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## **GROUNDWATER MONITORING REPORT - FOURTH QUARTER 2008**

**GATZKE / HOOSHI'S AUTO SERVICE  
1499 MACARTHUR BOULEVARD  
OAKLAND, CALIFORNIA 94602**

**AGENCY CASE NO. RO0000516**

**JANUARY 15, 2009  
REF. NO. 120741 (2)**

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**Prepared by:  
Conestoga-Rovers  
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## 1.0 INTRODUCTION

On behalf of Mrs. Naomi Gatzke, Conestoga-Rovers & Associates (CRA) is submitting this *Groundwater Monitoring Report – Fourth Quarter 2008* for the subject site. Presented are the fourth quarter 2008 groundwater monitoring activities and results and the anticipated first quarter 2009 activities.

Figure 1 is a vicinity map. Figure 2 is a recent groundwater elevation contour and hydrocarbon concentration map. Table 1 includes monitoring well construction details. Table 2 provides recent and historic groundwater level measurements, elevations, hydrochemical, and separate phase hydrocarbon (SPH) 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

### 1.1 SITE INFORMATION

<b>Site Address</b>	1499 MacArthur Boulevard, Oakland
<b>Site Use</b>	Auto Service Business
<b>Client and Contact</b>	Mrs. Naomi Gatzke
<b>Consultant and Contact Person</b>	CRA, Mark Jonas, P.G.
<b>Lead Agency and Contact Person</b>	Alameda County Environmental Health Mr. Jerry Wickham, P.G.
<b>Agency Case No.</b>	RO0000516

## **2.0 SITE ACTIVITIES AND RESULTS**

### **2.1 CURRENT QUARTER'S ACTIVITIES**

#### **2.1.1 FIELD ACTIVITIES**

On October 28, 2008, Muskan Environmental Sampling (MES) conducted quarterly monitoring and sampling activities. MES measured well water levels in all wells and collected groundwater samples for monitoring wells MW-1 through MW-6 (Figure 2). 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.

#### **2.1.2 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 TPHg by modified United States Environmental Protection Agency (EPA) Method SW8015C; and benzene, toluene, ethylbenzene, total xylenes (BTEX), and methyl tertiary butyl ether (MTBE) by EPA Method SW8021B. 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.

## 2.2 CURRENT QUARTER'S RESULTS

<b>Groundwater Flow Direction</b>	Southwest
<b>Hydraulic Gradient</b>	0.14
<b>Range of Measured Water Depth from Top of Casing in Monitoring Wells</b>	8.29 to 11.90 feet
<b>Were Measureable Separate Phase Hydrocarbons Observed</b>	No

Based on depth-to-water measurements collected during the monitoring event on October 28, 2008, groundwater appears to generally flow towards the southwest with an apparent gradient of 0.14 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.

Hydrocarbons were detected in wells MW-1, MW-2, and MW-5. TPHg concentrations ranged from 120 micrograms per liter ( $\mu\text{g/L}$ ) to 36,000  $\mu\text{g/L}$ . The highest concentration of TPHg was detected in monitoring well MW-5. BTEX was detected in well MW-2 at concentrations of 550  $\mu\text{g/L}$ , 140  $\mu\text{g/L}$ , 810  $\mu\text{g/L}$ , and 1,600  $\mu\text{g/L}$  respectively. BTEX was detected in well MW-5 at concentrations of 270  $\mu\text{g/L}$ , 780  $\mu\text{g/L}$ , 530  $\mu\text{g/L}$ , and 4,600  $\mu\text{g/L}$  respectively. Only TPHg (120  $\mu\text{g/L}$ ) and benzene (0.59  $\mu\text{g/L}$ ) were detected in well MW-1. No MTBE was detected in any of the wells this quarter.

## 2.3 PROPOSED ACTIVITIES FOR NEXT QUARTER

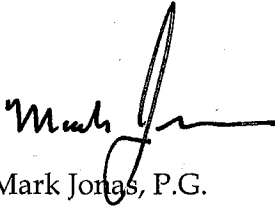
During the first quarter 2009, CRA will measure water levels in all wells and collect groundwater samples from monitoring wells MW-1, MW-2, and MW-5. Based on the sampling schedule, monitoring wells MW-1, MW-2, and MW-5 are sampled on a quarterly basis and monitoring wells MW-3, MW-4, and MW-6 are sampled on an annual basis during the fourth quarter. Groundwater samples will be analyzed for TPHg by modified EPA Method SW8015C and for BTEX and MTBE by EPA Method SW8021B. CRA will then prepare a groundwater monitoring report summarizing the monitoring activities and results.

A December 2008 Work Plan was submitted to ACEH for additional characterization. The Work Plan will be implemented after ACEH approves the scope of work.

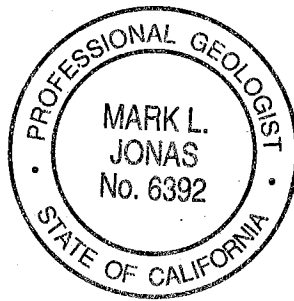
All of Which is Respectfully Submitted,  
CONESTOGA-ROVERS & ASSOCIATES



Michael Werner



Mark Jonas, P.G.



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## FIGURES



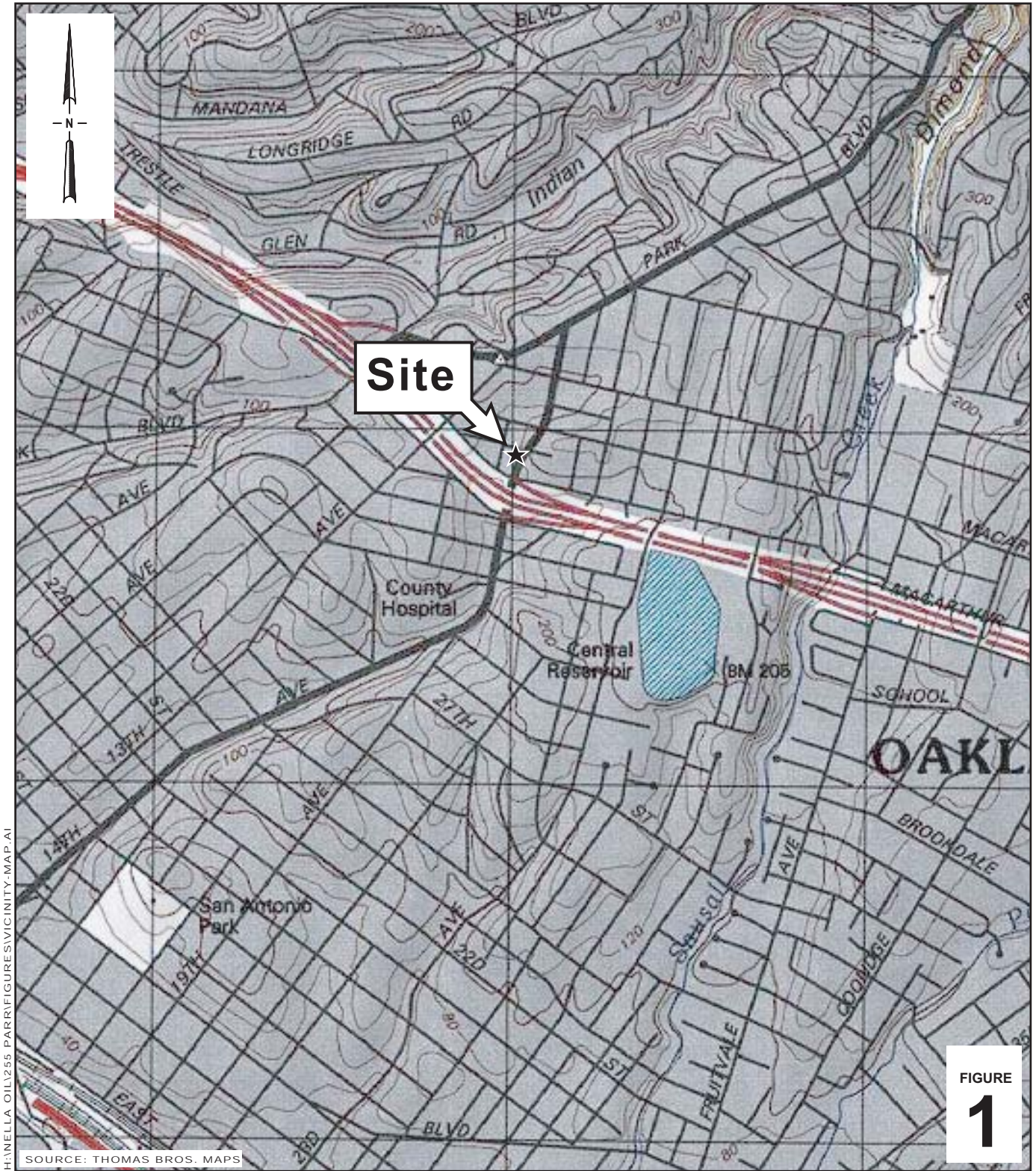


FIGURE  
**1**

H:\NELLA\_OIL\255\_PARR\FIGURES\VICINITY\_MAP.A1

SOURCE: THOMAS BROS. MAPS

0 1/8 1/4 1/2 1  
SCALE : 1" = 1/4 MILE

### Hooshi's Auto Service

1499 MacArthur Boulevard  
Oakland, California



**CONESTOGA-ROVERS  
& ASSOCIATES**

### Vicinity Map

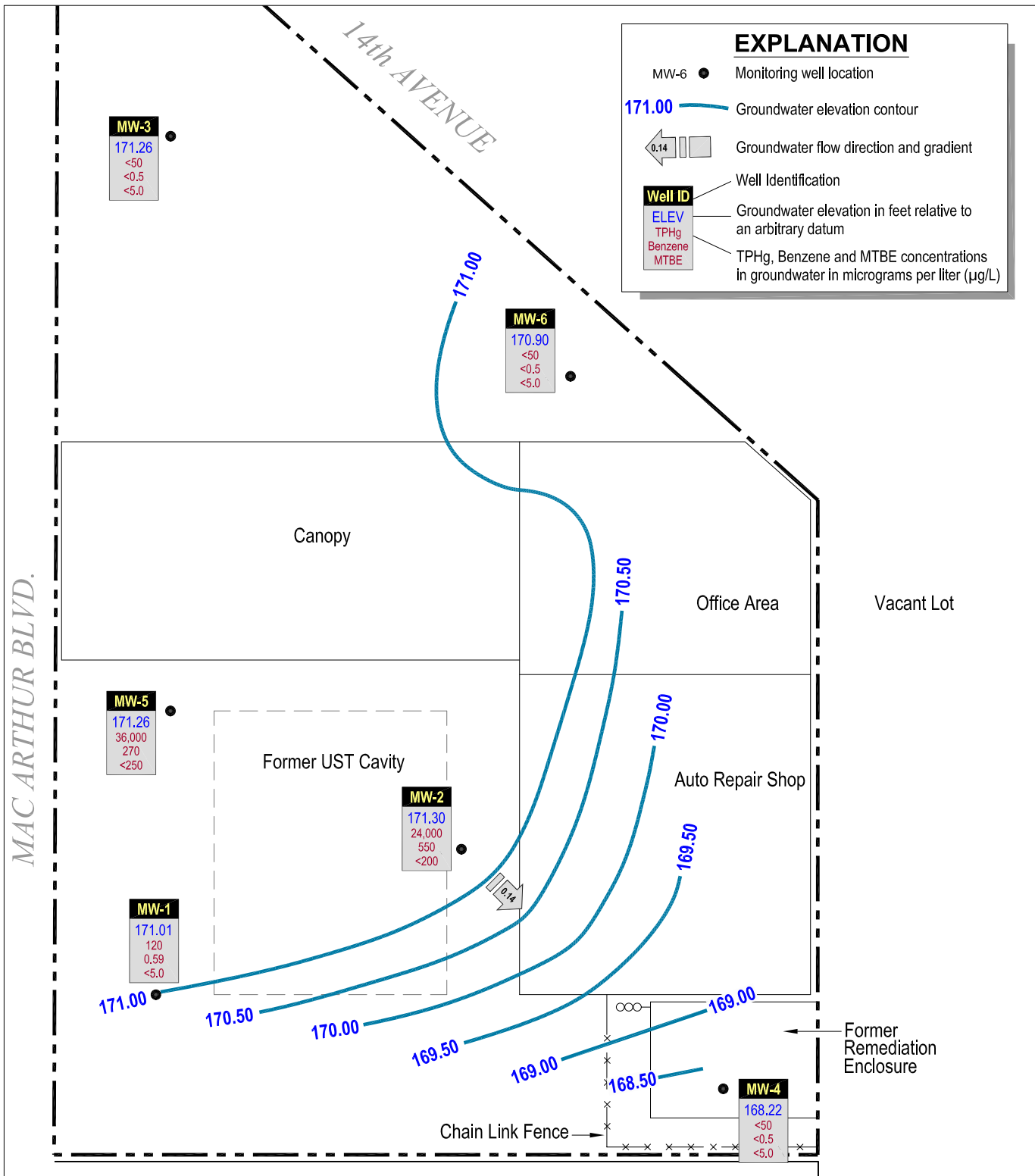
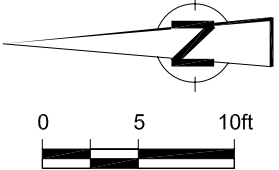


Figure 2

**GROUNDWATER ELEVATION CONTOUR AND  
HYDROCARBON CONCENTRATION MAP  
HOOSHI'S AUTO SERVICE  
1499 MacARTHUR BOULEVARD  
Oakland, California  
October 28, 2008**



## TABLES

TABLE 1

**MONITORING WELL CONSTRUCTION DETAILS**  
**GATZKE / HOOSHI'S AUTO SERVICE**  
**1499 MACARTHUR BOULEVARD, OAKLAND, CALIFORNIA**

<i>Well ID</i>	<i>Former ID</i>	<i>Date Installed</i>	<i>Date Destroyed</i>	<i>Borehole diameter (in)</i>	<i>Depth of borehole (ft)</i>	<i>Casing diameter (in)</i>	<i>Screened interval (ft bgs)</i>	<i>Filter Pack (ft bgs)</i>	<i>Bentonite seal (ft bgs)</i>	<i>Cement (ft bgs)</i>	<i>TOC elevation (ft above msl)</i>
MW-1	B1	1/7/1993	--		20*	2					180.83
MW-2	B2	1/7/1993	--		20*	2					180.24
MW-3	B3	1/7/1993	--		20*	2					179.55
MW-4	--	6/27/1996	--		20	2	4.5 - 19	3.5 - 19	2.5 - 3.5	1 - 2.5	180.12
MW-5	--	6/27/1996	--		20	2	4.5 - 19	3.5 - 19	2.5 - 3.5	1 - 2.5	180.09
MW-6	--	6/27/1996	--		20	2	4.5 - 19	3.5 - 19	2.5 - 3.5	1 - 2.5	179.63

**Abbreviations / Notes**

ft = feet

in = inches

ft bgs = feet below grade surface

ft above msl = feet above mean sea level

TOC = top of casing

Elevations surveyed by Virgil Chavez Land Surveying.

\* = Depth assume by downhole measurement.

**GROUNDWATER ELEVATION AND ANALYTICAL DATA  
GATZKE / HOOSHI'S AUTO SERVICE  
1499 MACARTHUR BOULEVARD, OAKLAND, CALIFORNIA**

Well ID	Date	TOC Depth to Groundwater (ft)	Groundwater Elevation (ft msl**)	SPH Thickness (ft)	TPHg	Benzene	Toluene	Ethylbenzene (µg/L)	Xylenes	MTBE
<i>2006 Grab Groundwater Analytical Data</i>										
B-1*	12/21/2006	--	--	--	13,000	37 / 28	32 / ND<17	380 / 520	1,100 / 1,300	ND<17
B-2*	12/21/2006	--	--	--	40,000	1,100 / 1,100	1,300 / 1,300	990 / 840	6,400 / 5,900	ND<50
B-3*	12/21/2006	--	--	--	300	1.9 / 3.2	1.0 / 0.98	0.76 / 1.4	0.62 / 1.2	ND<0.5
B-4*	12/21/2006	--	--	--	7,600	110 / 87	32 / 22	470 / 520	520 / 450	ND<10
B-5*	12/22/2006	--	--	--	72,000	-- / 850	-- / 3,100	-- / 2,800	-- / 16,000	ND<100
<i>Monitoring Well Groundwater Analytical Data</i>										
MW-1	1/4/1993	--	--	--	539	130	12	22	13	--
181.00	4/22/1993	--	--	--	1,130	75	8.0	38	11	--
	12/27/1994	--	--	--	770	22	6.6	14	21	--
	6/27/1996	14.11	166.89	--	3,300	260	34	59	170	80
	12/10/1996	13.71	167.29	--	1,500	84	11	22	32	34
	5/8/1998	13.85	167.15	--	3,200	300	12	62	36	ND<120
	8/17/1998	14.11	166.89	--	1,700	160	18	32	27	39
	11/4/1998	14.28	166.72	--	1,100	11	4.3	3.6	6.5	ND<50
	2/17/1999	13.41	167.59	--	320	200	47	72	75	57
	5/27/1999	14.16	166.84	--	2,500	81	12	29	41	ND<80
	8/19/1999	14.18	166.82	--	780	19	ND<0.5	5.7	4.5	28
180.83	11/23/1999	14.43	166.40	--	1,300	24	0.64	1.8	3.3	ND<100
	2/17/2000	13.85	166.98	--	1,300	60	9.1	22	19	22/16
	5/9/2000	14.01	166.82	--	2,700	55	13	19	25	34/29
	8/15/2000	14.24	166.59	--	--	--	--	--	--	--
	12/1/2000	8.75	172.08	--	480	6.4	5.9	1.1	3.9	18 (21)
180.63	2/8/2001	8.49	172.14	--	64	ND<0.5	ND<0.5	ND<0.5	ND<0.5	6.1/5.6
	4/9/2001	8.71	171.92	--	--	--	--	--	--	--
	4/24/2001	7.90	172.73	--	77	ND<0.5	ND<0.5	ND<0.5	ND<0.5	5.6/3.7
	8/6/2001	8.83	171.80	--	140	1.7	0.55	ND<0.5	0.63	5.8/4.0
	10/22/2001	8.91	171.72	--	120	0.92	ND<0.5	ND<0.5	0.59	11(10)
	2/1/2002	8.15	172.48	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	4/19/2002	8.63	172.00	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	7/16/2002	8.79	171.84	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	10/3/2002	8.90	171.73	--	110	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	1/10/2003	7.93	172.70	--	ND<50	ND<0.5	0.74	ND<0.5	ND<0.5	ND<5.0
	4/21/2003	8.17	172.46	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	7/9/2003	8.92	171.71	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	10/7/2003	9.13	171.50	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	1/22/2004	8.20	172.43	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	4/2/2004	7.09	173.54	--	110	0.52	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	12/29/2004	6.15	174.48	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	1/27/2005	7.15	173.48	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0
	4/6/2005	6.84	173.79	--	140	ND<0.5	0.55	ND<0.5	0.70	ND<5.0
	7/28/2005	7.36	173.27	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	10/14/2005	7.51	173.12	--	220	1.2	ND<0.5	0.56	0.75	ND<5.0
1/30/2006	6.80	173.83	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
4/11/2006	6.60	174.03	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
7/14/2006	7.53	173.10	--	170	0.65	0.60	ND<0.5	ND<0.5	ND<5.0	
10/13/2006	7.47	173.16	--	200	0.93	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
1/12/2007	7.40	173.23	--	92	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
4/20/2007	7.14	173.49	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	

**GROUNDWATER ELEVATION AND ANALYTICAL DATA  
GATZKE / HOOSHI'S AUTO SERVICE  
1499 MACARTHUR BOULEVARD, OAKLAND, CALIFORNIA**

Well ID TOC (ft*)	Date	TOC Depth to	Groundwater	SPH Thickness (ft)	TPHg	Benzene	Toluene	Ethylbenzene (µg/L)	Xylenes	MTBE
		Groundwater (ft)	Elevation (ft msl**)							
MW-1 cont'd	7/30/2007	7.81	172.82	--	130	0.52	ND<0.5	ND<0.5	0.61	ND<10
	10/24/2007	8.15	172.48	--	150	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	1/15/2008	7.79	172.84	--	86	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	4/17/2008	8.64	171.99	--	100	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	7/9/2008	9.09	171.54	--	140	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	<b>10/28/2008</b>	<b>9.62</b>	<b>171.01</b>	--	<b>120</b>	<b>0.59</b>	<b>ND&lt;0.5</b>	<b>ND&lt;0.5</b>	<b>ND&lt;0.5</b>	<b>ND&lt;0.5</b>
MW-2	1/4/1993	--	--	--	149,000	21,700	25,000	ND	7,760	--
180.45	4/22/1993	--	--	--	136,300	9,900	15,870	15,300	2,190	--
	12/27/1994	--	--	--	94,000	11,000	18,000	2,700	16,000	--
	6/27/1996	12.61	168.64	1.00	--	--	--	--	--	--
	12/10/1996	11.10	169.55	0.25	--	--	--	--	--	--
	5/8/1998	10.81	169.66	0.03	--	--	--	--	--	--
	8/17/1998	12.16	168.31	0.02	--	--	--	--	--	--
	11/4/1998	12.61	167.86	0.02	--	--	--	--	--	--
	2/17/1999	9.82	170.66	0.04	--	--	--	--	--	--
	5/27/1999	11.07	169.48	0.13	--	--	--	--	--	--
	8/19/1999	12.79	167.68	0.02	--	--	--	--	--	--
180.24	11/23/1999	12.14	168.20	0.12	--	--	--	--	--	--
	2/17/2000	10.01	170.37	0.18	--	--	--	--	--	--
	5/9/2000	10.88	169.38	0.03	--	--	--	--	--	--
	8/15/2000	12.28	167.97	0.01	--	--	--	--	--	--
	12/1/2000	8.03	172.21	Sheen <sup>Field</sup>	260,000	1,100	5,000	1,900	17,000	ND<100
	2/8/2001	7.86	172.38	Sheen <sup>Field</sup>	2,900	1.7	14	5.0	140	ND<5.0
	4/9/2001	7.95	172.29	Sheen <sup>Field</sup>	--	--	--	--	--	--
	4/24/2001	6.90	173.34	Sheen <sup>Lab</sup>	56,000	360	980	1,000	4,700	ND<5.0
	8/6/2001	8.15	172.09	Sheen <sup>Field &amp; Lab</sup>	54,000	680	1,900	1,500	7,800	ND<200/ND<10
	10/22/2001	8.22	172.02	Sheen <sup>Field &amp; Lab</sup>	32,000	420	770	1,100	4,100	ND<250
	2/1/2002	8.07	172.17	--	26,000	310	490	920	1,600	ND<1,000
	4/19/2002	8.60	171.64	--	16,000	300	240	1,000	990	ND<100
	7/16/2002	8.21	172.03	--	5,700	120	18	340	15	ND<50
	10/3/2002	8.14	172.10	--	4,400	44	16	68	20	ND<25
	1/10/2003	6.98	173.26	Sheen <sup>Lab</sup>	16,000	300	320	580	830	ND<100
	4/21/2003	7.25	172.99	--	12,000	350	260	610	380	ND<50
	7/9/2003	7.99	172.25	--	3,300	51	7.4	47	2.8	ND<17
10/7/2003	8.21	172.03	--	2,400	93	11	34	22	ND<50	
1/22/2004	7.24	173.00	--	5,900	240	130	350	200	ND<50	
4/2/2004	6.29	173.95	--	37,000	840	1,500	1,300	5,900	ND<500	
12/29/2004	5.37	174.87	--	9,300	240	230	330	880	ND<50	
1/27/2005	6.38	173.86	Sheen <sup>Field</sup>	37,000	1,200	1,400	1,300	5,200	<250	
4/6/2005	5.88	174.36	--	21,000	400	340	780	1,700	ND<100	
7/28/2005	6.61	173.63	--	35,000	690	1,200	1,200	5,200	ND<500	
10/14/2005	6.80	173.44	Sheen <sup>Field &amp; Lab</sup>	14,000	380	120	780	1,200	ND<100	
1/30/2006	5.91	174.33	Sheen <sup>Field &amp; Lab</sup>	22,000	310	140	1,300	2,800	ND<50	
4/11/2006	5.65	174.59	Sheen <sup>Field &amp; Lab</sup>	18,000	280	170	780	1,400	ND<250	
7/14/2006	6.76	173.48	Sheen <sup>Field &amp; Lab</sup>	49,000	340	140	1,600	4,800	ND<500	
10/13/2006	6.74	173.50	Sheen <sup>Field &amp; Lab</sup>	21,000	490	73	600	1,100	ND<110	
1/12/2007	6.55	173.69	Sheen <sup>Field</sup>	16,000	320	170	600	2,100	ND<250	
4/20/2007	6.39	173.85	Sheen <sup>Field &amp; Lab</sup>	15,000	340	160	420	1,700	ND<120	



**GROUNDWATER ELEVATION AND ANALYTICAL DATA  
GATZKE/HOOSHI'S AUTO SERVICE  
1499 MACARTHUR BOULEVARD, OAKLAND, CALIFORNIA**

Well ID TOC (ft*)	Date	TOC Depth to	Groundwater	SPH Thickness (ft)	TPHg	Benzene	Toluene	Ethylbenzene (µg/L)	Xylenes	MTBE
		Groundwater (ft)	Elevation (ft msl**)							
MW-2 cont'd	7/30/2007	7.09	173.15	Sheen <sup>Field</sup>	17,000	430	170	740	2,100	ND<100
	10/24/2007	7.40	172.84	Sheen <sup>Field &amp; Lab</sup>	14,000	370	40	240	490	ND<100 (8.3)
	1/15/2008	6.90	173.34	Sheen <sup>Field</sup>	13,000	440	180	510	1,700	ND<250
	4/17/2008	7.89	172.35	Sheen <sup>Field</sup>	29,000	410	200	830	2,700	ND<130
	7/9/2008	8.39	171.85	Sheen <sup>Field</sup>	21,000	370	170	760	2,200	ND<120
	<b>10/28/2008</b>	<b>8.94</b>	<b>171.30</b>	<b>Sheen<sup>Field</sup></b>	<b>24,000</b>	<b>550</b>	<b>140</b>	<b>810</b>	<b>1,600</b>	<b>ND&lt;200</b>
	MW-3 179.94	1/4/1993	--	--	--	1,610	772	14	11	ND
	4/22/1993	--	--	--	3,040	980	34	19	16	--
	12/27/1994	--	--	--	2,600	180	9.0	7.2	13	--
	6/27/1996	13.20	166.74	--	2,000	22	2.9	11	7.4	56
	12/10/1996	13.13	166.81	--	970	ND<0.5	ND<0.5	ND<0.5	ND<0.5	24
	5/8/1998	13.03	166.91	--	780	3.7	2.1	1.1	2.4	ND<32
	8/17/1998	13.22	166.72	--	870	2.8	ND<0.5	ND<0.5	3.7	ND<5.0
	11/4/1998	13.31	166.63	--	770	1.6	4.4	2.0	6.9	ND<30
	2/17/1999	12.89	167.05	--	650	6.2	3.4	1.5	2.6	ND<5.0
	5/27/1999	12.32	167.62	--	570	1.5	1.2	0.72	1.1	ND<20
	8/19/1999	13.19	166.75	--	830	ND<0.5	1.9	ND<0.5	1.3	ND<20
179.55	11/23/1999	13.26	166.29	--	900	ND<0.5	1.8	0.56	1.4	ND<20
	2/17/2000	12.78	166.77	--	250	ND<0.5	1.5	ND<0.5	0.62	ND<5.0
	5/9/2000	12.92	166.63	--	690	ND<0.5	2.1	0.85	1.6	ND<5.0
	8/15/2000	13.19	166.36	--	610	ND<0.5	2.3	0.75	1.2	ND<5.0
	12/1/2000	7.50	172.05	--	120	ND<0.5	0.90	0.65	0.62	ND<5.0
	2/8/2001	7.20	172.35	--	87	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	4/9/2001	7.33	172.22	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	8/6/2001	7.61	171.94	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	10/22/2001	7.58	171.97	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	2/1/2002	7.53	172.02	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	8.5/8.5
	4/19/2002	7.95	171.60	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	9.0/11
	7/16/2002	7.68	171.87	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	20/30
	10/3/2002	7.78	171.77	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	1/10/2003	6.91	172.64	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	19/16
sampled annually	4/21/2003	7.21	172.34	--	--	--	--	--	--	--
	7/9/2003	8.05	171.50	--	--	--	--	--	--	--
	10/7/2003	8.19	171.36	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	1/22/2004	7.13	172.42	--	--	--	--	--	--	--
	4/2/2004	5.73	173.82	--	--	--	--	--	--	--
	12/29/2004	4.88	174.67	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	1/27/2005	5.80	173.75	--	--	--	--	--	--	--
	4/6/2005	5.49	174.06	--	--	--	--	--	--	--
	7/28/2005	6.02	173.53	--	--	--	--	--	--	--
	10/14/2005	6.11	173.44	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	1/30/2006	5.45	174.10	--	--	--	--	--	--	--
	4/11/2006	5.22	174.33	--	--	--	--	--	--	--
	7/14/2006	6.15	173.40	--	--	--	--	--	--	--
	10/13/2006	6.03	173.52	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	1/12/2007	5.98	173.57	--	--	--	--	--	--	--
	4/20/2007	5.76	173.79	--	--	--	--	--	--	--

**GROUNDWATER ELEVATION AND ANALYTICAL DATA  
GATZKE / HOOSHI'S AUTO SERVICE  
1499 MACARTHUR BOULEVARD, OAKLAND, CALIFORNIA**

Well ID TOC (ft*)	Date	TOC Depth to	Groundwater	SPH Thickness (ft)	TPHg ←	Benzene	Toluene	Ethylbenzene (µg/L)	Xylenes →	MTBE
		Groundwater (ft)	Elevation (ft msl**)							
	7/30/2007	6.44	173.11	--	--	--	--	--	--	--
	10/24/2007	6.82	172.73	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	1/15/2008	6.45	173.10	--	--	--	--	--	--	--
	4/17/2008	7.30	172.25	--	--	--	--	--	--	--
	7/8/2008	7.79	171.76	--	--	--	--	--	--	--
	<b>10/28/2008</b>	<b>8.29</b>	<b>171.26</b>	--	<b>ND&lt;50</b>	<b>ND&lt;0.5</b>	<b>ND&lt;0.5</b>	<b>ND&lt;0.5</b>	<b>ND&lt;0.5</b>	<b>ND&lt;5.0</b>
MW-4	6/27/1996	17.03	163.51	--	720	2	0.5	2.5	23	3.2
180.54	12/10/1996	8.50	172.04	--	80	2.4	ND<0.5	ND<0.5	6.6	ND<2.0
	5/8/1998	11.46	169.08	--	ND<50	0.60	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	8/17/1998	13.98	166.56	--	ND<50	ND<0.5	ND<0.5	ND<0.5	0.5	ND<5.0
	11/4/1998	14.36	166.18	--	96	9.7	8.1	4.8	18	ND<5.0
	2/17/1999	8.39	172.15	--	ND<50	ND<0.5	ND<0.5	ND<0.5	0.5	ND<5.0
	5/27/1999	12.80	167.74	--	ND<50	ND<0.5	1.0	ND<0.5	2.9	ND<5.0
	8/19/1999	14.42	166.12	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
180.12	11/23/1999	14.63	165.49	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	2/17/2000	8.15	171.97	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	5/9/2000	12.81	167.31	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	8/15/2000	14.29	165.83	--	ND<50	2.1	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	12/1/2000	12.80	167.32	--	81	6.0	8.4	1.0	5.6	ND<5.0
	2/8/2001	12.57	167.55	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	4/9/2001	12.50	167.62	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	8/6/2001	14.00	166.12	--	59	1.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	10/22/2001	14.05	166.07	--	130	6.3	ND<0.5	0.88	ND<0.5	ND<5.0
	2/1/2002	13.47	166.65	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	4/19/2002	13.55	166.57	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	7/16/2002	14.05	166.07	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	10/3/2002	13.09	167.03	--	77	2.1	0.51	ND<0.5	ND<0.5	ND<5.0
	1/10/2003	12.04	168.08	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	20/15
sampled annually	4/21/2003	12.15	167.97	--	--	--	--	--	--	--
	7/9/2003	12.90	167.22	--	--	--	--	--	--	--
	10/7/2003	13.15	166.97	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	1/22/2004	12.09	168.03	--	--	--	--	--	--	--
	4/2/2004	8.97	171.15	--	--	--	--	--	--	--
	12/29/2004	7.85	172.27	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	1/27/2005	8.28	171.84	--	--	--	--	--	--	--
	4/6/2005	8.07	172.05	--	--	--	--	--	--	--
	7/28/2005	10.83	169.29	--	--	--	--	--	--	--
	10/14/2005	11.49	168.63	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	1/30/2006	8.04	172.08	--	--	--	--	--	--	--
	4/11/2006	8.03	172.09	--	--	--	--	--	--	--
	7/14/2006	10.72	169.40	--	--	--	--	--	--	--
	10/13/2006	11.25	168.87	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	1/12/2007	8.89	171.23	--	--	--	--	--	--	--
	4/20/2007	9.22	170.90	--	--	--	--	--	--	--
	7/30/2007	11.29	168.83	--	--	--	--	--	--	--
	10/24/2007	10.08	170.04	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	1/15/2008	8.26	171.86	--	--	--	--	--	--	--



**GROUNDWATER ELEVATION AND ANALYTICAL DATA  
GATZKE / HOOSHI'S AUTO SERVICE  
1499 MACARTHUR BOULEVARD, OAKLAND, CALIFORNIA**

Well ID TOC (ft*)	Date	TOC Depth to Groundwater (ft)	Groundwater Elevation (ft msl**)	SPH Thickness (ft)	TPHg ←	Benzene	Toluene	Ethylbenzene (µg/L)	Xylenes	MTBE →
	4/17/2008	10.84	169.28	--	--	--	--	--	--	--
	7/9/2008	10.08	170.04	--	--	--	--	--	--	--
	<b>10/28/2008</b>	<b>11.90</b>	<b>168.22</b>	--	<b>ND&lt;50</b>	<b>ND&lt;0.5</b>	<b>ND&lt;0.5</b>	<b>ND&lt;0.5</b>	<b>ND&lt;0.5</b>	<b>ND&lt;5.0</b>
MW-5	6/27/1996	13.62	166.74	0.16	--	--	--	--	--	--
180.23	12/10/1996	13.26	167.77	1.00	--	--	--	--	--	--
	5/8/1998	13.15	167.11	0.04	--	--	--	--	--	--
	8/17/1998	13.36	166.89	0.02	--	--	--	--	--	--
MW-5 cont'd	11/4/1998	13.52	166.73	0.02	--	--	--	--	--	--
	2/17/1999	13.02	167.23	0.02	--	--	--	--	--	--
	5/27/1999	13.80	166.71	0.35	--	--	--	--	--	--
	8/19/1999	13.45	166.86	0.10	--	--	--	--	--	--
180.09	11/23/1999	14.03	166.35	0.36	--	--	--	--	--	--
	2/17/2000	13.28	167.02	0.26	--	--	--	--	--	--
	5/9/2000	13.55	166.77	0.29	--	--	--	--	--	--
	8/15/2000	13.58	166.54	0.04	--	--	--	--	--	--
	12/1/2000	8.00	172.09	0.00	54,000	240	1,700	870	1,000	ND<300
180.04	2/8/2001	7.88	172.16	Sheen <sup>Lab</sup>	33,000	63	420	120	4,500	ND<50
	4/9/2001	7.97	172.07	0.00	--	--	--	--	--	--
	4/24/2001	7.00	173.04	0.00	3,200	ND<1.0	11	7	260	ND<5.0
	8/6/2001	8.17	171.87	--	2,700	11	40	21	240	ND<5.0
	10/22/2001	8.15	171.89	Sheen <sup>Lab</sup>	20,000	200	1,200	330	2,900	ND<100
	2/1/2002	8.07	171.97	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	4/19/2002	8.51	171.53	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	7/16/2002	8.40	171.64	--	ND<50	ND<0.5	ND<0.5	ND<0.5	1.7	ND<5.0
	10/3/2002	8.18	171.86	--	15,000	94	830	460	2,200	ND<500
	1/10/2003	6.95	173.09	--	290	ND<0.5	1.8	ND<0.5	17	ND<5.0
	4/21/2003	7.18	172.86	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	7/9/2003	7.95	172.09	--	ND<50	ND<0.5	ND<0.5	ND<0.5	2.7	ND<5.0
	10/7/2003	8.22	171.82	--	9,800	120	340	180	2,000	ND<50
	1/22/2004	7.18	172.86	--	250	ND<0.5	0.82	ND<0.5	29	ND<5.0
	4/2/2004	6.23	173.81	--	4,300	6.3	18	59	750	ND<25
	12/29/2004	5.27	174.77	--	72	ND<0.5	0.78	ND<0.5	6.5	ND<5.0
	1/27/2005	6.25	173.79	--	3,300	<5.0	22	18	320	<50
	4/6/2005	5.90	174.14	Sheen <sup>Field</sup>	3,100	1.3	6.9	7.2	100	ND<10
	7/28/2005	6.50	173.54	--	18,000	53	230	130	2,100	ND<500
	10/14/2005	6.65	173.39	Sheen <sup>Field &amp; Lab</sup>	23,000	140	370	240	2,100	ND<500
	1/30/2006	5.96	174.08	Sheen <sup>Field &amp; Lab</sup>	2,500	1.0	8.7	ND<1.0	130	ND<10
	4/11/2006	5.63	174.41	Sheen <sup>Field</sup>	1,200	1.3	3.1	1.7	54	ND<5.0
	7/14/2006	6.65	173.39	Sheen <sup>Field &amp; Lab</sup>	13,000	27	66	30	480	ND<50
	10/13/2006	6.60	173.44	Sheen <sup>Field &amp; Lab</sup>	23,000	170	390	260	2,500	ND<250
	1/12/2007	6.50	173.54	Sheen <sup>Field &amp; Lab</sup>	17,000	72	130	70	1,600	ND<250
	4/20/2007	6.22	173.82	Sheen <sup>Field &amp; Lab</sup>	10,000	55	120	37	620	ND<50
	7/30/2007	6.95	173.09	Sheen <sup>Field</sup>	41,000	120	580	270	3,100	ND<250
	10/24/2007	7.27	172.77	Sheen <sup>Field &amp; Lab</sup>	31,000	210	440	300	2,500	ND<200 (ND<5.0)
	1/15/2008	6.89	173.15	Sheen <sup>Field &amp; Lab</sup>	14,000	87	120	39	1,400	ND<100
	4/17/2008	7.80	172.24	Sheen <sup>Field &amp; Lab</sup>	21,000	35	150	71	1,100	ND<80
	7/9/2008	8.24	171.80	Sheen <sup>Field &amp; Lab</sup>	30,000	130	600	290	4,000	ND<180

**GROUNDWATER ELEVATION AND ANALYTICAL DATA  
GATZKE / HOOSHI'S AUTO SERVICE  
1499 MACARTHUR BOULEVARD, OAKLAND, CALIFORNIA**

Well ID TOC (ft*)	Date	TOC Depth to Groundwater (ft)	Groundwater Elevation (ft msl**)	SPH Thickness (ft)	TPHg	Benzene	Toluene	Ethylbenzene (µg/L)	Xylenes	MTBE
	10/28/2008	8.78	171.26	Sheen <sup>Field &amp; Lab</sup>	36,000	270	780	530	4,600	ND<250
MW-6	6/27/1996	18.55	161.48	--	ND	ND	ND	ND	ND	--
180.03	12/10/1996	11.79	168.24	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.0
	5/8/1998	11.62	168.41	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	8/17/1998	12.66	167.37	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	11/4/1998	13.56	166.47	--	68	3.8	3.7	2.8	11	ND<5.0
	2/17/1999	12.91	167.12	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	5/27/1999	13.03	167.00	--	ND<50	1.0	1.7	0.82	4.9	ND<5.0
MW-6 cont'd	8/19/1999	13.10	166.93	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
179.63	11/23/1999	13.58	166.05	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	2/17/2000	10.72	168.91	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	5/9/2000	11.71	167.92	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	8/15/2000	12.49	167.14	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	12/1/2000	8.64	170.99	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	2/8/2001	8.20	171.43	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	4/9/2001	8.53	171.10	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	8/6/2001	8.69	170.94	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	10/22/2001	8.75	170.88	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	2/1/2002	8.31	171.32	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	4/19/2002	8.62	171.01	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	7/16/2002	8.84	170.79	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	10/3/2002	8.71	170.92	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	1/10/2003	6.99	172.64	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	19 (16)
sampled annually	4/21/2003	7.15	172.48	--	--	--	--	--	--	--
	7/9/2003	7.98	171.65	--	--	--	--	--	--	--
	10/7/2003	8.28	171.35	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	1/22/2004	7.15	172.48	--	--	--	--	--	--	--
	4/2/2004	6.56	173.07	--	--	--	--	--	--	--
	12/29/2004	5.63	174.00	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	1/27/2005	6.66	172.97	--	--	--	--	--	--	--
	4/6/2005	6.25	173.38	--	--	--	--	--	--	--
	7/28/2005	6.71	172.92	--	--	--	--	--	--	--
	10/14/2005	6.86	172.77	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	1/30/2006	6.35	173.28	--	--	--	--	--	--	--
	4/11/2006	5.89	173.74	--	--	--	--	--	--	--
	7/14/2006	6.80	172.83	--	--	--	--	--	--	--
	10/13/2006	6.75	172.88	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	1/12/2007	6.61	173.02	--	--	--	--	--	--	--
	4/20/2007	6.45	173.18	--	--	--	--	--	--	--
	7/30/2007	6.98	172.65	--	--	--	--	--	--	--
	10/24/2007	7.30	172.33	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	1/15/2008	6.93	172.70	--	--	--	--	--	--	--
	4/17/2008	7.78	171.85	--	--	--	--	--	--	--
	7/9/2008	8.22	171.41	--	--	--	--	--	--	--
	10/28/2008	8.73	170.90	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
Trip Blank	5/8/1998	--	--	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	11/4/1998	--	--	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	5/27/1999	--	--	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0

**GROUNDWATER ELEVATION AND ANALYTICAL DATA  
GATZKE / HOOSHI'S AUTO SERVICE  
1499 MACARTHUR BOULEVARD, OAKLAND, CALIFORNIA**

<i>Well ID</i>	<i>Date</i>	<i>TOC Depth to Groundwater</i>	<i>Groundwater Elevation</i>	<i>SPH Thickness</i>	<i>TPHg</i>	<i>Benzene</i>	<i>Toluene</i>	<i>Ethylbenzene</i>	<i>Xylenes</i>	<i>MTBE</i>
<i>TOC (ft*)</i>		<i>(ft)</i>	<i>(ft msl**)</i>	<i>(ft)</i>				<i>(µg/L)</i>		
	11/23/1999	--	--	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0
	12/1/2000	--	--	--	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0

Abbreviations and Methods:

TOC = Top of casing elevation

ft = Measured in feet

ft msl = elevation in feet mean sea level.

SPH = Separate phase hydrocarbons

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

Benzene, toluene, ethylbenzene, and xylenes by EPA Method SW8021B

MTBE = Methyl tertiary butyl ether by EPA Method SW8021B or SW8260B in parenthesis.

µg/L = Micrograms per liter

-- = Not sampled, not analyzed, not applicable, or no SPH measured or observed.

ND&lt;0.5 = Not Detected (ND) above Detection Limit.

x.x/y.y = Result of EPA Method SW8021B / Result of EPA Method SW8260B

TOC Depth to Groundwater = Groundwater depth measured in feet below TOC

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

Field = Observed in the field

Lab = Observed in analytical laboratory

\* = 2006 grab groundwater samples collected from 20 ft bgs.

\*\* = Calculated groundwater elevation corrected for SPH by the relation: Groundwater Elevation = Well Elevation - Depth to Water + (0.8xSPH thickness (ft))

\*\*\* = Due to the air sparge system running during sampling, samples collected on 4/9/01 were anomalous. Well was resampled on 4/24/01 with the air sparge system off.

Analytical Laboratory Notes:

a - Unmodified or weakly modified gasoline is significant.

b - Lighter than water immiscible sheen is present.

c - No recognizable pattern on laboratory chromatogram.

d - Heavier gasoline range compounds are significant (aged gasoline?).

f - One to a few isolated non-target peaks present on laboratory chromatogram.

i - Liquid sample contains greater than ~1 vol. % sediment

j - Sample diluted due to high organic content.

GROUNDWATER ELEVATION AND ANALYTICAL DATA  
GATZKE/HOOSHI'S AUTO SERVICE  
1499 MACARTHUR BOULEVARD, OAKLAND, CALIFORNIA

*Notes*

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a,i

a,i

a,i

a,i

a,b

a

a

a

a

a

a

a

a,b

a

a

a,c

c

a

a

f

a

c

a

a

a

c,i

GROUNDWATER ELEVATION AND ANALYTICAL DATA  
GATZKE/HOOSHI'S AUTO SERVICE  
1499 MACARTHUR BOULEVARD, OAKLAND, CALIFORNIA

*Notes*

---

a,c  
c  
c  
c  
c  
a

a  
c,d

a,b  
a,b,j  
a,b  
a  
a  
a  
a  
a,b  
a  
a  
a  
a  
a  
a  
a  
a  
a  
a  
a  
a, b  
a,b,i  
a,b,i  
a,b  
a,b,i  
a,i  
a,b

GROUNDWATER ELEVATION AND ANALYTICAL DATA  
GATZKE/HOOSHI'S AUTO SERVICE  
1499 MACARTHUR BOULEVARD, OAKLAND, CALIFORNIA

*Notes*

---

a

a,b

a,i

a

a

a

a

b,c

c

b,c

a

c,d

c,d

d

a

c,d

c,d

c,d

GROUNDWATER ELEVATION AND ANALYTICAL DATA  
GATZKE/HOOSHI'S AUTO SERVICE  
1499 MACARTHUR BOULEVARD, OAKLAND, CALIFORNIA

*Notes*

---

i

a

a

a

a

a

a

GROUNDWATER ELEVATION AND ANALYTICAL DATA  
GATZKE/HOOSHI'S AUTO SERVICE  
1499 MACARTHUR BOULEVARD, OAKLAND, CALIFORNIA

*Notes*

---

c,d

a,b

c,d

a

a,b

a

a

a

d

a

d

a

c,d

a

a, b

b,c,d

a

a,b

a,b

a,b,i

a,b

a

a,b,j

a,b

a,b

a,b



GROUNDWATER ELEVATION AND ANALYTICAL DATA  
GATZKE/HOOSHI'S AUTO SERVICE  
1499 MACARTHUR BOULEVARD, OAKLAND, CALIFORNIA

*Notes*

---

a,b

a

**GROUNDWATER ELEVATION AND ANALYTICAL DATA  
GATZKE/HOOSHI'S AUTO SERVICE  
1499 MACARTHUR BOULEVARD, OAKLAND, CALIFORNIA**

*Notes*

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APPENDIX A

GROUNDWATER MONITORING FIELD DATA SHEETS





## WELL SAMPLING FORM

<b>Date:</b>		10/28/2008				
<b>Client:</b>		Conestoga-Rovers and Associates				
<b>Site Address:</b>		1499 MacArthur Boulevard, 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>		20.05	<b>Fe=</b> <b>mg/L</b>			
<b>Depth to Water:</b>		9.62	<b>ORP=</b> <b>mV</b>			
<b>Water Column Height:</b>		10.43	<b>DO=</b> <b>mg/L</b>			
<b>Gallons/ft:</b>		0.16				
<b>1 Casing Volume (gal):</b>		1.67	<b>COMMENTS:</b> very turbid, silty			
<b>3 Casing Volumes (gal):</b>		5.01				
<b>TIME:</b>	<b>CASING VOLUME (gal)</b>	<b>TEMP (Celsius)</b>			<b>pH</b>	<b>COND. (µS)</b>
11:20	1.7	20.3			7.46	931
11:23	3.3	20.1			7.50	948
11:25	5.0	20.1	7.52	954		
<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	10/28/2008	11:30	40 ml VOA	HCl, ICE	TPHg BTEX MTBE	8015, 8021, 8260
<b>Signature:</b>						






## WELL SAMPLING FORM

<b>Date:</b>		10/28/2008				
<b>Client:</b>		Conestoga-Rovers and Associates				
<b>Site Address:</b>		1499 MacArthur Boulevard, Oakland, CA				
<b>Well ID:</b>		MW-3				
<b>Well Diameter:</b>		2"				
<b>Purging Device:</b>		Disposable Bailer				
<b>Sampling Method:</b>		Disposable Bailer				
<b>Total Well Depth:</b>		19.95	<b>Fe=</b> <b>mg/L</b>			
<b>Depth to Water:</b>		8.29	<b>ORP=</b> <b>mV</b>			
<b>Water Column Height:</b>		11.66	<b>DO=</b> <b>mg/L</b>			
<b>Gallons/ft:</b>		0.16				
<b>1 Casing Volume (gal):</b>		1.87	<b>COMMENTS:</b> very turbid, silty			
<b>3 Casing Volumes (gal):</b>		5.60				
<b>TIME:</b>	<b>CASING VOLUME (gal)</b>	<b>TEMP (Celsius)</b>			<b>pH</b>	<b>COND. (µS)</b>
11:00	1.9	18.9			6.84	710
11:03	3.7	19.2			6.90	724
11:05	5.6	19.4	6.89	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-3	10/28/2008	11:10	40 ml VOA	HCl, ICE	TPHg BTEX MTBE	8015, 8021, 8260
<b>Signature:</b>						



## WELL SAMPLING FORM

<b>Date:</b>		10/28/2008				
<b>Client:</b>		Conestoga-Rovers and Associates				
<b>Site Address:</b>		1499 MacArthur Boulevard, 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>		19.95	<b>Fe=</b> <b>mg/L</b>			
<b>Depth to Water:</b>		11.90	<b>ORP=</b> <b>mV</b>			
<b>Water Column Height:</b>		8.05	<b>DO=</b> <b>mg/L</b>			
<b>Gallons/ft:</b>		0.16				
<b>1 Casing Volume (gal):</b>		1.29	<b>COMMENTS:</b> turbid			
<b>3 Casing Volumes (gal):</b>		3.86				
<b>TIME:</b>	<b>CASING VOLUME (gal)</b>	<b>TEMP (Celsius)</b>			<b>pH</b>	<b>COND. (µS)</b>
10:15	1.3	19.6			7.41	723
10:17	2.6	19.5			7.38	729
10:20	3.9	19.1	7.39	725		
<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	10/28/2008	10:25	40 ml VOA	HCl, ICE	TPHg BTEX MTBE	8015, 8021, 8260
				<b>Signature:</b>		






## WELL SAMPLING FORM

<b>Date:</b>		10/28/2008				
<b>Client:</b>		Conestoga-Rovers and Associates				
<b>Site Address:</b>		1499 MacArthur Boulevard, Oakland, CA				
<b>Well ID:</b>		MW-5				
<b>Well Diameter:</b>		2"				
<b>Purging Device:</b>		Disposable Bailer				
<b>Sampling Method:</b>		Disposable Bailer				
<b>Total Well Depth:</b>		14.69	<b>Fe=</b> <b>mg/L</b>			
<b>Depth to Water:</b>		8.78	<b>ORP=</b> <b>mV</b>			
<b>Water Column Height:</b>		5.91	<b>DO=</b> <b>mg/L</b>			
<b>Gallons/ft:</b>		0.16				
<b>1 Casing Volume (gal):</b>		0.95	<b>COMMENTS:</b> very turbid, silty, light sheen			
<b>3 Casing Volumes (gal):</b>		2.84				
<b>TIME:</b>	<b>CASING VOLUME (gal)</b>	<b>TEMP (Celsius)</b>			<b>pH</b>	<b>COND. (µS)</b>
11:40	0.9	19.7			7.44	551
11:42	1.9	19.8			7.39	570
11:45	2.8	20.0	7.45	564		
<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-5	10/28/2008	11:50	40 ml VOA	HCl, ICE	TPHg BTEX MTBE	8015, 8021, 8260
<b>Signature:</b>						



## WELL SAMPLING FORM

<b>Date:</b>		10/28/2008				
<b>Client:</b>		Conestoga-Rovers and Associates				
<b>Site Address:</b>		1499 MacArthur Boulevard, Oakland, CA				
<b>Well ID:</b>		MW-6				
<b>Well Diameter:</b>		2"				
<b>Purging Device:</b>		Disposable Bailer				
<b>Sampling Method:</b>		Disposable Bailer				
<b>Total Well Depth:</b>		20.09	<b>Fe=</b> <b>mg/L</b>			
<b>Depth to Water:</b>		8.73	<b>ORP=</b> <b>mV</b>			
<b>Water Column Height:</b>		11.36	<b>DO=</b> <b>mg/L</b>			
<b>Gallons/ft:</b>		0.16				
<b>1 Casing Volume (gal):</b>		1.82	<b>COMMENTS:</b> turbid			
<b>3 Casing Volumes (gal):</b>		5.45				
<b>TIME:</b>	<b>CASING VOLUME (gal)</b>	<b>TEMP (Celsius)</b>			<b>pH</b>	<b>COND. (µS)</b>
10:35	1.8	20.3			7.00	763
10:37	3.6	20.1			6.94	761
10:40	5.5	20.0	6.99	761		
<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-6	10/28/2008	10:45	40 ml VOA	HCl, ICE	TPHg BTEX MTBE	8015, 8021, 8260
				<b>Signature:</b>		

APPENDIX B

LABORATORY ANALYTICAL REPORT



**McC Campbell Analytical, Inc.**

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701  
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: #120741; Hooshi's	Date Sampled: 10/28/08
		Date Received: 10/28/08
	Client Contact: Mark Jonas	Date Reported: 11/04/08
	Client P.O.:	Date Completed: 10/31/08

**WorkOrder: 0810724**

November 04, 2008

Dear Mark:

Enclosed within are:

- 1) The results of the **6** analyzed samples from your project: **#120741; Hooshi's**,
- 2) A QC report for the above samples,
- 3) A copy of the chain of custody, and
- 4) An invoice 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 or concerns, please feel free to give me a call. Thank you for choosing

McC Campbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius  
Laboratory Manager  
McC Campbell Analytical, Inc.



# McC Campbell Analytical, Inc.



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

# CHAIN-OF-CUSTODY RECORD

WorkOrder: 0810724

ClientCode: CETE

WriteOn   
  EDF   
  Excel   
  Fax   
  Email   
  HardCopy   
  ThirdParty   
  J-flag

Report to:	Mark Jonas	Email: mjonas@CRAworld.com	Bill to:	Accounts Payable	Requested TAT: 5 days
	Conestoga-Rovers & Associates	cc:		Conestoga-Rovers & Associates	Date Received: 10/28/2008
	5900 Hollis St, Suite A	PO:		5900 Hollis St, Ste. A	Date Printed: 10/28/2008
	Emeryville, CA 94608	ProjectNo: #120741; Hooshi's		Emeryville, CA 94608	
	(510) 420-0700    FAX (510) 420-9170				

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
0810724-001	MW-1	Water	10/28/2008 11:30	<input type="checkbox"/>	A	A											
0810724-002	MW-2	Water	10/28/2008 12:10	<input type="checkbox"/>	A												
0810724-003	MW-3	Water	10/28/2008 11:10	<input type="checkbox"/>	A												
0810724-004	MW-4	Water	10/28/2008 10:25	<input type="checkbox"/>	A												
0810724-005	MW-5	Water	10/28/2008 11:50	<input type="checkbox"/>	A												
0810724-006	MW-6	Water	10/28/2008 10:45	<input type="checkbox"/>	A												

**Test Legend:**

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

Prepared by: Maria Venegas

**Comments:**

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).  
 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: **10/28/08 3:43:35 PM**

Project Name: **#120741; Hooshi's**

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

WorkOrder N°: **0810724** Matrix Water

Carrier: Client Drop-In

#### Chain of Custody (COC) Information

- Chain of custody present? Yes  No
- Chain of custody signed when relinquished and received? Yes  No
- Chain of custody agrees with sample labels? Yes  No
- Sample IDs noted by Client on COC? Yes  No
- Date and Time of collection noted by Client on COC? Yes  No
- Sampler's name noted on COC? Yes  No

#### Sample Receipt Information

- Custody seals intact on shipping container/cooler? Yes  No  NA
- Shipping container/cooler in good condition? Yes  No
- Samples in proper containers/bottles? Yes  No
- Sample containers intact? Yes  No
- Sufficient sample volume for indicated test? Yes  No

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

- All samples received within holding time? Yes  No
  - Container/Temp Blank temperature Cooler Temp: 12.4°C NA
  - Water - VOA vials have zero headspace / no bubbles? Yes  No  No VOA vials submitted
  - Sample labels checked for correct preservation? Yes  No
  - TTLC Metal - pH acceptable upon receipt (pH<2)? Yes  No  NA
  - Samples Received on Ice? Yes  No
- (Ice Type: WET ICE )

\* NOTE: If the "No" box is checked, see comments below.

-----

Client contacted:

Date contacted:

Contacted by:

Comments:



# McC Campbell Analytical, Inc.

"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701  
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: #120741; Hooshi's	Date Sampled: 10/28/08
		Date Received: 10/28/08
	Client Contact: Mark Jonas	Date Extracted: 10/30/08-10/31/08
	Client P.O.:	Date Analyzed 10/30/08-10/31/08

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

Extraction method SW5030B

Analytical methods SW8021B/8015Cm

Work Order: 0810724

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	MW-1	W	120,d1	ND	0.59	ND	ND	ND	1	100
002A	MW-2	W	24,000,d1	ND<200	550	140	810	1600	20	118
003A	MW-3	W	ND,b1	ND	ND	ND	ND	ND	1	93
004A	MW-4	W	ND	ND	ND	ND	ND	ND	1	93
005A	MW-5	W	36,000,d1,b6	ND<250	270	780	530	4600	50	110
006A	MW-6	W	ND	ND	ND	ND	ND	ND	1	92

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	5	0.5	0.5	0.5	0.5	µg/L
	S	1.0	0.05	0.005	0.005	0.005	0.005	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:

b1) aqueous sample that contains greater than ~1 vol. % sediment  
b6) lighter than water immiscible sheen/product is present  
d1) weakly modified or unmodified gasoline is significant





**QC SUMMARY REPORT FOR SW8021B/8015Cm**

W.O. Sample Matrix: Water

QC Matrix: Water

BatchID: 39197

WorkOrder: 0810724

Analyte	EPA Method SW8021B/8015Cm		Extraction SW5030B						Spiked Sample ID: 0810723-006A			
	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	99.1	90.2	9.45	95.8	93.5	2.35	70 - 130	20	70 - 130	20
MTBE	ND	10	104	91.6	12.8	89.8	89.6	0.250	70 - 130	20	70 - 130	20
Benzene	ND	10	98.2	94.1	4.31	95.1	92.3	3.00	70 - 130	20	70 - 130	20
Toluene	ND	10	88.5	84.3	4.86	85	83.1	2.20	70 - 130	20	70 - 130	20
Ethylbenzene	ND	10	98.4	94.4	4.15	93.6	92	1.78	70 - 130	20	70 - 130	20
Xylenes	ND	30	96.1	92.5	3.84	91.9	89.9	2.29	70 - 130	20	70 - 130	20
%SS:	93	10	97	97	0	99	99	0	70 - 130	20	70 - 130	20

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

BATCH 39197 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0810724-001A	10/28/08 11:30 AM	10/31/08	10/31/08 9:57 PM	0810724-002A	10/28/08 12:10 PM	10/30/08	10/30/08 3:56 AM
0810724-003A	10/28/08 11:10 AM	10/31/08	10/31/08 11:05 PM	0810724-004A	10/28/08 10:25 AM	10/31/08	10/31/08 7:43 AM
0810724-005A	10/28/08 11:50 AM	10/31/08	10/31/08 7:08 PM	0810724-006A	10/28/08 10:45 AM	10/31/08	10/31/08 8:51 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.

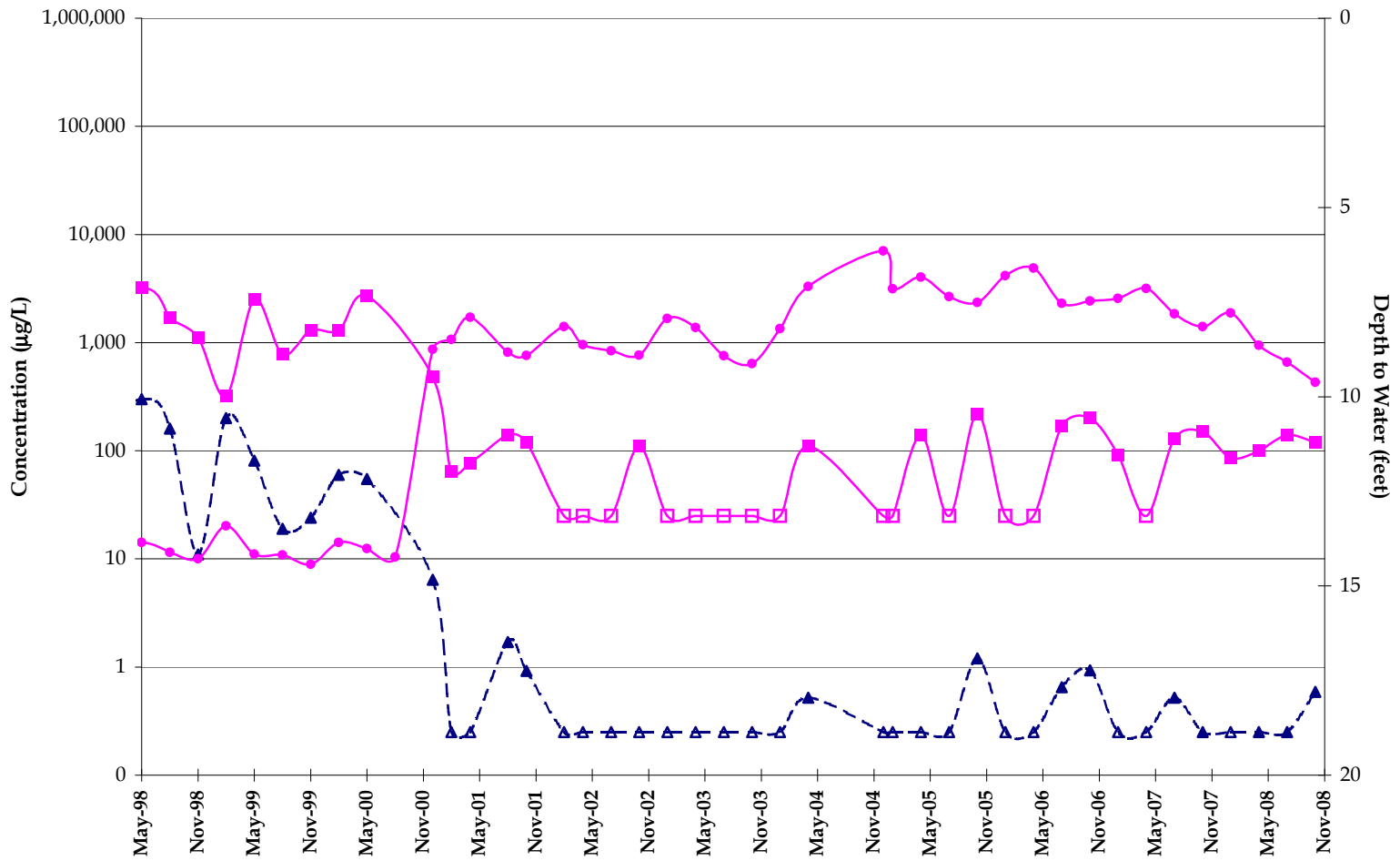
N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = matrix interference and/or 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, or inconsistency in sample containers.

APPENDIX C

TPHg AND BENZENE CONCENTRATION TREND GRAPHS

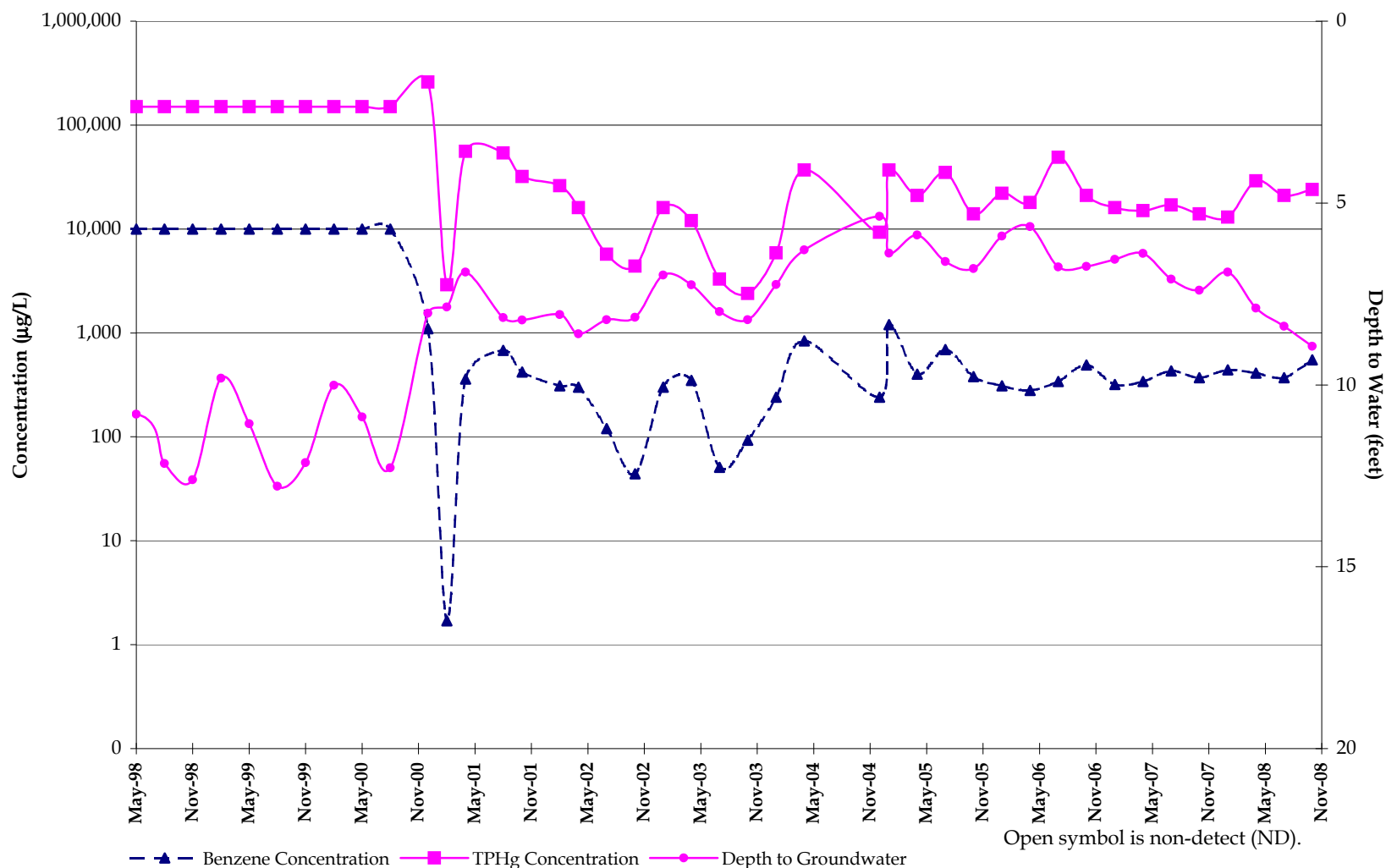
**Monitoring Well MW-1  
TPHg and Benzene Concentration Trend  
Hooshi's Auto Service, 1499 MacArthur Boulevard, Oakland, CA**



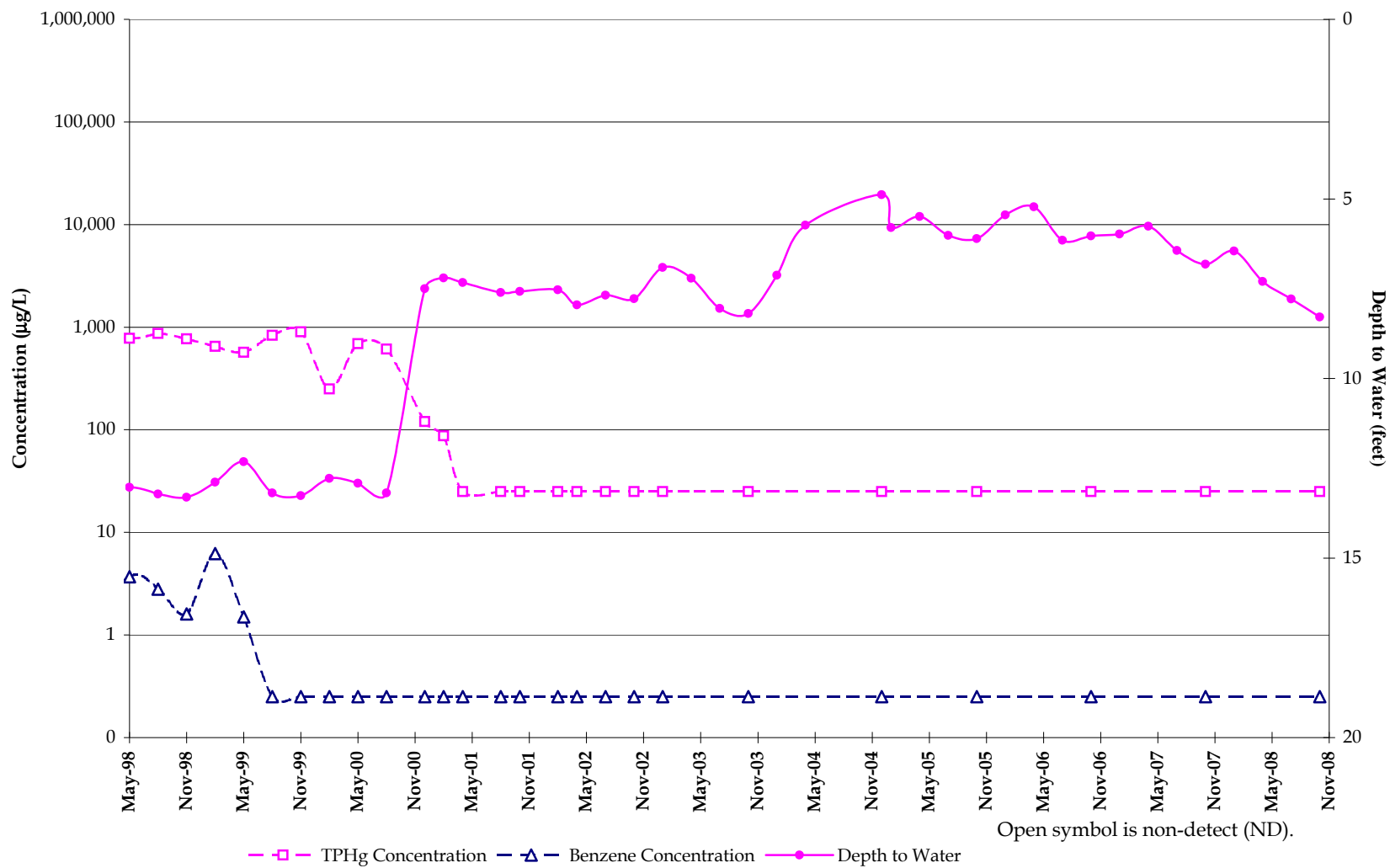
—▲— Benzene Concentration    —■— TPHg Concentration    —●— Depth to Groundwater

Open symbol is non-detect (ND).

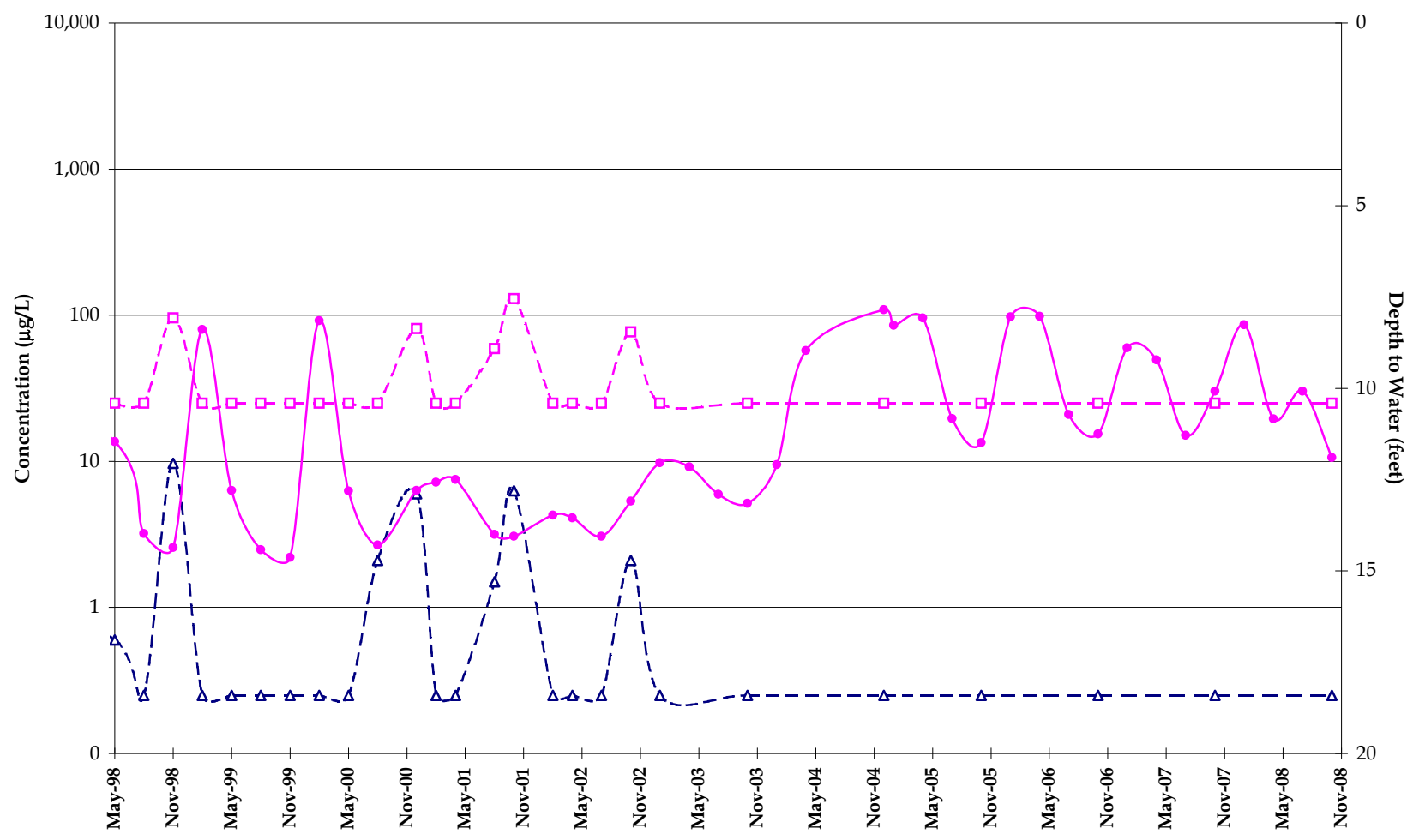
**Monitoring Well MW-2  
TPHg and Benzene Concentration Trend  
Hooshi's Auto Service, 1499 MacArthur Boulevard, Oakland, CA**



**Monitoring Well MW-3**  
**TPHg and Benzene Concentration Trend**  
**Hooshi's Auto Service, 1499 MacArthur Boulevard, Oakland, CA**



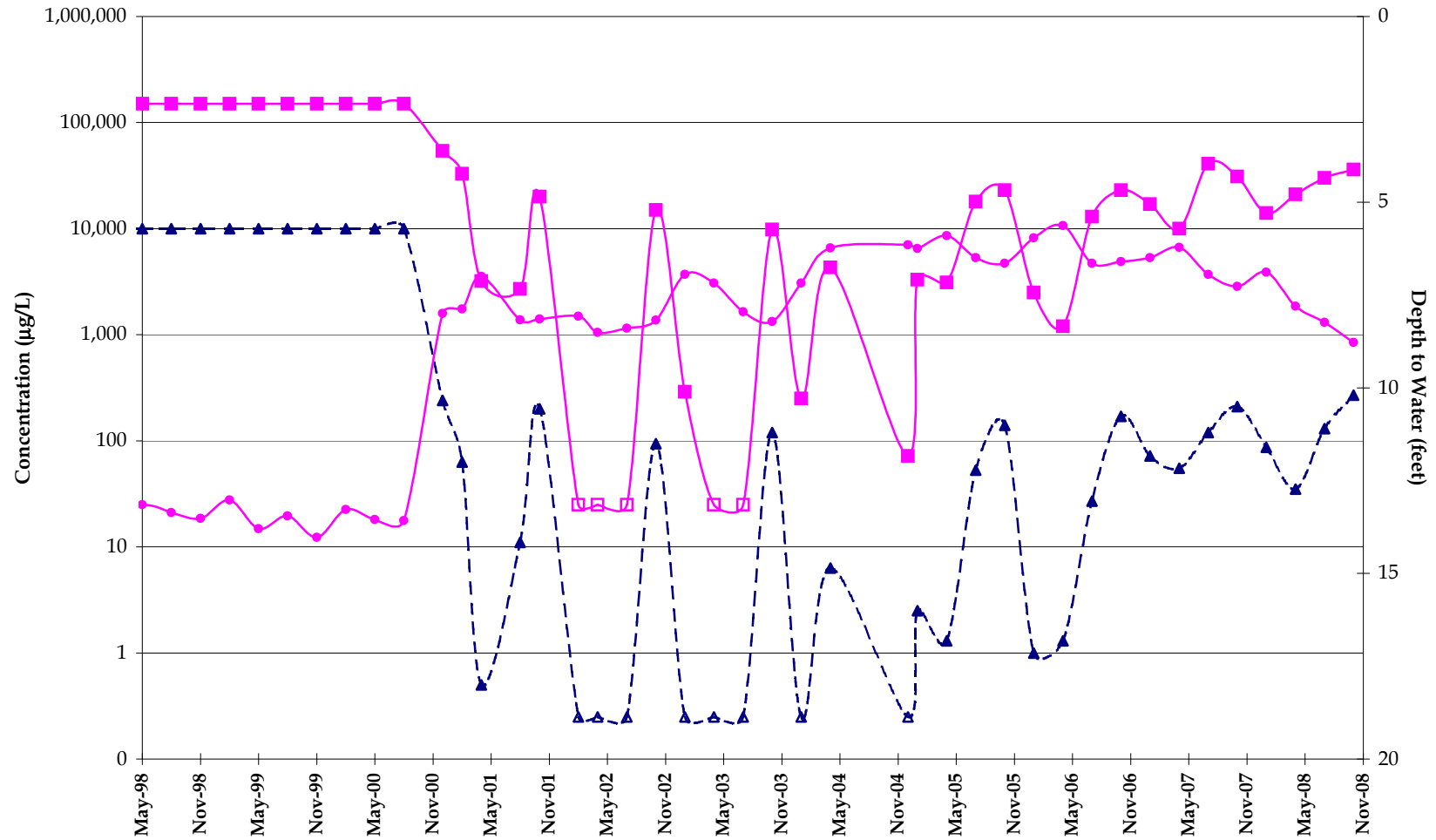
**Monitoring Well MW-4**  
**TPHg and Benzene Concentration Trend**  
**Hooshi's Auto Service, 1499 MacArthur Boulevard, Oakland, CA**



- □ - TPHg Concentration   
 - △ - Benzene Concentration   
 - ● - Depth to Water

Open symbol is non-detect (ND).

**Monitoring Well MW-5  
TPHg and Benzene Concentration Trend  
Hooshi's Auto Service, 1499 MacArthur Boulevard, Oakland, CA**



—▲— Benzene Concentration   
 —■— TPHg Concentration   
 —●— Depth to Groundwater

Open symbol is non-detect (ND).

**Monitoring Well MW-6**  
**TPHg and Benzene Concentration Trend**  
**Hooshi's Auto Service, 1499 MacArthur Boulevard, Oakland, CA**

