



**CONESTOGA-ROVERS  
& ASSOCIATES**

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Environmental Health

5900 Hollis Street, Suite A, Emeryville, California 94608  
Telephone: 510-420-0700 Facsimile: 510-420-9170  
www.CRAworld.com

June 11, 2007

Mr. Steven Plunkett  
Alameda County Environmental Health Services  
UST Local Oversight Program  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502-6577

Re: **Second Quarter 2007 Monitoring Report**  
Former ARCO Service Station  
706 Harrison Street, Oakland, California  
Fuel Leak Case No. RO0000484  
CRA Project No. 231116

Dear Mr. Hwang:

On behalf of Mr. Bo K. Gin, Conestoga-Rovers & Associates, Inc. (CRA) is submitting this *Second Quarter 2007 Monitoring Report* for the subject site. This report describes Second Quarter 2007 activities and results as well as anticipated Third Quarter 2007 activities.

If you have any questions or comments regarding this report or the project, please contact Mark Jonas at (510) 420-3307.

Sincerely,  
**Conestoga-Rovers & Associates, Inc.**

Mark Jonas, P.G.  
Senior Project Manager

Attachments: *Second Quarter 2007 Monitoring Report*

cc: Mr. Bo K. Gin, 342 Lester Avenue, Oakland, California 94606  
Mr. Mike Rauser, Aqua Science Engineering, 208 W. Pintado Road, Danville, California 94526

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**SECOND QUARTER 2007 MONITORING REPORT**

**Former ARCO Service Station  
706 Harrison Street, Oakland, California  
Fuel Leak Case No. RO0000484  
CRA Project No. 231116**

**June 11, 2007**

*Prepared for:*

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

*Prepared by:*

Conestoga-Rovers & Associates, Inc.  
5900 Hollis Street, Suite A  
Emeryville, California 94608

*Written by:*

Christina McClelland  
Staff Geologist

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Mark Jonas, P.G.  
Senior Project Manager





## **SECOND QUARTER 2007 MONITORING REPORT**

**Former ARCO Service Station  
706 Harrison Street, Oakland, California  
Fuel Leak Case No. RO0000484  
CRA Project No. 231116**

**June 11, 2007**

### **INTRODUCTION**

On behalf of Mr. Bo K. Gin, Conestoga-Rovers & Associates, Inc. (CRA) is submitting this *Second Quarter 2007 Monitoring Report* for the subject site. Presented are the Second Quarter 2007 groundwater monitoring activities and results and the anticipated Third Quarter 2007 activities.

Figure 1 is a vicinity map. Figure 2 is recent monitoring groundwater contours and hydrocarbon concentrations. Table 1 is well construction details. Table 2 provides recent and historic groundwater level measurements, 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 methyl tertiary butyl ether (MTBE) concentrations, and groundwater elevations. Appendix D provides monitoring groundwater elevations and analytical data for the neighboring former Shell Station located at 726 Harrison Street in Oakland, California. Appendix E is regulatory correspondence.

### **SECOND QUARTER 2007 ACTIVITIES**

#### **Monitoring Activities**

**Field Activities:** On April 18, 2007, Muskan Environmental Sampling (MES) conducted quarterly monitoring and sampling activities. MES measured well water levels in monitoring wells MW-1 through MW-7 (Figure 2). MES also collected groundwater samples from monitoring wells MW-1, MW-2, and MW-4. Groundwater depth measurements have been 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, provided 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 by McCampbell Analytical, Inc. of Pittsburg, California, a California-certified laboratory (DHS License No. 1644). All groundwater samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg) by modified United States Environmental Protection Agency (EPA) Method SW8015C; benzene, toluene, ethylbenzene, and total xylenes (BTEX) and MTBE by EPA Method SW8021B; and all samples were analyzed for MTBE by EPA Method SW8260B. The analytical laboratory report is included in Appendix B. Groundwater analytical results are provided on Table 2 and summarized on Figure 2. Groundwater analytical results have been submitted to the GeoTracker database.

## **Monitoring Results**

**Groundwater Flow Direction and Gradient:** Based on depth-to-water measurements collected during the monitoring event on April 18, 2007, groundwater appears to flow towards the south with an apparent gradient of 0.02 feet per foot (Figure 2). The gradient and flow direction are consistent with historical data. Depth-to-water and groundwater elevation data for the site are in Table 2.

**Hydrocarbon Distribution in Groundwater:** Hydrocarbons were detected in down-gradient well MW-1, source area well MW-2, and up-gradient well MW-4 during this sampling event (Figure 1, Table 1). The highest TPHg, benzene, toluene, ethylbenzene, and xylenes concentrations were detected in monitoring well MW-2 at 100,000 micrograms per liter ( $\mu\text{g/L}$ ), 3,500  $\mu\text{g/L}$ , 18,000  $\mu\text{g/L}$ , 2,500  $\mu\text{g/L}$ , and 12,000  $\mu\text{g/L}$ , respectively. TPHg and BTEX concentrations were detected in well MW-1 at 5,400  $\mu\text{g/L}$ , 1,400  $\mu\text{g/L}$ , 170  $\mu\text{g/L}$ , 210  $\mu\text{g/L}$ , and 350  $\mu\text{g/L}$ , respectively.

TPHg and BTEX concentrations in upgradient well MW-4 are slightly higher than the previous quarter at 2,300  $\mu\text{g/L}$ , 350  $\mu\text{g/L}$ , 28  $\mu\text{g/L}$ , 38  $\mu\text{g/L}$ , and 42  $\mu\text{g/L}$ , respectively. Analytical results are presented in Figure 2, Table 2, and Appendix B.

Significantly higher elevated concentrations of BTEX are present up-gradient of the site, on the adjacent property (see Figure 2 and Appendix D).

**MTBE Distribution in Groundwater:** MTBE was detected all sampled monitoring wells, specifically MW-1, MW-2 and MW-4. The highest on-site MTBE concentration was detected in up-gradient well MW-4, at 5,900  $\mu\text{g/L}$ . MTBE concentrations in wells MW-1, and MW-2 were 3,600  $\mu\text{g/L}$  and 5,600  $\mu\text{g/L}$ , respectively.



Significantly higher concentrations of MTBE were identified in wells located up-gradient, on the adjacent property. On the adjacent property, the highest MTBE concentration was detected in monitoring well MW-5, at 27,000 µg/L (Figure 2). Well MW-5 is located approximately eight feet up-gradient of the 706 Harrison Street Property boundary

## **ANTICIPATED THIRD QUARTER 2007 ACTIVITIES**

### **Monitoring Activities**

During Third Quarter of 2007, CRA will measure water levels in well MW-1 through MW-7 and collect groundwater samples from monitoring wells MW-1 through MW-7. Pursuant to Alameda County Environmental Health's letter dated February 25, 2003, the well sampling schedule was revised so that wells MW-1, MW-2, and MW-4 are sampled on a quarterly basis and wells MW-3, MW-5, MW-6, and MW-7 are sampled on a semi-annual basis, during the first and third quarters. Groundwater samples will be analyzed for TPHg by EPA Method SW8015C, BTEX, and MTBE by EPA Method SW8021B and by EPA Method SW8260B. CRA will prepare a groundwater monitoring report summarizing the monitoring activities and results.

### **REGULATORY CORRESPONDENCE**

In a January 24, 2007 letter to Ms. Donna Drogos, on behalf of our client, we requested 1/ approval for onsite characterization and 2/ ACEH's pursuit of remediation at the up-gradient site. This letter and associated correspondence are in Appendix E *Regulatory Correspondence*. We request a response from ACEH for our request.

### **ATTACHMENTS:**

Figure 1 – Vicinity Map

Figure 2 – Groundwater Elevation Contour and Hydrocarbon Concentration Map

Table 1 – Well Construction Details

Table 2 – Groundwater Elevation and Analytical Data

Appendix A – Groundwater Monitoring Field Data Sheets

Appendix B – Laboratory Analytical Report

Appendix C – Benzene and MTBE Concentration Graphs

Appendix D – Former Shell Station Groundwater Monitoring and Analytical Results

Appendix E – Regulatory Correspondence

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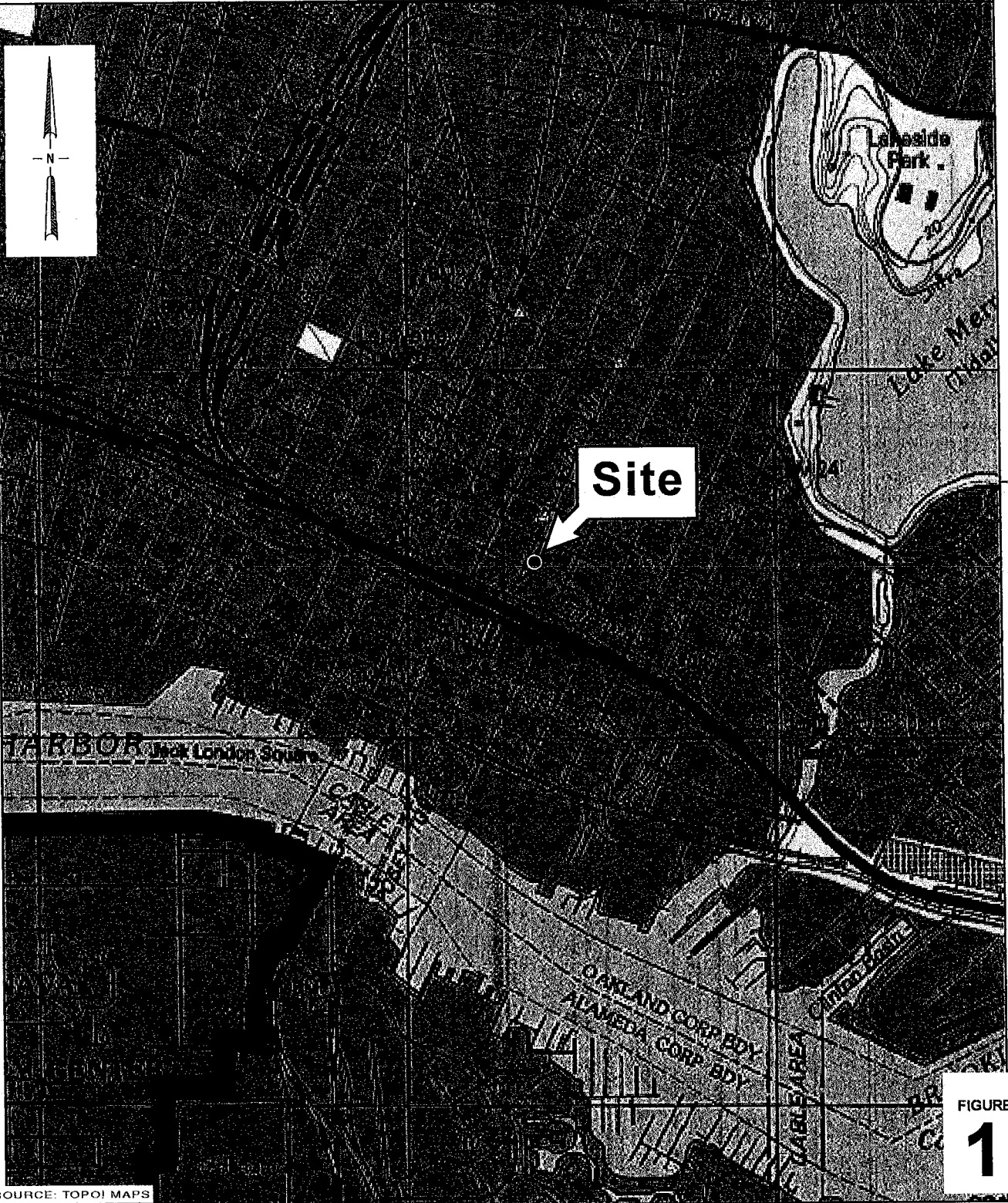
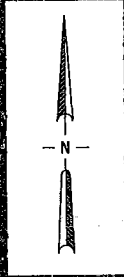
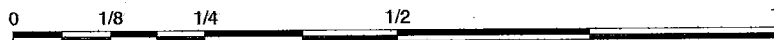


FIGURE  
**1**

H:\BO-GIN\FIGURES\VICINITY-MAP.A1

SOURCE: TOPOI MAPS



SCALE : 1" = 1/4 MILE

### Former ARCO Station

706 Harrison Street  
Oakland, California



**CONESTOGA-ROVERS  
& ASSOCIATES**

### Vicinity Map

**EXPLANATION**

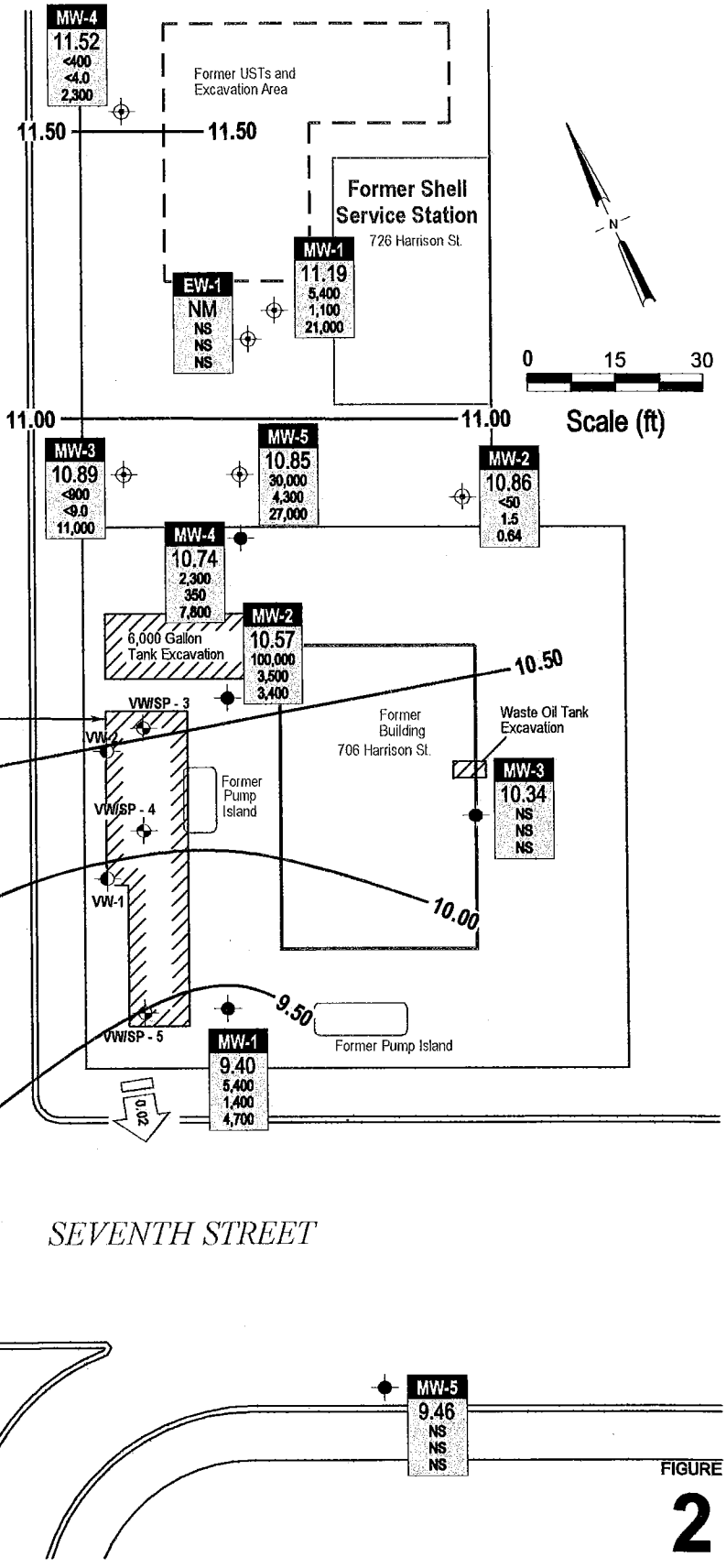
- Monitoring well location
- Dual SVE/Sparging well
- SVE well location
- Shell Monitoring well location
- Groundwater elevation contour, dashed where inferred
- Groundwater flow direction and gradient (ft/ft)
- | Well ID |
|---------|
| ELEV    |
| TPHg    |
| Benzene |
| MTBE    |

 Well identification.
- | ELEV    |
|---------|
| TPHg    |
| Benzene |
| MTBE    |

 Groundwater elevation, in feet above mean sea level (msl).
- | TPHg    |
|---------|
| Benzene |
| MTBE    |

 TPHg, Benzene and MTBE concentrations are in micrograms per liter (µg/L)
- NS Not sampled
- NM Not Measured

HARRISON STREET



H:\BO\_GIN-OAKLAND\FIGURES\2007\Q1\07-MP-DWG

FIGURE  
**2**

**Former ARCO Station**  
706 Harrison Street  
Oakland, California



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**Groundwater Elevation Contour  
and Hydrocarbon  
Concentration Map**  
April 18, 2007

# Conestoga-Rovers & Associates

**Table 1. Well Construction Details - Former ARCO Station, 706 Harrison Street, Oakland, California**

Well ID	Date Installed	Borehole Depth (ft)	Borehole Diameter (in)	Casing Diameter (in)	Screen Interval (ft bgs)	Screen Size (in)	Filter Pack (ft bgs)	Bentonite Seal (ft bgs)	Cement Seal (ft bgs)	TOC Elevation (ft msl)
MW-1	July 22, 1993	28.0	8	2	18 - 28	0.020	16 - 28	15 - 16	0 - 15	26.17
MW-2	July 23, 1993	28.0	8	2	18 - 28	0.020	16 - 28	15 - 16	0 - 15	27.53
MW-3	July 22, 1993	28.0	8	2	18 - 28	0.020	16 - 28	15 - 16	0 - 15	26.79
MW-4	Nov. 28, 1994	31.5	NA	2	9.5 - 29.5	0.010	8.5 - 31.5	6.5 - 8.5	0 - 6.5	28.20
MW-5	Nov. 30, 1994	30.0	NA	2	14.5 - 29.0	0.010	13 - 30	11 - 13	0 - 11	25.07
MW-6	Dec. 1, 1994	27.5	NA	2	11.5 - 26.5	0.010	10.5 - 27.5	8.5 - 10.5	0 - 8.5	26.13
MW-7	Dec. 2, 1994	29.0	NA	2	13 - 28	0.010	12 - 29	10 - 12	0 - 10	26.70
VW-1	July 23, 1993	20.0	8	2	15 - 20	0.020	13 - 20	12 - 13	0 - 12	NA
VW-2	July 22, 1993	20.0	8	2	15 - 20	0.020	13 - 20	12 - 13	0 - 12	NA
VW-3 (Dual)	Nov. 28, 1994	29.5	NA	2" / 1"	2": 8 - 18 1": 27 - 28	0.010	2": 6 - 18 1": 25.5 - 29.5	5 - 6 23.5 - 25.5	0 - 5	NA
VW-4 (Dual)	Nov. 29, 1994	29.5	NA	2" / 1"	2": 8 - 18 1": 28.5 - 29.5	0.010	2": 7 - 18 1": 26.5 - 29.5	5 - 7 18 - 26.5	0 - 5	NA
VW-5 (Dual)	Nov. 30, 1994	30.0	NA	2" / 1"	2": 7 - 17 1": 28.5 - 29.5	0.010	2": 6 - 17 1": 26 - 30	5 - 6 17 - 26	0 - 5	NA

**Abbreviations / Notes**

ft = feet  
in = inches  
ft bgs = feet below grade surface  
ft msl = feet above mean sea level  
TOC = top of casing  
NA = Not Available



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**Table 2. Groundwater Elevation and Analytical Data - Former ARCO Station - 706 Harrison Street, Oakland, California**

Well ID/ Sample ID TOC	Date Sampled	Depth to Water (ft)	Groundwater Elevation (ft-msl)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	MTBE by 8021B (ug/L)	MTBE by 8260B (ug/L)	Notes
MW-1 29.15	8/13/1993	17.40	11.75	20,000	8,500	640	280	440	-	-	
	12/14/1993	17.27	11.88	17,000	9,200	1,200	4,400	540	-	-	
	4/15/1994	17.00	12.15	9,500	3,600	530	160	280	-	-	
	12/29/1994	16.40	12.75	-	-	-	-	-	-	-	
	7/19/1996	15.83	13.32	17,000	5,200	1,100	330	530	-	-	sheen/odor
	1/27/1997	13.58	15.57	30,000	9,800	1,300	790	880	400	-	b, sheen/odor
	6/18/1997	16.11	13.04	19,000	5,600	1,400	510	770	1,200	800	a, b
	9/18/1997	16.62	12.53	48,000	18,000	4,400	1,000	1,700	ND<640	-	b
	12/10/1997	15.93	13.22	22,000	4,900	1,300	580	650	460	260	a, b, odor
	2/18/1998	11.56	17.59	16,000	5,000	750	400	780	1,800	-	b
	5/12/1998	13.53	15.62	19,000	4,600	810	450	770	5,500	-	b, c
	8/18/1998	15.19	13.96	12,000	3,600	1,300	300	570	5,100	3,700	a, b
	11/24/1998	15.67	13.48	13,000	3,600	890	330	380	6,100	-	b
	2/4/1999	15.31	13.84	20,000	5,900	830	450	500	4,900	-	b
	5/18/1999	14.95	14.20	23,000	7,000	1,600	520	830	6,100	-	b
	8/27/1999	15.84	13.31	19,000	5,800	1,700	410	710	1,800	2,100	a, b
	11/18/1999	16.39	12.76	20,000	4,900	630	410	580	4,900	3,600	b
	2/29/2000	13.43	15.72	12,000	2,800	24	290	170	3,100	3,400	a
	5/25/2000	15.08	14.07	12,000	2,200	120	330	260	9,100	12,000	a, b
	8/9/2000	16.09	13.06	13,000	2,500	44	310	140	16,000	-	b
	11/9/2000	15.90	13.25	11,000	2,500	140	380	150	11,000	12,000	b
	1/29/2001	16.05	13.10	9,600	3,100	100	77	200	2,600	2,400	b
	4/16/2001	16.90	12.25	3,300	1,200	4.4	2.7	28	900	940	b
	8/14/2001	17.13	12.02	2,000	500	3.4	24	7.8	68	53	a
	10/22/2001	16.11	13.04	220	83	0.63	2.8	ND<0.5	ND<10	5.7	a
	2/1/2002	16.93	12.22	640	220	1.7	4.7	0.57	ND<10	-	a
5/10/2002	15.09	14.06	230	26	0.97	ND<0.5	ND<0.5	ND<5.0	-	a	
7/8/2002	15.20	13.95	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	ND<0.5		
10/2/2002	15.70	13.45	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-		
1/23/2003	15.09	14.06	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-		
4/29/2003	13.02	16.13	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-		
26.17	7/18/2003	14.50	11.67	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	10/9/2003	13.81	12.36	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	1/28/2004	13.09	13.08	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	4/7/2004	14.97	11.20	180	60	0.56	1.9	ND<0.5	ND<5.0	-	a
	7/23/2004	14.15	12.02	130	36	ND<0.5	0.65	ND<0.5	ND<5.0	-	a

# Conestoga-Rovers & Associates

**Table 2. Groundwater Elevation and Analytical Data - Former ARCO Station - 706 Harrison Street, Oakland, California**

Well ID/ Sample ID TOC	Date Sampled	Depth to Water (ft)	Groundwater Elevation (ft-msl)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	MTBE by 8021B (ug/L)	MTBE by 8260B (ug/L)	Notes
MW-1 <sup>cont</sup>	10/12/2004	16.30	9.87	ND<50	2.5	1.5	ND<0.5	0.86	ND<5.0	-	
	2/14/2005	13.85	12.32	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	4/27/2005	13.35	12.82	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	7/19/2005	14.68	11.49	4,500	1,400	6.5	160	58	630	-	a
	10/18/2005	15.15	11.02	1,700	340	ND<5.0	28	ND<5.0	8,000	7,200	a
	1/23/2006	13.27	12.90	3,100	790	6.5	79	32	4,200	5,100	a
	4/12/2006	12.33	13.84	7,200	2,600	110	350	320	5,600	4,000	a
	7/10/2006	14.93	11.24	2,700	550	4.2	77	47	5,500	8,300	a
	10/16/2006	16.51	9.66	2,000	470	6.4	38	13	6,300	6,400	a
	1/26/2007	16.87	9.30	3,300	600	36	34	27	6,200	5,900	a
	4/18/2007	16.77	9.40	5,400	1,400	170	210	350	3,600	4,700	a,i
MW-2 30.51	8/13/1993	17.05	13.46	34,000	6,800	10,000	740	3,900	-	-	
	12/14/1993	18.28	12.23	16,000	3,200	4,200	500	1,700	-	-	
	4/15/1994	18.10	12.41	23,000	2,500	4,200	470	1,800	-	-	
	12/29/1994	17.40	13.11	-	-	-	-	-	-	-	
	7/19/1996	16.72	13.79	90,000	7,300	14,000	1,600	7,300	-	-	odor
	1/27/1997	14.89	15.62	63,000	7,100	13,000	1,600	7,100	500	-	b, odor
	6/18/1997	17.12	13.39	52,000	5,100	10,000	1,400	6,000	ND<200	-	b
	9/18/1997	17.63	12.88	110,000	9,400	23,000	2,600	13,000	ND<890	-	b, sheen/odor
	12/10/1997	16.98	13.53	39,000	2,600	5,300	940	3,900	780	320	b, odor
	2/18/1998	12.61	17.90	85,000	9,000	19,000	2,300	11,000	2,400	-	b
	5/12/1998	14.45	16.06	110,000	9,500	21,000	2,500	12,000	ND<1,200	-	b
	8/18/1998	16.14	14.37	64,000	6,000	13,000	1,700	7,800	2,000	1,300	a, b
	11/24/1998	16.70	13.81	78,000	5,300	14,000	2,300	11,000	ND<2,000	-	b, g
	2/4/1999	18.39	12.12	66,000	5,800	16,000	2,600	12,000	3,000	-	b, g
	5/18/1999	15.90	14.61	78,000	6,700	17,000	2,400	10,000	4,300	-	b
	8/27/1999	16.79	13.72	91,000	7,400	17,000	2,300	11,000	1,200	1,000	a, b
	11/18/1999	17.32	13.19	180,000	7,000	20,000	3,300	16,000	ND<6,000	1,700	b,g
	2/29/2000	14.37	16.14	86,000	5,500	13,000	2,000	9,500	3,500	4,700	a
	5/25/2000	16.01	14.50	110,000	6,300	14,000	2,400	10,000	7,500	6,500	a, b, g
	8/9/2000	17.02	13.49	77,000	5,000	13,000	2,000	8,600	5,900	-	b
11/9/2000	17.00	13.51	70,000	4,800	12,000	1,900	8,000	9,400	8,300	b	
1/29/2001	18.31	12.20	110,000	8,200	21,000	2,800	13,000	2,500	1,900	b,g	
4/16/2001	18.59	11.92	97,000	7,400	15,000	2,500	12,000	ND<3,000	ND<50	b,g	
8/14/2001	18.74	11.77	97,000	6,200	14,000	2,400	13,000	ND<250	ND<50	a,j	

# Conestoga-Rovers & Associates

**Table 2. Groundwater Elevation and Analytical Data - Former ARCO Station - 706 Harrison Street, Oakland, California**

Well ID/ Sample ID TOC	Date Sampled	Depth to Water (ft)	Groundwater Elevation (ft-msl)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	MTBE by 8021B (ug/L)	MTBE by 8260B (ug/L)	Notes
MW-2 <sup>cont</sup>	10/22/2001	18.27	12.24	71,000	5,900	15,000	2,400	12,000	ND<1,400	150	a
	2/1/2002	18.05	12.46	1,400	11	88	44	210	ND<5.0	-	a
	5/10/2002	17.15	13.36	97,000	4,500	15,000	2,500	12,000	ND<3,000	-	a,g
	7/8/2002	15.30	15.21	42,000	2,100	6,500	2,200	8,800	ND<1,000	65	a
	10/2/2002	15.89	14.62	70,000	1,700	5,700	1,900	8,300	ND<1,700	-	a
	1/23/2003	17.51	13.00	40,000	1,900	7,800	1,200	5,600	ND<1,000	-	a
	4/29/2003	15.31	15.20	82,000	2,500	11,000	2,200	9,400	ND<2,000	-	a
27.53	7/18/2003	16.84	10.69	57,000	2,100	8,700	2,200	10,000	-	ND<50	a
	10/9/2003	16.05	11.48	49,000	1,800	7,000	1,700	7,600	ND<1,500	26	a
	1/28/2004	15.39	12.14	550	21	33	3.0	61	ND<100	-	a
	4/7/2004	16.01	11.52	41,000	2,500	11,000	1,900	8,000	ND<2,000	-	a
	7/23/2004	15.30	12.23	81,000	2,000	12,000	2,500	12,000	ND<2,000	-	a,h
	10/12/2004	17.87	9.66	75,000	2,600	13,000	2,300	11,000	ND<1,300	-	a
	2/14/2005	14.80	12.73	75,000	2,600	12,000	2,400	10,000	ND<1,800	-	a,h
	4/27/2005	14.63	12.90	61,000	2,800	11,000	1,600	7,000	ND<2,700	-	a
	7/19/2005	15.60	11.93	90,000	3,700	14,000	2,600	10,000	ND<7,000	-	a
	10/18/2005	16.08	11.45	77,000	3,300	14,000	2,400	11,000	7,900	6,400	a
	1/23/2006	14.20	13.33	54,000	1,600	8,000	1,600	6,700	6,600	7,000	a
	4/12/2006	12.51	15.02	43,000	1,800	7,800	1,300	5,200	6,400	4,900	a
	7/10/2006	14.76	12.77	86,000	2,800	11,000	2,100	9,600	ND<6,500	400	a,h
	10/16/2006	16.74	10.79	110,000	3,600	16,000	2,400	12,000	ND<6,000	2,700	a,h
	1/26/2007	17.10	10.43	120,000	3,900	16,000	2,300	10,000	ND<5,000	3,000	a,h,i
4/18/2007	17.02	10.51	100,000	3,500	18,000	2,500	12,000	5,200	3,400	a,h,i	
MW-3 29.77	8/13/1993	17.05	12.72	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.5	-	-	No SVOCs.
	12/14/1993	17.70	12.07	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.5	-	-	
	4/15/1994	17.40	12.37	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	-	-	
	12/29/1994	16.80	12.97	-	-	-	-	-	-	-	
	7/19/1996	16.28	13.49	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	-	-	
	1/27/1997	13.83	15.94	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	6/18/1997	16.53	13.24	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	9/18/1997	17.07	12.70	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	12/10/1997	16.15	13.62	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	2/18/1998	11.80	17.97	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	5/12/1998	13.85	15.92	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
8/18/1998	15.57	14.20	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-		

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**Table 2. Groundwater Elevation and Analytical Data - Former ARCO Station - 706 Harrison Street, Oakland, California**

Well ID/ Sample ID TOC	Date Sampled	Depth to Water (ft)	Groundwater Elevation (ft-msl)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	MTBE by 8021B (ug/L)	MTBE by 8260B (ug/L)	Notes
MW-3 <sup>cont</sup>	11/24/1998	16.04	13.73	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	2/4/1999	17.80	11.97	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	5/18/1999	15.29	14.48	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	8/27/1999	16.15	13.62	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	11/18/1999	16.77	13.00	-	-	-	-	-	-	-	
	2/29/2000	13.71	16.06	ND<50	2	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	5/25/2000	15.46	14.31	-	-	-	-	-	-	-	
	8/9/2000	16.46	13.31	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	11/9/2000	16.25	13.52	-	-	-	-	-	-	-	
	1/29/2001	16.52	13.25	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	4/16/2001	16.95	12.82	-	-	-	-	-	-	-	
	8/14/2001	17.11	12.66	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	10/22/2001	16.50	13.27	-	-	-	-	-	-	-	
	2/1/2002	16.90	12.87	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	5/10/2002	15.03	14.74	-	-	-	-	-	-	-	
	7/8/2002	14.45	15.32	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	10/2/2002	15.03	14.74	-	-	-	-	-	-	-	
	1/23/2003	15.48	14.29	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	4/29/2003	12.49	17.28	-	-	-	-	-	-	-	
	26.79	7/18/2003	14.80	11.99	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-
10/9/2003		14.13	12.66	-	-	-	-	-	-	-	
1/28/2004		13.47	13.32	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
4/7/2004		15.41	11.38	-	-	-	-	-	-	-	
7/23/2004		14.54	12.25	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
10/12/2004		16.58	10.21	-	-	-	-	-	-	-	
2/14/2005		14.19	12.60	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
4/27/2005		13.68	13.11	-	-	-	-	-	-	-	
7/19/2005		15.15	11.64	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
MW-3 <sup>cont</sup>		10/18/2005	15.60	11.19	-	-	-	-	-	-	-
	1/23/2006	13.65	13.14	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	270	260	
	4/12/2006	11.94	14.85	-	-	-	-	-	-	-	
	7/10/2006	14.48	12.31	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1,100	1,600	
	10/16/2006	16.19	10.60	-	-	-	-	-	-	-	
	1/26/2007	16.56	10.23	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	2,500	3,400	
4/18/2007	16.45	10.34	-	-	-	-	-	-	-		

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Well ID/ Sample ID TOC	Date Sampled	Depth to Water (ft)	Groundwater Elevation (ft-msl)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	MTBE by 8021B (ug/L)	MTBE by 8260B (ug/L)	Notes
MW-4 31.18	12/16/1994	18.10	13.08	2,500	32	6.5	4.5	17	-	-	
	12/29/1994	17.95	13.23	-	-	-	-	-	-	-	
	7/19/1996	17.38	13.80	3,300	520	39	67	60	-	-	
	1/27/1997	15.25	15.93	4,500	860	55	100	91	1,100	-	b
	6/18/1997	17.61	13.57	2,700	700	52	81	76	2,200	2,300	a, b
	9/18/1997	18.01	13.17	3,900	760	38	56	64	ND<170	-	b
	12/10/1997	17.45	13.73	12,000	1,800	120	210	210	2,900	2,600	a, b
	2/18/1998	13.09	18.09	1,700	210	8	6.7	16	200	-	b
	5/12/1998	14.78	16.40	2,100	300	15	36	34	920	-	b, c
	8/18/1998	16.59	14.59	4,700	1,000	130	110	150	5,200	4,900	a, b
	11/24/1998	17.18	14.00	3,000	810	44	76	94	4,800	-	b
	2/4/1999	18.90	12.28	2,800	770	50	69	69	3,100	-	b
	5/18/1999	16.30	14.88	4,000	780	57	7.7	79	4,800	-	b
	8/27/1999	17.21	13.97	4,100	870	51	74	99	3,300	4,100	a, b
	11/18/1999	17.77	13.41	3,000	760	43	67	65	5,100	5,400	b
	2/29/2000	14.85	16.33	4,600	1,000	64	94	170	4,100	4,600	a
	5/25/2000	16.45	14.73	2,600	540	39	59	41	3,500	5,300	b
	8/9/2000	17.47	13.71	4,400	930	66	98	79	9,400	-	b
	11/9/2000	17.45	13.73	4,200	630	34	54	44	7,800	9,400	b
	1/29/2001	18.90	12.28	3,100	710	34	66	51	9,400	8,000	b
4/16/2001	19.17	12.01	160	1.2	1.3	ND<0.5	12	22	20	b	
8/14/2001	19.20	11.98	1,700	190	11	35	13	300	250	b	
10/22/2001	18.95	12.23	1,100	120	3.7	29	7.9	ND<25	16	a	
2/1/2002	19.05	12.13	2,600	25	43	21	280	ND<5.0	-	a	
5/10/2002	17.69	13.49	490	3.5	2.0	2.1	2.2	ND<5.0	-	a	
7/8/2002	15.75	15.43	170	0.51	0.62	1.6	1.2	ND<5.0	2.0	m	
10/2/2002	16.30	14.88	240	1.7	2.0	2.2	0.88	ND<5.0	-	a	
1/23/2003	17.74	13.44	ND<50	0.52	4.1	ND<0.5	1.9	ND<5.0	-		
4/29/2003	15.47	15.71	1,300	75	4.8	21	7.3	130	120	a	
7/18/2003	17.08	11.12	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	-	0.74	a	
10/9/2003	16.25	11.95	210	4.7	0.57	1.6	1.1	ND<10	10	a	
1/28/2004	15.65	12.55	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	a	
4/7/2004	16.49	11.71	-	-	-	-	-	-	-		
4/12/2004	-	-	-	770	56	3.2	7.0	6.5	120	160	a
7/23/2004	15.86	12.34	1,100	130	11	17	17	790	800	a	
10/12/2004	18.05	10.15	150	0.86	ND<0.5	ND<0.5	0.97	ND<10	-	a	

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MW-4 <sup>cont</sup>	2/14/2005	15.30	12.90	1,500	200	16	30	31	420	550	a
	4/27/2005	14.20	14.00	3,000	520	100	27	86	600	480	a
	7/19/2005	16.08	12.12	1,800	310	16	36	25	1,000	1,100	a
	10/18/2005	16.55	11.65	2,500	450	28	47	51	3,800	4,500	a
	1/23/2006	14.66	13.54	1,300	170	13	14	14	2,500	3,300	a
	4/12/2006	12.92	15.28	940	150	12	7.6	12	3,400	3,300	a
	7/10/2006	15.38	12.82	1,700	260	14	26	20	4,300	5,900	a
	10/16/2006	17.21	10.99	3,200	440	26	34	63	7,800	7,500	a
	1/26/2007	17.58	10.62	2,000	290	20	28	42	8,300	8,300	a
	<b>4/18/2007</b>	<b>17.46</b>	<b>10.74</b>	<b>2,300</b>	<b>350</b>	<b>28</b>	<b>38</b>	<b>42</b>	<b>5,900</b>	<b>7,800</b>	<b>a,i</b>
MW-5 28.04	12/16/1994	16.07	11.97	ND<50	1.1	ND<0.5	ND<0.5	2.4	-	-	
	12/29/1994	16.10	11.94	-	-	-	-	-	-	-	
	7/19/1996	15.49	12.55	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	-	-	
	1/27/1997	13.60	14.44	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	6/18/1997	15.55	12.49	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	9/18/1997	16.16	11.88	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	12/10/1997	15.41	12.63	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	2/18/1998	10.93	17.11	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	5/12/1998	13.25	14.79	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	8/18/1998	14.75	13.29	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	11/24/1998	15.15	12.89	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	2/4/1999	14.61	13.43	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	5/18/1999	14.15	13.89	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	8/27/1999	15.43	12.61	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	11/18/1999	15.97	12.07	-	-	-	-	-	-	-	
	2/29/2000	13.16	14.88	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	5/25/2000	14.72	13.32	-	-	-	-	-	-	-	
	8/9/2000	15.68	12.36	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	11/9/2000	15.39	12.65	-	-	-	-	-	-	-	
	1/29/2001	15.97	12.07	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
4/16/2001	16.24	11.80	-	-	-	-	-	-	-		
8/14/2001	17.39	10.65	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-		
10/22/2001	15.90	12.14	-	-	-	-	-	-	-		
2/1/2002	16.55	11.49	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-		
5/10/2002	15.12	12.92	-	-	-	-	-	-	-		

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MW-5 <sup>cont</sup>	7/8/2002	15.92	12.12	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	10/2/2002	16.42	11.62	-	-	-	-	-	-	-	
	1/23/2003	14.90	13.14	ND<50	20	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	4/29/2003	12.05	15.99	-	-	-	-	-	-	-	
25.07	7/18/2003	14.28	10.79	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	10/9/2003	13.36	11.71	-	-	-	-	-	-	-	
	1/28/2004	12.68	12.39	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	4/7/2004	14.71	10.36	-	-	-	-	-	-	-	
	7/23/2004	13.49	11.58	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	i
	10/12/2004	15.88	9.19	-	-	-	-	-	-	-	
	2/14/2005	13.22	11.85	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	i
	4/27/2005	13.40	11.67	-	-	-	-	-	-	-	
	7/19/2005	14.21	10.86	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	i
	10/18/2005	14.79	10.28	-	-	-	-	-	-	-	
	1/23/2006	13.12	11.95	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	i
	4/12/2006	11.39	13.68	-	-	-	-	-	-	-	
	7/10/2006	14.40	10.67	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	25	-	i
	10/16/2006	15.44	9.63	-	-	-	-	-	-	-	
	1/26/2007	15.76	9.31	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	490	-	
	4/18/2007	15.61	9.46	-	-	-	-	-	-	-	
MW-6 29.10	12/16/1994	17.74	11.36	-	-	-	-	-	-	-	
	12/29/1994	17.40	11.70	-	-	-	-	-	-	-	
	7/19/1996	16.60	12.50	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	-	-	
	1/27/1997	14.88	14.22	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	6/18/1997	16.73	12.37	51	22	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	c
	9/18/1997	17.24	11.86	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	12/10/1997	16.56	12.54	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	2/18/1998	12.93	16.17	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	5/12/1998	14.35	14.75	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	8/18/1998	15.94	13.16	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	11/24/1998	16.46	12.64	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	2/4/1999	18.25	10.85	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	5/18/1999	15.73	13.37	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
8/27/1999	15.64	13.46	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-		
11/18/1999	17.04	12.06	-	-	-	-	-	-	-		

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**Table 2. Groundwater Elevation and Analytical Data - Former ARCO Station - 706 Harrison Street, Oakland, California**

Well ID/ Sample ID TOC	Date Sampled	Depth to Water (ft)	Groundwater Elevation (ft-msl)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	MTBE by 8021B (ug/L)	MTBE by 8260B (ug/L)	Notes
MW-6 <sup>cont</sup>	2/29/2000	14.55	14.55	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	5/25/2000	15.86	13.24	-	-	-	-	-	-	-	
	8/9/2000	16.80	12.30	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	11/9/2000	16.60	12.50	-	-	-	-	-	-	-	
	1/29/2001	17.00	12.10	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	4/16/2001	17.15	11.95	-	-	-	-	-	-	-	
	8/14/2001	17.30	11.80	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	10/22/2001	17.13	11.97	-	-	-	-	-	-	-	
	2/1/2002	16.57	12.53	70	37	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	a
	5/10/2002	15.25	13.85	-	-	-	-	-	-	-	
	7/8/2002	15.79	13.31	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	10/2/2002	16.38	12.72	-	-	-	-	-	-	-	
	1/23/2003	16.03	13.07	ND<50	21	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	4/29/2003	14.19	14.91	-	-	-	-	-	-	-	
	26.13	7/18/2003	15.47	10.66	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-
10/9/2003		14.73	11.40	-	-	-	-	-	-	-	
1/28/2004		14.05	12.08	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
4/7/2004		14.41	11.72	-	-	-	-	-	-	-	
7/23/2004		15.15	10.98	3,300	1,300	ND<5.0	52	9.7	ND<50	-	a
10/12/2004		17.29	8.84	-	-	-	-	-	-	-	
2/14/2005		14.60	11.53	350	160	ND<0.5	ND<0.5	ND<0.5	ND<25	2.0	a,i
4/27/2005		14.10	12.03	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	ND<0.5	
7/19/2005		15.18	10.95	110	15	ND<0.5	0.62	ND<0.5	ND<5.0	1.7	a,i
10/18/2005		15.65	10.48	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	0.87	i
1/23/2006		14.02	12.11	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	0.50	i
4/12/2006		12.66	13.47	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	ND<0.5	
7/10/2006		14.64	11.49	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	ND<0.5	
10/16/2006		16.50	9.63	-	-	-	-	-	-	-	
1/26/2007		16.83	9.30	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	ND<0.5	
4/18/2007	16.72	9.41	-	-	-	-	-	-	-		
MW-7 29.67	12/16/1994	17.07	12.60	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	12/29/1994	17.65	12.02	-	-	-	-	-	-	-	
	7/19/1996	16.44	13.23	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	1/27/1997	15.09	14.58	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	6/18/1997	16.59	13.08	73	ND<0.5	0.55	ND<0.5	ND<0.5	ND<5.0	-	d



# Conestoga-Rovers & Associates

**Table 2. Groundwater Elevation and Analytical Data - Former ARCO Station - 706 Harrison Street, Oakland, California**

Well ID/ Sample ID TOC	Date Sampled	Depth to Water (ft)	Groundwater Elevation (ft-msl)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	MTBE by 8021B (ug/L)	MTBE by 8260B (ug/L)	Notes
MW-7 <sup>cont</sup>	9/18/1997	17.06	12.61	94	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	b, f
	12/10/1997	16.58	13.09	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	2/18/1998	12.60	17.07	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	5/12/1998	14.81	14.86	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	8/18/1998	15.67	14.00	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	11/24/1998	16.30	13.37	200	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	d
	2/4/1999	15.99	13.68	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	5/18/1999	15.42	14.25	200	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	d
	8/27/1999	16.35	13.32	140	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	11/18/1999	16.81	12.86	--	--	--	--	--	--	--	
	2/29/2000	14.16	15.51	100	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	f
	5/25/2000	15.54	14.13	--	--	--	--	--	--	--	
	8/9/2000	16.56	13.11	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	11/9/2000	16.45	13.22	-	-	-	-	-	-	-	
	1/29/2001	16.92	12.75	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	4/16/2001	17.03	12.64	-	-	-	-	-	-	-	
	8/14/2001	17.27	12.40	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	10/22/2001	16.95	12.72	-	-	-	-	-	-	-	
	2/1/2002	16.14	13.53	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	5/10/2002	15.30	14.37	-	-	-	-	-	-	-	
7/8/2002	15.73	13.94	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-		
10/2/2002	16.24	13.43	-	-	-	-	-	-	-		
1/23/2003	15.70	13.97	ND<50	23	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-		
4/29/2003	12.68	16.99	-	-	-	-	-	-	-		
26.70	7/18/2003	15.19	11.51	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	10/9/2003	14.45	12.25	-	-	-	-	-	-	-	
	1/28/2004	13.88	12.82	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	4/7/2004	15.71	10.99	-	-	-	-	-	-	-	
	7/23/2004	14.85	11.85	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	130	120	
	10/12/2004	16.90	9.80	-	-	-	-	-	-	-	
	2/14/2005	14.42	12.28	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	190	200	
	4/27/2005	13.75	12.95	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	1.3	
	7/19/2005	14.91	11.79	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	65	66	
	10/18/2005	15.40	11.30	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	12	15	
	1/23/2006	13.99	12.71	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	2.2	
	4/12/2006	12.32	14.38	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	2.0	

# Conestoga-Rovers & Associates

**Table 2. Groundwater Elevation and Analytical Data - Former ARCO Station - 706 Harrison Street, Oakland, California**

Well ID/ Sample ID TOC	Date Sampled	Depth to Water (ft)	Groundwater Elevation (ft-msl)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Xylenes (ug/L)	MTBE by 8021B (ug/L)	MTBE by 8260B (ug/L)	Notes
MW-7 <sup>cont</sup>	7/10/2006	14.31	12.39	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	1.5	
	10/16/2006	16.23	10.47	-	-	-	-	-	-	-	
	1/26/2007	16.61	10.09	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	ND<0.5	
	4/18/2007	16.54	10.16	-	-	-	-	-	-	-	
VW-3	3/6/2003	-	-	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	i
	3/25/2003	-	-	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	i
VW-4	3/6/2003	-	-	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	3/25/2003	-	-	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
Trip Blank	11/9/2000	-	-	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	
	2/14/2005	-	-	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	-	

**Abbreviations and Analyses:**

ug/L = Micrograms per liter  
 ND<0.5 = Not Detected (ND) above laboratory detection limit.  
 - = Not sampled, not analyzed, or not applicable  
 TOC = Top of casing elevation, measured in feet, relative to mean sea level  
 ft = Measured in feet  
 ft-msl = Elevation in feet relative to mean sea level  
 TPHg = Total petroleum hydrocarbons as gasoline by modified EPA Method SW8015C  
 Benzene, ethylbenzene, toluene and xylenes by EPA Method SW8021B.  
 MTBE = Methyl tertiary butyl ether by EPA Method SW8021B and/or SW8260B.  
 SVOCs = Semi-Volatile Organic Compounds (EPA Method 8270)  
 Wells were re-surveyed on October 27, 2003 to City of Oakland Benchmark 25A.

**Analytical Laboratory Notes:**

a = "unmodified or weakly modified gasoline is significant"  
 b = "heavier gasoline range compounds are significant"  
 c = "lighter gasoline range compounds are significant"  
 d = "isolated peaks are present"  
 f = "hydrocarbons with no recognizable patterns are present"  
 g = "lighter than water immiscible sheen is present"  
 h = "lighter than water immiscible sheen/product is present"  
 i = "sample contains greater than ~1 vol. % sediment"  
 j = "sample was diluted due to high organic content"  
 m = "no recognizable pattern"

Vicinity Map

Figure 1

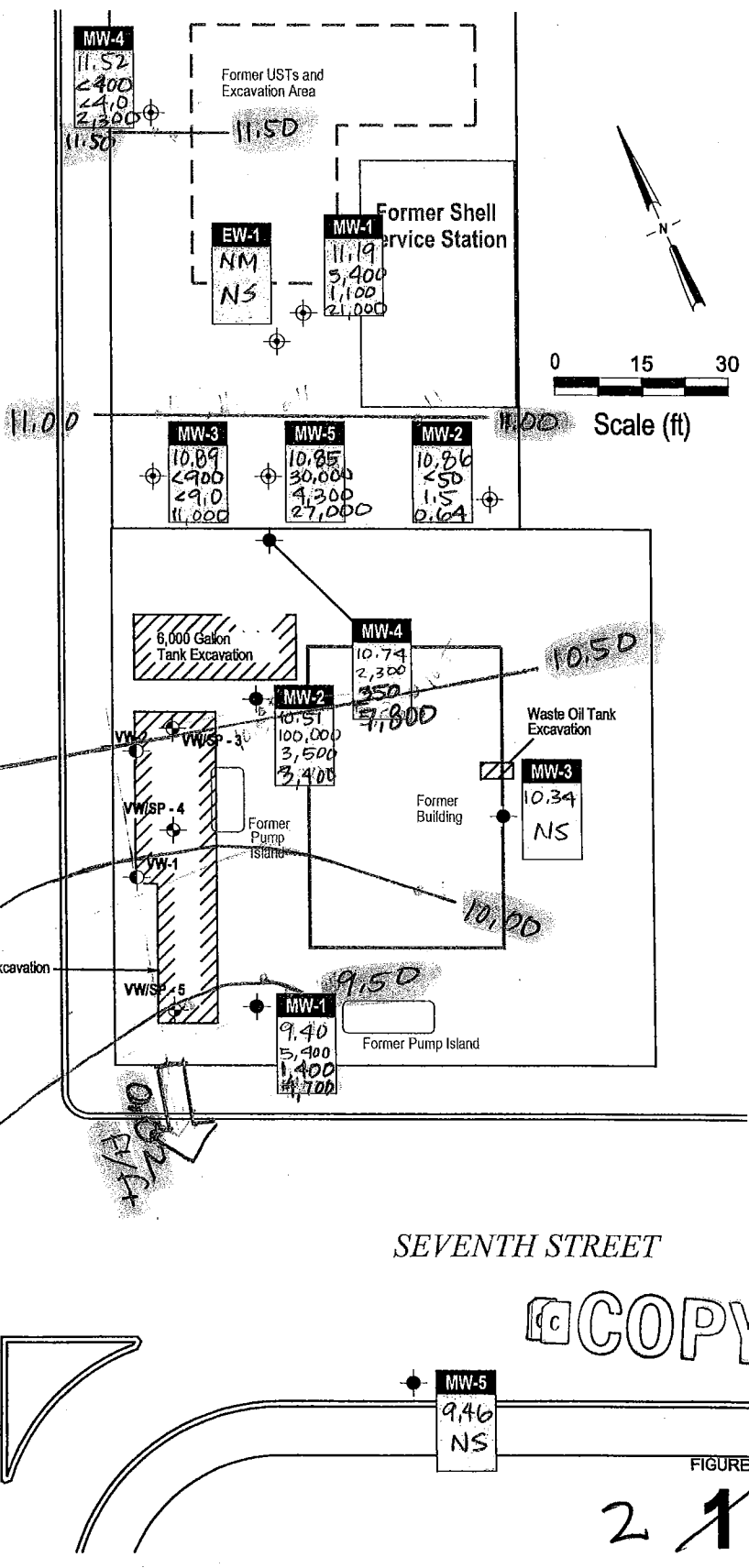
**EXPLANATION**

- Monitoring well location
- ⊕ Dual SVE/Sparging well
- SVE well location
- ⊙ Shell Monitoring well location
- Groundwater elevation contour, dashed where inferred
- [x.xx] Groundwater flow direction and gradient (ft/ft)
- Well ID  
ELEV  
TPHg  
Benzene  
MTBE
- Groundwater elevation, in feet above mean sea level (msl).
- TPHg, Benzene and MTBE concentrations are in micrograms per liter (µg/L)
- NS Not sampled
- NM Not measured
- \* Groundwater elevation anomalous, not used in contouring

*please remove note about*

*MTBE on most recent figure*

HARRISON STREET



**COPY**

**FIGURE 2 1**

H:\SB-2004\BEO\G\IN\FIGURES\QM\_Template(3006).DWG

**Former ARCO Station**  
706 Harrison Street  
Oakland, California



C A M B R I A

**Groundwater Elevation Contour and Hydrocarbon Concentration Map**

*April 18, 2007*



**CONESTOGA-ROVERS  
& ASSOCIATES**

Second Quarter 2007 Monitoring Report  
706 Harrison Street, Oakland  
www.CRAworld.com FLC #RO0000484  
June 11, 2007

## APPENDIX A

### Groundwater Monitoring Field Data Sheets

## WELL GAUGING SHEET

<b>Client:</b> Conestoga-Rovers and Associates						
<b>Site</b> <b>Address:</b> 706 Harrison Street, Oakland, CA						
<b>Date:</b> 4/18/2007			<b>Signature:</b>			
Well ID	Time	Depth to SPH	Depth to Water	SPH Thickness	Depth to Bottom	Comments
MW-1	4:30		16.77		24.73	
MW-2	4:38		17.02		25.80	
MW-3	4:05		16.45		27.75	
MW-4	4:34		17.46		25.60	
MW-5	3:55		15.61		27.84	
MW-6	4:17		16.72		25.90	
MW-7	4:25		16.54		27.75	

## WELL SAMPLING FORM

<b>Date:</b>		4/18/2007				
<b>Client:</b>		Conestoga-Rovers and Associates				
<b>Site Address:</b>		706 Harrison Street, Oakland, CA				
<b>Well ID:</b>		MW-1				
<b>Well Diameter:</b>		2"				
<b>Purging Device:</b>		Disposable Bailer				
<b>Sampling Method:</b>		Disposable Bailer				
<b>Total Well Depth:</b>		24.73	<b>Fe=</b> mg/L			
<b>Depth to Water:</b>		16.77	<b>ORP=</b> mV			
<b>Water Column Height:</b>		7.96	<b>DO=</b> mg/L			
<b>Gallons/ft:</b>		0.16				
<b>1 Casing Volume (gal):</b>		1.27	<b>COMMENTS:</b> very turbid, silty			
<b>3 Casing Volumes (gal):</b>		3.82				
<b>TIME:</b>	<b>CASING VOLUME (gal)</b>	<b>TEMP (Celsius)</b>			<b>pH</b>	<b>COND. (µS)</b>
4:50	1.3	17.9	7.02	690		
4:53	2.5	18.1	7.10	658		
4:55	3.8	18.1	7.07	655		
<b>Sample ID:</b>	<b>Sample Date:</b>	<b>Sample Time:</b>	<b>Container Type</b>	<b>Preservative</b>	<b>Analytes</b>	<b>Method</b>
MW-1	4/18/2007	5:00	40 ml VOA	HCl, ICE	TPHg BTEX MTBE	8015, 8021, 8260
<b>Signature:</b>						

## WELL SAMPLING FORM

<b>Date:</b>		4/18/2007				
<b>Client:</b>		Conestoga-Rovers and Associates				
<b>Site Address:</b>		706 Harrison Street, Oakland, CA				
<b>Well ID:</b>		MW-2				
<b>Well Diameter:</b>		2"				
<b>Purging Device:</b>		Disposable Bailer				
<b>Sampling Method:</b>		Disposable Bailer				
<b>Total Well Depth:</b>		25.80	<b>Fe=</b>	<b>mg/L</b>		
<b>Depth to Water:</b>		17.02	<b>ORP=</b>	<b>mV</b>		
<b>Water Column Height:</b>		8.78	<b>DO=</b>	<b>mg/L</b>		
<b>Gallons/ft:</b>		0.16				
<b>1 Casing Volume (gal):</b>		1.40	<b>COMMENTS:</b> very turbid, silty			
<b>3 Casing Volumes (gal):</b>		4.21				
<b>TIME:</b>	<b>CASING VOLUME (gal)</b>	<b>TEMP (Celsius)</b>			<b>pH</b>	<b>COND. (µS)</b>
5:40	1.4	18.6			6.90	695
5:43	2.8	18.5			6.84	673
5:45	4.2	18.4	6.81	670		
<b>Sample ID:</b>	<b>Sample Date:</b>	<b>Sample Time:</b>	<b>Container Type</b>	<b>Preservative</b>	<b>Analytes</b>	<b>Method</b>
MW-2	4/18/2007	5:50	40 ml VOA	HCl, ICE	TPHg BTEX MTBE	8015, 8021, 8260

**Signature:**



## WELL SAMPLING FORM

<b>Date:</b>		4/18/2007				
<b>Client:</b>		Conestoga-Rovers and Associates				
<b>Site Address:</b>		706 Harrison Street, Oakland, CA				
<b>Well ID:</b>		MW-4				
<b>Well Diameter:</b>		2"				
<b>Purging Device:</b>		Disposable Bailer				
<b>Sampling Method:</b>		Disposable Bailer				
<b>Total Well Depth:</b>		25.60	<b>Fe=</b> <b>mg/L</b>			
<b>Depth to Water:</b>		17.46	<b>ORP=</b> <b>mV</b>			
<b>Water Column Height:</b>		8.14	<b>DO=</b> <b>mg/L</b>			
<b>Gallons/ft:</b>		0.16				
<b>1 Casing Volume (gal):</b>		1.30	<b>COMMENTS:</b> very turbid, silty			
<b>3 Casing Volumes (gal):</b>		3.91				
<b>TIME:</b>	<b>CASING VOLUME (gal)</b>	<b>TEMP (Celsius)</b>			<b>pH</b>	<b>COND. (µS)</b>
5:15	1.3	18.0			7.19	689
5:17	2.6	18.3			7.20	714
5:20	3.9	18.1	7.24	720		
<b>Sample ID:</b>	<b>Sample Date:</b>	<b>Sample Time:</b>	<b>Container Type</b>	<b>Preservative</b>	<b>Analytes</b>	<b>Method</b>
MW-4	4/18/2007	5:25	40 ml VOA	HCl, ICE	TPHg BTEX MTBE	8015, 8021, 8260
<b>Signature:</b>						



# Well Inspection

CRA

CRA Project Number: 231116

Site Name: Bo Gin

Person Making Observations: Sanjiv Gill

Date of Observations: 4/18/2007

Well ID	1. Access clear of obstructions	2. Well cover present	3. Bolts in place and not stripped	4. Rubber seal in place, not cracked	5. Cap locked	6. Cap snug	7. No water in outer annular space	8. If water present, >1" below TOC	9. Exposed casing not cracked	10. Outer annular seal adequate	11. Well box acceptable	12. Well labeled	13. Other (see notes)	Notes (Attach extra sheets if necessary.)
MW-1	√	√	√	√	√	√	√	√	√	√	No			<input type="checkbox"/> Photograph provided.
MW-2	√	√	√	√	√	√	√	√	√	√	No			<input type="checkbox"/> Photograph provided.
MW-3	√	√	⊙	√	√	√	√	√	√	√	No		added bolts	<input type="checkbox"/> Photograph provided.
MW-4	√	√	√	√	√	√	√	√	√	√	No			<input type="checkbox"/> Photograph provided.
MW-5	√	√	√	√	√	√	√	√	√	√	No			<input type="checkbox"/> Photograph provided.
MW-6	√	√	√	√	√	√	√	√	√	√	No			<input type="checkbox"/> Photograph provided.
MW-7	√	√	√	√	√	√	√	√	√	√	No			<input type="checkbox"/> Photograph provided.
														<input type="checkbox"/> Photograph provided.
														<input type="checkbox"/> Photograph provided.
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														<input type="checkbox"/> Photograph provided.
														<input type="checkbox"/> Photograph provided.
														<input type="checkbox"/> Photograph provided.
														<input type="checkbox"/> Photograph provided.

**Legend:** √ = Yes, wellhead meets quality standard  
 No = No, wellhead does not meet quality standard, needs correction (if necessary, use notes to clarify).  
 ⊙ = Quality standard not met, but corrected during site visit.

MUSKAN  
ENVIRONMENTAL  
SAMPLING

**DRUM INVENTORY**

<b>Client:</b>	Conestoga-Rovers and Associates			
<b>Project:</b>	Bo Gin			
<b>Site Address:</b>	706 Harrison Street, Oakland, CA			
<b>Date:</b>	4/18/2007			
<b>ARRIVAL</b>	<b>Amount</b>	<b>SPH</b>	<b>Soil</b>	<b>Water</b>
<b>COMMENTS (color, type, label markings, location etc.):</b> Five empty black open top steel drums (two drums missing a lid and one has a lid unknown owner), (two drums CRA).	FULL			
	3/4			
	2/3			
	1/2			
	1/3			
	1/4			
	>0,<1/4			
<b>DEPARTURE</b>	<b>Amount</b>	<b>SPH</b>	<b>Soil</b>	<b>Water</b>
<b>COMMENTS (color, type, label markings, location etc.):</b> Four empty black open top steel drums (two drums missing a lid and one has a lid unknown owner), (one drum empty one containing non haz purge water CRA). Drums located near well MW-1	FULL			
	3/4			
	2/3			
	1/2			
	1/3			
	1/4			1
	>0,<1/4			
	<b>TOTAL</b>			1



**CONESTOGA-ROVERS  
& ASSOCIATES**

Second Quarter 2007 Monitoring Report  
706 Harrison Street, Oakland  
www.CRAworld.com FLC #RO0000484  
June 11, 2007

## APPENDIX B

### Laboratory Analytical Report

**McC Campbell Analytical, Inc.**

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701  
Web: www.mccampbell.com E-mail: main@mccampbell.com  
Telephone: 877-252-9262 Fax: 925-252-9269

Conestoga-Rovers & Associates 5900 Hollis St, Suite A Emeryville, CA 94608	Client Project ID: #230-0116; BoGin	Date Sampled: 04/18/07
		Date Received: 04/18/07
	Client Contact: Mark Jonas	Date Reported: 04/23/07
	Client P.O.:	Date Completed: 04/23/07

**WorkOrder: 0704248**

April 23, 2007

Dear Mark:

Enclosed are:

- 1). the results of 3 analyzed samples from your #230-0116; BoGin project,
- 2). a QC report for the above samples
- 3). a copy of the chain of custody, and
- 4). a bill for analytical services.

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

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

Best regards,

Angela Rydelius, Lab Manager

0704248

**McCAMPBELL ANALYTICAL, INC.**

1534 WILLOW PASS ROAD  
PITTSBURG, CA 94565-1701

Website: [www.mccampbell.com](http://www.mccampbell.com) Email: [main@mccampbell.com](mailto:main@mccampbell.com)  
Telephone: (877) 252-9262 Fax: (925) 252-9269

**CHAIN OF CUSTODY RECORD**

TURN AROUND TIME

RUSH  24 HR  48 HR  72 HR  5 DAY

GeoTracker EDF  PDF  Excel  Write On (DW)

Report To: Mark Jonas Bill To: Conestoga-Rivers & Associates  
Company: Conestoga-Rivers & Associates  
5900 Harris Street  
Emeryville, CA E-Mail: mjonas@crworld.com  
Tele: (510) 420-3307 Fax: (510) 420-9170  
Project #: 230-0116 Project Name: Bogin  
Project Location: 706 Harrison Street Oakland, CA  
Sampler Signature: Muskan Environmental Sampling

SAMPLE ID	LOCATION/ Field Point Name	SAMPLING		# Containers	Type Containers	MATRIX					METHOD PRESERVED				Analysis Request	Other	Comments
		Date	Time			Water	Soil	Air	Sludge	Other	ICE	HCL	HNO <sub>3</sub>	Other			
+1 +5 +1 MN-1		4-18-07	5:00	4	vea	X						X	X	X			Filter Samples for Metals analysis: Yes / No  MTBE by 8260
MN-2			5:50														
MN-4			5:25														

Relinquished By: [Signature] Date: 4-18-07 Time: 8:18 Received By: [Signature]  
Relinquished By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received By: \_\_\_\_\_  
Relinquished By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received By: \_\_\_\_\_

ICE/c 10-6  
GOOD CONDITION yes  
HEAD SPACE ABSENT yes  
DECHLORINATED IN LAB  
APPROPRIATE CONTAINERS yes  
PRESERVED IN LAB \_\_\_\_\_

COMMENTS:

VOAS O&G METALS OTHER  
PRESERVATION pH-2

**McC Campbell Analytical, Inc.**



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

**CHAIN-OF-CUSTODY RECORD**

WorkOrder: 0704248

ClientID: CETE

EDF     Excel     Fax     Email     HardCopy     ThirdParty

Report to:

Mark Jonas  
Conestoga-Rovers & Associates  
5900 Hollis St, Suite A  
Emeryville, CA 94608

Email: mjonas@CRAworld.com  
TEL: (510) 420-070    FAX: (510) 420-917  
ProjectNo: #230-0116; BoGin  
PO:

Bill to

Accounts Payable  
Conestoga-Rovers & Associates  
5900 Hollis St, Ste. A  
Emeryville, CA 94608

Requested TAT: 5 days

Date Received 04/18/2007

Date Printed: 04/18/2007

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
0704248-001	MW-1	Water	4/18/2007 5:00:00	<input type="checkbox"/>	A	B	A										
0704248-002	MW-2	Water	4/18/2007 5:50:00	<input type="checkbox"/>	A	B											
0704248-003	MW-4	Water	4/18/2007 5:25:00	<input type="checkbox"/>	A	B											

Test Legend:

1	G-MBTEX W
6	
11	

2	MTBE W
7	
12	

3	PREDF REPORT
8	

4	
9	

5	
10	

Prepared by: Rosa Venegas

Comments:

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





**Sample Receipt Checklist**

Client Name: **Conestoga-Rovers & Associates**

Date and Time Received: **4/18/2007 9:11:55 AM**

Project Name: **#230-0116; BoGin**

Checklist completed and reviewed by: **Rosa Venegas**

WorkOrder N°: **0704248** Matrix

Carrier: Client Drop-In

**Chain of Custody (COC) Information**

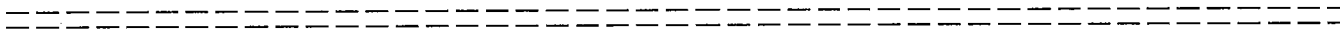
Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Sample IDs noted by Client on COC?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Date and Time of collection noted by Client on COC?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Sampler's name noted on COC?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>

**Sample Receipt Information**

Custody seals intact on shipping container/cooler?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper containers/bottles?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	

**Sample Preservation and Hold Time (HT) Information**

All samples received within holding time?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Container/Temp Blank temperature	Cooler Temp:		NA <input checked="" type="checkbox"/>
Water - VOA vials have zero headspace / no bubbles?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	No VOA vials submitted <input type="checkbox"/>
Sample labels checked for correct preservation?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	



Client contacted:

Date contacted:

Contacted by:

Comments:



# McC Campbell Analytical, Inc.

"When Quality Counts"

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Web: www.mcccampbell.com E-mail: main@mcccampbell.com  
Telephone: 877-252-9262 Fax: 925-252-9269

Conestoga-Rovers & Associates  5900 Hollis St, Suite A  Emeryville, CA 94608	Client Project ID: #230-0116; BoGin	Date Sampled: 04/18/07
		Date Received: 04/18/07
	Client Contact: Mark Jonas	Date Extracted: 04/18/07-04/20/07
	Client P.O.:	Date Analyzed 04/18/07-04/20/07

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

Extraction method SW5030B

Analytical methods SW8021B/8015Cm

Work Order: 0704248

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	MW-1	W	5400,a,i	3600	1400	170	210	350	10	95
002A	MW-2	W	100,000,a,h,i	5200	3500	18,000	2500	12,000	100	104
003A	MW-4	W	2300,a,i	5900	350	28	38	42	5	104

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	5.0	0.5	0.5	0.5	0.5	1	µg/L
	S	NA	NA	NA	NA	NA	NA	1	mg/Kg

\* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in 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 McC Campbell 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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Conestoga-Rovers & Associates  5900 Hollis St, Suite A  Emeryville, CA 94608	Client Project ID: #230-0116; BoGin	Date Sampled: 04/18/07
		Date Received: 04/18/07
	Client Contact: Mark Jonas	Date Extracted: 04/19/07
	Client P.O.:	Date Analyzed 04/19/07

### Methyl tert-Butyl Ether\*

Extraction method SW5030B

Analytical methods SW8260B

Work Order: 0704248

Lab ID	Client ID	Matrix	Methyl-t-butyl ether (MTBE)	DF	% SS
001B	MW-1	W	4700,i	100	98
002B	MW-2	W	3400,h,i	200	96
003B	MW-4	W	7800,i	200	98


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

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

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

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

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) sample diluted due to high organic content/matrix interference; k) reporting limit near, but not identical to our standard reporting limit due to variable Encore sample weight; m) reporting limit raised due to insufficient sample amount; n) results are reported on a dry weight basis; p) see attached narrative.

 Angela Rydelius, Lab Manager



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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 0704248

EPA Method SW8021B/8015Cm	Extraction SW5030B			BatchID: 27495					Spiked Sample ID: 0704336-001A			
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>£</sup>	ND	60	104	96.9	7.37	103	103	0	70 - 130	30	70 - 130	30
MTBE	ND	10	109	110	1.27	104	111	6.14	70 - 130	30	70 - 130	30
Benzene	ND	10	110	104	5.77	106	115	7.43	70 - 130	30	70 - 130	30
Toluene	ND	10	108	102	5.57	108	111	2.96	70 - 130	30	70 - 130	30
Ethylbenzene	ND	10	105	97.8	6.91	106	107	1.11	70 - 130	30	70 - 130	30
Xylenes	ND	30	96.3	91.7	4.96	96.7	96.3	0.345	70 - 130	30	70 - 130	30
%SS:	90	10	109	106	2.89	107	116	7.44	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 27495 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0704248-001A	04/18/07 5:00 AM	04/18/07	04/18/07 8:14 PM	0704248-001A	04/18/07 5:00 AM	04/19/07	04/19/07 11:21 PM
0704248-002A	04/18/07 5:50 AM	04/18/07	04/18/07 11:15 PM	0704248-003A	04/18/07 5:25 AM	04/18/07	04/18/07 11:46 PM
0704248-003A	04/18/07 5:25 AM	04/20/07	04/20/07 3:45 AM				

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

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

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

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

# cluttered chromatogram; sample peak coelutes with surrogate peak.



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### QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder: 0704248

EPA Method SW8260B	Extraction SW5030B			BatchID: 27499			Spiked Sample ID: 0704347-006B					
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
Methyl-t-butyl ether (MTBE)	ND	10	108	109	1.01	105	110	4.77	70 - 130	30	70 - 130	30
%SS1:	96	10	94	93	0.885	91	89	2.54	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 27499 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0704248-001B	04/18/07 5:00 AM	04/19/07	04/19/07 7:14 PM	0704248-002B	04/18/07 5:50 AM	04/19/07	04/19/07 8:02 PM
0704248-003B	04/18/07 5:25 AM	04/19/07	04/19/07 8:50 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.

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

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

*JR* QA/QC Officer



**CONESTOGA-ROVERS  
& ASSOCIATES**

Second Quarter 2007 Monitoring Report  
706 Harrison Street, Oakland  
www.CRAworld.com FLC #RO0000484  
June 11, 2007

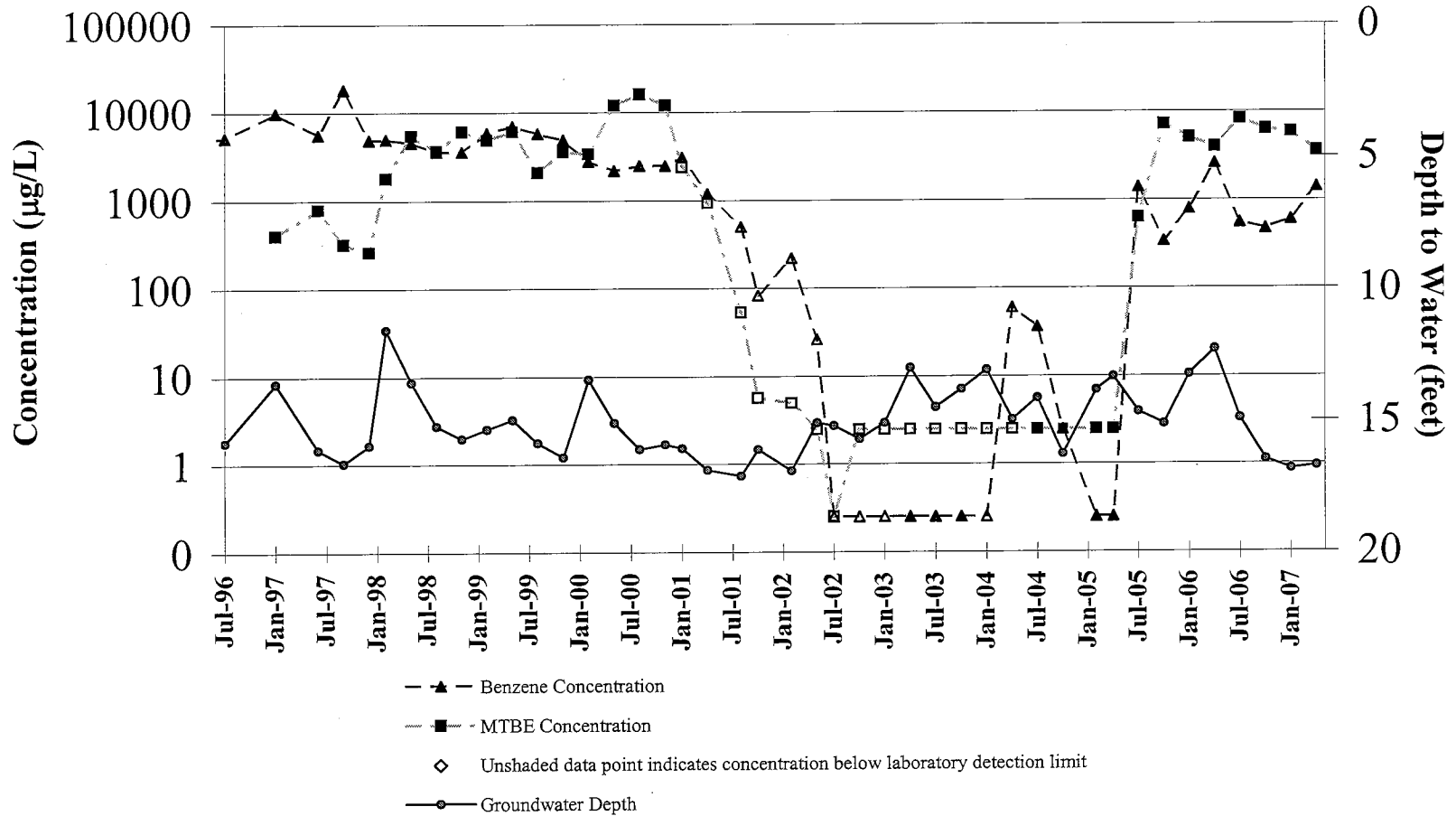
## APPENDIX C

### *Benzene and MTBE Concentration Graphs*

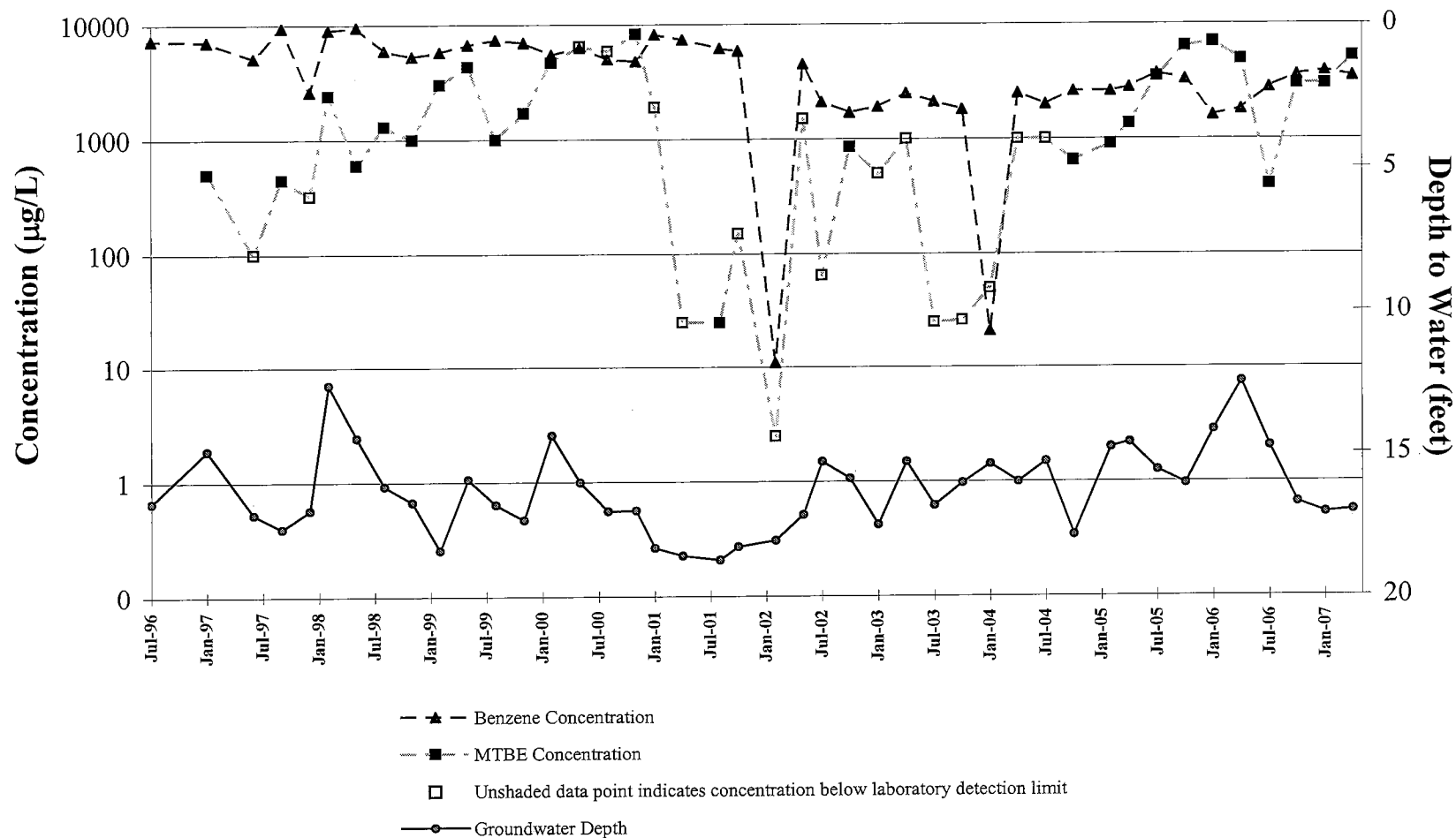
# Monitoring Well MW-1

## Benzene and MTBE Concentration Trends

### Former ARCO Service Station, 706 Harrison Street, Oakland, CA

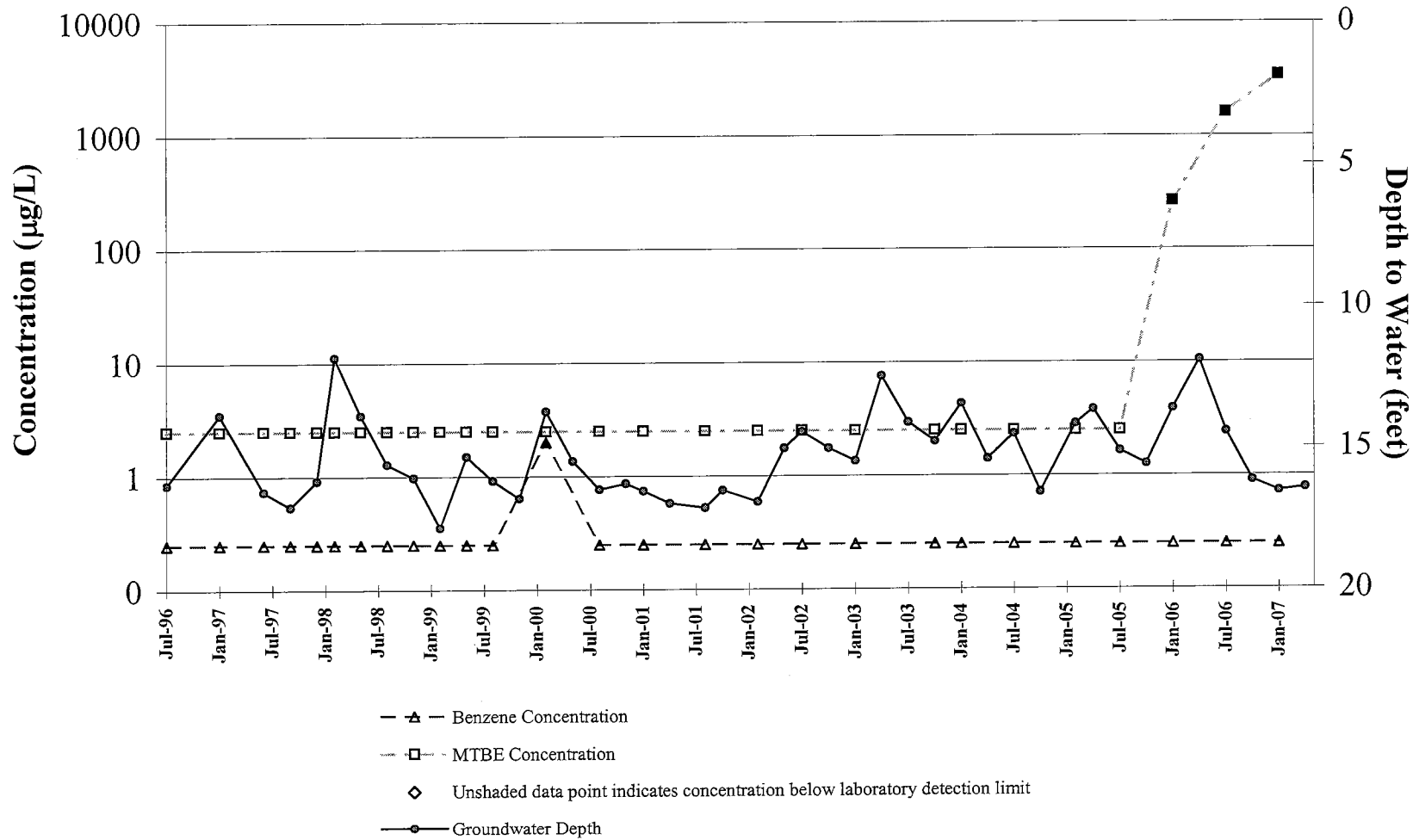


## Monitoring Well MW-2 Benzene and MTBE Concentration Trends Former ARCO Service Station, 706 Harrison Street, Oakland, CA

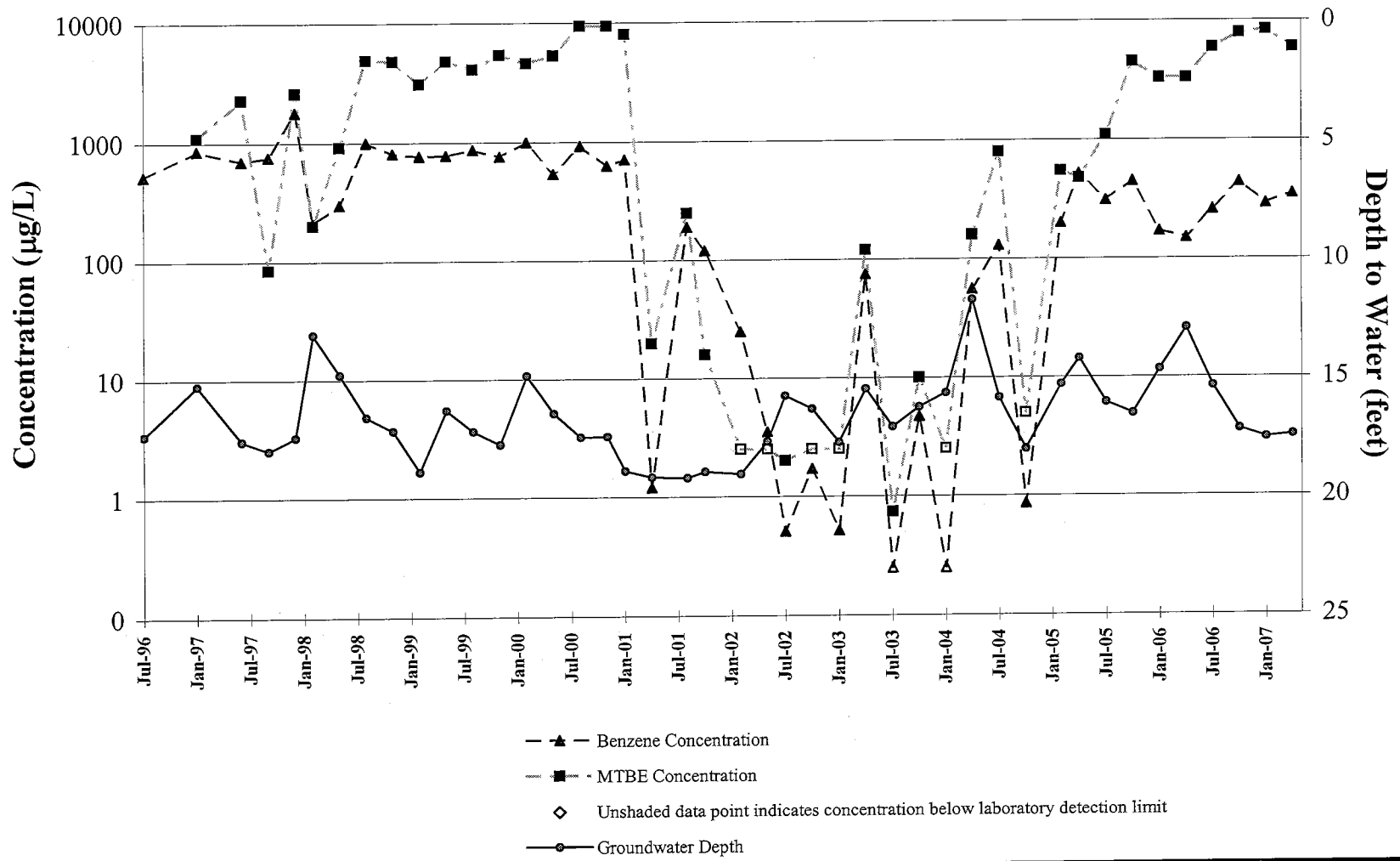




**Monitoring Well MW-3  
Benzene and MTBE Concentration Trends  
Former ARCO Service Station, 706 Harrison Street, Oakland, CA**



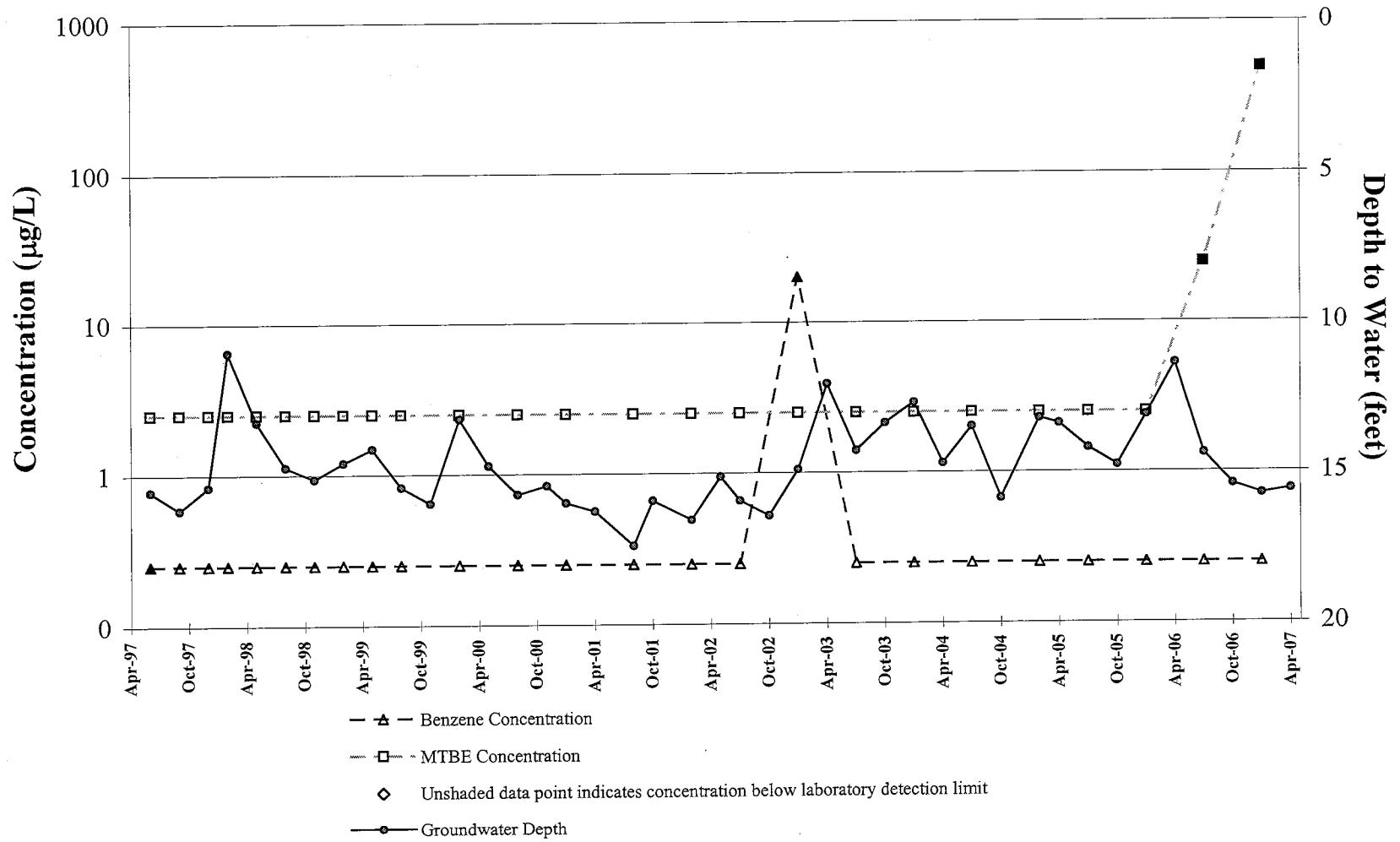
## Monitoring Well MW-4 Benzene and MTBE Concentration Trends Former ARCO Service Station, 706 Harrison Street, Oakland, CA



# Monitoring Well MW-5

## Benzene and MTBE Concentration Trends

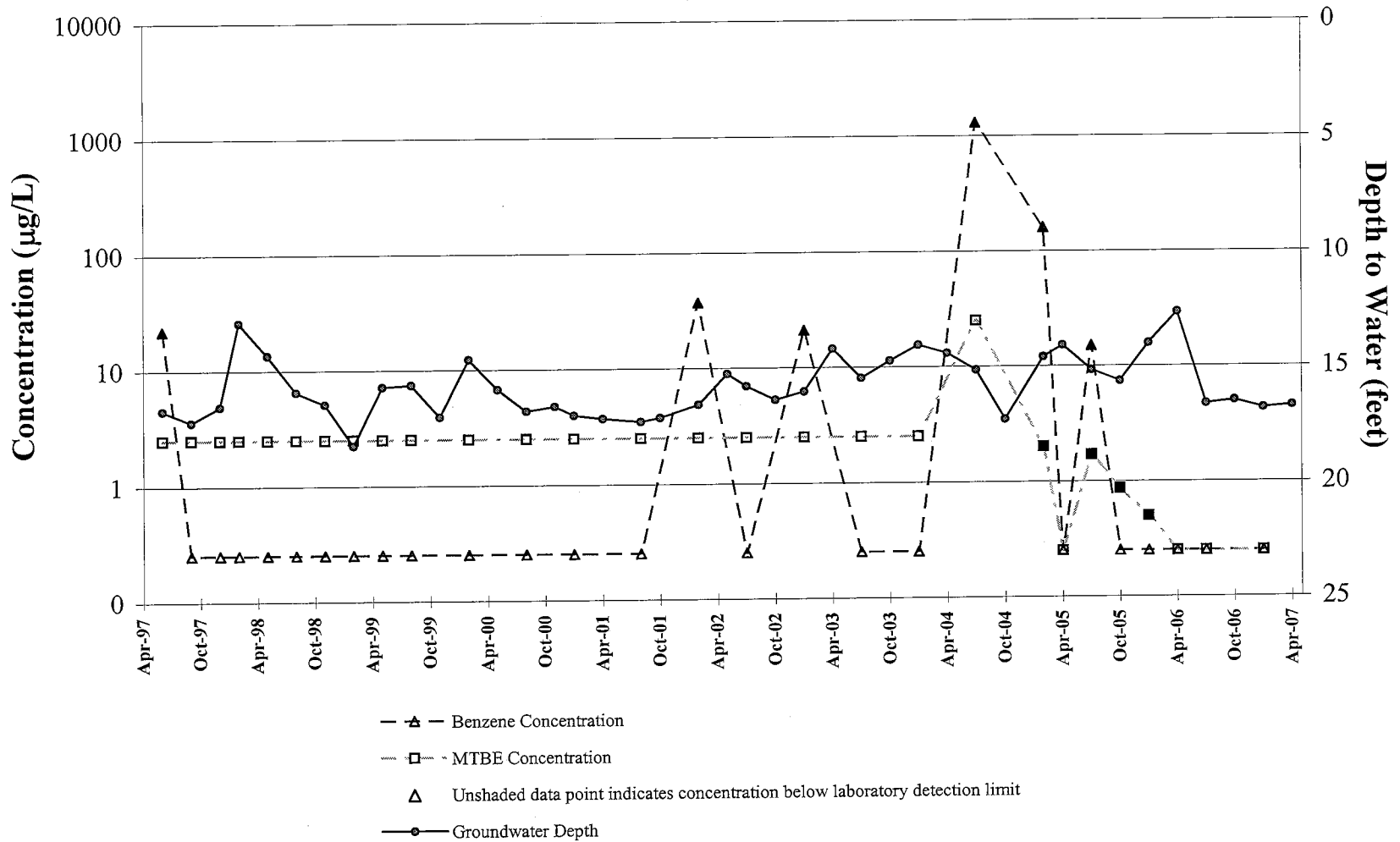
### Former ARCO Service Station, 706 Harrison Street, Oakland, CA



# Monitoring Well MW-6

## Benzene and MTBE Concentration Trends

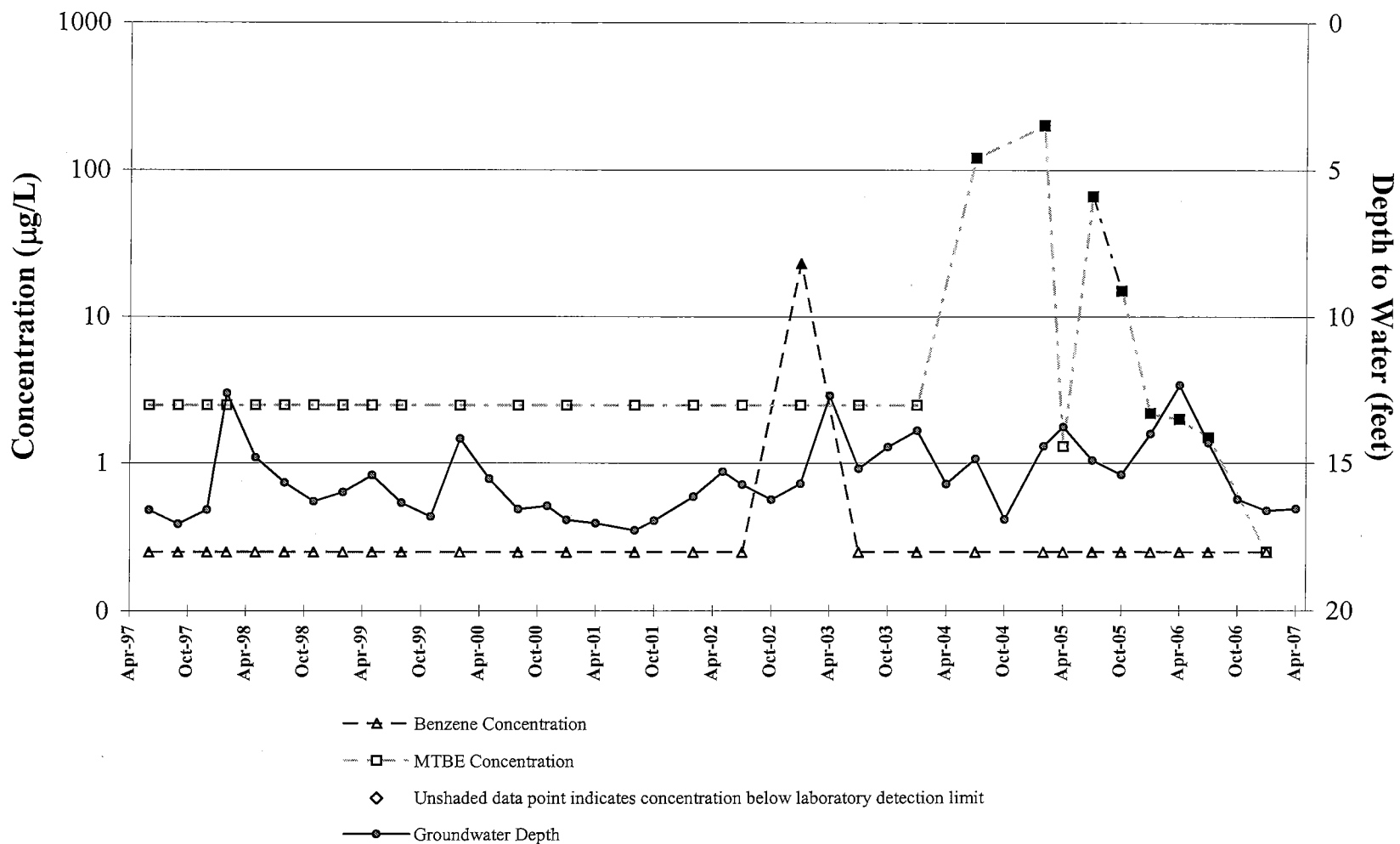
### Former ARCO Service Station, 706 Harrison Street, Oakland, CA



# Monitoring Well MW-7

## Benzene and MTBE Concentration Trends

### Former ARCO Service Station, 706 Harrison Street, Oakland, CA





**CONESTOGA-ROVERS  
& ASSOCIATES**

Second Quarter 2007 Monitoring Report  
706 Harrison Street, Oakland  
www.CRAworld.com FLC #RO0000484  
June 11, 2007

## APPENDIX D

### *Former Shell Station Groundwater Monitoring and Analytical Results*

TABLE ONE  
Groundwater Elevation Data  
Yee Property  
726 Harrison St., Oakland, CA

Well ID	Date of Measurement	Top of Casing Elevation (Relative to Mean Sea Level)	Depth to Water (feet)	Groundwater Elevation (project data)
MW-1	12/15/98	31.95*	17.32	14.63
	3/4/99		15.52	16.43
	6/17/99		16.9	15.05
	8/27/99		17.39	14.56
	12/9/99		18.03	13.92
	3/7/00		15.11	16.84
	6/7/00		16.66	15.29
	10/11/00		18.08	13.87
	1/18/01		17.96	13.99
	4/5/01		16.35	15.60
	7/17/01	16.94	15.01	
	10/5/01	28.98	17.35	11.63
	1/18/02		15.40	13.58
	4/11/02		15.76	13.22
	7/8/02		16.17	12.81
	10/9/02		16.72	12.26
	1/29/03		16.26	12.72
	4/11/03		16.56	12.42
	7/18/03		16.42	12.56
	10/9/03		16.88	12.10
	1/28/04		16.10	12.88
	4/7/04	15.43	13.55	
	7/23/04	16.41	12.57	
	10/12/04	17.73	11.25	
	1/29/05	15.02	13.96	
	4/28/05	14.99	13.99	
	7/19/05	16.36	12.62	
	10/18/05	17.82	11.16	
	1/23/06	15.80	13.18	
	4/12/06	13.24	15.74	
	7/10/06	15.64	13.34	
10/16/06	17.51	11.47		
1/26/07	18.36	10.62		
4/18/07	17.79	11.19		
MW-2	12/15/98	32.40*	18.03	14.37
	3/4/99		16.11	16.29
	6/17/99		17.72	14.68
	8/27/99		Inaccessible	
	12/9/99		Inaccessible	
	3/7/00		Inaccessible	
	6/7/00		17.67	14.73
	10/11/00		18.91	13.49
	1/18/01		18.66	13.74
	4/5/01		16.97	15.43
	7/17/01	17.54	14.86	
	10/5/01	29.44	17.98	11.46
	1/18/02		15.87	13.57
	4/11/02		16.36	13.08
	7/8/02		16.72	12.72
	10/9/02		17.33	12.11
	1/29/03		16.82	12.62
	4/11/03		17.15	12.29
	7/18/03		17.05	12.39
	10/9/03		17.52	11.92
	1/28/04		16.70	12.74
	4/7/04	16.02	13.42	
	7/23/04	Inaccessible		
	10/12/04	17.31	12.13	
	1/29/05	15.46	13.98	
	4/28/05	15.79	13.65	
	7/19/05	17.25	12.19	
	10/18/05	17.72	11.72	
	1/23/05	15.65	13.79	
	4/12/06	12.33	17.11	
	7/10/06	16.58	12.86	
10/16/06	18.33	11.11		
1/26/07	19.21	10.23		
4/18/07	18.58	10.86		

**TABLE ONE**  
**Groundwater Elevation Data**  
**Yee Property**  
**726 Harrison St., Oakland, CA**

Well ID	Date of Measurement	Top of Casing Elevation (Relative to Mean Sea Level)	Depth to Water (feet)	Groundwater Elevation (project data)
<b>MW-3</b>	12/15/98	31.61*	17.26	14.35
	3/4/99		15.47	16.14
	6/17/99		16.92	14.69
	8/27/99		17.40	14.21
	12/9/99		18.01	13.60
	3/7/00		16.15	15.46
	6/7/00		16.85	14.76
	10/11/00		18.07	13.54
	1/18/01		17.89	13.72
	4/5/01		16.21	15.40
	7/17/01	16.90	14.71	
	10/5/01	28.64	17.32	11.32
	1/18/02		15.35	13.29
	4/11/02		15.82	12.82
	7/8/02		16.15	12.49
	10/9/02		16.67	11.97
	1/29/03		16.19	12.45
	4/11/03		16.49	12.15
	7/18/03		16.42	12.22
	10/9/03		16.80	11.84
	1/28/03		15.94	12.70
	4/7/04	15.28	13.36	
	7/23/04	16.15	12.49	
	10/12/04	16.63	12.01	
	1/29/05	16.15	12.49	
	4/28/05	14.94	13.70	
	7/19/05	16.25	12.39	
	10/18/05	16.76	11.88	
	1/23/06	15.81	12.83	
	4/12/06	13.22	15.42	
7/10/06	15.49	13.15		
10/16/06	17.46	11.18		
1/26/07	18.02	10.62		
4/18/07	17.75	10.89		
<b>MW-4</b>	12/15/98	32.53*	17.59	14.94
	3/4/99		15.88	16.65
	6/17/99		17.14	15.39
	8/27/99		17.65	14.88
	12/9/99		18.28	14.25
	3/7/00		15.41	17.12
	6/7/00		17.09	15.44
	10/11/00		18.33	14.20
	1/18/01		18.23	14.30
	4/5/01		16.69	15.84
	7/17/01	17.32	15.21	
	10/5/01	29.58	17.71	11.87
	1/18/02		15.85	13.73
	4/11/02		16.14	13.44
	7/8/02		16.56	13.02
	10/9/02		17.09	12.49
	1/29/03		16.65	12.93
	4/11/03		16.93	12.65
	7/18/03		16.78	12.80
	10/9/03		17.26	12.32
	1/28/04		16.38	13.20
	4/7/04	15.64	13.94	
	7/23/04	16.58	13.00	
	10/12/04	Inaccessible		
	1/29/05	14.90	14.68	
	4/28/05	15.18	14.40	
	7/19/05	16.48	13.10	
	10/18/05	16.99	12.59	
	1/23/06	15.09	14.49	
	4/12/06	13.49	16.09	
7/10/06	14.99	14.59		
10/16/06	17.29	12.29		
1/26/07	18.17	11.41		
4/18/07	18.06	11.52		



**TABLE ONE**  
**Groundwater Elevation Data**  
**Yee Property**  
**726 Harrison St., Oakland, CA**

Well ID	Date of Measurement	Top of Casing Elevation (Relative to Mean Sea Level)	Depth to Water (feet)	Groundwater Elevation (project data)
MW-5	8/29/01	29.06	17.42	11.64
	1/18/02		15.68	13.38
	4/11/02		16.17	12.89
	7/8/02		16.51	12.55
	10/9/02		17.10	11.96
	1/29/03		16.58	12.48
	4/11/03		16.87	12.19
	7/18/03		16.77	12.29
	10/9/03		17.21	11.85
	1/28/04		16.34	12.72
	4/7/04		15.38	13.68
	7/23/04		16.55	12.51
	10/12/04		17.02	12.04
	1/29/05		15.23	13.83
	4/28/05		15.41	13.65
	7/19/05		16.79	12.27
	10/18/05		17.28	11.78
	1/23/06		15.28	13.78
	4/12/06		13.66	15.40
	7/10/06		16.14	12.92
10/16/06		19.33	9.73	
1/26/07		18.94	10.12	
4/18/07		18.21	10.85	

\* Top of casing elevation relative to arbitrary project datum

**TABLE THREE**  
**Summary of Analytical Results for GROUNDWATER Samples**  
**Yee Property**  
**726 Harrison St., Oakland, CA**  
**All results are in parts per billion (ppb)**

Well ID & Dates Sampled	TPH-G	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE
<b>MW-1</b>						
7/3/97	18,000	2,700	350	450	900	7,400
12/5/98	18,000	1,500	270	260	560	14,000
3/4/99	44,000	2,800	400	440	960	43,000
6/17/99	33,000	2,200	250	460	660	25,000
8/27/99	6,000	1,000	97	190	230	14,000/ 16,000*
12/9/99	15,000	1,500	160	220	420	17,000
3/7/00	9,300	1,500	210	66	530	12,000
6/7/00	26,000**	1,700	< 250	360	580	30,000
10/11/00	13,000**	1,600	< 100	140	160	19,000
1/18/01	14,000**	450	< 100	110	230	9,600
4/5/01	38,000	2,200	180	290	590	35,000
7/17/01	35,000**	1,800	< 100	300	170	35,000
10/5/01	17,000	1,500	210	420	790	27,000
1/18/02	18,000	1,500	120	160	220	22,000
4/11/02	41,000	2,700	210	340	380	30,000
7/8/02	36,000	2,800	140	360	300	31,000
10/9/02	30,000	1,700	310	< 100	< 100	19,000
1/29/03	26,000	2,400	< 100	310	520	20,000
4/11/03	22,000	1,700	< 100	270	580	16,000
7/18/03	40,000	3,200	290	480	830	39,000
10/9/03	54,000**	3,300	< 130	350	310	49,000
1/28/04	26,000***	3,000	310	420	800	31,000
4/7/04	33,000***	2,800	130	310	310	39,000
7/23/04	56,000***	4,500	< 250	390	< 500	53,000
10/12/04	25,000***	1,400	< 250	< 250	< 500	25,000
1/29/05	24,000	1,600	< 100	160	< 200	19,000
4/28/05	< 10,000	2,000	< 100	160	100	34,000
7/19/05	37,000	2,100	83	210	230	28,000
10/18/05	37,000	1,300	< 250	< 250	< 250	23,000
1/24/06	23,000	780	< 100	160	260	11,000
4/12/06	11,000	1,500	87	360	670	17,000
7/10/06	72,000	4,700	< 250	350	< 500	66,000
10/16/06	26,000	1,600	< 250	330	< 500	22,000
1/26/07	7,200	1,500	< 70	140	96	34,000
4/18/07	5,400	1,100	< 50	200	120	21,000

**TABLE THREE**  
**Summary of Analytical Results for GROUNDWATER Samples**  
**Yee Property**  
**726 Harrison St., Oakland, CA**  
**All results are in parts per billion (ppb)**

Well ID & Dates Sampled	TPH-G	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE
<b>MW-2</b>						
12/5/98	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
3/4/99	Inaccessible due to car parked over well					
6/17/99	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
8/27/99	Inaccessible due to car parked over well					
12/9/99	Inaccessible due to car parked over well					
3/7/00	Inaccessible due to car parked over well					
6/7/00	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
10/11/00	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
1/18/01	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
4/5/01	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
7/17/01	No longer sampled					
7/10/06	< 50	< 0.50	< 0.50	< 0.50	< 1.0	4.5
10/16/07	< 50	< 0.50	< 0.50	< 0.50	< 1.0	< 0.5
1/26/07	< 50	0.55	1.0	< 0.50	1.4	0.97
4/18/07	< 50	1.5	2.6	0.93	3.2	0.64

**TABLE THREE**  
**Summary of Analytical Results for GROUNDWATER Samples**  
**Yee Property**  
**726 Harrison St., Oakland, CA**  
**All results are in parts per billion (ppb)**

Well ID & Dates Sampled	TPH-G	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE
<b>MW-3</b>						
12/5/98	6,500	< 50	50	60	502	3,900
3/4/99	2,800	< 25	< 25	< 25	< 25	1,600
6/17/99	1,000	< 10	< 10	< 10	< 10	1,400
8/27/99	230	< 0.5	0.51	0.5	1	1,500/ 1,600*
12/9/99	870**	< 0.5	< 0.5	< 0.5	< 0.5	2,100
3/7/00	150**	4	< 0.5	< 0.5	< 0.5	830
6/7/00	140**	< 0.5	< 0.5	< 0.5	< 0.5	1,100
10/11/00	620**	< 5.0	< 5.0	< 5.0	< 5.0	1,500
1/18/01	1,200**	< 5.0	< 5.0	< 5.0	< 5.0	1,000
4/5/01	1,700**	< 5.0	< 5.0	< 5.0	< 5.0	1,900
7/17/01	1,400**	< 10	< 10	< 10	< 10	1,700
10/5/01	< 1,000	< 10	< 10	< 10	< 10	1,700
1/18/02	1,600	26	20	16	54	2,100
4/11/02	2,600	21	16	< 10	21	2,300
7/8/02	2,800	< 10	< 10	< 10	< 10	3,800
10/9/02	6,000	< 50	< 50	< 50	< 50	4,900
1/29/03	1,800	< 10	< 10	< 10	< 10	2,300
4/11/03	2,900	< 25	< 25	< 25	< 25	3,100
7/18/03	3,400	< 10	< 10	< 10	< 10	3,200
10/9/03	2,300	< 10	< 10	< 10	< 10	2,700
1/28/03	1,700**	< 10	< 10	< 10	< 10	2,900
4/7/04	2,700**	< 10	< 10	< 10	< 20	3,600
7/23/04	4,200**	< 25	< 25	< 25	< 50	4,900
10/12/04	5,000**	< 50	< 50	< 50	< 100	5,900
1/29/05	< 1,000	< 10	< 10	< 10	< 20	3,100
4/28/05	< 200	< 2.0	< 2.0	< 2.0	< 2.0	1,300
7/19/05	4,400	< 20	< 20	< 20	< 40	3,000
10/18/05	18,000	< 50	< 50	< 50	< 50	6,800
1/24/06	17,000	< 100	< 100	< 100	< 200	7,000
4/12/06	< 200	< 2.0	< 2.0	< 2.0	< 2.0	7,800
7/10/06	11,000	< 100	< 100	< 100	< 200	12,000
10/16/06	< 10,000	< 100	< 100	< 100	< 100	17,000
1/26/07	< 200	< 2.0	< 2.0	< 2.0	< 2.0	4,000
4/18/07	< 900	< 9.0	< 9.0	< 9.0	< 9.0	11,000

**TABLE THREE**  
**Summary of Analytical Results for GROUNDWATER Samples**  
**Yee Property**  
**726 Harrison St., Oakland, CA**  
**All results are in parts per billion (ppb)**

Well ID & Dates Sampled	TPH-G	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE
<b>MW-4</b>						
12/5/98	880	3	< 0.5	< 0.5	< 0.5	950
3/4/99	3,800	< 25	< 25	< 25	< 25	3,700
6/17/99	2,700	< 25	< 25	< 25	< 25	2,700
8/27/99	440	4.7	1.1	0.58	1.3	1,600/ 1,700*
12/9/99	1,100**	< 2.5	< 2.5	< 2.5	< 2.5	1,700
3/7/00	< 250	< 2.5	< 2.5	< 2.5	< 2.5	1,700
6/7/00	530**	8.8	< 2.5	< 2.5	< 2.5	440
10/11/00	700**	3.9	< 2.5	< 2.5	< 2.5	680
1/18/01	2,000**	< 2.5	< 2.5	< 2.5	< 2.5	780
4/5/01	810**	< 2.5	< 2.5	< 2.5	< 2.5	620
7/17/01	880**	< 2.5	< 2.5	< 2.5	< 2.5	570
10/5/01	550**	< 2.5	< 2.5	< 2.5	< 2.5	710
1/18/02	960**	< 5.0	< 5.0	< 5.0	< 5.0	1,300
4/11/02	1,100**	< 5.0	< 5.0	< 5.0	< 5.0	550
7/8/02	1,200**	< 5.0	< 5.0	< 5.0	< 5.0	890
10/9/02	1,300**	< 5.0	< 5.0	< 5.0	< 5.0	880
1/29/03	530**	< 1.0	< 1.0	< 1.0	< 1.0	190
4/11/03	690**	< 2.5	< 2.5	< 2.5	< 2.5	310
7/18/03	1,600**	< 10	< 10	< 10	< 10	1,300
10/9/03	1500***	< 10	< 10	< 10	< 10	1,400
1/28/04	1,200**	< 10	< 10	< 10	< 10	1,900
4/7/04	1,900**	< 10	< 10	< 10	< 20	2,200
7/23/04	1,800**	< 10	< 10	< 10	< 20	1,600
10/12/04	Inaccessible due to car parked over well					
1/29/05	< 1,300	< 13	< 13	< 13	< 25	3,900
4/28/05	510	< 1.5	< 1.5	< 1.5	< 1.5	510
7/19/05	5,400	< 50	< 50	< 50	< 100	2,700
10/18/05	10,000	< 50	< 50	< 50	< 50	9,000
1/24/06	10,000	< 100	< 100	< 100	< 200	8,300
4/12/06	1,900	< 10	< 10	< 10	< 20	2,200
7/10/06	750	5.4	< 5.0	< 5.0	< 10	790
10/16/06	2,400	< 10	< 10	< 10	< 10	2,200
1/26/07	250	< 1.5	< 1.5	< 1.5	< 1.5	7,000
4/18/07	< 400	< 4.0	< 4.0	< 4.0	< 4.0	2,300

**TABLE THREE**  
**Summary of Analytical Results for GROUNDWATER Samples**  
**Yee Property**  
**726 Harrison St., Oakland, CA**  
**All results are in parts per billion (ppb)**

Well ID & Dates Sampled	TPH-G	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE
<b>MW-5</b>						
8/29/01	14,000	1,300	470	230	800	14,000
1/18/02	24,000	3,200	1,300	390	1,500	5,700
4/11/02	23,000	2,700	980	38	950	4,300
7/8/02	19,000	3,300	25	360	1,100	2,100
10/9/02	24,000	2,800	990	360	820	2,400
1/29/03	17,000	2,100	1,400	380	1,400	< 250
4/11/03	26,000	2,900	2,200	590	2,200	630
7/18/03	26,000	3,500	1,700	480	1,300	1,300
10/9/03	27,000	3,800	1,900	510	1,700	1,200
1/28/04	29,000	4,800	2,900	770	2,300	3,300
4/7/04	23,000	4,400	2,700	720	2,200	1,700
7/23/04	29,000	5,200	2,200	810	1,400	2,200
10/12/04	26,000	4,300	2,000	670	1,300	2,200
7/18/03	8,200	650	77	99	140	4,300
10/9/03	5,700**	500	28	53	35	3,600
1/28/04	17,000***	1,600	90	250	280	9,700
4/7/04	No longer sampled					
1/24/06	21,000	1,800	1,200	270	820	13,000
7/10/06	45,000	3,700	2,600	650	1,800	23,000
10/16/06	66,000	4,200	3,300	800	2,100	35,000
1/26/07	30,000	3,200	2,600	610	2,400	38,000
4/18/07	30,000	4,300	3,300	800	2,600	27,000
<b>ESL</b>	<b>100</b>	<b>1</b>	<b>40</b>	<b>30</b>	<b>20</b>	<b>5</b>

**Notes:**

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

\*\* Hydrocarbon reported in the gasoline range does not match the laboratory gasoline standard

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

ESL = Environmental screening levels presented in the "Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (July 2003)" document prepared by the California Regional Water Quality Control Board, San Francisco Bay Region.

Most current data is in **Bold**

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



**CONESTOGA-ROVERS  
& ASSOCIATES**

Second Quarter 2007 Monitoring Report  
706 Harrison Street, Oakland  
www.CRAworld.com FLC #RO0000484  
June 11, 2007

## APPENDIX E

### *Regulatory Correspondence*

January 24, 2007

Ms. Donna Drogos  
Alameda County Environmental Health Services  
UST Local Oversight Program  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502-6577  
510/567-6721

Re: **Request for Approval for Onsite Characterization and  
ACEH Pursuit of Remediation at Upgradient Site**  
Former ARCO Service Station  
706 Harrison Street, Oakland, California 94607  
STID 3749; Fuel Leak Case #RO0000484, Cambria Project #230-0116



Dear Ms. Drogos:

Yesterday I received a call from Mr. Don Hwang stating that he will no longer act as the site manager for Alameda County Environmental Health on the 706 Harrison site, Fuel Leak Case #RO0000484. He asked that I contact you.

We ask that you please address two issues as soon as you can. Attached are correspondences previously sent to Mr. Hwang. Specifically:

- Please approve our recommendation to perform on-site characterization. We will then provide your office with a *Work Plan for Onsite Characterization*. We would like to determine if a source of contamination currently exists at the site.
- Please diligently pursue active remediation at the upgradient site, located at 726 Harrison, Fuel Leak Case #RO0000321. See the attached October 7, 2005 ACEH letter requiring a remediation pilot study. Apparently, Mr. Chan is under the mistaken assumption that he is not required to remediate his site, in contradiction to previous ACEH correspondence.

The 706 Harrison project has been on-going for quite some time and our client and Cambria want to get this site closed as soon as possible. Your support in this effort is greatly appreciated. Please approve our request for on-site characterization via e-mail ([mjonas@cambria-env.com](mailto:mjonas@cambria-env.com)), letter, or by telephone (510/420-3307).

Thank you for your time and consideration.

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

Mark Jonas, P.G.  
Senior Project Manager

Cambria  
Environmental  
Technology, Inc.

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

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



Jonas, Mark

---

**From:** Jonas, Mark  
**Sent:** Friday, January 12, 2007 3:34 PM  
**To:** 'Don Hwang (don.hwang@acgov.org)'  
**Subject:** Request for Onsite Characterization - Bo Gin RO0000484  
**Attachments:** Letter Cambria - ACEH 1-12-07.pdf

Dear Mr. Hwang:

Attached is a letter requesting approval of our recommendation to perform onsite characterization under a Work Plan for the Bo Gin site.

Please provide your approval for the Work Plan for Onsite Characterization.

Sincerely,

*Mark Jonas*

Mark Jonas, P.G.

Senior Project Manager, x-107

**Cambria Environmental Technology, Inc.**

5900 Hollis Street, Suite A, Emeryville, California 94608

510/420-3307; 510/420-9170 fax

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1/24/2007

**Jonas, Mark**

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**From:** Jonas, Mark  
**Sent:** Monday, January 22, 2007 1:09 PM  
**To:** 'Don Hwang (don.hwang@acgov.org)'  
**Subject:** Request for Authorization for Onsite Characterization - Bo Gin RO0000484

Dear Don:  
I hope all is going well with you. I had called and left a message.

In summary, we request to perform additional onsite characterization at the Bo Gin site located at 706 Harrison Street, in Oakland, California. This should help to determine if an on-going source currently exists. We request your authorization to meet the requirement for reimbursement under the UST Fund. After we receive your authorization, we will present an Onsite Characterization Work Plan.

Please authorize onsite characterization for the Bo Gin site, Fuel Leak Case #RO0000484.

Sincerely,

*Mark Jonas*

Mark Jonas, P.G.  
Senior Project Manager, x-107  
**Cambria Environmental Technology, Inc.**  
5900 Hollis Street, Suite A, Emeryville, California 94608  
510/420-3307; 510/420-9170 fax

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C A M B R I A

January 12, 2007

-- sent via e-mail --

Mr. Don Hwang  
Alameda County Environmental Health Services  
UST Local Oversight Program  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502-6577  
510/567-6746

Re: **Request for Approval of Onsite Characterization**  
Former ARCO Service Station  
706 Harrison Street  
Oakland, California 94607  
STID 3749; Fuel Leak Case RO0000484  
Cambria Project #230-0116



Dear Mr. Hwang:

On behalf of Mr. Bo K. Gin, Cambria Environmental Technology, Inc. recommends that more current onsite soil characterization be performed at the subject site. Our rationale is to collect information necessary to evaluate current risk, remediation, and closure. Please provide your approval for us to provide you with a Work Plan for Onsite Characterization.

Also, please provide a status report on remediation of the upgradient site located at 726 Harrison Street.

If you would like to discuss this or any other issue, please contact Mark Jonas at (510) 420-3307 or at [mjonas@cambria-env.com](mailto:mjonas@cambria-env.com).

Thank you for your time and consideration.

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

Mark Jonas, P.G.  
Senior Project Manager

Cambria  
Environmental  
Technology, Inc.

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

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

**Jonas, Mark**

---

**From:** Jonas, Mark  
**Sent:** Thursday, December 21, 2006 4:08 PM  
**To:** 'Don Hwang (don.hwang@acgov.org)'  
**Subject:** Status of Remediation at 726 Harrison?  
**Attachments:** 10-7-05 ACEH Letter 726 Harrison.pdf

Dear Don:

Attached is the October 7, 2005 letter from ACEH concerning remediation at the 726 Harrison Street site. This site is adjacent to our client's site at 706 Harrison Street. What is the current status of active remediation at the 726 Harrison site?

Sincerely,

*Mark Jonas*

Mark Jonas, P.G.

Senior Project Manager, x-107

**Cambria Environmental Technology, Inc.**

5900 Hollis Street, Suite A, Emeryville, California 94608

510/420-3307; 510/420-9170 fax

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1/24/2007

ALAMEDA COUNTY  
HEALTH CARE SERVICES

AGENCY  
DAVID J. KEARS, Agency Director



ENVIRONMENTAL HEALTH SERVICES  
ENVIRONMENTAL PROTECTION  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502-6577  
(510) 567-6700  
FAX (510) 337-9335

October 7, 2005

Mr. Peter Yee  
1000 San Antonio Avenue  
Alameda, CA 94501

OCT 12 2005

Kin Chan  
4328 Edgewood Avenue  
Oakland, CA 94602-1316

Subject: Fuel Leak Case No. RO0000321, Chan Service Station, 726 Harrison Street, Oakland, CA

Dear Mr. Yee and Mr. Chan:

Alameda County Environmental Health (ACEH) staff has reviewed the fuel leak case file for the above-referenced site, including the most recent report entitled, "Quarterly Groundwater Monitoring Report, April 2005 Groundwater Sampling" dated July 12, 2005 and prepared on your behalf by Aqua Science Engineers, Inc. ACEH is concerned with the elevated concentrations of fuel hydrocarbons in soil and groundwater at your site and the lack of progress that you have made towards site cleanup. A chemical oxidation pilot test was proposed by your consultant, Aqua Science Engineers, in a work plan dated May 23, 2003 and supplemented by a work plan addendum dated June 15, 2003. ACEH approved the work plan in correspondence dated August 12, 2003. To date, that pilot study has not been started and no cleanup has been conducted at your site. ACEH has repeatedly requested in the correspondence listed below that you initiate this work and submit the required technical reports:

- December 11, 2003 - ACEH correspondence requesting that the pilot study be initiated by September 15, 2003 and that reports be submitted 30 days after the conclusion of the test.
- April 6, 2004 - Notice of Violation. ACEH correspondence informing you that your site is out of compliance and requesting that the results of the pilot test be submitted by June 10, 2004.
- July 26, 2004 - ACEH correspondence requesting that the pilot study be initiated by September 24, 2004 and that reports be submitted 30 days after the conclusion of the test.
- March 21, 2005 - ACEH correspondence requesting that the pilot study be initiated by September 24, 2004 and that reports be submitted 30 days after the conclusion of the test.

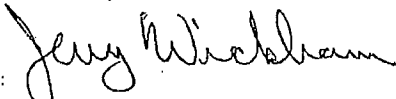
No extensions of due dates or approval of delays have been granted by this office. Therefore, your site is out of compliance with ACEH directives. We are providing a copy of this letter to the Underground Storage Tank Fund. Please note that delays in investigation, late reports, or enforcement actions may result in your site becoming ineligible to receive grant money from the state's Underground Storage Tank Fund (Senate Bill 2004) to reimburse you for the cost of

Peter Yee  
Kin Chan  
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cleanup. In addition, we may refer your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 25299.76 authorizes enforcement including administrative action or monetary penalties of up to \$10,000 per day for each day of violation

We request that you immediately provide this office with notice of your intent to initiate the approved work plan. If you have any questions, please call me at (510) 567-6791.

Sincerely,



Jerry Wickham  
Hazardous Materials Specialist

cc: Sunil Ramdass, SWRCB Cleanup Fund, 1001 I Street, 17<sup>th</sup> floor, Sacramento, CA 95814-2828  
Susan D. Barba, 242 California Avenue, San Leandro, CA. 94526  
Robert Kitay, Aqua Science Engineers, Inc., 208 W. El Pintado, Danville, CA 94526  
Matt Meyers, Cambria Environmental Technology, Inc., 5900 Hollis Street, Suite A, Emeryville, CA 94608

Donna Drogos, ACEH  
Jerry Wickham, ACEH  
File