



**CONESTOGA-ROVERS  
& ASSOCIATES**

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December 10, 2007

**RECEIVED**

2:18 pm, Jan 02, 2008

Alameda County  
Environmental Health

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

Re: **Groundwater Monitoring Report – Third Quarter 2007**  
1137-1167 65<sup>th</sup> Street, Oakland, California 94608  
CRA Project No. 521000  
Fuel Leak Case No. RO0000082

Dear Mr. Chan:

On behalf of Mr. John Nady, Conestoga-Rovers & Associates, Inc. (CRA) is submitting this *Groundwater Monitoring Report – Third Quarter 2007*. Presented in this report are a summary of the field activities and results from the third quarter 2007 groundwater monitoring event. In addition, this report contains recommendations for fourth quarter 2007 activities.

If you have any questions, please call me at (510) 420-3307.

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

Mark Jonas, P.G.  
Senior Project Manager

Attachment: Groundwater Monitoring Report – Third Quarter 2007

cc: Mr. Frederic Schrag, 6701 Shellmound Street, Emeryville, California 94608 (1 copy + PDF via e-mail)

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## **GROUNDWATER MONITORING REPORT – THIRD QUARTER 2007**

**1137-1167 65<sup>th</sup> Street  
Oakland, California 94608  
CRA Project No. 521000  
Fuel Leak Case No. RO0000082**

**December 10, 2007**

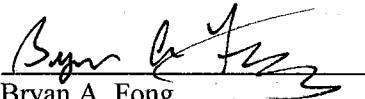
*Prepared for Submittal to:*

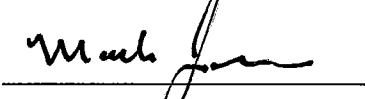
Mr. Barney Chan  
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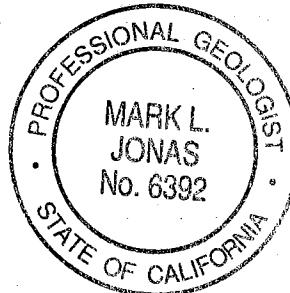
*Prepared by:*

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

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Bryan A. Fong  
Staff Geologist

  
Mark Jonas, P.G. #6392  
Senior Project Manager





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## **GROUNDWATER MONITORING REPORT – THIRD QUARTER 2007**

**1137-1167 65<sup>th</sup> Street  
Oakland, California 94608  
CRA Project No. 521000  
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**December 10, 2007**

### **INTRODUCTION**

This report describes the third quarter 2007 groundwater monitoring activities performed at 1137-1167 65<sup>th</sup> Street, in Oakland, California (Figure 1). This groundwater monitoring event was conducted at the direction of the Alameda County Health Care Services Agency, Environmental Health Division (ACEH). This report presents a summary of the monitoring activities and results from the third quarter 2007 monitoring event. In addition, this report contains recommendations for fourth quarter 2007 activities.

### **MONITORING ACTIVITIES**

CRA coordinated with Muskan Environmental Sampling (MES) to perform quarterly groundwater monitoring activities at the site. On September 7, 2007, MES measured groundwater levels in all thirteen monitoring wells and collected groundwater samples from nine of the thirteen wells. As recommended in the *Groundwater Monitoring Report – Fourth Quarter 2005* and approved by Mr. Barney Chan of ACEH, the sampling schedule was revised as follows:

- Total petroleum hydrocarbons as diesel (TPHd), gasoline (TPHg), motor oil (TPHmo), and stoddard solvent (TPHss), and benzene, toluene, ethylbenzene, and total xylenes (BTEX) are analyzed in groundwater samples collected from monitoring wells MW-1A, MW-2A, MW-3A, MW-4A, MW-6A, MW-7A, and MW-6B.
- Halogenated volatile organic compounds (HVOCs) are analyzed in groundwater samples collected from monitoring wells MW-1A, MW-3A, MW-6A, MW-7A, MW-1B, MW-6B, and MW-6C.
- It is not necessary to analyze groundwater samples for methyl tertiary butyl ether (MTBE).
- Monitoring wells MW-4B, MW-5B, MW-1C, and MW-4C are no longer sampled.



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Copies of the field data sheets are included as Appendix A.

**Water Level Measurements:** Depth to groundwater measurements were recorded to the nearest 0.01-foot, relative to a previously established reference elevation. Measurements were collected using an electric, conductance-actuated well sounder. The groundwater level measurement data are summarized in Table 2.

**Groundwater Sampling:** MES collected groundwater samples from wells MW-1A, MW-2A, MW-3A, MW-4A, MW-6A, MW-7A, MW-1B, MW-6B, and MW-6C.

Prior to sampling, the wells were purged to remove standing water in the well casing and annulus to promote inflow of representative groundwater from the surrounding formation. Each well was purged using a new disposable bailer, pre-cleaned poly vinyl chloride (PVC) bailer, or disposable tubing with a check valve. Field measurements of pH, specific conductance, and temperature of purged groundwater were measured after extraction of each successive casing volume. Casing volumes were calculated based on well diameter and height of the water column. Typically, purging continued until at least three casing volumes are extracted and consecutive pH, specific conductance, and temperature measurements appeared to stabilize. Water quality field measurements, purge volumes and sample collection data were recorded on field sampling data forms (Appendix A).

To minimize the potential for cross-contamination, groundwater monitoring equipment was decontaminated prior to being used in the first monitoring well and between successive wells. Groundwater samples were collected from each of the wells using clean disposable bailers or disposable tubing with a check valve. The samples were decanted from the bailers into 1-liter (L) amber glass containers and/or 40-milliliter (mL) glass volatile organic analysis (VOA) vials, both supplied by McCampbell Analytical, Inc. (McCampbell) of Pittsburg, California. Sample containers were labeled and placed in a cooler chilled with water-based ice, for temporary storage and transport. A chain-of-custody record was maintained (Appendix B).

Groundwater samples were analyzed for TPHd, TPHmo, TPHss, and TPHg by modified United States Environmental Protection Agency (EPA) Method SW8015C. BTEX and MTBE were analyzed by EPA Method SW8021B. Samples were also analyzed for HVOCs by EPA Method SW8260B, but only reported for the EPA Method 8010 basic target list. Samples marked for TPHd and TPHmo analysis were subjected to silica gel cleanup prior to analysis. The laboratory analytical report is included in Appendix B. Analytical results are summarized on Figures 2, 3, and 4 and presented in Tables 2 and 3.



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**Waste Disposal:** Approximately 55 gallons of purge water was generated during this quarter's monitoring event. This waste water is stored in sealed Department of Transportation (DOT) approved 55 gallon drums and temporarily left on site for eventual transport and disposal.

## RESULTS

**Groundwater Flow Direction and Gradient:** Depth-to-water measurements collected from thirteen wells on September 7, 2007 ranged from 3.37 to 11.08 feet (ft) below top of casing (TOC). Groundwater elevations were calculated by subtracting the depth-to-water measurements from the surveyed TOC elevations. The groundwater elevations for A, B, and C water-bearing zones were each plotted and contoured on Figures 2, 3, and 4, respectively. The groundwater flow direction in the A-zone was south-southwest with a gradient of approximately 0.03 feet per foot (ft/ft) (Figure 2). The groundwater flow direction in the B-zone was predominantly southwest with a gradient of approximately 0.045 ft/ft (Figure 3). The groundwater flow direction in the C-zone was southwest with a gradient of approximately 0.007 ft/ft (Figure 4). The groundwater flow direction and gradient in the A-zone, B-zone, and C-zone are generally consistent with historical results. The A-zone is defined as the first encountered groundwater bearing zone from approximately 5 feet below ground surface (ft bgs) to 15 ft bgs. A-zone monitoring wells are MW-1A, MW-2A, MW-3A, MW-4A, MW-6A, and MW-7A. The B-zone is defined as the second encountered groundwater bearing zone from approximately 16 ft bgs to 22 ft bgs. B-zone monitoring wells are MW-1B, MW-4B, MW-5B, and MW-6B. The C-zone is defined as the third encountered groundwater bearing zone from approximately 28 ft bgs to 40 ft bgs. C-zone monitoring wells are MW-1C, MW-4C, and MW-6C. Rose diagrams depicting historical groundwater flow directions for the A, B, and C-zones are presented on the figures. Depth-to-water and groundwater elevation data are presented in Tables 2 and 3.

**Chemicals Detected in A-Zone Groundwater:** During this monitoring event, groundwater samples from A-zone monitoring wells MW-1A, MW-2A, MW-3A, MW-4A, MW-6A, and MW-7A were analyzed for petroleum hydrocarbons. Groundwater from A-zone monitoring wells MW-1A, MW-3A, MW-6A, and MW-7A were analyzed for HVOCS.

Petroleum hydrocarbons were detected in all six A-zone monitoring wells sampled. The highest TPHd, TPHg, and TPHss concentrations were detected in well MW-7A at 57,000 micrograms per liter ( $\mu\text{g}/\text{L}$ ), 21,000  $\mu\text{g}/\text{L}$ , and 19,000  $\mu\text{g}/\text{L}$  respectively. TPHmo was only detected at or above the laboratory reporting limit in well MW-3A at 1,600  $\mu\text{g}/\text{L}$ .



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Benzene was detected in well MW-4A at a concentration of 0.74 µg/L. Toluene was detected in wells MW-2A and MW-4A at concentrations of 0.98 µg/L and 1.3 µg/L respectively. Ethylbenzene was only detected in well MW-1A at a concentration of 2.2 µg/L. Xylenes were detected in wells MW-1A, MW-4A, MW-6A and MW-7A at concentrations of 4.6 µg/L, 1.9 µg/L, 3.1 µg/L and 54 µg/L, respectively.

HVOCS were detected in three of the four A-zone monitoring wells sampled. The HVOCS detections were as follows:

- The only Tetrachloroethene (PCE) Trichloroethene (TCE) cis-1,2-Dichloroethene (cis-1,2-DCE) trans-1,2-Dichloroethene (trans-1,2-DCE) 1,1-Dichloroethane (1,1-DCA), and Vinyl Chloride concentrations detected were in well MW-1A at a concentration of 25 µg/L, 15 µg/L, 17 µg/L, 1.4 µg/L, 2.0 µg/L, and 2.3 µg/L, respectively.
- Additionally, chlorobenzene was detected in well MW-3A at a concentration of 82 µg/L and chloroethane was detected in well MW-6A at a concentration of 24 µg/L.

No other HVOCS were detected in A-zone wells. A-zone groundwater analytical data and water level data are presented in Tables 2 and 3, and summarized on Figure 2.

**Chemicals Detected in B-Zone Groundwater:** During the third quarter 2007, groundwater samples from B-zone monitoring well MW-6B were analyzed for petroleum hydrocarbons by EPA Methods SW8015C and SW8021B, and wells MW-1B and MW-6B were analyzed for HVOCS.

- TPHd, TPHg, and TPHss were detected in this groundwater sample at concentrations of 32,000 µg/L, 4,500 µg/L, and 3,800 µg/L, respectively.
- Xylenes was detected at a concentration of 11 µg/L. No TPHmo, benzene, Toluene, or ethylbenzene were detected above laboratory reporting limits.
- The following HVOCS were detected in well MW-1B: 9.8 µg/L cis-1,2-DCE, 8.6 µg/L 1,1-DCA, and 7.0 µg/L 1,2-DCA.



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- The following HVOCS were detected in well MW-6B: 1.3 µg/L chloroethane, 1.9 µg/L cis-1,2-DCE, and 0.66 µg/L 1,1-DCA. B-zone groundwater analytical data and water level data are presented in Tables 2 and 3, and summarized on Figure 3.

**Chemicals Detected in C-Zone Groundwater:** No C-zone wells were sampled for petroleum hydrocarbons. Only C-zone well MW-6C was sampled and analyzed for HVOCS.

The following HVOCS were detected in well MW-6C: 7.0 µg/L PCE, 6.9 µg/L TCE, 32 µg/L cis-1,2-DCE, 0.99 µg/L trans-1,2-DCE, 0.90 µg/L 1,1-DCA, and 4.2 µg/L vinyl chloride.

- No other HVOCS were detected in well MW-6C. C-zone groundwater analytical data and water level data are presented in Tables 2 and 3, and summarized on Figure 4.

## **GEOTRACKER SUBMITTALS**

CRA uploaded third quarter 2007 groundwater depth data, analytical results, and this report to the State's GeoTracker database on behalf of Mr. John Nady.

## **RECOMMENDED FOURTH QUARTER 2007 ACTIVITIES**

### **Groundwater Monitoring**

A quarterly groundwater monitoring event will occur during the fourth quarter 2007. Monitoring activities shall include gauging groundwater depths in the thirteen site monitoring wells to determine groundwater flow patterns. Groundwater sampling and analysis shall include monitoring wells MW-1A, MW-2A, MW-3A, MW-4A, MW-6A, MW-7A, and MW-6B for petroleum hydrocarbons (TPHg, TPHd, TPHmo, TPHss, and BTEX) and wells MW-1A, MW-3A, MW-6A, MW-7A, MW-1B, MW-6B, and MW-6C for (8010 basic target list) HVOCS. A report will be prepared detailing the activities and findings of the fourth quarter 2007 event to be submitted to ACEH. Groundwater analytical, well gauging data, and groundwater monitoring report will be uploaded to GeoTracker. The fourth quarter 2007 groundwater monitoring report will be submitted via ACEH's file transfer protocol (ftp) site and notification will be sent to Mr. Chan by e-mail.



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## **Site Characterization**

A Site Characterization Work Plan will be submitted for soil, groundwater, and soil gas sampling and analysis. Implementation will proceed after approval by ACEH.

## **ATTACHMENTS**

Figure 1 – Vicinity Map

Figure 2 – Groundwater Flow and Chemical Concentrations – A Zone

Figure 3 – Groundwater Flow and Chemical Concentrations – B Zone

Figure 4 – Groundwater Flow and Chemical Concentrations – C Zone

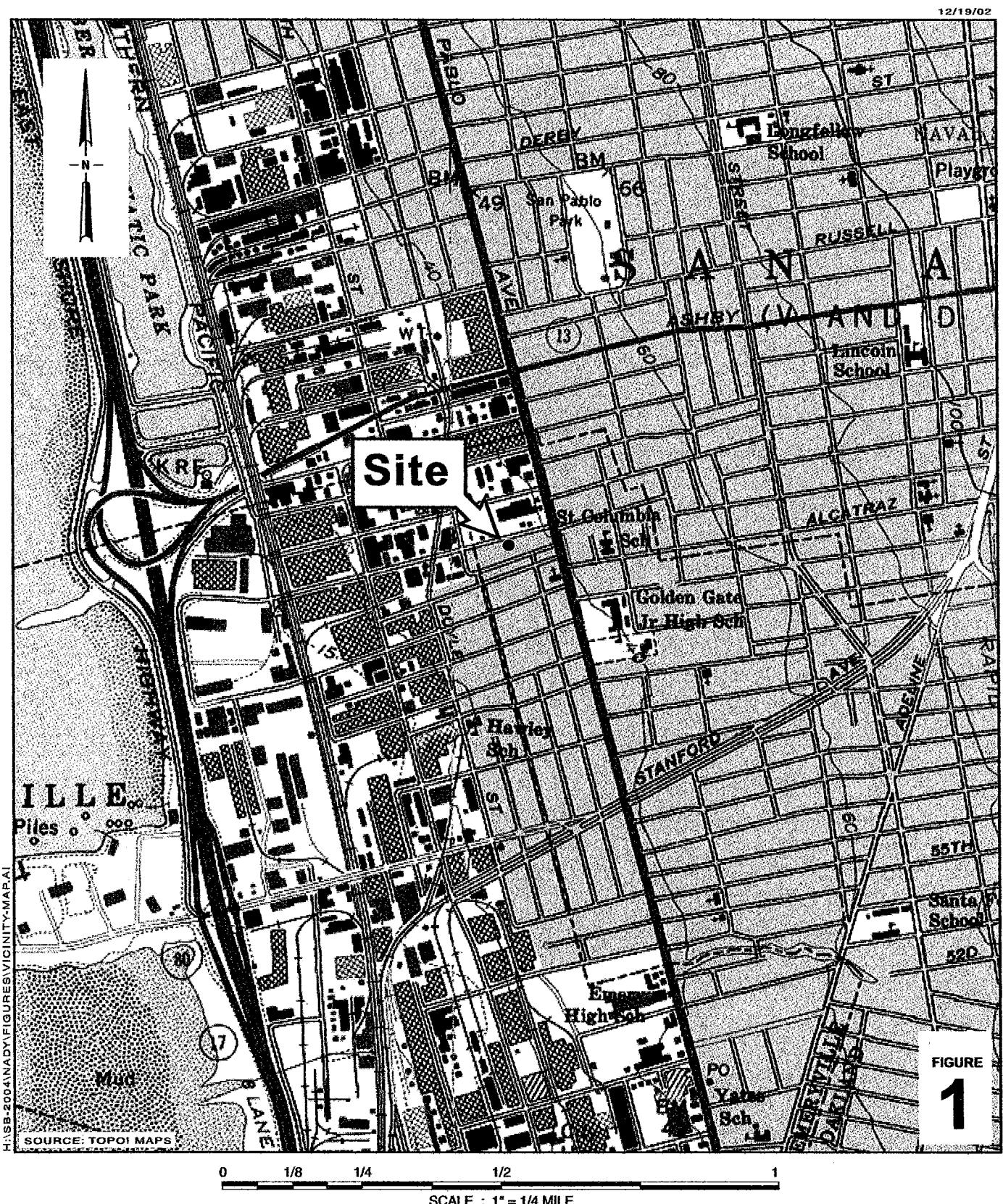
Table 1 – Well Construction Details

Table 2 – Monitoring Well Groundwater Results: Petroleum Hydrocarbons

Table 3 – Monitoring Well Groundwater Results: Halogenated Volatile Organic Compounds

Appendix A – Field Data Sheets

Appendix B – Laboratory Analytical Report



H:\SSB-2004\NADY\FIGURES\VICINITY.MAP.AI

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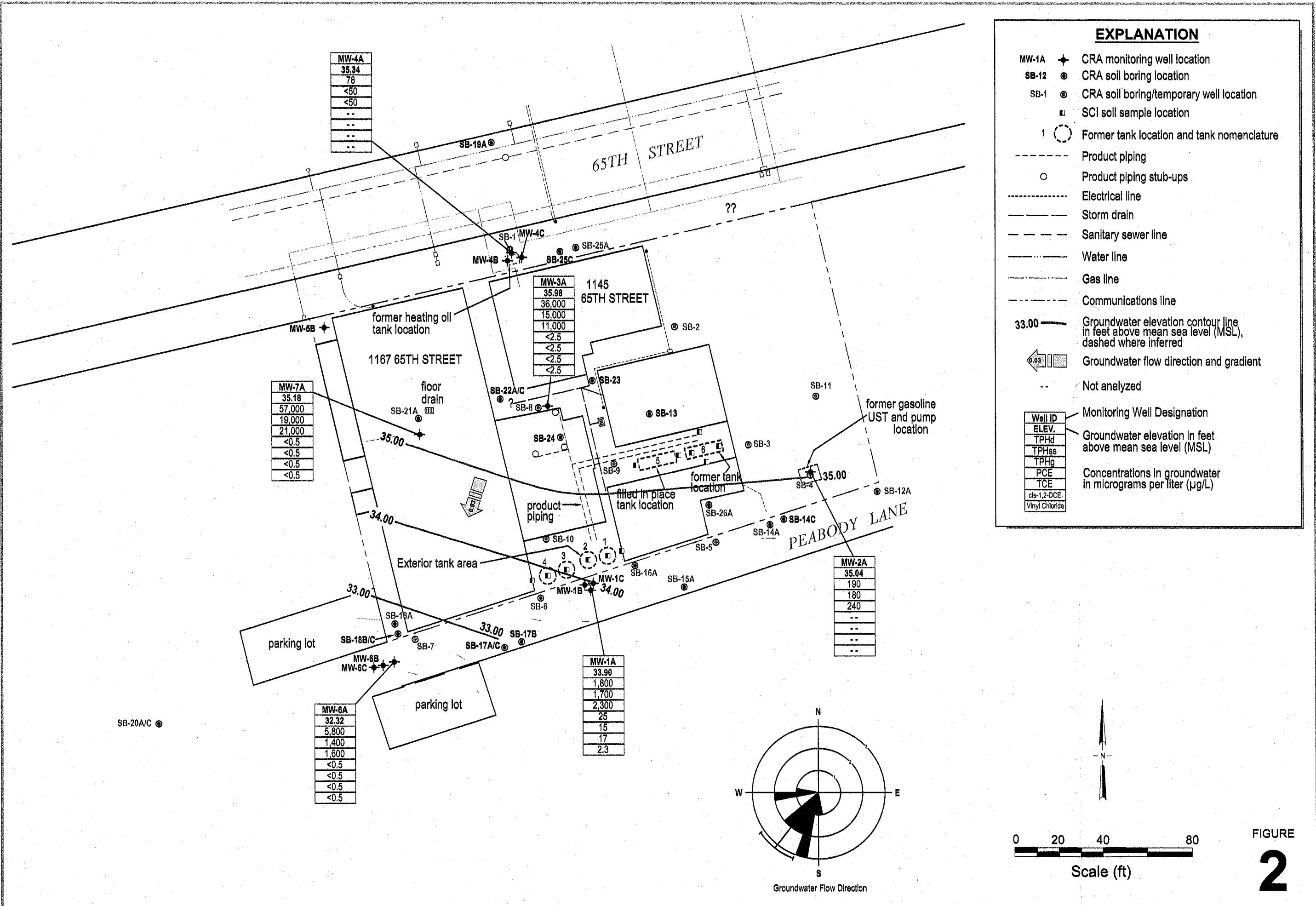


## **Vicinity Map**

**1137 - 1167 65th Street  
Oakland, California**

## **Groundwater Flow and Chemical Concentrations - A Zone**

September 7, 2007

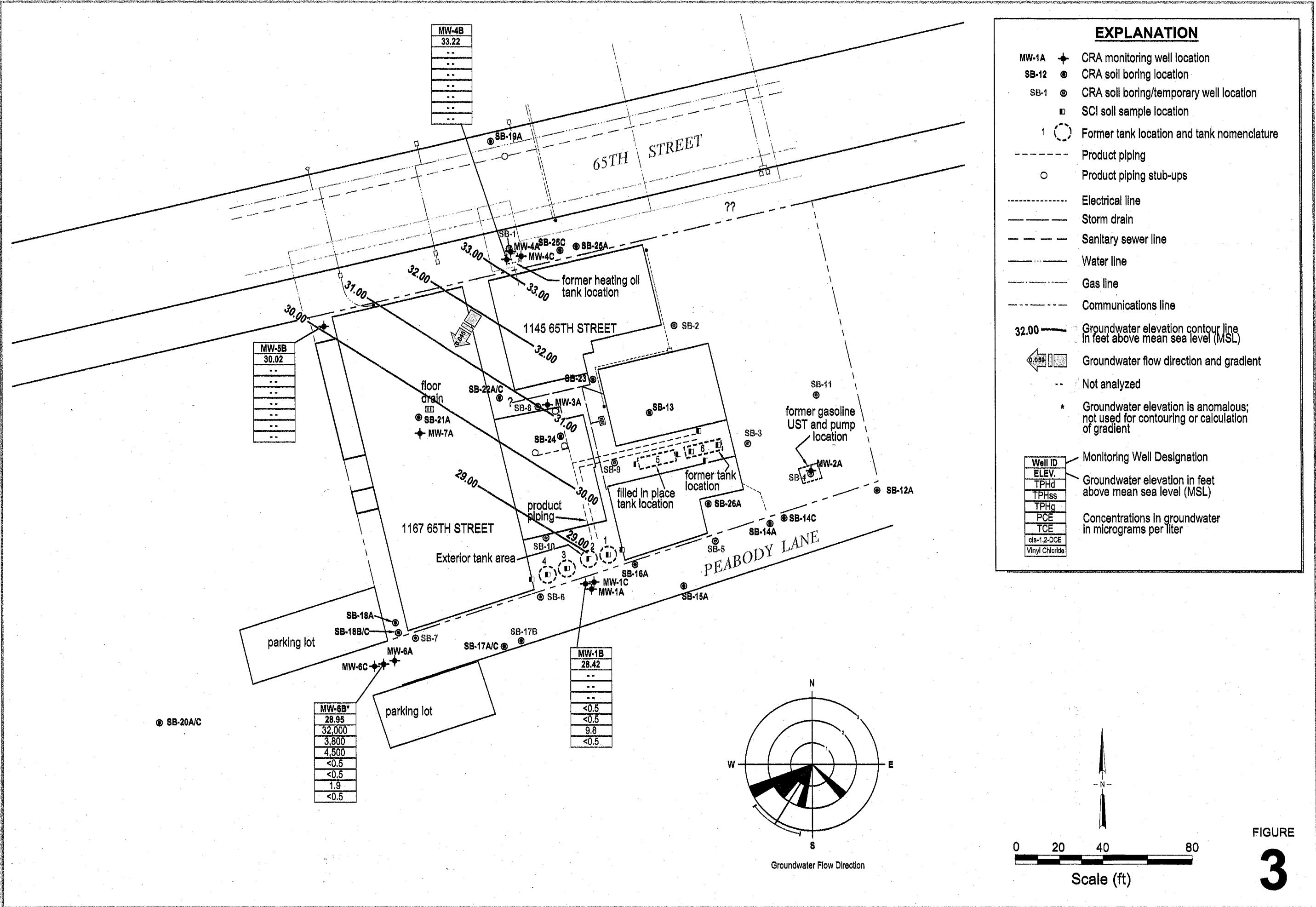


**Groundwater Flow and  
Chemical Concentrations - B Zone**

September 7, 2007



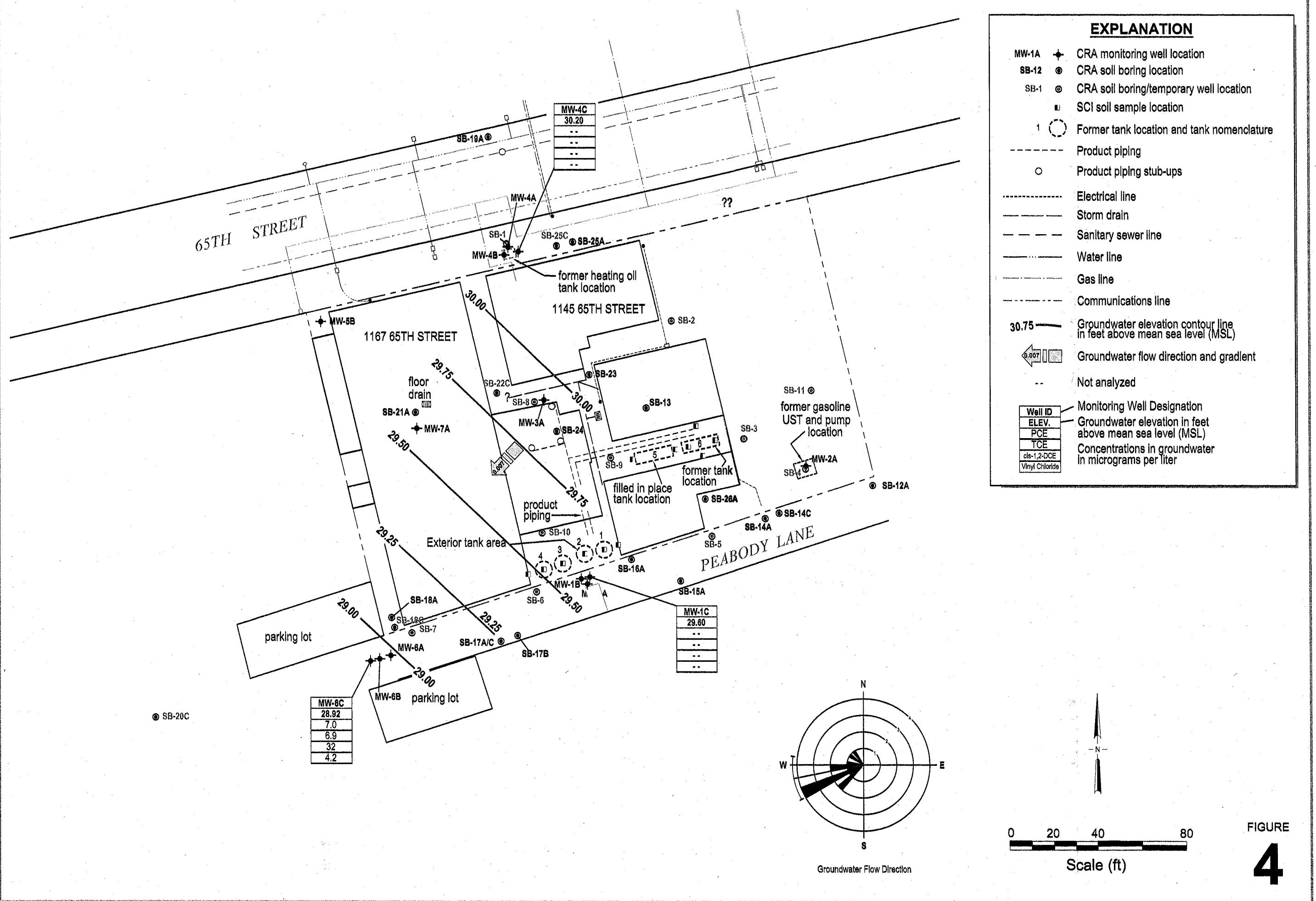
1137 - 1167 65th Street  
Oakland, California



## **Groundwater Flow and Chemical Concentrations - C Zone**

September 7, 2007

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**Table 1. Well Construction Details - John Nady, 1137-1167 65th Street, Oakland, California**

Well ID	Date Installed	Borehole Depth (ft)	Borehole Diameter (inches)	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)
<b>A-Zone Monitoring Wells</b>										
MW-1A	5/10/2004	14.5	8	2	4.5 - 14.5	0.010	3.5 - 14.5	2.5 - 3.5	0 - 2.5	39.64
MW-2A	5/11/2004	12.0	10	4	3.0 - 12.0	0.020	2.5 - 3.0	1.0 - 2.5	0 - 1.0	40.72
MW-3A	5/7/2004	16.0	8	2	3.5 - 14.0	0.010	3.0 - 3.5	2.0 - 3.0	0 - 2.0	40.88
MW-4A	5/18/2004	16.0	8	2	3.0 - 13.0	0.010	2.5 - 13.0	1.5 - 2.5	0 - 1.5	38.71
MW-6A	5/11/2004	14.5	8	2	4.5 - 14.5	0.010	3.5 - 14.5	1.5 - 3.5	0 - 1.5	37.98
MW-7A	5/7/2004	10.0	6.5	1	5.0 - 10.0	0.010	4.0 - 10.0	3.0 - 4.0	0 - 3.0	40.58
<b>B-Zone Monitoring Wells</b>										
MW-1B	5/12/2004	20.0	8	2	16.5 - 20.0	0.010	15.5 - 20.0	13.0 - 15.5	0 - 13.0	39.50
MW-4B	5/18/2004	24.0	8	2	17.0 - 21.0	0.010	16.0 - 21.0	12.0 - 14.0 21.0 - 24.0	0 - 12.0	38.54
MW-5B	5/18/2004	24.0	8	2	15.0 - 24.0	0.010	14.0 - 24.0	12.0 - 14.0	0 - 12.0	38.98
MW-6B	5/12/2004	24.5	8	2	17.0 - 22.0	0.010	16.0 - 22.0	14.0 - 16.0 22.0 - 24.5	0 - 14.0	37.66
<b>C-Zone Monitoring Wells</b>										
MW-1C	5/10/2004	40.0	8	2	25.0 - 34.0	0.010	24.0 - 34.0	22.0 - 24.0 34.0 - 40.0	0 - 22.0	39.49
MW-4C	5/17/2004	40.0	8	2	27.0 - 32.0	0.010	26.0 - 27.0	24.0 - 26.0 32.0 - 40.0	0 - 24.0	38.50
MW-6C	5/11/2004	39.5	8	2	26.5 - 34.0	0.010	25.5 - 34.0	23.0 - 25.0 34.0 - 39.5	0 - 23.0	37.59

**Abbreviations / Notes**

ft = feet

in = inches

ft bgs = feet below grade surface

ft msl = feet above mean sea level

TOC = top of casing

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**Table 2. Monitoring Well Groundwater Results: Petroleum Hydrocarbons** - John Nady, 1137-1167 65th Street, Oakland, California

Well ID TOC (ft)	Date Sampled	Groundwater Zone	Groundwater Elevation (ft msl)	Depth to Water (ft)	TPHd	TPHg	TPHmo	TPHss	Benzene µg/L	Toluene	Ethylbenzene	Xylenes	MTBE	Notes	
		Depth of Well (ft)	←	→											
MW-1A 39.64	6/3/2004	Zone A	35.14	4.50	1,300	1,400	260	2,500	ND<0.5	ND<0.5	2.0	11	ND<5.0		
	11/23/2004		14.5	36.54	3.10	1,400	2,300	ND<250	2,800	0.64	ND<0.5	2.5	9.7	6.8	a,b,c
	3/14/2005		37.02	2.62	3,200	4,800	ND<250	6,000	0.68	ND<0.5	2.0	6.8	ND<5.0	d,e	
	6/15/2005		35.14	4.50	2,500	2,800	ND<250	3,400	ND<2.5	ND<2.5	ND<2.5	5.9	ND<25	a,b,h,i,c	
	9/19/2005		33.14	6.50	2,800	4,100	ND<250	6,000	ND<1.0	ND<1.0	3.3	6.2	ND<10	a,b,i,c	
	12/12/2005		35.14	4.50	2,500	2,600	ND<250	3,100	ND<1.7	ND<1.7	2.7	6.5	ND<17	a,b,c,h,i	
	3/13/2006		37.74	1.90	2,300	2,000	ND<250	2,400	0.51	ND<0.5	1.9	3.5	--	a,b,c,i	
	6/19/2006		35.94	3.70	2,600	2,200	ND<250	3,500	0.52	ND<0.5	2.9	6.7	--	m,b,c	
	9/20/2006		34.19	5.45	2,400	2,200	ND<250	2,400	ND<2.5	ND<2.5	3.0	9.7	--	a,b,c,i	
	12/20/2006		37.02	2.62	1,900	1,300	ND<250	1,400	0.52	ND<0.5	2.9	7.6	--	a,e,h	
	3/29/2007		37.04	2.60	1,200	1,800	ND<250	2,100	ND<0.5	ND<0.5	2.2	6.4	ND<5.0	a,b,c	
MW-2A 40.72	6/11/2007		35.72	3.92	2,200	3,200	ND<250	2,200	ND<5.0	ND<5.0	ND<5.0	--	a,b,c		
	9/7/2007		33.90	5.74	1,800	2,300	ND<250	1,700	ND<0.5	ND<0.5	2.2	4.6	ND<5.0	a,b,c	
MW-2A 40.72	6/3/2004	Zone A	36.48	4.24	2,900	1,700	ND<250	3,500	ND<0.5	3.5	4.9	5.1	ND<5.0		
	11/23/2004		12	37.83	2.89	ND<50	ND<50	ND<250	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<5.0		
	3/14/2005		39.02	1.70	--	--	--	--	--	--	--	--	--		
	3/15/2005		--	--	560	360	450	260	ND<0.5	2.5	ND<0.5	ND<0.5	ND<5.0	e,d,g,i	
	6/15/2005		37.91	2.81	--	--	--	--	--	--	--	--	--		
	6/16/2005		--	--	470	480	330	430	ND<0.5	2.9	ND<0.5	ND<0.5	ND<5.0	a,b,i,g,e	
	9/19/2005		35.46	5.26	--	--	--	--	--	--	--	--	--		
	9/20/2005		--	--	2,100	960	870	960	ND<0.5	4.7	2.9	ND<0.5	ND<5.0	e,g,b,i,l	
	12/12/2005		37.66	3.06	--	--	--	--	--	--	--	--	--		
MW-3A 40.88	12/13/2005		--	--	700	670	470	510	ND<0.5	5.9	ND<0.5	ND<0.5	ND<5.0	a,b,e,g,i	
	3/13/2006		40.33	0.39	--	--	--	--	--	--	--	--	--		
	3/14/2006		--	--	81	100	ND<250	81	ND<0.5	1.5	ND<0.5	ND<0.5	--	a,b,c,i	
	6/19/2006		37.31	3.41	--	--	--	--	--	--	--	--	--		
	6/20/2006		--	--	530	270	420	180	ND<0.5	1.7	ND<0.5	ND<0.5	--	e,g,i,l	
	9/20/2006		34.65	6.07	800	1,700	730	1,700	ND<2.5	5.5	ND<2.5	ND<2.5	--	a,b,d,e,g,i	
	12/20/2006		38.57	2.15	190	94	300	61	ND<0.5	1.5	ND<0.5	ND<0.5	--	e,g,m,n	
	3/29/2007		38.22	2.50	200	260	ND<250	240	ND<0.5	2.7	ND<0.5	ND<0.5	ND<5.0	a,b,c	
	6/11/2007		37.14	3.58	200	180	ND<250	94	ND<0.5	1.7	ND<0.5	ND<0.5	--	a,b,c,i	
	9/7/2007		35.04	5.68	190	240	ND<250	180	ND<0.5	0.98	ND<0.5	ND<0.5	ND<5.0	a,b,c,i	
MW-3A 40.88	6/3/2004	Zone A	36.56	4.32	90,000	4,800	6,000	12,000	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<50		
	11/23/2004		16	37.89	2.99	22,000	3,800	ND<2,500	5,700	ND<5.0	ND<5.0	ND<5.0	ND<50	a,c,d	
	3/14/2005		37.28	3.60	--	--	--	--	--	--	--	--	--		
	3/15/2005		--	--	37,000	2,400	ND<2,500	3,500	ND<1.7	ND<1.7	ND<1.7	ND<1.7	ND<17	e,d,i	
	6/15/2005		36.78	4.10	--	--	--	--	--	--	--	--	--		
	6/16/2005		--	--	15,000	2,100	ND<1,200	3,300	ND<1.7	ND<1.7	ND<1.7	ND<1.7	ND<17	a,c,d,h,i	
	9/19/2005		35.93	4.95	--	--	--	--	--	--	--	--	--		
	9/20/2005		--	--	55,000	4,700	ND<5,000	8,000	ND<1.0	ND<1.0	2.6	6.8	ND<10	a,b,c,d,j	

# Conestoga-Rovers & Associates

**Table 2. Monitoring Well Groundwater Results: Petroleum Hydrocarbons** - John Nady, 1137-1167 65th Street, Oakland, California

Well ID TOC (ft)	Date Sampled	Groundwater Zone	Groundwater Elevation (ft msl)	Depth to Water (ft)	TPHd ←	TPHg	TPHmo	TPHss	Benzene µg/L	Toluene	Ethylbenzene	Xylenes	MTBE →	Notes
MW-3A <i>(cont.)</i>	12/12/2005		36.72	4.16	--	--	--	--	--	--	--	--	--	
	12/13/2005		--	--	34,000	1,100	ND<12,000	1,600	ND<1.7	ND<1.7	ND<1.7	2.3	ND<17	a,b,c,d,h,i
	3/13/2006		37.42	3.46	--	--	--	--	--	--	--	--	--	
	3/14/2006		--	--	21,000	2,200	1,600	3,300	ND<0.5	ND<0.5	1.1	ND<0.5	--	a,c,d,g,h
	6/19/2006		36.48	4.40	--	--	--	--	--	--	--	--	--	
	6/20/2006		--	--	19,000	8,000	1,000	16,000	ND<5.0	ND<5.0	ND<5.0	ND<5.0	--	c,d,g,h,m
	9/20/2006		35.78	5.10	13,000	2,500	1,300	3,300	ND<5.0	ND<5.0	ND<5.0	ND<5.0	--	a,c,d,g,h,i
	12/20/2006		36.78	4.10	15,000	2,600	670	3,500	ND<2.5	ND<2.5	ND<2.5	7.6	--	e,g,h,n
	3/29/2007		36.82	4.06	21,000	2,600	940	3,400	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<50	a,c,d,h
	6/11/2007		36.52	4.36	13,000	5,200	730	3,500	ND<10	ND<10	ND<10	ND<10	--	a,d,h
	9/7/2007		35.98	4.90	36,000	11,000	1,600	15,000	ND<10	ND<10	ND<10	ND<10	ND<100	a,c,d,h
MW-4A 38.7J	6/3/2004	Zone A	36.26	2.45	270	ND<50	440	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	11/23/2004	16	37.13	1.58	73	ND<50	ND<250	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	d
	3/14/2005		36.66	2.05	--	--	--	--	--	--	--	--	--	
	3/15/2005		--	--	210	ND<50	300	ND<50	0.91	1.7	ND<0.5	1.9	ND<5.0	g,d,f,i
	6/15/2005		36.38	2.33	--	--	--	--	--	--	--	--	--	
	6/16/2005		--	--	99	59	ND<250	75	1.0	1.9	ND<0.5	2.1	ND<5.0	j,d,f
	9/19/2005		35.01	3.70	--	--	--	--	--	--	--	--	--	
	9/20/2005		--	--	87	ND<50	ND<250	ND<50	1.2	2.1	0.51	2.4	ND<5.0	d,f
	12/12/2005		36.39	2.32	--	--	--	--	--	--	--	--	--	
	12/13/2005		--	--	71	ND<50	ND<250	ND<50	0.67	1.4	ND<0.5	1.9	ND<5.0	d,f,i
	3/13/2006		36.75	1.96	--	--	--	--	--	--	--	--	--	
	3/14/2006		--	--	68	ND<50	ND<250	ND<50	0.60	1.3	ND<0.5	1.8	--	d,f
	6/19/2006		36.15	2.56	--	--	--	--	--	--	--	--	--	
	6/20/2006		--	--	72	ND<50	ND<250	ND<50	0.53	1.1	ND<0.5	1.6	--	f
	9/20/2006		35.10	3.61	160	110	ND<250	88	1.2	2.5	0.61	3.9	--	a,d,f,i
	12/20/2006		36.39	2.32	97	ND<50	ND<250	ND<50	0.99	2.1	0.52	2.9	--	f
	3/29/2007		36.46	2.25	ND<50	ND<50	ND<250	ND<50	ND<0.5	0.93	ND<0.5	1.3	ND<5.0	
	6/11/2007		36.14	2.57	66	ND<50	ND<250	ND<50	ND<0.5	0.92	ND<0.5	1.6	--	d,f
	9/7/2007		35.34	3.37	78	ND<50	ND<250	ND<50	0.74	1.3	ND<0.5	1.9	ND<5.0	f
MW-6A 37.98	6/3/2004	Zone A	31.98	6.00	3,500	970	340	2,400	ND<0.5	ND<0.5	ND<0.5	2.1	ND<5.0	
	11/23/2004	14.5	33.13	4.85	1,400	1,900	ND<250	3,000	ND<0.5	ND<0.5	ND<0.5	3.0	ND<5.0	a,c
	3/14/2005		35.03	2.95	5,900	2,900	ND<250	2,600	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<50	e,d,i
	6/15/2005		33.28	4.70	6,100	2,200	ND<250	3,400	ND<0.5	ND<0.5	0.60	4.4	ND<10	a,j,c,d
	9/19/2005		32.07	5.91	2,600	2,200	ND<250	3,900	ND<1.0	ND<1.0	1.4	7.6	ND<10	a,b,c
	12/12/2005		33.12	4.86	4,600	2,900	ND<250	4,500	ND<0.5	ND<0.5	1.6	8.9	ND<5.0	a,c,h,i
	3/13/2006		36.05	1.93	4,300	1,900	ND<250	3,000	ND<0.5	ND<0.5	ND<0.5	4.3	--	a,c,d,h
	6/19/2006		32.59	5.39	7,800	2,300	260	4,600	ND<1.0	ND<1.0	ND<1.0	ND<1.0	--	c,g,h,m
	9/20/2006		31.96	6.02	2,600	960	ND<250	1,200	ND<2.5	ND<2.5	ND<2.5	ND<2.5	--	a,c,i
	12/20/2006		33.57	4.41	4,100	2,400	ND<250	3,200	ND<5.0	ND<5.0	ND<5.0	8.1	--	e,h,n

# Conestoga-Rovers & Associates

**Table 2. Monitoring Well Groundwater Results: Petroleum Hydrocarbons - John Nady, 1137-1167 65th Street, Oakland, California**

Well ID TOC (ft)	Date Sampled	Groundwater Zone	Groundwater Elevation (ft msl)	Depth to Water (ft)	TPHd	TPHg	TPHmo	TPHss	Benzene μg/L	Toluene	Ethylbenzene	Xylenes	MTBE	Notes
		Depth of Well (ft)	←	→										
MW-6A <i>(cont.)</i>	3/29/2007		33.67	4.31	2,900	2,200	ND<250	2,700	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<50	a,c
	6/11/2007		32.95	5.03	6,400	4,300	ND<250	3,700	ND<0.5	ND<0.5	2.1	9.5	--	a,c
	9/7/2007		32.32	5.66	5,800	1,600	ND<250	1,400	ND<1.0	ND<1.0	ND<1.0	3.1	ND<10	a,b,c,d,h
MW-7A <i>40.58</i>	6/3/2004	Zone A	36.08	4.50	--	3,900	--	9,900	ND<5.0	ND<5.0	ND<5.0	6.6	ND<50	
	11/23/2004		10	--	--	--	--	--	--	--	--	--	--	
	3/14/2005		37.03	3.55	14,000	3,900	620	3,700	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<50	c,d,h
	6/15/2005		36.41	4.17	24,000	2,500	ND<1,200	3,900	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<50	a,c,d,h,i
	9/19/2005		35.25	5.33	43,000	7,000	ND<5,000	13,000	ND<10	ND<10	ND<10	ND<10	ND<100	a,c,i
	12/12/2005		36.15	4.43	10,000	1,700	ND<1,200	2,500	ND<1.0	ND<1.0	1.4	2.4	ND<10	a,c,d,h,i
	3/13/2006		36.76	3.82	31,000	1,600	1,100	2,300	ND<0.5	ND<0.5	0.93	9.1	--	a,c,d,g,h,i
	6/19/2006		35.78	4.80	36,000	26,000	1,300	44,000	ND<5.0	ND<5.0	10	ND<5.0	--	c,d,g,h,i,m
	9/20/2006		35.03	5.55	36,000	49,000	ND<5,000	69,000	ND<50	ND<50	ND<50	ND<50	--	a,c,h,i
	12/20/2006		36.35	4.23	14,000	38,000	ND<1,200	53,000	ND<50	ND<50	ND<50	150	--	e,h,n
	3/29/2007		36.06	4.52	34,000	4,100	890	5,600	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<50	a,h,c,d
	6/11/2007		36.02	4.56	32,000	3,800	ND<1,200	3,400	ND<5.0	ND<5.0	ND<5.0	ND<5.0	--	a,c,d,h,i
	9/7/2007		35.18	5.40	57,000	21,000	ND<2,500	19,000	ND<10	ND<10	ND<10	54	ND<100	a,b,c,d,h
MW-1B <i>39.50</i>	6/3/2004	Zone B	25.10	14.40	ND<50	ND<50	ND<250	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	11/23/2004		26.24	13.26	ND<50	ND<50	ND<250	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	3/14/2005		33.97	5.53	52	ND<50	ND<250	ND<50	0.60	ND<0.5	ND<0.5	ND<0.5	ND<5.0	d,i
	6/15/2005		31.87	7.63	ND<50	ND<50	ND<250	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	i
	9/19/2005		30.35	9.15	ND<50	ND<50	ND<250	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	i
	12/12/2005		30.39	9.11	ND<50	ND<50	ND<250	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	i
	3/13/2006		32.15	7.35	--	--	--	--	--	--	--	--	--	
	6/19/2006		22.99	16.51	--	--	--	--	--	--	--	--	--	
	9/20/2006		30.32	9.18	--	--	--	--	--	--	--	--	--	
	12/20/2006		31.60	7.90	--	--	--	--	--	--	--	--	--	
	3/29/2007		24.63	14.87	--	--	--	--	--	--	--	--	--	
	6/11/2007		26.39	13.11	--	--	--	--	--	--	--	--	--	
	9/7/2007		28.42	11.08	--	--	--	--	--	--	--	--	--	
MW-4B <i>38.54</i>	6/3/2004	Zone B	33.52	5.02	ND<50	ND<50	ND<250	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	11/23/2004		34.65	3.89	ND<50	ND<50	ND<250	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	3/14/2005		34.78	3.76	--	--	--	--	--	--	--	--	--	
	3/15/2005		--	--	ND<50	ND<50	ND<250	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	i
	6/15/2005		33.98	4.56	--	--	--	--	--	--	--	--	--	
	6/16/2005		--	--	ND<50	ND<50	ND<250	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	i
	9/19/2005		32.57	5.97	--	--	--	--	--	--	--	--	--	
	9/20/2005		--	--	ND<50	ND<50	ND<250	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	i
	12/12/2005		33.65	4.89	--	--	--	--	--	--	--	--	--	
	12/13/2005		--	--	ND<50	ND<50	ND<250	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	i

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Well ID TOC (ft)	Date Sampled	Groundwater Zone	Groundwater Elevation (ft msl)	Depth to Water (ft)	TPHd	TPHg	TPHmo	TPHss	Benzene µg/L	Toluene	Ethylbenzene	Xylenes	MTBE	Notes
		Depth of Well (ft)	←	→										
MW-4B	3/13/2006		34.61	3.93	--	--	--	--	--	--	--	--	--	
(cont.)	6/19/2006		33.86	4.68	--	--	--	--	--	--	--	--	--	
	9/20/2006		32.58	5.96	--	--	--	--	--	--	--	--	--	
	12/20/2006		33.92	4.62	--	--	--	--	--	--	--	--	--	
	3/29/2007		33.96	4.58	--	--	--	--	--	--	--	--	--	
	6/11/2007		34.03	4.51	--	--	--	--	--	--	--	--	--	
	9/7/2007		33.22	5.32	--	--	--	--	--	--	--	--	--	
MW-5B	6/3/2004	Zone B 24	30.16	8.82	ND<50	ND<50	ND<250	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
38.98	11/23/2004		31.32	7.66	ND<50	ND<50	ND<250	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	3/14/2005		32.71	6.27	--	--	--	--	--	--	--	--	--	
	3/15/2005		--	--	ND<50	ND<50	ND<250	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	i
	6/15/2005		31.20	7.78	ND<50	ND<50	ND<250	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	i
	9/19/2005		28.68	10.30	--	--	--	--	--	--	--	--	--	
	9/20/2005		--	--	ND<50	ND<50	ND<250	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	12/12/2005		30.65	8.33	ND<50	ND<50	ND<250	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	3/13/2006		32.87	6.11	--	--	--	--	--	--	--	--	--	
	6/19/2006		30.97	8.01	--	--	--	--	--	--	--	--	--	
	9/20/2006		29.68	9.30	--	--	--	--	--	--	--	--	--	
	12/20/2006		31.21	7.77	--	--	--	--	--	--	--	--	--	
	3/29/2007		31.40	7.58	--	--	--	--	--	--	--	--	--	
	6/11/2007		31.02	7.96	--	--	--	--	--	--	--	--	--	
	9/7/2007		30.02	8.96	--	--	--	--	--	--	--	--	--	
MW-6B	6/3/2004	Zone B 24.5	29.36	8.30	2,300	1,100	ND<250	2,900	ND<0.5	ND<0.5	ND<0.5	1.4	ND<5.0	
37.66	11/23/2004		30.53	7.13	280	500	ND<250	700	ND<0.5	ND<0.5	ND<0.5	1.6	ND<5.0	a,c
	3/14/2005		31.86	5.80	5,200	1,300	340	1,200	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	e,d,i
	6/15/2005		30.17	7.49	1,700	900	ND<250	1,300	ND<0.5	ND<0.5	ND<0.5	1.9	ND<5.0	a,c
	9/19/2005		28.83	8.83	2,700	1,200	ND<250	2,000	1.0	1.4	ND<1.0	5.0	ND<20	a,b,c
	12/12/2005		29.85	7.81	4,100	840	ND<250	1,200	ND<0.5	ND<0.5	ND<0.5	3.3	ND<5.0	a,s,h,i
	3/13/2006		32.31	5.35	6,900	1,400	270	2,000	ND<0.5	ND<0.5	ND<0.5	4.7	--	a,c,d,h,i
	6/19/2006		29.88	7.78	7,700	1,700	310	3,300	ND<1.0	ND<1.0	ND<1.0	ND<1.0	--	c,g,h,m
	9/20/2006		28.78	8.88	16,000	3,200	740	4,200	ND<5.0	ND<5.0	ND<5.0	ND<5.0	--	a,c,d,g,h,i
	12/20/2006		30.34	7.32	16,000	55,000	ND<1,200	77,000	ND<50	ND<50	ND<50	130	--	e,g,h,n
	3/29/2007		30.44	7.22	24,000	3,400	650	4,300	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<50	a,h,c,d
	6/11/2007		29.93	7.73	29,000	2,600	ND<1,200	2,100	ND<5.0	ND<5.0	ND<5.0	ND<5.0	--	a,c,d,h
	9/7/2007		28.95	8.71	32,000	4,500	ND<1,200	3,800	ND<5.0	ND<5.0	ND<5.0	11	ND<50	a,b,c,d,h
MW-1C	6/3/2004	Zone C 40	30.07	9.42	ND<50	ND<50	ND<250	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
39.49	11/23/2004		31.30	8.19	ND<50	ND<50	ND<250	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	3/14/2005		32.58	6.91	ND<50	ND<50	ND<250	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	f
	6/15/2005		30.89	8.60	ND<50	ND<50	ND<250	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	

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Well ID TOC (ft)	Date Sampled	Groundwater Zone	Groundwater Elevation (ft msl)	Depth to Water (ft)	TPHd	TPHg	TPHmo	TPHss	Benzene µg/L	Toluene	Ethylbenzene	Xylenes	MTBE	Notes
		Depth of Well (ft)	←	→										
MW-1C <i>(cont.)</i>	9/19/2005		29.19	10.30	ND<50	ND<50	ND<250	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	i
	12/12/2005		30.54	8.95	ND<50	ND<50	ND<250	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	i
	3/13/2006		32.99	6.50	--	--	--	--	--	--	--	--	--	
	6/19/2006		30.66	8.83	--	--	--	--	--	--	--	--	--	
	9/20/2006		29.53	9.96	--	--	--	--	--	--	--	--	--	
	12/20/2006		31.13	8.36	--	--	--	--	--	--	--	--	--	
	3/29/2007		31.19	8.30	--	--	--	--	--	--	--	--	--	
	6/11/2007		30.63	8.86	--	--	--	--	--	--	--	--	--	
	9/7/2007		29.60	9.89	--	--	--	--	--	--	--	--	--	
MW-4C 38.50	6/3/2004	Zone C	30.10	8.40	ND<50	ND<50	ND<250	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	11/23/2004	40	31.31	7.19	ND<50	ND<50	ND<250	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	3/14/2005		33.15	5.35	--	--	--	--	--	--	--	--	--	
	3/15/2005		--	--	ND<50	ND<50	ND<250	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	i
	6/15/2005		30.85	7.65	--	--	--	--	--	--	--	--	--	
	6/16/2005		--	--	ND<50	ND<50	ND<250	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	9/19/2005		25.97	12.53	--	--	--	--	--	--	--	--	--	
	9/20/2005		--	--	ND<50	ND<50	ND<250	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	12/12/2005		30.00	8.50	--	--	--	--	--	--	--	--	--	
	12/13/2005		--	--	ND<50	ND<50	ND<250	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	i
	3/13/2006		31.18	7.32	--	--	--	--	--	--	--	--	--	
	6/19/2006		30.90	7.60	--	--	--	--	--	--	--	--	--	
	9/20/2006		29.91	8.59	--	--	--	--	--	--	--	--	--	
	12/20/2006		31.21	7.29	--	--	--	--	--	--	--	--	--	
	3/29/2007		31.29	7.21	--	--	--	--	--	--	--	--	--	
	6/11/2007		30.93	7.57	--	--	--	--	--	--	--	--	--	
	9/7/2007		30.20	8.30	--	--	--	--	--	--	--	--	--	
MW-6C 37.59	6/3/2004	Zone C	27.89	9.70	240	160	ND<250	340	ND<0.5	ND<0.5	ND<0.5	1.1	ND<5.0	
	11/23/2004	39.5	29.21	8.38	ND<50	ND<50	ND<250	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	d
	3/14/2005		31.79	5.80	60	ND<50	ND<250	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	6/15/2005		30.14	7.45	ND<50	ND<50	ND<250	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	9/19/2005		28.79	8.80	ND<50	ND<50	ND<250	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	12/12/2005		29.81	7.78	ND<50	ND<50	ND<250	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<5.0	
	3/13/2006		32.09	5.50	--	--	--	--	--	--	--	--	--	
	6/19/2006		29.84	7.75	--	--	--	--	--	--	--	--	--	
	9/20/2006		28.74	8.85	--	--	--	--	--	--	--	--	--	
	12/20/2006		30.29	7.30	--	--	--	--	--	--	--	--	--	
	3/29/2007		30.39	7.20	--	--	--	--	--	--	--	--	--	
	6/11/2007		29.86	7.73	--	--	--	--	--	--	--	--	--	
	9/7/2007		28.92	8.67	--	--	--	--	--	--	--	--	--	

# Conestoga-Rovers & Associates

**Table 2. Monitoring Well Groundwater Results: Petroleum Hydrocarbons - John Nady, 1137-1167 65th Street, Oakland, California**

Well ID TOC (ft)	Date Sampled	Groundwater Zone Depth of Well (ft)	Groundwater Elevation (ft msl)	Depth to Water (ft)	TPHd	TPHg	TPHmo	TPHss	Benzene μg/L	Toluene	Ethylbenzene	Xylenes	MTBE	Notes
<b>Abbreviations:</b>														
TOC (ft) = Top of casing elevation in feet above mean sea level (msl)														
μg/L = micrograms per liter - approximately equal to parts per billion = ppb														
ft = measured in feet														
TPHd = Total petroleum hydrocarbons as diesel by EPA Method SW8015C with silica gel cleanup.														
TPHg = Total petroleum hydrocarbons as gasoline by EPA Method SW8015C.														
TPHmo = Total petroleum hydrocarbons as motor oil by EPA Method SW8015C with silica gel cleanup.														
TPHss = Total petroleum hydrocarbons as stoddard solvent by EPA Method SW8015C.														
Benzene, toluene, ethylbenzene, and xylenes by EPA Method SW8021B.														
MTBE = Methyl tertiary-butyl ether by EPA Method SW8021B (EPA Method SW8260B).														
-- = Not available, not applicable, not analyzed, not measured														
<b>Notes:</b>														
a = TPH pattern that does not appear to be derived from gasoline (stoddard solvent/mineral spirit?).														
b = No recognizable pattern.														
c = Stoddard solvent/mineral spirit.														
d = Diesel range compounds are significant, no recognizable pattern.														
e = Gasoline range compounds are significant.														
f = One to a few isolated peaks present														
g = Oil range compounds are significant.														
h = Lighter than water immiscible sheen/product is present.														
i = Liquid sample contains greater than ~1 vol. % sediment.														
j = Unmodified or weakly modified gasoline is significant														
k = TPHg range non-target isolated peaks subtracted out of the TPHg concentration														
l = Heavier gasoline compounds are significant (aged gasoline?)														
m = Strongly aged gasoline or diesel range compounds are significant														

Conestoga-Rovers & Associates

Table 3. Monitoring Well Groundwater Results: Halogenated Volatile Organic Compounds - John Nady, 1137-1167 65th Street, Oakland, California

Well ID TOC (#)	Date Sampled	Groundwater Zone	Groundwater Elevation to Water (ft)	Depth of Well (ft)	(ft ansl)	(PCE)		(TCE)		1,1-Dichloroethane	1,2-Dichloroethene	trans-1,2-Dichloroethene	1,1-Dichloroethane	1,2-Dichloroethane	Vinyl Chloride	Notes/Other VOCs	
						Chloroethane	Chloroform	1,1,2,2-Tetrachloroethane	Tetrachloroethene	Trichloroethene	1,2-Dichlorobenzene	cis-1,2-Dichloroethene	1,1-Dichloroethane	1,2-Dichloroethane	Vinyl Chloride		
MW-1A 39.64	6/3/2004	Zone A 14.5	35.14	4.50	ND<2.5	ND<2.5	ND<2.5	55	16	ND<2.5	36	ND<2.5	ND<2.5	ND<2.5	6.3		
	11/23/2004		36.54	3.10	ND<1.0	ND<1.0	ND<1.0	38	11	ND<1.0	51	2.4	2.8	ND<1.0	9.5		
	3/14/2005		37.02	2.62	ND<1.0	ND<1.0	ND<1.0	42	12	2.0	32	2.2	2.4	ND<1.0	8.0		
	6/15/2005		35.14	4.30	ND<1.0	ND<1.0	ND<1.0	62	19	2.6	24	2.4	3.0	ND<1.0	10	h,j	
	9/19/2005		33.14	6.50	ND<1.2	ND<1.2	ND<1.2	55	18	2.3	28	2.0	2.6	ND<1.2	9.4	i	
	12/12/2005		35.14	4.50	ND<1.0	ND<1.0	ND<1.0	16	60	2.0	22	2.3	2.5	ND<1.0	12	h,j	
	3/13/2006		37.74	1.90	ND<1.2	ND<1.2	ND<1.2	14	30	17	ND<1.2	16	1.4	2.0	ND<1.2	4.0	i
	6/19/2006		35.94	3.70	ND<0.5	ND<0.5	ND<0.5	33	9.0	ND<0.5	15	1.1	1.8	ND<0.5	3.2		
	9/20/2006		34.19	5.45	ND<0.5	ND<0.5	ND<0.5	34	15	ND<0.5	21	1.6	2.3	ND<0.5	5.4	i	
	12/20/2006		37.02	2.62	ND<0.5	ND<0.5	ND<0.5	27	15	ND<0.5	16	1.3	1.7	ND<0.5	5.2		
	3/29/2007		37.04	2.60	ND<0.5	ND<0.5	ND<0.5	29	16	ND<0.5	13	1.2	1.4	ND<0.5	ND<0.5		
MW-2A 40.72	6/1/2007	Zone A 12	35.72	3.92	ND<0.5	ND<0.5	ND<0.5	26	17	ND<0.5	13	1.6	1.9	ND<0.5	2.3		
	9/7/2007		33.90	5.74	ND<0.5	ND<0.5	ND<0.5	25	15	ND<0.5	17	1.4	2.0	ND<0.5	2.3		
	6/3/2004		36.48	4.24	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5		
	11/23/2004		37.83	2.89	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5		
	3/14/2005		39.02	1.70	--	--	--	--	--	--	--	--	--	--	--		
	3/15/2005		--	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	i	
	6/15/2005		37.91	2.81	--	--	--	--	--	--	--	--	--	--	--		
	6/16/2005		--	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	i	
	9/19/2005		35.46	5.26	--	--	--	--	--	--	--	--	--	--	--		
MW-2A 40.72	9/20/2005		--	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	i	
	12/2/2005		37.66	3.06	--	--	--	--	--	--	--	--	--	--	--		
	12/13/2005		--	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	i	
	3/13/2006		40.33	0.39	--	--	--	--	--	--	--	--	--	--	--		
	6/19/2006		37.31	3.41	--	--	--	--	--	--	--	--	--	--	--		
	9/20/2006		34.65	6.07	--	--	--	--	--	--	--	--	--	--	--		
	12/20/2006		38.57	2.15	--	--	--	--	--	--	--	--	--	--	--		
	3/29/2007		38.22	2.50	--	--	--	--	--	--	--	--	--	--	--		
	6/11/2007		37.14	3.58	--	--	--	--	--	--	--	--	--	--	--		
	9/7/2007		35.04	5.68	--	--	--	--	--	--	--	--	--	--	--		
MW-3A 40.88	6/3/2004	Zone A 16	36.56	4.32	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	ND<50	a	
	11/23/2004		37.89	2.99	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0	ND<5.0		
	3/14/2005		37.28	3.60	--	--	--	--	--	--	--	--	--	--	--		
	3/15/2005		--	--	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	j,i, 1,3-dichlorobenzene (1.2) 1,4-dichlorobenzene (5.7)	
	6/15/2005		36.78	4.10	--	--	--	--	--	--	--	--	--	--	--		
	6/16/2005		--	--	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	h,i, 1,3-dichlorobenzene (1.5) 1,4-dichlorobenzene (8.3)	
	9/19/2005		35.93	4.95	--	--	--	--	--	--	--	--	--	--	--	i, 1,4-dichlorobenzene (1.6) 1,3-dichlorobenzene (1.4)	
	9/20/2005		--	--	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0		
	12/12/2005		36.72	4.16	--	--	--	--	--	--	--	--	--	--	--	h,j, 1,4-dichlorobenzene (7.2)	
	12/13/2005		--	--	ND<1.0	ND<1.0	26	ND<1.0	ND<1.0	43	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0		
	3/13/2006		37.42	3.46	--	--	--	--	--	--	--	--	--	--	--	i, chlorobenzene (3.7) 1,4-dichlorobenzene (7.2)	
	3/14/2006		--	--	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0		
	6/19/2006		36.48	4.40	--	--	--	--	--	--	--	--	--	--	--	h, chlorobenzene (8.8) 1,4-dichlorobenzene (7.3)	
	6/20/2006		--	--	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0		
	9/20/2006		35.78	5.10	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	h, chlorobenzene (31)	
	12/20/2006		36.78	4.10	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	h, chlorobenzene (31) 1,4-dichlorobenzene (5.6) chlorobenzene (55)	
	3/29/2007		36.82	4.06	ND<1.7	ND<1.7	ND<1.7	ND<1.7	ND<1.7	ND<1.7	ND<1.7	ND<1.7	ND<1.7	ND<1.7	ND<1.7	1,4-dichlorobenzene (6.0)	

Conestoga-Rovers & Associates

Table 3. Monitoring Well Groundwater Results: Halogenated Volatile Organic Compounds - John Nady, 1137-1167 65th Street, Oakland, California

Well ID TOC (ft)	Date Sampled	Groundwater Zone	Groundwater Elevation to Water (ft amsl)	Depth of Well (ft)	(ft)	(µg/L)										Notes/Other VOCs	
						Chloroethane	Chloroform	1,1,2,2-Tetrachloroethane	Tetrachloroethene	(PCE)	Trichloroethene	1,2-Dichlorobenzene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,1-Dichloroethane	1,2-Dichloroethane	Vinyl Chloride
MW-3A (cont.)	6/1/2007	Zone A	36.52	4.36	ND<1.7	ND<1.7	ND<1.7	ND<1.7	ND<1.7	ND<1.7	ND<1.7	ND<1.7	ND<1.7	ND<1.7	ND<1.7	ND<1.7	h, chlorobenzene (88)
	9/7/2007		35.98	4.90	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	ND<2.5	h, chlorobenzene (82)
MW-4A 38.7J	6/3/2004	Zone A 16	36.26	2.45	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1.7	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	11/23/2004		37.13	1.58	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1.9	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	3/14/2005		36.66	2.05	--	--	--	--	--	--	--	--	--	--	--	--	--
	3/15/2005		--	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1.1	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	i
	6/15/2005		36.38	2.33	--	--	--	--	--	--	--	--	--	--	--	--	--
	6/16/2005		--	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1.4	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	9/19/2005		35.01	3.70	--	--	--	--	--	--	--	--	--	--	--	--	--
	9/20/2005		--	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1.3	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5
	12/12/2005		36.39	2.32	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/13/2005		--	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	2.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	i
MW-6A 37.98	6/3/2004	Zone A 14.5	31.98	6.00	4.7	0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1.8	2.1	ND<0.5	6.7	
	11/23/2004		33.13	4.85	ND>0.5	ND>0.5	ND>0.5	ND>0.5	ND>0.5	ND>0.5	ND>0.5	ND>0.5	ND>0.5	ND>0.5	ND>0.5	ND>0.5	i
	3/14/2005		35.03	2.95	0.61	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	i, 1,4-dichlorobenzene (0.60)
	6/15/2005		33.28	4.70	6.9	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	3.3	ND<0.5	2.5	1.5	ND<0.5	3.2
	9/19/2005		32.07	5.91	21	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	2.6	ND<0.5	6.7	4.7	5.0	
	12/12/2005		33.12	4.86	13	ND<0.5	8.7	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1.1	0.82	ND<0.5	ND<0.5
	3/13/2006		36.05	1.93	1.7	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	h
	6/19/2006		32.59	5.39	9.4	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1.0	1.1	ND<0.5	1.3
	9/20/2006		31.96	6.02	ND>0.5	ND>0.5	ND>0.5	ND>0.5	ND>0.5	ND>0.5	ND>0.5	ND>0.5	ND>0.5	1.6	1.9	0.57	ND<0.5
	12/20/2006		33.57	4.41	12	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	h
MW-7A 40.58	3/29/2007	Zone A 10	33.67	4.31	8.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	0.69	0.71	ND<0.5	ND<0.5
	6/11/2007		32.95	5.03	9.8	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	
	9/7/2007		32.32	5.66	24	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	h
	6/3/2004		36.08	4.50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	2.0	ND<0.5	ND<0.5	ND<0.5	ND<0.5	
	11/23/2004		--	--	--	--	--	--	--	--	--	--	--	--	--	--	
	3/14/2005		37.03	3.55	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	2.6	ND<0.5	ND<0.5	ND<0.5	ND<0.5	h
	6/15/2005		36.41	4.17	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1.8	ND<0.5	ND<0.5	ND<0.5	ND<0.5	
MW-1B 39.50	9/19/2005	Zone B 20	35.25	5.33	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1.6	ND<0.5	ND<0.5	ND<0.5	ND<0.5	i
	12/12/2005		36.15	4.43	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	
	3/13/2006		36.76	3.82	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	
	6/19/2006		35.78	4.80	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	
	9/20/2006		35.03	5.55	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	
	12/20/2006		36.35	4.23	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	
	3/29/2007		36.06	4.52	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	
	6/11/2007		36.02	4.56	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	j,h,i
	9/7/2007		35.18	5.40	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	h
MW-1B 39.50	6/3/2004	Zone B 20	25.10	14.40	ND<0.5	8.3	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	3.9	ND<0.5	8.1	7.9	ND<0.5
	11/23/2004		26.24	13.26	ND<0.5	6.2	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	2.5	ND<0.5	8.4	8.8	ND<0.5
	3/14/2005		33.97	5.53	1.1	1.9	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	3.8	ND<0.5	5.2	12	ND<0.5
	6/15/2005		31.87	7.63	ND<0.5	1.3	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	3.3	ND<0.5	8.8	9.9	ND<0.5
	9/19/2005		30.35	9.15	0.98	0.87	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	3.0	ND<0.5	7.1	11	ND<0.5
	12/12/2005		30.39	9.11	1.5	0.75	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	3.7	ND<0.5	7.0	12	ND<0.5
	3/13/2006		32.15	7.35	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	6.1	ND<0.5	6.8	5.2	ND<0.5

# Conestoga-Rovers & Associates

Table 3. Monitoring Well Groundwater Results: Halogenated Volatile Organic Compounds - John Nady, 1137-1167 65th Street, Oakland, California

Well ID TOC (#)	Date Sampled	Groundwater Zone	Groundwater Elevation (ft amsl)	Depth to Water (ft)	Chloroethane	Chloroform	(PCE)		(TCE)		1,2-Dichlorobenzene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,1-Dichloroethane	1,2-Dichloroethane	Vinyl Chloride	Notes/Other VOCs
							1,1,2,2-Tetrachloroethane	Tetrachloroethene	Trichloroethene	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	
MW-1B (cont.)	6/19/2006		22.99	16.51	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	7.0	ND<0.5	7.8	6.2	ND<0.5	
	9/20/2006		30.32	9.18	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	9.9	ND<0.5	11	10	ND<0.5	
	12/20/2006		31.60	7.90	2.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	9.9	ND<0.5	7.7	7.8	ND<0.5	
	3/29/2007		24.63	14.87	1.6	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	9.0	ND<0.5	9.7	8.7	ND<0.5	
	6/1/2007		26.39	13.11	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	8.5	ND<0.5	8.0	6.5	ND<0.5	
	9/7/2007		28.42	11.08	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	9.8	ND<0.5	8.6	7.0	ND<0.5	
MW-4B 38.54	6/3/2004	Zone B	33.52	5.02	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	
	11/23/2004		34.65	3.89	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	
	3/14/2005		34.78	3.76	--	--	--	--	--	--	--	--	--	--	--	--	
	3/15/2005		--	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	i	
	6/15/2005		33.98	4.56	--	--	--	--	--	--	--	--	--	--	--	--	
	6/16/2005		--	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	i	
	9/19/2005		32.57	5.97	--	--	--	--	--	--	--	--	--	--	--	--	
	9/20/2005		--	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	i	
	12/12/2005		33.65	4.89	--	--	--	--	--	--	--	--	--	--	--	--	
	12/13/2005		--	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	i	
	3/3/2006		34.61	3.93	--	--	--	--	--	--	--	--	--	--	--	--	
	6/19/2006		33.86	4.68	--	--	--	--	--	--	--	--	--	--	--	--	
	9/20/2006		32.58	5.96	--	--	--	--	--	--	--	--	--	--	--	--	
	12/20/2006		33.92	4.62	--	--	--	--	--	--	--	--	--	--	--	--	
	3/29/2007		33.96	4.58	--	--	--	--	--	--	--	--	--	--	--	--	
	6/1/2007		34.03	4.51	--	--	--	--	--	--	--	--	--	--	--	--	
	9/7/2007		33.22	5.32	--	--	--	--	--	--	--	--	--	--	--	i	
MW-5B 38.98	6/3/2004	Zone B	30.16	8.82	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	
	11/23/2004		31.32	7.66	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	
	3/14/2005		32.71	6.27	--	--	--	--	--	--	--	--	--	--	--	--	
	3/15/2005		--	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	i	
	6/15/2005		31.20	7.78	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	i	
	9/19/2005		28.68	10.30	--	--	--	--	--	--	--	--	--	--	--	--	
	9/20/2005		--	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	i	
	12/12/2005		30.65	8.33	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	i	
	3/3/2006		32.87	6.11	--	--	--	--	--	--	--	--	--	--	--	--	
	6/19/2006		30.97	8.01	--	--	--	--	--	--	--	--	--	--	--	--	
	9/20/2006		29.68	9.30	--	--	--	--	--	--	--	--	--	--	--	--	
	12/20/2006		31.21	7.77	--	--	--	--	--	--	--	--	--	--	--	--	
	3/29/2007		31.40	7.58	--	--	--	--	--	--	--	--	--	--	--	--	
	6/1/2007		31.02	7.96	--	--	--	--	--	--	--	--	--	--	--	--	
	9/7/2007		30.02	8.96	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6B 37.66	6/3/2004	Zone B	29.36	8.30	0.65	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	
	11/23/2004		30.53	7.13	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	
	3/14/2005		31.86	5.80	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1.1	ND<0.5	ND<0.5	ND<0.5	ND<0.5	3.5	
	6/15/2005		30.17	7.49	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1.4	ND<0.5	ND<0.5	ND<0.5	ND<0.5	0.55	
	9/19/2005		28.83	8.83	1.4	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1.0	ND<0.5	ND<0.5	ND<0.5	1.1	
	12/12/2005		29.85	7.81	2.3	ND<0.5	ND<0.5	11	ND<0.5	ND<0.5	ND<0.5	1.3	ND<0.5	ND<0.5	ND<0.5	ND<0.5	
	3/13/2006		32.31	5.35	0.73	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	
	6/19/2006		29.88	7.78	0.91	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	
	9/20/2006		28.78	8.88	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	j,h	
	12/20/2006		30.34	7.32	2.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1.2	ND<0.5	ND<0.5	ND<0.5	ND<0.5	
	3/29/2007		30.44	7.22	1.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	
	6/1/2007		29.93	7.73	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	j,h	
	9/7/2007		28.95	8.71	1.3	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1.9	ND<0.5	ND<0.5	ND<0.5	ND<0.5	
MW-1C 39.49	6/3/2004	Zone C	30.07	9.42	ND<0.5	0.57	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	
	11/23/2004		31.30	8.19	ND<0.5	0.56	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	
	3/14/2005		32.58	6.91	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	i	

# Conestoga-Rovers & Associates

Table 3. Monitoring Well Groundwater Results: Halogenated Volatile Organic Compounds - John Nady, 1137-1167 65th Street, Oakland, California

Well ID TOC (ft)	Date Sampled	Groundwater Zone	Groundwater Elevation to Water (ft amsl)	Depth of Well (ft)	Chloroethane	Chloroform	1,1,2,2-Tetrachloroethane	Tetrachloroethene	(PCE)	(TCE)	Trichloroethene	1,2-Dichlorobenzene	cis-1,2-Dichloroethene	trans-1,2-Dichloroethene	1,1-Dichloroethane	1,2-Dichloroethane	Vinyl Chloride	Notes/Other VOCs
									µg/L									
MW-1C (cont.)	6/15/2005		30.89	8.60	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	i	
	9/19/2005		29.19	10.30	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5		
	12/12/2005		30.54	8.95	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	i	
	3/13/2006		32.99	6.50	-	-	-	-	-	-	-	-	-	-	-	-		
	6/19/2006		30.66	8.83	-	-	-	-	-	-	-	-	-	-	-	-		
	9/20/2006		29.53	9.96	-	-	-	-	-	-	-	-	-	-	-	-		
	12/20/2006		31.13	8.36	-	-	-	-	-	-	-	-	-	-	-	-		
	3/29/2007		31.19	8.30	-	-	-	-	-	-	-	-	-	-	-	-		
	6/11/2007		30.63	8.86	-	-	-	-	-	-	-	-	-	-	-	-		
	9/7/2007		29.60	9.89	-	-	-	-	-	-	-	-	-	-	-	-		
MW-4C 38.50	6/3/2004	Zone C	30.10	8.40	ND<0.5	0.84	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	
	11/23/2004	40	31.31	7.19	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	
	3/14/2005		33.15	5.53	-	-	-	-	-	-	-	-	-	-	-	-	i	
	3/15/2005		--	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5		
	6/15/2005		30.85	7.65	-	-	-	-	-	-	-	-	-	-	-	-		
	6/16/2005		--	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5		
	9/19/2005		25.97	12.53	-	-	-	-	-	-	-	-	-	-	-	-		
	9/20/2005		--	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5		
	12/12/2005		30.00	8.50	-	-	-	-	-	-	-	-	-	-	-	-		
	12/13/2005		--	--	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	i	
	3/13/2006		31.18	7.32	-	-	-	-	-	-	-	-	-	-	-	-		
	6/19/2006		30.90	7.60	-	-	-	-	-	-	-	-	-	-	-	-		
	9/20/2006		29.91	8.59	-	-	-	-	-	-	-	-	-	-	-	-		
	12/20/2006		31.21	7.29	-	-	-	-	-	-	-	-	-	-	-	-		
	3/29/2007		31.29	7.21	-	-	-	-	-	-	-	-	-	-	-	-		
	6/11/2007		30.93	7.57	-	-	-	-	-	-	-	-	-	-	-	-		
	9/7/2007		30.20	8.30	--	--	--	--	--	--	--	--	--	--	--	--		
MW-6C 37.59	6/3/2004	Zone C	27.89	9.70	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	2.8	ND<0.5	0.61	ND<0.5	ND<0.5	
	11/23/2004	39.5	29.21	8.38	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	
	3/14/2005		31.79	5.80	ND<0.5	ND<0.5	ND<0.5	ND<0.5	1.8	1.9	ND<0.5	12	ND<0.5	1.1	ND<0.5	2.3		
	6/15/2005		30.14	7.45	ND<0.5	ND<0.5	ND<0.5	ND<0.5	3.1	3.1	ND<0.5	20	0.64	1.4	ND<0.5	5.7		
	9/19/2005		28.79	8.80	ND<0.5	ND<0.5	ND<0.5	ND<0.5	2.9	3.0	ND<0.5	18	0.57	1.3	ND<0.5	6.8		
	12/12/2005		29.81	7.78	0.66	ND<0.5	ND<0.5	ND<0.5	3.2	3.0	ND<0.5	19	0.61	1.4	ND<0.5	10		
	3/13/2006		32.09	5.50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	3.2	3.9	ND<0.5	26	0.61	0.95	ND<0.5	5.1		
	6/19/2006		29.84	7.75	ND<0.5	ND<0.5	ND<0.5	ND<0.5	4.0	3.4	ND<0.5	32	0.78	0.96	ND<0.5	11		
	9/20/2006		28.74	8.85	ND<0.5	ND<0.5	ND<0.5	ND<0.5	3.7	4.6	ND<0.5	23	0.76	1.0	ND<0.5	9.4	i	
	12/20/2006		30.29	7.30	ND<0.5	ND<0.5	ND<0.5	ND<0.5	4.1	4.6	ND<0.5	36	0.88	0.92	ND<0.5	13		
	3/29/2007		30.39	7.20	ND<0.5	ND<0.5	ND<0.5	ND<0.5	6.0	6.4	ND<0.5	35	1.2	1.1	ND<0.5	5.3		
	6/11/2007		29.86	7.73	ND<0.5	ND<0.5	ND<0.5	ND<0.5	6.1	6.4	ND<0.5	26	0.99	0.85	ND<0.5	4.0		
	9/7/2007		28.92	8.67	ND<0.5	ND<0.5	ND<0.5	ND<0.5	7.0	6.9	ND<0.5	32	0.99	0.90	ND<0.5	4.2		

#### Abbreviations:

TOC (ft) = Top of casing elevation in feet above mean sea level (msl)

µg/L = micrograms per liter; approximately equal to parts per billion = ppb

ft = measured in feet

Halogenated Volatile Organic Compounds analyzed by EPA Method SW8260B, reported EPA Method 8010 basic target list.

ND<0.5 = Not Detected above detection limit cited.

-- = Not available, not applicable, not analyzed, not measured

#### Notes:

a = Total Trihalomethanes

b = Sample diluted due to high organic content

b = 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



**CONESTOGA-ROVERS  
& ASSOCIATES**

## **APPENDIX A**

### **Field Data Sheets**



MUSKAN  
ENVIRONMENTAL  
SAMPLING

## WELL GAUGING SHEET

Client: Conestoga-Rovers and Associates

Site

Address: 1137-1167 65th Street, Oakland, CA

Date: 9/7/2007

Signature:

Well ID	Time	Depth to SPH	Depth to Water	SPH Thickness	Depth to Bottom	Comments
MW-1A	9:23		5.74		14.40	
MW-1B	9:15		11.08		19.75	
MW-1C	8:35		9.89		34.56	
MW-2A	8:50		5.68		11.15	
MW-3A	9:35		4.90		13.95	
MW-4A	8:42		3.37		12.66	
MW-4B	8:25		5.32		20.76	
MW-4C	8:20		8.30		32.00	
MW-5B	8:15		8.96		23.05	
MW-6A	9:29		5.66		14.40	
MW-6B	9:05		8.71		22.00	



MUSKAN  
ENVIRONMENTAL  
SAMPLING

## **WELL GAUGING SHEET**



MUSKAN  
ENVIRONMENTAL  
SAMPLING

## **WELL SAMPLING FORM**

Date:	9/7/2007					
Client:	Conestoga-Rovers and Associates					
Site Address:	1137-1167 65th Street, Oakland, CA					
Well ID:	MW-1A					
Well Diameter:	2"					
Purging Device:	Disposable Bailer					
Sampling Method:	Disposable Bailer					
Total Well Depth:	14.40		Fe=	mg/L		
Depth to Water:	5.74		ORP=	mV		
Water Column Height:	8.66		DO=	mg/L		
Gallons/ft:	0.16					
1 Casing Volume (gal):	1.39		COMMENTS: very turbid, silty			
3 Casing Volumes (gal):	4.16					
TIME:	CASING VOLUME (gal)	TEMP (Celsius)	pH	COND. (µS)		
12:15	1.4	22.7	9.03	258		
12:20	2.8	21.9	9.05	248		
12:25	4.2	21.9	9.02	251		
Sample ID:	Sample Date:	Sample Time:	Container Type	Preservative	Analytes	Method
MW-1A	9/7/2007	12:30	40 ml VOA, 1 L Amber	HCl, ICE	TPHg/ss BTEX TPHd TPHmo HVOCS	8015, with silica gel clean up 8020, 8010



MUSKAN  
ENVIRONMENTAL  
SAMPLING

## **WELL SAMPLING FORM**

Date:	9/7/2007					
Client:	Conestoga-Rovers and Associates					
Site Address:	1137-1167 65th Street, Oakland, CA					
Well ID:	MW-1B					
Well Diameter:	2"					
Purging Device:	Disposable Bailer					
Sampling Method:	Disposable Bailer					
Total Well Depth:	19.75		Fe=	mg/L		
Depth to Water:	11.08		ORP=	mV		
Water Column Height:	8.67		DO=	mg/L		
Gallons/ft:	0.16					
1 Casing Volume (gal):	1.39		COMMENTS: very turbid, silty			
3 Casing Volumes (gal):	4.16					
TIME:	CASING VOLUME (gal)	TEMP (Celsius)	pH	COND. (µS)		
11:50	1.4	19.8	6.62	1739		
11:53	2.8	19.9	6.55	1710		
11:55	4.2	19.6	6.59	1688		
Sample ID:	Sample Date:	Sample Time:	Container Type	Preservative	Analytes	Method
MW-1B	9/7/2007	12:00	40 ml VOA, 1 L Amber	HCl, ICE	HVOCs	8010



MUSKAN  
ENVIRONMENTAL  
SAMPLING

## **WELL SAMPLING FORM**

Date:	9/7/2007					
Client:	Conestoga-Rovers and Associates					
Site Address:	1137-1167 65th Street, Oakland, CA					
Well ID:	MW-2A					
Well Diameter:	4"					
Purging Device:	3" PVC Bailer					
Sampling Method:	Disposable Bailer					
Total Well Depth:	11.15		Fe=	mg/L		
Depth to Water:	5.68		ORP=	mV		
Water Column Height:	5.47		DO=	mg/L		
Gallons/ft:	0.65					
1 Casing Volume (gal):	3.56		COMMENTS: very turbid			
3 Casing Volumes (gal):	10.67					
TIME:	CASING VOLUME (gal)	TEMP (Celsius)	pH	COND. (µS)		
1:10	3.6	19.7	7.41	270		
1:15	7.1	19.9	7.48	274		
1:20	10.7	19.9	7.45	277		
Sample ID:	Sample Date:	Sample Time:	Container Type	Preservative	Analytes	Method
MW-2A	9/7/2007	1:25	40 ml VOA, 1 L Amber	HCl, ICE	TPHg/ss BTEX TPHd TPHmo	8015, with silica gel clean up 8020



MUSKAN  
ENVIRONMENTAL  
SAMPLING

## **WELL SAMPLING FORM**

Date:	9/7/2007					
Client:	Conestoga-Rovers and Associates					
Site Address:	1137-1167 65th Street, Oakland, CA					
Well ID:	MW-3A					
Well Diameter:	2"					
Purging Device:	Disposable Bailer					
Sampling Method:	Disposable Bailer					
Total Well Depth:	13.95		Fe=	mg/L		
Depth to Water:	4.90		ORP=	mV		
Water Column Height:	9.05		DO=	mg/L		
Gallons/ft:	0.16					
1 Casing Volume (gal):	1.45		COMMENTS: very turbid, silty			
3 Casing Volumes (gal):	4.34					
TIME:	CASING VOLUME (gal)	TEMP (Celsius)	pH	COND. (µS)		
1:40	1.4	18.7	6.58	410		
1:42	2.9	18.9	6.64	422		
1:45	4.3	18.4	6.65	415		
Sample ID:	Sample Date:	Sample Time:	Container Type	Preservative	Analytes	Method
MW-3A	9/7/2007	1:50	40 ml VOA, 1 L Amber	HCl, ICE	TPHg/ss BTEX TPHd TPHmo HVOCs	8015, with silica gel clean up 8020, 8010



MUSKAN  
ENVIRONMENTAL  
SAMPLING

## **WELL SAMPLING FORM**

Date:	9/7/2007					
Client:	Conestoga-Rovers and Associates					
Site Address:	1137-1167 65th Street, Oakland, CA					
Well ID:	MW-4A					
Well Diameter:	2"					
Purging Device:	Disposable Bailer					
Sampling Method:	Disposable Bailer					
Total Well Depth:	12.66		Fe=	mg/L		
Depth to Water:	3.37		ORP=	mV		
Water Column Height:	9.29		DO=	mg/L		
Gallons/ft:	0.16					
1 Casing Volume (gal):	1.49		COMMENTS: very turbid, silty			
3 Casing Volumes (gal):	4.46					
TIME:	CASING VOLUME (gal)	TEMP (Celsius)	pH	COND. (µS)		
12:45	1.5	23.4	10.75	561		
12:47	3.0	22.7	10.76	503		
12:50	4.5	22.1	10.76	532		
Sample ID:	Sample Date:	Sample Time:	Container Type	Preservative	Analytes	Method
MW-4A	9/7/2007	12:55	40 ml VOA, 1 L Amber	HCl, ICE	TPHg/ss BTEX TPHd TPHmo	8015, with silica gel clean up 8020



MUSKAN  
ENVIRONMENTAL  
SAMPLING

## **WELL SAMPLING FORM**

Date:	9/7/2007							
Client:	Conestoga-Rovers and Associates							
Site Address:	1137-1167 65th Street, Oakland, CA							
Well ID:	MW-6A							
Well Diameter:	2"							
Purging Device:	Disposable Bailer							
Sampling Method:	Disposable Bailer							
Total Well Depth:	14.40		Fe=	mg/L				
Depth to Water:	5.66		ORP=	mV				
Water Column Height:	8.74		DO=	mg/L				
Gallons/ft:	0.16		COMMENTS: very turbid					
1 Casing Volume (gal):	1.40							
3 Casing Volumes (gal):	4.20							
TIME:	CASING VOLUME (gal)	TEMP (Celsius)					pH	COND. (µS)
11:25	1.4	22.9					6.65	686
11:27	2.8	22.2	6.68	621				
11:30	4.2	22.0	6.60	665				
Sample ID:	Sample Date:	Sample Time:	Container Type	Preservative	Analytes	Method		
MW-6A	9/7/2007	11:35	40 ml VOA, 1 L Amber	HCl, ICE	TPHg/ss BTEX TPHd TPHmo HVOCs	8015, with silica gel clean up 8020, 8010		



MUSKAN  
ENVIRONMENTAL  
SAMPLING

## **WELL SAMPLING FORM**

Date:	9/7/2007						
Client:	Conestoga-Rovers and Associates						
Site Address:	1137-1167 65th Street, Oakland, CA						
Well ID:	MW-6B						
Well Diameter:	2"						
Purging Device:	Disposable Bailer						
Sampling Method:	Disposable Bailer						
Total Well Depth:	22.00		Fe=	mg/L			
Depth to Water:	8.71		ORP=	mV			
Water Column Height:	13.29		DO=	mg/L			
Gallons/ft:	0.16						
1 Casing Volume (gal):	2.13		<b>COMMENTS:</b> light sheen, very turbid				
3 Casing Volumes (gal):	6.38						
TIME:	CASING VOLUME (gal)	TEMP (Celsius)				pH	COND. (µS)
11:00	2.1	19.3				6.93	1018
11:05	4.3	19.1				6.97	1067
11:10	6.4	19.4				6.97	1065
Sample ID:	Sample Date:	Sample Time:	Container Type	Preservative	Analytes	Method	
MW-6B	9/7/2007	11:15	40 ml VOA, 1 L Amber	HCl, ICE	TPHg/ss BTEX TPHd TPHmo HVOCs	8015, with silica gel clean up 8020, 8010	



MUSKAN  
ENVIRONMENTAL  
SAMPLING

## **WELL SAMPLING FORM**

Date:	9/7/2007					
Client:	Conestoga-Rovers and Associates					
Site Address:	1137-1167 65th Street, Oakland, CA					
Well ID:	MW-6C					
Well Diameter:	2"					
Purging Device:	Disposable Bailer					
Sampling Method:	Disposable Bailer					
Total Well Depth:	33.80		Fe=	mg/L		
Depth to Water:	8.67		ORP=	mV		
Water Column Height:	25.13		DO=	mg/L		
Gallons/ft:	0.16		<b>COMMENTS:</b> very trubid, silty			
1 Casing Volume (gal):	4.02					
3 Casing Volumes (gal):	12.06					
TIME:	CASING VOLUME (gal)	TEMP (Celsius)				
10:30	4.0	18.8	6.87	1026		
10:35	8.0	18.5	6.85	1067		
10:40	12.1	18.4	6.91	1078		
Sample ID:	Sample Date:	Sample Time:	Container Type	Preservative	Analytes	Method
MW-6C	9/7/2007	10:45	40 ml VOA, 1 L Amber	HCl, ICE	HVOCS	8010



MUSKAN  
ENVIRONMENTAL  
SAMPLING

# **WELL SAMPLING FORM**

Date:	9/7/2007					
Client:	Conestoga-Rovers and Associates					
Site Address:	1137-1167 65th Street, Oakland, CA					
Well ID:	MW-7A					
Well Diameter:	1"					
Purging Device:	Check Valve Tubing					
Sampling Method:	Disposable Bailer					
Total Well Depth:	10.00		Fe=	mg/L		
Depth to Water:	5.40		ORP=	mV		
Water Column Height:	4.60		DO=	mg/L		
Gallons/ft:	0.04					
1 Casing Volume (gal):	0.18		COMMENTS: very turbid, silty			
3 Casing Volumes (gal):	0.55					
TIME:	CASING VOLUME (gal)	TEMP (Celsius)	pH	COND. (µS)		
10:05	0.2	19.5	6.80	949		
10:07	0.4	19.7	6.81	925		
10:10	0.6	19.6	6.80	944		
Sample ID:	Sample Date:	Sample Time:	Container Type	Preservative	Analytes	Method
MW-7A	9/7/2007	10:15	40 ml VOA, 1 L Amber	HCl, ICE	TPHg/ss BTEX TPHd TPHmo HVOCs	8015, with silica gel clean up 8020, 8010



**CONESTOGA-ROVERS**  
& ASSOCIATES

## **APPENDIX B**

### **Laboratory Analytical Report**



**McCampbell Analytical, Inc.**

"When Quality Counts"

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

Conestoga-Rovers & Associates  5900 Hollis St, Suite A  Emeryville, CA 94608	Client Project ID: #521000; John Nady	Date Sampled: 09/07/07
		Date Received: 09/07/07
	Client Contact: Mark Jonas	Date Reported: 09/13/07
	Client P.O.:	Date Completed: 09/13/07

**WorkOrder: 0709139**

September 13, 2007

Dear Mark:

Enclosed are:

- 1). the results of 9 analyzed samples from your **#521000; John Nady project**,
- 2). a QC report for the above samples
- 3). a copy of the chain of custody, and
- 4). a bill for analytical services.

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

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

Best regards,

Angela Rydelius, Lab Manager



## McCAMPBELL ANALYTICAL, INC.

1534 WILLOW PASS ROAD  
PITTSBURG, CA 94565-1701Website: [www.mccampbell.com](http://www.mccampbell.com) Email: [main@mccampbell.com](mailto:main@mccampbell.com)  
Telephone: (877) 252-9262 Fax: (925) 252-9269

0709139

## CHAIN OF CUSTODY RECORD

TURN AROUND TIME     

RUSH 24 HR 48 HR 72 HR 5 DAY

GeoTracker EDF  PDF  Excel  Write On (DW)  Check if sample is effluent and "J" flag is required

Report To: Mark Jones  
 Company: Conestoga-Rovers & Associates  
 5000 Hollis Street, Ste A  
 Emeryville, CA  
 Tele: (510) 443-3303 Fax: (510) 443-9170  
 Project #: 521000 Project Name: John Norky  
 Project Location: 1137-1167 65th Street, Oakland, CA  
 Sampler Signature: Muskan Environmental Sampling

## Analysis Request

Other

Comments  
Filter Samples for Metals analysis: Yes / No

SAMPLE ID	LOCATION/ Field Point Name	SAMPLING		# Containers	Type Containers	MATRIX	METHOD PRESERVED								
		Date	Time					Water	Soil	Air	Sludge	Other	ICP	HCL	HNO3
MU-1A		4/7/07	12:30	1	Ampli vials	X							X		
MU-1B			12:00												
MU-2A			11:25												
MU-3A			11:50												
MU-4A			12:55												
MU-6A			11:35												
MU-6B			11:15												
MU-6C			10:45												
MU-7A			10:15	Y	N	X							X		

Relinquished By:

Date:

4/7/07

Time:

3:30pm

Received By: *Ana V*

Relinquished By:

Date:

Time:

Received By:

Relinquished By:

Date:

Time:

Received By:

ICP   
 GOOD CONDITION   
 HEAD SPACE ABSENT   
 DECHLORINATED IN LAB   
 APPROPRIATE CONTAINERS   
 PRESERVED IN LAB

COMMENTS:

VOAS O&G METALS OTHER  
 PRESERVATION pH-2

**McCAMPBELL ANALYTICAL, INC.**

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

# CHAIN-OF-CUSTODY RECORD

Page 1 of 1

WorkOrder: 0709139

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: #521000; John Nady  
PO:

Bill to:

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

Requested TAT: 5 days

Date Received 09/07/2007

Date Printed: 09/07/2007

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
0709139-001	MW-1A	Water	9/7/2007 12:30:00	<input type="checkbox"/>	C	B		A								
0709139-002	MW-1B	Water	9/7/2007 12:00:00	<input type="checkbox"/>	A											
0709139-003	MW-2A	Water	9/7/2007 1:25:00	<input type="checkbox"/>		B		A								
0709139-004	MW-3A	Water	9/7/2007 1:50:00	<input type="checkbox"/>	C	B		A								
0709139-005	MW-4A	Water	9/7/2007 12:55:00	<input type="checkbox"/>		B		A								
0709139-006	MW-6A	Water	9/7/2007 11:35:00	<input type="checkbox"/>	C	B		A								
0709139-007	MW-6B	Water	9/7/2007 11:15:00	<input type="checkbox"/>	C	B		A								
0709139-008	MW-6C	Water	9/7/2007 10:45:00	<input type="checkbox"/>	A											
0709139-009	MW-7A	Water	9/7/2007 10:15:00	<input type="checkbox"/>	B	C	A	A								

Test Legend:

1	8010BMS_W
6	
11	

2	G-MBTEX_W
7	
12	

3	PREDF REPORT
8	

4	TPH(DMO)WSG_W
9	

5	
10	

Prepared by: Ana 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.



**McCampbell Analytical, Inc.**

"When Quality Counts"

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

## Sample Receipt Checklist

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

Date and Time Received: **9/7/2007 5:44:46 PM**

Project Name: **#521000; John Nady**

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

WorkOrder N°: **0709139** Matrix Water

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:                            | 3.6°C                       | NA <input 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"/> |   |
| TTLC Metal - pH acceptable upon receipt (pH<2)?     | Yes <input type="checkbox"/>            | No <input type="checkbox"/> | NA <input checked="" type="checkbox"/>          |

-----  
Client contacted:

Date contacted:

Contacted by:

Comments:



# McCampbell 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: #521000; John Nady	Date Sampled: 09/07/07
		Date Received: 09/07/07
	Client Contact: Mark Jonas	Date Extracted: 09/09/07-09/11/07
	Client P.O.:	Date Analyzed 09/09/07-09/11/07

## Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0709139

Lab ID	0709139-001C	0709139-002A	0709139-004C	0709139-006C	Reporting Limit for DF =1	
Client ID	MW-1A	MW-1B	MW-3A	MW-6A		
Matrix	W	W	W	W	S	W
DF	1	1	5	1		
Compound	Concentration				µg/kg	µg/L
Bromodichloromethane	ND	ND	ND<2.5	ND	NA	0.5
Bromoform	ND	ND	ND<2.5	ND	NA	0.5
Bromomethane	ND	ND	ND<2.5	ND	NA	0.5
Carbon Tetrachloride	ND	ND	ND<2.5	ND	NA	0.5
Chlorobenzene	ND	ND	82	ND	NA	0.5
Chloroethane	ND	ND	ND<2.5	24	NA	0.5
2-Chloroethyl Vinyl Ether	ND	ND	ND<5.0	ND	NA	1.0
Chloroform	ND	ND	ND<2.5	ND	NA	0.5
Chloromethane	ND	ND	ND<2.5	ND	NA	0.5
Dibromochloromethane	ND	ND	ND<2.5	ND	NA	0.5
1,2-Dichlorobenzene	ND	ND	ND<2.5	ND	NA	0.5
1,3-Dichlorobenzene	ND	ND	ND<2.5	ND	NA	0.5
1,4-Dichlorobenzene	ND	ND	ND<2.5	ND	NA	0.5
Dichlorodifluoromethane	ND	ND	ND<2.5	ND	NA	0.5
1,1-Dichloroethane	2.0	8.6	ND<2.5	ND	NA	0.5
1,2-Dichloroethane (1,2-DCA)	ND	7.0	ND<2.5	ND	NA	0.5
1,1-Dichloroethene	ND	ND	ND<2.5	ND	NA	0.5
cis-1,2-Dichloroethene	17	9.8	ND<2.5	ND	NA	0.5
trans-1,2-Dichloroethene	1.4	ND	ND<2.5	ND	NA	0.5
1,2-Dichloropropane	ND	ND	ND<2.5	ND	NA	0.5
cis-1,3-Dichloropropene	ND	ND	ND<2.5	ND	NA	0.5
trans-1,3-Dichloropropene	ND	ND	ND<2.5	ND	NA	0.5
Methylene chloride	ND	ND	ND<2.5	ND	NA	0.5
1,1,2,2-Tetrachloroethane	ND	ND	ND<2.5	ND	NA	0.5
Tetrachloroethene	25	ND	ND<2.5	ND	NA	0.5
1,1,1-Trichloroethane	ND	ND	ND<2.5	ND	NA	0.5
1,1,2-Trichloroethane	ND	ND	ND<2.5	ND	NA	0.5
Trichloroethene	15	ND	ND<2.5	ND	NA	0.5
Trichlorofluoromethane	ND	ND	ND<2.5	ND	NA	0.5
Vinyl Chloride	2.3	ND	ND<2.5	ND	NA	0.5

### Surrogate Recoveries (%)

%SS1:	99	103	103	102	
%SS2:	87	94	102	102	
%SS3:	93	111	102	106	

### Comments

i

h

h

\* 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.



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Conestoga-Rovers & Associates  5900 Hollis St, Suite A  Emeryville, CA 94608	Client Project ID: #521000; John Nady	Date Sampled: 09/07/07
		Date Received: 09/07/07
	Client Contact: Mark Jonas	Date Extracted: 09/09/07-09/11/07
	Client P.O.:	Date Analyzed 09/09/07-09/11/07

## Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)\*

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0709139

Lab ID	0709139-007C	0709139-008A	0709139-009B		Reporting Limit for DF =1
Client ID	MW-6B	MW-6C	MW-7A		
Matrix	W	W	W		S W
DF	1	1	1		
Compound	Concentration			µg/kg	µg/L
Bromodichloromethane	ND	ND	ND		NA 0.5
Bromoform	ND	ND	ND		NA 0.5
Bromomethane	ND	ND	ND		NA 0.5
Carbon Tetrachloride	ND	ND	ND		NA 0.5
Chlorobenzene	ND	ND	ND		NA 0.5
Chloroethane	1.3	ND	ND		NA 0.5
2-Chloroethyl Vinyl Ether	ND	ND	ND		NA 1.0
Chloroform	ND	ND	ND		NA 0.5
Chloromethane	ND	ND	ND		NA 0.5
Dibromochloromethane	ND	ND	ND		NA 0.5
1,2-Dichlorobenzene	ND	ND	ND		NA 0.5
1,3-Dichlorobenzene	ND	ND	ND		NA 0.5
1,4-Dichlorobenzene	ND	ND	ND		NA 0.5
Dichlorodifluoromethane	ND	ND	ND		NA 0.5
1,1-Dichloroethane	0.66	0.90	ND		NA 0.5
1,2-Dichloroethane (1,2-DCA)	ND	ND	ND		NA 0.5
1,1-Dichloroethene	ND	ND	ND		NA 0.5
cis-1,2-Dichloroethene	1.9	32	ND		NA 0.5
trans-1,2-Dichloroethene	ND	0.99	ND		NA 0.5
1,2-Dichloropropane	ND	ND	ND		NA 0.5
cis-1,3-Dichloropropene	ND	ND	ND		NA 0.5
trans-1,3-Dichloropropene	ND	ND	ND		NA 0.5
Methylene chloride	ND	ND	ND		NA 0.5
1,1,2,2-Tetrachloroethane	ND	ND	ND		NA 0.5
Tetrachloroethene	ND	7.0	ND		NA 0.5
1,1,1-Trichloroethane	ND	ND	ND		NA 0.5
1,1,2-Trichloroethane	ND	ND	ND		NA 0.5
Trichloroethene	ND	6.9	ND		NA 0.5
Trichlorofluoromethane	ND	ND	ND		NA 0.5
Vinyl Chloride	ND	4.2	ND		NA 0.5

### Surrogate Recoveries (%)

%SS1:	97	101	97	
%SS2:	88	94	89	
%SS3:	111	108	109	

\* 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.



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Conestoga-Rovers & Associates  5900 Hollis St, Suite A  Emeryville, CA 94608	Client Project ID: #521000; John Nady		Date Sampled: 09/07/07
			Date Received: 09/07/07
	Client Contact: Mark Jonas		Date Extracted: 09/10/07-09/11/07
	Client P.O.:		Date Analyzed 09/10/07-09/11/07

## Gasoline (C6-C12) and Stoddard Solvent Range (C9-C12) Volatile Hydrocarbons with BTEX and MTBE\*

Extraction Method: SW5030B

Analytical Method: SW8021B/8015Cm

Work Order: 0709139

Lab ID	0709139-001B	0709139-003B	0709139-004B	0709139-005B	Reporting Limit for DF =1	
Client ID	MW-1A	MW-2A	MW-3A	MW-4A		
Matrix	W	W	W	W	S	µg/L
DF	1	1	20	1	S	µg/L
Compound	Concentration				ug/kg	µg/L
TPH(g)	2300	240	11,000	ND	NA	50
TPH(ss)	1700	180	15,000	ND	NA	50
MTBE	ND	ND	ND<100	ND	NA	5.0
Benzene	ND	ND	ND<10	0.74	NA	0.5
Toluene	ND	0.98	ND<10	1.3	NA	0.5
Ethylbenzene	2.2	ND	ND<10	ND	NA	0.5
Xylenes	4.6	ND	ND<10	1.9	NA	0.5

## Surrogate Recoveries (%)

%SS:	90	105	86	106	
Comments	e,m	e,m,i	e,h		

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

# cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent / mineral spirit?); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) reporting limit raised due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern; n) TPH(g) range non-target isolated peaks subtracted out of the TPH(g) concentration at the client's request; p) see attached narrative.



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Conestoga-Rovers & Associates  5900 Hollis St, Suite A  Emeryville, CA 94608	Client Project ID: #521000; John Nady	Date Sampled: 09/07/07
		Date Received: 09/07/07
	Client Contact: Mark Jonas	Date Extracted: 09/10/07-09/11/07
	Client P.O.:	Date Analyzed 09/10/07-09/11/07

## Gasoline (C6-C12) and Stoddard Solvent Range (C9-C12) Volatile Hydrocarbons with BTEX and MTBE\*

Extraction Method: SW5030B

Analytical Method: SW8021B/8015Cm

Work Order: 0709139

Lab ID	0709139-006B	0709139-007B	0709139-009C		Reporting Limit for DF =1	
Client ID	MW-6A	MW-6B	MW-7A			
Matrix	W	W	W		S	W
DF	2	10	20			
Compound	Concentration				ug/kg	µg/L
TPH(g)	1600	4500	21,000		NA	50
TPH(ss)	1400	3800	19,000		NA	50
MTBE	ND<10	ND<50	ND<100		NA	5.0
Benzene	ND<1.0	ND<5.0	ND<10		NA	0.5
Toluene	ND<1.0	ND<5.0	ND<10		NA	0.5
Ethylbenzene	ND<1.0	ND<5.0	ND<10		NA	0.5
Xylenes	3.1	11	54		NA	0.5

## Surrogate Recoveries (%)

%SS:	97	91	119		
Comments	e,m,h	e,m,h	e,m,h		

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

# cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent / mineral spirit?); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) reporting limit raised due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern; n) TPH(g) range non-target isolated peaks subtracted out of the TPH(g) concentration at the client's request; p) see attached narrative.



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Conestoga-Rovers & Associates 5900 Hollis St, Suite A Emeryville, CA 94608	Client Project ID: #521000; John Nady	Date Sampled: 09/07/07
		Date Received: 09/07/07
	Client Contact: Mark Jonas	Date Extracted: 09/07/07
	Client P.O.:	Date Analyzed: 09/08/07-09/12/07

## Diesel (C10-23) and Oil (C18+) Range Extractable Hydrocarbons with Silica Gel Clean-Up\*

Extraction method: SW3510C/3630C

### Analytical methods: SW8015C

Work Order: 0709139

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	250	µg/L
	S	NA	NA	mg/Kg

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

#) cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract; &) low or no surrogate due to matrix interference.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel? is significant); d) gasoline range compounds are significant; e) unknown medium boiling point pattern that does not appear to be derived from diesel (asphalt); f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) reporting limit raised due to matrix interference; k) kerosene/kerosene range; l) bunker oil; m) fuel oil; n) stoddard solvent/mineral spirit; p) see attached narrative.



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## QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder 0709139

EPA Method SW8260B		Extraction SW5030B				BatchID: 30475				Spiked Sample ID: 0709139-002A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)				
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD	
Chlorobenzene	ND	10	104	105	1.18	104	108	4.37	70 - 130	30	70 - 130	30	
1,2-Dichloroethane (1,2-DCA)	7.0	10	70.5	71.8	0.959	91.5	98.1	6.94	70 - 130	30	70 - 130	30	
1,1-Dichloroethene	ND	10	101	101	0	99.8	104	4.09	70 - 130	30	70 - 130	30	
Trichloroethene	ND	10	87.6	88.4	0.954	85.5	89.4	4.39	70 - 130	30	70 - 130	30	
%SS1:	103	10	96	96	0	97	96	0.781	70 - 130	30	70 - 130	30	
%SS2:	94	10	95	94	0.853	97	98	0.738	70 - 130	30	70 - 130	30	
%SS3:	111	10	100	102	2.14	104	102	1.82	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 30475 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0709139-001C	09/07/07 12:30 PM	09/09/07	09/09/07 4:27 AM	0709139-002A	09/07/07 12:00 PM	09/09/07	09/09/07 5:11 AM
0709139-004C	09/07/07 1:50 PM	09/11/07	09/11/07 1:02 PM	0709139-006C	09/07/07 11:35 AM	09/11/07	09/11/07 1:50 PM
0709139-007C	09/07/07 11:15 AM	09/11/07	09/11/07 4:12 AM	0709139-008A	09/07/07 10:45 AM	09/09/07	09/09/07 5:56 AM
0709139-009B	09/07/07 10:15 AM	09/11/07	09/11/07 4:57 AM				

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

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

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

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

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.



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## QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder 0709139

EPA Method SW8021B/8015Cm		Extraction SW5030B			BatchID: 30478				Spiked Sample ID: 0709130-009A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex) <sup>f</sup>	ND	60	95.6	97.5	1.94	91.9	94.3	2.63	70 - 130	30	70 - 130	30
MTBE	ND	10	94.8	92.2	2.83	88.7	92.1	3.75	70 - 130	30	70 - 130	30
Benzene	ND	10	101	99.3	1.68	97.1	101	4.44	70 - 130	30	70 - 130	30
Toluene	ND	10	101	100	0.979	96.8	102	4.83	70 - 130	30	70 - 130	30
Ethylbenzene	ND	10	106	105	1.22	102	107	4.26	70 - 130	30	70 - 130	30
Xylenes	ND	30	120	117	2.82	113	120	5.71	70 - 130	30	70 - 130	30
%SS:	93	10	91	90	0.868	94	94	0	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 30478 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0709139-001B	09/07/07 12:30 PM	09/11/07	09/11/07 6:51 AM	0709139-003B	09/07/07 1:25 PM	09/11/07	09/11/07 6:24 PM
0709139-004B	09/07/07 1:50 PM	09/10/07	09/10/07 9:12 PM	0709139-005B	09/07/07 12:55 PM	09/11/07	09/11/07 9:26 PM
0709139-006B	09/07/07 11:35 AM	09/11/07	09/11/07 8:55 PM	0709139-007B	09/07/07 11:15 AM	09/11/07	09/11/07 6:55 PM
0709139-009C	09/07/07 10:15 AM	09/11/07	09/11/07 7:21 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.

<sup>f</sup> 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 SW8015C

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder 0709139

EPA Method SW8015C		Extraction SW3510C/3630C				BatchID: 30454				Spiked Sample ID: N/A			
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)				
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD	
TPH(d)	N/A	1000	N/A	N/A	N/A	86	82.4	4.22	N/A	N/A	70 - 130	30	
%SS:	N/A	2500	N/A	N/A	N/A	101	91	10.1	N/A	N/A	70 - 130	30	

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

### BATCH 30454 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0709139-001A	09/07/07 12:30 PM	09/07/07	09/08/07 3:04 PM	0709139-003A	09/07/07 1:25 PM	09/07/07	09/08/07 4:17 PM
0709139-004A	09/07/07 1:50 PM	09/07/07	09/11/07 4:51 PM	0709139-005A	09/07/07 12:55 PM	09/07/07	09/10/07 6:11 PM
0709139-006A	09/07/07 11:35 AM	09/07/07	09/08/07 7:51 PM	0709139-007A	09/07/07 11:15 AM	09/07/07	09/12/07 3:28 AM
0709139-009A	09/07/07 10:15 AM	09/07/07	09/12/07 4:37 AM				

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

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

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

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

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

DHS ELAP Certification N° 1644

 QA/QC Officer