.24	812			
Sample ID:	Sample Date:	Sample Time:	Container Type	Preservative	Analytes	Method	
RW-9	12/6/2006	7:40	40 ml VOA, 1 L amber	HCl, ICE	TPHg, TPHd, BTEX, MTBE	8015 with silica gel clean up, 8021	

## **APPENDIX B**

### Analytical Results for Groundwater Sampling



# McCampbell Analytical, Inc.

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701  
 Web: [www.mccampbell.com](http://www.mccampbell.com) E-mail: [main@mccampbell.com](mailto:main@mccampbell.com)  
 Telephone: 877-252-9262 Fax: 925-252-9269

Cambria Env. Technology  5900 Hollis St, Suite A  Emeryville, CA 94608	Client Project ID: #130-0105; Worthington	Date Sampled: 12/06/06
		Date Received: 12/07/06
	Client Contact: Mark Jonas	Date Extracted: 12/09/06
	Client P.O.:	Date Analyzed: 12/09/06

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

Extraction method: SW5030B

Analytical methods: SW8021B/8015Cm

Work Order: 0612152

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	MW-1	W	4500,a,h	ND<60	440	13	42	190	5	98
002A	MW-2	W	27,000,a,h	ND<900	1100	51	420	1600	10	99
003A	MW-3	W	44,000,a,h	ND<500	4500	110	930	3600	50	90
004A	MW-4	W	21,000,a,h	ND<100	920	56	73	1500	20	90
005A	RW-5	W	8500,a,h	ND<900	1200	24	91	250	10	91
006A	RW-9	W	13,000,a,h	ND<250	3000	29	180	260	10	109

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; p) see attached narrative.



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Telephone: 877-252-9262 Fax: 925-252-9269

Cambria Env. Technology 5900 Hollis St, Suite A Emeryville, CA 94608	Client Project ID: #130-0105; Worthington	Date Sampled: 12/06/06
		Date Received: 12/07/06
	Client Contact: Mark Jonas	Date Extracted: 12/07/06

Client P.O.: Date Analyzed 12/09/06-12/13/06

## Diesel Range (C10-C23) Extractable Hydrocarbons with Silica Gel Clean-Up\*

Extraction method SW3510C/3630C

Analytical methods SW8015C

Wash Order: 0612152

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	µg/L
	S	NA	NA

\* water samples are reported in µg/L, wipe samples in µg/wipe, soil/solid/sludge samples in mg/kg, product/oil/non-aqueous liquid samples in mg/L, and all DISTLC / STLC / SPLC / TCLP extracts are reported in µg/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/matrix interference

+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) unknown medium boiling point pattern that does not appear to be derived from diesel; f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; k) kerosene/kerosene range; l) bunker oil; m) fuel oil; n) stoddard solvent/mineral spirit.



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 Telephone: 877-252-9262 Fax: 925-252-9269

## QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder 0612152

EPA Method SW8021B/8015Cm		Extraction SW5030B		BatchID: 25097				Spiked Sample ID: 0612156-002A				
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex) <sup>f</sup>	ND	60	103	104	0.818	104	107	3.16	70 - 130	30	70 - 130	30
MTBE	ND	10	113	112	0.899	101	97.1	3.80	70 - 130	30	70 - 130	30
Benzene	ND	10	97.4	102	4.21	93.5	95.2	1.86	70 - 130	30	70 - 130	30
Toluene	ND	10	88.7	90.3	1.75	87.4	88.1	0.784	70 - 130	30	70 - 130	30
Ethylbenzene	ND	10	96.4	95.3	1.10	92.4	94.8	2.61	70 - 130	30	70 - 130	30
Xylenes	ND	30	86	86.7	0.772	86	86.3	0.387	70 - 130	30	70 - 130	30
%SS:	100	10	103	104	1.39	101	103	1.51	70 - 130	30	70 - 130	30

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

### BATCH 25097 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0612152-001	12/06/06 8:50 AM	12/09/06	2/09/06 10:40 PM	0612152-002	12/06/06 1:00 AM	12/09/06	12/09/06 6:49 AM
0612152-003	2/06/06 12:00 PM	12/09/06	12/09/06 6:40 PM	0612152-004	2/06/06 10:50 AM	12/09/06	12/09/06 8:10 PM
0612152-005	2/06/06 10:15 AM	12/09/06	12/09/06 9:20 AM	0612152-006	12/06/06 7:40 AM	12/09/06	12/09/06 9:40 PM

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

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

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

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



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 Telephone: 877-252-9262 Fax: 925-252-9269

## QC SUMMARY REPORT FOR SW8015C

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder 0612152

EPA Method SW8015C		Extraction SW3510C/3630C				BatchID: 25098			Spiked Sample ID: N/A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(d)	N/A	1000	N/A	N/A	N/A	114	115	0.939	N/A	N/A	70 - 130	30
%SS:	N/A	2500	N/A	N/A	N/A	101	101	0	N/A	N/A	70 - 130	30

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

### BATCH 25098 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0612152-001	12/06/06 8:50 AM	12/07/06	12/13/06 8:33 PM	0612152-002	12/06/06 1:00 AM	12/07/06	12/09/06 7:02 AM
0612152-003	2/06/06 12:00 PM	12/07/06	12/09/06 9:23 AM	0612152-004	2/06/06 10:50 AM	12/07/06	3/09/06 10:33 AM
0612152-005	2/06/06 10:15 AM	12/07/06	2/09/06 12:55 PM	0612152-006	12/06/06 7:40 AM	12/07/06	12/11/06 6:10 PM

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

% Recovery =  $100 * (\text{MS-Sample}) / (\text{Amount Spiked})$ ; RPD =  $100 * (\text{MS} - \text{MSD}) / ((\text{MS} + \text{MSD}) / 2)$ .

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

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

## McCAMPBELL ANALYTICAL, INC.

110 2<sup>nd</sup> AVENUE SOUTH, #D  
PACHECO, CA 94553-5560

*CKE*  
Website: [www.mccampbell.com](http://www.mccampbell.com) Email: matu@mccampbell.com  
Telephone: (925) 798-1620 Fax: (925) 798-1622

## CHAIN OF CUSTODY RECORD

TURN AROUND TIME

 RUSH     24 HR     48 HR     72 HR     5 DAY
EDF Required?  Yes  No

## Analysis Request

Other

Comments

Report To: *Mack Jones* Bill To: Cambria Environmental Technology  
 Company: Cambria Environmental Technology  
 5900 Hollis St. Ste A  
 Emeryville, CA 94608 E-Mail: [mjones@Cambria-env.com](mailto:mjones@Cambria-env.com)  
 Tele: 510-420-3307 Fax: (510) 420-9170  
 Project #: 130-0105 Project Name: *Northington*  
 Project Location: 3055 35th Ave., Oakland, CA  
 Sampler Signature: Muskan Environmental Sampling *18*

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING		# Containers	Type	MATRIX	METHOD PRESERVED	NITRO & BTEX & TPH as Gas (602 / 8021 + 8015)	NITRO & BTEX ONLY (EPA 602 / 8021)	TPH as Diesel Fuel (8015) / <i>1000</i> mg/l (8015) / Clean up	Total Petroleum Oil & Grease (1604 / 5520 KN&R)	Total Petroleum Hydrocarbons (418.1)	EPA 502.2 / 601 / 8010 / 8021 (IV VOCs)	EPA 505/ 608 / 8081 (CI Pesticides)	EPA 608 / 8082 PCB's ONLY: Aroclors Congeners EPA 537 / 8141 (NP Pesticides)	EPA 545 / 8151 (Aroclor Chlorobicides)	EPA 524.2 / 634 / 8269 (VOCs)	Fuel Additives (NPFTE, RTBE, TAME, DIFP, TBA, 1,2-DCA, 1,2-EDE, ethanol) by 8261B TPH <sub>4</sub> by 8015 M	VOCs and fuel additives by 8260 TPH <sub>4</sub> / BTEX (8015 / 8026)	<i>Hold</i>	Filter Samples for Metals analysis: Yes / No
		Date	Time			Water	Soil	Air	Sludge	Other	ICE	HCl	HNO <sub>3</sub>	Other							
MN-1		126-06	8:50	5	<i>Vas</i> <i>Amb</i>	X				X	X			X							
MN-2			1:00												X						
MN-3			12:00																		
MN-4			10:50																		
RN-5			10:15																		
RN-9			7:40												X						
TB					1 Van N																
Relinquished By:		Date: 12/7	Time: 1:00 PM ADL	Received By:																	
Relinquished By:		Date: 12/7	Time: 6:30	Received By:																	

C  
CEP 20  
GOOD CONDITION  
HEAD SPACE ABSENT  
DECHLORINATED IN LAB  
PRESERVATION  
VOAS O&G METALS OTHER  
APPROPRIATE CONTAINERS  
PRESERVED IN LAB

**McCAMPBELL ANALYTICAL, INC.**


1534 Willow Pass Rd  
Pittsburg, CA 94565-1701  
(925) 252-9262

**CHAIN-OF-CUSTODY RECORD**

Page 1 of 1

WorkOrder: 0612152

ClientID: CETE

 EDF Fax Email HardCopy ThirdParty

## Report to:

Mark Jonas  
Cambria Env. Technology  
5900 Hollis St, Suite A  
Emeryville, CA 94608

Email: mjonas@cambria-env.com  
TEL: (510) 420-070 FAX: (510) 420-917  
ProjectNo: #130-0105; Worthington  
PO:

## Bill to

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

Requested TAT: 5 days

Date Received: 12/07/2006

Date Printed: 12/07/2006

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
0612152-001	MW-1	Water	12/6/2006 8:50:00	<input type="checkbox"/>	A	A	B									
0612152-002	MW-2	Water	12/6/2006 1:00:00	<input type="checkbox"/>	A		B									
0612152-003	MW-3	Water	12/6/2006	<input type="checkbox"/>	A		B									
0612152-004	MW-4	Water	12/6/2006	<input type="checkbox"/>	A		B									
0612152-005	RW-5	Water	12/6/2006	<input type="checkbox"/>	A		B									
0612152-006	RW-9	Water	12/6/2006 7:40:00	<input type="checkbox"/>	A		B									

Test Legend:

1	G-MBTEX W
2	PREDF REPORT
6	
11	

2	PREDF REPORT
7	
12	

3	TPH(D)WSG W
8	

4	
9	

5	
10	

Prepared by: Nickole White

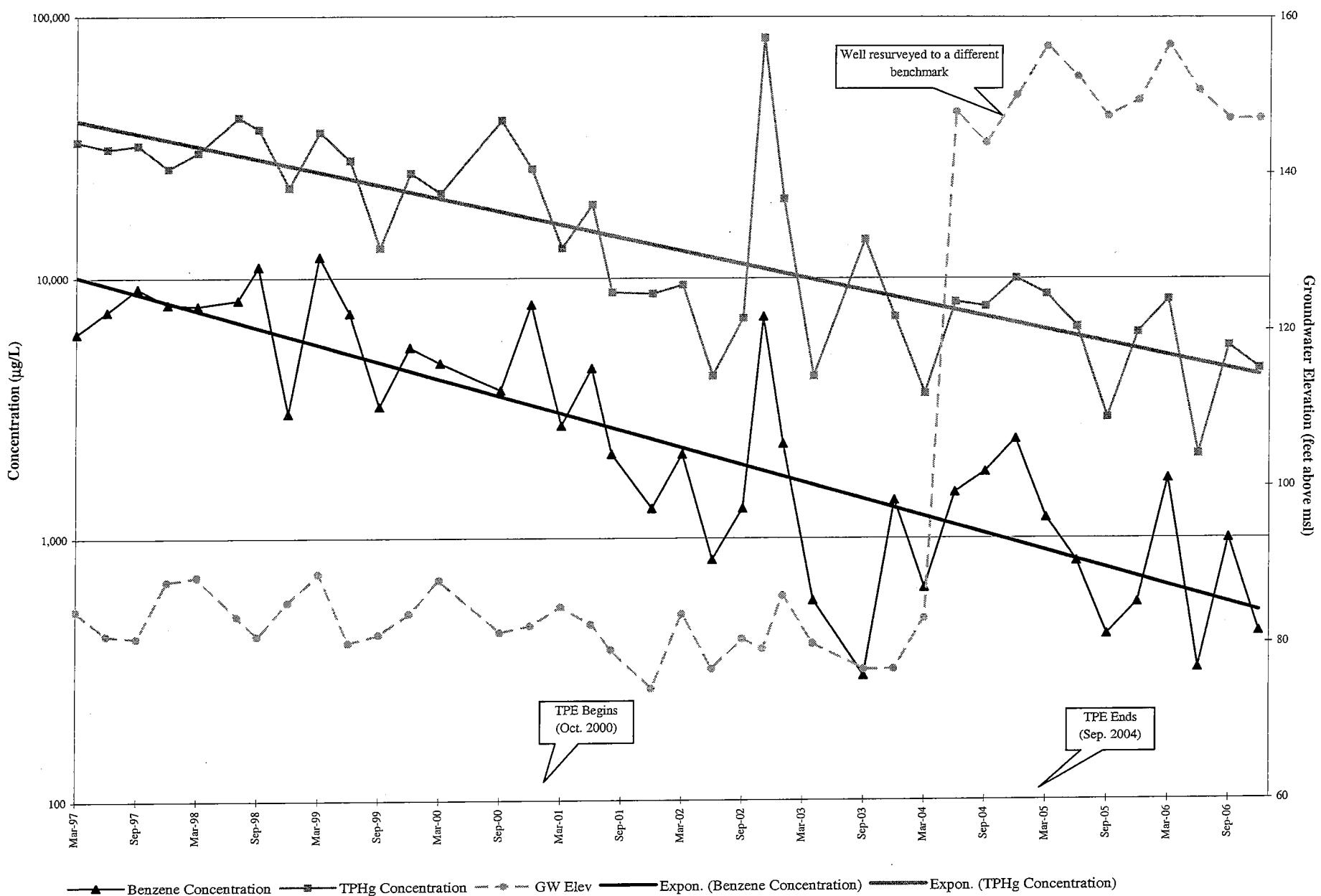
## Comments:

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

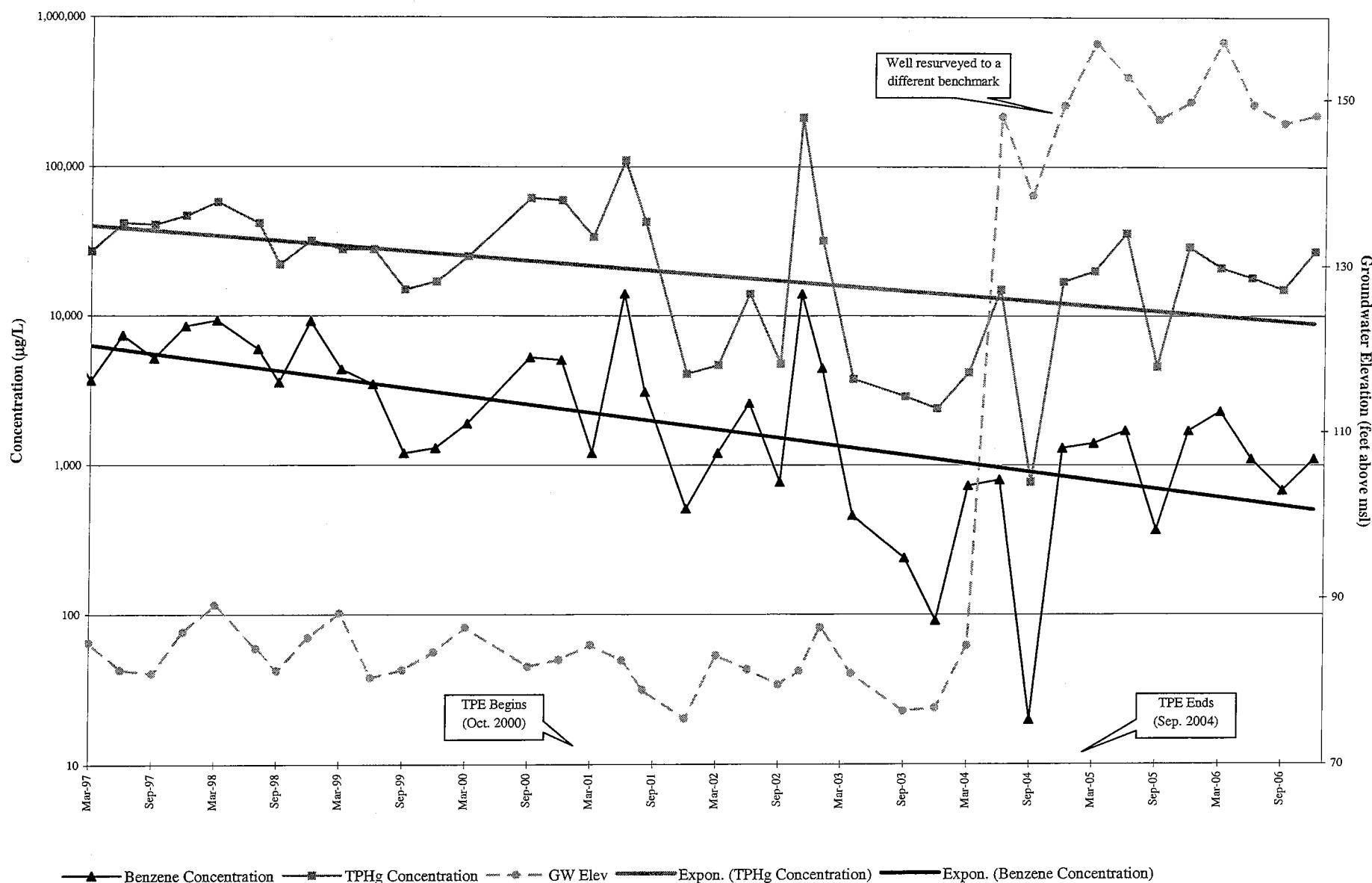
## **APPENDIX C**

TPHg and Benzene Concentration Trend Graphs

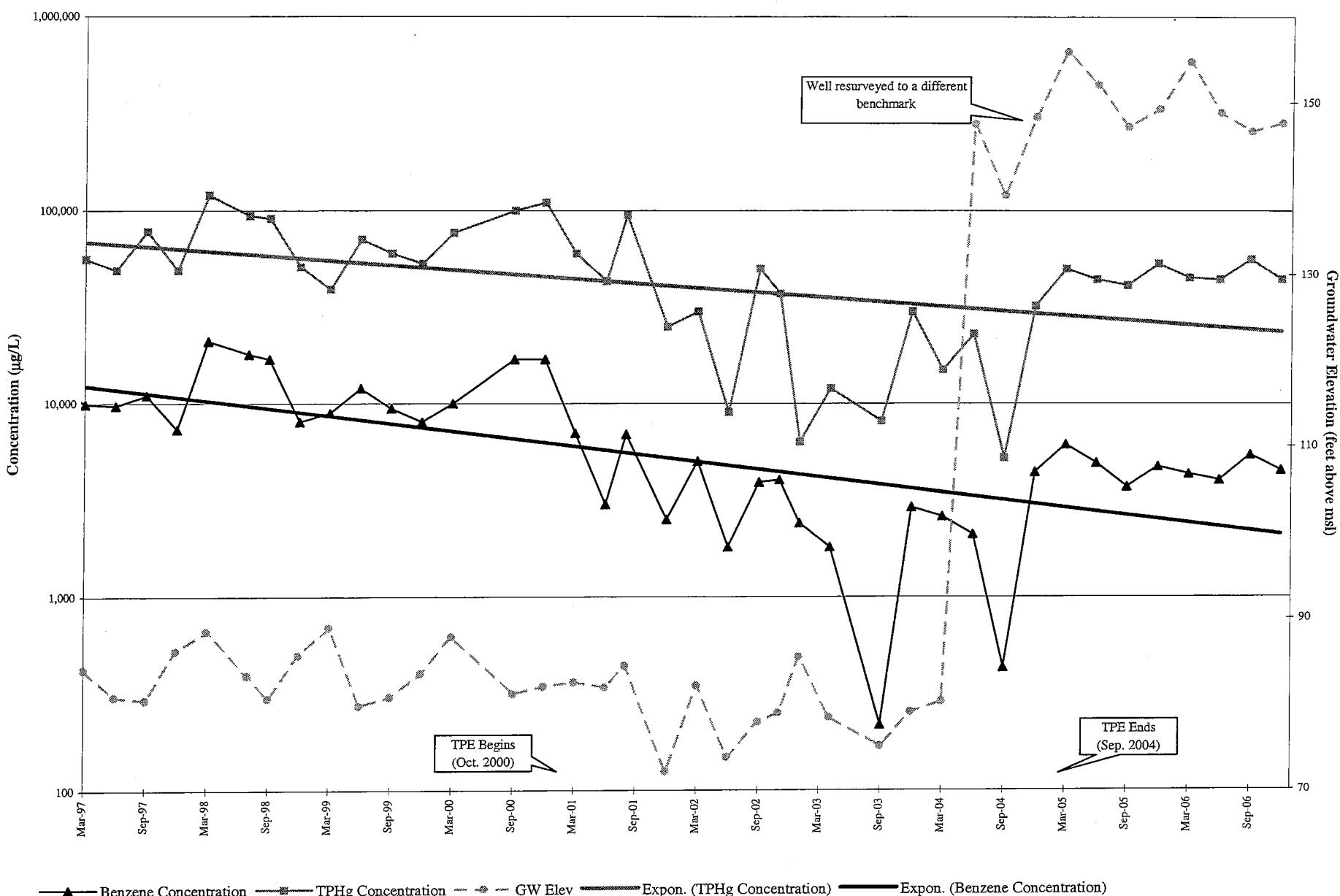
**TPHg and Benzene Concentration Trends**  
**Well MW-1 (March 1997 to Present)**



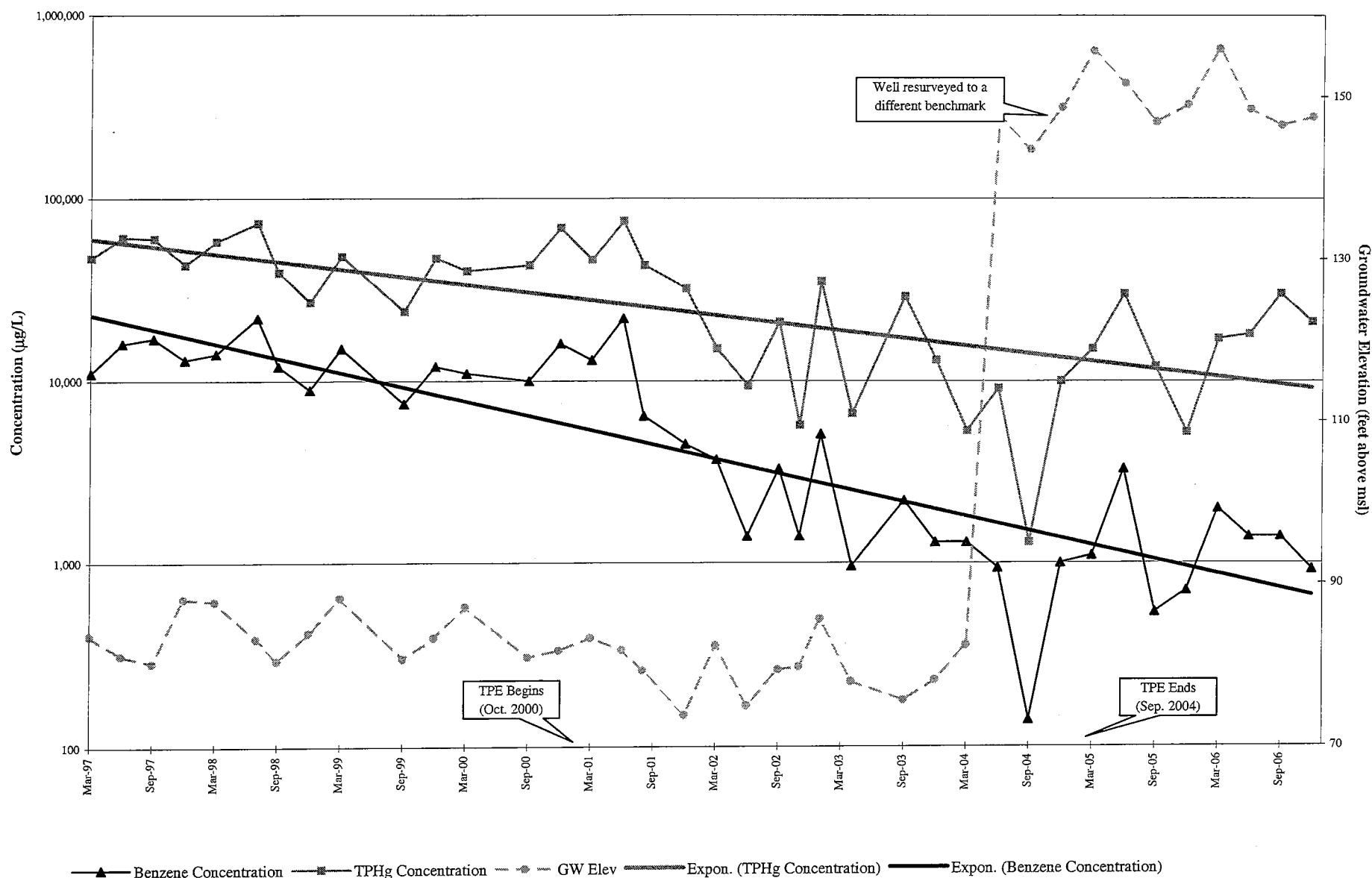
**TPHg and Benzene Concentration Trends  
Well MW-2 (March 1997 to Present)**



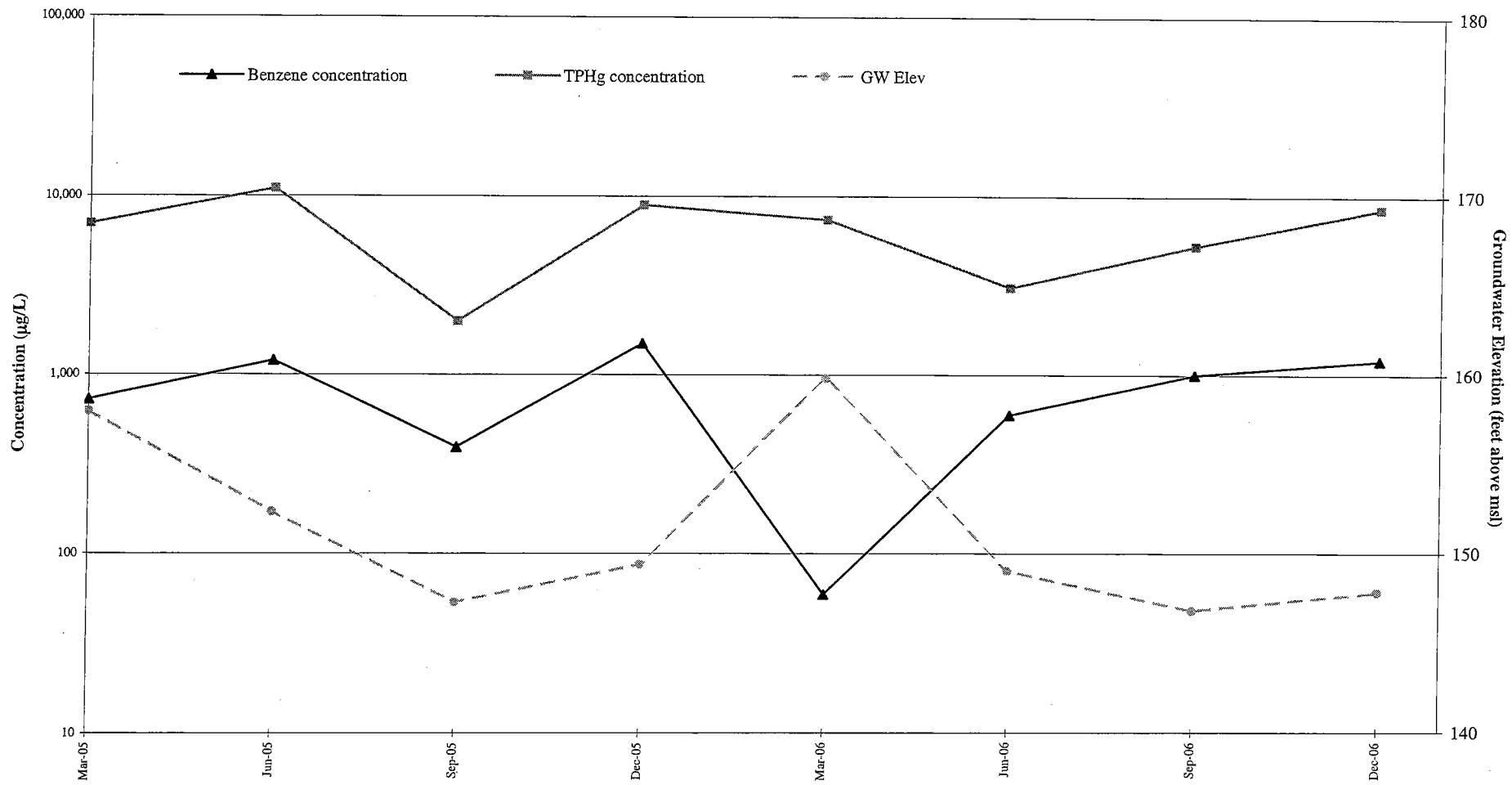
**TPHg and Benzene Concentration Trends  
Well MW-3 (March 1997 to Present)**



**TPHg and Benzene Concentration Trends**  
**Well MW-4 (March 1997 to Present)**



**TPHg and Benzene Concentration Trends  
Well RW-5 (March 2005 to Present)**



**TPHg and Benzene Concentration Trends  
Well RW-9 (March 2005 to Present)**

